



**Guide to**  
*Preparing Your Home*  
**for**

# Summer

**Energy Efficiency**

**Control your power usage  
this summer.**

**Make your home more  
energy efficient.**





# Summer Tips for Summer Saving

As the temperatures rise in the East Texas summer, more electricity is used in the home. To supply this higher demand, more electricity is purchased by URECC from generation plants. With all the co-ops and electric companies needing more power, generation companies must then produce more power for the supply. This production costs more money. That power cost increase is passed on to the purchaser (the co-op), and is reflected in the Power Cost Recovery Factor passed on to the members.

When the temperatures outside are hot, you use more electricity in your home at a time when power is more expensive. Efficiency in your power use is a must to control your power bill. Below are a few tips to help you make every watt count.

**1. Install a programmable smart thermostat.** These devices allow you to set automatic temperature controls for maximum comfort and energy efficiency alternatives to air conditioning during hot summer months. You can adjust your thermostat from your smartphone should your schedule change and no one is at home.



**2. Replace your air filter.** Your HVAC system's air filter gets a lot more use during the summer. Check it every thirty days throughout the summer. Replace it when necessary.

**3. Practice smart landscaping.** Strategically planting shrubs and leafy trees near your home's windows is an excellent way to prevent those same windows from transferring excess heat into your home.

**4. Install exterior window coverings.** Protect windows is by adding awnings or screen shades to shade their exterior side. Sunlight through windows can warm your room up to 10 degrees or more.

**5. Update your home's insulation.** Pay close attention to your attic and the levels between your home's conditioned and unconditioned spaces. Extra insulation can be added on top of existing material, but consider contacting a professional for appropriate installation and removal. Foam insulation has become a popular product in new homes due to efficiency.



**6. Use smart door techniques.** When the air conditioner is on and running, every opened door and window leaks out valuable energy. Keep unnecessary trips to and from the house at a low to keep your energy bill similarly low.



**7. Clean your refrigerator coils.** Refrigerators can cause surprisingly high energy usage, especially when they're not operating efficiently. To get the best performance from your unit, dust it off and clean up those condensing coils

**8. Install ceiling fans in high-trafficked rooms.** Ceiling fans do not actually cool the temperature of the room, but the circulating air will make you feel cooler.

**9. Search out and seal any air leaks.** Stop cooling the outside by ensuring your home is properly sealed. Test the stripping and caulking around your doors and windows and replace where needed.

**10. Call in the professionals.** While many of these preparation tips can be easily done by a handy homeowner, have professionals service your AC unit, install airtight doors and energy efficient windows, and even do energy audits to point out areas that are costing you money.

