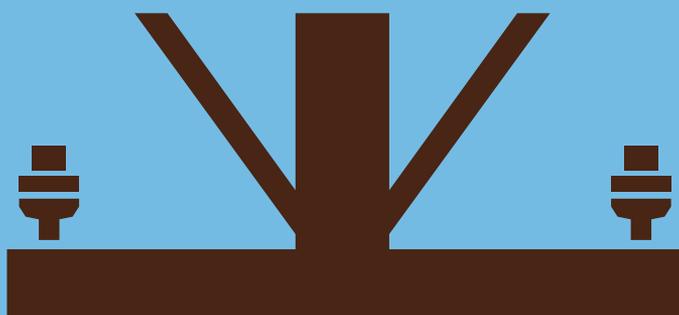
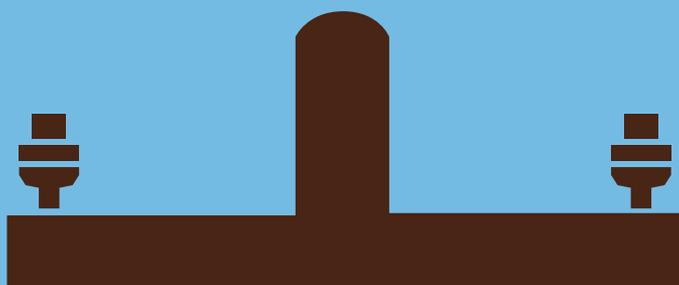


PENN*lines*

THE MAGAZINE YOU COME HOME TO

Positive power

Cooperatives explore beneficial electrification



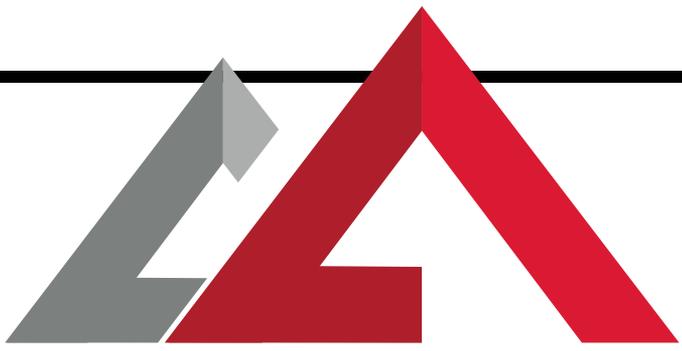
PLUS

Efficient basement space

Going the extra mile

All-day granola





L&L ROOFING, LLC

www.landroofing.com

**CALL US FOR A FREE
ROOF INSPECTION!**

724-840-3841 ■ PA - Linford
740-656-0177 ■ OH - LaVern



COMMERCIAL ROOFING EXPERTS.



HunterDouglas

OCTOBER 2020
Vol. 55 • No. 10

EDITOR
Peter A. Fitzgerald

SENIOR EDITOR/WRITER
Katherine Hackleman

ASSOCIATE EDITOR
Michael T. Crawford

LAYOUT & DESIGN
W. Douglas Shirk

PRODUCTION COORDINATOR
Michelle M. Smith

CONTRIBUTING COLUMNISTS
Janette Hess
George Weigel

Penn Lines (USPS 929-700), the newsmagazine of Pennsylvania's electric cooperatives, is published monthly by the Pennsylvania Rural Electric Association, 212 Locust Street, P.O. Box 1266, Harrisburg, PA 17108-1266. *Penn Lines* helps 166,000 households of co-op consumer-members understand issues that affect the electric cooperative program, their local co-ops, and their quality of life. Electric co-ops are not-for-profit, consumer-owned, locally directed, and tax-paying electric utilities. *Penn Lines* is not responsible for unsolicited manuscripts. The opinions expressed in *Penn Lines* do not necessarily reflect those of the editors, the Pennsylvania Rural Electric Association, or local electric distribution cooperatives.

Subscriptions: Electric co-op members, \$5.39 per year through their local electric distribution cooperative. Preferred Periodicals postage paid at Harrisburg, PA 17107 and additional mailing offices. POSTMASTER: Send address changes with mailing label to *Penn Lines*, 212 Locust Street, P.O. Box 1266, Harrisburg, PA 17108-1266.

Advertising: Display ad deadline is six weeks prior to month of issue. Ad rates upon request. Acceptance of advertising by *Penn Lines* does not imply endorsement of the product or services by the publisher or any electric cooperative. If you encounter a problem with any product or service advertised in *Penn Lines*, please contact: Advertising, *Penn Lines*, P.O. Box 1266, Harrisburg, PA 17108. *Penn Lines* reserves the right to refuse any advertising.



Board officers and staff, Pennsylvania Rural Electric Association: Chairman, Leroy Walls; Vice Chairman, Tim Burkett; Secretary, Barbara Miller; Treasurer, Rick Shope; President & CEO, Frank M. Betley

© 2020 Pennsylvania Rural Electric Association. All rights reserved. Reproduction in whole or in part without written permission is prohibited.

Visit with us at **Penn Lines Online**, located at: www.prea.com/penn-lines-magazine. *Penn Lines Online* provides an email link to *Penn Lines* editorial staff, information on advertising rates, and an archive of past issues.

Member Of:



CONTENTS

- 4 **KEEPING CURRENT**
News from across the Commonwealth
- 6 **ENERGY MATTERS**
Co-ops and the local communities they serve
- 11 **TECH TRENDS**
The future of energy storage
- 12 **FEATURE: POSITIVE POWER**
Cooperatives explore beneficial electrification
- 14A **COOPERATIVE CONNECTION**
Information and advice from your local electric cooperative
- 16 **TIME LINES**
Your newsmagazine through the years
- 17 **SMART CIRCUITS**
How to make your basement or crawl space more efficient
- 18 **FEATURE: COOPERATIVE SCHOLARS**
Winners of statewide electric cooperative scholarships announced
- 20 **FEATURE: GOING THE EXTRA MILE**
- 22 **COUNTRY KITCHEN**
All-day granola
- 23 **POWER PLANTS**
How to keep animals from eating your bulbs
- 24 **CLASSIFIEDS**
- 26 **PUNCH LINES**
The night Earl snagged the 'big one'
- 27 **RURAL REFLECTIONS**
Last call for 2020 photos



12



20



22

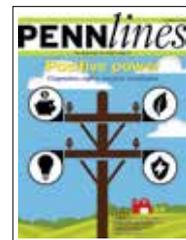


27

ON THE COVER

Through a concept called beneficial electrification, cooperatives continue an innovative legacy of enriching their communities.

Illustration by Neil C. Jones



News from across the Commonwealth



REMEMBRANCE: President Donald Trump, second from right, participates in the 19th anniversary observance of the crash of Flight 93 in a Somerset County field near Shanksville, Pa., on Sept. 11, 2020. One of four coordinated terrorist attacks on Sept. 11, 2001, the crash took the lives of 40 passengers and crew members. Their final resting place is now the location of the Flight 93 National Memorial. To adhere to the Commonwealth's public health guidelines, this year's observance was private; however, the national park opened to visitors following the observance.

2021 Farm Show to be held virtually

The Pennsylvania Department of Agriculture has announced the 2021 Pennsylvania Farm Show will be held virtually with no in-person events or competitions due to COVID-19.

"There are times in the life of a farmer when the risks are too great or uncertain, requiring farmers to make the tough decision to leave a field fallow," said Agriculture Secretary Russell Redding when making the announcement. "To protect our assets — both our people and our resources — from incalculable losses, we have made the tough decision to take a year to lie in fallow. Rather than an in-person Farm Show, we will celebrate Pennsylvania agriculture virtually for 2021 as we prepare for a productive future.

"We'll look at our strengths and where we need to invest together in order to grow and cultivate for tomor-

row," he added. "We'll consider what has become crystal clear during the pandemic — that agriculture is essential for life; our people are resilient and innovative. We will focus on agricultural awareness, education and literacy while highlighting the interconnectedness of our food chain."

Watch Pennsylvania elk online

The Pennsylvania Game Commission has installed a camera on State Game Lands 311 — typically a hub of elk activity during fall bugling season — in Elk County. Video and sound are being live-streamed at pgc.pa.gov through a partnership with HDOnTap and the North Central Pennsylvania Regional Planning and Development Commission.

To watch, go to the website and click on the Elk Country Live Stream button. The live stream will run until

the end of bugling season (sometime in mid-October). The best time to see elk on camera is typically late in the afternoon.

PennDOT invites public participation in new program

The Pennsylvania Department of Transportation (PennDOT) invites participation in a new Safety Citizens program.

PennDOT will introduce bimonthly traffic safety topics, which will include a question for participants to answer. Answers can be submitted via a short video, a poem or an original piece of artwork. Some submissions will be displayed on PennDOT's statewide social media platforms.

Information can be found online at PennDOT.gov.

New Gettysburg book release scheduled

A new battlefield guide, "Bullets and Bandages: The Aid Stations and Field Hospitals at Gettysburg," by James Gindlesperger is being released this year. In early July 1863, 160,000 men fought one of the most fierce battles of the Civil War. After the armies departed, about 21,000 wounded men remained, and this guide is the story of how Gettysburg, a town of 2,500 people, cared for those wounded men.

It includes historical and contemporary photos, as well as stories about the soldiers and the residents who assisted them, and an extensive listing of civilian hospital sites and farm division field hospitals. Gindlesperger is the author of multiple guides to Civil War battlefields, as well as several books about the war. 🌞

Shop When You Need To Online & In-Store

3-Ply Disposable Face Masks (1779) **Less Than 35¢ per Mask**

NEW **WHILE SUPPLIES LAST**

\$3.49 ~~\$5.99~~ **Save 42%**

Non-medical. **In-Store Only**

ITEM 57593 86304741 **LIMIT 4 - Exp. 11/29/20***

Rapid Pump® 1.5 Ton Lightweight Aluminum Floor Jack (1738)

\$59.99 ~~\$79.99~~ **Save \$103**

Compare to K Tool XT163094 \$163.09

Use Online & In-Store

ITEM 64552/64832/64980/64545 shown 86305112 **LIMIT 1 - Exp. 11/29/20***

WOW! SUPER COUPON **SAVE 86%**

5 ft. 6" x 7 ft. 6" All Purpose/Weather Resistant Tarp

\$2.99 ~~\$9.97~~ **WOW! 97¢**

LIMIT 3

Compare to Blue Hawk CH6X-L \$6.98

Use Online & In-Store

ITEM 953/69128/69136/69246/63110/69210 shown 86305587 **Exp. 11/29/20***

WOW! SUPER COUPON **20% OFF**

Use Online & In-Store

86304717

Limit 1 coupon per customer per day. Save 20% on any 1 item purchased. *Cannot be used with other discount, coupon or any of the following items or brands: Inside Track Club membership, Extended Service Plan, gift cards, open box items, 3 Day Parking Lot Sale items, compressors, floor jacks, power stations, sales, storage cabinets, chests of drawers, trailers, welders, Admiral, Ames, Atlas, Avanti, Bauer, Central Machinery, Cobra, CoverPro, Daytona, Diamondback, Drummey, Earthquake, Fischer, Hercules, Icon, Jupiter, Lynx, Posi-Lon, Predator, Tailgator, Viking, Vulcan, Zurich. Not valid on prior purchases. Non-transferable. Original coupon must be presented. Valid through 11/29/20.

3 Gallon, 100 psi Oil-Free Air Compressor (4067)

\$39.99 ~~\$54.99~~ **Save 59%**

HotDog ITEM 69265/97080 shown Pancake ITEM 60633/61615 shown

Use Online & In-Store

Compare to Porter-Cable PCFP02003 \$96.62

86306844 **LIMIT 2 - Exp. 11/29/20***

Quantum 588 Lumen Tactical Flashlight (5334)

\$9.99 ~~\$13.99~~ **Save 83%**

Compare to Streamlight ProTac 1L \$59.99

Use Online & In-Store

ITEM 64799/63934 shown 86307099 **LIMIT 4 - Exp. 11/29/20***

30", 5 Drawer Mechanic's Cart (4642)

\$199.99 ~~\$239.99~~ **Save \$630**

Compare to Snap-on Blue-Point KRBC10TBPS \$330

Use Online & In-Store

ITEM 64721, 64722, 64030, 64031, 64061, 64720, 56429

86307317 **LIMIT 1 - Exp. 11/29/20***

Heavy Duty Foldable Aluminum Sports Chairs (5193)

\$19.99 ~~\$29.99~~ **Save 64%**

Green ITEM 63066/62314 shown Blue ITEM 56719

Use Online & In-Store

Compare to Coleman 635394 \$56.49

86307602 **LIMIT 4 - Exp. 11/29/20***

0.30 cal. Ammo Box (7430)

\$3.49 ~~\$5.99~~ **Save 65%**

Bunker Hill

Use Online & In-Store

ITEM 63135/61451 shown

Compare to RangeMaxx 1312-92 \$9.99

86309387 **LIMIT 4 - Exp. 11/29/20***

20v Lithium-Ion 1/2" Impact Wrench (512)

\$99.99 ~~\$119.99~~ **Save \$39**

450 TORQUE FT. LBS. BOLT BREAKAWAY

Tool Only. Battery and charger sold separately.

