

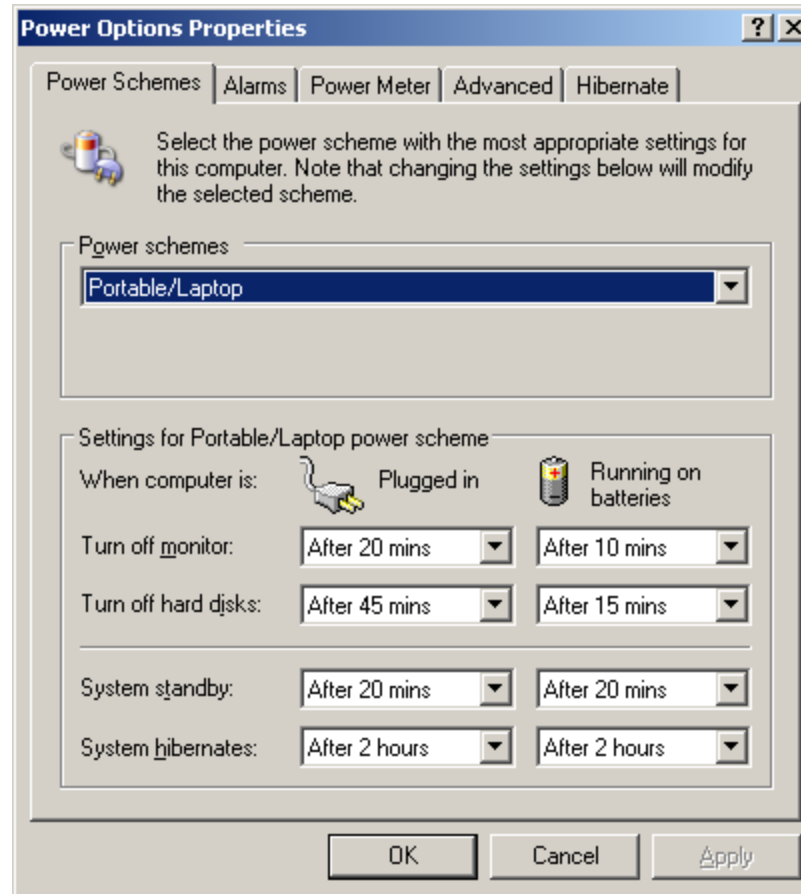
Power Management

FEC Partner Webinar

June 2013

Speaker: Stephen Sturdivant, EPA Region 6
Technical assistant: Tom Bolioli, Cadmus Group