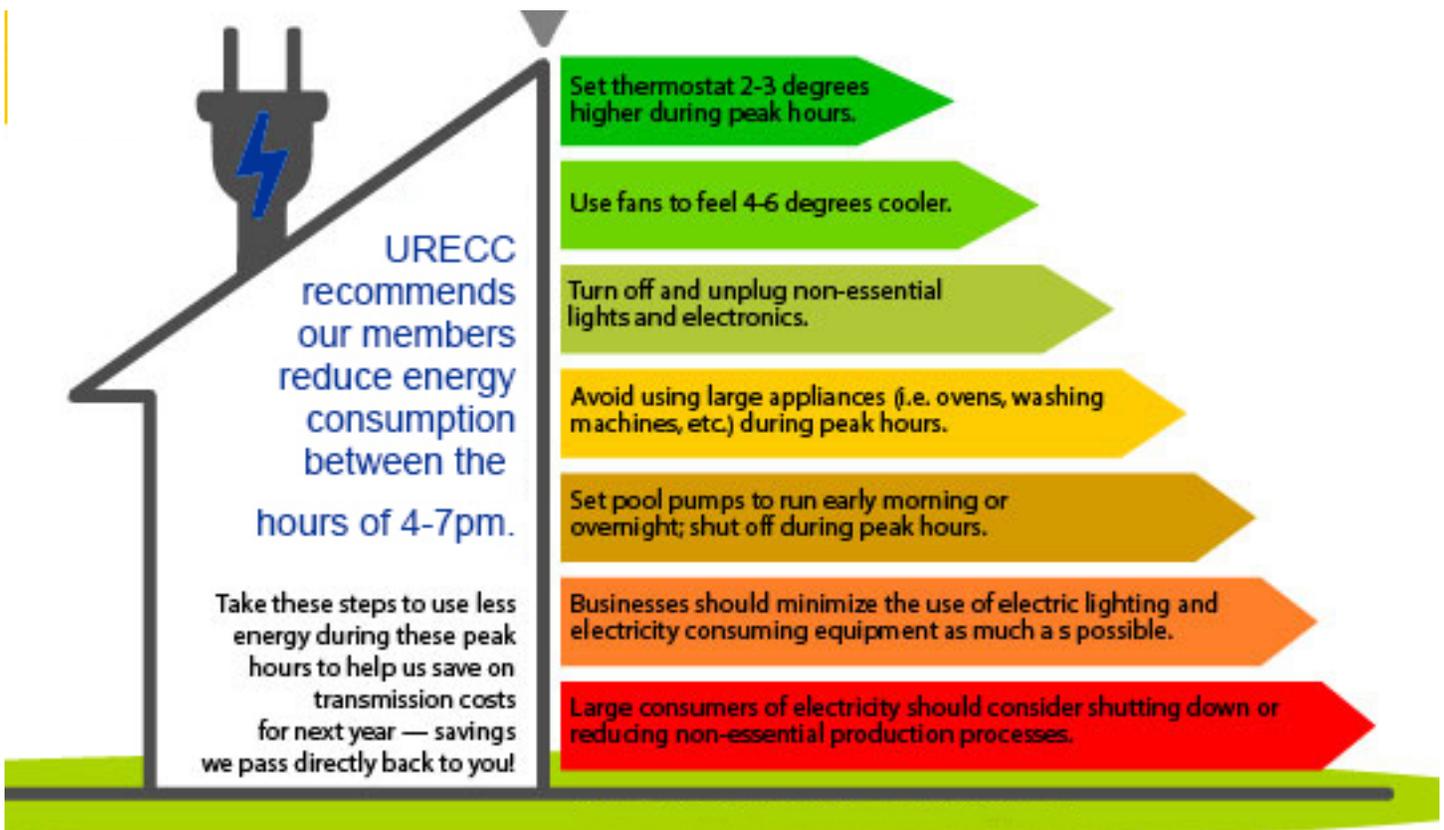
# BEAT THE PEAK

URECC members have a set rate they pay for power. (Rate = cost of power + percentage to cover operations.) The URECC rate that members pay does not change during the day, but the cost of power URECC buys for members fluctuates hourly, costing the cooperative more at times during the day when electricity is in higher demand. Example: On a hot August afternoon, when the family comes home after work and school they will turn on lights, adjust the thermostat to a comfortable temperature, turn on the TV(s), charge phones, use computers, cook dinner, perhaps run the dishwasher or wash clothes, etc. With families across the country all doing this at once, much more energy must be generated to meet demand. Providing more energy will cost power plants more money for gas, battery storage, employees on hand, etc. The power generating plants must pass those increased expenses on to the co-op with higher prices during demand time. The co-op, paying more for the power, then must pass those higher prices on to the members.

These times when power costs more, while people are home using more power are known as “Peak Times”. Adjusting some of your household activities, or conserving power during these peak times is a healthy way to trim your monthly electric bill. Cooking dinner, turning on a light or two, or adjusting the thermostat are essential activities, but doing laundry, running the dishwasher, and operating pool pumps can be rescheduled to off-peak times when power is much less expensive.

Those with residential solar systems, battery storage systems, or home generator systems can also offset their power bill substantially by utilizing the power they have stored or generated during these peak times of the day.

Having the same efficiency mindset with electricity that one would have with other products during higher price periods can save you a lot of money in a not so long time period. Example, if the price of gasoline suddenly climbs to a record high price at the pumps, don't we all curb unnecessary driving or even let prices influence where we drive to for vacation? If we are dieting, don't we avoid eating foods with super-high calorie content? Being aware of peak-time pricing can work basically the same way, putting the power of control and budgeting in your hands.



