West Central Electric Cooperative, Inc. ~ Serving our members' needs since 1939

Electricity generation vs. environmental protection:

Answering your questions regarding regulations and how they could affect your electric rates

Have you been wondering what is with all the fuss on the environmental issues and coal generation? Do you want to know why the cooperatives don't just replace coal generation with wind power? Are you confused by the term "clean coal?" These are questions many members may have regarding the recent EPA proposed environmental regulations

Continuing this month, *Electric News* features a series answering these and many more questions regarding the generation of electricity vs. environmental protection.

•With the threat of global warming, why aren't you relying on wind and other renewables instead of coal and gas?

Associated Electric Cooperative is Missouri's wind energy leader and continues to diversify its resources to include renewable resources. In 2013, 16 percent of our generator's electricity to serve member load was produced by renewable resources, including wind and hydropower.

We are always open to evaluating economical options for adding power supply to the system, including wind and solar generation. To satisfy growth in electricity demand, we must look at all cost-effective generation resources that are available, including natural gas, nuclear, biomass, hydroelectric, wind and solar. In addition, we will continue to implement energy efficiency and equipment rebate programs.

Wina

Renewables, in general, cost more than conventional sources of electric generation. Because the federal government subsidizes wind power in the form of a tax credit for developers, utility-scale wind is generally one of the most cost-effective forms of renewable energy. However, wind generation is not very reliable and needs other controllable generation to support times when demand is high and the wind is not blowing.

In 2013, 10 percent of our member load was served with wind generation. In 2014, Associated Electric projects 12 percent of the resource mix will be provided by wind energy.

The rural electric cooperatives took the lead in wind power when our gen-

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Discover the meaning of membership

Every October, cooperatives are recognized for the qualities that make the business model unique. Seven cooperative principles set us apart from other businesses: voluntary and open membership; democratic member control; member's economic participation; autonomy and independence; education, training and information; cooperation among cooperatives; and concern for community.

This Co-op Month, we're focusing on "The Electric Co-op Connection: Discover the meaning of mem-

"In the 1930s, rural America needed electricity just as much as anyone else. It was a major challenge that big utilities weren't interested in tackling. So, the men and women of rural America banded together and made it happen. And that's why we celebrate in October – we celebrate the power of working together for the common good and bettering the quality of life for our friends and neighbors."

Mike Gray General Manager bership." Co-ops exist to serve their members, but they also play a major role in their local communities.

"Cooperative membership is unique," said WCE General Manager Mike Gray. "Electric cooperatives are committed to providing members with safe, reliable and affordable electricity, but there's more to it than that. We're local, and that means we care about our commu-

nity. This is why we participate in programs such as Youth Tour and CYCLE, safety demonstrations and back-to-school fairs. We support our local 4-H and FFA chapters and provide scholarships. We donate to local causes in communitites across our service area. We do all of this and more because we care."

West Central Electric is proud to be part of America's cooperative network, which includes more



THE ELECTRIC COO-OP CONNECTION...The value of membership is crystal clear to members who are able to attend their cooperative's annual meeting and vote on the bylaws that govern their cooperative and the directors who make the decisions by which their cooperative operates. (Above) Member Mary McKenney serves as an election inspector during the 75th annual meeting and collects election ballots from her fellow members.

than 47,000 cooperative businesses.

Electric co-ops provide power for many Show-Me-State residents with 40 electric co-ops serving more than 600,000 members. Other co-op businesses thrive in our state, too, with Missouri's co-op economy employing more than 60,000 residents.

West Central Electric is one of more than 900 electric cooperatives, public utility districts and public power districts serving 42 million people in 47 states.

"In the 1930s, rural America needed electricity just as much as anyone else," Gray said. "It was a

major challenge that big utilities weren't interested in tackling. So, the men and women of rural America banded together and made it happen. And that's why we celebrate in October – we celebrate the power of working together for the common good and bettering the quality of life for our friends and neighbors."

In addition to cooperative utilities, Missouri residents are served cooperatively by credit unions, food co-ops, agricultural co-ops, and more! To learn more about West Central Electric, visit www.westcentralelectric.coop.

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This institution is an equal opportunity provider and employer.

