

ENERGY STAR Specifications At-A-Glance

Category	Product	Effective Date of Original ENERGY STAR Specification	Current/ Proposed Effective Date	ENERGY STAR Specification Levels	Specification Updates	Federal Standard in Effect/Plans for Future Standards
Appliances	Clothes Washers	1997	1/1/2011	Modified Energy Factor (MEF) ≥ 2.0; Water Factor (WF) ≤ 6.0	<ul style="list-style-type: none"> A Draft 1 Version 6.0 specification was released on 7/28/2011 that proposes changes to the commercial clothes washer requirements. Through a separate stakeholder process, EPA is also proposing new requirements for combination all-in-one washer dryers (combination W/Ds) and released a second Draft 1 Version 6.0 specification on 10/12/2011. The Final Version 6.0 specification will combine changes for commercial washers and combination W/Ds and is scheduled to be published in December 2011 or January 2012. Eligibility requirements for residential clothes washers will remain unchanged in Version 6.0 from Version 5.1 levels. The Version 6.0 is proposed to take effect on 1/8/2013. EPA plans to initiate the specification revision process in 2012 to revisit residential clothes washer levels. 	<p>Current Standard: Top-Loading and Front-Loading, Standard: MEF ≥ 1.26; WF ≤ 9.5.</p> <p>Effective January 1, 2015 (EISA): Requires that DOE publish a final rule no later than December 31, 2011, to determine whether to amend the standards in effect for residential clothes washers. Pursuant to this requirement, DOE is currently developing a rulemaking to review and will possibly amend energy conservation standards for residential clothes washers.</p> <p>http://www1.eere.energy.gov/buildings/appliance_standards/residential/clothes_washers.html</p>
Appliances	Dehumidifiers	2001	6/1/2008	Energy efficiency is measured in liters of water removed per kWh of energy consumed, or Energy Factor (EF). <ul style="list-style-type: none"> Standard capacity: Ranges from ≥ 1.20 to ≥ 1.80 L/kWh High capacity: ≥ 2.50 L/kWh 	A final Version 3.0 specification was released on 10/31/2011. The Version 3.0 requirements include a minimum EF of 1.85 for units <75 pints/day and a minimum EF of 2.80 for units ≥75 pints/day. The specification also requires inclusion of an adjustable humidistat. The Version 3.0 takes effect on 10/1/2012.	<p>Current Standard: Up to 25 pints/day: Minimum Energy Factor (MEF) ≥1.00 25.01 to 35 pints/day: MEF ≥1.20 35.01 to 54 pints/day: MEF ≥1.30 54.01 to 74.99 pints/day: MEF ≥1.50 75 pints/day or greater: MEF ≥2.25</p> <p>Effective October 1, 2012 (EISA): Up to 35 pints/day: MEF ≥1.35 35.01 to 45 pints/day: MEF ≥1.50 45.01 to 54 pints/day: MEF ≥1.60 54.01 to 75 pints/day: MEF ≥1.70 Greater than 75 pints/day: MEF ≥2.50</p>
Appliances	Residential Dishwashers	1996	8/1/2009	<ul style="list-style-type: none"> Standard: ≤ 324 kWh/year and ≤ 5.8 gallons per cycle Compact: ≤ 234 kWh/year and ≤ 4.0 gallons per cycle 	<ul style="list-style-type: none"> A Final Version 5.0 specification was released on 4/25/2011, with a Tier 1 effective date of 1/20/2012 and Tier 2 effective date of 1/1/2014. The Version 4.1 Tier 2 was originally planned to take effect 7/1/2011, but is superseded by the new Version 5.0 requirements. On 9/19/2011, EPA and DOE hosted a webinar to discuss the development of an ENERGY STAR test procedure for dishwasher cleanability, with the purpose of including cleaning performance requirements in future specification revisions. EPA plans to initiate a specification revision process in 2012, to establish the Tier 2 cleaning performance requirement. 	<p>Current Standard: Federal standards for residential dishwashers were last amended through EISA. These standards became effective January 1, 2010 and specify standard size dishwashers not exceed 355 kWh/year and 6.5 gallons per cycle and compact size dishwashers not exceed 260 kWh/year and 4.5 gallons per cycle.</p> <p>http://www1.eere.energy.gov/buildings/appliance_standards/pdfs/74fr12058.pdf</p>
Appliances	Residential Refrigerators & Freezers	1996	4/28/2008	<ul style="list-style-type: none"> Full Size Refrigerators ≥ 7.75 cu. ft. in volume must be 20% more efficient than the minimum federal government standard (NAECA) Full Size Freezers ≥ 7.75 cu. ft. in volume must be 10% more efficient than NAECA Compact refrigerators and freezers < 7.75 cu. ft. and ≤ 36 in. high must be 20% more efficient than NAECA 	A Version 5.0 specification framework document was released on 7/11/2011. The framework document shares EPA's initial thoughts on potential changes to energy criteria and on addressing foam blowing agents and smart grid functionality. A Draft 1 is scheduled to be released in November 2011. The Final Version 5.0 specification is scheduled for release in March 2012.	<p>Current Standard: Based on configuration and adjusted volume. http://www1.eere.energy.gov/buildings/appliance_standards/residential/pdfs/reffrbod.pdf</p> <p>Effective September 15, 2014 (DOE): On September 15, 2011 DOE published a Final rule amending the federal standards for refrigerators, refrigerator-freezers and freezers. These standards are based on configuration, presence of an automatic ice maker, whether the product is built-in, and adjusted volume. http://www1.eere.energy.gov/buildings/appliance_standards/pdfs/refrig_finalrule_frnotice.pdf</p>
Appliances	Room Air Cleaners	2004	7/1/2004	<ul style="list-style-type: none"> Must produce a minimum 50 Clean Air Delivery Rate (CADR) for Dust to be eligible Efficiency Performance Requirement: ≥ 2.0 CADR/watt (Dust) Standby Power Requirement: ≤ 2.0 watts; qualifying models that perform secondary consumer functions (e.g., clock, remote control) must meet the standby power requirement UL Safety Requirement: Models that emit ozone as a byproduct of air cleaning must meet UL Standard 867 (i.e., ozone production ≤ 50 ppb) 	A new Version 1.2 specification was released on 7/20/2011. Changes to the specification were limited to the allowance of a single unit to be tested three times with three different filters for purposes of qualification.	None
