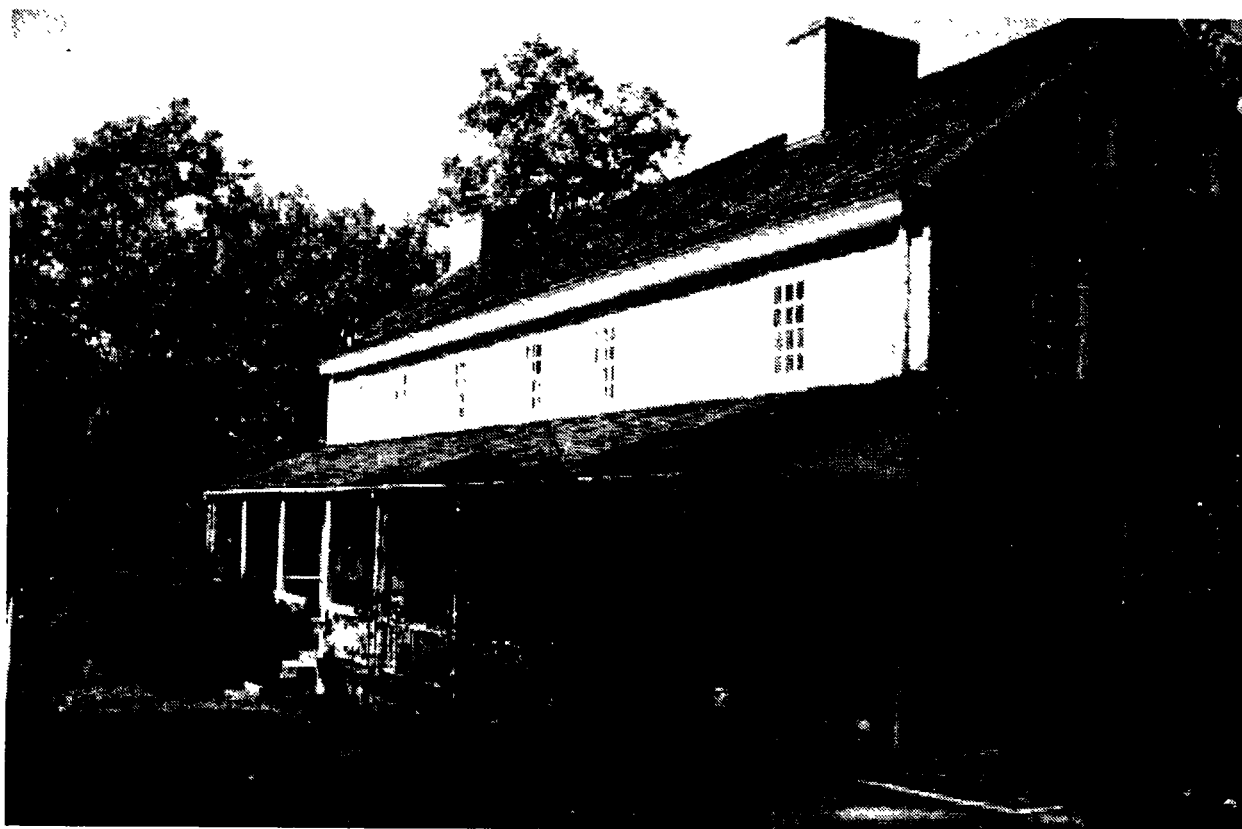


Residential Natural Gas Market Survey 1999



Residential Natural Gas Market Survey

1999

52nd Annual Survey
Natural Gas Utility Industry
United States

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INTRODUCTION

This year's report is the 52nd annual *Residential Natural Gas Market Survey* conducted by the American Gas Association (AGA). The data collected for 1999 provides a unique and comprehensive portrait of the residential natural gas market. Detailed information is presented by state and region, including customers, market share, inventory additions from new homes, and conversions from alternative fuels. Company-specific data are reported in Appendices 1, 2 and 3.

