

Doing Business the Cooperative Way

Board of Trustees

Chase Riddle

Chairman, Prattville
(334) 365-3648

Jimmie Harrison, Jr.

Vice Chairman, Maplesville
(334) 366-4338

Ruby J. Neeley

Secretary/Treasurer, Clanton
(205) 646-3649

C. Milton Johnson

Statesville
(334) 412-2843

Mark Presnell, Sr.

Wetumpka
(334) 567-2689

Patsy M. Holmes

Wetumpka
(334) 567-8273

Terry Mitchell

Stewartville
(256) 249-3128

David A. Kelley, Sr.

Rockford
(256) 496-0160

Van Smith

Billingsley
(205) 755-6166

Charles Byrd

Deatsville
(334) 361-3324

Contact Us

Toll Free: 1-800-545-5735
Outage Hotline: 1-800-619-5460
www.caec.coop

Prattville Office:
1802 U.S. Hwy. 31 North
Mailing: P.O. Box 681570
Prattville, AL 36068

Clanton Office:
1601 7th St. North

Rockford Office:
9191 U.S. Hwy. 231

Wetumpka Office:
637 Coosa River Pkwy.



My experience with co-ops began with my first job after college in Sanford, N.C., in 1983 with Central Electric Membership Corporation, and has continued with my association here at CAEC since 1997. The cooperative model has been a perfect fit for me –having given me the opportunity to develop relationships with those who use the cooperative’s service. Interestingly, as I reflect on my college education, while obtaining my degree in business, I attended three different schools and not once was introduced to the cooperative business model.



Cooperatives are all around us. In fact, you might be surprised by the number of businesses that use the co-op model. Some household names you may be familiar with are Ace Hardware, Land O’Lakes, Ocean Spray, Sunkist and Welch’s. With more than 100 million people who are members of 47,000 cooperatives in the United States, consumers can pick from a wide array of goods and services.

You’re probably wondering where the concept for the cooperative business model originated. Co-ops were set up to gain access to goods and services that were otherwise not easily accessible. For example, Rural Electric Cooperatives were started by farmers in the 1930s to obtain electric services when private utility companies refused to serve rural areas. Your co-op was part of that movement 75 years ago and on Nov. 14, 1939, CAEC’s system was energized for a local group of farmers and rural residents. This common bond of ideals and principles is traced back to 1844 when a group of 28 weavers pooled their savings and opened the first successful consumer co-op in Rochdale, England.

Although the Rochdale Pioneers weren’t the first group to try forming a co-op, they were the first to make their co-op succeed and endure. To avoid the mistakes made by earlier co-ops and to help others, they developed a list of operating principles governing their organization. This list, now known as the seven principles (Voluntary and Open Membership; Democratic Member Control; Members’ Economic Participation; Autonomy and Independence; Education, Training and Information; Cooperation Among Cooperatives and Concern for Community) formed the basis for what CAEC and thousands of cooperatives around the world use to operate co-op businesses.

I am often asked to explain the types of business models for the electric utility industry. The basic difference is an electric cooperative is owned by the members it serves and operates on a not-for-profit, cost-of-service basis. Investor-owned utilities are in business to make a profit for their stockholders who may or may not purchase power from them. Municipal systems are usually owned by a city, a state or federal government agency and their customers are typically located in urban or semi-urban areas. All these business types play a role in delivering reliable and affordable power.

To put it simply, cooperatives are different than other forms of business because of you, our members, and because of the way decisions are made. We welcome and encourage your involvement – after all, it’s your co-op. ■

Tom Stackhouse
President/CEO



2014 Annual Meeting - Celebrating 75 Years of Service

CAEC's Annual Meeting and Member Appreciation Day, held on Friday, Aug. 8, at the co-op's headquarters in Prattville, commemorated 75 years of service. Despite the short interruption of heavy rain early into the event, the celebration turned out to be a good time for all who attended. A total of 3,590 members registered and voted by mail and 580 members registered on site the day of the meeting. It is estimated that 1,800 were in attendance for the festivities.

Members were presented with several activities including free health screenings from Baptist Health Systems (consisting of blood pressure and cholesterol checks); healthy lifestyle information from community and wellness groups; and energy-efficiency products and tips. Additionally, information about the construction of the new headquarters was presented.

