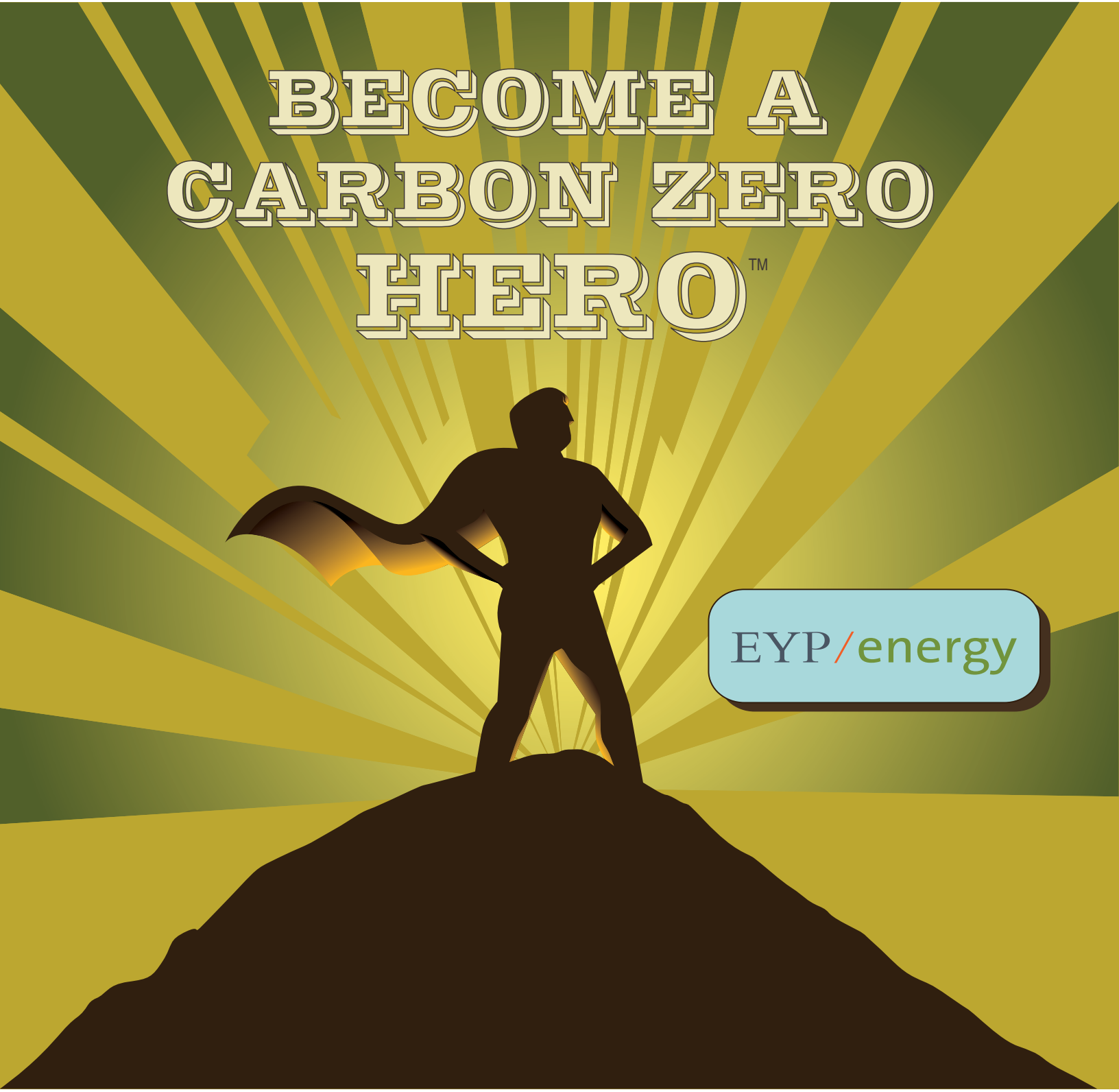
BECOME A CARBON ZERO HERO™



EYP/energy

Questions & Answers

1. **My HP LP2065 monitor shuts down and goes to screensaver until I hit the keyboard. Is the phantom load still there or do I have to shut the computer down to eliminate phantom load?**

Basically, screensavers do not save energy. In fact, there are some really interesting stories that have come out of Australia where they measured the energy consumption of computers and certain kinds of screensavers.

The really cool ones- the ones with all the pretty colors- use a lot more energy than even when the computer is running full blast. So, you're not going into sleep mode if you have your screensaver up. What you really want to do is go into sleep mode and that means the computer monitor goes dark.

What you have right now is a setting that makes it go into screensaver after 15 or 20 minutes, but what you want to do is have it go into hibernate mode.

If you recall, that screensaver, the famous one on I believe it was MSN, that had all the pipes and graphics and it was really cool- they actually tested that particular one and it was an absolute energy hog. So yes, get rid of the screensavers and go into sleep mode.

2. **You mentioned that phantom load reduction strategies are behaviorally oriented. In your experience, what methods have been successful in changing the behavior of students and staff on college campuses?**

First of all, you need to have your administration on board saying okay, we need to implement this and sustain this. You also need to energize, sort to speak, your campus community. The critical path to that is if you have a sustainability committee or a student environmental committee- bring them together, educate them and then let them go wild basically.

They have more creative juices than all of us combined and they will help come up with the programs that are going to appeal to their generation and get the message across. It is encouragement and its also setting some standards and getting buy ins from the top down.

