DOE/EIA-0314(93)

Housing Characteristics 1993

June 1995

Residential Energy Consumption Survey
Energy Information Administration

EIA

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Cover Photo:

A single-family home, which is one type of housing unit sampled in the Residential Energy Consumption Survey, is surrounded by mountains, beautiful blue sky, and white clouds. The single-family home was superimposed on this landscape, which is a scene in West VA in the southern region of the United States.

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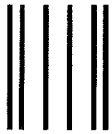

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Public Use Data Diskettes containing RECS data are available through the Office of Scientific and Technical Information and the National Technical Information Service. (See Appendix F, "Related EIA Publications on Energy Consumption," for ordering information.) Selected tables are also available on the Electronic Publishing System (EPUB). For questions about the contents of EPUB reports and data, call (202) 586-8800.

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Contents

At a Glance vii

1. Introduction 1
Background 1
RECS Data Used in This Report 3
Organization of the Report 3

2. Highlights of the 1993 RECS 5
Characteristics of New Homes 5
Emerging Technologies 6
Air-Conditioning 7
Lights 8
Appliances 8
Major Equipment Purchases 9
Residential Motor Vehicles 10
Energy Efficiency Measures 11

3. Detailed Tables 15
Organization of the Tables 15
Categories of Data in the Tables 16
Statistical Significance of Data 18
Quick-Reference Guide 20

Appendices
A. How the Survey Was Conducted 207
B. Quality of the Data 225
C. RECS Coverage Related to EIA Supply Surveys 239
D. Survey Forms 245
E. U.S. Climate Zone and Census Regions and Divisions Maps 249
F. Related EIA Publications on Energy Consumption 253

Glossary 259

Tables

2.1 Percent of U.S. Single-Family and Mobile Homes Having Insulation 13

HOUSEHOLD CHARACTERISTICS

3.1a.[1] Household Characteristics by Census Region and Climate Zone, Million U.S. Households, 1993 22
3.1b. Household Characteristics by Census Region and Climate Zone, Percent of U.S. Households, 1993 23
3.2a. Household Characteristics by Year of Construction, Million U.S. Households, 1993 30
3.2b. Household Characteristics by Year of Construction, Percent of U.S. Households, 1993 31
3.3a. Household Characteristics by Type and Ownership of Housing Unit, Million U.S. Households, 1993 38

[1]Titles in bold are available on a menu-driven electronic bulletin board (202/586-2557).

3.3b. Household Characteristics by Type and Ownership of Housing Unit, Percent of U.S. Households, 1993 39
3.4. Household Characteristics by Average Floorspace, 1993 46
3.5. Household Characteristics by Total Floorspace, 1993 50
3.6a. Household Characteristics by Family Income, Million U.S. Households, 1993 54
3.6b. Household Characteristics by Family Income, Percent of U.S. Households, 1993 55

SPACE HEATING

3.7a. Space Heating by Census Region and Climate Zone, Million U.S. Households, 1993 62
3.7b. Space Heating by Census Region and Climate Zone, Percent of U.S. Households, 1993 63
3.8a. Space Heating by Year of Construction, Million U.S. Households, 1993 66
3.8b. Space Heating by Year of Construction, Percent of U.S. Households, 1993 67
3.9a. Space Heating by Type and Ownership of Housing Unit, Million U.S. Households, 1993 70
3.9b. Space Heating by Type and Ownership of Housing Unit, Percent of U.S. Households, 1993 71
3.10. Space Heating by Average Floorspace, U.S. Households, 1993 74
3.11. Space Heating by Total Floorspace, U.S. Households, 1993 76
3.12a. Space Heating by Family Income, Million U.S. Households, 1993 78
3.12b. Space Heating by Family Income, Percent of U.S. Households, 1993 79

AIR-CONDITIONING

3.13. Total Air-Conditioning In U.S. Households, 1993 82
3.14. Central Air-Conditioning in U.S. Households, 1993 84
3.15. Room Air-Conditioning in U.S. Households, 1993 86

APPLIANCES

3.16a. Appliances by Census Region and Climate Zone, Million U.S. Households, 1993 88
3.16b. Appliances by Census Region and Climate Zone, Percent of U.S. Households, 1993 89
3.17a. Appliances by Year of Construction, Million U.S. Households, 1993 96
3.17b. Appliances by Year of Construction, Percent of U.S. Households, 1993 97
3.18a. Appliances by Type and Ownership of Housing Unit, Million U.S. Households, 1993 104
3.18b. Appliances by Type and Ownership of Housing Unit, Percent of U.S. Households, 1993 105
3.19a. Appliances by Family Income, Million U.S. Households, 1993 112
3.19b. Appliances by Family Income, Percent of U.S. Households, 1993 113

LIGHT USAGE

3.20a. Light Usage by Census Region and Climate Zone, Million U.S. Households, 1993 120
3.20b. Light Usage by Census Region and Climate Zone, Percent of U.S. Households, 1993 121
3.21a. Light Usage by Type and Ownership of Housing Unit, Million U.S. Households, 1993 124
3.21b. Light Usage by Type and Ownership of Housing Unit, Percent of U.S. Households, 1993 125
3.22. Indoor Light Usage by Type of Bulb, U.S. Households, and Lights, 1993 128

USAGE INDICATORS

3.23a. Usage Indicators by Census Region and Climate Zone, Million U.S. Households, 1993 132
3.23b. Usage Indicators by Census Region and Climate Zone, Percent of U.S. Households, 1993 133
3.24a. Usage Indicators by Year of Construction, Million U.S. Households, 1993 138
3.24b. Usage Indicators by Year of Construction, Percent of U.S. Households, 1993 139
3.25a. Usage Indicators by Type and Ownership of Housing Unit, Million U.S. Households, 1993 144
3.25b. Usage Indicators by Type and Ownership of Housing Unit, Percent of U.S. Households, 1993 145
3.26a. Usage Indicators by Family Income, Million U.S. Households, 1993 150
3.26b. Usage Indicators by Family Income, Percent of U.S. Households, 1993 151

CONSERVATION

3.27a. Conservation by Census Region and Climate Zone, Million U.S. Households, 1993 156
3.27b. Conservation by Census Region and Climate Zone, Percent of U.S. Households, 1993 157
3.28a. Conservation by Year of Construction, Million U.S. Households, 1993 162
3.28b. Conservation by Year of Construction, Percent of U.S. Households, 1993 163
3.29a. Conservation by Type and Ownership of Housing Unit, Million U.S. Households, 1993 168
3.29b. Conservation by Type and Ownership of Housing Unit, Percent of U.S. Households, 1993 169
3.30a. Conservation by Family Income, Million U.S. Households, 1993 174
3.30b. Conservation by Family Income, Percent of U.S. Households, 1993 175

EQUIPMENT PURCHASE

3.31a. Equipment Purchase by Census Region and Climate Zone, Million U.S. Households, 1993 180
3.31b. Equipment Purchase by Census Region and Climate Zone, Percent of U.S. Households, 1993 181
3.32a. Equipment Purchase by Year of Construction, Million U.S. Households, 1993 186
3.32b. Equipment Purchase by Year of Construction, Percent of U.S. Households, 1993 187
3.33a. Equipment Purchase by Type and Ownership of Housing Unit, Million U.S. Households, 1993 192
3.33b. Equipment Purchase by Type and Ownership of Housing Unit, Percent of U.S. Households, 1993 193
3.34a. Equipment Purchase by Family Income, Million U.S. Households, 1993 198
3.34b. Equipment Purchase by Family Income, Percent of U.S. Households, 1993 199

A1. Relative Sampling Rates Based on Income Rating and Main Home-Heating Fuels: Housing Units Classified as Built Before 1987 210
A2. Poverty Status in 1993 and Home-Heating Fuel in 1993 RECS Main and Supplemental Low-Income Sample 211
A3. Housing Units Constructed in 1987 or Later in 1993 RECS: Basic and Supplemental New Construction Samples 212
A4. Interviews Completed by Stage in the 1993 RECS 215
A5. Response Rates in the 1993 RECS by Region, Urban Status, and Type of Structure 216
A6. U.S. Population Estimates Used as Controls in Ratio Adjustment of Sampling Weights in the 1993 RECS 219
A7. Imputation Methods Used for the 1993 RECS Household Questionnaire 220
A8. Household Questionnaire Items Most Frequently Imputed in the 1993 RECS 221
B1. Definition of Poverty, 1993 RECS 227
B2. Completeness of Data on Square Footage of Housing Units in the 1993 RECS 229
C1. Comparison of Residential Energy Consumption Estimates from the Consumption Survey and Supply Surveys, 1990 240

Illustrations

1.1 Increase in New Home-Sample Cases 2
2.1. Awareness and Use of New Energy-Saving Technologies in U.S. Households, 1993 7
2.2. Trends in Air-Conditioning, 1978 to 1993 7
2.3. Changes in Appliance Saturation, 1990 to 1993 9
2.4. Equipment Purchases 1990 Through 1993 10
2.5. Importance of Energy Efficiency and Price in New Equipment Purchases, 1990 Through 1993 10
2.6. Average Number of Vehicles per Household by Location of Household, 1993 10
2.7. Average Number of Vehicles per Household by Number of Drivers in the Household, 1993 11
2.8. Daytime Temperatures in U.S. Households, 1981, 1990, and 1993 12
3.1. Use of RSE Row and Column Factors 18
A1. Multistage Area Probability Sample Activities for the 1993 RECS 209

At a Glance

This report, *Housing Characteristics 1993*, presents statistics about the energy-related characteristics of U.S. households. These data were collected in the 1993 Residential Energy Consumption Survey (RECS)—the ninth in a series of nationwide energy consumption surveys conducted since 1978 by the Energy Information Administration of the U.S. Department of Energy. Over 7 thousand households were surveyed, representing 97 million households nationwide. A second report, to be released in late 1995, will present statistics on residential energy consumption and expenditures.

Interesting facts from the 1993 RECS are presented graphically on the following pages of this section.

- Housing characteristics by the four major Census regions
- Housing characteristics by the three major types of housing units: single-family homes, multifamily dwellings, and mobile homes
- Overview of a single-family house
  - Cutaway view of a house
  - Kitchen
  - Furnace/laundry room
- Square footage and rooms in U.S. housing units.
- Detailed data concerning windows

EIA RECS At a Glance

In the UNITED STATES, there are 96.6 million households

69% are single-family homes; 25% are apartments; and 6% are mobile homes.

Housing stock is oldest in the Northeast and Midwest and newest in the South.

45% of Single-family homes were built over a basement; 35% were built over a crawlspace; and 30% were built on a slab.*

Most housing units in the Northeast and Midwest were built over a basement.

Most housing units in the South and West were built on a slab or over a crawlspace.

48% had a garage or carport. These were more likely in the Midwest and West and least likely in the Northeast and South.

In the WEST there are 20.4 million households, 21% of all U.S. households

66% are Single-family homes
29% are Apartments
5% are Mobile homes

13% were built before 1940
23% were built after 1980

21% of Single-family homes were built over a basement*
47% were built over a crawlspace
40% were built on a slab

56% had a garage or carport

80% had natural gas available in their neighborhood
69% actually used natural gas

38% used air-conditioning**
27% used central air-conditioning

59% used natural gas for space heating
28% used electricity
5% used wood

In the MIDWEST there households, 24% of all

71% are Single-family homes
23% are Apartments
6% are Mobile homes

32% were built before 1940
18% were built after 1980

79% of Single-family homes were built over a basement*
30% were built over a crawlspace
14% were built on a slab

55% had a garage or carport

In the SOUTH there are 35% of all U.S. households

74% are Single-family homes
18% are Apartments
8% are Mobile homes

11% were built before 1940
34% were built after 1980

19% of Single-family homes were built over a basement*
44% were built over a crawlspace
43% were built on a slab

44% had a garage or carport

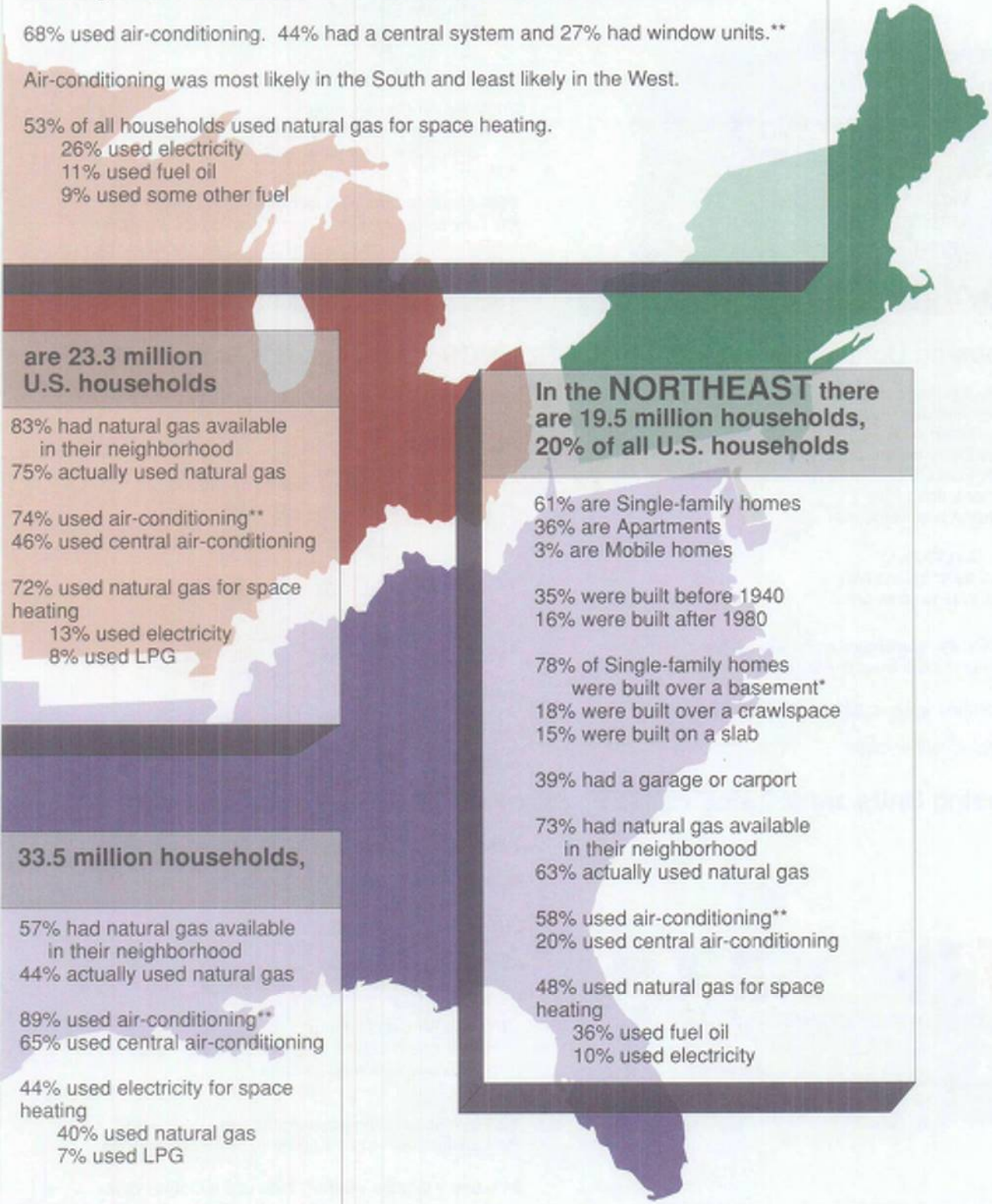
* Percentages sum to more than 100% because multiple catagories may apply.
**Some housing units have both central and wall/window units

71% had natural gas available in their neighborhood; 60% actually used natural gas. Natural gas was most available in the Midwest and least available in the South.

68% used air-conditioning. 44% had a central system and 27% had window units.**

Air-conditioning was most likely in the South and least likely in the West.

53% of all households used natural gas for space heating.
- 26% used electricity
- 11% used fuel oil
- 9% used some other fuel



are 23.3 million U.S. households

83% had natural gas available in their neighborhood
75% actually used natural gas

74% used air-conditioning**
46% used central air-conditioning

72% used natural gas for space heating
- 13% used electricity
- 8% used LPG

In the NORTHEAST there are 19.5 million households, 20% of all U.S. households

61% are Single-family homes
36% are Apartments
3% are Mobile homes

35% were built before 1940
16% were built after 1980

78% of Single-family homes were built over a basement*
18% were built over a crawlspace
15% were built on a slab

39% had a garage or carport

73% had natural gas available in their neighborhood
63% actually used natural gas

58% used air-conditioning**
20% used central air-conditioning

48% used natural gas for space heating
- 36% used fuel oil
- 10% used electricity

33.5 million households,

57% had natural gas available in their neighborhood
44% actually used natural gas

89% used air-conditioning**
65% used central air-conditioning

44% used electricity for space heating
- 40% used natural gas
- 7% used LPG

EIA RECS At a Glance

66.8 million Housing Units are SINGLE-FAMILY HOMES, 69% of all U.S. Housing Units

83% of these homes are owned, 17% are rented
Main Heating Fuel and Equipment:
- 56% use Natural Gas
- 21% use Electricity
- 11% use Fuel Oil
- 5% use LPG
- 1% use Kerosene

70% use Air Conditioning*
- 47% use a central system
- 25% use wall/window units

25% of single-family households were eligible for the Low-Income Home Energy Assistance Program

93% use a clothes washer, 88% use a clothes dryer

26% use a personal computer

24.2 million Housing Units are MULTIFAMILY DWELLINGS, 25% of all U.S. Housing Units

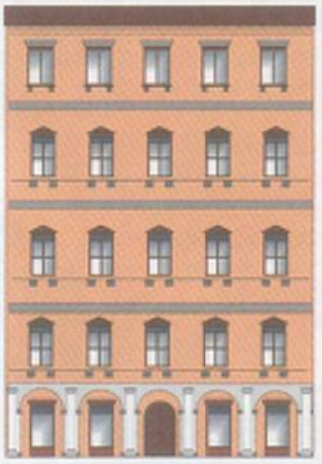
12% of these dwellings are owned, 88% are rented
Main Heating Fuel and Equipment:
- 48% use Natural Gas
- 39% use Electricity
- 10% use Fuel Oil
- Nearly none use LPG
- Nearly none use Kerosene

65% use Air Conditioning*
- 36% use a central system
- 30% use wall/window units

48% of multifamily households were eligible for the Low-Income Home Energy Assistance Program

31% use a clothes washer, 25% use a clothes dryer

18% use a personal computer



5.6 million Housing Units are MOBILE HOMES, 6% of all U.S. Housing Units

79% of these homes are owned, 21% are rented

Main Heating Fuel and Equipment:
- 32% use Natural Gas
- 27% use Electricity
- 22% use LPG
- 8% use Kerosene
- 5% use Fuel Oil

70% use Air Conditioning*
- 43% use a central system
- 29% use wall/window units

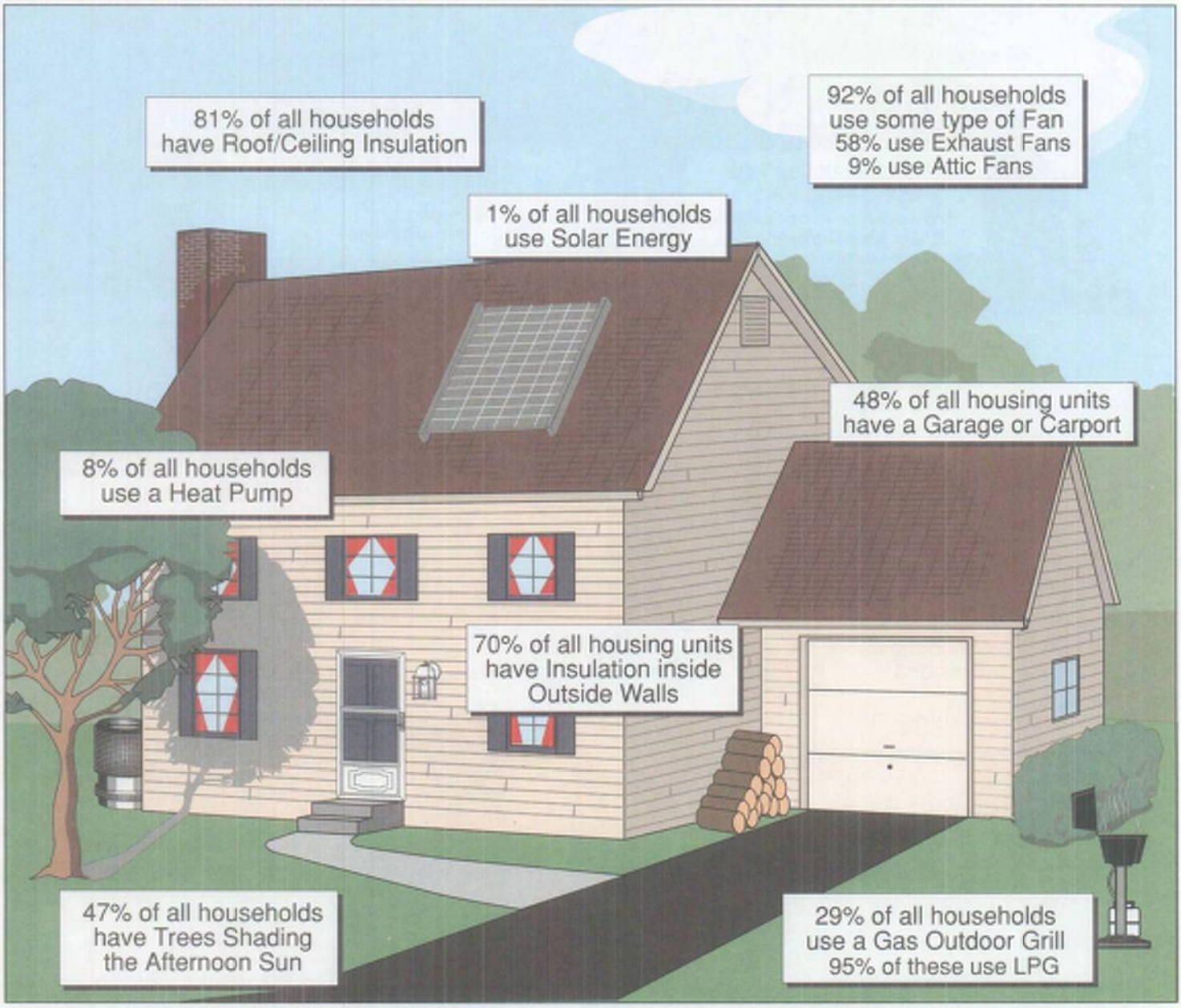
40% of mobile home households were eligible for the Low-Income Home Energy Assistance Program

84% use a clothes washer, 75% use a clothes dryer

11% use a personal computer

*Some housing units have both central systems and wall/window units

EIA RECS At a Glance



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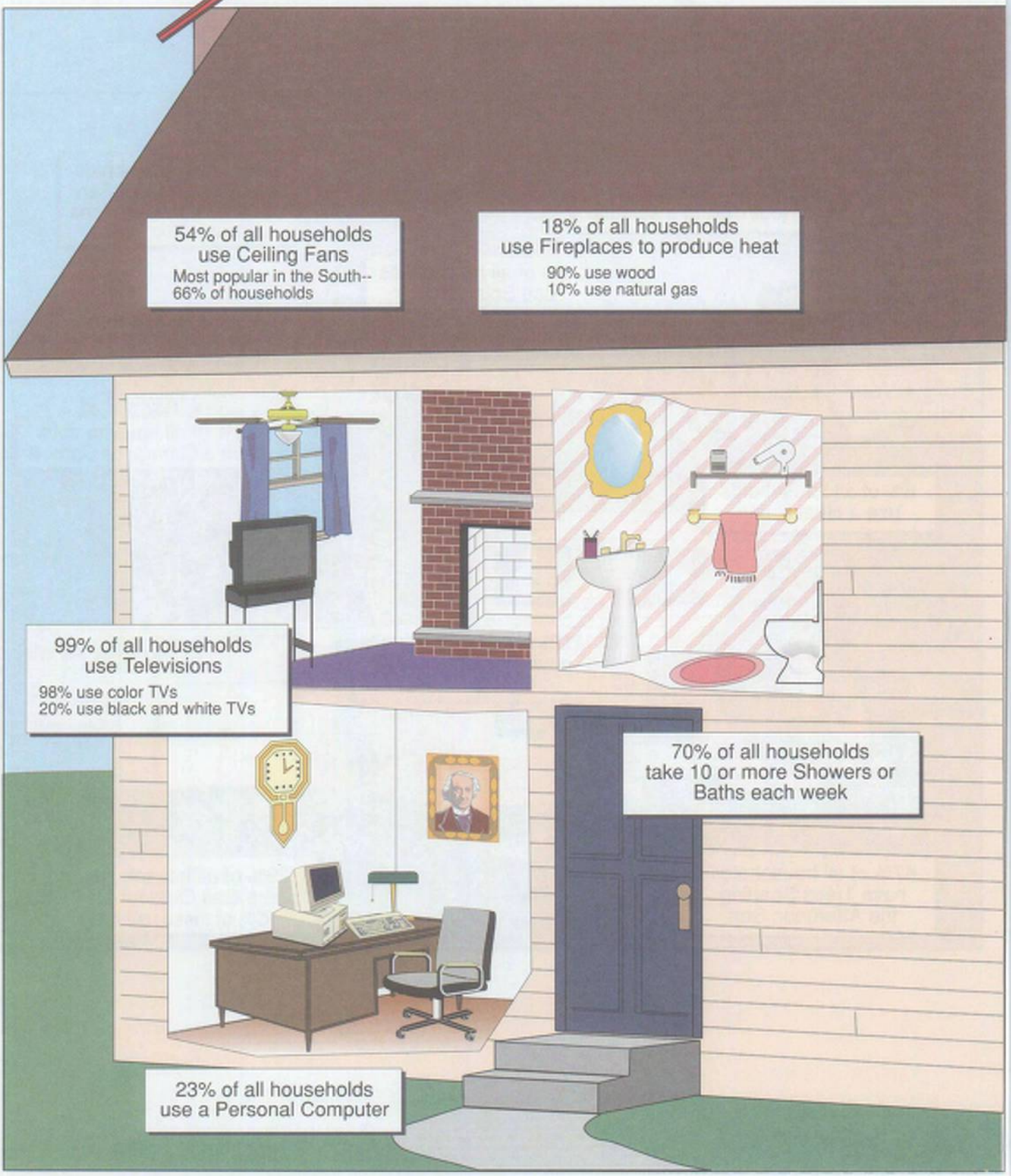


