

Appliance Standards Awareness Project 2019 State Appliance Standards Recommendations

Assumptions for national annual shipments, average lifetime, per-unit savings, per-unit incremental cost, and percentage of shipments already meeting standard level

Product	National annual shipments in 2021 (million)	Average lifetime (years)	Per-unit annual savings	Units	% savings relative to baseline products	Per-unit incremental cost (2017\$)	% of annual shipments already meeting standard level
Air compressors	0.03	13.0	4,762	kWh	3%	1,088	72%
Air purifiers	5.0	9.0	214	kWh	40%	82	69%
Commercial dishwashers	0.1	13.2	--	--	--	1,078	67%
<i>electricity</i>	--	--	1,385	kWh	20%	--	--
<i>natural gas</i>	--	--	33	MMBtu	38%	--	--
<i>water</i>	--	--	45,808	gallons	38%	--	--
Commercial fryers	0.1	12.0	--	--	--	1,815	27%
<i>electricity</i>	--	--	163	kWh	17%	--	--
<i>natural gas</i>	--	--	46	MMBtu	31%	--	--
Commercial hot-food holding cabinets	0.05	12.0	2,197	kWh	37%	637	62%
Commercial steam cookers	0.01	12.0	--	--	--	3,085	53%
<i>electricity</i>	--	--	10,927	kWh	55%	--	--
<i>natural gas</i>	--	--	40	MMBtu	54%	--	--
<i>water</i>	--	--	162,060	gallons	93%	--	--
Computers and computer monitors	87.5	--	--	--	--	--	--
<i>computers</i>	67.3	--	--	--	--	--	--
<i>desktops</i>	16.7	5.0	--	--	37%	--	*
<i>tier 1</i>	--	--	30	kWh	--	10	--
<i>tier 2</i>	--	--	19	kWh	--	5	--
<i>notebooks</i>	48.9	4.0	4	kWh	11%	1	*
<i>small-scale servers</i>	0.5	5.0	24	kWh	8%	13	*
<i>workstations</i>	1.2	5.0	37	kWh	8%	13	*
<i>monitors</i>	20.2	7.0	28	kWh	46%	5	*
Faucets	48.9	--	--	--	--	--	--
<i>residential lavatory</i>	30.1	10.0	--	--	--	0	88%
<i>electricity</i>	--	--	19	kWh	24%	--	--
<i>natural gas</i>	--	--	0.14	MMBtu	24%	--	--
<i>water</i>	--	--	566	gallons	24%	--	--
<i>kitchen</i>	15.4	10.0	--	--	--	0	54%
<i>electricity</i>	--	--	75	kWh	17%	--	--
<i>natural gas</i>	--	--	0.55	MMBtu	17%	--	--
<i>water</i>	--	--	2,214	gallons	17%	--	--
<i>public</i>	3.5	3.0	--	--	--	0	98%
<i>electricity</i>	--	--	--	kWh	--	--	--
<i>natural gas</i>	--	--	2.63	MMBtu	77%	--	--
<i>water</i>	--	--	6,153	gallons	77%	--	--

Product	National annual shipments in 2021 (million)	Average lifetime (years)	Per-unit annual savings	Units	% savings relative to baseline products	Per-unit incremental cost (2017\$)	% of annual shipments already meeting standard level
High CRI fluorescent lamps	17.6	--	--			--	--
<i>residential</i>	5.4	15.0	13	kWh	52%	9	**
<i>commercial</i>	12.3	6.7	69	kWh	56%	15	**
Portable air conditioners	1.4	10.5	223	kWh	23%	78	37%
Portable electric spas	0.5	10.0	367	kWh	19%	0	71%
Residential ventilating fans	7.7	10.0	13	kWh	75%	0	60%
Showerheads	16.4	10.0	--	--		0	76%
<i>electricity</i>	--	--	108	kWh	19%	--	--
<i>natural gas</i>	--	--	0.80	MMBtu	19%	--	--
<i>water</i>	--	--	2,179	gallons	19%	--	--
Spray sprinkler bodies	71.7	9.0	299	gallons	10%	3	10%
Toilets (water closets)	16.3	--	--			--	--
<i>residential</i>	12.8	25.0	861	gallons	20%	0	64%
<i>commercial</i>	3.5	12.0	488	gallons	20%	0	51%
Uninterruptible power supplies	10.4	--	--		--	--	--
<i>residential</i>	1.0	6.1	64	kWh	30%	15	51%
<i>commercial</i>	9.3	6.1	64	kWh	30%	14	51%
Urinals	0.9	12.0	2,340	gallons	50%	0	68%
Water coolers	2.5	10.0	92	kWh	30%	0	67%

*For computers and computer monitors, the per-unit annual savings and % savings take into account sales that already meet the standard (i.e., savings are relative to the existing base case efficiency, not the least-efficient products available).

**For high CRI fluorescent lamps, the estimated shipments include only T12 lamps (i.e. they do not include shipments of compliant replacement options such as widely-available LED tube lamps). Therefore, it is not necessary to account for the estimated market penetration of compliant lamps.

Notes: For portable air conditioners, national annual shipments reflect estimated shipments in the assumed compliance year of 2022. For the plumbing products (faucets, showerheads, toilets, and urinals) and portable air conditioners, we took into account that a significant portion of current models have efficiency levels that fall in between the baseline level and the recommended standard level in the estimates of the percentage of annual shipments already meeting the recommended standard level, so as not to overestimate potential savings.