More Power to You

SMARTER HOMES

LEADING TO BETTER EFFICIENCY, ENERGY SAVINGS

ROCK ENERGY COOPERATIVE
Empowering Members Since 1936

Shane L. Larson,
Chief Executive Officer

Did you get a Smart Plug for Christmas and wonder, what in the world is this thing? Nowadays, smart home technology is leading the way in the home improvement industry for good reason—because, in large part, it saves people money on their energy bills, that's why.

In a DIY smart home, Rock Energy Cooperative members can target some of the home's biggest energy wasters (see "Energy Vampires" pg. 20C) using: **Smart Thermostats** to better control heating and cooling; **Smart Plugs** for electronics, lighting, and other appliances; **Smart Switches** paired with LED bulbs; and better engineered appliances.

The smart home has come of age over the last few decades. It's true that some smart home devices can save resources, but not all of them will. For instance, always-on smart speakers and connected cameras actually use more energy, because they're not replacing an energy load, they're adding one (although not a significant one). On the other hand, other energy-saving devices, such as Smart Thermostats and AI-powered water and energy monitoring systems, are creating a path toward a brighter, greener future—and saving us some cash along the way.

A new home, as opposed to an older home, built from the ground up to be sustainable has a better chance to provide greater energy efficiency with connected technology because the systems can be more easily integrated. For example, individual room dampers can be managed by a Smart Thermostat embedded in a smart light switch, which also contains sensors that can intelligently drop window shades to prevent solar heat gain and sense incoming weather fronts to get ahead of precooling or preheating.

Here at Rock Energy, we do the best we can to inform our members of different ways they can save on their energy bills.

As you probably already know, there is a huge selection of different smart products and devices out there, and with so many options to choose from, it's hard to say what the best choices are for each individual's particular needs.

So, you may ask yourself, how can I make my home into a more efficient, smart home? Well, let's take a quick look at some of different items (see list to the right) you can invest in to get yourself on the SMART track to energy efficiency!

SMART ENERGY SAVING DEVICES

LED Light Bulbs — LED lighting products produce light up to 90% more efficiently than incandescent light bulbs.

Plugs — A means of adding a smart outlet with a little less fuss, Smart Plugs insert into your existing outlets, no re-wiring required. Smart WiFi connects fixtures in your home to the smart switches, then operates them from anywhere via smartphone/devices. This is a convenient, energy-saving option for porch lights, bedroom lights, fans, and more.

Outlets — Operated with apps or Alexa/Siri/Google Home voice-operated commands, with Smart Outlets you can schedule the times you want your outlets to be turned on and off for easier, more efficient operation of lamps, fans, humidifiers, coffee pots, water heaters, and more.

Light Occupancy Sensor Switch — Light occupancy sensors, taking the place of standard light switches in the home, sense when your family enters/leaves a room from many feet away. The sensor turns lights on and off only when needed. Most also detect natural light, further saving on energy use.

Thermostats — Once installed, the latest models learn your thermostat preferences, processing your family's optimal comfort settings with outdoor temperature and humidity for a more consistent home climate from season-to-season.

Blinds — Motorized blinds can be controlled by a smartphone app or your smart home speaker, like Google Home or Amazon Alexa. You can control them with the sound of your voice or a remote control.

Surge Protectors — A surge protector restricts the voltage supplied to an electric device by either blocking or shortening to ground any unwanted voltage spikes above a safe threshold. If not protected, energy spikes can possibly lead to lasting damage to your devices.

ELECTRICAL SAFETY AT HOME IS CRITICAL

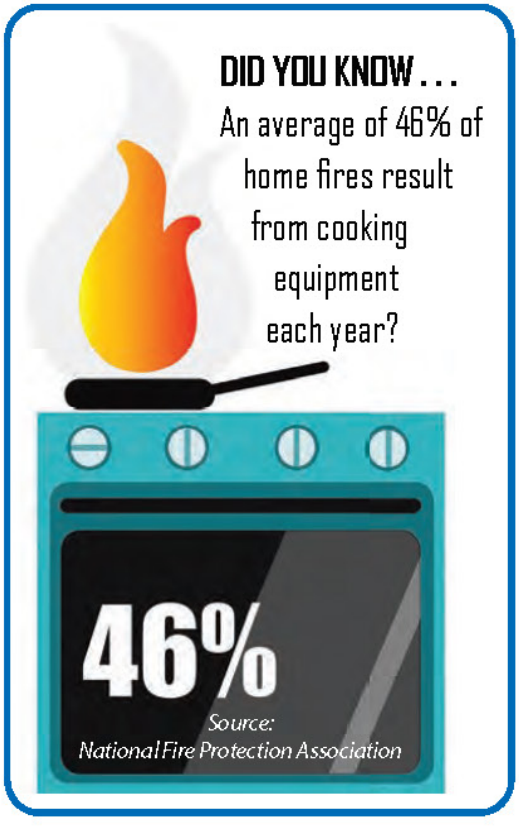
Taking steps to help prevent electrical fires by identifying possible safety problems before they occur is an important part of making sure your home is safe. When it comes to electrical safety, there are a variety of different trouble spots that you should look out for. Here is a checklist to help find possible issues with your electrical system or appliances before they become a fire hazard in your home:

