



Facilitation Guide

Justice in My Home Electricity

How Much am I Paying for My Electricity?

This facilitation guide helps to pinpoint the exact costs charged on our electric bills and where/how we can save money. We hope that this workshop encourages energy efficiency when using (and not using) appliances in your home. If you are based in the Twin Cities, contact Natalya (narevalo@ceed.org) to pick up a CEED Power Pack with energy conservation supplies to save money on electricity and practice energy efficiency. If you are further away, many of the materials can be found at your local hardware store.

Materials Needed

- [Appliance Worksheet](#) (print)
- Hair dryer
- Kill-A-Watt meter(s)
- Electric bill examples
- Calculator(s)
- Paper
- Markers

CEED resources to download and print

- [Energy Hog Appliances](#)

Materials that may be included in CEED's Power Pack

- Multi outlet power strip
- 60W LED bulb
- Weather stripping

Facilitation Steps

A. Introduction: Who are we? Who's all here? Goals for today [10 min]

B. Energy use at home [15 min]

1. Pass out paper and markers to all participants. Have them write: Morning, Afternoon, Evening, and Late Night in different corners of their paper.
2. Next, encourage them to draw or write the names of the common appliances they use throughout the day in their respective corners (e.g draw a tea kettle under "Morning" because I use my electric kettle for a cup of tea in the morning). Have them circle appliances they use multiple times throughout the day.
3. Explain that this activity is to help visualize where their common energy usage occurs. Use leading questions:
 - a. What is used out of habit or comfort, but maybe isn't necessary?
 - b. What is used out of necessity?
4. Briefly go around the room and have participants share their most commonly used appliance.

The price of electricity

We are purchasing electricity everytime we turn on a light or plug in and use an appliance, but we don't know the dollar amount of how much our electricity is costing us... whereas everytime we go to the market, we know exactly how much a carton of eggs will cost us. Together, we will figure out just how much our electricity use is costing us.

C. Understanding our home electric bill [20 min]

1. To understand the numbers on electric bills, some math will be involved. Encourage participants to log into their electric utility account and pull up any past bill. If some don't have access to their bill, they can look up the average cost of residential electricity in their state: <https://www.eia.gov/opa/data/v1/qb.php?category=1012>
2. Pass out new, blank sheets of paper. Instruct participants to draw a table with their name in the vertical column, and "\$", "kWh", and "\$/kWh" in the horizontal columns. Reference the table below:

	\$	kWh	\$/kwh
Carlos			

3. Have participants reference their bills to fill out the empty columns. Share and reference the details needed for completion of each table:
 - a. \$: Find your "AMOUNT DUE" on your bill. This is the total dollar amount paid for one

month of electricity. Utility providers arrive at this number based on how much electricity you use, along with taxes and other fees.

- b. kWh: Next, identify electricity usage charges to find your kWh usage on your bill. You purchase electricity by the “kilowatt-hour” (kWh). On their bills, there may be various kWh line items, have them add them all together for their total kWh used.
- c. \$/kWh: Instruct participants to divide their “AMOUNT DUE” by the total kWh used. The final number is exactly how much you paid per kilowatt hour for your electricity use for one month.

What *exactly* is raking up our bills?

Reference the commonly used appliances participants shared at the beginning of the workshop (appliances circled on their papers). Together, we will identify just how much each appliance may be costing us.

D. The purchasing of kilowatt hours [40 min]

1. Have participants grab a chair and make a large group circle.
2. Grab the hair dryer and Kill-A-Watt meter. Pass the hair dryer around the circle. Prompt participants to find and note the “watts” labeled on the hair dryer.
3. Lead participants to a nearby outlet and plug in the hair dryer. Using the Kill-A-Watt meter, test the hair dryer: click through the settings: to high/low, hot/cold. Note how many watts the hair dryer is using changes when settings switch.
4. Using the watt numbers read by the meter, together, calculate the energy cost of the hair dryer per year:
 - a. Note the number of watts used by the hair dryer.
 - b. Multiply by the hours used per day. Note the final number.
 - c. Multiply by the days used per year. Note the final number (the final number here is the total **watt hours in a year**).
 - d. Divide by one thousand (this changes the watt hours to **KILOwatt hours**). Note the final number.
 - e. Have participants reference back to their individual kilowatt hour number from the previous exercise. Multiply the number noted above by the \$ you pay per kilowatt hour. Note each participant's final number. This number is how much the hair dryer costs you per year.
5. Split participants into groups of 2-3. Hand out the [Appliance Worksheet](#), detailing the equation, and calculators. Instruct participants to use the equation to calculate money spent on appliances around the room. Allow ~10 minutes for teams to test and calculate.
6. Suggest appliances as helpful: refrigerator, cell phone charger, laptop, lamp, vacuum.
7. Once time is up, encourage teams to share some of their final numbers and allow the other teams to guess what appliance they may have tested.

E. Energy efficient habits [10 min]

1. Hand out the list of [Energy Hog Appliances](#). Note that the appliances listed are those that are considered to be high watts and use energy, even when not in use.
2. Using guiding questions, facilitate a brief reflection referencing the Energy Hog list:
 - a. Which appliances from the list do you use a lot?
 - b. Which appliance(s) surprised you?
 - c. What are some appliances in your home that are turned off, but are still plugged in?

Energy Efficiency

Energy efficiency means using *less* energy to perform the same task – that is, eliminating energy waste. Being energy efficient also helps us to save money and keep our electric bills down.

What can we do to impact our electric bills for the better?

1. Technology used: using lower watt appliances
2. Individual behavior: how long you use each appliance

F. Reflections & Closing [10 min]

1. Wrap-up; what did participants learn? What will they be sharing with community members? What remains unanswered?
2. Thank participants for their time and participation; we hope that they learned something new and are energized to continue conversations like today's.
3. Distribute Power Packs.