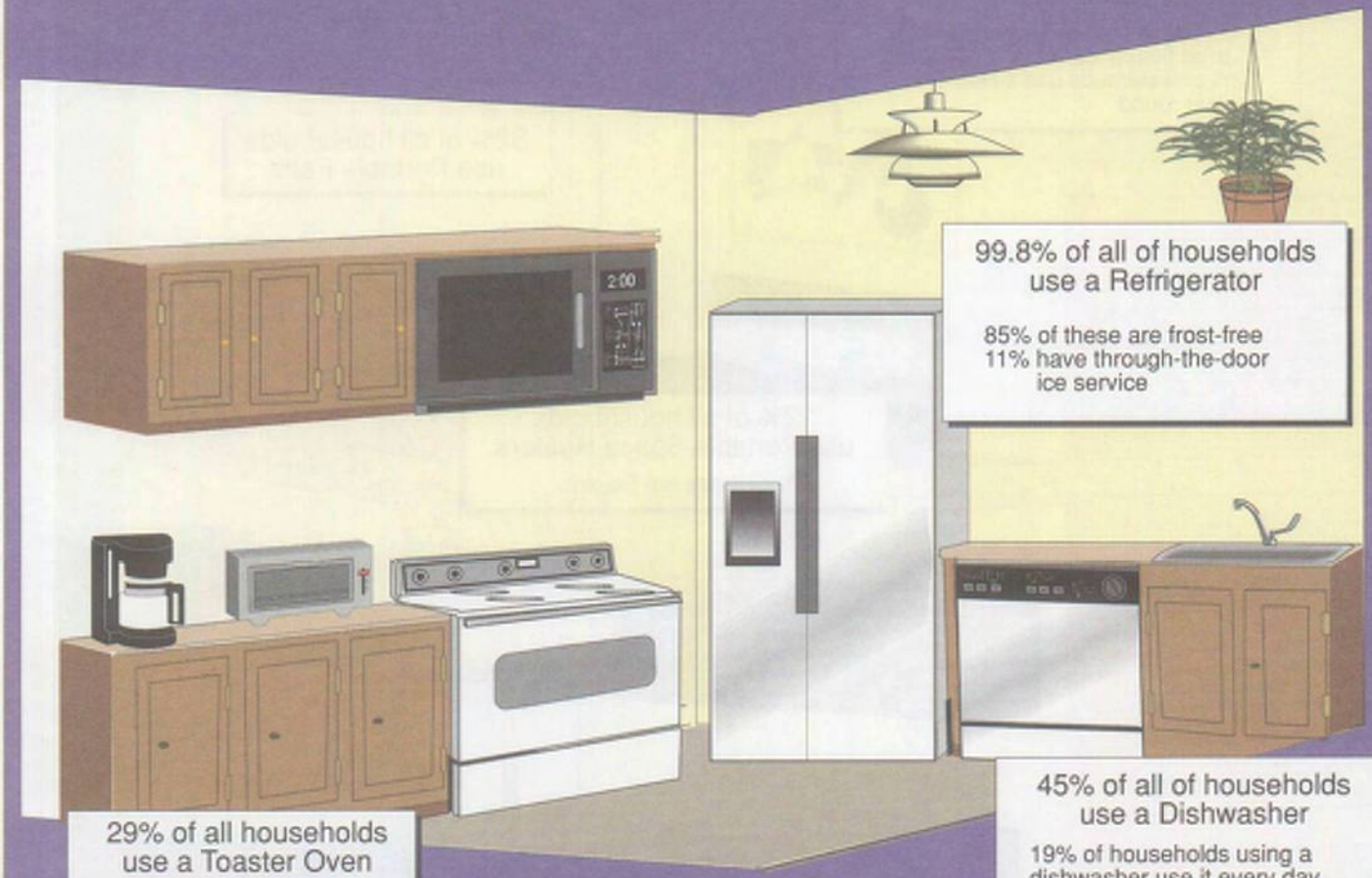
12% of all households
use Waterbed Heaters
Most popular in the Midwest -- 18%
of all households
83% of waterbeds use a Heater all
year round
52% of all households
use Portable Fans
12% of all households
use Portable Space Heaters
83% of these are Electric
39% of Refrigerators
are less than 5 years old

EIA RECS At a Glance

84% of all households use a Microwave Oven

51% of these are used for snacks, defrosting, or reheating
6% are used to do most or all cooking

80% of all households cook two or more hot meals each day



99.8% of all of households use a Refrigerator

85% of these are frost-free
11% have through-the-door ice service

29% of all households use a Toaster Oven

45% of all of households use a Dishwasher

19% of households using a dishwasher use it every day

99% of all households use a Cooking Range

62% of these are electric

98% of all households use an Oven

63% of these are electric

EIA RECS At a Glance

13% of all households use Well Water Pumps

20% of all Main Heating Equipment is less than 5 years old

28% of all Central Air-Conditioning Equipment is less than 5 years old

26% of all Water Heaters are less than 5 years old

99% of all households use Main Heating Equipment

53% use Natural Gas
26% use Electricity
11% use Fuel Oil

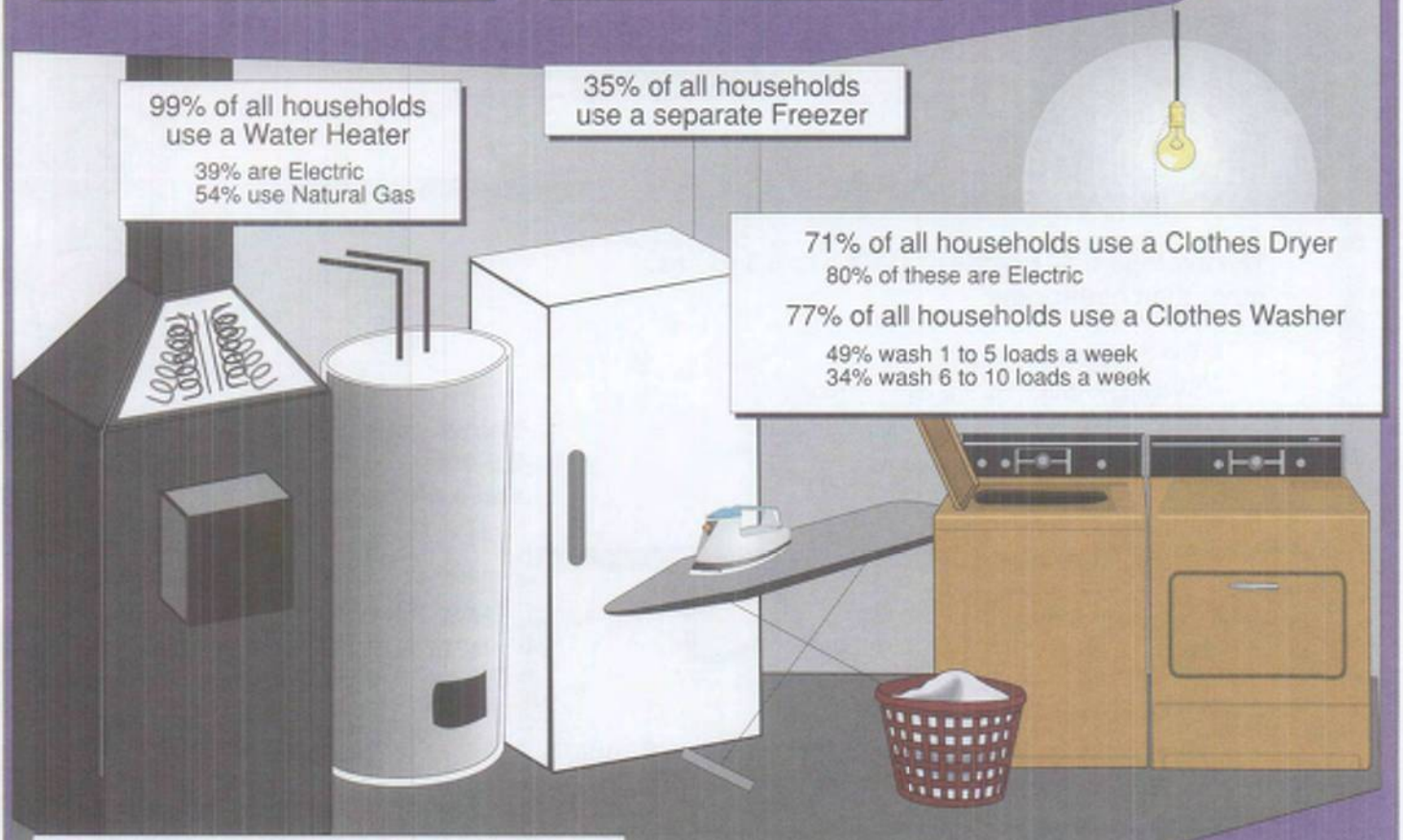
68% of all households use Air-Conditioning

44% have Central Air-Conditioning
27% have Window Units

99% of all households use a Water Heater

39% are Electric
54% use Natural Gas

35% of all households use a separate Freezer



71% of all households use a Clothes Dryer

80% of these are Electric

77% of all households use a Clothes Washer

49% wash 1 to 5 loads a week
34% wash 6 to 10 loads a week

14% of all households use a Humidifier

26% in the Midwest
8% in the South

9% of all households use a Dehumidifier

22% in the Midwest
13% in the Northeast

24% have insulation around Water Heater

30% have insulation around Hot Water Pipes

30% have insulation around Heating/Cooling Ducts

SQUARE-FOOTAGE AND NUMBER OF ROOMS IN U.S. HOUSING UNITS

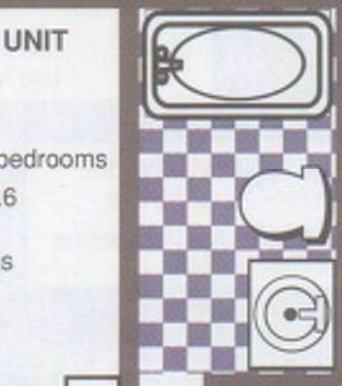
The average U.S. HOUSING UNIT had 2.6 bedrooms

The average:

SINGLE-FAMILY HOME had 3.0 bedrooms

MULTIFAMILY DWELLING had 1.6 bedrooms

MOBILE HOME had 2.4 bedrooms



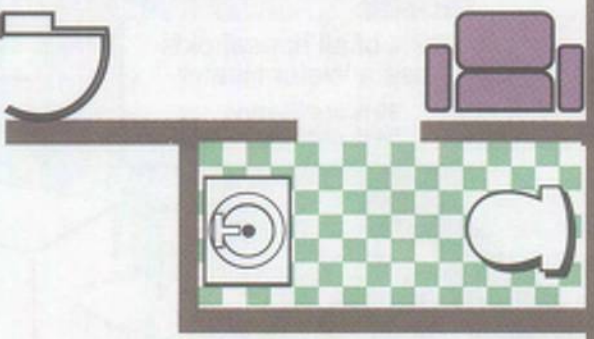
The average U.S. HOUSING UNIT had 1.4 complete bathrooms and 0.3 half bathrooms

The average:

SINGLE-FAMILY HOME had 1.5 complete and 0.3 half bathrooms

MULTIFAMILY DWELLING had 1.1 complete and 0.1 half bathrooms

MOBILE HOME had 1.4 complete and 0.1 half bathrooms



The average U.S. HOUSING UNIT had 5.5 rooms, other than bathrooms

The average:

SINGLE-FAMILY HOME had 6.2 rooms

MULTIFAMILY DWELLING had 3.8 rooms

MOBILE HOME had 4.5 rooms

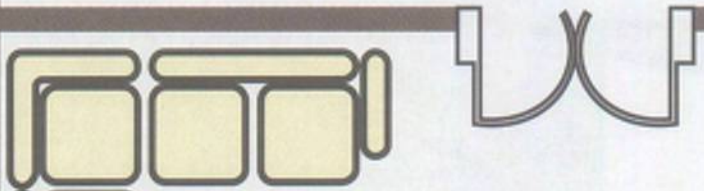
The average U.S. HOUSING UNIT had 2.9 other rooms, excluding bedrooms and bathrooms

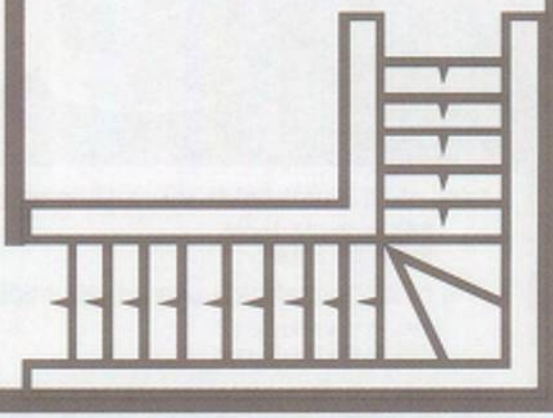
The average:

SINGLE-FAMILY HOME had 3.3 rooms

MULTIFAMILY DWELLING had 2.2 rooms

MOBILE HOME had 2.2 rooms





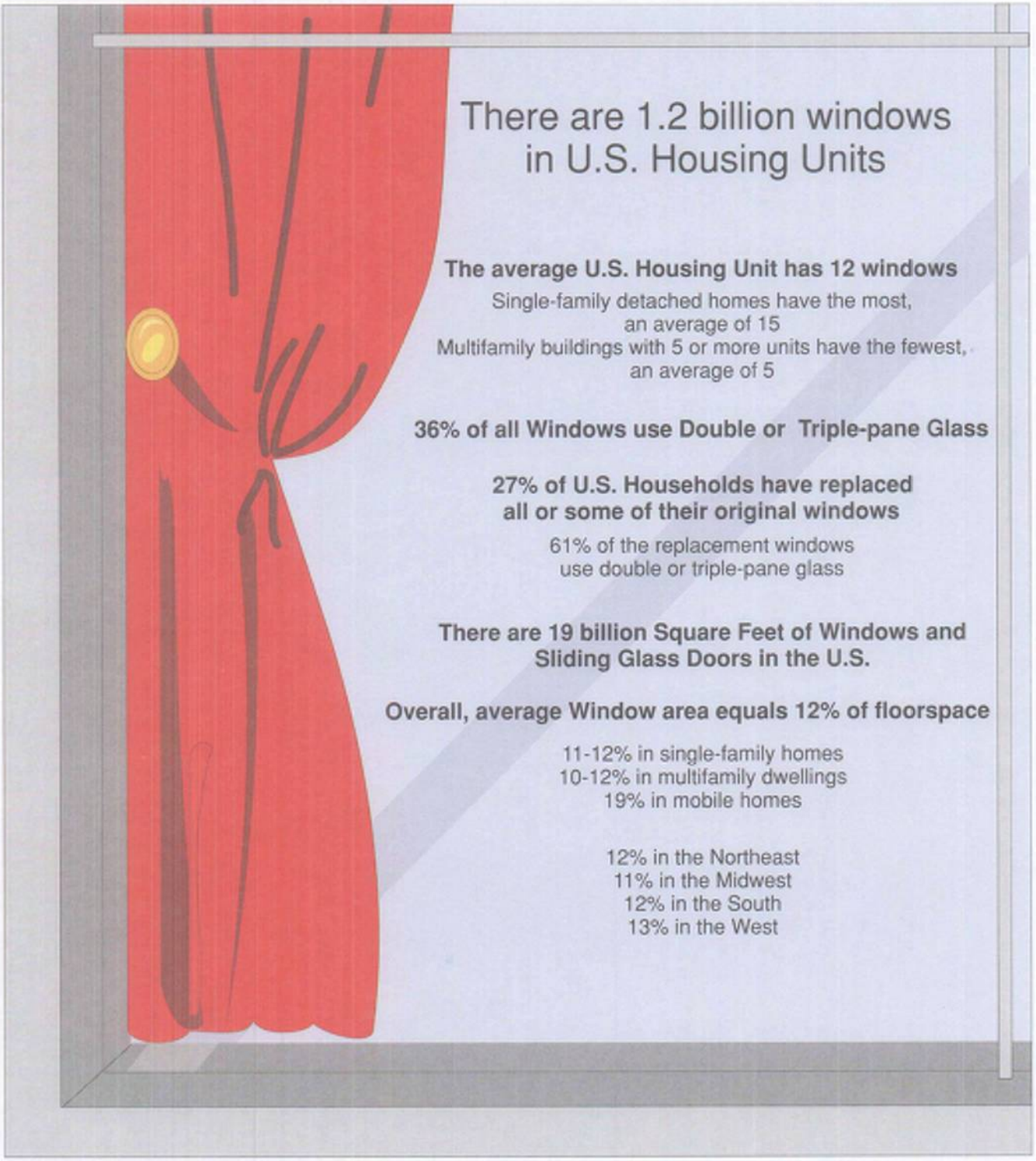
The average U.S. HOUSING UNIT had 1,875 square feet of which 1,630 square feet were heated

The average:

SINGLE-FAMILY HOME had 2,280 square feet of which 1,950 square feet were heated

MULTIFAMILY DWELLING had 970 square feet of which 920 square feet were heated

MOBILE HOME had 980 square feet of which 940 square feet were heated



There are 1.2 billion windows in U.S. Housing Units

The average U.S. Housing Unit has 12 windows

Single-family detached homes have the most, an average of 15
Multifamily buildings with 5 or more units have the fewest, an average of 5

36% of all Windows use Double or Triple-pane Glass

27% of U.S. Households have replaced all or some of their original windows

61% of the replacement windows use double or triple-pane glass

There are 19 billion Square Feet of Windows and Sliding Glass Doors in the U.S.

Overall, average Window area equals 12% of floorspace

11-12% in single-family homes
10-12% in multifamily dwellings
19% in mobile homes

12% in the Northeast
11% in the Midwest
12% in the South
13% in the West

1. Introduction

Housing Characteristics 1993, the first of two reports based on data from the 1993 Residential Energy Consumption Survey (RECS), provides information on energy use in residential housing units in the United States. This information includes the physical characteristics of the residential housing units, the appliances used, the number and characteristics of occupants, the fuels being used, and other energy-related characteristics. A second report, *Household Energy Consumption and Expenditures 1993*, will feature data on energy consumption and expenditures.

Background

EIA Surveys

Congress has mandated that EIA collect, analyze, and disseminate impartial, comprehensive data about energy--how much is produced, who uses it, and the purposes for which it is used. To comply with that Congressional mandate, the EIA conducts two types of surveys:[2]

- **Supply surveys** gather information annually, or more frequently, from energy suppliers and marketers on the quantities and prices of specific energy sources produced or supplied to the market. The results of the supply surveys are combined and published in fuel-specific EIA publications and in the *Monthly Energy Review*.

- **Consumption surveys** gather information every 2 or 3 years[3] directly from energy end users on the types of energy they use, along with information on the energy-related characteristics of households, commercial buildings, residential vehicles, and manufacturing establishments. The results of these surveys are published in energy-consumption reports, such as this report, and in special analytical reports.[4]

RECS Methodology

In 1984, EIA began conducting the RECS, a national sample survey of residential housing units and their energy suppliers, every 3 years. Previous surveys were conducted annually from 1978 to 1982. The RECS consists of three parts:

- EIA interviews **households** for information about fuels used, how fuels are used, energy-using appliances, structural features, energy-efficiency measures taken, and demographic characteristics of the household.

- EIA interviews the **rental agents** for those households that have any of their energy use included in their rent. This information is used to augment information from those households that may not be knowledgeable about the fuels used for space heating or water heating.

- After obtaining permission from respondents, EIA mails questionnaires to their **energy suppliers** to collect the actual billing data on energy consumption and expenditures.

[2]For information on the differences, see Energy Information Administration, *Energy Consumption by End-Use Sector, A Comparison of Measures by Consumption and Supply Surveys*, DOE/EIA-0533 (Washington, D.C., April 6, 1990). Appendix C of this report includes a summary of the differences for the residential sector.

[3]Beginning with the 1994 data year, data are collected from the manufacturing establishments every 2 years.

[4]See Appendix F, "Related EIA Publications on Energy Consumption," for a listing of publications from RECS and other EIA consumption surveys.

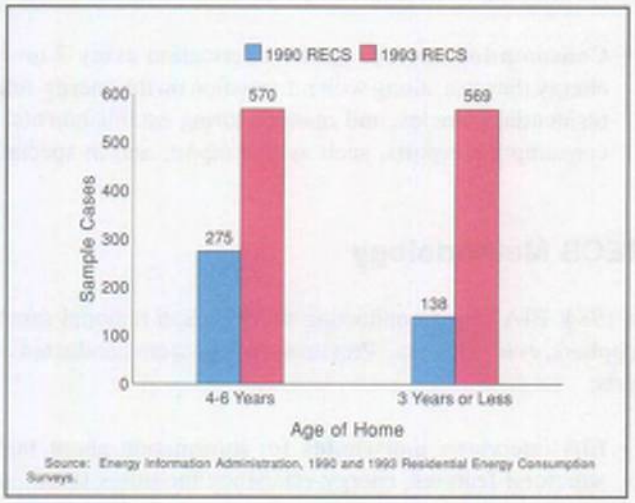
RECS Sample Revision

EIA made a major investment to update the sample design for the 1993 RECS to reflect the results of the 1990 Census.[5] Updating the sample design for the 1,610 RECS sample clusters requires producing about 5,000 maps, identifying boundaries of the sample location, sending personnel to each location to make lists of the housing units there, creating data bases of the lists, and checking the accuracy of the data bases.

Within each RECS sample cluster, the number of housing units changes through construction of new housing units, conversion of commercial space to housing units, demolition of existing housing units, conversion of residential units to other uses, and division of existing housing units into multiple units. Over the 10-year period between major revisions of the sample design, the number of housing units in some sample clusters will decline dramatically, while the number of housing units in other clusters will increase dramatically. Revising the sample design is like preventive maintenance—if it is not done periodically, the machine may cease to function.

As part of the redesign effort, a provision to sample new housing units at a higher rate than older housing units was built into the sample. This oversample of new housing units was included to provide more accurate and more precise data for this important segment of the housing stock. Both the redesign effort and the new housing units oversample increased the number of observations for new housing units for the 1990 RECS (Figure 1.1).

Figure 1.1. Increase in New Home Sample Cases



Source: Energy Information Administration, 1990 and 1993 Residential Energy Consumption Surveys.

Another feature of the 1993 sample design is a provision that allows for an increased geographic breakdown of the observations. Before the redesign, the observations could be classified by the nine Census Divisions. The 1993 design allows the observations to be classified by the nine Census Divisions and the four most populous States, which were California, New York, Texas, and Florida.

Data are presented in this report for the four Census regions, however, for the nine Census Divisions and four States, data will be available in the *Household Consumption and Expenditures 1993* report. The data files for the 1993 RECS will contain geographic identifiers for the nine Census Divisions and for the most populous States mentioned above.

[5]Energy Information Administration, *Sample Design for the Residential Energy Consumption Survey*, DOE/EIA-0555(94)/1 (August 1994).

RECS Data Used in This Report

The statistics published in this report are based on a sample of 7,111 households from the population of all primary, occupied residential housing units in the United States as of July 1993.[6] As a result, all of the statistics are estimates rather than exact measurements of the population. The 1993 RECS represents 96.6 million households in the 50 States and the District of Columbia. As described in Appendix B, "Quality of the Data," the accuracy of each estimate is indicated by the relative standard error (RSE). No estimates were published that were based on fewer than 10 sample households or that had an RSE greater than 50 percent. All the tables of estimates in the section titled "Detailed Tables" include corresponding RSE's that are calculated using row and column RSE factors.

EIA gratefully acknowledges the cooperation of the respondents for supplying the information used to produce the estimates in this report.

Organization of the Report

This introductory chapter is followed by two chapters: Chapter 2 highlights some of the more interesting survey findings and presents some data that are not included in the "Detailed Tables", Chapter 3 contains 60 tables that report information at the National level and four Census regions and for various Climate zones. In addition to data on the year the housing unit was constructed and family-income categories, the tables also contain data on single-family homes, apartments in two-to four-unit buildings, apartments in five or more units buildings, and mobile homes.

The tables in Chapter 3 are organized by the following categories: household and housing-unit characteristics (including fuels used), space heating, air-conditioning, appliances, lights, usage indicators, conservation, and major equipment purchases.

These chapters are followed by six technical appendices:

- Appendix A, "**How the Survey Was Conducted**," describes the sample design and data collection procedures.
- Appendix B, "**Quality of the Data**," discusses nonsampling error and sampling error that affect the accuracy and precision of the estimates.
- Appendix C, "**RECS Coverage Related to EIA Supply Surveys**," discusses differences between the estimates from the RECS and estimates from supply surveys.
- Appendix D, "**Survey Forms**," contains reproductions of the forms used to collect the data presented in this report.
- Appendix E, "**U.S. Climate Zones and Census Regions and Divisions Maps**," contains maps showing the Census regions and divisions and the climate zones by which the data in this report are organized.
- Appendix F, "**Related EIA Publications on Energy Consumption**," provides a list of related energy consumption publications for readers interested in earlier RECS publications or reports for other sectors.

