

# Bureau of the Census Statistical Brief

## Housing in Metropolitan Areas — Home Heating Fuel

From natural gas to solar power, we Americans use a wide variety of energy sources to heat our homes. As you'll see in this Brief, the fuel we use is determined, to an extent, by where we live.

This Brief is one of a series that uses data collected in the 1990 Census of Population and Housing to examine the characteristics of housing in America's metropolitan areas (MA's). This Brief examines the range of fuels *occupied* housing units used as their main heating source. There are nine major categories of fuel types, including none.

The MA's used here correspond to the definitions that were in place in 1990. The count of 335 MA's equals the total number of MSA's (metropolitan statistical areas) and PMSA's (primary metropolitan statistical areas).

PMSA's are aggregated into consolidated metropolitan statistical areas, not discussed in this Brief.

### Gas was the predominate home heating fuel in metropolitan areas.

The majority of the Nation's metropolitan homes were heated by gas, either utility or bottled

(56 percent and 3 percent, respectively). The next most common home heating fuels were electricity and fuel oil or kerosene, used by 26 percent and 12 percent of units, respectively. The remaining 3 percent used either some other fuel, or none at all.

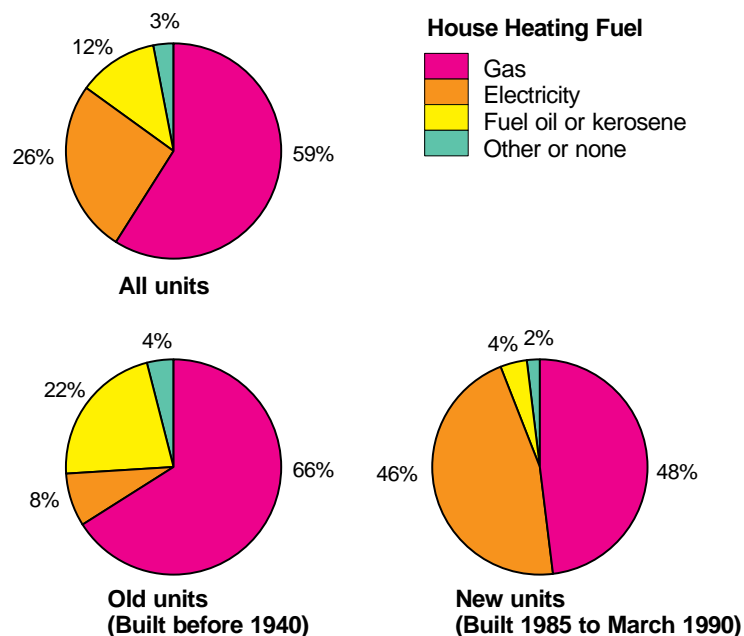
A home's chances of using a particular fuel varied by when it was built. For instance, the percentage of "new" homes (those built between 1985 and March 1990)

heated by electricity was nearly 6 times that of "old" homes (those built prior to 1940). Conversely, the percentage of old units that used fuel oil or kerosene was about 5 times that of new units. (See graph below.)

As mentioned earlier, the likelihood of a home using a given fuel also depended on *where it was located*. The next several sections examine where specific energy sources were most prevalent.

### For New Homes, Gas or Electricity Was Nearly Always the Choice, While for Old Homes, Gas and Fuel Oil Predominated

Distribution of occupied housing units inside metro areas, by year structure built and primary fuel used for house heating: 1990



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BUREAU OF THE CENSUS

**Metro Area Rankings by House Heating Fuel**

(Metro areas with 1 million or more persons)

Percent of occupied housing units using specified fuel as the primary fuel for house heating, by metro area: 1990

