MOU/CO-OP ENERGY EFFICIENCY PROGRAMS REPORTING FORM

For: Electric Cooperatives that had retail sales of more than 500,000 megawatt hours in 2005, and Municipally-Owned Utilities

SECO State Energy Conservation Office

Energy Systems Laboratory

Purpose of this document: *As mandated by the 82nd Legislature (2011), beginning April 1, 2012, all electric cooperatives that had retail sales of more than 500,000 megawatt hours in 2005 and all municipally owned utilities must report each year to the State Energy Conservation Office (SECO), on a standardized form developed by SECO, information regarding the combined effects of the energy efficiency activities of the electric cooperative/utility from the previous calendar year, including the annual goals, programs enacted to achieve those goals, and any achieved energy demand or savings goals. [Sections 39.9051 and Section 39.9052 of the Utilities Code].*

This form is intended to partially fulfill the reporting requirement. Please provide all the information requested below.

DATA FOR A CONSECUTIVE 12-MONTH PERIOD:

Beginning: 01 / 01 /2012 **Ending:** 12 / 31 /2012

Please attach a copy of the detailed report containing the below information.

MOU/Co-op: Trinity Valley Electric Cooperative

CONTACT PERSON (Name & Title)**: Trevor Moeller Energy Management Advisor**

ADDRESS: 1800 Highway 243 East

CITY: Kaufman TX. ZIP75142

PHONE:903-264-1167 EMAIL: TREVORM@TVEC.COOP

Energy Efficiency Program	**Estimated Electric Peak Demand Savings** (kW)	**Estimated Electricity Use Savings** (kWh)	**Estimated Natural Gas Increase From Fuel Switching – If Applicable** *Specify Units:* ☐CCF ☐MCF ☐Therms	**Other Program Performance Metric**
Res/Comm. Energy Audits(54 in 2012)	Unavailable	Unavailable		
Energy Management Presentations to the following organizations: -Community Service Workshops: Nine per year -Agri-Life Child Care Conferences: Twice per year -Master Wellness Volunteer: Once per year -Diabetes Organization- Do Well Be Well Group: Once per year -Kaufman County Leadership Advisory Board: Once per year -Senior Citizens Groups: Once per year in Kaufman, Forney and Terrell -Henderson County Master Gardeners -Canton Lions Club -Co-op Connections Card				

Requirement 2:
Energy Efficiency Goals

Trinity Valley Electric Cooperative, Inc.

Kaufman, Texas

BOARD POLICY 403

ENERGY CONSERVATION

I. OBJECTIVE

To establish policy concerning use of energy by the Cooperative and its members, particularly in regard to effectiveness, efficiency, and conservation of energy. This objective is consistent with the utility responsibilities of a full-service cooperative and its prime concern for members needs.

II. POLICY

It shall be the policy of Trinity Valley Electric Cooperative to:

A. Constantly examine its own use of energy. This includes, but is not limited to, plant engineering design and construction, lighting and climate control and use of vehicles.

B. Develop and carry out a system-wide program of energy management including energy conservation, adequate home insulation and weatherization, efficient irrigation and other farm and business uses. Alternate energy sources will be appropriately considered.

C. Develop and carry out an information program so that the need for energy management is understood along with understanding of what each member can do to meet energy use needs most effectively.

D. Develop and carry out an information and education program with major groups involved in housing, including the building industry and local government organizations, to assure understanding and coordination in methods of energy management.

E. Develop training as appropriate for all employees.

Trinity Valley Electric Cooperative
FEB 2 8 2012
Approved
Board of Directors

III. RESPONSIBILITY

The General Manager/CEO shall have responsibility for the implementation of this policy.

Howard Tillison, Board Chairman

February 28, 2012
Date

Trinity Valley Electric Cooperative
FEB 2 8 2012
Approved
Board of Directors

Requirement 3:Energy Efficiency Programs

Trinity Valley Electric Cooperative does not track estimated energy savings for residential or commercial consumers. We offer to members estimated energy savings in percentages for various energy conservation improvements; however, we do not feel that it is realistic to associate a monetary value to those savings. There are too many factors that affect a members bill to determine how much of a reduced bill was due to energy savings versus other factors such as weather, wholesale power costs, reduced/increased power cost recovery factor, etc.

Requirement 4:
Program Materials/Additional Information

Website Information

www.tvec.net

A Touchstone Energy® Cooperative

Energy Management

Home Energy Audits

As a special service to our members, we offer free Home Energy Audits. Upon request, trained TVEC personnel will visit your home and offer advice on ways you can improve the management of your energy usage. If you are interested in this valuable service, call our Member Service Department toll-free at 800-766-9576 for an appointment. We will be happy to explain the details.

TogetherWeSave

The Department of Energy estimates that by 2035 residential demand for electricity will increase 24% above 2008 levels. We want to work with you to keep your electric bill affordable. Find out how you can save by visiting www.togetherwesave.com

You Have the Power

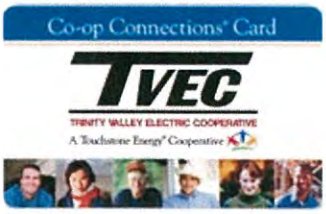
Download your copy of You Have The Power, a free guide to help lower your utility costs by using energy wisely. This guide will give you all the information you need to manage energy effectively in your home or business. Remember, doing all you can to effectively manage energy use will have a direct impact on your energy costs and quality of life. As a co-op member, that's the kind of power you have. Download your copy here.

Becoming Energy Wise

In this 13-minute video, consumers learn how to reduce their energy costs. The video demonstrates simple, effective improvements to make homes more energy efficient. Contact Bobbi Byford at (469) 376-2234 for more information.

Energy Tips

The following tips will help you make your home safer, more energy efficient and a more comfortable place to live. By following these simple tips, you can be health-wise and energy-conscious.



MISSION STATEMENT: At Trinity Valley Electric Cooperative, we are committed to our member-owners to deliver safe and reliable electric power at a competitive price, with a strong emphasis on member service, community and sound business practices.

Set the thermostat from 76 degrees to 78 degrees in the summer months.
Set the thermostat from 68 degrees to 70 degrees in the winter months.
Use fans to circulate air to help stay comfortable.
Use curtains, drapes or blinds to help control the temperature inside your home.
Repair or replace broken or cracked windows.
Change or clean your heating/cooling unit filter once a month.
Run dishwasher and washing machine only when they are fully loaded.
Insulate hot water pipes and ducts wherever they run in unheated areas.
Replace older, inefficient appliances with new energy-efficient models.

Weatherizing

Put a draft stopper along cracks, beneath doors and windows.
Place movable insulation in windows to block heat gain during the summer and keep heat indoors during the winter.
Use caulk and weather stripping around doors and windows to prevent air leakage.
Install inexpensive gaskets around light switches and electrical outlets to seal against air leaks.

Water Heating

Check your water heater thermostat setting. If the thermostat is set between 140 degrees and 160 degrees, or "high", you can reduce the setting to between 110 degrees and 120 degrees, or "medium", and save at least $20 a year with an electric water heater or $10 a year with a gas water heater. The lower thermostat setting can also prevent scalding.
Look for and repair leaky faucets.
Replace your showerhead with a low-flow showerhead. This can reduce the flow of water from 8 gallons to 3 gallons per minute, and save up to 4,000 gallons of water a year.
Run your dishwasher and washing machine only when they are fully loaded.
Save even more hot water by using a cold water laundry detergent so you can wash and rinse with cold water. Normally, only very greasy clothes need to be washed in warm or hot water.

Lighting

Replace two bulbs with one bulb that produces a similar amount of light. For instance, you could replace 60-watt bulbs with one 100-watt bulb. However, be sure that the fixture is rated to use the higher wattage bulb.
Change to fluorescent lamps wherever possible by replacing the entire fixture or by changing from incandescent to compact, fluorescent bulbs. The initial cost of a compact, fluorescent bulb is more than an incandescent bulb, but it can last up to 12 times longer and produce less heat, which will reduce the load on your air conditioner.

Cooking

Cook several foods at one time when using your oven. Prepare dishes that can be stored or frozen for later use.
Bake food in glass pans. Glass pans allow you to reduce the oven temperature by 25 degrees.
Use small cooking appliances, such as deep fryers, electric skillets, toaster ovens, microwave ovens and pressure cookers. These appliances use less energy than your range or oven.
Match the size of the pan to the heating element when cooking on the stove. More heat will get to the pan and less will be lost to the surrounding air.
Place lids on pots when cooking to retain the heat. This will help your food cook faster and keep vitamins from going up in steam.

TVEC Trinity Valley Electric Cooperative, Inc.

TOGETHERWESAVE $39,039,125

64 Like 120 Tweet 45

Home | Add Up Your Savings | Share Your Story | Energy Saving Forum | Watch & Learn | Energy Saving Applications | Links & Resources | Contact Us

What can you do?

Pull the plug	$0
Adjust your water heater	$0
Turn off the lights	$0
Install CFLs	$0
Upgrade your refrigerator	$0
Upgrade your HVAC	$0
Upgrade your dishwasher	$0
Seal your air ducts	$0
Upgrade washing machine	$0
Change your air filter	$0
Seal the cracks	$0
Adjust the blinds	$0
Add insulation	$0
Adjust your thermostat	$0
TOTAL SAVED:	**$0**

Calculation Assumptions

Assumptions | Privacy Information | Legal Information | Take the TogetherWeSave.com Survey | Copyright © 2010-2012 Touchstone Energy Cooperative, Inc. All rights reserved.

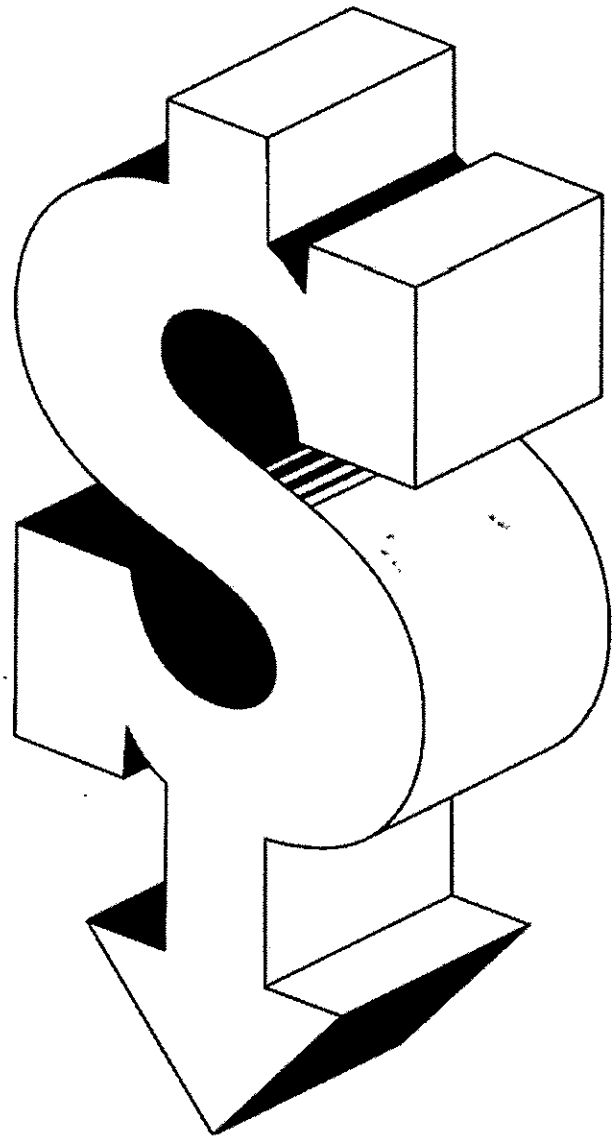
You have the

POWER!

A Guide to Cost-Cutting Conservation Measures

A Guide to Lowering Utility Costs by Using Energy Wisely

One of the best things about being a member of an electric cooperative is that you have the power to directly affect what you pay for energy.



When all co-op members make the effort to manage their energy use more effectively, the result is that the co-op ultimately doesn't need to buy as much energy to serve members' needs. That means that the cost of energy comes down for everyone in the co-op. Not only that, you'll also be helping to reduce your co-op's dependence on power generated by fossil fuels. That means cleaner air for everyone.

This guide is designed to give you all the information you need to manage energy effectively in your home or business. You'll learn how to make the most efficient use of energy in everything from heating and cooling systems to lighting and appliances. There are tips on saving energy in small ways every day, as well as detailed information about taking energy efficiency into account when it's time to replace major appliances or if you're undertaking a major home renovation.

Remember, doing all you can to effectively manage energy use will have a direct impact on your energy costs and quality of life. As a co-op member, that's the kind of power you have.

1 **Heating and Cooling** 2

2 **Appliances** 7

3 **Home Electronics** 10

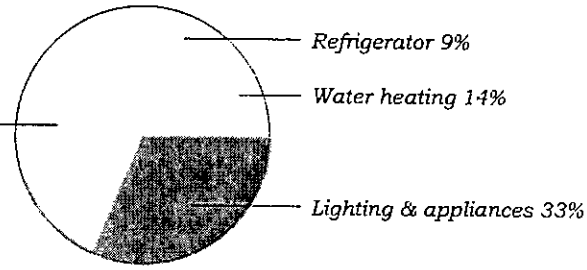
4 **Lighting** 11

5 **Pools and Spas** 12

Heating and Cooling

Because you spend the largest portion of your energy dollars staying warm or cool, you'll save the most on energy by taking steps to use your heating and cooling systems more efficiently. Follow the tips on the next few pages, and you can reduce your heating and cooling bills by as much as 50 percent.

Heating and Cooling: The Biggest Piece of the Energy Pie



Adapted from the U.S. Department of Energy's Energy Savers booklet, available at www.eere.energy.gov.

Simple Steps You Can Take to Save on Heating and Cooling

There are many simple, low-cost (or no-cost) things you can do every day to reduce your use of energy for heating and cooling, such as setting your thermostat appropriately or using ceiling fans to circulate heated or cooled air more effectively.

Set Your Thermostat on "Savings"

The single best way to reduce heating and cooling costs is to set your thermostat at 78° or higher in summer and 68° or lower in winter. If you're keeping your thermostat at 72° in the summer, consider this: According to the U.S. Department of Energy, raising that setting to 78° could save you up to 47 percent on cooling costs.

You'll save additionally by greater adjustments to your thermostat (higher in summer, lower in winter) while you are away from home or asleep. When you return or wake up, don't set it at an unnaturally lower or higher setting to try to cool or heat the house faster. That doesn't work; it just cools or heats the house more than you need, which uses more energy.

