

# Ways to Save

Energy efficiency tips to help you lower your monthly power bill

**JACKSON**  
ELECTRIC MEMBERSHIP CORPORATION™



# Money Saving Advice

Jackson EMC is a good resource to use in your energy planning. We can show you specific ways to reduce your energy consumption, and in turn, your electric bill.

## In your planning, you need to consider:

1. the energy efficiency of your home's structure;
2. the equipment and appliances within;
3. the habits and lifestyles of your family members.

## Concentrate your efforts on the three biggest energy users:

- air conditioning
- heating
- water heating

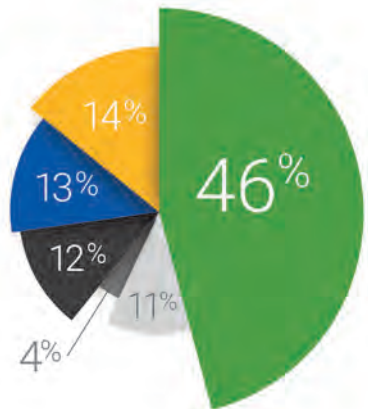
By practicing some simple energy efficiency techniques, you can lower your monthly bill. Savings can be accomplished by reducing either the wattage or the length of time that you use an appliance.

And remember, Jackson EMC's residential specialists are available for consultation and advice on insulation, equipment and operating costs – at no charge.

## Where Does My Money Go?

Annual energy bill for a typical single family home is approximately \$2,200

- Heating and Cooling
- Water Heating
- Appliances
- Lighting
- Electronics
- Other (includes external power adapters, telephony, set-top boxes, ceiling fans, vent fans and home audio)



# Maintaining Your Heating & Cooling Equipment



- ✓ **SEAL DUCTWORK.** Leaky ductwork often accounts for as much as 30% of total heating and cooling costs. Seal ducts permanently with mastic or a rated metal duct tape used primarily for areas around the unit needing access from time to time, such as the filter rack. First, seal the bigger holes and high-pressure areas, such as the air handler cabinet, plenums and take-offs. Next, seal elbows, ductwork joints and boots.

If the leakage is 20% of the total airflow, the efficiency of the cooling system can drop by as much as 50%.

- ✓ **CHECK AND/OR REPLACE AIR FILTERS EVERY 1-2 MONTHS.** Dirty or clogged air filters restrict airflow and cause your compressor to work harder, increasing costs.



- ✔ **ENSURE PROPER AIRFLOW TO INDOOR SUPPLY AND RETURN VENTS, AND AROUND YOUR OUTDOOR UNIT.** Do not block indoor supply and return vents with furniture or other objects. Keep the outdoor unit free of leaves, grass, shrubs, snow, or anything else that can block airflow.

At least 6 feet of space above and 2–3 feet of space around the outdoor unit is required for maximum efficiency.

- ✔ **CALL A TRAINED HEATING AND AIR CONDITIONING PROFESSIONAL** for a routine performance check every 6 months.
- ✔ **REFER TO JACKSON EMC'S CONTRACTOR NETWORK** when using any Jackson EMC program or seeking Jackson EMC rebates at [jacksonemc.com/contractors](https://jacksonemc.com/contractors).

# Energy Efficient Habits

- ✔ **TURN OFF LIGHTS, APPLIANCES AND TOOLS WHEN NOT IN USE.**
- ✔ **SET THERMOSTAT TO 78° IN SUMMER.** Lower settings will increase operating costs approximately 5% for every degree below 78°. If you're going to be away from home, set your thermostat even higher.

- ✔ **SET THERMOSTAT TO 68° IN WINTER.** As a rule of thumb, your heating cost will increase 3% for each degree above 68°.



- ✔ **SMART THERMOSTATS ARE DESIGNED TO CONSERVE ENERGY** by customizing heating and cooling periods, based on your patterns and preferences. Many smart thermostats can be installed by residents; but if you need assistance, contact a qualified HVAC contractor.
- ✔ **USE SHADES, BLINDS OR CURTAINS TO YOUR ADVANTAGE.** In the summer, tilt blinds up to divert heat away. In the winter, keep curtains open and tilt blinds down to let the sun and warmth in, close them at night to prevent heat loss.
- ✔ **USE LED LIGHTING WHEREVER POSSIBLE.** LED lights not only provide more light than incandescent bulbs, they emit less heat for your air conditioner to cool. LED lights are more efficient than CFL lights.
- ✔ **REDUCE OPERATING TIME OF AIR CONDITIONING UNIT** by using the dishwasher and stove during the cooler evening hours.



