

Co-ops could go far with better batteries

From an outside perspective, generating and distributing electricity may look a little like herding cats. When power is needed, it must be instantly on hand. When it's created, it must be immediately moved to where it can be used. And because it can't be easily stored, supply and demand must be kept in perfect balance — a precise dance where a misstep could lead to an outage.

Unlike other utilities that manage tangible resources like water or natural gas, electric co-ops can't keep extra electricity on hand — power can't be stored in a warehouse or a large tank. It's safe to say that if we could design a battery that allowed us to keep reserve megawatts at the ready, providing power reliably and safely would be significantly easier, and kilowatt-hours would be more affordable.

Stored electricity has several valuable uses. For one, renewable energy sources like wind and solar aren't always at the ready when electricity is needed. Wind often blows strongest at night when electricity demand is low. But if that unused energy could be stored and put to work the next day, a wind farm would be much more productive and cost-effective.

Stored energy could also give the electric grid a needed boost during periods of peak demand — the electric utility industry's equivalent of

rush-hour traffic, when people come home in the late afternoon and turn on lights, dishwashers and all the other comforts of home. That spike in demand is currently met by switching

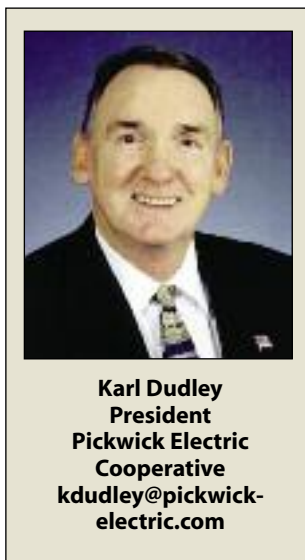
on natural gas-fired generators, which are expensive to operate. A battery could do the same job for a lot less.

A battery tucked beside the local substation serving your home could keep lights on should a power line leading into that substation fail. The whole process would likely happen without so much as a lightbulb flickering, keeping you warm and comfortable

while repairs are made.

Because of these potential benefits, electric co-ops are leading the way in searching for a better battery. The Cooperative Research Network, an arm of Arlington, Va.-based National Rural Electric Cooperative Association, is looking to put large-scale batteries to the test through three projects (in South Carolina, Alaska and Hawaii) that could win federal funding before the end of the year. Each would demonstrate how batteries could be used in different ways.

Success could lead to major breakthroughs. If the technology proves effective and affordable, electric co-ops could better stabilize the price of electricity and increase reliability. Herding those cats may one day be a little less complicated.



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These five pages contain local news and information for members of Pickwick Electric Cooperative.



PEC celebrates 74 years of service

Approximately 600 members and friends celebrated Pickwick Electric Cooperative's 74th Annual Meeting on Tuesday, Sept. 15. Entertainment was once again provided by the Renewed Gospel Ministries Quartet. The crowd enjoyed hot dogs and soft drinks, and several nice door prizes were awarded. Our younger members were entertained with outside party jumpers.

The PEC staff would like to thank you, our members, for attending this year's annual meeting.



All day, kids eagerly entered the obstacle course.



The McNairy Central High School tennis team served hot dogs and soft drinks, for which PEC offers a big "thank you."



Annual meeting attendees enjoyed hot dogs and soft drinks. Each registered member also received a 25-foot extension cord.



PEC members participated in the Our Energy, Our Future Campaign.



President Karl Dudley addressed the crowd.

Energy efficiency — proper insulation

One of the simplest ways to reduce your home's heating and cooling costs — and improve comfort — involves installing proper insulation. Doing so provides resistance to heat flow. The more heat flow resistance your insulation provides, the lower your heating and cooling costs.

Heat flows naturally from a warmer to a cooler space. In winter, heat moves directly from heated living spaces to adjacent unheated attics, garages, basements and even outdoors. It can also travel indirectly through interior ceilings, walls and floors — wherever there is a difference in temperature.

During the summer cooling season, the reverse takes place. Heat flows from the outdoors to the interior of a house.

To maintain comfort, heat lost in the winter must be replaced by your heating system. In summer, heat gained must be removed by your cooling system. Proper insulation, though, decreases heat flow.



