

Rural Electric

YOUTH TOUR



The Rural Electric Youth Tour is a group of more than 1,500 high school students who visit Washington, D.C., every June, year after year from all over America. They come because the people who lead electric cooperatives believe education is important—education about electric cooperatives and education about America.

Students on the tour learn about electric cooperatives, American history and U.S. government. They attend educational seminars and visit with their representatives in the House and the Senate. They see historical sights in and around Washington—the U.S. Capitol, the monuments, the Smithsonian, Arlington Cemetery, Mt. Vernon and countless other places—and they learn about the cooperative business model.

YOUTH TOUR GOALS

The Youth Tour provides the opportunity for young people to:

- Increase their understanding of the value of rural electrification;
- Become more familiar with the historical and political environment of the nation's capital through visits to monuments, government buildings and cooperative organizations;
- Visit elected officials in order to increase their knowledge of how the federal government works;
- Expand their understanding of cooperatives as a business model.

THE ORIGIN OF THE YOUTH TOUR

Senator Lyndon Johnson inspired the Youth Tour when he addressed the NRECA Annual Meeting in Chicago in 1957. The Senator declared, "If one thing goes out of this meeting, it will be sending youngsters to the national capital where they can actually see what the flag stands for and represents."

Consequently, beginning in 1957, some of the Texas electric cooperatives sent groups of young people to Washington to work during the summer in Senator Johnson's office, to learn more about government in action. In 1958, rural electric cooperatives in Iowa sponsored the first group of 34 young people on a week-long study tour of the nation's capital. The idea grew and other states sent busloads of young people throughout the summer. By 1959, the Youth Tour had grown to 130 youths.

In 1964, the National Rural Electric Cooperative Association (NRECA) began to coordinate the program and suggested that co-op representatives from each state arrange to be in Washington, D.C. during Youth Tour week. The first year of the coordinated tour included approximately 400 young people from 12 states. The idea has continued to grow and today more than 1,800 young people and chaperones participate in the Youth Tour every year.

NRECA coordinates hotel accommodations, maintains a Youth Tour office in the hotel, arranges to have a full time nurse on duty and offers T-shirts, postage stamps and Youth Tour souvenirs for sale. NRECA organizes educational programs on cooperatives, rural electrification and government. Additionally, NRECA coordinates Youth Day during which all Youth Tour participants assemble to listen to prominent speakers and complete the day with a dinner dance. NRECA also coordinates boat cruises on the Potomac and theater tickets to one of Washington's professional theaters.

YOUTH LEADERSHIP COUNCIL

In 1976, the NRECA board of directors created the Youth Consulting Board. In 1998, the structure of the Youth Consulting Board was redesigned and is now known as the NRECA Youth Leadership Council.

The Youth Leadership Council (YLC) is a joint effort of local electric co-ops, statewides and NRECA that was created to provide an extension of youth activities available to states participating in the Youth Tour program. Each state is entitled to have one representative on the Youth Leadership Council. The representatives are selected by statewide Youth Tour directors through a variety of methods. The new Youth Leadership Council members are announced each year during the Youth Day program in Washington, D.C.

The YLC is designed to develop the participants' leadership and presentation skills and provide a broader understanding of electric cooperatives. All YLC members attend the NRECA Youth Leadership Conference and the NRECA Annual Meeting. In addition, YLC members are selected from NRECA Regional Meeting host states to speak before the membership about their Youth Tour experiences.

The NRECA Youth Leadership Conference is held each July following the Youth Tour. The Conference provides hands-on activities that promote individual leadership development. During the conference, participants select a spokesperson to address the membership of the NRECA Annual Meeting and the Youth Tour delegates the following summer.

The NRECA Annual Meeting annually hosts nearly 7,000 rural electric cooperative members and is held in a variety of major cities nationwide. The YLC provides assistance to the NRECA staff during the NRECA Annual Meeting, attends educational seminars and participates in a variety of programs. They have an opportunity to meet with many influential people, elected officials, NRECA's board of directors, the CEO and administrative staff.

HOW TO PARTICIPATE IN THE YOUTH TOUR

If you want to join this Washington tradition, contact your local electric cooperative or public power district for more information. The tour is coordinated by NRECA and is sponsored jointly by NRECA, electric cooperatives in more than 38 states and by statewide associations of electric cooperative systems in each of those states.

Cooperatives & Your

COMMUNITY



WHAT IS A COOPERATIVE?

A cooperative is a business. In many ways, it is like any other business; but in several important ways, it is unique and different. A cooperative business belongs to the people who use it—people who have organized to provide themselves with the goods and services they need. A cooperative operates for the benefit of its members.

These member-owners share equally in the control of their cooperative. They meet at regular intervals, review detailed reports and elect directors from among themselves. The directors in turn hire general managers and CEOs to manage the daily affairs of the cooperative in a way that serves the members' interests.

Members invest in the cooperative business to provide capital for a strong and efficient operation. All net savings left after the co-op's bills are paid and money is set aside for operations and improvements are returned to co-op members.

Cooperatives may be organized to provide just about any good or service such as:

- | Business services
- | Childcare
- | Credit and personal financial services
- | Employment
- | Equipment, hardware, and farm supplies
- | Utilities and cable T.V. services
- | Food and food services
- | Funeral planning
- | Health care
- | Housing
- | Insurance
- | Legal and professional services
- | Marketing of agricultural and other products

Americans hold over 350 million co-op memberships. These people have organized to provide themselves with goods and services in nearly every sector of our economy. Their cooperatives may be organized in a number of ways and for many purposes.

CATEGORIES OF COOPERATIVES

Producer-owned cooperatives are owned by farmers, producers, or small businesses. Agricultural producers or crafts people organize cooperatives to process and market their goods, and to provide themselves with credit, equipment, and production supplies. Similarly, retail stores or small businesses organize cooperatives to provide supplies or common services.

Consumer-owned cooperatives enable consumers to secure a wide array of goods and services. For example, they may offer health care, utilities, insurance, or housing. They may buy and sell food, heating fuel, hardware and other consumer goods. Or, they may operate credit unions, child care facilities and funeral and memorial societies. Almost all consumer needs can be met by a cooperative.

Worker-owned cooperatives are businesses owned and controlled by their employees. Worker cooperatives may be found in almost any industry. Examples include employee-owned food stores, processing companies, restaurants, taxicab companies, sewing companies, timber processors, or other industries.

COOPERATIVE BUSINESS FACTS

- More than 29,000 cooperatives operate in every sector of the economy and in every congressional district; Americans hold over 350 million co-op memberships.
- U.S. cooperatives generate 2 million jobs and make a substantial contribution to the U.S. economy with annual sales of \$652 billion and possessing assets of \$3 trillion.
- The majority of our country's 2 million farmers are members of the nearly 3,000 farmer-owned cooperatives. They provide over 250 thousand jobs and annual wages of over \$8 billion.
- Over 7,500 credit unions provide financial services to 91 million U.S. consumers.
- More than 900 rural electric co-ops deliver electricity to more than 42 million people in 47 states. This makes up 42 percent of the nation's electric distribution lines and covers 75 percent of our country's land mass.
- Approximately 233 million people are served by insurance companies owned by or closely affiliated with co-ops.
- Food co-ops have been innovators in the areas of unit pricing, consumer protection, organic and bulk foods and nutritional labeling.
- More than 50,000 families in the U.S. use cooperative day care centers, giving co-ops a crucial role in the care of our children.
- About 1.2 million rural Americans in 31 states are served by the 260 telephone cooperatives.
- In the United States, more than 1.2 million families of all income levels live in homes owned and operated through cooperative associations.

Statistics gathered from the National Cooperative Business Association.

PRINCIPLES

Cooperatives worldwide generally operate using the same principles as adopted in 1995 by the International Cooperative Alliance.

The principles are part of a cooperative statement of identity that also includes the definition of a cooperative and a list of cooperative values.

DEFINITION

A cooperative is an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise.

VALUES

Cooperatives are based on these values:

Self-help and Self-responsibility — through the cooperative, members play an active role in meeting their own needs and accept responsibility for guiding their cooperative;

Democracy — the co-op is governed through a democratic process that gives members ultimate authority over the co-op;

Equality and Equity — all co-op members have equal rights and responsibilities and all members are entitled to be treated impartially and fairly;

Solidarity — co-ops members work together cooperatively to achieve the greater good for all the members and for the cooperative enterprise itself.

COOPERATIVE PRINCIPLES

Voluntary and Open Membership — Cooperatives are voluntary organizations, open to all persons able to use their services and willing to accept the responsibilities of membership, without gender, social, racial, political or religious discrimination.

Democratic Member Control — Cooperatives are democratic organizations controlled by their members, who actively participate in setting their policies and making decisions. Men and women serving as elected representatives are accountable to the membership.

Member Economic Participation — Members contribute equitably to, and democratically control, the capital of their cooperative. At least part of that capital is usually the common property of the cooperative. They usually receive limited compensation, if any, on capital subscribed as a condition of membership. Members allocate surpluses for any or all of the following purposes: developing the cooperative, possibly by setting up reserves, part of which at least would be indivisible; benefiting members in proportion to their transactions with the cooperative; and supporting other activities approved by the membership.

Autonomy and Independence — Cooperatives are autonomous, self-help organizations controlled by their members. If they enter into agreements with other organizations, including governments, or raise capital from external sources, they do so on terms that ensure democratic control by their members and maintain their cooperative autonomy.

Education, Training and Information — Cooperatives provide education and training for their members, elected representatives, managers and employees so they can contribute effectively to the development of their cooperatives. They inform the general public—particularly young people and opinion leaders—about the nature and benefits of cooperation.

Cooperation among Cooperatives — Cooperatives serve their members most effectively and strengthen the cooperative movement by working together through local, national, regional and international structures.

Concern for Community — While focusing on member needs, cooperatives work for the sustainable development of their communities through policies accepted by their members.

SHORT HISTORY OF COOPERATIVES

Scholars find that the cooperative way of sharing resources and risks is as old as our civilization and it has a remarkable history and evolution. Some of the earliest forms of cooperation probably occurred during group animal hunts, in united efforts to achieve mutual protection, and in community farming. In North America, the cooperative way is said to date back to the 1620 Mayflower Compact when the Pilgrims banded together on a cooperative basis.

1752 The first successful cooperative was organized in the United States when Benjamin Franklin formed the Philadelphia Contributionship for the Insurance of Houses from Loss by Fire—the oldest continuing cooperative in the U.S.

1844 The Rochdale Equitable Pioneers Society was established in Rochdale, England. These pioneers wrote down a set of principles to operate their food cooperative, which contributed to their success and spread to other cooperatives around the world. The successful establishment of the cooperative in Rochdale marks the beginning of the modern cooperative era.

1844 The Rochdale Equitable Pioneers Society opened a food cooperative store on Toad Lane in Rochdale, England. Toad Lane is considered the birthplace of modern cooperatives because the principles and practices of the Pioneers assured the success of the cooperative model.

1865 The State of Michigan passed what is believed to be the first law recognizing the cooperative method of buying and selling.

1895 The International Cooperative Alliance (ICA) was established. Today over 200 national cooperative organizations representing 92 nations belong to ICA, the apex organization of all national cooperative movements. The ICA aims to promote cooperative development and trade worldwide and boasts an individual membership of more than 750 million people.

1916 The first national cooperative association was formed—now known as the National Cooperative Business Association.

1922 The U.S. Congress passed the Capper-Volstead Act allowing farmers to act together to market their products without violating antitrust laws.

1920s & 30s The U.S. Congress established governmental agencies—the Farm Credit Administration (1929), the National Credit Union Administration (1934) and the Rural Electrification Administration (1935)—to provide loans and assistance to cooperatives.

1978 The U.S. Congress passed the National Consumer Cooperative Bank Act, establishing the National Cooperative Bank

THE COOPERATIVE CONCEPT

The Soda Pop Co-op—A true story

Cooperatives actively serve their consumers, their communities, and the nation. One important example of cooperatives' community involvement is NRECA's Rural Electric Youth Tour. This program introduces students to the nation's capital where they come to learn about democracy, see the historic sights and meet other students from across the United States—and learn about cooperatives!

During one Youth Tour, one group of students confronted and solved a problem using the cooperative concept. They discovered that the price for soda pop available from the hotel vending machines was as much as four times as what it cost at a grocery store! The machines did not always work properly and some of the group's favorite kinds of soda pop were not offered at all. The students were stuck with an overpriced, unreliable, and insufficient soda pop source. They wanted reliable service and selection at affordable prices. This resourceful group came up with the idea of pooling their money to buy several cases of soda pop. They all voted on what kind to buy and they paid less than what it cost at the hotel.

They had formed a co-op, the soda pop co-op. And, like co-ops everywhere, this was a nonprofit cooperative, operating on the democratic principle of one member, one vote, and open to all members. From collecting money from the membership to making the purchase and delivering the product, there were varieties of tasks associated with running this co-op. By working together, the students made the soda pop co-op quite a success.

CO-OPS MEET PEOPLE'S NEEDS

There are many kinds of cooperatives, but common to all of them are the concepts of member benefit, member control, and member involvement.

The soda pop co-op was created like so many other cooperatives—out of a need that was best met the cooperative way. Throughout history, cooperatives have provided the means to supply people and communities with essential products or services that were otherwise unavailable. When electricity was not available in rural areas, people formed co-ops to get the job done. Cooperatives are the locally based member-controlled way to serve the needs of a community.

If you are unfamiliar with cooperatives, just look around you. You may begin every day with the products and services of cooperative businesses. From the morning news to your fruit juice to the butter on your toast, cooperatives are everywhere—the news service, Associated Press is a co-op and so are Sunkist Growers, Ocean Spray and Land O'Lakes, just to note a few familiar names. If your day's activities take you to your credit union, you are possibly doing business with another co-op, not to mention your health care system or your insurance company. Most of the dairy products and produce at your grocery come from co-ops, as might your electric and telephone service.

Any business can be organized as a cooperative. Setting up and using co-ops is one method of meeting basic needs that might not otherwise be met. Co-ops provide a great way to have a voice in how

people receive services and products. They are an excellent means for being involved in building our communities.

ELECTRIC COOPERATIVES

If you are participating in the Rural Electric Youth Tour, you are certainly familiar with electric cooperatives. However, do you know that America's electric cooperatives are:

- | Private independent electric utility businesses;
- | Owned by the consumers they serve;
- | Incorporated under the laws of the states in which they operate;
- | Established to provide at-cost electric service;
- | Governed by a board of directors elected from the membership, which sets policies and procedures that are implemented by the cooperative's professional staff?

You probably know that distribution cooperatives deliver electricity to the consumer and that generation and transmission cooperatives (G&T) generate and transmit electricity to distribution co-ops.

In addition to electric service, many electric co-ops are involved in community development and revitalization projects such as small business development and jobs creation, improvement of water and sewer systems, and assistance in delivery of health care and educational services.

ELECTRIC CO-OP FACTS AT-A-GLANCE

841 distribution and 65 G&T cooperatives serve:

- | 42 million people in 47 states;
- | 18 million businesses, homes, schools, churches, farms, irrigation systems, and other establishments in 2,500 of 3,141 counties in the U.S.

To perform their mission, electric cooperatives:

- | Own assets worth \$112 billion;
- | Own and maintain 2.5 million miles, or 42 percent of the nation's electric distribution lines, covering three quarters of the nation's landmass;
- | Deliver 10 percent of the total kilowatt/hours sold in the U.S. each year;
- | Generate 5 percent of the total electricity produced in the U.S. each year;
- | Employ nearly 70,000 people in the United States.

Collectively, U.S. electric co-ops pay more than \$1.4 billion in state and local taxes each year.

MEMBER BENEFIT: THE COOPERATIVE DIFFERENCE

The only reason a not-for-profit member-owned cooperative exists is to provide benefits to its members. This mission makes the cooperative different from other forms of business.

In contrast to a cooperative, a for-profit investor-owned business exists to make the maximum profit for its stockholders. These stockholders typically do not represent much, if any, of the firm's business volume nor do they ordinarily have much "stake" in the local community where the firm is doing business. Stockholders primarily invest for a profit or return on their investment. Whether the product or service is one that should be provided, or whether it benefits a particular community, is a secondary consideration. For-profit businesses are essential components of the U.S. economy and they make significant contributions to the American way of life. However, many needs are often best met through a cooperative enterprise.

The cooperative form of business brings into the American free enterprise system people from every walk of life and every economic condition. They enrich our communities, large and small. Cooperatives are the means through which those who work together to build a business can attain all its benefits and those who need service can receive it on their terms.

The difference between service-oriented cooperatives and profit-oriented businesses was never clearer than in the history of America's rural electric cooperatives. Prior to 1935, just ten percent of our nation's countryside had electricity in the home. Most companies providing electricity then were for-profit investor-owned firms. Those companies chose to not serve rural America because they could not make a profit in sparsely populated areas. As a result, rural Americans had no electricity.

Rural America was in the dark until President Franklin Roosevelt's executive order established the Rural Electrification Administration in 1936 (renamed Rural Utilities Service in October 1994). With the help of REA financial and engineering resources, rural Americans formed member-owned electric utility systems, organized as cooperative businesses. Those cooperative members used the American free enterprise system to build their own electric utility companies. The new electric cooperatives were created for only one reason: to provide the benefits of electricity service to their members.

When electric cooperatives began operating, the benefits of electric service lifted peoples' lives out of darkness and brought them the power to pump water, refrigerate food, and cook without a wood stove. The increase in productivity created by electric power on farms and ranches strengthened the economies of rural communities. These changes came because the only purpose of the electric cooperative was, and still is, to provide benefits to its members.

The benefits provided by electric co-ops also extend into local communities every day. It may be a matter of sponsoring a community health fair. It may be offering Red Cross first-aid classes, organizing a neighborhood watch, making meeting space available for community groups, offering clerical help and other assistance for community betterment projects, participating in career days at high schools or teaching youngsters about electrical safety. Electric co-ops are always part of the community because the co-op members are the community.

MEMBER CONTROL AND INVOLVEMENT

Member control is another distinguishing characteristic of cooperatives. As democratically governed organizations, co-ops are led by the voices of their members.

Co-op members influence the way in which a cooperative is governed and operated by electing a board of directors to act on their behalf. Only co-op members are eligible to serve as co-op directors and directors are committed to represent the views of all the members.

The co-op board of directors sets the overall direction for the cooperative. The co-op's CEO and staff are responsible for the day-to-day operation of the co-op. The views of the membership are communicated to the co-op staff because the co-op board supervises the co-op CEO.

Member control also has its responsibilities. An early newsletter of a Virginia electric co-op expressed this way: "If you do your share in making your cooperative succeed, you will be part owner of a going business that will yield constantly increasing benefits to you and your neighbors. Attend the annual meeting, help elect your board of directors, have a voice in the success of your cooperative."

Certainly, the early electric co-op members and boards of directors had a great responsibility to get their co-ops off to promising starts. Today, member involvement in co-op governance and direction is even more important as new generations of co-op members become responsible for keeping the co-op focused on providing benefits.

STANDING UP FOR THE CO-OP

Member involvement also includes speaking up on behalf of the cooperative regarding public policy, legislation, and regulation. At both the state and federal levels, new laws and regulations are proposed each year that could affect the member's ability to run their own co-op or the ability of the co-op to provide beneficial service.

In the best American tradition of civic duty, co-op members are called upon to write and call their elected representatives and state their views. The past few years have brought unprecedented change in the electric utility industry and electric co-op members have diligently stood their ground, lest the co-op form of business be weakened. Those who receive benefits from the cooperative are also called upon to stand up for what is rightfully theirs.

