

Coal Use in New Brunswick

Approximately 15% of New Brunswick’s power comes from our only coal generating station in Belledune. In this activity we’ll think about the environmental costs of burning coal.

a) Using the chart below, calculate the approximate electricity consumption (in kWh) for this classroom (remember your units!).

Object	Watt-Hours consumption	Number in the Classroom	kWh consumed in 1 hour from object	kWh consumed in an 8 hour day from object	Total consumption for 65 classrooms
1 Fluorescent tube	40	24			
1 desktop computer	200	1			
1 laptop	50				
Cell phone (charged)	2.2				
Projector	150	1			
Smart board	1.5	1			
Total					

b) There are 195 school days in a year. Calculate how much electricity we use in a school year. How much of that electricity is produced from coal.

c) About 2460 kWh of electricity can be produced from burning 1 metric ton of coal. How many tons of coal are required to power 15% of the school’s kWh needs for the entire year?

d) What are some things that we did not account for when calculating the energy consumption?

e) What are some of the environmental consequences to the consumption of this coal? Would these consequences still exist if we switched to Natural Gas?

f) Why is coal used as a source of energy despite its harm to the environment?

g) Do you think power use at KV has increased over the years? Why or why not? Give some examples to justify your position.

h) How would you go about trying to conserve the power use at KV? What sorts of things that you would recommend?

i) People often talk about turning off the lights to save money. If NB Power charges 12.56 cents/kWh, how much does it cost to run all the lights in all classrooms.