ENERGY STAR® Unit Shipment and Market Penetration Report Calendar Year 2010 Summary

This is the ninth year in which ENERGY STAR has collected unit shipment data from partners and/or their representative associations and used it to project the market penetration of ENERGY STAR qualified products.

Data:

In 2010, data was collected for the following ENERGY STAR qualified products:

• Audio/Video	• Displays
• Battery Charging Systems	• Furnaces
• Boilers	• Geothermal Heat Pumps
• Ceiling Fans	• Imaging Equipment
• Central Air Conditioners and Air-Source Heat Pumps (CAC/ASHP)	• Light Commercial HVAC
• Clothes Washers	• Refrigerators and Freezers
• Commercial Dishwashers	• Residential Light Fixtures (RLF)
• Commercial Fryers	• Roof Products
• Commercial Griddles	• Room Air Cleaners
• Commercial Hot Food Holding Cabinets	• Room Air Conditioners
• Commercial Ice Machines	• Set-top Box Service Providers
• Commercial Ovens	• Set-top Boxes
• Commercial Refrigerators and Freezers	• Solid-State Lighting Luminaires (SSL)
• Commercial Steam Cookers	• Telephony
• Compact Fluorescent Lamps (CFL)	• Televisions
• Computer Servers	• Vending Machines
• Computers	• Ventilating Fans
• Decorative Light Strings (DLS)	• Water Coolers
• Dehumidifiers	• Water Heaters
• Dishwashers	

Methodology:

ENERGY STAR market penetrations for a given year are derived by dividing ENERGY STAR qualified product shipments by total U.S. shipments.

ENERGY STAR Shipment Data

> ENERGY STAR shipment data is collected from program partners for each calendar year. EPA uses this data as the representative value of all ENERGY STAR qualified product shipments for the respective year; that is, no adjustments are made to the totals to account for partners that fail to report their shipments. Using the reported data represents a conservative approach. Though this method may underestimate ENERGY STAR market penetration, the data are reliable and the method is easily replicated. Further, response rates for all collected product categories average approximately 95%, suggesting that reported shipments closely approximate actual ENERGY STAR qualified product shipments.

U.S. Shipment Data

> U.S. shipments are based on modeled and documented data. Industry data is used as a direct input whenever available and compared to forecast assumptions to ensure data comparability. Industry sources include trade associations, publications, and commercially available market research.

Response Rate:

Percent of Partners that Submitted CY2010 Unit Shipment Data:

Product Category	Response Rate (%)	Number of Manufacturers Required to Respond
Audio/Video	90%	30
Battery Charging Systems	86%	37
Boilers	98%	46
Ceiling Fans	89%	46
Central ACs and Air-Source Heat Pumps	88%	43
Clothes Washers	86%	22
Commercial Dishwashers	100%	19
Commercial Fryers	100%	10
Commercial Griddles	100%	7
Commercial Hot Food Holding Cabinets	91%	22
Commercial Ice Machines	83%	6
Commercial Ovens	100%	14
Commercial Refrigerators and Freezers	100%	29
Commercial Steam Cookers	100%	11
Compact Fluorescent Lamps	82%	171
Computer Servers	100%	13
Computers	79%	102
Decorative Light Strings	85%	26
Dehumidifiers	88%	26
Dishwashers	95%	21
Displays	93%	43
Furnaces	96%	28
Geothermal Heat Pumps	100%	26
Imaging Equipment	96%	48
Light Commercial HVAC	100%	5
Refrigerators and Freezers	97%	33
Residential Light Fixtures	87%	229
Roof Products	92%	293
Room Air Cleaners	96%	25
Room Air Conditioners	100%	18
Set-top Box Service Providers	80%	5
Set-top Boxes	100%	10
Solid-State Lighting Luminaires	95%	43
Telephony	91%	11
Televisions	84%	43
Vending Machines	88%	8
Ventilating Fans	95%	37
Water Coolers	85%	27
Water Heaters	85%	48
Total	**95%[1]**	**1681**

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[1] Does not account for partnerships that were terminated due to failure to recommit.

Results:

The goal of the ENERGY STAR program is to reduce greenhouse gas and other emissions associated with avoidable energy consumption by transforming the market for energy efficient products, buildings and services, so that more energy efficient options become the norm and persist in the marketplace. As this occurs, EPA looks for additional opportunities to improve efficiency by tightening energy and environmental performance standards for a given product or service, and revising specifications accordingly.[2]

The below estimates of market penetration for calendar year 2010 provide a key indicator of whether the market is being transformed for a given product, and are used to inform the specification revision process. As noted in highlights, significant market penetration was anticipated for some product categories, and new criteria have already been established or are currently being developed.

ENERGY STAR CY2010 Qualified Units Shipped, Corresponding Estimated Market Penetration, and Relevant Specification Updates:

Key and notes	
	New specification effective in 2011; therefore, market penetration under the currently effective specification is likely to be lower.
	New specification effective in 2012.

Product Category[3]	2010 Units Shipped (thousands unless otherwise stated)	2010 Estimated Market Penetration	Specification Revisions Affecting Future Market Penetration (Version/Tier Effective Date)
Audio/Video Products (Consumer)[4]			
Audio Separates	978	64%	
CD Players	0	0%	
DVD Players	17,413	65%	Version 3.0 Revision in Process
Home Theater	648	22%	
Mini-systems	152	10%	
Audio/Video Products (Professional/Commercial)[4]			
Amplifiers	24	NA	

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[2] The approach and criteria for revising ENERGY STAR product specifications are documented in *Specification Development Guiding Principles* (www.energystar.gov/ia/partners/prod_development/downloads/guiding_princip.pdf).
Detailed documentation for the rationale for revising specific products is available online by product category at www.energystar.gov/productdevelopment.
[3] Number of ENERGY STAR qualified shipments and market penetrations are provided for select, notable subcategories of products. The totals and market penetrations for each main product category may be comprised of additional subcategories.
[4] Specification updated during Calendar Year 2010; therefore, shipment data may comprise a blend of products qualified under the old and new specifications.