Do keep in mind that if you have an infant or an older person living in your home, they may require cooler or warmer temperatures to stay healthy. Use your common sense.

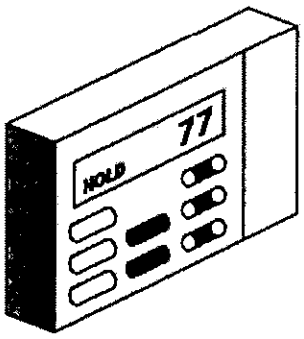
> Every degree above 78 that you set your thermostat in summer will save up to 3 percent on cooling costs.

Consider the Alternatives

The principle is simple: It's a lot cheaper to move air around than it is to heat or cool it. With that in mind, consider these ways to stay cool in summer and warm in winter without depending entirely on your central system.

In the heat of the summer, use fans to circulate cooled air while you keep the thermostat at a higher setting.

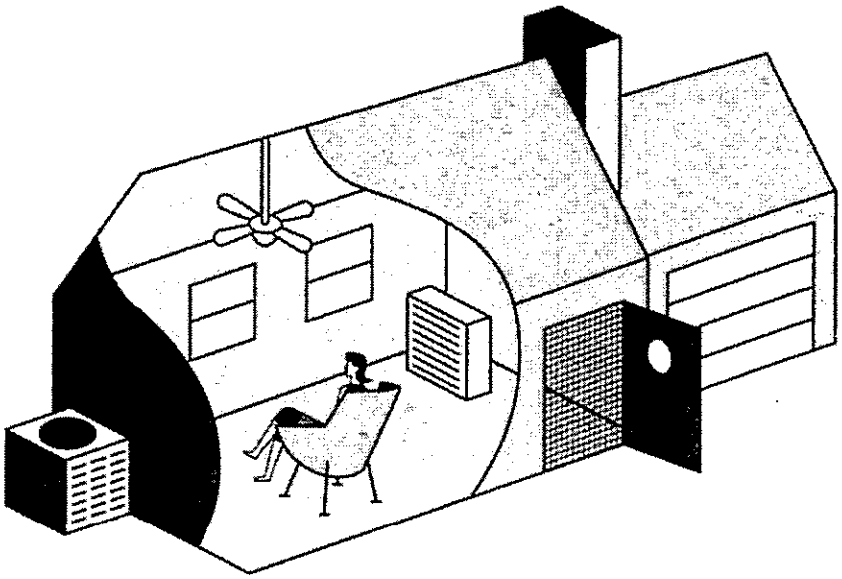
If you live in a part of the state with low humidity, consider an evaporative cooler as an alternative to central air conditioning. Evaporative coolers use water evaporation to cool the air and a fan to circulate it.



Programmable Thermostats

For maximum energy efficiency in heating or cooling, use a programmable thermostat to automatically adjust the setting when you leave the house or go to bed and then turn it back to normal when you return or wake up. Programmable thermostats range in cost from $45–$100+, but can easily pay for themselves in energy savings.

There are many options for heating and cooling your home. During temperate weather, consider leaving windows and doors open if you feel safe doing so. Use floor and ceiling fans to circulate air. For maximum cooling, use the central system supplemented by fans, and lower window shades to keep out the sun. For maximum heating, use the central system supplemented by fans, and open shades to take advantage of the sun's rays. ▶



In spring and fall, when it's not particularly hot or cold, a whole house fan can be an excellent alternative to your central system. Installed in the ceiling, a whole house fan draws outdoor air inside to cool the house.

Use pleated instead of mesh filters in your central air-and-heat system for better filtration.

Get Your Ducts in a Row

Are the air ducts in your home delivering all the warmth or cooling your system is generating--or are they losing it due to poor performance? Here's what you can do to make sure your ducts are working properly and delivering the conditioned air you're paying for.

Be sure your ducts aren't leaking. You or your service professional will be looking for:
- Obvious holes in the ducts.
- Dirty spots on the duct insulation and around air vents.
- Areas where connections have become separated.

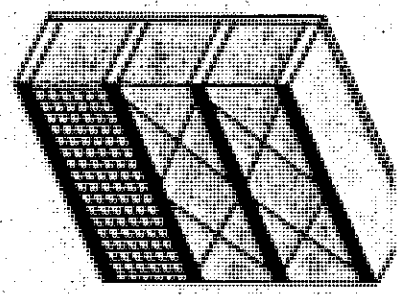
If you find only a few problem areas and you're a do-it-yourselfer, you can repair and seal them with duct tape. Just be sure to use tape with the Underwriters Laboratories (UL) logo on it to avoid tape degradation or cracking over time. However, if you find that your ductwork is very poorly insulated or has extensive leakage problems, call a service professional.

In winter, set your ceiling fan to turn clockwise to send warm air downward into the room. In summer, set it to turn counter-clockwise to circulate cool air through the room.

Attic Insulation

- Measure carefully to be sure you buy the correct amount of insulation.
- Get the right stuff. Choose batts or blankets to fit between joists, and use rolls or blankets on the attic floor.
- Install a vapor barrier of thick plastic sheeting if you choose insulation in the form of "faced" batts or blankets.
- Follow the product instructions and wear proper protective gear when installing insulation.
- Have attic vents installed along the ceiling cavity; this will ensure proper airflow from soffit to attic to control moisture and maintain the insulating power.

In a multi-story building, lightweigh fencing (left) or wire lacing (right) retains insulation between floors.



Home Improvements That Can Save You Plenty

Energy-related home improvements may not be as inexpensive as buying a fan or as simple as scheduling a system checkup, but they can be well worth the expense or time they require.

Save With a Heat Pump

Like standard systems, heat pumps can meet your heating and cooling needs in one unit. The difference is that a heat pump will heat for significantly less cost than a typical electric resistance-heating unit. There are two types of heat pumps available today.

- Air-source heat pumps draw heat from the air outside to heat your home in winter, and expel heat outside to cool your home in summer. An air-source heat pump may reduce your heating costs by up to 50 percent if you convert from an electric furnace to an all-electric air-source heat pump. Generally, the colder it gets where you are, the less the savings, since the colder the air outside, the more difficult it is to extract heat from it.
- Ground-source heat pumps (also known as geothermal or earth-energy systems) make use of the earth's ability to store natural heat. They pump heat from deep in the earth into your home rather than taking it from the air. A ground-source heat pump may cost more than a conventional system, but the energy savings could pay for the unit in three to five years.

Regular System Maintenance

Like any other mechanical device, a central heating and cooling system will only work well if it's regularly maintained. That means keeping the system properly "tuned" with regular professional checkups, frequent filter cleanings or replacements, and periodic observation of both the inside and outside units.

Be Good to the Planet and Your Pocketbook: Go Solar

Using passive solar energy to heat and cool your home can cut your heating costs by more than 50 percent and help reduce your cooling costs, too. If you're building a new home or doing a major renovation of your existing home, consider passive solar techniques such as:

- Placing larger, insulated windows on south-facing walls for more efficient heating.
- Improving heat transfer by locating thermal mass, such as a concrete slab floor or heat-absorbing wall, close to windows.
- Using reflective coatings on windows, exterior walls and roof to keep out heat in summer.
- Installing strategically designed overhangs to shade the house from summer sun.

Keep the Air Inside Where It Belongs

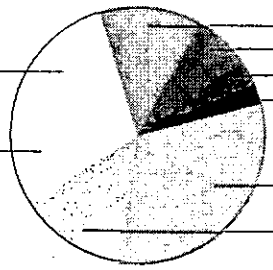
If your heating and cooling dollars are going out the window due to air leaks in your house, you need to caulk, weather-strip and insulate.

Caulking, or filling cracks and gaps in your home will eliminate air leakage around doors and windows as well as in areas where plumbing, ducting or electrical wiring penetrates the house. Weather-stripping is also useful around doors and windows that leak air.

Insulation creates a barrier of resistance to keep heat from escaping in winter or coming in during summer. The "R-factor" assigned to different types of insulation refers to the level of resistance. Different R-factor ratings are appropriate for different parts of the state, so check with your co-op and a local insulation dealer to see what's right for you.

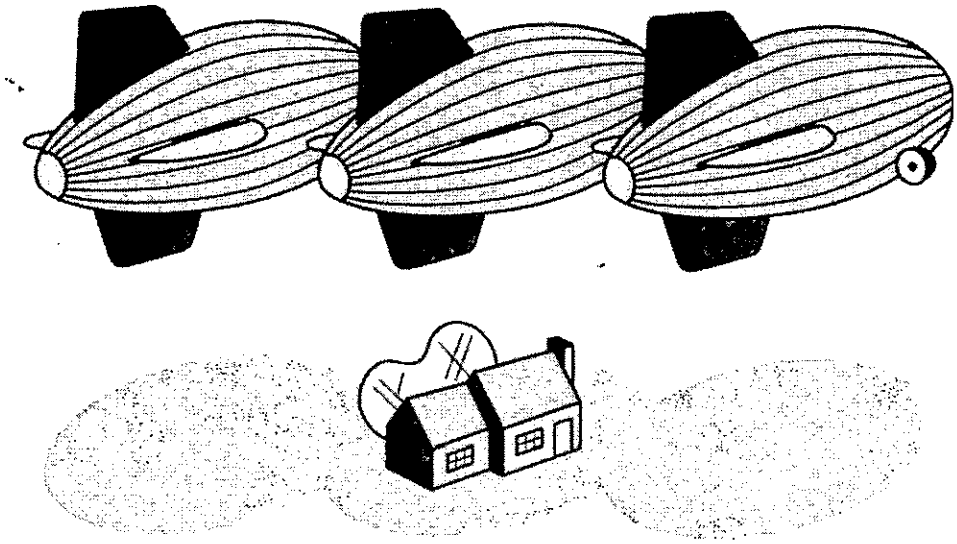
The best place to start insulating is the attic. That's because heat tends to rise and is therefore more likely to be lost or gained through the highest part of the house. The attic is also one of the easiest places to install insulation.

Where Does the Air Go?



Adapted from the U.S. Department of Energy's Energy Savers booklet, available at www.eere.energy.gov.

More than 600,000 cubic feet of air passes through the older Texas house daily. That's enough to fill three Goodyear blimps every 24 hours. ▶



Let the Sunshine In (But Only in Winter)

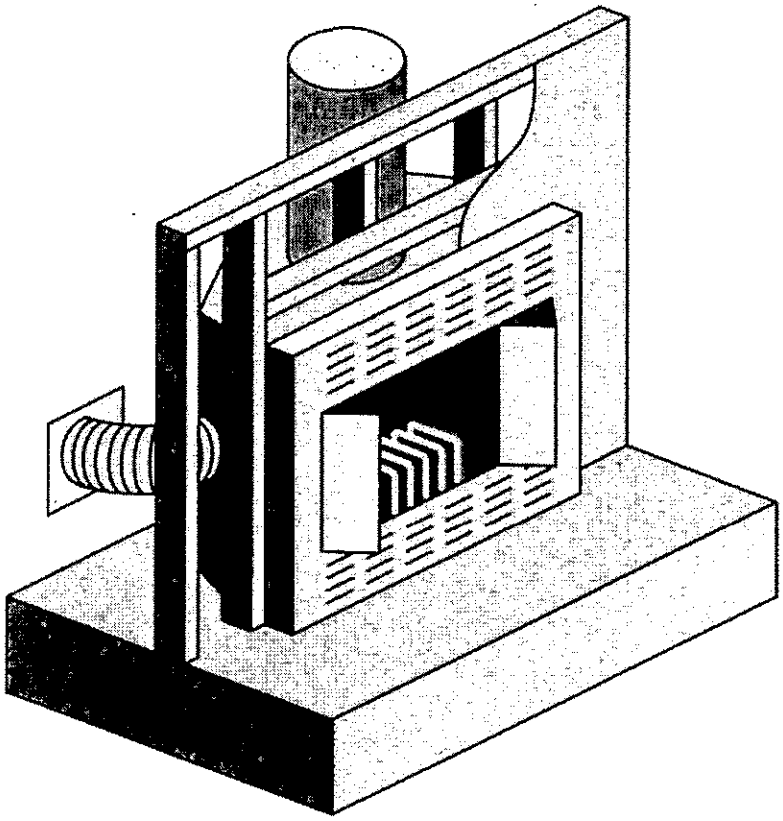
The U.S. Department of Energy estimates that one-fourth of the energy used to cool and heat your home is lost through windows.

Things you can do inside:

- Use lined draperies, opaque roller shades or special thermal shades on windows.
- Choose carpeting over fibrous padding for optimal heat gain or loss.
- Use fabric or woven wall coverings.

Things you can do outside your home to reduce energy loss:

- Consider installing storm windows and double-pane windows, which are at least twice as effective as single-pane windows.
- When you do spring planting, choose deciduous greenery for the south and west sides of your house that will leaf out and block the sun in summer--but lose its leaves and let in warming rays in winter.
- Consider the new solar panels that can absorb and dissipate up to 70 percent of the sun's heat and glare before it reaches the windows. They are easy to install and can be removed in winter.



Keep your fireplace damper closed unless a fire is going. Leaving the damper open is like throwing open a 48-inch window. The damper should be well sealed. It's best to cover the firebox opening with metal or glass doors, which will restrict the amount of heated air drawn from the house.

Keep the Home Fires Burning Efficiently

As much as 30 percent of your conditioned air could vanish right up the chimney. That's because a fireplace needs air to keep the fire burning–and it gets that air from inside your home, where you've already paid to make the air warm. Take these steps to improve fireplace efficiency:

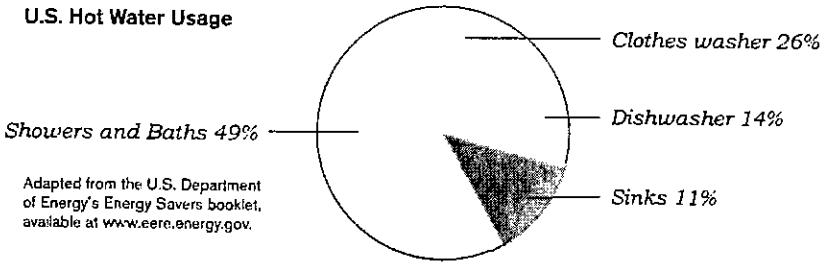
- Cover the firebox opening with tight-fitting metal or glass doors.
- Have a tight-fitting flue damper with an accessible handle; keep the damper open when the fireplace is in use and closed when it's not.
- Use a combustion air intake with a tight-fitting damper to draw air from outside into the firebox.
- Keep ash box clean, especially if outside, to provide air source.
- Use well-aged firewood, which burns hotter and cleaner.
- Caulk around the hearth.
- Plug and seal the chimney flues of unused fireplaces.

