



# **POWER TO SAVE**

**AN ENERGY  
CONSERVATION  
GUIDE FOR  
YOUR HOME**



**Hawaiian Electric Company**

[www.heco.com](http://www.heco.com)



Welcome to Hawaiian Electric's Power to Save energy conservation kit. This handy, interactive booklet provides you with tools to wisely manage your electricity use and discover ways you can save energy.

The Power to Save Kit includes energy- and money-saving tips, an energy use chart of common household appliances and the cost to run them, an appliance buying guide, and an overview of how to read your electric bill.

To get started, we invite you to take our home energy quiz on the following page to find out what items are the largest energy users in your home. Use the results of your quiz to compare them to the annual energy use of a typical family of four to understand how each appliance affects your electrical bill and to identify areas of your home where you should focus your energy conservation efforts.

Please call us if you have any questions or would like more copies of the Power to Save energy conservation kit, and thank you for your commitment to conserving energy!

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## ❖ ENERGY CONSERVATION QUIZ ❖

In this first section, we'll take a look at your daily energy use.  
At the end of the quiz, you will be able to rank yourself to see how well you did.

Circle the letter that corresponds to your daily habits:

### LIGHTING

- A. I replaced most or all of my incandescent light bulbs with compact fluorescent light bulbs (CFLs).
- B. I changed a few of my incandescent bulbs to compact fluorescent light bulbs and intend to change the others as they burn out.
- C. I don't plan on changing my incandescent bulbs.

### WATER HEATING

- A. I have a solar water heater and I maintain it as prescribed by my solar contractor.
- B. I have a high-efficiency water heater.
- C. My water heater is old but still works.

### COOLING

- A. I open my windows and take advantage of Hawaii's cool trade winds.
- B. I limit use of my air conditioning and turn it on only when necessary.
- C. I leave my air conditioner on at all times.

### ELECTRONICS

- A. I use a power strip to turn off my chargers and other electronics when not in use.
- B. I use a power strip, but sometimes forget to turn it off.
- C. Most of my electronics are left plugged directly into the wall outlet.

### CLOTHES DRYER

- A. I hang my laundry on the clothesline.
- B. I use the dryer for certain items and hang the rest of my laundry on the clothesline.
- C. I use my dryer all the time to dry my laundry.

### POOL AND SPA

- A. I don't have a pool pump, spa, or hot tub at home.
- B. I only turn on my pool pump, spa, or hot tub when needed or have a timer to limit the hours of operation.
- C. I keep my pool pump, spa, or hot tub running all day so I can jump in anytime.

**REFRIGERATOR/FREEZER**

- A. I have an ENERGY STAR® qualified refrigerator that is sized just right for my needs.
- B. My refrigerator temperature is set between 37°F and 40°F, and my freezer section is set to 0°F.
- C. I have a refrigerator for daily use and a second refrigerator to store extra food and/or drinks (e.g., wine chiller, freezer, etc.).

**MICROWAVE OVEN**

- A. I use a microwave oven whenever possible to heat leftovers and water.
- B. I use a microwave some of the time to heat foods.
- C. I do not have a microwave oven.

Now, let's see how you did.  
Write down the points you earned for each answer in the space provided:

**A = 5 points**

**B = 3 points**

**C = 0 points**

Add up your total score:

