

# BTES NEWS

**Bristol Tennessee Essential Services**

*Electric • Internet • Telephone • Cable*

Spring 2019 - For Customers of Bristol Tennessee Essential Services

## What is Happening When My Lights Blink?

### **BLINKING LIGHTS**

Your family has just sat down to dinner, and your kids are talking about their day at school when the lights suddenly blink rapidly. Everyone stops talking and stares up at the lights. Thankfully, they stay on. So, what just happened?

"BTES has protective devices installed throughout our electric system that isolate faults caused by trees, car accidents or animal interference," said Clayton Dowell, director of engineering. "What you are seeing when your lights blink are those devices working. They may also test the line to see if the power can be automatically restored."

If the fault is momentary (such as an animal), it is likely that an automatic device may restore power in a matter of seconds and a crew may not be needed to restore power.

If the fault is permanent (like a tree falling across the power lines), the power may blink a few times before ultimately staying off. In this case, a crew must be dispatched to locate, isolate and resolve the fault before power can be safely restored.

"When your lights blink, these devices are doing exactly what they were designed to do," Dowell said. "They are determining where the fault is located, isolating the fault and working to keep as many customers' power on as possible."

### **VOLTAGE SAG VERSUS SURGE**

Typically, when people see the lights dim or "blink," they will incorrectly refer to it as a surge, which is a momentary increase in voltage. In fact, surges are relatively rare. The majority of the dimming is due to momentary voltage sags caused by a fault. These are short periods of lower voltage.

"Surges are extremely rare," Dowell said. "They are typically caused by lightning strikes directly to the power lines."

Often, what customers are seeing is a brief sag in voltage, meaning the amount of electricity coming into your home is briefly lower than normal. This causes lights and other appliances that are currently operating to dim or slow down.



### **WHAT WAS THAT NOISE?**

During an outage event, sometimes you may hear a loud noise or "boom." This is a fuse.

"A fuse is a device that protects a large amount of customers from problems that may happen on a line feeding a smaller number of people," said Chris De Troye, system engineer. "These are the things that 'blow' and may sound like a gunshot."

Hearing that sound means the device is working correctly when a fault occurs on the system. The fuse not only prevents the line serving the small amount of customers from burning down, but also protects

equipment farther up the line.

"Sometimes people may inaccurately say that a transformer blew when they hear that sound, but it was actually the fuse doing exactly what it was created to do," De Troye said.

### **WHAT DO I NEED TO DO?**

If your lights blink and come back on, there is no need to call us.

If you experience an outage, call BTES' outage reporting system at (423) 968-BTES (2837). This automated system tracks outages and helps us quickly pinpoint where the problem is located. It uses caller ID technology, which means it is important that we have the correct phone number on file. If your electricity is out, you must call from a "wired" phone or a cell phone. To ensure the power outage is reported correctly, please verify the accuracy of the phone number listed on your electric bill.

If you utilize our fiber services (Internet, telephone or cable television), in most cases, your outage is automatically reported for you. Customers are still encouraged to call the outage reporting system to confirm the outage has been reported and share any relevant information that may help us restore services faster.

For more information and other frequently asked questions about power outages, visit [www.btes.net](http://www.btes.net).

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## Cost Savings through Green Energy

This spring, a Rotary Group Study Exchange team from Taiwan visited Bristol. Part of their time included a visit with BTES and an interview with Power 7, our cable channel. After the interview, one of the team members asked if we participate in any green power initiatives.



"Yes," I answered, and then explained that we make the TVA Green Power Switch program available to our customers, which enables them to purchase green power blocks. These blocks of power are generated from landfill gases, wind, solar, etc. I personally buy a block every month at a cost of \$4 per block. The \$4 pays for the extra cost to generate the green power, which means other customers don't have to pay the extra cost. Any BTES customer can sign up!

Other TVA programs include the TVA Solar Program and eScore (home energy efficiency program), which I have used. When we replaced appliances and lighting at home, we did so with more efficient items, as has BTES. By using the synergies of several BTES systems, we are able to meet our customers' energy needs while saving costs.

Examples of cost-saving programs include our load management and water heater programs. We have used systems for this purpose for approximately 40 years. Originally, we did much of this manually and didn't have ways of monitoring the effects at the customer's location. Since there is a higher kWh cost from TVA to BTES in the winter weekday mornings for four hours, and in the summer weekday evenings for six hours, any of those higher-cost kWh that we can move to a lower-cost time saves money. We are doing this with the latest edition of our water heater controls.