Board of Directors:

Densil Allen, President Clark Bredehoeft, Vice-Pres. Dale Jarman, Treasurer Robert Simmons, Secretary Stan Rhodes, Asst. Sect. Max Swisegood, Director Richard Strobel, Director Sandra Streit, Director

Now is the time to prep your home for winter

Although winter can bring beautiful scenes of glittering snow and ice, the cold temperatures can often be less than pleasant. The cold can also find its way through every crack of your home, and frigid temperatures can overwork your heating systems. Take simple steps to make your home energy efficient for winter before cold temperatures set in.

"Most winterizing steps can pay for themselves relatively quickly with heating bill savings," said WCE Member Services Manager Steve Moore. "Don't overlook simple energy-saving steps such as letting the sun warm rooms on sunny days or closing the damper when the fireplace is not in use. These are effective energy-saving tips that cost you nothing."

Lowering the thermostat is the easiest way to save energy. Energy use is reduced for every degree dialed down. Turn it down when you are away from home or sleeping, and keep it to the lowest comfortable level when you are home. Consider installing a programmable thermostat to automatically adjust the temperature.

Use these tips to help keep the cold air outside and to cut costs to heat your

home

•Before firing up your heating system, make sure the furnace and heaters are in good working order, and have a professional check and service your furnace system to ensure peak efficiency and safety.

•Clean or replace your furnace filter every month to save energy and improve heat circulation. Dust and dirt slow down air flow. This makes the system work harder, which wastes energy and costs more money.

•Seal leaks between door frames and windows with weather stripping or

caulking. There may be gaps that contribute to the loss of heat in your home.

"Weather stripping and caulking are inexpensive and among the simplest, most effective ways to boost efficiency and cut energy costs year round," Moore said.

•Make sure walls, attics, and flooring, especially above unheated spaces such as crawl spaces and garages, are properly insulated, and repair any leaks on the roof.

•Replace window screens with stom windows. If you have older or leaky

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7 Cooperative Principles reflect what co-ops value

Originally drawn up by Charles Howarth, one of 28 weavers and other artisans who founded the Rochdale Society of Equitable Pioneers in Rochdale, England, on December 21, 1844, these principles governing cooperative operations were introduced into the United States in 1874 by the National Grange, and formally written down by the International Cooperative Alliance in 1937 (last updated in 1995).

Open and Voluntary Membership

Membership in a cooperative is open to all persons who can reasonably use its services and stand willing to accept the responsibilities of membership, regardless of race, religion, gender, or economic circumstances.

Democratic Member Control

Cooperatives are democratic organizations controlled by their members, who actively participate in setting policies and making decisions. Elected representatives (directors/trustees) are elected from among the membership and are accountable to the membership. In primary cooperatives, members have equal voting rights (one member, one vote); cooperatives at other levels are organized in a democratic manner.

Members' Economic Participation

Members contribute equitably to, and democratically control, the capital of their cooperative. At least part of that capital remains the common property of the cooperative. Members allocate surpluses for any or all of the following purposes: developing the cooperative; setting up reserves; 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



COOPERATIVE PRINCIPLES AT WORK...Several cooperative principles have been at work lately as cooperatives across the nation educate their members about the recent EPA regulations and how they affect energy consumers. Co-op members and non-members alike have joined in the fight to stop EPA rate hikes by contacting their elected officials or filling our Action cards allowing the cooperatives to contact legislators on their behalf, asking the EPA to take a common-sense approach to the issue and adopt an All-of-the-Above strategy that includes renewables, nuclear, natural gas and clean coal. (Above) The Missouri Electric Cooperative Building was bustling with signees during the Missouri State Fair, and more than 10,000 names were added during the 10-day state fair.

into agreements with other organizations, including governments, or raise capital from external sources, they do so on terms that ensure democratic control as well as their unique identity.

Education, Training and Information

Education and training for members, elected representatives (directors/trustees), CEOs, and employees help them effectively contribute to the development of their cooperatives. Communications about the nature and benefits of cooperatives, particularly with the general public and opinion leaders, helps boost cooperative understanding.

Cooperation Among Cooperatives

By working together through local, national,

regional, and international structures, cooperatives improve services, bolster local economies, and deal more effectively with social and community needs.