Power Management



Save \$

Save \$

Save \$

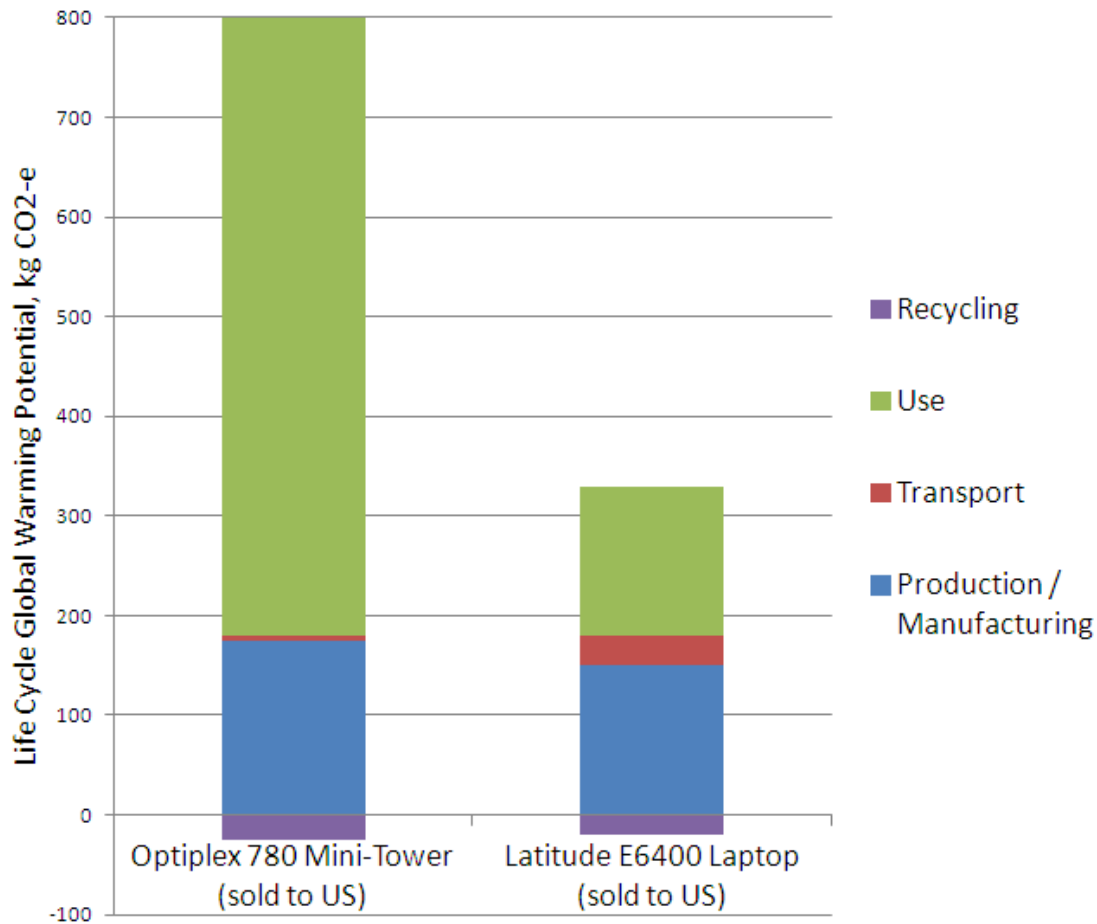
Save \$

Why Power Management

- Executive Order 13423 and 13514 Federal Agencies must:
 - buy Energy Star
 - enable Energy Star