Battery Charging Systems	14,509	34%	Version 2.0 2012
Boilers			Review Completed in 2011
Residential Gas Boilers	100	52%	
Residential Oil Boilers	75	61%	
Ceiling Fans			
Ceiling Fan Only	1,394	18%	
Ceiling Fan with Light Kit	304	3%	Luminaires Version 1.1[5] 4/1/2012
Light Kit Only	171	8%	
Central Air Conditioners and Air-Source Heat Pumps (CAC/ASHP)			Scheduled for Review in 2012
ASHP[6]	760	46%	
CAC	950	27%	
Clothes Washers	5,233	64%	Version 5.0 1/1/2011
Residential Use	5,144	64%	
Commercial Use	88	44%	
Commercial Dishwashers	28	74%	Version 2.0 9/1/2012
Commercial Fryers	16	19%	Version 2.0 4/22/2011
Commercial Griddles	4	14%	Version 1.0 Tier 2 (electric only) 1/1/2011
Commercial Hot Food Holding Cabinets	23	63%	Version 2.0 7/1/2011
Commercial Ice Machines	70	63%	Version 2.0 9/1/2012
Commercial Ovens	23	36%	Version 2.0 5/1/2012
Commercial Refrigerators & Freezers	228	72%	Version 3.0 Revision in Process
Commercial Steam Cookers	5	35%	Version 2.0 Revision in Process
Compact Fluorescent Lamps (CFL)	331,608	20%	
Computers	49,371	71%	Version 6.0 9/1/2012
Desktop	11,415	47%	
Notebooks	37,330	84%	
Small-Scale Servers	28	NA	
Thin Clients	490	NA	
Workstations	136	20%	
Decorative Light Strings	24,993	19%	

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[5] Lighting requirements were revised to align with the Luminaires specification.
[6] As percent of heat pump market.

Dehumidifiers	1,604	99%	Version 3.0 10/1/2012
Dishwashers	5,644	100%	Version 5.0 1/20/2012
Displays			Version 6.0 7/1/2012
Digital Picture Frames	1,425	10%	
LCD Monitors	12,131	43%	
Professional Displays PDP	122	3%	
Enterprise Servers	91	5%	Version 2.0 Revision in Process
Freezers	491	25%	Version 2.0 Revision in Process
Furnaces			Version 3.0 9/1/2011
Residential Gas Furnaces	1,340	61%	
Residential Oil Furnaces	20	36%	
Geothermal Heat Pumps	60	47%	Water-to-Air & Water-to-Water Version 3.0 Tier 3 1/1/2012
Geothermal Heat Pumps (% of heat pump market)	60	3%	
Imaging Equipment[7]	29,055		Version 2.0 11/1/2012
Copiers	156	79%	
Digital Duplicators	6	NA	
Fax Machines	260	7%	
Mailing Machines	184	NA	
Multi-function Devices	19,991	99%	
Printers	7,752	99%	
Scanners	706	99%	
Light Commercial HVAC			
CACs and Heat Pumps	69 million sq. ft.	9%	
Gas/Electric Package Units	36	NA	
Refrigerators	4,684	50%	Version 2.0 Revision in Process
Residential Light Fixtures[8]	12,768	7%	Luminaires Version 1.1 4/1/2012
Indoor	6,923	4%	
Outdoor	5,846	20%	
Roof Products			Versions 2.3 and 3.0 Revisions in Process
Commercial	2,836,084,193 sq. ft. 29,953,518 gal.	37%[9]	
Residential	1,746,624,424 sq. ft.	35%	
Room Air Cleaners	564	21%	

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[7] The total number of imaging equipment units shipped and corresponding market penetration do not include mailing machines and digital duplicators.
[8] Shipments include solid state lighting luminaires.
[9] Gallons were converted to square feet for the purpose of estimating market penetration.

Room Air Conditioners	2,101	33%	Version 3.0 10/1/2012
Set-top Boxes	15,076	52%	Version 3.0 9/1/2011
Telephony	19,486	68%	Version 2.0 12/1/12
TVs[4]	34,194	80%	Version 5.0 9/30/2011
LCD	28,889	77%	
OLED	4	NA	
Plasma	3,684	95%	
Rear Projection	208	16%	
TV Combination Units[4]	1,409	NA	
Vending Machines	68	28%	Version 3.0 Revision in Process
Ventilating Fans[10]	887	13%	Luminaires Version 1.1[11] 4/1/2012
Water Coolers	982	68%	Version 2.0 12/1/2012
Water Heaters			Version 2.0 11/1/2012
Gas Storage	455	12%	
Gas Tankless	384	NA	
Heat Pumps (% of electric water heater market)	59	2%	
Solar	10	NA	
Windows, Doors, and Skylights	41,077	79%	Version 6.0 Revision in Process
Windows	33,675	81%	
Doors	6,817	71%	
Skylights	585	70%	

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[10] Market penetration for ventilating fans does not include in-line ventilating fans.
[11] Lighting requirements were revised to align with the Luminaires specification.