Appliances	Room Air Conditioners	1996	11/16/2005	Includes Energy Efficiency Ratio (EER) requirements for room air conditioners (RACs) with and without louvered sides, in various form factors. Requirements differ for units with and without reverse cycle. EER requirements vary according to RAC cooling capacity (BTU/hr), but generally require RACs to be 10% more efficient than federal minimum standards.	A Draft 2 Version 3.0 Specification was published on 5/17/2011. The revised specification will include new EER requirements for all room air conditioner product types, and is anticipated to also address additional energy-savings product features such as energy saver mode, check air filter notification and smart grid functionality, with an expected effective date of 10/1/2012. A Final Version 3.0 specification will be published in January 2012.	<p>Current Standard: Energy Efficiency Ratio (EER) levels are based on 16 product classes that vary depending on the size of the room air conditioner, whether it has louvered sides and a heating cycle, and whether is for casement installations.</p> <p>http://www1.eere.energy.gov/buildings/appliance_standards/residential/pdfs/racrlbod.pdf</p> <p>Effective June 1, 2014 (DOE): The final rule amending the energy conservation standards for room air conditioners was issued on April 21, 2011, and the compliance date of the standards was amended on August 24, 2011. The standards are based on 16 product classes with levels that vary depending on the size of the room air conditioner, whether it has louvered sides and a heating cycle, and whether is for casement installations. These more stringent standards now use a Combined Energy Efficiency Ratio (CEER) metric that incorporates energy use in all modes, including the standby and off modes, instead of the previously used EER that only incorporates energy use in active mode.</p> <p>http://www1.eere.energy.gov/buildings/appliance_standards/residential/pdfs/aham_2_final_rule_amending_dates_fr.pdf</p>

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Appliances	Residential Water Heaters	2009	9/1/2010	Covers high-efficiency gas storage, gas condensing, whole-home gas tankless, solar, and heat pump water heaters. Products must meet energy factor or solar fraction, warranty, safety rating, and some must meet a first hour rating or gallons per minute.	The Version 2.0 specification revision process was launched in May 2011 followed by the release of a Draft 1 specification on 8/12/2011. The new Version 2.0 specification proposes to categorize products by fuel source (i.e., Electric, Gas and Solar), which are further subdivided by intended use (i.e., whole-home water heating, point-of-use (POU)). EPA anticipates releasing a Draft 2 specification in November 2011 and finalizing the requirements by the end of January 2012. The Version 2.0 is proposed to take effect on 11/1/2012.	<p>Current Standard: Standards in place for Gas-fired Water Heaters, Oil-fired Water Heaters, Electric Water Heaters, Tabletop Water Heaters, Instantaneous Gas-fired Water Heaters, and Instantaneous Electric Water Heaters.</p> <p>Effective April 16, 2015 (DOE): The new levels are as follows: Gas-fired Storage: For tanks with a Rated Storage Volume at or below 55 gallons: $EF = 0.675 - (0.0015 \times \text{Rated Storage Volume in gallons})$. For tanks with a Rated Storage Volume above 55 gallons: $EF = 0.8012 - (0.00078 \times \text{Rated Storage Volume in gallons})$. Electric Storage: For tanks with a Rated Storage Volume at or below 55 gallons: $EF = 0.960 - (0.0003 \times \text{Rated Storage Volume in gallons})$. For tanks with a Rated Storage Volume above 55 gallons: $EF = 2.057 - (0.00113 \times \text{Rated Storage Volume in gallons})$, which will not be achievable without heat pump technology . Oil-fired Storage: $EF = 0.68 - (0.0019 \times \text{Rated Storage Volume in gallons})$. Gas-fired Instantaneous: $EF = 0.82 - (0.0019 \times \text{Rated Storage Volume in gallons})$. http://www1.eere.energy.gov/buildings/appliance_standards/residential/pdfs/htgp_finalrule_fedreg.pdf</p>
Commercial Food Service	Commercial Dishwashers	2007	10/1/2007	Covers under counter, door-type, and rack type conveyor (multi and single tank) machines. Products must meet idle energy rate (kW) and water consumption (gallons/rack) limits, as determined by both machine type and sanitation approach (i.e., chemical/low temperature versus high temperature).	EPA released a Draft 3 Version 2.0 specification on 9/1/2011. New water consumption levels are proposed for flight type and pot, pan utensil machines along with modifications to idle and water performance levels for a few chosen existing machine types. A new ENERGY STAR test method based on the existing NSF 3 and ASTM Standards referenced in the specification will be shared with stakeholders in November 2011 for review and comment. The Version 2.0 specification is scheduled for finalization by the end of 2011 and effective 9/1/2012.	None