Concern for Community

Cooperatives work for the sustainable development of their communities through policies supported by the membership.

These principles are underpinned by six ideals—the so-called cooperative values of Self-Help, Self-Responsibility, Democracy, Equality, Equity, and Solidarity. In addition, the International Cooperative Alliance lists cooperative "ethical values" of Honesty, Openness, Social Responsibility, and Caring for Others.



MISSOURI STATE FAIR ENERGY BIKE...Eil Wilkinson, 9, son of WCE members Chad and Amy Wilkinson of Lone Jack tries his hand at the energy trike. One of many displays in the building, the trike, and a larger, similar display with a bicycle, is designed to show patrons just how much energy it takes to run incandescent lightbulbs compared to compact flourescent lightbulbs.

Now is the time to prep your home for winter

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windows that you cannot replace, use temporary fixes such as plastic film kits that create the effect of an interior storm window.

•If an electric space heater is being used, make sure the wiring is adequate, and check for cord fraying splitting wires or overheating. Do not place a portable heater in high-traffic areas and keep it clear of anything flammable.

•Replace incandescent light bulbs with LED or CFL bulbs. These bulbs use less energy and last substantially longer.

"Most people will be pleasantly surprised to realize the savings on their heating bills by using these simple measures," Moore said. "Most winterizing steps will pay for themselves relatively quickly with energy bill savings, and don't forget, saving energy is the cheapest and cleanest way to add to our energy supply."

For more information on home efficiency, visit EnergyEdCouncil.org.

Electricity generation vs. environmental protection:

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erator, Associated Electric Cooperative, worked with a wind developer to bring the first three wind farms to Missouri.

Associated Electric is buying all the power from Missouri's first three wind farms and from a fourth, which is Missouri's largest wind farm.

Associated also signed two more long-term wind power purchase agreements, locking in wind power at a fixed cost for many years into the future.

BP Wind Energy's Flat Ridge 2 Wind Farm in south-central Kansas is the largest of the new projects at 300 MW and became commercial in December 2012. The 150-MW Osage Wind Farm in Oklahoma is expected to become commercial by July 2015.

Once this additional farm is complete, Associated's wind power portfolio will increase from 600 MW to 750 MW – which is projected to produce the amount of energy used by about 181,000 member households in a year when considering the nature of wind power and the varying ways members use electricity.

Hydropower

Hydropower from federal dams in Missouri, Oklahoma and Arkansas is another major renewable generating resource.

We use a mix of generating resources and technologies to make sure we can deliver electricity at the lowest cost possible. While hydropower is our cheapest resource, it is a limited commodity dependent on rainfall and the capacity of lakes and dams to store the water.

The breakdown of 2013 generagion shows the mix of resources serving member load:

•79% Coal •10% Wind •4% Natural Gas

•1% Purchases

Energy efficiency

The cleanest kilowatt is the one that's never generated. The Take Control & Save energy efficiency program is in its sixth year. Energy efficiency measures promoted and implemented thus far are projected to produce lifetime savings of more than 1 billion kWh – enough energy to power about 76,000 homes for one year.

Comparative costs of resources

When we consider the resources used to serve member load in 2013, hydropower was the lowest cost. When our generator had to purchase power, which was about 1 percent of the total energy delivered to members, the cost was nearly two times the cost of hydropower.

Coal was used to produce about 79 percent of member electricity, and it cost about one-third more than the cost of hydropower. Wind-generated electricity cost about three times the cost of hydropower. Our generator's cost to produce electricity with natural gas cost almost 2.5 times the cost of hydropower.

(Note: Associated's variable costs are used for comparing its coal and natural gas resources.)

•Wind is free. What does wind energy actually cost me?

Electricity produced by wind turbines actually costs more than electricity generated by Associated Electric's coal plants. And because they operate about 35 percent to 55 percent of the time, wind turbines cannot supply the round-the-clock electricity needed by our members. Fuel-based generators must be in place to supply power when the wind is not blowing.

Also, wind cannot be relied on to produce electricity during periods of peak demand. Some form of electric generator that can be relied on to produce electricity when it is called for has to back up the wind generators. Coal or natural gas baseload power plants that will operate around the clock will have a place among our power supply options for a long time.