A Glossary of statistical and technical terms used in this report follows the appendices.

[6]This represents a change from past RECS where the date was November of the survey year. The change was made to give greater weight to the consumption and expenditures data, which are collected for calendar year 1993 for which July 1993 is the midpoint. The change means the time separation between the date used to estimate the universe of households for the 1993 RECS is 2 2/3 years after the date used for the 1990 RECS. When calculating estimates of annual change, one needs to consider that the period covered was less than 3 years.

2. Highlights of the 1993 RECS

The 1993 Residential Energy Consumption Survey (RECS) collected new as well as more detailed data than were collected in previous surveys. These areas of expanded detail included the characteristics of new homes, emerging technologies, indoor and outdoor lighting, household appliances, equipment that had been replaced, and energy-efficiency measures. The 1993 RECS also updated the data collected in previous surveys, two examples of which include air-conditioning and residential vehicles.

The additional data collected during the 1993 RECS were largely in response to a user-needs study, which showed that EIA customers wanted more detailed information on energy-related characteristics.[7]

Characteristics of New Homes

RECS included a series of questions that were asked of all household respondents owning single-family homes built between 1988 and 1993. The questions were designed to measure the energy-efficiency awareness levels of occupants of new single-family homes. It was thought that the energy-efficiency awareness of respondents may be attributed to sales brochures and publicity about newer single-family homes. The new homeowners were asked about the efficiency of central air-conditioning and heating equipment, the use of zoned-heating, the amount of glass on the south versus north sides of the home, and the R-value of roof insulation. EIA found that many occupants of new homes had little information on the energy-related characteristics of their homes.

Cooling Equipment. Eighteen percent of new homeowners were unable to report whether or not they had a high-efficiency central air-conditioning system. Among those who did report, 92 percent reported that their equipment was high efficiency. Homeowners seem to attach a different meaning to high efficiency than would be indicated by an engineering definition:[8] they may define high-efficiency equipment as equipment that is new or meets the minimum standard.

Seventy-two percent of new homeowners were unable to report the size of their central air-conditioner. Among the 28 percent who reported a size, 16 percent reported it to be 3 tons or more; 6 percent reported a size of 2 1/2 tons; the remaining 6 percent reported the size of their air-conditioners to be 2 tons or less.

The size of the air-conditioner, which is usually determined by the amount of floorspace to be cooled, is an important consideration when constructing a new home. There has been evidence that units are often oversized, meaning they cool a smaller area than their size is designed for,[9] but this did not seem to be a major problem among the 1.3 million homeowners who reported the size of their air-conditioner in this study. Oversizing means the air-conditioner can quickly reduce the temperature because of its large size relative to the area cooled, but it may not run long enough to reduce the humidity to a comfortable level. For energy efficiency and comfort, it is better to undersize an air-conditioner than to oversize it. If 600 square feet of floorspace per ton is taken as a criterion, cooling less than that number would be an indication of oversizing. Thirty-six percent of the homeowners who reported the size of their air-conditioner were cooling less than 600 square feet per ton of capacity, indicating they may have oversized units.

[7]See Energy Information Administration, *User-Needs Study for the 1993 Residential Energy Consumption Survey*, DOE/EIA-0555(93)/2 (September 1993).

[8]The minimum standard for central air-conditioners and heat pumps was a Seasonal Energy Efficiency Rating (SEER) of 10, which took effect in 1992. The percentage of units shipped rated 10.5 SEER or above for the years 1990 through 1993 were: 1990--6.9 percent, 1991--11.3 percent, 1992--18.7 percent, and 1993--23.3 percent. These data were taken from a written communication dated February 1, 1995, from David Martz, Air-Conditioning and Refrigeration Institute.

[9]Leon Neal, "Air-Conditioner Efficiency in the Real World," *Home Energy* (May/June 1992), pp. 32-39.

Square Feet of Floorspace Cooled per Ton of Capacity

Floorspace	Percent
Less than 400	11
400 to 499	12
500 to 599	13
600 to 699	14
700 or More	51

Glass on South Side of Home. EIA wanted to ascertain whether new homes were being built with more windows on the south side to take advantage of passive solar heating. Of the homeowners who reported knowing whether their houses faced south, only 37 percent reported that their house had more glass on the south side than on the north side. The remaining 63 percent reported more glass on the north (35 percent), the same amount of glass on the south side as on the north side (23 percent), or no glass on the south side at all (5 percent). These figures suggest that new homes are not being constructed to take advantage of a southern exposure. One reason for this may be constraints placed on house orientation in urban areas (houses in rural areas were somewhat more likely to have glass on the south side--46 percent did so). Another reason may be that house design plans are not customized to a particular site.

Heating Equipment. Nineteen percent of new homeowners were unable to report whether or not they had high-efficiency heating equipment. Among the homeowners who did report, 90 percent reported having high-efficiency systems. However, what homeowners understand as "high efficiency" is different from industry standards of high efficiency, for most heating equipment is equal to or slightly above the minimum standards.[10] One explanation is that homeowners may equate "high efficiency" with being new. It is not uncommon for homeowners to think of new equipment in this way. Since the 1992 introduction of standards for gas furnaces—the most common type of new heating equipment—the average efficiency of new heating equipment has risen from 75 percent in 1987 to 83 percent in 1993.

Only 14 percent of the homeowners had zoned-heating systems, which maintain different temperatures in different parts of the house.

Insulation. Two out of five homeowners (42 percent) were not able to tell us how much insulation was in their ceiling. Only 26 percent of the homeowners reported that the ceiling insulation of their homes had R-values of 30 to 38 or higher, which are the recommended R-values for most homes. About a third (32 percent) reported having insulation with a lower than recommended R-value or none at all.

Emerging Technologies

Few respondents reported using any of the newer or emerging energy-saving technologies about which they were asked. The technologies most often reported as being used were halogen and compact fluorescent light bulbs and low-emissivity (low-E) window glass, which improves the insulating characteristics of window glass (Figure 2.1). Other emerging technologies that were asked about included:

- Ground-source and water-source heat pumps, which use heat from the ground and water, respectively, rather than from the air to heat the house
- Instantaneous water heaters, which heat water at the point of use
- Heat-pump water heaters, which heat water using heat from the ambient air

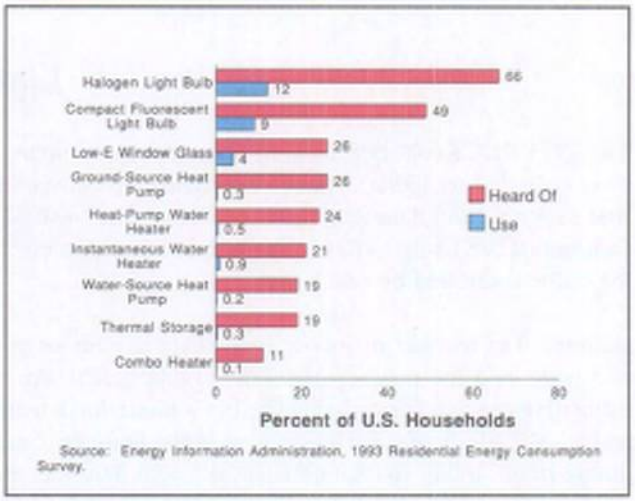
[10]See Energy Information Administration, *Annual Energy Outlook 1995*, DOE/EIA-0383(95) (Washington, DC, January 1995), p. 15, which reports an average efficiency rating of 83 percent for 1993 for gas furnaces. The minimum standard is 78 percent, which took effect in 1992.

- Thermal storage materials, such as ceramic bricks, which store heat during off-peak periods for later use during peak periods of demand.

- Combo heaters, which are gas-fired water heaters that provide heat to the house by circulating hot water through heat exchangers.

Many respondents were unaware of the existence of these technologies, even though much of the technology has been on the market since the early 1980's. For example, only 26 percent of the respondents interviewed had ever heard of low-E window glass.

Figure 2.1. Awareness and Use of New Energy-Saving Technologies in U.S. Households, 1993

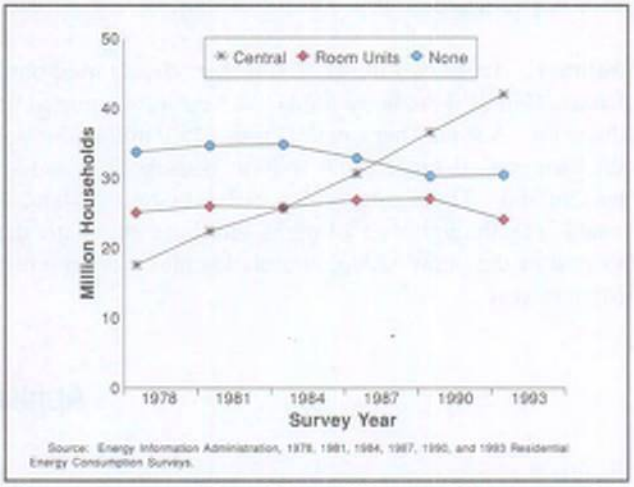


Source: Energy Information Administration, 1993 Residential Energy Consumption Survey.

Air-Conditioning

Between 1978 and 1993, the number of homes with central air-conditioners rose from 18 million homes in 1978 to 42 million homes in 1993 (Figure 2.2). During the same period, the number of homes without any air-conditioning (central or individual room units) decreased from a peak of 35 million homes in 1984 to a low of about 30 million homes in 1990 and 1993.

Figure 2.2. Trends in Air-Conditioning, 1978 to 1993



Source: Energy Information Administration, 1978, 1981, 1984, 1987, 1990, and 1993 Residential Energy Consumption Surveys.

Between 1990 and 1993, the number of homes without any air-conditioning remained about the same. However, the number of homes with central air-conditioning increased, while the number of homes with individual room units decreased:

- The number of homes with central air-conditioning grew from 36.6 million, or 39 percent of all homes in 1990, to 42.1 million, or 44 percent of all homes in 1993.

- The number of homes with individual room air-conditioners decreased from 27.1 million, or 29 percent of all homes in 1990, to 24.1 million, or 25 percent of all homes in 1993.

Homes with central air-conditioners use about three times more energy for cooling than homes with individual room conditioners, primarily because central air-conditioners cool more square footage and are used in areas of the country with warmer weather, higher humidity, or both.[11]

The use of air-conditioning varied among the Census regions.

- In the South, where air-conditioning needs were greatest, 89 percent of all households had some type of air-conditioning (central air-conditioning or individual room conditioners) in 1993 (Table 3.16b). About 65 percent of all households in the South had central air-conditioning.

[11]Homes with both central air-conditioning and individual room air-conditioners are counted only under central air-conditioning. Consumption of electricity for air-conditioning is found in: Energy Information Administration, *Household Energy Consumption and Expenditures 1990, Part 1: National Data*, DOE/EIA-0321 (90) (Washington, DC, February 1993) pp. 102 and 106.

- In the West, unlike the Nation as a whole, the installation of central air-conditioning in new, privately owned single-family houses is declining as new-home construction is shifting from California to the mountainous States where air-conditioning is less necessary.[12]

Lights

The 1993 RECS collected indepth information on the use of indoor and outdoor lights. In previous surveys, data were collected on lights, without distinguishing between indoor and outdoor lights. The 1993 RECS data are the first national-level data with detail on the number of indoor lights and the number of hours they are used--the two factors that are likely to have the greatest impact on electricity consumption for lighting. A light is defined as all the bulbs controlled by one switch.[13]

Indoor. The number of indoor lights used 1 hour or more per day in a housing unit is related to the number of occupants and the number of rooms (Table 3.22). An analysis of this relationship reveals a useful method for estimating the number of lights used in a home for 1 hour or more per day.[14] This estimation starts with 0.6 lights and adds 0.4 lights for each occupant in the household and 0.7 lights for each room. Rooms[15] include the kitchen, dining room, living room, and each bedroom, but does not include bathrooms, the basement, or the utility room.

For example, one person living in a four-room housing unit would be expected to use about four lights.[16] Other factors, such as the age of the occupants, play a role in these relationships, so any particular household may differ from this estimate.

Outdoor. About two-thirds of U.S. households used outdoor lights at least part of the day or night in 1993 (Table 3.20a). Half of these households (31.5 million) reported that the total wattage for their outdoor lighting was less than 150 watts. A somewhat smaller group (25.9 million households) used their outdoor lights only in the evening, others left them on all night (16.6 million households), and some had their lights on automatic control (18.2 million households). These categories overlap to some extent; for example, those automatic devices that sense darkness would keep the lights on all night, but those automatic devices that sense movement would keep the lights on only for part of the night. Also, households may have more than one outdoor light, each being controlled or used in a different way.

Appliances

The 1993 RECS found an increase in the number of households using certain appliances in 1993. The appliances that showed increased use included window or ceiling fans, personal computers, color televisions, microwave ovens, and electric clothes dryers (Figure 2.3).[17]

RECS data show a decline in households using black and white televisions, portable kerosene heaters, and well-water pumps. (Except for air-conditioning equipment, the RECS identifies only those appliances that are being used and, consequently, would not count appliances that are present but not used.)

[12]See U.S. Bureau of the Census, Current Construction Reports Series C25, *Characteristics of New Housing: 1993*, U.S. Department of Commerce (Washington, DC, 1994).

[13]For example, a chandelier with multiple lights controlled by one switch is counted as one light. See Glossary for further definition.

[14]Based upon a regression analysis where the dependent variable is the number of lights and the independent variables are the number of household members and the number of rooms.

[15]See Glossary for further definition of rooms.

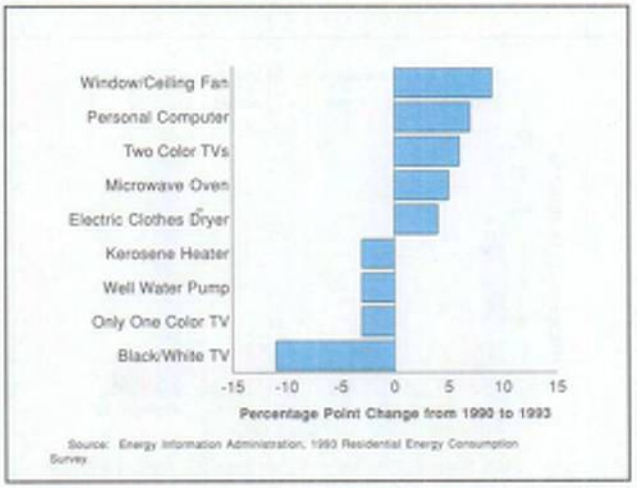
[16]Calculated in this way: 0.6 + 0.4 * (0.7 * 4) = 3.8 lights.

[17]The estimate of the increase in the use of color televisions is based on the increase in the number of households reporting using two color televisions.

The 1993 survey also collected data on some other appliances and equipment for the first time. The appliances and equipment on which data were collected for the first time and the percent of homes using these appliances (Table 3.16b) are listed below:

- Ceiling fans (54 percent)
- Window fans (13 percent)[18]
- Toaster ovens (29 percent)
- "Through-the-door-ice-service" for refrigerators (11 percent)
- Air cleaners (6 percent)
- Laser printers (6 percent)
- Aquariums with 20-gallon or larger heated water tanks (4 percent)
- Second freezers (4 percent).
- Facsimile machines (3 percent)
- Photocopiers (2 percent).

Figure 2.3. Changes in Appliance Saturation, 1990 to 1993



Major Equipment Purchases

Between 1990 and 1993, about 35 percent of the 96.6 million U.S. households purchased one or more pieces of major equipment (main heating equipment, water heater, central air-conditioner, or refrigerator):[19]

- 22 percent purchased one type of major equipment
- 7 percent purchased two types of major equipment
- 4 percent purchased three types of major equipment
- 2 percent purchased all four types of major equipment.

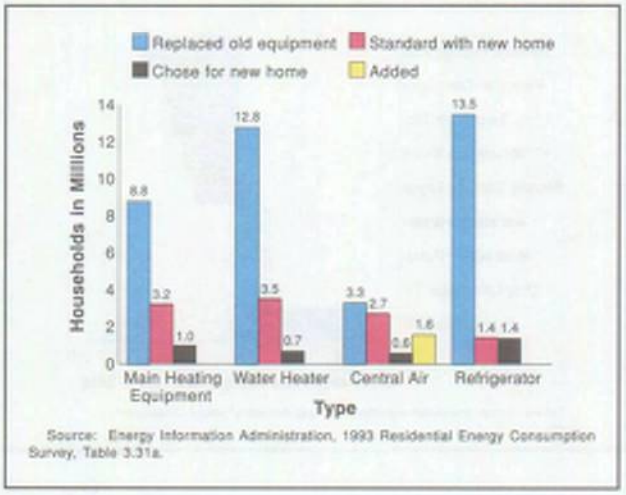
Water heaters and refrigerators were the major equipment most often purchased (Figure 2.4). About 17 million households purchased new water heaters, while a little more than 16 million households purchased new refrigerators.

Most of the households purchasing major equipment lived in single-family and mobile homes. For example, 43 percent of households living in single-family homes purchased at least one piece of major equipment between 1990 and 1993. In contrast, only 11 percent of the households living in apartments purchased any major equipment.

Excluding refrigerators, energy efficiency was more often described by homeowners as being at least somewhat important in major equipment purchases than was price (Figure 2.5).

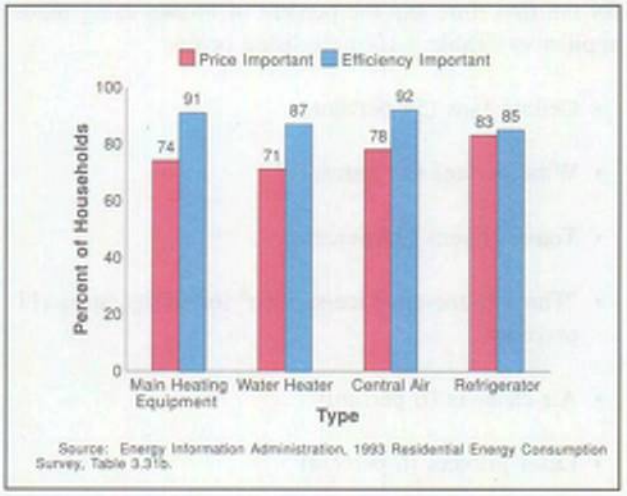
[18]In previous surveys, data were collected on ceiling fans and window fans together. Asking about them separately may increase reporting.
[19]"Equipment purchase" includes replacing old equipment, buying additional equipment, selecting equipment for a new home, or purchasing a new home that already has standard equipment.

Figure 2.4. Equipment Purchases, 1990 Through 1993



Source: Energy Information Administration, 1993 Residential Energy Consumption Survey, Table 3.31a.

Figure 2.5. Importance of Energy Efficiency and Price in New Equipment Purchases, 1990 Through 1993



Source: Energy Information Administration, 1993 Residential Energy Consumption Survey, Table 3.31b.

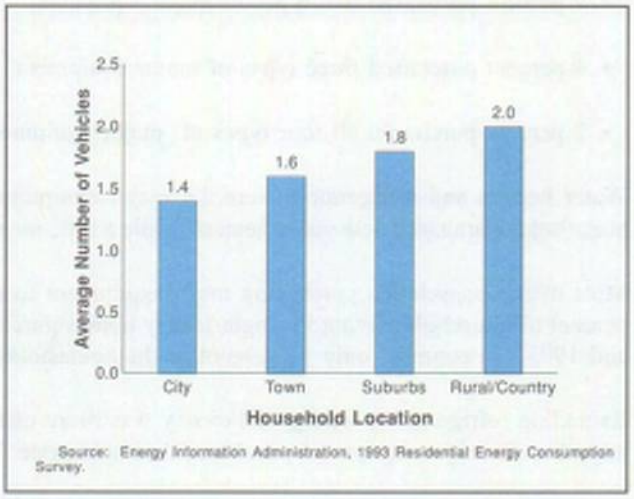
Residential Motor Vehicles

Transportation represented a substantial energy expenditure by U.S. households in 1993. Detailed information about household vehicle usage and fuel expenditures is collected in the Residential Transportation Energy Survey (RTECS) based on the sample of households interviewed for the RECS. The 96.6 million U.S. households and 157.7 million regular drivers owned or had regular use of 153.1 million vehicles in 1993, an average of 1.6 vehicles per household and an average of 0.97 vehicles per regular driver. Included in the total of 157.7 million regular drivers are 2.6 million drivers who lived in the 11.9 million households that did not own or have regular use of a motor vehicle.

The more rural the area in which a household lived, the more vehicles the household was likely to have (Figure 2.6).

- Households located in the cities averaged 1.4 vehicles.
- Households located in towns averaged 1.6 vehicles.
- Households located in the suburbs averaged 1.8 vehicles.
- Households located in rural areas averaged 2.0 vehicles (Figure 2.6).

Figure 2.6. Average Number of Vehicles per Household by Location of Households, 1993



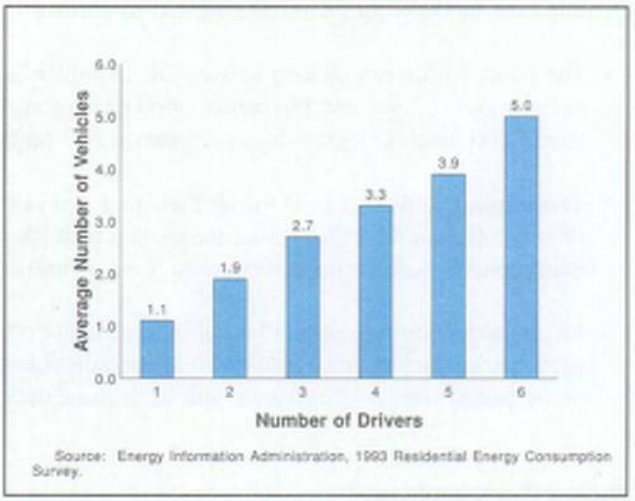
Source: Energy Information Administration, 1993 Residential Energy Consumption Survey.

The number of vehicles per household was related to the number of regular drivers in the household (Figure 2.7). Households with only one driver averaged 1.1 vehicles, while households with six drivers averaged 5.0 vehicles.

Of all households having only one vehicle, 68 percent had a car, while 13 percent had a pick-up truck. Among households having more than one vehicle, the additional vehicles were more likely to be pick-up trucks or sport utility vehicles. About 25 percent of households having more than one vehicle had a pick-up truck.

Few vehicles used a fuel other than gasoline or diesel. Less than 1 percent of the most often used vehicles or second most often used vehicles used ethanol or propane as a fuel.

Figure 2.7. Average Number of Vehicles per Household by Number of Drivers in the Household, 1993



Source: Energy Information Administration, 1993 Residential Energy Consumption Survey.

Energy-Efficiency Measures

Both the 1990 and the 1993 RECS collected data on the various measures that households had taken to improve energy efficiency. The three most significant of these measures were participation in demand-side management (DSM) programs, control of indoor temperatures, and insulation. Comparison of the 1990 and 1993 surveys shows that U.S. households have made few changes in the measures they are taking to improve energy efficiency.

Demand-Side Management Programs

At the end of 1993, 8 percent (7.6 million) of U.S. households indicated that they had participated in the past year in a DSM program offered by electric or natural gas utilities or some other group (Tables 3.27a and 3.27b). Although this number is a small percentage of households, it represents a statistically significant 3-percentage point increase over 1990, when only 5 percent (4.6 million households) participated. Of the 89.1 million nonparticipating households, 45 percent (40.0 million) reported that DSM programs were not available to them.

It is important to note that these DSM participation data are self-reports from the interviewed households. Frequently, these reports differ greatly from DSM participation rates reported by energy suppliers. A yet to be performed comparison of the households and the supplier reports may indicate substantial underreporting by the households.

DSM programs are designed to reduce demand for energy, especially during periods of peak generation by utilities. Typical DSM programs include:

- Load-control programs. Homeowners receive a discount on their utility bills if they agree to have certain appliances put on a timer or shut off for short periods during the daytime on weekdays.
- Energy audits. After examination of the home, energy auditors recommend measures the homeowner can take to save energy.
- Conservation programs. Installation of such energy-saving features as insulation, energy-efficient light bulbs, a water heater blanket, energy-efficient windows, low-flow showerheads, caulking, or weatherstripping.
- Monetary offers. Utilities or other energy providers offer low-interest loans, rebates, or other incentives to encourage homeowners to buy energy-efficient equipment.
- Fuel-switching programs. Homeowners are encouraged to use a different energy source for space heating, water heating, or cooking.
- Time-of-use programs. Utilities or other energy providers offer less expensive rates for electricity used at certain times (such as between midnight and 6:00 a.m.).

Of these programs, load-control programs had the highest participation rate (3 percent of all households), with other programs having participation rates of less than 2 percent each.

Participation in DSM programs was related to climate zone, ownership of house, and family income:

- The participation rate among households in colder climate zones (having more than 7,000 heating degree-days per year) was 13 percent; the participation rate among households in more temperate climate zones (having fewer than 4,000 heating degree-days per year) was 7 percent.
- Those households that paid for all their fuel and electricity were more likely to participate in a DSM program (9 percent) than were those households that paid for only some of their fuel and electricity (2 percent) or those households whose fuel and electricity were included in their rent (1 percent).
- The participation rate among households with a family income of less than $10,000 per year was 6 percent. The participation rate of households with an income of between $25,000 and $35,000 per year was 8 percent and the participation rate of households with an income of $50,000 per year was 13 percent.

