



UPS Webinar: End-user Discussion December 13, 2010

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Outline



1. Introduction
 - Meeting objectives
 - Context
2. End-user Questions
3. What's Next?
4. General Comments
5. Contacts and Resources

Introduction: Meeting Objectives



1. Feedback on list of end-user questions
2. Discuss the ENERGY STAR program and the current status of the UPS specification
3. Take general comments or concerns relevant to UPS spec development

What is ENERGY STAR?

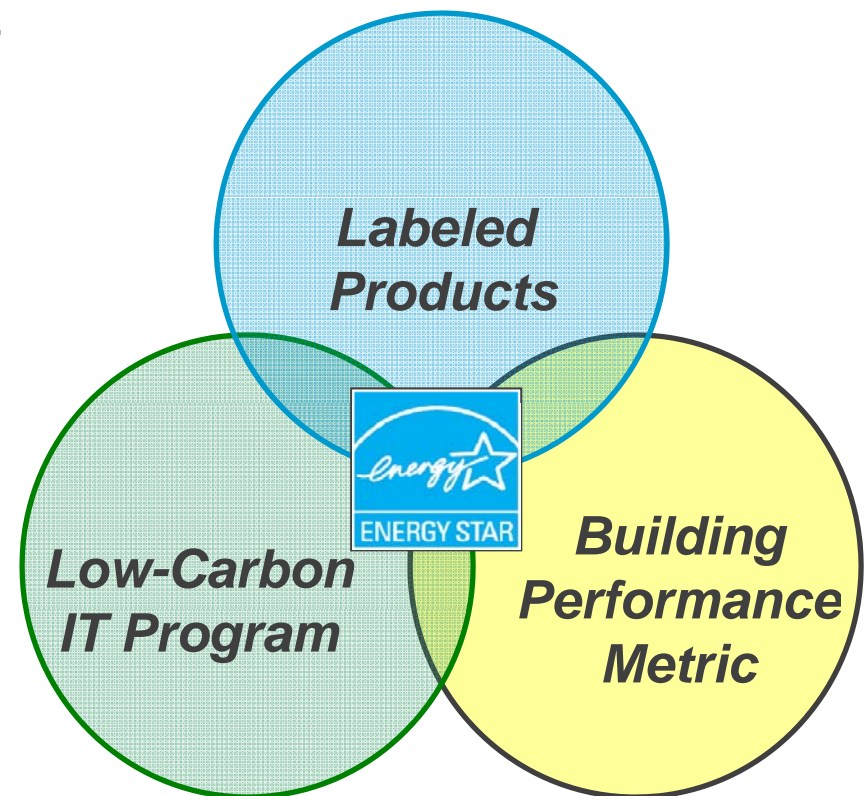


- Joint program of the US EPA and DOE
- Promotes energy efficient products and practices
- Helps organizations save money and protect the environment
 - \$17 billion saved in 2009
 - Reduced greenhouse gas emissions by equivalent of 30 million cars (2009)
- Influential brand recognized by over 80% of Americans

Solutions from ENERGY STAR



- Government efforts aimed at:
 - Reducing operating overhead costs.
 - Providing information.
- EPA & DOE tools:
 - Building Performance Metric (a.k.a. Portfolio Manager).
 - Product labeling.
 - Low-carbon IT Program.
 - All provide information to assist in implementing efficiency efforts.
- Solutions are broad, holistic, and focus on information – not specific technologies.



Introduction:

Why ENERGY STAR for UPS?



- UPS Energy Savings Potential Is High
 - 550 to 710 million kWh/year in the US
 - Majority in small-capacity units
 - But per-unit savings greater in high-capacity units
- Data center energy demands increasing
 - Double every ~5 years
 - UPS critical for efficiency
- Potential for Cost Savings
 - Approximately 2 – 3 years ROI
 - Varies by product size

Introduction:

Why ENERGY STAR for UPS?



