Knowledge is Power and Vigilance is Key

As an educator, I am a witness to the power of learning. Arming ourselves with knowledge is often the key to success —no matter the issue.

That viewpoint is why your CAEC Board of Trustees and staff work hard to keep you informed about the legislative issues facing all of us, as end users of electricity. As you listen to the headlines and commercials about energy, you may not think the topics pertain to you. But potential mandates such as cap and trade (which calls for electricity providers to reduce greenhouse gasses 17 percent by 2020 and 40 percent by 2030) and Renewable Energy Standards (RES) that could require a certain percent of our produced power to come from renewable energy sources would have a direct impact on your family budget (see the June issue of *Alabama Living*, pages 4 and 5).

With the potential for a huge (30 percent) increase in your power bill, we have an obligation to provide you the facts and allow your concerns to be heard before decisions are made at the state level or in Washington.

You may recall that last year, we asked members to reach out to their elected officials through the Our Energy, Our Future grassroots campaign (*www.ourenergy.coop*). To date, more than 5,900 messages have been sent from our membership, messages to let our delegates know that their constituents are concerned about the energy discussions taking place in our nation's capital.

We recently took this a step further by voicing your concerns with our Washington officials face to face during the Legislative Conference, where more than 3,000 electric cooperative representatives discussed a wide range of topics including climate change, renewable energy and energy efficiency with members of Congress.

Those of us from Alabama thanked our senators as well as our seven representatives, who shortly after this conference, sent a letter to the energy committee expressing their concerns about the estimated billions of dollars in costs stemming from proposed energy mandates and how those costs will affect Alabama citizens.

As consumers, we need to continue interacting with our elected officials and remind them that their decisions regarding our nation's energy future should include an understanding of cost and affordability for us. Without those considerations as part of the decision, we may find ourselves unprepared for the future.

As in the classroom, those who are without an understanding of the information or who are unprepared often find themselves failing the test —and when it comes to our energy future, this is one test that we cannot afford to fail. It's important that all of us tap into the power of understanding and stay engaged with the energy issue.

Chase Riddle, Chairman/Board of Trustees

LOCATIONS

Prattville Headquarters
1802 U.S. Hwy. 31 North
(334) 365-6762/(800) 545-5735
Outage Hotline: (800) 619-5460

Clanton Office
1601 7th St. North

Rockford Office
U.S. Highway 231

Wetumpka Office
637 Coosa River Pkwy.

CAEC Mailing Address:
P.O. Box 681570
Prattville, AL 36068

CAEC Member Appreciation and Annual Meeting

Friday August 14

Register by mail or in person and receive
a $5 credit on your September bill and chances at door prizes
including a $500 grand door prize*
Special gift for those attending

4:00 p.m.	Registration/Activities Begin	6:30 p.m.	Business Session
4:45 p.m.	Performance by **Prattville High School Show Choir**		❍ Statement of quorum ❍ Audit, officer and management reports
5:30 p.m.	Performance by **Next Chapter Quartet**		❍ Certification of Trustee Election
6:30 p.m.	National Anthem **Prattville High School Show Choir**		❍ Unfinished Business ❍ New Business ❍ Adjournment

**You do not have to be present to win door prizes, including the grand prize. Whether attending in person or not at all, mail in the ballot in the center of this magazine. Your ballot registers you for Annual Meeting, qualifying you for a $5 credit on your September bill. It also enters you into the prize drawings.*

Our Energy, Our Future™
A Dialogue With America

Official Notice of Annual Meeting of the Members of Central Alabama Electric Cooperative

Annual Meeting

It will be held at the cooperative headquarters, 1802 U.S. Hwy. 31 North, Prattville on Friday, Aug. 14, 2009, at 4 p.m. with the business session beginning at 6:30 p.m. for the following purposes:

- Presenting reports of trustees, management and auditors
- Installing trustees
- Acting upon such other business as may properly come before the meeting.

Ruby J. Neeley, secretary/treasurer

Election of Trustees

At a meeting of the board of trustees on March 24, 2009, a committee was appointed to nominate candidates for trustees of the cooperative for the coming year (Article IV, Section 4.05 CAEC Bylaws). The following members were nominated by the committee and accepted the nomination as candidates for trustees:

District 3: *Patsy Holmes of Wetumpka*
District 7: *Van Smith of Billingsley*
District 8: *Chase Riddle of Prattville*

Coal: Your Main Source of Power

Do you know how much coal your home uses every day? Each year, an average family of four uses 3,375 pounds of coal for their water heater; 560 pounds- stovetop/range; 256 pounds- television; and 37 pounds- vacuum cleaner.

Almost half of the electricity used in the United States is coal-generated, and given the vast resource the U.S. has of this fuel type — there is enough known supply to last almost 300 years —even used at the same rate as today.

