

# People's Electric Cooperative & Rural Electrification

## History of Rural Electrification

Electricity was slow reaching the rural areas of the United States following the completion of Thomas Edison's first central station electric system in lower Manhattan in 1882. The Rural Electrification Amendment to Franklin D. Roosevelt's New Deal was passed by Congress in 1936 after FDR discovered he was paying 18 cents per kilowatt hour for electricity at his Warm Springs, Georgia, cottage.... about 4 times the rate he was paying at his home in Hyde Park, New York. Investor-owned utilities were offered the first rural electric funds, but did not serve rural areas and declined to borrow from the government, even at inexpensive interest rates, because of low profit margins in rural areas.

Electricity made possible tremendous changes in farm productivity. It enables irrigation to make arid lands productive. It makes possible efficient and sanitary large-scale dairy farming. It reduces the labor in livestock feeding and poultry productions, saving millions of dollars and encouraging greater production.

The mechanization of farming made possible by electricity has increase income to farmers, and at the same time, made them the most efficient in the world by cutting the cost of food and fiber to the American public. People of the United States spend a smaller part of their income for food than any other people in the world.

Because of the availability of dependable electricity, a multimillion-dollar electrical appliance, equipment and service have been created in rural America. Much of the benefit of this accrued to urban residents.

Thousand of modern homes and cabins surround the nation's magnificent lakes and recreation areas. Development of these areas and the tourism industry which generates so much revenue was made possible, at least in part, by dependable electric service from the rural electric cooperatives.

Often the electric cooperative is a major employer in the town which it has its headquarters, and thus is a major factor in the economy of that town.

Americans are fleeing the cities, reversing the migration from country to town, which occurred a few years ago. They are moving from town to country, where electric cooperatives provide the electrical energy. More people each year are feeling pride in their quality of life and in the electric cooperatives that make it possible.

A few years ago, The Rural Electrification Administration changed its name to Rural Utilities Service (RUS), which better represents this organization's activities – providing federal assistance and financing to rural electric cooperatives, rural water and sewer districts, and rural telephone companies.

## **Cooperative Principles**

The “Rochdale Principles” that most member-owned cooperatives follow originated in the experience of the highly successful consumer cooperative begun in Rochdale, England, in 1844. These principles provide that a cooperative meet the following principles:

- 1) Open Membership – Those who may reasonably use the cooperative’s service within the practical limits imposed by existing facilities, geography, etc. – must be permitted to join.
- 2) Democratic Control – Effective means to control the organization must rest in the hands of the members on the basis of one member, one vote. In order to provide adequate capital, members are urged to invest. No amount of investment, however, can earn more than one vote for any member.
- 3) Limited Return on Investment – Dividends paid on invested dollars should provide a fair “rental” for the members’ money, but a nominal ceiling on interest prevents speculation in co-op stock. Fundamentally, the cooperative exists to provide services to members, not to return dollars of profit to investors.
- 4) Return of Margins to Members – Dollars left over after all expenses would be regarded as profit for other organizations. In this case, however, they do not belong to the cooperative, but to the members, and must be so allocated in the books. Such dollars are returned to the members, on a basis decided by the member-elected board, in proportion to each member’s use of the service.

## **Member-Owned Cooperatives vs. Investor-Owned Utilities**

Member-owned cooperatives, such as PEC, differ from investor-owned utilities, such as OG&E or PSO in a variety of ways. Some of the more significant ways include:

### ***Member-Owned Cooperatives:***

1. The cooperative is owned by its member/owners.
2. The service of the cooperative is used by its member/owners.
3. The member/owners vote in the affairs of the cooperative.
4. Each member of the cooperative has one vote, regardless of the size of the organization.
5. All net margins are returned to the member/owners for the cooperative based on the amount of business done with the cooperative by that member.

### ***Investor-Owned Utilities:***

1. The utility is owned by the stockholders.
2. The service of the utility is generally used by non-owner customers.
3. The common stockholders vote in the affairs of the utility.
4. The stockholders vote in the affairs of the utility based upon the number of shares of common stock they own.
5. All net margins are returned to the stockholders in proportion to the number of shares of stock owned.

