

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: South Dakota

	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	9.0	89	319	8.8	2.0	8.9	16.4	159	574	14.4	4.0	15.5
Showerheads	6.5	61	152	6.2	1.5	6.2	11.7	111	276	10.2	2.9	10.9
Lawn spray sprinklers	--	--	322	--	--	--	--	--	526	--	--	--
Toilets	--	--	79	--	--	--	--	--	214	--	--	--
Computers and monitors	24.4	--	--	12.9	5.5	11.3	27.3	--	--	11.9	6.6	11.6
High CRI fluorescent lamps	38.1	--	--	20.1	8.6	17.8	12.4	--	--	5.4	3.0	5.2
Air purifiers	6.1	--	--	3.2	1.4	2.8	10.0	--	--	4.3	2.4	4.3
Pool pump replacement motors	3.7	--	--	2.0	0.8	1.7	0.0	--	--	0.0	0.0	0.0
Commercial fryers	0.1	56	--	2.6	0.03	3.0	0.3	121	--	5.6	0.1	6.6
Commercial dishwashers	0.5	12	17	0.8	0.1	0.9	1.2	29	41	1.9	0.3	2.1
Commercial steam cookers	0.9	5	16	0.7	0.2	0.7	2.0	11	35	1.4	0.5	1.4
Portable air conditioners	3.2	--	--	1.7	0.7	1.5	6.1	--	--	2.7	1.5	2.6
Urinals	--	--	26	--	--	--	--	--	56	--	--	--
Audio/video equipment	3.6	--	--	1.9	0.8	1.6	3.6	--	--	1.6	0.9	1.5
Uninterruptible power supplies	4.7	--	--	2.5	1.1	2.2	5.2	--	--	2.2	1.3	2.2
Telephones	2.5	--	--	1.3	0.6	1.2	2.5	--	--	1.1	0.6	1.1
Water coolers	1.7	--	--	0.9	0.4	0.8	3.1	--	--	1.4	0.8	1.3
Ventilation fans	0.9	--	--	0.5	0.2	0.4	2.0	--	--	0.9	0.5	0.8
Portable electric spas	1.0	--	--	0.5	0.2	0.5	1.9	--	--	0.8	0.5	0.8
Hot food holding cabinets	0.6	--	--	0.3	0.1	0.3	1.4	--	--	0.6	0.3	0.6
Compressors	0.7	--	--	0.4	0.2	0.3	1.6	--	--	0.7	0.4	0.7
Total	108	223	930	67	24	62	109	432	1,722	67	26	69

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	5.2	10.4	77.6	no cost	0.0
Showerheads	2.9	5.7	42.9	no cost	0.0
Lawn spray sprinklers	3.5	6.5	42.7	7.8	1.1
Toilets	0.9	2.7	23.3	no cost	0.0
Computers and monitors	2.3	2.5	9.3	1.8	2.8
High CRI fluorescent lamps	3.3	1.1	6.7	1.4	3.4
Air purifiers	0.6	1.0	4.1	2.0	3.7
Pool pump replacement motors	0.4	0.0	2.0	6.0	1.0
Commercial fryers	0.4	1.0	3.6	1.9	5.1
Commercial dishwashers	0.3	0.9	5.3	8.6	1.3
Commercial steam cookers	0.3	0.7	4.5	9.7	1.1
Portable air conditioners	0.3	0.6	2.9	2.5	3.4
Urinals	0.3	0.7	5.0	no cost	0.0
Audio/video equipment	0.4	0.4	3.2	no cost	0.0
Uninterruptible power supplies	0.4	0.4	2.0	2.1	2.5
Telephones	0.2	0.2	2.0	no cost	0.0
Water coolers	0.1	0.3	2.0	no cost	0.0
Ventilation fans	0.1	0.2	1.5	no cost	0.0
Portable electric spas	0.1	0.2	1.5	no cost	0.0
Hot food holding cabinets	0.1	0.1	0.5	2.7	3.4
Compressors	0.05	0.1	0.6	3.1	3.3
Total	22	36	243	6.1	-

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: **South Dakota**

	Potential cumulative savings through 2035					
	Electricity (GWh)	Natural gas (TBtu)	Water (billion gallons)	NO _x (tons)	SO ₂ (tons)	CO ₂ (thous. MT)
Faucets	181	1.8	6.3	166.7	37.9	172.3
Showerheads	129	1.2	3.0	117.2	27.1	120.9
Lawn spray sprinklers	--	--	6.1	--	--	--
Toilets	--	--	1.8	--	--	--
Computers and monitors	353	--	--	171.2	75.0	159.2
High CRI fluorescent lamps	395	--	--	202.0	87.4	193.0
Air purifiers	115	--	--	54.9	24.1	49.9
Pool pump replacement motors	38	--	--	18.9	8.1	16.7
Commercial fryers	3	1.2	--	56.5	0.6	65.7
Commercial dishwashers	12	0.3	0.4	18.0	2.4	19.9
Commercial steam cookers	20	0.1	0.3	14.6	4.3	14.9
Portable air conditioners	66	--	--	31.3	13.8	28.5
Urinals	--	--	0.6	--	--	--
Audio/video equipment	48	--	--	23.2	10.2	20.9
Uninterruptible power supplies	67	--	--	32.5	14.2	30.7
Telephones	34	--	--	16.6	7.3	15.6
Water coolers	34	--	--	16.3	7.2	15.5
Ventilation fans	20	--	--	9.4	4.1	8.5
Portable electric spas	21	--	--	9.8	4.3	9.0
Hot food holding cabinets	14	--	--	6.4	2.8	6.1
Compressors	15	--	--	7.1	3.1	6.8
Total	1,563	5	19	973	334	954

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.