

**2.1.16 Operating Characteristics of Electric Appliances in the Residential Sector**

	Power Draw (W) (1)			Annual Usage (hours/year)			Annual Consumption (kWh/year)	Annual Cost (\$) (2)
	Active	Idle	Off	Active	Idle	Off		
<b>Kitchen</b>								
Coffee Maker	1,000	70	0	38	229	8,493	58	5.6
Dishwasher (3)				365 (4)			120	11.6
Microwave Oven	1,500		3	70		8,690	131	12.6
Toaster Oven	1,051			37			54	5.2
Refrigerator-Freezer							660	63.1
Freezer							470	45.0
<b>Lighting</b>								
18-W Compact Fluorescent	18			1,189			20	2.1
60-W Incandescent Lamp	60			672			40	3.9
100-W Incandescent Lamp	100			672			70	6.4
Torchiere Lamp-Halogen	300			1,460			440	42.0
<b>Bedroom and Bathroom</b>								
Hair Dryer	710			50			40	3.4
Waterbed Heater	350			3,051			1,070	102.7
<b>Laundry Room</b>								
Clothes Dryer				359 (4)			1,000	96.0
Clothes Washer (3)				392 (4)			110 (3)	10.4
<b>Home Electronics</b>								
Desktop PCs	75	4	2	2,990	330	5,440	237	22.8
Notebook PCs	25	2	2	2,368	935	5,457	72	6.9
Desktop Computer Monitors	42	1	1	1,865	875	6,020	85	8.2
Stereo Systems	33	30	3	1,510	1,810	5,440	119	11.4
Televisions	97		4	1,860		6,900	222 (7)	21.3
Analog, <40"	86			1,095 (5)			184	17.7
Analog, >40"	156			1,825 (5)			312	30.0
Digital, ED/HD TV, <40"	150			1,095 (5)			301	28.9
Digital, ED/HD TV, >40"	234			1,825 (5)			455	43.7
Set-top Boxes	20	0	20	6,450	0	2,310	178	17.1
DVD/VCR	17	13	3	170	5,150	3,430	78	7.5
Video Game Systems	36	36	1	405	560	7,795	41	3.9
<b>Heating and Cooling</b>								
Dehumidifier	600			1,620			970	93.3
Furnace Fan	295			1,350			400	38.2
Ceiling Fan (only fan motor)	35			2,310			81	7.8
Space Heater	1,320	1		584			314	30.1
<b>Water Heating</b>								
Water Heater-Family of 4	4,500			64 (6)			4,770	458.3
Water Heater-Family of 2	4,500			32 (6)			2,340	224.3
Portable Spa	4,350	275		25	8,735		2,525	242.4
<b>Miscellaneous</b>								
Rechargeable Power Tool	13	4		73			38	3.6
Vacuum	542			37			55	5.3
Pool Pump	1,000			792			790	76.0
Well Pump	725			115			80	8.0
Lawn Sprinkler	11			0			32	3.1
Aquarium Equipment	24			6,534			153	14.6

Note(s): 1) Power draw will vary due to appliance components and modes of operation. 2) \$0.096/kWh. 3) Excludes electricity for water heating and drying. 4) Cycles/year. 5) TVs <40" are estimated on 3 hours/day and TVs >40" are estimated on 5 hours/day. 6) Gallons/day. 7) Power, usage and annual consumption values for televisions are weighted averages of multiple usage types and screen sizes.

Source(s): BTS/A.D. Little, Electricity Consumption by Small End Uses in Residential Buildings, Aug. 1998, Exhibit 6-8, p. 6-10 for clothes washer, computer, dehumidifier, dishwasher, furnace fan, pool pump, torchiere lamp-halogen, waterbed heater, and well pump; LBNL, Energy Data Sourcebook for the U.S. Residential Sector, LBNL-40297, Sept. 1997, p. 100-102 for clothes dryers, Table 10.2, p. 108 for lighting, and p. 62-67 for water heaters; LBNL, Miscellaneous Electricity Use in the U.S. Residential Sector, LBNL-40295, Apr. 1998, Appendix D for hair dryers; EIA, Supplement to AEO 2008, June 2008, Table 21 for refrigerator and freezer; GAMA, Consumers' Directory of Certified Efficiency Ratings for Heating and Water Heating Equipment, Apr. 2000 for water heater power draw; EIA/TIAX, Commercial and Residential Sector Miscellaneous Electricity Consumption: FY2005 and Projections to 2030, Sept. 2006, p. 41-60 for coffee maker, microwave oven, stereo systems, TVs, DVD/VCR, ceiling fan, and portable spa; TIAX, Energy Consumption by Consumer Electronics in U.S. Residences, Final Report to the Consumer Electronics Association, Jan. 2007, p. 69-72 for desktop and notebook PCs, p. 62-63 for

monitors, p. 85-90 for TVs, p. 76-81 for set-top boxes, and p. 103-105 for video game systems; and Energy Center of Wisconsin, Electricity Savings Opportunities for Home Electronics and Other Plug-In Devices in Minnesota Homes, May 2010, pp. 52-57 for toaster ovens, space heaters, power tools, vacuums, lawn sprinklers, and aquarium equipment.