- Pre-existing efficiency trend
 - Customer demand drives efficiency
 - ENERGY STAR can help:

Introduce Uniformity

- UPS efficiency testing, reporting
- Aid customers in comparisons

Performance vs. Efficiency

- Help datacenter customers make tradeoffs
- Possibly develop sizing guidance



UPS End-user Questions

System-Wide Data Center Efficiency



- Are there any UPS product attributes, that would help you:
 - Select more efficient UPSs, AND
 - Optimize the efficiency of your whole data center?



Image courtesy of [The Planet](#) dedicated hosting.

Energy Saver Modes (ECO-MODE)

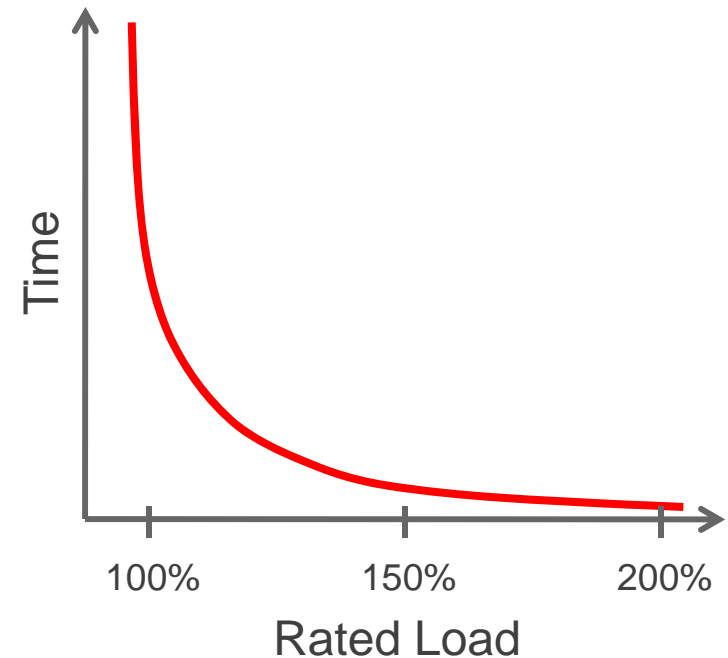


- Some UPSs include energy saver or eco modes that boost their efficiency when activated.
 - Are these modes useful to you?
 - How much are they used in industry?



Overload State

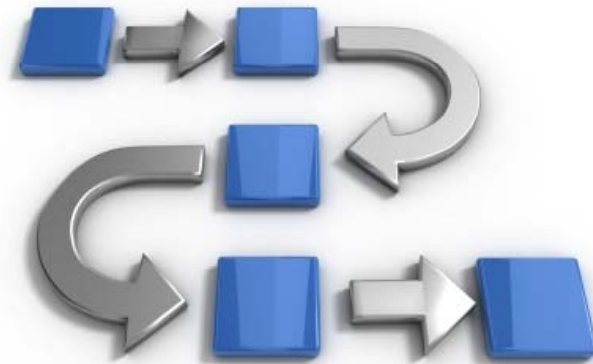
- Please comment on the value (if any) of reporting the time that an UPS can spend in its overload state.
- How can standardized reporting increase the value of this information?





UPS Procurement Process

- What are typical process used for identifying additional UPS hardware needs?