Use Online & In-Store

Compare to Ryobi P251 \$139

ITEM 56176/63629 shown 86309487 **LIMIT 1 - Exp. 11/29/20***

130 Piece Tool Kit with Case (3888)

\$29.99 ~~\$39.99~~ **Save 60%**

LIFETIME WARRANTY

SAE AND METRIC

Use Online & In-Store

ITEM 64263/68998/63248/64080/63091 shown

Compare to Anvil A137HOS \$75.88

86310217 **LIMIT 2 - Exp. 11/29/20***

Mechanics Gloves (329)

\$4.99 ~~\$5.49~~ **Save 53%**

AVAIL. IN SM, MED, LG, XL, XXL

Use Online & In-Store

Compare to Valeo 25521 \$10.64

ITEM 62434, 62426, 62433, 62432, 62429, 64179, 64228, 64178 shown 86310935 **LIMIT 4 - Exp. 11/29/20***

2000w Super Quiet Inverter Generator (1508)

\$449.99 ~~\$499.99~~ **Save \$599**

PREDATOR

Use Online & In-Store

Compare to Honda Power Equipment EU2200ITA \$1,049

ITEM 62523 86311428 **LIMIT 1 - Exp. 11/29/20***

200 Lumen LED Super Bright Flip Light (6028)

\$1.99 ~~\$3.99~~ **Save 60%**

Use Online & In-Store

Compare to Premier SW-SWITCH-12/24 \$4.99

ITEM 64723/64189/63922 shown 86311929 **LIMIT 4 - Exp. 11/29/20***

10 ft. x 10 ft. Slant Leg Pop-Up Canopy (1734)

\$54.99 ~~\$64.99~~ **Save 31%**

COVER PRO

Use Online & In-Store

ITEM 62898/62897/62899 shown

Compare to Quik Shade 167501DS \$79.99

86311965 **LIMIT 2 - Exp. 11/29/20***

18" Working Platform Step Stool (6026)

\$19.99 ~~\$29.99~~ **Save 50%**

HaulMaster

Use Online & In-Store

Compare to Neocraft 60635 \$39.99

ITEM 62515/66911 shown 86312424 **LIMIT 3 - Exp. 11/29/20***

Tilting Flat Panel TV Mount (669)

\$14.99 ~~\$26.99~~ **Save \$85**

HOLDS FLAT SCREEN TV'S UP TO 70 INCHES

Use Online & In-Store

Compare to Rocketfish RF-TVM-LP-PT03V2/V3 \$89.99

ITEM 64355/64356 shown 86312612 **LIMIT 3 - Exp. 11/29/20***

100w Solar Panel Kit (677)

\$189.99 ~~\$199.99~~ **Save \$10**

CHARGES ON A CLOUDY DAY

RENEWABLE ENERGY ANYWHERE

2X MORE POWER

Use Online & In-Store

Compare to Thunderbolt Solar \$1.89 PER WATT

ITEM 64550/63518 shown 86312713 **LIMIT 1 - Exp. 11/29/20***

Ultra-Light, Crush-Proof Weather-Resistant Lockable Case (1397)

\$9.99 ~~\$12.99~~ **Save 80%**

Case contents and locks not included.

Use Online & In-Store

Compare to Pelican 1150-000-180 \$60.50

ITEM 64550/63518 shown 86313143 **LIMIT 1 - Exp. 11/29/20***

2500 lb. Electric Winch with Wireless Remote Control (2337)

\$54.99 ~~\$69.99~~ **Save 35%**

BADLAND

Use Online & In-Store

Compare to Ironlion 54123 \$84.99

ITEM 61258/61297/63476/61840 shown 86313651 **LIMIT 1 - Exp. 11/29/20***

Co-ops and the local communities they serve

By Paul Wesslund

We like the word “local.” We like it because it’s the nearby hardware store where we can get what we need. It’s where we meet friends for coffee. It’s the shop where they look us in the eye and smile. It’s a word of warmth that makes us feel known.

Local also means your electric co-op. It’s as local as you and your neighbors because you own it. It’s grown and changed with you, possibly starting before you were even born. Because it’s made up of you and your neighbors, it’s as unique to each part of the country as you are.

October is National Cooperative Month so it makes sense to use this time to recognize and celebrate the variety that is the essence of being local.

That local heritage for electric co-ops started in the 1930s with neighborly visits, talking about the lights they could see in the city but didn’t have themselves. They weren’t likely to get those modern conveniences because no company saw a profit in stringing wires to power a few lightbulbs in a remote farmhouse.

No such thing as a typical co-op

So, the local farmers took matters into their own hands. They pooled \$5 startup fees, organized member-owned, not-for-profit electric cooperatives, and convinced local politicians to create a federal loan program to help with the rest of the cost.

Today, more than 900 electric co-ops provide electricity to more than 19 million businesses, homes, schools and farms. They cover more than half



the land in the United States. They employ 71,000 people and invest \$12 billion a year in local economies.

It’s hard to describe a typical co-op.

They’re big and small. The largest electric co-op serves nearly 350,000 members; the smallest, 113.

They’re in metropolitan and non-metropolitan areas. While their rural heritage meant they didn’t serve cities, many of their communities have grown over the decades. About 40% serve counties classified as rural and 60% classified as metropolitan.

While those numbers reflect the variety and uniqueness of who co-ops serve, what they do also matters.

Less pollution, more renewable energy

As co-op members became more aware of environmental priorities, co-ops focused on reducing power plant emissions. From 2009 to 2016,

co-ops reduced greenhouse gas emissions by 8%, nitrogen oxide emissions by 24% and sulphur dioxide emissions by 66%. Co-ops also launched energy efficiency programs, many offering home and business “energy checkups.”

Electric co-ops are helping power the growth in alternative energy; 17% of co-op electricity across the U.S. now comes from hydroelectric power, solar, wind and other renewable sources.

Electric vehicles offer a promising technology with special hurdles for co-op territories that are outside of city centers. Some electric co-ops are working to set up charging stations that will be required for a viable electric vehicle industry.

High-speed internet service is increasingly required for a vibrant local economy, so some co-ops around the country are exploring ways their members can get connected.

And now that we’re all faced with the fallout from the effects of COVID-19, electric co-ops are again on the job as the virus changes everything from the national economy to how we say hello to our neighbors.

Electric co-ops are developing payment plans for people out of work. They’re socially distancing line crews. They’re setting up drive-in or virtual membership meetings, and offering virtual energy audits. 🌞

Paul Wesslund writes on consumer and cooperative affairs for the National Rural Electric Cooperative Association, the national trade association representing more than 900 local electric cooperatives. From growing suburbs to remote farming communities, electric co-ops serve as engines of economic development for 42 million Americans across 56% of the nation’s landscape.

Country Morning Canister Set



Edition Four
12 3/4 in. H.



Edition Three
12 1/4 in. H.



Edition Two
11 1/2 in. H.



Premiere Edition
11 in. H.

Canisters are all 6 inches in diameter.

Each canister features wraparound artwork by Dona Gelsinger

Hand-painted rooster sculpture crowns the lift-off lid

Canisters include freshness seal to preserve contents

Put a Country Shine on your Kitchen

The kitchen is the heart of any home, and no matter where it's located there's always room for some country charm to remind us of the home cooking of years gone by. Now a new collection of canisters bearing the rooster artwork of Dona Gelsinger is ready to strut its stuff on your counter or anywhere that could use a touch of country beauty.

Superior Quality—Satisfaction Guaranteed

Act now to acquire the limited edition *Country Morning Canister Set*, featuring Dona Gelsinger's acclaimed artwork, beginning with "Tea." Each edition is payable in two monthly installments of \$34.99 each, for a total of \$69.99*. Your purchase is risk-free, backed by our 365-day guarantee. Send no money now. Editions will ship about every other month. You may cancel at any time by notifying us. Just mail the Reservation Application today!



©Dona Gelsinger, Little Angel Publishing, Inc. White City, OR. All Rights Reserved.
©2019 BGE 01-24677-001-BIH

www.bradfordexchange.com/rooserset

RESERVATION APPLICATION SEND NO MONEY NOW

The
Bradford Exchange

9345 Milwaukee Avenue · Niles, IL 60714-1393

YES. Please reserve the *Country Morning Canister Set* for me as described in this announcement.
Limit: One per order Please Respond Promptly

Mrs. Mr. Ms. _____ Name (Please Print Clearly)

Address _____

City _____ State _____ Zip _____

Email (optional) _____

904620-E66101

*Plus a total of \$10.99 shipping and service per canister; see bradfordexchange.com. Limited-edition presentation restricted to 95 firing days. Please allow 4-8 weeks after initial payment for shipment. Sales subject to product availability and order acceptance.

Political spotlight

Supporting cooperative candidates

The Action Committee for Rural Electrification (ACRE) — the political action arm of electric cooperatives — endorses the following 10 U.S. congressional and 56 state legislative candidates to represent electric cooperative service areas in Pennsylvania and New Jersey. The recommendations are based on the candidates' support for and voting record regarding rural electrification and their stance on various rural and consumer concerns, in accordance with ACRE bylaws.

By voting for these men and women on Nov. 3, you will help ensure your local electric cooperative has a voice before Congress and the state legislature.

Endorsed candidates are listed below. In seats where no action was taken, "No Endorsement" is noted. Electric cooperatives represented are noted after each state House, Senate or congressional district.

U.S. Senate (N.J.)



Cory Booker (D)
(Sussex REC)

U.S. House of Rep. (N.J.)



Josh Gottheimer (D)
5th District
(Sussex REC)

U.S. House of Representatives (Pa.)



Scott Perry (R)
10th District
(Adams EC)



Fred Keller (R)
12th District
(Adams EC, Claverack REC, Sullivan County REC, Tri-County REC, Valley REC)



Guy Reschenthaler (R)
14th District
(REA Energy, Somerset REC)



Mike Kelly Jr. (R)
16th District
(Central EC, Northwestern REC, Warren EC)



Lloyd Smucker (R)
11th District
(Adams EC)



John Joyce (R)
13th District
(Adams EC, Bedford REC, New Enterprise REC, REA Energy, Somerset REC, Valley REC)



Glenn "GT" Thompson (R)
15th District
(Central EC, Northwestern REC, REA Energy, Tri-County REC, United EC, Warren EC)



Conor Lamb (D)
17th District
(Central EC)

Pennsylvania State Senate



John DiSanto (R)
15th District
(Adams EC)



Gene Yaw (R)
23rd District
(Claverack REC, Sullivan County REC, Tri-County REC)



Mike Regan (R)
31st District
(Adams EC)



Wayne Langerholc (R)
35th District
(Bedford REC, New Enterprise REC, REA Energy, Somerset REC, United EC, Valley REC)



Scott Hutchinson (R)
21st District
(Central EC, Northwestern REC, United EC, Warren EC)



Cris Dush (R)
25th District
(REA Energy, Tri-County REC, United EC)



Doug Mastriano (R)
33rd District
(Adams EC)



Kim Ward (R)
39th District
(REA Energy, Somerset REC)

Pennsylvania State Senate, cont.



Joe Pittman (R)
41st District
(Central EC,
REA Energy,
United EC)



Dan Laughlin (R)
49th District
(Northwestern REC)

Pennsylvania State House of Representatives



Ryan Bizzarro (D)
3rd District
(Northwestern REC)



Daryl Metcalfe (R)
12th District
(Central EC)



Joseph Petrarca (D)
55th District
(REA Energy)



Kathy Rapp (R)
65th District
(Central EC,
Northwestern REC,
United EC, Warren EC)



Curt Sonney (R)
4th District
(Northwestern REC,
Warren EC)



Parke Wentling (R)
17th District
(Northwestern REC)



Mike Reese (R)
59th District
(Somerset REC)



Brian Smith (R)
66th District
(REA Energy, United EC)



Brad Roae (R)
6th District
(Northwestern REC)



Frank Dermody (D)
33rd District
(Central EC)



Jeff Pyle (R)
60th District
(Central EC, REA Energy)



Martin Causer (R)
67th District
(Tri-County REC)



Tim Bonner (R)
8th District
(Central EC)



Keith Gillespie (R)
47th District
(Adams EC)



Jim Struzzi II (R)
62nd District
(REA Energy)



Clint Owlett (R)
68th District
(Claverack REC,
Tri-County REC)



Aaron Bernstine (R)
10th District
(Central EC)



Matt Dowling (R)
51st District
(Somerset REC)



Donna Oberlander (R)
63rd District
(Central EC, REA Energy, United EC)



Carl Walker Metzgar (R)
69th District
(Bedford REC,
Somerset REC)



Marci Mustello (R)
11th District
(Central EC)



Ryan Warner (R)
52nd District
(Somerset REC)



R. Lee James (R)
64th District
(Central EC,
Northwestern REC)



Jim Rigby (R)
71st District
(REA Energy)

Pennsylvania State House, cont.

**No
Endorsement**
72nd District
(REA Energy)



**Rich
Irvin (R)**
81st District
(New Enterprise
REC, Valley REC)



Dan Moul (R)
91st District
(Adams EC)



**Karen
Boback (R)**
117th District
(Claverack REC)



**Tommy
Sankey III (R)**
73rd District
(REA Energy,
United EC)



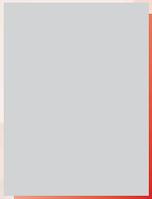
**John
Hershey (R)**
82nd District
(Adams EC,
Valley REC)



**Dawn
Keefer (R)**
92nd District
(Adams EC)



Kate Klunk (R)
169th District
(Adams EC)



**No
Endorsement**
75th District
(United EC)



**No
Endorsement**
84th District
(Sullivan County REC,
Tri-County REC)



Mike Jones (R)
93rd District
(Adams EC)



**Kerry
Benninghoff (R)**
171st District
(Valley REC)



**Stephanie
Borowicz (R)**
76th District
(Tri-County REC,
United EC)



**Perry
Stambaugh (R)**
86th District
(Adams EC)



Stan Saylor (R)
94th District
(Adams EC)



**Torren
Ecker (R)**
193rd District
(Adams EC)



**Jesse
Topper (R)**
78th District
(Bedford REC, New
Enterprise REC,
Valley REC)



**Rob
Kauffman (R)**
89th District
(Adams EC)



Tina Pickett (R)
110th District
(Claverack REC,
Sullivan County REC,
Tri-County REC)



Seth Grove (R)
196th District
(Adams EC)



**Lou
Schmitt Jr. (R)**
79th District
(Valley REC)



**Paul
Schemel (R)**
90th District
(Adams EC)



**Jonathan
Fritz (R)**
111th District
(Claverack REC)



Barb Gleim (R)
199th District
(Adams EC)



**Jim
Gregory (R)**
80th District
(Valley REC)



The future of energy storage

By Maria Kanevsky

Energy storage technology is extremely versatile — it's small enough to fit in your phone, or large enough to power your entire home.

