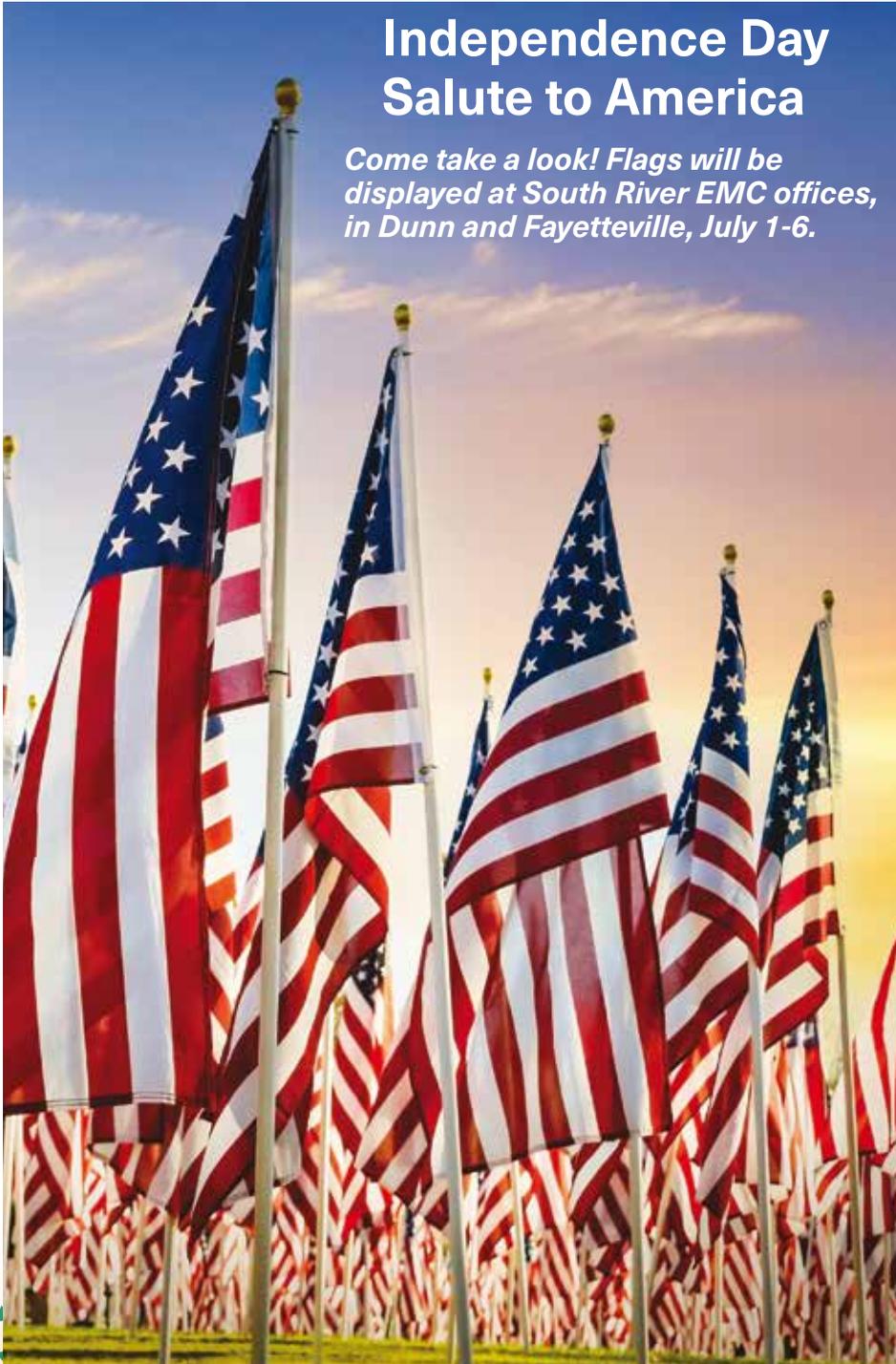


South River EMC Communicator

July 2023

Independence Day Salute to America

Come take a look! Flags will be displayed at South River EMC offices, in Dunn and Fayetteville, July 1-6.



*South River EMC
offices will be closed
Tuesday, July 4.*

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Please tag
@SouthRiverEMC in photos.

Getting Smart About Home Lighting

Technology is smarter, so gone are the days when a simple flip of the switch was the only choice for illuminating our homes.

While this tried-and-true option is still on the table, as well as being widely used by members, it's true we've entered a new era of innovative and intelligent technologies, which includes smart lighting.

Smart lighting saves money, connects to Wi-Fi and offers an array of cutting-edge functionality and convenience. Let's look at some benefits of smart lighting options.