INTERNATIONAL COOPERATIVES: ELECTRICITY COMES TO BANGLADESH

The Bangladesh countryside is characterized by rice paddies, fish ponds and occasional stands of trees, and busy people—harvesting rice, plowing with water buffalo, tossing fish nets into ponds. You cannot cross the Bangladesh countryside and not see people at work. Thanks to electricity, there are new jobs—and some of the old jobs are a little easier. In 1962, NRECA brought rural electric advisors to Bangladesh to introduce a program of rural electrification, one modeled after the network of cooperatives that have worked so well in the United States.

Ed Wheeler, who joined the Bangladesh team after working at Pierce-Pepin Electric Co-op in Wisconsin, first came to Bangladesh as a missionary in 1975. "At that time, electricity was very exotic. It was only for the wealthier people and the people in the cities," said Mr. Wheeler. "And in Bangladesh, it wasn't just the introduction of the technology that was a challenge; it was the introduction of a democratic cooperative. The ordinary citizen just feels he's never had a say on what happens in his country and that he never will," Wheeler observed.

Since 1978, over 100 rural electric experts have worked in Bangladesh helping create a national Rural Electrification Board and organize 53 cooperatives serving more than six million people. More than 50,000 miles of line have been constructed. Factories followed, bringing thousands of jobs. In addition, with power for irrigation pumps, farmers began reaping three crops a year instead of one. Finally, in addition to the industrial and agricultural benefits, lights allowed an educational advantage—school children could then study at night.

HISTORY

Of Rural Electrification



IN THE BEGINNING

As the lights began coming on all over rural America, the first magic glow of the naked bulb in the farm home was witnessed with a sense of wonder and awe. A Kentucky farmer, remembering his boyhood, recalled: "I'll never forget that day—it was late on a November afternoon, just before dark. All we had were wires hanging down from the ceiling in every room, with bare bulbs on the end. Dad turned on the one in the kitchen first, and he just stood there, holding on to the pull chain. He said to me, 'Carl, come here and hang on to this so I can turn on the light in the sitting room.' I knew he didn't have to do that and I told him to stop holding it, that it would stay on. He finally let go, and then looked kind of foolish."

AMERICA'S RURAL ELECTRIC STORY

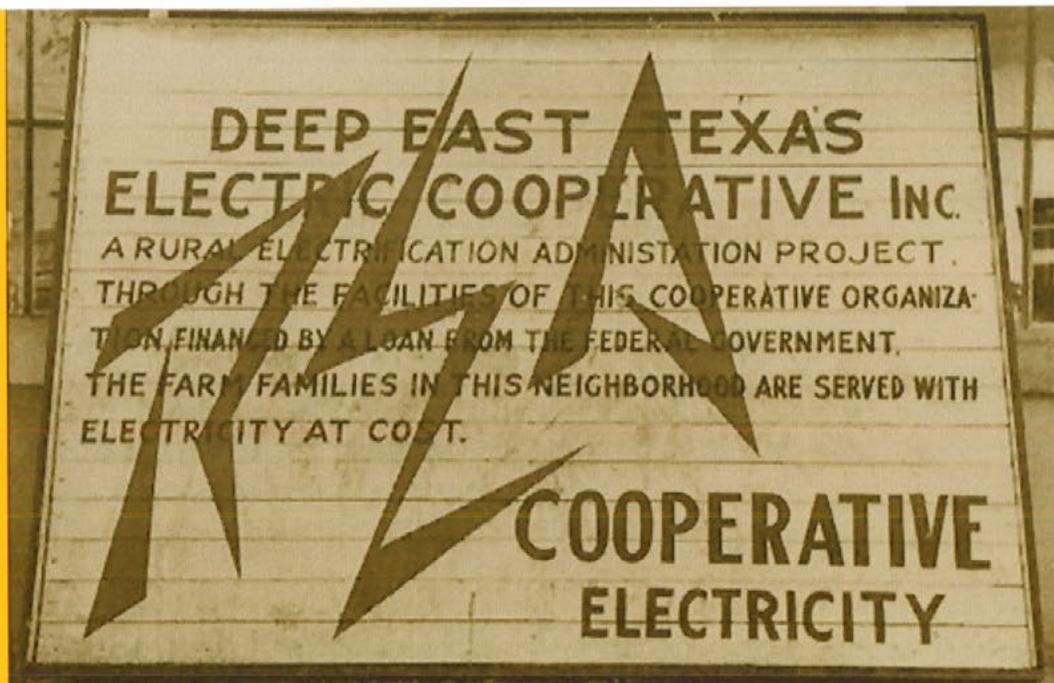
Today, rural America is a land made bright and thriving by an industrious, imaginative people, a people who have created cooperative institutions to improve their lives and to enrich and increase the productivity of a nation.

The glimmering tapestries of light that set the nights aglow throughout all of rural America are testaments to perhaps the most singular and stunning of these cooperative achievements—the bringing of light and power to the land.



The story of rural electrification begins in darkness and then comes alive in the radiant light of hope and promise which lives within the human spirit. It is a story of how hopes and excitement were translated into vital and imaginative action, into a unique partnership struck by the federal government and rural people in their determined effort to electrify the land and "get lights." The people of rural America realized their dreams through hard work and loans and technical assistance from a little agency they called "the REA." How they successfully built their cooperative institutions to achieve the light and power and how each generation of rural Americans have nurtured and carried forward the early work is a magnificent and intensely human story of struggle, trial and triumph.

Today, as those early struggles stand many decades distant, the early organizing experiences and triumphs of rural electrification's pioneers are told and celebrated against a backdrop of folk legend and lore. But the old power and magic persists in present-day rural electrification. Those early, moving experiences are beacons and guideposts to the present, enlivening, enriching and inspiring legacy which rural electric people continue today. The rural electric experience is never-ending. Here is that story, America's rural electric story.



THE DAWN OF HOPE

Because there was no electricity, life and work for most rural Americans in the 1930s was fixed in a cycle of hardship and drudgery, little had changed from decades before. Only the most affluent farmers and ranchers or those near towns could get “the electric.” The majority of rural people, nearly 90 percent, lived and labored in a dark and powerless land.

But, beginning in 1935, the hope for electricity in rural America became a reality. The federal government had a plan to provide assistance to the people of rural America and help them bring the power into their lives. They could organize cooperatively and secure loans to electrify the rural areas. This message swept the land. It was the beginning of the full-scale electrification of America, a partnership of the people with their government. People called it “the REA.”

President Franklin D. Roosevelt created the Rural Electrification Administration (REA) with an executive order signed in May 1935. With this action was the recognition that if rural America was ever to become electrified, there was need for government involvement. But, it was the driving force of the rural people themselves that became the true catalyst. After it became apparent that private utilities were not going to construct electric lines with REA loan funds under the agency’s plan for area-wide rural electrification, it was the farmer-owned cooperatives, many newly organized for the REA loans, that came to the forefront. Their applications flooded the REA offices in Washington, D.C. By 1936, the movement for cooperative rural electrification became a groundswell of popular support that swept the land. Congress passed legislation making REA permanent with provisions for cooperatives.

Meanwhile, rural electric organization meetings increased and intensified. REA field men, meeting day and night, outlined procedures and principles to the rural leaders. It took a tremendous effort, a wagon-load of patience and hard work, as these committed men and women went up and down the

country roads, working from farm to farm, to get the needed signatures of new members, obtaining the hard-to-come-by \$5 “sign-up” fees required to become a co-op member. Then began the long hours of mapping electric lines with the engineers, acquiring land easements for the lines from their neighbors, and finally, preparing the loan application to REA. At the same time, REA engineers and specialists in Washington worked at a frenzied pace to keep up with the demand. Yes, the REA was really coming. Electricity for rural America!

How the rural people in partnership with their federal government electrified the rural areas is one of the greatest achievements of cooperative and economic democracy this nation has ever known. In hundreds and hundreds of regions, there were the first hopes and excitement, then the cooperative commitment to bring light and power into their lives to “get the REA.”

The stories of the early days of rural electrification are all unique but similar—rural men and women educating and organizing—for power. They met, they planned and they created their own cooperative organizations. All over the country, the poles began to dot the landscape and, overhead, new lines of power were coming into the lives of rural Americans. Line crews, often aided by eager members themselves, cleared rights-of-way and dug holes, while others came behind with the poles and hardware. Last, the crews came to string the wire.

In the earliest days, raising the lines was sometimes a primitive affair, but by 1936, REA developed assembly line methods for line construction with uniform procedures and standardized types of electrical hardware. The results were lowered costs, which made electricity feasible for more and more rural people. The number and rate of REA projects accelerated. With loans and technical assistance from the REA, rural electrification was on the move.



THE NEW “HIRED HAND”

Soon after light and power came into the home, farmers and ranchers began to realize the potential for electricity in their daily work. Electricity could grind feed, shell corn, pump water and saw wood. It powered milking machines and lifted hay into the barn. Electricity furnished the bright lights in the barnyard, giving precious extra hours to bring in the harvest. At the heart of all these lightened labors and the increased productivity was the electric motor—the new “hired hand.”

A new cooperative enterprise soon appeared on Main Street. The first offices of rural electric systems were most often humble, store-front affairs, but they were welcome additions to rural communities determined to pull themselves out of the throes of a Depression-ridden rural America. The cooperative, a unique new enterprise, soon found itself in the forefront of community affairs. The directors that the cooperative members had elected were their neighbors and friends, farmers and ranchers like themselves. These directors met monthly to set policy and give guidance to the cooperative manager.

The entire co-op form of running the system was given full and democratic expression once a year at the annual membership meeting. Under one-member/one-vote bylaws, member control was assured. It was, and continues to be, economic democracy at work.

A BOON TO THE ECONOMY

There was a quickening of life in the community. Schools, churches and meeting places now had lights and other electric conveniences for the first time. All of the electric improvements created new economic activity along Main Street. New business and new kinds of businesses began to appear—electric wiring, plumbing and new electric appliances could be found in the stores. In addition, electricity brought new industry. With electric power available from the co-op, factories could locate in rural areas, consequently generating more jobs. These new employment opportunities gave hope, promise and a future to the younger generation in rural America—rural opportunities.

The rural electric co-op had become a vital economic foundation with its board of directors providing a rich store of new community leadership. Rural electrification and the respect, responsibility and revitalization that it accomplished, was not so wild a dream after all.

The people of rural America built a remarkably unified and enduring movement, determined to succeed. Much of their solidarity came from the tenacious cooperative spirit so deep-rooted in the governing of their electric systems. From the grassroots power of the people out on the lines, through the strong and active “statewide” organizations, to Washington, D.C. and the National Rural Electric Cooperative Association (NRECA), this bulwark of unity and a sense of community have ensured survival, growth, and maturity for cooperative rural electrification. This unity continues as cooperatives’ greatest source of strength—especially today as cooperatives face deregulation in the industry and competition in the marketplace.

ELECTRIC USE SOARS

When rural electric cooperatives were first organized, their directors and managers wondered how they and their neighbors were going to use the forty kilowatt-hours of electricity the lines were built to carry. Forty kilowatt-hours (kWh) a month seemed impossible.

Their apprehensions were short-lived, as indicated by a review of national rural electric growth rates. In 1948, ten years after the program started, the astronomical figure of 40 kWh, thought to be wildly optimistic earlier, had tripled to more than 120 kWh as a national average of on-farm consumption. And electric consumption in rural areas continued to rise at phenomenal rates for several decades. The accelerating consumption, combined with the millions of farms that were being electrified for the first time, made rural electrification the growth industry in agricultural areas for many years—much to the delight of appliance and equipment manufacturers and dealers.

In 1938, when 40 kWh seemed like a pipe dream, the typical rural electric system had built and was operating 250 miles of line with \$230,000 the co-op had borrowed from the Rural Electrification

Administration. The fledgling electric utility had about 800 consumer-members who had elected directors to govern the affairs of the organization. The co-op staff consisted of a manager, a book-keeper, a line foreman and a crew.

By the time of the bombing of Pearl Harbor in December 1941 and the outbreak of World War II, there were nearly 775 rural electric systems operating or under development across rural America. The war effort slowed the advance of rural electrification, but at the war's close, new legislation was enacted by Congress to complete the job. This legislation liberalized interest rates and payback periods for REA loans, making rural electrification possible for even the most remote regions.

In 1947, there were still 2.5 million farm families without light and power, but the period of rural electrification's greatest growth was about to begin. Exceptional growth followed for electric co-ops all across the nation. By 1948, more than 40,000 consumers a month were being connected to co-op lines. In 1949 alone, 184,000 miles of electric line were energized. By 1953, close to five million farms or 88 percent, had been electrified and there were 1.2 million miles of electric lines singing along America's rural roads and highways.

By the 25th anniversary of REA in May 1960, the big push to construct and develop local co-op systems had resulted in 97 percent of all U.S. farms being electrified. But construction of this electric power delivery system to serve rural America did not complete the rural electrification program or the missions of the electric co-ops and the REA. The growth of electricity consumption was increasing and there was no decrease in sight. To satisfy the growing demand for electricity, higher capacity substation equipment and electric lines had to replace the original system. That required large financial investments by the co-ops.

Co-ops were also needing more electric power to deliver to members through their local systems. At that time, the local co-op typically bought most of its power from two outside sources—purchases from private power companies and from the federal government's system of hydroelectric dams. The federal policy, known as "preference," gave co-ops and publicly-owned utilities the first right to buy hydroelectricity from the taxpayer-financed dams. This policy greatly aided rural electrification because the availability of federal electric power kept private electric companies from gaining a monopoly over the supply of electricity and charging extraordinary rates.

However, by 1960, the supply available from both the federal government and private power companies was not enough to meet the co-op's growing needs. One solution was to create new groups and federations of co-ops to generate and transmit power to many local distribution systems. Local distribution co-ops worked together to develop generation and transmission cooperatives (G&Ts), that make up power supply networks which today reach over vast regions to supply an increasing portion of the power needed by cooperative members. These cooperatively-owned and operated power plants and transmission lines help the local distribution cooperative maintain an ample supply of electricity. Today, cooperative G&Ts generate five percent of the total electricity produced in the U.S. each year. And because distribution co-ops are members of the G&Ts, they have a voice in how the G&T is operated and how it plans to meet the distribution co-ops' future needs.



THE TRUE IMPACT OF RURAL ELECTRICITY

Rural electrification has had a profound impact on the way Americans live and work. It has provided high-quality food and fiber for the nation and the world. It has created commercial and industrial growth. And it has made a new-found home for crowd-weary people.

The electricity provided by rural electric systems has allowed the American farmer and rancher to increase productivity to easily feed our nation and help feed a hungry world—at a cost that allows Americans to spend less of their income on food than people of any other nation.

Electricity from cooperatives has allowed small and large industries to locate in rural areas. Thousands of companies have been aided by economic development initiatives of rural electric leaders, providing hundreds of thousands of new jobs and relieving population pressures on America's cities.

Because there are electric cooperatives, today's rural America enjoys greatly diversified economic activity with greater stability and security for millions of its residents—a diversity that has reached into social and cultural life, enriching the community. And because of electricity, rural America is an attractive and desirable place to work and to raise families—a land of opportunity.

In the beginning, the organizers of the rural electric systems knew they were making a big commitment to the future of their communities. In partnership with their federal government through the REA, they turned a dream into reality and set in motion one of the most amazing success stories of cooperative and economic democracy this nation has ever known. They left a powerful and impressive legacy of success. Today, 36 million consumers are served in 47 states by more than 900 private, consumer-owned electric cooperatives reaching out to the most remote regions of the nation.

But the job is not finished. While rural electric systems operate and maintain nearly half this country's power lines, those lines reach only about six consumers per mile of line, well below the total industry average of 32 customers per mile of line. That difference in consumer density means that co-ops are receiving less income per mile of line than other electric utilities, while still having to cover the cost of building and maintaining a very large system. These difficult economic challenges continue to be overcome through the power of cooperation among people and through their partnership with their state and federal governments and regulatory agencies. The strength of that partnership depends on how well co-op members communicate with their elected representatives in the U.S. Congress and the state legislatures about issues that affect their co-op.

CELEBRATING AND GIVING THANKS

Grateful farm and ranch families wrote letters of thanks to President and Mrs. Roosevelt, and later to President Truman, telling them how electricity had improved their lives and their work. Letters to REA told of the night that the lights came on and how both children and parents ran through their homes, turning lights on and off. Some even told of hurling their hated kerosene lamps, sooty glass chimneys and all, out of the window.

In Tennessee, a farmer who got his lights in the early 1940s, rose the next Sunday at church to bear witness: "Brothers and sisters, I want to tell you this. The greatest thing on earth is to have the love of God in your heart, and the next greatest thing is to have electricity in your house."

THE FUTURE OF ELECTRIC COOPERATIVES

Deregulation and Competition

Today's electric cooperatives are vital economic and social institutions because they are, and always will be, inseparable from the people and communities they serve. The people's interests, the community's interests and the co-op's interests are one and the same.

A fundamental change in the electricity industry has begun and it will affect electric cooperatives over the next several years. The change concerns the wholesale and retail portions of the industry. Wholesalers sell large quantities of goods or services to retailers. Retailers sell to the ultimate end-users of the goods and services.

The systems of electric lines, transformers and meters that are connected to homes, schools and businesses are local electricity distribution (or, delivery) systems. These systems, including local distribution cooperatives, operate as retail businesses, selling electricity to the consumer who is the end-user of the electricity. This is like a local grocery store that sells bread in small quantities to the consumers who actually eat the bread.

The wholesale portion of the electricity industry is like the companies that bake huge quantities of bread that is sold to many local grocery stores. In the electricity industry, there are for-profit companies and electric cooperatives that generate huge quantities of electricity that is sold to other companies and cooperatives. Those companies and co-ops then sell the electricity to the end-user of the electricity. Generation and transmission cooperatives operate as wholesalers. Local distribution cooperatives operate as retailers.

The Energy Policy Act of 1992 called for creating competition among the nation's wholesale electricity suppliers. In April 1996, the Federal Energy Regulatory Commission (FERC) issued orders designed to bring that competition into reality.

The intention is to encourage companies that generate wholesale electricity to compete with each other and to give local retail distribution companies the ability to choose between wholesale suppliers.

Up to now, the majority of for-profit electric utility companies generated electricity to serve retail customers within their own service areas.

Other for-profit companies were in business only to generate electricity and sell it wholesale to other electric utility companies. Generation and transmission cooperatives generated electricity for distribution cooperatives to deliver to their member-consumers at the retail level.

The switch to wholesale competition means that large amounts of electricity can now be bought and sold among many types of companies, including those that do not actually generate electricity, but only buy and sell it as a broker. This is a basic change in an industry that, up to now, has been closely regulated in many aspects of its businesses, including the rates charged for power and the terms under which power is delivered.

A major factor affecting wholesale competition is the delivery of electricity through the network of high-voltage, high-capacity transmission lines. Some power generation companies, including generation and transmission cooperatives, own transmission lines and others do not. Up to now, the transmission system has not been required to accommodate such a large exchange of electricity between so many buyers and sellers. Some industry analysts say that many thousands of miles of new high voltage transmission line must be built to accommodate wholesale competition. Others say that such an expansion of the transmission system would be far too costly. The regulations that govern wholesale competition and the use of transmission systems are still being written and there is no universal agreement about those rules.

The retail portion of the electricity industry remains the largest regulated industry in the nation and the individual state governments have the primary role in regulating electric utilities within each state. A few states have allowed retail end-user consumers to choose between electric power suppliers, but the electricity is still being delivered by the utility that has always served them. Debates about whether to change the regulation of the retail portion of the industry are still going on at both the state and federal levels of government. How these debates affect electric co-ops depends on how effectively co-op members speak up about the issues to their elected representatives.