**TOTAL POINTS**

35 – 40

**OUTSTANDING job!** You're a super energy saver!  
Read on to discover even more energy-saving tips.

29 – 34

**NICE efforts on saving energy.** The good news is that you have more ways to improve! Read on!

BELOW 29

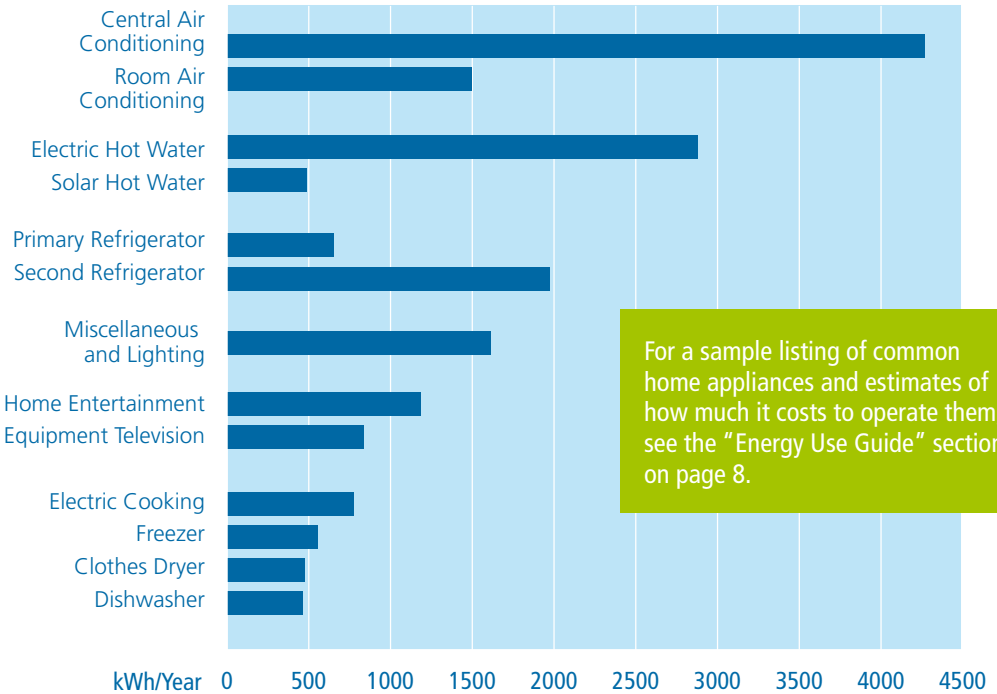
**NEED HELP.** Not to worry, the Power to Save booklet will provide you with lots of helpful information to become a super energy saver! Read on!

Continue on to the next sections to see how much energy you can save by concentrating on the areas that you scored 0-3 points. The next page will show you how much of your monthly bill is attributed to these energy users.

## HOME ELECTRICITY USE

Do you ever wonder where and how much electricity is used in your home and what uses the most energy? The graph below is an example of annual energy use for a typical family of four and illustrates which items use the most energy and cost the most to operate. Keep in mind that your usage may be different depending on your family size, household activities, as well as the type, number, and age of your appliances.

### Annual Energy Use for Family of Four



For a sample listing of common home appliances and estimates of how much it costs to operate them, see the "Energy Use Guide" section on page 8.

Notice that the categories that use the most electricity are air conditioning, water heating, refrigeration, lighting, and home entertainment equipment. Concentrate on conserving energy from these appliances first, as they will yield the largest reward for your effort. Other high-energy users in the home are swimming pool pumps, second refrigerators including wine chillers, and hot tubs/spas. Periodic maintenance also maximizes appliance lifespan and ensures your appliances are running at their best.

Now that you have identified high-impact areas where you can save the most energy and have seen how much each appliance affects your electric bill, you can take action by using the following energy-saving tips:

## COOLING

- Open the windows to let Hawaii's fresh trade winds cool your home or turn on a fan instead of using the air conditioner, a savings of approximately \$80 per month assuming your A/C unit is 12,000 Btu/H, EER 10.8, and running eight hours per day.
- Maintain your air conditioner for maximum efficiency by cleaning its filter and vents regularly. Replace filters that look worn.
- Only use your AC when the room is occupied. Refer to the energy use guide or operating cost chart later in the booklet to understand the cost of running your unit per hour.



A key factor to air conditioning is sizing your unit properly. Too small or large a unit can cause it to not perform optimally, increasing your electrical use. Visit [heco.com](http://heco.com) under 'Residential Services' to use our air conditioning sizing calculator and find out which air conditioner is right for you.

## WATER HEATING

- Install a solar water heater. A well-designed and properly sized solar water heater can reduce water heating energy use by 80% to 90%.
- If your water heater is more than 10 years old, it is probably not more than 80% efficient. An old water heater can operate for years at very low efficiencies before it finally fails. One way to reduce water-heating costs is to replace your old water heater with a new, higher-efficiency model. New energy-efficient water heaters have thick insulation, better heating element placement, and other energy-saving features that make them less expensive to operate than older models.



- Take short five-minute showers instead of tub baths. Filling the bathtub full of water uses over 25 gallons of hot water.

- If you have a solar water heater, remember to properly maintain it. Improperly maintained solar water heaters can contribute to large increases on your monthly bill.
- Install low-flow restrictors in older faucets and showerheads. They will reduce water flow to one to three gallons per minute, thus reducing your hot water costs.

## REFRIGERATOR/FREEZER



- Clean out your second refrigerator and turn it off for one month to see energy savings and to determine if a second refrigerator is necessary. You'll save between \$180 to \$1,080 per year if it is a model made prior to 1980, and for models made between 1980 to 2001 savings can be between \$144 to \$720 per year.
- Consider that the efficiency of refrigerators and freezers has improved considerably. New efficiency standards went into effect in 2001, and older units are typically two to three times more expensive to run than a new unit.
- Make sure your refrigerator door seals are airtight. Test them by closing the door over a piece of paper or dollar bill so that it is located across the seal. If you can pull the paper or bill out easily, the latch may need adjustment or the seal may need replacing.
- Allow ample space on each side of the refrigerator/freezer and around condenser coils for air circulation. Air flow increases energy performance.
- Unplug the refrigerator and clean its condenser coils regularly (unless you have a no-clean condenser model). Your refrigerator will run for shorter periods with cleaner coils.



