

Potential Lost Savings from DOE’s Proposed Rollbacks of Efficiency Standards

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Summary

In May, the Department of Energy (DOE) published 17 proposals to roll back efficiency standards. Here we provide the potential lost energy, water, and economic savings and emissions reductions from the proposed rollbacks.

DOE’s proposals to roll back efficiency standards could significantly increase energy and water waste while raising costs for consumers and businesses. Table 1 shows DOE’s prior estimates of the cumulative energy and water savings and net economic savings for consumers and businesses for 15 of the 17 standards that the department is now proposing to repeal.¹ The table also shows DOE’s prior estimates of the reduction in needed U.S. electricity generation capacity in 2030 and 2040. DOE’s current proposals would put these savings at risk.

Table 1. Energy, water, and economic savings at risk from DOE’s proposed rollbacks

Product	Final rule date	Compliance date	Cumulative energy savings (quads)	Cumulative water savings (trillion gallons)	Net economic savings (billion \$)	Reduction in needed U.S. electricity generation capacity in 2030 (GW)	Reduction in needed U.S. electricity generation capacity in 2040 (GW)
Air cleaners	2023	2023/2025	1.8	--	13.7	0.69	1.65
Battery chargers	2016	2018	0.17	--	1.2	0.17	0.21
Commercial clothes washers	2010	2013	**	0.14	**	**	**
	2014	2018	**	0.02	**	**	**
Commercial prerinse spray valves	2016	2019	0.1	0.12	1.48	0.05	0.07
Compact residential clothes washers	2012	2015/2018	0.05	0.02	0.56	**	**
	2024	2028	0.003	0.01	0.02	**	**
Compressors	2020	2025	0.16	--	0.4	0.08	0.13

¹ DOE has never updated the faucet standards originally established by Congress, and DOE did not provide a savings estimate associated with the amended condenser water use standards for automatic commercial ice makers.

Conventional cooking tops	2009	2012	0.1	--	0.56	--	--
Conventional ovens	2009	2012	0.05	--	0.14	--	--
	2024	2028	0.03	--	0.19	--	--
Dehumidifiers	2016	2019	0.3	--	2.71	0.28	0.34
Dishwashers	2012	2013	**	0.14	**	**	**
	2024	2027	**	0.24	**	**	**
External power supplies	2014	2016	0.94	--	3.8	0.70	1.21
Microwave ovens	2013	2016	0.48	--	3.38	0.32	0.48
	2023	2026	0.06	--	0.35	0.03	0.07
Miscellaneous refrigeration products	2016	2019	1.5	--	11.0	1.16	1.73
	2024	2029	0.32	--	0.77	0.07	0.35
Portable air conditioners	2020	2025	0.49	--	3.1	0.37	0.47
Residential clothes washers	2012	2015/2018	**	3.03	**	**	**
	2024	2028	**	1.89	**	**	**
Total	--	--	6.6	5.6	43	3.9	6.7

Notes: The cumulative energy and water savings and net economic savings are calculated over a 30-year period. A “quad” is a unit of energy equivalent to one quadrillion British thermal units (Btus). The net economic savings reflect the net present value savings for consumers and businesses, accounting for both operating costs and upfront purchase costs, using a 3% discount rate.

**For commercial clothes washers, dishwashers, and residential clothes washers, DOE’s current proposals would repeal the water efficiency standards while leaving the energy efficiency standards in place. In the prior rules, DOE did not separate out the economic savings associated with just the water efficiency requirements. For compact residential clothes washers, the prior rules addressed additional categories of washers, and DOE did not separate out the reductions in needed electricity generation capacity for compact washers.

DOE’s proposals to roll back efficiency standards could also significantly increase greenhouse gas and air pollutant emissions that harm public health and the environment. Table 2 shows DOE’s prior estimates of the cumulative emissions reductions from the standards that the department is now proposing to repeal.

Table 2. Emissions reductions at risk from DOE’s proposed rollbacks

Product	Final rule date	Compliance date	Cumulative emissions reductions					
			CO ₂ (million metric tons)	NO _x (thous. tons)	SO ₂ (thous. tons)	CH ₄ (thous. tons)	N ₂ O (thous. tons)	Hg (tons)
Air cleaners	2023	2023/2025	57.7	91.2	24.2	411.4	0.6	0.2

Battery chargers	2016	2018	10.8	18.8	6.6	43.6	0.14	0.02
Commercial clothes washers	2010	2013	**	**	**	**	**	**
	2014	2018	**	**	**	**	**	**
Commercial prerinse spray valves	2016	2019	5.9	14.7	1.8	47.4	0.04	0.01
Compact residential clothes washers	2012	2015/2018	**	**	**	**	**	**
	2024	2028	**	**	**	**	**	**
Compressors	2020	2025	8.2	11.0	6.5	40.8	0.1	0.02
Conventional cooking tops	2009	2012	**	**	**	**	**	**
Conventional ovens	2009	2012	**	**	**	**	**	**
	2024	2028	**	**	**	**	**	**
Dehumidifiers	2016	2019	18.6	33.1	11.0	77.9	0.23	0.04
Dishwashers	2012	2013	**	**	**	**	**	**
	2024	2027	**	**	**	**	**	**
External power supplies	2014	2016	47.0	15.0	81.7	--	--	0.1
Microwave ovens	2013	2016	38.1	32.7	27.1	--	--	0.095
	2023	2026	1.9	2.9	0.85	12.6	0.02	0.005
Miscellaneous refrigeration products	2016	2019	91.8	164.0	54.0	387.1	1.1	0.2
	2024	2029	5.85	10.8	1.8	48.6	0.06	0.01
Portable air conditioners	2020	2025	25.6	32.2	16.4	124.8	0.4	0.06
Residential clothes washers	2012	2015/2018	**	**	**	**	**	**
	2024	2028	**	**	**	**	**	**
Total	--	--	311	426	232	1,194	2.7	0.8

**For commercial clothes washers, dishwashers, and residential clothes washers, DOE's current proposals would repeal the water efficiency standards while leaving the energy efficiency standards in place. For compact residential clothes washers, conventional cooking tops, and conventional ovens, the prior rules addressed additional categories of products, and DOE did not separate out the emissions reductions for these specific products.