As a member of West Central Electric Cooperative, your rate (unless you have subscribed to a green power program) includes power from the lowest-cost resources our power supplier can find. Costs vary in different situations. Our generator, Associated Electric Cooperative, has contracted for wind generation at a fixed price for 20 years and in some cases 25 years.

Through these contracts Associated

Electric expects to avoid some natural gas purchases by using wind generation. Over the course of the 20- and 25-year contracts, Associated expects to see a net savings compared to costs from fuel-based generators. Pending federal regulation, such as a carbon penalty, as well as prices for fossil fuels, can affect the cost effectiveness of wind.

In the market the wholesale cost of wind generation has varied widely over the last several years – from about 3.5 cents a kilowatt-hour to more than 7 cents a kWh, and that's just to produce the wind energy. It still has to be delivered across country over transmission lines and to the cooperative member's home or business, and that adds more cost. The average transmission cost in Missouri is about 4 cents, so delivered wind energy would be about 7.5 cents to 11 cents a kWh. Considering additional generating capacity to cover times that the wind isn't blowing would further increase the cost by about 2.3 cents per

Current projects benefit from a government production tax credit. This tax credit lowers the cost of wind by 20 to 40 percent, depending on the project, and it is already accounted for in the stated market prices above. (Look for this feature to continue next month for answers to questions on how we clean up emissions from burning coal and why we don't rely soley on renewables including a comparative of the costs of resources.)

Plan for safety ahead of coming winter storms

Winter can bring thoughts of gently falling snow or sparkling ice, but it can also bring unpredictable weather with high winds, whiteouts, and ice storms. This can cause hazardous roads and power outages. Make sure to be prepared this winter season.

"Heavy snow and accumulating ice can easily bring tree limbs down onto power lines, cutting off power to homes and businesses. Making plans now for a potential power outage can make riding out a prolonged power outage safer and more comfortable," said Molly Hall, director of the Energy Education Council's Safe Electricity program.

Steps to help keep your family safe and comfortable during a winter storm can happen long before one is forecast. One necessary way to prepare is to put an emergency kit together. Some of the items that Safe Electricity recommends you include in your kit are:

- •Water stock up on bottled water for consumption. •Food – have enough non-perishable food items to last at least three to seven days.
- •Utensils include a non-electric can opener, cooking

tools, paper plates, and plastic utensils.

- ·Blankets, pillows, and warm clothing items.
- ·First aid kit, medicine, and prescription drugs.
- •Flashlight and batteries be sure to include extra

•Radio and clock - use battery-operated radios and clocks; also consider purchasing a National Oceanic and Atmospheric Administration (NOAA) weather

•Telephone - keep cell phone chargers (wall, car, and/ or solar) on hand and, if you have a landline, a traditional (not cordless) telephone set.

•Supplies for alternate heating methods, such as a fireplace or wood-burning stove.

Other tasks to complete in advance of a storm include having the power company or a tree-trimming professional remove limbs that could fall on power lines if they become covered in ice or snow, insulating your home by installing storm windows, caulking cracks in your home, and making sure your heating system is in proper working order.

If the electricity goes out due to a winter storm, you might be in for a prolonged power outage as crews work through the harsh weather to get the power back on. If you find yourself in this situation, make sure to contact your electrical utility as soon as you can so they know you have lost power. Other actions you can take to stay safe and comfortable are:

- ·Stay inside, and dress warm.
- ·Close off unneeded rooms.

•When using an alternative heat source, follow operating instructions, use fire safeguards, and be sure to properly ventilate. Always keep a multipurpose, dry-chemical fire extinguisher nearby, and know how to use it.

•Place draft block at the bottom of doors to minimize cold drafts from entering the house.

·Cover windows at night.

•Keep a close eye on the temperature in your home. Infants and people over the age of 65 are often more susceptible to the cold. You may want to stay with friends or relatives or go to a shelter if you cannot keep your home warm.

Winter can bring a variety of weather patterns ranging from mild snows to severe blizzards. To prepare yourself for winter storms, make sure to pay attention to weather forecasts and understand the difference between the warnings provided by the National Weather

•Winter Storm Warning - issued when hazardous winter weather in the form of heavy snow, freezing rain, or sleet is coming or occurring. The warnings are issued 12 to 24 hours prior to the storm.