Costs associated with using coal include the mining, transportation, power generation and emissions-control, yet coal-fueled electric power remains one of the lowest-cost sources of energy for consumers.

So how does coal power your home? Let's start in the mines.

Mining Coal

There are two basic ways to mine coal: surface mining and underground mining. Miners extract coal from deposits at or near ground level using the surface mining method. Surface crews remove earth covering the coal and gradually extract this fossil fuel. Miners are then required by law to return the land to its original, or an improved condition – known as reclamation.

In areas where coal deposits are deep underground, miners dig tunnels into the earth and use one of three methods: conventional, continuous or longwall mining.

With the conventional method the miner uses a long electric chain saw to slice a strip under the coal deposit and the area is blasted. After the explosion loosens the coal, miners use a loading machine and conveyor belt to transfer the coal to the earth's surface for further processing.

In contrast, continuous and longwall mining do not use drilling or blasting. With these processes the coal is torn or cut out respectively, then sent on to the preparation plant.

At the preparation plant, workers operate machinery to remove rocks and debris before washing, sorting and blending the coal before it is shipped.

Coal miners are highly skilled and well trained in the use of complex, state-of-the-art equipment. On average coal miners work a 40-hour week in cold, noisy, damp and dark environments, while earning an average hourly wage of $21.57. There are more than 300,000 people employed in the coal mining industry.

Transporting Coal

Coal is largely transported in the U.S. by rail and barge. Alternative shipping methods include truck, conveyors and vessel.

Rail transportation accounts for 70 percent of coal shipments to power plants, which can lead to market power abuse (i.e. rate increases, poor quality and unreliable service) caused by the absence of competition. Since 2004, a number of generating and transmission cooperatives have reported that their railroad carriers are demanding 100 percent rate increases at the expiration of their existing contracts.

PowerSouth's (our power supplier) Charles R. Lowman Power Plant, located near Leroy, Ala., receives golf ball-sized coal by barge on the Tombigbee River and by rail. As it is unloaded onto a conveyor, the coal is transferred to a large storage pile, big enough to sustain two months demand.

The Lowman plant can store up to 250,000 tons of coal. Based on high demand, the plant can burn as much as 5,000 tons on a day when consumers use a lot of electricity.

The next step in the process is converting coal into electricity.

Converting Coal into Electricity

Coal-fired electricity generation is the process of making electric power from the energy (carbon) stored in coal. The process of converting coal into electricity has multiple steps:

1. A machine called a **pulverizer** (shown to the right) grinds coal into a fine powder.
2. The coal powder mixes with hot air, which helps it burn more efficiently. Primary air fans blow the mixture through coal pipes into the **furnace.**
3. The burning coal heats water in a **boiler**, creating steam.
4. Steam from the boiler spins the blades of a **turbine**, transforming heat energy from the burning coal into mechanical energy which spins the turbine.
5. The spinning turbine is used to power a **generator**, a machine that turns mechanical energy into electrical energy. This happens when magnets spin inside a copper coil in the generator.
6. A **condenser** cools the steam after it exits the turbine. As the steam is condensed, it turns back into water.
7. The water is pumped back into the boiler, and the cycle begins once again.

The generated electricity then begins its journey to your home through the transmission system, as explained in June's issue of *Alabama Living*, on pages 6 & 7.

While the basic process of converting coal to electricity has not changed in 60 years, advancements in the technology for removing emissions have led to cleaner coal.

"Clean Coal" Technology

Clean coal technologies fall into four main categories: coal washing, pollution controls for existing plants, efficient combustion technologies and experimental carbon capture and storage. Research and development in the last two decades have resulted in more than 20 new, lower-cost and environmentally compatible clean coal technologies.

In fact, PowerSouth has invested approximately $400 million in equipment upgrades at the Lowman Plant for the reduction of sulfur dioxide, nitrogen oxide and mercury emissions. Lowman's three coal-fired generating units can produce 556 megawatts (enough to power 300,000 homes and businesses) by burning approximately 1.5 million tons of coal annually.

Through the integration of scrubber enhancements, sulfur dioxide emissions have been reduced approximately 92.5 percent (200,000 tons total) and nitrogen oxide emissions reduced by about 80 percent (18,000 tons), while achieving the co-benefit of mercury reduction when used in combination with scrubbers.

Although other countries do not monitor their emissions from coal, cleaner coal technology is helping alleviate the output of pollutants here in the U.S.

While elected officials in Congress debate which fuel sources should be used to supply the bulk of our nation's electricity needs, coal continues to generate about half (49 percent) of all the power produced as compared to natural gas (21 percent), nuclear (20 percent), hydro (6 percent), renewables (3 percent) and petroleum (1 percent). Although the U.S. accommodates only five percent of the earth's population, we consume 25 percent of our world's energy production —for the relatively low cost of 11¢/kWh on average nationally.