Get practical tips to conserve energy, manage costs, and launch an energy conservation program at work with Hawaiian Electric's **Ways to Save at Work** and **Power to Save for Small Business** pamphlets. To have these booklets sent to you, call Hawaiian Electric at 543-7511 or visit us online at [heco.com](http://heco.com) to download a copy. Take a look and see how you can start saving energy today!



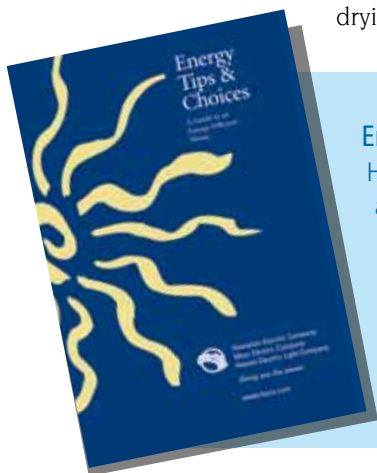
## LIGHTING

- Choose ENERGY STAR® qualified compact fluorescent lights (CFLs) as they typically use 75% less energy and last up to ten times longer than standard incandescent light bulbs. Changing one regular 100-watt bulb to an energy-saving CFL can save 80 kWh and more than \$24 per year per bulb, when used three hours a day.
- Lightly dust compact fluorescent lights (CFLs) regularly for optimal performance.



## CLOTHES DRYER

- Hanging your laundry on the clothesline instead of using the dryer eight times a week will save approximately \$32 per month.
- Dry full loads instead of several smaller loads. Avoid running the dryer unnecessarily for one or two items.
- Clean the dryer's lint filter before each load to better circulate air and maintain the unit's efficiency.
- Check the vent or duct occasionally for obstructions, which can add to drying time and energy used.

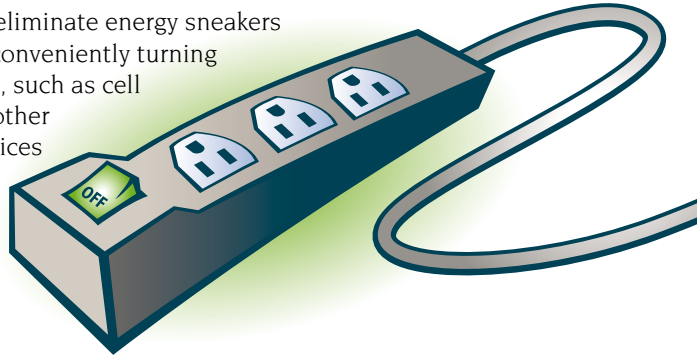


### Energy Tips and Choices

Hawaiian Electric's *Energy Tips and Choices* is a guide to an energy-efficient home. This booklet provides detailed information about appliances and energy use that will help you to use electricity more efficiently, and receive the most value for your money. To have a copy sent to you call Hawaiian Electric at 543-7511 or visit us online at [heco.com](http://heco.com) to download a copy.

## ELECTRONICS

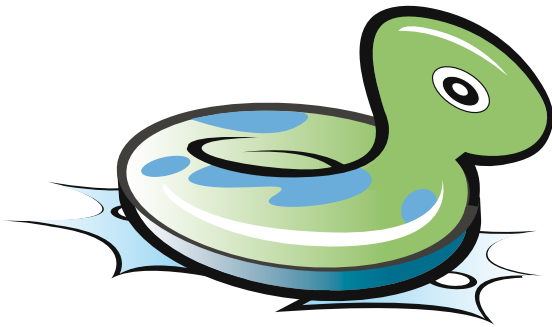
- Use a power strip to eliminate energy sneakers (phantom loads) by conveniently turning off devices not in use, such as cell phone chargers and other electronics. Such devices use standby power when not in use.



## POOL AND SPA

- Consult a pool supplier to ensure you have the smallest, right-sized pump for your pool. A 0.75-horsepower or smaller pump is generally sufficient for residential pools.
- Reduce a pool pump's electricity use by up to 40% by changing to a larger filter, increasing the diameter or decreasing the length of the pipes, and replacing 90-degree elbow pipes with flexible pipes.
- Consider reducing pool pump filtration time to six hours per day. If the water does not seem clean, increase the filtration time in 30-minute increments until it does.
- Install a timer to activate your pool pump in short periods throughout the day as opposed to having the pump on for six hours straight, which allows debris to build up the remaining 18 hours.

