

WATTS & VOLTS

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Make it a summer of safety

Summer's longer days and warmer weather mean increased activity at your home. With that increased activity, though, often comes increased safety risks. Intermountain Rural Electric Association wants you to enjoy your summer and protect yourself and your family by following these guidelines regarding electric facilities:

You can find more detailed safety recommendations by visiting www.SafeElectricity.org. If you have any specific questions or concerns about IREA's service or facilities, call us at (800) 332-9540.

Do not climb trees near power lines, even if they aren't touching the lines. Drones, kites and model aircraft should not be flown near power lines or other structures such as substations. Never climb utility poles or towers, and don't allow children to play on or near pad-mounted equipment.

Carefully plan any landscaping projects so that growing vegetation will not interfere with IREA's electrical facilities. Shrubbery and other plants can grow to completely cover transformer boxes and other equipment, creating problems for repair crews and causing potential service interruptions. You can read our guidelines for plant materials by visiting www.irea.coop/customer-tools/irea-your-property/.



Place swimming pools and other water-filled containers at least 5 feet from underground utility lines, and at least 25 feet from overhead power lines. For water features such as waterfalls and ponds, follow the aforementioned guidelines regarding digging and vegetation.



Always call 811 before any project that includes digging, as you can never assume the location or depth of underground utility lines. Failure to have trained professionals properly mark underground lines can result in serious personal injury and even death, and makes you responsible for any damage to utility lines.

Take extra precautions when working on DIY and other improvement projects in and around your home. Be aware of overhead lines when you use a ladder or other extended hardware, staying at least 10 feet from lines at all times, and never trim trees or other vegetation near power lines. Instead, call IREA at (800) 332-9540 to report any potential hazards involving vegetation and our structures or facilities.



Legislation ends with little action on energy

The 2017 Legislative Session drew to a close May 10 after an eventful last few days, as is typical for the State Legislature. During the session, 788 bills and resolutions were introduced by the 100 legislators representing the people of Colorado.

In the introductory remarks made by leadership on the first day of the Legislative Session, shared priorities by caucus leaders included transportation funding, construction defects reform and fixing the hospital provider fee. As the Republican Senate and Democratic House moved forward, it was clear that not all legislators were in lockstep with these priorities, and the bipartisan proposal for transportation funding was killed in a Senate committee. With many tough negotiations and long hours, however, both construction defects reform and the hospital provider fee fix were accomplished through compromise solutions. While other major issues came to the forefront during this session, energy policy was not significantly changed over the 120-day period.

Senate Bill 301, by Sen. Ray Scott (R-Grand Junction) and Representatives KC Becker (D-Boulder) and Lori Saine (R-Firestone), was introduced late in the session as a compromise bill between the Senate Republicans and the Colorado Energy Office to reauthorize the latter's funding, which was set to expire July 1. Senate Republicans shared concerns that the office maintains too narrow a focus on renewable energy, to the exclusion of other resources. The bill would have funded the office for an additional four years and expanded its focus from "clean and renewable energy" to "energy." The bill also would have increased the annual registration fee for plug-in and hybrid electric vehicles, and would have repealed obsolete and underutilized programs housed within the Energy Office. Another key provision of the bill would have required the Colorado's Public Utilities Commission to adopt rules allowing investor-owned utilities to submit plans to acquire natural gas reserves to meet long-term supply needs.



Because the bill was so broad in subject matter, its title, "Concerning Energy-Related Statutes," could have allowed for any and every energy-related issue to be amended into the single bill very late in the session. IREA kept a close eye on this piece of legislation to ensure that nothing detrimental to our members was quietly added at the last minute. Though the bill was an agreement between two groups prior to introduction, it was not an agreement among all groups, and no compromise was reached before the last hours of session. It instead died as the last action on the calendar, leaving the Energy Office without state funding. The Energy Office does receive federal funding and will continue, albeit with diminished resources.

IREA takes positions on legislation that will directly affect our members and rates. We supported House Bill 1116, from Representatives Millie Hamner (D-Dillon) and Tony Exum (D-Colorado Springs) and Sen. Beth Martinez-Humenik (R-Thornton), which continues funding low-income energy assistance through the Department of Human Services, Energy Outreach Colorado and the Colorado Energy Office for the next five years. This bill was signed into law in June by Gov.

John Hickenlooper.

Additional funding to the low-income energy assistance program is provided through donations. IREA matches the donations our members make to Energy Outreach Colorado dollar-for-dollar, up to \$75,000 per year. For information on how to contribute to this program through your monthly bill, or to make a one-time payment, go to www.IREA.coop/community-involvement/energy-assistance/.

