

PowerLines

A monthly publication for member/owners of Eastern Illini Electric Cooperative

September 2013

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New President/CEO search

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Our website, www.eiec.coop, has been updated to provide you with a wealth of information.

Check out our site today to learn about our programs and services, and find tips to save money on your utility bills while you make your home more energy efficient.

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Power plant tour available

Unique opportunity available to visit a state-of-the-art plant in southern Illinois on October 23.

As member/owners of Eastern Illini Electric Cooperative, you have the special chance to take a behind the scenes tour of the state-of-the-art power plant and coal mine, the Prairie State Energy Campus (PSEC), located in southern Illinois in Washington County, near Lively Grove.

About the tour

The tour will leave our cooperative headquarters in Paxton at 7 a.m. on Wednesday, October 23. We plan to return to Paxton by approximately 7 p.m. that evening.

To help offset the cost of the tour, we are asking all participants to pay \$20. The tour fee will include round-trip transportation, lunch, and dinner.

The tour will consist of a walking portion through the power plant, and a driven portion through the coal mine (surface only).

About the plant

PSEC uses pulverized coal technology, where coal is ground to about the consistency of talcum powder and used as fuel for a boiler to heat water and produce steam.

The steam drives a turbine, which in turn drives an electrical generator, sending electricity throughout the grid to families and businesses all over

the Midwest, including our area.

PSEC also incorporates the latest in emissions control technologies that make it one of the cleanest coal-fueled power plants in the country. It represents an important step in helping to create a sustainable and secure energy future for you - as Eastern Illini Electric Cooperative member/owners.

The stack at PSEC is a whopping 700-foot tall - which is actually 70-feet taller than the Gateway Arch.

How to register

You can sign up for the tour at our office in Paxton, or by mailing your \$20 per person tour fee and each person's name to us at:

EIEC
Plant Tour
330 W. Ottawa
Paxton, IL 60957

The registration deadline for the tour is October 9, and the tour is limited to the first 50 people that sign up.

Respectfully,

Dave Champion



**MESSAGE FROM
THE PRESIDENT**

Stay safe this harvest season

These simple steps can help you stay safe when farming near power lines.

Harvest season can yield higher numbers of electrocution, shock and burn injuries on the farm. Nationwide, an average of 64 agricultural workers are electrocuted and hundreds more injured in electrical accidents each year. Safe Electricity and Eastern Illini Electric Cooperative urge farm workers to avoid tragic accidents by taking note of activities that take place around power lines.

“Equipment contacting overhead power lines is the leading cause of farm electrocution accidents in the Midwest,” says Eastern Illini’s President/CEO Wm. David Champion, Jr. “Many of these accidents occur near grain bins when augers make contact with power lines.”

“Everyone who works on the farm should know the location of power lines and keep farm equipment at least 10 feet away from them – below, to the side and above,” says Molly Hall, Director of Safe Electricity.

Here are some safety considerations for farm workers:

- Always lower portable augers or elevators to their lowest possible level - under 14 feet - before moving them.
- Be aware of increased height when loading and transporting larger modern tractors with higher antennas.
- Always use a spotter to help make certain that contact is not made with a line when moving large equipment.
- As in any outdoor work, be careful



Grain augers coming into contact with overhead power lines is a major hazard during harvest season. Always know your surroundings when farming!

not to raise any equipment such as ladders, poles or rods into power lines. Remember, non-metallic materials such as lumber, tree limbs, tires, ropes and hay may also conduct electricity under certain conditions.

- Inspect farm equipment for transport height and determine clearance with any power lines under which the equipment must pass.

- Consider the possibility of underground utility equipment for new or replacement power lines.

- Train all employees to be aware of risks for potential electrical shock on the farm.

“It’s almost always best to stay in the cab and call for help if you come

into contact with a power line. Warn others who may be nearby to stay away and wait until the electric utility arrives to make sure power to the line is cut off,” says Hall.

“If the power line is energized and you step outside, your body becomes the path to ground and electrocution is the result,” Hall noted. “Even if a power line has landed on the ground, the potential for the area nearby to be energized still exists.



Energy Efficiency

Tip of the Month

Like homes and other businesses, farms of all types can lower their electricity bills by turning off or lowering lights and small equipment in outbuildings. Timers and sensors can help, too. Regular cleaning, maintenance, and seasonal tune-ups help keep larger equipment running at top efficiency.

Source: E Source

Harvesting efficiency



Energy efficiency offers rich rewards for farmers.

Every dairy cow carries an energy price tag. Farmers pump water—and \$2.6 billion in energy dollars—to boost crops.

At the end of the day, energy, both direct and indirect, accounts for 13 percent of the average farmer's production expenses. To enhance their bottom lines, more farmers are turning to energy efficiency.

Electricity powers a farm's heating (water, space, heat lamps), pumping (irrigation, water wells, manure lagoons), refrigeration, ventilation, lighting, and fans (drying grains, aeration). Material handling—such as feed augers, manure conveyors, milking, and egg conveyors—also drain resources.

The American Council for an Energy Efficient Economy estimates farmers could save \$88 million annually by investing in efficient motors and lighting. How can Illinois farmers reap efficiency benefits? Eastern Illini provides energy audits for agricultural business members.

