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# Q & A APPLIANCE STANDARDS QUESTIONS AND ANSWERS

## Progress Toward 3 Billion MT CO<sub>2</sub> Reduction

Dec. 2015



Efficiency standards already adopted during the Obama administration will reduce CO<sub>2</sub> emissions by 2.2 billion metric tons through 2030.



*President Obama set a goal to reduce carbon dioxide (CO<sub>2</sub>) emissions by 3 billion metric tons by 2030 through efficiency standards. Standards already adopted during the Obama administration will reduce CO<sub>2</sub> emissions by 2.2 billion metric tons through 2030 and save consumers and businesses about \$444 billion over the life of the products. The following table shows electricity savings, CO<sub>2</sub> reductions, and dollar savings from standards finalized since the start of the Obama administration.<sup>i</sup>*

Product	Final Rule Date	Effective Date	Cumulative Electricity Savings Through 2030 (billion kWh) <sup>ii</sup>	Cumulative CO <sub>2</sub> Reductions Through 2030 (MMT) <sup>iii</sup>	Net Present Value of Savings (billion 2012\$) <sup>iv</sup>
EISA <sup>v</sup> - General Service Lamps (GSLs)	March 2009	2012-2014	1,510.9	704.4	168.7
EISA (excluding GSLs)	March 2009	2008-2013 <sup>vi</sup>	472.5	234.6	50.5
Ranges and Ovens	April 2009	2012	--	3.9	1.3
Commercial Boilers	July 2009	2012	--	6.1	1.5
General Service Fluorescent Lamps	July 2009	2012	414.6	193.2	17.6
Incandescent Reflector Lamps	July 2009	2012	98.3	46.1	6.7
Beverage Vending Machines	August 2009	2012	16.5	7.7	1.2
Commercial Clothes Washers	January 2010	2013	2.7	2.7	0.8
Small Motors	March 2010	2015	175.5	81.4	9.9
Water Heaters	April 2010	2015	118.1	74.8	6.3
Direct Heating Equipment	April 2010	2013	--	0.4	0.05
Pool Heaters	April 2010	2013	--	0.5	0.05
Clothes Dryers	April 2011	2015	21.9	10.6	2.7
Room Air Conditioners	April 2011	2014	40.2	18.7	3.1
Central A/C and Heat Pumps	June 2011	2015	112.6	52.2	8.8
Refrigerators and Freezers	September 2011	2014	248.7	115.4	15.7
Fluorescent Lamp Ballasts	November 2011	2014	318.1	147.6	30.9
Clothes Washers	May 2012	2015	115.5	59.3	29.9
Dishwashers	May 2012	2013	0.0	1.3	0.3
Distribution Transformers	April 2013	2016	58.6	27.2	8.7
Microwaves	June 2013	2016	26.1	12.1	3.0
Metal Halide Light Fixtures	February 2014	2017	13.0	6.8	1.3
External Power Supplies	February 2014	2016	28.3	23.6	1.2
Commercial Refrigeration Equipment	March 2014	2017	112.5	48	9.7
Electric Motors	May 2014	2016	181	96	19.8
Walk-in Coolers and Freezers	May 2014	2017	43.2	33.6	3.3
Furnace Fans	June 2014	2019	83.4	34	15.8
Commercial Clothes Washers	Dec 2014	2018	1.2	1.2	0.3
General Service Fluorescent Lamps	Jan 2015	2018	140.4	90	0.8



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Automatic Commercial Ice Makers	Jan 2015	2018	10.7	3.9	1.0
Single-Package Vertical A/C and HP	Sept 2015	2019	2.8	2.0	0.2
Commercial Package A/C and HP	Dec 2015	2018/2023	92.5	77	22.1
Commercial Furnaces	Dec 2015	2023	--	0.9	0.5
<b>Total</b>	--	--	<b>4,459</b>	<b>2,217</b>	<b>444</b>

<sup>i</sup> Estimates of electricity savings and NPV are based on information from DOE final rules. DOE has not provided estimates of CO<sub>2</sub> reductions through 2030 for individual rules published through 2013. CO<sub>2</sub> reductions for these rules represent ASAP estimates of the contribution of each rule to DOE's estimate of total CO<sub>2</sub> reductions from rules published through 2013. CO<sub>2</sub> reductions from rules published beginning in 2014 are DOE estimates.

<sup>ii</sup> Standards for ranges and ovens, boilers, clothes washers, water heaters, direct heating equipment, pool heaters, clothes dryers, dishwashers, and warm air furnaces also save natural gas. ASAP estimates that total natural gas savings through 2030 are 1.2 trillion cubic feet.

<sup>iii</sup> MMT is short for million metric tons.

<sup>iv</sup> Net present value (NPV) of sales through 2045 discounted to 2014 (2012\$).

<sup>v</sup> The Energy Independence and Security Act (EISA), enacted by Congress in 2007 and signed by President Bush, set new standards for boilers, clothes washers, dishwashers, dehumidifiers, electric motors, external power supplies, metal halide light fixtures, reflector lamps, and walk-in coolers and freezers as well as light bulbs (general service lamps). The Energy Department codified the new standards into regulations in March 2009.

<sup>vi</sup> The effective dates in the EISA vary by product.