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How can people use less electricity and why would that be beneficial to the environment?

Thomas Edison invented the first commercial worthy light bulb in 1880. These first light bulbs were not energy efficient. They produce light by using electricity to heat a metallic wire to such a high temperature that it glows with light. This process is called incandescence. These light bulbs became a part of our everyday lives and are still seen in households today. When I was younger, I liked to flick the light switch on and off a bunch and sometimes leave my desk lamp on to sleep. My parents would encourage me to stop, but I never knew why. After researching this subject, I now think twice about the flick of a switch and wonder if our home is as efficient as it can be.

In the United States, we are still dependent on fossil fuel for the production of electricity. Some of the most carbon-dense fossil fuels are oil and coal, which produce greenhouse gases that remain in the atmosphere for thousands of years. There are more power plants planned for, and now under construction. Sadly, most will still use these fossil fuels. However, since 2016 more power plants using renewable energy sources such as hydro, wind and solar power are being built, giving some hope in slowing our CO₂ contribution to climate change. Although this may seem like a small change, the benefit is huge, because on our current path we are already producing 25% more carbon emissions than we should, pushing the goal of stabilizing global average temperatures set forth by the Paris Agreement out of reach.

You may be thinking "So, what is so important about the light bulb?" Well, just the production of light alone accounts for 20-30% of global electricity consumption, and 6% of greenhouse gas emissions. Now, imagine if 90% of that electricity is wasted in making that light. In fact, only 10% of electrical power is converted to visible light using Edison's incandescent light bulbs. People can use less electricity by simply switching from Incandescent bulbs to Light Emitting Diode or "LED" bulbs. LEDs use less power because they are the exact opposite of

incandescent light bulbs, they use 90% and waste only 10% of electricity. Also, because they use less power, they last longer than incandescent light bulbs.

So the next time you flick the switch, ask yourself, “Do I need light right now?” Make sure when you leave a room, shut off all the lights. The earth depends on it and it is counting on you, on all of us.

Resources Cited:

“How Blue LEDs Changed the World” by Blomberg © 2019

“Are we powering our way into a climate crisis?” Environmental Science Journal for Teens © October 2018

History of the light bulb: www.bulbs.com