Currently across the nation, there are many businesses that operate as cooperatives. In addition to electric and telephone cooperatives, some examples of these cooperatives are Farmland Industries, Sunkist and Ocean Spray. The first electric cooperative established in Oklahoma was Cimarron Electric Cooperative in Kingfisher. Electric cooperatives serve 35,458,927 consumers in 47 states – all but Massachusetts, Rhode Island and Connecticut – or about 12 percent of the U.S. population. Hawaii became the most recent to incorporate an electric cooperative. Distribution cooperatives grew by 2.5%

in 2002, adding 350,000 new meters nationwide. That translates into 800,000 additional consumers using co-op electricity. The 2.5% growth rate was more than twice the utility industry average of 1.2 %. Investor-owned utilities own 73 of every 100 miles of transmission line in the U.S. The federal government is the next largest owner at 13 miles, followed by municipal utilities with 8 miles, and cooperatives at 6 miles.

### **People's Electric Cooperative**

After farmers and ranchers in southeastern Oklahoma were unable to secure electrical service from any other source, the Cooperative was organized as the Interstate Cooperative Electric and Power Company. Ten pioneering men founded this organization by selling two thousand \$5.00 shares of stock door-to-door to rural dwellers eager to electrify their homes.

Having 2000 paid stockholders in the company and meeting REA's requirement for loan funds approval of at least two meters per mile, the directors negotiated the first financial loan with the Rural Electrification Administration in March of 1938. This loan consisted of \$135,000 to construct 125 miles of line serving approximately 470 customers in Coal, Hughes and Pontotoc counties.

Due to new provisions in the Rural Electric Cooperative Act, the Interstate Cooperative Electric and Power Company was converted to a non-profit, membership corporation called People's Electric Cooperative. This motion was passed on July 29, 1939. All \$5.00 shares of stock were then transferred into \$5.00 memberships, which is the same cost of memberships today.

Having provided services for 75 years, People's Electric Cooperative, located at 1600 N. Country Club and 1700 N. Country Club in Ada, has grown to meet the needs of its rural members in 11 counties which Pontotoc, Seminole, Hughes, Pontotoc, Seminole, Hughes, Pittsburg, Coal, Atoka, Johnston, Murray, Carter, Garvin and McClain. This service area extending 43 miles east, 36 miles west, 36 miles north and 37 miles south of Ada, contains nearly 4,800 miles of distribution line. People's Electric Cooperative, a distribution cooperative, receives electricity generated and transmitted from Western Farmers Electric Cooperative (WFEC) in Anadarko, OK. PEC then distributes electricity 24 hours per day, 365 days per year to approximately 21,000 locations, which equates to 4.3 meters per mile of line. Of these locations, approximately 13,400 are residential consumers. PEC has a total of approximately 15,000 members. Oklahoma's largest electric cooperative is Oklahoma Electric Cooperative in Norman, which has approximately 41,000 members. PEC is one of 28 distribution cooperatives in Oklahoma. In addition to WFEC, there is one other power supply, or generation transmission, cooperative in Oklahoma. That power supply cooperative, which provides power to cooperative in northeastern Oklahoma is KAMO. WFEC provides power to members in Oklahoma, Texas, Kansas and Arkansas.

Each consumer of the cooperative is a member with one vote in the affairs of the cooperative, and membership is open to anyone within PEC's service area who desires electric service from the cooperative. In addition, the cooperative will construct line to consumers who build anywhere within PEC's service areas, regardless of the distance from a distribution line. For these line extensions, the cooperative pays the first \$1,800 associated with the construction of the electric service, and the consumer pays 70% of any costs over \$1,800.

PEC employs 64 full-time employees and 57 part-time employees and has an annual payroll of over \$4 million. More than 2,000 people in the State of Oklahoma are employed by electric cooperatives.

Currently, 22 substations are scattered across PEC's service territory. In these substations, voltages are "stepped down" from transmission voltage to distribution voltage which can then be delivered to residences, barns, shops, businesses and other facilities receiving electric service. PEC's first substation was located in Fittstown. Electricity can leak off the lines in various ways, such as from bumping tree limbs or windings within transformers. This type of loss is referred to as line loss.