- Regularly clean debris from intake grates. Clogged drains require pumps to work harder, using more electricity.



Estimates are based on \$0.30 per kilowatt-hour (kWh)



### Check Your Home Energy Consumption

Hawaiian Electric offers a free home energy evaluation survey online at [heco.com](http://heco.com); just click on the item "My Home Energy Check." This customized analysis is complete with tips that will help you to conserve energy and manage costs.

## ❖ HOW MUCH DOES THAT APPLIANCE REALLY COST YOU? ❖

Learning how much it costs to operate your home appliances will help you to make wise decisions on how you use them. It also can help you to decide if it's time to replace an old appliance with a new energy-efficient model.

### Energy Use Guide for Commonly Used Appliances

Here is a sample listing of common home appliances and estimates of how much it costs to operate them per month. For a complete listing, please refer to Hawaiian Electric's **Energy Tips and Choices** booklet.

This sample chart shows some of the high-energy users are air conditioners, refrigerators/freezers, hot tub/spas, pool pumps, water heaters, and large screen TVs.

### Monthly Energy Costs

LARGE APPLIANCES	Use (Time)	kWh/Month	Cost/Month*
Air Conditioner, Room and Small Split-System <sup>1</sup>			
8,000 Btu/H, EER 10.8	4 hours/day	88.89	\$ 26.67
10,000 Btu/H, EER 10.8	4 hours/day	111.11	\$ 33.33
12,000 Btu/H, EER 10.8	4 hours/day	133.33	\$ 40.00
Air Conditioner, Central and Large Split-System <sup>1</sup>			
24,000 Btu/H (2 Ton), SEER 13.0	8 hours/day	443.08	\$ 132.92
36,000 Btu/H (3 Ton), SEER 13.0	8 hours/day	664.62	\$ 199.38
48,000 Btu/H (4 Ton), SEER 13.0	8 hours/day	886.15	\$ 265.85
Clothes Washer (excluding hot water)	8 loads/week	10.67	\$ 3.20
Clothes Dryer <sup>2</sup>	8 loads/week	106.67	\$ 32.00
Dishwasher (excluding hot water)	1 load/day	20.00-30.00	\$ 6.00-9.00
Freezer, Chest			
Manufactured Before 1980, 17-22 cu. ft.		100.00-130.00	\$ 30.00-39.00
Manufactured After 1980, 17-22 cu. ft.		40.00-100.00	\$ 12.00-30.00
Manufactured After 2001, 17-22 cu. ft.		40.00-43.00	\$ 12.00-12.90
ENERGY STAR® After 2001, 17-22 cu. ft.		35.00-38.00	\$ 10.50-11.40
Hot Tub/Spa <sup>1</sup>	24 hours/day	400.00	\$ 120.00
Oven Bake Unit, Self-Cleaning	2 hours/week	9.60	\$ 2.88
Range, Large Surface Unit	15 min/day	9.60	\$ 2.88
Refrigerator/Freezer, Side-by-Side			
Manufactured Before 1980, 19-22 cu. ft.		140.00-250.00	\$ 42.00-75.00
Manufactured After 1980, 19-22 cu. ft.		90.00-180.00	\$ 27.00-54.00
Manufactured After 2001, 19-22 cu. ft.		53.00-57.00	\$ 15.90-17.10
ENERGY STAR® After 2001, 19-22 cu. ft.		42.00-49.00	\$ 12.60-14.70
Swimming Pool Pump (1 horsepower)	8 hours/day	240.00	\$ 72.00
Water Heater, Conventional		260.00	\$ 78.00
Water Heater, Solar		26.00	\$ 7.80

<b>SMALL APPLIANCES</b>	<b>Use (Time)</b>	<b>kWh/Month</b>	<b>Cost/Month*</b>
Clock	24 hours/day	1.44	\$ 0.43
<b>Coffemaker</b>			
Brew Cycle	8 minutes/day	5.00	\$ 1.50
Warm Cycle	2 hours/day	4.20	\$ 1.26
<b>DVD Player</b>			
On Mode	2 hours/day	0.78	\$ 0.23
Standby Mode	22 hours/day	1.52	\$ 0.46
Fan, Ceiling or Oscillating	4 hours/day	12.00	\$ 3.60
Hair Blow Dryer	20 minutes/day	18.00	\$ 5.40
Iron <sup>2</sup>	30 minutes/week	1.00	\$ 0.30
Microwave Oven	20 minutes/day	15.00	\$ 4.50
Radio	6 hours/day	0.90-12.60	\$ 0.27-3.78
Rice Cooker	20 minutes/day	5.00	\$ 1.50
<b>Television</b>			
34-inch Tube-Type	7 hours/day	52.50	\$ 15.75
32-inch LCD	7 hours/day	30.03	\$ 9.01
42-inch Plasma	7 hours/day	57.12	\$ 17.14
Toaster	4 minutes/day	3.00	\$ 0.90
Toaster Oven/Broiler (oven function) <sup>2</sup>	20 minutes/day	3.75	\$ 1.13
Vacuum Cleaner	1.25 hours/week	3.25	\$ 0.98
Video Game Console	1 hour/day	1.08	\$ 0.32