•Winter Storm Watch - alerts the public to the possibility of a blizzard, heavy snow, freezing rain, or sleet. Watches are issued 12 to 48 hours before the storm.

•Winter Storm Outlook- this is given when winter storm conditions are possible and are issued three to five days in advance of a winter storm.

•Blizzard Warning – issued for gusty winds of 35 mph or more, and falling or blowing snow that creates visibilities of a fourth of a mile or less. These conditions usually last at least three hours.

For more information on how to prepare for a winter storm and how to keep your family safe during and after a winter storm, visit SafeElectricity.org.

From the Boardroom... Regular meeting of the Board of Directors held July 24, 2014

The meeting was called to order by President Densil Allen. Robert Simmons, Secretary of the Cooperative, caused the minutes of the meeting to be kept. The following Directors were present: Max Swisegood, Clark Bredehoeft, Paul Nolte, Dale Jarman, Richard Strobel, Densil Allen, Robert Simmons, Sandra Streit. Absent was Director Stan Rhodes. Also present were General Manager Mike Gray, Adm. Asst. and Benefits Admin Kim Lewis, cooperative attorney Rod Widger.

APPROVAL OF AGENDA

After discussion, the agenda was approved.

APPROVAL OF MINUTES

The unapproved minutes of the regular meeting of the board of directors held June 26, 2014 were approved. REVIEW OF EXPENDITURES FOR June

An itemized list of expenditures for June was presented to the board, and the payment of the bills was ratified.

APPROVAL OF REPORTS

The following June 2014 reports were approved: Operating Report (RUS Form 7) and Comparative Operating Statement including the Financial Statistical Report with month and budget comparisons and statistical data pertaining to operating revenue, expenses, margins, assets, liabilities, and KWH sales; treasurer's report; construction, retirement, maintenance and operations report.

SAFETY REPORT

Mike Gray reported no lost time accidents during the month of June.

MEMBERSHIPS

The applications submitted for membership in the cooperative were accepted and approved. Directors reviewed a list of requests for termination of membership in the cooperative which, along with their requests that their billings be deducted from their deposits and the remainder, if any, be refunded to them, were accepted and approved.

N.W. ELECTRIC POWER COOPERATIVE, INC. REPORT

Gray and Swisegood reported their attendance at the recent board meeting and shared highlights of the meeting.

AMEC VOTING REPRESENTATIVE AND BOARD MEMBER

The board appointed Clark Bredehoeft as an AMEC board member and as the cooperative's voting representative to the AMEC Annual Meeting, and Mike Gray as alternate.

NRECA REGION VIII MEETING

The board appointed Max Swisegood as the cooperative's delegate and Mike Gray as alternate for representation at the NRECA Region VIII meeting

ANNUAL MEETING DISCUSSION

Gray presented a copy of the annual meeting program and proposed agenda. Rod Widger led a discussion of the immediate effect and consequences of the membership bylaw amendment proposal.

Gray provided his Manager's Report for the month. He reported on the following: Missouri State Fair Foundation fundraising dinner and Friends of the Fair reception.

UNFINISHED BUSINESS

Discussion was held regarding the building tour.

EXECUTIVE SESSION AND ADJOURNMENT

The board entered into executive session to discuss personnel matters.

MEETING ADJOURNED

FINANCIAL REPORT • Statement of Operations • July 2014			
	This month	YTD 2014	YTD 2013
Revenue	2,057,635	15,961,716	15,338,261
Power Bill Expense	1,288,202	9,465,078	9,089,637
Opertion & Maint. Expense	468,244	3,274,259	3,474,393
Depreciation Expense	153,360	1,038,753	1,032,384
Interest Expense	<u>111,729</u>	<u>748,826</u>	<u>777,032</u>
Total cost of Srvc. (Total Expense)	2,021,535	14,526,916	14,373,446
Operating Margins (Revenue less Expenses)	36,100	1,350,418	964,816
Other Margins	<u>11,843</u>	82,221	<u>144,936</u>
TOTAL MARGINS	47,943	1,432,639	1,109,752

