

## Appliance Standards Awareness Project

### 2024 State Appliance Standards Recommendations

#### Savings estimates for: North Dakota

	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	1.4	--	--	0.2	0.1	0.2	4.1	--	--	0.5	0.2	0.5
Commercial dishwashers	0.7	16	22	0.8	0.03	0.9	1.9	47	66	2.4	0.1	2.7
Commercial fryers	0.2	60	--	2.8	0.01	3.2	0.5	161	--	7.4	0.02	8.6
Commercial ovens	0.5	8	--	0.4	0.02	0.5	1.3	20	--	1.1	0.05	1.2
Commercial steam cookers	0.3	2	7	0.2	0.02	0.2	0.8	6	18	0.4	0.03	0.4
Faucets	3.5	15	82	1.2	0.2	1.2	7.9	32	181	2.3	0.3	2.6
Gas fireplaces	--	16	--	0.7	--	0.8	--	51	--	2.3	--	2.7
High CRI fluorescent lamps	7.3	--	--	1.2	0.4	0.9	2.4	--	--	0.3	0.1	0.3
Irrigation controllers	--	--	158	--	--	--	--	--	510	--	--	--
Portable electric spas	5.3	--	--	0.9	0.3	0.7	10.4	--	--	1.2	0.4	1.2
Residential ventilating fans	0.3	--	--	0.04	0.01	0.03	0.9	--	--	0.1	0.03	0.1
Showerheads	4.5	18	70	1.6	0.2	1.5	10.0	40	156	3.0	0.4	3.3
Spray sprinkler bodies	--	--	291	--	--	--	--	--	647	--	--	--
Toilets (water closets)	--	--	30	--	--	--	--	--	91	--	--	--
Urinals	--	--	7	--	--	--	--	--	18	--	--	--
Water coolers	4.8	--	--	0.8	0.2	0.6	10.7	--	--	1.2	0.4	1.2
<b>Total</b>	<b>29</b>	<b>135</b>	<b>638</b>	<b>11</b>	<b>1</b>	<b>11</b>	<b>51</b>	<b>359</b>	<b>1,495</b>	<b>22</b>	<b>2</b>	<b>25</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: North Dakota

	Potential annual utility bill savings (million 2022\$)		Net present value savings (million 2022\$)	Payback period (years)
	In 2030	In 2040		
Commercial battery chargers	0.1	0.4	3.1	1.8
Commercial dishwashers	0.5	1.7	14.6	1.2
Commercial fryers	0.5	1.4	8.5	3.6
Commercial ovens	0.1	0.3	0.6	8.1
Commercial steam cookers	0.1	0.4	3.9	1.0
Faucets	1.7	4.4	44.0	0.0
Gas fireplaces	0.1	0.5	4.1	1.3
High CRI fluorescent lamps	0.8	0.3	3.6	2.1
Irrigation controllers	2.3	8.6	78.0	0.8
Portable electric spas	0.6	1.4	11.9	0.9
Residential ventilating fans	0.0	0.1	1.0	0.0
Showerheads	1.7	4.3	43.3	0.0
Spray sprinkler bodies	4.2	10.9	100.7	0.8
Toilets (water closets)	0.4	1.5	19.0	0.0
Urinals	0.1	0.3	2.9	0.0
Water coolers	0.5	1.2	11.8	0.0
<b>Total</b>	<b>14</b>	<b>35</b>	<b>340</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: North Dakota

	Potential cumulative savings through 2050						Utility bill savings (million 2022\$)
	Electricity (GWh)	Natural gas (TBtu)	Water (billion gallons)	NO <sub>x</sub> (tons)	SO <sub>2</sub> (tons)	CO <sub>2</sub> (thous. MT)	
Commercial battery chargers	76	--	--	9.4	3.3	9.3	7.2
Commercial dishwashers	35	0.9	1.2	43.8	1.5	50.5	31.7
Commercial fryers	9	3.1	--	139.9	0.4	163.8	26.3
Commercial ovens	24	0.4	--	20.6	1.1	23.6	5.9
Commercial steam cookers	15	0.1	0.3	7.4	0.7	8.4	8.5
Faucets	157	0.6	3.6	49.1	7.0	53.7	87.4
Gas fireplaces	--	0.9	--	42.0	0.0	49.3	9.0
High CRI fluorescent lamps	85	--	--	13.2	4.8	11.8	9.1
Irrigation controllers	--	--	9.2	--	--	--	157.7
Portable electric spas	212	--	--	27.2	9.5	26.6	27.0
Residential ventilating fans	16	--	--	1.9	0.7	1.9	2.0
Showerheads	199	0.8	3.1	61.9	8.9	67.6	86.0
Spray sprinkler bodies	--	--	12.9	--	--	--	218.3
Toilets (water closets)	--	--	1.9	--	--	--	32.5
Urinals	--	--	0.3	--	--	--	5.7
Water coolers	214	--	--	27.4	9.6	26.8	23.5
<b>Total</b>	<b>1,043</b>	<b>7</b>	<b>29</b>	<b>444</b>	<b>47</b>	<b>493</b>	<b>682</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.