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The Anti-Standby Guys

SCAPA Bluegrass, Lexington KY

Teacher Advisor: Ashlie Arkwright

Our team chose the issue of standby power because it's something most of us haven't really thought about, but it's also something that's always around us. According to Berkeley Lab, "a typical American home has forty products constantly drawing power." And these products are responsible for "almost 10% of residential electricity use." Using less standby power is also a relatively easy fix for the average consumer, and a great first step in becoming more kind to our environment. With the strategies we discuss in this action plan, we hope to **stand up to standby** in our community!

What Is The Environmental Issue?

Standby Power, which is also known as vampire draw, vampire power, phantom load, or leaking electricity, is the power that a device consumes when it is not actively in use but not fully turned off. Many common household electrical products actually are not fully turned off unless they are unplugged. These products are consuming power 24 hours a day. The Guardian states that “Wasted energy from appliances left on standby is also responsible for 4 million tonnes of excess carbon dioxide each year.” And according to the New York Times, devices in standby mode can cost more than $19 billion in electricity bills each year. Not only is this money down the drain, but those extra 4 million tonnes of carbon dioxide come with another cost too. Carbon dioxide is the main greenhouse gas contributing to climate change, and in turn, is causing huge environmental problems like species loss and rising sea levels.

What Is The Environmental Issue? Cont.

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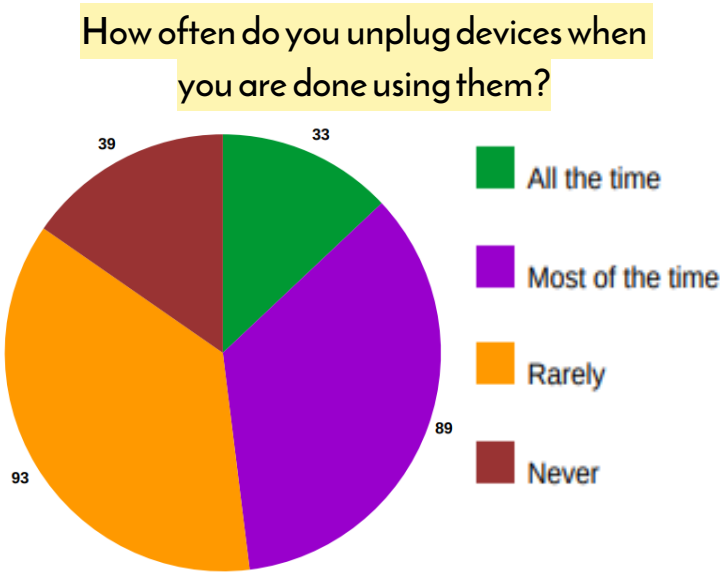
The Need For Our Project

At the beginning of our project we asked a question of 254 students to find out how often our school community unplugged their devices when they were done using them. What we found showed a definite need for our project and decreasing the amount of standby energy in our community.



Members

To make reaching our goal easier, each team member has a particular job.

Melody - Advertising Designer

She designed our stickers, posters, our flyers, and other advertising materials.

Seth - Researcher

Seth gathered background information on standby energy to help us with our project.

Lily - Social Media Coordinator

Lily administered all of our social media accounts and helped spread awareness of our cause.

Lauren and Jeremiah - Executive Assistants

They helped by assisting the others with extra work.

Alex - Marketing

Alex created websites and promoted the team online. He also spread awareness of upcoming events

Evan - Business Organizer/Data Collector

Evan contacted most of the companies we used through our project, such as Moes and Wyze plugs among others.

Our Action Plan

Listed below are the strategies we came up with to help **spread awareness** about standby power in our community.

-Create an Instagram account to inform people about standby power and how to stop it, as well as spreading the word about events we plan to host.

-Create a video about standby power and how to reduce it and send it to a local elementary school (Picadome Elementary) to be shown on their morning news.

-Create a poster to hang in the hallways of our school which describes standby power and includes a space to sign a pledge to help reduce it.

-Create additional flyers to hang throughout our school.

-Distribute stickers that remind people to unplug unused devices.

Our Action Plan Cont.

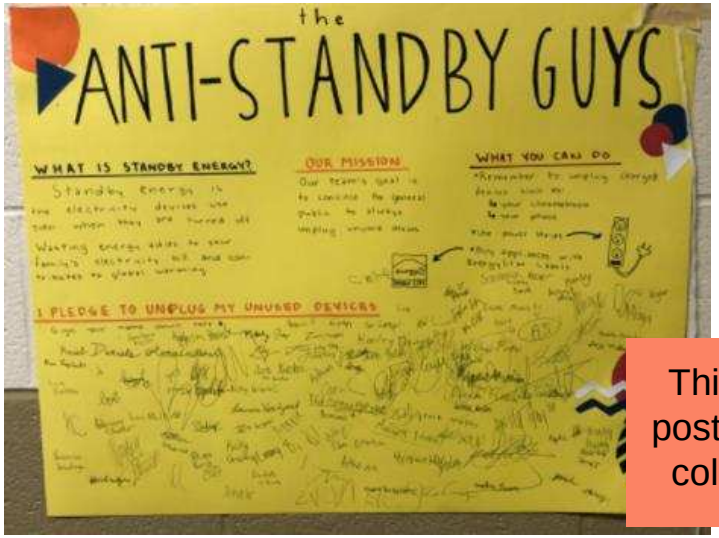
Along with spreading awareness, we also had some plans to be able to physically make a change, rather than just depending on other people to use the information we spread. We managed to find a product called the Wyze Plug, which is an affordable smart plug. It can help reduce standby power by giving consumers the ability to control remotely whether or not their outlet is on, and set timers for energy use. We aren't sponsored by Wyze, but we really liked their product and decided to provide some to classrooms in our school. We reached out to a parent (Tresine Logsdon) who works in sustainability for Fayette County Public Schools. She informed us that standby power from our school last year resulted in approximately 1.5 million pounds of CO_2 being generated. We think that Wyze plugs could be a great way to cut this number down, and decided to introduce at least 46 new units into our school.