The big picture looks like this: BTES buys your power from TVA. BTES' power bill from 2018 was \$75,791,441.23. The energy (kWh) was \$53,545,060.03 (71%). The demand (monthly top hour) cost was \$22,246,372.20 (29%), so the total top hour each month was 29% of the total power cost.

Another way we save costs is through our voltage control system. We operate the voltage within prescribed limits and there is a savings from operating in the lower limits. When we first started, we had to calculate the expected voltage and leave a large margin for error. Now, with our fiber-optic system to locations that have Internet, telephone or cable services, we can know the exact voltage. This data comes from our metering collars. We also have automatic power outage reporting.

**These two programs boast a total annual value to BTES in savings and sales, and ultimately to our customers, of more than \$4 million per year.**

Without these programs, we would have to raise our rates \$10 per month for every residential customer — and the same percentage for general power customers to cover that loss in revenue. We have no plan to do that. Our intention is to continue improving service while being as green as possible, and without raising costs to others.

Thanks and have a great day ... and good luck!

*Mike Browder*

## BTES News

Owned and published by  
Bristol Tennessee Essential Services,  
serving more than 33,000 electric customers  
and more than 17,500 fiber customers.

**Dr. R. Michael Browder**  
Chief Executive Officer

**BTES News** is published four times a year.  
Address changes, news items and  
suggestions should be sent to:  
P.O. Box 549, Bristol, TN 37621  
BTES website: [www.btes.net](http://www.btes.net)

Editor: Leslie Blevins

### Our Mission

To provide service to our customers,  
employees and community that exceeds  
their expectations.

### Our Vision

To be the best electric, Internet,  
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for the benefit of our customers.

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## The Difference a Bulb Makes

What kind of impact does choosing a different kind of light bulb have on your energy expenses? Here's a quick comparison of key stats about incandescent, compact fluorescent (CFL) and light-emitting diode (LED) bulbs.

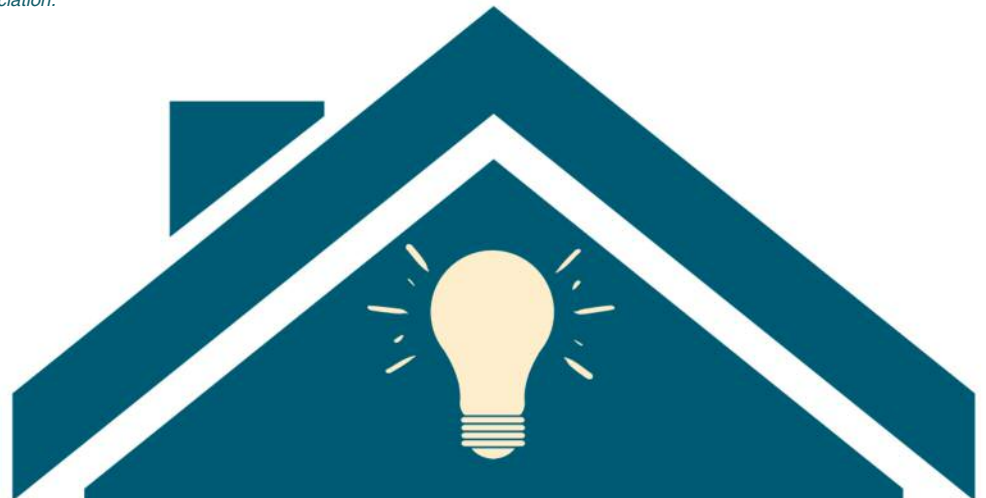
	INCANDESCENT	CFL	LED
BRIGHTNESS	800 lumens	840 lumens	840 lumens
ENERGY USED	60 watts	13 watts	9 watts
COST PER BULB*	\$1.49	\$2.49	\$1.37
YEARLY ENERGY COST**	\$7.55	\$1.64	\$1.13
ESTIMATED LIFESPAN	1.8 years (2,000 hours)	11 years (12,000 hours)	13 years (15,000 hours)
TOTAL COST OVER 10 YEARS	\$83.78	\$18.89	\$12.67

\*Price quotes all come from the same large retailer for comparably sized and style bulbs.