For the children, there was a new educational demonstration, sponsored by the Pine Level Volunteer Fire Department – featuring what a firefighter in full turnout gear would wear into a flaming, smoke-filled environment. The children also enjoyed face painting, bounce



Pine Level Volunteer Fire Department - demonstration of a firefighter in full turnout gear

house activities and exploring nature with wildlife experts Jimmy and Sierra Stiles who gave hands-on activities with small animals, as they talked about the conservation efforts that utilities, like CAEC, utilize to protect wildlife habitats.

CAEC also encouraged members to sign up to have an email sent on their behalf to the Environmental Protec-

tion Agency (EPA) to address the latest proposed EPA regulations that target existing power plants that could add to the price of generating electricity and have serious consequences for our communities. If you missed that opportunity, please visit Action.coop to make your voice heard. The deadline for written comments to the EPA is Dec. 1.



The Kempters from Slapout

And for everyone, live entertainment by the Kempters from Slapout and the Prattville High School Show Choir was provided. Door prizes, tasty food and Blue Bell ice cream was also available.

During the business meeting, Wayne Gruenloh, CPA and owner of Gruenloh and Associates of Robertsdale, Ala., presented CAEC's audit and gave the Cooperative an unmodified opinion, which is the highest opinion that can be given.

In the Board of Trustees election, Board members C. Milton Johnson, Statesville, District 1; Terry Mitchell, Stewartville, District 4; and Jimmie Harrison, Jr., Maplesville, District 6, were re-elected to three-year terms.

CAEC President and CEO Tom Stackhouse presented the three areas the co-op focuses on when delivering power to our members: reliability, affordability and being environmentally sound. Furthermore, he encouraged the members to seek out the facts when it comes to the EPA on our energy future.

The meeting concluded with the grand prize of \$500, won by Nell Hassell. ■

Hydropower-Using Water to Generate Electricity

At an early age we were taught that electricity and water do not mix. True as that may be, did you know that water is used to generate some of your electricity? Sounds weird but one of the oldest sources used to produce energy that has been around for hundreds of years is hydropower – using water to power machinery or make electricity.

In last month's issue of *Alabama Living* we discussed nuclear generation and this month we will focus on the energy of the hydrologic water cycle (moving water) and how it can be tapped to produce electricity.

The United States is the fourth largest producer of hydroelectricity in the world after China, Canada



and Brazil. Hydropower is the largest renewable energy source for electricity generation in the United States. In 2013, hydropower accounted for approximately six percent of total U.S. electricity generation and 52 percent of generation from all renewables. The total hydropower capacity in the U.S. is about 100,000 megawatts (MW), providing electricity to more than 28 million American homes. Additionally, in the U.S., hydropower is produced for an average of 7 cents per kilowatt-hour (kWh) in comparison to other renewable averages such as wind - 18 cents per kWh, solar - 13 cents per kWh and biomass - 10 cents per kWh.

HOW HYDROPOWER IS GENERATED

- **Dam** - Most hydropower plants rely on a dam that holds back water, creating a large **reservoir**.



- **Intake** - Gates on the dam open and gravity pulls the water through the penstock, a pipeline that leads to the turbine. Water builds up pressure as it flows through this pipe.

- **Turbine** - The water strikes and turns the large blades of a turbine, which is attached to a generator

above it by way of a shaft. Modern hydro turbines can convert as much as 90 percent of the available energy into electricity.

- **Generators** - As the turbine blades turn, so do a series of electro-magnets on the rotating portion of the generator. The giant magnets rotate past copper coils, creating electricity.

After the generators produce electricity, it is transferred to an electrical power substation and then transmitted to your home.

- **Outflow** - The used water is clean when it is discharged from the turbine and is sometimes carried through pipelines (tailraces) and re-enters the river downstream.

The water in the reservoir is considered stored energy. The level of the reservoir above the turbine is referred to as “head” and determines the amount of pressure and volume available to generate electricity. A greater amount of head translates to more available energy for electrical generation. When the gates are open, the water flowing through the pen-



stock becomes kinetic energy because it is in motion. The rotating turbine in turn drives the generator.