Many people are familiar with small-scale batteries for handheld devices, but utility-scale batteries take energy storage to a whole new level. The ability to store energy helps to ensure that energy demand meets supply at any given time, making electricity available when you need it.

The most widespread form of energy storage in the U.S. is through pumped hydropower, a form of mechanical energy storage. Pumped hydropower energy storage has been used for several decades now, and currently makes up about 97% of the country's utility storage capacity.

Energy is stored by pumping water uphill from a lower elevation reservoir to store in an upper water basin. When energy is needed, the water is allowed to flow through an electric turbine to generate energy, the same way it flows through a hydroelectric dam. This method is the cheapest way to store large amounts of energy, but it is largely dependent on the surrounding geography and any potential resulting ecosystem issues.

Batteries are quickly gaining attention as another form of energy storage. In 2018, the power capacity from battery storage systems in the U.S. more than doubled from 2010. The most common type of battery chemistry is lithium-ion because of a high-cycle efficiency and fast response time. Ninety percent of large-scale battery system capacity in the U.S. uses lithium-ion chemistry. Some less-common



DENNIS GAINER

GREEN POWER: Energy storage plays a crucial role in incorporating renewable energy into our electric grid. Solar and wind energy are weather-dependent, so when energy demand is low, storing the excess energy makes it possible to use it later when demand is higher.

battery types for utility storage include lead acid batteries, nickel-based batteries and sodium-based batteries. However, each chemistry has varying limitations. Beyond pumped hydropower and batteries, there are a few other forms of energy storage used at the utility scale: thermal, hydrogen, and compressed air.

Energy storage currently plays a crucial role in incorporating renewable energy into our electric grid. Solar and wind energy are weather-dependent, so when energy demand is low but energy supply is high from the sun or wind, storing the excess energy makes it possible to use it later when demand is higher. As renewable energy becomes more prevalent, energy storage will help to create a more resilient grid.

Although battery prices have been

decreasing steadily over the last several years, energy storage can be expensive to attain. Currently, there are 25 gigawatts of electrical energy storage capacity in the U.S., and many experts expect capacity to grow.

As technologies improve, equipment costs decrease and more renewable energy is generated, there is a great potential for utility-scale energy storage to continue expanding in the coming decades. ☀️

Maria Kanevsky is a program analyst for the National Rural Electric Cooperative Association, the national trade association representing more than 900 local electric cooperatives. From growing suburbs to remote farming communities, electric co-ops serve as engines of economic development for 42 million Americans across 56% of the nation's landscape.



Positive power

Cooperatives explore beneficial electrification

Rural electric cooperatives — as the name implies — were formed to bring electricity to areas that existing utilities wouldn't touch because these profit-minded companies found little benefit in electrifying sparsely populated areas. Electrification became the tool cooperatives wielded to help rural Pennsylvanians improve the quality of their lives. Through a concept called beneficial electrification, cooperatives continue an innovative legacy of enriching their communities.

Isn't all electrification beneficial? That's a question fielded often by Keith Dennis, vice president of consumer-member engagement at the National Rural Electric Cooperative Association in Washington, D.C., and co-chair of the Beneficial Electrification League (BEL). Beneficial electrification uses electricity in lieu of end-use fossil fuels — such as oil, propane, coal, or natural gas — in appli-

By Michael T. Crawford
Associate Editor

ances or equipment to support a more resilient grid, benefit the environment, improve product quality or quality of life, or save consumer-members money over time without hindering any of the other goals.

“Ten years ago, you wouldn't have a clear path to be pushing for electrification of end-use products,” says Dennis, a founding member of BEL. “Today, when you have trends of falling emissions — you have more hydro, more nuclear and renewables together making clean energy — burning fossil fuels in millions and millions of homes and cars isn't the future.”

If something runs on a fossil fuel, it's a potential candidate for beneficial electrification. Perhaps the flashiest example of end-use electrification is the rise of electric vehicles (EVs), which

POWER UP: Mike Johnson, key accounts/senior safety specialist at Adams EC, plugs in a hybrid electric vehicle to a charging station operated by the cooperative's subsidiary, Adams Energy Resources, LLC.

on average recharge for one-fourth the cost of refueling a traditional gasoline-operated vehicle.

Lightbulb moment

“My opinion of EVs was that they were a fad,” recalls Mike Johnson, key accounts/senior safety specialist at Gettysburg-based Adams Electric Cooperative (EC). “We sat through this New and Emerging Technologies Conference. ... Different organizations all over the country presented on EVs and the benefits to electric utilities, the benefits to society, and the future of EVs. We recognized, sitting there, we were behind the eight ball.”

Due to rising efficiencies of appliances, electric sales at utilities had

been relatively flat for more than two decades. Ironically, Johnson realized if sales could be improved at the right time of day, it could benefit consumer-members.

“If we could pick up car chargers off our peak, we stood a better chance of maintaining a steady rate or possibly lowering the rates,” Johnson explains. “We realized we had to do something. ... With very little modification in their (members’) daily routine, they could get their vehicles off of our peak. That would help us save on having to do system improvements and substation improvements and be able to prolong our existing system without having to do a bunch of advancements to be able to handle that additional load that is coming.”

Adams EC realized that to see EV adoption in its territory, more infrastructure was required, and began installing Level 2 commercial charging stations throughout its service territory via its subsidiary, Adams Energy Resources, LLC.

“It was going to be a benefit to our members and the co-op — they were going to be able to save on their fuel

DEMAND RESPONSE: Travis Kuhstos, demand response program manager and staff energy specialist at Valley REC, connects a demand response unit (DRU) to a consumer-member’s water heater, below, and secures another DRU to a wall, right.

costs and we were hopefully going to be able to shift and add load in our off-peak times,” Johnson says.

EVs aren’t the be-all, end-all of beneficial electrification, of course. In fact, a simpler, quieter modification in most members’ lives goes a long way toward achieving every goal of beneficial electrification: water heaters.

Multiple benefits

“Most people don’t think about it until you don’t have hot water or there’s a puddle on the floor,” quips Steve Koep, general manager of BEL. “But electric water heating is cleaner, it’s more manageable, it’s safer and it’s healthier. It’s not only good for the member, it’s good for the co-op. It’s good for the climate, and it’s good for the grid.”

Electric water heaters are generally easy to maintain without specialized technical skills and avoid the risk of backdraft, which can result in carbon monoxide leaks, explains Travis Kuhstos, demand response program



USA CARPER, VALLEY REC



USA CARPER, VALLEY REC

SOLAR POWER: Valley REC Vice President of Operations Todd Ross inspects the metering for a solar interconnection at a residence in Juniata Township, Huntingdon County, in 2017. The exposed meter on the left measures the net amount of electricity the rooftop solar array has fed into the co-op’s distribution system while the covered meter in the center measures the total amount of electricity produced by the array, much of which is used by the household.

manager and staff energy specialist at Huntingdon-based Valley Rural Electric Cooperative (REC). They are also more efficient, meaning every watt of electricity going into an electric water heater is doing what it’s meant to do, as opposed to oil or gas where energy is lost.

“I tell members they’re consolidating their bills — they’re paying one bill a month covering everything — and in our area, electric is still the cheapest ‘fuel’ source,” notes Kuhstos, a member of Valley REC. “People are getting away from the fossil fuel stuff — I’ve done the same myself — because it’s cleaner. An oil system, for example, could backfire and put soot through the house. ... It’s almost weekly where I get a phone call about somebody replacing a 30-, 40- or even 50-year-old water heater.”

He adds, “Water heaters have really come a long way. The energy (efficiency) factors for water heaters even 10 years ago are so much different than they are today.”

The concept of beneficial electrification, which ultimately plugs more systems into the grid, reverses historic approaches to reducing environmental impacts or even reducing energy costs. These approaches often encouraged homeowners to simply use less electricity.



LISA CARPER, VALLEY REC

INTERCONNECTED: A technician finishes installation of a battery system for a 12-kilowatt solar array at the home of a Valley REC member. Valley REC has 45 member solar interconnections on its system.

Increasing demand for electricity, even with efficient technology, puts additional strain on the energy grid, which can lead to having to repair or replace components more frequently, according to Tony Vincik, manager of energy management systems at Harrisburg-based Allegheny Electric Cooperative, Inc. (Allegheny).

“Substations and power lines have limits to what can be run through them, and high demand can put transformers at their limit,” Vincik explains. “Sitting at maximum capacity on a hot summer day can damage the equipment over time, but if you can slow the load down, the equipment will last longer.”

Tradition of efficiency

For more than 30 years, Pennsylvania electric cooperatives, in partnership with Allegheny — the wholesale power provider for 14 electric cooperatives in Pennsylvania and New Jersey — have been carefully managing energy demand to minimize the impact of peaks.

The Coordinated Load Management System (CLMS), devised by Allegheny in 1986, has avoided more than \$150 million in power costs since its inception by spreading out the use of electricity to off-peak times, such as at night when most people are asleep or in the middle of the day while most people are away from home.

If that concept sounds familiar, it’s because that’s exactly how your cooperative utilizes water heaters to reduce peak load. Through a demand response unit, cooperatives can remotely switch

off water heaters when demand for electricity is at its highest to keep costs down. Because modern water heaters are so well insulated, the water stored inside remains heated long enough for demand to decrease and the heater to be switched back on.

Some cooperatives, including Sullivan County REC, based in Forksville, Pa., offer a similar beneficial electrification concept for home heating — electric thermal heating — that allows for heat to persist even if the system is off.

“It’s a system that uses a couple of different mediums, brick or water,” explains Tom Eberlin, a member of Sullivan County REC and the cooperative’s technical services representative. “They look like an old-fashioned register that water would flow through with ceramic bricks with heating elements that run through them. The bricks



JEFF SPAKO, SULLIVAN COUNTY REC

HEATER METER: An electric meter attached to the home of a Sullivan County REC member monitors energy use of an electric thermal storage system.

absorb the heat, and when the power is off, the bricks hold the heat so it can keep the room warm. With a properly designed system, it will keep your home warm during the longest control periods. We don’t shut them off for that long, but they’ll have enough stored heat in them so there is no chance of not having heat from avoiding the peak.”

He adds, “It’s a great system the way it heats the home, and it is a money saver for the rates and time off the peak. The benefit to the cooperative is it reduces the load during that peak time. It’s not just a benefit to our cooperative, but all the cooperatives.”

While not beneficial electrification in and of itself, CLMS enables the concept by helping cooperatives rely more on their own clean energy. In 2019, through Allegheny, cooperative consumer-members received nearly 59% of their energy from the Susquehanna Steam Electric Station (SSES), a two-reactor nuclear plant in Berwick, Pa., and nearly 10% from hydropower via the Raystown Hydroelectric Project and hydroelectric projects located along the Niagara and St. Lawrence rivers in upstate New York. In addition to these large-scale resources, nearly 600 member-owned renewable energy sources — primarily wind and solar energy — contribute to Allegheny’s clean energy portfolio.

The more electric cooperatives rely on their own energy portfolio, the less Allegheny has to purchase from the energy market, which typically consists of more than 60% fossil fuels. Clean energy drives beneficial electrification as much as technological efficiencies.

“As the grid gets greener, everything attached to the grid gets greener right along with it,” Koep says. “It can be a big motivating factor for folks with the energy choices that they make in terms of the water heating, space heating and ultimately their next vehicle.”

Times change and with it applications of technology and electricity, but a cooperative’s concern for community — its duty to benefit its consumer-members — remains steady. ⚡

Tri-County Rural Electric Cooperative, Inc.

A Touchstone Energy® Cooperative 



One of 14 electric cooperatives
serving Pennsylvania and New Jersey

Tri-County REC

22 North Main Street • P.O. Box 526

Mansfield, PA 16933

570-662-2175

Website: www.tri-countyrec.com

Email: trico@tri-countyrec.com

For emergencies call:

1-800-343-2559

Secure Pay by phone:

1-888-678-2013

BOARD OF DIRECTORS

Gerald "Arnie" A. Kriner

Chairman

Valery J. Robbins

Vice Chairman

Lowell W. Geiser

Secretary/Treasurer

Alfred G. Calkins

James R. Davis

Nicholas Reitter

Jerome Sasala

Alston A. Teeter

Matthew S. Whiting

Craig Eccher

President & CEO

Staff

Brittany Hopkins, *Executive Assistant*

Austin Helmuth, *Director, Engineering*

Eric McRoberts, *Director, Operations*

Barbara Carleton, *Director, Financial Services*

Bryan Berguson, *Director, Member Services*

Rachel Hauser, *Director, Regulatory Affairs & Economic Development*

Office Hours

Monday through Friday

7:30 a.m. - 4 p.m.