A total of 64 natural gas utility companies responded to this year's survey. This is a decline from the 76 utilities that responded to the 1998 survey. Some of the decline in the survey response rate can be attributed to mergers and acquisitions, and downsizing in the natural gas industry. Company-specific data were derived from the Energy Information Administration's Form 176 database. In addition, some state total data were derived from AGA's Gas Facts: 1999 survey responses. Individual company data are listed by region and state in Appendices 1, 2 and 3. Please note that some tabular data may not add up to the totals shown due to rounding.

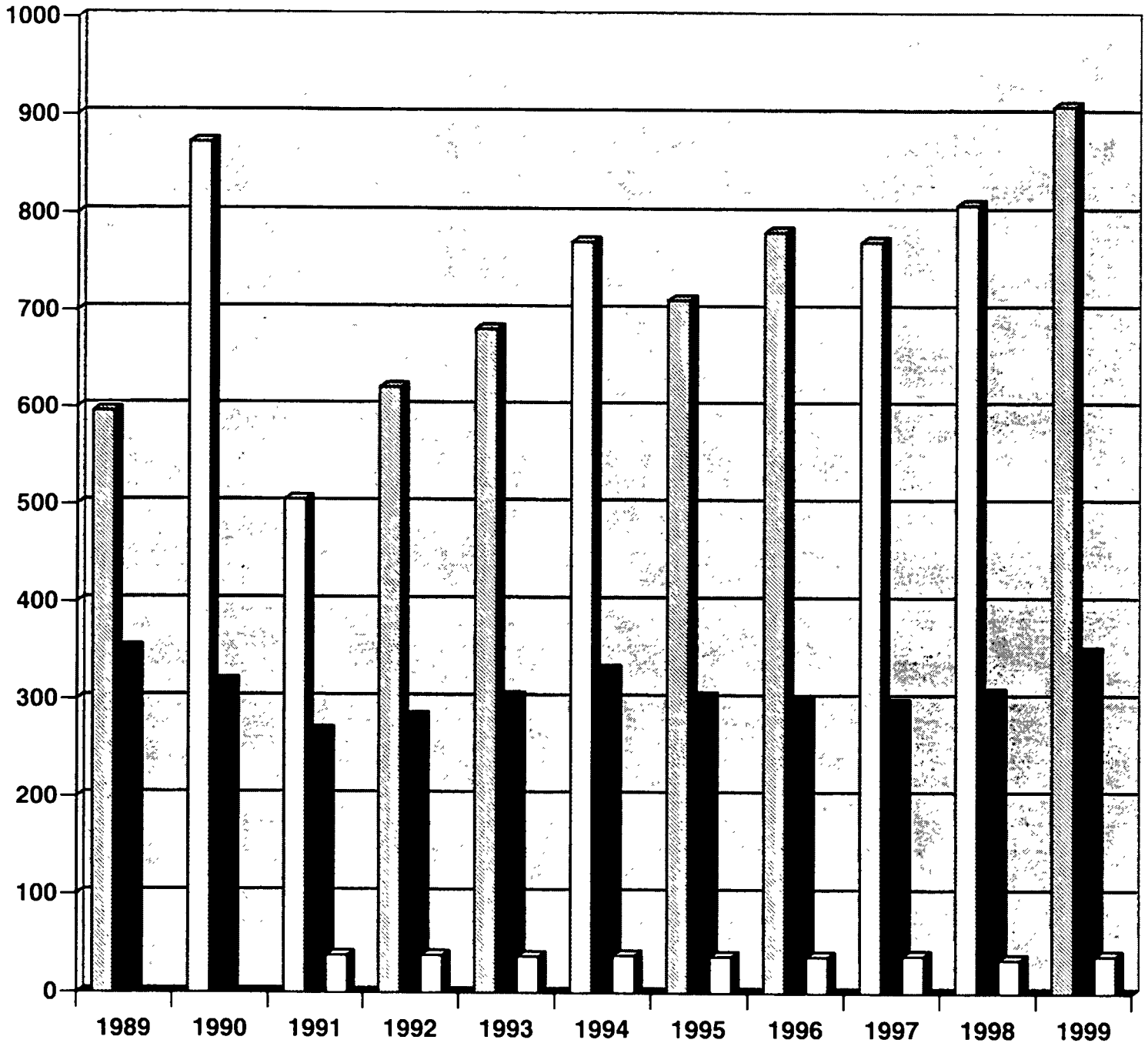
Incorporated in the survey results are data regarding new private housing completions from the U.S. Bureau of the Census. The source of these data is different from the statistics compiled from the survey respondents and should be evaluated separately.