Stay Out of Hot Water

Water heating accounts for a sizable part of your energy bill–about 14 percent. Fortunately, there are a number of things you can do to ensure that you have plenty of hot water without wasting energy in the process.

Start by thinking of ways to use less hot water. Take showers instead of tub baths, for example. Or install low-flow showerheads and faucets. You can also reduce your energy consumption for water heating by turning down the water heater thermostat. (A setting of 120 degrees will provide a comfortable water temperature for most uses.) And you can insulate your hot-water storage tanks and pipes to reduce heat loss.

U.S. Hot Water Usage



Adapted from the U.S. Department of Energy's Energy Savers booklet, available at www.eere.energy.gov.

SEER: We Spell It Out for You

When buying a new central system or heat pump, check the unit's SEER (Seasonal Energy Efficiency Ratio) number. The higher the SEER, the more efficient the unit's performance

Heating and Cooling in a Nutshell

- Set the thermostat at 78 degrees in summer, 68 degrees in winter.
- Consider alternatives such as fans to take the load off your central system.
- Have your system serviced regularly for efficient operation.
- Clean or replace filters regularly.
- Keep ducts in good repair to avoid air leaks.
- Caulk, weather-strip and insulate.
- Install storm windows and double-pane windows.
- Landscape with plants that will block the sun in summer and let it in during winter.
- Choose window coverings, carpet and wall coverings with energy efficiency in mind.
- Take steps to minimize air loss through the fireplace.
- Lower the water heater thermostat to 120 degrees.

Appliances

The energy costs to operate everyday appliances such as refrigerators and freezers, ranges and ovens, washers and dryers, and dishwashers account for about 20 percent of your electric bill. You can reduce these costs by using appliances efficiently and by looking for high-efficiency choices when it's time to buy new ones.

Tips for Using Appliances Efficiently

Refrigerators and Freezers

Keep it clean. Regularly defrost models that aren't frost-free, and clean the condenser coils of your refrigerator three or four times a year.

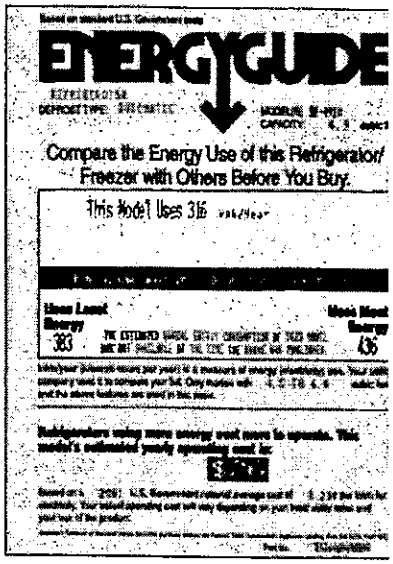
Shut the door. Don't stand in front of an open fridge contemplating the contents. Decide what you need before you open the refrigerator, then get what you need and shut the door.

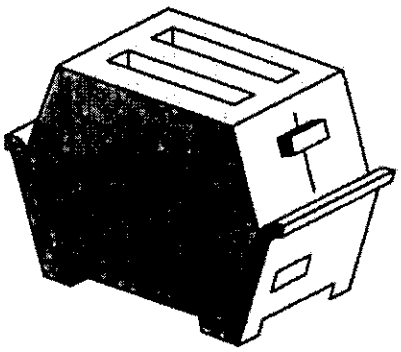
Fill the freezer. A freezer that's two-thirds to three-quarters full requires less energy to operate than an empty one. If you don't have enough food to fill the freezer, add some water-filled plastic milk cartons or soda bottles.

Test the seals. Fold a paper towel, shut the refrigerator door on it and then pull the towel out of the closed door. If there's no resistance, you probably need new seals around the door to keep the cold air in.

Maintain the right temperature. Optimum refrigerator temperature is 38 to 42 degrees. For the freezer, it's 0 degrees or higher (although not higher than the freezing point of 32 degrees, obviously).

Pay Attention to the EnergyGuide Label. It includes the estimated energy consumption in kWh on a scale with similar appliances and the estimated yearly operating cos based on the national average cos of electricity.





How Much Are You Paying to Run Your Appliances?

To determine how much electricity an appliance uses, follow these steps:

1. Find the wattage of the appliance. (It's usually listed on the serial number plate.)
2. Estimate the hours per month that you use the appliance.
3. Multiply the wattage by the hours of use per month. Divide the result by 1,000 to get your total monthly kilowatt-hour (kWh) usage for the appliance.
4. Figure out your average monthly cost per kWh by dividing your total monthly electric bill by the number of kWh used. (kWh used will be listed on the bill.)
5. Determine your monthly energy cost for the appliance by multiplying the kWh usage by your cost per kWh.

Electric Ranges and Ovens

Keep it covered. Use pan lids to retain the heat in the pan. Remember that water boiled in a covered pan comes to a boil faster.

Use the right pan. Don't waste energy by using a pan or pot that is too small for the burner, or that is too large or heavy for the amount or type of food you are cooking.

Turn off burners sooner. Because electric burners stay hot for a while after they're turned off, you can turn the burners off several minutes before the allotted cooking time. The food will finish cooking without using more electricity.

Preheat selectively. Baked goods may require a preheated oven to come out just right, but other foods don't. There's no need to preheat when you're cooking a main dish or heating a casserole.

Use heat-conducting cookware. Ceramic, glass and stainless-steel cookware conduct and retain heat better, which means that you can reduce the oven temperature by 25 degrees when you use them.

Close the door. The oven loses about 25 degrees of heat every time you open the door. Use a timer to gauge doneness instead of opening the oven door every few minutes to check.

A toaster oven uses a third to half as much energy as a full-sized oven, which makes it a great choice for small meals and snacks.

Washers and Dryers

Don't run small loads. Wait until you have enough laundry for a full, large load.

Sort by wash temperature. Use hot water only for whites and hard-to-clean items. Wash everything else in warm or cold water to save on water heating costs.

Pretreat stains. The more you can do to remove stains and heavy soil before you wash, the less likely you'll have to wash an item a second time.

Shorten the wash cycle. Cutting washing time from 15 to 7 1/2 minutes will save about 25 percent of the electricity needed to run the washer.

Fill the dryer. Don't waste electricity by drying just one or two items.

Dry heavy items separately. Dry heavy items like towels in a separate load from lighter-weight items that don't need as much drying time.

Don't over dry. Use the cool-down cycle to allow clothes to finish drying with the residual heat in the dryer. If your dryer has a moisture sensor that automatically shuts off the machine when clothes are dry, use it.

Install a vent/filter kit. This will allow you to vent clean, warm air from your clothes dryer into your home during winter, recycling heat that would otherwise be wasted.

Use a clothesline. Anytime you can dry clothes outside instead of in the dryer, do. That's free solar energy!

Dishwashers

Run a full load. Don't run your dishwasher when there are only a few items in it.

Shorten the cycle. Keep the dishwashing cycle as short as possible. Don't use a long "pots and pans" cycle if you're only washing plates, glasses and silverware.

Air-dry dishes. Skip the drying cycle to reduce the amount of electricity needed to run the dishwasher.

It takes less water to wash a load of dishes in the dishwasher than to wash them by hand—approximately 9.9 gallons compared to an average of 15.7 gallons.

Clean Up With the Right Laundry Temperature

Water Temperature	Electricity Saved
Hot wash/warm rinse	0%
Hot wash/cold rinse	33%
Warm wash/warm rinse	33%
Warm wash/cold rinse	67%
Cold wash/cold rinse	100%

Buying New? Put Energy Efficiency First

There's plenty of consumer information available to you today to help you make the most energy-efficient choices when purchasing new appliances. (See sample EnergyGuide label on page 7.)

When buying a new freezer, choose a chest-style freezer instead of an upright model. Chest-style freezers retain cold air better when the door is opened.

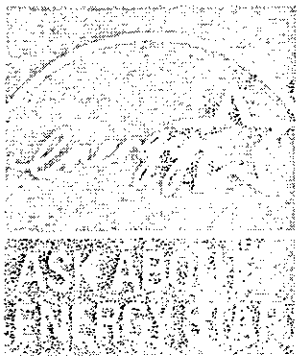
Front-loading washing machines use:

40 to 60% less water

30 to 50% less energy

50 to 70% less detergent

than top-loaders. ▶



Look for the Energy Star

Appliances that receive an Energy Star rating from the U.S. government are among the most efficient available today. They may cost more to purchase, but they will also cost less to operate over the time you own them.

- An Energy Star washing machine may use about a third of the energy and less water than other machines.
- Most Energy Star washers remove more water from your clothes during the spin cycle, so the clothes don't take as long to dry in the dryer.
- An Energy Star refrigerator can save $35-$70 a year compared to older models. That adds up to $525-$1,050 over the average 15-year life of the unit.
- Energy Star dishwashers use less water and energy, and must exceed minimum federal standards for energy efficiency by at least 25 percent.

Appliances in a Nutshell

- Consider lower-cost cooking alternatives such as toaster ovens and microwaves.
- Know how to read an EnergyGuide label.
- Look for the Energy Star to find highly energy-efficient new appliances.

Home Electronics

While individual energy consumption of home entertainment systems, computers and other home electronics may be relatively low, the cost can add up.

Unplug to Save

When you're away from home for the weekend or longer, don't just turn off your TV, DVD player and cable box. Unplug them. As long as these and other small electronics are plugged in, they'll draw power to operate timer displays and other functions that stay on even when the device is switched off. You won't save a fortune–from $.25-$3 a month per device–but every little bit counts.

Protect Against Power Surges

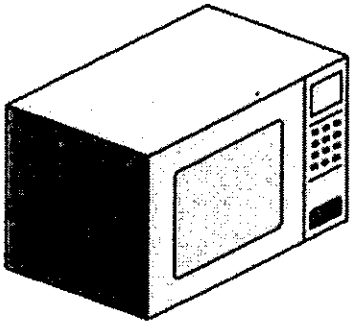
This simple step isn't about lowering your electric costs for home electronics. It's about avoiding the big hit you'll take if a power surge destroys your DVD player or other small electronics. Power surges are slight changes in voltage that happen during storms or other electrical events. They can damage the sensitive circuits inside electronic devices. To protect against them, plug your electronics into a surge protector.

Take Advantage of Built-In Computer Features

If you have a computer that runs on Microsoft Windows, use the power management controls to put your computer to sleep after it idles for a specified period (adjustable from five minutes to more than an hour). The hibernation mode reduces the amount of power the computer uses (up to 300 watts at full power) to 15 watts or lower. In addition, some of the newest computers available have a feature called IAPC (Instantly Available PC) that sends the computer into a sleep mode of less than 8 watts–and then allows it to go right back to where you left off instantaneously when you turn it back on.

Microwaving Makes Sense

Reduce your energy bills for cooking by using your microwave instead of your range or oven when you can. Microwave ovens use less energy than traditional appliances, and they don't heat up your kitchen.



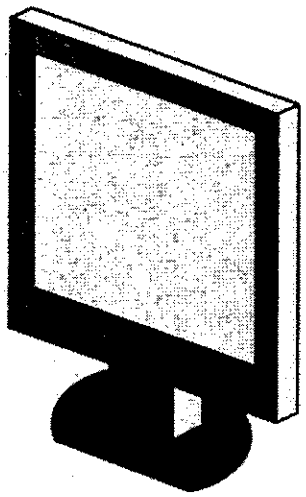
Don't confuse a power strip with a surge protector: A power strip offers no protection from power surges.

Home Electronics in a Nutshell

- When you're away for extended periods, unplug small electronics.
- Invest in a surge protector to keep power spikes from harming electronics.
- Take advantage of your computer's power management controls.
- Consider a flat-panel monitor for energy savings.

Gives New Meaning to "Flat Rate"

Been wanting a sleek, new flat-panel computer monitor—but worried about the high price? Does it help to know they use only about a third of the energy of a traditional monitor? You may pay more for one initially, but the savings over time are likely to make up for that.



Lighting

Go fluorescent. A 25-watt fluorescent light will generate as much light as a 100-watt incandescent bulb for one-fourth the energy. Fluorescent lights cost more to buy, but far less to operate. They last longer, too.

Turn out the lights. Don't waste energy by leaving lights on when you're not using them. Consider installing timers or sensors to reduce the amount of time your lights are on.

Use task lighting. Focus the light where you need it for reading, studying, sewing and other tasks, rather than just brightly lighting the entire room.

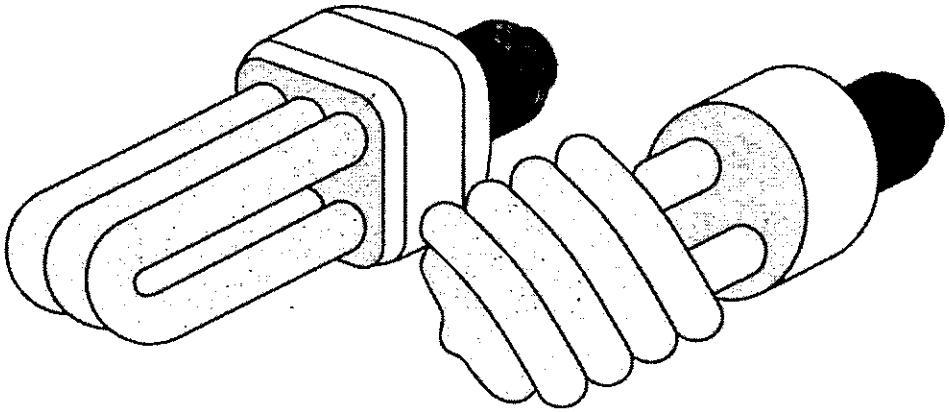
Avoid long-life incandescent bulbs. They are the least efficient of all incandescent light bulbs.

