

# Home Energy Management



Energy Saving Guidelines  
for Your Home



*Prepared especially for the Members of  
Sumter Electric Cooperative, Inc.*

A Touchstone Energy® Cooperative 

Heating & Cooling Your Home

Other Energy Saving Concerns

Energy Services & Payment Options



The purpose of this booklet is to equip you, our SECO customer/member, with information to help in making wise energy management decisions in your household. We will carefully study various parts of your home, from your space conditioning system to your water heater and everything in between, examining ways to be more energy conscious. It is SECO's goal to help you gain a greater understanding of your energy consumption and save you money in the long run.

## Lifestyle Can Make a Difference

You have complete control over how and when to use your electricity. And, you choose the ingredients necessary to maintain this standard of living. Let's take a look at some "lifestyle considerations" that can cause your electric bill to be higher than normal.

There is a direct relationship between the number of people living in the home and the amount of energy that is being used. This is especially true if you have teenagers at home. Also, if friends and relatives are visiting you can expect to use more energy for cooking, baking, laundry, bathing and space conditioning (heating and cooling your home).

### Ask yourself the following questions...

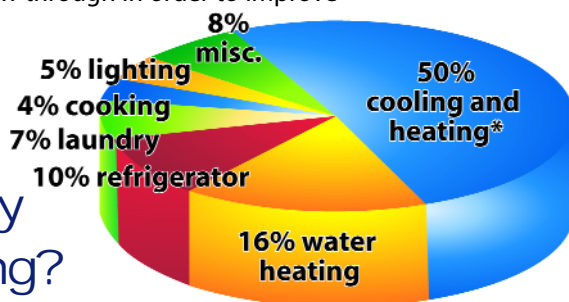
When I take a bath, do I use hot water sparingly, or is the tub completely full of water? Do I take short showers, or do I stay in the shower until the hot water runs out?

Do I repair leaky faucets or simply let them drip?

Do I operate automatic washers and/or dishwashers with a full load, or whenever it's convenient?

Remember, knowledge can be a powerful tool in reducing your energy costs. And, as you thumb through this pamphlet, you may discover a number of ideas in *Home Energy Management* that will help you to identify areas that need improvement. You will learn how to calculate your energy usage, review insulation recommendations, understand the details in your electric bill, learn energy savings tips and much, much more. However, it is up to you to formulate a plan – make the right decisions and follow through in order to improve the energy efficiency in your home.

### Where is my energy going?



This illustration shows the majority of energy usage goes into cooling and heating the home. These statistics are based on an average home for a family of four in the Central Florida region.

*\*The information given is an approximation of the "average family home." There are many variables to consider when determining individual energy usage per family dwelling.*

# Cooling & Heating Your Home



From a comfort standpoint, most Floridians prefer to be relatively cool in summer and warm in winter. Space conditioning is probably the largest energy user in your home and it offers the most potential for energy savings. In fact, during the summer air conditioning accounts for approximately one-half of most average monthly utility bills. Also, humidity plays an important part in our year-round comfort. If we operate a dehumidifier in summer and, to a lesser degree, a humidifier in winter, this contributes to our household energy consumption because they tend to run continuously. Read on!

## Ideal thermostat settings:



Thermostat settings make a big difference in your cooling and heating costs. Most people are comfortable with a setting between 78° F and 80° F in summer and 70° F or below in winter.

- ✓ There can be an annual cost savings of 6% to 8% for each degree higher you set the thermostat when cooling your home during the summer.
- ✓ You'll save 3% to 5% of your annual heating costs for each degree lower you set the thermostat in winter.
- ✓ When you leave home, adjust the thermostat to save energy. You can do this manually or automatically with a programmable thermostat.
- ✓ When you're away for an extended period of time, set the thermostat up to 85° F in summer; down to 55° F in winter. For additional savings, you can turn the unit off completely, but it may take several hours to regain a comfortable temperature when you return. If freezing, or mildew, is a problem keep the unit on and adjust the thermostat accordingly.

## Why insulate?

Inadequate insulation and air leakage are the leading causes of energy waste in most US homes. Not only does extra insulation save money, it also makes for a more comfortable home.

Insulation is rated in terms of thermal resistance called R-value. The higher the R-value the greater the insulating effectiveness. Installing more insulation in your home increases your R-value thus improving the resistance to heat flow.

Here are the recommended minimum R-values for a Central Florida home using an electric heat pump:

Existing Construction		The amount of insulation needed for your home depends on a number of variables:
Ceilings	R-30	• type of insulation needed for certain construction.
Walls	R-11	• type of heating/cooling being used.
Floors	R-11	• where you plan to insulate.
		• climate of the home.

There are excellent resources available on the World Wide Web to help you better understand the intricacies of insulation. Try visiting Oak Ridge National Laboratory on the World Wide Web at [www.ornl.gov](http://www.ornl.gov) to help you calculate the ideal R-value for your personal needs. Also, there is a formula available on the inside back cover of this pamphlet for determining how much insulation you need to add to your existing situation.

Heating & Cooling Your Home

Other Energy Saving Concerns

Energy Services & Payment Options

## Leaky Ducts – major cause of high energy bills



In the southern United States, it is estimated that 80% of all homes lose more energy through duct leaks than any other means. Here are a few inspection tips for your space conditioning system:

- ✓ During the winter, turn “on” your central heating unit and fan. Using your hands feel along the entire length of the duct system for escaping warm air. Wet hands are more sensitive to air movement.
- ✓ Look for dirty spots on the duct insulation and around the air vents in your home. These can be signs of air leakage.
- ✓ It’s well worth your investment to wrap any uninsulated duct located in the attic with fiberglass insulation.
- ✓ Be sure to check all the connections to the vents, joints and heating/cooling unit for a snug fit.

### Tuning up your cooling/heating system

- ✓ Have the air conditioner and/or heating system checked out by a qualified professional. Preventative maintenance on your AC unit could save you money and discomfort later in the season.
- ✓ Change filters monthly. Clogged filters make the unit work harder and increase operating costs.