Our thanks go to those companies participating in the *1999 Residential Natural Gas Market Survey* information-gathering effort. Their cooperation and support are the essential elements that have made this publication a primary source of natural gas utility industry data and an important industry reference.

I. EXECUTIVE SUMMARY

- The residential natural gas customer count reached 58 million in 1999, or 61 percent of total U.S. households. Approximately 83 percent of these natural gas customers use natural gas for house heating purposes.
- The natural gas share of new single-family housing completions exceeded the electric share in all regions. Gas single-family homes completed registered a 70 percent market share, the same as in 1999 (see Figure 1). When both single and multi-family units are considered, the gas share of new housing completions remained constant at 64 percent. The overall electric share remained at 33 percent in 1999.
- New additions to the number of residential customers totaled at least 953,000 in 1999. Companies participating in the survey responded that almost 17 percent of their new customers came from existing homes converting to natural gas from other fuels. The relative contribution of new construction and conversions to residential customer additions varied by region.
- Reported conversions of existing units from other fuels to natural gas space heating totaled 66,873 in 1999, a four percent increase from the 1998 reported level. Based on AGA survey data, 15,702 (24 percent) of all heating conversions were from electricity, 8,505 (13 percent) were from fuel oil, and respondents were unable to identify the previous energy source for the remainder.
- The overall market share for natural gas space heat has remained constant at 51 percent for the last twelve years. Natural gas water heater market share has remained roughly at 51 percent as well, with shares for gas cooking and clothes drying falling slightly to 35 percent and 22 percent, respectively.
- Natural gas utilities are committed to offering bill payment assistance programs. In 1999, at least \$32.3 million went to support these programs, which includes the Low Income Home Energy Assistance Program (LIHEAP).

Figure 1
Natural Gas vs. Electricity and Oil
Single Family Home Completions 1989-1999
(Thousand Homes)



Note: Data unavailable for oil for 1989-1990
Source: U.S. Bureau of Census

□ Natural Gas ■ Electricity □ Oil

II. UNITED STATES HOUSING MARKET IN 1999

New Housing Completions

Additions to the U.S. housing market increased 10.9 percent in 1999 from 1998 with new completions totaling 1,636,000.

Natural gas continued to dominate the new single-family home market. According to the U.S. Bureau of the Census, new gas single-family completions numbered 909,000 in 1999, up from 809,000 in 1998. This 12.4 percent increase in gas units was about the same increase for all single-family home completions, resulting in the same gas market share of 70 percent in 1999 as it was in 1998. The 1999 electric market share of new home completions totaled 27 percent, a one percentage point increase from last year. Gas single-family home completions exceeded electric completions for the fourteenth consecutive year.

In the new multi-family housing arena, gas dropped two percentage points of its market share, from 44 to 42 percent. The total number of multi-family units completed in 1999 rose to 329,000 from 314,000 in 1998. Market share for electric grew by one percentage point above 1998, reaching 56 percent in 1999. In 1999, natural gas multi-family units numbered 139,000 compared with 185,000 electric units.

When both single and multi-family units are considered, gas house heating market share of new housing in 1999 remained constant at 64 percent. The overall 1999 electric house heating market share also remained at the same level as 1998 at 33 percent.