IREA also supported Senate Bill 229, by Sen. Chris Holbert (R-Parker) and Representatives Polly Lawrence (R-Roxborough) and Diane Mitsch Bush (D-Steamboat Springs), which was signed into law by Gov. Hickenlooper last month. The bill adds public utility service vehicles to the list of public services vehicles drivers must take additional care to avoid when passing on roadways. Commonly referred to as the "move over" law, the bill also increases penalties if death or bodily harm is caused by a driver not following the law.

For more information about Intermountain Rural Electric Association's legislative advocacy efforts, please visit www.IREA.coop/community-involvement/political-advocacy/.



Battery tech drives down PEV fears

Though triple the number were sold in 2016 as were in 2012, the 144,000-plus plug-in electric vehicles (PEVs) that hit U.S. roads last year represent less than 1% of all new vehicles.

The Chevrolet Volt, Nissan LEAF and Tesla Models S and X buoyed sales by 30,000 over the previous year, an increase of more than 25%, according to the U.S. Department of Energy's Alternative Fuels Data Center.

With PEVs making so many headlines, why do actual sales seem so miniscule? Experts point to a variety of reasons, but one hits home for many would-be PEV owners: Range anxiety.

Range anxiety refers to a potential driver's fear that a PEV's limited battery will be depleted before reaching a destination. With most PEVs' ranges falling under 100 miles and charging stations few and far between, that fear is not unwarranted.

Though U.S. drivers travel just 40 miles each per day on average, most feel secure that their vehicles could take them several hundred miles, if needed, with little to no chance of running out of fuel or becoming stranded.

To combat this range anxiety, automakers have begun producing PEVs with longer ranges. Several can travel more than 200 miles, with the aforementioned Tesla Model X and S each boasting a range of nearly 300 miles.

But what will put PEVs on the same playing field as traditional gas-powered vehicles, most of which are capable of 500 miles or more? The answer seems to be better batteries.

While nickel-metal hydride, or NiMH, batteries powered early hybrid vehicles such as the Toyota Prius, lithium-ion batteries now power many of the rechargeable devices we use today, including most PEVs. They also can be found in most smartphones, laptops and home electronics. And for good reason: Lithium is plentiful, and its batteries lightweight and efficient. On the other hand, they are prone to combustion, as seen with the several PEV battery fires in recent years.

The tradeoff is favorable enough, however, that Tesla has built a 5.8 million-square-foot factory in Utah to produce the lithium-ion batteries that will power the 500,000 PEVs it plans to build by 2018. By then, Tesla boasts, its "Gigafactory" will be producing 35 gigawatt-hours of lithium-ion battery cells each year.

In the meantime, scientists and engineers will be working to improve energy density, the amount of energy stored by a battery in relation to its size. Some believe energy density could be doubled or even tripled within the next 10 years.

That means the same 7,000 lithium-ion cells that currently allow a Model S to travel 300-plus miles could, in the next decade, allow it to travel between 600 and 900 miles. Alternately, the amount of battery cells built into the vehicle could be halved, creating a lighter car that is more efficient, safer and cheaper.

While PEVs must overcome other hurdles in order to gain a larger market share, it seems likely that battery technology is the key to their continued growth.



Send your paper bill sailing

Declare your independence from paper bills and physically mailing payments with IREA's electronic billing and automatic bill payment options, both of which now feature online enrollment.

Electronic billing combines your bill with a free and secure payment option that is sent to your email address as an attached PDF file. Free, secure and easy to use, you can access and pay the eBill as it arrives in your inbox without having to remember any username or password. One click and you're in.

With free automatic bill pay, your bill is automatically paid on time each month. Using a checking or savings account of your choice, funds will automatically be withdrawn on your due date, ensuring on-time, effortless payment every month.

IREA's recently redesigned website now allows customers to sign up online for both electronic billing and automatic bill payment. Visit <https://irea.coop/billing-payment/payment-options/> for more info.

Below are some frequently asked questions about eBilling and Auto Pay:

I submitted my Auto Pay Authorization form. When will it start?

Enrollment processing may take up to 5 business days. Auto Pay will not apply to any bill generated before en-

rollment processing is complete. If you receive a bill that does not state "automatic payment" on the payment stub, pay that bill using another option.

Can I stop my Auto Pay payment from going through just this month?

Yes, call Consumer Services at (800) 332-9540 at least 5 business days before the due date on your bill.

Can I sign up for Auto Pay using my credit or debit card?

Not at this time.

Can I be on eBilling and Auto Pay at the same time?

Yes, you can. If you are on Auto Pay, there will be no payment option from within your secure PDF bill. The full bill amount and draft date will be stated instead.

How do I pay for free?

Check or cash payments are free whether taken at an IREA office or mailed in. Our free electronic payments include Auto Pay and payments using a savings or checking account within our eBill PDF file. Many banks also offer free electronic bill payment options. Customers are encouraged to check with their financial institution. IREA does not charge customers fees for these types of bank bill payments.