## Weatherize your home



The average home in the United States may have a 25% – 40% increase in its heating and cooling bill due to an unweatherized house. Certain measures will help improve your housing envelope:

- ✓ Caulk and weatherstrip all exterior doors, windows, attic entrance, and baseboards.
- ✓ Seal and/or caulk any air leaks including the ductwork, plumbing, electrical outlets, and light fixtures.
- ✓ Check for air leaks in places like – fireplace dampers, around ventilation pipes, dryer exhaust vents, under drains and door jams.
- ✓ Insulate your attic including the attic door, or hatch cover to the recommended levels for the Central Florida area.



*Taken on a cold day, this infrared photo helps us to better understand energy loss through the building envelope of the house. It clearly shows the heat loss in and around the windows, doors and particularly through the roof and chimney – demonstrating the need to weatherize this home.*

*Photograph provided by Owens Corning – Toledo, Ohio*

# Heat Pumps... Ideal for Florida

Today, heat pumps are installed in most new Florida homes. And, because they are ideal for the hot summers and the mild winters in Florida, many existing homes are equipped with an air-to-air type of heat pump. Heat pumps are not new technology. In fact, they were first marketed in the 1930's and became quite popular during the energy crisis of the 1970's.

## What is a heat pump?

Basically, a heat pump is a device that extracts heat from the outside air pumping it into the home in winter. During summer it works similar to a regular air conditioner. There are three types of heat pumps: air-to-air, water-to-air (which takes its heat from groundwater), and the ground loop system (which takes heat from the temperature of the earth below the frost line).

## How does it work?

Even cold air contains some heat. "Cold" simply means that some, but not all, of the heat has been removed. Heat is totally absent from the air only at a temperature of absolute zero, or - 459° F. During the summer, a heat pump extracts heat from indoor air and pumps it outside.

## How does it do this?

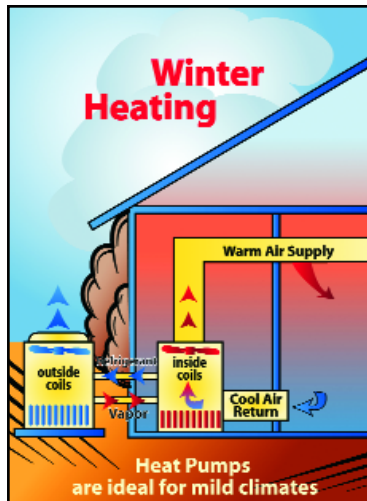
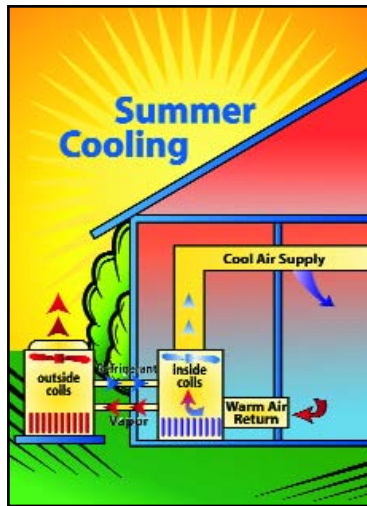
Heat pumps use energy to transfer and intensify heat that is already available in the surrounding environment. Simply stated, in the winter the heat is transferred from the outside to the inside, and in the summer the heat is transferred from the inside to the outside. Yet, a heat pump uses energy only to run the fan and compressor.

## How long do they last?

Studies show the average age of all operational heat pumps to be from 15 to 20 years! Heat pumps are ideal for Florida's climate.



*To insure peak performance, have your system checked on a regular basis by a qualified service specialist. Also, clear excess debris and shrubbery from around your exterior heat pump unit to prevent any air blockage.*



Heating & Cooling Your Home

Other Energy Saving Concerns

Energy Services & Payment Options

## What to look for when purchasing a heat pump

Get a professional to assist you in making a decision of this magnitude. Here are a number of factors to consider: square footage of your home, window orientation and exposure to light, construction materials, levels of insulation, air infiltration and lifestyle. Be sure to get at least three bids from various qualified heating/cooling professionals, read your contract carefully and never pay in full before the work starts.

It is necessary that you consider the SEER (*Seasonal Energy Efficiency Rating*) and the HSPF (*Heating System Performance Factor*) of your potential purchase. This is a measure of BTUs divided by the seasonal energy input in watt-hours. Basically, the higher the SEER, or HSPF number, the greater the energy savings; however, the initial cost of the unit goes up as well. Depending on what you purchase, your cooling expert should be able to calculate the annual energy savings in your home. Just be sure to compare apples with apples when comparing costs.

Below is a table to help you understand this cost efficiency factor.

### Annual Cooling Energy Cost

SEER (Seasonal Energy Efficiency Ratio)

BTUs	6	6.6	7.4	7.8	8.5	8.9	10*	11	12	13	15
12,000	\$288	\$262	\$234	\$222	\$203	\$194	\$173	\$157	\$144	\$133	\$115
18,000	\$432	\$393	\$350	\$332	\$305	\$291	\$259	\$236	\$216	\$199	\$173
24,000	\$576	\$524	\$467	\$443	\$407	\$388	\$346	\$314	\$288	\$266	\$230
30,000	\$720	\$655	\$584	\$554	\$508	\$485	\$432	\$393	\$360	\$332	\$288
36,000	\$864	\$785	\$701	\$665	\$610	\$582	\$518	\$471	\$432	\$399	\$346
42,000	\$1008	\$916	\$817	\$775	\$712	\$680	\$605	\$550	\$504	\$465	\$403
48,000	\$1152	\$1047	\$934	\$886	\$813	\$777	\$691	\$628	\$576	\$532	\$461

### Annual Heating Energy Cost

HSPF (Heating System Performance Factor)

BTUs	Heat Strips	5.2	6.0	6.4	6.8*	7.5	8.0
18,000	\$190	\$125	\$108	\$101	\$95	\$86	\$81
24,000	\$253	\$166	\$144	\$135	\$127	\$115	\$108
30,000	\$316	\$208	\$180	\$169	\$159	\$144	\$135
36,000	\$380	\$249	\$216	\$203	\$191	\$173	\$162
42,000	\$443	\$291	\$252	\$236	\$222	\$202	\$189
48,000	\$506	\$332	\$288	\$270	\$254	\$230	\$216

These charts are a guide to understanding how Energy Efficiency Ratio works. Prior to 1992 most systems had a SEER of 6.0 or less. Today, the US minimum efficiency standard is a SEER rating of 10.