<b>LIGHTS</b>	<b>Use (Time)</b>	<b>kWh/Month</b>	<b>Cost/Month*</b>
<b>Compact Fluorescent</b>			
13-watt CFL (equivalent to 60-watt incandescent)	3 hours/day	1.17	\$ 0.35
26-watt CFL (equivalent to 100-watt incandescent)	3 hours/day	2.34	\$ 0.70
Fluorescent, 4-foot Tube	3 hours/day	3.96	\$ 1.19
<b>Incandescent</b>			
60-watt Standard Bulb	3 hours/day	5.40	\$ 1.62
100-watt Standard Bulb	3 hours/day	9.00	\$ 2.70

<b>COMPUTERS</b>	<b>Use (Time)</b>	<b>kWh/Month</b>	<b>Cost/Month*</b>
Computer & Monitor (desktop)	4 hours/day	9.00	\$ 2.70
Laser Printer (color)	15 minutes/day	1.43	\$ 0.43

<sup>1</sup> = Compressor "on" the entire time

<sup>2</sup> = Appliance controlled by thermostat. Figures based on industry estimated "on" time.

\* Cost per month estimates are based on \$0.30 per kilowatt-hour (kWh) and average use for a family of four. Fixed monthly customer service charge is in addition to kWh costs. Use these as guidelines only; actual costs will vary according to each household's usage, activities, and number, age, type, and efficiency of appliances.

## DIDN'T SEE YOUR APPLIANCE LISTED OR IN THE ENERGY TIPS AND CHOICES BOOKLET?

To estimate how much it costs to operate a particular appliance simply follow the chart below in four simple steps.

**STEP 1** Determine the appliance's wattage and convert it to kilowatts.  
 \_\_\_\_\_watts / 1000 = \_\_\_\_\_kilowatts

**STEP 2** Enter the number of hours you use the appliance on average.  
 \_\_\_\_\_hours

**STEP 3** The cost per kilowatt is given to you, assuming  
 \$0.30 per kilowatt-hour.

**STEP 4** Calculate the operating cost. Multiply steps 1, 2, & 3.  
 \_\_\_\_\_kilowatts x \_\_\_\_\_hours x \$0.30 per kilowatt-hour =  
 \$\_\_\_\_\_ cost to operate the appliance

An appliance calculator is also available online at [heco.com](http://heco.com) under "Residential Services."

### Cost to Operate Your Appliances

APPLIANCE	KILOWATTS	HOURS USED PER DAY	COST PER KILOWATT	COST OF OPERATING APPLIANCE
	STEP 1	STEP 2	STEP 3	STEP 4
TV (42 INCH PLASMA)	272 (watts) / 1,000 = 0.272 kW	7 hours	\$0.30 per kilowatt-hour	0.272 kW x 7 hrs x \$0.30 = \$0.57 to operate this TV for seven hours
1.			\$0.30 per kilowatt-hour	
2.			\$0.30 per kilowatt-hour	
3.			\$0.30 per kilowatt-hour	
4.			\$0.30 per kilowatt-hour	
5.			\$0.30 per kilowatt-hour	

#### HINTS:

- If the wattage is not listed on the appliance, but the amps and volts are, you can calculate the wattage. Simply multiply the amps times the volts: Amps x Volts = Watts
- Horsepower: Motors are often rated in horsepower. One horsepower is roughly equal to one kilowatt.

## ❖ WHAT TO LOOK FOR WHEN CONSIDERING A NEW APPLIANCE ❖

If you are purchasing a new appliance, it is important to compare available energy-efficient models with the ENERGY STAR® and ENERGYGUIDE® labels. Both labels will allow you to make wise decisions on what appliances can save you money in the long run. Your appliance purchases today will affect your electrical bill for months and years to come.