# GET TO KNOW YOUR HOUSEHOLD ELECTRIC HABITS



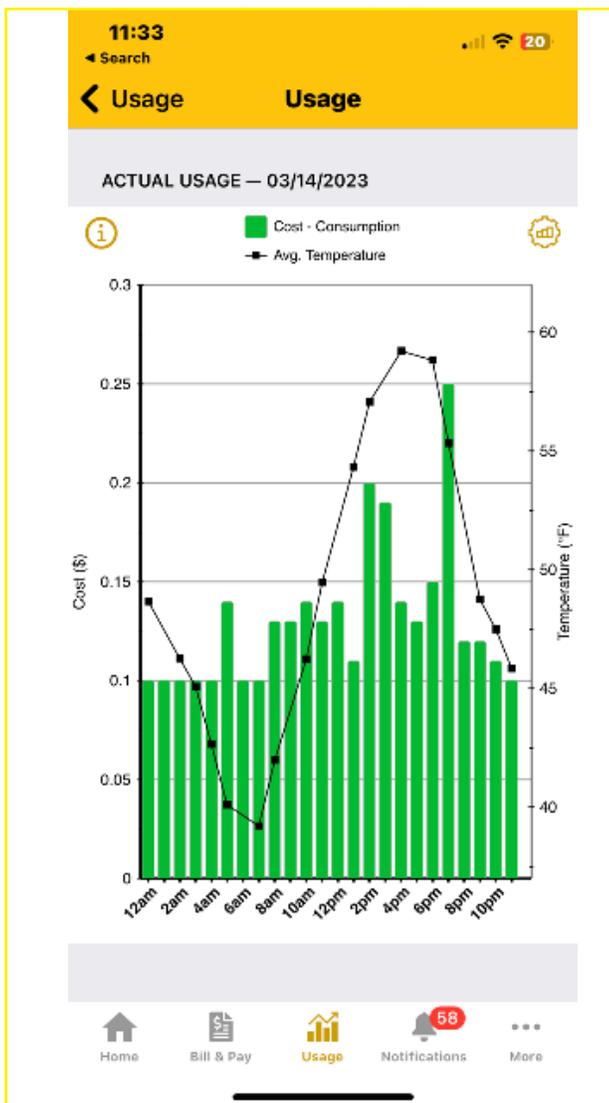
The first step to taking control of your electric bill is getting to know where your electricity is used. Compare it to your household financial budget. It's doubtful that any of us deposit our paycheck into our bank account, then spend that money however we want and not know where the money went at the end of the month. Those serious about budgeting, or making ends meet, track their spending to know where every dollar goes. If these efforts are adapted to your household energy use, you can budget usage and have some control over that monthly bill. As individuals or as a co-op, we can't control the price of electricity, but we can reduce unnecessary usage, or adapt habits to where we use more power when the cost of electricity is cheaper. This can be a major impact on reducing your electric bill.

URECC provides a powerful tool for members to monitor their power usage hour by hour throughout each day. This is one of the features of the URECC SmartHub app. The "actual usage" page on the app (as seen below left) will show you in graph form the hours you use less or more power. It makes it easy to see hours to be more conservative on usage, or applying what we have learned from the "Beat the Peak" article on page 3, transfer

some of your power-using activities, such as running the dishwasher or washing machine/dryer to hours when electricity costs less from the generation companies. Using the SmartHub graph, a member can target a high usage hour, then the following day make adjustments to the appliances and electronics, times used charging devices or EV's, even programming the thermostat to cool the house more before and after peak hours.

Another helpful feature of the SmartHub app is the ability to set alerts for usage that exceeds the normal or "budgeted" power use. After reviewing the hourly breakdown of your previous days' use of power, a member can set a limit alert for their household usage. At the point you reach that limit, you will receive a message alert from the S2martHub app. If this alert shows the member usage is higher than on an average day they can identify a trouble spot or identify the cause of the escalated usage; was temperatures rise drastically causing the AC to run more, was this due to plugging in special tools for work in a shop, or was the pool pump run for an extra session.

Knowing when and where you are using power can help you become efficiency-minded and even set a budget for power usage. Either of which can help trim your power bill each month.



Download the URECC SmartHub app from Google Play or the App Store.





## TOP 5 BENEFITS OF ADDING INSULATION TO YOUR HOME

### 1. Lower Energy Bills & Energy Consumption

A big reason to update your insulation is the significant impact it will have on the amount of energy your home uses. If your home is not properly insulated then you are using more energy than is necessary to heat and cool them.