*\*Minimum efficiency standards. Average cost savings listed above is based on a number of averaging variables (family size, lifestyle, energy usage etc.) which may vary from household to household.*



## Cooling Your Home the Natural Way

Landscaping is a very cost effective way to cool your home naturally, plus it offers environmental benefits as well. Studies indicate in shaded neighborhoods temperatures can be reduced 3° F to 6° F during the summer months. Therefore, a few carefully selected/placed trees, bushes, or vines can prevent excess sunlight from penetrating your home.



When designing your landscape, use plants native to Florida and position them wisely. You may consider planting a deciduous tree or two on the southwestern corner of your home. Due to the angle of the sun, this will provide more shade during the summer months. Keep in mind the expected size of the tree after many growing seasons and place trees accordingly. Vines, shrubs, grasses and hedges are also effective. This method doesn't pay off immediately; however, with careful planning and work, you'll reap the benefits in time.

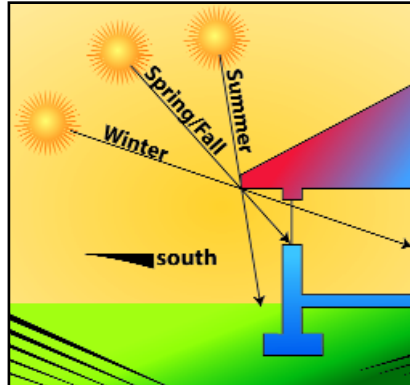
### Window treatments

Louvers, shutters, awnings and interior shades, available in a variety of different styles and materials, offer a good means of preventing direct sunlight from entering through your windows and doors.

Also, consider sun control or reflective films to cover the south and west facing windows.

### Choose the right color

It's not just for aesthetics, color is an important scientific factor to consider when purchasing any home improvement items such as new roofing materials, paint, window shades, blinds etc. Lighter colored surfaces reflect heat and darker colored surfaces absorb heat by way of conduction.



*Seasonal shading performance of a south facing roof over hang.*

### Other cooling and heating tips:



- ✓ For economy and best humidity control, set the fan on "auto" when operating your cooling unit.
- ✓ Cooling units located on the north side, or the shady side, of the house generally use less energy than those in a more sunny location.
- ✓ Use a ceiling, or portable, fan when operating your air conditioner and you can raise your thermostat setting 3° F, or more. You'll feel just as comfortable for less cost.
- ✓ Rotate your ceiling fans in a counter-clockwise direction during the summer months to help make you feel cooler. Try adjusting fans to rotate in a clockwise mode for winter months; this will circulate the air down from above.
- ✓ Portable space heaters can be very expensive to operate continuously; however, to heat a small area for a short period of time portable heaters are effective.
- ✓ Do not let furniture or draperies block indoor air grills. Keep outside air conditioning unit clear of plants and other obstructions.
- ✓ Keep your fireplace damper closed if not in use and install tempered glass doors. Although aesthetically appealing, your fireplace is one of the more inefficient heat sources in the home.
- ✓ Dress for the weather, wear light weight cotton clothing to stay cooler and wear sweaters in the winter to stay warm.



Heating & Cooling Your Home

Other Energy Saving Concerns

Energy Services & Payment Options

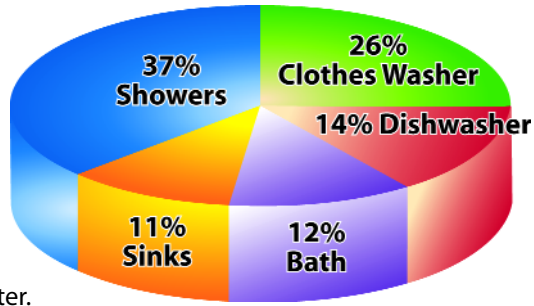




# Water Heating

According to the Department of Energy, water heating is the second largest residential energy expense after cooling and heating. The average Florida home can attribute approximately 16% of its energy budget (\$100 to \$400 a year) to heating water.

There are four commonly known methods of conserving hot water. They are to: use less water, turn down the thermostat setting, insulate your water heater or purchase a more efficient water heater.



The typical US homeowner's water consumption by place of use.

Information provided by US Department of Energy.



Low-flow Showerhead

## Hot water conservation

One simple, yet inexpensive, solution to conserve hot water is to install a low-flow showerhead. A standard showerhead uses about 5 to 7 gallons per minute (gpm) compared to a low-flow showerhead that uses a flow rate of 3 gpm or less. The purchase price ranges from \$10 to \$50 dollars and you'll save around \$25 per year in hot water costs. Plus, installation is a snap.

Here's a quick test to see if you would benefit from this type of showerhead. Set your shower to a normal pressure, then hold up a bucket to catch all the water. If it takes less than 20 seconds to catch one gallon of water, this may be a wise investment.

Another way to save on hot water is to adjust the water heater's thermostat setting to 115° F. However, if your automatic dishwasher does not have a temperature booster, the ideal setting is 140° F. The factory preset on most new water heaters is usually 140° F or above. Bear in mind, higher hot water temperature settings may pose a safety risk for some people, particularly frail seniors and very young children. Set the temperature according to your household needs.

Consider insulating an older electric water heater, especially one purchased prior to those with the yellow "Energy Guide" label. Newer models are more likely to be energy efficient. They are designed with built-in insulation. The older models probably need insulation.

You can save up to 70% on your water heating cost by purchasing a solar water heater; however, the initial expense can be pricey. This is becoming a popular choice for heating water in Florida. For more information visit the Florida Solar Energy Center's Website at: [www.fsec.ucf.edu](http://www.fsec.ucf.edu) and in the "search box" type "solar water heating" which will list all the current pages on the subject.