Commercial Food Service	Commercial Fryers	2003	4/22/2011	Gas standard vat, open deep-fat fryers ($\leq 12 - 18$ inch): • Heavy load cooking energy efficiency $\geq 50\%$ • Idle energy rate $\leq 9,000$ Btu/hr Electric standard vat, open deep-fat fryers ($< 12 - 18$ inch): • Heavy load cooking energy efficiency $\geq 80\%$ • Idle energy rate $\leq 1,000$ watts Gas large vat, open deep-fat electric fryers ($> 18 - \leq 24$ inch): • Heavy load cooking energy efficiency $\geq 50\%$ • Idle energy rate $\leq 12,000$ Btu/hr Electric large vat, open deep-fat electric fryers ($> 18 - \leq 24$ inch): • Heavy load cooking energy efficiency $\geq 80\%$ • Idle energy rate $\leq 1,100$ watts	Starting 8/1/2011, fryer models that were qualified under the previous Version 1.1 specification were required to meet new third-party certification requirements to remain ENERGY STAR qualified. Performance levels for standard fryers did not change in the new Version 2.0.	None
Commercial Food Service	Commercial Griddles	2009	1/1/2011	Covers gas and electric, single and double sided units that meet cooking energy efficiency and normalized idle energy rate levels: • Gas: $\geq 38\%$ cooking energy efficiency, $\leq 2,650$ Btuh/sq.ft idle energy rate • Electric: $\geq 70\%$ cooking energy efficiency, ≤ 320 watts/sq.ft idle energy rate	None	None
Commercial Food Service	Commercial Hot Food Holding Cabinets	2003	10/1/2011	Covers glass and solid door hot food holding cabinets. Excludes dual function equipment, heated transparent cabinets, and drawer warmers. Models must meet maximum idle energy rate levels based on interior volume (V, in cubic feet): • $0 < V < 13 = \leq 21.5$ V • $13 \leq V < 28 = \leq 2.0$ V + 254.0 • $28 \leq V = \leq 3.8$ V + 203.5	None	None
Commercial Food Service	Commercial Ice Makers	2008	1/1/2008	Products must not exceed maximum energy use limit (kWh/100lbs ice), as determined by harvest rate (lbs ice/day) and equipment type (i.e., ice making head, remote cooled, self contained). Units also must meet potable water use limits. Only air-cooled, cube type units may qualify.	A Draft 2 Version 2.0 specification was released on 8/22/2011. The Draft 2 proposes to expand scope to flake and nugget machines and presents new performance levels for air-cooled batch type machines. A Final Version 2.0 specification is scheduled to be released by December 2011.	<p>Current Standard: Requirements for maximum energy and condenser water consumption based on equipment and cooling type. http://www.eere.energy.gov/buildings/appliance_standards/pdfs/epact2005_appliance_std.pdf (page 18)</p> <p>Future Standard Development: DOE released a Framework document and announced potential changes to standard levels in November 2010. The Test Procedure Notice of Proposed Rulemaking (NOPR) (76 FR 18428) was released on April 4, 2011. http://www1.eere.energy.gov/buildings/appliance_standards/commercial/automatic_ice_making_equipment.htm</p>

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Commercial Food Service	Commercial Ovens	2009	5/16/2009	Covers convection gas and electric ovens. <ul style="list-style-type: none"> Gas Full Size: $\geq 44\%$ cooking energy efficiency, $\leq 13,000$ Btu/h idle energy rate Electric Full Size: $\geq 70\%$ cooking energy efficiency, ≤ 1 kW idle energy rate Electric Half Size: $\geq 70\%$ cooking energy efficiency, ≤ 1.6 kW idle energy rate 	EPA plans to launch efforts to develop requirements for combination (i.e., combi) ovens, and potentially other oven types, in Fall 2011. EPA will also revisit current levels for convection ovens to determine whether there is an opportunity for revisions to existing requirements.	None
Commercial Food Service	Commercial Refrigerators & Freezers	2001	1/1/2010	Products must not exceed maximum energy consumption (kWh/day) as determined by internal volume, door type (glass, solid), and configuration.	EPA plans to launch efforts to align with the DOE sampling and testing requirements, and to evaluate whether to open the specification for a broader revision.	<p>Current Standard: Maximum daily energy consumption (kWh/day) for Designs for Holding Temperature Applications (where V is the volume):</p> <ul style="list-style-type: none"> refrigerator solid, $0.10V + 2.04$; refrigerator glass, $0.12V + 3.34$; freezer solid, $0.40V + 1.38$; freezer glass, $0.75 + 4.10$; refrigerator/freezer solid, $0.27 AV - 0.71$ or 0.70 <p>Designs for Pull Down Temperature Applications and Transparent Doors: $0.126V + 3.51$.</p> <p>Effective January 1, 2012 (DOE): Additional standards for commercial refrigerator, freezer, and refrigerator-freezer with a self-contained condensing unit and without doors; commercial refrigerator, freezer, and refrigerator-freezer with a remote condensing unit; hybrid equipment; refrigerator-freezers, and wedge cases.</p> <p>DOE must publish a rule amending above standards by January 1, 2013, if warranted, with an effective date of January 1, 2016–January 1, 2018.</p>
Commercial Food Service	Commercial Steam Cookers	2003	8/1/2003	<ul style="list-style-type: none"> Electric steam cookers 3-pan and larger: $\geq 50\%$ cooking energy efficiency, maximum idle rate based on pan capacity Gas steam cookers 3-pan and larger: $\geq 38\%$ cooking energy efficiency, maximum idle rate based on pan capacity 	EPA is currently conducting market and engineering research to determine whether there are additional opportunities for expanding scope or revisiting Version 1.1 performance requirements.	None
Commercial Food Service	Pre-rinse Spray Valves	N/A	TBD	TBD	EPA's WaterSense and ENERGY STAR programs are currently working to jointly develop a new specification to include water efficiency and product performance criteria. A draft criteria proposal was released for stakeholder review and discussion during a ASME/CSA Task Group meeting held on 2/9/2011. EPA is continuing to conduct field and lab testing and the draft specification development process is scheduled to launch in Spring 2012.	Current Standard: Pre-rinse spray valves must not exceed a flow rate of 1.6 gallons/minute.