### ENERGY STAR QUALIFIED APPLIANCES

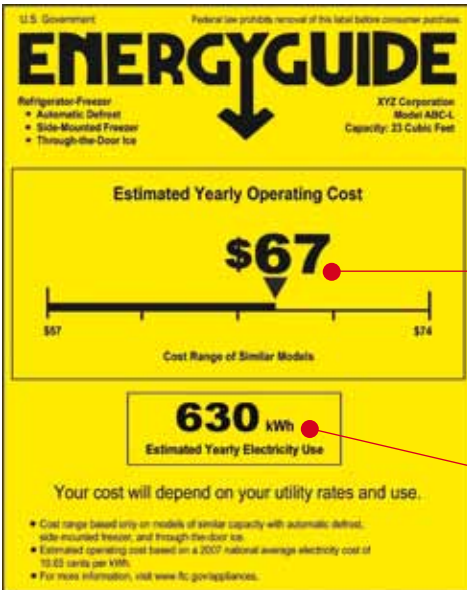
When purchasing a new appliance be sure to look for those with the ENERGY STAR label. ENERGY STAR qualified appliances have met strict energy efficiency guidelines set by the U.S. Environmental Protection Agency (EPA), U.S. Department of Energy (DOE), and typically use 10% to 50% less energy than standard models.

Visit [energystar.gov](http://energystar.gov) for more information and a listing of ENERGY STAR qualified products.

### HOW TO READ AN ENERGYGUIDE LABEL

Choosing appliances in today's market can be a difficult task. Although there are many decisions to consider when buying a new appliance, many of us overlook the most important aspect of the purchase, how much electricity the appliance will use over its lifetime. Many models may seem identical in performance, but take a closer look at the yellow ENERGYGUIDE label and

you will see that particular models are more economical to run than others.



#### READING AN ENERGYGUIDE LABEL

Pay special attention to the following two areas when comparing different appliance brands and models.

This is the estimated yearly operating cost of the appliance on a scale compared to similar models. Estimate is based on the national average cost of electricity which may be different from the rate you pay. The July 2008 residential rate for Oahu is \$0.30/kWh.

This is the estimated amount of electricity the appliance uses in a year based on typical use. The lower the kWh amount the better.

Source: U.S. Department of Energy, Energy Efficiency and Renewable Energy

ENERGYGUIDE labels can be found on all new water heaters, refrigerators, freezers, clothes washers, dishwashers, and room air conditioners.



Hawaiian Electric's HOME ENERGY CHALLENGE is an educational program that teaches and challenges students and their families how to reduce their home energy use. For more information visit [heco.com](http://heco.com)

Using the ENERGYGUIDE will help you to plan your purchases wisely. Consider the following example, showing why a less expensive appliance is not always the best choice. Although Refrigerator B is cheaper to purchase, deciding to buy the more energy-efficient Refrigerator A will save you money over the refrigerator's lifetime.

	Purchase Price	Yearly Energy Cost	Estimated Lifetime	Life Cycle Cost
Refrigerator A	\$800	(\$120 x	20 years)	\$3200
Refrigerator B	\$700	(\$140 x	20 years)	\$3500

### TAKE THE ENERGY PLEDGE!

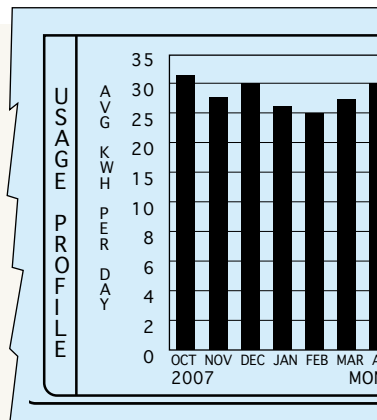
We invite you to take the Energy Pledge, a great way to begin your efforts to save energy and protect Hawaii's environment. After signing the pledge card, place it in a common area of your home, such as your refrigerator, as a daily reminder to your family to conserve energy. Visit us online at [heco.com](http://heco.com) to download a copy. The small changes you make today will produce big results in how you live energy wise tomorrow!



### ✦ YOUR ELECTRIC BILL ✦

Understanding how to read your electric bill will help you to measure your energy use every month. The User Profile and Bill Detail sections of a sample bill are explained on the following pages.

**How you are billed:** Homeowners are charged by how much electricity was used during a certain period. Electricity used is measured in kilowatt-hours (kWh) and here is the breakdown of what makes a kilowatt-hour and kilowatt-hours/Day:



**Watts:** A watt is the standard unit of measure for electricity. For example, a conventional water heater uses 4,500 watts.

**Kilowatts:** A kilowatt is 1,000 watts. Since we use large amounts of electricity at one time, it is often easier to describe electricity use in kilowatts.

**Kilowatt-Hours (kWh):** The amount of kilowatts used in one hour.

**Kilowatt-Hours (kWh)/Day:** The average amount of kilowatts used per day during the billing period. This is calculated by dividing total kilowatt-hours by the amount of days in the billing period.

As an example, take a look at the following sample bill:

## USAGE PROFILE SECTION

Represents your electricity history for the past year

**Average Kilowatt-Hours per Day (KWH/DAY):** This column is the average daily electrical usage for that period. Comparing this column to periods in the past is the easiest way to see if you are using more or less electricity than previous periods.