- ✔ **OPERATE CEILING FANS DURING THE COOLING SEASON** to increase your comfort level if you select a higher, more energy-efficient thermostat setting.

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- ✔ **DO NOT PLACE LAMPS OR OTHER HEAT PRODUCING APPLIANCES NEAR THE THERMOSTAT.**
- ✔ **INSTALL A PROGRAMMABLE THERMOSTAT** to achieve energy savings in the summer and winter. *If you have a heat pump*, ask your heating and air conditioning professional for a programmable thermostat specially designed for these units.
- ✔ **FOR MEMBERS WITH HEAT PUMPS:** In the winter, nighttime setbacks and frequent thermostat changes will **increase energy costs** and are **not recommended**. Programmable and smart thermostats designed for heat pumps permit setbacks without increasing operating costs.
- ✔ **SET THE THERMOSTAT TO EMERGENCY HEAT ONLY** in the event the heat pump is not working. Because emergency heat costs nearly twice as much to operate as the heat pump during normal operation, it should not be used except in the case of system failure while awaiting repairs.

# Save More By Inspecting The “Thermal Envelope”



- ✔ **CHECK ATTIC INSULATION.** With proper insulation in your attic, your savings in air conditioning and heating costs will often cover the expense of your investment in insulation. An attic insulation value of R-38 will help achieve greater comfort while lowering heating and cooling bills.
  - ▶ Check your insulation to ensure a blown-in fiberglass depth of 12”-14”, a blown-in cellulose depth of 8”-9”, or a batt depth of at least 10”.
  - ▶ Never let storage items compress insulation.

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- ✔ **CHECK FOR PROPER VENTILATION IN ATTICS AND CRAWL SPACES,** which reduces moisture build-up in the summer and winter.
- ✔ **CAULK AND WEATHERSTRIP AROUND EXTERIOR DOOR AND WINDOW FRAMES.** Caulk and seal cracks and penetrations on the exterior or interior of the home, including plumbing penetrations.
- ✔ **REDUCE HEAT TRANSFER FROM THE ATTIC** by installing an attic hatch cover over the pull down stairs and ensuring older attic fans are sealed to prevent air loss from the attic.





✔ **IN THE WINTER, USE THE FIREPLACE SPARINGLY.** It draws your home's heated air up the chimney.

- ▶ Be sure the damper is closed when the fireplace is not in use.
- ▶ Use glass fireplace doors to help reduce air infiltration.

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✔ **MAKE CERTAIN THE FLOOR ABOVE YOUR BASEMENT OR CRAWL SPACE IS WELL INSULATED.** An insulation value in the floor of R-19 will help achieve greater comfort while lowering heating bills. Make certain fiberglass is facing out and insulation is secured to the floor with no gaps.

✔ **INSTALL INSULATED FOAM GASKETS** under electric outlets and light switch plate covers to reduce air infiltration.

✔ **USE A SPRAY FOAM SEALANT TO SEAL HOLES** around pipes in bathrooms and kitchen cabinets.

# How Much Electricity Appliances Use



## KITCHEN APPLIANCES (per year)

APPLIANCE	kWh	COST
Dishwasher	472	\$39.24
Range with Oven	1,129	\$93.90
Freezer – Upright, Manual Defrost	1,113	\$92.56
Freezer – Chest, Manual Defrost	894	\$74.34
Freezer – Upright, Frost Free	2,646	\$220.11
Microwave Oven	193	\$16.09
Refrigerator	1,460	\$121.47
Toaster Oven	428	\$35.62



## LAUNDRY (per year, family of 4)

APPLIANCE	kWh	COST
Clothes Washer	124	\$10.31
Clothes Dryer	2,348	\$195.33
Iron	199	\$16.55

## WATER HEATING (per year)

APPLIANCE	kWh	COST
Electric Water Heater	4,928	\$409.97



## COMFORT CONDITIONING (per year)

APPLIANCE	kWh	COST
Ceiling Fan	110	\$9.11
Dehumidifier	3,298	\$274.41
Whole House Fan	1,825	\$151.84
Window Fan	438	\$36.44



## CONSUMER ELECTRONICS (per year)

APPLIANCE	kWh	COST
Computer	460	\$38.26
Plasma TV	875	\$72.80
Stereo	161	\$13.36



## MISCELLANEOUS (per year)

APPLIANCE	kWh	COST
Clock Radio	88	\$7.29
Curling Iron	3	\$0.25
Electric Blanket (8 hours/day)	511	\$42.52
Hair Dryer	110	\$9.11
Vacuum Cleaner	36	\$2.96
18-Watt Compact Fluorescent Bulb	39	\$3.28
100-Watt Fluorescent Light Bulb	219	\$18.22

Usage adopted from Apogee Interactive, Inc. These figures are based on standard usage and standard wattage calculations. If you'd like specific numbers for your home, please visit [jacksonemc.com/monitor](http://jacksonemc.com/monitor).

