

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: Montana

	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	9.8	117	393	8.3	0.9	8.5	17.8	209	707	14.7	1.4	15.1
Showerheads	7.0	80	187	5.8	0.6	5.9	12.7	146	340	10.4	1.0	10.6
Lawn spray sprinklers	--	--	521	--	--	--	--	--	852	--	--	--
Toilets	--	--	97	--	--	--	--	--	263	--	--	--
Computers and monitors	28.3	--	--	8.5	2.5	6.6	31.7	--	--	9.3	2.5	7.1
High CRI fluorescent lamps	33.5	--	--	10.1	2.9	7.8	11.5	--	--	3.4	0.9	2.6
Air purifiers	7.5	--	--	2.3	0.7	1.8	12.3	--	--	3.6	1.0	2.8
Pool pump replacement motors	3.5	--	--	1.0	0.3	0.8	0.0	--	--	0.0	0.0	0.0
Commercial fryers	0.1	67	--	3.1	0.01	3.6	0.3	146	--	6.8	0.03	7.8
Commercial dishwashers	0.6	15	20	0.9	0.1	0.9	1.5	35	49	2.0	0.1	2.2
Commercial steam cookers	1.1	6	19	0.6	0.1	0.6	2.5	13	42	1.3	0.2	1.2
Portable air conditioners	2.5	--	--	0.7	0.2	0.6	4.7	--	--	1.4	0.4	1.1
Urinals	--	--	31	--	--	--	--	--	68	--	--	--
Audio/video equipment	4.4	--	--	1.3	0.4	1.0	4.4	--	--	1.3	0.4	1.0
Uninterruptible power supplies	5.2	--	--	1.6	0.5	1.2	5.8	--	--	1.7	0.5	1.3
Telephones	2.8	--	--	0.8	0.2	0.6	2.8	--	--	0.8	0.2	0.6
Water coolers	1.8	--	--	0.5	0.2	0.4	3.2	--	--	0.9	0.3	0.7
Ventilation fans	1.1	--	--	0.3	0.1	0.3	2.4	--	--	0.7	0.2	0.6
Portable electric spas	1.7	--	--	0.5	0.1	0.4	3.1	--	--	0.9	0.2	0.7
Hot food holding cabinets	0.7	--	--	0.2	0.1	0.2	1.6	--	--	0.5	0.1	0.4
Compressors	1.1	--	--	0.3	0.1	0.2	2.5	--	--	0.7	0.2	0.6
Total	113	285	1,269	47	10	41	121	550	2,321	60	10	56

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	6.5	13.2	98.6	no cost	0.0
Showerheads	3.6	7.3	54.6	no cost	0.0
Lawn spray sprinklers	5.7	10.8	70.6	7.9	1.1
Toilets	1.1	3.3	29.1	no cost	0.0
Computers and monitors	3.0	3.4	14.3	2.0	2.5
High CRI fluorescent lamps	3.3	1.2	8.5	1.6	3.1
Air purifiers	0.9	1.5	6.6	2.3	3.6
Pool pump replacement motors	0.4	0.0	2.1	6.6	1.0
Commercial fryers	0.6	1.5	6.2	2.4	4.3
Commercial dishwashers	0.4	1.1	7.0	9.3	1.2
Commercial steam cookers	0.4	0.9	5.8	10.5	1.0
Portable air conditioners	0.3	0.6	2.8	2.9	3.3
Urinals	0.3	0.9	6.1	no cost	0.0
Audio/video equipment	0.5	0.5	4.5	no cost	0.0
Uninterruptible power supplies	0.5	0.6	2.8	2.4	2.3
Telephones	0.3	0.3	2.4	no cost	0.0
Water coolers	0.2	0.3	2.4	no cost	0.0
Ventilation fans	0.1	0.3	2.2	no cost	0.0
Portable electric spas	0.2	0.4	2.9	no cost	0.0
Hot food holding cabinets	0.1	0.2	0.8	3.1	3.0
Compressors	0.1	0.1	0.5	2.2	4.5
Total	29	48	331	7.1	-

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: **Montana**

	Potential cumulative savings through 2035					
	Electricity (GWh)	Natural gas (TBtu)	Water (billion gallons)	NO _x (tons)	SO ₂ (tons)	CO ₂ (thous. MT)
Faucets	196	2.3	7.8	164.7	16.4	168.1
Showerheads	140	1.6	3.7	115.5	11.7	117.5
Lawn spray sprinklers	--	--	9.8	--	--	--
Toilets	--	--	2.2	--	--	--
Computers and monitors	410	--	--	124.3	34.5	96.5
High CRI fluorescent lamps	352	--	--	107.3	30.8	87.3
Air purifiers	142	--	--	43.1	11.9	32.8
Pool pump replacement motors	35	--	--	10.8	3.0	8.2
Commercial fryers	3	1.5	--	67.6	0.3	78.4
Commercial dishwashers	14	0.3	0.5	19.4	1.2	20.9
Commercial steam cookers	25	0.1	0.4	13.4	2.1	12.8
Portable air conditioners	51	--	--	15.4	4.2	11.7
Urinals	--	--	0.7	--	--	--
Audio/video equipment	59	--	--	17.9	5.0	13.6
Uninterruptible power supplies	75	--	--	22.7	6.3	17.9
Telephones	37	--	--	11.2	3.1	8.7
Water coolers	35	--	--	10.7	2.9	8.4
Ventilation fans	24	--	--	7.4	2.0	5.6
Portable electric spas	34	--	--	10.3	2.8	7.8
Hot food holding cabinets	16	--	--	5.0	1.4	3.9
Compressors	24	--	--	7.2	2.0	5.6
Total	1,671	6	25	774	142	706

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.