The nation's electric cooperatives have clearly stated that any change in the electricity industry must make the interests of consumers the highest priority. By collectively speaking out about their common needs, co-op members can influence their state and federal elected representatives as decisions are made about the electric power business. Electric cooperatives say that whether the industry remains as it is, or is opened to some form of competition, the result must be that every American must have access to reliable, safe, affordable electricity service.

ELECTRIC COOPERATIVES MOVE FORWARD

Electric cooperatives across the nation have come together in a new way to respond to competition in the electric power industry. The Touchstone Energy brand alliance established in 1997 helps electric cooperatives pool their resources to communicate that cooperatives are valuable members of their communities and to show consumers the positive differences between cooperatives and other electricity providers. Consumer research shows that the more people know about electric cooperatives, the more they appreciate what cooperatives stand for and do in their communities. Touchstone Energy reaches out to people with the message that delivering value to its members is always the co-op's highest priority.

Touchstone Energy advertising, events and projects emphasize the significance of each electric cooperative's local presence and unique service to its community. Activities include such programs as Get Charged!, a joint effort by Touchstone Energy and Discovery Channel Schools to provide educational material about electricity and the history of cooperatives to middle schools. Touchstone Energy also makes available the resources of a nationwide electric cooperative network that brings greater benefits to customers.

Touchstone Energy cooperatives are local, active members of their communities and are dedicated to serving commercial, industrial, agricultural and residential customers with integrity, accountability, innovation and commitment to community. As of this publication date, more than 600 Touchstone Energy cooperatives in 44 states are delivering energy and energy solutions to more than 17 million customers every day. Learn more about Touchstone Energy by going to www.nreca.coop.

IMPORTANT RURAL ELECTRIFICATION DATES

1935	
APRIL 8	President Roosevelt signs Emergency Relief Appropriation Act of 1935, including rural electrification as one of eight categories of projects for funds.
MAY 11	Executive Order No. 7037 creates Rural Electrification Administration (REA), under authority of Emergency Relief Appropriation Act, to make funds available for rural electric service.
JULY 22	REA approves first loans to borrowers in Georgia, Indiana and Tennessee.
1936	
JANUARY 6	Senator George W. Norris of Nebraska and Representative Sam Rayburn of Texas introduce bills to continue REA for 10 years as an independent lending agency.
FEBRUARY 15	First REA-financed rural electric cooperative line is energized in Mississippi.
MAY 20	Roosevelt signs Rural Electrification Act of 1936 (Norris Rayburn bill).
DECEMBER 29	REA approves first generation and transmission loans to two federated power co-ops in Iowa.
1937	
FEBRUARY 15	REA drafts Electric Cooperative Corporation Act, a model state law for formation and operation of rural electric cooperatives.
1938	
JANUARY 10	Federal Court upholds right of five distribution co-ops in Iowa to organize a federated cooperative to generate power for member systems.
OCTOBER 1	REA Farm Equipment Tour begins a four year nationwide trek to acquaint rural people with uses of electricity on the farm.

1939	
JULY 1	REA is transferred to U.S. Department of Agriculture.
1940	
SEPTEMBER 12	REA approves loan to serve millionth rural consumer.
1942	
MARCH 19	Rural Leaders organize National Rural Electric Cooperative Association (NRECA) in Washington, D.C.
1943	
AUGUST 31	NRECA signs first pooled insurance contracts for member systems, their personnel and for NRECA personnel.
1944	
SEPTEMBER 21	Roosevelt signs Pace Act, extending the life of REA indefinitely.
1946	
	Farms electrified in the U.S. pass the 50 percent mark.
1949	
JUNE 30	Loan funds advanced by REA pass \$1 billion.
OCTOBER 28	President Harry Truman signs amendment to the Rural Electrification Act providing for the rural telephone program.
1953	
	Henry County REMC in Indiana becomes first co-op to pay off REA loan out of earnings.
1955	
NOVEMBER 7	U.S. Supreme Court upholds the right of rural electric systems to borrow money from REA for generation and transmission purposes in suit filed by Kansas City Power & Light and nine other power companies in Missouri.
1958	
APRIL 18	NRECA launches "Minuteman" program with weekly newsletter on Washington developments in rural electrification and related issues.
1959	
MAY 11	REA begins 25th year with \$3.8 billion in loans approved to 1,030 electric systems, providing new or improved service to 4.5 million consumers on 1.4 million miles of line.

OCTOBER 28	REA observes 10th anniversary of telephone loans program with loans approved to 679 borrowers on 328,000 miles of line.
1960	
MAY 11	REA celebrates Silver Anniversary (25 years).
1961	
JUNE 21	REA establishes Rural Area Development program to help borrowers promote economic development in rural areas.
1962	
NOVEMBER 1	NRECA and U.S. Agency for International Development (USAID) sign contract providing self-help technical assistance in developing nations.
1964	
	NRECA, following the lead of several member states, organizes first Rural Electric Youth Tour.
1968	
OCTOBER 17	REA makes loan to Alaska Village Electric Cooperative to provide electric service for first time to approximately 20,000 people in 59 isolated villages, part of a plan developed with other government agencies and the state.
1969	
APRIL 10	Member-owned financing institution National Rural Utilities Cooperative Finance Corporation (CFC) is incorporated.
1972	
AUGUST 30	President Richard Nixon signs Rural Development Act, providing new credit resources to revitalize rural America.
DECEMBER 29	Nixon administration kills rural electric funding program with executive order discontinuing REA direct loans effective January 1, 1973.
1973	
MAY 8-10	NRECA calls rural electric rally for support of REA loan program.
MAY 11	Rural Electrification Act amended by Congress to provide for insured and guaranteed loans and to continue 2 percent direct loans for special cases.
1976	
JUNE	NRECA creates Youth Consulting Board.

1979	
JUNE	NRECA's board approves launching of National Rural Electric Women's Association.
1985	
APRIL 12	Study commissioned by NRECA and CFC recommends formation of a subsidiary to offer satellite TV through rural electric cooperatives.
MAY 11	Fiftieth anniversary of REA celebrated. Postal Service issues commemorative stamp. NRECA publishes <i>The Next Greatest Thing</i> , a book on the history of rural electrification.
1987	
JANUARY 5	President Ronald Reagan's budget for FY 1988 calls for dismantling the REA.
JUNE 30	Congress approves legislation permitting all G&T cooperatives to prepay high-interest FFB debt without penalty and budgets \$7.2 billion expected from prepayment as income to the government.
SEPTEMBER 30	Twenty-nine rural electric borrowers buy back their REA loans during the fiscal year. They pay 59 percent of face value.
1992	
JUNE	Energy Policy Act signed into law, calls for competition in wholesale electricity. An NRECA-sponsored survey finds that Americans place a high value on preserving the ideals represented by rural lifestyle.
1994	
OCTOBER	Rural Electrification Administration (REA) changes its name to Rural Utilities Service (RUS).
1996	
APRIL	Federal Energy Regulatory Commission issues orders implementing wholesale competition in the electric power industry as provided for in the Energy Policy Act signed into law in 1992.
1997	
MARCH	NRECA unveils the Touchstone Energy brand as a means to help electric cooperatives compete in the marketplace.
1998	
MARCH	Youth Consulting Board is renamed Youth Leadership Council (YLC).

CAREERS

In Electric Cooperatives



CAREERS IN ELECTRIC COOPERATIVES

An Overview

Working for a cooperative or public power district is a great career opportunity. From the beginning of the rural electrification movement, some of the best, brightest, most creative and dedicated people have chosen to serve their community and develop their careers through electric cooperatives.

America's electric cooperatives employ approximately 60,000 people nationwide in a great variety of professional, technical and business positions. Employees at electric cooperatives and public power districts are among the highest skilled, best trained, most productive people in the workforce. And, they receive the satisfaction of knowing that their work directly improves the lives of the people they live among.

While working for a cooperative or public power district requires the same high level of performance as any of today's modern businesses, there is a difference. A big difference is that the co-op owners are also the co-op's customers and the co-op has only one mission—to provide the co-op owners with the best service and to serve with accountability, integrity, innovation and commitment to the community. This clarity of purpose makes it possible for co-op employees to focus their attention on the mission and achieve higher levels of professional growth.

While providing electricity is a primary function of an electric cooperative, its greater purpose goes beyond an exchange of money for a service rendered. Just as the appearance of rural electric systems revolutionized agriculture more than a half century ago, today, the work of these systems continues to provide all Americans with a choice of where to live, work and raise their families.

Another important difference is that electric cooperatives are active at the local, state and national levels in advocating for an improved quality of life for their members. Cooperative organizations and leaders give cooperative members a voice in the legislative and regulatory processes that affects the ability of electric cooperatives to serve their members. Cooperatives are committed to helping their members—their neighbors—in achieving all the benefits our democratic society can offer.

As a substantial member of the local community, cooperatives, at the direction of their consumers via the board of directors, may decide to take on special projects in addition to providing electric service. Perhaps there is a need for sewer and water systems, a desire to have cable television programming, a needed education, health or social service to be provided or a concentrated effort required to attract new business to an area. The local member-controlled electric cooperative can sometimes be the catalyst or the means for community development projects.

AN EFFECTIVE NETWORK

The network of electric cooperatives includes several different organizations. There are distribution cooperatives that deliver electricity to homes, businesses, schools, churches and all the other places people need electric power.

There are electric generation and transmission cooperatives (G&Ts) that generate electricity and deliver it through high-voltage transmission lines to distribution cooperatives.

There are statewide associations of electric cooperatives that represent the co-ops' interests before state legislatures and regulatory commissions.

CO-OP BOARD WORK

In addition to the staff positions available at cooperatives, the board of directors (also referred to as board members or trustees) performs another important function. Board members set the policy of the organization and hire the general manager who oversees the day-to-day operations and who hires employees to carry out these operations. Director positions are not salaried jobs although the co-op generally compensates directors for the time and expenses associated with various meetings. It is an essential job and one that helps shape the cooperative because the board of directors is elected by the members of the cooperative to represent their needs and the needs of their community.

There are national organizations that provide specialized support services for distribution and G&T cooperatives and statewide associations. The National Rural Electric Cooperative Association represents the electric co-ops' interests before the federal government and provides insurance and employee benefit programs, education and training opportunities, programs of research to develop useful electrotechnologies and supports the continuing development of electric cooperatives in other nations.

The Cooperative Finance Corporation provides its cooperative members with a variety of loan and investment financial services. The National Rural Telecommunications Cooperative works to make telecommunications technologies available for its members.

All these cooperative organizations are linked by the common bond of the cooperative principles. Each organization is dedicated to serving the needs of the cooperative members. Within this network, there are countless opportunities

for people to begin a career and grow in a profession.

Electric cooperative organizations are looking for talented and resourceful people. They offer competitive salaries and excellent benefits. And, they offer you the opportunity and flexibility to make the most of your abilities in some of the best places to call "home."

Learning more about co-op career opportunities is as easy as calling your local distribution cooperative or the statewide association of electric co-ops in your state. Please take a look at the following brief sample of the types of jobs and experiences electric co-ops offer. You might want to join the fun.

THE ATTRIBUTES OF A GOOD CO-OP DIRECTOR

Co-op members are asked to vote for a representative from your community to serve on the board of directors of that co-op. If you are eligible, you may even be asked to serve on a board of directors yourself someday. What does a director do? What makes a good director of a cooperative? Here are some guidelines, many of which are suggestions of the Agricultural Cooperative Service, part of the U.S. Department of Agriculture:

- | A good director is a member willing to take the time to be on the board.
- | A good director listens to members and keeps an open mind to another's point of view.
- | A good director must watch the co-op but not interfere with the daily operations.
- | A good director needs to practice sound business principles in his or her own affairs.
- | A good director can be trusted.
- | A good director takes part in the community.
- | A good director voices opinions honestly and has good judgment.
- | A good director recognizes and assumes legal responsibility for his or her actions as a board member.
- | A good director knows that cooperatives are like other businesses except for the fact that members control the cooperative with their votes and the cooperative does not operate to make a profit. A good director can explain these differences known as "the cooperative way."

DISTRIBUTION CO-OP/PUBLIC POWER DISTRICT CAREERS

Distribution co-ops supply electricity directly to the consumer. Whether your career choice finds you working in the co-op office, outdoors with a crew, or a combination of both, you will find the work fulfilling and purposeful. You will also find that the cooperatives spirit is contagious.

Here are a number of career opportunities available at a distribution co-op.

| CASHIER/RECEPTIONIST

Perhaps the first contact a consumer-member has with their co-op is with the cashier/receptionist. This career involves greeting consumers and other visitors and assisting them or directing them to the appropriate person. The cashier/receptionist tasks might include receiving payments over the counter or mail payments from consumer members, answering general questions and/or addressing complaints. The cashier/receptionist generally reports to the office manager or another mid-supervisory position. And, like all careers within electric cooperatives, the cashier/receptionist represents the co-op and demonstrates the commitment to personal service. A candidate for this career should enjoy interacting with the public. Computer skills are a definite plus.

| METER READER

The meter reader is responsible for recording electric usage from consumers' meters that he or she reads on an established route. This important information then appears on consumers' electric bills. The meter reader may also report any needed repairs or meter tampering.

I ACCOUNTANT/BOOKKEEPER

The accountant/bookkeeper is responsible for keeping a complete and systematic set of subsidiary records and ledgers used to record financial transactions and show the financial state of the cooperative. This individual also prepares reports and financial statements. A career as an accountant/bookkeeper generally requires a college degree in business or accounting and computer literacy.

I PAYROLL SPECIALIST

Everyone at the co-op seems to appreciate the person in this important position! The payroll specialist is responsible for computing the wages of employees and recording all of the necessary data. In addition, this person prepares employee paychecks and tax withholding statements.

I CONSUMER SERVICES REPRESENTATIVE

The consumer services representative helps members complete applications for new service. This position's responsibility often includes responding to questions regarding consumer accounts and processing work orders that initiate the provision of new service.

I MARKETING AND MEMBER SERVICES REPRESENTATIVE

This co-op representative advises consumers about the efficient use of electricity. Since there are many different needs for electricity, from heating a home to lighting a commercial facility to powering computers in an office to irrigation systems on the farm, this is a diverse and interesting career. Often, this individual is responsible for promoting programs designed to use energy more efficiently. This position may also work with the community and make presentations on energy and electricity to groups or schools. It may even encompass encouraging rural development (attracting new business to the area). Like many jobs at the co-op, computer skills are helpful in this position.

I COMMUNICATIONS/PUBLIC INFORMATION SPECIALIST

This co-op specialist develops written member communications such as newsletters, brochures and pamphlets and prepares these materials for publication. Many distribution co-ops have a web site where public and member information is posted. This specialist may also be responsible for developing content for the site and keeping it updated. He or she may be responsible for conducting member education programs, writing press releases and articles, publishing a regular newsletter for the membership or contributing to the statewide association publication.

I MANAGER/DIRECTOR/VICE PRESIDENT OF ENGINEERING & OPERATIONS

This individual is responsible for the long and short range system planning and the design and inspection of distribution substations and other facilities. He or she may direct the acquisition of right-of-way and construction sites and has authority over the design, construction, and maintenance and service activities of the cooperative.

I LINE CREW

Members of the line crew are among the most visible of electric cooperative employees. These careers can be dangerous, requiring great concentration and strict adherence to safety procedures. Because of the nature of the work, safety issues and ongoing training are heavily emphasized.

I JOURNEYMAN LINEMAN

This position is responsible for performing a variety of tasks around the construction and repair of electricity distribution lines and other equipment. He or she has completed a period of time (usually four years) as an apprentice lineman.

I GROUNDMAN

The groundman assists the linemen in the construction, replacement and maintenance of electrical equipment.

I EQUIPMENT OPERATOR/TRUCK DRIVER

The employee in this important position assists the crew by operating specialized equipment including hole digging machines, derricks, air compressors and other equipment mounted on the trucks.

I LINE FOREMAN/SUPERINTENDENT/OPERATIONS COORDINATOR

The line foreman, who usually is by trade and training a journeyman lineman, supervises the entire crew. Duties include distributing the work to the line crews and coordinating day-to-day and long-range work plans.

I DISPATCHER

This position handles the radio communications with line crews, keeping track of routine assignments during regular working hours and assigning jobs to crews in the event of an emergency, day or night. This person often is also responsible for remote control switches to manage distribution system load.

I MAPPING TECHNICIAN

The mapping technician maintains current and accurate system maps using a computer-assisted mapping system. The location of every utility pole, transformer, meter and all other equipment required to distribute electricity is recorded.

I STAKING/FIELD ENGINEER

A staking/field engineer surveys and stakes electric distribution lines in accordance with construction specifications. The emphasis of the field engineer's job is supplying power to new consumers. This employee may also be responsible for writing the work orders that initiate the process of supplying new service.

I WAREHOUSE CLERK

The warehouse clerk at a distribution co-op is responsible for receiving, storing and issuing line equipment and materials, tools and safety equipment. This employee coordinates all inventories.

I MULTI-TASK JOBS AT THE DISTRIBUTION CO-OP

Some electric distribution cooperatives have many consumers, more than 100,000. Others have as few as 1,000. More typically, distribution co-ops serve about 8,600 consumers. To give you an idea of how rural electric systems differ from their urban counterparts, a rural electric system has approximately 5.8 consumers along a mile of power line. In a city, this figure averages from about 35 to 45 homes or businesses along a mile of line. The difference is also apparent when comparing the number of employees. However, the effort needed to serve people with electric service is essentially the same.

The difference in size or systems often results in multi-task jobs. For example, in a very small cooperative, the manager of office services assumes many responsibilities and executes many tasks such as accepting payments from consumers, keeping records and ordering supplies for the office. In larger systems, the work can be more specialized with these tasks divided among several employees. The manager of office services in a larger system may only be responsible for analyzing and organizing office operations and procedures and taking care of consumer, general and plant accounting. In many ways, working for a smaller cooperative is a bigger challenge. Jobs throughout a smaller co-op may be combined, offering employees more variety and more responsibility.

G&T CAREERS

A generation and transmission cooperative (G&T) or public power agency is primarily involved in supplying power to distribution cooperatives or public power districts. A G&T serves the distribution cooperative by bringing power to its doorstep (the substation), ready to be distributed to homes, businesses and farms. A G&T may play the role of a broker by purchasing power for its members from other organizations that generate electricity. Or, the G&T may generate the power themselves and transmit it over high voltage lines. Usually, a G&T does both.

Many of the careers available at a G&T are similar to those at the distribution co-op. For example, administrative work and invoicing is still necessary at the G&T level; the essential difference in these jobs is that the member of the G&T is the distribution co-op and not the individual consumer. However, some of the careers at a G&T are not found at the distribution cooperative. These careers have responsibilities specifically related to generating power or to procuring wholesale electricity. And, while these positions may use the same skills, require the same education or even have similar job titles, they are very different because the G&T is not distributing electricity directly to consumers, it is generating and transmitting it to co-ops. The following are some of the careers available at a G&T.

I DIRECTOR OF ENVIRONMENTAL AFFAIRS

Often a registered professional engineer (PE), this employee is concerned with the co-op's compliance with environmental requirements—at the federal, state and local level. These include air quality, water and waste management and hazardous materials compliance. There are many potential pollutants at an electric generating facility and many pollution control devices and procedures that this individual may oversee. In addition, he or she is responsible for keeping up with the changing laws and regulations, obtaining necessary permits, understanding the impact on the co-op's policies, procedures and plant operations and informing personnel of important environmental issues that affect the co-op.