### **State and National Organizations**

PEC is a member of both state and national associations for electric cooperatives. The national association, founded in 1942, is known as the National Rural Electric Cooperative Association (NRECA) and is headquartered in Arlington, Virginia. Glenn English is the current General Manager of NRECA. The first General Manager of NRECA was Clyde Ellis. Approximately 1,000 Cooperatives across the nation are members of NRECA, and collectively, these cooperatives provide electricity to 25 million people.

The state association is the Oklahoma Association of Electric Cooperatives (OAEC), and is located in Oklahoma City. Chris Myers is the General Manager of OAEC. OAEC publishes a monthly newsletter called "Oklahoma Living", which reaches some 320,000 members. OAEC was organized to collectively perform services which would not be economical or practical for each cooperative to perform individually.

### **PEC Loads**

Today, PEC serves many large industrial loads as well as residences, barns, shops and a variety of other structures. PEC's five largest loads are Seaway Pipeline/TEPPCO in Colbert, Oklahoma Stone/TXI in Millcreek, Atheon in Davis, Pontotoc Production in Ada and Solo Cup Company in Ada. Because growth helps stabilize electric rates, being successful in obtaining new load, particularly in competitive areas, is important to any utility. Since the mid-1990's, PEC has been quite successful in attracting new load in competitive areas. Some of the commercial and industrial load now served by PEC in this type of situation include TXI in Millcreek; PrePaid Legal Services, Staples, Ada Ford, Tinker Federal Credit Union, Taco Mayo, Holiday Inn Express and Microtel in Ada. Subdivisions in competitive areas, resulting in densely populated residential growth, are also important. PEC has also been successful in serving the loads for many new subdivisions in and around Ada, including: Cobblestone, Rosecreek, The Heritage, The Oaks, Kingsridge, Eagle's Ridge, and Walker Estates. Because electric cooperatives operate on the premise of one member/one vote, even these large, industrial consumers have exactly the same voting power as small, residential consumers.

### **Load Management**

Many commercial consumers take advantage of a program offered by PEC in which they reduce or eliminate their electric usage from 4:00 p.m to 8:00 p.m. during PEC's "peak period" in order to avoid large demand charges. This voluntary effort to shift electric usage around peak periods of the day is called load management.

### **Bill Payment**

Over the years, PEC has taken several measures to make bill paying easier for its members. The new headquarters building features a drive-thru window – a convenience PEC did not have available at the

old Main Street location. PEC instituted an e-bill payment option whereby members can submit payments electronically over the Internet by following links at PEC's website, [www.peoplesec.com](http://www.peoplesec.com). In addition, in 2004, a DelayPay system was designed that allows members to receive payment extensions through an automated phone system. Using this system, members who have a problem paying a bill for any reason can receive one free extension per 12 month period. The system extends the due date on the member's bill by 10 extra days.

Payments are also accepted at a number of banks throughout PEC's service territory. Another popular method of payment is the Sure B.E.T (Bills Electronically Transferred) Program, which allows customers to pay their bills electronically each month through their checking or savings accounts. For members who want or need to visit the office in person, PEC offers extended office hours: 7 a.m. to 6 p.m. Monday through Friday. One final payment option available to PEC members is to pay their electric bills by Visa or Mastercard. In fact, PEC has its own Visa card program called Co-op Power Plus. New services, products and methods of bill payment, as well as other important information, are provided monthly to PEC members through its monthly newsletter, the "People's Powerline".

### **SCADA**

PEC utilizes a Supervisory Control and Data Acquisition (SCADA) system which is used for periodic data gathering from substations and for remote control of equipment at these stations. This nerve center makes it possible to monitor substations for voltage delivered to consumers, power surges and spikes, and intermittent power failures, and to restore some types of large power outages from PEC offices, rather than sending line technicians out to the field.

### **AMR Meters**

For over 60 years, PEC member read their own meters and returned these reading with their monthly payments. While this was definitely the least expensive method for the cooperative to receive these readings, for some members it was a hassle, for others it was something they just couldn't remember to do, but for all it is something that will no longer be an option when the electric industry is deregulated. Utilities will be required to have a means to obtain meter readings quickly and efficiently. So in January of 1999, PEC started a program to eliminate the need for its members to do this. Automated meter reading (AMR) devices are being installed at each location on PEC's system. These devices will use the member's telephone line to call the monthly reading into a computer in PEC's office. AMR systems are currently used by many electric, gas and water utilities throughout the United States.