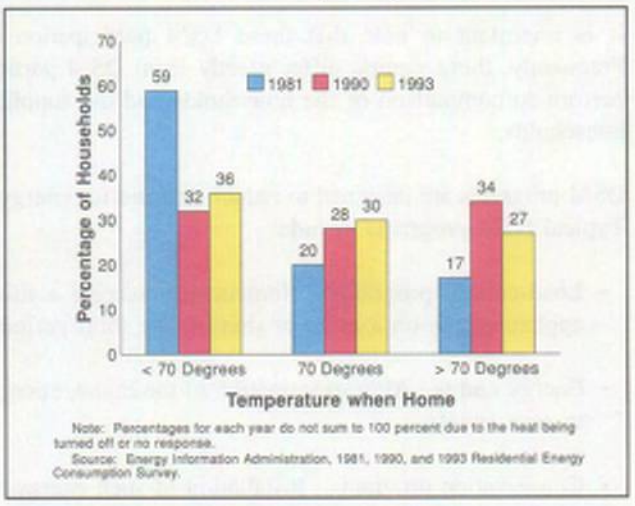
Indoor Temperatures

About 66 percent of all households maintained the average daytime winter temperature of their homes at 70 degrees Fahrenheit or less (Figure 2.8). Although this percentage was slightly higher than the 60 percent of households who maintained daytime temperature at 70 degrees Fahrenheit or less in 1990, the percentage of households was substantially lower than the 79 percent of households who did so in 1981.

Half of all households (51 percent) maintained the temperature in their home at less than 70 degrees Fahrenheit during the nighttime, and 18 percent of households maintained the temperature at 70 degrees Fahrenheit (Table 3.23b). As was the case with daytime temperatures, nighttime temperatures in 1993 were substantially higher than those reported in the 1981 RECS.

Overall, about half (48 percent) of U.S. households lowered their temperatures during sleeping hours in both 1993 and 1990 (Table 3.24b). Of the households lowering their temperatures at night, over 75 percent were doing so manually. The other 25 percent had clock thermostats that set back the temperature automatically.

Figure 2.8. Daytime Winter Temperatures in U.S. Households, 1981, 1990, and 1993



Note: Percentages for each year do not sum to 100 percent due to the heat being turned off or no response.
Source: Energy Information Administration, 1981, 1990, and 1993 Residential Energy Consumption Survey.

Home Insulation

The percentages of U.S. single-family and mobile homes that were insulated changed little between 1990 and 1993 (Table 2.1). The percentage of insulated homes constructed in 1988-1990 was generally higher than the percentage of insulated homes constructed in 1985-1987. The percentage of insulated homes constructed in 1991-1993 was generally higher than the percentage of insulated homes constructed in the previous 3 years.

Table 2.1. Percent of U.S. Single-Family and Mobile Homes Having Insulation

Type of Insulation	Percent				
	All U.S. Single-Family and Mobile Homes		Year Homes Constructed[1]		
	1993	1990	1991-93	1988-90	1985-87
Roof/Ceiling	81	80	92	88	87
Outside Walls	70	67	91	89	85
Water Heater	24	28	21	29	25
Hot Water Pipes	30	34	41	42	31
Heating/Cooling Ducts	30	32	53	47	45
Weatherstripping	63	60	74	71	64
Caulking	71	67	78	71	74

[1]Data from the 1993 Residential Energy Consumption Survey.
Source: Energy Information Administration, 1990 and 1993 Residential Energy Consumption Surveys.

3. Detailed Tables

This section introduces the following 60 tables, which present detailed data describing the characteristics of households in the residential sector. This section provides assistance in reading the tables by explaining some of the headings for categories of data and by explaining the use of the row and column factors to compute the confidence levels of the estimates given in the tables and the statistical significance of differences between the data in two or more categories. The section concludes with a "Quick-Reference Guide" to the statistics in the different tables.

Organization of the Tables

The tables are grouped into eight topical sections:

- **Household Characteristics**--Presents data relating to location, type, ownership, age, size, construction, and householder demographic and income characteristics.
- **Space Heating**--Presents data describing the types of heating fuel and equipment used for main and secondary heating purposes.
- **Air-Conditioning**--Presents data describing selected household characteristics including location, number of rooms and area cooled and air-conditioning usage.
- **Appliances**--Presents data describing the frequency and characteristics of energy-intensive appliances found in most households.
- **Light Usage**--Presents data describing the number and usage of incandescent and fluorescent indoor lights and outdoor lights.
- **Usage Indicators**--Presents data describing usage of heating and cooling equipment, including thermostat settings at various times of the day, equipment using hot water, and cooking appliances.
- **Conservation**--Presents data describing conservation measures taken by the household, participation in demand-side management programs, and types of windows in the housing unit.
- **Equipment Purchase**--Presents data describing the purchase and replacement of heating and cooling equipment, refrigerators, and water heaters in the past 4 years and purchase considerations such as price and energy efficiency.

Within each section, except for Air-conditioning and Light Usage, four sets of tables are presented. Each set of tables is comprised of data presented in terms of counts of millions of U.S. households and in terms of percent of U.S. households. Each count table is paired with its comparable percent table so that for each topic or variable counts are presented on the left-hand page and percentages presented on the facing right-hand page. The four sets of tables are entitled:

- Census Region and Climate Zone
- Year of Construction
- Type and Ownership of Housing Unit
- Family Income.

In addition to the four sets of tables listed above, the Household Characteristics and Space Heating sections also include tables that present data as a function of average and total floorspace. The three tables in the Air-conditioning tables use a unique format that presents data as a function of cooled floorspace and air-conditioning usage. Finally, the Light Usage section includes a table that describes indoor light usage by type of bulb. This section does not present data by the Year of Construction and Family Income headings formats.

Categories of Data in the Tables

Column Categories

The column categories most commonly classify data by the four sets of headings described above. The following, listed in alphabetical order, are explanations of some of the column categories that may require clarification.

Below Poverty Line (100 Percent and 125 Percent)--Low income classifications to which certain households are assigned. "Below 100 percent of poverty line includes households with incomes below the poverty level as defined by the U.S. Bureau of the Census and the Office of Management and Budget. "Below 125 percent of poverty" includes households with incomes below 125 percent of the poverty level. These groups of the poor and near-poor represent alternative levels for defining poverty. The poverty line varies with the number of family members in the household and the income of the entire family. (See **Eligible for Federal Assistance** below.)

Census Region--Four regions as defined by the U.S. Bureau of Census. For a map showing the four Census regions (and nine Census divisions), see Appendix E. For a listing of the States included in each Census region (and division), see the Glossary.

Climate Zone--One of five climatically distinct areas, defined by long-term weather conditions affecting the heating and cooling loads in buildings. The zones were developed by the Energy End Use and Integrated Statistics Division (EEUISD) from seven distinct climate categories originally identified by the American Institute of Architects (AIA) for the U.S. Department of Energy and the U.S. Department of Housing and Urban Development. The zones were determined according to the 30-year average (1961-1990) of the annual heating and cooling degree-days (base 65 degrees Fahrenheit). For additional details, see the Glossary.

Cooled Floorspace--Computed as heated floorspace times the percentage of rooms that are cooled over total rooms. If the housing unit has no heated floorspace then total floorspace is substituted for heated floorspace in the computation of cooled floorspace.

Cooling Degree-Days (CDD)--A measure of how hot a location was over a period of time, relative to a base temperature. In this report, the base temperature is 65 degrees Fahrenheit, and the period of time is 1 year. The cooing degree-days for a single day is the difference between that day's average temperature (the mean of the maximum and minimum temperature for a 24-hour period) and the base temperature if the daily average is greater than the base; it is zero if the daily average temperature is less than or equal to the base temperature.

Eligible for Federal Assistance--Households are categorized as eligible for federal energy assistance if their income is below the federal maximum standard. The Federal standard is 150 percent of the poverty line or 60 percent of statewide median income, whichever is the higher income. Individual States can set the standard at a lower level than the federal maximum. (See **Below Poverty Line** above.)

Family Income--The total combined income (before taxes and deductions) of all members of the family from all sources, for the 12 months prior to the interview. This definition includes the total income of all family members who lived in the household during the 12 months prior to the interview, regardless of whether they were living there at the time of the interview. For additional details, see **Family Income Category** in the Glossary.

Floorspace (square feet)--The floor area of the housing unit that is enclosed from the weather. Basements are included, whether or not they contain finished space. The finished space and the heated space in attics are included. Garages are included if they share a wall with the house. Crawl spaces, even if they are enclosed from the weather, are not included. Sheds and other buildings that are not attached to the house are not included.

Heated Floorspace--The portion of floorspace that is heated during most of the winter season. Rooms that are shut off during the heating season to save fuel are not counted as heated square footage. Attached garages that are unheated and unheated areas in basements and attics are not counted as heated floorspace.

Lights Used One or More Hours per Day--All the light bulbs controlled by one switch are counted as one light. For example, a chandelier with multiple lights controlled by one switch is counted as one light. A floor lamp with two separate bulbs controlled by two separate switches would be counted as two lights. Indoor and outdoor lights were counted only if they were under the control of the householder.

"Incandescent Lights" are the most common household lamps. Electricity runs through a tungsten filament that glows and produces a soft, warm light. Because so much of the energy used is lost as heat, these are highly inefficient sources of light. These common general-service bulbs emit light in all directions.

"Fluorescent Lights" are usually long, narrow, white tubes connected to a fixture at both ends of the lamp; some are circular tubes. The inner surface of the tube is coated with a material that fluoresces (emits visible light) when bombarded with secondary radiation generated by a gaseous discharge within the tube. These lights are typically found in kitchen and basement work areas. Newer types ("compact" fluorescent lamps), looking somewhat more like a conventional incandescent bulb, are being made, which can be screwed into fixtures.

Type and Ownership of Housing Unit--"Single-Family Housing Unit" is a unit that provides living space for one household or family. The structure may be detached or attached to another unit. Attached houses are considered single-family houses as long as the house itself is not divided into more than one housing unit and has an independent outside entrance. A single-family house is contained within walls that go from the basement or the ground floor (if there is no basement) to the roof. (A mobile home with one or more rooms added is classified as a single-family home.) Townhouses, rowhouses, and duplexes are considered single-family attached housing units, as long as there is no household living above another one within the walls that go from the basement to the roof to separate the units.

"Multifamily (two to four units)" is a housing unit in a building with two to four housing units--a structure that is divided into living quarters for two, three, or four families or households and in which one household lives above another. This category also includes houses originally intended for occupancy by one family (or for some other use) that have been converted into separate dwellings for two to four families. Typical arrangements in these types of living quarters are separate apartments downstairs and upstairs or one apartment on each of three or four floors.

"Multifamily (five or more units)" is a housing unit in a building with five or more housing units--a structure that is divided into living quarters for five or more families or households and in which one household lives above another.

"Mobile Home" is a housing unit built on a movable chassis and moved to the site. It may be placed on a permanent or temporary foundation and may contain one or more rooms. If rooms are added to the structure, it is considered a single-family housing unit. A manufactured house assembled on site is a single-family housing unit, not a mobile home.

"Owned/Rented" describes the relationship of a housing unit's occupants to the structure itself, not the land on which the structure is sited. "Owned" means the owner or co-owner is a member of the household and the housing unit is either fully paid for or mortgaged. A household is classified "rented" even if the rent is paid by someone not living in the unit. "Rent-free" means the unit is not owned and no money is paid or contracted for rent. Such units are usually provided in exchange for services rendered or as an allowance or favor from a relative or friend not living in the unit. Unless shown separately, rent-free households are grouped with rented households.

Year of Construction--The year the structure was originally completed or the year any part of the structure was first occupied. For mobile homes, year of construction is the model year.

Row Categories

The row categories classify data by specific features of the households as described by the section headings described above. All of the column categories already described also are employed as row categories. The large majority of the row categories presented are not particularly technical in nature, e.g., number and percent of color televisions in U.S. households. The Glossary provides detailed definitions of the more technical terms used as row categories.

Statistical Significance of Data

Row and Column Factors

The tables provide row factors in the far-right column and column factors on the top line of each table. These factors are to be used to determine the Relative Standard Error (RSE) for each estimate, which in turn can be used to determine the standard error and the confidence level of the estimate and to determine whether the difference between any two figures is statistically significant. However, since the RSE's are only approximate, standard errors, confidence intervals, and statistical tests must also be regarded as only approximate. For more details about the derivation of the row and column RSE factors, see Appendix B, "Quality of the Data."

To calculate the RSE for a specific estimate, multiply the row factor by the column factor, as illustrated in Figure 3.1, an excerpt from Table 3.1a of this report. This table shows that 10.2 million housing units in the Midwest were located in suburban areas. Multiplying 4.2 (the row factor) by 0.9 (the column factor) yields an approximate RSE of 3.8 percent.

Figure 3.1. Use of RSE Row and Column Factors

Table 3.1a. Household Characteristics by Census Region and Climate Zone, Million U.S. Households, 1993

Housing and Household Characteristics	Total	Census Region				Climate Zone					RSE Row Factors
						Fewer than 2,000 CDD and --				More than 2,000 CDD and Fewer than 4,000 HDD	
						More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factors:	0.4	0.8	0.9	0.7	0.9	2.2	1.3	1.2	1.4	1.2	
Total	96.6	19.5	23.3	33.5	20.4	8.7	26.5	22.5	17.8	21.2	6.9
Urban Status											
Urban	75.8	17.6	16.6	23.8	17.9	3.9	22.7	18.2	13.5	17.5	5.6
Central City	30.6	6.8	6.4	9.8	7.6	1.9	8.2	6.8	5.4	8.4	5.3
Suburban	45.2	10.8	10.2	14.0	10.2	2.0	14.5	11.4	8.2	9.1	4.2
Rural	20.8	1.9	6.7	9.7	2.5	4.8	3.8	4.3	4.3	3.7	13.4
Climate Zone											
Under 2,000 CDD and --											
Over 7,000 HDD	8.7	1.8	5.1	NC	1.7	8.7	--	--	--	--	20.8
5,500 to 7,000 HDD	26.5	9.4	14.3	NC	2.8	--	26.5	--	--	--	14.8
4,000 to 5,499 HDD	22.5	8.3	3.8	7.7	2.6	--	--	22.5	--	--	15.1
Under 4,000 HDD	17.8	NC	NC	7.9	9.8	--	--	--	17.8	--	12.4
2,000 CDD or More and --											
Under 4,000 HDD	21.2	NC	NC	17.8	3.4	--	--	--	--	21.2	8.5

Source: Energy Information Administration, Office of Energy Markets and End Use, the 1993 Residential Energy Consumption Survey.

Standard Errors

Since the estimates presented in the following tables are based on a sample of residential housing units, they are subject to sampling error, or standard error. To determine the standard error for an estimate in these tables, multiply the approximate RSE by the estimate. For example, to determine the standard error of 10.2 million housing units located in the suburbs of the Midwest in 1993, multiply 10.2 million housing units by .0378 (the approximate RSE). The result, 0.39 million housing units, is the approximate standard error for the estimate.

Confidence Levels

For each of the estimates given in the tables, a 95-percent confidence range can be determined with the estimate at the mid-point. To calculate the 95-percent confidence range for a given figure:

1. Multiply the RSE row factor by the RSE column factor to determine the approximate RSE.

2. Multiply the approximate RSE (divided by 100) by the estimate given in the table to determine the approximate standard error.

3. Multiply the result by 1.96 to determine approximate 2 standard errors.

4. Subtract the result of Step 3 from the given estimate to determine the bottom of the range.

5. Add the result of Step 3 to the given estimate to determine the top of the range.

The result of these steps will yield a range with the property that, in repeated surveys, the estimate would fall in the range constructed in this way 95 percent of the time.

For example, to determine the confidence range for the estimated 10.2 million midwestern housing units located in the suburbs in 1993:

1. Multiply 4.2 (the RSE row factor) by 0.9 (the RSE column factor), which yields 3.78 percent (the approximate RSE).

2. Multiply .0378 (the approximate RSE) by 10.2 million households (the estimate), which yields 0.4 million housing units (the approximate standard error).

3. Multiply 0.4 million housing units by 1.96, which yields 0.8 million housing units (approximate 2 standard errors).

4. To determine the bottom of the range, subtract 0.8 million housing units from 10.2 million housing units, which yields 9.4 million housing units.

5. To determine the top of the range, add 0.8 million housing units to 10.2 million housing units, which yields 11.0 million housing units.

It can then be said with 95-percent confidence that, in 1993, between 9.4 million and 11.0 million of the midwestern housing units were located in the suburbs.

Statistical Significance Between Two Statistics

The difference between any two estimates given in the detailed tables may or may not be statistically significant. Statistical significance for the difference between two independent variables is computed as:

$$S_{x_1-x_2} = \sqrt{[S_{x_1}]^2 + [S_{x_2}]^2}$$

where S is the standard error, x_1 is the first estimate, and x_2 is the second estimate. The result of this computation is to be multiplied by 1.96, and if this result is less than the difference between the two estimates, the difference is statistically significant.

For example, in 1993, 10.2 million of the midwestern housing units were located in the suburbs, while 6.4 million midwestern households were located in the central city, for an estimated difference of 3.8 million housing units. The standard error for the 10.2 million suburban housing units estimate (x_1) is 0.39, and the standard error for the 6.4 million central city housing units estimate (x_2) is 0.31:

$$S_{x_1-x_2} = \sqrt{.39^2 + .31^2}$$

$$S_{x_1-x_2} = .50.$$

Multiplying .50 by 1.96 yields 1.0 million housing units. Since 1.0 housing units is less than the 3.8 million housing units difference between the 1993 midwestern suburban and central city estimates, the difference is statistically significant.

Quick-Reference Guide

The Quick-Reference Guide lists topical sections and table headings covered in the detailed tables and shows the table numbers for each of the tables. To assist the reader in locating a particular table, the topical section title is printed along the outside edge of each table page. The suffix "a" that accompanies the table number refers to the table that presents data in terms of counts of millions of U.S. households; the suffix "b" refers to the table that presents data in terms of the percent of U.S. households.

Topical Section	Census Region and Climate Zone	Year of Construction	Type and Ownership of Housing Unit	Family Income	Floor-space	Special Subject Matter
Household Characteristics	3.1a/b	3.2a/b	3.3a/b	3.6a/b	3.4, 3.5	
Space Heating	3.7a/b	3.8a/b	3.9a/b	3.12a/b	3.10, 3.11	
Air-conditioning	--	--	--	--	--	3.13, 3.14, 3.15
Appliances	3.16a/b	317a/b	3.18a/b	3.19a/b	--	--
Light Usage	3.20a/b	--	3.21a/b	--	--	3.22
Usage Indicators	3.23a/b	3.24a/b	3.25a/b	3.26a/b	--	--
Conservation	3.27a/b	3.28a/b	3.29a/b	3.30a/b	--	--
Equipment Purchase	3.31a/b	3.32a/b	3.33a/b	3.34a/b	--	--

Detailed Tables

Table 3.1a. Household Characteristics by Census Region and Climate Zone, Million U.S. Households, 1993

Housing Unit and Household Characteristics	Total	Census Region				Climate Zone					RSE Row Factors
		Northeast	Midwest	South	West	Fewer than 2,000 CDD and -- More than 7,000 HDD	Fewer than 2,000 CDD and -- 5,500 to 7,000 HDD	Fewer than 2,000 CDD and -- 4,000 to 5,499 HDD	Fewer than 2,000 CDD and -- Fewer than 4,000 HDD	More than 2,000 CDD and Fewer than 4,000 HDD	
RSE Column Factors:	0.4	0.8	0.9	0.7	0.9	2.2	1.3	1.2	1.4	1.2	
Total	96.6	19.5	23.3	33.5	20.4	8.7	26.5	22.5	17.8	21.2	3.9
Urban Status											
Urban	75.8	17.6	16.6	23.8	17.9	3.9	22.7	18.2	13.5	17.5	5.6
Central City	30.6	6.8	6.4	9.8	7.6	1.9	8.2	6.8	5.4	8.4	5.3
Suburban	45.2	10.8	10.2	14.0	10.2	2.0	14.5	11.4	8.2	9.1	4.2
Rural	20.8	1.9	6.7	9.7	2.5	4.8	3.8	4.3	4.3	3.7	13.4
Climate Zone											
Under 2,000 CDD and--											
Over 7,000 HDD	8.7	1.8	5.1	NC	1.7	8.7	--	--	--	--	20.8
5,500 to 7,000 HDD	26.5	9.4	14.3	NC	2.8	--	26.5	--	--	--	14.8
4,000 to 5,499 HDD	22.5	8.3	3.8	7.7	2.6	--	--	22.5	--	--	15.1
Under 4,000 HDD	17.8	NC	NC	7.9	9.8	--	--	--	17.8	--	12.4
2,000 CDD or More and --											
Under 4,000 HDD	21.2	NC	NC	17.8	3.4	--	--	--	--	21.2	8.5
Heated Floorspace Category (square feet)											
Fewer than 600	7.5	1.7	1.0	2.3	2.4	.4	1.4	1.9	1.9	2.0	13.6
600 to 999	21.8	4.1	4.8	8.0	4.8	1.6	6.1	4.9	4.3	4.9	8.0
1,000 to 1,599	27.8	4.8	4.8	11.4	6.7	1.7	6.0	6.0	6.4	7.7	7.0
1,600 to 1,999	12.4	2.0	3.4	4.4	2.6	1.3	3.5	2.6	2.0	2.9	10.3
2,000 to 2,399	9.6	2.1	2.8	3.1	1.7	1.3	2.9	2.2	1.5	1.8	10.4
2,400 to 2,999	8.2	2.2	3.0	2.1	.9	1.3	3.0	2.0	.8	1.1	11.0
3,000 or More	9.3	2.5	3.4	2.2	1.2	1.2	3.5	2.7	1.0	.9	14.1
Ownership of Unit											
Owned	63.2	12.3	16.2	22.9	11.9	6.5	17.4	14.5	10.1	14.6	5.2
Rented	33.4	7.2	7.1	10.6	8.5	2.2	9.0	7.9	7.7	6.6	6.5
Type and Ownership of Housing Unit											
Single-Family Detached	59.6	9.6	15.7	22.4	12.0	6.2	15.7	12.9	11.2	13.6	6.0
Owned	51.3	9.0	14.0	18.7	9.7	5.5	14.1	11.5	8.8	11.4	6.3
Rented	8.2	.6	1.7	3.7	2.3	.7	1.6	1.4	2.4	2.2	13.0
Single-Family Attached	7.2	2.3	.9	2.5	1.5	.4	1.8	2.3	1.1	1.6	16.5
Owned	4.4	1.6	.4	1.6	.8	.2	1.0	1.8	.4	1.0	23.0
Rented	2.8	.7	.5	.9	.7	.2	.8	.5	.7	.6	19.6
Multifamily (2 to 4 units)	8.0	2.9	1.8	1.6	1.6	.7	2.9	2.0	1.3	1.1	15.0
Owned	1.5	.9	.3	.2	.1	.2	.7	.4	Q	.2	23.8
Rented	6.5	2.1	1.5	1.5	1.5	.5	2.2	1.6	1.2	.9	16.7
Multifamily (5 or more units)	16.2	4.1	3.5	4.4	4.3	.7	4.6	4.5	3.4	3.1	11.3
Owned	1.6	.4	.3	Q	.5	Q	.4	.4	Q	Q	24.1
Rented	14.7	3.7	3.2	4.0	3.8	.6	4.3	4.1	3.1	2.6	11.5
Mobile Home	5.6	.5	1.4	2.6	1.0	.7	1.4	.8	.9	1.8	19.9
Owned	4.4	.4	1.2	2.0	.8	.5	1.3	.5	.6	1.5	22.1
Rented	1.2	.1	.2	.6	.2	.2	.2	.3	.2	.3	27.0
Year of Construction											
1939 or Before	20.4	6.7	7.4	3.5	2.7	3.2	7.5	5.6	2.6	1.4	11.7
1940 to 1949	6.9	1.6	1.6	2.1	1.6	.7	2.0	1.6	1.4	1.2	14.9
1950 to 1959	13.1	2.9	2.2	4.4	3.6	.9	2.9	3.2	3.2	2.8	10.7
1960 to 1969	15.0	2.7	4.2	5.1	3.0	.6	4.9	3.1	3.1	3.3	10.1
1970 to 1979	18.1	2.5	3.8	7.1	4.8	1.5	4.6	4.0	3.3	4.8	9.1
1980 to 1984	8.5	1.1	1.3	4.1	1.9	.7	1.3	1.6	1.6	3.2	11.5
1985 to 1987	5.5	.7	.8	2.9	1.1	.4	.9	1.4	.9	1.9	16.4
1988 to 1990	4.7	.7	1.0	2.2	.8	.4	1.1	1.2	.8	1.2	16.1
1991 to 1993[1]	4.5	.6	1.0	2.2	.7	.3	1.2	.7	.8	1.5	20.6

See footnotes at end of table.