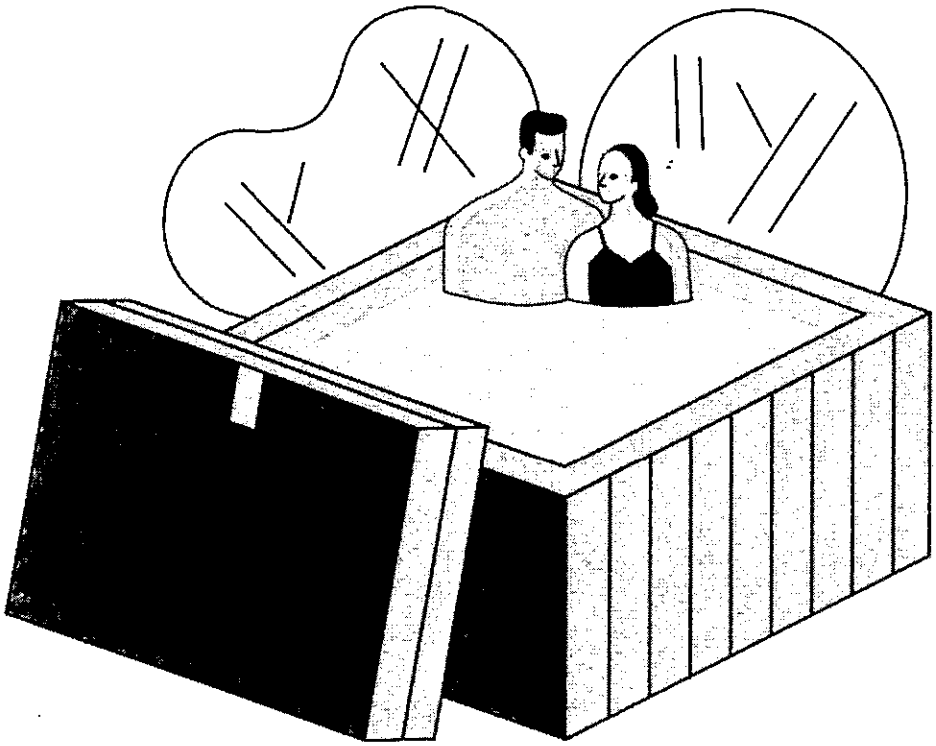
Buy fixtures with fewer bulbs. A 100-watt bulb glows with nearly 50 percent more light than four 25-watt bulbs.

Look for the Energy Star. Light bulbs and light fixtures are eligible for the Energy Star rating. Energy Star lighting uses two-thirds less energy and lasts six to 10 times longer than traditional lighting.

Replace 25 percent of the incandescent lighting in high-use areas with fluorescent lighting, and you'll save about 50 percent on the lighting portion of your electricity bill.

Fluorescent lighting is four times more efficient than incandescent lighting. ▶





Timers, covers, solar heating, lower temperature settings and insulation reduce the cost of using spas.

Pools and Spas

Relaxing in your pool or spa is even more enjoyable when you know it's not costing you a fortune to operate. A few simple steps can make a big difference in the energy cost to heat and circulate the water in your pool or spa.

Use a timer. A timer on the pool pump will make it easier to reduce the running time to only what it takes to keep the water clean and sanitary.

Keep it covered. Cover your spa with a tight-fitting, insulated cover when not in use.

Lower the temperature. Reduce the temperature or turn off the pool or spa heater between uses.

Consider solar heating. It's a much more affordable way to heat your pool than traditional electrical resistance heating.

Look for good insulation. When purchasing a new pool or spa, look for insulation that has been applied directly to the fiberglass or wood that holds the water. This type of insulation reduces heat loss and helps maintain water temperature.

Together, We Can Keep Energy Costs Under Control

Your electric cooperative is dedicated to delivering energy and energy solutions to you safely, dependably and at a reasonable cost. As a co-op member, you have the power to help keep that cost under control. When you use the information in this booklet to use energy efficiently in your home or business, you play an important part in reducing energy demands and controlling your co-op's energy costs. Thanks for taking the time to learn more about action you can take, and thanks for doing your part.

Resources

Air-Conditioning and Refrigeration Institute, **www.ari.org**

The Alliance to Save Energy, **www.ase.org**

American Architectural Manufacturers Association, **www.aamanet.org**

American Council for an Energy-Efficient Economy, **www.aceee.org**

American Society of Landscape Architects, **www.asla.org**

American Solar Energy Society, **www.ases.org**

Association of Home Appliance Manufacturers, **www.aham.org**

Cellulose Insulation Manufacturers Association, **www.cellulose.org**

Efficient Windows Collaborative, **www.efficientwindows.org**

Energy Star, **www.energystar.gov**

Federal Trade Commission, Bureau of Consumer Protection, **www.ftc.gov**

Insulation Contractors Association of America, **www.insulate.org**

National Arbor Day Foundation, **www.arborday.org**

National Association of Home Builders, **www.nahb.org**

National Association of State Energy Officials, **www.naseo.org**

National Insulation Association, **www.insulation.org**

North American Insulation Manufacturers Association, **www.naima.org**

Polyisocyanurate Insulation Manufacturers Association, **www.pima.org**

Rocky Mountain Institute, **www.rmi.org**

Solar Energy Industries Association, **www.seia.org**

Solar Rating and Certification Corporation, **www.solar-rating.org**

Texas Electric Cooperatives, **www.texas-ec.org**

U.S. Department of Energy's Energy Efficiency and Renewable Energy portal, **www.eere.energy.gov**

Window and Door Association, **www.wdma.org**

Newsletters

Revealing R-values

By Kris Wendtland

When the weather's brisk, it's smart to wear a coat. Your home needs the same kind of protection, too—insulation to keep cold air out and warm air in. Just as a coat closet features thin jackets for fall and heavy jackets for winter, different types of insulation, ranked by R-value, exist to keep your home comfortable and your electric bills affordable.

R-value reflects the ability of insulation and other parts of your home, like windows, to resist the transfer of heat. The rating depends on material, thickness, and density, and a higher R-value indicates more effective insulation. Multiple layers of insulation may be combined for a higher cumulative R-value.

How Insulation Works

Metals and liquids easily transfer heat, making them bad insulators. Air, however, does not conduct heat, making it a strong insulator when isolated in small pockets.

Just as fur keeps animals warm, insulation holds heat in (or out) of a building. Fur is a collection of hair—tiny hollow cylinders. Air fills the cylinders and spaces in-between. The smaller the space for air in between the cylinders and the more spaces there are (longer hair equals more space), the greater the insulation.

Building insulation works on the same principle. Fiberglass insulation, for example, exists as a collection of hollow fiberglass cylinders.

Be careful to preserve the air—the bulk of your home's protection—when installing insulation. When an installer squeezes 3 in. of insulation into a 1-in. space, critical air pockets are eliminated. For this reason, actual insulating R-values may not always match the label. Insulation must be installed correctly to maximize protection—and electric bill savings.

The Value of R-Values

The first layer of insulation pays for itself fastest, saving more than half of the energy dollars spent on heating or air conditioning. However, as more insulation is added, efficiency gains dwindle.

Boosting the R-value of a wall from 0 to R-10 cuts 90 percent of heat loss from one side of the wall to the other. This makes an immediate difference you can feel. Adding an additional layer of R-15 insulation (a total R-value of 25) only cuts another 6 percent of heat transmission. Further increasing insulation thickness from R-25 to R-35 helps only by a little more than 1 percent.

In some regions with several months of very cold winds, increasing attic insulation values from R-25 to R-35 or even R-50 can be worth the investment over the life of your home. In most seasonal climates, however, replacing single-pane windows saves more energy than adding insulation in your attic, floors, or walls (assuming R-25 to R-30 is common throughout the home).

A typical single-pane window boasts an R-value of 0.9. In contrast, a triple-glazed pane assembly with low-emissivity (low e) insulated coatings have an R-value of 8.3. Based on an electricity cost of 10 cents per kilowatt-hour (kWh), a home with 18 single-pane windows (4 square feet each) could waste $94.32 in unnecessary expense across three months (assuming 12 hours per day of a 40 degrees Fahrenheit indoor/outdoor temperature differential). A more efficient window assembly would cost $10.20 over the same time. After a year, savings from switching out the windows could surpass $300.

Energy auditors and electric cooperative staff are trained to discuss the pros and cons of energy efficiency upgrades. TVEC also offers energy audits to reveal areas ready for improvement; to schedule an audit, call 1-800-766-9576.

Sources: Jim Herritage, CEM, Energy Auditors, Inc.; Residential Energy: Cost Savings and Comfort for Existing Buildings by John Krigger and Chris Dorsi; University of Tennessee at Knoxville Department of Ecology and Evolutionary Biology

Kris Wendtland writes on energy efficiency issues for the National Rural Electric Cooperative Association

WIN $25 JUST FOR READING

Somewhere, hidden in this newsletter, is a TVEC account number. Read closely, if the account number is yours, contact the Member Services Department by March 15, 2012 to receive a $25 credit on your electric bill. Don't miss out – you could be a winner.

Home Energy Audits Available

As a special service to our members, TVEC offers free home energy audits. Upon request, trained TVEC personnel will visit your home and offer advice on ways you can improve the management of your energy usage. If you are interested in this valuable service, call our office today for an appointment. We will be happy to explain the details.

TVEC
TRINITY VALLEY ELECTRIC COOPERATIVE
A Touchstone Energy® Cooperative
News
March 2012 www.tvec.net Vol.24 • No.3

Stop Air Flow and High Energy Bills

A Message from Manager of Member Services *Shannon Steakley*

After a long day at work, I'm ready to go home and relax. Our homes should be an oasis for all of us—where we can kick back and get comfortable.

But there's no oasis of comfort when your home is too cold in winter or oppressively hot in the summer. That means it's leaking air—and wasting money.

One of the best things you can do if you have high electric bills is check the insulation. How much is in your attic and basement or crawl space? What kind is it? Is there an air barrier along with the insulation? The answers to these questions will determine how much energy and money you can save.

Air infiltration is one of the main problems for most homes. It's healthy to have some air flow in and out of your home, but too much leads to discomfort and high electric bills. Properly installed insulation paired with an air barrier can do a lot to save.

If you have fiberglass insulation—whether blown or rolled batts—you'll need to create an air barrier by sealing all of the cracks and gaps between the living spaced and unfinished areas with caulk and expanding foam. Cellulose does a better job of blocking air, but only foam insulation offers its own air barrier.

Check out EnergySavers.gov to learn more about insulation. You can also contact TVEC and talk to one of our energy advisers about whether your home needs more insulation. By doing so, you'll be well on your way to a more comfortable home—and lower electric bills.

Making sure your home has adequate insulation is one of the best things you can do to help stave off high energy bills.

Reminder: Account Numbers to get Upgrade

Due to necessary upgrades to our billing software, TVEC will be adding one digit to your account number. The change will take place on March 1, 2012.

All members will have a 0 inserted prior to the last two digits of their account number. For example: 1234567801 will become 12345678001 after the transition. To confirm, you can find your updated account number on your March bill.

Here's what you need to know after the upgrade takes place.

When you pay your bill:

If you pay your bill by using Fidelity Express, you will need to enter your updated account number in order to process the payment. If you use your bank's online bill payment option, you will need to update your account information with your bank.

When you call TVEC:

Remember to provide your updated account number – whether you are using the automated system or speaking to a member services representative – when you call to report an outage or make an account inquiry.

We hope this upgrade will be seamless and straightforward, but please bear with us while we make the transition. If you have any questions, contact our Member Services Department at 1-800-766-9576.

How to Buy an Energy-Efficient Appliance

You go shopping for a new refrigerator, and you're on a budget. The best buy is the fridge with the lowest sales price, right?

Not necessarily. If you buy the lowest-priced refrigerator, you may end up spending more than if you buy a more expensive one. The reason? The cost of owning a home appliance has three components: the initial purchase price, the cost of repairs and maintenance, and the cost to operate it.

To figure out how much you'll spend over the lifetime of the appliance, you have to look at all these factors. The appliance with the lowest initial purchase price, or even the one with the best repair record, isn't necessarily the one that costs the least to operate. Here's an example of how an appliance's energy consumption can affect your out-of-pocket costs.

Consider three components when purchasing an appliance: purchase price, cost of future repairs and the cost to operate the appliance.

Suppose you're in the market for a new refrigerator-freezer. Different models of refrigerators with the same capacity can vary dramatically in the amount of electricity they use. For one popular size and configuration, for example, the annual electricity consumption varies across models from a low of about 600 kilowatt-hours a year to a high of more than 800 kilowatt-hours a year. Based on national average electricity prices, that means the annual cost to operate this refrigerator can range from about $50 to $70, depending on which model you buy.

A $20 difference in annual operating costs might not sound like much. But remember that you will enjoy these savings year after year for the life of the appliance, while you must pay any difference in purchase price only once. As a result, you may actually save money by buying the more expensive, more energy-efficient model.

You can learn about the energy efficiency of an appliance that you're thinking about buying through the yellow-and-black EnergyGuide label. The Federal Trade Commission's Appliance Labeling Rule requires appliance manufacturers to put these labels on:

- Refrigerators, freezers, dishwashers, clothes washers
- Water heaters, furnaces, boilers
- Central air conditioners, room air conditioners, heat pumps
- Pool heaters

When you shop for one of these appliances in a dealer's showroom, you should find the labels hanging on the inside of an appliance or secured to the outside. The law requires that the labels specify:

- The capacity of the particular model
- For refrigerators, freezers, dishwashers, clothes washers and water heaters, the estimated annual energy consumption of the model
- For air conditioners, heat pumps, furnaces, boilers and pool heaters, the energy efficiency rating
- The range of estimated annual energy consumption, or energy efficiency ratings, of comparable appliances.

Some appliances also may feature the ENERGY STAR logo, which means that the appliance is significantly more energy efficient than the average comparable model. To compare how updating appliances and making other changes around your home can impact your electric bill, visit www.TogetherWeSave.com.

Source: Federal Trade Commission, U.S. Department of Energy

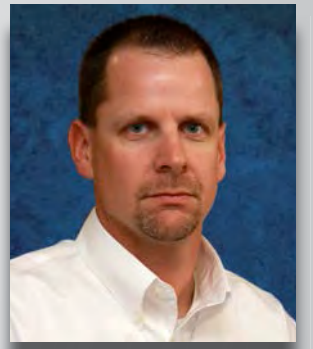
6014365201

Q & A

Q: When will TVEC install my new meter?

A: The advance metering project will be carried out over the course of four years. An implementation schedule is available at www.tvec.net. Also, notice will be provided to you by mail and via phone message prior to installation. In addition, the workers installing the new meters will attempt to notify you in person before they install the meter.

– ğ ff Lane
manger of communications



*For more information on TVEC's AMI system, go to **tvec.net** and select the advanced metering button on the right.*

Be Your Home's Private Investigator

Do-it-yourself home energy audits reveal savings in energy and money

No matter the age of your home, it could benefit from a private energy investigation—also known as an energy audit. TVEC offers free home energy audits conducted by trained employees. But you can get started on your own search to find low-cost solutions that could save money every month on your electric bill.