\*\*Assumes use of 3 hrs./day at average public consumption rate of 11.5 cents/kwh.

Information retrieved from the American Public Power Association.

The U.S. Department of Energy estimates that the widespread adoption of LEDs in residential and commercial applications over the next 20 years will save about \$265 billion, prevent the need for constructing 40 new power plants, and reduce the electricity demand of lighting by 33 percent.



Considering the average home uses about **40 bulbs**, the difference for one home over 10 years is more than **\$2,800** in cost savings and more than **22,000 kilowatt hours** in energy savings.

## Energy Savings Tips

Here are a few tips and ideas to help us all not only save energy, but also save money at the same time!

**Put your computer monitor on sleep instead of using screensavers.** Screensavers may cost you an extra \$50 or more in electricity per year.

**Close the door.** Your garage doors could be the last line of defense between you and the great outdoors. During the winter months, keep your garage doors shut. Also, consider insulated doors for additional efficiency.

**Turn off the faucet.** An open faucet lets about five gallons of water flow every two minutes.

**Keep it indoors.** Whether you're heating or cooling, you don't want your energy going out the door. Caulk and add weatherstripping around doors and window frames. Closely check any areas where pipes go from the outside of your home to the inside.

**Turn it off.** Make sure to turn off any lights or appliances when not in use. Small things add up!

**Leave it be.** Leave your oven door closed while cooking and baking. When you repeatedly open and close the oven, warm air escapes. Use the oven light to check on foods.

**Chill out.** Let cooked foods cool to room temperature before putting them in the refrigerator. Hot foods – and their containers – will raise the temperature in the fridge, making it work much harder. Be careful, however, not to leave foods out too long so they don't spoil.

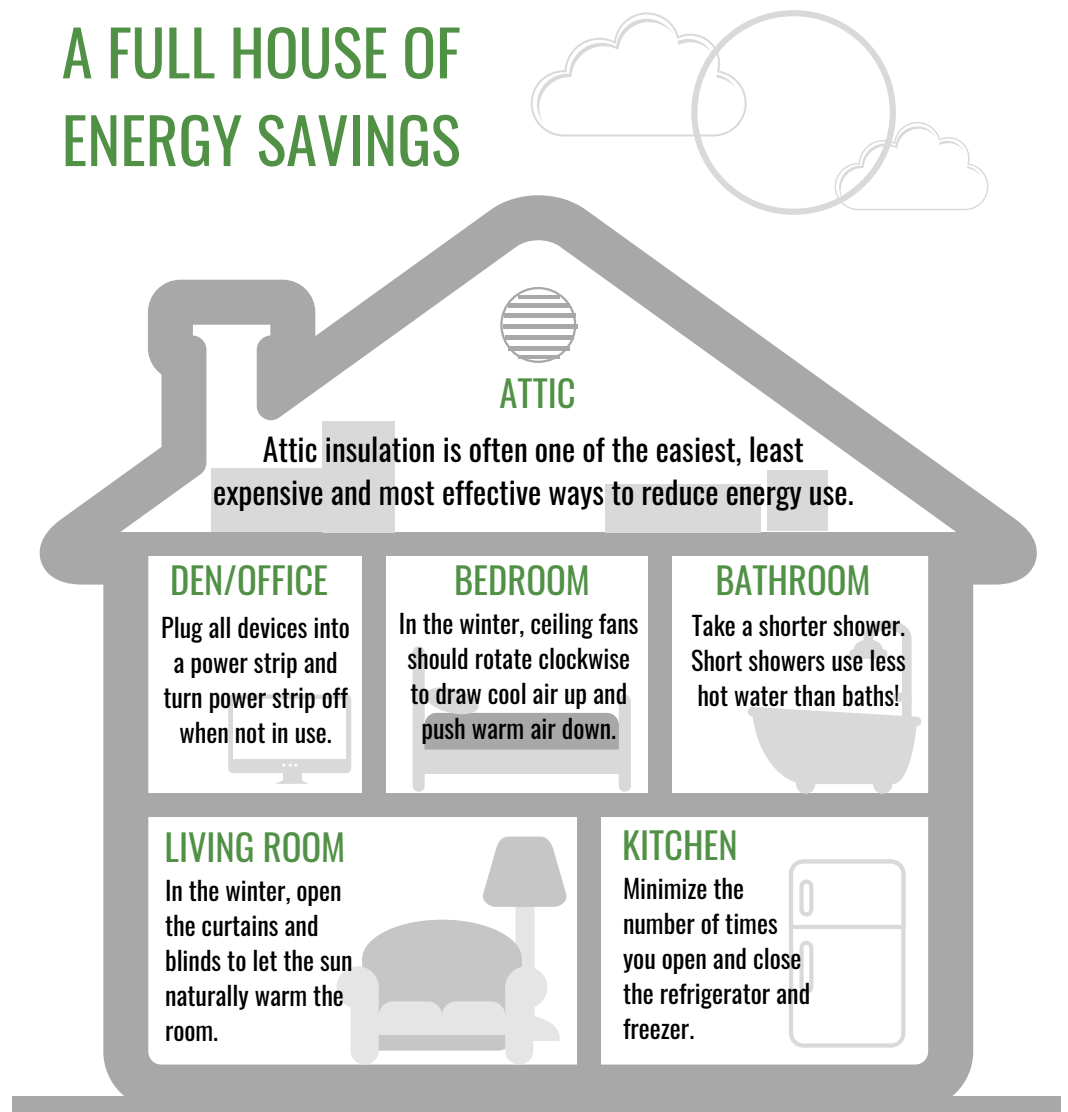
**Don't go to the extreme.** Your home warms up at the same speed, regardless of the temperature setting – so you won't reach your desired temperature any sooner by setting the thermostat to a higher setting than you are actually seeking.

