

**Table 15. Capital Cost and Efficiency Ratings of Selected Commercial Space Heating Equipment<sup>1</sup>**

Equipment Type	Vintage	Efficiency <sup>2</sup>	Capital Cost (\$2001 per Mbtu/hour) <sup>3</sup>	Maintenance Cost (\$2001 per Mbtu/hour) <sup>3</sup>	Service Life (Years)
Electric Heat Pump	Current Standard	6.8	\$81.39	\$3.33	14
	2000- typical	7.5	\$97.92	\$3.33	14
	2000- high efficiency	9.8	\$155.56	\$3.33	14
	2005- typical	7.5	\$97.22	\$3.33	14
	2005- high efficiency	9.8	\$155.56	\$3.33	14
	2010 - typical	7.5	\$97.22	\$3.33	14
	2010 - high efficiency	9.8	\$155.56	\$3.33	14
	2020 - typical	7.8	\$97.22	\$3.33	14
Ground-Source Heat Pump	2020 - high efficiency	10.0	\$150.00	\$3.33	14
	2000- typical	3.4	\$187.50	\$1.46	20
	2000- high efficiency	4.0	\$229.17	\$1.46	20
	2005- typical	3.4	\$166.67	\$1.46	20
	2005- high efficiency	4.3	\$229.17	\$1.46	20
	2010- typical	3.4	\$166.67	\$1.46	20
	2010 - high efficiency	4.3	\$208.33	\$1.46	20
	2020 - typical	3.8	\$166.67	\$1.46	20
Electric Boiler	2020 - high efficiency	4.5	\$197.92	\$1.46	20
	Current Standard	0.98	\$21.83	\$0.14	21
Packaged Electric	1995	0.93	\$19.77	\$3.49	18
Natural Gas Furnace	Current Standard	0.80	\$9.11	\$1.00	15
	2000 - high efficiency	0.92	\$14.82	\$0.88	15
	2010 - typical	0.81	\$8.70	\$0.96	15
Natural Gas Boiler	Current Standard	0.80	\$18.11	\$0.55	25
	2000 - high efficiency	0.87	\$33.82	\$0.69	25
	2005 - typical	0.81	\$17.87	\$0.55	25
	2005 - high efficiency	0.90	\$31.68	\$0.67	25
Natural Gas Heat Pump	2005 - absorption	1.4	\$173.61	\$4.17	15
Distillate Oil Furnace	Current Standard	0.81	\$14.25	\$1.00	15
	2000	0.86	\$23.75	\$1.00	15
	2010	0.89	\$22.69	\$1.00	15
Distillate Oil Boiler	Current Standard	0.83	\$15.76	\$0.13	20
	2000 - high efficiency	0.88	\$18.83	\$0.12	20
	2005 - typical	0.83	\$15.76	\$0.13	20
	2005- high efficiency	0.88	\$18.83	\$0.12	20

<sup>1</sup>Equipment listed is for the New England Census division, but is also representative of the technology data for the rest of the U.S. See the source referenced below for the complete set of technology data.

<sup>2</sup>Efficiency measurements vary by equipment type. Electric air-source and natural gas heat pumps are rated for heating performance using the Heating Seasonal Performance Factor (HSPF); natural gas and distillate furnaces are based on Annual Fuel Utilization Efficiency; ground-source heat pumps are rated on coefficient of performance; and boilers are based on combustion efficiency.

<sup>3</sup>Capital and maintenance costs are given in 2001 dollars.

Source: Energy Information Administration, "Technology Forecast Updates - Residential and Commercial Building Technologies - Reference Case", Arthur D. Little, Inc., Reference Number 8675309, October 2001.