

**Appliance Standards Awareness Project**  
**2024 State Appliance Standards Recommendations**

**Savings estimates for: Pennsylvania**

	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)
Commercial battery chargers	6.4	--	--	0.4	0.6	1.5	19.1	--	--	1.0	1.5	4.3
Commercial dishwashers	11.0	270	375	12.8	0.9	16.9	32.1	789	1,099	37.5	2.6	49.2
Commercial fryers	3.0	1,011	--	46.0	0.3	54.4	8.1	2,696	--	122.6	0.6	145.0
Commercial ovens	8.0	128	--	6.3	0.7	8.7	21.3	341	--	16.6	1.7	22.9
Commercial steam cookers	5.0	40	112	2.1	0.4	3.3	13.5	107	300	5.6	1.1	8.8
Faucets	47.5	309	1,369	16.7	4.1	27.7	105.5	682	3,030	36.4	8.4	60.1
Gas fireplaces	--	179	--	8.1	--	9.5	--	576	--	26.1	--	30.6
High CRI fluorescent lamps	52.6	--	--	3.0	4.5	12.5	20.3	--	--	1.1	1.6	4.6
Irrigation controllers	--	--	171	--	--	--	--	--	551	--	--	--
Portable electric spas	53.0	--	--	3.0	4.6	12.6	104.2	--	--	5.5	8.3	23.6
Residential ventilating fans	4.3	--	--	0.2	0.4	1.0	14.0	--	--	0.7	1.1	3.2
Showerheads	60.1	386	1,177	20.9	5.2	34.8	133.6	858	2,616	45.9	10.7	75.9
Spray sprinkler bodies	--	--	315	--	--	--	--	--	699	--	--	--
Toilets (water closets)	--	--	498	--	--	--	--	--	1,515	--	--	--
Urinals	--	--	112	--	--	--	--	--	298	--	--	--
Water coolers	26.2	--	--	1.5	2.3	6.2	58.2	--	--	3.0	4.6	13.2
<b>Total</b>	<b>277</b>	<b>2,323</b>	<b>4,098</b>	<b>121</b>	<b>24</b>	<b>189</b>	<b>530</b>	<b>6,050</b>	<b>9,901</b>	<b>302</b>	<b>42</b>	<b>442</b>

Assuming a compliance date of 2026 for all the recommended standards. 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. We accounted for the interaction effects among irrigation controllers and spray sprinkler bodies in calculating the total water savings. The total potential water savings are thus smaller than the sum of the individual products.

## Savings estimates for: Pennsylvania

	Potential annual utility bill savings (million 2022\$)		Net present value savings (million 2022\$)	Payback period (years)
	In 2030	In 2040		
Commercial battery chargers	0.4	1.3	9.3	2.2
Commercial dishwashers	9.2	30.1	257.4	1.1
Commercial fryers	8.2	22.8	136.9	3.1
Commercial ovens	1.7	4.8	6.5	7.3
Commercial steam cookers	2.6	7.8	68.7	0.9
Faucets	32.3	80.6	812.4	0.0
Gas fireplaces	1.8	6.0	49.8	1.1
High CRI fluorescent lamps	5.1	2.4	24.7	2.3
Irrigation controllers	2.8	10.3	94.4	0.7
Portable electric spas	7.8	16.6	148.1	0.8
Residential ventilating fans	0.6	2.2	20.6	0.0
Showerheads	31.9	79.2	796.7	0.0
Spray sprinkler bodies	5.1	13.1	122.3	0.8
Toilets (water closets)	8.1	28.3	353.2	0.0
Urinals	1.8	5.6	54.6	0.0
Water coolers	2.4	5.6	55.0	0.0
<b>Total</b>	<b>121</b>	<b>313</b>	<b>2,998</b>	<b>-</b>

Assuming a compliance date of 2026 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 2026 and 2050. 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. We accounted for the interaction effects among irrigation controllers and spray sprinkler bodies in calculating the total savings. The totals are thus smaller than the sum of the individual products.

## Cumulative savings estimates for: Pennsylvania

Potential cumulative savings through 2050							
	Electricity (GWh)	Natural gas (TBtu)	Water (billion gallons)	NO <sub>x</sub> (tons)	SO <sub>2</sub> (tons)	CO <sub>2</sub> (thous. MT)	Utility bill savings (million 2022\$)
Commercial battery chargers	353	--	--	18.5	28.1	78.6	23.7
Commercial dishwashers	591	14.5	20.2	689.8	47.2	904.0	556.0
Commercial fryers	153	51.2	--	2,329.3	12.3	2,754.8	427.5
Commercial ovens	404	6.5	--	315.0	32.3	434.5	90.3
Commercial steam cookers	256	2.0	5.7	105.9	20.5	165.4	147.9
Faucets	2,109	13.7	60.6	729.8	169.6	1,196.1	1,611.0
Gas fireplaces	--	10.4	--	472.6	--	553.9	108.0
High CRI fluorescent lamps	643	--	--	34.9	57.1	148.1	66.7
Irrigation controllers	--	--	10.0	--	--	--	189.6
Portable electric spas	2,123	--	--	111.8	171.6	474.8	333.5
Residential ventilating fans	254	--	--	13.3	20.2	56.6	40.0
Showerheads	2,672	17.2	52.3	918.6	214.8	1,508.4	1,580.2
Spray sprinkler bodies	--	--	14.0	--	--	--	262.6
Toilets (water closets)	--	--	31.6	--	--	--	604.4
Urinals	--	--	5.7	--	--	--	106.7
Water coolers	1,163	--	--	61.2	93.5	259.7	109.3
<b>Total</b>	<b>10,722</b>	<b>116</b>	<b>197</b>	<b>5,801</b>	<b>867</b>	<b>8,535</b>	<b>6,190</b>

Assuming a compliance date of 2026 for all the recommended standards. 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. We accounted for the interaction effects among irrigation controllers and spray sprinkler bodies in calculating the total water and utility bill savings. The total potential water and utility bill savings are thus smaller than the sum of the individual products.