To be an energy "private-eye," ask yourself a simple question: Does my home feel drafty and cold in the winter, or stuffy and hot in the summer? If your answer is "yes," then your home probably experiences air leakage.

To track down where those spots are, round up the usual suspects—culprits like damaged seals around doors and windows. If you see daylight or feel air, then apply caulk and weather stripping to keep outdoor air where it's supposed to be.

But don't forget spots you might not immediately think of, like recessed canister lights and electrical outlets. Outlet insulation kits can be purchased for as little as $2, and you can fix up your canister lights with some caulk around the edges.

Also look where walls meet the ceiling. Cobwebs mean you've got drafts.

Next, poke your head into the attic and inspect the crawl space or basement for sufficient insulation. How much you need depends on your climate. Check out the insulation calculator from the Oak Ridge National Laboratory at www.ornl.gov/~roofs/Zip/ZipHome.html.

It's important to remember insulation won't do its job well if there's not a proper air barrier working in tandem. That means all joints and cracks must be sealed between your living space and insulation.

Finally, look to your light fixtures. Compact fluorescent lightbulbs (CFLs) are up to 75 percent more efficient than traditional incandescent bulbs, and they've come a long way in light quality, design, and affordability. You can purchase CFLs in a variety of shapes and hues. They cost more upfront, but you'll make your money back in less than nine months and after that, they start saving money. Make sure to purchase a CFL that's rated by ENERGY STAR, the U.S. Environmental Protection Agency's program that denotes products meeting specific energy efficiency criteria. ENERGY STAR-rated CFLs will typically last 10 times longer than a traditional incandescent bulb producing the same amount of light.

To learn more about ways to reduce your electric bill, call TVEC at 1-800-766-9576 and ask about our free home energy audit program.

Sources: EnergySavers.gov, Eastern Illini Electric Cooperative, EnergyStar.gov

Installing CFL light bulbs can help save money on your electric bill each month.

Q & A

Q: What is the $20 Customer Charge on my bill?

A: The Customer Charge assists in recovering a portion of the fixed costs associated with the delivery of electric service to each meter location. These costs are incurred by TVEC regardless of the amount of energy consumed at each meter location. The Customer Charge component includes billing, accounting, customer service, meter reading, a portion of the distribution wire expense for metering, transformers, general operations maintenance and other expenses based on service to a minimum size customer.

– Bryan Wood
chief financial officer

Be Your Home's Private Investigator

No matter the age of your home, it could benefit from a private energy investigation—also known as an energy audit. TVEC offers free home energy audits conducted by trained energy advisors. But you can get started on your own search to find low-cost solutions that could save money every month on your electric bill.

To be an energy "private-eye," ask yourself a simple question: Does my home feel drafty and cold in the winter, or stuffy and hot in the summer? If your answer is "yes," then your home probably experiences air leakage.

To track down where those spots are, round up the usual suspects—culprits like damaged seals around doors and windows. If you see daylight or feel air, then apply caulk and weather stripping to keep outdoor air where it's supposed to be.

But don't forget spots you might not immediately think of, like recessed canister lights and electrical outlets. Outlet insulation kits can be purchased for as little as $2, and you can fix up your canister lights with some caulk around the edges.

Next, poke your head into the attic and inspect for sufficient insulation. How much you need depends on your climate. It's important to remember insulation won't do its job well if there's not a proper air barrier working in tandem. That means all joints and cracks must be sealed between your living space and insulation.

Finally, look to your light fixtures. Compact fluorescent lightbulbs (CFLs) are up to 75 percent more efficient than traditional incandescent bulbs, and they've come a long way in light quality, design, and affordability. They cost more upfront, but you'll make your money back in less than nine months and after that, they start saving money.

30030879001

Tornado Safety Tips

Practice and Prepare

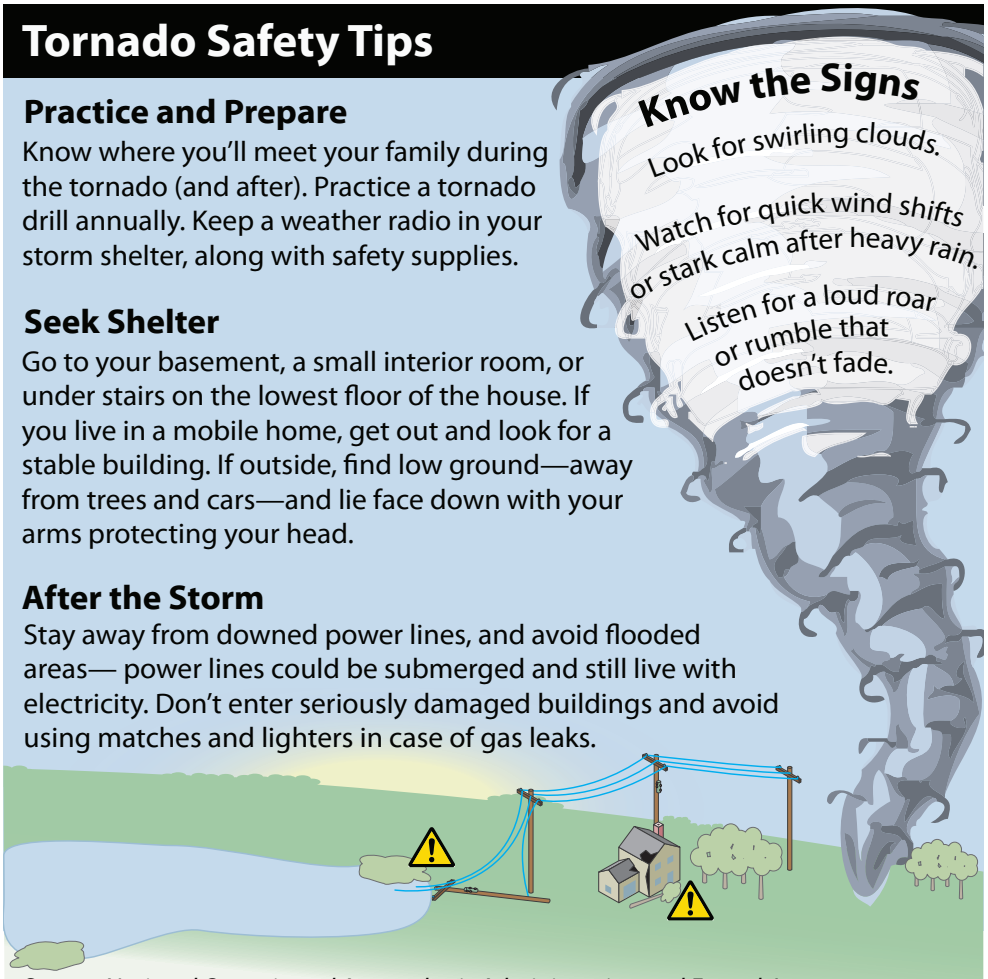
Know where you'll meet your family during the tornado (and after). Practice a tornado drill annually. Keep a weather radio in your storm shelter, along with safety supplies.

Seek Shelter

Go to your basement, a small interior room, or under stairs on the lowest floor of the house. If you live in a mobile home, get out and look for a stable building. If outside, find low ground—away from trees and cars—and lie face down with your arms protecting your head.

After the Storm

Stay away from downed power lines, and avoid flooded areas— power lines could be submerged and still live with electricity. Don't enter seriously damaged buildings and avoid using matches and lighters in case of gas leaks.



Source: National Oceanic and Atmospheric Administration and Funnel, Inc.

Matlock's Lockbox to be Removed

Effective June 1, 2012 the Matlock's Country Store in Combine will no longer have a TVEC lockbox for members to pay their monthly bills. This location is the last remaining TVEC lockbox. All others have since been taken out of service.

Members who previously used this service will still have several options when paying their bills:

- Bring payments to any TVEC office
- Mail payments
- Online Bill Payment
- Automatic Draft
- Pay Via Phone

We apologize for any inconvenience this may cause.

Home Energy Audits Available

As a special service to our members, TVEC offers free home energy audits. Upon request, trained TVEC personnel will visit your home and offer advice on ways you can improve the management of your energy usage. If you are interested in this valuable service, call our office today for an appointment. We will be happy to explain the details.

Pump Up Your Pool's Efficiency

After a low-impact workout in the backyard, a swimming pool provides the perfect summer retreat. But who wants it to be a wallet drain? Soak up these pool efficiency tips to save money while maintaining your personal, pristine oasis.

Each pool is equipped with an energy guzzler: the pump. The bigger the pump, the higher the power bill. Make sure your pool uses the smallest pump possible. New products like variable-speed pumps offer a good way to save. A knowledgeable pool supply or service firm can help choose a proper pump for your pool, taking into consideration its size, filter, and piping.

Greater savings can come from decreasing pump operation time, no matter the pump size. Keep drains clear of debris, or your pump will work harder to circulate water. Also, find a proper balance for backwashing the filter. Too much backwashing—the process of filtering and disposing of dirty water—wastes water, while too little strains the pump.

Here are some common myths that lead to extra pump time (and wasted energy):

- I need to run my pump to keep chemicals mixed – FALSE. Circulate while adding chemicals, and they will stay mixed. There is no need to recirculate the water each day to "re-mix" the water.
- My pool will be dirty if I don't run my pump to constantly clean debris – FALSE. Try running your pump for six hours or less a day, as suggested by the U.S. Department of Energy's EnergySavers.gov. If the cleanliness is not to your liking, increase filtration time by 30-minute increments until you are satisfied. If six hours works well, try decreasing filtration time to find a balance with energy efficiency. To keep debris down without running your pump overtime, use a skimmer to manually clean the water. Also, try using a timer to run your filter for several short periods during the day rather than allowing debris to pile up after one long continuous filtration.
- I need my pump to run continuously to keep algae at bay – FALSE. Proper chemical balance and brushing down pool walls are the best algae fighters.

Make sure your pool isn't draining energy dollars needlessly by adjusting pump time and investing a little legwork. You'll have a prime poolside spot to relax in afterward, and the relief you'll see on your power bill will be well worth the effort.

Don't let your swimming pool be a drain on your electric bill this summer.

WIN $25 JUST FOR READING

Somewhere, hidden in this newsletter, is a TVEC account number. Read closely, if the account number is yours, contact the Member Services Department by July 15, 2012 to receive a $25 credit on your electric bill. Don't miss out – you could be a winner.

Home Energy Audits Available

As a special service to our members, TVEC offers free home energy audits. Upon request, trained TVEC personnel will visit your home and offer advice on ways you can improve the management of your energy usage. If you are interested in this valuable service, call our office today for an appointment. We will be happy to explain the details.

TVEC
TRINITY VALLEY ELECTRIC COOPERATIVE
A Touchstone Energy® Cooperative
News
July 2012 www.tvec.net Vol.24 • No.7

Cool Off Electric Bills with TogetherWeSave.com

A Message from General Manager/CEO ***Jerry Boe***

Scorching temperatures and high electric bills don't need to arrive hand-in-hand this summer. At TVEC we are committed to providing you with not only safe and reliable electric service, but also with information you need to save energy, and keep electric bills affordable, when the heat is on.

One of the most powerful tools in TVEC's energy-saving arsenal is TogetherWeSave.com. The website offers nine applications focusing on different actions that, once completed, show an actual savings calculation. For example, in the "Lower Your Water Heater Temperature" application, you can virtually adjust the temperature setting on the water heater dial to see a projection of how much money you could save by doing just that.

Take the Virtual Home Tour on TogetherWeSave.com to find even more ways to cut costs. You will "walk" through a home's family room, kitchen, laundry room, bedroom, basement, and attic. Each area reveals at least two actions you can take to improve your home's energy efficiency. As you move through the room and complete the suggested changes you will see a running tally of potential energy dollar savings.

The website also provides access to the Touchstone Energy® Cooperatives TV Web Portal where you can view short energy efficiency videos. You can even connect with other energy-conscious members by sharing your story about what you are doing to be more efficient. It's remarkable that co-op members just like you from across the country have already visited TogetherWeSave.com and collectively saved an estimated $40 million by making small energy-related changes at home.

TVEC also offers home energy audits. This service is free to all members. A trained representative will come to your home, complete an inspection, and ask you a series of questions in order to get an idea of your energy usage habits.

Following the inspection, we will provide a detailed report outlining recommendation that will help you lower your electric bill.

For more information regarding a home energy audit, call any of our offices and we will be glad to explain the details.

We want to help you reach your energy-saving goals. So go ahead: flip a switch, lower the blinds, raise the temperature on your thermostat, and visit TogetherWeSave.com to find out how little changes can cool off your electric bill.

Advanced Metering Status ...

We would like to thank our members for their cooperation during the meter deployment for phase 1 of our AMI project. Over 14,000 meters have been changed out.

The project on is on schedule and phase 2 meter deployment will run from September through November of 2012, when an additional 13,000 meters are slated to be installed.

The project map – as well as much more information regarding the AMI project – can be found on our website, www.tvec.net, under the Advanced Metering page.

We are already seeing increased efficiency in our operations through outage verification, remote reconnects, and remote meter readings.

If you have any questions or concerns, please give us a call at 1-800-766-9576.

TVEC Lineman Shayde Harrison installs a new advanced meter.

Renters Have the Power to Save Electricity

If you rent your home, it often seems that you can't do much to control your electric bills. But in reality, there are lots of low- or no-cost tricks that you can put into place to cut down on electricity use.

"Usually leases forbid renters to make alterations to a structure, so your energy-saving solutions have to be simple," says Brian Sloboda, a senior program manager specializing in energy efficiency with the Cooperative Research Network, an arm of the Arlington, Va.-based National Rural Electric Cooperative Association.

Useful tips to help shave your electric bills:

- When lightbulbs burn out, replace them with compact fluorescent lamps (CFLs). If they have an ENERGY STAR label, these bulbs typically last up to 10 times longer than traditional incandescent bulbs and use 75 percent less electricity.
- A roll of weather stripping and a tube of caulk can go a long way in saving energy and money.
- Use your vacuum to clean coils in the bottom panel of your refrigerator.
- Similarly, keep your dryer vents clean.
- Don't allow furniture to block air vents, and shut the vents in rooms you don't use.
- Check the temperature on your water heater. These devices don't need to be set at more than 120 degrees Fahrenheit for daily showers and chores.