### 2. Prevents Mold and Damage

A leaky roof is an issue no one wants to deal with. A leaky roof coupled with mold is an even worse issue. Having an added layer of insulation creates a moisture barrier that keeps unwanted water out of your home. It is also much easier to remove old, damaged insulation and replace it than it is to replace your entire roof.

### 3. Healthier Home

Living with mold in your home and not realizing it can lead to a number of health issues. Symptoms such as a mild cough and headaches can lead to more serious issues such as chronic bronchitis and other respiratory illnesses. Insulation also helps keep allergens and pollutants outside of your home. Having fewer irritants in the air and out of your home also leads to fewer asthma attacks for any asthmatic persons or pets living in your home.

### 4. Increased Comfort

Do you have to add or take off layers depending on what floor your on? If so, the addition of insulation could really help with this problem. Adding insulation will help to ensure the temperature is more consistent throughout your home.

Insulation also can help with soundproofing and noise pollution. Whether or not if the noise is traveling from floor to floor, or from outside to inside, adding insulation to your home will help drown out the sounds.

### 5. Added Value to your Home

Adding insulation is a great way to increase your homes overall value. This is because adding insulation will result in a more efficient home. Potential home buyers will pay more for a home that is energy efficient than one that is not. They also get the added benefit of moving into an already comfortable home. This also means adding insulation will add more comfort and a return on your investment.

## DIY

# A Basic Home Energy Audit You Can Conduct on Your Home



Home energy audits done by a professional can save you hundred or thousands of dollars a year by identifying areas in your home where you are losing valuable electricity escaping through windows and walls, or being wasted by non-efficient appliances. But...energy audits done by a professional can be pricey, and in East Texas professional auditors are mostly limited to HVAC sales companies. If you want to do a basic audit yourself, the checklist below is a good place to start.

**1. DRAFTS:** Outside air comes in and cool air escapes through unsealed frames.

**How to identify:** On a windy day close all doors, windows, and chimney damper. Light a candle or incense and move it around the perimeter of each window and door. If the flame flickers or the smoke blows sideways, you have an air leak.

**How to repair:** Install new weatherstripping and caulk around all seals inside and outside around windows and doors.

**2. DAMAGED FIREPLACE DAMPER:** Ten to 20 percent of cooled air from your home can be drawn into the chimney flue, passing around a rusted, stuck, or loose-fitting damper.

**How to identify:** With the damper closed, hold a lit candle inside the firebox and watch the flame. If it gets beaten around or blown out, air is flowing up the chimney.

**How to repair:** This is one project where calling a professional would be recommended. Proper sealing of the damper will be required, and if rusted, the damper may need to be replaced. Balloon-like plugs called Fireplace Draftstoppers are also available to place in your flu, then inflate during the months when you are not using your fireplace.

**3. ELECTRICITY “PHANTOM” DEVICES:** Devices with a standby mode using power even when they aren't in use can account for 10 percent of your electricity costs; Phone chargers, TV's, and computers,

**How to identify:** If it has an indicator light, a charger or AC power adapter on the cord, or a digital clock, it's a phantom. There are detectors available that will measure exactly how much power is being drawn from the outlet when the device is “Off”.

**How to prevent:** Plug phone chargers, TV's, computers, and sound equipment into power strips. The flip of the power strip and all devices are disconnected from power.

**4. UNDER THE DOOR AIR FILTRATION:** While most homeowners weatherstrip around the jamb, they often overlook the area beneath an exterior door.

**How to identify:** Close the door on a piece of paper placed on the threshold and give it a tug. If it pulls out easily, air is passing through.

**How to repair:** Install a sweep seal. This metal strip with a piece of vinyl attached uses spring action to close the space between the threshold and door. There are also foam, vinyl, and felt seals that fit under the door or on the threshold to prevent air transfer.