Table 3.1b. Household Characteristics by Census Region and Climate Zone, Percent of U.S. Households, 1993

Housing Unit and Household Characteristics	Total	Census Region				Climate Zone					RSE Row Factors
						Fewer than 2,000 CDD and --				More than 2,000 CDD and Fewer than 4,000 HDD	
		Northeast	Midwest	South	West	More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factors:	0.5	0.9	1.1	0.9	1.0	1.4	1.1	1.1	1.2	1.1	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0
Urban Status											
Urban	78.4	90.2	71.2	70.9	87.8	44.9	85.7	81.0	76.0	82.4	5.7
Central City	31.7	35.0	27.4	29.1	37.5	22.0	30.8	30.2	30.1	39.5	5.2
Suburban	46.8	55.2	43.8	41.8	50.3	23.0	54.9	50.8	45.9	42.8	4.0
Rural	21.6	9.8	28.8	29.1	12.2	55.1	14.3	19.0	24.0	17.6	12.0
Climate Zone											
Under 2,000 CDD and--											
Over 7,000 HDD	9.0	9.4	22.0	NC	8.5	100.0	--	--	--	--	21.6
5,500 to 7,000 HDD	27.4	48.2	61.4	NC	13.7	--	100.0	--	--	--	14.9
4,000 to 5,499 HDD	23.2	42.4	16.5	23.1	12.8	--	--	100.0	--	--	14.8
Under 4,000 HDD	18.4	NC	NC	23.7	48.4	--	--	--	100.0	--	12.6
2,000 CDD or More and --											
Under 4,000 HDD	21.9	NC	NC	53.2	16.6	--	--	--	--	100.0	8.3
Heated Floorspace Category (square feet)											
Fewer than 600	7.8	8.8	4.4	7.0	11.9	4.5	5.2	8.6	10.4	9.3	13.8
600 to 999	22.6	21.1	20.8	23.9	23.7	18.3	23.1	22.0	24.1	22.9	6.2
1,000 to 1,599	28.8	24.8	20.7	34.1	33.0	19.3	22.8	26.6	35.8	36.5	4.8
1,600 to 1,999	12.8	10.3	14.6	13.2	12.8	14.7	13.4	11.8	11.4	13.7	8.3
2,000 to 2,399	10.0	11.0	11.9	9.1	8.2	14.9	10.8	9.7	8.4	8.5	8.7
2,400 to 2,999	8.5	11.1	13.0	6.2	4.5	14.6	11.5	9.1	4.5	5.0	8.8
3,000 or More	9.6	12.9	14.6	6.4	6.0	13.8	13.3	12.1	5.3	4.2	12.0
Ownership of Unit											
Owned	65.4	63.0	69.5	68.3	58.2	74.5	65.9	64.8	57.0	68.9	2.7
Rented	34.6	37.0	30.5	31.7	41.8	25.5	34.1	35.2	43.0	31.1	5.1
Type and Ownership of Housing Unit											
Single-Family Detached	61.7	49.1	67.2	66.7	59.0	71.3	59.2	57.6	62.9	64.0	3.5
Owned	53.1	46.2	60.0	55.8	47.5	63.8	53.3	51.3	49.3	53.8	3.7
Rented	8.5	2.9	7.2	10.9	11.5	7.6	5.9	6.3	13.6	10.2	11.4
Single-Family Attached	7.5	12.1	3.9	7.4	7.3	4.7	6.8	10.2	6.4	7.5	18.6
Owned	4.6	8.3	1.8	4.6	4.0	Q	3.8	8.0	2.4	4.7	22.5
Rented	2.9	3.8	2.1	2.7	3.3	2.4	3.0	2.3	4.0	2.8	19.3
Multifamily (2 to 4 units)	8.3	15.0	7.9	4.9	7.8	8.4	11.0	8.8	7.0	5.3	14.2
Owned	1.5	4.4	1.4	.5	.6	2.1	2.6	1.7	Q	.9	23.1
Rented	6.7	10.6	6.5	4.4	7.2	6.3	8.5	7.1	6.8	4.4	16.0
Multifamily (5 or more units)	16.8	21.1	14.9	13.2	20.9	8.0	17.5	20.0	18.8	14.5	11.3
Owned	1.6	2.0	1.1	Q	2.3	Q	1.4	1.7	Q	Q	22.7
Rented	15.2	19.1	13.7	11.9	18.6	7.4	16.1	18.3	17.4	12.2	11.4
Mobile Home	5.8	2.8	6.1	7.8	5.0	7.6	5.5	3.4	4.9	8.7	18.2
Owned	4.6	2.1	5.1	6.0	3.8	5.7	4.8	2.1	3.6	7.2	20.3
Rented	1.2	.7	1.0	1.8	1.1	1.8	.7	1.3	1.3	1.5	26.5
Year of Construction											
1939 or Before	21.1	34.5	31.8	10.5	13.3	37.1	28.2	25.2	14.8	6.5	9.4
1940 to 1949	7.1	8.3	6.8	6.3	7.7	8.1	7.6	7.1	8.1	5.4	13.9
1950 to 1959	13.5	14.7	9.5	13.0	17.8	9.9	11.1	14.4	18.1	13.3	9.6
1960 to 1969	15.5	14.1	17.9	15.2	14.8	7.4	18.5	13.7	17.5	15.5	9.2
1970 to 1979	18.8	12.8	16.2	21.1	23.7	16.7	17.5	17.8	18.4	22.7	7.7
1980 to 1984	8.8	5.7	5.7	12.2	9.6	8.1	5.0	7.2	8.9	15.3	10.5
1985 to 1987	5.7	3.5	3.5	8.7	5.4	4.3	3.5	6.3	5.2	8.8	15.8
1988 to 1990	4.9	3.4	4.5	6.4	4.2	5.0	4.1	5.5	4.4	5.5	15.2
1991 to 1993[1]	4.6	2.9	4.2	6.5	3.6	3.4	4.5	3.0	4.7	7.0	20.5

See footnotes at end of table.

Table 3.1a. Household Characteristics by Census Region and Climate Zone, Million U.S. Households, 1993 (Continued)

Housing Unit and Household Characteristics	Total	Census Region				Climate Zone					RSE Row Factors
						Fewer than 2,000 CDD and --				More than 2,000 CDD and Fewer than 4,000 HDD	
		Northeast	Midwest	South	West	More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factors:	0.4	0.8	0.9	0.7	0.9	2.2	1.3	1.2	1.4	1.2	
Observed Location of Household											
City	44.7	8.0	10.7	13.5	12.5	3.5	11.2	9.0	9.4	11.5	6.2
Town	15.8	3.6	3.9	5.6	2.6	1.9	4.5	3.2	3.2	3.0	16.1
Suburbs	19.9	4.9	4.7	7.1	3.3	.8	6.7	6.3	2.6	3.5	10.9
Rural or Open Country	16.2	3.0	4.0	7.3	2.0	2.4	4.1	3.9	2.6	3.2	15.0
Total Number of Rooms (Excluding Bathrooms)											
1 or 2	3.2	1.1	.4	.7	1.0	.3	.5	1.2	.8	.5	21.9
3 to 5	47.4	8.8	10.2	17.4	11.0	3.8	12.1	10.3	9.8	11.3	6.2
6 to 8	40.2	8.2	10.9	13.8	7.3	4.0	12.1	9.2	6.4	8.6	7.0
9 or More	5.8	1.4	1.8	1.5	1.1	.6	1.8	1.8	.7	.9	16.2
Bedrooms											
None or 1	12.9	3.3	2.6	3.7	3.3	.8	3.3	3.6	2.7	2.5	11.3
2	30.0	5.8	7.2	9.9	7.1	2.6	8.3	6.8	5.8	6.6	7.7
3	38.5	7.3	9.1	15.4	6.7	3.5	10.3	8.3	6.8	9.5	6.9
4 or More	15.2	3.1	4.4	4.5	3.2	1.7	4.6	3.8	2.4	2.7	10.1
Other Rooms (Excluding Bathrooms)											
None or 1	4.4	1.2	.5	1.4	1.3	.4	.6	1.4	1.2	.9	18.2
2	35.6	6.4	7.1	13.4	8.6	2.9	8.8	7.5	7.6	8.7	6.9
3	31.7	6.1	8.3	11.0	6.3	2.9	9.3	6.8	5.7	7.0	7.3
4	16.3	3.7	4.6	5.2	2.7	1.6	5.0	4.3	2.3	3.1	8.5
5 or More	8.7	1.9	2.8	2.5	1.4	.9	2.8	2.5	1.0	1.4	13.3
Full Bathrooms											
None or 1	61.6	14.8	16.9	18.4	11.5	6.5	19.3	15.0	10.3	10.5	5.2
2	30.9	4.0	5.7	13.5	7.7	1.9	6.4	6.3	6.5	9.8	6.9
3 or More	4.1	.6	.7	1.6	1.2	.2	.8	1.1	1.0	1.0	17.2
Half Bathrooms											
None	71.5	13.8	16.0	25.7	15.9	6.2	18.5	15.5	14.1	17.1	4.7
1	23.9	5.5	6.9	7.3	4.2	2.4	7.6	6.5	3.6	3.9	8.5
2 or More	1.2	.2	.4	.4	.2	.1	.4	.5	Q	Q	25.8
Number of Stories											
Single-Family Homes	66.8	11.9	16.6	24.8	13.5	6.6	17.5	15.2	12.3	15.2	5.5
1 Story	40.6	3.6	8.0	18.9	10.0	3.0	7.6	7.3	9.4	13.1	7.7
2 Stories	22.4	6.7	7.5	5.1	3.0	3.2	8.4	6.3	2.7	1.8	9.3
3 Stories	1.6	1.0	.1	.4	.2	.1	.4	.9	.1	Q	27.1
Split-Level	2.2	.5	.9	.4	.3	.3	1.0	.6	Q	.2	23.2
Other	Q	Q	NC	Q	NC	NC	NC	Q	NC	Q	100.0
Mobile Homes	5.6	.5	1.4	2.6	1.0	.2	1.4	.8	.9	1.8	19.9
Multi-Story Apartment Building	24.2	7.0	5.3	6.1	5.8	1.4	7.6	6.5	4.6	4.2	9.1
Outside Wall Material											
Brick	26.6	6.7	6.7	12.0	1.3	.8	7.7	8.3	3.0	6.8	10.4
Wood	27.6	4.9	6.4	8.6	7.7	3.5	7.4	5.9	5.2	5.5	10.8
Siding	22.9	5.7	8.3	7.2	1.7	3.1	9.2	6.0	2.1	2.5	10.4
Stucco	10.3	.2	.4	1.5	8.2	.4	.4	.5	6.3	2.7	16.8
Composition	4.1	1.2	.9	1.5	.5	.5	1.1	1.0	.6	.8	16.8
Concrete/Block	4.3	.5	.3	2.6	1.0	.2	.5	.3	.4	2.8	24.5
Other	.8	Q	.4	.2	Q	.2	.2	.3	Q	Q	35.1

See footnotes at end of table.

Table 3.1b. Household Characteristics by Census Region and Climate Zone, Percent of U.S. Households, 1993 (Continued)

Housing Unit and Household Characteristics	Total	Census Region				Climate Zone					RSE Row Factors
						Fewer than 2,000 CDD and –				More than 2,000 CDD and Fewer than 4,000 HDD	
						More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factors:	0.5	0.9	1.1	0.9	1.0	1.4	1.1	1.1	1.2	1.1	
Observed Location of Household											
City	46.2	41.2	45.7	40.2	61.5	40.8	42.3	39.9	53.1	54.4	5.2
Town	16.3	18.6	16.9	16.7	12.8	22.4	16.8	14.4	17.8	14.0	14.4
Suburbs	20.6	25.0	20.2	21.2	16.1	9.5	25.4	28.2	14.5	16.5	10.7
Rural or Open Country	16.8	15.2	17.1	21.9	9.6	27.4	15.6	17.5	14.6	15.1	13.6
Total Number of Rooms (Excluding Bathrooms)											
1 or 2	3.3	5.7	1.5	2.2	5.0	3.2	1.7	5.4	4.4	2.3	22.5
3 to 5	49.0	45.1	43.8	52.0	53.8	44.2	45.8	45.7	55.3	53.3	4.1
6 to 8	41.6	42.0	47.0	41.3	35.6	45.8	45.5	40.8	36.1	40.4	4.9
9 or More	6.0	7.1	7.7	4.6	5.6	6.8	7.0	8.1	4.1	4.1	14.7
Bedrooms											
None or 1	13.4	17.0	11.1	11.1	16.3	9.4	12.6	16.0	15.5	11.6	11.0
2	31.1	30.0	30.8	29.5	35.0	30.4	31.2	30.1	32.5	31.0	5.5
3	39.8	37.3	39.0	46.0	32.9	40.6	38.9	37.1	38.4	44.7	4.4
4 or More	15.7	15.8	19.0	13.4	15.8	19.5	17.4	16.8	13.6	12.8	7.8
Other Rooms (Excluding Bathrooms)											
None or 1	4.6	6.4	2.2	4.1	6.2	4.1	2.4	6.1	6.6	4.2	18.4
2	36.8	33.1	30.5	40.0	42.3	33.8	33.2	33.3	42.9	41.1	5.1
3	32.8	31.5	35.7	32.7	31.0	33.2	35.0	30.3	32.1	33.2	4.9
4	16.8	19.0	19.8	15.6	13.5	18.0	18.7	19.2	13.0	14.8	6.9
5 or More	9.0	10.0	11.8	7.5	7.0	10.9	10.7	11.1	5.4	6.7	11.5
Full Bathrooms											
None or 1	63.8	76.0	72.6	54.9	56.5	75.1	72.9	66.8	58.1	49.3	2.7
2	32.0	20.8	24.3	40.4	37.8	22.3	24.2	28.2	36.4	46.1	5.2
3 or More	4.2	3.2	3.1	4.7	5.7	2.6	2.9	5.0	5.5	4.6	16.4
Half Bathrooms											
None	74.0	70.7	68.8	76.8	78.3	71.5	70.0	68.9	79.5	80.7	2.4
1	24.8	28.0	29.6	21.9	20.9	27.3	28.6	28.8	20.2	18.6	6.8
2 or More	1.2	1.3	1.6	1.3	.8	1.2	1.5	2.3	Q	Q	24.5
Number of Stories											
Single-Family Homes	69.1	61.1	71.1	74.1	66.3	76.1	66.0	67.8	69.2	71.5	3.0
1 Story	42.0	18.7	34.3	56.5	49.2	34.5	28.8	32.7	53.0	62.0	5.5
2 Stories	23.2	34.6	32.4	15.4	14.6	37.2	31.8	28.2	14.9	8.3	7.5
3 Stories	1.7	5.0	.5	1.2	.8	.9	1.7	4.1	.8	Q	26.9
Split-Level	2.2	2.7	4.0	1.1	1.7	3.4	3.6	2.7	Q	1.0	22.4
Other	Q	Q	NC	Q	NC	NC	NC	Q	NC	Q	100.0
Mobile Homes	5.8	2.8	6.1	7.8	5.0	7.6	5.5	3.4	4.9	8.7	18.2
Multi-Story Apartment Building	25.1	36.1	22.8	18.1	28.7	16.4	28.5	28.8	25.9	19.8	8.7
Outside Wall Material											
Brick	27.5	34.2	28.6	35.7	6.4	9.1	29.2	36.9	17.0	31.9	9.0
Wood	28.6	25.4	27.4	25.6	37.8	40.7	28.0	26.4	29.4	25.9	9.1
Siding	23.7	29.5	35.5	21.6	8.3	35.5	34.8	26.8	12.0	11.7	8.0
Stucco	10.7	1.2	1.9	4.3	40.1	4.1	1.5	2.4	35.4	12.9	18.0
Composition	4.2	6.0	4.0	4.5	2.2	5.9	4.1	4.6	3.5	3.8	15.6
Concrete/Block	4.4	2.4	1.1	7.7	4.8	2.6	1.7	1.5	2.5	13.4	24.7
Other	.9	Q	1.5	.6	Q	2.1	.7	1.4	Q	Q	34.2

See footnotes at end of table.

Table 3.1a. Household Characteristics by Census Region and Climate Zone, Million U.S. Households, 1993 (Continued)

Housing Unit and Household Characteristics	Total	Census Region				Climate Zone					RSE Row Factors
						Fewer than 2,000 CDD and --				More than 2,000 CDD and Fewer than 4,000 HDD	
		Northeast	Midwest	South	West	More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factors:	0.4	0.8	0.9	0.7	0.9	2.2	1.3	1.2	1.4	1.2	
Foundation/Basement (More than one may apply)											
Basement	33.8	11.6	14.4	4.9	2.9	6.3	15.7	9.8	1.7	0.7	10.2
Crawlspace	24.8	2.3	4.6	11.3	6.7	1.3	4.9	5.6	7.7	5.3	11.0
Enclosed	19.4	1.9	3.6	8.4	5.5	1.3	4.2	4.5	6.2	3.3	11.2
Open to Outside	5.6	.4	1.0	2.9	1.2	Q	.7	1.2	1.5	2.2	21.3
Concrete Slab	23.4	2.3	2.7	11.8	6.6	.7	3.2	3.4	5.2	10.9	10.4
Other	.3	Q	Q	Q	Q	NC	Q	Q	Q	Q	90.6
Not Asked (Mobile Homes and Buildings with 5 or More Units)	21.8	4.6	4.9	7.0	5.3	1.4	6.1	5.2	4.2	4.9	9.3
Garage/Carport											
Yes	46.7	7.6	12.9	14.7	11.4	4.9	12.9	9.4	8.5	10.9	6.6
1-Car Garage	14.4	3.4	4.1	3.6	3.4	1.3	4.6	3.5	2.4	2.1	11.0
2-Car Garage	24.7	3.7	7.9	7.1	5.9	2.6	7.4	4.8	4.4	5.4	8.7
3-Car Garage	2.1	.4	.6	.2	.8	.3	.6	.5	.3	.3	20.3
Covered Carport	6.3	.1	.4	4.2	1.5	.2	.5	.7	1.5	3.4	20.
No	26.9	4.8	5.2	13.6	3.4	2.4	6.1	6.5	5.0	6.9	9.5
Not Asked (Apartments)	24.2	7.0	5.3	6.1	5.8	1.4	7.6	6.5	4.6	4.2	9.
Fuels Used for Any Use (more than one often used)											
Electricity	96.6	19.5	23.3	33.4	20.4	8.7	26.5	22.4	17.8	21.2	6.9
Natural Gas	58.4	12.2	17.5	14.6	14.1	4.5	18.8	12.9	12.1	10.2	7.
Fuel Oil	10.9	7.4	1.4	1.6	.5	2.1	3.4	4.8	.4	.2	17.4
LPG[2]	8.6	1.3	2.2	4.4	.8	1.4	1.6	1.4	1.6	2.6	20.9
Kerosene	3.7	.8	.9	1.9	Q	.3	.9	1.1	.8	.5	21.3
Wood	22.2	3.6	4.3	7.9	6.4	2.5	4.7	5.9	4.4	4.8	9.2
Solar	1.2	.1	Q	.3	.5	.2	.2	.2	.3	.4	25.
Coal	.6	.2	Q	Q	Q	Q	.1	Q	Q	Q	64.8
Natural Gas Available In Neighborhood											
Yes	69.0	14.2	19.3	19.2	16.3	5.0	21.4	15.8	14.1	12.6	6.3
No	27.6	5.2	4.0	14.3	4.1	3.6	5.1	6.6	3.7	8.6	12.6
1993 Family Income Category											
Less than $5,000	4.1	1.0	.7	1.7	.7	.2	1.0	.9	.9	1.0	15.0
$5,000 to $9,999	10.6	2.0	2.3	4.4	1.9	.9	2.6	2.3	2.4	2.4	11.
$10,000 to $14,999	11.1	2.0	2.8	3.6	2.6	1.1	3.2	2.1	2.3	2.4	9.6
$15,000 to $19,999	9.6	1.7	2.5	3.4	2.1	1.0	2.8	1.8	1.6	2.4	12.
$20,000 to $24,999	8.7	1.4	2.4	3.0	1.9	1.1	2.2	2.2	1.3	1.9	11.0
$25,000 to $34,999	14.1	2.6	3.6	4.9	2.9	1.5	3.9	3.3	2.3	3.1	9.
$35,000 to $49,999	17.5	3.8	4.4	5.8	3.4	1.5	4.9	4.3	3.0	3.8	8.5
$50,000 to $74,999	12.6	2.7	3.1	4.1	2.7	1.0	3.8	3.1	2.2	2.5	8.5
$75,000 or More	8.3	2.1	1.5	2.6	2.2	.4	2.2	2.4	1.7	1.6	11.6
Below Poverty Line											
100 Percent	14.4	3.0	2.6	5.9	2.9	1.0	3.3	3.0	3.5	3.6	9.6
125 Percent	19.4	3.9	4.0	7.6	3.8	1.6	4.6	4.1	4.5	4.5	9.0
Eligible for Federal Assistance[3]	30.7	6.3	7.1	10.9	6.4	2.8	8.1	6.6	6.3	6.8	6.9

See footnotes at end of table.

Table 3.1b. Household Characteristics by Census Region and Climate Zone, Percent of U.S. Households, 1993 (Continued)

Housing Unit and Household Characteristics	Total	Census Region				Climate Zone					RSE Row Factors
						Fewer than 2,000 CDD and --				More than 2,000 CDD and Fewer than 4,000 HDD	
		Northeast	Midwest	South	West	More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factors:	0.5	0.9	1.1	0.9	1.0	1.4	1.1	1.1	1.2	1.1	
Foundation/Basement (More than one may apply)											
Basement	35.0	59.4	61.7	14.7	14.4	69.3	59.4	43.5	9.3	3.1	7.6
Crawlspace	25.7	11.6	19.6	33.6	32.9	14.9	18.4	25.0	43.1	25.2	9.0
Enclosed	20.1	9.6	15.4	25.1	27.2	14.7	15.8	19.8	35.0	15.4	9.5
Open to Outside	5.8	2.1	4.4	8.7	6.0	Q	2.8	5.2	8.3	10.2	18.6
Concrete Slab	24.2	12.0	11.6	35.2	32.2	7.7	12.1	14.9	29.4	51.4	9.3
Other	.3	Q	Q	Q	Q	NC	Q	Q	Q	Q	77.1
Not Asked (Mobile Homes and Buildings with 5 or More Units)	22.6	23.9	20.9	20.9	25.9	15.5	22.9	23.3	23.7	23.2	8.4
Garage/Carport											
Yes	48.3	39.2	55.3	44.0	55.9	56.6	48.8	41.8	47.7	51.6	4.3
1-Car Garage	14.9	17.5	17.4	10.7	16.5	21.5	17.3	15.5	13.4	9.7	9.1
2-Car Garage	25.6	19.2	33.8	21.3	29.2	30.2	27.9	21.5	25.0	25.5	7.3
3-Car Garage	2.2	2.3	2.7	.7	3.9	3.9	2.2	2.4	1.9	1.4	18.9
Covered Carport	6.5	.7	1.9	12.5	7.5	2.0	1.8	3.3	8.2	16.1	18.9
No	27.8	24.6	22.2	40.5	16.5	27.4	23.0	28.9	28.3	32.6	7.4
Not Asked (Apartments)	25.1	36.1	22.8	18.1	28.7	16.4	28.5	28.8	25.9	19.8	8.7
Fuels Used for Any Use (more than one often used)											
Electricity	99.9	100.0	100.0	99.8	100.0	100.0	100.0	99.8	100.0	99.9	NE
Natural Gas	60.4	62.9	74.9	43.6	69.2	51.6	70.8	57.5	67.8	48.0	5.4
Fuel Oil	11.3	38.1	6.2	4.7	2.3	24.0	13.0	21.2	2.2	1.0	16.9
LPG[2]	8.9	6.6	9.5	13.0	3.8	15.8	6.2	6.3	9.0	12.2	19.3
Kerosene	3.8	4.0	4.1	5.6	Q	3.9	3.5	4.8	4.8	2.5	20.8
Wood	23.0	18.2	18.5	23.7	31.4	28.5	17.9	26.1	24.5	22.5	8.3
Solar	1.2	.8	Q	.8	2.7	Q	.7	.7	1.7	1.7	24.4
Coal	.6	.8	Q	Q	Q	Q	.5	Q	Q	Q	61.8
Natural Gas Available in Neighborhood											
Yes	71.4	73.2	82.7	57.3	79.9	58.0	80.9	70.5	79.2	59.5	4.4
No	28.6	26.8	17.3	42.7	20.1	42.0	19.1	29.5	20.8	40.5	11.3
1993 Family Income Category											
Less than $5,000	4.2	5.4	2.8	5.0	3.3	2.9	3.6	4.2	5.2	4.6	14.3
$5,000 to $9,999	11.0	10.2	9.8	13.0	9.5	10.3	9.7	10.3	13.3	11.5	9.3
$10,000 to $14,999	11.5	10.5	12.1	10.8	13.0	12.3	12.2	9.4	13.1	11.3	7.7
$15,000 to $19,999	10.0	8.6	10.8	10.0	10.2	11.7	10.5	8.2	9.2	11.1	10.2
$20,000 to $24,999	9.1	7.4	10.2	9.1	9.2	12.2	8.4	9.9	7.3	9.2	9.0
$25,000 to $34,999	14.5	13.5	15.6	14.7	14.0	16.9	14.6	14.8	12.9	14.6	7.1
$35,000 to $49,999	18.1	19.5	19.0	17.3	16.9	16.9	18.4	19.0	17.0	18.0	6.6
$50,000 to $74,999	13.1	14.0	13.2	12.3	13.3	11.7	14.4	13.7	12.4	11.9	7.8
$75,000 or More	8.6	10.9	6.4	7.7	10.6	5.0	8.3	10.5	9.7	7.7	11.8
Below Poverty Line											
100 Percent	14.9	15.4	11.1	17.5	14.3	11.3	12.4	13.4	19.7	16.9	8.0
125 Percent	20.0	20.1	17.2	22.8	18.7	19.0	17.3	18.4	25.1	21.4	7.2
Eligible for Federal Assistance[3]	31.7	32.2	30.5	32.6	31.2	32.4	30.7	29.4	35.6	32.0	4.8

See footnotes at end of table.