Smart lighting is energy efficient. Most smart bulbs use LED technology, which is much more efficient than traditional incandescent, and CFL lighting. Additionally, smart lighting gives you more control over how and when you light your home, ultimately resulting in less energy used for lighting.

Smart lighting provides convenience and control. Most smart bulbs can be controlled from an

app on your smartphone or can be paired with a voice assistant, like Amazon Alexa. You can conveniently control lighting settings from anywhere in your home or when you're away. Whether you want to set a schedule for lighting or adjust brightness levels, these smart options offer effortless control from anywhere!

Smart options can empower you to personalize home lighting. Bright, warm, purple, green — whatever mood you want to create, smart lighting can help. For a more traditional look, you can try dimmable white bulbs. If you want to create the perfect ambiance for movie night, look for bulbs that can be adjusted for a variety of vibrant colors. The possibilities are endless.

While smart lighting offers convenience and control, keep in mind your wall light switch will need to stay "on" for you to control the smart bulb from your phone or via voice command. To use a smart bulb, the wall switch it's connected to must be "on" so the bulb receives power, which enables it to connect to a Wi-Fi network.

If you need additional options to operate the lights, consider a smart light switch. Today's smart switches tend to play nicely with smart bulbs. If you want to control your smart bulbs with a physical switch (in addition to using your phone and voice commands), look for smart switches that include a built-in feature that allows both. Many smart light switches include motion detectors as well.

If you're looking to take the plunge and integrate multiple smart bulbs to your home lighting system, your best bet may be a kit, like the Philips Hue Starter Kit (as pictured). Most kits include several bulbs and any additional tools you'll need to get started.

If you're new to smart home tech and looking to start small, try a smart bulb in a high-traffic area of your home.

It's also worth noting that smart plugs are a great starter option and allow convenient control of lamps or other lighting fixtures that are plugged in to a wall outlet. Smart plugs are inexpensive and simply plug in to your existing outlet. Electrical items that are connected to the smart plug can be controlled from a smart phone app, just like smart bulbs.

Whether you're looking for more convenience, colorful options or better ways to manage energy use, smart lighting can provide multiple benefits. Determine which smart lighting features are most important for your needs, then start shopping!



Science In Schools

Each year, South River EMC awards over \$50,000 in Bright Ideas grants to schools.

These grants are used for any number of projects in any field to help meet the needs of students regarding curriculum and behavior.

"I have applied for and won several Bright Ideas grants and I am so thankful for their support," said Dayna Nemr, a third-grade science teacher at Hargrove Elementary. "I have received one to create class books that were published, for students and parents, a grant for STEM Legos, and a grant for a math hands-on center."

Her most recent grant enabled her students to get a more in-

depth understanding of the solar system by visiting the Fayetteville State University planetarium.

STEM, or science, technology, engineering, and math, is a topic with a lot of history, but has definitely gained momentum in the last 20 years. STEM programming prepares students for a changing career field, while also giving them a more hands-on approach to learning.

However, schools have not had the funding in their budgets to provide all the different project ideas, in particular, science.



Midway High students studying microbiology.

"Our school tries to buy what we need to teach science well,"

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Collier Substation: Battery Energy Storage

Last year, we talked about a 2.5-megawatt (MW) battery storage system that would connect with one of our substations in Cumberland County.

This project is meant to enhance system resilience and reliability for members.

It is also one of 10 battery projects deployed in rural locations, which will collectively provide 40-MW of power, and will be charged when demand for electricity is low and discharged during moments of peak demand for power.

This enhances electric reliability and is expected to provide cost

savings over the lifetime of the batteries. Because cooperatives are not-for-profit, members will benefit from those savings.

Installation of the battery energy-storage system was completed this year as one of a growing collection of distributed-energy resources including the microgrid at Butler Farms in Lillington, the 500-kilowatt solar plus battery project at Halls Substation in Sampson County and a planned 10-MW battery storage project at our Butler Substation later this year.

South River EMC and the network of cooperatives in North Carolina have worked together for years to lead innovative energy strategies, including community solar, microgrids, demand-response programs and solar plus storage initiatives.



Do Hot Days Make For Bright Ideas?

Summer, the perfect time to have fun, yet also plan.

Teachers, we are talking to you.

We know there is never a down moment in education and summer is a great time to make plans for the next school year.

Maybe you have some new ideas during the year, or attended a training on a concept that would be great for your classroom.

A Bright Ideas grant could provide the funding to make those ideas a reality.

The Bright Ideas program awards grants, in any amount up to \$2,500, to teachers in certified, public K-12 schools, who have innovative, classroom-based ideas.

Applications for professional development

will not be considered.

South River EMC typically awards at least \$50,000 in grant funding to teachers in parts of Harnett, Johnston, Sampson and Cumberland counties.

Since 1994, educators statewide have received \$15 million to fund over 14,200 projects affecting 3.5 million students.