## Other hot water tips:



- Repair all leaky faucets. According to the US government, a leak of just one drip per second can cost \$1 per month.
- Simply, turn the faucet off while shaving or brushing your teeth and try taking short showers instead of long showers or baths.
- Install a water heater timer and set it according to your family needs.
- Periodically drain the hot water tank. This will prevent a build up of sediment which puts a strain on the heating elements.

If you are in the market for a new water heater, there are many choices available. Varieties include heat recovery units, heat pump exchange units, solar water heaters, and higher efficiency models. Study and compare these and determine what is best suited for your budget, bearing in mind long term usage cost. If you are not sure ask an energy expert which type is best suited for your home to save you money in the long run.

Other Energy Saving Concerns

Energy Services & Payment Options

## In the Kitchen

While many Floridians are trying to get away from the heat, particularly during those hot summer months, we all have to eat and the kitchen can be one of the warmest places in the house. Appliances have a tendency to generate excessive amounts of heat while in use. Let's explore energy tips and techniques for the kitchen and smart appliance usage.

### Your refrigerator

Today, more than the television set, the refrigerator is the single most widely used appliance in America. While modern refrigerators and freezers now boast a long list of options and sometimes, useful features, they have also become more efficient. Still, a refrigerator can be one of the biggest energy users in the home. The older refrigerators and freezers are power hogs, often accounting for as much as 25% of a total monthly energy bill. In fact, refrigerators more than ten years old, are still one of the largest energy users in many households. A common temptation, when a new one is purchased, is to put the old refrigerator in the garage. This will add to your overall energy cost. Today's new refrigerators are much more energy efficient.



### Things to keep in mind:



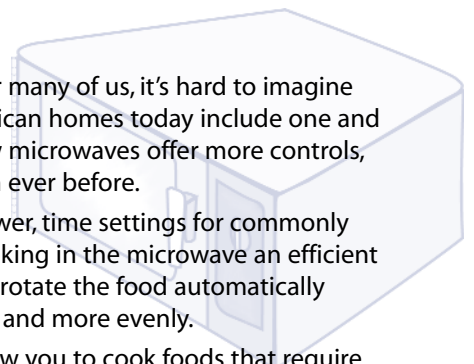
- ✓ Be sure the refrigerator is working properly. Ask yourself: does the compressor motor run continually or does it cycle on and off?
- ✓ Check the seals around the door thoroughly by placing a dollar bill between the seal and door. If the bill stays securely in place, the seals are relatively good. If the gaskets are hard and not flexible to the touch, out of shape or split, replace the seals or even the fridge itself.
- ✓ Defrost frequently to prevent ice buildup. Frost is an insulator when it forms and the compressor must run longer to keep the freezer cold. Automatic defrost can be a real money saver.
- ✓ Keep the doors open only as long as necessary. A refrigerator left open allows the cold air to escape, costing you money.
- ✓ For peak efficiency keep your freezer full. Fill empty spaces with bags of ice or cartons of frozen water.
- ✓ Clean condensing coils at the back or bottom of your refrigerator regularly. Try using a special brush or tool attachment on your vacuum cleaner.

### Your microwave

Remember life before the microwave oven? For many of us, it's hard to imagine how we ever got along without it. In fact, American homes today include one and sometimes two microwave ovens. And, the new microwaves offer more controls, features and convenience at a better price than ever before.

Some features, such as preset programmed power, time settings for commonly cooked foods and browning features make cooking in the microwave an efficient and time saving convenience. Carousels, which rotate the food automatically during cooking, save time and cook food faster and more evenly.

Combination microwave/convection ovens allow you to cook foods that require browning, eliminating the need to heat up your oven. Many models have built-in sensors that keep food from over cooking. And in Florida, the best news is that it doesn't add heat to your home and make your AC work harder.



### More good ideas:

- ✓ Defrost frozen foods in the refrigerator first. Baking defrosted food uses one-third less energy.
- ✓ If cooking time takes an hour or more, you don't have to preheat your oven.
- ✓ Lower the oven temperature. If you use ceramic, glass or stainless steel cookware, temperatures should be lowered by 25 degrees. These materials conduct and retain heat better than other types of materials.
- ✓ When you have several dishes to go into the oven, try to schedule your cooking so that you can cook more than one dish at a time. Often, a simple temperature change of a few degrees will allow you to put two casseroles in at once, using the oven's heat efficiently and resulting in the same great meal!
- ✓ Use a timer. Opening the oven door lets the heat escape and increases energy usage. Although it's tempting to open and close the oven door to check on how it's going, every time the door is opened the oven loses heat and has to work harder to get back to the correct temperature. Use the oven window and the interior light to check on the meal as it cooks.

### The Energy Star®

It is important to look for the ENERGY STAR® label when making a major purchase on any home appliance, water heater, cooling or heating unit – even doors, skylights or windows. The purpose is to help identify the more energy efficient products on the market.

Although energy efficient models may cost more to purchase initially, the additional up-front costs are offset by the savings on your utility bill. One helpful way to figure out if buying an ENERGY STAR® appliance makes sense for you is to think of it as having two price tags. The first price tag is the initial purchase price that you pay at the store when you buy the appliance. The second price tag is the cost to operate the appliance over its lifetime. You might be surprised when you see the potential savings.

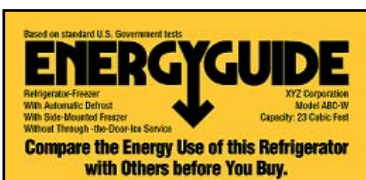


*The ENERGY STAR label was designed by the US Department of Energy and US Environmental Protection Agency to enhance awareness of the need for energy efficiency in consumer products.*

### What is an ENERGY STAR® appliance?

The ENERGY STAR® label may be found on clothes washers, refrigerators, dishwashers, and room air conditioners. An appliance receives the ENERGY STAR® rating if it is significantly more energy efficient than the minimum government standards, as determined by standard testing procedures. The amount by which an appliance must exceed the minimum standards is different for each product rated, and depends on available technology. ENERGY STAR® rated products are always among the most efficient available today.

### What to look for on the energy guide label.



The bright yellow and black guide, on all new appliances, provides the consumer with two important facts. First, it gives the estimated energy consumption in kilowatt-hours for a particular model in comparison to others. Secondly, the guide provides the estimated yearly operating expense

in US dollars based on the national average cost of electricity. You can use these numbers to determine the operating cost over the average life of the product .

