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.

<table>
<thead>
<tr>
<th></th>
<th>Carbon dioxide</th>
<th>Sulfur Dioxides</th>
<th>Nitrogen Oxides</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>965.47 lbs/mwh</td>
<td>896.26 lbs/mwh</td>
<td>965.47 lbs/mwh</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Floor</th>
<th>By window min.</th>
<th>By window max.</th>
<th>Away from window min.</th>
<th>Away from window max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basement</td>
<td>--</td>
<td>--</td>
<td>500</td>
<td>700</td>
</tr>
<tr>
<td>First floor</td>
<td>700</td>
<td>2000*</td>
<td>530</td>
<td>650</td>
</tr>
<tr>
<td>Second floor</td>
<td>700</td>
<td>4300**</td>
<td>530</td>
<td>680</td>
</tr>
<tr>
<td>Third floor</td>
<td>650</td>
<td>20000***</td>
<td>530</td>
<td>690</td>
</tr>
</tbody>
</table>

*at 6:00pm  
**not in direct sun  
*** direct sun

Legend

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

<table>
<thead>
<tr>
<th>Location</th>
<th>Computers</th>
<th>Printers</th>
<th>Copiers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Library - 1st floor</td>
<td>66</td>
<td>15</td>
<td>3</td>
</tr>
<tr>
<td>Library - 2nd floor</td>
<td>19</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Library - 3rd floor</td>
<td>13</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Basement Level</td>
<td>145</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Academic Development Center</td>
<td>5</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Mailroom</td>
<td>3</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Copy Center</td>
<td>3</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>254</strong></td>
<td><strong>27</strong></td>
<td><strong>9</strong></td>
</tr>
</tbody>
</table>
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!
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.

**Sulfur Dioxides**
- 896.26lbs /mwh → 60.3 lbs/mwh

**Carbon dioxide**
- 965.47lbs /mwh → 121.2 lbs/mwh

**Nitrogen Oxides**
- 965.47lbs /mwh → 334.2 lbs/mwh

* Results shown are based on 100% mix