Call Your Co-op

When you're trying to save energy and money, it's good to know you're not alone. Contact TVEC for more information.

Students Take in the Capital

TVEC again sponsored two teens from the co-op service area for the annual Youth Tour to Washington, D.C. Dylan McGriff, of Wills Point and Taylor Shults, of Mabank were among the over 1500 high school students from across the country who participated in the event.

Each year in June, Youth Tour students have the opportunity to learn first-hand what it is like to be involved in politics, community service and pressing issues of the day. Highlights included meeting with their elected representatives in the U.S. House and Senate to discuss the process of government and issues of the day, and increasing their knowledge of electric cooperatives and American history.

The Youth Tour has been a joint effort of local electric co-ops, such as TVEC, their statewide associations, and the National Rural Electric Cooperative Association for over 40 years.

Principles of a Cooperative

Continued from paage 1

leaders, about the nature and benefits of cooperation.

6. **Cooperation Among Cooperatives —** Cooperatives serve their members most effectively and strengthen the cooperative movement by working together through local, national, regional and international structures.
7. **Concern for Community —** While focusing on member needs, cooperatives work for the sustainable development of their communities through policies accepted by their members.

WIN $25 JUST FOR READING

Somewhere, hidden in this newsletter, is a TVEC account number. Read closely, if the account number is yours, contact the Member Services Department by September 15, 2012 to receive a $25 credit on your electric bill. Don't miss out – you could be a winner.

Home Energy Audits Available

As a special service to our members, TVEC offers free home energy audits. Upon request, trained TVEC personnel will visit your home and offer advice on ways you can improve the management of your energy usage. If you are interested in this valuable service, call our office today for an appointment. We will be happy to explain the details.

Co-op Connections Card Helps Henson Save Money, Give Back

La Nelle Henson, a long time co-op member, has a passion for quilting, sewing and saving money with the Co-op Connections Card.

Because she saves money by using her Co-op Connections Card at her pharmacy, she has more resources to help fund her charitable donations. La Nelle loves to give and loves to save.

Born and raised in Texas, Henson grew up in a simpler way of life. Several years ago she recognized a need in her community. She sews bears and creates beautiful quilts that she donates to local hospitals to help comfort resident patients.

TVEC members have saved over $125,000 this year by using their Co-op Connections Cards.

TVEC member, La Nelle Henson, uses her Co-op Connections Card on her monthly prescriptions.

Energy Efficiency Tip of the Month

Did you know a computer can draw as much electricity as a new refrigerator? Turn it off when not in use or switch on its energy-saving mode. Also, cell phone and mp3 player chargers as well as plasma TVs and entertainment centers pull power even when they're off. Unplug these and other appliances to save on your electric bill. Find more ways to save at TogetherWeSave.com

Source: Touchstone Energy® Cooperatives

WAYS TO PAY YOUR UTILITY BILL

DRIVE-THROUGH
at the Kaufman office

NIGHT DROPS
at each of our four locations

BANK DRAFT
sign up today at any of our four convenient locations

CREDIT CARDS
Visa, Discover, MasterCard, American Express

IN PERSON
at any TVEC office or Fidelity Express location

ONLINE or BY PHONE
at www.tvec.net or 1-800-720-3584

TVEC
TRINITY VALLEY ELECTRIC COOPERATIVE

LOCAL OFFICES FOR YOUR CONVENIENCE

KAUFMAN HEADQUARTERS
1800 E. Hwy. 243
P.O. Box 888
Kaufman, Texas 75142

ATHENS DISTRICT OFFICE
909 W. Larkin (Hwy. 175 W.)
Athens, TX

GUN BARREL BRANCH
1012 W. Main, Ste. 102
Gun Barrel City, TX

WILLS POINT BRANCH
582 North Fourth Street
Wills Point, TX

You can make bill payments, arrange for new service, receive information on how to save energy, and much more at any TVEC office

MEMBER SERVICES
(972) 932-2214 1-800-766-9576

OUTAGE REPORTING
1-800-967-9324

24-HOUR AUTOMATED CUSTOMER SERVICE
1-800-720-3584

60 Years of Home Cooking Cookbooks Available. Come by and purchase Your copy today!

Stay Warm and Save

On top of staying warm throughout the winter months, a lot of people worry about saving money and energy. According to a poll by the Consumer Reports National Research Center, four out of 10 consumers are worried about money this holiday season.

The average family spends $2,200 a year on energy; nearly half of that goes towards heating and cooling costs. Stay warm and save energy with these helpful winter tips:

- Pick smarter lightbulbs. Decorate for the holidays efficiently with strands of light-emitting diodes (LEDs). Using LED holiday lights for 10 hours a day cuts seasonal lighting costs by 90 percent when compared to traditional incandescent holiday lights.
- Check furnace filters. Be sure to clean or replace your heating and cooling system's air filter. At a minimum change the filter every three months; a dirty filter clogs the system, making the system work harder to keep you warm.
- Install a programmable thermostat. Is your home alone most of the day? Programmable thermostats can knock up to 10 percent off heating bills with the ability to automatically turn temperatures down 10 to 15 degrees for 8 hours a day.
- Insulate water heaters and pipes. Wrap water pipes connected to the water heater with foam, and insulate the water heater, too. To save about $75 annually, consider lowering the water heater temperature from 140 degrees to 120.
- Bundle up your home. The more heat that escapes from cracks, the more cold air enters, causing your system to work harder and use more energy. Use an incense stick to spot air leaks. When it's windy outside, hold a lit incense stick near your windows, doors, and electrical outlets. If the smoke blows sideways, you've got a leak that should be plugged with weather-stripping, caulk, or expandable foam.
- Use a low-flow showerhead. About 14 percent of your energy bill funds water heating. Low-flow showerheads can minimize water use by up to 60 percent—a helpful change, especially when extended family members visit for the holidays.

Youth Tour June 2013

It's that time again.

Enter now to win an all-expense-paid-trip to our nation's capital.

High school sophomores, juniors and seniors from area schools are eligible to enter the 2013 Youth Tour to Washington D.C. contest, sponsored by Trinity Valley Electric Co-op.

Youth Tour 2013 is scheduled for June 13-21.

Applications and complete contest rules are available at www.tvec.net. Entries must be received by February 15, 2013. Contact Bobbi Byford at 469-376-2234 for more information.

The Directors and Staff of TVEC would like to wish you a Happy Holiday and a Safe New Year!

Brochures

Brochures are displayed in the lobbies of all four TVEC office locations

HOME ENERGY SAVINGS GUIDE

Touchstone Energy®
Cooperatives

TOGETHERWESAVE.COM

Touchstone Energy®
Cooperatives

TOGETHERWESAVE.COM

FIND OUT HOW THE LITTLE CHANGES ADD UP.

FLIP THE SWITCH. LOWER THE BLINDS. INSULATE YOUR ATTIC. LOWER THE TEMPERATURE ON YOUR THERMOSTAT. THESE SOUND LIKE SIMPLE TASKS. TAKE ALL OF THESE STEPS AROUND YOUR HOME AND YOU CAN RACK UP BIG SAVINGS.

TOGETHER WE SAVE.

THIS HOME ENERGY SAVINGS GUIDE CONTAINS VALUABLE TIPS ON HOW TO IMPROVE YOUR HOME'S EFFICIENCY.

FOR MORE INFORMATION, PLEASE CONTACT YOUR LOCAL TOUCHSTONE ENERGY COOPERATIVE AND VISIT TOGETHERWESAVE.COM.

HOME ENERGY SAVINGS

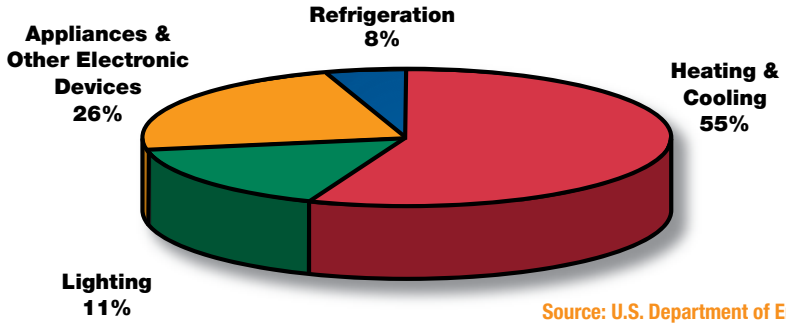
Your Touchstone Energy cooperative works hard to hold down energy prices. You, too, can play an important role in controlling your energy costs by evaluating your home and taking simple steps to trim unnecessary energy use. The following are some tips to help you reduce your energy costs.

HOME ENERGY COSTS

Get a clear picture of which parts of your home use the most energy.

- The first step in reducing home energy costs is to review last year's utility bills. Using the below national "percentage" averages, a homeowner who spent $1,900 a year for home energy would have paid roughly:
  - $1045 for heating and cooling
  - $494 for appliances and other electronic devices
  - $209 for lighting
  - $152 for refrigeration
- When implementing energy-saving measures, remember, you cannot save more than you are spending.
- Contact your local Touchstone Energy cooperative to review your bills and receive a more accurate estimate. Go to TogetherWeSave.com for more information.

AVERAGE HOME ENERGY USAGE



Source: U.S. Department of Energy

HOME ENERGY SAVING TIPS

Assess how your family uses energy in your home.

- **Leaving unnecessary lights on increases energy costs.**
- **Turn off computers and other office equipment when they're not being used, especially overnight and on weekends.**
- **Heating your home to higher than 68° in the winter or cooling it below 75° in the summer costs more.**
- **Taking long showers runs up the water heating (and water/sewer) bills.**

INSULATION

- **If you have insulation in your attic graded at R-19 or less, consider bringing it up to R-38 in moderate climates and R-49 in cold climates.**
- **In cold climates, if you have floor insulation graded at R-11 or less, consider bringing it up to R-25.**

WINDOWS

Windows leak heat. If you have single-pane windows, consider doing the following:

- **Tighten and weather-strip your old windows and then add storm windows.**
- **Replace your old single-glazed windows with new double-glazed windows.**
- **In colder climates, "low-e" coatings on glass can help reduce heat loss through windows.**
- **In hot climates, consider adding solar screening to west-facing windows that catch a lot of heating late in the day. Solar screening is sold at many home improvement stores.**

AIR INFILTRATION

Air that transfers in and out of homes through cracks, crevices and holes increases energy consumption. Here are some helpful tips to avoid air infiltration:

- **Seal around pipe penetrations coming through walls.**
- **During hot and cold weather, ensure windows are closed tightly and locked.**
- **Ensure weather-stripping around doors and windows is tight.**
- **When your fireplace is not operating, its flue should be closed tightly, with a sign hanging from the flue handle warning it is closed.**
- **Check the ceiling behind the cornice of built-in bookshelves for holes cut during construction.**
- **Drop-down stairways should fit tightly into the ceiling and be carefully weather-stripped.**
- **Whole-house attic fans should be sealed tightly during the winter.**
- **Make sure your outside dryer vent door closes when the dryer is not in use. This requires cleaning away lint accumulation periodically.**

DRYERS

Drying clothes uses a lot of energy.

- Don't over-dry your clothes. If 50 minutes works, don't set to 70 minutes.
- Make sure to clean the inside lint filter before each drying cycle.
- Periodically check your flexible metal dryer vent hose to ensure it is still tightly connected and not kinked.

WATER HEATER

Your water heater works with many of your home's other systems.

- Make sure your water heater is set at the lowest point. Try setting it to 120°.
- Washing clothes with warm water and rinse with cold water.
- Overfilling your washer can increase your energy use.
- If your water heater is located in an unconditioned space, consider installing a thermal wrap around it. Take care to install it in accordance with the tank and wrap manufacturer instructions.

REFRIGERATION

Trim your refrigerator's energy use.

- **Make sure refrigerator and freezer seals fit tightly when doors close.**
- **Keep outside coils clean. Dirty coils make your refrigerator compressor work longer to remove heat.**
- **Setting your freezer below 0° uses extra energy.**
- **Setting your refrigerator below 37° uses extra energy.**

HEATING & AIR CONDITIONING

Heating, ventilating, and air conditioning (HVAC) uses the largest chunk of your home energy dollar. Keep it running "lean and mean."

- **HVAC systems should be checked to verify they are moving the correct amount of air. An HVAC technician can tell you if it is.**
- **Heat pump and air conditioning systems should be checked annually to verify they are properly charged, strictly in accordance with manufacturer guidelines.**
- **Inside and outside coils should be kept clean and free of debris.**
- **Gas furnaces should be tuned for maximum combustion efficiency.**
- **Return filters should be changed monthly.**
- **Have an HVAC technician check carefully for duct leaks. Leaks that are found should be sealed with fiberglass mesh and mastic sealant.**

LIGHTING

Take a look at your home's lighting. Consider these points:

- **A 100-watt lamp costs roughly a penny an hour to operate.**
- **Consider replacing incandescent lighting with energy-saving compact fluorescent lamps. They use about one quarter of the wattage, last much longer and give off less heat.**
- **When you finish cooking, turn off the kitchen lighting and the range exhaust fan.**
- **Don't leave unnecessary lighting on during the day.**
- **Take a look at the security lighting you use at night. Check with your Touchstone Energy cooperative to see if it can help save you money by installing a pole-mounted outdoor light.**

SELECTING A CONTRACTOR

Some of the work you will want to complete will require the services of a contractor. When selecting a contractor, keep in mind that the best price is not always the best value. Here are some questions to ask when deciding who to use:

- **How long have you been in business?**
- **Can you provide proof that you are state-licensed and carry workers' compensation insurance?**
- **Can you provide the names of neighbors who have used your services?**
- **Are you a member of the Better Business Bureau?**

NOTES:

Touchstone Energy®
Cooperatives

TOGETHERWESAVE.COM

FOR MORE INFORMATION ON ENERGY SAVINGS CHECK WITH THE FOLLOWING SOURCES:

- VISIT TOUCHSTONEENERGY.COOP FOR INFORMATION AND TO LOCATE YOUR LOCAL TOUCHSTONE ENERGY COOPERATIVE.
- U.S. DEPARTMENT OF ENERGY – ENERGY.GOV/YOURHOME.HTM
- ENERGY STAR – ENERGYSTAR.GOV
- ALLIANCE TO SAVE ENERGY – ASE.ORG
- YOUR STATE'S ENERGY OFFICE.

For more information, please contact your local Touchstone Energy cooperative or visit TogetherWeSave.com.