### **TWACS**

Although the new AMR devices being installed to read members' meters over the phone lines has been a vast improvement over the member read alternative, many meters are not located near a phone line. For these accounts, PEC began in 2004 installing TWACS meters at locations without access to phone lines. These new TWACS meters send meter reading from the member's location to the substation via the power lines. Equipment at the substation gathers these readings and transfers the information to the office. Soon, all the meters, no matter how remote the location, will provide automated readings to PEC's offices.

### **Financing**

On September 30, 1987, PEC became the first electric cooperative in Oklahoma to repay all its loans to the Rural Utilities Service (RUS), formally the REA. PEC has repaid over \$20 million to the federal

government. This repayment not only relieved PEC of its financial obligations to the federal government, but also from the rigid and often more costly accounting and construction procedures which the REA requires cooperatives to follow. During the fifty years in which PEC borrowed from the federal government, the Cooperative never missed a loan payment. Now, the Cooperative receives its money directly from Wall Street bankers through the Cooperative's bank called Cooperative Finance Corporation (CFC) and the CoBank National Bank for Cooperatives (currently PEC's primary lender).

### **Intermediary Relending Program (IRP)**

PEC administers an Intermediary Relending Program (IRP). The purpose of this program is creation and retention of jobs in the area. Funds through this program are used to finance business facilities and community development projects. The maximum available through this loan program is \$150,000.

### **Heat Pumps & Water Heaters**

For 20 years, PEC has paid rebates to members who install electric water heaters and heat pumps in their homes. A \$50 rebate is paid when a member replaces an older electric water heater with a new one. Members who replace gas water heaters with electric water heaters receive a \$100 rebate as do members who install an electric water heater in a brand new home. The rebate paid to members who install any type of electric heat pump is \$100 per ton.

In addition to rebates, PEC offers a financing program for heat pumps with monthly payments added to members' electric bills. Interest rates as low as five percent (5%) and repayment periods of up to 10 years make this a very popular program with PEC members.

### **Power Surges: Causes & Protection**

Power surges caused by lightning, birds, animals and trees interfering with powerlines; auto accidents involving utility poles; refrigerators, vacuum cleaners; and many other factors can cause much damage to appliances. PEC offers a home surge protection program for its members called HomeGuard Defender Plus. The devices offered through this program are designed to protect appliances and electronic equipment by reducing any potentially damaging external, high-voltage spikes and surges to a "safe" level before they enter a home via the powerline. Additional devices are provided for use with sensitive, electronic equipment which can see surges from power, cable or telephone lines.

### **Uninterruptible Power Supply Systems (UPS) Systems**

PEC offers UPS systems to alleviate problems caused by power blinks. A UPS is simply a battery backup for various pieces of electronic equipment in a home or business. They work much the way a 9V battery keeps an alarm clock on in the event of a power outage. UPS systems are designed to keep power on for 10-15 minutes, in order to carry the equipment through power blinks, or in the event of a prolonged outage, to sustain power long enough to shut everything off properly.

### **Portable Generators**

In order to help members avoid extended, unavoidable power outages, like those experienced during ice storms and tornadoes, PEC sells portable generators at cost to its members. Three models are available to meet varying needs of PEC members, and financing at interest rates as low as nine percent (9%) for members participating in Sure BET is available. Financing to members not participating in Sure BET is available at 14% interest. All generators can be financed and paid out monthly on members' electric bills for two years.

### **Long Life Light Bulbs**

PEC sells long life light bulbs designed to last up to 10 times longer than traditional light bulbs. These bulbs have an expected life of 5,000 to 15,000 hours! Sometimes, light bulbs burn out quickly in a home because the voltage is a little higher than the light bulb was designed to handle. The long life light bulbs offered by PEC are designed for 130 volts, the light output at 120 volts may be a little less than the output of bulbs designed to operate at this lower voltage.