Metropolitan Area	Gas		Electricity		Fuel Oil, Kerosene, etc		Other or None	
	Percent	Rank	Percent	Rank	Percent	Rank	Percent	Rank
Anaheim-Santa Ana, CA PMSA	81.1%	10	17.9%	27	0.0%	46	1.0%	38
Atlanta, GA MSA	77.0	15	20.6	23	0.7	28	1.6	28
Baltimore, MD MSA	47.3	33	27.3	17	23.2	8	2.1	17
Bergen-Passaic, NJ PMSA	68.9	21	6.5	43	23.8	7	0.8	40
Boston, MA PMSA	39.6	36	13.2	30	45.7	2	1.6	28
Charlotte-Gastonia-Rock Hill, NC-SC MSA	35.6	38	43.3	11	16.3	10	4.7	5
Chicago, IL PMSA	87.8	3	9.1	36	1.2	26	1.9	22
Cincinnati, OH-KY-IN PMSA	63.1	24	25.5	19	8.4	17	3.0	7
Cleveland, OH PMSA	85.1	5	9.4	35	3.4	23	2.1	17
Columbus, OH MSA	74.5	17	18.4	26	4.9	21	2.1	17
Dallas, TX PMSA	51.8	32	47.7	8	0.1	38	0.5	46
Denver, CO PMSA	84.7	6	12.9	32	0.2	33	2.2	16
Detroit, MI PMSA	91.2	2	4.6	46	2.8	24	1.4	33
Fort Lauderdale-Hollywood-Pompano Beach, FL PMSA	6.6	46	90.6	1	0.5	29	2.4	13
Fort Worth-Arlington, TX PMSA	46.1	34	53.3	6	0.1	38	0.6	44
Houston, TX PMSA	53.9	30	45.3	9	0.1	38	0.7	43
Indianapolis, IN MSA	67.5	22	24.6	20	5.6	19	2.3	15
Kansas City, MO-KS MSA	86.9	4	11.0	34	0.2	33	1.8	25
Los Angeles-Long Beach, CA PMSA	82.9	9	14.9	28	0.1	38	2.1	17
Miami-Hialeah, FL PMSA	9.6	45	84.7	2	0.9	27	4.8	4
Middlesex-Somerset-Hunterdon, NJ PMSA	65.1	23	8.7	39	25.1	6	1.1	36
Milwaukee, WI PMSA	81.0	11	7.2	40	10.1	15	1.7	26
Minneapolis-St. Paul, MN-WI MSA	83.7	8	9.0	37	4.4	22	3.0	7
Nassau-Suffolk, NY PMSA	27.4	42	5.3	45	66.5	1	0.8	40
New Orleans, LA MSA	62.2	26	37.1	13	0.1	38	0.6	44
New York, NY PMSA	45.9	35	6.5	43	44.8	3	2.8	11
Newark, NJ PMSA	54.9	29	6.8	41	36.7	4	1.6	28
Norfolk-Virginia Beach- Newport News, VA MSA	37.4	37	45.2	10	14.8	11	2.6	12
Oakland, CA PMSA	78.8	13	19.1	24	0.2	33	1.9	22
Orlando, FL MSA	12.4	43	80.2	4	6.2	18	1.1	36
Philadelphia, PA-NJ PMSA	56.7	28	13.1	31	28.7	5	1.5	32
Phoenix, AZ MSA	32.8	40	66.3	5	0.1	38	0.9	39
Pittsburgh, PA PMSA	80.0	12	8.8	38	8.8	16	2.4	13
Portland, OR PMSA	34.6	39	40.5	12	17.0	9	7.9	1
Riverside-San Bernardino, CA PMSA	84.3	7	13.6	29	0.1	38	2.0	21
Rochester, NY MSA	71.4	19	12.7	33	12.0	14	3.8	6
Sacramento, CA MSA	59.9	27	32.9	16	0.4	30	6.9	2
Salt Lake City-Ogden, UT MSA	91.9	1	6.7	42	0.2	33	1.3	34
San Antonio, TX MSA	62.4	25	36.6	14	0.1	38	0.8	40
San Diego, CA MSA	69.4	20	27.2	18	0.4	30	3.0	7
San Francisco, CA PMSA	75.0	16	21.7	22	0.4	30	3.0	7
San Jose, CA PMSA	74.1	18	24.1	21	0.2	33	1.6	28
Seattle, WA PMSA	30.6	41	51.1	7	12.2	12	6.1	3
St. Louis, MO-IL MSA	77.3	14	18.6	25	2.2	25	1.9	22
Tampa-St. Petersburg-Clearwater, FL PMSA	11.1	44	82.1	3	5.6	19	1.2	35
Washington, DC-MD-VA MSA	52.0	31	34.1	15	12.2	12	1.7	26

**Gas use was particularly common in the Midwest and West.**

Four of the five MA's where at least 90 percent of homes were heated by gas were located in these two regions. Salt Lake City-Ogden, UT (92 percent), led the Nation, followed by Detroit, MI; Davenport-Rock Island-Moline, IA-IL; Buffalo, NY; and Provo-Orem, UT. Buffalo, which led the Northeast, was the lone area outside the West or Midwest that even made the national top *ten* in gas use. Amarillo, TX (87 percent), was the Southern leader.