Teachers can apply online at ncbrightideas.com.

Educators with applications submitted by the early-bird deadline of Aug. 15, are eligible to be entered into a drawing for a \$100



Visa gift card. The final application deadline is Sept. 15.

South River EMC only accepts applications online at ncbrightideas.com.

If you want to learn more about this program, visit sremc.com or e-mail connections@sremc.com.

Phone it in!

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said Long Hill Elementary teacher, Laura Myers. "However, I do not know that there is much money available to any school in the county to buy additional science materials."

One teacher wrote a Bright Ideas grant for gel electrophoresis, a laboratory method used to separate mixtures of DNA, RNA, or proteins according to molecular size.

"It is widely used in molecular biology, biochemistry and genetics," said Cape Fear High School teacher, Kathy Lee. "It also plays a critical role in the diagnosis of genetic disorders, forensic science, and in the identification of microorganisms."

This grant allowed students to learn how to properly use equipment, gain experience with genetic patterns and inheritance, become familiar with common genetic disorders as well as considering some of the ethical dilemmas inherent in genetic testing. It gave them the opportunity to look into a career they might be interested in moving into as well.

STEM is in schools from kindergarten through high school, with it meaning a little different lesson for each one.

"In third grade, we teach forces and motion along with energy; we also teach the moon and its phases," said Myers. "In addition, we teach plants and soil and we also teach the states of matter and how they change."

Midway High School received several grants this past Bright Ideas season to give students more of a hands-on approach.

Vernon Blackman, automotive instructor at Midway High, wrote his grant to supply the school shop with upgraded and ad-



Hargrove Elementary third graders learn about outer space at Fayetteville State.

vanced electronic equipment to teach students how to properly diagnose starting and charging systems on newer vehicles, and also other types of electrical issues related to new and advanced vehicles.

"This equipment is what students most likely will see in the industry if pursuing a career in automotive repair," said Blackman.

"Organisms in Our Body" was written by Susan Citro, also from Midway High. The grant was intended to take students through a scientific journey to discover what microbes are naturally occurring in our bodies and in nature.

They learned about sample handling, preparing samples in a lab environment, and were able to watch those organisms grow.

"This grant allowed students the ability to have hands-on experience like a microbiologist would in a laboratory," said Citro. "They learned aseptic technique, the importance of proper sampling, how to prevent contamination of samples, and identification of the microorganisms that we come in contact with every day."

A grant entitled "Discover Plantology" was awarded to Tracy Byas, an extended course of study teacher at Western Harnett High.

"Each class received a set of herbs to watch grow," said Byas. "We used them to make a pot of spaghetti. The students loved pinching off the herbs and placing them into the pan of meat/sauce."

Lessons were tailored to the students' abilities, those with higher capability cooked, while others used graphs and tracked growth of their plants. They also learned how watering their plants and turning them for sun, impacted their growth.

Many teachers expressed that their projects would not have been possible without a Bright Ideas grant.

The Bright Ideas grant program has funded thousands of projects impacting 3.5 million students across the state.

Teachers in public, K-12 schools can apply online at ncbrightideas.com until Sept. 15.



HERO Homes Are Checking Boxes

The high efficiency residential option, or HERO, home was introduced in 2018.

This building option provides the homeowner with a more energy-efficient home from the ground up with a more tightly constructed thermal envelope.

You can achieve 30 percent savings in one of two ways, the prescriptive path, or the performance path. The prescriptive path is straightforward: comply

fully with a list of specific requirements for insulation, high-efficiency lighting, window U-factors, whole house tightness and duct leakage testing, among other things.

The performance path has more flexibility. It requires an energy cost analysis provided by a HERS rater and signed-off on by a design professional as proof that the home being built will have energy costs that are less than or

equal to that same home built to the HERO code's prescriptive requirements. This does NOT allow for appliance tradeoffs to meet compliance, because the HERO Code is focused almost solely on improvements in the thermal enclosure.

If a new home is in your plans, consider building a HERO home, which can improve comfort as well as energy savings. For details visit sremc.com/HERO-home.

Weatherization Improves Comfort

The tightness of a home affects the comfort of it. For example, if your windows don't seal, air can flow in and out of your home, heating it up this summer. Improvements like caulking and weatherstripping can help prevent air movement.

Meanwhile, insulation prevents heat transfer, or the movement of heat to a cool place, like inside of your home. In the event of patchy or insufficient insulation,

you'll feel warmer in your home than normal. This can be fixed, replacing insulation, or upgrading it might be the ticket.

By making improvements, you can not only improve comfort, but costs as well. Improvements can add up though, and if you are eligible for Community Action, these improvements could be made for you.

