A few years ago, some mechanical engineering students built a shoe that used the energy produced when walking to power an LED light. Now, they’re using that kinetic energy to charge cell phones, smartwatches, GPS devices and other portable electronics, asking users, “How much power will you make today?”

Obviously, you couldn’t walk long enough to run your air conditioner in August, but having a tool available that can charge your phone while you’re hiking might give you the boost you need to make an important phone call.

This month we’re spotlighting some of our own thoughtful engineers, charged with thinking innovatively about how to approach situations and seize opportunities that best benefit our members.

One area where our engineers are thinking ahead is a pilot program for a new electric water heater that works with our load management system. We’ve been using water heaters with our load management program for more than 20 years to reduce our peak demand and save members money. New Department of Energy regulations require any new electric water heater larger than 55 gallons to connect to a load management system. We see this as an area where we can assist our members as the inventory of large tanks are depleted. So we have 50 people testing a new water heater that ties into our grid which we can cycle off as needed when we reach peak demand.

We want to make sure if you need these appliances, we can offer them and support the technology. This program could not only reduce peak load and help avoid the need for additional electric generation, it could give you greater control over your appliance through mobile applications.

Another opportunity Jackson EMC’s engineers are developing is providing you with solar power. If you want to install solar energy at home, you can get assistance from engineers in planning, as well as loans and rebates to make it possible. But, roof-top solar panels don’t work for everyone, so through our partnership with Green Power EMC, we’re investing in large-scale solar operations to benefit all of our members. Two large solar installations in Hazelhurst cover hundreds of acres and feed enough electricity onto the grid to power nearly 10,000 homes.

Through our Sun Power for Schools program, middle and high school students learn about energy conversion and study the real-time strength of solar power generation. I’m excited to think about the next generation of engineers and the innovation that they will bring.

Have an innovative idea? Send me an email at chip@jacksonemc.com.

Chip Jakins, President/CEO

Programmable thermostats save money by turning up the temperature when you are away from home or at night, limiting the amount of time air conditioning equipment runs.

You can save as much as 10 percent on heating and cooling by simply turning back your thermostat 7-10 degrees from its normal setting for 8 hours a day. With a programmable thermostat, you can do this automatically by scheduling the times you turn on the air conditioning.

Programmable thermostats can store multiple daily settings that you can temporarily manually override without affecting the rest of the daily or weekly program.
Jackson EMC members have access to state-of-the-art security protection through EMC Security, a company jointly-owned by Walton EMC, GreyStone Power and Jackson EMC. EMC Security has grown over the past 18 years to be among the largest in the U.S. The company is currently ranked as the 36th largest security firm in the nation and the 15th largest residential security firm.

After 18 years, I’m still amazed at the speed of EMC Security’s response when my alarm goes off.

Most of the time – fortunately – it’s when we forget to disarm the system and open a door. Within seconds, my phone is ringing, and it’s one of their friendly reps to make sure we’re okay,” said Greg Brooks, EMC Security’s very first customer.

While Brooks has remained a customer for 18 years, he didn’t have to stay longer than a month. No customer ever signs a contract, so they are free to leave at any time.

“We take great pride in our service and being able to offer month-to-month monitoring service, which has been one of the many company standards adhered to since our inception,” said Vince Raia, president of EMC Security.

Customers likely hang around for the low price too. In 18 years, that has remained constant at $16.95 a month as well. For Brooks, though, it’s about more than the low price.

“They work hard to make you feel secure about your security company,” he said. “I can also give their service techs high marks. Always courteous, I’m especially impressed that they’re so respectful of my home.”

EMC Security has also been providing advanced smart-home technology for ten years, offering customers peace of mind through the ability to manage not only their security system but temperature, door locks, video cameras, and lights from a smartphone or tablet.

Call 770-963-0305 to learn more about EMC Security’s security solutions and schedule a free on-site consultation.

EMC SECURITY IN 2015

- 256,591 trouble signals acted on
- 225 break ins
- 10 seconds average response time
- 150 medical emergencies
- 41 fires
- 12 other actual emergencies
- $16.95 monthly rate for 18 years

VISIT EMCSECURITY.COM TO LEARN MORE
Providing our members with safe, reliable power is what Jackson EMC is all about. Our engineers work in some areas you might not realize in order to keep the lights on for our 220,000+ members.

HERE’S A LOOK AT FIVE OF THE AMAZING ENGINEERS WHO WORK AT JACKSON EMC.

**LORI MCCUTCHEON**
**COMMUNICATIONS**

Lori manages the department in charge of communication systems. Everything from fiber optics, radios and phones to monitoring and controlling substations, meters and line switches. Communication between people and equipment is vital for employee safety, reliability and the day-to-day business operations. Lori’s also in charge of the apparatus shop that ensures meters, transformers and other equipment operates correctly.