**Be a STAR.** Look for the ENERGY STAR® label when replacing large or small appliances.

**Keep the dust and lint away.** Make sure your dryer's outside vent is clear, and clean the lint filter after every load. Also, change your air filters monthly to ensure that your heat pump is running efficiently.

**Get a tune-up.** Have your heating and cooling system checked annually to keep it running as efficiently as possible.

## A FULL HOUSE OF ENERGY SAVINGS



TO LEARN MORE VISIT  
[WWW.BTES.NET/ENERGYSAVINGSTIPS](http://WWW.BTES.NET/ENERGYSAVINGSTIPS)



## Customers Win Items Created on *Design Time*

BTES Power 7 has been giving away items created on our do-it-yourself television show, *Design Time*, on the BTES Facebook page. Winners include:



**Bun Hat**  
Kim Bright Jenkins



**Scarecrow Décor**  
Linda Davidson



**Wooden Window Décor**  
Pat Burton



**Bun Hat**  
Penny Chappell



**Pillowcases**  
Johnathan Tippens

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## COMMON WRITING MISTAKES

### its vs. it's

**its**  
a possessive pronoun



Example:  
The puppy played with its toy.

**it's**  
contraction of "it is" or "it has"

Example:  
I think it's going to rain.



### there vs. their vs. they're

**there**  
an adverb, in or at that place

Example:  
There is only one cookie left.



**their**  
a possessive pronoun

Example:  
Their cat is happy.



**they're**  
contraction of "they are"

Example:  
They're going to the farm.



### your vs. you're

**your**  
possessive pronoun

Example:  
Your hair looks beautiful!



**you're**  
contraction of "you are"

Example:  
You're going to win the race!



## The Lighter Side

What did the Thesaurus eat for breakfast?

A synonym roll!



# Favorite Recipes of BTES employees and customers

## Chocolate Chip Banana Bread

2 cups flour	1 tsp. baking powder
1/2 tsp. baking soda	1/4 tsp. salt
3/4 cup sugar	2 eggs
1/2 cup butter, softened	1 tsp. vanilla
2 bananas, mashed	1 cup chocolate chips

Preheat oven to 350 degrees. Spray a non-stick, 9x5-inch loaf pan with a non-stick cooking spray. In a large bowl, cream together butter and sugar. Add eggs and vanilla and mix until smooth. Add bananas and mix until smooth. Add flour, baking powder, baking soda and salt, and mix until combined. Add chocolate chips, folding them in until evenly distributed. Pour batter into prepared loaf pan. Bake for 45 minutes.