What is a Wyze Plug?

Wyze Plugs are small and compact outlet controllers that can help regulate energy use through an app. In this app you can set when/which outlets and appliances in your home you would like to receive electricity. For instance in our schools we have around 35 rarely used and out-dated televisions that have been left plugged in for years. But with Wyze Plugs we can set a timer that only produces an energy flow when it is absolutely needed. This is also the same case with many laptop carts and laptops that are left plugged in throughout hours of no usage. So instead of having to shut the computers down and waiting for them to boot back up in the morning teachers can use their phone start their computers up so they are ready when they need them. This is a much more energy efficient way of doing things, rather than leaving the computer on all night like many teachers do.

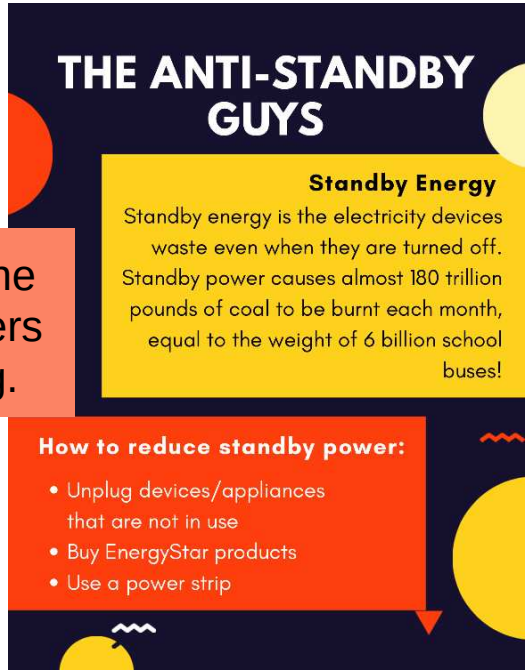
Implementing Our Ideas

Our Instagram account is @theantistandbyguys



This is the large poster we hung to collect pledges.

This is one of the flyers we hung.



Implementing Our Ideas Cont.

To implement our Wyze plugs concept, we needed to raise money. The first thing we did was partner with a local restaurant (Moe's Southwest Grill). Moe's agreed to let us host an all-day fundraiser, where we would receive 20% of the profit from people who mentioned The Anti-Standby Guys when they ordered.
Then, after speaking with Ms. Logsdon, we realized we could use our school's "Go Green to Earn Green" funds to purchase additional Wyze Plugs. Our group has nearly 46 Wyze plugs on their way to our school which are sure to help our school cut down on standby energy usage.

You can find more info on Wyze plugs at their website, here!
(press "**PAST**" for extended info)

Implementing Our Ideas Cont.

We also created a video on what standby power is and how to reduce it, and we sent it to Picadome to show on their morning news. This video was shown to roughly 500 students and 75 staff.

These are the stickers we gave out.

We were also able to have group members speak about our cause on our school's end-of-day announcements over the intercom, as well as during lunch. We handed out the stickers during lunch too, and placed them in 20 classrooms throughout our school.

Results

We were successful in spreading the word about what standby power is and how it affects our community's energy use. We put posters all over our school educating faculty and students about exactly what phantom loads are, easy ways to reduce them and appliances that produce standby energy. Our video that we shared with Picadome Elementary School reached 575 people, and it is available to send to other schools. We gathered around 150 signatures on our poster pledging to unplug their unused devices. We figured out that our school produced so much standby energy that it generated around 1.5 million pounds of CO_2. We placed 20 stickers asking people to unplug their devices all over SCAPA and handed them out to students to place in their homes.

Results Cont.

SCAPA's total energy consumption for last year amounted to around 964,320 kWh of energy. This amount of energy cost our school close to $76,560.39 and caused around 1,503,552 pounds of CO_2 to be emitted to our atmosphere. Sadly the amount of stand by energy in that total is equal to 192,864 kWh of energy, exactly 20% of our total energy consumption, and $15,312.08 that could have easily been avoided. This astounding standby/phantom load sum of 300,710 pounds of CO_2 is a direct result of a lack of knowledge of our topic. When asking multiple school administrators, including our principal, they all had no idea that we were wasting this much energy and money. We decided that we would make a change in the way we handle our school's electricity by introducing Wyze plugs to our school. We estimate our group can reduce our school wide standby/ phantom load footprint by almost 50,000 (47,637.8) kWh, or 68,000 pounds, of CO_2 emissions just by integrating these Wyze plugs and creating more awareness of the phantom load issue.

Photo Gallery

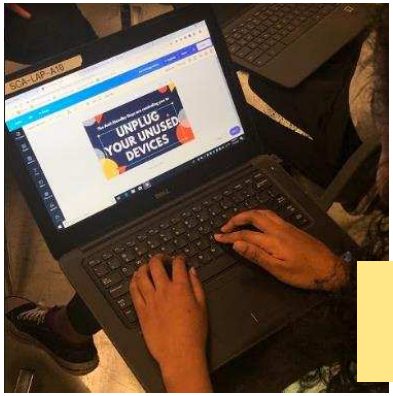
A parent at our Moe's fundraiser

Putting one of our stickers up

Wyze Plugs

Our group working

Seth and Evan working on research



Melody designing stickers

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