

Knowing Energy: How Intense is Your Electricity Usage?

Energy Revealed

Learner Worksheet

Level 1-2: Grades 3-8

Level 3-4: Grades 9-12



Reminder:

- kWh = kW x Time (hours)
- 1 kW = 1000 W
- Canadian Average Electricity Bill = 750 kWh (OEB)
- Canadian Average House Size = 1250 feet squared

Level 1 Questions/Activities:

1. With the assistance of people in your household, login into your local utility providers website and locate the MONTHLY consumption of electricity or ask a guardian for a copy of ONE electricity bill.

2. Using your investigation skills find out how many square feet your house is, which is?

3. Divide your average electricity consumption by the square footage of your home to see what we call 'the energy intensity' of your home in kWh/square foot.

4. Submit this number to your educator to graph and display anonymously. Discuss with the class why there is a wide range of numbers.

Level 2 Questions/Activities:

- **Note:** Complete level 1 questions/activities first if you haven't already done so.

1. Repeat the intensity analysis for ONE natural gas bill as well (if you do not use gas in your home, great! You are ahead of the curve in savings GHG's, sit back and move onto the next question). **BONUS:** Convert your natural gas intensity to an equivalent kWh/square foot (this may require a bit of research).

2. What is the range of intensities you see (highest and lowest)? Why do you think you see this much variety in electricity consumption?

3. What is the average intensity for your class? Given the range of values do you think the average for your class is high or low compared to the national average (Ontario Energy Board, OEB)? Why do you think your class lays where it does, think beyond the obvious discussed in level 1?