Table 3.1a. Household Characteristics by Census Region and Climate Zone, Million U.S. Households, 1993 (Continued)

Housing Unit and Household Characteristics	Total	Census Region				Climate Zone					RSE Row Factors
		Northeast	Midwest	South	West	Fewer than 2,000 CDD and – More than 7,000 HDD	Fewer than 2,000 CDD and – 5,500 to 7,000 HDD	Fewer than 2,000 CDD and – 4,000 to 5,499 HDD	Fewer than 2,000 CDD and – Fewer than 4,000 HDD	More than 2,000 CDD and Fewer than 4,000 HDD	
RSE Column Factors:	0.4	0.8	0.9	0.7	0.9	2.2	1.3	1.2	1.4	1.2	
Payment Method for Fuel and Electricity											
All Paid by Household	83.1	14.6	20.1	31.3	17.1	7.7	22.3	18.1	15.3	19.7	4.8
Some Paid, Some in Rent	8.3	3.4	2.2	.8	2.0	.4	2.7	3.0	1.4	.8	12.9
All Included in Rent	4.1	1.3	.7	1.2	.9	.5	1.0	1.2	.8	.6	18.0
Other Method	1.1	.2	.3	.2	.4	.1	.5	.1	.2	.1	28.5
Age of Householder											
Under 25 Years	5.7	1.0	1.3	2.0	1.3	.5	1.4	1.3	1.2	1.3	14.8
25 to 34 Years	19.9	3.7	5.2	6.9	4.1	1.8	5.5	4.9	3.3	4.4	7.6
35 to 44 Years	21.4	4.7	4.7	7.4	4.6	2.0	5.5	5.0	4.1	4.8	6.5
45 to 59 Years	21.9	4.1	5.3	7.7	4.8	1.7	6.1	5.1	4.2	4.7	8.0
60 Years and Over	27.8	6.0	6.8	9.5	5.5	3.6	8.0	6.2	4.9	6.0	7.3
Race of Householder											
White	80.2	16.4	20.6	26.7	16.5	3.4	23.0	18.6	13.1	17.1	4.2
Black	10.9	2.2	2.0	5.6	1.1	Q	2.6	2.8	2.6	2.9	12.3
Other[4]	5.5	.9	.6	1.2	2.8	.3	.9	1.0	2.1	1.3	14.1
Householder of Hispanic Descent											
Yes	7.9	1.7	.9	2.3	2.9	.3	1.3	1.8	1.9	2.5	14.6
No	88.7	17.7	22.4	31.2	17.4	3.4	25.2	20.6	15.9	18.7	5.1
Household Size											
1 Person	23.5	4.8	6.1	8.0	4.6	2.2	6.9	5.4	4.4	4.6	7.4
2 Persons	31.7	6.0	7.5	11.1	7.1	2.7	8.6	7.4	5.6	7.4	5.8
3 Persons	16.6	3.7	3.6	6.2	3.1	1.4	4.4	4.0	2.8	3.9	8.4
4 Persons	14.6	3.2	3.8	4.6	2.9	1.5	4.2	3.3	2.5	3.1	7.9
5 Persons	6.8	1.2	1.5	2.5	1.6	.6	1.7	1.6	1.6	1.4	12.0
6 or More Persons	3.5	.6	.8	1.0	1.0	.3	.8	.8	.9	.8	16.8
Household Owns or Has Regular Use of a Motor Vehicle											
No	11.9	4.3	2.1	3.8	1.8	.5	3.0	4.1	2.5	1.9	11.8
Yes	84.7	15.2	21.2	29.7	18.6	8.2	23.4	18.4	15.3	19.3	4.4
1 Vehicle	34.2	6.4	8.2	12.0	7.7	3.1	9.4	7.2	6.5	8.2	6.4
2 Vehicles	36.4	6.6	9.3	12.6	7.9	3.6	10.7	7.8	6.1	8.2	6.5
3 Vehicles	10.8	1.7	2.8	4.1	2.3	1.3	2.4	2.6	2.1	2.4	11.9
4 or More Vehicles	3.2	.5	.9	1.1	.7	.3	1.0	.8	.6	.6	15.1

[1] Does not include all new construction for 1993.
[2] Excludes 22.1 million households that use LPG only for outdoor grills.
[3] Below 150 percent of poverty line or 60 percent of median State income.
[4] Includes 1.7 million householders who described themselves as Hispanic rather than White, Black, or other.
NC = No cases in sample.
Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.
-- = Data not applicable.
Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.
Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.1b. Household Characteristics by Census Region and Climate Zone, Percent of U.S. Households, 1993 (Continued)

Housing Unit and Household Characteristics	Total	Census Region				Climate Zone					RSE Row Factors
						Fewer than 2,000 CDD and --				More than 2,000 CDD and Fewer than 4,000 HDD	
						More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factors:	0.5	0.9	1.1	0.9	1.0	1.4	1.1	1.1	1.2	1.1	
Payment Method for Fuel and Electricity											
All Paid by Household	86.0	75.0	86.4	93.3	84.2	88.7	84.2	80.8	86.1	92.8	1.8
Some Paid, Some in Rent	8.6	17.3	9.3	2.5	9.6	4.8	10.2	13.3	8.1	3.6	13.1
All Included in Rent	4.2	6.5	3.1	3.6	4.4	5.3	3.7	5.3	4.5	3.0	18.4
Other Method	1.2	1.2	1.3	.7	1.8	1.2	1.9	.6	1.3	.7	27.7
Age of Householder											
Under 25 Years	5.9	5.0	5.8	6.1	6.6	5.8	5.3	5.9	6.8	6.0	13.7
25 to 34 Years	20.6	19.0	22.3	20.5	20.2	20.9	20.9	21.6	18.3	20.9	5.8
35 to 44 Years	22.1	24.0	20.0	22.2	22.6	23.6	20.6	22.1	23.3	22.5	4.5
45 to 59 Years	22.6	21.2	22.6	22.8	23.6	19.6	23.1	22.7	23.8	22.2	5.9
60 Years and Over	28.7	30.8	29.3	28.3	26.9	30.1	30.1	27.7	27.8	28.4	4.9
Race of Householder											
White	83.0	84.2	88.5	79.8	80.8	96.4	86.8	82.9	73.8	80.5	1.7
Black	11.3	11.2	8.8	16.7	5.3	Q	9.7	12.6	14.5	13.6	11.2
Other[4]	5.7	4.6	2.7	3.5	13.9	2.9	3.5	4.5	11.7	5.9	14.9
Householder of Hispanic Descent											
Yes	8.2	8.9	4.1	6.8	14.5	3.5	5.0	8.2	10.7	12.0	14.3
No	91.8	91.1	95.9	93.2	85.5	96.5	95.0	91.8	89.3	88.0	1.6
Household Size											
1 Person	24.3	24.5	26.3	23.9	22.8	25.0	26.0	24.3	24.6	21.9	4.9
2 Persons	32.8	30.9	32.0	33.3	34.7	31.6	32.4	32.8	31.3	35.0	3.6
3 Persons	17.2	18.9	15.5	18.5	15.2	16.6	16.5	17.9	16.0	18.4	6.6
4 Persons	15.1	16.4	16.4	13.9	14.4	17.1	15.9	14.5	14.3	14.6	6.1
5 Persons	7.0	6.0	6.4	7.5	7.8	6.7	6.3	6.9	8.9	6.5	10.4
6 or More Persons	3.6	3.3	3.4	3.0	5.1	3.0	2.9	3.5	5.0	3.7	16.3
Household Owns or Has Regular Use of a Motor Vehicle											
No	12.3	22.1	8.9	11.3	8.7	5.6	11.5	18.1	13.8	8.7	11.0
Yes	87.7	77.9	91.1	88.7	91.3	94.4	88.5	81.9	86.2	91.3	1.4
1 Vehicle	35.4	32.7	35.3	35.8	37.7	35.2	35.4	32.0	36.3	38.6	4.0
2 Vehicles	37.7	33.9	40.0	37.5	39.0	41.5	40.3	34.8	34.5	38.6	4.4
3 Vehicles	11.2	8.9	11.9	12.1	11.1	14.6	9.2	11.7	11.8	11.2	10.3
4 or More Vehicles	3.3	2.5	4.0	3.3	3.5	3.0	3.6	3.4	3.6	2.8	14.0

[1] Does not include all new construction for 1993.
[2] Excludes 22.1 million households that use LPG only for outdoor grills.
[3] Below 150 percent of poverty line or 60 percent of median State income.
[4] Includes 1.7 million householders who described themselves as Hispanic rather than White, Black, or other.
NC = No cases in sample.
Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.
NE = RSE row factor not estimated because RSE's for all statistics in this row are between 0.0 and 1.0 percent.
-- = Data not applicable.
Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • Percentages are calculated on unrounded numbers. • See "Glossary" for definition of terms used in this report.
Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.2a. Household Characteristics by Year of Construction, Million U.S. Households, 1993

Housing Unit and Household Characteristics	Total	Year of Construction									RSE Row Factors
		1991 to 1993[1]	1988 to 1990	1985 to 1987	1980 to 1984	1970 to 1979	1960 to 1969	1950 to 1959	1940 to 1949	1939 or Before	
RSE Column Factors:	0.4	1.8	1.4	1.4	1.1	0.8	0.9	0.9	1.2	0.8	
Total	96.6	4.5	4.7	5.5	8.5	18.1	15.0	13.1	6.9	20.4	5.3
Census Region and Division											
Northeast	19.5	.6	.7	.7	1.1	2.5	2.7	2.9	1.6	6.7	12.6
New England	5.3	.1	.2	.3	.3	.6	.7	.6	.4	1.9	16.0
Middle Atlantic	14.4	.5	.5	.4	.9	1.9	2.0	2.2	1.2	4.8	16.4
Midwest	23.3	1.0	1.0	.8	1.3	3.8	4.2	2.2	1.6	7.4	12.1
East North Central	16.4	.5	.8	.6	.9	2.7	3.5	1.5	1.1	4.9	12.7
West North Central	6.9	.5	.3	.2	.4	1.1	.7	.7	.5	2.5	23.7
South	33.5	2.2	2.2	2.9	4.1	7.1	5.1	4.4	2.1	3.5	7.8
South Atlantic	17.4	1.4	1.3	1.9	1.9	3.5	2.6	2.2	1.1	1.5	11.0
East South Central	6.0	.3	.4	.4	.6	1.5	.8	.8	.4	.9	13.2
West South Central	10.1	.5	.5	.6	1.6	2.1	1.7	1.3	.6	1.1	13.1
West	20.4	.7	.8	1.1	1.9	4.8	3.0	3.6	1.6	2.7	10.5
Mountain	5.4	.3	.2	.2	.6	1.6	.6	.9	.4	.6	16.5
Pacific	15.0	.5	.7	.9	1.3	3.2	2.4	2.7	1.2	2.1	12.3
Urban Status											
Urban	75.8	3.7	3.6	4.5	6.7	14.3	12.8	10.8	5.2	14.2	6.1
Central City	30.6	1.1	1.0	1.2	2.1	4.9	4.6	4.3	2.6	8.7	9.3
Suburban	45.2	2.6	2.6	3.3	4.6	9.4	8.2	6.4	2.6	5.5	7.2
Rural	20.8	.7	1.1	1.0	1.7	3.9	2.2	2.3	1.7	6.2	9.3
Climate Zone											
Under 2,000 CDD and--											
Over 7,000 HDD	8.7	.3	.4	.4	.7	1.5	.6	.9	.7	3.2	24.1
5,500 to 7,000 HDD	26.5	1.2	1.1	.9	1.3	4.6	4.9	2.9	2.0	7.5	14.4
4,000 to 5,499 HDD	22.5	.7	1.2	1.4	1.6	4.0	3.1	3.2	1.6	5.6	14.3
Under 4,000 HDD	17.8	.8	.8	.9	1.6	3.3	3.1	3.2	1.4	2.6	14.6
2,000 CDD or More and --											
Under 4,000 HDD	21.2	1.5	1.2	1.9	3.2	4.6	3.3	2.8	1.2	1.4	12.4
Heated Floorspace Category (square feet)											
Fewer than 600	7.5	Q	.2	.3	.5	1.4	1.5	.8	.6	2.1	17.7
600 to 999	21.8	.6	.8	1.2	2.2	5.0	3.7	2.6	1.9	3.8	9.9
1,000 to 1,599	27.8	1.4	1.5	1.7	2.6	5.1	3.8	4.3	2.0	5.4	8.6
1,600 to 1,999	12.4	.6	.7	.7	1.0	1.8	2.3	2.1	.8	2.3	11.9
2,000 to 2,399	9.6	.5	.4	.5	.8	1.7	1.4	1.3	.6	2.5	14.3
2,400 to 2,999	8.2	.5	.5	.5	.6	1.4	1.0	1.0	.6	2.2	13.1
3,000 or More	9.3	.7	.6	.7	.6	1.7	1.4	1.0	.3	2.2	14.7
Ownership of Unit											
Owned	63.2	3.3	3.6	3.6	5.3	11.4	9.6	9.5	4.5	12.2	6.1
Rented	33.4	1.1	1.1	1.9	3.1	6.7	5.4	3.6	2.4	8.1	9.7

See footnotes at end of table.

Table 3.2b. Household Characteristics by Year of Construction, Percent of U.S. Households, 1993

Housing Unit and Household Characteristics	Total	Year of Construction									RSE Row Factors
		1991 to 1993[1]	1988 to 1990	1985 to 1987	1980 to 1984	1970 to 1979	1960 to 1969	1950 to 1959	1940 to 1949	1939 or Before	
RSE Column Factors:	0.4	1.7	1.4	1.4	1.1	0.9	1.0	0.9	1.2	0.7	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0
Census Region and Division											
Northeast	20.2	12.9	14.1	12.4	13.1	13.7	18.2	22.0	23.5	33.0	11.9
New England	5.2	2.2	4.2	4.7	3.0	3.4	4.8	4.8	5.9	9.3	16.7
Middle Atlantic	14.9	10.7	9.9	7.7	10.1	10.4	13.4	17.2	17.6	23.8	15.4
Midwest	24.1	21.9	22.1	14.7	15.7	20.7	27.7	17.0	23.0	36.4	10.7
East North Central	16.9	10.1	16.0	10.3	10.5	14.7	23.1	11.6	16.3	24.1	12.3
West North Central	7.2	11.7	6.1	4.4	5.2	6.1	4.6	5.4	6.6	12.3	23.2
South	34.7	48.8	45.7	52.9	48.2	39.0	33.9	33.3	30.8	17.3	6.5
South Atlantic	18.0	31.2	27.4	34.4	22.0	19.3	17.5	17.1	15.3	7.4	10.1
East South Central	6.2	7.3	7.7	6.9	6.8	8.0	5.3	6.3	6.2	4.2	13.9
West South Central	10.5	10.4	10.7	11.6	19.4	11.7	11.2	9.9	9.3	5.6	13.1
West	21.1	16.4	18.0	19.9	23.0	26.5	20.1	27.7	22.8	13.3	9.8
Mountain	5.5	6.3	3.3	4.0	7.4	8.7	4.1	7.0	5.2	3.0	17.1
Pacific	15.5	10.1	14.7	15.9	15.6	17.8	16.0	20.7	17.6	10.3	12.2
Urban Status											
Urban	78.4	83.6	76.2	82.0	79.4	78.7	85.2	82.6	75.1	69.6	2.6
Central City	31.7	24.7	22.0	22.2	24.5	27.1	30.7	33.2	37.0	42.8	7.9
Suburban	46.8	58.9	54.2	59.8	54.9	51.5	54.5	49.4	38.1	26.8	5.2
Rural	21.6	16.4	23.8	18.0	20.6	21.3	14.8	17.4	24.9	30.4	9.4
Climate Zone											
Under 2,000 CDD and--											
Over 7,000 HDD	9.0	6.7	9.2	6.8	8.3	8.0	4.3	6.6	10.2	15.8	23.7
5,500 to 7,000 HDD	27.4	26.7	23.2	16.8	15.7	25.5	32.7	22.5	29.1	36.7	13.4
4,000 to 5,499 HDD	23.2	14.9	26.2	25.6	19.0	22.0	20.5	24.8	23.0	27.8	13.4
Under 4,000 HDD	18.4	18.6	16.7	16.7	18.7	18.0	20.8	24.6	21.0	12.9	14.4
2,000 CDD or More and --											
Under 4,000 HDD	21.9	33.1	24.7	34.1	38.3	26.5	21.8	21.6	16.7	6.8	11.4
Heated Floorspace Category (square feet)											
Fewer than 600	7.8	Q	3.3	6.1	6.2	7.9	9.7	6.0	8.4	10.1	17.2
600 to 999	22.6	13.4	17.7	21.8	26.2	27.5	24.4	19.8	27.7	18.6	8.5
1,000 to 1,599	28.8	31.1	31.5	30.1	31.3	28.2	25.1	32.8	29.3	26.6	6.9
1,600 to 1,999	12.8	14.5	14.5	12.7	12.3	9.9	15.3	16.4	11.6	11.3	10.7
2,000 to 2,399	10.0	10.4	9.4	8.2	9.7	9.5	9.2	9.8	8.9	12.1	13.2
2,400 to 2,999	8.5	10.4	10.0	8.6	7.6	7.5	6.7	7.5	9.1	10.7	12.4
3,000 or More	9.6	16.1	13.5	12.5	6.7	9.6	9.6	7.6	4.9	10.6	13.8
Ownership of Unit											
Owned	65.4	74.9	76.3	65.9	63.2	63.1	64.0	72.6	65.7	60.0	3.5
Rented	34.6	25.1	23.7	34.1	36.8	36.9	36.0	27.4	34.3	40.0	7.3

See footnotes at end of table.

Table 3.2a. Household Characteristics by Year of Construction, Million U.S. Households, 1993 (Continued)

Housing Unit and Household Characteristics	Total	Year of Construction									RSE Row Factors
		1991 to 1993[1]	1988 to 1990	1985 to 1987	1980 to 1984	1970 to 1979	1960 to 1969	1950 to 1959	1940 to 1949	1939 or Before	
RSE Column Factors:	0.4	1.8	1.4	1.4	1.1	0.8	0.9	0.9	1.2	0.8	
Type and Ownership of Housing Unit											
Single-Family Detached	59.6	2.7	2.7	2.8	4.0	9.3	9.4	10.5	4.9	13.3	0.4
Owned	51.3	2.6	2.5	2.5	3.6	8.5	8.3	8.8	4.0	10.5	0.9
Rented	8.2	.1	.2	.3	.4	.8	1.1	1.7	.9	2.7	5.6
Single-Family Attached	7.2	.4	.5	.7	1.2	1.1	.8	.6	.6	1.3	2.4
Owned	4.4	.3	.4	.5	.7	.6	.4	.3	.3	.8	2.9
Rented	2.8	.1	.1	.2	.4	.5	.4	.3	.3	.5	2.2
Multifamily (2 to 4 units)	8.0	.1	.3	.2	.5	1.1	1.0	.8	.7	3.3	2.2
Owned	1.5	Q	Q	Q	Q	Q	Q	.2	Q	.8	3.1
Rented	6.5	Q	.2	.1	.5	1.1	.9	.6	.6	2.5	2.4
Multifamily (5 or more units)	16.2	.8	.5	1.2	1.8	4.7	3.2	1.0	.7	2.4	1.0
Owned	1.6	Q	Q	Q	.2	.7	.3	Q	Q	Q	4.4
Rented	14.7	.8	.5	1.0	1.6	4.0	3.0	.9	.6	2.4	1.1
Mobile Home	5.6	.5	.6	.7	.9	2.0	.6	Q	Q	Q	5.4
Owned	4.4	.4	.5	.5	.7	1.6	.4	Q	NC	Q	7.3
Rented	1.2	Q	Q	.2	.2	.4	Q	Q	Q	Q	9.2
Observed Location of Household											
City	44.7	1.7	1.5	2.0	3.5	7.5	7.4	6.6	3.4	11.1	0.9
Town	15.9	.5	.8	.7	1.1	2.5	2.0	1.9	1.4	4.9	1.6
Suburbs	19.9	1.3	1.4	1.8	2.2	4.2	3.5	3.2	1.2	1.2	2.3
Rural or Open Country	16.2	1.0	1.1	1.0	1.6	4.0	2.2	1.3	.9	3.1	1.8
Total Number of Rooms (Excluding Bathrooms)											
1 or 2	3.2	Q	Q	Q	.2	.7	.6	Q	Q	1.1	5.7
3 to 5	47.4	2.1	2.2	2.8	4.9	9.6	7.1	5.8	3.8	9.0	0.8
6 to 8	40.2	1.9	2.1	2.1	3.1	6.6	6.5	6.3	2.8	8.9	0.5
9 or More	5.8	.3	.3	.5	.2	1.1	.3	.8	.3	1.4	3.0
Bedrooms											
None or 1	12.9	.4	.3	.6	1.2	2.6	2.5	1.1	.8	3.6	1.9
2	30.0	1.0	1.3	1.6	2.7	6.0	4.1	3.8	3.0	6.5	0.7
3	38.5	2.3	2.1	2.4	3.5	6.5	6.2	6.5	2.3	6.8	0.9
4 or More	15.2	.8	1.0	1.0	1.0	3.0	2.3	1.7	.9	3.4	1.9
Other Rooms (Excluding Bathrooms)											
None or 1	4.4	.3	.2	.2	.3	1.0	.7	.2	.2	1.2	3.3
2	35.6	1.5	1.6	2.0	4.1	7.9	5.5	4.4	2.6	5.9	0.7
3	31.7	1.4	1.6	1.8	2.6	4.7	5.1	4.7	2.5	7.4	0.9
4	16.3	.8	.8	.9	1.1	3.0	2.5	2.4	1.1	3.7	1.6
5 or More	8.7	.4	.5	.6	.5	1.5	1.2	1.2	.5	2.2	2.5
Full Bathrooms											
None or 1	61.6	1.2	1.5	2.0	4.2	10.7	10.2	9.5	5.5	17.0	0.8
2	30.9	2.9	2.9	3.2	3.8	6.5	4.5	3.0	1.3	3.0	0.7
3 or More	4.1	.4	.3	.3	.5	1.0	.4	.6	Q	.4	2.5
Half Bathrooms											
None	71.5	3.1	3.1	3.5	5.9	13.6	10.4	9.7	5.5	16.7	0.7
1	23.9	1.3	1.6	2.0	2.4	4.3	4.3	3.3	1.3	3.5	0.8
2 or More	1.2	Q	Q	Q	.2	.2	.4	Q	Q	Q	9.8

See footnotes at end of table.

Table 3.2b. Household Characteristics by Year of Construction, Percent of U.S. Households, 1993 (Continued)

Housing Unit and Household Characteristics	Total	Year of Construction									RSE Row Factors
		1991 to 1993[1]	1988 to 1990	1985 to 1987	1980 to 1984	1970 to 1979	1960 to 1969	1950 to 1959	1940 to 1949	1939 or Before	
RSE Column Factors:	0.4	1.7	1.4	1.4	1.1	0.9	1.0	0.9	1.2	0.7	
Type and Ownership of Housing Unit											
Single-Family Detached	61.7	60.8	57.4	50.8	47.5	51.0	62.5	80.6	71.0	65.2	4.4
Owned	53.1	57.8	53.8	45.0	42.6	46.7	55.4	67.3	58.2	51.8	4.9
Rented	8.5	3.0	3.6	5.9	4.9	4.3	7.1	13.3	12.7	13.4	15.5
Single-Family Attached	7.5	8.7	11.5	11.9	14.0	6.1	5.5	4.9	8.9	6.3	19.6
Owned	4.6	6.4	8.6	8.4	8.7	3.5	2.9	2.6	4.6	3.8	24.6
Rented	2.9	2.3	2.9	3.6	5.3	2.5	2.6	2.3	4.2	2.4	24.8
Multifamily (2 to 4 units)	8.3	2.3	6.9	3.2	5.9	6.3	6.6	6.1	9.8	16.2	19.6
Owned	1.5	Q	Q	Q	Q	Q	Q	1.5	Q	4.0	29.4
Rented	6.7	Q	5.1	2.4	5.3	5.9	5.9	4.5	8.1	12.2	20.8
Multifamily (5 or more units)	16.8	17.5	10.9	21.2	21.5	25.6	21.6	7.5	9.6	11.9	13.8
Owned	1.6	Q	Q	Q	2.5	3.8	1.9	Q	Q	Q	40.7
Rented	15.2	16.8	10.3	18.9	19.0	21.9	19.7	6.9	8.4	11.7	14.2
Mobile Home	5.8	10.6	13.3	12.8	11.0	11.0	3.7	Q	Q	Q	14.6
Owned	4.6	9.6	11.5	9.4	8.7	8.7	3.0	Q	NC	Q	16.5
Rented	1.2	Q	Q	3.4	2.3	2.3	Q	Q	Q	Q	26.4
Observed Location of Household											
City	46.2	38.0	30.8	36.9	41.8	41.4	49.3	50.2	49.5	54.4	6.1
Town	16.3	12.1	16.3	12.4	12.7	13.6	13.1	14.7	20.8	24.2	13.7
Suburbs	20.6	28.0	29.2	32.3	26.3	23.2	23.0	24.7	17.3	6.0	10.7
Rural or Open Country	16.8	21.9	23.6	18.4	19.3	21.9	14.6	10.3	12.4	15.4	11.5
Total Number of Rooms (Excluding Bathrooms)											
1 or 2	3.3	Q	Q	Q	2.5	4.1	3.8	Q	Q	5.2	24.5
3 to 5	49.0	48.0	46.9	50.3	58.1	53.2	47.6	44.6	54.4	44.0	5.0
6 to 8	41.6	41.7	44.1	38.7	36.9	36.6	43.0	47.9	40.0	43.7	5.8
9 or More	6.0	7.8	7.4	9.0	2.5	6.1	5.6	5.9	3.8	7.1	18.4
Bedrooms											
None or 1	13.4	8.3	6.6	10.2	14.2	14.5	16.5	8.1	10.9	17.6	14.2
2	31.1	23.4	27.2	28.6	31.8	32.9	27.2	29.1	43.6	32.2	7.6
3	39.8	51.0	44.6	43.1	41.7	35.8	41.1	49.6	32.6	33.4	5.4
4 or More	15.7	17.3	21.6	18.2	12.2	16.8	15.3	13.1	12.9	16.9	10.7
Other Rooms (Excluding Bathrooms)											
None or 1	4.6	7.4	5.0	4.5	3.1	5.7	4.4	1.8	3.1	5.8	20.0
2	36.8	33.6	34.6	37.2	48.3	43.4	36.7	34.1	37.2	29.0	6.5
3	32.8	31.8	34.4	32.0	30.1	25.9	33.8	36.2	35.7	36.3	6.4
4	16.8	17.7	16.4	15.7	13.1	16.5	16.9	18.5	16.5	18.0	9.9
5 or More	9.0	9.5	9.6	10.6	5.5	8.5	8.2	9.4	7.5	10.8	14.7
Full Bathrooms											
None or 1	63.8	25.9	31.3	35.7	49.7	58.8	67.8	72.5	80.0	83.4	4.2
2	32.0	64.2	62.0	58.6	44.3	35.8	29.6	22.8	18.7	14.5	6.1
3 or More	4.2	9.8	6.7	5.7	5.9	5.5	2.6	4.7	Q	2.1	19.2
Half Bathrooms											
None	74.0	69.6	65.2	63.8	69.4	75.1	69.1	74.4	80.1	81.9	3.0
1	24.8	29.4	34.2	35.6	28.4	23.6	28.4	25.0	18.9	17.4	8.1
2 or More	1.2	Q	Q	Q	2.2	1.2	2.6	Q	Q	Q	28.0

See footnotes at end of table.

