


# A Guided Tour of Your Electric Bill

By Linda Copman

	<b>Hawaiian Electric Co., Inc.</b> PO Box 3978 Honolulu, HI 96812-3978	<b>17</b> Cut your electric bill! HECO will help pay for a solar or heat pump water heater. Call 537-5577.			
ACCOUNT NUMBER		SERVICE ADDRESS			
8806-0869-002 JOHN O DOE		900 RICHARDS ST			
A M O U N T S	07/25/97	BALANCE FROM PREVIOUS BILLING	7	\$94.50	8
		PAYMENT - THANK YOU		<u>94.50-</u>	
		BALANCE PRIOR TO BILLING		\$0.00	
		CURRENT ELECTRIC SERVICE DUE 09/06/97	9	<u>85.19</u>	10
		TOTAL AMOUNT DUE		\$85.19	

**Image:** Top portion of a sample Hawaiian Electric Company (HECO) bill, from their Website at [www.helcohi.com](http://www.helcohi.com).

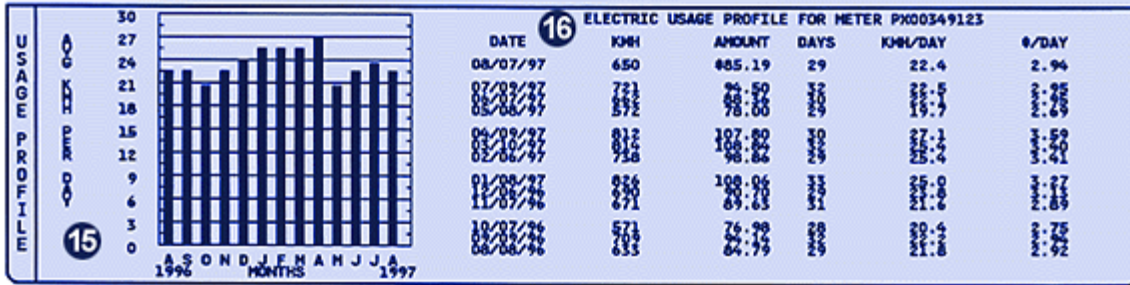
Reading the fine print on a nutrition label might help you to avoid loading up on unwanted calories. Likewise, reading the fine print on your monthly electric bill can potentially save you money, by helping you to understand what you are being charged for and how your home energy usage affects your bill.

You are invited to take this guided tour of your electric bill, in which each line item is explained to better understand what it is you are paying the utility for each month.

To understand your bill, it is helpful to know that a watt is the amount of electrical energy needed to power light bulbs (for example, a 60-watt bulb), appliances and other electrical equipment. A kilowatt is equivalent to 1,000 watts, and a kilowatt-hour is the amount of electrical energy required to provide one kilowatt of energy for one hour. If you turn ten 100-watt bulbs on in your house for one hour, they will consume one kilowatt-hour of energy.

Your monthly electric bill is broken down into four sections:

- Amounts which indicates past billing amounts paid and current charges
- Bill Period which lists service dates and meter data
- Bill Detail provides an itemized breakdown of your bill
- Usage Profile is a useful graphical profile of your electric consumption over a twelve-month period. This graph is a great way to track changes in your electric usage due to the purchase of a new appliance or seasonal use of heaters or air conditioners, or to evaluate the effectiveness of any energy conservation measures you recently implemented in your home.



**Image:** Usage Profile portion of a sample Hawaii Electric Light Company bill, from their Website at [www.helcohi.com](http://www.helcohi.com).

The “meat” of your electric bill lists the number of kilowatt-hours (kWh) you used during the billing period, according to your meter reading. The number of kWh your household uses varies each month due to differences in the number of days in the billing period, the number of people in the household and seasonal or other changes in your appliance usage. In the example below, John Doe’s household used 650 kWh during the sample billing cycle.

BILL PERIOD		BILL DETAIL	
11	R RESIDENTIAL SERVICE FROM 07/09/97 TO 08/07/97 29 DAYS	14	CUSTOMER CHARGE \$7.00
12	MTR# PX000349123 KILOWATT HOURS		NON-FUEL ENERGY 50.58
	CURRENT READING 86252		BASE FUEL ENERGY 22.84
	PREVIOUS READING 85602		ENERGY COST ADJUSTMENT 2.47
	DIFFERENCE 650		IRP COST RECOVERY 2.30
13	MULTIPLIER 1		TOTAL FOR SERVICE \$85.19
	USAGE 650		

**Image:** A sample Hawaii Electric Light Company bill, from their Website at [www.helcohi.com](http://www.helcohi.com).

Here is a line-by-line breakdown of each numbered item in the Bill Detail portion of your bill:

11. **From (Date) to (Date) Days.** The start and end dates of the billing period and the total number of days for which your current electricity usage was measured.
12. **Meter Reading.** The actual meter readings taken at the start and end of the billing period. If the utility estimated your bill, the phrase “EST. CURRENT READING” will be printed here.
13. **Usage.** The number of kilowatt-hours of electricity you used during the billing period.
14. **Breakdown of electric charges:**