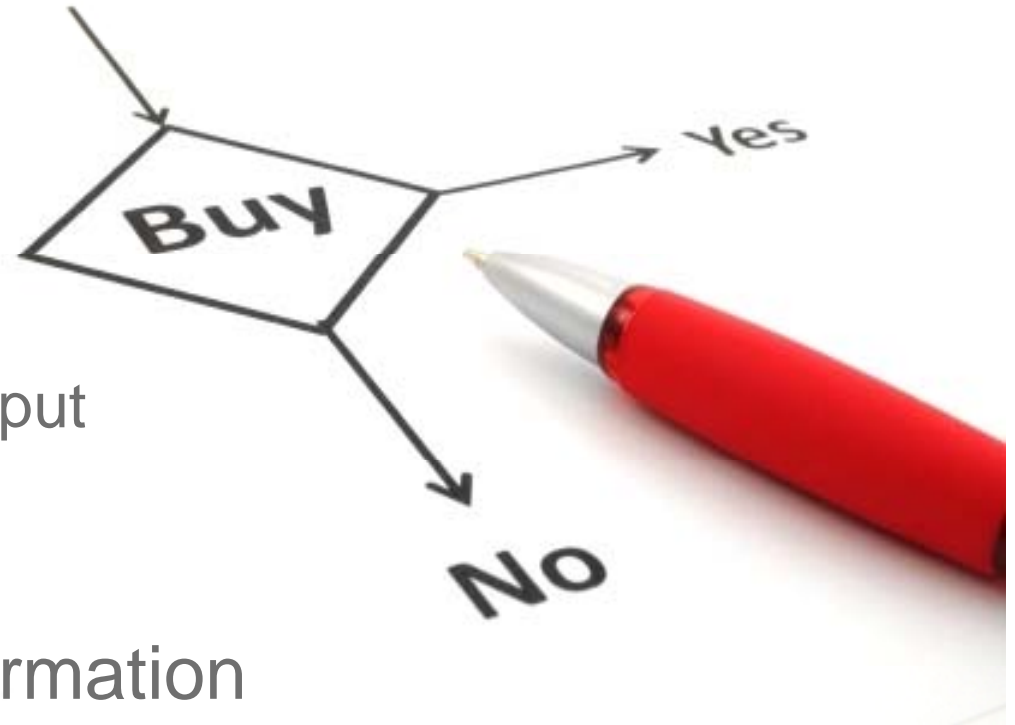


- How could an ENERGY STAR label or additional power and performance information assist you in this process?

Supplementary Information



- Aside from:
 - performance,
 - efficiency,
 - cost, and
 - electrical input and output characteristics,



Is there any other information that impacts your UPS purchase decision?

Real Time Information Reporting



- Some UPS products enable real-time information about their operations to be captured. Is this a useful function for you?
- What data in particular would you find most useful to increase the efficiency and performance of your systems?