Appliance Energy-Use Calculators can only compute approximate energy-use values. This is due to varying conditions of climate location, actual versus run watts, "hidden" loads, and use patterns that change from day-to-day within any given home.

Not all appliances actually go "off" when turned off. These "hidden" loads are appliances that, when turned "off", still use power (timer, clock, remote control, etc.), even though they appear to be off or not in use. "Hidden" loads are included where typically applicable.

# Saving on Water Heating Costs

- ✔ **CHECK THE EFFICIENCY OF YOUR WATER HEATER** and consider replacing an old, inefficient water heater with a new high-efficiency model. A high insulation R-value in the tank wall is one thing to shop for in addition to longer warranties – 10 years and up.
  - ✔ **CHECK WATER TEMPERATURE.** Set the water heater thermostat to 120°F for energy efficiency.
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- ✔ **REPAIR LEAKY FAUCETS AND PIPES.** Little drips add up. A hot water faucet that drips once per second will waste 1,661 gallons of water per year plus the electricity used to heat it.
- ✔ **INSULATE HOT WATER PIPES.** Insulate hot water pipes, especially the first three feet that exit your water heater.



- ✔ **USE COLD WATER OR WARM WATER, INSTEAD OF HOT WATER, FOR LAUNDRY AND HOUSEHOLD CLEANING.**
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- ✔ **INSTALL WATER FLOW RESTRICTORS AND LOW-FLOW SHOWERHEADS** that will reduce the amount of hot water needed. For maximum water efficiency, select a shower head with a flow rate of less than 2.5 gpm.
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- ✔ **CENTRALLY LOCATE THE WATER HEATER** to areas of greatest use like the kitchen, laundry room and bathrooms.

# Tips For Buying New Equipment

✔ **CHECK THE SEASONAL ENERGY EFFICIENCY RATIO (S.E.E.R.) WHEN YOU BUY.** The S.E.E.R. is the ratio of the total cooling provided during the season to the total energy consumed by the air conditioner or heat pump. The higher the S.E.E.R. the more efficient the air conditioner, and the less energy it will take to cool your home. These savings can partially offset the cost of new equipment within a few years. The size and construction of your house will determine the size of the unit you need.

✔ **CHECK THE HEATING SEASONAL PERFORMANCE FACTOR (H.S.P.F.) WHEN YOU BUY AN ELECTRIC HEAT PUMP.** The H.S.P.F. is the ratio of the total heat provided during the heating season to the total energy consumed by the heat pump. The higher the H.S.P.F., the more efficient the electric heat pump. A high efficiency heat pump can also reduce your cooling bills and make your home more comfortable.

✔ **REPLACE YOUR AIR CONDITIONER WITH AN ENERGY EFFICIENT HEAT PUMP.**

Replacing an older heating and air conditioning system with a new high-efficiency electric heat pump can, in many cases, reduce your heating bill by as much as half.

If you have a gas furnace, a new electric heat pump will work with it to keep you comfortable year-round. The high-efficiency heat pump cools your home in the summer just like an air conditioner. In the winter, it heats your home with outside temperatures as low as 32°F. Below 32°F, your gas furnace will provide supplemental heat.

For more information on how to improve your home's energy efficiency, please visit [jacksonemc.com](http://jacksonemc.com) or contact the Jackson EMC office nearest you.



FOR MORE INFORMATION, PLEASE VISIT  
[JACKSONEMC.COM](http://JACKSONEMC.COM) OR CONTACT THE  
JACKSON EMC OFFICE NEAREST YOU.

### **GAINESVILLE**

1000 Dawsonville Highway • Gainesville, GA 30504-0909  
(770) 536-2415

### **JEFFERSON**

850 Commerce Road • Jefferson, GA 30549-0038  
(706) 367-5281

### **LAWRENCEVILLE**

825 Buford Drive • Lawrenceville, GA 30043  
(770) 963-6166

### **NEESE**

85 Spratlin Mill Road • Hull, GA 30646-0085  
(706) 548-5362