Table 3.2a. Household Characteristics by Year of Construction, Million U.S. Households, 1993 (Continued)

Housing Unit and Household Characteristics	Total	Year of Construction									RSE Row Factors
		1991 to 1993[1]	1988 to 1990	1985 to 1987	1980 to 1984	1970 to 1979	1960 to 1969	1950 to 1959	1940 to 1949	1939 or Before	
RSE Column Factors:	0.4	1.8	1.4	1.4	1.1	0.8	0.9	0.9	1.2	0.8	
Number of Stories											
Single-Family Homes	66.8	3.1	3.2	3.4	5.2	10.4	10.2	11.2	5.5	14.5	0.9
1 Story	40.6	1.7	1.8	1.7	3.0	6.7	7.9	8.5	3.6	5.8	1.6
2 Stories	22.4	1.3	1.2	1.6	1.9	2.7	1.7	2.3	1.8	7.9	10.5
3 Stories	1.6	.1	.1	.1	Q	Q	Q	Q	Q	.8	29.6
Split-Level	2.2	.1	.1	.1	.2	.8	.5	.3	Q	Q	26.6
Other	Q	NC	Q	NC	NC	NC	NC	NC	NC	Q	100.0
Mobile Homes	5.6	.5	.6	.7	.9	2.0	.6	Q	Q	Q	15.8
Multi-Story Apartment Building	24.2	.9	.8	1.3	2.3	5.8	4.2	1.8	1.3	5.7	10.0
Outside Wall Material											
Brick	26.6	.9	.9	1.1	2.6	5.3	6.3	3.1	1.8	4.6	10.2
Wood	27.6	1.4	1.4	1.6	2.5	4.7	2.8	3.4	2.1	7.7	10.1
Siding	22.9	1.6	1.8	1.8	1.8	4.5	2.6	2.5	1.6	4.9	8.9
Stucco	10.3	.5	.4	.7	1.1	2.3	1.5	1.9	.7	1.2	15.2
Composition	4.1	Q	.1	Q	Q	.3	.6	.9	.5	1.4	20.9
Concrete/Block	4.3	Q	Q	.2	.4	1.0	1.0	1.0	.2	.3	38.0
Other	.8	Q	Q	Q	Q	Q	.2	Q	Q	.3	40.9
Foundation/Basement (More than one may apply)											
Basement	33.8	1.2	1.2	1.2	1.3	4.2	4.6	4.7	2.8	12.6	3.6
Crawlspace	24.8	.7	.9	.9	1.3	3.5	3.8	5.0	2.7	6.1	4.8
Enclosed	19.4	.6	.7	.8	1.1	2.9	3.1	3.7	1.9	4.6	5.1
Open to Outside	5.6	.1	.2	.1	.2	.6	.7	1.3	.8	1.5	21.1
Concrete Slab	23.4	1.6	1.7	1.8	3.4	4.8	3.9	3.1	1.2	1.9	10.6
Other	.3	Q	NC	Q	NC	Q	Q	Q	NC	Q	100.0
Not Asked (Mobile Homes and Buildings with 5 or More Units)	21.8	1.3	1.1	1.9	2.8	6.7	3.8	1.1	.7	2.5	10.2
Garage/Carport											
Yes	46.7	2.7	2.7	2.8	4.2	8.3	7.7	7.6	3.1	7.5	7.8
1-Car Garage	14.4	.3	.5	.6	.9	1.6	2.2	3.4	1.5	3.5	9.6
2-Car Garage	24.7	2.1	1.7	1.7	2.7	5.1	3.9	3.3	1.1	3.1	6.1
3-Car Garage	2.1	.3	.3	.2	.2	.2	.2	Q	Q	.5	25.8
Covered Carport	5.3	.1	.3	.3	.5	1.4	1.5	1.0	.5	.6	7.6
No	26.9	.9	1.2	1.4	2.1	4.3	3.4	3.9	2.6	7.1	8.4
Not Asked (Apartments)	24.2	.9	.8	1.3	2.3	5.8	4.2	1.8	1.3	5.7	2.0
Fuels Used For Any Use											
Electricity	96.6	4.5	4.7	5.5	8.5	18.1	15.0	13.1	6.9	20.3	0.3
Natural Gas	58.4	2.3	2.1	2.6	4.0	8.6	9.8	9.4	4.9	14.7	1.4
Fuel Oil	10.9	.1	.2	.2	.3	1.4	1.3	1.9	1.2	4.3	6.5
LPG[2]	3.6	.4	.5	.5	.7	1.6	1.2	.9	.6	2.3	6.8
Kerosene	3.7	.1	.2	.2	.2	.6	.7	.4	.2	1.2	22.6
Wood	22.2	1.3	1.6	1.6	2.4	5.0	3.2	3.0	1.2	2.8	5.8
Solar	1.2	NC	Q	.1	.2	.3	.3	.2	Q	Q	38.2
Coal	.6	NC	Q	Q	Q	Q	Q	Q	Q	.3	90.0
Natural Gas Available In Neighborhood											
Yes	69.0	2.6	2.6	3.3	4.9	11.2	11.6	10.7	5.6	16.3	0.6
No	27.6	1.8	2.1	2.2	3.5	6.9	3.4	2.4	1.3	4.1	0.5

See footnotes at end of table.

Table 3.2b. Household Characteristics by Year of Construction, Percent of U.S. Households, 1993 (Continued)

Housing Unit and Household Characteristics	Total	Year of Construction									RSE Row Factors
		1991 to 1993[1]	1988 to 1990	1985 to 1987	1980 to 1984	1970 to 1979	1960 to 1969	1950 to 1959	1940 to 1949	1939 or Before	
RSE Column Factors:	0.4	1.7	1.4	1.4	1.1	0.9	1.0	0.9	1.2	0.7	
Number of Stories											
Single-Family Homes	69.1	69.5	68.9	62.8	61.5	57.1	68.0	85.5	79.8	71.4	3.6
1 Story	42.0	37.5	37.9	30.7	35.0	37.0	52.6	64.9	51.6	28.5	6.2
2 Stories	23.2	28.2	26.4	28.6	22.7	15.0	11.5	17.4	25.5	38.9	9.1
3 Stories	1.7	2.1	2.0	2.0	Q	Q	Q	Q	Q	3.8	28.4
Split-Level	2.2	1.8	2.1	1.4	2.3	4.5	3.4	2.1	Q	Q	26.3
Other	Q	NC	Q	NC	NC	NC	NC	NC	NC	Q	100.0
Mobile Homes	5.8	10.6	13.3	12.8	11.0	11.0	3.7	Q	Q	Q	14.6
Multi-Story Apartment Building	25.1	19.9	17.8	24.4	27.5	31.9	28.2	13.5	19.4	28.1	10.5
Outside Wall Material											
Brick	27.5	21.1	19.1	19.3	30.7	29.2	41.9	24.0	25.6	22.6	8.8
Wood	28.6	30.7	29.6	29.2	29.3	25.7	18.9	26.2	31.0	37.9	8.8
Siding	23.7	35.8	38.5	32.2	20.7	24.6	17.1	19.5	22.7	23.8	8.4
Stucco	10.7	10.7	9.0	13.6	12.8	12.8	10.0	14.6	9.6	5.9	14.7
Composition	4.2	Q	1.7	Q	Q	1.8	4.3	7.0	7.7	6.7	20.8
Concrete/Block	4.4	Q	Q	4.5	4.8	5.5	6.8	7.5	2.5	1.6	27.1
Other	.9	Q	Q	Q	Q	Q	1.1	Q	Q	1.5	45.0
Foundation/Basement (More than one may apply)											
Basement	35.0	25.8	24.8	22.3	15.8	23.2	30.4	36.2	41.1	61.9	8.1
Crawl Space	25.7	16.6	18.4	16.3	14.9	19.2	25.1	38.3	39.1	29.8	9.5
Enclosed	20.1	13.7	14.9	14.4	13.0	15.9	20.5	28.4	27.3	22.8	10.6
Open to Outside	5.8	2.9	3.5	2.3	2.1	3.6	4.9	9.9	11.9	7.2	20.7
Concrete Slab	24.2	34.8	35.9	33.5	40.5	26.3	26.2	23.8	16.8	9.3	9.2
Other	.3	Q	NC	Q	NC	Q	Q	Q	NC	Q	92.6
Not Asked (Mobile Homes and Buildings with 5 or More Units)	22.6	28.1	24.2	33.7	32.6	36.7	25.3	8.4	10.4	12.4	10.8
Garage/Carport											
Yes	48.3	61.2	58.0	50.3	50.0	45.7	51.3	58.0	44.9	36.9	5.6
1-Car Garage	14.9	6.7	9.9	11.3	10.5	8.9	14.4	25.8	21.5	17.1	12.4
2-Car Garage	25.6	46.0	36.9	31.3	31.6	28.2	26.0	25.4	15.9	15.2	8.5
3-Car Garage	2.2	7.1	5.9	3.4	2.6	1.3	1.2	Q	Q	2.3	22.5
Covered Carport	6.5	2.5	6.0	5.4	6.0	7.9	10.4	7.6	7.1	3.0	17.5
No	27.8	20.3	25.9	26.3	24.4	23.5	22.3	29.8	38.1	35.0	7.8
Not Asked (Apartments)	25.1	19.9	17.8	24.4	27.5	31.9	28.2	13.5	19.4	28.1	10.5
Fuels Used For Any Use											
Electricity	99.9	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.8	99.7	NE
Natural Gas	60.4	51.4	44.6	48.2	46.9	47.4	65.3	71.6	71.1	72.2	5.2
Fuel Oil	11.3	2.9	4.8	3.0	3.6	7.6	8.7	14.2	17.5	21.3	16.0
LPG[2]	8.9	9.3	10.3	9.0	7.7	9.0	7.7	6.9	8.2	11.4	16.7
Kerosene	3.8	1.2	3.5	3.2	2.7	3.5	4.5	3.0	3.1	5.8	22.8
Wood	23.0	28.2	34.9	28.9	27.9	27.7	21.4	23.3	18.1	13.8	8.7
Solar	1.2	NC	Q	1.7	2.0	1.5	1.7	1.5	Q	Q	31.9
Coal	.6	NC	Q	Q	Q	Q	Q	Q	Q	1.3	86.3
Natural Gas Available in Neighborhood											
Yes	71.4	58.9	55.2	60.4	58.5	61.9	77.5	82.0	81.3	80.0	4.0
No	28.6	41.1	44.8	39.6	41.5	38.1	22.5	18.0	18.7	20.0	9.2

See footnotes at end of table.

Table 3.2a. Household Characteristics by Year of Construction, Million U.S. Households, 1993 (Continued)

Housing Unit and Household Characteristics	Total	Year of Construction									RSE Row Factors
		1991 to 1993[1]	1988 to 1990	1985 to 1987	1980 to 1984	1970 to 1979	1960 to 1969	1950 to 1959	1940 to 1949	1939 or Before	
RSE Column Factors:	0.4	1.8	1.4	1.4	1.1	0.8	0.9	0.9	1.2	0.8	
1993 Family Income Category											
Less than $5,000	4.1	0.1	Q	0.1	0.4	0.8	0.5	0.4	0.5	1.1	[illegible]
$5,000 to $9,999	10.6	.2	0.2	.5	.9	2.0	1.8	1.2	.9	2.9	[illegible]
$10,000 to $14,999	11.1	.3	.4	.4	.8	2.0	1.7	1.7	1.0	2.9	[illegible]
$15,000 to $19,999	9.6	.2	.4	.5	.9	1.5	1.8	1.2	.8	2.3	[illegible]
$20,000 to $24,999	8.7	.2	.3	.6	.5	1.7	1.3	1.2	.6	2.3	[illegible]
$25,000 to $34,999	14.1	.7	.7	.7	1.1	2.9	2.1	2.1	.8	2.9	[illegible]
$35,000 to $49,999	17.5	1.2	1.0	1.2	1.5	3.1	2.8	2.3	1.2	3.1	[illegible]
$50,000 to $74,999	12.6	1.0	1.0	.9	1.2	2.4	1.8	1.8	.6	1.9	[illegible]
$75,000 or More	8.3	.5	.6	.7	1.0	1.7	1.3	1.2	.4	1.1	[illegible]
Below Poverty Line											
100 Percent	14.4	.3	.4	.6	1.3	2.7	2.0	1.8	1.3	3.8	[illegible]
125 Percent	19.4	.5	.6	.9	1.7	3.6	2.7	2.5	1.9	5.1	[illegible]
Eligible for Federal Assistance[3]	30.7	.7	.9	1.3	2.5	5.6	4.6	4.0	2.8	8.3	[illegible]
Payment Method for Fuel and Electricity											
All Paid by Household	83.1	4.3	4.5	5.2	7.7	15.4	12.0	11.8	5.7	16.6	[illegible]
Some Paid, Some in Rent	8.3	.1	.2	.2	.4	1.8	2.0	.6	.8	2.1	[illegible]
All Included in Rent	4.1	Q	Q	Q	.3	.8	.9	.5	.2	1.1	[illegible]
Other Method	1.1	Q	NC	Q	Q	Q	.2	Q	Q	.5	[illegible]
Age of Householder											
Under 25 Years	5.7	.3	.2	.4	.5	1.3	.7	.6	.3	1.2	[illegible]
25 to 34 Years	19.9	1.3	1.3	1.5	2.1	3.6	2.8	2.2	1.2	4.0	[illegible]
35 to 44 Years	21.4	1.2	1.6	1.7	2.2	4.0	2.2	3.0	1.2	4.2	[illegible]
45 to 59 Years	21.9	.9	.8	1.1	1.9	4.5	4.1	3.0	1.5	4.0	[illegible]
60 Years and Over	27.8	.7	.7	.9	1.7	4.8	5.2	4.2	2.7	7.0	[illegible]
Race of Householder											
White	80.2	4.0	4.1	4.8	6.9	15.0	12.4	10.9	5.3	16.8	[illegible]
Black	10.9	.2	.4	.4	.8	2.1	1.7	1.5	1.2	2.6	[illegible]
Other[4]	5.5	.2	.2	.3	.8	1.1	.9	.6	.4	.9	[illegible]
Householder of Hispanic Descent											
Yes	7.9	.3	.3	.4	.7	1.4	1.1	1.4	.6	1.7	[illegible]
No	88.7	4.2	4.4	5.1	7.7	16.7	13.9	11.7	6.4	18.7	[illegible]
Household Size											
1 Person	23.5	.8	.7	1.0	1.8	4.8	4.1	2.7	1.7	5.8	[illegible]
2 Persons	31.7	1.6	1.4	1.6	2.8	5.6	5.5	4.4	2.5	6.3	[illegible]
3 Persons	16.6	.9	.9	1.0	1.5	3.0	2.4	2.1	1.2	3.5	[illegible]
4 Persons	14.6	.6	1.0	1.2	1.5	2.7	1.9	2.1	.8	2.8	[illegible]
5 Persons	6.8	.3	.4	.5	.6	1.3	.6	1.3	.4	1.3	[illegible]
6 or More Persons	3.5	.1	.2	.2	.3	.7	.4	.6	.2	.7	[illegible]
Household Owns or Has Regular Use of a Motor Vehicle											
No	11.9	Q	.2	.4	.6	2.1	1.7	1.3	1.3	4.1	[illegible]
Yes	84.7	4.2	4.5	5.1	7.8	16.1	13.3	11.8	5.6	16.2	[illegible]
1 Vehicle	34.2	1.4	1.4	1.8	2.8	6.4	5.6	4.7	2.5	7.6	[illegible]
2 Vehicles	36.4	2.2	2.3	2.6	3.6	6.5	5.2	5.0	2.4	6.6	[illegible]
3 Vehicles	10.9	.5	.5	.5	1.1	2.4	2.0	1.6	.6	1.6	[illegible]
4 or More Vehicles	3.2	Q	.3	.2	.3	.7	.5	.5	.2	.5	[illegible]

[1] Does not include all new construction for 1993.
[2] Excludes 22.1 million households that use LPG only for outdoor grills.
[3] Below 150 percent of poverty line or 60 percent of median State income.
[4] Includes 1.7 million householders who described themselves as Hispanic rather than White, Black, or other.
NC = No cases in sample.
Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.
Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.
Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.2b. Household Characteristics by Year of Construction, Percent of U.S. Households, 1993 (Continued)

Housing Unit and Household Characteristics	Total	Year of Construction									RSE Row Factors
		1991 to 1993[1]	1988 to 1990	1985 to 1987	1980 to 1984	1970 to 1979	1960 to 1969	1950 to 1959	1940 to 1949	1939 or Before	
RSE Column Factors:	0.4	1.7	1.4	1.4	1.1	0.9	1.0	0.9	1.2	0.7	
1993 Family Income Category											
Less than $5,000	4.2	2.4	Q	2.7	4.6	4.5	3.2	3.3	7.6	5.3	19.8
$5,000 to $9,999	11.0	5.1	5.0	8.8	10.4	11.0	11.9	9.5	12.5	14.2	13.8
$10,000 to $14,999	11.5	7.1	8.3	6.4	10.0	11.1	11.2	12.6	14.5	14.1	10.9
$15,000 to $19,999	10.0	5.5	8.7	9.1	10.5	8.3	12.2	9.0	11.1	11.3	12.5
$20,000 to $24,999	9.1	5.4	6.4	10.4	6.1	9.6	8.6	9.0	9.0	11.2	12.1
$25,000 to $34,999	14.5	15.2	15.6	12.5	13.1	16.1	14.0	16.4	11.7	14.0	9.7
$35,000 to $49,999	18.1	27.5	20.9	21.6	18.2	17.2	18.8	17.4	18.0	15.1	8.7
$50,000 to $74,999	13.1	21.6	21.5	16.1	14.8	13.2	11.9	13.9	9.2	9.3	10.0
$75,000 or More	8.6	10.2	11.8	12.3	12.3	9.1	8.4	9.0	6.4	5.4	13.8
Below Poverty Line											
100 Percent	14.9	7.4	9.2	10.4	15.4	15.0	13.6	14.2	18.7	18.9	11.3
125 Percent	20.0	10.2	11.7	15.7	19.9	20.1	18.1	19.1	27.0	25.1	9.6
Eligible for Federal Assistance[3]	31.7	16.4	19.4	22.9	29.6	31.0	30.3	30.4	39.9	41.0	7.1
Payment Method for Fuel and Electricity											
All Paid by Household	86.0	96.1	96.0	93.9	90.7	84.8	79.7	90.0	82.9	81.8	1.9
Some Paid, Some in Rent	8.6	3.3	3.6	3.9	5.2	9.9	13.1	5.0	11.4	10.4	18.5
All Included in Rent	4.2	Q	Q	Q	4.0	4.7	6.1	4.2	3.5	5.3	26.8
Other Method	1.2	Q	NC	Q	Q	Q	1.1	Q	Q	2.5	35.2
Age of Householder											
Under 25 Years	5.9	7.6	4.9	7.6	6.4	7.4	4.8	4.8	5.0	5.7	18.3
25 to 34 Years	20.6	29.2	26.7	26.8	24.8	19.9	18.5	17.1	16.9	19.5	7.5
35 to 44 Years	22.1	26.9	34.9	30.1	26.1	21.9	14.9	23.1	17.7	20.8	7.2
45 to 59 Years	22.6	20.8	17.6	19.6	22.7	24.6	27.4	22.8	21.5	19.9	7.5
60 Years and Over	28.7	15.5	15.9	15.9	20.0	26.2	34.4	32.2	38.9	34.2	7.5
Race of Householder											
White	83.0	90.2	87.2	88.1	81.4	82.4	82.4	83.5	76.5	82.5	2.0
Black	11.3	5.1	8.2	6.5	9.4	11.3	11.4	11.6	17.9	12.9	14.3
Other[4]	5.7	4.7	4.6	5.4	9.2	6.3	6.2	5.0	5.6	4.6	16.5
Householder of Hispanic Descent											
Yes	8.2	6.2	7.0	7.8	8.8	7.7	7.5	10.5	8.0	8.2	14.6
No	91.8	93.8	93.0	92.2	91.2	92.3	92.5	89.5	92.0	91.8	1.2
Household Size											
1 Person	24.3	18.9	15.2	19.0	21.0	26.4	27.4	20.3	24.9	28.7	8.2
2 Persons	32.8	35.7	30.1	29.6	32.7	31.0	36.6	33.4	36.7	30.8	5.5
3 Persons	17.2	20.7	20.1	18.9	18.0	16.5	16.2	15.9	17.1	17.0	8.3
4 Persons	15.1	14.4	21.7	21.0	17.4	14.9	13.0	15.7	11.9	13.7	9.0
5 Persons	7.0	7.2	9.3	8.5	7.2	7.2	4.1	10.1	6.2	6.2	13.6
6 or More Persons	3.6	3.1	3.6	3.0	3.7	3.9	2.8	4.5	3.3	3.6	20.6
Household Owns or Has Regular Use of a Motor Vehicle											
No	12.3	Q	3.7	6.9	7.7	11.4	11.6	9.7	18.5	20.4	14.8
Yes	87.7	95.0	96.3	93.1	92.3	88.6	88.4	90.3	81.5	79.6	1.7
1 Vehicle	35.4	31.5	30.6	32.0	33.6	35.5	37.2	36.2	36.0	37.1	5.5
2 Vehicles	37.7	50.3	49.3	47.7	42.1	35.8	34.5	38.2	34.6	32.4	4.9
3 Vehicles	11.2	12.1	9.8	9.4	13.0	13.4	13.5	12.0	8.6	7.8	11.5
4 or More Vehicles	3.3	Q	6.5	3.9	3.7	3.9	3.3	3.9	2.3	2.3	19.9

[1] Does not include all new construction for 1993.
[2] Excludes 22.1 million households that use LPG only for outdoor grills.
[3] Below 150 percent of poverty line or 60 percent of median State income.
[4] Includes 1.7 million householders who described themselves as Hispanic rather than White, Black, or other.
NC = No cases in sample.
Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.
NE = RSE row factor not estimated because RSE's for all statistics in this row are between 0.0 and 1.0 percent.
Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • Percentages are calculated on unrounded numbers. • See "Glossary" for definition of terms used in this report.
Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.3a. Household Characteristics by Type and Ownership of Housing Unit, Million U.S. Households, 1993