## Why buy ENERGY STAR®?

Flourescent lighting fixtures that carry the ENERGY STAR® label meet federal energy efficiency and quality guidelines, without sacrificing performance. ENERGY STAR® labeled light fixtures help you play a role in energy conservation while saving money on your energy bills.

### Benefits of ENERGY STAR® lighting fixtures:

**Lighting Quality:** ENERGY STAR® labeled fixtures use less energy to produce the same amount of light as standard fixtures while providing excellent color rendering and light temperature.

**Safety and Reliability:** They meet EPA safety and reliability guidelines and also carry warranties. In addition, ENERGY STAR® labeled light fixtures operate at much lower temperatures than many traditional lamps, so the risk of starting a fire in your home is much lower.

**Attractive Design and Features:** ENERGY STAR® labeled models combine attractive design with the features that you want. Some portable models have dimmers or two-way switches.

**Convenience:** Indoor models start immediately and operate without the low level hum typical of older fluorescent fixtures. Outdoor fixtures automatically shut off during daylight hours and some models have motion sensors that allow lights to turn on automatically.



**Energy Saving  
Fluorescent Bulb**



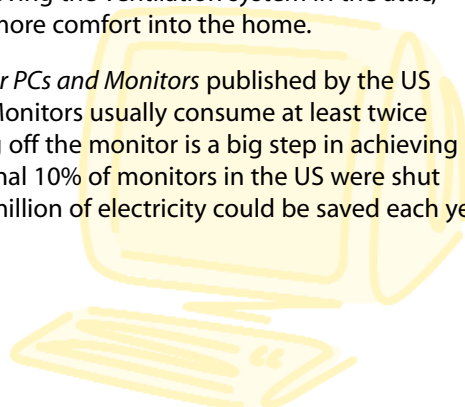
## Other Ways to Save

✓ The more affordable option to consider for heating your pool, instead of conventional methods, is solar heating and Florida has an ideal climate for this approach. According to a study completed at the University of Central Florida in the Solar Energy Center, "The average yearly cost for heating a residential pool in Florida is \$1,450 using electrical resistance (based on \$0.09/kWh), \$500 using an electric heat pump and \$580 using natural gas. Liquid propane costs the same as electrical resistance." For additional information on this topic visit [www.fsec.ucf.edu](http://www.fsec.ucf.edu), which offers a more in-depth approach to solar energy as a practical resource in your home.

✓ In addition to pools, spas use a significant amount of energy. It's wise to heat the spa, or pool, only when being used. You can save as much as \$50 per month by simply covering your spas and/or pools with an insulated cover. This helps to maintain the temperature, plus it prevents excess debris from getting into the water.

✓ If you discover excess humidity, try doing a little detective work around the house to determine the sources of moisture. Improving the ventilation system in the attic, bathroom and kitchen can aid in bringing more comfort into the home.

✓ The *User Guide to Power Management for PCs and Monitors* published by the US Government makes an interesting point, "Monitors usually consume at least twice as much electricity as the CPUs, and turning off the monitor is a big step in achieving significant energy savings. If just an additional 10% of monitors in the US were shut off at night and on weekends, about \$140 million of electricity could be saved each year."



## Ready and Willing To Serve You

At SECO, customer service is our number one priority and we are dedicated to providing you with the best possible service we can deliver. Our corporate mission is, "To satisfy customers by providing reliable, competitively-priced electricity and related services in a financially sound manner." SECO employees care about our member/customers and the communities in which they live.

### SECO is just a phone call away

SECO headquarters is located in Sumterville, where the customer service team is able to assist you over the telephone with all your electric service needs and much more. They will answer any questions you have regarding your account, assist you with new services and more. Please feel free to call for assistance and/or information between **8:00 a.m. – 7:00 p.m. Monday through Friday**. Local SECO telephone numbers are posted on the back of the booklet.



### After hours in the event of a major outage

SECO's Interactive Voice Response (IVR) improves our ability to effectively manage the reporting of power outages. Members calling to report an outage or to request a repair, anytime day or night, are directed to this automated system where the account location is identified by phone number and/or account number. Although the IVR is designed primarily for a touch-tone phone, voice response is available.

After the outage location is verified in the Operations Center, a repair request is automatically created and SECO personnel are swiftly dispatched to restore the service. Keeping your power on is a top priority at Sumter Electric Cooperative.

### Fast emergency electric service

SECO service technicians are on-call 24 hours a day, seven days a week to restore power quickly should you have a power outage or an electrical emergency.

#### What to check for before reporting an outage:

First, check for tripped circuit breakers or blown fuses. Next, check with your neighbors to see if they are without electricity.

If you have determined there is a power outage, you can contact your local SECO office anytime day or night and help will be on the way. The local SECO office numbers are posted on the back of this guide.

### What you need when reporting an outage

Be sure you have the **account name** and the **physical address of service** on hand, or an **account number**. We are able to locate your service by using the **telephone number** of the service account, only if the telephone number has been posted in SECO's account records. After you make the report, service technicians will be dispatched to restore your power as quickly and safely as possible.



## Give your house a check up



Free **Energy Audits** are conducted for members with residential or commercial accounts who wish to know more about their energy consumption. Trained professionals from SECO's member service group go on location to survey the facilities, exploring possible ways to improve energy efficiency. Following a thorough inspection of your home and/or business, they offer recommendations on ways to help keep your energy costs down.

## Surge Protection

SECO's Residential **Surge Protection Program** is aimed at helping you to protect your electrical appliances and sensitive electronic equipment from all types of power surges and electrical spikes.