- 5. LEAKING DUCTWORK:** After years of service, the adhesive on tape that seals joints between duct sections can dry out, allowing heated or cooled air to escape.
- How to identify:** With the AC on, shine a high-powered flashlight on ducts, especially at junctions where they connect. If you see where dust on the exterior of the ducts has been blown away, that's usually the sign of a leak.
- How to repair:** Use HVAC foil tape to seal joints between sections.
- 6. THE REFRIGERATOR INSIDE AND OUT:** Over time, wear and tear on the door's rubber gasket, as well as built-up dirt and dust on coils, erode its efficiency and make it more expensive to operate.
- How to identify:** The gasket condition: Close the refrigerator door on a piece of paper. If you don't feel resistance when you pull it out, the gasket seal is broken and chilled air is escaping. Mold or moisture on the gasket are other telltale signs.
- The coils: Visual inspection will reveal if there is dust or dirt on the coils.
- How to repair:** If the gasket needs replacing, order one from the manufacturer of the refrigerator and replace it. They are fairly simple to replace. If the coils are dusty or dirty, they can be wiped clean or even vacuumed.
- 7. ENTRANCE TO THE ATTIC IS NOT AIR-TIGHT:** Typically just a single sheet of plywood, an uninsulated attic entrance can allow cooled air to escape to the attic.
- How to identify:** With all windows and doors closed, turn on the air conditioner and do the candle/incense-stick test around the hatch. Watch for smoke seeping between the access panel and the wood trim frame it rests on.
- How to repair:** Secure rigid foam insulation to the back side of the hatch with duct tape, and affix foam tape around the edges of the panel to create a gasketlike seal.
- 8. UNINSULATED SWITCH AND OUTLET COVERS:** A thin metal or plastic plate isn't enough to prevent air from getting through what's basically a big hole in the wall.
- How to identify:** Remove the plate and cover the opening with a ply of tissue affixed to the wall at the top with painter's tape, like a curtain. If the tissue billows, you've got a leak.
- How to repair:** Insulate the opening with a pre-cut foam gasket, about 25 cents each at home centers. Just fit the gasket over the opening and replace the cover. For extra protection for outlets when they aren't in use, insert plastic child-safety plugs.
- 9. EXTRA REFRIGERATORS OR FREEZERS IN THE GARAGE:** Many times when a family gets a new refrigerator they will move the refrigerator they are replacing into their garage or a workshop for additional refrigerated storage. The extra storage room is nice, but often comes with a price tag with using electricity. Most garages and external workshops are uncooled areas which are much warmer than inside your home. A refrigerator works 24 hours a day to keep the storage area at a designated temperature: 41 degrees or below for the refrigerated section; 32 degrees or below for the freezer. The unit's compressor comes on and blows refrigerated air into the unit until it reaches the set temperature. It will repeat this as often as needed to maintain the temperature. If it's 98 degrees outside, chances are your unairconditioned garage will be 80-90 degrees. This is going to warm your refrigerator much more quickly than it would inside your home where the thermostat is set at a comfortable temperature, probably in the 70's. This could double or triple the power it used when it was in your home. One must also take into consideration that older refrigerators and freezers are not as efficient as the new units being sold today. They use more power, and when placed in an unairconditioned area will run often during a 24 hour period. Sometimes it is best to either dispose of the older unit. If you need more space, look at a lower end new Energy Star refrigerator or freezer.



# Top 5 Reasons ENERGY STAR® Appliances Are a Great Investment

## Top 5 Reasons ENERGY STAR Appliances Are a Great Investment

1. ENERGY STAR appliances include energy efficient refrigerators, dishwashers, clothes washers and dryers, furnaces, air conditioners, ceiling fans, freezers, water coolers, dehumidifiers and air purifiers.
2. Since heating and cooling represent nearly half of a home's energy consumption and costs, ENERGY STAR appliances such as ENERGY STAR geothermal heat pumps, programmable thermostats and energy efficient furnaces and air conditioners can significantly lower utility bills. Plus, as of December 1, 2009, homeowners who install ENERGY STAR geothermal heat pumps are eligible for an unlimited 30% federal renewable energy tax credit.
3. ENERGY STAR appliances deliver the same or BETTER performance as comparable appliance models while using LESS energy and saving MORE money. In addition to cutting household energy bills, ENERGY STAR appliances help homeowners reduce greenhouse gas emissions, limit waste production and improve indoor air quality.
4. With ENERGY STAR appliances, homeowners don't sacrifice budget, performance, features, style or comfort because the standards for appliances to qualify for this designation are so high.
5. If qualified ENERGY STAR appliances cost more than their conventional, less energy efficient counterparts, buyers will be able to recover their investment through lower utility bills within a reasonable period of time.