I SYSTEM DISPATCHER/POWER SYSTEM COORDINATOR

The system dispatcher determines the need for and the availability of electric power. He or she directs the generating station to add or reduce operating generating units to produce more or less power, arranges for wholesale electric energy from other utilities which are interconnected across the nation, and monitors and regulates energy flow within the system and with interconnected utilities.

MANAGER OF COMMUNITY AND ECONOMIC DEVELOPMENT

Attracting industry and promoting job growth is a natural responsibility of a G&T and the main responsibility of this important position. The co-op can assure a potential commercial enterprise that there will be abundant power available. And, the G&T itself has had essential experience with the area's infrastructure—transportation, roads, bridges, water supply and other needs a business may consider when locating a facility. In addition, the G&T understands the political environment, the cultural and tourist attractions, the school system, the economy of the area and the attitude of the community. Economic development covers a lot of territory including small businesses, home businesses, tourism and community services. Moreover, as a part of the larger community, the G&T can help communities assess their needs and evaluate what types of businesses, enterprises or efforts are likely to succeed in the area. The G&T and its member co-ops can also assist in securing financing for a new or relocating enterprise. Finally, the G&T's member co-ops can benefit from this effort to "build electric load" and attract additional consumers since it is these new businesses that often provide new jobs in the community.

STATEWIDE ORGANIZATION CAREERS

In some areas of the country, the functions of the statewide and the G&T are combined under one roof; however, more often, they are separate. In both cases, the statewide organization is an association of cooperatives formed to represent themselves to legislators and to the governor's office. The statewide can also provide other services such as communications and training with more efficiency than if each co-op member took on the job themselves. The following are some of the careers that provide such services.

STATEWIDE EDITOR

This position oversees the production of a publication written for co-op member-consumers. Throughout the United States, 38 statewide magazines reach more than 7.6 million consumer members. Often, the communications/public information specialist of the member distribution cooperatives contributes news and information about his or her co-op to the statewide. This information is incorporated into the statewide magazine and then distributed to the co-op's consumer members.

Lobbyist/Senior Legislative Representative/Director of Government Relations

This career can be found at the statewide organization or at the G&T. When the two organizations are combined, the lobbyist may work for both the G&T and the statewide. The lobbyist is responsible for monitoring and analyzing state and federal legislation and regulations, communicating the position of the organization to members and lobbying for passage or defeat of legislation or regulation on behalf of rural electrification. He or she also cultivates and maintains positive relationships with elected officials and their staffs and educates them about rural electrification. In addition, the legislative representative may help coordinate political action committees (PACs), host legislative meetings, maintain a grassroots-lobbying program and provide assistance to members with reporting requirements under the law.

SAFETY AND LOSS CONTROL COORDINATOR

Safety is of the utmost importance to everyone who works with construction, repair and maintenance of electric lines and equipment and to office personnel as well. This employee is responsible for planning, coordinating and presenting safety programs to line crews and other co-op employees. Very often, the loss control coordinator has worked as a journeyman lineman or line foreman with a distribution system. This position's responsibilities have been steadily increasing to encompass an

entire range of safety and health issues—from proper record keeping to ergonomics, the healthful fit and use of office furniture and equipment.

I CORPORATE COUNSEL

Law school and admittance to the bar are the requirements for a career as corporate counsel for a cooperative or statewide organization. Many statewide organizations employ an attorney on staff while distribution cooperatives usually retain a law firm and use the services of their counsel on an as-needed basis. An attorney helps the co-op by performing legal tasks, including reviewing contracts or bylaw amendments, helping secure financing and insuring that the co-op is in compliance with the multitude of laws associated with running a business, especially a utility.

CAREERS AT THE NATIONAL LEVEL

The National Rural Electric Cooperative Association (NRECA) is the membership organization for distribution cooperatives, G&Ts and statewide organizations, a total of over 900 members. NRECA was founded in 1942 specifically to overcome World War II shortages of construction materials and to obtain insurance coverage for newly constructed rural electric systems. Since those early days, NRECA has been an advocate of a strong rural electrification program as well as a supporter of effective rural development.

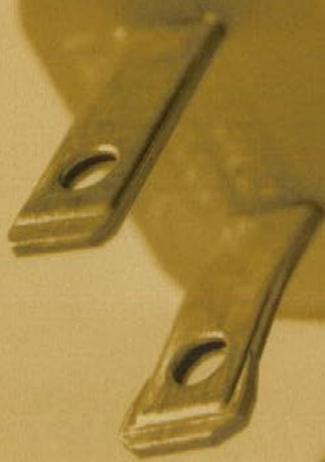
NRECA is a cooperative. It's overall policy direction is guided by NRECA members through a set of resolutions that are proposed, considered and adopted by representatives of NRECA's members. These resolutions tell the NRECA Board of Directors and professional staff which issues are important and state the members' positions on those issues. In response, the NRECA Board and staff develop a work plan and budget to achieve the members' goals. NRECA is a true grassroots organization because it helps millions of people accomplish together what they might not be able to do alone.

The NRECA, employees work to provide services such as legislative representation before Congress and the Executive Branch, representation in regulatory activities affecting electric service and the environment, management and skills training and consulting assistance for cooperative directors and employees. NRECA employees also provide publications, public relations, advertising and other communications services and a wide range of insurance and employee benefit packages. NRECA also has an International Programs Division, assisting in the development of rural electrification overseas.

In addition, subsidiary groups provide insurance programs for members of electric co-ops, handle insurance claims, audit and inspect pole production companies for quality control, manage overseas development contracts and provide marketing services for NRECA members. NRECA also supports a research program to develop new techniques to solve problems unique to rural electric systems and improve production and delivery of electricity in a cost-effective, safe and environmentally acceptable manner.

Energy and

ELECTRICITY



ELECTRICITY GENERATION, TRANSMISSION AND DISTRIBUTION

Your home is connected to an incredibly huge energy generation and delivery device that responds to your demand for power. It operates 365/24/7 and never sleeps. It is one of the biggest machines ever built on planet Earth. It is called...an Electric Utility System. Once you learn its secrets, you will never forget.

HERE'S HOW ELECTRICITY IS CREATED:

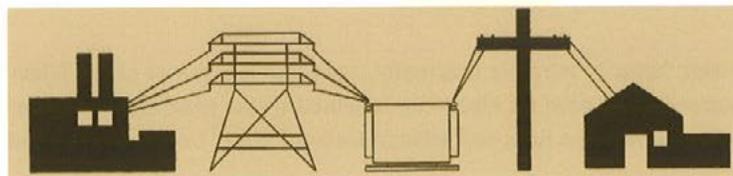
The electricity delivered through electric utility systems is generated at a power plant. An electricity generator is the machine that actually creates the electric energy. It is made up of a very large magnetized rotor shaft that spins inside a housing of copper wire coils. The spinning magnets create electric currents in each coil which then flow out of the generator and into electric lines leading out of the power plant.

Making the generator rotor shaft spin is the job of another machine called a turbine. A turbine is much like a windmill with many blades that are encased in a thick metal housing. High pressure steam is forced through the blades to make the turbine spin. The turbine is connected to the generator shaft and makes it spin.

Depending on the individual power plant, fuels such as natural gas, oil or coal are burned in a boiler where water is heated until it becomes steam. The steam is routed under high pressure through pipes to the turbine which turns the generator shaft. The spent steam travels to a condenser which cools it back into a liquid state and the water then returns to the boiler to be heated into steam again.

The generation process converts the stored energy in the fuel into heat which then changes water into steam. The energy in the steam is converted into mechanical energy when it forces the turbine and generator to spin. The generator then converts the spinning mechanical energy into electrical energy by creating electric current. The electrical energy is then used in all the things powered by electricity.

In a nuclear power plant, the heat from a nuclear reactor is used to change water into steam to turn a turbine and generator. In hydroelectric plants, such as those found on lakes and rivers, the force of rushing water is used instead of steam to spin the turbine and generator.



In the past few years, new technologies have been developed to use the power of renewable energies—that is, energy sources that are continually replenished. Such sources as the wind, solar energy and heat from geothermal sources underground offer interesting possibilities. Some small scale projects have been undertaken to convert organic and animal waste into flammable gas that can be used to heat a steam boiler. Other projects have converted grains and other organic crops into chemical alcohols for use as fuels. While these alternatives have not yet met large-scale electricity needs, they serve as reminders that planet Earth offers many energy sources.

HERE'S HOW ELECTRICITY TRAVELS TO YOUR HOME:

Electricity from the power plant is sent across the country through a system of big transmission lines that carry large amounts of electricity across long distances. To keep the electric power flowing efficiently, transformers increase the voltage, or electromotive force, in the transmission lines. As the voltage increases, the force of the electricity pushing through the lines increases.

To route the electricity to an electric cooperative, a town or factory, the transmission line is connected to a substation. In the substation, transformers reduce the high voltage and switches send the electricity into distribution lines that deliver the electric power to consumers and businesses. From the distribution line, the voltage is reduced again by another transformer (often seen on the power pole) to the 120-volt and 240-volt levels required for business equipment and home appliances.

From the distribution transformer, the power is channeled through a meter that measures the kilowatt hours used and then travels to the electric co-op member's own distribution panel and home circuit breakers. At this point, the power is divided up into several circuits that serve different rooms or uses in a building.

WHAT HAPPENS WHEN YOU TURN ON A LIGHT?

When a light switch is turned on, the whole electric utility system is affected as more demand for current is placed on the power plant. Additional power demand tends to slow the generator, like a car trying to climb a hill. To maintain a steady flow of electricity, the generator must keep turning at a constant speed. Increased demand for electricity means that more fuel must be burned to create more steam to keep the turbine and the generator turning at the proper speed.

The total demand for electricity placed on a utility system rises and falls during different times of the day and different seasons of the year. If many light switches or other electrical appliances are turned on at the same time it creates a "peak demand." For example, in the evenings when the house lights are on and kitchen ranges, water heaters, clothes dryers, air conditioners or heat pumps are in use, that is often a period of a peak demand. The electric power suppliers must anticipate that peak demand and have the necessary power available.

As you can see, each home or business is actually connected to a power plant. When you turn on a television or a computer, the need for electricity is sensed by the generating plant and the power has traveled many miles through the lines and substations to be ready for you to use when you flip the switch.

ENVIRONMENTAL RESPONSIBILITY

Members of electric cooperatives can be proud of their cooperatives' environmental records. Environmental policies are developed by the governing boards of local electric cooperatives, and because the board members are also members of the community, it is only natural that they have a sincere interest in protecting the environment.

From the power plant to your home, electric cooperatives have invested in systems that are designed to meet future energy needs while still protecting the environment. That commitment continues with ongoing research and new discoveries in areas of pollution control, reclamation and high-tech electric appliances.

Environmental protection is accomplished in several ways: using renewable and abundant energy sources, developing new pollution control technology at the power plants and promoting land reclamation, research and efficient energy use.

One early example of the co-ops' environmental stewardship effort is the concept of regional power production. In the late 1950's, the region's electric cooperatives knew their electricity requirements would soon increase and that they must find additional sources of power. Rather than having each cooperative build a small power plant, electric cooperative leaders worked together and built large-scale power plants and transmission lines that would serve many distribution cooperatives. The result was a more efficient generation and transmission system.

Co-op power plants have invested millions of dollars in pollution-control equipment and the numerous programs that power plants have in place to continually improve their operating efficiencies. These programs help reduce fuel consumption and emissions and contribute to keeping energy costs stable.

In addition, new electric appliance and equipment technologies have reduced the total amount of energy needed to heat and cool homes and buildings. Electric appliances require no open flame and are very efficient, so more of the energy is used for their designed purposes, whether it is for cooking, heating water or drying clothes. Many electric cooperatives can advise their members about energy saving methods and that contributes to the environment by reducing the total amount of energy needed.

SAVING MONEY AT HOME THROUGH ENERGY

EFFICIENCY

Co-op members can also play an important role in conserving energy and helping the environment. We can save electricity by reducing the peak demand on our nation's electric systems and we can decrease our total energy use and save money by making our homes energy efficient. First, we can

HOMETOWN ENVIRONMENTALISTS

Along with the above-mentioned environmental programs, some local electric cooperatives promote many hometown environmental efforts. Some of these include:

- Recycling paper, aluminum, glass and motor oil
- Using soy ink and recycled paper in publications
- Reducing the amount of disposable supplies used
- Switching to cleaning supplies that do not pollute
- Planting trees and promoting high-efficiency appliances
- Providing members with energy audits
- Promoting proper use of chemicals in the workplace
- Educating members on energy and environmental issues
- Protecting and developing wildlife habitats

help reduce the peak demand for electricity by using energy-intensive appliances, such as dishwashers and clothes washers and dryers in the early morning or late evening hours. Peak load usually occurs during the late afternoon and early evening hours, often causing electric utilities to use extra generating equipment to meet this heavy demand.

Second, we can decrease our electricity use by investing the time and materials to make our homes energy efficient. Much of our residential energy, 44 percent, is used to heat and cool our homes. An additional 14 percent is used to heat water, the third largest single energy user and expense. Refrigerators use 9 percent. Lighting, cooking and running other appliances account for the remaining 33 percent.

The U.S. Department of Energy has a wealth of useful information about energy efficiency available on its web site at www.energy.gov/efficiency.

Below are some basic and important energy saving tips.

I INSULATION AND WEATHERIZATION

Checking your home's insulating system and weatherizing your home are the fastest and most cost-efficient ways to reduce energy waste and save money. You can increase the comfort of your home and reduce your heating and cooling needs by up to 30% by investing just a few hundred dollars in proper insulation and weatherizing products. You can save 10% or more on your energy bill by simply reducing the air leaks in your home.

I INSULATION TIPS:

Check the insulation in your attic, ceilings, exterior and basement walls, floors and crawl spaces to see if it meets the levels recommended for your area of the country. Insulation is measured in R-values (the higher the R-value, the more effective the insulating capability) and your needs will depend on the climate in which you live and the amount of insulation, if any, you already have. The Department of Energy has recommendations for all areas of the nation. Your co-op can also offer guidance on home insulation.

I WEATHERIZATION TIPS:

Caulk, seal and weatherstrip all seams, cracks and openings to the outside to reduce air leaks in your home. Culprit areas include spaces around doors and windows and places where plumbing, ducting or electrical wiring penetrates through exterior walls, floors, ceilings and soffits over cabinets. When a fireplace is not in use, keep the flue damper tightly closed so that warm or cooled air is not escaping up the chimney.

Install storm windows over single-pane windows. Storm windows as much as double the R-Value of single-pane windows and can help reduce drafts, water condensation, and frost formation. Or, as a less costly alternative, use a heavy-duty, clear plastic sheet on a frame or tape clear plastic film to the inside of your window frames.

HOME HEATING AND COOLING

Heating and cooling your home uses more energy than any other system in your home—typically about 44% of your utility bill. By combining proper equipment maintenance and upgrades with appropriate insulation, weatherization and thermostat settings, you can cut your energy bills in half.

HEATING TIPS:

- Set your thermostat as low as is comfortable. Wear an extra layer of clothing instead of turning up the heat.
- Clean or replace furnace filters once a month or as needed.
- Turn off kitchen, bath and other ventilating fans as soon as they have done the job. In just one hour, these fans can pull out a houseful of warmed (or cooled) air.
- Clean warm-air registers, baseboard heaters and radiators as needed and make sure that they are not blocked by furniture, carpeting or drapes.
- Keep draperies and shades open on south-facing windows during the heating season to allow sunlight to enter your home. Close them at night to reduce the chill from cold windows.
- When purchasing new heating equipment, select an energy-efficient unit. For example, if you use electricity to heat your home, consider installing a heat pump system. Heat pumps are the most efficient form of electric heating in moderate climates, providing three times more heating than the equivalent amount of energy they consume in electricity.

COOLING TIPS:

- Set your thermostat as high as comfortably possible in the summer. The less difference between the outdoor and indoor temperatures, the lower the overall cooling bill.
- Do not set your thermostat at a colder setting than normal when you turn on your air conditioner. It will NOT cool your home any faster and could result in excessive cooling and therefore, unnecessary expense.
- Do not place lamps or TV sets near the air-conditioning thermostat since the thermostat will sense the heat from these appliances causing the air conditioner to run longer than necessary.
- If you do not need central air-conditioning, consider using individual window or through-the-wall units in rooms that need cooling from time to time. Select the lowest capacity and highest efficiency for the rooms you need to cool.
- Consider using a fan along with your window air conditioner. The fan will help spread the cooled air more efficiently through your home without greatly increasing the use of electricity.
- Block sunlight with vertical louvers or awnings on the outside of your windows or close your draperies, blinds and shades indoors.
- When possible, cook and use other heat-generating appliances in the early morning and late evening hours.

WATER HEATING ENERGY SAVERS

Water heating typically accounts for approximately 14% of your utility bill; therefore it pays to consider using less hot water or using it more efficiently.

WATER HEATING TIPS:

- | Repair leaky faucets promptly since leaks waste gallons of water in a short time period.
- | Insulate your electric hot-water storage tank and pipes (do not cover the thermostat).
- | Install aerators in faucets and low-flow showerheads to reduce water usage.
- | Lower the water heater thermostat to approximately 115 degrees, a temperature comfortable for most hot water uses.
- | When purchasing a new water heater, select one with a thick insulating shell.
- | Drain a quart of water from your water tank every three months to remove sediment that impedes heat transfer and lowers the efficiency of your heater. (Follow manufacturer's instructions).

APPLIANCE ENERGY SAVERS

Appliances account for about 20% of a household's energy consumption, with refrigerators and clothes dryers at the top of the list. The real cost of every household appliance is the purchase price and the operating cost. When shopping for new appliances, look for the federal government required, yellow and black EnergyGuide labels that explain the annual energy consumption and operating cost for each appliance.

DISHWASHER TIPS:

- | In the user's manual, check the manufacturer's recommendations on water temperature. Many models have internal heating elements that allow you to set the water heater to a lower temperature.
- | Running your dishwasher only when it is full of dirty dishes is more energy efficient than running it several times to wash just a few dishes.
- | Do not use the "rinse hold" cycle for a few soiled dishes. It uses 3 to 7 gallons of hot water each time.
- | Let dishes air dry. If the model does not have an automatic air-dry switch, turn off the control knob after the final rinse and prop the door open so the dishes will dry faster.

REFRIGERATOR/FREEZER TIPS:

- | Select refrigerator models with automatic moisture control. They have been engineered to prevent moisture accumulation without the addition of a heater.
- | Do not keep the refrigerator too cold. Recommended temperatures are 37–40 degrees Fahrenheit for refrigerators and 5 degrees Fahrenheit for the freezer section. Separate freezers for long-term food storage should be kept at zero degrees Fahrenheit. To check the refrigerator temperature, place an appliance thermometer in a glass of water in the center of the refrigerator. Read it after 24 hours. To check the freezer temperature, place a thermometer between frozen packages and read it after 24 hours.

