ENERGY STAR® Unit Shipment and Market Penetration Report Calendar Year 2012 Summary

This is the eleventh 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 certified products.

Data:

For 2012, data was collected for the following ENERGY STAR certified products:

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

Methodology:

ENERGY STAR market penetrations for a given year are derived by dividing ENERGY STAR certified 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 certified 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 87%, suggesting that reported shipments closely approximate actual ENERGY STAR certified 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 CY2012 Unit Shipment Data:

Product Category	Response Rate (%)	Number of Manufacturers Required to Respond
Audio/Video	90%	30
Battery Charging Systems	75%	48
Boilers	98%	50
Ceiling Fans	87%	54
Central ACs and Air-Source Heat Pumps	100%	29
Clothes Washers	100%	18
Commercial Dishwashers	100%	21
Commercial Fryers	100%	10
Commercial Griddles	100%	8
Commercial Hot Food Holding Cabinets	100%	8
Commercial Ice Machines	100%	8
Commercial Ovens	100%	16
Commercial Refrigerators and Freezers	93%	46
Commercial Steam Cookers	100%	9
Computer Servers	93%	15
Computers	72%	101
Decorative Light Strings	83%	41
Dehumidifiers	96%	25
Dishwashers	100%	20
Displays	87%	60
Furnaces	93%	27
Geothermal Heat Pumps	89%	28
Imaging Equipment	93%	72
Lamps	80%	261
Light Commercial HVAC	100%	9
Luminaires	80%	241
Refrigerators and Freezers	95%	44
Roof Products	92%	219
Room Air Cleaners	96%	26
Room Air Conditioners	89%	19
Set-top Box Service Providers	100%	6
Set-top Boxes Manufacturers	92%	13
Telephony	82%	11
Televisions	74%	53
Vending Machines	100%	8
Ventilating Fans	92%	49
Water Coolers	84%	32
Water Heaters	78%	50
Total	**87%[1]**	**1785**

[1] The response rate was lower than usual because of a change in the residential light fixtures specification in early 2012 that resulted in 32 partners leaving the program. Also note EPA has typically found that non-responsive partners generally have few or no shipments of ENERGY STAR certified products to report.

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 2012 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 CY2012 Certified Units Shipped, Corresponding Estimated Market Penetration, and Relevant Specification Updates:

Key and notes	
(pink)	New specification version effective in late 2012 or 2013; market penetration under the new version is likely to be lower.
(green)	New specification version effective in 2014 or later.

Product Category[3]	2012 Units Shipped (thousands unless otherwise stated)	2012 Estimated Market Penetration	Specification Revisions Affecting Future Market Penetration (Version/Tier Effective Date)
Audio/Video Products – Consumer	13,582		Version 3.0 - May 1, 2013
Audio Separates	*4*	*0%*	
Blu-ray Players	*6,742*	*61%*	
DVD Players	*5,585*	*61%*	
Home Theater	*81*	*4%*	
Mini-systems	*233*	*13%*	
Soundbars	*937*	*53%*	
Audio/Video Products – Professional/Commercial – Amplifiers	33	N/A	
Battery Charging Systems	*18,174*	*22%*	

[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] The number of ENERGY STAR certified products shipped 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.

Boilers	166	53%	Version 3.0 - TBD
Residential Gas Boilers	*109*	*57%*	
Residential Oil Boilers	*57*	*47%*	
Ceiling Fans			
Ceiling Fan Only	*1,477*	*19%*	
Ceiling Fan with Light Kit	*621*	*6%*	
Light Kit Only	*167*	*7%*	
CAC/ASHP	1,335	24%	
ASHP[4]	*547*	*32%*	
CAC	*788*	*20%*	
Clothes Washers	4,915	65%	
Residential Use	*4,856*	*66%*	Version 7.0 - TBD
Commercial Use	*59*	*30%*	Version 6.0 - February 1, 2013
Commercial Dishwashers	40	71%	Version 2.0 - February 1, 2013
Commercial Fryers	17	17%	
Commercial Griddles	2	6%	
Commercial Hot Food Holding Cabinets	5	8%	
Commercial Ice Machines	95	66%	Version 2.0 - February 1, 2013
Commercial Ovens	31	56%	Version 2.0 - January 1, 2014
Commercial Refrigerators & Freezers	379	54%	Version 3.0 - TBD
Commercial Steam Cookers	6	35%	
Computer Servers	164	8%	Version 2.0 - December 16, 2013
Computers	43,505	50%	Version 6.0 - April 28, 2014
Desktop	*7,205*	*21%*	
Notebooks	*34,859*	*69%*	
Small-Scale Servers	*36*	*N/A*	
Thin Clients	*1,267*	*N/A*	
Workstations	*138*	*16%*	
Decorative Light Strings	27,982	22%	
Dehumidifiers	1,157	99%	Version 3.0 - October 1, 2012
Dishwashers[5]	5,072	89%	Version 6.0 - TBD
Displays	22,395	56%	Version 6.0 - June 1, 2013
Digital Picture Frames	*24*	*0%*	
LCD Monitors	*22,146*	*83%*	

[4] As percent of heat pump market.
[5] Market penetration for dishwashers includes compact products.