### **Line Techs**

To become a line technician for People's Electric Cooperative requires intense training prior to being allowed to work on "hot lines". When a new employee is hired in this field, he/she enters as a Construction Technician I. After working with more experienced employees and further training, he/she advances to Construction Technician II. The process for advancement to Senior Line Technician requires individual evaluation and the demonstration of proficiency in all areas of line work. The minimum time required to achieve this position is four years.

### **Safety**

All PEC employees are encouraged to work safely. The importance placed on this is evidenced by the fact that PEC is one of only two Oklahoma cooperatives to ever obtain one million man hours worked without a lost time accident. The other Oklahoma cooperative is Northwestern Electric Cooperative in Woodward.

PEC has a variety of programs aimed at electrical safety. These programs are available for groups of all types and sizes. Volunteer fire departments, school classrooms, Boy/Girl Scout Troops and any number of other organizations can benefit from these safety programs. In addition, two programs are available each year for specific groups of students in PEC's service territory. The Safety Ranger program is offered to second graders in the area. Following an in-classroom presentation, students are given a coloring book which reinforces the electric safety topics covered in the program. Sixth graders participate each year in PEC's Safety Poster Contest. Seven district winners receive \$25 cash and three overall winners are awarded \$50 each in conjunction with this program.

### **Youth Tour**

Each year, PEC selects a number of juniors to send on the Youth Tour in Washington, D.C. While in D.C., these students join students from across the United States to see all of the history our nation's Capital has to offer. Beginning in 2007, a classroom test will be given to select the top students to compete for the trips during an interview competition. From 1992 until 2006, these students were selected during an academic tournament. Prior to 1992, an essay contest was used to select these students.

### **Executive VP & CEO**

Since it was formed by those 10 pioneering men 75 years ago until today, People's Electric Cooperative has been under the leadership of only six Executive Vice President/CEOs. PEC's first Executive VP & CEO was J.O. Vernon, who later became the Superintendent of Vanoss Schools. Since 1985, the Executive VP & CEO has been Randy Ethridge. Mr. Ethridge was first hired as general manager at

another Oklahoma electric cooperative at the age of 23, making him the youngest person ever to become manager of a rural electric cooperative.

### **Board of Trustees**

PEC's members/owners elect a Board of Trustees who set policies, establish rules and regulations, borrow money and perform many other functions for the cooperative. The only employee actually hired by the Board of Trustees of PEC is the Executive VP & CEO, and Board Members are prohibited by PEC's Bylaws (which is a set of guidelines adopted by the members for the Board of Trustees) from hiring their own relatives.

The first President of PEC's board was Delbert Hardin. The Pontotoc County town of Harden City is named after Mr. Harden. PEC's current Board of Directors includes Dr. Laurin Patton of Ada, Chairman of the Board & President; Eldon Flinn of Fittstown, Vice Chairman; Jack Lambert of Ada, Secretary; Bob Thomas of Coalgate, Treasurer; Jenny Trett of Sulphur, board member.

### **Capital Credits**

Unlike companies such as OG&E and PSO who return margins to stockholders, all of PEC's net margins are returned to its customers/members. Profits that PEC makes are called capital credits. Each year, capital credits are returned to PEC members based on their proportionate share of these capital credits. Approximately \$1,014,290 in capital credits were returned to PEC members this year. Since 1987, PEC has returned approximately \$16,414,290 in capital credits to its members.

### **Rural Electric Cooperatives and Tomorrow**

The task of the rural electric cooperatives is far from complete. Technological change is constantly increasing the electrical demand of present members. In meeting the challenges of tomorrow, the electric utility industry is seeking answers to environmental problems and to depletion of basic energy sources. Research is already looking at such exotic forms of electric generation as conversion of sea water to energy through nuclear fusion, large solar energy farms and orbiting space stations which will collect solar energy and transmit it to earth.

Other challenges of the environment are facing electric cooperatives and the rest of the industry. Can safe, economical methods of high voltage underground transmission be developed? To what extent can water used in cooling at power plants be reused to increase production of food, particularly seafood? Use of electricity in combating environmental pollution is an exciting field.

Electric cooperatives over the nation are playing their role in research and development involving these questions and many more in the electric power industry. The desire to serve and the enthusiasm and determination which have sparked the success of rural electric cooperative over the years will meet these challenges of tomorrow as well.