

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		
Kitchen								
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
Lighting								
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
Bedroom and Bathroom								
Hair Dryer	710			50			40	3.4
Waterbed Heater	350			3,051			1,070	102.7
Laundry Room								
Clothes Dryer				359 (4)			1,000	96.0
Clothes Washer (3)				392 (4)			110 (3)	10.4
Home Electronics								
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
Heating and Cooling								
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
Water Heating								
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
Miscellaneous								
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.