- | Make sure your refrigerator door seals are airtight. Test them by closing the door over a piece of paper that is half in and half out of the refrigerator. If you can pull the paper out easily, the seal may need to be replaced or the latch may need adjustment.
- | Move your refrigerator away from the wall and vacuum the condenser coils once a year (unless you have a no-clean condenser model). The refrigerator will run for shorter periods with clean coils.

| OTHER ENERGY-SAVING KITCHEN TIPS:

- | Place the faucet lever on the kitchen sink in the cold position when using small amounts of water. Placing the lever in the hot position uses energy to heat the water even though it never reaches the faucet.
- | Keep range-top burners and reflectors clean; they will reflect the heat better and save energy.
- | Cover your pan when boiling water; it's faster and uses less energy. Match the size of the pan to the heating element.
- | Use cold water rather than hot to operate your food disposer. This saves the energy needed to heat the water, is recommended for the appliance and aids getting rid of grease.
- | Install an aerator in your kitchen sink faucet. By reducing the amount water in the flow, you use less hot water and save the energy that would have been required to heat it.
- | Use small electric pans or toaster ovens for small meals rather than your large stove or oven. Toaster ovens use one-third to one-half as much energy as full-sized ovens.
- | When possible, use pressure cookers and microwave ovens. They save energy by significantly reducing cooking time.
- | When purchasing a new oven, consider new technologies such as the convection oven that save energy by significantly reducing cooking time.

| LAUNDRY TIPS:

- | Wash clothes in cold water, using cold-water detergents whenever possible. Unless your laundry has oily stains, cold or warm water will clean your clothes. Even switching your water temperature setting from hot to warm will cut a load's energy consumption in half.
- | Clean the dryer's lint filter after each load to improve air circulation.
- | Wash and dry full loads. If you wash a small load, use the appropriate water-level setting.
- | Pre-soak or use a soak cycle when washing heavily soiled garments. You'll avoid two washings and save energy.
- | If your dryer has an automatic moisture sensor, use it so you do not over-dry your clothes.
- | Use the cool-down cycle to allow the clothes to finish drying with the residual heat from the dryer.

- | When shopping for a new washer, look for a front-loading (horizontal-axis) machine. These use about one third of the energy and less water than a top-loading machine and remove more water from your clothes during the spin cycle, saving more energy on clothes drying as well.

LIGHTING ENERGY SAVERS

Increasing lighting efficiency is one of the fastest ways to decrease your energy bills. Replacing 25% of your lights in high-use areas with fluorescents can save approximately 50% of your lighting energy bill.

| INDOOR LIGHTING TIPS:

- | Turn off lights in any room not being used or consider installing timers, photo cells or occupancy sensors to reduce the amount of time lights are on.
- | Use linear fluorescent and energy-efficient compact fluorescent lamps (CFLs) in fixtures throughout your home. Though they are initially more expensive than incandescent bulbs, they last 6–10 times longer and pay for themselves by saving energy over their lifetimes. For spot lighting, consider CFLs with reflectors.
- | Use task lighting. Instead of brightly lighting an entire room, focus the light where it is needed. For example, use fluorescent under-cabinet lighting for kitchen sinks and concentrate lighting in reading and working areas. Install three-way lamps to keep lighting levels low when brighter light is not necessary.
- | For night-lights, consider using 4-watt mini-fluorescent or electroluminescent lights. These are much more efficient than their incandescent counterparts and luminescent lights are cool to the touch.
- | Use compact fluorescent lamps in torchiere fixtures instead of halogen lamps that generate excessive heat and create fire hazards. Compact fluorescent torchieres use 60% to 80% less energy and can produce more light (lumens) than halogen torchieres.

| OUTDOOR LIGHTING TIPS:

- | Use photocell units or timers on outdoor lights so they will turn off during the day.
- | Use long-lasting CFLs in outdoor lighting fixtures. In cold climates, be sure to buy a lamp with a cold-weather ballast.

OTHER ENERGY SAVING PRODUCTS

| ELECTRIC GRILLS

The electric grills on the market today are more powerful than older models yet use 91% less energy than charcoal grills and 29% less energy than standard gas grills. They use a standard grounded 120-volt receptacle and are capable of effectively grilling a variety of foods.

| CORDLESS ELECTRIC LAWN MOWERS

Fully charged, these mowers can run for approximately 90 minutes and emit about half the noise of conventional gas units. Electric mowers use only 40 kWh per year, costing approximately \$4.00 to \$5.00 per year in electricity.

▮ CORDLESS ELECTRIC WEED TRIMMERS

Six-volt models cost approximately \$2.50 per year to operate and 12-volt models cost approximately \$5.25 per year.

ELECTRIC SAFETY AT HOME

Electricity provides comfort and convenience, powering the homes and businesses around the nation. However, electricity can be dangerous and must be handled properly, with care and respect. For a safer home, inside and out, follow these important suggestions.

▮ INDOOR SAFETY TIPS:

- ▮ Remind children not to put anything into an electric outlet. Use plastic safety caps in outlets if there are infants and toddlers at home.
- ▮ Make sure that the fuses are the correct sizes for the circuits and that wiring in your house meets all national and local standards. Some indications of low or inadequate power are: frequently blown fuses or tripped circuit breakers, dimming lights when appliances are turned on and appliances operating slowly or at noticeably less than full power. Hire a qualified electrician to access and correct any problems.
- ▮ Inspect all electric cords in your home and replace any that are frayed or worn. Cords in poor condition can cause shocks and fires.
- ▮ Check bulbs in fixtures for the proper wattage (especially in ceiling fixtures and in “hooded” lamps that will trap heat). A bulb of too high wattage may lead to fire through overheating. If you do not know the correct wattage, use a bulb no larger than 60 watts.
- ▮ Check that all wall outlets and switches are working properly and are covered with faceplates so that no wiring is exposed. Improperly operating outlets or switches (including those that are warm to the touch) may indicate an unsafe wiring condition.
- ▮ Limit the number of appliances that you plug into an outlet so you do not overload it, otherwise you could trip the circuit breaker or ruin the appliance you are trying to run. Also, check all electric plugs for a snug fit. Loose-fitting plugs can cause overheating.
- ▮ Check your appliances and power tools for the Underwriters’ Laboratory (UL) seal. This means that they have been tested for safety. Also, be sure to use all appliances in accordance with the manufacturer’s instruction.
- ▮ If something seems wrong with an appliance or tool, or it gives a slight shock, disconnect it immediately. Have it repaired or discard it.
- ▮ Always disconnect small appliances and tools before cleaning them. To disconnect an appliance or tool, do not pull on the cord; instead, grasp the plug and pull it from the outlet.
- ▮ Do not run cords under rugs, flooring or furniture, and never staple or nail them into place. Also, keep cords out of high traffic areas to avoid tripping hazards. In the kitchen, keep cords away from hot surfaces, such as toasters, ovens and ranges.
- ▮ Keep electric heaters away from combustibles such as drapes and newspapers and place them where they will not be tipped over. Also, check heaters for the UL seal.

- | Install Ground Fault Circuit Interrupters (GFCIs) in places where water and electricity might meet (bathrooms, kitchens, laundry rooms, etc.). GFCIs automatically shut off power whenever necessary to avoid shocks. Regularly test the GFCIs in accordance with manufacturer's instructions.
- | Never turn on an appliance when you are on a wet floor or in the bathtub or shower (hair dryers, radios, etc.). If a plugged-in appliance does fall into water, do not reach in to get it! Unplug it first by pulling on the cord, not the plug. If the outlet has a GFCI, it will automatically disconnect the circuit.
- | Do not enter a flooded basement unless you are sure the water is not in contact with a source of electricity. Call an electrician to disconnect the power before you enter a flooded basement.

| OUTDOOR SAFETY TIPS

- | Install waterproof covers on outdoor outlets and keep them closed when not in use. Also make sure that there are GFCIs on all outdoor outlets.
- | Be sure your electric tools are double insulated or have a three-pronged plug. Do not adapt a three-pronged plug to an ungrounded, two-hole receptacle. And do not use electric tools near water or in the rain.
- | Do not fly kites near electric wires. If kite string gets caught in power lines, do not attempt to remove it.
- | Never climb a tree or utility pole that is near electric wires.
- | Keep ladders, antennas and other conductive objects away from electric lines. If you do not know if the line or the object is conductive—play it safe and assume that it is.
- | Do not dig until you check with your electric co-op or electric utility.
- | Never approach or touch downed power lines. Always assume that downed wires are energized and call your electric co-op or electric utility immediately.
- | When using an auxiliary generator during a power outage or at any other time, notify your electric co-op or electric utility. Improper installation and use can damage equipment and cause serious injury.

GLOSSARY OF ENERGY TERMS

A

ACID RAIN

Rain and snow polluted by sulfuric and nitric acids that are generated by burning fossil fuels.

AIR-TO-AIR HEAT PUMP

A heating and cooling device that uses electricity to move heat from the outside air into a building in winter, reversing the process for air conditioning in the summer. Also called air-source heat pump.

ALTERNATING CURRENT (AC)

An electric current that reverses its direction at regular recurring intervals of time and that has alternately positive and negative values. Almost all electric utilities generate AC electricity because it can easily be transformed to higher and lower voltages.

AMPERE (AMP)

The unit of measurement of electric current produced in a circuit by one volt acting through a resistance of one ohm. The measure of the rate of flow of electrons past a given point in an electric conductor such as a power line. Amperes equal watts divided by volts. A 1,000 watt heater at 120 volts draws 8.33 amps. This term is commonly used to indicate the size of circuit breakers and fuses.

AREA COVERAGE

The extension of electric service to all applicants in a service area, a basic tenet of electric cooperatives.

B

BIOMASS CONVERSION

The production of fuel or energy from organic waste, whether it be plant material, animal manure, municipal sewage sludge or solid waste.

BLACKOUT

A temporary loss of electricity in an area because of failure of generation or transmission equipment.

BRITISH THERMAL UNIT (BTU)

The standard unit for measuring quantity of heat energy, such as the heat content of fuel. It is the amount of energy necessary to raise the temperature of one pound of water one degree Fahrenheit.

BROWNOUT

A voltage reduction during an electrical shortage that causes conditions such as dim lights.

C

CAPITAL CREDITS

Any payments made by co-op members in excess of the cost of service. These payments are considered capital investments by the members and are assigned to each member's account. (See Patronage Capital.)

CIRCUIT

A circuit is the path that an electric current takes from the power source to the device using the power and then back to the source.

CIRCUIT BREAKER

A switch that opens an electric circuit when a short occurs.

CLEAN AIR ACT

A national law passed in 1963 and amended several times since, giving the U.S. government broad powers to limit air pollution.

COGENERATION

The simultaneous production of both usable heat or steam and electricity from a common fuel source.

CONDUCTOR

Any material that allows an electric current to pass through it. Also, the wire that carries electricity in an electric distribution or transmission system.

CONNECTION CHARGE

A one-time charge paid by a consumer for expenses involved in connecting electrical service to a home or business.

CONSUMER

A person or organization who purchases power for his own use. Sometimes referred to as a customer, but a customer could also be buying for resale purposes.

CURRENT

A flow of electrically charged particles (electrons) in an electrical conductor. The rate of movement of the electricity, measured in amperes.

D

DEMAND

The rate at which electric energy is delivered to or by a system at a given instant or averaged over a designated period, usually expressed in kilowatts or megawatts. The primary source of demand is the power consuming equipment of customers.

DEPARTMENT OF ENERGY (DOE)

The U.S. agency responsible for planning and allocating the nation's energy needs. DOE is a cabinet level department of the Executive Branch of the federal government.

DEREGULATION

The elimination of regulation from a previously regulated industry or sector of an industry.

DIRECT CURRENT (DC)

Electricity that flows continuously in one direction and that does not vary or that varies only slightly.

DISPATCHING

The control of an electric system that involves assigning loads to specific generating stations, operating and maintaining high-voltage lines, substations and other equipment, operating tie lines and switching, and scheduling energy transactions with other connecting electric utilities.

DISTRIBUTION SYSTEM

A system that enables delivery of electric energy in low voltage from convenient points (substations) on the transmission system to consumers.

E

EASEMENT

A right purchased from property owners that allows utility companies to construct, operate, maintain and control facilities, such as transmission lines on the property.

EFFICIENCY

Making maximum use of resources. Requires less sacrifice than conservation, but stresses getting the most benefit out of each unit of a resource used.

ELECTRIC COOPERATIVE

A not-for-profit electric utility that is organized as a cooperative form of business, owned by those who use its services. It operates according to the International Cooperative Alliance cooperative principles: open and voluntary membership; democratic control; member economic participation; autonomy and independence; education, training and information; cooperation among cooperatives; and, concern for community. (Also referred to as electric membership corporations, electric power associations, and rural electric cooperatives.)

ELECTRICITY

Electric current of power that results from the movement of electrons in a conductor.

ELECTRON

The negatively charged particles that form a part of all atoms.

ENERGY

The capability of doing work (potential energy) or the conversion of this capability to motion (kinetic energy); may be natural or manufactured. Most of the world's convertible energy comes from fossil fuels that are burned to produce heat which is then used as a transfer medium to mechanical or other means in order to accomplish tasks. In an electrical context, the use of power, measured in kilowatt-hours.

ENERGY AUDIT

A study of residential, commercial or industrial buildings to show energy users how to save money by using energy more efficiently.

ENERGY EFFICIENCY RATING (EER)

A measure of how efficiently an appliance uses energy. Determined by dividing the BTU per hour output by the number of watts used. A higher EER means greater efficiency. (See seasonal energy efficiency rating.)

ENERGY POLICY ACT OF 1992

This act addresses a wide variety of energy issues. The legislation creates a new class of power generators, exempt wholesale generators (EWGs), that are exempt from the provisions of the Public Utilities Holding Company Act of 1935 and grants the authority to FERC to order and condition access by eligible parties to the interconnected transmission grid.

ENVIRONMENTAL IMPACT STATEMENT (EIS)

A report required by many state and federal regulators that outlines the likely environmental consequences of building and operating large-scale facilities such as power plants.

ENVIRONMENTAL PROTECTION AGENCY (EPA)

The federal agency that develops rules and regulations for environmental protection and monitors utilities and other industries.

F

FAULT

A point of defect in an electric circuit that prevents the current from following the intended course.

FEDERAL ENERGY REGULATORY COMMISSION (FERC)

Formed in 1977, FERC regulates the price, terms and conditions of power sold in interstate commerce and of all transmission services. FERC is part of the U.S. Department of Energy but functions independently. FERC is the federal counterpart to a state utility regulatory commission.

FEDERAL POWER ACT OF 1935

This act established guidelines for federal regulation of interstate energy transportation and sales. It is the primary statute governing FERC regulation of the electric sector.

FOSSIL FUEL

Materials such as coal, oil or natural gas used to produce heat or power; also called conventional fuels.

FUEL CELL

A device that generates direct current electricity by means of an electrochemical process.

FUEL COST

The total cost of fuel delivered to a power plant, including freight and other transportation charges, unloading costs, and maintenance and mine reclamation costs.

FUSE

A protective device for electric circuits containing a wire designed to melt and open the circuit under abnormally high electric loads. (See circuit breaker.)

G

GENERATION AND TRANSMISSION COOPERATIVE (G&T)

A power supply cooperative owned by a group of distribution cooperatives. G&Ts generate power or purchase it from public or investor owned utilities or from both.

GENERATION STATION (POWER PLANT)

A plant that houses electric generators and other equipment for converting mechanical, chemical, or nuclear energy into electric energy.

GENERATOR

A machine that transforms mechanical energy into electric energy.

GEOHERMAL ENERGY

Natural heat contained in the rocks, hot water and steam of Earth's subsurface; it can be used to generate electricity and heat homes and businesses.

GEOHERMAL SYSTEM

An efficient electrical device for heating and cooling a home or other building by moving heat into or out of the structure. It uses an antifreeze solution or refrigerant in a pipe buried in the ground to collect or disperse heat. (Also referred to as earth-coupled heat pump, ground-source heat pump, heat pump, water-source pump.)

GREENHOUSE GASES

Carbon dioxide and other gases that reportedly contribute to the warming of Earth's atmosphere.

GRID

A system of interconnected high-voltage transmission lines and power generating facilities that allows bulk-power suppliers to share resources on a regional basis. This system provides emergency generation and transmission.

GROUND-FAULT CIRCUIT INTERRUPTER (GFCI)

A device that instantly breaks the circuit when a short develops. Required for outlets that are used in bathrooms, kitchens, outdoors or wherever electrical equipment might come into contact with water.

H

HIGH VOLTAGE

Voltage in a power line higher than the 110 to 220 volts used in most residences.

HORSEPOWER (HP)

A measure of power equal to approximately 746 watts. This term is generally used as "horsepower" and not abbreviated "hp."

HYDROELECTRIC PLANT

A facility that produces electric energy by releasing water from a reservoir through generators. Also abbreviated as "hydro."

I

INSULATION

Non-conducting material used to prevent the escape of electricity, heat or sound.

INTERCONNECTION

A tie permitting the flow of electricity between the facilities of two electric systems.

INVESTOR OWNED UTILITY (IOU)

A stockholder-owned power company that generates and distributes electric energy for a profit.

J, K

KILOWATT (kW)

A unit of electrical power equal to one thousand watts.

KILOWATT-HOUR (kWh)

A unit of electrical energy that is equal to one kilowatt of power used for one hour. One kilowatt hour is equal to one thousand watt-hours. An average household will use between 800–1300 kWh per month depending upon geographical area.

KILOVOLT (kV)

One thousand volts.

L

LIGHTNING ARRESTER

A device that protects consumer electric equipment against damage caused by power surges from power-line lightning strikes.

LINE

A carrier of electricity on an electric power system.

LOAD

The amount of electric power delivered or required at any specified point or points on a system. Load originates at the power-consuming equipment of the consumers. The load of an electric utility system is affected by many factors and changes on a daily, seasonal, and annual basis, typically following a pattern. System load is usually measured in megawatts (mW).

LOAD MANAGEMENT PROGRAM

A program for controlling use of electricity to reduce demand on the system at a time of maximum use by using such techniques as voltage reduction, cutting off air conditioners and water heaters for short periods by remote control and controlling how long irrigation pumps are used. Co-ops with load management programs usually have rate incentives to promote their strategy.

LOOP TRANSMISSION SYSTEM

System in which alternate transmission lines can deliver power to an area in the event that a line fails.

M

MARGIN

The difference between a cooperative's income and its expenses. Margins are returned to members in the form of capital credits as the cooperative's financial status allows.

MAXIMUM DEMAND

The greatest of all demands of the load that has occurred within a specified time period.

MEGAWATT (MW)

A unit of electrical power equal to one thousand kilowatts or one million watts.

MEGAWATT-HOUR (MWH)

One thousand kilowatt-hours of electric energy. A unit of electrical energy that equals one megawatt of power used for one hour.

METER

A device that measures the amount of electricity used.

MUNICIPAL UTILITY

A provider of utility services owned and operated by a municipal government.

N

NATIONAL ENERGY POLICY ACT OF 1992

A law aimed at increasing efficiency in the electric utility industry by enhancing competition in generation. It requires the opening of electric transmission access by giving FERC authority to order utilities to provide transmission to other utilities, federal power marketing agencies or power marketers for wholesale transactions.

NATIONAL RURAL ELECTRIC COOPERATIVE ASSOCIATION (NRECA)

Founded in 1942, NRECA is a national service organization dedicated to representing the national interests of cooperative electric utilities and the consumers they serve.

NATURAL GAS

A fossil fuel used for electric generation and space heating.

NUCLEAR ENERGY

Energy generated by an atomic reaction. In a nuclear power plant, the heat is used to make steam that turns a steam turbine that turns an electric generator.

O

OUTAGE

Interruption of service to an electric consumer because a power plant, transmission line or other facility is not operating.

OZONE LAYER

The part of the upper atmosphere that contains concentrations of a form of oxygen that screens out ultraviolet radiation. Studies show that chemicals from aerosol cans and refrigeration units are destroying this layer.

OHM

The unit of measurement of electrical resistance. The resistance of a circuit in which a potential difference of one volt produces a current of one ampere.

P

PASSIVE SOLAR ENERGY

Energy from the sun's radiation that can be used to heat and light without requiring complicated machinery. Usually controlled by building design and location.

PATRONAGE CAPITAL

Excess revenue after expenses have been paid. The co-op members treat it as advances of capital to the cooperative and it is credited to them on the basis of their contributions to revenues. (See Capital Credits.)