**My number one priority is to keep the phone lines working so members can call in and talk to someone when they need to. When members need to report outages or have a question about their bill, it’s important they get to someone who can help.**

**TOMMY PARKER**
**PLANNING**

Planning for a system as large as Jackson EMC takes coordination and time. Tommy works on 10-year long-range plans and three-year construction work plans that include everything from where substations should be built to which lines need to be upgraded and where new lines will be needed. Engineers are needed every step of the way, from planning construction to computer programming and then installing new technology as it becomes available.

**All of our planning activities have one goal—to ensure service reliability. It gives me a tremendous level of job satisfaction knowing the work that I do is helping to keep the lights on for our members.**

**JONATHAN WEAVER**
**FORECASTING**

Jonathan works in power generation, planning for green power, solar energy programs, forecasting member needs, distributed automation and load management. He works to make sure there is enough power coming through our lines to supply all 220,000+ members with enough electricity, and at a low price. He pays attention to population growth trends, weather forecasts and the cost of power generation so decision-makers can have informed models.

**Our members want their co-op to be as green as possible — economically and environmentally. Balancing these two desires is the basis for our decisions in green power participation.**
As a commercial and industrial engineer, Brittany works with Jackson EMC’s business members to ensure they are using energy wisely. She helps identify energy efficiency issues through energy audits and helps members monitor equipment operation using infrared imaging. When members need to make design changes to their lighting or HVAC system, she works with them during the design process to maximize efficiency and save them money.

“Commercial members make up 10 percent of the members, but they consume 40 percent of the energy. When I help them identify areas for energy efficiency, I know it's very important.”

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THOMAS EDISON
(1847-1931)
One of the most famous engineers of all time is Thomas Edison, an American inventor and businessman. He developed many devices that greatly improved the quality of life around the world, including the phonograph, motion-picture camera and of course, the electric light bulb.

EDITH CLARKE
(1883-1959)
As the very first female electrical engineer, she brought sophisticated electrical engineering concepts to dam building in the United States. Edith Clarke spent most of her career (26 years) at General Electric, where she had the distinction of becoming a salaried engineer after two years on the job. In addition, Clarke won awards for her papers and a patent for a specialized calculator.

BEULAH LOUISE HENRY
(1887-1973)
Beulah Louise Henry invented a bobbin-free lockstitch sewing machine, a doll with flexible arms, a vacuum ice cream freezer and a typewriter that made multiple copies without carbon paper. Toward the end of her career, Henry had amassed a large fortune by manufacturing her inventions through different companies.

LONNIE G. JOHNSON
(1949-CURRENT)
Engineer and inventor Lonnie G. Johnson earned his master’s degree in nuclear engineering from Tuskegee University. He went on to work for the U.S. Air Force and the NASA space program. Johnson’s Super Soaker, the World’s first high-powered water gun, became a best-selling product by the early 1990s. Since then, he has worked on the Johnson Thermoelectric Energy Converter, an engine that converts heat directly into electricity.
More than 26,300 families and individuals were evicted from their homes in Gwinnett County in 2012, according to Salvation Army of Lawrenceville Major Gift Manager Michelle Watkins. To meet as much of that need as they could, the local Salvation Army assisted 598 households with rental and mortgage assistance in the fiscal year 2014.

“Families and individuals come to our community center experiencing significant trauma from having lost all of their belongings thrown out in an eviction or foreclosure and having been reduced to spending nights behind abandoned buildings, in cars,” says Watkins. “Many exhibit signs of clinical depression, anxiety and PTSD as a result of these experiences.”

The Salvation Army’s Financial Emergency Services (FES) program offers immediate financial and food pantry assistance to stabilize families in crisis. To prevent homelessness, the program provides rental assistance for those behind on payments and facing eviction, financial assistance for those facing foreclosure, and professional social work, consultation, prayer and pastoral counseling for any who request services.

Almost every year since it was formed in 2005, the Jackson EMC Foundation has granted the Salvation Army of Lawrenceville funds for rental and/or mortgage assistance. “Funds provided by the Jackson EMC Foundation are essential to assist families in crisis,” says Watkins. “We continue to see more requests for assistance each year. Without the generosity of the Jackson EMC Foundation, there is a greater probability that families will be displaced from stable housing.”

The goal is to keep those suffering financial crisis in their homes. Typical clients range from low wage earners with scant savings who lost employment to those overwhelmed by high costs from an unexpected illness or injury, according to Watkins.

“Everyone needs a little help sometimes,” says Salvation Army Social Services Director Debbie Wengrow. “Foreclosures put a drag on the whole community, while keeping people in their homes helps keep the whole community going. Help from the Jackson EMC Foundation helps keep families afloat.”

In 2016, the Salvation Army celebrates 150 years of international service in 126 countries. “We’ve been helping families stay in their homes for 150 years,” Wengrow said. “It’s a blessing to have great partners like the Jackson EMC Foundation who make it possible to do it properly and efficiently.”

Jackson EMC awarded its first grant to the Salvation Army of Lawrenceville in June 2006 for $15,000. To date, the foundation has granted $110,000 to help keep families in their homes.