Jeff Fetzer, *Local Pages Editor*

Guest Column



Advisory group committed to member-co-op connection

By Bryan Berguson, *Director of Member Services*

TRI-COUNTY Rural Electric Cooperative was formed 84 years ago when farmers and rural residents wanted electricity.

In those early years, with few members and fewer options, it wasn't too difficult to stay in contact with members and keep them abreast of what was going on in the cooperative. As the territory and membership grew, there arose a need to have a better way of communicating with a larger number of members, and out of that need the Member Advisory Committee (MAC) was created.

The MAC's primary role is to advise Tri-County directors on matters of concern to the membership that they are hearing within their communities. The group also serves as a sounding board for proposed cooperative initiatives and provides feedback about the cooperative's existing programs and services.

The committee meets two times per year, usually in April and October, and topics of MAC meetings have ranged from smart meters to broadband internet to electric vehicles.

In fact, the meeting we held in September was about electric vehicles. Our MAC members had the opportunity to hear from three Tesla owners about their battery-powered cars and the experiences they've had with them. The owners and their cars were present, so members could see them up close and ask questions directly of those who drive them regularly.

Some of the meetings have featured tours of Tri-County's affiliated operations, including the C&T Call Center in Wellsboro, Valley Energy in Sayre, and Citizens' Electric Co. of Lewisburg.

Other meetings involve visits to local businesses, plants and other regional points of interest, many of them served by Tri-County. These visits are up close and personal and always very educational for those who attend.

Some of the facilities we've visited in recent years include the Truck-Lite plant in Wellsboro, Fisher Mining in English Center, Wheeland Lumber in Liberty, The Carpenters Shop in Ulysses, Mills Pride (now Masco) in Sayre, Northern Tier Solid Waste Authority, God's Country Creamery in Ulysses, the Sinnamahoning State Park Wildlife Center, and Thunder Ridge Sporting Clays in Middlebury Center.

We have members from each of the cooperative's nine voting districts serving on the committee, but we usually have room to add more. If you have an interest in serving on the committee or would like more information about it, give us a call at the Mansfield office or contact the board director in your district.

The Member Advisory Committee is made up of a great group of people who share a genuine interest in their electric cooperative and its activities. If that sounds like a group you'd like to be a part of, we encourage you to join us. 

Co-op member all-in on EVs after 6 years of Tesla ownership

By Jeff Fetzer

AS YOU drive up the dirt lane toward Tri-County member Michael Bush's seasonal home near Brookside, you know you've reached your destination when you spot the sporty, steel gray Tesla parked along the lane in a grassy pull-off, plugged in and sipping electricity so it can reach its next destination.

While electric vehicles (EVs) like Bush's Tesla Model S make up a tiny segment of U.S. auto market — about 2% in 2019 — battery-powered and plug-in hybrid electric cars have generated significant buzz among consumers and the media in the last couple of years. A number of factors are revving up interest in EVs:

- ▶ The Tesla Model 3 compact sedan, introduced in 2018, has quickly become the best-selling EV in the United States due to its moderate pricing, driving fun factor and high customer satisfaction rate.
- ▶ All of the major car manufacturers have begun producing electric vehicles, with more EV models being rolled out each year. Ford, the world's first company to mass produce gas-powered vehicles, is set to begin selling its all-electric Mustang Mach-EV this fall and plans to offer an all-electric F-150 pickup next year.



EARLY ADOPTER: Tri-County member Michael Bush of Williamsport stands next to his Tesla Model S while it is plugged in and charging at his seasonal home near Brookside in Lycoming County. After driving the battery-powered car for 6 years and nearly 80,000 miles, the longtime Merrill Lynch portfolio manager offers a bullish outlook for the future of electric vehicles in the U.S. auto market.

- ▶ The pricing gap between electric vehicles and gas-powered vehicles has continued to close.
- ▶ Battery range for EVs has continued to improve, with eight models by various manufacturers exceeding 225 miles per charge. At the same time, battery-charging stations have become more commonplace, especially in urban areas and along main transportation routes.

As an electric provider that will be impacted as more people plug into the grid

to charge their battery-powered buggies, Tri-County has more than a passing interest in monitoring EV market trends. As a cooperative that cites “education, training and information” among its guiding principles, Tri-County also seeks to pass information along to its members who may be interested in owning an electric vehicle in the future.

To that end, the cooperative's Member Advisory Committee (MAC) fall meeting Sept. 30 featured an “Electric Vehicle 101” presentation to provide MAC members an overview of electric-vehicle technology, as well as the driving experience of several EV owners.

Additionally, Tri-County anticipates purchasing its own EV in the future so co-op staff can become more knowledgeable about the pros and cons of driving a battery-powered vehicle in our rural service territory. The goal is for the cooperative to be able to provide members with reliable, first-hand information about EV operations and ownership.

In the meantime, we tapped one of the region's first Tesla owners to share his story as the owner of a fully electric car with *Penn Lines* readers.

A driver's experience

In 2014, Michael Bush was driving a 15-year-old car and decided it was time



RECHARGING: Michael Bush enjoys the quiet from the deck of his cabin near Brookside. The 40-acre property, purchased by Bush's parents, Elizabeth and the late state Rep. Alvin C. Bush, in 1984, serves as a weekend retreat and “green therapy” for Michael and his wife, Tera, throughout the spring, summer and fall. While they recharge at their weekend getaway, their Tesla Model S is plugged into the property's 120-volt electric circuit and slowly charging for their return trip home.

to begin shopping for a new ride.

“I tend to keep cars a long time, and I probably also tend to over research things, especially with major purchases,” says Bush, a portfolio manager for Merrill Lynch in Williamsport for over three decades. “I was vaguely aware that electric technology had been advancing — mostly battery technology because at that time it was all about range — and I started learning about Tesla, who seemed to have conceptually built the best mousetrap by far.”

A private pilot, Bush learned of a Tesla demonstration taking place at an airport near Boston in February 2014 and decided to fly in for a test drive of the Model S.

“I was blown away by the performance,” he recalls. “I could not believe how well it handled and accelerated.”

At the time, the all-electric Model S, introduced in 2012, was among the fastest-accelerating production cars in the world, going from 0 to 60 mph in about 3 seconds.

With an aging vehicle at home and a production backlog of the Model S at the Tesla plant, Bush immediately followed up his test drive in Boston with a trip to a Tesla Store near Philadelphia to put down a deposit on a Model S. Six months later, his new car arrived.

“As delighted as I was with the car, two weeks after I took delivery, they came out with an all-wheel drive version of the Model S, which is exactly what I wanted,” he says. “It was not only all-wheel drive, but had dual motors, one in the front and one in the back, and commensurate improvements in all sorts of things.”

So he decided to trade up to the all-wheel drive version, and took delivery of his second EV in January 2015.

After nearly 6 years of daily driving and 80,000 miles later, Bush has no plans to revert to gas-powered vehicles.

“It is the best car I’ve ever driven, by far,” he says. “It’s not even close, both in terms of ownership experience and actual performance.”

He notes as Tesla develops operating improvements for its vehicles, it automatically rolls them out to its car

owners.

“They are leaders in over-the-air software updates,” he says. “Along the way, I have gotten everything from range improvements to acceleration improvements to new functionality to new dashboard displays, an autopilot system, and all sorts of other things that are just downloaded while the car sat in my garage.”

While the auto-pilot function that enables Bush to utilize Tesla’s self-driving mode was an optional upgrade Bush paid for, there is no charge for the routine operating and functionality improvements the carmaker rolls out.

For those who purchased Teslas at that time, there was also no charge to use any of the Tesla “Supercharger” quick-charge stations in the country, for the life of the car. The fact that there were no such charging stations in the region at that time was not a deterrent, Bush notes, because the car’s 255-mile battery range would easily handle the daily trips from his home in Loyalsock Township to his downtown Williamsport office and his weekend trips to his seasonal home in Brookside, about 30 miles away.

“I don’t really use the Superchargers often,” he says, “because you only use one when you are far from home. So I might use them 10 times a year. As the range of the cars has gone up, the need for frequent supercharges has gone down, but meanwhile they have built some 5,000 Superchargers in the U.S.”

Superchargers, Tesla’s version of a Level 3 charger, can provide about an 80% battery charge in half an hour. Superchargers can be found in Williamsport, Bloomsburg, Bellefonte, Allentown, Harrisburg, Wilkes-Barre, and Painted Post, N.Y.

Charging time

Most EV owners, including Bush, charge their batteries at home after installing a Level 2 charger, which runs off a 240-volt electric circuit. Bush says



BATTERY-OPERATED: Michael Bush mows a path around a pond on his property near Brookside with an all-electric zero-turn lawn mower. The mower, manufactured by Mean Green Mowers in Hamilton, Ohio, can cut about 5 acres on a single battery charge.

it would take about 3 to 4 hours to fully charge his car if the battery were fully depleted.

“People ask me how long it takes to charge my car, and I answer about 8 or 10 seconds — because that’s how much time it takes me to connect the car,” he says. “You pull in at the end of the day, and it doesn’t matter what your battery capacity is at that moment, you just plug in. Then you disconnect it and drive away with a full tank every morning. That’s really the owner experience.”

Bush says at his Brookside property, where he and his wife, Tera, spend most weekends during the warm-weather months, he plugs into the standard 120-volt circuit to charge his EV. To fully charge there, if the battery were fully depleted, would take about 48 hours.

“It is perfectly adequate up here, where we’re not moving around once we get here,” he says from the deck of his Brookside cabin. “For daily use, it would not be a good option.”

Bush says he can’t give an accurate assessment of how much charging his Tesla has impacted his electricity bill because he installed a geothermal heating and cooling system at his home at about the same time he purchased his EV. Most studies indicate EV owners can expect a 50 to 75% savings in fuel costs over those driving gas-powered cars. They also save on routine maintenance activities, such as oil changes.

“This has not only been the most plea-
(continues on page 14d)

Co-op member all-in on EVs

(continued from page 14c)

surable car I've ever driven," Bush says, "it's also been the least maintenance intensive. And that's helpful when the service centers are so far away."

Biggest drawback

Bush says the nearest Tesla service centers are in the Lancaster and Philadelphia areas, and that is the only drawback he sees to owning a Tesla. He notes, however, that if the car needs minor repairs, the company will send out a "ranger" mobile unit to the car site to fix the problem.

"If the car is disabled — and this happened to me once — they will actually send a flatbed to pick up the car, take it down and bring it back again," he says, noting that there was no charge for the transport or repair because it was within the car's warranty period when it broke down.

Bush notes that battery range of the car does diminish slightly over time. After nearly six years of daily driving, his car's battery range is about 12 miles less than it was when new. The battery also loses efficiency when it is cold, although that can largely be negated by keeping the car in a heated garage or "preconditioning" the battery, which is the EV version of warming your car on a cold morning.

Bush says on a very cold day, if you didn't precondition the battery, you might lose 30 miles of battery range. If you precondition it, the range loss is minimal.

He says a potential problem that could arise during the winter would be driving a long distance to a location where charging is unavailable and having the car remain outside for long enough time for the battery to cool down completely, requiring a cold start. The car would operate very inefficiently for the first 10 to 20 miles, reducing overall battery range, he says, but once the battery warmed, efficiency would return to a more normal level.

He says the car's navigation system indicates if there is enough juice to reach your destination and shows you

where to find the nearest charging public station.

All of this information is displayed on a large central touchscreen screen in the center of the dash. If driving the car sounds complicated, Bush says that's not the case.

"It's simpler than operating an iPad," he says.

Electric convert

So is the electric vehicle for everybody? Bush thinks so.

"There could be narrow-use cases where an EV wouldn't be suitable, but now that the charging infrastructure has gotten broad and the cars have gotten more range, there should not be any more reluctance to owning one," he says. "The cars keep getting better, more reliable and they need so little to begin with, because they are mechanically simple."

He says he plans to keep his Tesla Model S for about four more years, and will replace it with another Tesla when he's ready to buy a new car. He notes that, at his wife's request, he placed a deposit on Tesla's all-electric pickup truck the day the California-based automaker began accepting orders for its Cybertruck model last November. He expects to take delivery of that truck, which is being built in Texas, toward the end of 2021.

Bush, the son of the late state Rep. Alvin C. Bush and grandson of former U.S. Rep. Alvin R. Bush, says he's gone all-in on electric-power since converting from a climate-change skeptic to a believer in green priorities at about the time he purchased his Tesla.

The barn at his Brookside property houses an assortment of battery-powered equipment, including a chainsaw, pole saw, leaf blower, weed trimmer, hand tools and even an all-electric zero-turn lawn mower, which he uses to mow about 4 acres of lawn and trails around his 40-acre home away from home. He uses a self-propelled electric mower at his Loyalsock Township home.

"If you are trying to promote electric use, you came to the right guy," he says. ☀

Going away for the winter?

Tri-County offers members who will be away from home for an extended period — including "snowbirds" who migrate to warmer climates for the winter — two convenient and timely ways to receive their electric bills while they are gone.

ONLINE BILLING

Tri-County's SmartHub program gives members the ability to pay their electric bills electronically, either online or through the SmartHub mobile app available for smartphones and tablets.

With SmartHub, members receive an email notification when a new bill is generated. They can then pay their bill electronically using a checking account, MasterCard, Visa or debit card.

SmartHub participants also have access to their account information 24 hours a day, seven days a week.

To sign up for SmartHub, visit the Tri-County website, tri-countyrec.com, and click on the SmartHub icon on our homepage.

SEASONAL ADDRESS PROGRAM

The co-op also offers a Seasonal Address Program that allows members to receive their electric bills at an alternate mailing address while they are away.

