

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460



OFFICE OF  
AIR AND RADIATION

April 18, 2012

Dear ENERGY STAR® Uninterruptible Power Supply Stakeholder:

The U.S. Environmental Protection Agency (EPA) welcomes your comments on the attached **Draft ENERGY STAR Version 1.0 Uninterruptible Power Supply (UPS) electronic comparison tool** (interactive “widget”). Stakeholders are encouraged to review the mockups and provide written comments to EPA via email to [UPS@energystar.gov](mailto:UPS@energystar.gov) no later than **Tuesday, May 1, 2012**.

EPA would like to thank all stakeholders who shared comments and data leading up to the creation of this Draft. This information was carefully reviewed and considered while developing this Draft.

Below is a list of key changes/elements that have been incorporated in the Draft mockups of the electronic comparison tool.

- **Power and Performance Data Sheet (PPDS):** EPA held stakeholder meetings to collect comments on the draft specification, and has incorporated that feedback into the PPDS and the included mockups. EPA will include standardized, unambiguous efficiency data on the PPDS and may include battery runtime insofar as that is an important parameter for end-users. As a result of stakeholder input and because mode transition time is not tested and verified by ENERGY STAR, EPA has decided to remove this field from the PPDS in the interest of maintaining the focus on standardized efficiency data.
- **Electronic Comparison Tool:** EPA is developing an interactive “widget” that will allow the publication of this performance information for qualified products in an easily accessible, dynamic format. These mockups address comments received in earlier feedback, and represent the process an end-user would use to compare up to 4 models in the comparison tool.

The following screenshots represent the steps taken to use the comparison tool:

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**Partner Resources** Home > Partner Resources > Specifications in Development > New Product Specifications in Development > Uninterruptible Power Supplies

**Uninterruptible Power Supplies**

EPA is currently developing a new product specification for Uninterruptible Power Supplies. Compare different ENERGY STAR labeled models using the tool below. Start by filtering by general characteristics to compare. From these results, you can choose up to four different models to compare. This web page will be updated periodically as new information becomes available.

**Manufacturer** Any Manufacturer

**Model Number**

**Output Power**

Minimum Minimum

Maximum Maximum

**Output Voltage**

Minimum Minimum

Maximum Maximum

**Energy Conversion Mechanism** Any

**Input Dependency Modes**

Highest Any

Lowest Any

**FIND MODELS**

**Partner Resources**

- Manufacturers
- Retailers
- New Home Industry
- Utilities/EEPS
- Service & Product Providers
- Buildings & Plants
- Small Businesses
- Congregations
- For Contractors
- For Federal Agencies
- Join ENERGY STAR

### Step 1. Initial Selection

An end-user navigates to a Web page with the comparison tool. On this initial screen, the end-user selects primary filtering criteria to narrow the initial comparison results.

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Choose up to 4 Models to Compare Close X

Compare?	Manufacturer	AC/DC Output	Output Power	Output Voltage	Energy Conversion Mechanism	Topology	Average Efficiency
<input type="checkbox"/>	Manufacturer 1	AC	xxx-yyy	xxx-yyy	Static	Double-conversion	0.888
<input type="checkbox"/>	Manufacturer 2	AC	xxx-yyy	xxx-yyy	Static	Double-conversion	0.8875
<input type="checkbox"/>	Manufacturer 3	AC	xxx-yyy	xxx-yyy	Static	Double-conversion	0.875
<input type="checkbox"/>	Manufacturer 4	AC	xxx-yyy	xxx-yyy	Static	Double-conversion	0.8625
<input type="checkbox"/>	Manufacturer 5	AC	xxx-yyy	xxx-yyy	Static	Double-conversion	0.881
<input type="checkbox"/>	Manufacturer 6	AC	xxx-yyy	xxx-yyy	Static	Double-conversion	0.8825
<input type="checkbox"/>	Manufacturer 6	AC	xxx-yyy	xxx-yyy	Static	Double-conversion	0.8705
<input type="checkbox"/>	Manufacturer 7	AC	xxx-yyy	xxx-yyy	Static	Double-conversion	0.8805

**COMPARE**

## Step 2. Choose models to compare

After selecting the “Find Models” button, an overlay appears on the Web page with models that match the initial filtering criteria. The end-user is able to select (via checkboxes next to each model) up to 4 models to compare. The individual columns on this screen will be sortable in ascending or descending order, if desired.