Tables 1 and 2 present the regional breakdown of units completed by type of fuel. Gas single-family home completions outnumbered electric completions in all of the four regions. The gas market share in the Northeast, Midwest, South and West regions was 64 percent, 90 percent, 50 percent and 89 percent, respectively. Market share for natural gas decreased one percentage point in the Midwest and South compared to 1998. The West region exhibited a two percentage points increase in market share over the past year. In the multi-family sector, gas completions were higher than electric in all regions but the South.

Table 3 shows new housing market share data from 1989 to 1999. The Census data show that overall, new housing market share of gas has been higher than electric for at least the last ten years. The market share went from 53 percent gas and 40 percent electric in 1989 to 64 percent gas and 33 percent electric in 1999.

TABLE 1

1999 PRIVATE HOUSING COMPLETIONS BY HEATING FUEL
(Thousands of Buildings)

Single-Family	Share	Units	Northeast	Midwest	South	West
Natural Gas ^a	70%	909	76	253	295	285
Electricity	27%	350	7	26	290	27
Oil	3%	38	35	S	S	S
Other	1%	10	S	3	S	6
Subtotal	100%	1,307	119	283	587	319
Multi-Family						
Natural Gas ^a	42%	139	22	40	29	48
Electricity	56%	185	S	15	134	35
Oil	1%	3	3	Z	Z	Z
Other	Z	Z	Z	Z	Z	1
Subtotal	100%	329	26	55	163	85
Combined						
Natural Gas ^a	64%	1,048	98	293	324	333
Electricity	33%	535	8	41	424	62
Oil	2%	38	38	S	S	S
Other	1%	11	S	S	S	6
Total	100%	1,636	145	338	750	404
Heat Pump^b						
Single-Family	22%	286	7	14	242	23
Multi-Family	28%	93	S	5	70	17
Combined	23%	379	7	19	312	40
Manufactured Homes^c						
		311	13	51	206	41

^aIncludes liquefied petroleum gas

^bSubset of electricity. Share information reflects total market

^cNot included in the totals for Single-Family, Multi-Family, or Combined. Heating fuel information not available for manufactured homes. Source: Census Bureau Website

S = Did not meet publication standards on the basis of response rate, associated standard error or consistency review.

Z = Less than 500 units

NOTE: Components may not add to totals due to rounding and withheld data (see note S).

Source: U.S. Bureau of the Census, *Characteristics of New Housing: 1999*.

TABLE 2

A COMPARISON OF 1998 & 1999 PRIVATE HOUSING COMPLETIONS
(Percent of Market)

	TOTAL U.S.		NORTHEAST		MIDWEST		SOUTH		WEST	
	1998	1999	1998	1999	1998	1999	1998	1999	1998	1999
Single-Family										
*Gas	70%	70%	64%	64%	91%	90%	51%	50%	88%	89%
Electricity	26%	27%	8%	6%	8%	9%	48%	50%	10%	8%
Oil	3%	3%	27%	30%	S	S	S	S	S	S
Other	1%	1%	S	S	S	1%	S	S	2%	2%
Multi-Family										
*Gas	44%	42%	90%	84%	71%	74%	20%	18%	56%	57%
Electricity	55%	56%	S	S	29%	27%	80%	82%	41%	42%
Oil	1%	1%	12%	10%	S	S	S	S	1%	S
Other	1%	S	S	S	S	S	S	S	2%	2%
Combined										
*Gas	64%	64%	69%	67%	88%	87%	44%	43%	81%	82%
Electricity	33%	33%	7%	6%	12%	12%	56%	56%	17%	15%
Oil	2%	3%	24%	26%	S	S	S	S	S	S
Other	1%	1%	S	S	S	S	S	S	2%	2%

*Includes liquefied petroleum gas

S = Did not meet publication standards on the basis of response rate, associated standard error or consistency review.

Source: U.S. Bureau of the Census, *Characteristics of New Housing: 1998 & 1999*.