It's easy to sign up for the program: just call our billing department and provide your alternate address, along with the dates you expect to be away. During this period, your correspondence from Tri-County will be mailed directly to the seasonal address, eliminating the need for the postal service to forward it to you.

For more information on the Seasonal Address Program or SmartHub, contact the Tri-County office at 1-800-343-2559.

7

COOPERATIVE PRINCIPLES

1 VOLUNTARY AND OPEN MEMBERSHIP



Cooperatives are voluntary organizations open to all persons able to use their services and willing to accept the responsibilities of membership, without gender, social, racial, political or religious discrimination.

2 DEMOCRATIC MEMBER CONTROL



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

3 MEMBERS' ECONOMIC PARTICIPATION



Members contribute equitably to, and democratically control, the capital of their cooperative. At least part of that capital is usually the common property of the cooperative. Members usually receive limited compensation, if any, on capital subscribed as a condition of membership. Members allocate surpluses for any or all of the following purposes: developing the cooperative, possibly by setting up reserves, part of which at least would be indivisible; benefitting members in proportion to their transactions with the cooperative; and supporting other activities approved by the membership.

4 AUTONOMY AND INDEPENDENCE



Cooperatives are autonomous, self help organizations controlled by their members. If they enter into agreements with other organizations, including governments, or raise capital from external sources, they do so on terms that ensure democratic control by their members and maintain their cooperative autonomy.

5 EDUCATION, TRAINING AND INFORMATION



Cooperatives provide education and training for their members, elected representatives, managers and employees so that they can contribute effectively to the development of their cooperatives. They inform the general public, particularly young people and opinion leaders, about the nature and benefits of cooperation.

6 COOPERATION AMONG COOPERATIVES



Cooperatives serve their members most effectively and strengthen the cooperative movement by working together through local, national, regional and international structures.

7 CONCERN FOR COMMUNITY



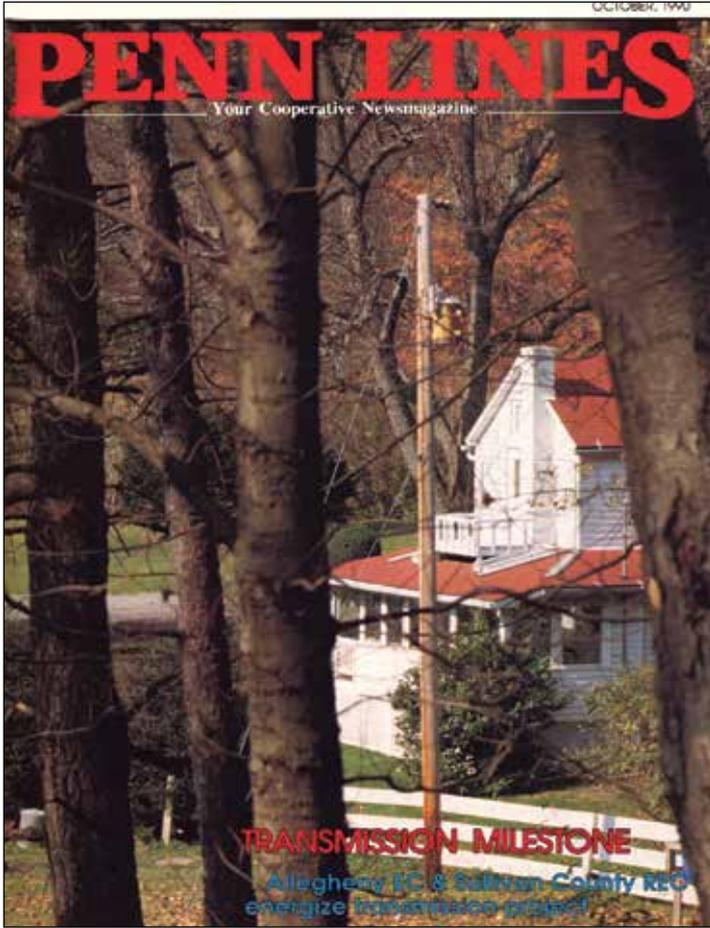
While focusing on member needs, cooperatives work for the sustainable development of their communities through policies accepted by their members.

The National Rural Electric Cooperative Association (NRECA) is the national service organization for more than 900 not-for-profit rural electric cooperatives and public power districts providing retail electric service

to more than 42 million consumers in 47 states and whose retail sales account for approximately 12 percent of total electricity sales in the United States. Learn more at NRECA.org



Your Newsmagazine Through the Years



In 1990, Allegheny Electric Cooperative, Inc. (Allegheny) and Sullivan County Rural Electric Cooperative marked a milestone in Allegheny’s continuing effort to deliver sufficient power at reasonable rates to its 13 Pennsylvania and one New Jersey member cooperatives.

Allegheny, the wholesale power supplier for the 14 cooperatives, built the Fairfield-Mill Creek Substation and transmission line in Lycoming County to improve service for about 2,000 cooperative consumer-members who for years had suffered from regular outages.

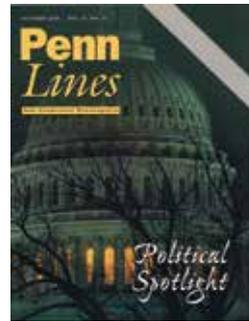
Work on the project began in 1987 with the selection of a construction manager and continued until the lines were energized in the summer of 1990. The project was funded through the Rural Electrification Administration (now known as the Rural Utilities Service) and the National Rural Utilities Cooperative Finance Corporation.

1990



2010

More people are becoming attracted to the idea of generating their own power through a backyard renewable energy system, but know the facts before making a commitment.



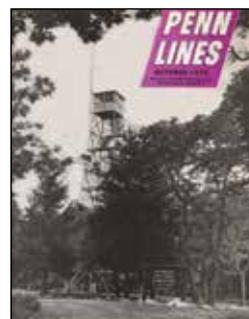
2000

The Action Committee for Rural Electrification®, the political action arm of local electric cooperatives, announces support for 59 federal and state candidates in the fall election.



1980

U.S. President Jimmy Carter and former California Gov. Ronald Reagan, along with Independent John Anderson, are profiled prior to the 1980 General Election.



1970

Greenwood Fire Tower near the Huntingdon County-Centre County line is one of 130 state-owned fire towers charged with preventing and controlling forest fires.

How to make your basement or crawl space more efficient

By Pat Keegan and Brad Thiessen

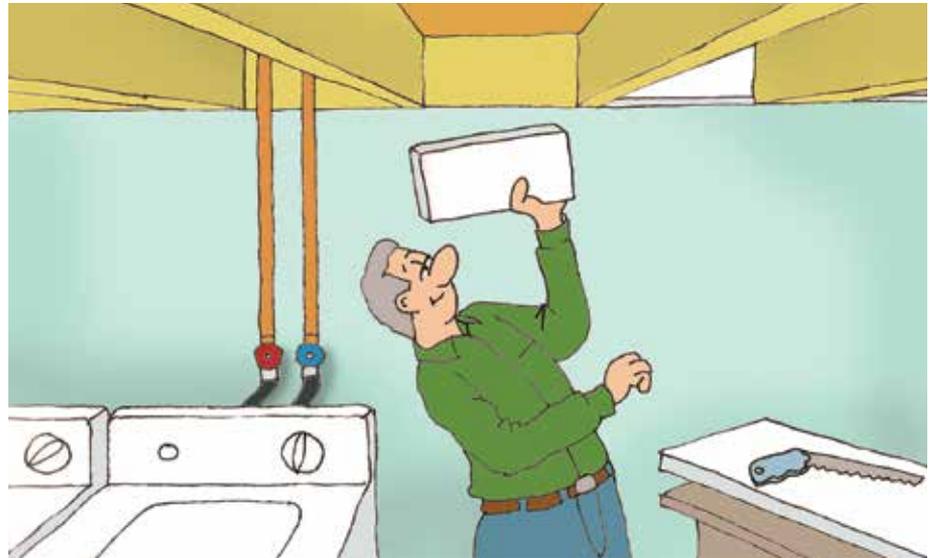
Dear Pat and Brad: I've heard that energy can be lost through my home's basement. Is that true? If so, what can I do to make my basement more efficient? — *Andy*

Dear Andy: Basements can account for a large portion of your home's energy use, especially in colder climates. More importantly, basements are often a key area when you're looking to improve the energy efficiency of your home. Crawl spaces can also waste energy, so we'll address them, too.

Moisture is a common problem in basements and crawl spaces, and can lead to mold, rot, and lowered effectiveness of insulation. It should be noted that as you make efficiency improvements, you can solve moisture problems, but you could potentially make them worse. Look carefully for signs of water damage or moisture buildup. Any untreated wood in contact with a cement floor or wall could be rotting. Crawl spaces can be muddy or even have standing water in them if gutters or the slope of the landscaping drains in the wrong direction. Once drainage problems are solved, the crawl space should have a ground vapor barrier.

If you live in an area where radon has been a problem, you should conduct a radon test through a licensed professional or purchase a do-it-yourself home test kit. Carbon monoxide problems can be deadly. If you have any type of combustion occurring in the basement or crawl space, make sure they have adequate ventilation and that you have working carbon monoxide detectors nearby.

If you have a forced-air heating system, your basement or crawl space is



abundant with opportunities for improving ductwork. Sealing leaks helps your system distribute air more efficiently and should make your home more comfortable. The best way to seal ducts is with duct mastic.

You'll find lots of air leaks in basements and crawl spaces, particularly where pipes and wires enter or exit the space. If you can get to the sill plate, apply caulk around it. You can also increase efficiency by sealing any gaps or leaks around basement windows.

Insulation is an effective tool for reducing energy use and improving comfort, but the applications are quite different in basements and crawl spaces.

The place to begin in basements is the rim joist, which is right above the sill plate on the top of the foundation wall. Rigid foam board can be carefully fitted between the joists.

Insulated basement walls make a room more comfortable. You can insulate the inside of the foundation wall if you're sure moisture is not leaking

through the wall from the outside. Experts prefer sprayed-on foam or rigid foam board applied directly to the foundation wall. A wood-framed wall can be butted up against the rigid foam and insulated with fiberglass or mineral wool batts. The bottom plate of the wall, which sits on the concrete floor, should be pressure-treated wood.

Over the past several years, the most common approach for crawl spaces was to insulate under the floor with fiberglass batts. This allowed the crawl space to be vented to the outside, which alleviated any moisture buildup. If all the right moisture control and drainage steps have been taken, the crawl space can be unventilated, and the insulation can be applied to the foundation walls instead of underneath the floor. 

This column was co-written by Pat Keegan and Brad Thiessen of Collaborative Efficiency. For more information on making your basement more energy efficient, visit: www.collaborativeefficiency.com/energytips.

PREA announces scholarship winners

Pennsylvania Rural Electric Association Scholarships in Memory of William F. Matson

Nine Pennsylvania Rural Electric Association (PREA) Scholarships in Memory of William F. Matson were recently awarded to outstanding students whose homes are served by rural electric cooperatives.

PREA scholarships are awarded each year to students in rural electric cooperative service areas in Pennsylvania and New Jersey. Selection is based on academic excellence, cooperative membership, community involvement and need. The scholarship program is named for William F. Matson, who served for 22 years as president of PREA and Allegheny Electric Cooperative, Inc., until his death in June 1986. This year, 253 applications for scholarships were reviewed.

The recipients of the scholarships this year are Hannah Van Blarcom, Sussex REC; Kiara Baker, Warren EC; Emma Kissell, REA Energy; Kaitlyn Maxwell, Bedford REC; Ryan Gardner, Somerset REC; Brooke Fry, Northwestern REC; Joshua Lukawski, Sussex REC; Lucas Mattocks, Northwestern REC; and Allyson Ritchey, New Enterprise REC.

Hannah Van Blarcom, daughter of Justine and Charles Van Blarcom, Sussex, N.J., is a graduate of Vernon Township High School. A student at Quinnipiac University, Hamden, Conn., majoring in biology, she was active in field hockey, marching band, Technology Student Association, orchestra, pit orchestra, track, Health Occupational Students of America, Robotics and Mock Trial in high school. She also was a member of sev-



eral honor societies, including National Honor Society, Science National Honor Society, Math National Honor Society, English Honor Society, History Honor Society, Spanish Honor Society, French Honor Society and T-M Music Honor Society. She also volunteers for a number of community service organizations.

Kiara Baker, a student at Taylor University, Upland, Ind., was homeschooled by her parents, John and Amy Baker, Spartansburg, Pa. She is majoring in biochemistry (pre-med). She played basketball and volleyball for four years, participated in piano and voice worship teams, worked on her family's farm, volunteered with several community service organizations while taking NPRC dual-enrollment classes, and also participated in a Summer Leadership Internship with Branch Ministries.



Emma Kissell, daughter of Jim and Deb Kissell, Portage, Pa., is attending Saint Francis University, Loretto, Pa., majoring in physician assistant sciences. A graduate of Portage Area High School, she participated in varsity girls basketball, volleyball and softball, Math Competition Team, Spanish Club, Student Council, Prom Committee, Envirothon, Science Club, Interact Club, and was a class officer. She volunteers with the Portage Food Pantry, Saint Bartholomew Youth Group and Independent Family Services.