Appendix A shows the sources for the savings estimates.

This policy analysis was updated to include the reduction in needed U.S. electricity generation capacity achieved by the standards.

Appendix A. Sources for savings estimates

Product	Sources
Air cleaners	DOE 2023 Final Rule: www.govinfo.gov/content/pkg/FR-2023-04-11/pdf/2023-06499.pdf . DOE 2023 Final Rule Technical Support Document: www.regulations.gov/document/EERE-2021-BT-STD-0035-0024 .
Battery chargers	DOE 2016 Final Rule: www.govinfo.gov/content/pkg/FR-2016-06-13/pdf/2016-12835.pdf . DOE 2016 Final Rule Technical Support Document: www.regulations.gov/document/EERE-2008-BT-STD-0005-0257 .
Commercial clothes washers	DOE 2010 Final Rule: www.regulations.gov/document/EERE-2006-STD-0127-0006 . DOE 2014 Final Rule Technical Support Document: www.regulations.gov/document/EERE-2012-BT-STD-0020-0036 .
Commercial prerinse spray valves	DOE 2016 Final Rule: www.govinfo.gov/content/pkg/FR-2016-01-27/pdf/2016-00068.pdf . DOE 2016 Final Rule Technical Support Document: www.regulations.gov/document/EERE-2014-BT-STD-0027-0046 .
Compact residential clothes washers	DOE 2012 Final Rule: www.govinfo.gov/content/pkg/FR-2012-05-31/pdf/2012-12320.pdf . DOE 2024 Final Rule Technical Support Document: www.regulations.gov/document/EERE-2017-BT-STD-0014-0510 . DOE 2024 Final Rule National Impact Analysis: www.regulations.gov/document/EERE-2017-BT-STD-0014-0512 .
Compressors	DOE 2020 Final Rule: www.govinfo.gov/content/pkg/FR-2020-01-10/pdf/2019-26355.pdf . DOE 2020 Final Rule Technical Support Document: www.regulations.gov/document/EERE-2013-BT-STD-0040-0082 .
Conventional cooking tops	DOE 2009 Final Rule: www.govinfo.gov/content/pkg/FR-2009-04-08/pdf/E9-7545.pdf .
Conventional ovens	DOE 2009 Final Rule: www.govinfo.gov/content/pkg/FR-2009-04-08/pdf/E9-7545.pdf . DOE 2024 Final Rule Technical Support Document: www.regulations.gov/document/EERE-2014-BT-STD-0005-12819 .
Dehumidifiers	DOE 2016 Final Rule: www.govinfo.gov/content/pkg/FR-2016-06-13/pdf/2016-12881.pdf . DOE 2016 Final Rule Technical Support Document: www.regulations.gov/document/EERE-2012-BT-STD-0027-0046 .
Dishwashers	DOE 2012 Final Rule: www.govinfo.gov/content/pkg/FR-2012-05-30/pdf/2012-12340.pdf .

	DOE 2024 Final Rule: www.govinfo.gov/content/pkg/FR-2024-04-24/pdf/2024-08212.pdf .
External power supplies	DOE 2014 Final Rule: www.govinfo.gov/content/pkg/FR-2014-02-10/pdf/2014-02560.pdf . DOE 2014 Final Rule Technical Support Document: www.regulations.gov/document/EERE-2008-BT-STD-0005-0217 .
Microwave ovens	DOE 2013 Final Rule: www.govinfo.gov/content/pkg/FR-2013-06-17/pdf/2013-13535.pdf . DOE 2013 Final Rule Technical Support Document: www.regulations.gov/document/EERE-2011-BT-STD-0048-0021 . DOE 2023 Final Rule: www.govinfo.gov/content/pkg/FR-2023-06-20/pdf/2023-12958.pdf . DOE 2023 Final Rule Technical Support Document: www.regulations.gov/document/EERE-2017-BT-STD-0023-0032 .
Miscellaneous refrigeration products	DOE 2016 Final Rule: www.govinfo.gov/content/pkg/FR-2016-10-28/pdf/2016-24759.pdf . DOE 2016 Final Rule Technical Support Document: www.regulations.gov/document/EERE-2011-BT-STD-0043-0118 . DOE 2024 Final Rule: www.govinfo.gov/content/pkg/FR-2024-05-07/pdf/2024-08001.pdf . DOE 2024 Final Rule Technical Support Document: www.regulations.gov/document/EERE-2020-BT-STD-0039-0037 .
Portable air conditioners	DOE 2020 Final Rule: www.govinfo.gov/content/pkg/FR-2020-01-10/pdf/2019-26350.pdf . DOE 2020 Final Rule Technical Support Document: www.regulations.gov/document/EERE-2013-BT-STD-0033-0047 .
Residential clothes washers	DOE 2012 Final Rule: www.govinfo.gov/content/pkg/FR-2012-05-31/pdf/2012-12320.pdf . DOE 2024 Final Rule: www.govinfo.gov/content/pkg/FR-2024-03-15/pdf/2024-04736.pdf .