Figure 2
Market Share for All Housing Completions
1989-1999

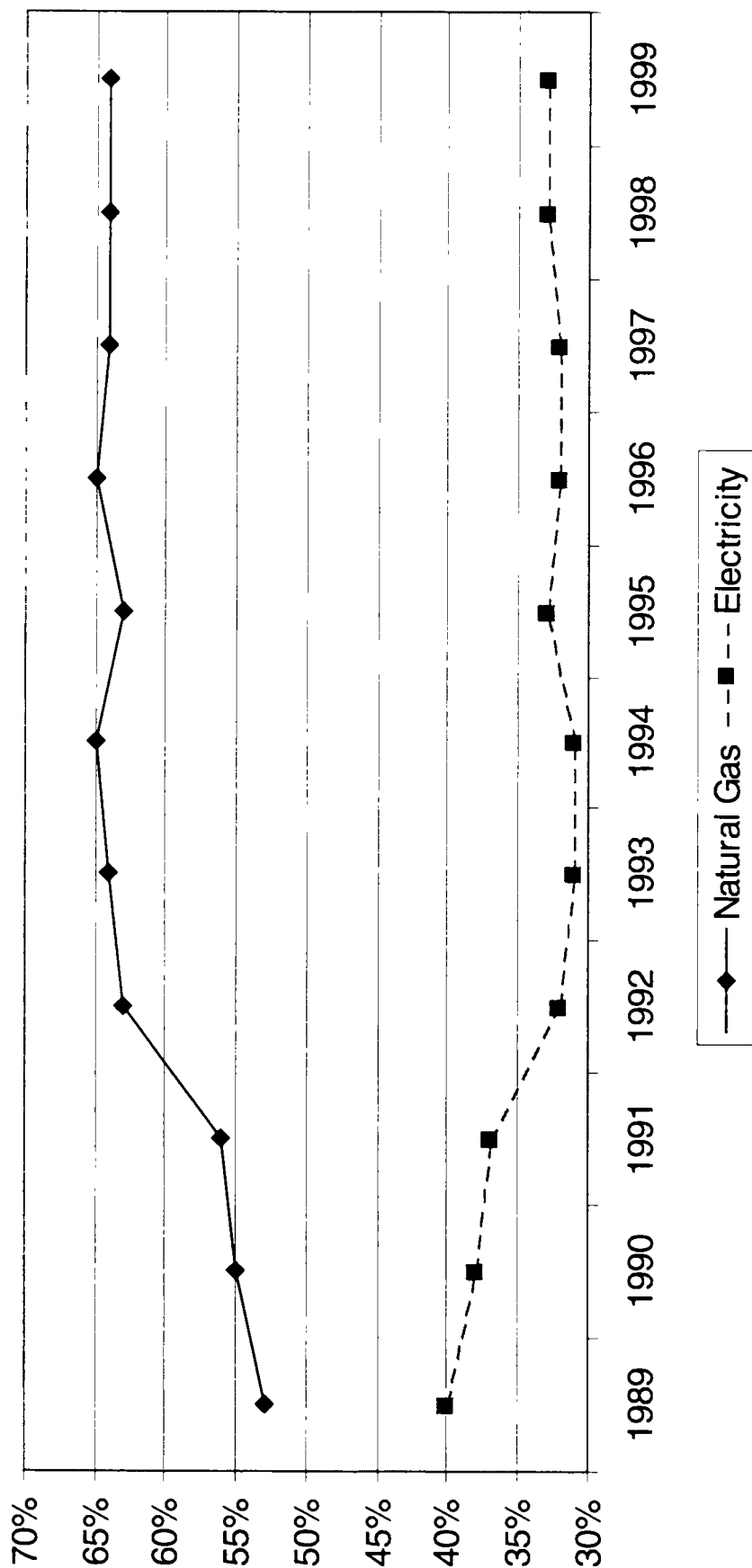


TABLE 3

MARKET SHARE OF PRIVATE HOUSING COMPLETIONS BY HEATING FUEL

1989 - 1999

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Single-Family											
Natural Gas ^a	58%	59%	60%	65%	66%	67%	67%	69%	69%	70%	70%
Electricity	34%	33%	32%	29%	29%	29%	28%	26%	26%	26%	27%
Oil	5%	5%	4%	4%	3%	3%	3%	3%	3%	3%	3%
Other	3%	3%	4%	2%	2%	1%	1%	1%	1%	1%	1%
Multi-Family											
Natural Gas ^a	42%	44%	41%	52%	52%	52%	47%	48%	45%	44%	42%
Electricity	54%	53%	55%	44%	45%	46%	51%	52%	54%	55%	56%
Oil	1%	1%	1%	1%	0%	0%	1%	S	S	1%	1%
Other	3%	2%	4%	3%	3%	2%	1%	S	S	1%	1%
Combined											
Natural Gas ^a	53%	55%	56%	63%	64%	65%	63%	65%	64%	64%	64%
Electricity	40%	38%	37%	32%	31%	31%	33%	32%	32%	33%	33%
Oil	4%	4%	4%	3%	3%	3%	3%	2%	3%	3%	3%
Other	3%	3%	3%	2%	2%	1%	1%	1%	1%	1%	1%

^a Includes liquefied petroleum gasSource: U.S. Bureau of the Census, *Characteristics of New Housing: Various Years*.

S = did not meet publication standards on the basis of response rate, associated standard error or consistency review.

Existing Housing

According to the U.S. Department of Energy, a little over 52 percent of existing housing units in 1997 used natural gas to heat their homes, accounting for 53 million of the total 101.5 million housing units in the U.S. (see Table 4).

Natural gas holds the largest market share in the Midwest, where 73.4 percent of the homes in that region have natural gas heating systems, compared with 71.9 percent in 1993. Natural gas has the lowest market share in the warmer climate of the South. About 38.4 percent of the houses in the South used natural gas space heating in 1997, an increase from 37.9 percent in 1993.