	Manufacturer 1 XXX-1500-120	Manufacturer 2 YYY-2000-120	Manufacturer 3 ZZZ-2200-120	Manufacturer 4 111-1500-120
<b>General Characteristics</b>				
Manufacturer	Manufacturer 1	Manufacturer 2	Manufacturer 3	Manufacturer 4
Model Name	XXX-1500-120	YYY-2000-120	ZZZ-2200-120	111-1500-120
Model Number	XXX-1500-120	YYY-2000-120	ZZZ-2200-120	111-1500-120
<b>Electrical Characteristics</b>				
Energy Conversion Mechanism	Static	Static	Static	Static
Topology	Double-conversion	Double-conversion	Double-conversion	Double-conversion
Model Meets Definition of Modular UPS (Y/N)	N	N	N	N
Single-normal-mode UPS or Multiple-normal-mode UPS?	Single-normal-mode	Single-normal-mode	Single-normal-mode	Single-normal-mode
Total Number of Outlets	6	6	6	4
Number of Backup Outlets	6	6	6	4
Number of Surge Outlets	0	0	0	0
Minimum Input Voltage	110 V rms	90 V rms	90 V rms	89 V rms
Maximum Input Voltage	130 V rms	150 V rms	150 V rms	142 V rms
Minimum Output Voltage	110 V rms	110 V rms	110 V rms	100 V rms
Maximum Output Voltage	127 V rms	127 V rms	127 V rms	127 V rms
Minimum Output Frequency	60 Hz	50 Hz	50 Hz	50 Hz
Maximum Output Frequency	60 Hz	60 Hz	60 Hz	60 Hz
<b>ENERGY STAR Efficiency Values<sup>1</sup></b>				
Test Input Frequency	120 V rms	120 V rms	120 V rms	120 V rms
Test Output Voltage	60 V rms	60 V rms	60 V rms	60 V rms
Test Output Frequency	120 Hz	120 Hz	120 Hz	120 Hz

### Step 3. Compare models

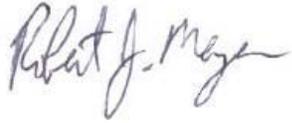
After choosing up to 4 models and selecting the “Compare” button, the overlay displays the 4 models with the information for each model in a table. This way, an end-user can compare the information across the columns for each of the criteria in the PPDS. If no models contain information for an individual specification, that row will be hidden (to avoid blank rows in the comparison table). The comparison table will be grouped into sections of related information (General Characteristics, Electrical Characteristics, ENERGY STAR Efficiency Values, Metering and Communications, Energy Storage Device, UPS Configuration and Recycling and Environmental Information). These sections mirror the sections of the PPDS. A full rendering of this comparison table is attached to this letter.

### Written Comments and Stakeholder Webinar

Stakeholders are encouraged to submit written comments on the Draft comparison tool to [UPS@energystar.gov](mailto:UPS@energystar.gov) by **Tuesday, May 1, 2012**. Also, EPA will hold a brief webinar to demonstrate the use of the proposed comparison tool on **Wednesday, April 25<sup>th</sup>, from 2:30 PM – 4 PM EDT**. Please RSVP to [UPS@energystar.gov](mailto:UPS@energystar.gov) by **April 23<sup>rd</sup>** to receive call-in information. For further information on specification development activities to date, visit the ENERGY STAR Product Development website at [www.energystar.gov/NewSpecs](http://www.energystar.gov/NewSpecs) and follow the link to “Uninterruptible Power Supplies.”

Thank you for your continued support of the ENERGY STAR program. Please direct any specific questions to RJ Meyers, EPA, at [Meyers.Robert@epa.gov](mailto:Meyers.Robert@epa.gov), or 202-343-9923, or Matt Malinowski, ICF International, at [mmalinowski@icfi.com](mailto:mmalinowski@icfi.com) or 202-862-2693.

Sincerely,

A handwritten signature in black ink that reads "Robert J. Meyers". The signature is written in a cursive style with a large initial "R" and "M".

Robert Meyers  
ENERGY STAR Data Center Products Manager