Heating & Cooling	Boilers	1996	4/1/2002	Products must meet a rating of 85% AFUE (or CAafue for combined appliances) or greater.	None	<p>Current standard: Gas boilers (excluding gas steam): minimum 80% AFUE; oil-fired boilers: minimum 80% AFUE; gas steam boilers: minimum 75% AFUE.</p> <p>Effective September 1, 2012 (EISA): Gas hot water: minimum 82% AFUE; gas steam: minimum 80% AFUE; oil hot water: minimum 84% AFUE; oil steam: minimum 82% AFUE.</p>
Heating & Cooling	Ceiling Fans	2002	1/1/2009	<ul style="list-style-type: none"> Must meet minimum airflow (CFM) and airflow efficiency (CFM/watt) requirements. Performance is measured at each of 3 speeds. At low, medium, and high speed, minimum airflow is 1,250 CFM, 3,000 CFM, and 5,000 CFM, and the efficiency requirement is 155 CFM/watt, 100 CFM/watt, and 75 CFM/watt, respectively. Integral or attachable light kits, including those sold separately, must meet most requirements of the Version 4.2 RLF specification (e.g., efficacy, lifetime, warranty, color, operating temperature). 	EPA finalized the Version 3.0 specification on 8/15/2011. The new version will become effective on 4/1/2012 at which time light kits will be required to meet the new Luminaries Version 1.1 requirements.	<p>Current Standards: Ceiling fans shall have the following features: fan speed controls separate from any lighting controls; adjustable speed controls; the capability of reversible fan action. Specific to ceiling fan light kits, (A) Light kits with medium screw based sockets shall be packaged with screw based lamps to fill each socket that: (i) meet the ENERGY STAR CFL V3.0; (ii) use light sources other than CFL that have lumens per watt performance at least equivalent to the ENERGY STAR CFL V3.0 requirements. (B) Light kits with pin-based sockets for fluorescent lamps shall meet the ENERGY STAR RLF V4.0 and be packaged with lamps to fill all sockets. Packaging must include FTC energy information label. All other lamp types, maximum total wattage of 190 watts.</p>
Heating & Cooling	Central Air Conditioners & Air Source Heat Pumps	1995	1/1/2009	<ul style="list-style-type: none"> Split Systems: ≥ 8.2 HSPF, ≥ 14.5 SEER, ≥ 12 EER Single package equipment including gas/electric package units: ≥ 8.0 HSPF, ≥ 14 SEER, ≥ 11 EER 	None	<p>Current Standard: Split system and single package central air conditioners and heat pumps: minimum SEER=13.0, minimum HSPF=7.7.</p> <p>http://www1.eere.energy.gov/buildings/appliance_standards/residential/pdfs/central_ac_hp_finalrule.pdf (page 31)</p> <p>Effective January 1, 2015 (DOE): DOE issued a final rule on October 25, 2011 that includes regional minimum standards, dividing the nation into three regions for purposes of compliance: North, Southeast and Southwest.</p> <p>http://www1.eere.energy.gov/buildings/appliance_standards/residential/residential_furnaces_cac_hp_direct_final_rule.html</p>

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Heating & Cooling	Furnaces	1995	10/1/2008	<ul style="list-style-type: none"> Gas and oil furnaces must meet or exceed a rating of 90% AFUE or 85% AFUE, respectively. 	EPA finalized the Version 3.0 and 4.0 Furnace specifications on 6/13/2011. The new versions will become effective on 2/1/2012 and 2/1/2013, respectively. Changes in the new Version 3.0 and 4.0 specifications include efficiency levels binned by U.S. Region and new requirements for furnace fan efficiency and air leakage.	<p>Current Standard: Furnaces (excluding mobile home furnaces): minimum 78% AFUE; mobile home furnaces: minimum 75% AFUE.</p> <p>Effective May 1, 2013 (DOE): DOE issued a final rule on October 25, 2011 that includes regional minimum standards, dividing the nation into three regions for purposes of compliance: North, Southeast and Southwest. The standards established in the final rule will be applied to non-weatherized furnaces.</p> <p>Effective January 1, 2015 (DOE): The standards established in the final rule will be applied to weatherized furnaces.</p> <p>http://www1.eere.energy.gov/buildings/appliance_standards/residential/residential_furnaces_cac_hp_direct_final_rule.html</p>
Heating & Cooling	Geothermal Heat Pumps (GHPs)	2001	1/1/2011	<ul style="list-style-type: none"> Water-to-Air: Open Loop: ≥3.8 COP; ≥18.2 EER, Closed Loop: ≥3.5 COP; ≥16.1 EER Direct Geoexchange (DGX): ≥3.6 COP; ≥16.0 EER Water-to-Water: Open Loop: ≥3.4 COP; ≥19.1 EER, Closed Loop: ≥3.0 COP; ≥15.1 EER <p>Tier 3 levels to go into effect 1/1/2012:</p> <ul style="list-style-type: none"> Water-to-Air: Open Loop: ≥4.1 COP; ≥21.1 EER, Closed Loop: ≥3.6 COP; ≥17.1 EER Direct Geoexchange (DGX): ≥3.6 COP; ≥16.0 EER Water-to-Water: Open Loop: ≥3.5 COP; ≥20.1 EER, Closed Loop: ≥3.1 COP; ≥16.1 EER 	None	None
Heating & Cooling	Heat Recovery Ventilators	N/A	TBD	TBD	Heat and Energy Recovery Ventilators are not labeled in the U.S. at this time. EPA continues to gather data on the suitability of these products for labeling.	None
Heating & Cooling	Light Commercial HVAC	2002	1/1/2011	<p>Air-Source Central Air Conditioner:</p> <ul style="list-style-type: none"> 3 phase - Single Package, <65,000 Btu/h: ≥14 SEER, ≥ 11 EER 3 phase - Split System, <65,000 Btu/h: ≥14 SEER, ≥ 12 EER Electric resistance or no heating type, ≥65,000 Btu/h - <135,000 Btu/h: ≥11.7 EER; ≥11.8 IEER All other heating types, ≥65,000 Btu/h - <135,000 Btu/h: ≥11.5 EER; ≥11.6 IEER Electric resistance or no heating type, ≥135,000 Btu/h - <240,000 Btu/h: ≥11.7 EER; ≥11.8 IEER All other heating types, ≥135,000 Btu/h - <240,000 Btu/h: ≥11.5 EER; ≥11.6 IEER <p>Air-Source Heat Pump:</p> <ul style="list-style-type: none"> 3 phase - Single Package, <65,000 Btu/h: ≥14 SEER, ≥ 11 EER, ≥ 8.0 HSPF 3 phase - Split System, <65,000 Btu/h: ≥14 SEER, ≥ 11 EER, ≥ 8.2 HSPF Electric resistance or no heating type, ≥65,000 Btu/h - <135,000 Btu/h: ≥11.3 EER, ≥ 11.4 IEER, ≥ 3.35 COP Electric resistance or no heating type, ≥135,000 Btu/h - <240,000 Btu/h: ≥10.9 EER, ≥ 11 IEER, ≥ 3.25 COP 	None	<p>Current Standard:</p> <ul style="list-style-type: none"> Central air conditioners ≥ 65,000 Btu/h - < 135,000 Btu/h per hour: 11.2 EER (no heating or electric resistance heating), 11.0 EER (all other integrated heating types) Air-cooled central air conditioner heat pumps ≥ 65,000 Btu/h - 135,000 Btu/h: 11.0 EER (no heating or electric resistance heating); 10.8 EER (all other integrated heating types); 3.3 COP for all types <p>http://www.eere.energy.gov/buildings/appliance_standards/pdfs/epact2005_appliance_stds.pdf (pages 15-16)</p>
Heating & Cooling	Programmable Thermostats	1995	N/A	None	ENERGY STAR specification suspended on 12/31/2009 (see Climate Controls).	None
Heating & Cooling	Climate Controls	N/A	4/1/2012	TBD	A Draft 2 Version 1.0 was released on 7/1/2010 followed by a Draft usability metric and test method on 11/30/2010. Two rounds of usability testing were planned. The first round was awarded through a competitive process and has been completed. A revised schedule was released on 3/11/2011 that indicates the Version 1.0 specification will be finalized in February 2012. An RFP was released for the second round of testing on 8/15/2011.	None