Large metro areas (population over 1 million) followed the same pattern. (See table on page 2.) Of the 12 with the highest percentage of gas use, all except Pittsburgh, PA were located in the Midwest or West. Gas was least predominant, on the other hand, in the four Florida MA's — Fort Lauderdale-Hollywood-Pompano Beach, Miami-Hialeah, Tampa-St. Petersburg-Clearwater, and Orlando.

**Most electricity users were in the South or West.**

Together, these two regions contained the 70 metro areas where homes were most likely to be heated by electricity. But one Southern State in particular — Florida — was the Nation's electricity capital. It was home to all of the top six (and 10 of the top 11) MA's. Leading the United States was Naples, where electricity heated 93 percent of homes. Next in line (and also surpassing the 90-percent mark) were Fort Myers-Cape Coral, West Palm Beach-Boca Raton-Delray Beach, and Fort Lauderdale-Hollywood-Pompano Beach. Overall, 20 percent of the Nation's metropolitan electricity-heated homes were found in the Sunshine State alone.

Looking at the large metro areas only, we see that 18 of the electricity top 20 were located in the South or West. (See table.) The

exceptions were Cincinnati, OH-KY-IN, and Indianapolis, IN.

**Fuel oil and kerosene were most popular in the Northeast.**

The Northeast was the location of every one of the 30 metro areas where liquid fuels (including fuel oil and kerosene) were most commonly used. The two national leaders — Bangor (where 80 percent of homes were heated by a liquid fuel) and Lewiston-Auburn (75 percent) — were both in Maine. These were the only MA's in the country that topped the 70-percent barrier.

Once again, large metro areas followed the same pattern as all MA's. (See table.) The top seven in liquid fuel use were in the Northeast, with Nassau-Suffolk, NY at 67 percent, leading the pack. Baltimore, MD, at 23 percent, was the highest-ranked metro area outside the Northeast.

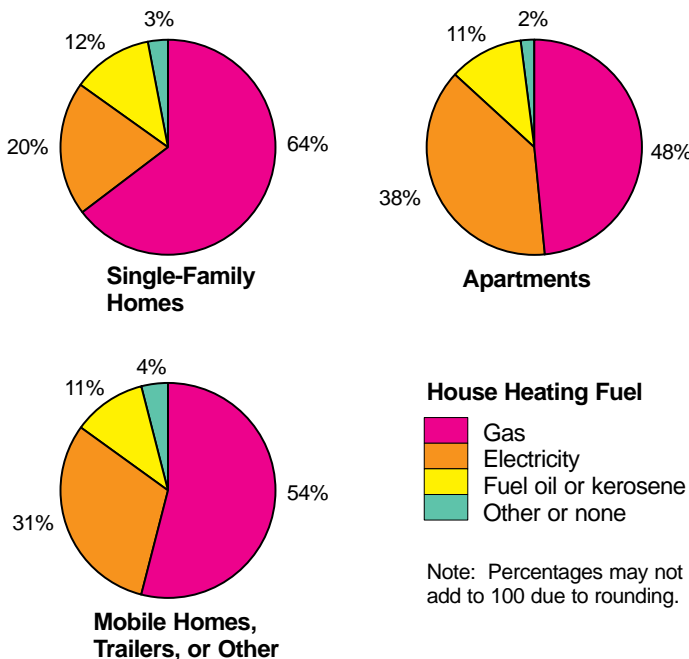
**Fuels that were little-used nationally were actually common in some metro areas ....**

Nationally, coal or coke, wood, and solar energy were practically non-existent as home heating sources. But not so in some individual metro areas. To illustrate —

- Coal or coke was the main source of heat for 16 percent of residences in Johnstown, PA, making that area the Nation's coal/coke capital. Eight of the 10 metros with the highest percentage of homes using coal or coke (3 percent or more) were in Pennsylvania. As a result, the Keystone State was home to the majority (54 percent) of all metro housing units in the U.S. which used this fuel.
- Wood was used to heat 28 percent of homes in Redding, CA, and 22 percent in Medford, OR. The six MA's where wood use was next-most common were scattered

**Gas Led the Way Among Each Structure Type**

Distribution of occupied housing units inside metro areas, by structure type and primary fuel used for house heating: 1990



throughout the West and — like Redding and Medford — were usually fairly small in terms of number of households.

