

# The McKillop Library & Energy Efficiency



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# Efficient Electricity

The McKillop Library draws up to **1134.51 Mwh** (megawatt/hour) a year!  
Along with this incredible amount of electricity comes very high emissions.

Carbon dioxide	Sulfur Dioxides	Nitrogen Oxides
965.47 lbs/mwh	896.26 lbs/mwh	965.47 lbs/mwh

These top three emissions are the result of  
**Natural Gas, Nuclear Power & Coal**

Not only are these emissions hazardous to our health, but to our environment as well!

So...What can we do to help our **Earth** out??

# Elevator Use

There are 2 elevators at McKillop Library:

1. Staff
2. Student

**Energy usage** = 4 Wh for 1 floor  
8 Wh for round trip ( floor 1 to 3)

When the elevator gets used just once, that alone requires the same amount of energy as charging a cell phone does!

**Although this may not seem like much energy, it does add up over time!**

# Possible Solutions



- Take the stairs
- Put up signs that encourage use of the stairs
- Install a swipe card machine



# Lighting

- Areas of low traffic are always lit up → Energy that is not getting used.
- CFL bulbs use 1/5 the power that incandescent bulbs use. Switch ALL bulbs to CFL's.
- THE LIBRARY IS TOO BRIGHT! More light is being emitted than necessary.

# Lux Chart

<u>Floor</u>	<u>By window</u> <u>min.</u>	<u>By window</u> <u>max.</u>	<u>Away from</u> <u>window min.</u>	<u>Away from</u> <u>window max.</u>
Basement	--	--	500	700
First floor	700	2000*	530	650
Second floor	700	4300**	530	680
Third floor	650	20000***	530	690

\*at 6:00pm

Legend →

\*\*not in direct sun




\*\*\* direct sun

Please note that the England office  
building regulations is 500lux!!

# Solutions!



In addition to the GreenStart mixes:

-  Install auto-light sensors.
-  Switch **all** light bulbs to CFL bulbs.
-  Encourage students to work by sunlight.

# Computers, Printers and Copiers

- Computers remain powered-on 24/7
- If a computer is turned off, it is automatically set to turn back on at 5 AM.  
(The library doesn't open until 8:00!)
- Sleep mode has been disabled for library machines.
- They reboot once at 2 AM for maintenance, but are otherwise always running.



# Computers, Printers and Copiers

	Computers	Printers	Copiers
Library - 1st floor	66	15	3
Library - 2nd floor	19	4	1
Library - 3rd floor	13	2	1
Basement Level	145	4	0
Academic Development Center	5	1	0
Mailroom	3	0	2
Copy Center	3	1	2
<b>TOTAL</b>	<b>254</b>	<b>27</b>	<b>9</b>

# Recommendations



Shut off and unplug computers, printers, and copiers when they're not in use! Especially overnight.

Unplug copiers and printers overnight, especially in low traffic areas.

Set computers to sleep mode instead of just switching to a screensaver to save energy!



# The Ultimate Solution

www.ripower.com offers an alternative to the standard mix of the “Big Three” called

## New England GreenStart

Specifically for power and lighting that provides energy efficient options like using more hydroelectric, wind, and solar power.

In addition to the National Grid electric bill, GreenStart offers a 50% (1.25¢/kwh) mix and a 100% (2.4¢/kwh) mix.

### Carbon dioxide

965.47lbs /mwh →  
121.2 lbs/mwh

### Sulfur Dioxides

896.26lbs /mwh →  
60.3 lbs/mwh

### Nitrogen Oxides

965.47lbs /mwh →  
334.2 lbs/mwh

\* Results shown are based on 100% mix