Heating & Cooling	Ventilating Fans	2001	1/15/2009	Must meet maximum allowable sound levels (sones), minimum efficacy levels (CFM/watt), and a percentage of 0.1 in. w.g. static pressure rated airflow at 0.25 in. w.g. static pressure. These various factors differ according to fan type and airflow. Lighting requirements, including LED, also included.	EPA finalized the Version 3.1 Ventilating Fans specification on 7/29/2011. The new version will become effective on 4/1/2012 at which time light kits will be required to meet the new Luminaries Version 1.1 requirements.	None
Home Electronics	Audio/Video	1999	7/30/2010	Mandatory Auto-power down (APD); Idle state (if APD Timing > 30 min); Sleep mode; and On mode power consumption limits based on product functionality; Amplifier minimum efficiency requirements.	A Draft 2 Version 3.0 specification was released on 9/9/2011. The goals of this revision are to: (1) establish performance requirements noted as "TBD" during development of the Version 2.0 Tier 3 product specification; (2) assess existing product performance criteria and modify as needed to ensure that ENERGY STAR continues to represent the top performing products in the market; and (3) address changes in program scope necessary to maintain broad applicability of the AV specification to the market. A Final Version 3.0 specification is scheduled to be released by the end of 2011.	None

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Home Electronics	Battery Charging Systems (BCS)	2006	1/1/2006	Must not exceed a maximum Nonactive Energy Ratio, which is based on the nominal battery voltage (Vb).	The Version 2.0 development process was launched on 10/27/2010 followed by the release of a Draft 1 specification on 12/7/2010. EPA is delaying further action on the specification until the release of the DOE test procedure final rule and energy conservation standards proposed rule for BCS, at which point EPA will consider the comments and incorporate responses into a Draft 2 specification.	Effective July 1, 2011 (EISA): DOE is required to issue a final rule prescribing energy conservation standards for battery chargers, if technologically feasible and economically justified. DOE is continuing to develop the Notice of Proposed Rulemaking (NOPR) for battery charger standards. This Notice will be followed by a final rule. http://www1.eere.energy.gov/buildings/appliance_standards/residential/battery_external.html
Home Electronics	Cordless Phones	2002	11/1/2008	Requirements for power in Standby mode: • Additional handsets: ≤ 1 watt • Cordless phones and answering machines: ≤ 2 watts • Combination products: ≤ 2.5 watts External power supplies (EPS) packaged with telephony products must meet international Level V efficiency levels, except for the No-load power consumption requirements.	The Version 3.0 Telephony specification revision process was launched on 9/21/2011. EPA is investigating inclusion of VoIP products and necessary revisions to testing methodology.	None
Home Electronics	Digital to Analog (DTA) Converters	2007	N/A	None	ENERGY STAR specification suspended on 12/31/2010.	None
Home Electronics	External Power Supplies (EPS)/Adapters	2005	N/A	None	ENERGY STAR specification suspended on 12/31/2010.	Current Standard: Based on nameplate output power, products must meet a minimum average efficiency in active mode and a maximum wattage in no-load, meeting Level IV in the International Efficiency Marking Protocol. No-Load mode requirements do not apply to AC-AC EPSs with nameplate output power of 20 watts or more that are designed to be connected to a security or life safety alarm or surveillance system component. Effective July 1, 2011 (EISA): DOE is required to publish a final rule to determine whether current standard should be amended, and if such determination is positive, include any amended standards as part of that final rule. DOE is continuing to develop the Notice of Proposed Rulemaking (NOPR) for EPS standards. This Notice will be followed by a final rule. http://www1.eere.energy.gov/buildings/appliance_standards/residential/battery_external.html
Home Electronics	Game Consoles	N/A	TBD	TBD	EPA launched development of recognition criteria for Game Console manufacturers on 8/4/2011. Final criteria are scheduled for release by the end of Q1 2012.	None
Home Electronics	Set-top Boxes	2001	9/1/2011	Must meet an annual energy allowance when tested according to a typical viewing pattern. The ENERGY STAR energy allowance varies by base functionality (e.g., cable, satellite, IP) and additional features present, such as additional tuners or a DVR.	• EPA finalized the Version 3.0 and 4.0 Set-top Box specifications on 1/21/2011. Version 3.0 took effect September 1, 2011. Revisions include new, more stringent Typical Electricity Consumption (TEC) requirements for all STB base types and additional functionalities have been established. Optional credit for STBs that have Deep Sleep capability with power consumption 85% less than On Mode are available via both manufacturer and service provider requirements. Promotes multi-room STB installations with true thin-client devices via both manufacturer and service provider requirements. The Version 4.0 specification which tightens requirements further will become effective on 7/1/2013.	None
Home Electronics	Set-top Box Service Providers	2008	4/23/2008	Separate requirements for service providers (Version 1.0) were published and became effective on 4/23/2008. Providers must meet either a purchasing or fleet requirement; test to ensure qualified boxes will continue to meet technical requirements once deployed; and train and educate staff and consumers.	• The same Eligibility Criteria exist for both manufacturers and service providers, with differing Partner Commitments. There are new Service Provider Partner Commitments as of 2011, calling on Service providers to ensure that 50% of their new purchases or 25% of their fleet meet the latest ENERGY STAR requirements.	None
Home Electronics	Small Network Equipment	N/A	TBD	TBD	EPA completed work with stakeholders to develop a dataset for the analysis of small network equipment. This analysis, along with a Draft 1 specification, is scheduled to be released in November 2011. The Final Version 1.0 Small Network Equipment specification is scheduled for release in early 2012.	None
