

## Appliance Standards Awareness Project

### 2024 State Appliance Standards Recommendations

#### Savings estimates for: United States

	Potential annual savings in 2030						Potential annual savings in 2040					
	Electricity (TWh)	Natural gas (TBtu)	Water (billion gallons)	NO <sub>x</sub> (thous. tons)	SO <sub>2</sub> (thous. tons)	CO <sub>2</sub> (MMT)	Electricity (TWh)	Natural gas (TBtu)	Water (billion gallons)	NO <sub>x</sub> (thous. tons)	SO <sub>2</sub> (thous. tons)	CO <sub>2</sub> (MMT)
Commercial battery chargers	0.2	--	--	0.01	0.01	0.03	0.4	--	--	0.03	0.02	0.1
Commercial dishwashers	0.3	7	10	0.3	0.01	0.4	0.8	20	28	1.0	0.03	1.2
Commercial fryers	0.1	26	--	1.2	0.004	1.4	0.2	69	--	3.1	0.01	3.7
Commercial ovens	0.2	3	--	0.2	0.01	0.2	0.5	9	--	0.4	0.02	0.5
Commercial steam cookers	0.1	1	3	0.1	0.01	0.1	0.3	3	8	0.1	0.01	0.2
Faucets	1.2	8	35	0.5	0.1	0.7	2.8	17	78	1.0	0.1	1.4
Gas fireplaces	--	5	--	0.2	--	0.2	--	15	--	0.7	--	0.8
High CRI fluorescent lamps	1.4	--	--	0.1	0.1	0.3	0.5	--	--	0.04	0.02	0.1
Irrigation controllers	--	--	98	--	--	--	--	--	315	--	--	--
Portable electric spas	1.1	--	--	0.1	0.1	0.2	2.2	--	--	0.2	0.1	0.3
Residential ventilating fans	0.1	--	--	0.01	0.01	0.02	0.3	--	--	0.02	0.01	0.1
Showerheads	1.6	10	30	0.6	0.1	0.8	3.5	22	67	1.2	0.2	1.7
Spray sprinkler bodies	--	--	180	--	--	--	--	--	400	--	--	--
Toilets (water closets)	--	--	13	--	--	--	--	--	39	--	--	--
Urinals	--	--	3	--	--	--	--	--	8	--	--	--
Water coolers	0.9	--	--	0.1	0.05	0.2	2.1	--	--	0.1	0.1	0.3
<b>Total</b>	<b>7</b>	<b>59</b>	<b>353</b>	<b>3</b>	<b>0</b>	<b>5</b>	<b>14</b>	<b>154</b>	<b>823</b>	<b>8</b>	<b>1</b>	<b>10</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: United States

	Potential annual utility bill savings (million 2022\$)		Net present value savings (billion 2022\$)	Payback period (years)
	In 2030	In 2040		
Commercial battery chargers	12	36	0.3	2.2
Commercial dishwashers	235	772	6.6	1.1
Commercial fryers	243	707	4.7	2.9
Commercial ovens	52	149	0.4	6.6
Commercial steam cookers	66	197	1.7	0.9
Faucets	776	1,945	19.6	0.0
Gas fireplaces	53	187	1.6	1.0
High CRI fluorescent lamps	158	68	0.8	1.9
Irrigation controllers	1,476	5,490	50.1	0.7
Portable electric spas	161	347	3.0	0.9
Residential ventilating fans	15	53	0.5	0.0
Showerheads	771	1,928	19.4	0.0
Spray sprinkler bodies	2,716	6,967	64.7	0.8
Toilets (water closets)	188	662	8.2	0.0
Urinals	42	130	1.3	0.0
Water coolers	99	230	2.3	0.0
<b>Total</b>	<b>6,793</b>	<b>17,813</b>	<b>178</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: United States

	Potential cumulative savings through 2050						Utility bill savings (billion 2022\$)
	Electricity (TWh)	Natural gas (TBtu)	Water (billion gallons)	NO <sub>x</sub> (thous. tons)	SO <sub>2</sub> (thous. tons)	CO <sub>2</sub> (MMT)	
Commercial battery chargers	8	--	--	0.6	0.4	1.3	0.7
Commercial dishwashers	15	371	516	17.9	0.7	22.1	14.3
Commercial fryers	3.9	1,307	--	59.5	0.2	70.0	13.4
Commercial ovens	10	165	--	8.2	0.5	10.4	2.8
Commercial steam cookers	7	52	145	2.8	0.3	3.8	3.8
Faucets	55	345	1,554	19.6	2.7	27.3	38.9
Gas fireplaces	--	265	--	12.0	--	14.1	3.4
High CRI fluorescent lamps	17	--	--	1.4	0.9	3.2	2.0
Irrigation controllers	--	--	5,701	--	--	--	101.0
Portable electric spas	45	--	--	3.4	2.0	7.0	7.0
Residential ventilating fans	6	--	--	0.4	0.3	1.0	1.0
Showerheads	70	433	1,341	24.7	3.5	34.4	38.5
Spray sprinkler bodies	--	--	7,992	--	--	--	139.9
Toilets (water closets)	--	--	808	--	--	--	14.1
Urinals	--	--	144	--	--	--	2.5
Water coolers	42	--	--	2.9	1.8	6.7	4.5
<b>Total</b>	<b>279</b>	<b>2,938</b>	<b>16,208</b>	<b>154</b>	<b>13</b>	<b>201</b>	<b>352</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.