CRUST
1 Box Yellow Cake Mix
1 Stick of melted butter
1 Egg

Heat oven to 350 degrees. Mix above ingredients and pat into a 12x17 pan. Do not pat up the sides of the pan. Set aside.

FILLING
1 8 oz. Package Cream Cheese
1 Stick Melted Butter
2 Eggs
1 lb. Box Powdered Sugar
1 Tsp. Vanilla
1 Cup Chopped Pecans (can put more if you like a lot of nuts)

Mix everything except pecans. Stir in pecans and pour over crust and bake until puffed and golden, about 30-40 minutes. Let cool approximately 30-45 minutes. Cut into squares.
$89,559 IN GRANTS

during its June meeting, including $83,500 to organizations and $6,059 to individuals.

ORGANIZATIONAL GRANT RECIPIENTS:

$13,000 | Jubilee Partners
A nonprofit Christian services community in Comer, Ga, that assists newly arrived refugees screened by the U.S. State Department settle where they can learn English, cultural and practical skills and recover from war trauma and subsistence living in refugee camps, for medical services and transportation, household supplies, special clothing and English as a second language materials.

$12,000 | St. Vincent de Paul at St. Patrick's Catholic Church
An organization of volunteers who give their time to assist families that have fallen on hard times, to help fund emergency financial assistance for housing assistance, including rent, mortgage and temporary housing to avoid eviction and foreclosure and prevent homelessness.

$8,500 | Ark United Ministry Outreach Center
To provide emergency financial assistance that will help prevent eviction and reduce homelessness for workers in low-wage jobs, the disabled and the elderly in Clarke, Madison and Oglethorpe counties who are facing unexpected expenses.

$7,500 | Lekotek of Georgia
A charitable organization that provides children with disabilities with accessible play, adaptive technology and toys, information and resources, to provide services through its Gainesville satellite office to serve ten new families from Barrow, Clarke, Franklin, Hall, Jackson, Lumpkin and Madison counties, and to purchase additional adaptive toys and technology.

$6,000 | Creative Community Services
To help purchase a van to transport youth for the STEP Program, which helps prepare young people to transition out of the state foster care system and into independent adulthood, preventing them from ending up in mental institutions, homeless shelters or jails as adults.

$1,575 to replace a leaking back door for a young man disabled by ankylosing spondylitis, a form of arthritis.

$3,500 to help purchase a handicapped accessible van for a man injured and disabled by an ATV accident.

$984 to purchase a lift chair for a disabled senior citizen.

FOR MORE INFORMATION ABOUT THE JACKSON EMC FOUNDATION, OR TO APPLY FOR A GRANT, VISIT JACKSONEMC.COM/FOUNDATION

THE KINGSMEN QUARTET TO PLAY ANNUAL MEETING SEPTEMBER 15

The Kingsmen Quartet began playing music in 1956 in the mountains of western North Carolina. Today, this powerhouse of musicians continues to define Southern Gospel music.

The Kingsmen have performed on the lawn of the White House for President Carter, for President Reagan at the opening of the World’s Fair in Knoxville, Tenn. and members who attend annual meeting September 15 will hear this group sing hit songs, such as “Gloryroad,” “Look for Me At Jesus’ Feet,” and “Love Lifted Me.” Music will begin at 6:15.

In 2000, the Kingsmen were inducted into the Gospel Music Hall of Fame followed by the Christian Music Hall of Fame in 2008. The Kingsmen band was voted favorite band a record 17 times making this quartet one of the most awarded groups in Southern Gospel Music. Today, the Kingsmen consist of 2008 hall of fame inductee Ray Dean Reese, his son Brandon Reese, Randy Crawford, Bob Sellers and Chris Jenkins.
NEED TO KNOW: FRAUD ALERT

Jackson EMC takes steps to protect our members’ information.

Unfortunately, from time to time, Jackson EMC members are solicited by utility scammers and unknowingly provide information to the wrong people.

To prevent members from falling victim to potential scams, here is a list of the procedures Jackson EMC takes when communicating with members about bills:

- **When calling the office, you may be asked to verify the last four digits of your Social Security number to identify yourself but you will not be asked for complete Social Security numbers (unless you are calling to set up new service).**

- **Jackson EMC will notify you by U.S. mail of past due amounts and potential disconnection, and will ask you to use traditional payment methods to make payment, including coming to the office or going to jacksonemc.com.**

- **Only Jackson EMC members who have signed up for paperless billing will receive an email from the cooperative notifying them that their bill is ready to view.**

- **Jackson EMC will not request that you obtain pre-paid cards to pay your bill.**

- **Our employees will never call or email you to demand immediate payment to avoid disconnection.**

If you suspect someone has reached out to you and obtained personal account or financial information, contact Jackson EMC immediately at 1-800-462-3691. Jackson EMC will never send an employee to your home or business to collect payment.