Why Power Management

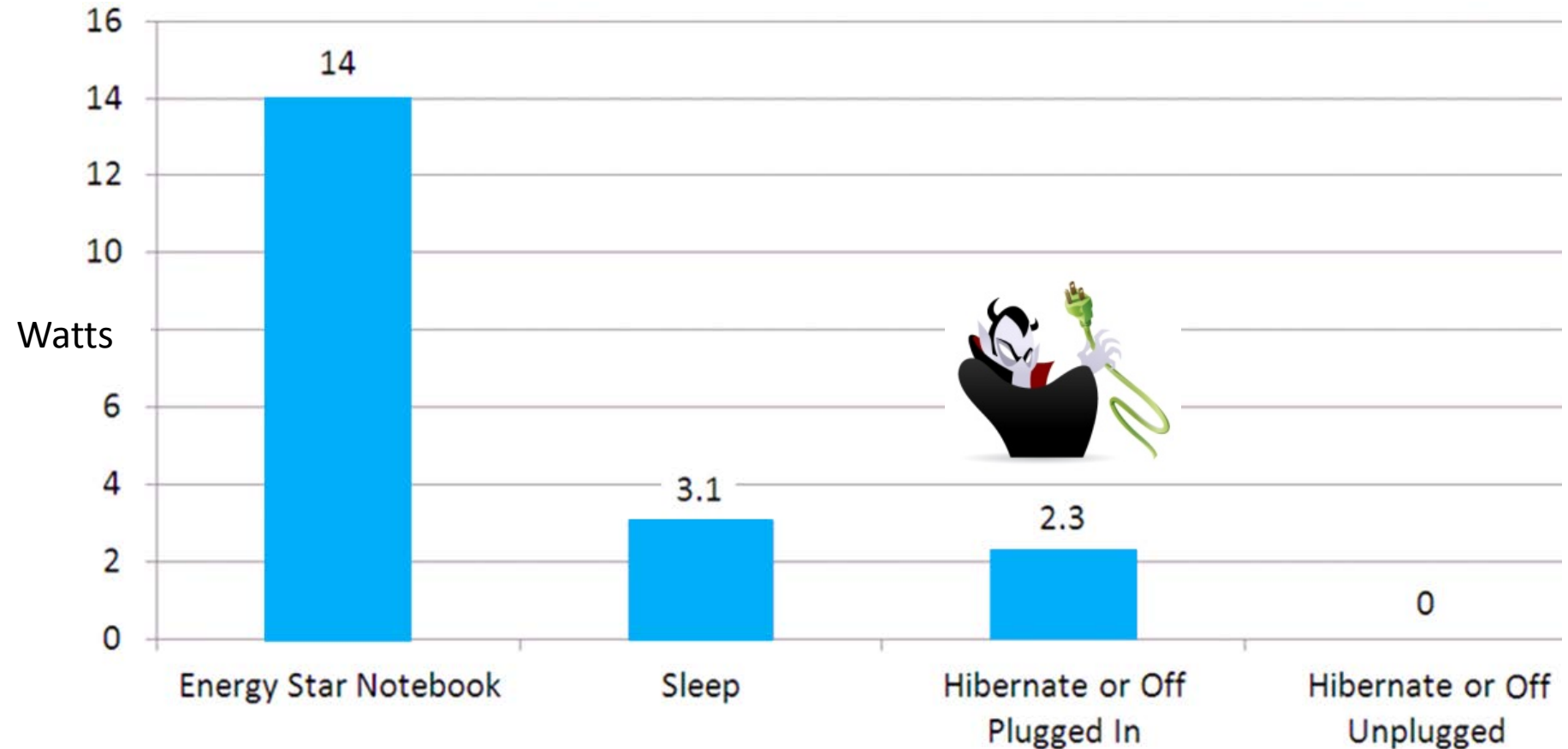


Source:

"Carbon Footprint of a Typical Business Desktop from Dell", Dell Computer, 2010

"Carbon Footprint of a Typical Business Laptop from Dell", Dell Computer, 2010

Power Management Settings



Sources:

<http://www.microsoft.com/windows/explore/turnoff-pc.aspx>

http://www.energystar.gov/ia/products/power_mgt/LowCarbonITSavingsCalc_v26_with_5_0v2.xls




Power Management Savings

- Labor costs: ~ \$5 / seat
 - Identifying appropriate solutions
 - Testing and troubleshooting exceptions
 - Ensuring that power managed computers do not interfere with administrative software updates
- Software costs: ~ \$0-15 / seat

Compare with

- Energy savings: ~ \$75+ / seat !!!

Save \$



Will Power Management Settings Mess With System Updates?

- Answer: no
- Sleep settings should not interfere with the distribution of administrative software updates (such as Windows security patches and antivirus definitions).
- We recommend 3 different methodologies:
 - Configuring client computers to apply software patches and updates as soon as computers become available on the network.
 - Windows Task Scheduler can wake up sleeping computers for updates at particular times.
 - With Wake-on-LAN (WOL) activated, a network administrator can wake up sleeping computers at any time in order to perform on-demand software patches or updates.
- For more details, go here:
 - http://www.energystar.gov/index.cfm?c=power_mgt.pr_power_mgt_implementation_res

Examples:

- With laptops that users might take home on any given night, GSK patches PCs during normal business hours. End-users can defer updates for a later time (e.g., lunchtime or during a meeting).
http://www.energystar.gov/ia/products/power_mgt/downloads/GlaxoSmithKline_Case_Study.pdf?e5bc-aa8b
- US Air Force used task scheduler to accommodate patching at night.
http://www.energystar.gov/ia/products/power_mgt/downloads/USAF_Case_Study.pdf?6a89-f1f6
- Verizon used WOL to update their PCs at night.
http://www.energystar.gov/ia/products/power_mgt/VerizonCaseStudy.pdf?3df1-6a1a



Calculate Benefits

- Power Management: \$\$\$
[http://www.energystar.gov/ia/products/power_mgt/LowCarbonITSavingsCalc v26 with 50v2.xls](http://www.energystar.gov/ia/products/power_mgt/LowCarbonITSavingsCalc_v26_with_50v2.xls)
- Purchase, Use, and Disposal:
<http://www2.epa.gov/fec/publications-and-resources#calculator>

Power Management Options

- Sleep: Pro's: low power state, takes a couple seconds to come back on. Risk corrupting files left open if power is lost.
- Hibernate: Pro's: saves everything to hard drive so nothing is lost even when power is lost. Con's: takes 20 seconds to boot up.
- Low battery safety features:
- Windows 7 "hybrid sleep": There's a solution where you can sleep at first, but when battery is low, go to hibernation.
- Closing the laptop and power button

Practical Use At Work

- Catch that meeting
- Mouse in your pocket
- Listen to your laptop.
 - Needle can tap the hard drive if perpendicular impact. If you put your ear to it and not hear anything , the needle is locked and you're fine.
- Microsoft updates at the wrong times.

More Opportunities For Efficiency

- Computer training rooms
- Desktop phones
- Start menu quick set
- Power Supplies: draws a couple watts even when not plugged in to the laptop.
- CRT's : Black backgrounds

Questions?

- Finding software solutions to implement power management in a diverse equipment environment.
- Finding PM solutions for large fleets of Apple products.
- Guidance on power management for imaging equipment.

Technical Assistance:

Tom Bolioli, Cadmus Group (on the call) and

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Cadmus, Energy Services Division

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