If both your bill and the KWH/DAY amount have increased, you are paying for the increased amount of electricity you have used.

If your bill amount has increased and your KWH/DAY has remained the same, you likely are experiencing changes to the Bill Detail section, which is explained on page 15.

**DATE:** The ending date of a billing period

**KWH (Kilowatt-Hours):** The amount of kilowatt-hours used during that period

**AMOUNT:** The total dollar amount

DATE	KWH	AMOUNT	DAYS	KWH/DAY	\$/DAY
10/23/08	581	\$ 174.75	33	17.6	\$ 5.28
09/20/08	482	144.60	29	16.6	\$ 4.99
08/22/08	716	214.80	30	23.9	\$ 7.16
07/23/08	918	275.40	33	27.8	\$ 8.35
06/23/08		316.20	30	35.1	\$ 10.54
		248.70	28	29.6	\$ 8.88
		292.80	33	29.6	\$ 8.87
		243.90	29	28.0	\$ 8.41
		223.20	29	25.7	\$ 7.70
		49.90	32	26.0	\$ 7.81
		53.80	28	30.2	\$ 9.06
		16.20	31	27.5	\$ 8.26
		5.40	32	31.8	\$ 9.54

**DAYS:** The number of days in the billing period, usually ranging from 28-33 days

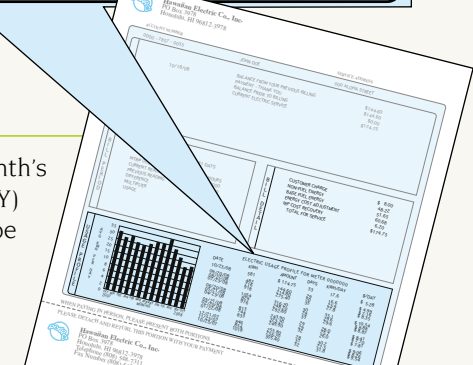
**\$/DAY:** The average daily cost for the amount of electricity you used in that period

ELECTRIC USAGE PROFILE FOR METER 0000000						
DATE	KWH	AMOUNT	DAYS	KWH/DAY	\$ /DAY	
10/23/08	581	\$ 174.75	33	17.6	\$ 5.28	
09/20/08	482	144.60	29	16.6	\$ 4.99	
08/22/08	716	214.80	30	23.9	\$ 7.16	
07/23/08	918	275.40	33	27.8	\$ 8.35	
06/20/08	1054	316.20	30	35.1	\$ 10.54	
05/21/08	829	248.70	28	29.6	\$ 8.88	
04/23/08	976	292.80	33	29.6	\$ 8.87	
03/21/08	813	243.90	29	28.0	\$ 8.41	
02/20/08	744	223.20	29	25.7	\$ 7.70	
01/22/08	833	249.90	32	26.0	\$ 7.81	
12/21/07	846	253.80	28	30.2	\$ 9.06	
11/23/07	854	256.20	31	27.5	\$ 8.26	
10/23/07	1018	305.40	32	31.8	\$ 9.54	

## HOW TO COMPARE ELECTRICITY USAGE

**Example:** By subtracting your current month's average kilowatt-hours per day (KWH/DAY) from the same month last year, you will be able to see if you are using more or less electricity.

Using the example profile above, this family currently uses 14.2 kilowatt-hours (KWH) less a day than was used one year ago. At \$0.30 per kilowatt-hour (KWH) that is a saving of \$4 a day or \$128 a month.



Month	KWH/DAY
October 2007	31.8
October 2008	- 17.6
Change of	= 14.2

### Electricity Use Exercise:

Now it's your turn. Using your most recent electricity bill, compare electricity use (in KWH/DAY) between the current month and the same month a year ago. Has your electrical use increased or decreased? It is important to compare the same month from the previous year because different months can influence your electrical usage. For example, you would be more likely to use your air conditioner during warm summer months than you would in the winter when air temperatures are much cooler.