Natural gas heating also beats out the competition in the Northeast and West regions of the country. Natural gas house heating market share in the Northeast was 46.7 percent, a decrease from 48.3 in 1993. Much of this decrease has been due to the increase of electricity for heating which is currently used to heat 12.2 percent of the homes, up from 9.9 percent in 1993.

TABLE 4

**1997 HOUSEHEATING FUEL MARKET SHARE
BY U.S. CENSUS REGION AND HEATING EQUIPMENT (Existing Housing)**

(Percent Using)

	Northeast	Midwest	South	West	U.S.
Natural Gas	46.7	73.4	38.4	57.5	52.4
Warm-Air Furnace	25.8	61.3	26.5	39.1	37.3
Boiler/Steam Unit	18.7	9.7	1.5	3.0	7.1
Floor Furnace	Q	1.0	3.5	11.4	4.0
Room Heater	1.6	1.3	6.9	3.9	3.9
Electricity	12.2	12.4	48.7	33.0	29.6
Built-In Units	7.0	5.4	6.0	12.3	7.4
Warm-air Furnace	2.0	5.1	18.2	13.2	10.9
Heat Pump	1.9	1.2	22.4	4.7	9.6
Other	1.2	Q	2.1	2.8	1.8
Fuel Oil	35.0	4.3	3.2	1.0	9.2
Boiler/Steam Unit	23.7	Q	0.8	Q	5.0
Warm-Air Furnace	10.4	3.6	2.2	0.6	3.8
Other	0.9	Q	Q	Q	0.4
Wood	2.2	1.9	1.9	3.1	2.2
Heating Stove	1.5	0.9	1.3	2.5	1.5
Other	.7	Q	0.6	Q	0.7
LPG	1.2	7.1	5.5	2.6	4.4
Warm-air Furnace	0.8	6.0	2.7	2.0	3.0
Room Heater	Q	Q	2.1	Q	0.9
Other	Q	0.9	0.7	Q	0.6
Kerosene	1.9	Q	1.2	Q	0.9
Other	0.7	Q	Q	0.3	0.4
None	Q	Q	0.8	2.1	0.8

Q: Data withheld because sample size was less than 10 households or the relative standard error was greater than 50 percent.