Home Electronics	Televisions	1998	5/1/2010	On mode power requirements irrespective of resolution. Peak luminance of the product in the "home" mode, or in the default mode as shipped, cannot be less than 65% of the peak luminance of the "retail" mode, or the brightest selectable preset mode, of the product. Additional requirements for download acquisition mode (DAM) of 0.08 kWh/day.	EPA initiated the Version 6.0 Televisions specification revision process on 4/18/2011 followed by the release of a Draft 1 specification on 5/25/2011. EPA is focused on efforts to refine a testing methodology for Automatic Brightness Control (ABC) and plans to release a Draft 2 specification when there is greater clarity on testing parameters. Specification development efforts are scheduled to resume in Fall 2011.	Future Standard Development: In September, 2009, DOE initiated the rulemaking and data collection process to develop a test procedure for televisions. A Request for Information (RFI) (75 FR 54048) was published on September 3, 2010, asking stakeholders to provide information and views on key issues affecting the development of a new test procedure. http://www1.eere.energy.gov/buildings/appliance_standards/residential/tv_sets.html
Home Envelope	Insulation	N/A	9/26/2011	Insulation products are tested on two attributes (R-value and surface burning) and required to meet third-party certification requirements. R-value must meet a minimum requirement of R ≥ 3.0.	The Insulation program has a Definitions and Testing Requirements for Residential Insulation Version 1.0 (not a product specification). This document was released on 9/26/2011 and took effect immediately.	None
Home Envelope	Roof Products	1999	8/13/2009	Product submissions must include initial emissivity data for all existing and new products. All new products cannot be cleaned prior to the three year test. Reflectivity requirements differ for low-slope and steep-slope roofs. Products submitted through the Color Family Program must provide Hunter "L," "a," "b" color values.	Based on questions received from certification bodies and manufacturers, EPA plans to edit the current Version 2.2 specification to provide clarification, effective immediately, and is considering longer term changes in regards to testing requirements. EPA will share revision plans with stakeholders in Fall 2011.	None
Home Envelope	Windows, Doors, Skylights	1998	1/4/2010	Products must meet NFRC U-Factor and, where applicable, Solar Heat Gain Coefficient (SHGC) ratings based on climate zone.	Work on the 2013 criteria revision continues. Initial research is complete and proposed criteria ranges will be sent to stakeholders in October 2011. A Final specification is scheduled for release no earlier than September 2012.	None

ENERGY STAR Specifications At-A-Glance

Category	Product	Effective Date of Original ENERGY STAR Specification	Current/Proposed Effective Date	ENERGY STAR Specification Levels	Specification Updates	Federal Standard in Effect/Plans for Future Standards
Lighting	Decorative Light Strings	2007	3/1/2008	Products must meet stringent efficiency (under 0.2 watt per bulb) and quality (3-year warranty, protection against over-voltage, maintained light output) requirements. In addition, qualified light strings must meet product packaging requirements to ensure consumers have a clear understanding of products when they look to purchase light strings.	A Draft Version 1.5 was released on 11/2/2011. This minor revision includes expanding the scope to allow ENERGY STAR qualified decorative light strings attached to decorative forms to be eligible for the ENERGY STAR. A Final Version 1.5 is expected to be released by the end of 2011 with no change to the effective date.	None
Lighting	Exit Signs	1996	N/A	None	ENERGY STAR specification suspended on 5/1/2008.	Current Standard: Input power demand shall be 5 watts or less per face (sunset ENERGY STAR V2.0 requirements).
Lighting	Residential Light Fixtures	1997	6/2/2008	Covers both indoor and outdoor fixtures. Must meet minimum standards for lamp/ballast system efficacy, minimum lamp and ballast quality standards, and fixture requirements for safety and labeling. Requirements for GU24 based integrated replacement lamps included under this specification.	The Version 1.1 Luminaires specification was finalized on 7/5/2011 and will take effect on 4/1/2012. The Luminaires V1.1 specification will replace the Residential Light Fixtures (RLF, V4.2) and Solid State Lighting Luminaires (SSL, V1.3) specifications.	<p>Current Standards: Torchieres shall consume not more than 190 watts of power and shall not be capable of operating with lamps rated at more than 190 watts. Also, bare lamp and covered lamp (no reflector) medium base compact fluorescent lamps manufactured on or after January 1, 2006, shall meet minimum efficacy, lumen maintenance, and lamp life requirements that are a subset of ENERGY STAR criteria for CFLs, Version 2.0. Minimum efficiency standards for metal halide lamp fixtures.</p> <p>Fluorescent lamp ballasts (with some exceptions) manufactured on or after July 1, 2009 shall have a power factor ≥ 0.90 and meet a minimum ballast efficacy factor.</p> <p>Effective January 1, 2012 (EISA): Manufacturers shall improve the performance of general service incandescent lamps over two years between January 1, 2012 and 2014. For the same lumen output, the minimum requirements represent a reduction of 25% over the incandescent technology in use in 2007. EISA also amended requirements for general service fluorescent lamps (GSFL), incandescent reflector lamps (IRL), and set new requirements for modified spectrum general service, intermediate base, and candelabra incandescent lamps.</p> <p>Effective July 14, 2012 (DOE): DOE issued an energy conservation standard final rule for GSFL and IRL on June 26, 2009, specifying more stringent requirements than those set by EISA.</p> <p>Effective January 1, 2020 (EISA): The Secretary shall prohibit the sale of any general service lamp (i.e., general service incandescent lamps, compact fluorescent lamps, general service light-emitting diode (LED or OLED) lamps, and similar) with minimum efficacy ≤ 45 lumens per watt ("backstop requirement") unless determines a more stringent standard is justified through a rulemaking to begin in 2014. DOE shall initiate a further rulemaking in 2020 to determine whether the standards in effect then should be made more stringent.</p> <p>Future Standard Development: DOE issued a positive final determination for HID lamps on June 16, 2010. Because DOE determined that energy conservation standards for HID lamps are warranted, DOE is also initiating a standards rulemaking for HID lamps to be completed by June 2014.</p> <p>Also, DOE has determined that it has the authority to conduct a rulemaking on ER, BR, and small-diameter incandescent lamps and has begun work on a standard within an accelerated timeframe. DOE will strive to complete a final rule for these products in 2011.</p>
Lighting	Solid State Lighting Luminaires	2008	2/1/2009	Covers SSL products that fit into 10 residential applications and 5 non-residential applications. Luminaires must meet efficacy, quality, reliability, and testing guidelines.		