Month	KWH/DAY
_____	<input type="text"/>
(Same month One Year Ago)	
_____	- <input type="text"/>
This Month	
CHANGE OF	= <input type="text"/>

## BILL DETAIL SECTION

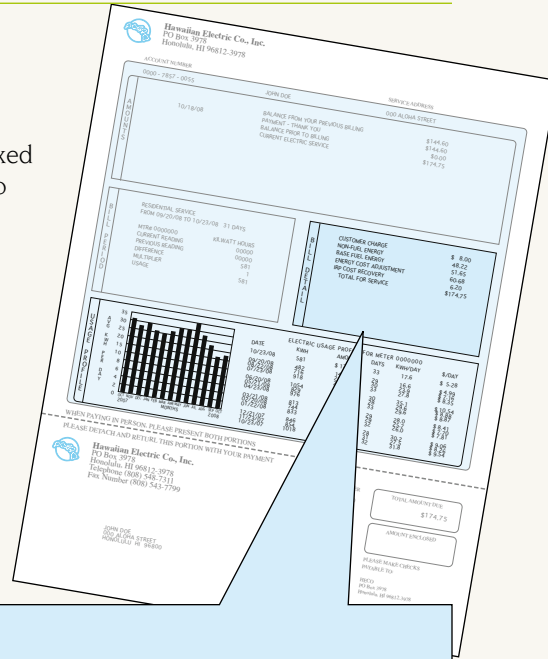
The breakdown of your total bill by individual charges

**Customer Charge:** Covers some of the fixed costs of maintaining electrical service to your home, whether you used any electricity or not.

**Non-Fuel Energy:** Covers some of the costs—excluding fuel costs—to provide electric service to you. These include costs to operate power plants and maintain the electric system.

**Base Fuel Energy Charge:** This is the cost of fuel used in our power plants to produce electricity. It also includes the cost of energy purchased from independent power producers. This charge is based on fuel prices used in Hawaiian Electric's last completed rate case, as approved by the Public Utilities Commission. The base fuel charge is adjusted monthly by the Energy Cost Adjustment, which may increase or decrease your bill in accordance with changes in actual fuel and purchased energy costs.

**Energy Cost Adjustment:** Because the price of fuel fluctuates, the Public Utilities Commission allows an adjustment to reflect these changes. This adjustment reflects increases or decreases in the cost of buying energy from independent power producers and in the price of fuel from the time the Base Fuel Energy Charge was set in Hawaiian Electric's last rate case.



<span style="color: blue;">●</span> CUSTOMER CHARGE	\$ 8.00
<span style="color: green;">●</span> NON-FUEL ENERGY	48.22
<span style="color: brown;">●</span> BASE FUEL ENERGY	51.65
<span style="color: blue;">●</span> ENERGY COST ADJUSTMENT	60.68
<span style="color: black;">●</span> IRP COST RECOVERY	6.20
<b>TOTAL FOR SERVICE</b>	<b>\$174.75</b>

**IRP Cost Recovery:** With Public Utilities Commission approval, bills may be adjusted to recover the costs of HECO's long-term energy planning process (IRP, or Integrated Resource Planning) and the costs of certain energy efficiency programs.

\*Note at times other charges may be temporarily included in your bill.

## ❖ OTHER SOURCES OF USEFUL INFORMATION ❖

Following is a list of websites that offer useful information on energy efficiency and energy conservation.

- ENERGY STAR® is a government-backed program that helps businesses and individuals protect the environment through superior energy efficiency.  
<http://www.energystar.gov>
- Hawaii Energy Efficiency Program administer rebates and incentives for qualified equipment.  
<http://www.hawaiienergy.com>
- Hawaii State Department of Business, Economic Development, and Tourism (DBEDT) offers information on energy conservation and energy tax credits.  
<http://hawaii.gov/dbedt/>
- “Field Guide for Energy Performance, Comfort, and Value in Hawaii Homes”  
<http://hawaii.gov/dbedt/info/energy/efficiency/fieldguide/>
- “Hawaii Homeowner’s Guide to Energy Comfort & Value”  
<http://hawaii.gov/dbedt/info/energy/publications/hhog.pdf>
- Hawaiian Electric Company offers a wide range of information on energy conservation, residential and business services, renewable energy and safety.  
<http://www.heco.com>
- Hawaii’s Energy Future provides an overview of the diverse energy resources needed to power Hawaii’s future.  
<http://www.hawaiisenergyfuture.com>
- U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy offers tips on saving energy and money at home.  
<http://www.energysavers.gov>

## IMPORTANT HECO PHONE NUMBERS

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### Customer Service for

- Start, change, and termination of service
- Payment arrangements
- Billing information

548-7311

weekdays  
7:30 a.m. to 6:00 p.m.

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### Customer Service for the hearing impaired

548-3596

weekdays  
7:30 a.m. to 5:00 p.m.

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### Trouble Dispatch for

- Outages or power lines down
- Dimming or bright lights
- Lights out

548-7961

24 hours

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### Consumer Education for

- Energy conservation
- Residential appliance operating costs and information
- School programs

543-7511

weekdays  
7:30 a.m. to 4:00 p.m.

If you have questions on the Power to Save kit or would like additional copies, please call Hawaiian Electric's Education and Consumer Affairs Department at 543-7511 or visit us online at [heco.com](http://heco.com).



**Hawaiian Electric Company**  
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