Source: U.S. Department of Energy, Energy Information Administration, *Housing Characteristics 1997*

III. RESIDENTIAL NATURAL GAS CUSTOMERS IN 1999

Total Residential Customers

Based on the Energy Information Administration's Form 176 database, the total number of residential natural gas customers reached 58 million in 1999, a 1.6 percent increase over 1998. This information was used to develop the total number of residential customers shown in Table 5.

House Heating Customers

Based on survey responses, Census information, and AGA's Gas Facts: 1999 data, approximately 83 percent of all 1999 residential natural gas customers used gas to heat their homes (see Table 5). The Midwest region of the country had the highest penetration, in excess of 92 percent, while the Northeast region had the lowest penetration, around 74 percent.

Natural Gas Customer and Unit Additions

The number of natural gas customers increased 953,000 in 1999. The South Atlantic had the highest percentage increase in customers, with the Middle Atlantic and the West South Central regions registering very small increases.

Most of the additions were estimated to be from new construction. Of the total additions reported by the survey respondents, 66,873 (or 17 percent) were from conversions of customers from another fuel. Other factors that should be considered include reductions in the number of customers (demolition, conversion to another fuel, etc.) and reclassification of customers from master-metered apartments to individual meters.

Table 5
1999 GAS CUSTOMERS AND UNIT ADDITIONS

Region, Division and State	GAS CUSTOMERS			GAS UNIT ADDITIONS		
	Total ¹	House Heating ²	Percent Heating ²	Total ¹	Reported Conversions ³	Reported Conversions as a % of Total Reported Additions ³
UNITED STATES	58,200,710	48,306,589	83.0%	952,762	66,873	16.7%
NORTHEAST						
NEW ENGLAND	2,010,577	1,553,640	77.3%	30,071	5,445	52.2%
Connecticut	442,457	346,492	78.3%	3,741	2,547	60.7%
Maine	15,247	10,156	66.6%	-399	NA	NA
Massachusetts	1,232,887	938,331	76.1%	20,401	2,377	55.7%
New Hampshire	80,958	57,480	71.0%	2,172	NA	NA
Rhode Island	211,097	171,529	81.3%	2,889	86	NA
Vermont	27,931	19,831	71.0%	1,267	435	49.2%
MIDDLE ATLANTIC	8,884,077	6,307,695	71.0%	16,071	20,609	60.2%
New Jersey	2,245,904	2,059,059	91.7%	-6,344	8,060	57.3%
New York	4,151,469	2,692,368	64.9%	35,501	10,780	61.0%
Pennsylvania	2,486,704	2,213,430	89.0%	-13,086	1,769	70.3%
MIDWEST						
EAST NORTH CENTRAL	12,651,844	12,011,096	94.9%	219,051	2,432	13.5%
Illinois	3,594,071	3,290,488	91.6%	37,920	NA	NA
Indiana	1,570,253	1,541,292	98.2%	38,339	540	13.1%
Michigan	2,949,628	2,912,539	98.7%	45,930	NA	NA
Ohio	3,110,983	2,862,104	92.0%	60,021	1,802	14.6%
Wisconsin	1,426,909	1,364,318	95.6%	36,841	90	5.4%
WEST NORTH CENTRAL	4,826,886	4,440,735	92.0%	61,296	670	2.8%
Iowa	799,015	735,094	92.0%	8,628	NA	NA
Kansas	824,803	758,819	92.0%	5,821	NA	NA
Minnesota	1,190,190	1,174,723	98.7%	28,767	NA	NA
Missouri	1,311,865	1,287,234	98.1%	4,302	NA	NA
Nebraska	460,173	454,349	98.7%	7,963	94	2.8%
North Dakota	104,051	102,123	98.1%	2,121	92	NA
South Dakota	136,789	125,846	92.0%	3,694	484	NA
SOUTH						