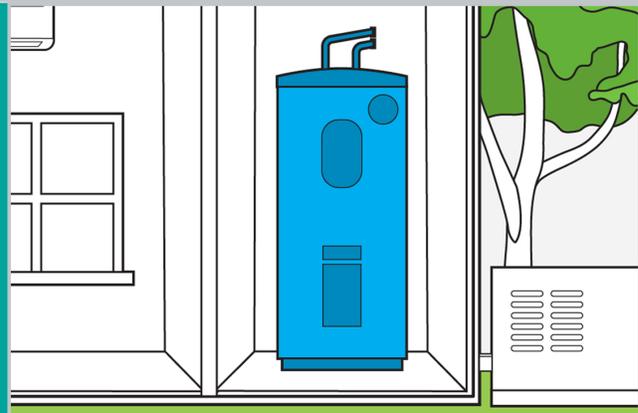
### Buyer Tip: Make informed Product Purchases

When comparing different types of residential water heaters, it is important to consider the household's anticipated water usage. As shown in the table below, the cost savings resulting from ENERGY STAR Certified products being more efficient than other models are increased with more water usage. Buyers can use this table for supplemental information when replacing standard residential water heaters with more efficient residential water heaters.

Water Usage	Very Small	Low	Medium	High
Daily Water Usage (gal/day)	10	38	55	84
Annual Energy Savings (kWh)	356	1,355	1,961	2,995
Annual Energy Cost Savings	\$31	\$117	\$169	\$259
Lifetime Cost Savings*	\$311	\$1,181	\$1,709	\$2,611

## SUPER-EFFICIENT WATER HEATER

Water heaters use about 20% of a home's energy. An important element of an ENERGY STAR Home Upgrade is a heat pump water heater that earns the ENERGY STAR label, which is up to 4 times more efficient and uses 70 percent less energy than a standard model. Upgrading to a high efficiency heat pump water heater can help you prepare for a **clean energy future**, as our energy supply gets cleaner and more renewable every day.

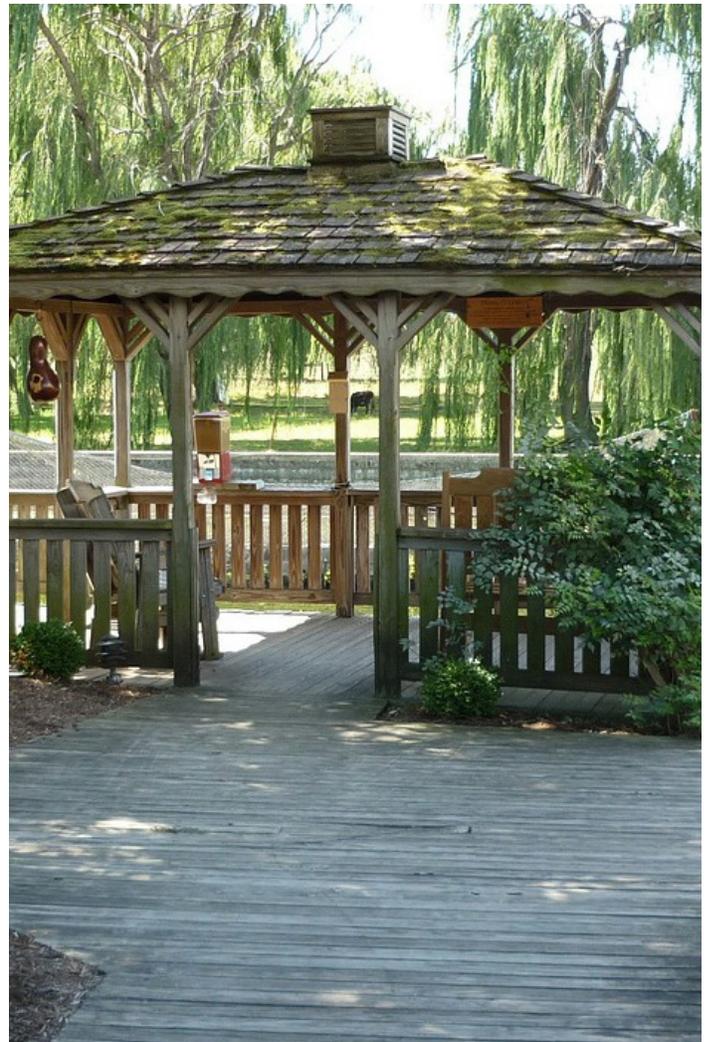


# Save Money and Energy by Planting Trees

Trees provide economic, environmental, psychological and social benefits to humans. Energy savings are one such highly valued benefit or service urban trees provide. Did you know that just 17% shade on a building from trees for example can reduce power bills by \$10/month or that urban trees can lower surrounding temperatures by as much as 20° F? Alternatively, trees can reduce winter heating costs by 15% through wind control. Correct planning, design, and care for urban trees is essential to maximize their energy conserving benefits.

