

States Go First: How States Can Save Consumers Money, Reduce Energy and Water Waste, and Protect the Environment with New Appliance Standards (Full report at <https://appliance-standards.org/document/states-go-first>)

Savings estimates for: Michigan

	Potential annual savings in 2025						Potential annual savings in 2035					
	Electricity (GWh)	Natural gas (BBtu)	Water (million gallons)	NO _x (tons)	SO ₂ (tons)	CO ₂ (thous. MT)	Electricity (GWh)	Natural gas (BBtu)	Water (million gallons)	NO _x (tons)	SO ₂ (tons)	CO ₂ (thous. MT)
Faucets	62.1	1,306	3,825	75.8	74.6	105.9	113.0	2,341	6,876	131.1	107.5	186.3
Showerheads	44.3	902	1,819	52.7	53.2	74.0	80.6	1,641	3,308	92.2	76.7	131.3
Lawn spray sprinklers	--	--	2,191	--	--	--	--	--	3,586	--	--	--
Toilets	--	--	940	--	--	--	--	--	2,550	--	--	--
Computers and monitors	263.8	--	--	69.1	316.5	155.9	295.5	--	--	64.0	281.1	163.7
High CRI fluorescent lamps	392.4	--	--	102.8	470.8	232.7	129.8	--	--	28.1	123.5	72.3
Air purifiers	70.8	--	--	18.5	84.9	41.6	115.8	--	--	25.1	110.2	63.4
Pool pump replacement motors	52.8	--	--	13.8	63.4	31.1	0.0	--	--	0.0	0.0	0.0
Commercial fryers	1.4	638	--	29.4	1.7	34.7	3.1	1,392	--	64.1	2.9	75.7
Commercial dishwashers	5.9	140	195	7.9	7.1	10.9	14.2	337	469	18.4	13.5	25.8
Commercial steam cookers	10.7	57	182	5.4	12.9	9.4	23.4	124	397	10.7	22.3	19.7
Portable air conditioners	42.1	--	--	11.0	50.5	24.8	80.4	--	--	17.4	76.5	44.0
Urinals	--	--	296	--	--	--	--	--	647	--	--	--
Audio/video equipment	41.6	--	--	10.9	49.9	24.5	41.6	--	--	9.0	39.6	22.8
Uninterruptible power supplies	48.5	--	--	12.7	58.2	28.8	53.8	--	--	11.7	51.2	30.0
Telephones	22.8	--	--	6.0	27.4	13.5	22.8	--	--	4.9	21.7	12.7
Water coolers	13.8	--	--	3.6	16.6	8.2	25.1	--	--	5.4	23.9	14.0
Ventilation fans	10.5	--	--	2.7	12.6	6.2	23.0	--	--	5.0	21.9	12.6
Portable electric spas	13.7	--	--	3.6	16.5	8.1	25.0	--	--	5.4	23.8	13.7
Hot food holding cabinets	7.1	--	--	1.9	8.6	4.2	15.6	--	--	3.4	14.8	8.7
Compressors	7.3	--	--	1.9	8.7	4.3	17.2	--	--	3.7	16.4	9.6
Total	1,112	3,044	9,449	430	1,334	819	1,080	5,835	17,833	500	1,027	906

Assuming a compliance date of 2020 for almost all of the recommended standards. Products are listed in order of potential national net present value savings. Totals may not sum due to rounding. Potential savings for pool pump replacement motors are zero in 2035 because we assume that the recommended standard would affect just seven years of product sales beginning in 2021.

	Potential annual utility bill savings (million 2016\$)		Net present value savings (million 2016\$)	Benefit-cost ratio	Payback period (years)
	In 2025	In 2035			
Faucets	63.3	127.8	952.9	no cost	0.0
Showerheads	35.0	71.0	530.2	no cost	0.0
Lawn spray sprinklers	23.6	44.5	290.9	7.8	1.1
Toilets	10.1	31.7	277.6	no cost	0.0
Computers and monitors	32.0	36.3	174.0	2.3	2.2
High CRI fluorescent lamps	40.2	14.2	115.1	1.7	2.9
Air purifiers	10.4	17.3	88.9	2.9	2.7
Pool pump replacement motors	7.8	0.0	42.9	8.5	0.7
Commercial fryers	6.0	14.5	60.9	2.4	4.2
Commercial dishwashers	4.0	10.7	67.3	9.4	1.2
Commercial steam cookers	3.6	8.6	56.1	10.5	1.0
Portable air conditioners	6.2	12.0	65.9	3.5	2.5
Urinals	3.2	8.0	57.3	no cost	0.0
Audio/video equipment	6.1	6.2	53.2	no cost	0.0
Uninterruptible power supplies	5.1	5.8	29.9	2.6	2.1
Telephones	2.6	2.7	22.9	no cost	0.0
Water coolers	1.4	2.6	19.8	no cost	0.0
Ventilation fans	1.5	3.4	25.4	no cost	0.0
Portable electric spas	2.0	3.7	28.8	no cost	0.0
Hot food holding cabinets	0.7	1.6	8.1	3.2	2.9
Compressors	0.5	1.3	6.2	3.1	3.2
Total	265	424	2,974	6.9	-

Assuming a compliance date of 2020 for almost all of the recommended standards. Products are listed in order of potential national net present value savings. Net present value savings take into account both utility bill savings and estimated impacts on product costs for items sold between 2020 and 2035. Totals may not sum due to rounding. The total benefit-cost ratio is calculated as the present value of the total utility bill savings from products sold through 2035 for the package of 21 recommended standards divided by the present value of the total additional costs.

Cumulative savings estimates for: Michigan

	Potential cumulative savings through 2035					
	Electricity (GWh)	Natural gas (TBtu)	Water (billion gallons)	NO _x (tons)	SO ₂ (tons)	CO ₂ (thous. MT)
Faucets	1,243	25.9	76.0	1,469.7	1,262.0	2,077.6
Showerheads	887	18.0	36.4	1,028.9	900.3	1,459.4
Lawn spray sprinklers	--	--	41.2	--	--	--
Toilets	--	--	21.6	--	--	--
Computers and monitors	3,822	--	--	904.5	3,926.9	2,191.4
High CRI fluorescent lamps	4,085	--	--	1,003.5	4,303.9	2,389.5
Air purifiers	1,332	--	--	311.8	1,353.4	752.9
Pool pump replacement motors	534	--	--	129.9	556.3	306.5
Commercial fryers	31	13.9	--	641.2	31.2	757.2
Commercial dishwashers	133	3.2	4.4	174.9	134.9	244.3
Commercial steam cookers	234	1.2	4.0	111.0	237.3	200.3
Portable air conditioners	865	--	--	201.7	878.2	488.2
Urinals	--	--	6.5	--	--	--
Audio/video equipment	553	--	--	131.4	570.1	314.6
Uninterruptible power supplies	697	--	--	164.9	715.6	401.9
Telephones	305	--	--	72.3	314.0	175.3
Water coolers	276	--	--	64.5	280.7	159.0
Ventilation fans	229	--	--	53.2	232.3	129.1
Portable electric spas	275	--	--	64.2	279.1	155.2
Hot food holding cabinets	156	--	--	36.2	157.8	89.3
Compressors	164	--	--	38.0	165.8	93.8
Total	15,820	62	190	6,602	16,300	12,385

Assuming a compliance date of 2020 for almost all of the recommended standards. Products are listed in order of potential national net present value savings. Totals may not sum due to rounding.