Kaitlyn Maxwell, Class of 2020 valedictorian and National Merit Scholarship Finalist from Everett Area High School, is the daughter of Bruce and Roxanne Maxwell, Everett, Pa. She is a student at Saint Francis University, Loretto, Pa., where she is majoring in



general engineering with a mechanical concentration. She was class chaplain and participated in state Envirothon and Future Business Leaders of America competitions. She was a two-time, first-team, all-state basketball player, medaled in state track and field events, holds the all-time basketball scoring record at her high school and the Bedford County female scoring record, is the all-time scoring leader in soccer at her high school, and holds the school record in the 200-meter, 400-meter and 800-meter competitions. She was named the *Bedford Gazette* Student-Athlete of the Year and the *Altoona Mirror* Co-female Athlete of the Year.

Ryan Gardner, a former NRECA Youth Leadership Council member representing Pennsylvania, is the son of Jennifer Gardner and Randy Chabol, Friedens, Pa. A graduate of Somerset Area High School, he is a student at West Virginia University, Morgantown, W.Va., majoring in mechanical/aerospace engineering. While in high school, he was a member of Interact Club, SADD, JETS Team, junior class president, president of the Fly-Fishing Club, a member of Student Council, captain of the varsity swim team, and participated in musicals, senior class play, choir, and choral ensembles.



Brooke Fry, daughter of Doug and Connie Fry, Titusville, Pa., is a student at Slippery Rock University, Slippery Rock, Pa., majoring in health care administration and management. A graduate of Titusville High School, she participated in and held offices in Student United Way,



Rotary Interact Club, Varsity Club, SPARK Club, National Honor Society, and the Ignite Mentor Program. She also served as class secretary her junior and senior years, and participated in cross country, swimming, and track and field. She volunteered with Grace Fellowship Church, participated in Titusville Twisters Gymnastics and was a lifeguard for the school district.

Joshua Lukawski, a student at Cedarville University, Cedarville, Ohio, is the son of Jeffrey and Suzanne Lukawski, Sussex, N.J. A graduate of High Point Regional High School, Sussex, N.J., he is majoring



in mechanical engineering. In high school, he was president of Student Council, BASIC (Brothers and Sisters in Christ), and Engineering Club, and was a member of Peer Counseling. He also participated in the Ambassador Program, Student Advisory Committee, Fill the Bus Committee and the school's spring musicals.

Lucas Mattocks, a student at Cedarville University, Cedarville, Ohio, was homeschooled by his parents, Ryan and Lisa Mattocks, Guys Mills, Pa. He is majoring in electrical engineering. He participated



in Calvary Baptist Christian Academy soccer, MSA travel soccer, CCSI/CBCA basketball, Lyona Bible Church Worship Team and Youth Group, Missionary Athletes International, Czech Outreach, piano, and art. He also coached youth soccer, was a math tutor and worked on his family's farm.

Allyson Ritchey, who graduated at the top of her class from Northern Bedford County High School, is a student at Shippensburg University, Shippensburg, Pa., where she is at the Woods Honors College majoring



in communication/journalism. The daughter of Kerry Ritchey and the late Melissa Benton Ritchey, and the granddaughter of Sylvia Benton, Hopewell, Pa., she was president of the band, National Honor Society, and Future Business Leaders of America, captain of the reading competition team, and a member of the chorus and scholastic scrimmage team. She volunteered with Angels Meals and the Bedford County Historical Society and was named a 2020 National Horatio Alger Scholar.

Jody Loudenslager Memorial Scholarship

Two students selected to participate in past Rural Electric Youth Tours have been named recipients of Jody Loudenslager Memorial Scholarships. They are Kimberly Reisinger, Northwestern REC, and Kaylee Schall, REA Energy.

Kimberly Reisinger, daughter of Pamela and Brian Reisinger, Meadville, Pa., is a student at Gannon University, Erie, Pa., in the physician assistant program. A graduate of Saegertown High School, she was president of the Student Council and National Honor



Society, and captain of both the wrestling and football cheerleading squads. She also was a member of the Junior Fair Board, 4-H County Council, 4-H, Girl Scouts, Key Club, Math and Science Club, Envirothon, Saegertown Area Library Teen Advisory Board, a volunteer emergency medical technician, and a candy striper.

Kaylee Schall, a graduate of Bishop Carroll Catholic High School, is the daughter of Ken and Carol Schall, Ebensburg. She is a student at Indiana University of Pennsylvania, where she is majoring in speech



and language pathology with a minor in deaf studies. She is a member of Sign Club and a Gold Member of the National Student Speech Language Hearing Association. She is president of the Catholic Student Association at college and also volunteers at Saint Benedict Parish and Saint Thomas Moore University Parish. 🌟

Generate Safely

Safe Generator Operation

Keep this card in your home's emergency kit or with your generator.

Never connect a standby generator into your home's electrical system. There are only two safe ways to connect a standby generator to your equipment:

Stationary Generator: An approved generator transfer switch, which keeps your house circuits separate from the electric co-op, should be installed by a professional.

Portable Generator: Plug appliances directly into the outlet provided on the generator.

Set up and run your generator in a well-ventilated area outside the home. Make sure it's out and away from your garage, doors, windows, and vents. The carbon monoxide generated is DEADLY.

Use a heavy-duty extension cord to connect electric appliances to the outlet on the generator.

Start the generator first BEFORE connecting appliances.



Source: SafeElectricity.org

Developed jointly by the Energy Education Council & Rural Electricity Resource Council

Going the extra mile



ALL IN A DAY'S WORK: Somerset REC Chief Lineman Craig Mitchell (now retired) sends up a Pennsylvania Game Commission warden in a bucket truck to rescue three bear cubs from a tree in 2012.

Lineworkers are the backbone of the electric cooperative — the ones who do the physical work needed to bring electricity to co-op members. But their efforts to help their communities don't always come in the form one would expect.

In recognizing all co-op employees during National Cooperative Month, we note that sometimes “going the extra mile” for lineworkers means ...

Bringing skills to bear

One summer day a few years ago, the Pennsylvania Game Commission (PGC) reached out to Somerset Rural Electric Cooperative (REC) with a unique problem. A bear had been discovered near a dumpster on the outskirts of Hooverville, Pa. After the bear was tranquilized, her three bear cubs were found in a nearby tree.

“It just happened I was on the crew that was in the area that day, so they sent us over there to see what we could do,” says Somerset REC lineworker Bryan Schrock.

While animal rescue isn't exactly in a

By Neil C. Jones
Senior Communications Coordinator

lineworker's job description, their skill with bucket trucks and a familiarity with hoisting personnel into the air for potentially dangerous work is certainly within their purview. On this particular day, it was a representative from the PGC they would be ferrying in their bucket truck to capture the bear cubs.

“They're wild animals, so they were pretty feisty,” Schrock says. “So we put (the game warden) in the basket, and we ran the bucket from the other controls, which was kind of awkward because the cubs would keep running up and down the tree, and we had to kind of chase them around with the bucket. But eventually the game warden got them.”

Schrock recalls assisting co-op members with everything from rescuing cats from trees to adjusting a flag on a flagpole.

“It's just an attitude that we try and help out where we can,” he says. “I think that's a testament to the cooperative movement.”

You ain't screen nothin' yet

When COVID-19 and the subsequent quarantine swept across the country in the spring, the Bedford County Chamber of Commerce started looking for any way they could get back to some semblance of normalcy.

The answer: a drive-in theater.

While an inflatable screen was first considered, they quickly realized they would require something far more sturdy and permanent, and with a Fourth of July opening deadline, they would need a crew that could work under pressure.

“We were approached as far as assisting with the poles and the construction of it, really,” says Brooks Shoemaker, Bedford Rural Electric Cooperative general manager & CEO.

The crew set the poles and built the frame of the structure, but the main difficulty they faced was one that only a lineworker who has set poles for a living would understand.

“Every utility pole doesn't come out of a mold, so they've each got their individual ‘nuances,’ shall we say,” explains Shoemaker, “and it was quite a

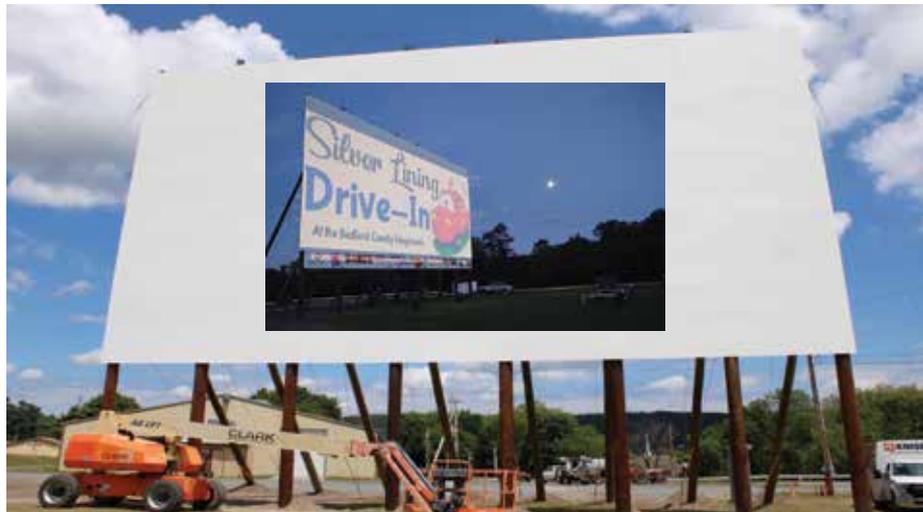
challenge for the guys to get them lined up in as straight a line as possible.”

By the time the project was completed, every lineworker at Bedford REC was involved with the project in one way or another, says Gary Diehl, Bedford REC member services manager.

“It wasn’t a hurry-up-and-get-it-done project from the point of our guys,” he adds. “It had an expedient timeline, but they took it very seriously. They put every bit of effort into it that they could.”

“I said to the guys, ‘How many of you learned about constructing movie theaters in lineman school?’” Shoemaker says. “And I just think it’s really cool that the guys were able to take the skills that they use every day and apply them to something totally different.”

After a successful preview showing of “The Sandlot” for the crew and their families, the Silver Lining Drive-In at the Bedford County Fairgrounds opened on time with a showing of “National Treasure.” With a parking area able to accommodate 150 cars to within 300 feet of the screen, it has since shown other classic films such as “Goonies,” “The Wizard of Oz,” “Ferris Bueller’s



CONCERN FOR COMMUNITY: The drive-in screen uses poles and guy wires provided and set by crews from Bedford Rural Electric Cooperative. The Silver Lining Drive-In at the Bedford County Fairgrounds (inset) is ready for a show as night falls.

Day Off,” “Footloose” and “Grease.”

Shoemaker hopes the community sees Bedford REC not only as an energy provider but as an organization of people who are always there to help.

“The local community knows when they reach out to us for something, if there’s any way that we can possibly assist, we do,” he says. “They knew we were here, and they knew we would help. We’re the local guys; we’re the people you can count on.”

Connecting across cultures

The lineworkers of Adams Electric Cooperative (EC) don’t just “go the extra mile.” In fact, they go more than 2,000 miles to Costa Rica to help their sister cooperative, Cooperativa de Electrificación Rural de San Carlos (Coopelesca). Founded in 1965 with just 365 members, by the end of 2013, the cooperative became the first distributor in the country to reach 100% of electricity coverage and the first Latin American carbon-neutral company in the energy industry.

Despite its growth, Coopelesca still turns to Adams EC for training and equipment.

“Traditionally, co-ops in those countries are about 10 to 15 years behind us as far as their tools, equipment and work methods,” says Mike Feathers, Adams EC operations manager. “I think the original premise was to exchange

knowledge and to shorten the gap in time it takes for them to learn to work safer, quicker, and more efficiently.”

The co-op not only sends lineworkers and equipment to Costa Rica, but they also bring Coopelesca crews to Pennsylvania, with the most recent visit in July 2019 to show them the proper procedures for underground work.

“They were getting more developed, putting more lines in underground,” Feathers says. “So they sent a supervisor and five linemen here to learn underground installation and maintenance procedures, a skill where they currently lacked experience. Of course, we host [the cooperatives’ statewide] underground school here at our co-op, so we utilized that training yard and our building here, and we did some training with them. We actually took them out to a couple underground developments we were doing work in and let them get some hands-on experience pulling in underground conductor using our recently acquired underground pulling machine.”

Feathers says these kinds of experiences also create a more well-rounded employee for Adams EC and Coopelesca crews.

“They get exposure to other parts of the world, other cultures, and we’re able to share knowledge,” he says. “It fosters that co-op spirit, not only among co-ops here, but across the world.”



ANOTHER DAY, ANOTHER COUNTRY: Adams EC lineworkers provide instruction to a Coopelesca counterpart during a visit to Costa Rica in March 2015.

All-day granola

By Janette Hess

Granola's not just for breakfast anymore! This fall, bake a big batch of nutty, sweetly-spiced granola to treat yourself first thing in the morning. Then, before indulging in a second bowl full, set aside enough to make snack-friendly Granola Oatmeal Cookies or dessert-appropriate Granola Apple Crunch.

Sweetened with honey and brown sugar, Harvest Granola features a seasonal blend of cinnamon and pumpkin pie spice. These flavors, along with the crunch of the granola, transfer deliciously to bakery-style Granola Oatmeal Cookies. Truly, these are the perfect cookie for fall.

In the recipe for Granola Apple Crunch, granola saves a few steps by standing in for traditional streusel topping. Served warm with an appropriate topping, this dessert will become a new fall favorite. ☀



A trained journalist, **Janette Hess** focuses her writing on interesting people and interesting foods. She is a Master Food Volunteer with her local extension service and enjoys collecting, testing and sharing recipes.