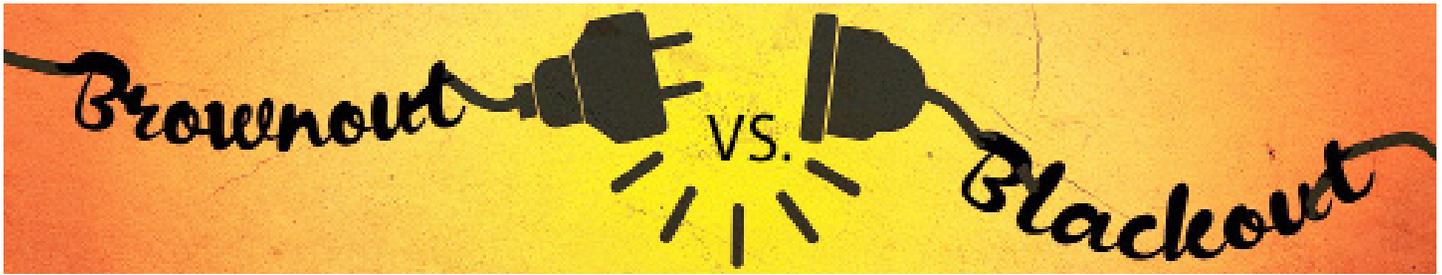
- Maximize warming effects of the sun in the winter.
- Maximize shade during the summer.
- Deflect winter winds away from buildings with windbreaks of trees and shrubs on the north and northwest side of the house.
- Tunnel summer breezes toward the home.
- Channel summer breezes toward the home.
- Maximize summer shade with trees that still allow penetration of low-angle winter sun.
- Avoid locating planting beds close to the home if they require frequent watering.

For more information on how to use trees to help shade, protect, or warm your home, please research online, or talk with your **County Extension Agent's Office**.



## Planting Trees Around Your House for Energy Efficiency





Demand for power can become greater than the amount of power being generated, such as extreme low temperatures in the winter, a heatwave in the summer, or equipment failure at generation plants. The system can become overloaded by the high usage. Brownouts may become necessary to avoid blackouts. Below are more details about brownouts and blackouts.

\*URECC will take all measures when possible to avoid brownouts, even to the extreme of shutting circuits down temporarily to avoid low voltage damage to members' electronics, HVAC units, and other products powered by electricity.

### ***What's the Difference Between a Blackout and a Brownout?***

A brownout is caused by high electricity demand that is near or above a utility's production capacity. When this occurs, the utility may reduce the flow of electricity to certain areas to prevent a blackout. A blackout is a large-scale service interruption that can happen as a result of severe weather or equipment failure at power plants.

### ***What Causes a Brownout?***

When demand is near or above the utility's maximum production capacity, the utility may intentionally throttle the flow of electricity in certain areas, resulting in a brownout. These intentional brownouts may last for anywhere from a few minutes to several hours, at which point electrical demand will presumably decrease and allow the utility to restore full power levels. And while it's far less common than severe weather events, brownouts can also occur spontaneously as a result of damage or malfunction within the grid or a nearby power plant.

### ***Why Do Blackouts Happen?***

When electrical service stops entirely, that's a blackout. The term "blackout" usually refers to large-scale service interruption, as smaller interruptions caused by things like transformer malfunctions are often simply called "power outages". But large-scale blackouts can still happen spontaneously as a result of severe weather or equipment failure at power plants.

### ***What is a "rolling blackout"?***

The term "rolling blackout" refers to a more deliberate process. Rolling blackouts are produced purposefully by electrical utilities, similar to intentional brownouts, to help temporarily ease the strain on an overtaxed electrical grid. Utilities typically spread these rolling blackouts across multiple areas for limited amounts of time, which helps prevent larger-scale blackouts. Rolling blackouts are usually announced, though they may occur on short notice.