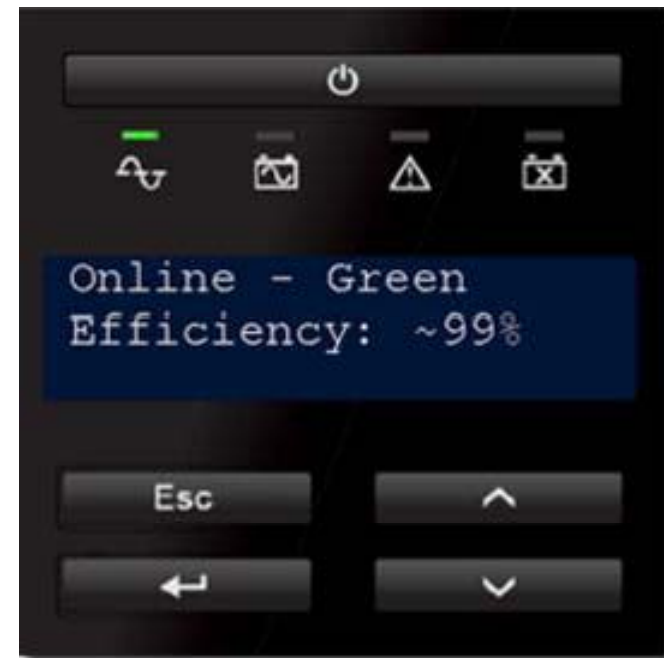


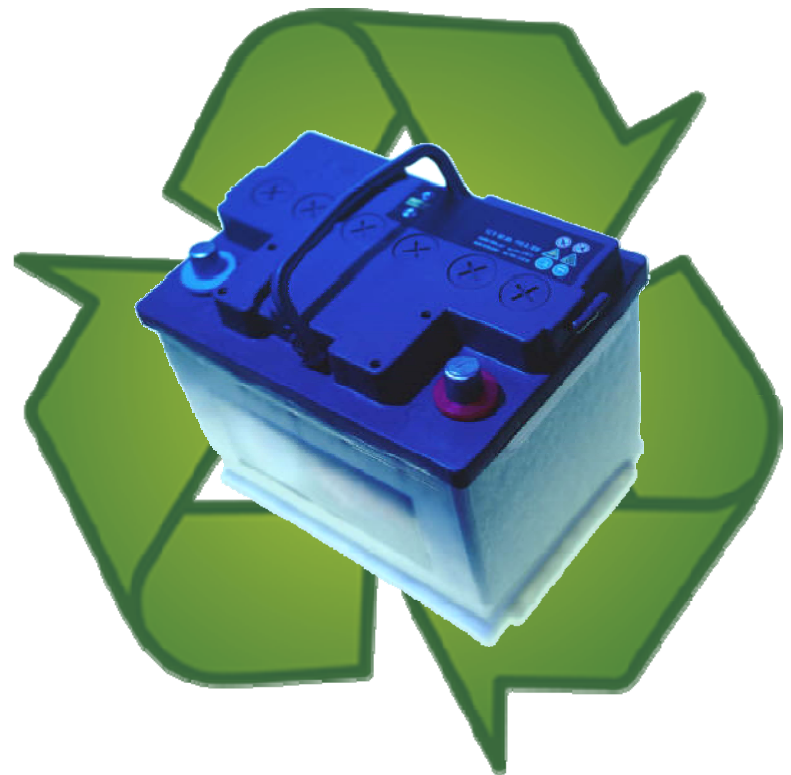
Image courtesy of APC by Schneider Electric.

- In what format would you prefer to receive this data?

Additional Environmental Impacts



- What additional UPS characteristics or environmental impacts beyond energy consumption (e.g., product durability and battery recycling) concern you?
- How can EPA best address them?



End-of-Life Management



- What considerations do you give to:
 - Product lifetime,
 - End-of-life management options?
- Are shorter-than-expected lifetimes an issue?
- What is the typical process used for handling UPS electronics and other components when their useful life is over?
- Is there ample end-of-life management infrastructure in place to meet your needs?

What's Next?



- Refine test procedure and build a data set based on manufacturer and end-user feedback.
- Develop Power Performance Data Sheet (PPDS) and Real-Time Power Measurement and Reporting
- Provide educational information
 - Resources for end-users
 - Assist in adoption of more efficient systems, practices
- Use data set to understand UPS market
 - Energy consumption of small, medium, large systems
 - Quantify tradeoffs between performance and efficiency
 - Performance, hardware characteristics
 - Special features
 - kWh reporting, energy saving modes, etc.



What's Next? (cont'd)

- December:
 - Receive industry feedback on test procedure (12/8/10)
 - Publish test procedure (12/17/10)
 - Begin constructing data set
 - February :
 - Finish data set (2/4/11)
 - Begin spec draft process
 - March – June:
 - Draft revisions
 - Stakeholder input/meetings
 - July:
 - Publish final specification (7/15/11)
 - Effective immediately
- 2011 Dates are Tentative

Open Comment



- EPA would now like to open up the line for any general comments from stakeholders.





References and Resources

- Energy Star UPS specification development
http://www.energystar.gov/index.cfm?c=new_specs.uninterruptible_power_supplies
- Energy Star Data Center energy efficiency initiatives
http://www.energystar.gov/index.cfm?c=prod_development.server_efficiency
- Energy Star Low Carbon IT campaign
http://www.energystar.gov/index.cfm?c=power_mgt.pr_power_mgt_low_carbon
- Energy Star Portfolio Manager
http://www.energystar.gov/index.cfm?c=evaluate_performance.bus_portfoliomanager



Thank You!

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