SOUTH ATLANTIC	6,034,798	4,888,186	81.0%	234,878	14,952	20.9%
Delaware	115,961	105,834	91.3%	3,454	NA	NA
District of Columbia	137,206	116,299	84.8%	4,339	NA	NA
Florida	556,628	111,326	20.0%	13,858	NA	NA
Georgia	1,732,865	1,403,621	81.0%	74,747	NA	NA
Maryland	939,029	835,397	89.0%	37,574	2,334	18.2%
North Carolina	815,908	722,563	88.6%	38,103	6,707	31.8%
South Carolina	473,799	408,438	86.2%	13,676	2,189	43.4%
Virginia	893,887	858,578	96.0%	46,731	3,722	39.9%
West Virginia	369,515	345,662	93.5%	2,396	NA	NA
EAST SOUTH CENTRAL	2,852,538	2,310,556	81.0%	30,453	4,435	48.7%
Alabama	775,311	628,002	81.0%	-9,607	344	63.9%
Kentucky	735,371	595,651	81.0%	7,856	NA	NA
Mississippi	426,352	345,345	81.0%	3,084	598	82.7%
Tennessee	915,504	741,558	81.0%	29,120	3,493	44.4%
WEST SOUTH CENTRAL	5,997,804	4,858,221	81.0%	10,138	3	0.2%
Arkansas	554,121	537,495	97.0%	6,735	NA	NA
Louisiana	961,923	779,158	81.0%	-689	NA	NA
Oklahoma	867,898	702,997	81.0%	-8,669	NA	NA
Texas	3,613,862	3,074,902	85.1%	12,761	3	0.2%
WEST						
MOUNTAIN	4,218,179	3,501,089	83.0%	148,262	5,713	6.3%
Arizona	802,469	666,049	83.0%	38,302	NA	NA
Colorado	1,265,032	1,049,977	83.0%	41,599	215	9.1%
Idaho	227,807	189,080	83.0%	13,938	2,876	27.1%
Montana	222,114	184,355	83.0%	3,196	45	NA
Nevada	490,029	406,724	83.0%	31,292	2,463	3.3%
New Mexico	473,375	392,901	83.0%	19,310	NA	NA
Utah	609,603	505,970	83.0%	314	NA	NA
Wyoming	127,750	106,033	83.0%	311	114	16.9%
PACIFIC	10,731,942	8,907,512	83.0%	217,849	12,614	42.4%
Alaska	88,924	73,807	83.0%	2,681	NA	NA
California	9,331,206	7,744,901	83.0%	149,278	NA	NA
Hawaii	30,708	6,142	20.0%	-210	NA	NA
Oregon	502,000	472,768	94.2%	24,204	9,269	46.1%
Washington	779,104	588,535	75.5%	41,896	3,345	34.7%

NA = Insufficient data available due to lack of survey response.

¹ = Derived from Energy Information Administration Form 176 Database (see Appendix 3)

² = Derived from survey responses, Gas Facts 1999 data, and Census information

³ = Based on survey responses only, does not reflect entire population

House Heating Conversions

In 1999, 66,873 housing units were converted from another fuel to natural gas (see Tables 5 and 6), a four percent increase compared with last year's level of conversions. The highest level of conversion activity came from the Middle Atlantic region, with the South Atlantic and Pacific regions also exhibiting high numbers of conversions. Hardly any conversions were reported in the West South Central region.

The respondents were asked to provide a breakdown of conversions by fuel type. Based on these data, fuel oil conversions to natural gas totaled 8,805 in 1999. Fuel oil conversions in the Northeast region accounted for almost half of these conversions, an area of the country where natural gas-to-oil competition is most fierce.

Based on these data, 15,702 units, or 23.5 percent, were conversions from electricity to natural gas. Electricity conversions were most prevalent in the Pacific region with over 6,000 conversions. For the most part, respondents were unable to identify the original heating source for the conversions, with 43,366 (63 percent) customers listed as Other/Unknown.