3. **Any info on ceiling hung data tech projectors being used in classrooms as well as in conference rooms and best way to work with them?**

You always get a challenge when you go to different college campuses. A lot of them are going to these white board or black board type technologies that tend to use a lot of projectors. The best way is to make sure it is shut off at the end of the class- and maybe the professor should be in charge of that, but I know that is challenging.

Or you could have the maintenance staff, when they go in and clean the classrooms make sure all the lights are off. There is not really a formal policy in place or program available other than just doing what your mom told you to do and shut things off at the end of the day.

4. **You know, shutting off computers at night always sounds great in theory, but how is system administrators supposed to push our updates during off hours if everything is turned off? Some machines support a sleep mode from which the computer can be woken up remotely, but not all of them. I wonder if folks would be ok with an 11 am reboot of their machines.**

Actually, that is exactly the type of issue we faced when we were over at the IT department at the University of Buffalo. What we found was that initially the IT department was a little reluctant to get involved, but by the end of our project they had become our biggest allies. So we worked with them to develop a maintenance schedule so they were able to have the computers go into sleep mode except for Thursday evenings. On Thursday evenings, they were able to push out all of their updates and that way the computers weren't running 24/7 all week long, they were just running for a few extra hours on Thursday evenings. This is a very effective way and the IT staff was absolutely thrilled with it.

5. Will you be doing this presentation again? If I had realized this was going to be focused so much on computer usage, I would have asked some IT folks to be part of it.

Our apologies for not making that clear in the invite we sent out, but we would be very happy to have a conference call with your IT folks. We already gave this presentation, something similar to it to the Association for the Advancement of Sustainability in Higher Education (AASHE), but please contact us; we would most welcome a conversation with your IT folks.

Absolutely, we would like to help make sure they don't have any concerns, because we know IT is always concerned about making sure this isn't going to interfere with their requirements. This webinar is also going to be recorded and posted on the AFC website.

6. Using a strip cord means that it is still plugged into the wall. Isn't this still using energy when you use the remote to turn it off?

Well actually, the usage is minimal. This strategy of using the strip cord has been especially successful in Europe where plug load represents a higher usage comparatively. So no, actually, the strip cord uses very little energy.

To add to that, I was just at a conference in Europe and there was a really interesting presentation by the Swedish energy agency that has developed their own version of the power strip that I talked about during our presentation.

They've partnered with big screen TV companies so that every time a Swedish consumer buys a big screen TV, they get a free power strip installed because frankly, they know the TV is going to be plugged in with a lot of other gadgets and that it will help them reduce energy. It is very popular and has been quite a success- it has really helped reduce plug load in Sweden.

7. Often you hear students argue that it is not worth turning off their computers when they will be using it again in a few hours and it will take more power to restart it than to just leave it on. When should you put your computer in sleep mode vs. hibernation vs. off? What is the best setting if you are not using your computer for a few hours vs. all night?

It can really save tremendous amounts of energy- 40 to 90 watts- if computers are put into hibernate. Hibernate is the setting that makes it come up again in 20 seconds. Now in our instant world, 20 seconds seems like a lot, but in my grandmother's time not so much.

So it is really just a matter of perspective and we're going to save a lot of energy, so we can wait a few seconds. There are a lot of different settings that are available, both on laptops and on desktops, but if you really want to get the most savings, you're going to have to have them go into sleep

at the end of the day.

8. Have you ever received any resistance from IT staff for implementing some of these power management strategies? What are some strategies to ease the tension?

This used to be much more of a hang up, I think a lot of IT folks have become more aware in the past year or two and have a lot more information. They've realized that this is not a burden on them. You may still run into it on certain campuses where they think this is another program you're trying to implement that is going to take their time and resources and they're just not interested. Part of the problem is that on most campuses, it isn't the IT staff paying the electric bill, so if there is any savings they don't see it reflected in their budget. But, I think there are two strategies for this. One relates to a poll question we asked- if you have IT staff on your sustainability committee, if you have one on your campus.

If you do have one, I think it is absolutely imperative to request that someone on the IT staff is involved, because then you get everyone going in the same direction and on the same team. You can bring in the information needed to show them that it is a very simple thing to do. Implementing power management and computer power management are actually very simple processes and don't interfere with what the IT staff is normally trying to do or take much time to do.

The second key is the educational piece. Whenever we had a presentation, we would bring someone in who could address specific IT concerns. I'll tell you, within 5 to 10 minutes of having a conversation with them, they'd say "ok, we understand what you're doing and that's not bad at all". IT is absolutely key to getting the plug load initiatives going on your campus and sustaining them.

There is also an urban myth going around that if you turn computers off you're going to hurt them. Actually, computers are meant to be turned off. The EPA has done some research down at the Dell factory and they turned computers on and off 5,000 times- which is a lot and there was no damage. If people start saying you shouldn't be turning your computers off because it is going to hurt them, say they were meant to be turned off, that is why they have an of switch.

9. Is focusing on computers distracting from other things that are more important? Lights, showers, washing machines, recycling, etc...that are bigger impacts. Or even other plug load issues.

First of all, we saw that a significant amount of campus energy consumption is related to plug load and it is growing. It is really the fastest growing sector of energy consumption on college campuses. You really need to get it under control one way or another.

The other thing about the computer usage of students, faculty and staff is that it is relatively easy to reduce energy consumption and have resulting savings. So when a campus is financially stressed, like just about everyone is these days, it helps to choose phantom load initiatives to free up operational dollars in your budget.

You can then put those dollars into other initiatives on your campus to reduce energy consumption and reduce greenhouse gas emissions. It is actually just part of a whole strategy, but I would say it is one of the first things you should do because it is so cost effective and it helps build momentum for other sustainability and energy initiatives on your campus.