TYPES OF HYDROPOWER PLANTS

There are four types of hydropower facilities:

1. *Impoundment* - The most common and typically a large hydropower system, it uses a dam to store river water in a reservoir.
2. *Run-of-River Project* - Uses water within the natural flow range of the river, requiring little or no impoundment. PowerSouth's (CAEC's power supplier) Gantt Hydroelectric Plant in Gantt, Ala., on the Conecuh River and the Point A Hydroelectric Plant, about five miles downstream near the town of River Falls, Ala., operates as a run-of-river project.
3. *Diversion* - Channels a portion of a river through a canal or penstock. It may not require the use of a dam.
4. *Pumped Storage* - When the demand for electricity is low, this facility stores energy by pumping water from a lower reservoir to an upper reservoir. During periods of high electrical demand, the water is released back to the lower reservoir to generate electricity.



These plants are operated and monitored using modern technology and can be operated from on-site control rooms or a centralized control room.

SIZES OF HYDROPOWER PLANTS

- Large - Projects that generate more than 30 megawatts (MW) - enough electricity to power nearly 30,000 households.
- Small - Capacity of 100 kilowatts (kW) to 30 MW. For example, PowerSouth's Gantt and Point A Hydroelectric plants have a combined generating capacity of 8 MW.
- Micro - Capacity up to 100 kW - enough electricity for a home, farm or village.

BENEFITS OF HYDROPOWER

- Domestic energy resource that is not subject to disruptions from foreign suppliers, cost fluctuations and transportation issues.
- Well developed technology.
- Climate-friendly and does not produce air pollution or create any toxic by-products.
- Capable of rapid response to peak demands and emergency needs.
- Systems are very efficient and they convert 70–90 percent of water energy to electricity.
- Average lifespan of a hydropower facility is 100 years.
- Existing hydropower facilities only have costs associated with monitoring and maintaining the facility.
- Non-power benefits include creating wildlife conservation lands, supporting healthy fisheries, improving water quality, controlling floods, irrigating land for food production and creating recreational opportunities.



CHALLENGES OF HYDROPOWER

- Some dams take up large areas of land and can cause fish and other animals to relocate.
- Plant life can be affected.
- The power stations are expensive to build, heavily regulated and take up to eight years to license.
- Vulnerability in times of drought.

Using hydro electric power as an alternative source of energy offers many advantages. These facilities contribute to grid reliability and help lower peak energy prices, which is a cost benefit to you. We know the need of alternative energy sources is growing and hydro electric power is one of the many considerations for renewable energy sources in our future.

The **Shocking** Truth About Static Electricity



Darren Maddox,
CAEC Training and
Safety Manager

You walk across the rug, reach for the doorknob and zap! – you get a static shock. Or, when you get out of your car, you get a shock as you touch the door. What’s going on? It’s static electricity – the result of an imbalance between negative and positive charges in an object. These charges can build up on the surface of an object until they find a way to be released or discharged.

A shock from static electricity is not a true electric shock but rather the pain from a hot spark jumping to or from your finger or other parts of your body.

For example, most shoes have insulating rubber or plastic soles. As we walk, a static charge can build up on these soles, which can generate an electrical charge on our bodies. This charge is released when we touch a door knob, metal filing cabinet or a variety of other objects.

As you enjoy the ride in your vehicle, electrons are exchanged between your clothes and the car seat, building up collections of excess charges. By the time you get out of the car, you have accumulated an overall charge, while the vehicle carries the opposite charge. To make things worse, the rubber car tires and the soles of your shoes are insulators, stopping the charges from escaping to the ground. As you reach to close the metal door, electrons leap between your finger and the car.

You may have noticed that you tend to get more static shocks in the winter when the air is particularly dry. The humidity is normally lower in the winter and heating your home further reduces the humidity. Dry air means that charges have nowhere to go, encouraging the accumulation of static charges and increasing your chances of getting a shock.



Typically, jolts from static electricity are mild; however, there are instances when they can cause real injuries, particularly in young children.

Although rare, static electricity can also pose a fire hazard. While it holds a lesser charge, it is still a form of electricity, which can lead to igniting a fire in the right circumstances, particularly around flammable materials.

Reducing or eliminating the ability of the sources of static electricity to build up their charges can help give you some relief from shocks.