PEAK DEMAND

The electric load that corresponds to a maximum level of electric demand in a specified time period; measured in kilowatts or megawatts. Also referred to as peak load.

PHOTOVOLTAIC CONVERSION

The process of converting the sun's light energy directly into electric energy, through the use of photovoltaic cells. A common application is solar-powered pocket calculators.

POWER GRID

A network of generation, transmission, and distribution systems that are interconnected.

POWER LINE

A conductor carrying electricity from the generator to the supplier or the ultimate consumer. (Also see Line.)

POWER MARKETING ADMINISTRATION (PMA)

A federal organization involved in delivering electricity from federal power resources to purchasing utilities.

POWER POOL

Two or more interconnected electric systems planned and operated to supply power in the most reliable and economical manner.

PREFERENCE PRINCIPLE

Legislative requirement giving non-profit consumer-owned electric systems first purchase rights to federal hydroelectric power generated on the nation's rivers and streams.

PRIVATIZATION

Turning over government or public assets, such as power marketing administrations, to private interests to operated for profit.

PUBLIC POWER DISTRICT (PPD)

State-created political entity, similar to a school district, formed to provide power to a service area.

Q, R

QUAD

This term refers to a quadrillion British thermal units, equal to the energy contained in 8 billion gallons of gasoline, a year's supply for 10 million cars.

RADIATOR

A device that transfers heat to the air in a room.

RATE

The cost, per kilowatt-hour, for electricity.

RATE BASE

The total value of a utility's plants, transmission lines, buildings and other equipment.

REA

Rural Electrification Administration renamed the Rural Utilities Service (RUS) in 1994.

REGULATION

A rule or order issued by an executive authority of a government, having the force of law.

REGULATORY COMMISSION

A state or federal agency responsible for the regulation of an industry or segment of an industry. In the electric utility industry, most states have regulatory commissions that must approve service area, construction permits, financing and rates. A majority of electric cooperatives are not regulated by their respective state commissions.

RELIABILITY

A utility's ability to deliver uninterrupted electricity to its consumers.

RESERVE CAPACITY

Extra generating capacity available to meet unanticipated demands for power.

RESTRUCTURING

The reconfiguration of the vertically-integrated electric utility. Restructuring usually refers to separation of the various utility functions into individually-operated and individually-owned utilities.

RETAIL COMPETITION

A system under which more than one electric provider can sell to retail customers and retail customers are allowed to buy from more than one provider.

RIGHT OF WAY

Use of property covered by an agreement that allows utilities to construct and operate their facilities there.

RURAL ELECTRIC COOPERATIVE (REC)

See "Electric Cooperative"

RURAL ELECTRIC YOUTH TOUR

An annual educational trip to Washington D.C. for high school students selected by local rural electric systems. It is organized by the National Rural Electric Cooperative Association and statewide associations. (Also referred to as "Youth Tour.")

RURAL ELECTRIFICATION

A term used to describe the introduction of electricity to rural areas not served by power companies.

RURAL ELECTRIFICATION ACT

Legislation that established the Rural Electrification Administration (REA, later the RUS) in 1936 as a lending agency for electric cooperatives. Telephone cooperatives were included in an amendment to the act in 1949.

RURAL ELECTRIFICATION ADMINISTRATION (REA)

The U.S. Department of Agriculture agency that lends money to the nation's consumer-owned electric and telephone cooperatives and offers engineering and accounting assistance. In 1994 the REA changed its name to Rural Utilities Service (RUS).

RURAL UTILITIES SERVICE (RUS)

See above. Formerly called Rural Electrification Administration.

R-VALUE

A number showing the ability of insulation to resist the transfer of heat. High R-values indicate more efficient insulation.

S

SEASONAL ENERGY EFFICIENCY RATING (SEER)

A measure of the efficiency of air conditioning systems. The higher the SEER, the more energy efficient the cooling system. (See Energy Efficiency Rating.)

SERVICE AREA

The geographic region that a utility is required to serve or has the exclusive right to serve, supplying electricity to the consumer.

SOLAR POWER

Energy from the sun's radiation converted into heat or electricity.

SUBSTATION

An electrical facility containing equipment for controlling the flow of electricity from supplier to user.

SURGE SUPPRESSOR

An electronic device that protects electric equipment from short-term, high-voltage flows of electricity, such as lightning strikes. Also called a spike suppressor.

SYSTEM DEMAND

The total amount of energy required to supply all consumers.

T

THERM

A measure of heat equal to 100,000 British thermal units (BTU).

TRANSFORMER

A device used to raise or lower voltage in electric distribution or transmission lines.

TRANSMISSION SYSTEM

All of the poles, lines and other equipment used to move bulk electricity from a generating plant to a distribution system.

TURBINE

A rotary engine driven by the pressure of steam, water or gas against the curved vanes of a wheel fastened to a driving shaft.

U,V

URANIUM

A soft, radioactive metal and the heaviest of natural elements, it is a fuel of nuclear energy. A pound of enriched uranium contains nearly 3 million times the energy contained in a pound of coal.

UTILITY

A cooperative or company that provides electricity, water, gas or telephone service for residential and commercial use.

VOLT

The unit of measurement of electromotive force. It is equivalent to the force required to produce a current of one ampere through a resistance of one ohm.

W, Y

WATT

A measure of real power production or usage equal to one joule per second. An electrical unit of power or a rate of doing work. The rate of energy transfer equivalent to one ampere following under a pressure of one volt at unity power factor. One horsepower is equivalent to approximately 746 watts.

WATT-HOUR (WH)

An electrical energy unit of measure equal to one watt of power supplied to or taken from an electrical circuit steadily for one hour.

WEATHER-STRIPPING

Insulation placed around doors and windows to save energy.

WHOLESALE CUSTOMER

A power purchaser that buys for resale to retail customers.

YOUTH LEADERSHIP COUNCIL

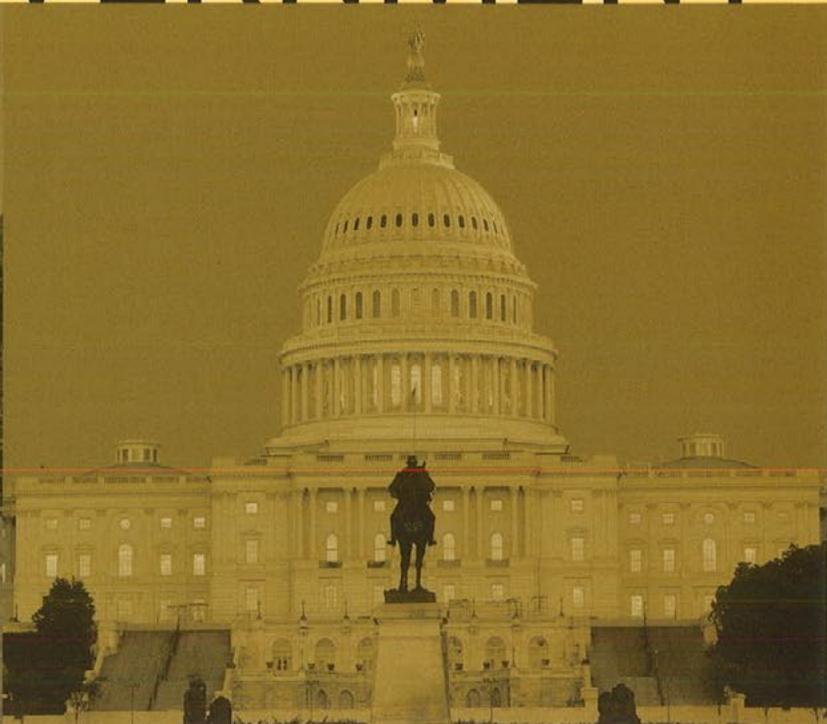
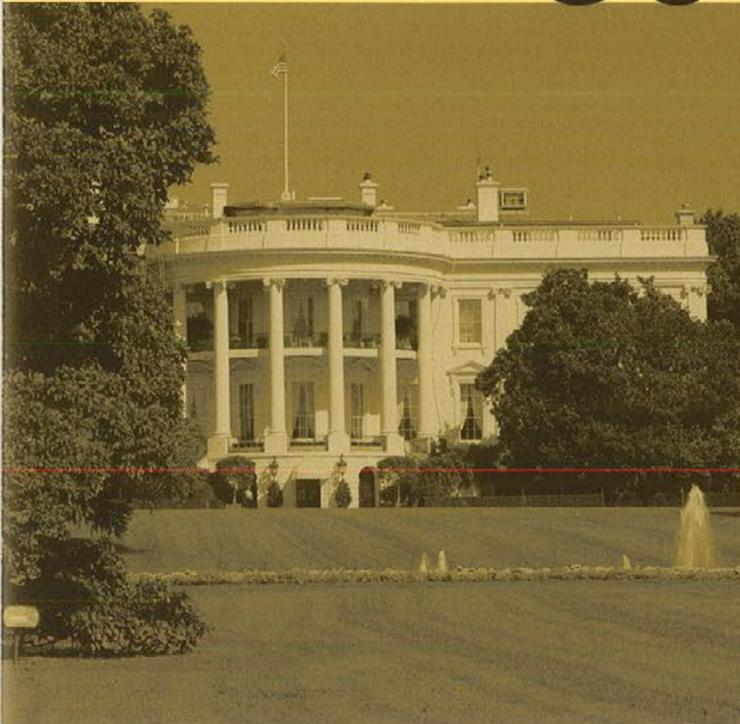
This group participates in the annual Rural Electric Youth Tour, NRECA Annual Meeting, and the Youth Leadership Conference. Composed of one member from each state.

YOUTH TOUR

Abbreviated reference for Rural Electric Youth Tour.

The United States

GOVERNMENT



The principle idea that the rights and liberties of the American people must be guaranteed was included in their Declaration of Independence, in which the thirteen United States of America declared:

“We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the pursuit of Happiness. That to secure these rights, Governments are instituted among Men, deriving their just powers from the consent of the governed...”

The principle that a just government can operate only by the consent of the people is the foundation our nation’s most important governing document—The United States Constitution.

THE CONSTITUTION

The Constitution guarantees the rights and liberties of the American people and defines the form of the U.S. government. The people had all their rights and liberties before they made the Constitution. The people formed the Constitution as the supreme law of the United States, among other purposes, to make the people’s liberties secure—secure not only against foreign attack but also against oppression by their own government.

The people who framed and ratified the Constitution set specific limits upon their national government and upon the States, and reserved to themselves all powers that they did not grant. The Ninth Amendment declares, “The enumeration in the Constitution, of certain rights, shall not be construed to deny or disparage others retained by the people.”

The Preamble declares the constitutional principles of the United States:

“We the People of the United States, in Order to form a more perfect Union, establish Justice, insure domestic Tranquility, provide for the common defense, promote the general welfare, and secure the Blessings of Liberty to ourselves and our Posterity, do ordain and establish this Constitution for the United States of America.”

THE BILL OF RIGHTS

During the debates on the adoption of the Constitution, its opponents repeatedly charged that the Constitution as drafted would open the way to tyranny by the central government. Fresh in their minds was the memory of the British violation of civil rights before and during the American Revolution.

They demanded a “bill of rights” that would spell out the immunities of individual citizens. Several state conventions in their formal ratification of the Constitution asked for such amendments; others ratified the Constitution with the understanding that the amendments would be offered. On September 25, 1789, the First Congress of the United States therefore proposed amendments to the Constitution that met the arguments most frequently advanced against it. The following text is a transcription of the first 10 amendments to the Constitution in their original form. These amendments were ratified December 15, 1791, and form what is known as the “Bill of Rights.”

AMENDMENT I

Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press; or the right of the people peaceably to assemble, and to petition the Government for a redress of grievances.

AMENDMENT II

A well regulated Militia, being necessary to the security of a free State, the right of the people to keep and bear Arms, shall not be infringed.

AMENDMENT III

No Soldier shall, in time of peace be quartered in any house, without the consent of the Owner, nor in time of war, but in a manner to be prescribed by law.

AMENDMENT IV

The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no Warrants shall issue, but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized.

AMENDMENT V

No person shall be held to answer for a capital, or otherwise infamous crime, unless on a presentment or indictment of a Grand Jury, except in cases arising in the land or naval forces, or in the Militia, when in actual service in time of War or public danger; nor shall any person be subject for the same offense to be twice put in jeopardy of life or limb; nor shall be compelled in any criminal case to be a witness against himself, nor be deprived of life, liberty, or property, without due process of law; nor shall private property be taken for public use, without just compensation.

AMENDMENT VI

In all criminal prosecutions, the accused shall enjoy the right to a speedy and public trial, by an impartial jury of the State and district wherein the crime shall have been committed, which district shall have been previously ascertained by law, and to be informed of the nature and cause of the accusation; to be confronted with the witnesses against him; to have compulsory process for obtaining witnesses in his favor, and to have the Assistance of Counsel for his defense.

I AMENDMENT VII

In suits at common law, where the value in controversy shall exceed twenty dollars, the right of trial by jury shall be preserved, and no fact tried by a jury, shall be otherwise reexamined in any Court of the United States, than according to the rules of the common law.

I AMENDMENT VIII

Excessive bail shall not be required, nor excessive fines imposed, nor cruel and unusual punishments inflicted.

I AMENDMENT IX

The enumeration in the Constitution, of certain rights, shall not be construed to deny or disparage others retained by the people.

I AMENDMENT X

The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people.

U.S. FEDERAL GOVERNMENT

The U.S. Constitution of the United States grants the federal government certain powers to be used in reaching the goals stated in the Preamble. Most of these powers are defined in Articles I, II and III of the Constitution. Those articles give some powers to Congress (Legislative Branch), some to the President (Executive Branch), and some to the Supreme Court (Judicial Branch). All laws, rules and regulations of the governmental structure may be tested for validity by comparing them to the nation's constitutional principles.

LEGISLATIVE BRANCH

Legislation is defined as the “act of making or enacting laws.” It also can mean “a law or a body of laws enacted.”

In Article I, Section 1, of the Constitution, the Legislative Branch is created by the following language: “All legislative Powers herein granted shall be vested in a Congress of the United States, which shall consist of a Senate and House of Representatives.”

The chief function of Congress is the making of laws. In addition, the Senate has the function of advising and consenting to treaties and to certain nominations by the President.

The U.S. Senate is referred to as “the Senate.” The U. S. House of Representatives is often referred to as “the House.” When speaking of both bodies, it is common to refer to them as “the two Houses of Congress.”

The Senate is composed of 100 Members—two from each state. A Senator must be at least 30 years of age, have been a citizen of the United States for nine years, and, when elected, be a resident of the state for which the Senator is chosen. The term of office is six years and one-third of the total membership of the Senate is elected every second year. Each Senator has one vote.

The House of Representatives is composed of 435 Members elected every two years from among

the 50 states, in proportion to the total population in each state. A Representative must be at least 25 years of age, have been a citizen of the United States for seven years, and, when elected, be a resident of the state in which the Representative is chosen. Each Representative has one vote.

Members of the Senate are properly designated as a United States Senator. Members of the House of Representatives are designated as a United States Representative. U.S. Senators and U.S. Representatives are all Members of Congress.

A Congress lasts for two years, commencing in January of the year following the biennial election of Members. A Congress is divided into two sessions.

Both the Senate and the House of Representatives have equal legislative functions and powers, with certain exceptions. For example, the Constitution provides that only the House of Representatives may originate bills that relate to the income to the government from taxation and other sources. By tradition, the House also originates appropriation bills that, by law, authorize the spending of money by the federal government for public expenses.

The Constitution authorizes the Senate and the House to each determine the rules of its own proceedings.

The House of Representatives adopts its rules on the opening day of each Congress. The Senate considers itself a continuing body and operates under continuous standing rules that it amends from time to time.

SOURCES OF LEGISLATION

Sources of ideas for legislation are unlimited. Primary sources are the ideas conceived by a Member of Congress. For example, a Member may promise the voters, if elected, to introduce legislation on a particular subject. The Member may have also become aware after taking office of the need for amendment to, or repeal of, an existing law or the enactment of a new law in an entirely new field.

In addition, the Member's constituents, either as individuals or through citizen groups, have the right to petition or transmit their proposals to the Member. The right to petition is guaranteed by the First Amendment to the Constitution.

In modern times, the "executive communication" has become a source of many legislative proposals. The communication is usually in the form of a message or letter from a member of the President's Cabinet, the head of an independent agency, or the President transmitting a draft of a proposed bill to the Speaker of the House of Representatives and the President of the Senate.

FORMS OF CONGRESSIONAL ACTION

The legislative work of Congress is initiated by the introduction of a proposal in one of four forms: the bill, the joint resolution, the concurrent resolution, and the simple resolution. The most customary form used in both houses is the bill. During the 105th Congress (1997–1998), 7,529 bills and 200 joint resolutions were introduced in both houses. Of the total number introduced, 4,874 bills and 140 joint resolutions originated in the House of Representatives.

A bill that has been agreed to in identical form by both the Senate and the House becomes the law of the land only after,

- (1) Presidential approval; or
- (2) failure by the President to return it with objections to the House in which it originated within 10 days while Congress is in session; or
- (3) the overriding of a presidential veto by a two-thirds vote in each House.

INTRODUCTION AND REFERRAL TO COMMITTEE

Any Member may introduce a bill at any time while the House is in session by simply placing it in the “hopper,” a wooden box provided for that purpose located on the side of the rostrum in the House Chamber. Permission is not required to introduce the bill.

In the Senate, a Senator usually introduces a bill or resolution by presenting it to one of the clerks at the Presiding Officer’s desk, without commenting on it from the floor of the Senate. However, a Senator may use a more formal procedure by rising and introducing the bill or resolution from the floor.

The Member introducing the bill is known as the sponsor. An unlimited number of Members may co-sponsor a bill. Bills that have been introduced are given an identification number and copies are made for review by Members and their staff. Printed and electronic versions of the bill are also made available to the public.

Committees made up of the Members of Congress in the respective houses do most of the work related to legislation. Each committee’s jurisdiction is divided into certain subject matters under the rules of each House and all measures affecting a particular area of the law are referred to the committee that has jurisdiction over the particular subject matter.

Each committee is provided with a professional staff to assist it in the innumerable administrative details involved in the consideration of bills and its oversight responsibilities.

CONSIDERATION BY COMMITTEE

One of the first actions taken by a committee is to seek the input of the relevant government departments and agencies. Frequently, the bill is also submitted to the General Accounting Office with a request for an official report of views on the necessity or desirability of enacting the bill into law.

The committee may also conduct public hearings to hear from people who have a particular interest in the potential effects the bill could have on people’s lives, businesses, communities, and the entire nation. For example, an electric cooperative member-owner could be called by the committee to speak about how the bill could affect the ability of electric cooperatives to serve their members.

When the committee has collected and considered information and other people's opinions about the bill, the committee can choose, by committee vote, whether or not to send the bill out of the committee for further consideration by the full House or Senate. If the committee chooses to table the bill, the bill does not proceed any further and it "dies" in the committee.

If the committee votes to send the bill on to the full House or Senate, the committee writes a committee report that describes the purpose and scope of the bill and the reasons for its recommended approval. Generally, a section-by-section analysis is set forth explaining precisely what each section is intended to accomplish. All changes in existing law must be indicated in the report and the text of laws being repealed must be set out.

CONSIDERATION AND DEBATE

Our democratic tradition demands that bills be given consideration by the entire membership of the House and Senate, usually with adequate opportunity for Members to debate the merits of the bill and to propose amendments. After general debate, a second reading of the bill begins. The second reading is a section-by-section reading during which time germane amendments may be offered to a section when it is read.

