

## Appliance Standards Awareness Project

### 2023 State Appliance Standards Recommendations

#### Savings estimates for: Virginia

	Potential annual savings in 2030						Potential annual savings in 2040					
	Electricity (GWh)	Natural gas (BBtu)	Water (million gallons)	NO <sub>x</sub> (tons)	SO <sub>2</sub> (tons)	CO <sub>2</sub> (thous. MT)	Electricity (GWh)	Natural gas (BBtu)	Water (million gallons)	NO <sub>x</sub> (tons)	SO <sub>2</sub> (tons)	CO <sub>2</sub> (thous. MT)
Air purifiers	108.5	--	--	9.5	15.6	35.4	177.6	--	--	9.2	9.2	40.0
Commercial dishwashers	5.4	132	184	6.5	0.8	8.8	12.9	316	441	15.0	0.7	19.7
Commercial fryers	2.0	681	--	31.1	0.3	36.9	4.5	1,487	--	67.6	0.2	80.0
Commercial ovens	5.5	88	--	4.5	0.8	6.5	12.0	192	--	9.3	0.6	12.9
Commercial steam cookers	3.5	28	77	1.6	0.5	2.6	7.6	60	169	3.1	0.4	4.9
Electric vehicle supply equipment	10.3	--	--	0.9	1.5	3.4	68.4	--	--	3.6	3.5	15.4
Faucets	107.9	336	2,238	24.7	15.5	53.0	196.1	609	4,063	37.8	10.1	76.5
Gas fireplaces	--	355	--	16.1	--	18.9	--	969	--	43.9	--	51.5
High CRI fluorescent lamps	71.5	--	--	6.3	10.3	23.6	15.9	--	--	0.8	0.8	3.6
Portable electric spas	36.2	--	--	3.2	5.2	11.8	60.9	--	--	3.2	3.1	13.7
Residential ventilating fans	8.9	--	--	0.8	1.3	2.9	24.3	--	--	1.3	1.3	5.5
Showerheads	93.2	288	1,319	21.2	13.4	45.7	169.5	524	2,398	32.6	8.7	66.0
Spray sprinkler bodies	--	--	3,238	--	--	--	--	--	5,886	--	--	--
Toilets (water closets)	--	--	495	--	--	--	--	--	1,316	--	--	--
Urinals	--	--	94	--	--	--	--	--	205	--	--	--
Water coolers	31.6	--	--	2.8	4.5	10.5	57.5	--	--	3.0	3.0	12.9
<b>Total</b>	<b>485</b>	<b>1,909</b>	<b>7,644</b>	<b>129</b>	<b>70</b>	<b>260</b>	<b>807</b>	<b>4,158</b>	<b>14,477</b>	<b>230</b>	<b>42</b>	<b>402</b>

Assuming a compliance date of 2025 for all the recommended standards. Totals may not sum due to rounding. While we continue to recommend the adoption of state-level standards for commercial hot-food holding cabinets and computers and computer monitors, we have not estimated savings for these products due to insufficient data on the current market.

## Savings estimates for: Virginia

	Potential annual utility bill savings (million 2021\$)		Net present value savings (million 2021\$)	Benefit-cost ratio	Payback period (years)
	In 2030	In 2040			
Air purifiers	13.7	23.0	152.1	6.1	1.2
Commercial dishwashers	4.2	11.1	69.9	9.5	1.2
Commercial fryers	6.3	14.4	74.3	3.3	2.9
Commercial ovens	1.2	2.7	3.9	1.2	7.6
Commercial steam cookers	1.6	3.8	25.0	10.3	1.0
Electric vehicle supply equipment	1.3	8.9	54.8	no cost	0.0
Faucets	49.7	100.0	749.1	no cost	0.0
Gas fireplaces	4.9	14.1	89.8	13.8	0.8
High CRI fluorescent lamps	5.3	1.4	19.5	2.3	2.6
Portable electric spas	4.6	7.9	53.0	6.8	1.0
Residential ventilating fans	1.1	3.2	21.9	no cost	0.0
Showerheads	34.3	68.4	514.2	no cost	0.0
Spray sprinkler bodies	45.4	95.3	644.2	12.0	0.8
Toilets (water closets)	6.9	21.3	182.6	no cost	0.0
Urinals	1.3	3.3	23.6	no cost	0.0
Water coolers	2.3	4.1	32.1	no cost	0.0
<b>Total</b>	<b>184</b>	<b>383</b>	<b>2,710</b>	<b>16.2</b>	<b>-</b>

Assuming a compliance date of 2025 for all the recommended standards. Net present value savings take into account both utility bill savings and estimated impacts on product costs for items sold between 2025 and 2040. 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 2040 for the package of recommended standards divided by the present value of the total additional costs. While we continue to recommend the adoption of state-level standards for commercial hot-food holding cabinets and computers and computer monitors, we have not estimated savings for these products due to insufficient data on the current market.

## Cumulative savings estimates for: Virginia

	Potential cumulative savings through 2040					
	Electricity (GWh)	Natural gas (TBtu)	Water (billion gallons)	NO <sub>x</sub> (tons)	SO <sub>2</sub> (tons)	CO <sub>2</sub> (thous. MT)
Air purifiers	2,042	--	--	139.0	189.2	565.2
Commercial dishwashers	121	3.0	4.1	143.0	10.5	194.7
Commercial fryers	45	14.9	--	676.7	3.9	803.2
Commercial ovens	120	1.9	--	94.9	10.5	138.1
Commercial steam cookers	76	0.6	1.7	32.4	6.7	55.0
Electric vehicle supply equipment	388	--	--	23.7	29.3	99.3
Faucets	2,157	6.7	44.7	449.5	196.5	949.5
Gas fireplaces	--	8.2	--	373.5	--	437.7
High CRI fluorescent lamps	694	--	--	54.0	79.8	223.4
Portable electric spas	691	--	--	47.1	64.0	191.1
Residential ventilating fans	207	--	--	13.5	17.8	55.5
Showerheads	1,865	5.8	26.4	386.9	169.9	818.7
Spray sprinkler bodies	--	--	64.8	--	--	--
Toilets (water closets)	--	--	11.3	--	--	--
Urinals	--	--	2.0	--	--	--
Water coolers	633	--	--	42.7	57.7	192.6
<b>Total</b>	<b>9,039</b>	<b>41</b>	<b>155</b>	<b>2,477</b>	<b>836</b>	<b>4,724</b>

Assuming a compliance date of 2025 for all the recommended standards. Totals may not sum due to rounding. While we continue to recommend the adoption of state-level standards for commercial hot-food holding cabinets and computers and computer monitors, we have not estimated savings for these products due to insufficient data on the current market.