## **Appliance Standards Awareness Project**

## 2024 State Appliance Standards Recommendations

Savings estimates for: Missouri

	Potential annual savings in 2030				Potential annual savings in 2040							
	Electricity (GWh)	Natural gas (BBtu)	Water (million gallons)	NOx (tons)	SO <sub>2</sub> (tons)	CO <sub>2</sub> (thous. MT)	Electricity (GWh)	Natural gas (BBtu)	Water (million gallons)	NOx (tons)	SO <sub>2</sub> (tons)	CO <sub>2</sub> (thous. MT)
Commercial battery chargers	2.5			0.2	0.3	0.6	7.1			0.6	0.6	1.5
Commercial dishwashers	5.2	128	178	6.2	0.6	8.0	15.2	374	521	18.2	1.3	23.1
Commercial fryers	1.4	479		21.8	0.2	25.8	3.8	1,278		58.2	0.3	68.7
Commercial ovens	3.8	61		3.1	0.5	4.1	10.1	162		8.2	0.9	10.7
Commercial steam cookers	2.4	19	53	1.1	0.3	1.6	6.4	51	142	2.8	0.6	4.1
Faucets	25.2	133	653	8.1	3.0	13.0	55.9	294	1,444	17.9	4.9	27.5
Gas fireplaces		88		4.0		4.6		282		12.8		15.0
High CRI fluorescent lamps	32.0			2.7	3.9	7.6	11.5			0.9	1.0	2.5
Irrigation controllers			1,815			-			5,847			
Portable electric spas	13.6	-		1.1	1.6	3.2	26.8			2.2	2.4	5.7
Residential ventilating fans	2.1			0.2	0.2	0.5	6.6			0.5	0.6	1.4
Showerheads	31.9	166	561	10.2	3.8	16.4	70.9	369	1,247	22.5	6.2	34.8
Spray sprinkler bodies			3,339			-			7,420			
Toilets (water closets)			237			-			721			
Urinals		-	53						141			
Water coolers	20.5	-		1.7	2.5	4.8	45.6			3.7	4.0	9.7
Total	141	1,074	6,555	60	17	90	260	2,810	15,295	149	23	205

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: Missouri

		nual utility bill llion 2022\$)	Net present value savings	Payback period	
	In 2030	In 2040	(million 2022\$)	(years)	
Commercial battery chargers	0.2	0.5	3.4	2.7	
Commercial dishwashers	4.1	13.4	113.8	1.2	
Commercial fryers	3.9	11.8	73.7	3.4	
Commercial ovens	0.8	2.3	3.2	8.0	
Commercial steam cookers	1.1	3.4	29.7	1.0	
Faucets	13.6	33.6	339.6	0.0	
Gas fireplaces	0.9	3.3	27.3	1.1	
High CRI fluorescent lamps	2.8	1.0	11.5	2.3	
Irrigation controllers	26.4	98.3	895.2	0.8	
Portable electric spas	1.4	2.8	23.4	1.2	
Residential ventilating fans	0.2	0.7	6.5	0.0	
Showerheads	13.3	32.8	330.5	0.0	
Spray sprinkler bodies	48.6	124.8	1,155.6	0.8	
Toilets (water closets)	3.5	12.1	151.2	0.0	
Urinals	0.8	2.4	23.3	0.0	
Water coolers	1.7	3.8	38.4	0.0	
Total	118	310	3,102	_	

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: Missouri**

	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	133			10.7	12.5	28.2	9.7	
Commercial dishwashers	280	6.9	9.6	335.0	26.4	425.8	247.8	
Commercial fryers	73	24.3		1,106.5	6.9	1,305.5	220.8	
Commercial ovens	192	3.1		154.8	18.2	204.2	43.2	
Commercial steam cookers	121	1.0	2.7	53.6	11.5	77.2	64.5	
Faucets	1,119	5.9	28.9	356.9	107.8	551.8	673.2	
Gas fireplaces		5.1		231.4		271.2	58.7	
High CRI fluorescent lamps	383			33.8	49.4	92.8	33.3	
Irrigation controllers			105.9			-	1,809.2	
Portable electric spas	545			44.4	53.4	117.7	57.5	
Residential ventilating fans	120			9.7	11.2	25.4	12.7	
Showerheads	1,417	7.4	24.9	449.4	136.6	695.8	655.3	
Spray sprinkler bodies			148.4				2,505.6	
Toilets (water closets)			15.0			_	258.7	
Urinals			2.7				45.5	
Water coolers	912			73.8	87.9	195.3	76.1	
Total	5,294	54	301	2,860	522	3,991	6,134	

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.