- **Electrical Outlets** – Check for loose-fitting plugs and loose wall receptacles. Avoid overloading outlets with adapters and too many appliance plugs.
- **Electrical Wiring** – If an outlet is not working, it may be an indicator of unsafe wiring. Have an electrician check it out. Check for loose wires and loose lighting fixtures. Listen for popping or sizzling sounds behind walls. If light switches are hot to the touch or lights spark and flicker, immediately shut them off at the circuit breaker and contact an electrician to make repairs.
- **Ground Fault Circuit Interrupters (GFCIs)** – Make sure GFCIs are installed in your kitchen, bathrooms, laundry, workshop, basement, garage, and outdoor outlets. GFCIs help protect against electrical shock.
- **Arc Fault Circuit Interrupters (AFCIs)** – Consider having AFCIs installed in your home. An AFCI installed in a circuit breaker monitors the flow of electricity throughout your home. If the AFCI detects any abnormality, it will shut the system off to prevent a fire.

FIRES INVOLVING ELECTRICAL FAILURE OR MALFUNCTION

- Local fire departments responded to an estimated average of 44,880 home fires involving electrical failure or malfunction each year in 2012-2016.
- Home fires involving electrical failure or malfunction caused an estimated average of 440 civilian deaths and 1,250 civilian injuries each year in 2012-2016, as well as an estimated $1.3 billion in direct property damage a year.
- Electrical distribution, lighting, and power transfer equipment accounted for half (50%) of home fires involving electrical failure or malfunction, followed by cooking equipment (15%), heating equipment (9%), fans (6%), air conditioners (3%), and clothes dryers (3%).
- Nearly two of five fires (39%) involving electrical failure or malfunction occurred in the cold weather months from November through February. These fires were less likely to occur in the overnight hours between midnight and 8 a.m. (22% of total), but fires during this time period accounted for 60% of the civilian deaths.

Source: NFPA Research



- **Plugs** – Do not remove the grounding pin (third prong) to make a plug fit a two-conductor outlet.
- **Cords** – Make sure cords are not frayed or cracked, placed under rugs, tightly wrapped around any object, or located in high-traffic areas. Do not nail or staple them to walls, floors, or other objects.
- **Extension Cords** – These are not intended as permanent household wiring, so use them on a temporary basis only. If you find you need more electrical outlets, talk to an electrician about installing more so you will not need to use extension cords.
- **Light Bulbs** – Verify that your light bulbs are the intended wattage for the lamp or fixture they are in, and make sure they are screwed in securely so they do not overheat.
- **Appliances/Electronics** – If an appliance repeatedly blows a fuse, trips a circuit breaker, or has given you an electrical shock, immediately unplug it and have it repaired or replaced. Use surge protectors to protect expensive electronics.
- **Circuit Breakers/Fuses** – Check that circuit breakers are working properly. Fuses should be properly rated for the circuit they are protecting.
- **Service Capacity** – If fuses blow or trip frequently, you may need to increase the capacity of your electrical service or add new branch circuits.

Stop Energy Vampires

It's very likely you have energy vampires in your home stealing money from you right now. Some electronics draw power from the outlet and money from your wallet, even when they are turned off. They go into standby mode, which uses electricity for features like displays and remote controls.

There are many household appliances that constantly use energy including: televisions, computers, microwaves, DVD players, cable boxes with DVRs, cell phone chargers, printers, and game consoles.

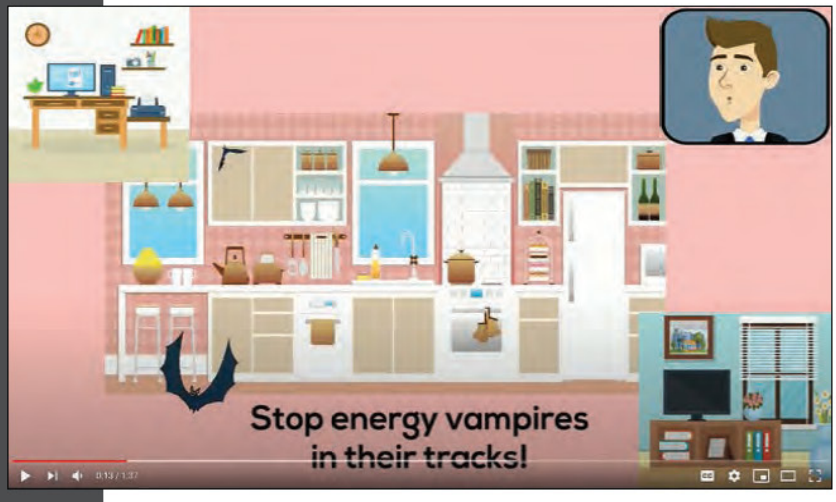
Here is some advice to help you put a stop to energy vampires in your home:

- Unplug electronics that you are not using.
- If you have a room that you do not use regularly, plug electronics into a power strip, and turn off the power strip when items are not in use.
- Power strips can also be useful in areas where there is a large concentration of electronics like in an office or an entertainment system.
- Purchase smart power strips for your computers and televisions. These devices sense when the computer or television is sleeping or off. The smart strip cuts off power to related electronics, such as DVD players, video game consoles, and printers.
- Buy low-standby products. Most Energy Star endorsed products draw smaller than average amounts of electricity when turned off.
- Avoid electronics with extra features that you do not need as these might use more energy.