With the winter months approaching, now is a good time to insulate.



Heat-flow resistance is measured or rated in terms of R-value. The higher the R-value, the greater the insulation's effectiveness.

When calculating the R-value of a multilayered installation, add R-values of individual layers. Installing more insulation in your home increases the R-value.

Insulation effectiveness also depends on how and where it's installed. For example, insulation that gets compressed will not provide its full rated R-value. The overall R-value of a wall or ceiling will be somewhat different from the R-value of the insulation because some heat flows around the insulation through studs and joists. Therefore, it's important to properly install your

insulation to achieve the maximum R-value.

For more information, visit www.eere.energy.gov.

Source: U.S. Department of Energy Office of Energy Efficiency and Renewable Energy



Celebrate Veterans Day this year by remembering those who have served our country and those who are serving today.

Nov. 11 • Veterans Day

PEC would like to honor all veterans who have served our country. Present and retired employees, directors and attorney who served in the armed forces are Terry Abernathy, Bobby Barnes, Jerry Burks, director Jimmy Dickey, employee Jimmy Dickey, Larry Gage, Clyde Garrison, Harold Finley, Robert Goad, Joe Gortney, Leslie Gwin, Jamie McAfee, John Mitchell, Layne Moffett, Terry Pearson, Glen Plunk, Maynard Smith, Joe Thomas, Jackie Weaver, Bobby Whitley, Marvin Wilkes and Robert Williams.

Be wary of electric space heaters that claim to save money

Many electric space heaters advertise that they can slash your electric bill, but what they don't advertise is that they can also cause that bill to increase significantly.

Whether it's a standard electric space heater you see at Lowe's or Walmart or a "ruby quartz" or "infrared" model advertised in a newspaper flyer, the thing you need to be concerned about is how much power the unit consumes. This is most commonly given in watts. If you can't find this information on the package or heater itself, be sure to ask the retailer before making a purchase.

Many electric space heaters are rated at 1,500 watts. This rating is how much power the space heater uses. You are billed for each kilowatt-hour of electricity you consume. One thousand watts is equal to 1 kilowatt, so 1,500 watts is equal to 1.5 kilowatts.

This means that for each hour the space heater is running, it consumes 1.5 kilowatt-hours of electricity, which costs about 12 cents.

Doesn't sound like much, does it? But running that heater nonstop is a surefire way to increase your bill.

If you ran one 1,500-watt space heater for 24 hours a day for a single month, it would cost about \$90. That's on top of your normal bill.

So where are the savings that are often touted on such items?

An electric space heater can save money but only if you reduce the running time of your electric furnace or other primary heating system.

A space heater could reduce your electric bill, for instance, if you lowered the thermostat on your electric furnace or heat pump from 72 degrees to 66 degrees and used the space heater to heat a single occupied room up to a comfortable temperature.

If, however, you're using the space heater to heat an enclosed garage or some other area of your home normally not heated, then the space heater is simply an additional cost.

Also, keep in mind that if you're using an electric space heater to supplement a propane furnace, then you may see a drop in the amount of propane you use, but your electric bill will still increase.

Electric space heaters can provide an effective and simple means of heating that cold, unconditioned tool shed, bedroom or other relatively small space, but they should never be allowed to run 24 hours a day, and you should always keep in mind the cost of operating such a piece of equipment.



Happy Thanksgiving

The PEC office will be closed on Thursday and Friday, Nov. 26-27, for the Thanksgiving holiday. Should you have an emergency, we will have standby crews available.



Stay Clear!

A downed power line may not be a dead line. It could cause serious injury or death.



FOLLOW THESE TIPS FROM PICKWICK ELECTRIC COOPERATIVE TO STAY SAFE:

- **Assume all power lines are ENERGIZED and dangerous.** Even lines that are de-energized could become energized at any time.
- **Never touch a downed power line!** And never touch a person or object that is touching a power line.
- **If someone is injured as a result of contact with electric current, do not try to assist him or her.** You could be injured or killed. Call 911.
- **If a power line falls across your vehicle while you are in it, stay inside until help arrives.**
- **Call 911 immediately to report a downed power line.** Then call Pickwick Electric Cooperative.