I VOTING

Voting by Members to pass or reject a bill is often recorded by electronic device unless other methods, such as voice votes or roll call votes are used.

A bill that is passed in the House of Representatives is then sent to the Senate for consideration, and the reverse is true for a bill originating in the Senate. Members of the second body may approve the bill as it stands, reject the bill, or amend the original bill and send it back for consideration by the originating body. If the bill is of high importance and the differences between the House and Senate versions are significant, a conference committee comprised of Senators and Representatives can be convened to reconcile the differences and, hopefully, produce a bill that both the Senate and House will pass.

I ENROLLMENT

When the bill has been agreed to in identical form by both bodies, a copy of the bill is "enrolled" (produced) for presentation to the President. The preparation of the enrolled bill is a painstaking and important task because it must reflect precisely the effect of all amendments agreed to by both bodies.

I PRESIDENTIAL ACTION

Article I, Section 7, of the Constitution provides in part that: "Every Bill which shall have passed the House of Representatives and the Senate, shall, before it becomes a Law, be presented to the President of the United States."

If the President approves the bill, he signs it and usually writes the word "approved" and the date. However, the Constitution requires only that the President sign it.

The bill may become law without the President's signature by virtue of the constitutional provision that if the President does not return a bill with objections within 10 days (excluding Sundays) after it has been presented to the President, it become law as if the President had signed it. However, if Congress by their adjournment prevents its return, it does not become law. This is known as a "pocket veto"; that is, the bill does not become law even though the President has not sent his objections to the Congress.

Notice of the signing of a bill by the President is sent by message to the house in which it originated and that house informs the other, although this action is not necessary for the act to be valid. The action is also noted in the Congressional Record. A bill becomes law on the date of approval or passage over the President's veto, unless it expressly provides a different effective date.

I VETO MESSAGE

By the terms of the Constitution, if the President does not approve the bill "he shall return it, with his Objections to that House in which it shall have originated, who shall enter the Objections at large on their Journal, and proceed to reconsider it."

A two-thirds affirmative vote by both the House and Senate is necessary to pass the bill over the President's objections. If so approved, the bill becomes the law of the land, notwithstanding the objections of the President, and it is ready for publication as a binding statute.

I PUBLICATION

One of the important steps in the enactment of a valid law is the requirement that it shall be made known to the people who are to be bound by it. There would be no justice if the people were held responsible for their conduct before it made known to them the unlawfulness of such behavior. In practice, our laws are published immediately upon their enactment so that the public will be aware of them.

How to address a letter to your Representative or Senator:

The Honorable Senator (name)
Senate Office Building
Washington, D.C. 20515

The Honorable Congressman/woman (name)
House Office Building
Washington, D.C. 20515

For more information about the specific duties of the houses of Congress, see these web sites: www.senate.gov and www.house.gov.

The official web portal for the U.S. Government is www.firstgov.gov.

For current visitor and contact information regarding U.S. federal branches, departments, and agencies, please see the related web sites.

EXECUTIVE BRANCH

www.whitehouse.gov

The President is the chief executive and administrative head of the executive branch of the federal government which includes numerous agencies, both temporary and permanent, as well as 14 executive departments: Agriculture, Commerce, Defense, Education, Energy, Health and Human Services, Homeland Security, Housing and Urban Development, Interior, Labor, State, Transportation, Treasury and Justice. The President is authorized to appoint and direct other executive officers to see that the laws are faithfully executed. The President is commander-in-chief of the armed forces and also has the duty to appoint the justices of the Supreme Court and judges of certain other courts with the advice and consent of the Senate.

In order for a person to become President, he or she must be a natural-born citizen of the United States, be at least 35 years of age, and have resided in the United States for at least 14 years. No person shall be elected to the office of President more than twice.

The Cabinet, a creation of custom and tradition dating back to George Washington's administration, advises the President and is composed of the heads of the 14 executive departments and certain other executive branch officials to whom the President accords Cabinet rank. The Vice President also participates in Cabinet meetings, and from time to time, other individuals are invited to participate in discussions of particular subjects.

EXECUTIVE BRANCH CABINET LEVEL DEPARTMENTS AND FUNCTIONS

I DEPARTMENT OF AGRICULTURE

14th Street and Independence Avenues S.W., Washington, D.C. 20250

www.usda.gov

The Department of Agriculture (USDA) works to improve and maintain farm income and to develop and expand markets abroad for agriculture products. The department seeks to cure the problems of poverty, hunger and malnutrition. It works to enhance the environment and maintain our production capacity by helping landowners protect the soil, water, forest and natural resources. Rural development, credit and conservation programs are key resources for carrying out national growth policies. USDA research findings directly or indirectly benefit all Americans. The Department, through inspection and grading services, safeguards and ensures quality in the daily food supply.

I RURAL UTILITIES SERVICE

(formerly the Rural Electrification Administration)

Department of Agriculture South Building, Room 4043, Washington, D.C. 20250

www.rurdev.usda.gov/utilities_LP.html

The Rural Electrification Administration (REA) was established by Executive Order on May 11, 1935, as a credit agency of the U.S. Department of Agriculture to assist rural electric and telephone utilities obtain financing. In October 1994, REA changed its name to Rural Utilities Service (RUS). About 1,100 rural electric and more than 1,000 rural telephone utilities in 47 states, Puerto Rico, American Samoa, the Virgin Islands, Guam, Rota, Saipan and Tinian have received RUS loans, loan guarantees or other assistance from RUS in obtaining financing to construct rural electric and telephone utility systems. The RUS administrator is appointed by the President and subject to Senate confirmation.

I DEPARTMENT OF COMMERCE

14th Street between Constitution Avenue and E Street N.W., Washington, D.C. 20230
www.commerce.gov

The Department of Commerce encourages, serves and promotes the nation's international trade, economic growth and technological advancement. Within this framework and together with a policy of promoting the national interest through the encouragement of the competitive free enterprise system, the Department provides a wide variety of programs. It offer assistance and information to help increase exports, administers programs to prevent unfair foreign trade competition, provides research and support for the increased use of scientific engineering and technological development, grants, patents and registers trademarks. It also provides assistance to promote domestic economic development, seeks to improve understanding of the earth's physical environment and oceanic life, promotes travel to the United States by residents of foreign countries and assists in the growth of minority businesses.

I DEPARTMENT OF DEFENSE

The Pentagon, Arlington, VA
www.defense.gov

The Department of Defense (DOD) is responsible for providing the military forces needed to deter war and protect the security of our country. The Secretary of Defense exercises direction, authority and control over the Department of Defense under the President, who is Commander-in-Chief of the armed forces. The armed forces consist of the Army, Navy, Marine Corps, Air Force and military reserves, approximately 1.4 million men and women. This figure represents full-time military personnel comprising both regular and reserves on active duty and officer candidates, including cadets at the three military academies. The active military is re-enforced by approximately 1.8 million members of the reserves. In addition, there are about 772,000 civilian employees of the Defense Department.

I DEPARTMENT OF EDUCATION

600 Independence Avenue S.W., Washington, D.C. 20202
www.ed.gov

The Department of Education is a Cabinet level department that establishes policy for, administers and coordinates most Federal assistance to education. The Department of Education was created by the Department of Education Organization Act, approved October 17, 1979.

I DEPARTMENT OF ENERGY

1000 Independence Avenue S.W., Washington, D.C. 20585
www.energy.gov

The Department of Energy (DOE) provides the framework for a comprehensive and balanced national energy plan through the coordination and administration of the energy functions of the federal government. The Department is responsible for long-term, high-risk research and development of energy technology, the marketing of federal power; energy conservation, the nuclear weapons program, energy regulatory program and a central energy data and analysis program.

checks, bonds and other publications or securities of the United States. The Secret Service is also responsible for providing security at the White House complex, buildings that house Presidential offices, the Vice President's residence, and various foreign, diplomatic missions in the Washington, D.C. metropolitan area and in other areas designated by the President.

JUDICIAL BRANCH

www.uscourts.gov

The judicial branch hears cases that challenge or require interpretation of the legislation passed by Congress and signed by the President. It consists of the U.S. Supreme Court and the lower federal courts. Courts decide arguments about the meaning of laws, how they are applied and whether they violate the Constitution. Appointees to the federal bench serve for life or until they voluntarily resign or retire. The Supreme Court is the most visible of the federal courts.

The structure of the federal court system has varied throughout the history of the nation. The Judicial Branch Article III, section 1, of the Constitution of the United States, merely provides that "the judicial power of the United States shall be vested in one Supreme Court, and in such inferior Courts as the Congress may from time to time ordain and establish." Therefore, the only indispensable court is the Supreme Court. The Supreme Court of the United States was created in accordance with this provision and by authority of the Judiciary Act of September 24, 1789. It was organized on February 2, 1790. Congress has established and abolished other U.S. courts as national needs have changed over time.

The federal court system can be viewed as a pyramid, with the Supreme Court of the United States at the top, the highest court in the nation. On the next level are the 13 United States Courts of Appeals and the Court of Military Appeals. On the following level are the 94 district courts and the specialized courts, such as the Tax Court, the Court of International Trade. There are a number of routes a case may take to a federal court, such as originating in a U.S. district court or coming from a state court or federal agency. A case may proceed through two levels of decision, generally district court on the first level and appeals court on the second level, before it is considered for review in the Supreme Court. The Supreme Court primarily reviews only cases that involve matters of great national importance and only accepts a small number of cases per term.

THE SUPREME COURT

The words "Equal Justice Under Law," written above the main entrance to the Supreme Court Building, express the ultimate responsibility of the Supreme Court of the United States. The Court is the highest tribunal in the nation for all cases and controversies arising under the Constitution or the laws of the United States. As the final arbiter of the law, the Court is charged with assuring the American people the promise of equal justice under the law and thereby functions as guardian and interpreter of the Constitution.

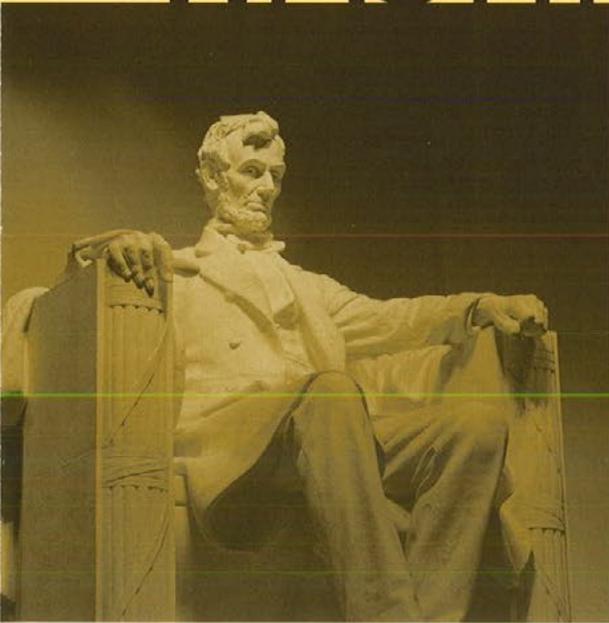
The Supreme Court comprises the Chief Justice of the United States and a number of Associate Justices that is decided by Congress. Under that authority, and by virtue of the act of June 25, 1948, the number of Associate Justices is eight. Power to nominate the Justices is vested in the President of the United States, and appointments are made by and with the advice and consent of the Senate. Supreme Court justices are appointed for a life term. However, a justice may retire at the age of 70, after serving 10 years as a Federal judge or at age 65, after 15 years of service.

By law, the term of the Supreme Court begins on the first Monday in October of each year and continues as long as the business before the Court requires, usually until the end of June. Approximately 5,000 cases are passed upon in the course of a term. The Court's Justices (six members constitute a quorum) hear cases for two weeks, and are out of session for two weeks while they formulate their decisions. During the in-session weeks, the Court is open to the public during hearings. In addition to the cases heard by the Justices, some 1,200 applications of various kinds are filed each year that can be acted upon by a single Justice.

The powers granted to the Congress, the President and the Supreme Court provide broad jurisdiction. The definitions of these powers are not always clearly stated in the Constitution. Some are defined in general terms that could have more than one meaning. For example, the Constitution states that Congress may collect taxes and borrow money only for "the common defense and general welfare of the United States." The questions raised about the meaning of the Constitution are answered during the actual process of government. Congress and the President try to answer the questions when they adopt laws or issue orders. If the laws or orders are challenged as unconstitutional, the Supreme Court may decide the outcome.

Sites & Tours Around

WASHINGTON, D.C.



PLACES TO GO AND THINGS TO DO IN THE WASHINGTON, D.C. AREA.

The following is a partial listing of the many interesting places to visit in and around Washington, D.C. In addition to descriptions, you will find web site addresses accompanying many of these listings. Please note: Visitors are strongly encouraged to verify the current hours of operation and tour procedures in advance. Some operations change with the seasons and some facilities periodically close or alter hours of operation for renovations. It is best to double check before finalizing plans or arriving.

HELPFUL WEB SITES

WWW.WASHINGTON.ORG

Contains information about the area from the Washington, D.C. Visitor's Association.

WWW.WMATA.COM

Contains extensive information on the Metrorail system.

WWW.WASHINGTONPOST.COM/GOG/DC-RESTAURANTS.HTML

Contains listings of Washington, D.C. area restaurants.

WWW.NPS.GOV

Web site of the National Park Service that operates many of the monuments, memorials and parks in the Washington, D.C. area and throughout the nation.

WWW.SI.EDU

Contains comprehensive information about The Smithsonian.

WWW.FIRSTGOV.GOV

The U.S. Government's official web portal with links to all government branches and citizen services.

I ARLINGTON NATIONAL CEMETERY

Arlington, Virginia

www.arlingtoncemetery.org

Telephone: 703 607 8052

See web site for current tour procedures and hours.

Here lie the remains of 175,000 American soldiers who fought in wars from the Revolutionary War to the present. Among the thousands of white headstones are the graves of William Howard Taft, John F. Kennedy, Robert Kennedy, boxer Joe Louis, Oliver Wendell Holmes and astronaut Virgil Grissom. Arlington House, at the top of the hill, is a memorial to Robert E. Lee and the final resting place of Washington's architect, Pierre Charles L'Enfant. The cemetery is also the site of the famous Tomb of the Unknown Soldier and the hourly changing of the guard.

I U.S. BOTANIC GARDENS

First Street & Maryland Avenue, S.W.,
Washington, D.C.

www.usbg.gov | Telephone: 202 225 8333

Hours: 10 a.m.–5:00 p.m. See web site for current tour procedures

This 19th century Victorian cast-iron and glass greenhouse grows ferns, succulents, cacti and many other plants and provides these plants to the Congressional offices. Free admission.

I BUREAU OF ENGRAVING AND PRINTING

14th and C Streets S.W., Washington, D.C.

www.bep.treas.gov | Telephone: 800 874 2330

See web site for current tour procedures and hours.

This building is the site where billions of U.S. dollars and stamps are printed each year. The tour includes watching high-speed presses print more than 7,000 sheets of bills every hour. The bureau is under strict security and photography is forbidden.

I UNITED STATES CAPITOL

Capitol Hill, Washington, D.C.

www.aoc.gov | Recorded information: 202 225 6927

The Capitol is open to the public for guided tours only. See web site for current tour procedures and hours.

George Washington and Pierre Charles L'Enfant chose the location of the Capitol. President Washington laid the cornerstone of the Capitol on September 18, 1793, and Congress began occupying the building in 1800. In 1814, British troops invaded Washington and took up residency in the Senate building. On the day they burned the Capitol, along with the city's other federal buildings, a sudden summer shower spared the Capitol from total destruction. Five years later, the building was repaired and today the Capitol is an outgrowth of the 1819 structure.

The Capitol's Rotunda was constructed after the fire of the War of 1812. At the main entrance to the Rotunda stand the bronze Columbus doors which depict events from the life of the great explorer. Rising over the Rotunda is one of the largest domes in the world, constructed of cast iron and weighing about 9 million pounds. In the eye or canopy, 180 feet above the floor, is the fresco "Apotheosis of Washington."

During the early days of the Civil War, the Rotunda served with the rest of the Capitol as a barracks and then as a hospital for Union soldiers. State funerals are also held in this room, with the flag-draped casket placed in the center of the room. This spot also marks the point from which the streets in the city are numbered and lettered.

The Capitol is the site of presidential inauguration ceremonies. Noteworthy inauguration events include the longest inaugural speech on record (one and one-half hours) delivered by William Henry Harrison in a downpour. (President Harrison died three weeks later of pneumonia.) Famous quotes from presidential inaugurations speeches include Franklin Delano Roosevelt's "The only thing we have to fear is fear itself" and John F. Kennedy's "Ask not what your country can do for you, but what you can do for your country."

HALL OF THE HOUSE OF REPRESENTATIVES

The House of Representatives moved into this chamber in 1857 and every president since Woodrow Wilson has addressed joint sessions of Congress in this room. The State of the Union Address, traditionally delivered in January, is also delivered in this hall. When the

House is in session, the mace, a symbol of authority, can be seen on the Speaker's right. 435 Congressmen and women are not assigned individual seats, but they do adhere to the traditional seating—Republicans on the Speaker's left and the Democrats on the right.

SENATE CHAMBER

The Senate Chamber was completed in 1859 and was renovated along with the House 90 years later. The 48 mahogany desks made in 1819 are still in use, and with the addition of new states, desks have been made in the pattern of the originals. In the niches of the gallery are busts of 20 vice presidents. The ceiling is crowned with the Great Seal of the United States.

The Senate respects many long-time traditions, including the selection of desk locations. The 100 senators choose location on the basis of seniority within parties. The President of the Senate, the Vice President of the United States, seats the Republicans to his left and the Democrats to his right.

STATUARY HALL

For about 50 years, the House of Representatives met here. John Quincy Adams, serving in the House in his post-presidential years, discovered an acoustical phenomenon in the room: at certain spots, you can clearly hear conversations from across the room though anyone standing in between hears nothing. In 1848, Adams suffered a stroke in this chamber; a small gold star on the floor designates where the sixth President died. Additionally, bronze disks on the floor mark the desk locations of famous representatives such as Abraham Lincoln.

In 1857, when the House was moved to its present Chamber, Statuary Hall became a haven for hucksters selling fruit, rootbeer and even whiskey. During the Civil War it was used as a hospital. In 1864, Congress designated this historic room as National Statuary Hall and asked each state to contribute statues of its two most

celebrated citizens. Ninety-two of these statues, representing people such as Will Rogers, Robert E. Lee and Brigham Young, are displayed in this room.

SENATE AND HOUSE OFFICE BUILDINGS

CAPITOL HILL

The Richard Brevard Russell, Everett McKinley Dirksen and Phillip A. Hart Senate Buildings house the offices of all 100 Senators and the nineteen standing and special committees of the Senate. The Nicholas Longworth, Joseph Cannon and Sam Rayburn House office buildings house the 435 representatives, their staffs and standing and special committees. The buildings are open to the public. Committee schedules are published daily in the "Today in Congress" column of The Washington Post newspaper.

FEDERAL BUREAU OF INVESTIGATION (FBI) HEADQUARTERS

9th Street and Pennsylvania Avenue N.W.,
Washington, D.C. 20535
www.fbi.gov

See web site for tour procedures and hours.

FORD'S THEATER & LINCOLN MUSEUM

511 10th Street, N.W., Washington, D.C. 20004
www.nps.gov/foth/schedule.htm

See web site for current tour procedures and hours.

This is the site where President Abraham Lincoln was assassinated on April 14, 1865. The Lincoln Museum contains objects related to Lincoln and to assassin John Wilkes Booth. Across the street is Peterson House where Lincoln died.