The greatest savings come from deploying more efficient equipment, although behavioral changes and a simple analysis of how energy is consumed can result in significant savings, too.

Equipped to save

Each farm—dairy, poultry, beef, hog, or crop—offers opportunities for efficiency improvements. For example:

- **Clean equipment:** Removing dust, soot, and debris from equipment will allow it to do more work with less

effort, extending its life and reducing energy use.

- **Inspect regularly:** Equipment should be checked regularly. Replace parts that are showing excessive wear before they break and cause irreparable damage.

- **Plug leaks:** Be it a pinprick hole in a hose or a drafty barn, leaks waste money, fuel, and electricity.

- **Remove clutter:** Hoses should be regularly flushed to clear debris. Ensure fan and motor intakes and exhausts remain clutter-free for maximum circulation and efficiency.

Light lessons

After tuning up equipment, check lights. Light work areas, not entire buildings. Use daylight when possible. Install dimmable ballasts to control light levels.

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Farm Energy Costs and Potential Savings

Farm Type	Energy Use (trillion Btu)
Oilseed and Grain	163
Cattle Feedlots	156
Dairy	83
Poultry	63
Greenhouse, Nursery	46
Fruit and Tree	37
Hog and Pig	31

Energy costs add up to 13% of a farm's production expenses.

Ways to Save Energy

- Use the animal housing, irrigation, nitrogen, tillage, and grain drying energy calculators at EnergyTools.sc.egov.usda.gov
- Efficient lighting saves up to **75%**
- Irrigation pump and motor efficiency saves up to **25%**
- Better dairy pumps, compressors, and lighting can save **10% to 35%**

Sources: USDA Impacts of Higher Energy Prices on Agriculture and Rural Economies; EnSave; American Council for an Energy Efficiency Economy On-Farm Energy Use Characterizations; National Sustainable Agriculture Information Service Energy Tips for Irrigators

Harvesting efficiency, continued

The type of light used makes a difference. Although useful as a heat source in limited situations (to keep water pumps from freezing in winter, for example), incandescent lightbulbs only convert 10 percent of the energy used into light. The rest of the energy is given off as heat. Consider these energy-saving lighting options, as compared to incandescents:

- Halogen incandescents use 25 percent less energy and last three times longer than traditional incandescents
- Compact fluorescent lamps (CFLs) use 75 percent less energy and last up to 10 times longer
- LEDs use between 75 percent and 80 percent less energy and last up to 25 times longer
- Cold cathode fluorescent lamps (CCFLs) last up to 25 times longer and offer the same efficiency as CFLs
- T-8 and T-5 fluorescent lights with electronic ballasts generate less noise and produce more light per watt. These bulbs also offer better color rendering, minimal flickering, cooler operation, and energy savings.

Harsh surroundings

Farm equipment must survive in a rough environment. Before buying new equipment or lighting, make sure the gear can survive fluctuating temperatures, wet locations, long hours of operation, and large loads.

Confirm the manufacturer's specifications that the unit is intended for the environment, and review the warranty and conditions. Make sure the way you plan to use it will not void the warranty.

Look for knowledgeable suppliers and installers familiar with the local climate and your farm's needs. Typically, farms need more rugged devices than what's available at a low cost from a retail or big-box store.

Seeds of change

For regional or crop-specific efficiency methods, use the U.S. Natural Resources Conservation Service energy calculators at this website: energytools.sc.egov.usda.gov.

By assessing how much energy a farm needs for animal housing, irrigation, and tillage, you can discover ways to cut costs.

Dairy farmers should also visit www.usdairy.com/saveenergy.

Funding for efficiency upgrades is available through the Rural Energy for America Program (REAP). Since 2008, REAP has funded more than 6,800 renewable energy and energy efficiency grants and loan guarantees as well as 600 farm energy audits.

Get details at www.rurdev.usda.gov > Energy > Rural Energy for America Program.

Farmers can also apply for financial and technical help through the Environmental Quality Incentives Program (EQIP), a program from USDA's Natural Resources Conservation Service. EQIP supports energy initiatives to manage and reduce agricultural energy needs. Learn more at www.nrcs.usda.gov > Programs > Financial Assistance > Environmental Quality Incentives Program.

To learn more, contact Eastern Illini at 800-824-5102 or visit the energy efficiency section of our website at www.eiec.coop.

President/CEO search under way

To all Eastern Illini Electric Cooperative Member/Owners:

Effective December 31, 2013, Wm. David Champion, Jr., our President/CEO, will retire from EIEC after 40 years of service. Your board of directors has contracted with the National Rural Electric Cooperative Association's Executive Search Department to facilitate the President/CEO search process.

Hiring a new President/CEO is the most important decision that a Board makes, and we take this responsibility as a challenge to build on EIEC's fine reputation and enhance its future performance for you – our member/owners.

We would like to assure you that we are doing everything in our power to identify not only the best technically capable individual, but the best "person" to lead the co-op and represent EIEC in the community and industry.

We appreciate your support and ask that you trust that we will fulfill our obligations and exceed your expectations. That is our goal and responsibility to you.

To learn more, visit www.eiec.coop.

Respectfully,

Marion Chesnut,
Chairman of the Board
Eastern Illini Electric Cooperative