101 EASY WAYS TO SAVE ENERGY AND MONEY

Touchstone Energy®
Cooperatives

TOGETHERWESAVE.COM

Touchstone Energy®
Cooperatives

TOGETHERWESAVE.COM

DO A LITTLE. SAVE A LOT.

EVERYTHING YOU DO, NO MATTER HOW SMALL, CAN ADD UP TO BIG SAVINGS — FOR YOU AND YOUR NEIGHBORS. FROM FLIPPING A SWITCH TO UPGRADING TO CFLs. SO TAKE YOUR PICK, AND SAVE YOUR MONEY.

FIND OUT HOW THE LITTLE CHANGES ADD UP AT TOGETHERWESAVE.COM.

WATER HEATING

1. Set water heater temperature no higher than 120^0F.

2. For households with 1 or 2 members, a 115^0F setting may work fine.

3. Install water-heater wrap per manufacturer's instructions.

4. Drain 1-2 gallons from bottom of water heater each year to reduce sediment build up.

5. Install heat traps on hot and cold water lines when it's time to replace your water heater.

6. Insulate exposed hot water lines.

7. Limit shower length to 5-7 minutes.

8. Install low-flow shower heads.

9. Fix dripping faucets.

10. Don't let water run while you are shaving.

11. Don't let water run while brushing your teeth.

LAUNDRY

12. Wash clothes in cold water. Use hot water only for very dirty loads.

13. Only do full laundry loads.

14. If you must do smaller loads, adjust the water level in the washing machine to match the load size, especially when using hot water.

15. Always use cold-water rinse.

16. Use bath towels at least twice before washing them.

17. Clean your dryer's lint trap before each load.

18. Make sure the outdoor dryer exhaust door closes when the dryer is off.

19. Verify dryer vent hose is tightly connected to inside wall fitting.

20. Check that the dryer vent hose is tightly connected to dryer.

21. Make sure dryer vent hose is not kinked or clogged.

22. Minimize clothes drying time; use moisture sensor on dryer if available.

23. Dry consecutive loads to harvest heat remaining in dryer from last load.

24. Consider using a "solar-powered" clothes dryer, an old fashioned clothes line.

KITCHEN

25. Use your refrigerator's anti-sweat feature only if necessary.

26. Switch your refrigerator's power-saver to "ON," if available.

27. Clean refrigerator coils annually.

28. Set the refrigerator temperature to 34^0 - 37^0F and freezer temperature to 0^0 - 5^0F.

29. Ensure gaskets around door seal tightly.

30. Unplug unused refrigerators or freezers.

31. Use microwave for cooking when possible.

32. When cooking on the oven range, use pot lids to help food cook faster.

33. If you are heating water, use hot tap water instead of cold.

34. Remember to use the kitchen exhaust fan when cooking and turn it off after cooking.

35. Use a crockpot instead of simmering foods on the stove.

36. If rinsing dirty dishes before putting them into the dishwasher, do so with cold water.

37. Use cold water for garbage disposal.

38. Only run dishwasher when fully loaded.

39. Use air-dry cycle instead of heat-dry cycle to dry dishes.

LIGHTING

40. Replace any light bulb that burns more than one hour per day with its equivalent compact fluorescent bulb.

41. Turn off unnecessary lighting.

42. Replace outdoor lighting with its outdoor-rated equivalent compact fluorescent bulb.

43. Use fixtures with electronic ballasts and T-8, 32-watt fluorescent lamps.

44. Use outdoor security lights with a photocell and/or a motion sensor.

MISCELLANEOUS

45. Turn computers and monitors off when not in use.

46. Make sure electric blankets are turned off in the morning.

47. Turn waterbed heater off when not needed.

48. Turn large-screen TV's off completely when not in use.

49. Turn off stereos and radios when not in use.

50. Remember to turn off hair curling irons and hot rollers.

51. Turn off coffee makers when not in use.

52. Turn off pool pump and/or heater when not needed.

53. Verify livestock water tank heaters are off when not needed.

54. Make sure heat tape is off when not needed.

55. Unplug battery chargers when not needed.

56. Ensure all new appliances purchased are Energy Star approved.

HEATING & AIR CONDITIONING

57. Set thermostats to 78^{0} F in summer, 68^{0} F in winter.

58. Run ceiling paddle fans on medium, blowing down in summer.

59. Run ceiling paddle fans on low, blowing up in winter.

60. Change HVAC filters monthly.

61. When installing new air filters, make sure they are facing in the correct direction (look for arrow on side of filter).

62. When heating or cooling, keep windows locked.

63. Insulate electric wall plugs and wall switches with foam pads.

64. Caulk along baseboards with a clear sealant.

65. Close fireplace dampers when not burning a fire.

66. Caulk around plumbing penetrations that come through walls beneath bathroom and kitchen sinks.

67. Caulk electrical wire penetrations at the top of the interior walls.

68. Close shades and drapes at night to keep heat in during the winter.

69. Make sure drapes and shades are open during the day to catch free solar heat in winter.

70. Close shades and drapes during the day to help keep heat out in summer.

71. Ensure attic access door closes tightly.

72. Insulate attic access door.

73. Make sure insulation in your attic does not block soffit vents.

74. Do not close off unused rooms that are conditioned by forced-air systems.

75. Do not close supply air registers.

76. Check to be sure return air grilles are not blocked by furniture or bookcases.

77. Ensure windows and doors are properly weather-stripped.

78. Make sure outside soffit vents are not blocked.

79. Do not use roof-top power ventilators for attic exhaust as they may evacuate conditioned air from your home.

80. Have your HVAC system serviced once per year by a NATE-certified technician.

81. Monitor your home's relative humidity in the summer. If it consistently stays in the 60 percent range or higher, ask your HVAC technician about lowering your central air conditioning unit's indoor fan speed.

82. Ensure window A/C units are weather-stripped.

83. Ensure windows with window mounted A/C units have weather-stripping between the middle of the top and bottom pane.

84. Remove and clean window A/C filter monthly.

85. Keep "fresh-air" vents on window A/C units closed.

86. Use heavy-duty, clear sheets of plastic on the inside of windows to reduce the amount of cold air entering your home.

87. Minimize use of electric space heaters.

88. Ensure your outdoor heat pump/air conditioning unit is kept clean and free of debris.

89. When using the fireplace, reduce heat loss by opening damper in the bottom of the firebox (if provided) or open the nearest window slightly.

90. In a basement, seal the sill and band joist with durable caulking or foam sealant.

91. Ensure floor registers are not blocked with rugs, drapes or furniture.

92. Outside your home, caulk around all penetrations including telephone, electrical, cable, gas, water spigots, dryer vents, etc.

93. Caulk around storm windows.

94. Caulk around basement windows.

95. Verify your supply air duct “boots” (behind supply air registers) are caulked to your ceiling or wall sheetrock or flooring.

96. If in unconditioned space, verify your ducts are tightly connected to your HVAC equipment.

97. Verify all outdoor doors (including storm doors) close and seal tightly.

98. In two-story homes serviced by one HVAC system, a paddle fan at the top of the stairs can push down hot, second-floor air.

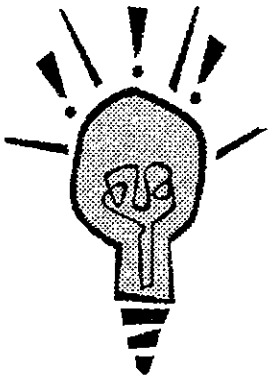
99. Install 15 minute, spring-wound timers on bathroom ventilator fans.

100. Always run your HVAC system fan on “AUTO.” Running it on “ON” uses more electricity and can decrease your air conditioner’s ability to remove moisture.

101. Keep your garage door down. A warmer garage in the winter and cooler garage in the summer will save energy.

For more information, please contact your local Touchstone Energy cooperative or visit TogetherWeSave.com.

LIGHTING and HEATING AND COOLING

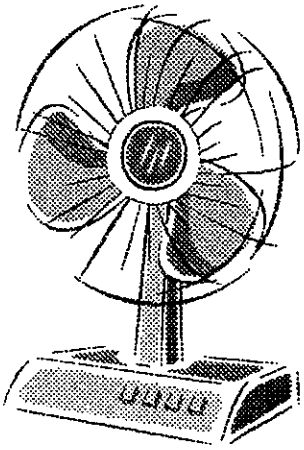


LIGHTING

- By replacing incandescent lights with fluorescent lights nearly four times as much light per watt can be produced and last 9 to 12 times as long.
- Keep light fixtures clean. Dust can absorb up to 20 percent of emitted light.

HEATING AND COOLING

- Programmable thermostats can be programmed to meet your family's life style. The thermostat will turn heat down automatically when you depart and up again when you return.
- In the summer fans can be used to circulate the air to make you feel cooler and used in the winter on reverse cycle to pull the heat down from the ceiling and circulate to make you feel warmer.
- Set thermostat at 78 degrees in the summer and 68 degrees in the winter.
- Insulate and tape ductwork
- Annual "checkup" for system
- Monthly filter cleaning or replacement
- Heat is constantly lost or gained in a home - 30 percent through the attic and 10 percent each through wall and floors
- Since heat moves from hot to cold areas, the idea of insulation is to create a barrier of resistance. The greater the R-factor, the better insulating power. Recommended R-factor is 30 for ceilings and 11 for walls.
- If the attic has 4 or more inches of insulation, added insulation is not vital. If there is less or no insulation, consider adding 6 to 9 inches of batt or blanket insulation or 6 to 12 inches of blown-in insulation.



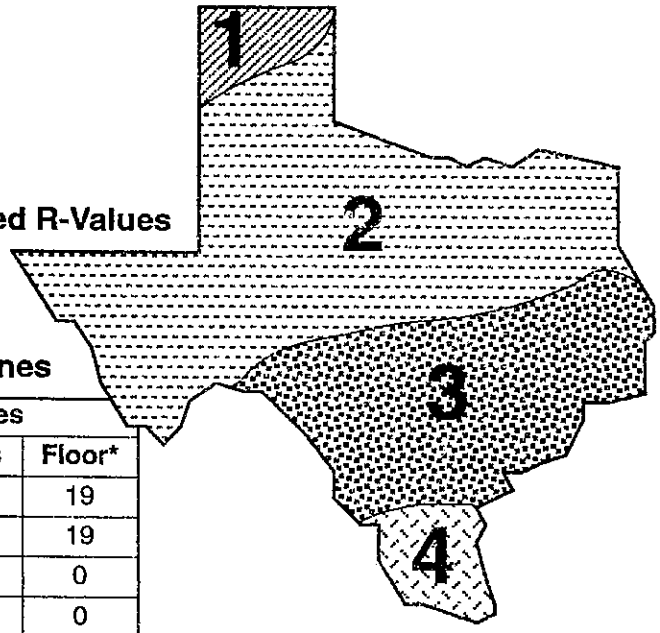
ENERGY *tips* **from** TVEC TRINITY VALLEY ELECTRIC

Additional Lighting and Heating and Cooling Tips

THICKNESS IN INCHES FOR INSULATION TO OBTAIN R-VALUES*					
	BATTS or BLANKETS		LOOSE and BLOWN FILL		
R-Value	Fiberglass	Mineral Wool	Fiberglass	Cellulose	Vermiculite
R-11	4 – 5 1/4	3 1/4 – 3 3/4	4	3 3/4	5 1/2
R-19	7 – 8 3/4	5 3/4 – 6 1/4	8	6 1/2	9
R-30	11 – 14	9 – 9 1/2	12	10 1/2	14 1/2
R-38	14 – 17 3/4	11 1/2 – 12	17	13	18

**Consult the manufacturer's recommendation for applications. Specific products may deviate from these nominal thicknesses, and specific R-values depend on material density and aging.*

Source: U.S. Department of Energy



Recommended R-Values for Existing Houses in Four Insulation Zones

Zone	R-Values		
	Ceiling	Walls	Floor*
1	38	11	19
2	30	11	19
3	30	11	0
4	19	11	0

*Floors over unheated crawlspaces and basements.

Source: U.S. Dept. of Energy

INSULATION CHECKLIST

- ❑ Check with electric cooperative for R-level recommendation
- ❑ Inspect current insulation for type, condition, and level
- ❑ Inspect vapor barriers
- ❑ Add appropriate type of insulation to bring to recommended R-level
- ❑ Keep insulation at least three inches from heat producers

FIREPLACE CHECKLIST

- ❑ Add glass fireplace doors and keep them closed
- ❑ Check damper fit (insulate in summer) and keep closed when not using fireplace
- ❑ Check into alternatives: outside air vent, fireplace inserts, circulation systems, etc.
- ❑ Keep ash box clean, especially if outside, to provide air source.

ENERGY tips FOR RENTERS

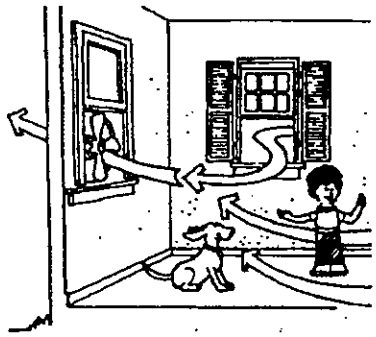
from TRINITY VALLEY ELECTRIC CO-OP

Whether you pay for utilities yourself or they are included in your rent, *you* pay for them. That's why it's important to learn how much energy you use and how to save. If you pay for your utilities directly, there are many simple suggestions in this tips sheet to help you save on electricity and gas.

If your landlord pays for utilities and they're included in your rent, take the steps recommended to avoid *wasting* energy. If you save, you reduce the landlord's cost of operation and that can help prevent rent increases.

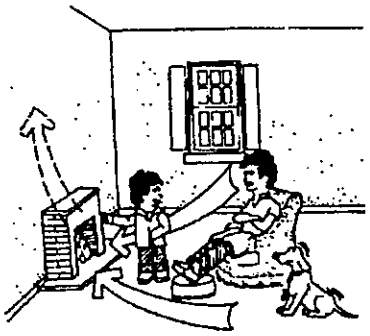
COOLING AND HEATING

The easiest way to save is to set your thermostat up to 78 degrees during the summer and down to 65 degrees for winter days and 55 degrees for winter nights. Thermostat set-up and set-back can save from 9 to 15 percent of your cooling and heating bills.



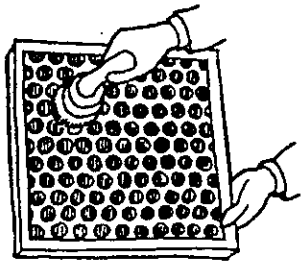
Summer Cooling

- Use fans to supplement your air conditioner. Air movement allows you to set your thermostat 6 to 8 degrees higher and maintain the same comfort level.
- Keep the sun's heat out of your home by lowering shades or closing drapes and curtains.
- When outdoor temperatures are more pleasant, turn off the air conditioner and open the windows to take advantage of natural breezes. Fans again will make you feel more comfortable.
- Dress in light, loose, comfortable clothing.