- ▶ Raising the humidity level in your home using a humidifier will reduce random static shocks, static cling and static in your hair.
- ▶ Moisturize your skin regularly. Dry skin tends to carry more static electricity.
- ▶ Place a fresh dryer sheet into your winter coat

to avoid sparks from handshakes. This may also help when you’re getting in and out of a car. And another great use for a dryer sheet is to rub a used dryer sheet over your television screen to reduce static electricity.

- ▶ Touch metal to metal. For example, before you open a door, stick your key in the lock before turning the knob. The metal on metal will take on the shock. This same rule can be applied to other electronics (i.e. anything that has a memory card, gadgets, computers, cell phones and photocopiers) to prevent serious damage.
- ▶ During the cold months, wear clothes that will reduce the effect of electric shock. Synthetic materials like polyester can contribute to a build-up in electrical charges — wear 100 percent cotton or wool clothing.
- ▶ Hold on to the frame of the car when getting out (i.e. grab the roof) until both feet are on the ground, then let go.

By taking the proper steps, you can reduce or prevent shocks from a buildup of static electric charges. ■

MODERN SERVICES, RELIABLE BANKING FROM PEOPLE YOU KNOW



CHECKING



24/7 BANKING



VISA DEBIT &
CREDIT CARDS



LOANS



SAVINGS

As a member of CAEC, you are now eligible for membership at Alabama Rural Electric Credit Union. At ARECU, you're more than just an account, you're a member and neighbor. With services such as mobile banking and deposits, VISA Debit & Credit cards, loans and more, we're here to help you with employees from right here in the River Region.

www.arecu.net



(800) 381-7328

Water Heater Rebates

CAEC offers rebates for water heaters. Purchase your new electric water heater from any store and receive a rebate for meeting the following criteria:

- Electric water heaters only (cannot be tankless)
- Minimum energy factor of .92
- Participation in CAEC's Peak Shaving Program* (at no additional charge)

Water heaters will be inspected to verify:

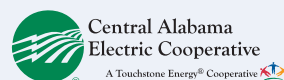
- [Installation at member's address](#)
- [Manufacturer's Information:](#)
Name and spec information (which includes model and serial numbers and the energy factor)
- [Proof of purchase:](#)
Copy of receipt and store name

Rebates are available in the following amounts:

Under 80 gal:	up to \$235
80 gal & up:	up to \$375

For more information about our rebate program, call (800) 545-5735, ext. 2118 or (334) 351-2118.

*To learn more about CAEC's Peak Shaving program, visit www.caec.coop.





Recipe for *Efficiency* from CAEC

Insulation

Have you looked in your attic lately? Insulation in your attic is an essential component to help keep your home warm in the winter and cool in the summer.

There are numerous types of insulation to choose from, and each has a different method of installation. The example below uses cellulose—an easy “do it yourself” process.

Ingredients (supplies):

Cellulose Insulation

Utensils (tools):

Insulation Blower Machine

Breathing Masks

Gloves

Goggles

Directions:

Purchase the cellulose insulation at your local home improvement store where you should also be able to rent an insulation blower. The amount you need will depend on the square footage of your home. Make sure the thickness of your insulation (including any existing insulation) is between 12 and 15 inches, which should give you an R-value of 38.

You will need at least one person to assist you in applying the insulation.

Installing Cellulose Attic Insulation

1. Place the insulation and the blower machine outdoors. DO NOT operate the machine indoors.

2. Take the blower's tube into the attic (through a window or door in the house). Make sure you are outfitted with gloves, goggles and breathing mask.



3. Have the person (also outfitted with gloves, goggles and a breathing mask) stationed near the blower machine and begin to feed it with the loose, cellulose insulation, one bale at a time. When ready, this person will also control the flow of the insulation by using an on/off switch or a lever that allows insulation to pass through.



4. In the attic, sweep the blower's tube in the locations where you desire the insulation, avoiding vents so they do not become clogged with insulation. When finished, have the person stationed with the blower turn the machine off.



On average, an 1,800 square foot house will take approximately four hours to complete at a cost of \$500. Prices and times may vary due to retailers, square footage and depth of existing insulation. On a house with little or no pre-existing insulation, adding more—and doing it yourself—can help make your home more comfortable and provide some cost savings on your power bill.