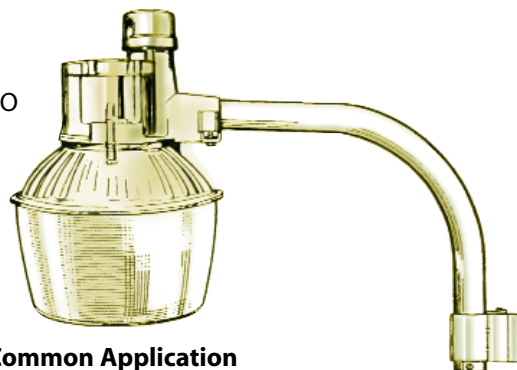
Power surges are sudden powerful increases in voltage, which can damage or destroy household appliances and electronics like computers, televisions, telephones and much more. Power surges or spikes can be caused by lightning strikes. They can also be caused by birds, animals and trees interfering with power lines, auto accidents involving utility poles, appliances cycling on and off in the home, and more.

SECO offers an array of surge protection and power quality devices to its membership. While surge protection can't protect against direct lightning strikes, it does safeguard against damage from major power fluctuations, surges that could come into your home through the electric, cable, and/or telephone lines.

Information on SECO's current product offerings is available through any of SECO's local offices. Central Florida is prone to severe weather and is the lightning capital of the nation. For that reason it's a good idea to protect your hard earned possessions as best you can whether through a SECO program or through some other mechanism.

## Outdoor lighting

If you live in an area that does not include street lighting, SECO has an Outdoor **Lighting Service** to meet your needs. Listed are a variety of high-pressure sodium lights which are programmed to stay on from dusk until dawn and are available in a variety of styles.



Lighting Type	Common Application
100 watt light* (7,500 lumens)	used most often for residences
250 watt light* (24,750 lumens)	used mostly for street lighting
400 watt light* (42,000 lumens)	used mostly for parking areas

*\*Contact your local SECO office for pricing information. Maintenance is provided at no extra charge.*

For more in depth details, installation charges and general maintenance for this program visit the services section at [www.secoenergy.com](http://www.secoenergy.com) on the World Wide Web, or contact a SECO representative.

## Special interest accounts

The purpose of this program is to identify and recognize the special needs of any member using "medically essential" equipment prescribed by a physician. This information is very helpful to SECO during planned outages or service restoration.

## Member assistance

In 1997, SECO established the **Angel Fund** program providing a means of "improving the human condition" in SECO's seven county service territory. The revenue generated from this fund is used to help people in dire circumstance, families in need of energy assistance along with a host of other humanitarian needs.



Contributions to this fund are made from the sales of items like weather monitors and collectible SECO trucks, in addition to personal donations. The majority of the proceeds are generated from the members who participate in SECO's Pennies from Heaven program.

## Pennies from Heaven

Designed to help support the Angel Fund, Pennies from Heaven provides an easy, effortless way for you and your Co-op to work together toward a common goal – providing financial assistance to worthy causes in our service area.

It's simple. Members who decide to be part of the program agree to have their monthly electric bill automatically rounded up to the nearest dollar. As an example, if your bill is \$67.72, you'll pay \$68.00. The extra 28 cents goes directly into the SECO Angel Fund.

The fund has been a lifeline for literally thousands of our less fortunate friends and neighbors. Any small administrative costs are absorbed by the Cooperative. So, you can rest assured that 100% of your donation will be used to make life better in our community.

Just imagine the good that could be done if all of SECO's members joined the "Pennies from Heaven" program. It's small change that changes lives.



## Caring for the elderly

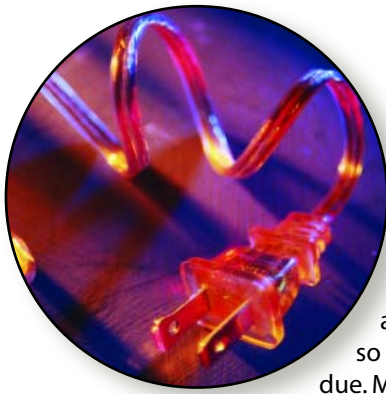
The **Gatekeeper Program** is designed to encourage trained employees to keep an eye out for our members, who are ages 65, or older, and in need of special assistance. Once a problem is identified, the Cooperative "opens the gates," by putting that person in touch with the social service agency that can help. With the member's permission, a trained professional investigates the problem and coordinates the delivery of services to the extent they are available. This program is very rewarding for employees and to elderly members in need of assistance. If you have a neighbor or friend that is in need of assistance, just ask and we will help.

## Bringing energy education to your neighborhood

Sumter Electric Cooperative realizes how important electricity is to you and your lifestyle. Throughout our corporation, employees are made available through the **Speakers Bureau** to help educate our members on many energy related topics.



If you are a member of a civic club, church action committee, senior citizens' group, business organization or educational institution within SECO's service territory and would like to know more about your Electric Cooperative and/or any related subjects, just give us a call. We may have a topic ready to suit your group's needs.



## Third Party Notification

Designed to help prevent the unexpected disconnection of electric service, **Third Party Notification** gives members the opportunity to have a duplicate copy of their electric bill mailed to a third party. The designated party is in no way obligated, or responsible, for payment of the bill. The additional bill, or reminder, simply serves as a courtesy notice so the designated party can remind the customer that the bill is due. Members who are away from home for extended periods of time find this service especially helpful and it can be useful to elderly members in need of assistance. In addition, landlords who receive a utility bill, to pass along to a tenant, may request a bill be sent directly to the tenant. An application to participate, signed and notarized, by the person whose name appears on the service account and the name and address of the person selected to receive the Third Party Notification is all that is required.

## Understanding your electric bill

A few days after the meter is read, an electric bill is mailed to SECO customers each month. The normal bill has approximately 30 days of service, but may vary from a minimum of 28 days to a maximum of 35 days, depending on the number of working days in the month and the holiday schedules.

If you are planning to be away on an extended trip when your next bill is expected, please notify SECO to make arrangements in advance to avoid any late charges. Also, you may consider bank draft as an option to accommodate your lifestyle.


PLEASE MAKE CHECKS PAYABLE TO:  
SUMTER ELECTRIC COOPERATIVE, INC.  
P.O. BOX 31634  
TAMPA, FLORIDA 33631-3634  
FOR ADDRESS/RATE CHANGE CHECK HERE   
See reverse side

This date does not extend the date any previous balance is due and payable.