Both blackouts and rolling blackouts are different from "**planned outages**", which are scheduled and announced days in advance when possible, often to allow for equipment maintenance.

### ***What to Do During a Power Blackout or Brownout***

If you notice dimming lights or other electrical effects in your home that sometimes come with a brownout, the first thing you should do is unplug any computers and other sensitive, valuable electronics. Low voltage levels won't hurt most of the appliances in your home, but they can potentially damage electronics.

If you don't have a whole-home surge protection system, you may also want to unplug your sensitive electronics during a blackout. They won't be harmed during the blackout, but when the power is restored afterward, there will be a momentary surge that could cause electronics damage.

### ***Who to Call in a Power Blackout or Brownout***

After making your electronics safe, the second thing you should do is check with your local utility to confirm that the brownout is coming from the grid. If everything is normal, the brownout conditions you're experiencing may be the result of an electrical problem within your home. Call an electrician for emergency service.

During a blackout, check with URECC to report the outage and inquire about the restoration of service. If you want to be aware of brownouts and blackouts both planned and unplanned, URECC sends out messaging through the URECC SmartHub app. Signing up for these alerts is often the easiest way to stay informed about electrical system changes that could affect you.

Blackouts and brownouts are rare, but understanding what they are and how to respond is key to minimizing the inconvenience.

# How the Weather Affects Your Power Usage

The URECC Member Services representatives often get calls from members after periods of hotter weather asking, “Why has my bill gone up? I haven’t changed my thermostat. It’s set on the same temperature it was last month, but my bill went up???” The answer is, “The usage of power went up, so therefore, your bill probably did, too.” Weather, mainly temperatures outside, have a major impact on your power usage.

Your AC unit primarily has one job: to take air from outside your home, cool it, and blow it inside your home until a desired temperature is reached. It does not blow cold or colder, depending on the temperature setting of the thermostat. It simply has one temperature. It comes on and stays on, blowing cold air until the thermostat says the desired temperature of the room is reached. If the room temperature is 78 degrees and your thermostat is set to 76, the AC will not have to stay on long to cool the room 2 degrees. However, if someone sets their thermostat to 80 degrees before leaving for the day (to conserve energy), then comes home after 5pm and adjusts the thermostat to 74 degrees to cool the warm house quickly, the AC will run non-stop until the room reaches 74 (using more power during peak times when electricity costs more from the generation plants). Any savings made during the day will be in vain as the unit stays on longer during a more expensive time of day. Sources at [energy.gov](http://energy.gov) recommend only adjusting the temperature a couple of degrees warmer when

away from the home to avoid running longer periods to cool things back down.

The second reason your energy use is affected by weather is the summer heat making temperatures rise. This makes your AC unit run for longer periods of time.

The air your AC takes from the outside to blow inside your home is typically HOT air during the East Texas summers. The hotter the air is coming in, the harder the AC has to work to cool it. If your AC unit outside the home sits in direct sunlight, on a typical August East Texas day, the air coming into the unit can easily be over 100 degrees. The AC unit takes the hot air, cools it as much as it can, then circulates the air in your home until it reaches the setting on your thermostat. This is why it is essential to have your AC unit serviced to confirm it has the proper amount of refrigerant to cool the air as it should, and to make sure the compressor is activating to cool the air. Being low on refrigerant or the compressor not working properly can add many hours of extra runtime and power usage over a month.

An additional idea on cooling the



outside air is tree planting to provide shade over your AC unit. There are also products available online when hooked to a water hose will provide a cool mist sprayed around your AC when the compressor comes on. The purpose of both of these ideas is to cool the air some before the compressor goes to work doing additional cooling, lightening the load on your AC, and using less electricity.

The other part of temperature affecting your AC is simply the hotter days warming your home. If you do not have drapes or blinds over windows letting direct sunlight into your home, your room could be as much as 10 degrees warmer than a shaded room. Then you have an ongoing battle of the sun heating your room simultaneously with your AC trying to cool it. The AC will have to run much more often to keep the room to the temperature setting you have chosen on your thermostat. The more your unit runs, the more it costs you in energy usage.