The weatherization package offered by Community Action is

for single family or manufactured low-income homes and includes: air and/or duct sealing, improved insulation, an HVAC tune-up or replacement, and a programmable thermostat in a home with a heat pump or an electric furnace or central AC.

For information on the weatherization rebate issued by South River EMC, please visit sremc.com/weatherization.

Pool Pump Savings Available

If you own a pool, then the pool pump is probably the largest electric motor in your home.

As a single-speed unit, it uses so

much energy and water because it has one setting for all tasks. Replacing it with a variable- or two-speed pump could help you save, as well

as making you eligible for a rebate from South River EMC.

For details visit sremc.com/energy-efficient-water-heating

Water Heaters: Cut Down On Those Costs

Water heaters use about 20 percent of a home's energy each month. Most homes have storage tank water heaters, which heat water periodically throughout the day. Due to this design, energy use can be higher.

In fact, your water heater uses more energy than your refrigerator, clothes washer, dishwasher, and clothes dryer combined. There are alternatives, which might have a little more cost upfront, but overall could be energy saving.

The first is a heat pump water heater, slightly more expensive than a standard electric water heater, but 2-3 times more

efficient. Using heat in the space surrounding the unit, it works like a refrigerator in reverse, pulling the heat out of the space and putting it into the tank to heat water. It does well in areas that remain in the 40- to 90-degree range and requires 1,000 cu. ft. of space.

Another option is solar water heating, which uses a free resource, the sun, to heat your water. While the resource is free, the installation is a little more costly.

However, with a good solar resource and good water use, you can recover costs quickly. These systems are typically roof mounted, so make sure there are

no building covenants preventing installation.

So, if you're looking to replace or upgrade your water heater, consider these options. If you're leaning more toward solar, make sure to include an electric back up when pricing the system. A back up is good to have for days of limited sun and high-water use.

South River EMC offers rebates on both solar and heat pump water heaters, a \$150 rebate for heat pump water heaters and \$200 for solar water heaters. For more information, or to apply for a rebate, visit sremc.com/energy-efficient-water-heating.



The Window To Savings

Windows, doors and skylights protect you from the elements just like a coat.

But like a coat, you should pick the windows, doors and skylights that make the most sense for your climate. While some windows, doors and skylights are better at keeping you warm, others excel at keeping you cool.

North Carolina is a mix of north-central and south-central ratings. There is no variance in U-factors, or how the rate at which a window transmits non-solar heat flow, both areas are rated at less than or equal to .30.

The variation comes in the solar heat gain coefficient, or SHGC, which is the fraction of solar radiation admitted through a window, door, or skylight —transmitted directly and/or absorbed, and subsequently released as heat inside a home. The

lower the SHGC, the less solar heat it transmits and the greater its shading ability.

A product with a high SHGC rating is more effective at collecting solar heat during the winter. A product with a low SHGC rating is more effective at reducing cooling loads during the summer by blocking heat gain. The rating for buildings in the north-central area is less than or equal to 0.40 and south-central rating is less than or equal to 0.25.

So, home comfort could be impacted by your window choice. If you feel like replacing windows might be something for consideration, South River EMC offers a rebate to single family and manufactured homes changing out drafty windows.

For details on the rebate, visit sremc.com/energy-star-windows.

Cool Savings

Heating and cooling your home is the biggest contributor to your electric costs each month. This is for several reasons, size and tightness of your home, type and age of the heating and cooling unit, efficiency of the unit and thermostat settings.

The bigger the home, the more space needs to be heated and cooled and you need a unit sized correctly to meet the demand. Also contributing to cost is the tightness of your home. A tightly built home better holds the temperature you set on the thermostat, which means the unit doesn't have to run as often. Your thermostat settings are also important in managing costs, 78 degrees in the summer and 68 degrees in the winter are recommended. As temperatures heat up, the higher setting means that although the heat pump will run, it might not run as long or as often.

The efficiency of your unit, or the seasonal energy efficiency ratio 2, or SEER2 rating, measures cooling efficiency. The higher the SEER2, the more efficient a system is at cooling. For summer temperatures,

you want a system up to cooling for less. A 16 SEER2 or greater unit is eligible for a rebate from South River EMC.

Then, there is the age of your unit. Even the most efficient system gets old, and the older it gets, the more inefficient it becomes. So, a rise in costs may be caused by an older, more inefficient system trying to heat and cool your home. While you can never guess when your heating and cooling system is going to need replaced, you can be prepared for that time by doing research from time to time.

Look at units appropriately sized for your home, too large and it heats and cools inefficiently, too small and it has to work harder, longer to meet demand. Consider SEER2 rating to find a unit that will be most efficient for your home. If that unit is 16 SEER2 or greater, you might be eligible for a rebate from South River EMC.

If you'd like information on this rebate visit sremc.com/energy-star-heating-cooling.

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