BILLING DATE 05/19/03	DUE DATE-CURRENT BILL ONLY MUST BE RECEIVED BY: ② 06/03/03
ACCOUNT NUMBER 1234567890	AMOUNT DUE 124.00

① JOHN D. MEMBER  
12345 MAIN STREET  
SUMTERVILLE, FL 33585

TO ASSURE PROPER CREDIT, PLEASE RETURN THIS SECTION WITH YOUR PAYMENT

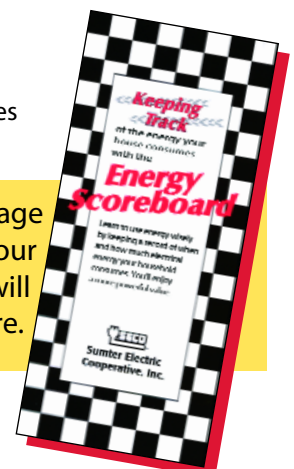


## Understanding your itemized electric statement

As shown above, the bottom portion of your bill should be sent with your payment, when mailing it. This will assure that your account is properly credited.

- ① This is the **mailing address** in SECO's electronic records. If this address is incorrect be sure to check the address change box above and write the change of address on the back, or contact SECO with your change of address.
- ② To avoid a late fee, payments must be received by the date due on the statement. If you are paying on the day the payment is due, the payment should be brought to one of our offices. This date does not apply to past due balances.

If you are interested in keeping track of your energy usage and would like to learn how to track the energy your household consumes daily, let us know. We will send you an "Energy Scoreboard" brochure.



JOHN D. MEMBER  
 12345 MAIN STREET  
 SUMTERVILLE, FL 33585

== SPECIAL MESSAGE == **3**  
 NEXT READING DATE 06/16/03

PLEASE DIRECT ALL PHONE INQUIRIES TO  
 SUMTERVILLE OFFICE..... (352) 793-3801  
 FROM PASCO OR HERNANDO COUNTY .....  
 ..... (352) 521-5788

== ENERGY INFORMATION == **4**  
 DAILY AVG ELEC USE 39 KWH/DAY  
 SAME MTH LAST YEAR 48 KWH/DAY

== RESIDENTIAL RATE == **5**  
 CUSTOMER CHARGES \$8.25/PER MONTH  
 ENERGY CHARGE 0.087000/PER KWH

Here is an example of the upper left section of your itemized statement of service:

**Special messages** are usually posted in this section of the bill, monthly. Announcements drawing attention such as, up and coming events or capital credit refunds and similar message are addressed here.

**3** **Next date** when your meter will be read.

**4** **Energy information** helps you to compare this month's usage to last year's usage during the same month. Keep in mind these numbers can be much different depending upon differences in weather, appliances, usage etc., from one year to the next.

**5** The **rate** is SECO's standard customer charge and the energy charge per kilowatt hour.

Below is an example of the upper right section of your itemized statement of service:

**6** The **account number** is a ten-digit number that identifies your account.

**7** The **meter number** is an eight-digit number located on the face of the electric meter and the **map number** is used to provide the exact location of the account.

**8** **Office** location serving you.

**9** **kWh used** tells how many kilowatt-hours of electricity were used between the current and the prior reading, which is needed to calculate the electric charge.

**10** **Days of Service** – the number of days of service included in this electric statement.

**11** **Power Cost Adjustment (PCA or Hot Bucks)** is used to pass along any increases or decreases in our wholesale cost of purchased power.

**12** **Trustee District** representing this account.

**13** **Last payment amount received.**

**14** The **Current Charges** reflect the breakdown of all charges, credits, and taxes included in your bill. Part of this list provides you with your current electric charges – combining the customer service charge and energy charge into one, plus any program fees that you may have signed up for. These programs may include SECO's surge program, the security lighting service, the Pennies from Heaven program, etc. Also, this may reflect your Hot Bucks credit or (PCA) and capital credit return, as well as any other credits you may be receiving from SECO at the time.

ACCOUNT NUMBER <b>6</b> 1234567890		METER NUMBER <b>7</b> 12345678		MAP NUMBER 0123456789	
OFFICE <b>8</b> S 86860	METER READINGS CURRENT 85717		PRIOR	KWH USED <b>9</b> 1143	
USAGE PERIOD 04/16/03 TO 05/15/03			DAYS SERVICE <b>10</b> 29	RATE SCHEDULE CONSTANT 1.0	
POWER COST ADJUSTMENT (PER KWH) .005800- <b>11</b>			TRUSTEE DISTRICT 2 <b>12</b>		
PAYMENT RECEIVED 82.00- <b>13</b>					
== CURRENT CHARGES ==					
ELECTRIC CHARGE		107.69			
*HOT BUCKS		6.63- <b>14</b>			
SURGE PROTECTOR		5.50			
PENNIES FROM HEAVEN		.68			
STATE TAX		.39			
MUNICIPAL TAX		7.57			
FRANCHISE FEE		6.06			
2.562% GROSS RCT TAX		2.74			
PLEASE PAY AMOUNT DUE → \$ 124.00					

Every member is responsible for paying the gross receipts tax and, depending on your location and services received, there may be other taxes included on your electric statement.

If you find any discrepancies, or errors, in your electric bill, **contact** your local office by dialing the number on the back of the statement. To reach the billing office, please call during business hours 8:00 a.m. until 7:00 p.m., Monday through Friday and speak to a SECO representative.

# Payment Options



Lifestyles may vary from one person to the next, that's why SECO has tried to make paying your bill as easy as possible. We have set up a variety of methods for payment to suit most needs. You may choose to send in your payment by US Mail, drop it off at any of SECO's six business offices, or stop by one of our convenient collection stations. If you're someone who is on the go, you can set up automatic bank draft, pay via telephone or Internet with our 24-hour Speedpay service.

At SECO, we care about you and want to make paying your bill as convenient as possible.

## Bank Draft – It's easy and it's free

It's ideal for members on the go, with no more monthly check writing. **Bank Draft** allows the customer to set up your energy payments so the funds are automatically transferred from your checking, or savings account, to SECO's account on the "due date" of your electric bill. Statements are mailed two weeks prior to the due date with "BANK DRAFT DO NOT PAY" printed near the amount due. If this suits your lifestyle take advantage of it – it's easy and it's free.