2009 Trustee Nominees

Below are this year's candidates for trustee election. Remember, every member has the opportunity to vote for each trustee. Your ballot/registration form is included in the center of this magazine.

District 3: Patsy Holmes

Patsy M. Holmes of Wetumpka has served on CAEC's Board of Trustees since July 1992. Holmes earned her Credentialed Cooperative Director and Board Leadership certificates from the National Rural Electric Cooperative Association.

She has been a member of the cooperative since 1965 and currently serves as Secretary/Treasurer of the Board of Directors for Alabama Rural Electric Association of Cooperatives (CAEC's statewide association) and on the board of the Elmore County Department of Human Resources.

She and her late husband William "Bobo" have two sons and two grandchildren. She is also a member of the Wetumpka Chamber of Commerce and a member of the Wetumpka Church of Christ.

District 7: Van Smith

Van Smith of Billingsley has served on CAEC's Board of Trustees since May 1994. He has earned his Credentialed Cooperative Director and Board Leadership certificates from the National Rural Electric Cooperative Association.

Smith began his career by teaching vocational education for 13 years. He then served as assistant principal of Billingsley High School for eight years before becoming principal in 1998.

Smith and his family have been members of CAEC since 1980. He has two sons and one daughter--his wife Ann passed away in the spring of 2008. In 1992, he and Ann represented CAEC at the Alabama Council of Cooperative's Annual Co-op Couples Conference and served as the host couple the following year. Mr. Smith is a past president of the Autauga County Cattlemen's Association and currently serves as director. He is a member of Indian Grave Baptist Church in Billingsley where he serves as Chairman of Deacons.

District 8: Chase Riddle

Chase Riddle of Prattville has served on the cooperative's board since May 1994 and currently serves as Board Chairman. He has earned his Credentialed Cooperative Director and Board Leadership certificates from the National Rural Electric Cooperative Association.

He and his family have been members of the co-op since 1977. Riddle is the director of career/technical education for the Autauga County school system. He is a past board member of the Prattville Area Chamber of Commerce and past board member and Chairman of the Prattville YMCA Board of Directors.

He and his wife, Sue, have four children and three grandchildren. They are members of the First United Methodist Church of Prattville.

We Did Our Part

We're participating with other members in CAEC's peak shaving program. Simply put, we're allowing our co-op to delay the re-heating cycle on our water heaters. It's a win-win program – we still have hot water when we need it, and the co-op avoids paying peak-time power costs. If enough of us join this effort, we can have a positive effect on our future rates – will you join us?

The peak shaving device for your electric water heater is free, and will be installed by a licensed electrician at no cost to you.

☑ Yes, I agree to do my part by joining CAEC's peak shaving program.

Name:_____Phone #(s):_____

Address:_____City:_____St:_____Zip:_____

Account #:_____

Email:_____

Number & Size(s) of Water Heater(s):_____

Signature:_____

Central Alabama Electric Cooperative
A Touchstone Energy® Cooperative

www.caec.coop

Mail form to: Central Alabama Electric Cooperative, P.O. Box 681570, Prattville, AL 36068

Recipe for *Efficiency* from CAEC

Refrigerator Coils

It's an appliance you use every minute of every day, whether you're home or not —your refrigerator. Refrigerators are a vital part of our household, but they can also be significant users of electricity. To help your refrigerator run at its optimal efficiency, you should clean its coils annually, or every six months if you have pets in the home. The coils often trap dust and hair and when this clings to the coils, it reduces your refrigerator's ability to run at its peak performance level, thus using more electricity than it should.

Utensils (tools):

Screwdriver

Vacuum Cleaner with Brush Attachment

Warm Water

Sponge

Directions:

1. Unplug your refrigerator and pull it away from the wall for easy access.

2. Locate your refrigerator's coils. In older models they can often be found on the back of the unit. Coils in newer models may be located in the front on the bottom of the unit located behind the kick plate.

3. If necessary, use the screwdriver to remove the back cover or kick plate to access the coils.

4. Inspect coils for accumulated dirt, dust and grime.

5. Use the vacuum cleaner with brush attachment to remove any accumulated dust, hair, debris from the coils.

6. If there is still remaining dirt or grime, use the warm water and sponge to gently remove from the coils.

7. If removed in step three, replace the back cover or kick plate.

8. Plug in your refrigerator and replace to its original position.

With refrigerators comprising an average of 9 percent of a home's energy usage, it's important to keep it running at peak efficiency. Also, remember to keep your refrigerator's temperature setting between 35 and 38 degrees Fahrenheit and your freezer at 0 degrees Fahrenheit to help reduce energy consumption. And if you're looking to buy a new unit, look for the ENERGY STAR label.