

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: Virginia

	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	152.8	568	3,185	44.6	18.4	86.9	277.9	1,005	5,724	70.7	21.6	139.1
Showerheads	109.0	380	1,514	30.7	13.1	60.7	198.3	692	2,753	49.3	15.4	97.9
Lawn spray sprinklers	--	--	1,561	--	--	--	--	--	2,554	--	--	--
Toilets	--	--	785	--	--	--	--	--	2,127	--	--	--
Computers and monitors	269.4	--	--	33.0	32.5	99.3	301.8	--	--	27.1	23.4	94.9
High CRI fluorescent lamps	404.5	--	--	49.5	48.7	148.6	129.8	--	--	11.6	10.1	41.1
Air purifiers	56.4	--	--	6.9	6.8	20.9	92.3	--	--	8.3	7.2	28.5
Pool pump replacement motors	76.5	--	--	9.4	9.2	28.4	0.0	--	--	0.0	0.0	0.0
Commercial fryers	1.2	541	--	24.8	0.1	29.2	2.6	1,179	--	53.9	0.2	63.5
Commercial dishwashers	5.0	119	165	6.0	0.6	8.1	12.0	286	398	14.1	0.9	19.0
Commercial steam cookers	9.1	48	154	3.3	1.1	5.9	19.8	105	337	6.6	1.5	11.9
Portable air conditioners	18.5	--	--	2.3	2.2	6.9	35.3	--	--	3.2	2.7	10.9
Urinals	--	--	251	--	--	--	--	--	548	--	--	--
Audio/video equipment	33.2	--	--	4.1	4.0	12.3	33.2	--	--	3.0	2.6	10.2
Uninterruptible power supplies	56.1	--	--	6.9	6.8	20.6	62.2	--	--	5.6	4.8	19.7
Telephones	25.4	--	--	3.1	3.1	9.3	25.4	--	--	2.3	2.0	8.0
Water coolers	17.4	--	--	2.1	2.1	6.4	31.6	--	--	2.8	2.5	10.0
Ventilation fans	8.3	--	--	1.0	1.0	3.1	18.3	--	--	1.6	1.4	5.7
Portable electric spas	7.0	--	--	0.9	0.8	2.6	12.7	--	--	1.1	1.0	3.9
Hot food holding cabinets	6.0	--	--	0.7	0.7	2.2	13.2	--	--	1.2	1.0	4.2
Compressors	4.3	--	--	0.5	0.5	1.6	10.2	--	--	0.9	0.8	3.2
Total	1,260	1,656	7,615	230	152	553	1,277	3,267	14,440	263	99	572

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	63.8	126.3	949.4	no cost	0.0
Showerheads	36.6	72.2	544.7	no cost	0.0
Lawn spray sprinklers	17.9	33.7	222.0	8.3	1.0
Toilets	9.0	28.1	246.0	no cost	0.0
Computers and monitors	28.8	32.2	138.2	2.0	2.4
High CRI fluorescent lamps	38.2	12.7	96.3	1.6	3.0
Air purifiers	7.5	12.3	59.2	2.6	3.0
Pool pump replacement motors	10.2	0.0	54.8	7.7	0.8
Commercial fryers	5.7	13.6	62.3	2.7	3.9
Commercial dishwashers	3.6	9.6	61.0	9.9	1.1
Commercial steam cookers	3.1	7.5	49.1	10.8	1.0
Portable air conditioners	2.5	4.7	24.7	3.2	2.7
Urinals	2.9	7.2	51.6	no cost	0.0
Audio/video equipment	4.4	4.4	37.9	no cost	0.0
Uninterruptible power supplies	5.4	6.0	29.0	2.3	2.3
Telephones	2.6	2.6	22.3	no cost	0.0
Water coolers	1.6	2.9	22.8	no cost	0.0
Ventilation fans	1.1	2.4	18.1	no cost	0.0
Portable electric spas	0.9	1.7	13.1	no cost	0.0
Hot food holding cabinets	0.6	1.2	6.0	3.0	3.1
Compressors	0.3	0.8	4.2	3.4	3.0
Total	247	382	2,713	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: **Virginia**

	Potential cumulative savings through 2035					
	Electricity (GWh)	Natural gas (TBtu)	Water (billion gallons)	NO _x (tons)	SO ₂ (tons)	CO ₂ (thous. MT)
Faucets	3,057	11.2	63.3	824.8	290.0	1,614.0
Showerheads	2,181	7.6	30.3	571.9	206.9	1,132.2
Lawn spray sprinklers	--	--	29.4	--	--	--
Toilets	--	--	18.1	--	--	--
Computers and monitors	3,903	--	--	413.4	388.9	1,350.1
High CRI fluorescent lamps	4,183	--	--	473.4	487.2	1,483.2
Air purifiers	1,062	--	--	110.4	101.8	355.6
Pool pump replacement motors	774	--	--	86.7	82.7	270.1
Commercial fryers	26	11.8	--	539.8	2.4	635.5
Commercial dishwashers	113	2.7	3.7	133.5	10.5	181.2
Commercial steam cookers	198	1.1	3.4	68.3	18.5	124.4
Portable air conditioners	380	--	--	39.2	35.9	126.7
Urinals	--	--	5.5	--	--	--
Audio/video equipment	441	--	--	47.0	44.5	149.7
Uninterruptible power supplies	805	--	--	85.3	80.2	281.1
Telephones	339	--	--	36.1	34.2	117.9
Water coolers	348	--	--	35.9	33.0	120.7
Ventilation fans	183	--	--	18.7	17.1	60.7
Portable electric spas	140	--	--	14.4	13.3	46.6
Hot food holding cabinets	132	--	--	13.5	12.3	45.6
Compressors	97	--	--	9.9	9.0	33.5
Total	18,361	34	154	3,522	1,869	8,129

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.