Source: SafeElectricity.org

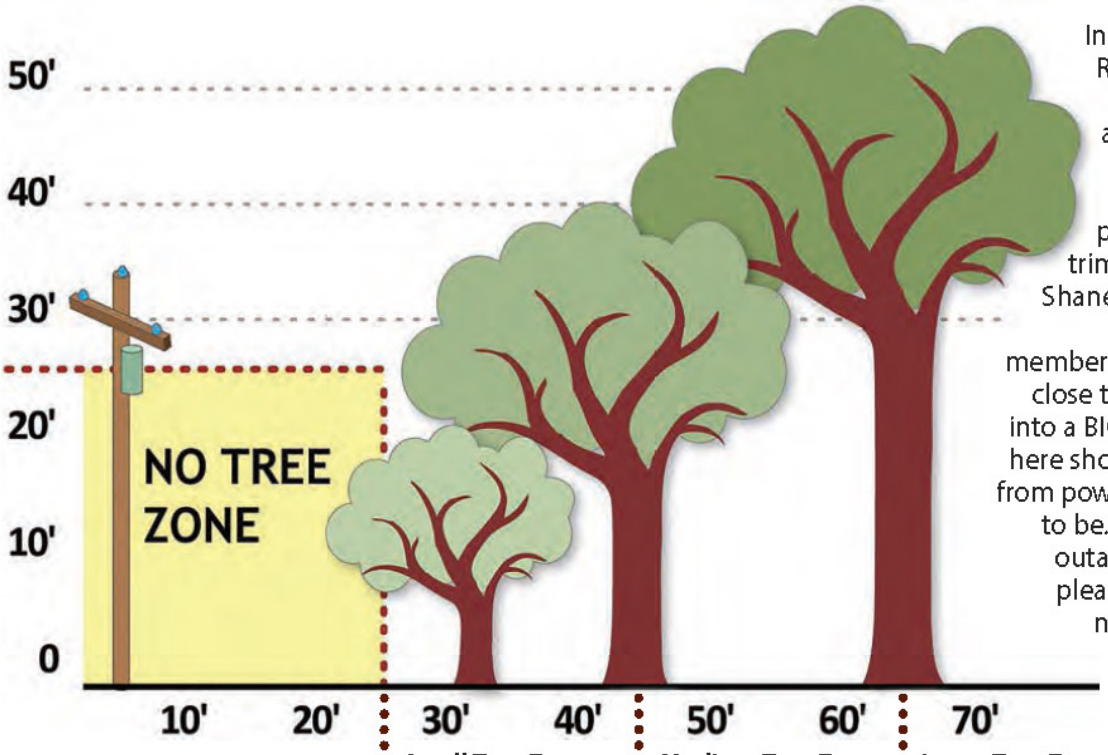
WHERE DO ENERGY VAMPIRES LURK?

Energy vampires can be anywhere — bedroom, living room, kitchen, etc.



To learn more about Energy Vampires, go to: www.rock.coop/content/info-videos and check out Rock Energy's short video on how to spot these nasty creatures and how to prevent them from draining your wallet!

WHEN PLANTING TREES, MAKE SURE TO KEEP THEM A SAFE DISTANCE FROM POWER DISTRIBUTION LINES!



Source: NRECA

Small Tree Zone: Plant trees less than 25' tall/spread at least 25' from lines.

Medium Tree Zone: Plant trees 25'-40' in height/spread at least 40' from lines.

Large Tree Zone: Plant trees larger than 40' in height/spread at least 60' from lines.

In last month's magazine, Rock Energy CEO, Shane Larson, wrote a column about line maintenance and the importance of making sure trees near power lines are properly trimmed. As a follow-up to Shane's message, this month we'd like to remind our members that trees planted too close to power lines can grow into a BIG problem. The graphic here shows the proper distance from power lines that trees need to be. Also, to prevent power outages and safety hazards, please remember that trees need to be trimmed and sometimes removed.

REMINDER – KEEP A CLEAR PATH TO METER & PIPES

Rock Energy Cooperative workers are always careful on the job, but they appreciate clear paths to meters, transformers, and other co-op equipment on your property. Keep firewood, snowdrifts, and other obstacles away from meters and other equipment. This will ensure a safe environment for workers.

Also remember to clear snow away from furnace intake and exhaust pipes. These pipes on the outside of your house are sometimes just a few inches off the ground and can be buried by snowdrifts. If snow covers part of the pipe, your furnace probably will continue to work, but the exhaust could begin to back up into your home. That exhaust contains carbon monoxide and other harmful gases. High levels of carbon monoxide in your home can lead to sickness and even cause death. When exposing the meter and pipes, avoid using a snow blower. Instead, gently remove snow and ice from the area with your hands or a shovel.

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