Take charge

of your energy use with a
Kill A Watt™ meter

JCE Co-op's instructional guide
on using a Kill A Watt meter

JCE CO-OP
Electric · Gas · Fiber

Kill A Watt electricity usage meter

The Kill A Watt meter is a simple household energy reader designed to help you save energy and money by giving you the information you need to make informed decisions about your home's energy consumption.

Use this meter as a tool to determine which of your appliances are drawing high amounts of electricity and phantom loads (standby energy). This knowledge can help you decide which appliances to limit use and which to replace with more efficient models.

General Information

- Please read all instructions in this manual before using the Kill A Water electrical usage meter.

- The display shows: Volts, Current (Amps), Apparent power (VA), Watts, Frequency, Power factor and Hours in real-time.

- The meter begins to record time and energy use once it is connected to a power supply.

- To reset, remove power from unit by unplugging it from the outlet.

- For any questions or comments please contact JCE Co-op's Member Services Department at 800-858-5522.

Determine the energy consumption of an electric appliance

1 Plug the Kill A Watt meter directly into a working wall outlet. The display will show information.

2 Plug the appliance (≤ 15 amps) you want to measure into the socket on the front of the Kill A Watt meter.

- Push the "Watt" button to see how many watts of electricity the device requires to operate.

- If it reads "0.0" then the appliance does not draw standby energy.

- To calculate the energy used while the appliance is running, turn the appliance on.

3 Leave the appliance and Kill A Watt meter plugged in for at least one hour—a longer period is required for large appliances that run in cycles, such as refrigerators, clothes washers, window A/C unit, cable box, video game system, etc....

4 At the end of your desired measurement period, return to the Kill A Watt meter and unplug the appliance from the meter. *DO NOT* unplug the Kill A Watt meter from the wall outlet. It has no battery life or memory to hold the data it has recorded.

5% Average household's monthly energy bill spent powering devices in standby mode

⑤ Gather the following information by pushing the pink button on the Kill A Watt meter.

_____kWh

_____time in hours

NOTE: **Time will initially display as Hours: Minutes (from 00:00 to 00:59) and switch to Hours (100.0) after 99:59 of measured time has elapsed.**

If Hours: Minutes are recorded, divide the number of minutes by 60 and add the number of hours to convert the time to hours.

Hours + (_____ min./60 min.) = _____._____ hours

⑥ Determine your electric rate.

($__._____/kWh) = cost per kWh + power cost adjustment

Rates can be found on your most recent electric statement, by calling your electricity distribution provider or visiting jcecoop.com/rates.

Bill sample

Purchased Energy Costs

Energy Charge	732 X 0.0398400	$29.16
Generation Charge	732 X 0.0468400	$34.29
Transmission Charge	732 X 0.0287700	$21.06
Power Cost Adjustment	732 X -0.015000	-$10.98

Distribution Costs

Facility Charge		$33.00
Member Service Charge		$5.00
Delivery Charge	732 X 0.0362000	$26.50

(7) You now have all the information you need to calculate the electricity consumption and cost of the appliance. Plug the information into the following formulas.

Per hour

$$\frac{\text{\_\_\_\_\_ kWh}}{\text{Time (hr)}} = \text{_____} \text{ kWh/hr}$$

Per day

_____ kWh/hr × 24 hrs/day = _____ kWh/day

_____ kWh/day × ($_.____/kWh) = $_.____ /day

Per month

_____ kWh/hr × 732 hrs/month = _____ kWh/month

_____ kWh/month × ($_.____/kWh) = $_.____ /month

Per year

_____ kWh/hr × 8760 hrs/year = _____ kWh/year

_____ kWh/year × ($_.____/kWh) = $_.____ /year

For questions or to schedule your FREE home energy assessment, please call the Energy Detective at JCE Co-op, 800-858-5522.

Track your results

Print your own tracking sheet at *jcecoop.com/energy-detective/kill-a-watt-meter*

		A Watts consumed	B Caluculate kW deman	C Hours used per day	
Example appliance			A ÷ 1,000 =		
While ON	Cost = kWh x $0.154[1]	20 watts →	0.02 kW →	3.0 hrs. →	
while OFF	Cost = kWh x $0.154	8 watts →	0.01 kW →	21.0 hrs. →	

Television

While ON	Cost = kWh x $0.154	_____ →	_____ →	_____ →	
while OFF	Cost = kWh x $0.154	_____ →	_____ →	_____ →	

Refrigerator

While ON	Cost = kWh x $0.154	_____ →	_____ →	_____ →	
while OFF	Cost = kWh x $0.154	_____ →	_____ →	_____ →	

Cable box

While ON	Cost = kWh x $0.154	_____ →	_____ →	_____ →	
while OFF	Cost = kWh x $0.154	_____ →	_____ →	_____ →	

Appliance_____

While ON	Cost = kWh x $0.154	_____ →	_____ →	_____ →	
while OFF	Cost = kWh x $0.154	_____ →	_____ →	_____ →	

[1]The current cost is ≈ $ 0.154 per kWh. Residential rates can vary over time. To calculate your own electric rate, add all of your annual bills and subtract monthly fixed charges that are not based on kWh. Electric rates can also be found on jcecoop.com.

