

Survey of Geothermal Heat Pump Shipments

This report provides information on geothermal heat pump shipments, based on the Energy Information Administration, Form EIA-902, "Annual Geothermal Heat Pump Manufacturers Survey." The survey shows that manufacturers shipped 36,439 geothermal heat pumps in 2003, a 2 percent decrease over the 2002 total of 37,139. Of those shipped in 2003, 10,306 were ARI-320 rated,¹ and 25, 211 were ARI-325 or ARI-330. ARI-rated shipments increased to 35,517 units in 2003, while the number of non-ARI-rated units shipped decreased to 922 (Table 37).

The total rated capacity of heat pumps shipped in 2003 was 124,438 tons, compared to 125,297 tons in 2002 (Table 38).

The proportion of geothermal heat pumps shipped to each Census Region in 2003 was as follows: the South (34 percent), the Midwest (33 percent), the Northeast (16 percent), and the West (9 percent) (Table 39). The proportion of geothermal heat pumps exported was 8 percent. Forty-four percent of geothermal heat pumps were shipped to wholesale distributors, while 30 percent went to installers. The remaining 26 percent were sold to exporters, retail distributors, end-users, or other domestic customers. (Table 40).

Table 37. Geothermal Heat Pump Shipments by Model Type, 1997-2003

(Number of Units)

Model	1997	1998	1999	2000	2001	2002	2003
ARI-320	7,772	10,510	7,910	7,808	NA	6,445	10,306
ARI-325/330	28,335	26,042	31,631	26,219	NA	26,802	25,211
Other Non-ARI Rated	1,327	1,714	2,138	1,554	NA	3,892	922
Totals	37,434	38,266	41,679	35,581	NA	37,139	36,439

NA=Not Available. No survey was conducted for 2001.

Source: Energy Information Administration, Form EIA-902 "Annual Geothermal Heat Pump Manufacturers Survey."

Table 38. Capacity of Geothermal Heat Pump Shipments by Model Type, 1997-2003

(Total Rated Capacity Tons)

Model	1997	1998	1999	2000	2001	2002	2003
ARI-320	24,708	35,776	27,970	26,469	NA	16,756	29,238
ARI-325/330	110,186	98,912	153,947	130,132	NA	96,541	89,731
Other Non-ARI Rated	6,662	6,758	9,735	7,590	NA	12,000	5,469
Totals	141,556	141,446	191,651	164,191	NA	125,297	124,438

NA=Not Available. No survey was conducted for 2001.

Note: One ton of capacity is equal to 12,000 Btus per hour. Source: Energy Information Administration, Form EIA-902 "Annual Geothermal Heat Pump Manufacturers Survey."

Table 39. Geothermal Heat Pump Shipments by Export, Census Region, and Model Type, 2003
(Number of Units)

Export and Census Region	ARI-320	ARI-325/330	Other Non-ARI Rated GHPs	Total
Export	260	2,455	49	2,764
Midwest	1,877	9,864	301	12,042
Northeast	2,797	3,031	96	5,924
South	3,983	8,126	434	12,543
West	1,389	1,735	42	3,166
Total	10,306	25,211	922	36,439

Note: The **Midwest Census Region** consists of Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin. The **Northeast Census Region** consists of Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont. The **South Census Region** consists of Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia. The **West Census Region** consists of Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming. "Export" in Table 39 and "Exporter" in Table 40 are different. "Export" refers to shipments outside of the country, while "Exporter" is the type of customer.

Source: Energy Information Administration, Form EIA-902 "Annual Geothermal Heat Pump Manufacturers Survey."

Table 40. Geothermal Heat Pump Shipments by Customer Type and Model Type, 2003
(Number of Units)

Customer Type	ARI-320	ARI-325/330	Other Non-ARI Rated GHPs	Total
Exporter	0	945	0	945
Wholesale Distributor	4,271	11,864	32	16,167
Retail Distributor	0	975	170	1,145
Installer	5	10,372	407	10,784
End-User	0	1,002	101	1,103
Others	6,030	53	212	6,295
Total	10,306	25,211	922	36,439

Note: "Export" in Table 39 and "Exporter" in Table 40 are different. "Export" refers to shipments outside of the country, while "Exporter" is the type of customer.

Source: Energy Information Administration, Form EIA-902 "Annual Geothermal Heat Pump Manufacturers Survey."

¹For a detailed explanation of the Air-Conditioning & Refrigeration Institute (ARI) system of rating geothermal heat pumps see: http://www.eia.doe.gov/cneaf/solar.renewables/rea_issues/geo_hp_art.pdf, June 7, 2004