



Sept 25, 2009

Phantom Power

Cam Allen -Alltech Consulting Group

TURNING OFF THE PHANTOM LOADS

During a visit to one of the EQuilibrium home some months ago I saw a feature that they had built into the home called the **“Green Plug” system. It was installed for controlling power to electrical appliances, home entertainment and home office equipment like your computer.** I have been aware of this issue called **“Standby Power”, “Vampire Power”, “Leaking Electricity” or the most common term “Phantom Loads” for some time.** I wondered if some of the claims that we were wasting 15% of our electrical power were really true. Lately I have **seen far too many “Green” ideas that just riding the wave of environmental change and not all they are cracked up to be.**

It seems however that there is some considerable truth to this issue. As we hunt for wasted electricity the problem of Phantom Loads has surfaced as a major problem. What is a **Phantom Load? Simply put it's the wasted electricity that is used for the instant on feature of your TV, the power that your charger is using even when its not powering up your cell phone or flashlight and items like your cordless phone or computer.** A recent USA study brought to light some interesting facts. In 1998 it was estimated that the phantom load use was equal to 5% of all the power used in the USA. By 2004 this had doubled to 10% or about 3 Billion Dollars of wasted power annually. In 2001 the US government recognized this issue and

mandated that any office equipment purchased must have less than 1 watt in standby reserve. In Canada we recognize similar problems with wasted electricity and unfortunately the percentage of wasted power is nearly identical to our southern neighbours. Canadian appliances in a standby mode are eating **up power at the rate of 6.3 Billion....yes Billion KWH annually.** If we could save 80% of this it equates into the residential consumption for the province of New Brunswick.



How do we fix this issue while still having some of the **“creature comforts” we now enjoy?** The first step is to look real hard at the kind of home office and enter-

tainment equipment you have. Most of these products are now Energy Star rated for electrical consumption. I had long **thought that computers were amongst the largest “power hogs” in standby, recently I was shown how the new large flat screen TV's are overtaking your computer for wasted power.** If you check, you will find some of the Energy Star Entertainment rated products use nearly 50% less standby energy. Computers are widely known for wasting energy, what is not as



HOW DO WE START?...

recognized is one feature called the screen saver; this eats up nearly as much electricity as if you had the computer running. The list of home conveniences that are quietly drawing tiny amounts of power include your DVD player, game console, cable or satellite box or audio system. Some of the game box consoles consume up to 185 watts of standby power. That's like leaving two incandescent lights on 24 hours a day.

I put this "Phantom Load" question to Shaun McFie. Shaun is a Master Electrician who is up to date on a lot of these electrical issues. We first discussed the "Green Plug" wall switching program. In the case of a new home or a major renovation he recommends installing a designated circuit that is located in the areas of a home where computers and entertainment equipment may be located. The plugs to this wall switch are painted green and wired to this wall switch. This means when you go to bed you turn this switch off and it turns off the major part of your "Phantom Load" This is a manual system that requires the homeowner to remember to shut it off each night. The other draw back is the wiring and how to refit an existing home. Shaun brought up a product that has been popular in commercial installations for over 10 years and is now rapidly gaining popularity in the residential market. It's called an Occupancy Sensor and within the past 2-3 years the price has dropped dramatically and the improvement in the quality of these installations has caused him to recommend them repeatedly on his job sites.

What is an "Occupancy Sensor?" in basic terms it is a motion activated control that can be inserted where you have a wall switch. They are designed to operate lighting and wall plugs. If a person enters the room the lights and possibly the plugs would become activated.



The earlier units were Infrared and they had limitations, people found them shutting off while they were in the room. The new units are ultrasonic and are much better. Shaun described how they installed one recently in a bathroom with a veined glass shower door. The ultrasonic unit worked great, an Infrared unit



would have lost the sensory ability with a person in the shower and shut the lights off.

The other option is low voltage timed controls that can be retrofitted to a wall switch. This allows you to preset the time for the plugs to come on and off. I have seen a number of novel ideas in homes where they recognize the "Phantom Load" issue. One home I was in the owner wired the top plug to the light switch and the bottom plug remained live. This was popular some time ago when ceiling lights were out of style. In this case all the plugs in the room were done this way.

Reducing the "Phantom Load" in every home must become the next energy conservation move. How do we start?...buy a good quality power bar with a built-in switch and move all your entertainment equipment to this device, then remember to turn

it off every night. We all recognize the advantage of the "Pigtail"
light bulbs, now we must find the leaking electricity in our home.

Questions or comments send to
cam@alltechconsultinggroup.com



Alltech Consulting Group

Tel: 546-9876
or: 888-523-8633
E-mail: cam@allchconsultinggroup.com