- Solar energy was most widely used in Santa Fe, NM (by 2 percent of residences), and Honolulu, HI (by just over 1 percent). All other 333 MA's were below 1 percent.

**.... while some of our Nation's metropolitan households didn't use any house heating fuel at all.**

Many of them (almost one-third) could be found in a single metro area — tropical Honolulu, HI, where 53 percent of homes had no heat. To show you how large a proportion this is, Miami-Hialeah, FL, which had the second-highest percentage of such households, stood at only 5 percent. (Though, as recently as 1950, two-thirds of homes there didn't have heat.)

**Usage patterns were similar across structure types.**

Gas was the most widely used fuel among each of the 3 structure types — single-family home; apartment; and mobile home, trailer, or other. The percentage using it, however, shows some variation by structure type. Electricity usage varied as well, but fuel oil/kerosene use virtually did not. (See graph on page 3.)

**Patterns changed dramatically between 1950 and 1990.**

Back in 1950, coal was king, as just over one-third of households nationally used it or coke for heating. But coal or coke was little-used (3 percent) by 1970 and almost never-used (less than one-half of 1 percent) by 1990. We've also seen vastly diminished percentages over the years for the fuel oil/kerosene and "other or none" categories. On the other hand, gas use more than doubled between 1950 and 1970, to 61 percent, and remained high in 1990. And the use of electricity rose substantially over both periods. Consequently, this fuel went from being almost unheard of as

a home heating source in 1950 to the second-leading fuel in 1990. (See graph below.)

**More information:**

*Subject Summary Tape File 7 (Metropolitan Housing Characteristics)* presents 1990 census data for States and MA's. Statistics on house heating fuel used are cross-tabulated by items such as household income and housing costs. *SSTF 7* comes on both computer tape and CD-ROM. Call Customer Services (301-457-4100) for more information on 1990 census products.

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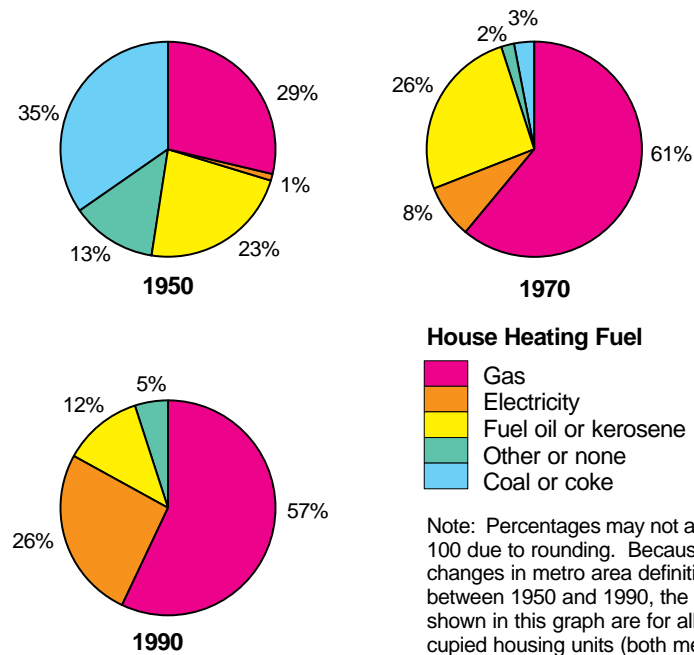
*This Brief is one of a series that presents information of current interest. It examines data from the 1990 census. A complete description of statistical quality and limitations is included in the SSTF 7 technical documentation.*

**Data for Smaller MA's**

The table on page 2 contains data only for the 46 largest metro areas. However, the information we show in it is available at a small charge for all 335 metropolitan areas. To order these printouts, call William Chapin (301-763-8553).

**While Electricity Use Has Skyrocketed, Coal Has Almost Vanished as a House Heating Source**

Distribution of occupied housing units, by primary fuel used for house heating: 1950, 1970, and 1990



Note: Percentages may not add to 100 due to rounding. Because of changes in metro area definitions between 1950 and 1990, the data shown in this graph are for all occupied housing units (both metro and nonmetro).