Professional Displays PDP	*225*	*45%*[6]	
Freezers[7]	895	44%	Version 5.0 – September 15, 2014
Furnaces	782	34%	Version 4.0 - February 1, 2013
Residential Gas Furnaces	*774*	*35%*	
Residential Oil Furnaces	*8*	*22%*	
Geothermal Heat Pumps	47	28%	
Imaging Equipment[8]	26,216	89%	Version 2.0 - January 1, 2014
Copiers	*109*	*82%*	
Digital Duplicators	*4*	*N/A*	
Fax Machines	*216*	*6%*	
Mailing Machines	*61*	*N/A*	
Multi-function Devices and Printers	*23,567*	*91%*	
Scanners	*1,375*	*N/A*	
Lamps[9]	322,245	16%	Version 1.0 - TBD
Compact Fluorescent Lamps (CFL)[10]	*290,212*	*88%*	
Integral LED Lamps	*23,214*	*70%*	
Light Commercial HVAC[11]	165 million sq. ft.	22%	
Luminaires[10, 12]	12,232	7%	
Indoor	*9,997*	*7%*	
Outdoor	*2,236*	*7%*	
Solid State Retrofit Kits	*3,653*	*N/A*	
Refrigerators[13]	6,585	76%	Version 5.0 - September 15, 2014
Roof Products	6.4 billion sq. ft.	29%	
Residential	*1.0 billion sq. ft.*	*22%*	
Commercial	*5.3 billion sq. ft.*	*31%*[14]	
Room Air Cleaners	806	16%[15]	

[6] Market penetration corrected based on new market data obtained in 2015. Previous market penetration was 3%.
[7] Market penetration for freezers includes compact products.
[8] The total number of imaging equipment units shipped and corresponding market penetration do not include mailing machines, digital duplicators, or scanners.
[9] This includes ENERGY STAR certified lamps as a percentage of all lamps, including incandescent.
[10] ENERGY STAR shipments and/or market penetration updated or corrected in July 2014.
[11] Shipments are converted to corresponding floor area to determine market penetration.
[12] Shipments and market penetration were updated to breakout solid state retrofit kits from indoor luminaires. Previous total luminaire shipments were 15,885 units with a market penetration of 10%. Previous indoor luminaire shipments were 13,649 units with a market penetration of 11%. Luminaire shipments include solid state lighting luminaires with the exception of solid state retrofit kits, which are not included in the luminaire shipments total or market penetration.
[13] Market penetration for refrigerators does not include compact products.
[14] Gallons were converted to square feet for the purpose of estimating market penetration.
[15] Market penetration was corrected based on new market data obtained in 2015. Previous market penetration was 30%.

Room Air Conditioners	4,411	58%	Version 3.0 - October 1, 2013
Set-top Boxes[16]	34,739	88%	Version 4.1 - TBD
Telephony	16,820	81%	Version 3.0 - TBD
Televisions[10]	28,533	71%	Version 6.0 - June 1, 2013
LCD	26,639	74%	
LCD less than or equal to 23 inches	*3,043*	*77%*	
LCD 24-34 inches	*9,938*	*61%*	
LCD 35-39 inches	*1,650*	*77%*	
LCD 40-44 inches	*3,860*	*83%*	
LCD 45-59 inches	*7,204*	*100%*	
LCD greater than or equal to 60 inches	*943*	*47%*	
OLED	*0*	*0%*	
Plasma	*1,893*	*63%*	
Rear Projection	*0*	*0%*	
TV Combination Units	*246*	*9%*	
Vending Machines	81	33%	Version 3.0 - March 1, 2013
Ventilating Fans[10, 17]	2,330	35%	
Water Coolers[10]	1,184	58%	Version 2.0 - February 1, 2014
Water Heaters[10]	488	N/A	Version 2.0 - July 1, 2013
Gas Storage	*108*	*3%*	
Gas Tankless	*339*	*N/A*	
Heat Pump	*34*	*1%*	
Solar	*7*	*N/A*	
Windows, Doors and Skylights[10]	37,898	76%	Version 6.0 - TBD

[16] Includes manufacturers' shipments to consumers, retailers, and set-top box service providers including both ENERGY STAR partners and non-partners.
[17] Market penetration for ventilating fans does not include in-line ventilating fans.