Winter Heating

- Use the sun to heat your apartment. Open curtains and shades when the sun is shining, and close them at night or on overcast days to keep out the cold.
- Wear warm clothing. This may include sweaters, socks, shawls, and/or long underwear. Wear several layers of clothing.
- Use your fireplace sparingly. In a typical, open-hearth fireplace, about 85 to 90 percent of the firewood's heating value is lost up the chimney in the form of hot combustion flue gases. In addition, heated room air is drawn out of the living space to keep the fire burning.
- When the fire is out, close the flue damper.



Year 'Round

- Seal cracks around windows and doors with inexpensive weatherstripping.
- Change or clean filters on air handling systems regularly. Dirty filters can cause excessive wear on your cooling and heating circulation system, reduce cooling or heating efficiencies, and increase the amount of energy needed to cool or heat your home.

Saving energy is easy . . .

APPLIANCES

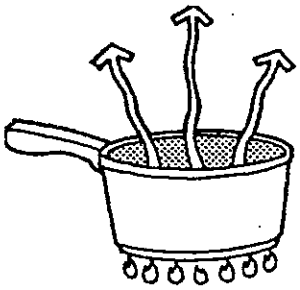
Major appliances account for 20 to 30 percent of all the energy used in the home, whether that's a house or an apartment. So, it will pay to take the following advice.

Water Heating

- Check the temperature of your hot water. If it's above 140 degrees, you can save energy by simply lowering the thermostat setting on the water heater. For most purposes the medium setting should provide sufficiently hot water.
- Have the landlord replace washers on leaky faucets to save hot water.
- When washing dishes in the sink, plug the sink and fill it with water instead of letting water run constantly.
- If you use a dishwasher, stop the machine before it gets to the dry cycle and let dishes dry in the air. Run the dishwasher only when full, and if it has an energy-saver cycle, be sure to use it.
- A 4-minute shower uses less water than a bath. Put a flow restrictor in your showerhead and save even more by cutting water flow from 8 gallons a minute to 2 or 3 gallons per minute.

Food Preparation and Storage

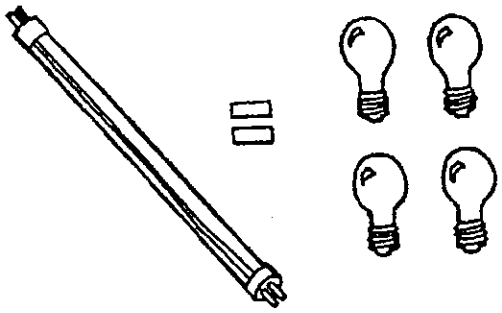
- Toaster ovens, microwave ovens, and slow cookers use less energy than the range-top or oven.
- When you use the oven, bake several items at the same time. Preheat for only 5 minutes (or not at all) and turn off the oven 10 minutes ahead of time.
- Open the refrigerator door as little as possible and close the door quickly. A list of snack food posted on the outside of the refrigerator door helps end refrigerator stare.



- For oven-cooked meals, turn heat off for the last 10 minutes.
- Clean burner pans often so they reflect more heat.
- Boil only the amount of water you need.
- Allow hot foods to cool to room temperature before refrigerating or freezing them.
- Keep commonly used items in a handy place near the front of the refrigerator.
- Keep the oven door closed rather than opening it to look in.
- Use the right size pan for each burner.
- Keep the freezer as full as possible to save energy.
- When you cook on the range, a cover on the pot will save a third of the energy used without a cover.
- Bake in ceramic or glass instead of metal and you can set your oven thermostat 25 degrees lower on any given recipe.
- Defrost the freezer when the ice is a quarter of an inch thick. More ice on the walls begins to act like a layer of insulation and decreases the efficiency of the freezer.

Lighting and Small Appliances

- Always turn off lights and small appliances when you're not using them.
- Choose light colors when you or your landlord paint. Light-colored walls reflect light so that you need less artificial light.
- Use energy-saver light bulbs that require 10 percent less electricity.
- Use lower wattage bulbs wherever possible and use fluorescent lights when you can. They are 3 to 5 times more efficient and last up to 12 times longer. New compact fluorescent bulbs are now available for use in table lamps and other fixtures designed for incandescent bulbs. Plus, you can take your more efficient bulbs with you when you move.



TVEC
TRINITY VALLEY ELECTRIC

MORE INFORMATION

For more information concerning other energy topics or answers to specific energy-related questions contact

P.O. BOX 888, KAUFMAN, TEXAS 75142 1800 HIGHWAY 243 EAST
PHONE: (972) 932-2214, (800) 766-9576, METRO: (972) 962-5997

ENERGY tips for LANDLORDS and APARTMENT MANAGERS

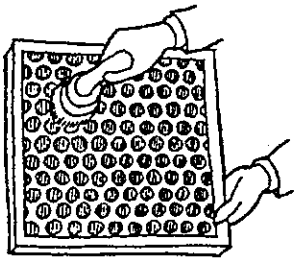
from TRINITY VALLEY ELECTRIC CO-OP

If you are an apartment manager or a landlord, you know that energy consumption can account for a large portion of operating expenses, particularly if the tenants' utilities are included in the rent. If tenants pay their own utility bills, you still may have to pay for energy supplied to common areas such as pools, laundry rooms and parking lots.

This tips sheet contains suggestions on how you can reduce energy use in and around your rental units. By following these tips, you can help keep utility bills and related rent increases under control and make your rental units more comfortable places to live.

Cooling

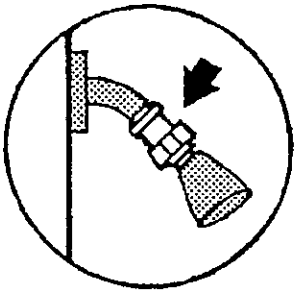
- Install ceiling fans in all units.
- Change or clean filters on air-handling systems regularly. Dirty filters can cause excessive wear on your cooling and heating circulation system and increase the amount of energy needed to cool or heat the units.



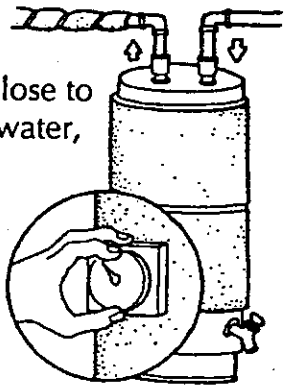
- Add exterior shading to decrease heat gain through windows and to help air conditioner compressors run more efficiently.

Equipment

- Install flow restrictors on faucets and shower heads to save water. Low-flow shower heads cut water flow from 8 gallons per minute to 2 or 3.



- Consider installing energy-saving water heaters and put them close to the greatest use of hot water, usually the kitchen or laundry room. Set the temperature at 120 to 130 degrees F, or medium, and suggest to tenants that they leave it there.



- Install an aerator in kitchen sink faucets. An aerator reduces the amount of water in the flow.
- Replace the washers on leaky faucets to conserve water.
- Consider installing heat pumps if your source of energy for heating is electricity. They use about half as much energy as electric resistance heating.

Painting

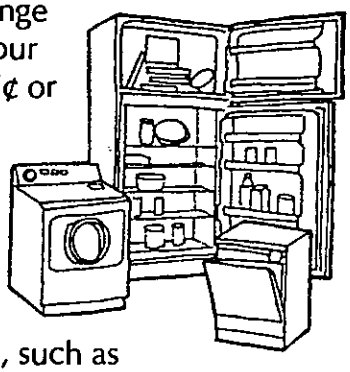
- Paint the exterior of the rental units according to climate. For example, painting a building white helps it reflect more of the sun's radiant heat.

Saving energy is easy . . .

- Choose light colors when painting the interior of the units. Light-colored walls reflect light so that less artificial light is needed.

Appliances

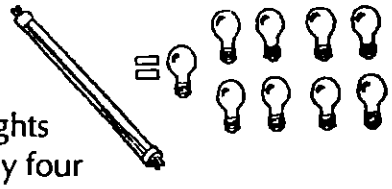
- Be energy conscious when buying appliances for a rental unit. Compare energy-use information and operating costs of similar models. Although more efficient appliances may cost more initially, they will cost less to operate and may last longer.
- Keep in mind when shopping for ranges that an electric range uses 1 kilowatt-hour per meal, about 7¢ or 8¢ worth. A gas range uses about 6¢ worth of gas per meal.



- Install the refrigerator away from heat sources, such as the stove, dishwasher or direct sunlight.
- Keep appliances in good working order. They will last longer, operate more efficiently and use less energy.
- Choose a gas range that has an electric ignition. A pilot light uses 11¢ worth of gas every day.
- Consider purchasing automatic dishwashers: An efficient automatic dishwasher can consume less energy than washing dishes by hand.

Lighting

- Replace incandescent lights with fluorescent lights in kitchens, bathrooms and laundry rooms. Fluorescent lights produce nearly four times as much light per watt as typical incandescent lights and last 9 to 12 times as long.



- Consider installing lighting timers on outside lights. Timers turn lights on and off automatically at pre-set times.

Washer/Dryer

- If you have central laundry rooms in a rental complex, be sure to keep the dryers' lint traps clean. A dirty lint trap slows the flow of air in the dryer so it takes longer and uses more energy to dry laundry.
- If there are washer/dryer connections inside the units, dryers should be vented outside to avoid adding excess moisture to the inside air.

Swimming Pools

- Clean the skimmer and pump-strainer baskets frequently.
- Follow the manufacturer's recommendations for servicing the filter.
- Keep the pool thermostats at 80 to 82 degrees F or below, and operate the pool heater only when the pool is being used.

TVEC
TRINITY VALLEY ELECTRIC

MORE INFORMATION
For more information concerning other energy topics or answers to specific energy-related questions contact

P.O. BOX 888, KAUFMAN, TEXAS 75142 1800 HIGHWAY 243 EAST
PHONE: (972) 932-2214, (800) 766-9576, METRO: (972) 962-5997

ENERGY tips FOR THE ELDERLY

from TRINITY VALLEY ELECTRIC CO-OP

The following tips will help you make your home energy efficient, safe and a more comfortable place to live. By following these simple tips you can be health wise and energy conscious.

Weatherizing

- Put a draft stopper along cracks beneath doors and windows.
- Place movable insulation in windows to block heat gain during the summer and keep the heat indoors during the winter.
- Caulk and weatherstrip around doors and windows to prevent air leakage.
- Install inexpensive gaskets around light switches and electrical outlets to seal against air leaks.
- Control your home's inside temperature with existing curtains, drapes or blinds. Open them in the winter to let warming sunlight in and close them in the summer to keep the heat out.
- Change or clean your heating/cooling unit's filter about once a month when the unit is operating.

Water Heating

- Look for and repair leaky faucets.
- Check your water heater thermostat setting. If the thermostat is set between 140 degrees F and 160 degrees F, or "high", you can reduce the setting to between 110 degrees F and 120 degrees F, or "medium", and save at least $20 a year with an electric water heater or $10 a year with gas. The lower thermostat setting can also prevent scalding.
- Replace your shower head with a low-flow shower head. It can reduce the flow of water from 8 gallons to 3 gallons per minute, and save up to 4,000 gallons of hot water a year.
- Run your dishwasher and washing machine only when they are fully loaded.
- Save even more hot water by using a cold-water laundry detergent so you can wash and rinse with cold water. Normally only very greasy clothes need to be washed in warm or hot water.

Lighting

- Replace two bulbs with one bulb that produces a similar amount of light. For instance, you could replace two 60-watt bulbs with one 100-watt bulb. However, be sure that the fixture is rated to use the higher wattage bulb.
- Change to fluorescent lamps wherever possible by replacing the entire fixture or by changing from incandescent to compact fluorescent bulbs. The initial cost of a compact fluorescent bulb is more than an incandescent bulb, but it can last up to 12 times longer and produce less heat, which will reduce the load on your air conditioner.
- Keep light fixtures clean. Dust can absorb up to 20 percent of emitted light.

Cooking

- Cook several foods at one time when using your oven. Prepare dishes that can be stored or frozen for later use.
- Bake food in glass pans. Glass pans allow you to reduce the oven temperature by 25 degrees.
- Use small cooking appliances, such as deep fryers, electric skillets, toaster ovens, microwave ovens and pressure cookers. These appliances use less energy than your range or oven.

- Match the size of the pan to the heating element when cooking on the stove. More heat will get to the pan and less will be lost to the surrounding air.
- Place lids on pots when cooking to retain the heat. This will help your food cook faster and keep vitamins from going up in steam.

Winter Tips

To save energy and money during the winter, set the thermostat at about 70 degrees F during the day and at night. For older adults, it's important to avoid the possibility of hypothermia, or lowering of the body temperature. This condition develops when body heat is lost faster than it can be replaced and is particularly common in winter. Because hypothermia can come on gradually, watch for these telltale signs: stiff muscles, shivering, puffiness in the face, or poor coordination. Some tips to save energy and avoid hypothermia include:

- Insulate your home properly.
- Dress warmly.
- Cover your legs with a blanket when reading or watching TV.
- Add an extra blanket at night.
- Avoid prolonged exposure to the cold.
- Get proper rest and drink plenty of fluids.

Summer Tips

To save energy and money during the summer, set your thermostat at 78 degrees F. In addition, guard against hyperthermia, or heat stress, which is a sudden increase in the body temperature. Heat stress can lead to heat exhaustion, heart failure or stroke. Some of the warning signs to watch for include dizziness, rapid heartbeat, diarrhea, nausea, cramps, or dry skin. Blistering Texas summers make heat stress a concern of the elderly. Some tips to save energy and avoid hyperthermia include:

- Dress in cool, loose-fitting clothes that are light in color.
- Wear a hat when you are outdoors or take an umbrella to protect your head and neck.
- Make use of fans; they help to keep the air circulating and aid to remove excess body heat.
- Keep physical activity to a minimum during the hottest part of the day.
- Drink plenty of fluids (check with your doctor).

TVEC
TRINITY VALLEY ELECTRIC

MORE INFORMATION
For more information concerning other energy topics or answers to specific energy-related questions contact

P.O. BOX 888, KAUFMAN, TEXAS 75142 1800 HIGHWAY 243 EAST
PHONE: (972) 932-2214, (800) 766-9576