Lighting	Luminaires	N/A	4/1/2012	Technology neutral specification covering all residential and select commercial applications for luminaires. Luminaires must meet efficacy, quality, reliability, labeling and testing guidelines.		
Lighting	Integral LED Lamps	2010	8/31/2010	Covers LED replacement lamps. Frequency requirement was revised in March 2010.		
Lighting	Compact Fluorescent Lamps	1999	12/2/2008	Products must meet efficiency requirements based on lamp type and input power. Minimum rated lifetime of 6,000 hours or greater, with an 8,000 hour requirement going into effect one year after finalization. Additional criteria to control quality and performance.	EPA has launched the specification development process for a new Version 1.0 Lamps specification, which will combine the CFL and Integral LED Lamps requirements into a single, technology neutral specification. A concept draft was released for comment on 3/22/2011 followed by a Draft 1 specification, which was released on 10/21/11 for review and comment. The new Version 1.0 Lamps specification is expected to take effect in 2012.	<p>Current Standard: Bare lamp and covered lamp (no reflector) medium base compact fluorescent lamps manufactured on or after January 1, 2006, shall meet minimum efficacy, lumen maintenance, and lamp life requirements that are a subset of ENERGY STAR criteria for CFLs, Version 2.0.</p> <p>Also, see additional Federal requirements under the Residential Light Fixtures category (above), many of which apply to Lamps categories.</p>
Lighting	Lamps	N/A	TBD	TBD		
Lighting	Traffic Signals	2000	N/A	None	ENERGY STAR specification suspended on 5/1/2007.	Current Standard: Shall: (1) meet the maximum and nominal wattage requirements used under the sunset ENERGY STAR V1.1 specification and (2) be installed with compatible, electrically connected signal control interface devices and conflict monitoring systems.

ENERGY STAR Specifications At-A-Glance

Category	Product	Effective Date of Original ENERGY STAR Specification	Current/ Proposed Effective Date	ENERGY STAR Specification Levels	Specification Updates	Federal Standard in Effect/Plans for Future Standards
Office Equipment	Computers	1992	7/1/2009	Covers desktops, notebooks, thin clients, and workstations. Must meet stringent requirements for either low TEC or low power consumption in Off, Sleep, and Idle modes of operation, with additional requirements covering use of efficient power supplies and automatic computer/display power management settings.	EPA launched the Version 6.0 specification revision process in February 2011 with the release of a discussion document for stakeholder review and comment. Dataset assembly was launched in July 2011 to build a more robust data set for system and component performance, with related efforts scheduled to be completed by Fall 2011. The draft development process will resume shortly thereafter.	None
Office Equipment	Displays	1992	1/30/2010	Displays < 30 inches: Maximum allowable Active mode power consumption varies according to monitor resolution and screen size. Sleep mode power consumption must be ≤ 2 watts and Off mode power consumption must be ≤ 1 watt. Displays 30 - 60 inches: Maximum allowable Active mode power consumption varies according to monitor resolution and screen size. Sleep mode power consumption must be ≤ 2 watts and Off mode power consumption must be ≤ 1 watt.	A Draft 1 specification was released on 6/3/2011 followed by a Draft 2 distributed on 9/20/2011. The revision includes revisiting Active mode power levels, addressing ABC, requiring new luminance test conditions and requirements, and reducing F-gases used in the manufacturing process. A Final Version 6.0 specification is scheduled for release by early 2012. This new version will supersede Version 5.1 Tier 2 requirements that were scheduled to take effect 10/30/2011.	None
Office Equipment	Imaging: Copiers	1995	7/1/2009	Products must meet TEC or Operational Mode (OM) Sleep and Standby Mode power requirements.	EPA launched the Version 2.0 development process with a discussion document released on 3/11/2011. A revised test method is under development and a Draft 1 specification will be distributed to stakeholders in Fall 2011. EPA anticipates finalizing this revision in March 2012 and the Version 2.0 is expected to take effect in December 2012.	None
Office Equipment	Imaging: Digital Duplicators	2007				
Office Equipment	Imaging: Multifunction Devices (MFDs)	1997				
Office Equipment	Imaging: Printers, Fax Machines, and Mailing Machines	1993 - Printers 1995 - Fax Machines 2000 - Mailing Machines				
Office Equipment	Imaging: Scanners	1997				
Data Centers	Computer Servers	2009	5/15/2009	Covers rack and pedestal servers with 1 - 4 processor sockets designed to be operated in a data center. Blade servers are excluded. Manufacturer may qualify several products under one family as long as it meets the definition for Product Family provided in the specification. Requirements: • Must meet minimum power supply energy efficiency and power factor levels, and maximum idle energy rate levels (1 and 2 socket units only) based on configuration. Idle adders are provided for key energy using components such as additional memory and hard drives. Manufacturers with 4 socket servers are only required to report idle but must incorporate power management features into the product upon shipment. • All manufacturers must provide a Power and Performance Data Sheet with each qualified model or family, which provides additional information to the end user. • One and two socket "managed" servers and all servers with greater than two sockets must have the ability to provide data on input power consumption in watts, inlet air temperature, and utilization of all logical CPUs during normal operation.	The Version 2.0 ENERGY STAR Computer Servers specification is currently under development. EPA is working with the Standard Performance Evaluation Corporation (SPEC) in the process of developing SERT ("Server Efficiency Rating Tool"), an Active mode efficiency rating tool that will function as the underpinnings of reporting criteria for ENERGY STAR. Version 2.0 will also update idle requirements for 1 - 2 socket servers and introduce new idle levels for 3 - 4 socket servers and blade servers.	None