## Pay your bill by phone or Internet

SpeedPay's automated system allows you to pay your SECO bill over the Internet or by telephone, 24 hours a day, 7 days a week using a credit card, debit card or an electronic check.



The process is simple! To make a payment on the Internet go to [www.secoenergy.com](http://www.secoenergy.com) and you'll find a direct link to SpeedPay's secure server where paying your bill is a snap. Or, if you prefer an automated telephone voice response system, just call toll free 1-866-605-6383. Please note, there is a SpeedPay convenience fee of \$4.95 for each \$500 payment increment, and this fee will be reflected on your credit card or banking statement. This fee will not appear on your SECO bill and SECO receives no revenue from the fee.

## Other payment locations near you

Many banks, savings and loans, and a variety of businesses have agreed to accept electric payments on our members' behalf. Just call a SECO representative to find out where the closest pay station is to you or go to SECO's corporate Website [www.secoenergy.com](http://www.secoenergy.com) and find a current list of businesses and their locations. The banks only accept the exact amount and payments must be made on or before the due date. The other businesses simply collect the payments for the Co-op to pick-up.



## Walk-in service

SECO's Corporate Office is located in Sumterville at the junction of U.S. Highway 301 and CR 470. There are five other offices conveniently located throughout our seven county service area with trained personnel ready to assist you with all your service needs. Our business hours are from 8 a.m. to 5 p.m. Monday through Friday and for your convenience there is a Night Deposit box at each office.

# Calculating the Cost of Energy

watts X hours = watt-hours  
 1,000 watt-hours = 1 kilowatt-hour (kWh)  
 kWh use per year X \$ per kWh = \$ household electricity cost per year

To find out how much it will cost to run a 60-watt porch light 11 hours a night for an entire year or (per month) at the cost .087 per kilowatt-hour (kWh) simply calculate:

60 watts X 11 hours/day = 660 watt-hours/day  
 660 watt-hours/day X 365 days/year = 240,900 watt-hours/year  
 240,900 ÷ 1000 = 240.9 kWh  
 240.9 kWh X \$0.087\* (kWh energy charge) = \$20.96 per year  
 \$20.96 ÷ 12 months = \$1.75 per month

\*The current kWh energy charge is indicated on your monthly billing statement.

## Evaluating the R-value of the existing insulation

Insulation is an important consideration in reducing the costs of cooling and heating your home. R-value means "resistance to heat flow" and the higher the R-value the greater the insulation power. Also consider the aging and settling effects on the existing insulation. Listed are the government recommended standards for the R-value in Central Florida.

Insulation type	R-value per inch of thickness
Fiberglass blanket (batt)	2.9 to 3.8 (use 3.2)
High-performance fiber blanket	3.7 to 4.3 (use 3.8)
Loose-fill fiberglass	2.3 to 2.7 (use 2.5)
Loose-fill rock wool	2.7 to 3.0 (use 2.8)
Loose-fill cellulose	3.4 to 3.7 (use 3.5)
Perlite or vermiculite	2.4 to 3.7 (use 2.7)
Expanded polystyrene board	3.6 to 4 (use 3.8)
Extruded polystyrene board	4.5 to 5 (use 4.8)
Polyisocyanurate board, unfaced	5.6 to 6.3 (use 5.8)
Polyisocyanurate board, foil-faced	7
Spray polyurethane foam	5.6 to 6.3 (use 5.9)



Use this formula to determine the R-value of your **existing** insulation:

$$\boxed{\phantom{000}} \times \boxed{\phantom{000}} = \boxed{\phantom{000}}$$

Thickness (inches) x R-value per inch = Total R-value

Use this formula to determine how much insulation you need to **add**:

$$\boxed{\phantom{000}} - \boxed{\phantom{000}} = \boxed{\phantom{000}}$$

Recommended R-value - Existing insulation R-value = R-value needed

Do you want to know if you have the **space available** to add the insulation you need?

Then use this formula to determine the approximate thickness you need to add:

$$\boxed{\phantom{000}} \div \boxed{\phantom{000}} = \boxed{\phantom{000}}$$

R-value needed ÷ R-value per inch = Approximate thickness needed

Use the product information printed on the packaging to determine the actual thickness for any new insulation.



**American Council for an Energy-Efficient Economy**  
 Washington, DC, 20036  
[www.acee.org](http://www.acee.org)

## References

**Florida Solar Energy Center**  
 Cocoa, FL 32922-5703  
[www.fsec.ucf.edu](http://www.fsec.ucf.edu)

**Oak Ridge National Laboratory**  
 Oak Ridge, TN 37831-6070  
[www.ornl.gov](http://www.ornl.gov)

**Owens Corning**  
 Toledo, OH 43659  
[www.owenscorning.com](http://www.owenscorning.com)

**Rocky Mountain Institute – "Homemade Money"**  
 Richard Heede and Staff  
 SnowMass, CO 81654-9199  
[www.rmi.org](http://www.rmi.org)

**U.S. Department of Energy**  
 Office of Energy Efficiency and Renewable Energy  
 Springfield, VA 22161  
[www.eere.energy.gov](http://www.eere.energy.gov)  
[www.energy.gov](http://www.energy.gov)



**Sumterville**

PO Box 301  
330 South US Highway 301  
Sumterville, FL 33585-0301  
352-793-3801  
Pasco or Hernando County (352) 521-5788  
Fax: 352-793-5242

**Inverness**

610 South US Highway 41  
Inverness, FL 34450-6030  
352-726-3944  
Fax: 352-726-5707

**Eustis**

15720 US Highway 441  
Eustis, FL 32726-6561  
352-357-5600  
Fax: 352-589-0079

**Groveland**

850 North Howey Road  
Groveland, FL 34736-2234  
352-429-2195  
Fax: 352-429-4904

**Ocala**

4872 Southwest 60th Avenue  
Ocala, FL 34474-4316  
352-237-4107  
Levy County (352) 528-3644  
Fax: 352-854-2045

**Rainbow Lakes**

3555 South US Highway 41  
Dunnellon, FL 34432-1646  
352-489-4390  
Fax: 352-489-3660