- **Customer Charge** - This charge includes the utility's fixed costs for maintaining electric service to your home, including reading your meter and processing your bill. You will be billed this customer charge even if you used no electricity during the billing period.
- **Non-fuel Energy** - This charge includes the utility's non-fuel costs for providing electric service to you. Non-fuel charges include the utility's costs to operate their power plants, including labor costs and costs to maintain the electric distribution system, including power lines.
- **Base Fuel Energy** - This charge is based on the cost of fuel used by the utility in its own power plants and the cost of fuel used by independent power producers that the utility purchases power from. The amount of this charge is calculated based on the fuel prices approved by the PUC in the utility's last rate case. Together, the Non-fuel Energy and Base Fuel Energy charges comprise what is referred to as the utility's "base rates."
- **Energy Cost Adjustment** - The Energy Cost Adjustment Charge (ECAC) is a surcharge that reflects increases or decreases in the price of fuel from the time the Base Fuel Energy Charge was set by the PUC in the utility's last rate case. As the cost of fuel rises, the ECAC rises correspondingly. As a rule of thumb, for each \$1 increase in the price of a barrel of fuel oil, the ECAC will increase by approximately .151 cents per kilowatt-hour.
- **IRP Cost Recovery** - There are three surcharges which are included in this line item:
  - i. **IRP Cost Adjustment** - This charge covers the costs of the utility's Integrated Resource Planning (IRP) programs. IRPs are 20-year planning documents that the utilities prepare according to a framework established by the Public Utilities Commission (PUC). The IRP Framework adopted in 1992 requires each utility to conduct a major review of its IRP every 3 years. The PUC allows the utilities to recover their IRP costs, including interest and taxes, through this surcharge, which is applied to all ratepayers.
  - ii. **DSM Cost Adjustment** - The IRP Cost Recovery line item also includes a separate charge for Demand-Side Management (DSM), or energy-efficiency programs. The costs of implementing DSM programs, including administrative and marketing costs, customer incentives and any utility incentives, are included in this charge. HELCO customers are

currently paying .2354 cents per kWh of energy for the DSM Adjustment, to reimburse HELCO \$962,309 for the 2007 DSM residential program costs and revenue taxes, for 2006 shareholder incentives, and for the reconciliation of the 2006 DSM residential program costs. In February 2007, the PUC approved a non-utility market structure for administering energy efficiency programs in the State of Hawai'i, to be implemented by January 2009. Presumably, a third party could provide more effective and aggressive DSM programs to ratepayers, since a third party would have more incentives to save energy than the utilities might have.

- iii. **SolarSaver Adjustment** - Finally, the IRP Cost Recovery line item includes a separate surcharge which allows the utility to recover its costs for implementing the SolarSaver Program. The SolarSaver Program is a new, no-interest loan available to residential customers on O'ahu, Maui and Hawai'i Island to pay for the cost of installing a solar water heating system on their residence. The three-year pilot program started in July 2007, and is limited to 100 customers per year on O'ahu; 50 per year on Maui; and 50 per year on Hawai'i Island. This charge is applied across the board to residential customers on O'ahu, Maui and Hawai'i Island, regardless of whether they participate in the SolarSaver program.

Other charges may be temporarily included in your electric bill. For example, the PUC may grant the utility an interim rate increase to allow for increases in fuel costs since the utility's last rate case was approved. Such charges will be listed on your bill.

With the price of oil at over \$100 per barrel in 2008, the ECAC represented at least one-third of your entire bill. This was not always the case. In 2004, the ECAC was as low as one cent per kWh. If you were to graph the price of oil and the price of electricity over time, you would see electricity follows oil exactly.

Delving further into the HELCO Website, one can view the authorizing document for the ECAC. The Public Utilities Commission's Decision and Order No. 18365 effective February 15, 2001, is online at

<http://www.helcohi.com/vcmcontent/FileScan/PDF/EnergyServices/Tarrifs/HELCO/HELCORatesECAC.pdf>. This document states the following:

*"The (Energy Cost) Adjustment shall be effective on the date of the cost. When a cost change occurs during a customer's billing period, the Adjustment will be prorated for the number of days each cost was in effect."*

In short, the price of oil goes up right in tandem with your electric bill.

This “pass through” allows Hawai`i’s utilities to maintain their profit ratio and shields them from free-market forces that would ordinarily prompt them to strive to lower production costs in order to keep their service affordable. It also has supported the stability of the corporate environment and ensured the stability of the utility’s delivery of power to consumers.

There is, at present, no incentive for Hawai`i’s utilities to reduce costs by retiring inefficient generating plants and replacing them with locally produced renewable energy plants. The old fossil fuel plants have been fully depreciated and require minimal capital investments to operate.

**Governor Linda Lingle Notes, “It isn’t in the utilities’ interest to move away from oil.”**

Addressing members of the Kona-Kohala Chamber of Commerce on March 13, 2008, Governor Linda Lingle stated, “They (*the utility*) have a 100% pass through. That’s the situation we have here because of the regulatory structure.” explained Lingle. Lingle’s recent talk singled out the PUC and the electric utilities as the entities that will need to change their current practices if the state is to succeed in reducing its dependency on imported oil.

**Act 162 Passes**

In 2006, Act 162 was passed by the State Legislature and signed into law; this law allows the PUC to “fairly share the risk of fuel cost changes between the public utility and its customers.” “Risk sharing” means that the utility limits the risk associated with oil price volatility and consumers will share in some of the associated risks. The ECAC, as it is currently structured, allows the utilities to pass along increased fuel prices to their customers, so there is no pricing incentive for the utilities to diversify their energy sources.

**Customers watch as electric bills skyrocket**

The bottom line is that only a small portion of your electric bill is a “fixed” monthly charge. The remainder of your bill fluctuates with your energy usage and with the price of oil. While it will take systemic changes to influence the price of oil and transition to renewable energy resources, taking measures to reduce the energy consumption in your home can significantly reduce your bill. Simple changes like replacing incandescent light bulbs with compact fluorescent bulbs or LED bulbs, using fans instead of air conditioning and installing a solar water heating system can result in significant monthly savings. Small changes in energy usage can have a big impact on your budget.

For more information about your Hawaiian Electric Light Company (HELCO) bill, please call the utility at (808) 969-6999 in Hilo, (808) 329-3584 in Kona, or (808) 885-4605 in Waimea.