

ENERGY STAR® Unit Shipment and Market Penetration Report Calendar Year 2014 Summary

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

Data:

For 2014, data was collected for the following ENERGY STAR certified products:

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

Methodology:

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

U.S. 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 88%, suggesting that reported shipments closely approximate actual ENERGY STAR certified product shipments.

Total U.S. Shipment Data

Total 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 Rates:

Percent of Partners that Submitted CY2014 Unit Shipment Data:

Product Category	Response Rate	Number of Partners Required to Respond
Audio/Video	92%	24
Boilers	92%	49
Ceiling Fans	84%	45
Central ACs and Air-Source Heat Pumps	95%	44
Clothes Washers	95%	19
Commercial Dishwashers	100%	16
Commercial Fryers	100%	9
Commercial Griddles	100%	9
Commercial Hot Food Holding Cabinets	100%	10
Commercial Ice Machines	92%	12
Commercial Ovens	92%	13
Commercial Refrigerators and Freezers	92%	50
Commercial Steam Cookers	100%	8
Commercial Water Heaters	100%	11
Computers	82%	104
Computer Servers	100%	11
Data Center Storage	100%	6
Decorative Light Strings	73%	37
Dehumidifiers	91%	34
Dishwashers	100%	24
Displays	85%	60
Furnaces	100%	17
Geothermal Heat Pumps	100%	28
Imaging Equipment	94%	68
Lamps	75%	345
Light Commercial HVAC	89%	9
Luminaires	90%	324
Pool Pumps	100%	10
Refrigerators and Freezers	88%	66
Roof Products	97%	238
Room Air Cleaners	97%	37
Room Air Conditioners	92%	24
Set-top Box Service Providers	83%	6
Set-top Boxes Brand Owners	93%	15
Small Network Equipment	100%	3
Telephony	86%	14
Televisions	88%	50
Uninterruptible Power Supplies	100%	14
Vending Machines	100%	5
Ventilating Fans	89%	47
Water Coolers	84%	31
Water Heaters	86%	28
Total	88%	1974

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 criteria for a given product or service, and revising specifications accordingly.

The below estimates of market penetration for calendar year 2014 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 CY2014 Certified Units Shipped, Corresponding Estimated Market Penetration, and Relevant Specification Updates:

Key and notes	
	New specification version effective in late 2014 or 2015; market penetration under the new version is likely to be lower.
	New specification version effective in 2015 or later.

Product Category ¹	2014 Units Shipped (thousand units unless otherwise stated)	2014 Estimated Market Penetration	Specification Revisions Affecting Future Market Penetration (Version - Effective Date)
Audio/Video Products – Consumer ²	13,172		Revision Planned 2016
<i>Blu-ray Players</i>	6,084	64%	
<i>DVD Players</i>	4,368	95%	
<i>Soundbars</i>	2,720	80%	
Audio/Video Products – Professional/Commercial			
<i>Amplifiers</i>	68	N/A	Version 3.0 – October 1, 2014
Boilers	157	50%	
<i>Residential Gas Boilers</i>	117	61%	
<i>Residential Oil Boilers</i>	39	32%	
Ceiling Fans			
<i>Ceiling Fan Only</i>	1,665	21%	
<i>Ceiling Fan with Light Kit</i>	388	4%	

¹ 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.

² Only includes subcategories of A/V products with significant shipments and market penetration

CAC/ASHP	1,727	25%	
ASHP ³	791	34%	
CAC	935	21%	
Clothes Washers	6,067	68%	
Residential Use	6,002	69%	Version 7.0 – March 7, 2015
Commercial Use	65	40%	Revision Planned 2016
Commercial Dishwashers	41	64%	
Commercial Fryers	20	23%	
Commercial Griddles	2	20%	
Commercial Hot Food Holding Cabinets	7	13%	
Commercial Ice Machines	100	53%	
Commercial Ovens	23	51%	
Commercial Refrigerators & Freezers	395	55%	Version 3.0 - October 1, 2014
Commercial Steam Cookers	6	33%	
Commercial Water Heaters - Gas	39	42%	
Computer Servers	245	7%	
Computers	72,242		Version 6.0 – June 2, 2014
Desktop	8,249	34%	
Notebooks	40,539	93%	
Tablets	22,094	28%	
Small-Scale Servers	19	0%	
Thin Clients	1,187	N/A	
Workstations	153	19%	
Data Center Storage	18	N/A	
Decorative Light Strings	42,002	27%	
Dehumidifiers	2,003	89%	Revision Planned 2016
Dishwashers ⁴	6,346	92%	Version 6.0 – January 29, 2016
Displays	19,854	75%	Version 7.0 – April 30, 2016
LCD Monitors	19,733	88%	
Signage Display	122	23% ⁵	
Freezers ⁶	536	29%	Version 5.0 – September 15, 2014
Furnaces	665	24%	

³ As percent of heat pump market.