THE UNITED STATES HOLOCAUST MEMORIAL MUSEUM

100 Raoul Wallenberg Place S.W.,
Washington, D.C. 20024
www.ushmm.org | Telephone: 202 488 0400

Group reservations request information:
202 488 0419

Group reservations (10 or more people) are accepted at a minimum of four weeks and up to one year in advance. Please allow three weeks to process a request.

Hours: 10:00 a.m.–5:30 p.m. daily (closed Yom Kippur and Christmas day)

This national museum memorializes the six million Jews and millions of other victims of Nazism who perished in the Holocaust. There is one permanent and two changing exhibits that tell the story of what happened through oral histories, artifacts, photos, film and documents. The complex also contains a computer-based Learning Center, a solemn Hall of Remembrance and a Children's Wall to commemorate the 1.5 million children who perished.

DEPARTMENT OF THE INTERIOR MUSEUM

Department of the Interior Building,
C Street between 18th and
19th Streets N.W., Washington, D.C.
www.doi.gov/museum/interiormuseum
Telephone: 202 208 4743

Hours: Mon.–Fri., 8:00 a.m.–4:30 p.m.
(closed on national holidays)

See web site for current tour procedures.

Houses exhibits depicting the origins and early development of the National Park Service including artifacts, geological samples, stuffed animals and lifelike dioramas.

JOHN F. KENNEDY CENTER FOR THE PERFORMING ARTS

New Hampshire Avenue at Rock Creek Parkway,
Washington, D.C. 20566
www.kennedy-center.org | Telephone: 800 444
1324 or 202 467 4600 (general information)

The Kennedy Center is the Home of the National Symphony, the American National Theater, the Washington Opera and the American Film Institute and also features a wide variety of drama, dance, music and film in its five theaters.

LIBRARY OF CONGRESS

Jefferson Building, First Street & Independence
Avenue, S.E., Washington, D.C. 20540
www.loc.gov | Telephone: 202 707 5000
(general information)
Visitor information: 202 707 8000

See web site for current tour procedures and hours.
Tour Schedule: Monday – Saturday: 10:30 a.m.,
11:30 a.m., 1:30 p.m., 2:30 p.m., 3:30 p.m.

Funded in 1800 with \$5,000, the Library began as a one-room reference collection for Congress. When it was burned in 1814 by the British, Thomas Jefferson, retired and in need of money, offered his fine private library for sale as a replacement.

There are 147 million items in the Library of Congress. There are nearly 22 million books, over 12 million photographs, over 5 million maps, 6.5 million pieces of sheet music; recordings of traditional songs of the Sioux; one of only three remaining perfect vellum-printed Gutenberg Bibles, circa 1455. It is the world's largest library and collection.

At the time of its completion, the main building was the most expensive structure in the world. The main building is an ornate Italian Renaissance/Beaux-Arts structure designed after a Paris opera house. Most striking is the Main Reading Room, a soaring domed octagon built in three colors of veined marble. The copper roof of the dome was once gilded. Two other buildings make up the Library of Congress complex, the Adams Building and the James Madison Memorial Building.

U.S. NATIONAL ARBORETUM

3501 New York Avenue N.E.,
Washington, D.C. 20002
www.usna.usda.gov | Telephone: 202 245 2726

Hours: 8:00 a.m.–5:00 p.m. daily
10:00 a.m.–3:30 p.m. (Bonsai collection)

The nation's own arboretum offers 444 lovely acres of trees, shrubs and flowering plants from across the United States and around the world. Enjoy the special Japanese bonsai collection and aromatic herb garden.

THE NATIONAL AQUARIUM

U.S. Department of Commerce Building,
14th Street & Constitution Avenue N.W.,
Washington, D.C. 20230
www.nationalaquarium.com
Telephone: 202 482 2825

The Aquarium is now open seven days a week, from 9–5pm, last admission at 4:30 pm.

A self-guided tour of the Aquarium takes approximately 45 minutes to an hour.

General admission (ages 11 and up): \$3.50

Hours: 9:00 a.m.–5:00 p.m. daily (closed Christmas)

The National Aquarium, founded more than 115 years ago, is the oldest aquarium in the country. The aquarium is located in the Department of Commerce's basement and has more than 1,000 marine and freshwater animals.

NATIONAL ARCHIVES

8th and Constitution Avenue N.W.,
Washington, D.C. 20408
www.archives.gov | Telephone: 866 272 6272

See web site for current tour procedures and hours.

This is the site where major original American documents such as the Declaration of Independence, the Constitution and the Bill of Rights are on public display. The Archives also contain a Research Room where you can explore your entire family history.

NATIONAL BUILDING MUSEUM

Judiciary Square, 401 F Street N.W.,
Washington, D.C. 20001
www.nbm.org | Telephone: 202 272 2448

Hours: 10:00 a.m.–5:00 p.m., Mon.–Sat.

11:00 a.m.–5:00 p.m., Sun.

Tours: Building See web site for scheduling group tours. \$8/Adults, \$5/Youth (Age 3-17)

The nation's only museum devoted to architecture and the building arts, this unique institution is housed in the historic Old Pension Building designed by General Montgomery Meigs in 1881. The magnificent Great Hall of this landmark has been the site of inaugural balls since Grover Cleveland's first in 1885. Renovation has restored the building's original Victorian elegance and provides space for exhibitions and conferences.

NATIONAL GALLERY OF ART

4th and Constitution Avenue N.W.,
Washington, D.C. 20565
www.nga.gov | Telephone 202 737 4215

Often mistaken as part of the Smithsonian, the National Gallery of Art is actually not a part of the Smithsonian complex and has a separate board of trustees. It is one of the world's great art museums, with extensive collections of Western European and American works housed in the West and East Buildings. The West Building, designed by John Russell Pope in 1941, contains works by the Old Masters from the 13th century to 19th century. The stupendous East Building, designed by architect I. M. Pei in 1978, contains a giant Calder mobile inside, along with many contemporary works.

WASHINGTON NAVY YARD

9th and M Streets S.E., Washington, D.C. 20374
www.cnic.navy.mil
Telephone: 202 433 4882

Tour groups and individuals who do not have military or Department of Defense identification and want to visit the Museum should call in advance for an appointment.

The Navy Yard is the oldest naval facility in the U.S. It is the site of the Naval Memorial Museum, the Marine Corps Museum and a gift shop in the Brooklyn Pilot House. The Naval Memorial Museum is a 10,000 foot-long warehouse displaying thousands of warships, weapons, submarines and aircraft. The Marine Corps Museum traces the 200-year history of the Marines through exhibits of weapons, uniforms and firearms.

THE PENTAGON

Across the 14th Street Bridge in Arlington, VA
pentagon.osd.mil

Tours of the Pentagon are available to schools, educational organizations and other select groups by reservation only. Groups interested in touring the Pentagon should contact the Pentagon Tour Office at 703 695 1776.

The Pentagon, one of the world's largest office buildings (3.7 million square feet), is the central headquarters for the Secretaries of the Defense Department, Army, Navy, and Air Force. Tours include Commander-in-Chief, Executive and Time Life Corridors as well as Hall of Heroes.

I SUPREME COURT

1 First Street N.E., Washington, D.C. 20543

www.supremecourt.gov

Visitor information: 202 479 3030

See web site for current tour information and hours.

The Supreme Court offers a variety of educational programs. Exhibits, which are changed periodically, and a theater, where a film on the Supreme Court is shown, are located on the ground floor. Lectures in the Courtroom are typically given every hour on the half-hour, on days that the Court is not sitting, beginning at 9:30 a.m., and concluding at 3:30 p.m. The building is open from 9:00 a.m. to 4:30 p.m. Monday through Friday. It is closed Saturdays, Sundays, and federal holidays.

I WASHINGTON NATIONAL CATHEDRAL

Mt. St. Alban, Massachusetts and Wisconsin

Avenues N.W., Washington, D.C. 20016

www.cathedral.org/cathedral

Telephone: 202 537 5596

See web site or call for current tour procedures and hours.

This spectacular 14th century Gothic cathedral is the sixth largest in the world and second largest in the United States. A magnificent view of Washington and the surrounding area can be seen from the Pilgrim Observation Gallery (donations suggested). The lovely grounds were designed by Frederic Law Olmstead. Nondenominational services.

I THE WHITE HOUSE

1600 Pennsylvania Avenue, N.W.,

Washington, D.C. 20500

www.whitehouse.gov

Visitor information: 202 456 7041

See the web site or call for current tour procedures and hours.

Home of every U.S. President since 1800, this famous house is visited by more than one million people each year. Five of the mansion's 132 rooms are open to the public: the East Room, the Green Room, the Blue Room, the Red Room and the State Dining Room.

George Washington personally selected the site in 1791 although he was the only President who did not live in the White House. The White House was frequently referred to as the President's Mansion or the President's Palace until Theodore Roosevelt dropped these imposing names and renamed it the White House. The first occupant was John Adams, in November of 1800.

During the War of 1812, the British gutted the interior and burned a sizeable portion of the exterior. The original architect, James Hoban, was enlisted to reconstruct the building. The building was painted white to cover fire damage, which is probably why it became known as the White House. Other alterations were running water in 1833, gas in 1848, bathrooms in 1878 and electricity in 1890. The house has been remodeled twice and currently has 132 rooms.

Designed to serve not only as home but also as the office of the President, it was not uncommon for the two functions to intersect. In 1902, the second floor was set aside for the exclusive use of the President's family, but as late as 1962 the First Family's meals were still being served on the non-private first floor since the second floor had no kitchen.

When Jacqueline Kennedy, wife of the 35th president, John Kennedy, arrived at the White House in 1961, she found the interior decor to be a medley of at least 34 different decorating tastes with very few historically accurate objects left intact. Mrs. Kennedy spearheaded an extensive restoration project that returned the furnishings and possessions used during previous administrations to the White House. Her project was successful and now the White House is a museum of priceless Americana, a beautiful home and an office.

WHITE HOUSE FORMAL ROOMS

The East Room is the site of Presidential

press conferences. Many moments in history have taken place here: four First Family weddings (Nellie Grant, Alice Roosevelt, Jesse Wilson, and Lynda Bird Johnson); the funerals of six Presidents (Harrison, Taylor, Lincoln, Harding, Franklin Roosevelt and Kennedy), and Richard Nixon's farewell address to his staff.

There are three special parlors: The Green Room famous for a sofa once owned by Daniel Webster, the Blue Room, where the President and First Lady officially receive their guests for receptions and state dinners, and the Red Room which is furnished in the American Empire style.

And finally, probably the most well-known of the White House formal rooms, the State Dining Room, furnished in gold and white, seats 140 dinner guests.

WHITE HOUSE GROUNDS

The 18 acres of the White House grounds, known as the President's Park, contain more than 80 varieties of trees planted throughout the years by almost every presidential family. Perhaps the most famous part of the park is Ellen Wilson's Rose Garden, planted in 1913 and redesigned in 1962 by Mrs. Paul Mellon at the request of John F. Kennedy.

MONUMENTS AND MEMORIALS

Administered by The National Park Service
(www.nps.gov)

I IWO JIMA STATUE, U.S. MARINE CORPS WAR MEMORIAL

On Route 50, near Arlington National Cemetery, Arlington, VA

www.nps.gov/gwmp/usmc.htm

Telephone: 703 289 2500

Hours: 8:00 a.m.–11:45 p.m.

The Iwo Jima statue, or Marine Corps Memorial, is the largest bronze statue ever cast. This 78-foot memorial commemorates all of the Marines who have died in battle since 1775. Felix W. de Weldon created the piece from a famous war photograph showing the flag being raised on Mt. Surbachi during WWII. For a demonstration of Marine Corps musical ability and marching excellence, see the Sunset parade performed every Tuesday evening in June and July at the memorial.

I JEFFERSON MEMORIAL

South Bank of the Tidal Basin, Washington, D.C.
www.nps.gov/thje | Telephone: 202 426 6841
(National Park Service)

Hours: 8:00 a.m.–11:45 p.m.

This memorial to the third U.S. president was dedicated in 1943 and was created in the style that he most preferred, the classical dome and colonnade. The memorial consists of a 19-foot bronze statue beneath a simple rotunda. The walls surrounding the statue are filled with quotes from the Declaration of Independence and other historical writings.

I THE KOREAN WAR VETERANS MEMORIAL

Independence Avenue and 23rd Street S.W., Washington, D.C.

www.nps.gov/kwvm | Telephone: 202 426 6841
(National Park Service)

Hours: 8:00 a.m.–11:45 p.m.

This memorial is dedicated to all those who served during the Korean War (1950 – 1954), the first major conflict of the Cold War. The returning veterans were the first American veterans not to receive a heroes' welcome. President William J. Clinton and Kim Young Sam, President of the Republic of Korea dedicated the memorial on July 27, 1995, the 42nd anniversary of the Armistice that ended the Korean War. The memorial includes a black granite wall with murals by Louis Nelson, a reflecting pool and statues by sculptor Frank C. Gaylord depicting service men.

■ LINCOLN MEMORIAL

West Potomac Park at 23rd Street N.W.,
Washington, D.C.
www.nps.gov/linc | Telephone: 202 426 6841
(National Park Service)

Hours: 8:00 a.m.–11:45 p.m.

This simple, grand memorial to Abraham Lincoln, the 16th president, is shaped like a Grecian temple and overlooks the massive Reflecting Pool on the National Mall. The walls surrounding the 19-foot statue of Lincoln contain some of his most famous speeches.

■ FRANKLIN DELANO ROOSEVELT MEMORIAL

West Potomac Park between the Tidal Basin and the Potomac River, Washington, D.C.
www.nps.gov/fdrm | Telephone: 202/426-6841
(National Park Service)

The main memorial is open 24 hours a day. Ranger station is open 8:00 a.m.–11:45 p.m.

Commissioned by Congress in 1955, this memorial was not completed until May 1997. The commission's guidelines invited prospective designers to look to "the character and work of Franklin Delano Roosevelt to give us the theme of a memorial that will do him the honor he deserves and transmit his image to future generations." Ultimately, the memorial was designed by Lawrence Halprin and incorporates the work of prominent American artists Leonard Baskin, Neil Estern, Robert Graham, Thomas Hardy and George Segal, as well as master stonemason John Benson.

■ THEODORE ROOSEVELT MEMORIAL

Theodore Roosevelt Island, Potomac River
between Key and Roosevelt Bridges
www.nps.gov/gwmp/tri.htm
Telephone: 703 285 2600

See web site or call for current tour procedures and hours.

This serene island, accessible only by footbridge from the parking lot, is a wildlife refuge with nearly two miles of trails. A 17-foot bronze statue of the U.S. president can be seen in Statuary Gardens.

■ VIETNAM VETERANS MEMORIAL

Constitution Avenue between Henry Bacon Drive and 21st Street N.W., Washington, D.C.
www.nps.gov/vive | Telephone: 202 426 6841
(National Park Service)

Hours: 8:00 a.m.–11:45

Designed by Maya Ying Lin, this modern V-shaped memorial constructed of black granite is inscribed with the names of 58,156 people who died in or remain missing from the Vietnam War. This memorial was built with the private contributions of American citizens. Large books at the memorial help locate the names on the walls.

■ VIETNAM WOMEN'S MEMORIAL

Constitution Avenue, near the Vietnam Veterans Memorial Wall, Washington, D.C.
www.vietnamwomensmemorial.org
Telephone: 202 426 6841
(National Park Service)

Hours: 8:00 a.m.–11:45

Former Army nurse Diane Carlson Evans founded the Vietnam Women's memorial Project in 1984. Authorized by Congress in 1988 and dedicated in 1993 as a part of the Vietnam Veterans Memorial, the Vietnam Women's Memorial honors the "women of the United States who served in the Republic of Vietnam during the Vietnam Era." Sculptor Glenna Goodacre designed the bronze statue that depicts three women, one of whom is tending to a wounded soldier. The statue is six feet, eight inches tall and weighs one ton. Planted around the statue's plaza are eight trees to commemorate each of the women who died in Vietnam.

■ WASHINGTON MONUMENT

On the National Mall at 15th Street, N.W.,
Washington, D.C.
www.nps.gov/wamo | Telephone: 202 426 6841
(National Park Service)

Hours: 9:00 a.m.–4:45 p.m. daily

Tickets, advance reservations: 800 967 2283 or
<http://reservations.nps.gov>

Tickets are required to visit the inside and top of the monument and are available free at the ticket kiosk

on the monument grounds at 15th street and Madison Drive on a first-come, first-serve basis.

The tallest masonry structure in the world (555 feet), this majestic obelisk was dedicated in 1885 to the memory of the first U.S. president. The best view of the District of Columbia and the surrounding areas is seen from the top of the monument.

THE SMITHSONIAN INSTITUTION COMPLEX

BACKGROUND AND HISTORY

The Smithsonian Institution is the world's largest museum complex with 15 museums and the National Zoo. The Smithsonian collection, which attracts more visitors than any other tourist center in the nation (far surpassing Disneyland), is so large that only one percent of its entire inventory can be displayed at any one time, despite the institution's 15 museums, galleries and parks in Washington, D.C.

The Smithsonian is not limited to exhibits encased in its buildings. It is both a seeker and source of education—the patron of thousands of global expeditions, the publisher of over 300 books and monographs each year. Its nine research centers host scientists ranging in age from pre-school to the post-graduate level.

The criteria for the institution's work were established in 1826 in one of history's most unusual wills. James Smithson, a highly regarded British scientist decreed that if the nephew who was his only heir died childless, the Smithson fortune would be donated to the United States of America "to found at Washington, under the name of the Smithsonian Institution, an establishment for the increase and diffusion of knowledge among men." The irony of the bequest was that Smithson had never even visited the United States!

Smithson's nephew died childless in 1835, and two years later, much to their amazement, Washington, D.C. officials learned that they were heir to more than a half million dollars, a vast sum at that point in history. Congress appointed Joseph Henry, America's most distinguished scientist in the mid-1800's, to act as the Smithsonian's first secretary.

Henry's principles still govern the institution today: "The great object is to facilitate...the promotion of science, the fostering of original research, and enlarging the bonds of human thought."

SMITHSONIAN MUSEUMS (PARTIAL LISTING)

www.si.edu All museums are linked to and accessible from this site.

Telephone: 202 357 2700 (general information)

Hours: Most museums are open

10:00 a.m.–5:30 p.m. daily, except Christmas Day.

See web site or call for specific tour and hours of operation information. Admission to all Smithsonian Museums is free.

SMITHSONIAN INFORMATION CENTER

1000 Jefferson Drive S.W., Washington, D.C. 20560

Telephone: 202 357 2700

See Smithsonian web site for tour information.

Popularly known as the "Castle," this building, completed in 1855, is the oldest of the Smithsonian's 15 museums. It houses the Smithsonian Information Center and the crypt of James Smithson, founder of the Smithsonian Institution.

ARTS AND INDUSTRIES BUILDING

900 Jefferson Drive S.W., Washington, D.C. 20560

Telephone: 202 357 2700. See Smithsonian web site for tour information.

Recreating the ambience of the Philadelphia Centennial of 1876, the exhibits represent an extensive collection of Victorian Americana. Highlights include working steam engines and other machines of the era, a Baldwin locomotive and a 51-foot model of the sloop-of-war, Antietam.

FREER GALLERY OF ART

12th Street and Jefferson Drive S.W., Washington, D.C. 20560

Telephone: 202 357 2700. See Smithsonian web site for tour information.

The Freer houses one of the finest collections of Oriental art in the world, with works from the Near and Far East. The collection also contains works by late 19th and early 20th century American artists, including James McNeil Whistler, Winslow Homer