

## **ENERGY EXPLORERS PART 6: THE HUNT FOR ENERGY VAMPIRES**

Name	Date	
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## WHAT ARE ENERGY VAMPIRES?

Although you may not realize it, your house is full of vampires. As you sleep, when you're awake, and while you're out, these vampires are using energy...and you're paying for it!

An energy vampire is a piece of electronic equipment that consumes energy when it is turned off but still in standby mode, or not in use. Vampires consume electricity with no purpose, while draining your wallet and using more polluting energy.

## WHAT ENERGY VAMPIRES LIVE IN YOUR HOUSE?

**Directions**: Walk through your house and write down all the energy vampires you find (Column A). Fill out the chart for each vampire, using the average power consumption chart (attached) to find the value for Column B.

A.	В.	C.	D.
Energy Vampire	Average energy consumption for vampire (in Watts)	How many hours in the last 30 days was it plugged in, but not it use? (in hours)	Total energy consumption in Watt Hours (Column B x Column C)
Example: TV in living room	3.06 W	606 h	3.06x606=1854.36 Wh



Answer the following questions to calculate how much money your household wastes on vampire energy.

1.	What is the total energy consumed by vampires in your house per month in Watt
	hours?

Add all items in Column D.

2. Duke Energy charges you per Kilowatt hour of energy used. Convert the total energy consumed in your house from Watt hour to Kilowatt hour.

1 Kilowatt Hour = 1,000 Watt hours

3. How much money does your house waste on energy vampires?

Total money spent = Total energy consumed in Kilowatt Hours x Price per Kilowatt Hour Price per kilowatt hour = \$0.093697

## HOW TO STRIP THE FANGS OUT OF VAMPIRE POWER

You can reduce the energy use in your house, save money and protect the environment taking steps to de-fang the energy vampires you identified.



- 1. **Get unplugged**. All of your chargers (cell phone, laptop, electric toothbrush) continue to draw electricity even when the devices are not charging. For example, only 5 percent of the power drawn by a cell phone charger is used to charge the phone the other 95 percent is wasted when it is left plugged into the wall. Unplug all electronics and appliances when they are not in use.
- 2. **Use a power strip**. Choose a power strip with a switch to control clusters of products. When you're not using the products, turn the power strip off. The most likely targets for clusters are computer equipment (desktop, monitor, printer, speakers, etc), entertainment centers (TV, DVD player, speakers, game consoles), audio equipment (receiver, amplifier, CD player), and kitchenware (microwave, toaster, blender).
- 3. **Turn your computer off**. Computers in sleep mode can cost an additional \$70 per year. If you are unable to turn it off, make sure the computer goes into a low-power sleep, standby, or hibernate mode. And, watch out for those screen savers! Graphic intense screen saver can actually waste power.



Product	Average Energy (W)	Product	Average Energy (W)
Amplifier		Game Console	
On, not playing	33.99	Active	26.98
On, playing	39.16	Off	1.01
Off	0.27	Ready	23.34
CD Player		Microwave Oven	
On, not playing	8.62	Ready, door closed	3.08
On, playing	9.91	Ready, door open	25.79
Off	5.04	Cooking	1433.
Charger, mobile phone		Modem, DSL	
On, charged	2.24	Off	1.37
On, charging	3.68	On	5.37
Power supply only	0.26	Modem, cable	
Clock, radio		Off	3.84
On	2.01	On	6.25
Coffee Maker		Standby	3.85
Off	1.14	Phone, cordless	
Computer Monitor, CRT		Ready, handset	2.81
Off	0.8	Ready, no handset	1.58
On	65.1	Active (talking)	1.9
Sleep	12.14	Off	0.98
Computer Monitor, LCD		Phone, cordless with answering machine	
Off	1.13	Ready, handset	4
On	27.61	Ready, no handset	2.82
Sleep	1.38	Active (talking)	3.53
Computer, desktop		Off	2.92
On, idle	73.97	Power Tool, cordless	
Off	2.84	Ready, charged	8.34
Sleep	21.13	Active	29.53
Computer, notebook		Ready	1.74
Fully on, charged	29.48	Printer, inkjet	
Fully on, charging	44.28	Off	1.26
Off	8.9	On	4.93
Power supply only	4.42	Printer, laser	
Sleep	15.77	Off	1.58
DVD Player		On	131.07
On, not playing	7.54	Receiver (audio)	
On, playing	9.91	On, not playing	37.61
Off	1.55	Off	2.92
DVD/VCR		Scanner, flatbed	
On, not playing	13.51	Off	2.48
On, playing	15.33	On	9.6



Off	5.04	Set-top Box, DVR	
Ipod/Kindle Charger		On, no recording	37.64
Plugged in, not charging	1	On, recording	29.29
		Off	36.68
Product	Average Energy	Product	Average Energy
	(W)		(W)
Set-top Box, digital cable with DVR		Surge Protector	
Not recording, TV off	44.63	Off	1.05
Not recording, TV on	44.4	On	0.8
Off by remote	43.46	Television, CRT	
Set-top Box, digital cable		Off by remote	3.06
On, TV off	24.65	Off by switch	2.88
On, TV on	29.64	Television, rear projection	
Off by remote	17.83	On	186.09
Off by switch	17.5	Off by remote	6.97
Set-top Box, satellite with DVR		Off by switch	6.6
Not recording, TV off	28.35	Telephone Answering Device	
Not recording, TV on	31.37	Off	2.01
Off by remote	27.8	Ready	2.25
Set-top Box, satellite		VCR	
On, TV off	15.95	On, not playing	7.77
On, TV on	16.15	Off	4.68071
Off by remote	15.66		
Off by switch	15.47		
Speakers, computer			
On, no sound	4.12		
Off	1.79		