⁴ Market penetration for dishwashers includes compact products.

⁵ Market penetration reflects updated information on the market. The previous shipment data summary reports will be corrected to allow for year-to-year comparisons.

⁶ Market penetration for freezers includes compact products.

<i>Residential Gas Furnaces</i>	659	24%	
<i>Residential Oil Furnaces</i>	5	15%	
Geothermal Heat Pumps ⁷	37	17%	
Imaging Equipment			
<i>Digital Duplicators</i>	4	N/A	
<i>Mailing Machines</i>	72	N/A	
<i>Multi-function Devices and Printers</i>	11,850	45%	
<i>Scanners</i>	780	N/A	
Lamps ⁸	286,028	15%	
<i>Compact Fluorescent Lamps (CFL)</i> ⁹	206,970	64%	
<i>Integral LED Lamps</i>	79,058	75%	
Light Commercial HVAC ¹⁰	213 million sq. ft.	27%	
Luminaires ¹¹	24,813	15%	
<i>Indoor</i>	22,602	13%	
<i>Outdoor</i>	2,212	7%	
<i>Solid State Retrofit Kits</i>	15,255	N/A	
Pool Pumps	199	30%	
Refrigerators ¹²	7,347	75%	Version 5.0 - September 15, 2014
Roof Products ¹³	8 billion sq. ft.	34%	
<i>Residential</i>	1.25 billion sq. ft.	26%	
<i>Commercial</i>	6.44 billion sq. ft.	37%	
Room Air Cleaners	1,105	22% ¹⁴	
Room Air Conditioners	2,981	50%	Version 4.0 - October 26, 2015
Set-top Boxes ¹⁵	39,758	88%	Version 4.1 – December 19, 2014
<i>Cable</i>	16,326	100%	
<i>Satellite</i>	6,994	92%	
<i>IP</i>	8,101	56%	
<i>Thin Client/Remote</i>	8,337	87%	

⁷ Market penetration as a percent of commercial and residential geothermal heat pumps. ENERGY STAR is focused on the residential market, which is known to be decreasing in contrast to the commercial market.

⁸ This includes ENERGY STAR certified lamps as a percentage of all lamps, including incandescent, halogen and solid state.

⁹ CFL shipments do not include pin-based lamps.

¹⁰ Shipments are converted to corresponding floor area to determine market penetration.

¹¹ Shipments include solid state lighting luminaires, but not retrofit kits. Market penetration does not include solid state lighting retrofit kits.

¹² Market penetration for refrigerators does not include compact products.

¹³ Gallons were converted to square feet for the purpose of estimating market penetration.

¹⁴ Market penetration reflects updated information on the market. The two previous shipment data summary reports will be corrected to allow for year-to-year comparisons.

¹⁵ Includes shipments to consumers, retailers, and set-top box service providers including both ENERGY STAR partners and non-partners.

Small Network Equipment	1,188	2%	
Telephony	18,687	46%	Version 3.0 – October 1, 2014
<i>Analog</i>	18,561	56%	
<i>VOIP</i>	126	2%	
Televisions	35,102	99%	Version 7.0 – October 30, 2015
<i>LCD</i>	34,284	100%	
<i>OLED</i>	13	34%	
<i>Plasma</i>	588	55%	
<i>TV Combination Units</i>	217	13%	
Uninterruptible Power Supplies	3,790	N/A	
Vending Machines	54	22%	
Ventilating Fans	3,434	N/A	Version 4.0 – October 1, 2015
Water Coolers	1,223	65%	
Water Heaters		N/A	
<i>Gas Storage</i>	216	5%	
<i>Gas Tankless</i>	416	N/A	
<i>Heat Pump</i>	46	1%	
<i>Solar</i>	3	N/A	
Windows, Doors and Skylights ¹⁶	TBD	TBD	Version 6.0 – January 1, 2015 January 1, 2016 (for northern zone windows)

¹⁶Shipment data and market share for windows, door, and skylights is determined by Ducker through a separate process. These figures will be updated when available, typically one year later.