Harvest Granola

- 5 1/2** cups old-fashioned oatmeal, divided
- 1/2** cup walnut pieces
- 1/2** cup pecan pieces
- 1** cup flaked coconut
- 1/4** cup ground flaxseed*
- 1/4** cup dark brown sugar
- 1/2** teaspoon pumpkin pie spice
- 1** teaspoon cinnamon
- 1/2** cup honey
- 1/3** cup canola or other vegetable oil
- 2** tablespoons water
- 2** teaspoons vanilla extract
- 1/4** teaspoon salt
- Cooking spray

- Optional add-ins:
- 1** cup raisins or finely chopped dried apples
 - 1/2** cup unsalted, roasted pepitas (a type of pumpkin seed)

*If desired, substitute an additional 1/4 cup oatmeal, processed to fine, for flaxseed.

Finely process 1/2 cup oatmeal. Transfer to large mixing bowl along with remaining oatmeal, walnuts, pecans, coconut, flaxseed, brown sugar and dry spices. Stir to combine. In separate microwave-proof bowl or large glass measuring cup, whisk together honey, oil, water, vanilla extract, and salt. Heat for 10 to 20 seconds in microwave oven. Whisk to combine and stir into oatmeal mixture. Lightly spray 2 rimmed cookie sheets with non-stick cooking spray. Evenly spread granola mixture on cookie sheets; press down with fingers. Bake at 250 degrees for 40 to 45 minutes, rotating sheets and very lightly tossing mixture with flat spatula half way through cooking process. Remove from oven when mixture is golden brown. Add additional ingredients, if desired. Allow granola to cool completely on baking sheets before bagging or transferring to airtight container. Granola will naturally break into a nice mixture of clusters and loose pieces. Makes approximately 7 cups granola.



Granola Oatmeal Cookies

- 3/4** cup (1 1/2 sticks) unsalted, room-temperature butter
- 2** cups flour
- 1/2** teaspoon baking soda
- 1/2** teaspoon salt
- 1** cup packed brown sugar
- 1/3** cup white sugar
- 2** teaspoons vanilla extract
- 1** egg
- 1** egg yolk
- 1 1/2** cups oat-based granola, such as Harvest Granola

Several hours before mixing up cookies, remove butter from refrigerator and allow to completely soften at room temperature. (Do not rush this step.) Line 2 cookie sheets with parchment paper. Stir together flour, baking soda and salt; set aside. In mixing bowl, beat together soft butter and sugars. Beat in egg, egg yolk and vanilla extract. Stir in dry ingredients before folding in granola by hand. Form dough into 1/4-cup balls and place on lined cookie sheets. Bake at 325 degrees for approximately 15 minutes, or until cookies are set and edges are lightly browned. Allow cookies to cool slightly before sliding parchment paper and cookies onto counter. When cookies have cooled to room temperature, store in air-tight container. Makes 12 to 13 large cookies.



Granola Apple Crunch

- 4** or **5** medium apples, peeled, cored and sliced
- 1/4** cup water
- 4** teaspoons lemon juice
- 1/2** cup sugar
- 2** tablespoons flour
- 1** teaspoon cinnamon
- 1/8** teaspoon salt
- 1 1/2** cups oat-based granola, such as Harvest Granola
- 1/4** cup (1/2 stick) butter, cut into small pieces
- Cooking spray

Place apples in sprayed 8- by 8-inch glass baking dish. Combine water and lemon juice; pour over apples. Thoroughly combine sugar, flour, cinnamon and salt; lightly toss with apples. Bake at 350 degrees for 45 minutes. Remove from oven and sprinkle with granola. Dot with butter. Return to oven and bake an additional 5 minutes, or until butter has melted. Serve warm with vanilla ice cream, whipped cream or a drizzle of vanilla icing. Makes 9 servings.

How to keep animals from eating your bulbs

By George Weigel

Most of our yards are seriously under-bulbed.

One reason is that spring-flowering bulbs score low on the instant-gratification scale. You plant the things in the fall, then end up with a bare bed for at least four months before anything happens.

Like any plant, bulbs also require some work and expense.

But maybe the biggest discourager is animals eating bulbs and/or the stems and buds before the bulb plants ever bloom a lick.

This is one gardening problem that's easy to solve, mainly because animals zero in on tulips ... and to a lesser extent, crocuses and sometimes hyacinths.

Tulips are beautiful bloomers, which is why they're the most popular of the spring-flowering bulbs.

However, burrowing rodents love the flavor of tulip bulbs, and deer, rabbits, and groundhogs are connoisseurs of the leaves and flower buds.

One way to solve the bulb/animal problem is to simply bypass tulips ... and maybe crocuses and hyacinths, if you've had bad luck with them.

Bulbs that animals hardly ever eat include daffodils, Siberian squill, ornamental onions (*Alliums*), glory-of-the-snow (*Chionodoxa*), snowdrops, fritillaria, striped squill, summer snowflakes and Spanish bluebells.

In case you'd rather not give up tulips, you have options.

The best defense against underground attack is to screen out the pests. A sheet of chicken wire laid over the bed after planting, then covered with mulch, works great. Rodents can't tunnel down through it, but the



PHOTO BY GEORGE WEIGEL

EMERGING BULBS: Tulip shoots poke up through the openings in this animal-preventing net.

bulb shoots can poke up through the thumb-sized openings.

Smarter rodents, however, can tunnel down beside the wire and then go sideways into the bulb booty. You can outsmart even those rodents by building what's essentially a buried cage around the bulbs.

First, excavate the bed down to the planting depth of the bulbs (typically about 6 inches for tulips). Lay chicken wire across the bottom, plant the bulbs and then fold up all four sides of the wire as you backfill the hole with soil. Lay another sheet of chicken wire across the top to completely enclose the planting. Touché, Mr. Vole!

An alternative to wire is making the soil too scratchy for rodent comfort.

Espoma's gritty Soil Perfector (sold in bags at most garden centers) can be mixed into bulb beds to discourage tunneling. Gravel, stone dust or similar crushed rock at about 10% volume also may do the trick at less cost.

When planting, don't leave the papery sheaths of tulips behind. That only advertises via scent that tasty rodent morsels are nearby.

To head off above-ground attacks in the spring, repellents are your best bet.

Lots of commercial products are available to spray on and around emerging bulb plants, including Ropel, Predator Fox Urine, Bobbex, Liquid Fence, Plantskydd, and Deer Out.

Some gardeners have reported success with such homemade repellents as human hair, rotten-egg concoctions, hanging sponge pieces soaked in a bloodmeal/ammonia mixture, and even human urine (a good assignment for the man of the house).

Another effective defense is enlisting an energetic cat or dog. They'll find it great sport chasing rodents and rabbits all day.

And if you're really getting desperate, there's fencing, although that isn't very ornamental for your ornamental plantings. ☀



George Weigel is a Pennsylvania Certified Horticulturist, author of two books geared to gardening in Pennsylvania, and garden columnist for *The Patriot-News/Pennlive.com* in Harrisburg. His website is georgeweigel.net.

Classified Advertisements

ISSUE MONTH	AD DEADLINE
December 2020	October 16
January 2021	November 16
February 2021	December 17

Penn Lines classified advertisements reach nearly 166,000 rural Pennsylvania households! Please note ads must be received by the due date to be included in the requested issue month. Ads received beyond the due date will run in the next available issue. Written notice of changes and cancellations must be received 30 days prior to the issue month. Classified ads will not be accepted by phone, fax or email. For more information please contact Michelle M. Smith at 717-233-5704.

PLEASE SUBMIT A CLEARLY WRITTEN OR TYPED SHEET WITH THE FOLLOWING REQUIRED INFORMATION:

- Cooperative members** should please submit the mailing label from *Penn Lines* as proof of membership.
- Non-members** should submit name, address, phone number, and email address, if applicable.
- Month(s)** in which the ad is to run.
- Ad copy** as it is to appear in the publication.
- Heading** ad should appear under, or name of special heading (additional fee). See below for FREE heading options.

FREE Headings:

- Around the House
- Business Opportunities
- Employment Opportunities
- Gift & Craft Ideas
- Livestock & Pets
- Miscellaneous
- Motor Vehicles & Boats
- Nursery & Garden
- Real Estate
- Recipes & Food
- Tools & Equipment
- Vacations & Campsites
- Wanted to Buy

CLASSIFIED AD SUBMISSION/RATES

Electric co-op members:

\$20 per month for 30 words or less, plus 50¢ for each additional word.

Non-members:

\$70 per month for 30 words or less, plus \$1.50 for each additional word.

Ad in all CAPITAL letters:

Add 20 percent to total cost.

SPECIAL Headings:

\$5 for co-op members, \$10 for non-members. Fee applies to any heading not listed under "FREE Headings", even if the heading is already appearing in *Penn Lines*. For ads running a special heading in consecutive months, the fee is a one-time fee of either \$5 or \$10 for all consecutive insertions.

PAYMENT:

Please make CHECK/MONEY ORDER payable to: PREA/Penn Lines.

Insertion of classified ad serves as proof of publication; no proofs supplied.

SEND COMPLETED AD COPY AND PAYMENT TO:

Penn Lines Classifieds • P.O. Box 1266 • Harrisburg, PA 17108

"AA" ROOFING

EXPERTS IN HARD-TO-FIND LEAKS! Roof repairs – all types. House-barn roofs painted. Slate work – chimney repairs. Southwestern PA for over 40 years. Speedy service! 814-445-4400.

AROUND THE HOUSE

CLOCK REPAIR: If you have an antique grandfather clock, mantel clock or old pocket watch that needs restored, we can fix any timepiece. Macks Clock Repair: 814-421-7992.

SPECIAL OFFER – BOTH COOKBOOKS FOR \$12. "Country Cooking" – \$5, including postage. "Recipes Remembered" – \$7, including postage. Both of these cookbooks are a collection of recipes from men and women of the electric co-ops of Pennsylvania and New Jersey. Payable to: Pennsylvania Rural Electric Association, P.O. Box 1266, Harrisburg, PA 17108. Write Attention: Cookbooks.

FOR SALE: HOT WATER RADIATORS. 1-37 in. high, 11 sections, \$130. 1-37 in. high, 12 sections, \$130. 3-37 in. high, 1-10 sections, \$125 each and two 12 sections. \$600 if you take them all and copper pipe plus baseboard heaters. 814-443-3280.

BUILDING SUPPLIES

FACTORY SECONDS of insulation, 4 x 8 sheets, foil back. R-Value 6.5 per inch. Great for pole buildings, garages, etc. Many thicknesses available. Also blue board insulation sheets. 814-442-6032.

STEEL ROOFING AND SIDING. Over 25 years in business. Several profiles cut to length. 29- and 26-gauge best quality residential roofing – 40-year warranty. Also, seconds, heavy gauges, accessories, etc. Installation available. Located northwestern Pennsylvania. 814-398-4052.

CONSULTING FORESTRY SERVICES

NOLL'S FORESTRY SERVICES. Timber Sales, Appraisals, Forest Management Plans, Forest Improvement Work, Wildlife Habitat Management. FREE Timber Land Recommendations. 30 years experience. Visit www.nollsforestryservices.com. Call Ron, 724-422-5525.

CENTRE FOREST RESOURCES. Forest Management Services, Wildlife Habitat Management, Timber Sales, Appraisals. College-educated, professional, ethical foresters working for you. FREE Timber Consultation. 814-571-7130.

RAYSTOWN FORESTRY CONSULTING timber sales, appraisals, wildlife habitat management. Dedicated to sustainable harvests for present and future generations to enjoy. 45 years experience. 814-448-0040 or 814-448-2405.

GIFT & CRAFT IDEAS

SPECIAL OFFER – BOTH COOKBOOKS FOR \$12. "Country Cooking" – \$5, including postage. "Recipes Remembered" – \$7, including postage. Both of these cookbooks are a collection of recipes from men and women of the electric co-ops of Pennsylvania and New Jersey. Payable to: Pennsylvania Rural Electric Association, P.O. Box 1266, Harrisburg, PA 17108. Write Attention: Cookbooks.

HEALTH INSURANCE

DO YOU HAVE THE BLUES regarding your health insurance? We cater to rural America's health insurance needs. For more information, call 800-628-7804. Call us regarding Medicare supplements, too.

MEDICARE, MEDICARE/MEDICAID. All Advantage Plans and Supplements. Many at \$0 premium. Dental, vision, hearing and more included. Call Nick (Brookville) for information. Helping you understand and improve your coverage. 412-367-8881.

HUNTING LEASES

WANTED HUNTING LAND – There is a current demand for hunting leases. Call for evaluation of your property. Professionally managed. Generate yearly income. \$1,000,000 liability insurance. Know who is on your property. www.nollsforestryservices.com. Call Ron 724-422-5525.

MASONRY REPAIRS

SPECIALIZING IN RESTORING AND REPAIRING masonry structures. We love old churches! Serving Western PA for 25 years. Contact Russ, Crane Masonry. www.cranemasonry.com. 724-465-0225.

MISCELLANEOUS

FOR SALE: Buckets, forks, thumbs, grapple buckets and pallet forks for skid loaders, backhoes and excavators. Tires for backhoes, rubber tire loaders and excavators also. Call 814-329-0118.

OLD GAS PUMP replicas. All metal powder coated. Also, air meters. Reasonable prices. Meadville, Pa. 814-969-1854.

FOR SALE: Dining room table set, four chairs, four table legs, two leaves. Medium dark veneer finish. Very nice. \$150. You pick up in Huntingdon area. Jim. 814-643-3652.

POWDER COATING

ALMOST ANYTHING METAL can be powder coated: auto parts, lawn furniture, wheels, etc. Restores, protects, preserves. 1,200-degree manifold coating. Arthurs Powder Coating, 263 Sexton Road, Indiana, PA 15701. 724-349-3770.