## Flourless Peanut Butter Muffins

1 medium ripe banana, peeled	1 large egg
1/2 cup (heaping) creamy peanut butter	3 tbsp. honey
1 tbsp. vanilla extract	1/4 tsp. baking soda
1/2 cup mini semi-sweet chocolate chips	pinch of salt

Preheat oven to 400 degrees. Prepare mini muffin pans with non-stick cooking spray. Using a blender canister, add banana, egg, peanut butter, honey, vanilla extract and baking soda. Blend on high speed until smooth and creamy, about 1 minute. Add chocolate chips and stir in by hand. Using a tablespoon or small cookie scoop that's been sprayed with cooking spray, form rounded 1 tablespoon mounds and place into prepared pans. Each muffin cavity should be filled 3/4 full. Bake for 8 - 9 minutes or until tops are set, domed, springy to the touch, and a toothpick inserted into the center comes out clean, or with a few moist crumbs, but no batter.





## Underground Maintenance Continues

Several neighborhoods in BTES' service area are equipped with underground facilities. BTES crews have been working to replace some underground facilities throughout BTES' service area to increase reliability of electric services. Our analysis has determined some existing underground cables have reached the end of their useful lives and are no longer performing reliably.

"The insulation used on some of the older electric cables has deteriorated faster than we expected," said BTES CEO Mike Browder. "The insulation thickness we previously used is still a standard used today for the voltage carried across those lines. We made the decision to use cables with thicker insulation in the late 1970s, and we haven't experienced the issues we have seen with the cables with less insulation. We are working to replace the older, less-insulated cables (installed prior to the late 1970s) in areas that we have documented faults because of this reason."

BTES has developed a plan to replace underground facilities with improved underground cables.

"Some of the subdivisions in our service areas have underground facilities with lower insulation levels, which have shown a higher propensity to fail, and we are working to change those cables out," said Steve Craddock, transmission and distribution supervisor. "We are so appreciative of our customers' patience with our crews as they improve our system and make repairs that will significantly increase our customers' reliability."

The construction plan minimizes the impact to the property by utilizing directional boring installation. Instead of opening a four-foot-deep trench along the front of properties, directional boring requires periodic holes for vaults and connecting the conduit. Once this conduit has been installed, BTES crews install the new cable and make the necessary connections. Although directional boring minimizes the impact, landscaping around BTES facilities may be affected. Landscaping within the existing utility easement that interferes with the safe, reliable operation of facilities will be removed and not replaced.

Completed projects include Tara Hills, Redstone and Littlewood subdivisions. Crews are currently working within Greystone Subdivision and plan to move to Middlebrook Subdivision next.



*As crews work to replace underground facilities, customers will see directional boring equipment similar to what is pictured above.*



*Once the boring work is complete, BTES crews install the new cable and make the necessary connections.*

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### Your Comments are Important

Please list the articles you found most interesting in this issue of BTES News, then clip out this form and mail it with your BTES bill to the address below. (Spring 2019)

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2. \_\_\_\_\_
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Other comments, story ideas or questions.

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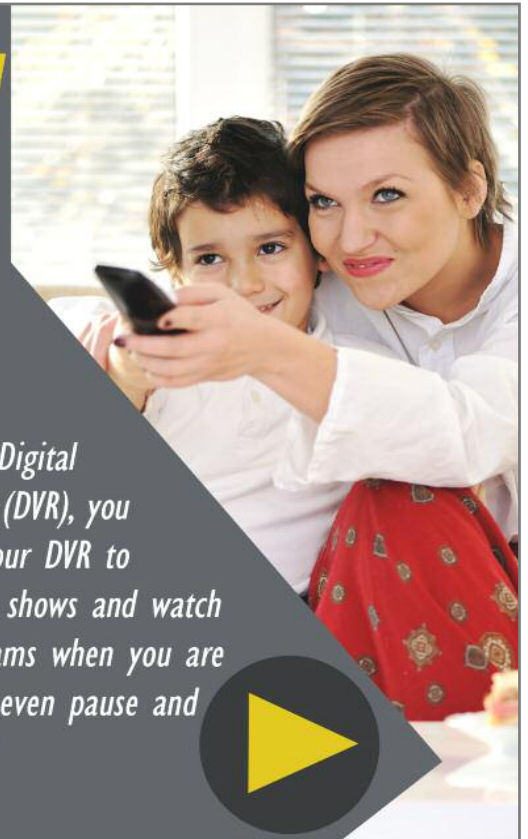
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