D Calculate kWh per day $B \times C =$	E Calculate kWh per month $D \times 30.4 =$	F Calculate kWh per year $E \times 12 =$	G Calculate lbs. of CO_2 per year $F \times 1.45 =$
0.06 kWh → $0.009	1.82kWh → $0.28	21.89 kWh → $3.37	31.74 lbs of CO_2
0.17kWh → ε0.026	5.11 kWh → $0.79	61.29 kWh → $9.44	88.87 lbs of CO_2
_____ → $_____	_____ → $_____	_____ → $_____	_____ lbs of CO_2
_____ → $_____	_____ → $_____	_____ → $_____	_____ lbs of CO_2
_____ → $_____	_____ → $_____	_____ → $_____	_____ lbs of CO_2
_____ → $_____	_____ → $_____	_____ → $_____	_____ lbs of CO_2
_____ → $_____	_____ → $_____	_____ → $_____	_____ lbs of CO_2
_____ → $_____	_____ → $_____	_____ → $_____	_____ lbs of CO_2
_____ → $_____	_____ → $_____	_____ → $_____	_____ lbs of CO_2
_____ → $_____	_____ → $_____	_____ → $_____	_____ lbs of CO_2

Additional tools for analyzing and reducing energy consumption located here at
jcecoop.com/energy-detective.

Technical terms

Amperes (Amps) – Watts/Volts

Frequency (Hz) – Measurement of output voltage

Kilowatt (KW) – The basic unit of electric demand, equal to 1,000 watts.

Kilowatt hours (kWh) – A unit of energy equal to 1,000 watt hours. The basic measure of electric energy generation or use. A 100-watt light bulb burning for 10 hours uses one kilowatt-hour.

Meter – A device used to measure and record the amount of electricity used by a consumer.

Phantom load – The electric power consumed by electronic appliances while they appear to be off; also called standby power or energy vampires.

Power factor (PF) – The ratio of the real power to the apparent power in an AC electrical current. It is measured as a decimal between 0 and 1 or as a percentage; PF = W/VA

Vrms arms (VA) – Apparent power; W/PF

Volts (V) – True RMS voltage; W/Amps

Watts (W) – Real power; V x Amps; VA x PF

The ENERGY DETECTIVE
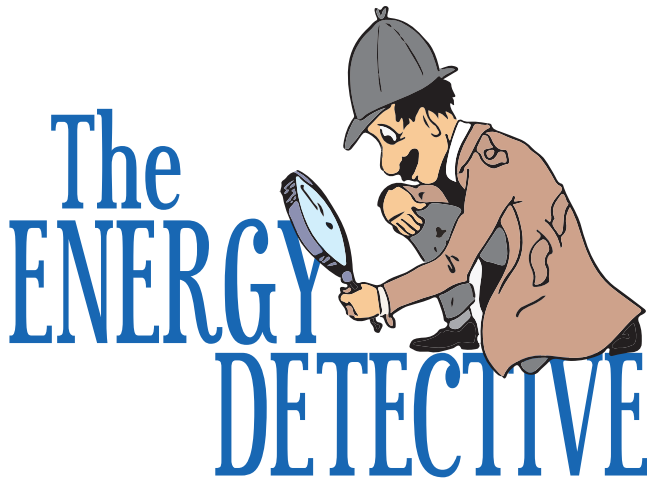
Free walk-through home or business energy assessments

This service is provided to our JCE Co-op members.

For a fee, we also do:

- Whole house and business energy audits
- Commercial and agriculture energy audits
- Duct leakage testing
- Blueprint plan review for IECC compliance
- New home IECC field inspections and mandatory testing with report and certificate

Call the Energy Detective
800-858-5522

The ENERGY DETECTIVE
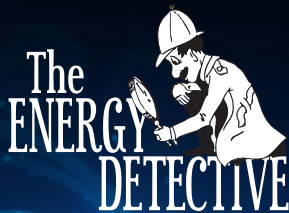
Please return this book to

– OR –

Meters borrowed directly from a JCE Co-op office can be returned to any of the following offices:

Elizabeth Headquarters, 793 US Rt. 20 W.
Monday– Friday: 7:30 a.m.–4 p.m.

Savanna Office, 103 Chicago Ave.
Monday–Friday: 7:30 a.m.–1 p.m., 1:30 p.m.–4 p.m.

Geneseo Office, 1004 S. Chicago St.
Monday–Friday: 7:30 a.m.–1 p.m., 1:30 p.m.–4 p.m.

800-858-5522 | jcecoop.com

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