Classified Advertisements

REAL ESTATE

VIRGINIA'S EASTERN SHORE. Fishermen and beach lover's paradise. Access Chesapeake Bay or Atlantic Ocean within minutes. Waterside Village 3/4-acre homesites near marina from \$18,000 with fenced and locked RV/camper storage available. Beach access nearby. Waterfront sites available on bayside and seaside. Many free boat ramps within minutes. Low, low taxes. Kirkwoodontheshore.com. 757-678-7631.

HOUSE AND GARAGE. Borders State Land. Out of flood plain. View of Pine Creek. Route 414. Just outside of Waterville, Pa. Well and septic. 2-plus acres. Call for information. 570-502-0202.

THINKING OF SELLING or want a free market analysis of your property? We specialize in farms, land and getaways. www.juniatarealty.com. Give Juniata Realty a call at 814-652-2234.

RECIPES & FOOD

SPECIAL OFFER – BOTH COOKBOOKS FOR \$12. "Country Cooking" – \$5, including postage. "Recipes Remembered" – \$7, including postage. Both of these cookbooks are a collection of recipes from men and women of the electric co-ops of Pennsylvania and New Jersey. Payable to: Pennsylvania Rural Electric Association, P.O. Box 1266, Harrisburg, PA 17108. Write Attention: Cookbooks.

**Have something to sell?
Place a classified ad in**

PENNLines



*Farms are part
of our electric
cooperative.*

SHAKLEE

FREE SAMPLE Shaklee's Energy Tea. Combination red, green and white teas that are natural, delicious, refreshing, safe. For sample or more information on tea or other Shaklee Nutrition/Weight Loss Products: 800-403-3381 or sbarton.myshaklee.com.

TRACTOR PARTS – REPAIR/RESTORATION

ARTHURS TRACTORS, specializing in vintage Ford tractors, 30 years experience, online parts catalog/prices, Indiana, PA 15701. Contact us at 877-254-FORD (3673) or www.arthurstractors.com.

VACATIONS & CAMPSITES

NEW SMYRNA BEACH, Fla., condo rental. Two bedrooms, two baths, pool. 200 yards from beach. Not available January - March. \$650 per week or \$2,400 per month. 814-979-8058 or 814-635-4020.

WANTED – OLD BARN

WE BUY QUALIFIED OLD BARNs. We also dismantle old sheds, warehouses, and outbuildings. No Sunday calls. Call 814-766-9925.

WANTED TO BUY

ANTIQUE AND CLASSIC American, and foreign cars, motorcycles, trucks, Broncos, Blazers and Scouts. Any condition. Will buy entire car collections. krmiller1965@yahoo.com. 717-577-8206.

WANTED TO BUY

BUYING VINTAGE HONDA motorcycles. 1960-1980. XR-75, CT70, ST90, SL70, Z50, CL70, CT90, S90 – all types big and small. Parts collections, parts bikes, non-running, rough, all considered. 724-972-8701.

ANTIQUE AND CLASSIC motorcycles wanted. All makes and sizes. BSA, Norton, Triumph, Honda, Yamaha, Suzuki, Kawasaki, etc. krmiller1965@yahoo.com. 717-577-8206.

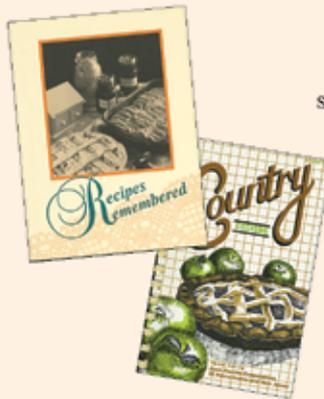
COIN COLLECTION: Having a hard time trying to figure out how best to liquidate your old coin/paper money collection? Call Jim for free and confidential advice to discuss your options. 814-233-9552.

VINTAGE WOMEN'S and children's clothing from the 1930s, 1940s and 1950s. Men's work wear/farm wear/denim 1900s-1950s. Please call or text photos of items to 814-836-5763.

SPECIAL OFFER

Two cookbooks for the price of \$12

"Recipes Remembered" & "Country Cooking"



"Recipes Remembered" and "Country Cooking" include favorite recipes from electric co-op men and women in Pennsylvania and New Jersey. "Recipes Remembered" features anecdotes about the recipes, cooking tips and favorite quotes. It also includes a section of dishes from co-op friends in other states and 15 different sections arranged by cooperatives. Both books are great for collectors.

*Only \$12, including postage, for both cookbooks payable to: Pennsylvania Rural Electric Association
P.O. Box 1266, Harrisburg, Pa. 17108
Write: Attention Cookbooks*

ORDER NOW FOR THE HOLIDAYS

Name _____

Address _____

Number of books _____ Amount enclosed \$ _____

The night Earl snagged the ‘big one’

By Earl Pitts, American

I keep hearin’ ex-samples of how the rest of y’all been comin’ around to doin’ stuff us country folks have been doin’ for years. Yeah, the whole U.S. of A. has done “gone country,” maybe because everyone is broke now.

Well, me and my friends, we been doin’ that stuff for years. Here’s an ex-sample. I heard this story about where the biggest new thing for people who don’t have money and do have extra time is somethin’ called “vampire fishin’.” Only they don’t really fish for vampires. That would be stupid. It’s just night fishin’.

The story goes that some of the biggest fish don’t even come out to feed until after dark. So, there’s boats out there in the misty darkness and there’s all kinds of silent figures dippin’ night-crawlers into the deep.

Yeah, we call that night fishin’. And it ain’t new. Lemme tell you somethin’ — the biggest fish I ever caught in my whole life was at 2 a.m.

See, what happened was that me and my family was campin’ down at Mudd Lake next to my Uncle Burl’s family and my cousin, Russell. Anyways, me and Russell got this brilliant idea to stay up late and night fish.

Let me see if I can do this justice. It was a moonless night with inky blackness everywhere. Couldn’t see your own hand in front of your face. We had a Coleman lantern we used to pick our way down the bank, but then we turned it down. The only thing you could hear was the water lappin’ on the bank and the skeeters buzzin’ in your ears. And maybe every half hour or so, the sound of Russell unwrappin’ another candy bar. That

kid loved his sweets.

I think at one point, Russell got hit in the head by an owl that thought his head was a muskrat. But he wasn’t bleedin’ so we kept goin’. It was three hours and two cans of Deep Woods Off — and still nothin’.

And then suddenly, just when we was real close to packin’ it in, we got a hit. And this wasn’t a nibble. This was a hit. It pulled Russell’s fishin’ pole clean off the Y-stick sideways, and the pole started headin’ into the water. I think Russell screamed. Or it could have been me. Russell grabbed the pole, but there was nothin’.

And then whatever monster it was took my line. It didn’t jerk. It didn’t bend. The whole stinkin’ pole just flew off the bank like I had snagged a passin’ freight train.

We both flew through the air, grabbin’ for that fishin’ pole. And the pole is skitterin’ across the rocks. I jumped it and tried to take control. I righted myself, grabbed for the reel, and started what ended up to be a two-hour, life-and-death struggle.

You ever seen that show, “Wicked Tuna?” It was like that, only we was on dry land, and nobody was gonna pay you \$6,000 for anything you hauled out of Mudd Lake.

It was a 38-pound catfish. It took two of us to pull that bad boy out of the water. We had our picture took with it the next mornin’. And the guy at the bait shop put it in a wire cage in the water next to the boat dock for curiosity seekers to look at.

Wake up, America! So, don’t tell me about no vampire fishin’. I have been to vampire hell and back. And lived to tell about it. I’m Earl Pitts, American.

They say your automakers are bringin’ back two-tone paint jobs with different color roofs and bodies. Very clever marketin’ idea. ‘Cept we don’t need to bring the two-tone paint job back out here because it never left!

‘Cept it ain’t usually a different color roof. It’s a different color door. Or a fender. When you go to the junk yard, you’re lookin’ for a part that fits for a vehicle that’s got a lotta miles left on it, not a color that matches.

I got a buddy who drives around with a different color trunk lid. I kept wonderin’ what in the world happened to this dude’s car that he needed to replace the trunk lid? I had to ask him. He said he hit a tree.

I says, “Wait a minute — you hit a tree — going backerts?” He says, no, he was goin’ forward and took out his bumper and his grill. And I’m like, “Then how come you had to replace the trunk lid?” Then he says the collision caused a bear to fall out of the tree.

Wake up, America! ‘Cause then it made perfect sense. I’m Earl Pitts, American. 🌞



Social commentary from **Earl Pitts** — a.k.a. GARY BURBANK, a nationally syndicated radio personality — can be heard on the following radio stations that cover electric cooperative service territories in Pennsylvania: WANB-FM 103.1 Pittsburgh; WARM-AM 590 Wilkes-Barre/Scranton; WIOO-AM 1000 Carlisle; WEEO-AM 1480 Shippensburg; WMTZ-FM 96.5 Johnstown; WQBR-FM 99.9/92.7 McElhattan; WLMF-FM 103.9 Kane; and WVNW-FM 96.7 Burnham- Lewistown. You can also find him at earlpittsamerican.com.

Last call for 2020 photos

It's time to wind down the 2020 Rural Reflections contest, so hurry and get your photos ready to mail. Entries must be post-marked by Oct. 31 in order to be placed in competition for the 2020 prizes.

Amateur photographers who are members of a rural electric cooperative have a chance to win a \$75 prize in one of our contest categories: artistic, landscape, human subject, animal and editor's choice. Runners-up will receive a \$25 prize. Entries received after Oct. 31 will be entered in the 2021 contest.

Winning entries and the runners-up, all selected by an independent panel of judges, will be printed in the January and February issues of *Penn Lines*.

Amateur photographers may send photos (no digital files, please) to *Penn Lines* Photos, P.O. Box 1266, Harrisburg, PA 17108-1266. Include your name, address, phone number, and the name of your electric cooperative that serves your home, business, or seasonal residence. Include a self-addressed, self-stamped envelope if you want your photo to be returned. 📧



Zoe Fickes
Bedford REC



Kay Kurtz
United EC



Susan Hanslovan
United EC



Jan Golden
REA Energy

dish

Save a Bundle on TV and Internet!



\$59⁹⁹ month for TV

2-YEAR TV PRICE LOCK!

It's All Included!

- ✓ Includes 190 Channels with Locals
- ✓ Includes Hopper Smart HD DVR
- ✓ Includes HD Programming
- ✓ Includes One TV, Add More for \$5/ea.
- ✓ Includes Voice Remote

Requires internet connected Hopper.



FREE Premium Channels

After 3 mos. you will be billed \$30/mo unless you call to cancel.

NETFLIX

- Fully Integrated -
Just Change The Channel And Watch!
Netflix subscription required.

Add Internet!

Blazing-Fast Internet

~~\$59⁹⁹ month for Internet~~ **\$40 per month for Internet**

- Speeds from 25Mbps-1 Gbps
- No Matter Where You Live
- Now with Unlimited Data!

Save up to \$20/month!*

*\$ off discount offers vary by service address. TV service not required for Internet. Speeds and prices vary by provider. Call for details or visit godish.com/internet/hughesnet.

godish.com/pricelock 🔍 **iSe Habla Español!**

1-866-290-7151 **dish**
Mon-Fri: 7am-10pm • Sat: 7am-9pm • Sun: 10am-7pm Central Time **Authorized Retailer**

Offer for new and qualifying former customers only. Important Terms and Conditions: Qualification: Advertised price requires credit qualification and 24-month commitment. Upfront activation and/or receiver upgrade fees may apply based on credit qualification. Offer ends 1/13/21. 2-Year Commitment: Early termination fee of \$20/mo. remaining applies if you cancel early. Included in 2-year price guarantee at \$59.99 advertised price: America's Top 120 programming package, local channels, HD service fees, and Hopper Duo Smart DVR for 1 TV. Included in 2-year price guarantee for additional cost: Programming package upgrades (\$74.99 for AT120+, \$84.99 for AT200, \$94.99 for AT250), monthly fees for upgraded or additional receivers (\$5-\$7 per additional TV, receivers with additional functionality may be \$10-\$15). Regional Sports: RSN Surcharge up to \$3/mo. applies to AT120+ and higher packages and varies based on location. NOT included in 2-year price guarantee or advertised price (and subject to change): Taxes & surcharges, add-on programming (including premium channels), DISH Protect, and transactional fees. Premium Channels: 3 Mos. Free: After 3 mos., you will be billed \$30/mo. for Showtime, Starz, and DISH Movie Pack unless you call or go online to cancel. Remote: The DISH Voice Remote with the Google Assistant requires internet-connected Hopper, Joey, or Wally device. Customer must press Voice Remote button to activate feature. The Google Assistant Smart Home features require Google account and compatible devices. Google is a trademark of Google LLC. Other: Netflix streaming membership required. All packages, programming, features, and functionality and all prices and fees not included in price lock are subject to change without notice. After 6 mos., if selected, you will be billed \$9.99/mo. for DISH Protect Silver unless you call to cancel. After 2 years, then-current everyday prices for all services apply. For business customers, additional monthly fees may apply. Free standard professional installation only. Indiana C.P.D Reg. No. - 19-08615. ©2020 GoDISH.com. All rights reserved. Internet speeds, prices, and providers vary by customer address. \$40 price refers to widely available plan from multiple providers. Restrictions apply. Nationwide availability of 25 Mbps plan is subject to change without notice. The application of "Unlimited Data with no Hard Data Limits" varies by provider, but commonly mean that your access to the internet will not be stopped by going over a data limit, but that speeds may be lowered. Call for details. Internet not provided by DISH and will be billed separately.