Data Centers	Data Center Storage	N/A	3/15/2012	TBD	A Draft 2 specification was released to stakeholders in early October 2011. The proposal covers online 2, 3, and 4 products as specified by the SNA taxonomy. As currently proposed, products will have to meet minimum PSU efficiency levels, implement a selection of energy-optimizing features, and a minimum idle power requirement. Reporting of active power efficiency metrics for random and sequential workloads will also be required, though no levels will be set until a subsequent Version 2.0. EPA held a stakeholder meeting and webinar at Storage Network World (SNW) in October 2011 to discuss the draft and further development efforts. EPA is currently accepting comments on Draft 2.	None
Data Centers	Uninterruptible Power Supplies	N/A	1/1/2012	TBD	A Draft 3 of the specification was released on 10/25/2011 to stakeholders. The proposal covers the following input dependencies: VFD (offline), VI (line interactive), and VFI (double conversion) UPSs. All output power (W) sizes are included, from consumer home use products up through multi-MW data center units (AC and DC systems). Other requirements proposed include: minimum power factor requirement, efficiency level credit provided for including a meter inside or bundled externally with a UPS product, and enabling measurement of data center PUE. Comments are being accepted until 11/30/2011. The final specification is expected to be completed by 1/1/2012.	Effective July 1, 2011 (EISA): DOE is required to issue a final rule prescribing energy conservation standards for battery chargers, if technologically feasible and economically justified. This may include consumer-scale UPSs. This ruling will not affect the ENERGY STAR for UPS specification. DOE is continuing to develop the Notice of Proposed Rulemaking (NOPR) for battery charger standards. This Notice will be followed by a final rule. http://www1.eere.energy.gov/buildings/appliance_standards/residential/battery_external.html
Other	Laboratory Grade Refrigerators and Freezers	N/A	TBD	TBD	EPA initiated a second round of manufacturer testing that concluded on 1/31/2011. Review and verification of the ASHRAE Test Procedure Supplement is close to completion, at which time EPA will resume the specification development process.	None

ENERGY STAR Specifications At-A-Glance

Category	Product	Effective Date of Original ENERGY STAR Specification	Current/ Proposed Effective Date	ENERGY STAR Specification Levels	Specification Updates	Federal Standard in Effect/Plans for Future Standards
Other	Transformers	1995	N/A	None	ENERGY STAR specification suspended on 5/1/2007.	Current Standard: Standards enacted for low-voltage dry-type distribution transformers equal to Class I Efficiency Levels specified in table 4-2 of the Guide for Determining Energy Efficiency for Distribution Transformers (NEMA TP-1-2002), and ENERGY STAR levels in effect at that time (now sunset). Effective January 1, 2010, DOE adopted additional standards for liquid-immersed and medium-voltage dry-type distribution transformers. There are currently no standards for underground mining distribution transformers.
Other	Vending Machines	2004	7/1/2007	<p>Energy Efficiency Requirements: $Y = 0.45 (8.66 + (0.009 \times C))$, Where: Y = 24 hr energy consumption (kWh/day) after the machine has stabilized, and C = vendible capacity. Includes both new and remanufactured units.</p> <p>Machines shall also be capable of operating in at least one of the following low power states:</p> <ul style="list-style-type: none"> • Lighting low power state — lights off for an extended period of time; • Refrigeration low power state — the average beverage temperature is allowed to rise above 40°F for an extended period of time; • Whole machine low power state — the lights are off and the refrigeration operates in its low power state. <p>In addition, the machine shall be capable of returning itself back to its normal operating conditions at the conclusion of the inactivity period.</p>	On 3/24/2011, EPA informed stakeholders of its intention to revisit the current Version 2.1 specification asking for feedback and data that could assist EPA in the decision-making process. EPA will release a proposal in Fall 2011 and is targeting early 2012 to finalize requirements.	Effective August 1, 2012 (DOE): DOE adopted the following standards on August 31, 2009: <ul style="list-style-type: none"> • Fully cooled shelf-style (Class A) beverage vending machines: maximum daily energy consumption (MDEC, kWh/day) = $0.055 \times V + 2.56$, where V is the volume • Stack-style (Class B) beverage vending machines: MDEC = $0.073 \times V + 3.16$ (These levels are more stringent than current ENERGY STAR Tier 2 levels).
Other	Water Coolers	2000	1/22/2010	<p>Energy Efficiency Requirements:</p> <ul style="list-style-type: none"> • Cold Only and Cook & Cold Units <0.16 kWh/day • Hot & Cold Units <1.20 kWh/day 	Efforts are underway to verify the current ENERGY STAR test method and determine whether the scope of the Version 1.1 specification should be expanded to Active mode. Based on this effort, EPA will make changes to the ENERGY STAR water cooler specification, as needed. In May 2011, EPA and DOE released a first draft test procedure and hosted a stakeholder webinar to discuss proposed changes and outstanding questions. EPA plans to release a Draft 1 Version 2.0 specification before the end of 2011.	None
Other	Pumps	N/A	TBD	TBD	EPA plans to launch specification development efforts in Fall 2011.	None
<p align="center">Additional information on historical specifications can be found at: http://www.energystar.gov/index.cfm?c=product_specs.pt_product_specs_historical</p>						
<p align="center">Additional information on current specifications can be found at: http://www.energystar.gov/specifications.</p>						
<p align="center">Additional information on specification development efforts can be found at: http://www.energystar.gov/productdevelopment.</p>						