Housing Unit and Household Characteristics	Type and Ownership of Housing Unit													
		Single-Family			Multifamily						Mobile Home			
					Two to Four Units			Five or More Units						
	Total	Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	
RSE Column Factors:	0.3	0.4	0.4	0.9	1.2	1.9	1.3	0.9	2.6	1.0	1.3	1.5	1.9	Row Factors
Total	96.6	66.8	55.8	11.0	8.0	1.5	6.5	16.2	1.6	14.7	5.6	4.4	1.2	
Census Region and Division														
Northeast	19.5	11.9	10.6	1.3	2.9	.9	2.1	4.7	.4	3.7	.5	.4	.1	
New England	5.1	3.1	2.7	.4	.9	.2	.7	.8	Q	.8	.2	.2	Q	
Middle Atlantic	14.4	8.8	7.9	.9	2.0	.6	1.4	3.8	.3	3.0	.3	.2	Q	
Midwest	23.3	16.6	14.4	2.2	1.8	.3	1.5	3.5	.3	3.2	1.4	1.2	.2	
East North Central	16.4	11.4	10.0	1.4	1.5	.2	1.2	2.5	.2	2.3	.9	.8	Q	
West North Central	6.9	5.2	4.5	.7	.4	Q	.3	.9	Q	.9	.5	.4	Q	
South	33.5	24.8	20.3	4.6	1.6	.2	1.5	4.4	Q	4.0	2.6	2.0	.6	
South Atlantic	17.4	12.2	9.9	2.3	1.0	.2	.8	2.7	Q	2.3	1.4	1.0	.4	
East South Central	6.0	4.7	4.0	.7	.2	NC	.2	.4	Q	.4	.7	.6	.1	
West South Central	10.1	8.0	6.4	1.6	.4	Q	.4	1.3	NC	1.3	.5	.4	Q	
West	20.4	13.5	10.5	3.0	1.6	.1	1.5	4.3	.5	3.8	1.0	.8	.2	
Mountain	5.4	3.6	2.9	.7	.3	Q	.3	.8	Q	.6	.7	.6	.1	
Pacific	15.0	9.9	7.6	2.3	1.3	Q	1.2	3.5	.3	3.1	.4	Q	Q	
Urban Status														
Urban	75.8	50.5	42.0	8.5	6.9	1.3	5.6	15.8	1.4	13.9	3.1	2.6	.5	
Central City	30.6	16.9	13.0	4.0	4.1	.9	3.2	8.7	.7	8.1	.8	.7	.1	
Suburban	45.2	33.5	29.0	4.5	2.8	.5	2.3	6.6	.8	5.8	2.3	2.0	.3	
Rural	20.8	16.3	13.8	2.6	1.1	.2	.9	1.0	Q	.8	2.5	1.8	.7	
Climate Zone														
Under 2,000 CDD and--														
Over 7,000 HDD	8.7	6.6	5.7	.9	.7	.2	.5	.7	Q	.6	.7	.5	.2	
5,500 to 7,000 HDD	26.5	17.5	15.1	2.4	2.9	.7	2.2	4.6	.4	4.3	1.4	1.3	.2	
4,000 to 5,499 HDD	22.5	15.2	13.3	1.9	2.0	.4	1.6	4.5	.4	4.1	.8	.5	.3	
Under 4,000 HDD	17.8	12.3	9.2	3.1	1.3	Q	1.2	3.4	Q	3.1	.9	.6	.2	
2,000 CDD or More and --														
Under 4,000 HDD	21.2	15.2	12.4	2.8	1.1	.2	.9	3.1	Q	2.6	1.8	1.5	.3	
Heated Floorspace Category (square feet)														
Fewer than 600	7.5	1.6	.8	.9	1.2	Q	1.2	4.1	.2	3.9	.6	.3	.3	
600 to 999	21.8	7.4	4.5	2.9	3.4	.3	3.1	7.8	.6	7.2	3.2	2.5	.8	
1,000 to 1,599	27.8	20.2	16.3	4.0	2.3	.5	1.8	3.7	.5	3.3	1.5	1.4	Q	
1,600 to 1,999	12.4	11.4	9.8	1.6	.4	.2	.2	.4	.2	.2	.2	.1	Q	
2,000 to 2,399	9.6	9.1	8.4	.8	.3	.2	Q	Q	Q	Q	Q	Q	Q	
2,400 to 2,999	8.2	8.0	7.5	.6	.1	Q	Q	NC	NC	NC	Q	Q	Q	
3,000 or More	9.3	9.0	8.6	.4	.2	Q	Q	Q	NC	Q	Q	Q	NC	
Year of Construction														
1939 or Before	20.4	14.5	11.3	3.2	3.3	.8	2.5	2.4	Q	2.4	Q	Q	Q	
1940 to 1949	6.9	5.5	4.3	1.2	.7	Q	.6	.7	Q	.6	Q	NC	Q	
1950 to 1959	13.1	11.2	9.1	2.0	.8	.2	.6	1.0	Q	.9	Q	Q	Q	
1960 to 1969	15.0	10.2	8.8	1.5	1.0	Q	.9	3.2	.3	3.0	.6	.4	Q	
1970 to 1979	18.1	10.4	9.1	1.2	1.1	Q	1.1	4.7	.7	4.0	2.0	1.6	.4	
1980 to 1984	8.5	5.2	4.3	.9	.5	Q	.5	1.8	.2	1.6	.9	.7	.2	
1985 to 1987	5.5	3.4	2.9	.5	.2	Q	.1	1.2	Q	1.0	.7	.5	.2	
1988 to 1990	4.7	3.2	2.9	.3	.3	Q	.2	.5	Q	.5	.6	.5	Q	
1991 to 1993[1]	4.5	3.1	2.9	.2	.1	Q	Q	.9	Q	.8	.5	.4	Q	
Observed Location of Household														
City	44.7	26.4	20.8	5.7	5.4	1.0	4.4	11.6	1.2	10.4	1.3	1.0	.2	
Town	15.8	12.1	9.9	2.2	1.3	.2	1.1	1.6	Q	1.5	.8	.6	.2	
Suburbs	19.9	15.3	13.8	1.5	1.1	.3	.8	2.9	.2	2.7	.7	.6	Q	
Rural or Open Country	16.2	13.0	11.3	1.7	.3	Q	.2	1	Q	.1	2.8	2.2	.7	

See footnotes at end of table.

Table 3.3b. Household Characteristics by Type and Ownership of Housing Unit, Percent of U.S. Households, 1993

Housing Unit and Household Characteristics	Total	Type and Ownership of Housing Unit												RSE Row Factors
		Single-Family			Multifamily						Mobile Home			
					Two to Four Units			Five or More Units						
		Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	
RSE Column Factors:	0.4	0.4	0.4	0.9	1.1	1.9	1.3	0.9	2.5	1.0	1.2	1.4	1.8	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0
Census Region and Division														
Northeast	20.2	17.8	19.0	11.7	36.5	57.8	31.7	25.3	24.5	25.3	9.7	9.4	10.9	10.5
New England	5.2	4.6	4.8	3.8	11.3	15.2	10.3	5.2	Q	5.2	4.0	4.4	Q	17.7
Middle Atlantic	14.9	13.2	14.2	7.9	25.3	42.5	21.3	20.1	19.4	20.1	5.7	5.0	Q	12.0
Midwest	24.1	24.8	25.8	19.6	23.1	22.1	23.3	21.3	17.2	21.8	25.4	27.0	19.4	11.6
East North Central	16.9	17.1	17.9	13.0	18.6	16.7	19.1	15.5	14.9	15.6	17.0	18.2	Q	13.4
West North Central	7.2	7.7	8.0	6.6	4.4	Q	4.2	5.8	Q	6.2	8.4	8.7	Q	24.3
South	34.7	37.2	36.3	41.4	20.5	11.8	22.5	27.2	28.1	27.1	46.8	45.9	50.2	9.1
South Atlantic	18.0	18.3	17.7	21.0	12.4	11.0	12.7	16.9	Q	15.8	25.8	23.2	35.8	12.6
East South Central	6.2	7.0	7.2	6.1	2.7	NC	3.3	2.6	Q	2.7	12.3	12.9	10.1	13.8
West South Central	10.5	11.9	11.4	14.3	5.4	Q	6.5	7.7	NC	8.5	8.7	9.8	Q	16.6
West	21.1	20.2	18.8	27.3	19.9	8.4	22.5	26.2	30.1	25.8	18.1	17.8	19.5	11.7
Mountain	5.5	5.5	5.2	6.5	3.6	Q	3.9	4.8	Q	4.4	11.7	12.6	8.6	20.3
Pacific	15.5	14.8	13.5	20.8	16.3	Q	18.7	21.4	21.7	21.4	6.4	Q	Q	14.0
Urban Status														
Urban	78.4	75.5	75.3	76.7	86.3	89.9	85.5	94.2	92.6	94.3	56.0	60.1	41.0	2.8
Central City	31.7	25.3	23.2	36.0	51.3	59.2	49.6	53.7	42.9	54.9	14.6	15.4	11.6	8.3
Suburban	46.8	50.2	52.0	40.8	34.9	30.7	35.9	40.4	49.8	39.4	41.4	44.6	29.3	7.5
Rural	21.6	24.5	24.7	23.3	13.7	10.1	14.5	5.8	Q	5.7	44.0	39.9	59.0	11.2
Climate Zone														
Under 2,000 CDD and--														
Over 7,000 HDD	9.0	9.9	10.3	7.8	9.1	12.2	8.4	4.3	Q	4.4	11.8	11.3	13.6	26.5
5,500 to 7,000 HDD	27.4	26.2	27.1	21.3	36.5	45.7	34.5	28.5	23.8	29.0	26.0	28.9	15.3	15.0
4,000 to 5,499 HDD	23.2	22.8	23.8	17.5	24.7	26.2	24.3	27.6	24.9	27.9	13.6	10.7	24.2	16.1
Under 4,000 HDD	18.4	18.4	16.5	28.3	15.6	Q	18.5	20.6	Q	21.0	15.6	14.4	20.0	18.7
2,000 CDD or More and --														
Under 4,000 HDD	21.9	22.7	22.2	25.0	14.0	12.5	14.3	19.0	31.7	17.6	33.1	34.7	27.0	14.5
Heated Floorspace Category (square feet)														
Fewer than 600	7.8	2.4	1.3	7.8	15.4	Q	18.1	25.2	11.5	26.7	10.3	7.2	21.8	14.8
600 to 999	22.6	11.1	8.0	26.3	42.6	19.7	47.8	47.9	38.0	48.9	57.9	55.9	65.5	6.7
1,000 to 1,599	28.8	30.3	29.2	35.8	28.8	35.8	27.2	23.1	29.1	22.4	26.9	32.0	Q	7.4
1,600 to 1,999	12.8	17.0	17.6	14.2	5.2	11.3	3.8	2.6	15.8	1.2	3.3	3.3	Q	17.9
2,000 to 2,399	10.0	13.7	15.0	6.8	3.8	12.9	Q	Q	Q	Q	Q	Q	Q	14.6
2,400 to 2,999	8.5	12.0	13.4	5.0	1.9	Q	Q	NC	NC	NC	Q	Q	Q	15.7
3,000 or More	9.6	13.5	15.4	3.9	2.4	Q	Q	Q	NC	Q	Q	Q	NC	18.6
Year of Construction														
1939 or Before	21.1	21.8	20.3	29.1	41.2	54.2	38.2	14.9	Q	16.3	Q	Q	Q	10.1
1940 to 1949	7.1	8.3	7.8	10.6	8.4	Q	8.6	4.1	Q	3.9	Q	NC	Q	17.8
1950 to 1959	13.5	16.7	16.4	18.5	9.9	13.5	9.1	6.0	Q	6.2	Q	Q	Q	14.0
1960 to 1969	15.5	15.3	15.7	13.1	12.5	Q	13.6	20.0	18.5	20.1	10.1	10.2	Q	14.0
1970 to 1979	18.8	15.5	16.3	11.3	14.2	Q	16.5	28.6	43.9	27.0	35.9	36.1	35.2	10.5
1980 to 1984	8.8	7.8	7.8	7.8	6.3	Q	6.9	11.2	13.6	11.0	16.8	16.8	16.5	15.2
1985 to 1987	5.7	5.2	5.3	4.7	2.2	Q	2.0	7.2	8.3	7.1	12.6	11.8	15.7	21.2
1988 to 1990	4.9	4.9	5.3	2.8	4.1	Q	3.7	3.2	Q	3.3	11.3	12.3	Q	20.0
1991 to 1993[1]	4.6	4.7	5.2	2.1	1.3	Q	Q	4.8	Q	5.1	8.5	9.7	Q	27.1
Observed Location of Household														
City	46.2	39.6	37.2	51.3	67.1	64.6	67.7	71.5	77.7	70.8	22.7	23.4	19.8	6.7
Town	16.3	18.1	17.7	19.7	15.9	13.9	16.4	9.8	Q	10.2	14.9	14.3	17.3	14.9
Suburbs	20.6	22.8	24.8	13.2	13.7	18.0	12.7	18.0	15.7	18.3	11.7	13.0	Q	15.9
Rural or Open Country	16.8	19.5	20.3	15.8	3.3	Q	3.2	.7	Q	.7	50.7	49.3	55.9	16.0

See footnotes at end of table.

Table 3.3a. Household Characteristics by Type and Ownership of Housing Unit, Million U.S. Households, 1993 (Continued)

Housing Unit and Household Characteristics	Type and Ownership of Housing Unit													
		Single-Family			Multifamily						Mobile Home			
					Two to Four Units			Five or More Units						
	Total	Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	RSE Row Factors
RSE Column Factors:	0.3	0.4	0.4	0.9	1.2	1.9	1.3	0.9	2.6	1.0	1.3	1.5	1.9	
Total Number of Rooms (Excluding Bathrooms)														
1 or 2	3.2	0.3	Q	0.2	0.6	Q	0.6	2.3	Q	2.2	Q	Q	NC	2.6
3 to 5	47.4	23.0	16.5	6.4	6.3	0.8	5.4	13.4	1.3	12.1	4.7	3.6	1.1	[illegible]
6 to 8	40.2	37.8	33.8	4.0	1.1	.6	.5	.4	Q	.4	.8	.7	Q	1.7
9 or More	5.8	5.7	5.3	.4	Q	Q	NC	Q	Q	Q	NC	NC	NC	21.4
Bedrooms														
None or 1	12.9	2.1	1.0	1.1	2.4	Q	2.2	8.2	.5	7.8	.2	.2	Q	14.6
2	30.0	15.7	11.7	4.1	4.1	.8	3.3	7.0	.9	6.0	3.3	2.4	.9	9.2
3	38.5	34.1	29.6	4.5	1.5	.6	1.0	.8	Q	.7	2.0	1.8	.2	5.3
4 or More	15.2	14.8	13.4	1.4	Q	Q	Q	.7	NC	.2	.1	Q	Q	19.8
Other Rooms (Excluding Bathrooms)														
None or 1	4.4	.9	.5	.4	.7	Q	.6	2.3	Q	2.2	.5	.4	.2	20.5
2	35.6	17.1	12.0	5.2	4.2	.4	3.8	10.6	.7	9.9	3.6	2.8	.8	6.8
3	31.7	24.9	21.2	3.8	2.6	.7	1.9	3.0	.6	2.4	1.2	1.0	.2	10.2
4	16.3	15.4	14.2	1.2	.5	.3	.2	Q	Q	Q	.2	.2	NC	15.4
5 or More	8.7	8.5	7.9	.6	Q	Q	Q	Q	Q	Q	Q	Q	Q	17.2
Full Bathrooms														
None or 1	61.6	37.3	28.9	8.5	7.2	1.1	6.0	13.7	.7	12.9	3.4	2.5	.9	6.3
2	30.9	25.4	23.0	2.4	.8	.3	.5	2.6	.8	1.8	2.1	1.9	.2	1.3
3 or More	4.1	4.0	3.9	Q	Q	Q	Q	Q	NC	Q	Q	Q	NC	28.2
Half Bathrooms														
None	71.5	44.8	35.9	9.0	7.2	1.3	5.9	14.5	1.3	13.2	5.0	3.9	1.1	1.2
1	23.9	20.8	18.8	2.0	.8	.2	.6	1.7	.3	1.4	.6	.5	Q	14.4
2 or More	1.2	1.1	1.1	Q	NC	NC	NC	Q	NC	Q	NC	NC	NC	37.0
Number of Stories														
Single-Family Homes	66.8	66.8	55.8	11.0	--	--	--	--	--	--	--	--	--	4.5
1 Story	40.6	40.6	33.1	7.5	--	--	--	--	--	--	--	--	--	4.9
2 Stories	22.4	22.4	19.2	3.2	--	--	--	--	--	--	--	--	--	6.1
3 Stories	1.6	1.6	1.4	.2	--	--	--	--	--	--	--	--	--	38.0
Split-Level	2.2	2.2	2.0	.1	--	--	--	--	--	--	--	--	--	30.3
Other	Q	Q	Q	NC	--	--	--	--	--	--	--	--	--	100.0
Mobile Homes	5.6	--	--	--	--	--	--	--	--	--	5.6	4.4	1.2	5.1
Multi-Story Apartment Building	24.2	--	--	--	8.0	1.5	6.5	16.2	1.6	14.7	--	--	--	6.9
Outside Wall Material														
Brick	26.6	15.5	13.3	2.1	2.8	.4	2.4	8.3	.5	7.7	Q	NC	Q	10.3
Wood	27.6	21.8	17.3	4.5	2.5	.4	2.1	2.6	.2	2.4	.7	.6	Q	13.1
Siding	22.9	16.2	14.6	1.6	1.1	.3	.9	.9	.1	.8	4.7	3.6	1.1	3.9
Stucco	10.3	6.6	5.2	1.3	.8	Q	.3	3.0	.4	2.6	NC	NC	NC	8.1
Composition	4.1	3.4	2.6	.8	.4	Q	.3	Q	NC	Q	.2	.2	Q	20.9
Concrete/Block	4.3	2.7	2.1	.5	.3	Q	.2	1.3	Q	1.0	Q	NC	Q	26.2
Other	.8	.7	.6	Q	Q	Q	Q	Q	NC	Q	NC	NC	NC	67.5

See footnotes at end of table.

Table 3.3b. Household Characteristics by Type and Ownership of Housing Unit, Percent of U.S. Households, 1993 (Continued)

Housing Unit and Household Characteristics	Total	Type and Ownership of Housing Unit												RSE Row Factors
		Single-Family			Multifamily						Mobile Home			
					Two to Four Units			Five or More Units						
		Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	
RSE Column Factors:	0.4	0.4	0.4	0.9	1.1	1.9	1.3	0.9	2.5	1.0	1.2	1.4	1.8	
Total Number of Rooms (Excluding Bathrooms)														
1 or 2	3.3	0.5	Q	2.1	7.3	Q	8.6	14.0	Q	14.7	Q	Q	NC	24.8
3 to 5	49.0	34.4	29.6	58.3	78.2	55.5	83.3	82.7	85.3	82.4	84.6	82.7	91.8	3.5
6 to 8	41.6	56.6	60.6	36.4	14.3	41.9	8.1	2.6	Q	2.5	14.7	16.4	Q	10.8
9 or More	6.0	8.5	9.6	3.2	Q	Q	NC	Q	Q	Q	NC	NC	NC	21.5
Bedrooms														
None or 1	13.4	3.2	1.9	9.9	29.4	Q	34.4	50.7	29.2	53.0	3.7	3.9	Q	13.2
2	31.1	23.5	20.9	36.8	50.8	53.0	50.3	42.9	60.6	41.0	58.4	54.2	74.2	6.0
3	39.8	51.1	53.1	40.8	18.9	37.5	14.6	5.1	Q	4.5	36.0	40.1	20.5	8.2
4 or More	15.7	22.2	24.1	12.6	Q	Q	Q	1.3	NC	1.5	1.8	Q	Q	18.4
Other Rooms (Excluding Bathrooms)														
None or 1	4.6	1.3	.8	3.4	8.8	Q	9.8	14.2	Q	14.7	9.8	8.9	13.2	20.3
2	36.8	25.7	21.5	46.8	52.2	24.5	58.5	65.2	42.8	67.6	65.5	64.7	68.6	5.5
3	32.8	37.3	38.0	34.1	32.2	47.3	28.8	18.6	40.4	16.3	21.2	22.1	17.8	8.2
4	16.8	23.1	25.5	10.7	6.0	19.9	2.8	Q	Q	Q	3.3	4.2	NC	14.4
5 or More	9.0	12.7	14.2	5.0	Q	Q	Q	Q	Q	Q	Q	Q	Q	15.6
Full Bathrooms														
None or 1	63.8	55.9	51.8	76.9	89.8	77.0	92.7	84.0	48.2	87.8	61.6	56.7	80.1	3.4
2	32.0	38.1	41.3	21.9	9.7	21.8	7.0	15.8	51.8	12.0	38.3	43.2	19.9	10.1
3 or More	4.2	6.0	7.0	Q	Q	Q	Q	Q	NC	Q	Q	Q	NC	19.5
Half Bathrooms														
None	74.0	67.1	64.3	81.3	90.2	86.3	91.0	89.0	81.7	89.8	89.1	88.9	89.7	2.4
1	24.8	31.2	33.8	18.0	9.8	13.7	9.0	10.5	18.3	9.7	10.9	11.1	Q	13.0
2 or More	1.2	1.7	1.9	Q	NC	NC	NC	Q	NC	Q	NC	NC	NC	33.5
Number of Stories														
Single-Family Homes	69.1	100.0	100.0	100.0	--	--	--	--	--	--	--	--	--	3.9
1 Story	42.0	60.7	59.4	67.6	--	--	--	--	--	--	--	--	--	4.8
2 Stories	23.2	33.5	34.4	29.0	--	--	--	--	--	--	--	--	--	8.5
3 Stories	1.7	2.4	2.5	2.2	--	--	--	--	--	--	--	--	--	35.5
Split-Level	2.2	3.2	3.6	1.2	--	--	--	--	--	--	--	--	--	30.4
Other	Q	Q	Q	NC	--	--	--	--	--	--	--	--	--	100.0
Mobile Homes	5.8	--	--	--	--	--	--	--	--	--	100.0	100.0	100.0	22.9
Multi-Story Apartment Building	25.1	--	--	--	100.0	100.0	100.0	100.0	100.0	100.0	--	--	--	10.8
Outside Wall Material														
Brick	27.5	23.2	23.9	19.3	35.3	27.8	37.0	50.9	34.2	52.7	Q	NC	Q	9.3
Wood	28.6	32.7	31.1	40.8	31.2	29.5	31.6	16.0	12.0	16.5	12.5	14.0	Q	11.6
Siding	23.7	24.2	26.1	14.4	14.3	22.8	12.4	5.7	7.8	5.5	84.0	82.3	90.4	9.8
Stucco	10.7	9.8	9.4	12.1	9.4	Q	9.7	18.4	24.5	17.7	NC	NC	NC	17.0
Composition	4.2	5.1	4.6	7.3	5.5	Q	5.3	Q	NC	Q	3.0	3.7	Q	23.0
Concrete/Block	4.4	4.0	3.8	4.7	3.9	Q	3.8	8.0	21.5	6.6	Q	NC	Q	23.7
Other	.9	1.1	1.0	Q	Q	Q	Q	Q	NC	Q	NC	NC	NC	60.6

See footnotes at end of table.

Table 3.3a. Household Characteristics by Type and Ownership of Housing Unit, Million U.S. Households, 1993 (Continued)

Housing Unit and Household Characteristics	Type and Ownership of Housing Unit													
					Multifamily									
		Single-Family			Two to Four Units			Five or More Units			Mobile Home			
	Total	Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	
RSE Column Factors:	0.3	0.4	0.4	0.9	1.2	1.9	1.3	0.9	2.6	1.0	1.3	1.5	1.9	RSE Row Factors
Foundation/Basement (More than one may apply)														
Basement	33.8	29.9	26.6	3.3	3.9	1.1	2.9	--	--	--	--	--	--	1.5
Crawlspace	24.8	23.6	19.3	4.3	1.2	.1	1.1	--	--	--	--	--	--	1.2
Enclosed	19.4	18.4	15.1	3.3	1.0	Q	.9	--	--	--	--	--	--	1.3
Open to Outside	5.6	5.3	4.3	1.0	.3	Q	.2	--	--	--	--	--	--	2.1
Concrete Slab	23.4	20.3	16.2	4.1	3.1	.3	2.8	--	--	--	--	--	--	1.2
Other	.3	Q	Q	Q	Q	Q	Q	--	--	--	--	--	--	14.0
Not Asked (Mobile Homes and Buildings with 5 or More Units)	21.6	--	--	--	--	--	--	16.2	1.6	14.7	5.6	4.4	1.2	--
Garage/Carport														
Yes	46.7	45.6	40.6	5.0	--	--	--	--	--	--	1.0	.9	.2	1.6
1-Car Garage	14.4	14.2	11.8	2.4	--	--	--	--	--	--	.2	.2	Q	10.3
2-Car Garage	24.7	24.5	22.7	1.8	--	--	--	--	--	--	.2	.2	Q	11.4
3-Car Garage	2.1	2.0	2.0	Q	--	--	--	--	--	--	Q	Q	Q	29.7
Covered Carport	6.3	5.7	4.9	.8	--	--	--	--	--	--	.6	.5	Q	21.6
No	26.9	22.3	16.1	6.1	--	--	--	--	--	--	4.6	3.6	1.0	1.5
Not Asked (Apartments)	24.2	--	--	--	8.0	1.5	6.5	16.2	1.6	14.7	--	--	--	0.9
Fuels Used for Any Use (more than one often used)														
Electricity	96.6	66.7	55.7	11.0	8.0	1.5	6.5	16.2	1.6	14.7	5.6	4.4	1.2	0.9
Natural Gas	58.4	41.3	34.2	7.1	5.5	1.1	4.4	9.7	.8	8.9	1.8	1.6	.3	0.7
Fuel Oil	10.9	8.1	7.1	1.0	.9	.3	.6	1.8	.2	1.4	.3	.2	.1	6.3
LPG[2]	8.6	6.5	5.5	1.0	.2	Q	.1	Q	Q	Q	1.9	1.4	.5	10.8
Kerosene	3.7	2.7	2.1	.6	.2	Q	Q	Q	NC	Q	.7	.4	.3	25.3
Wood	22.2	20.4	18.5	1.9	.6	.2	.4	.5	Q	.4	.7	.6	Q	7.5
Solar	1.2	1.1	1.1	Q	Q	Q	Q	Q	NC	Q	Q	Q	NC	47.2
Coal	.6	.5	.4	Q	Q	Q	Q	NC	NC	NC	Q	NC	Q	199.4
Natural Gas Available in Neighborhood														
Yes	69.0	47.7	39.4	8.3	6.3	1.2	5.1	12.4	.9	11.5	2.6	2.2	.4	1.5
No	27.6	19.1	16.3	2.8	1.7	.3	1.4	3.9	.7	3.2	3.0	2.2	.8	3.4
1993 Family Income Category														
Less than $5,000	4.1	1.8	.9	.8	.5	Q	.5	1.5	NC	1.5	.2	Q	.2	8.4
$5,000 to $9,999	10.6	5.3	3.6	1.7	1.3	Q	1.2	3.1	Q	3.0	.9	.6	.3	13.2
$10,000 to $14,999	11.1	6.3	4.7	1.6	1.3	Q	1.2	2.7	.3	2.4	.9	.6	.2	12.3
$15,000 to $19,999	9.6	6.0	4.6	1.4	1.1	.2	.9	1.6	Q	1.5	.9	.7	.2	14.3
$20,000 to $24,999	9.7	5.8	4.6	1.2	.9	Q	.7	1.5	Q	1.5	.6	.5	Q	15.2
$25,000 to $34,999	14.1	9.9	8.5	1.5	.8	.2	.6	2.2	.3	1.9	1.1	.9	.1	12.4
$35,000 to $49,999	17.5	13.3	11.9	1.4	1.3	.5	.8	2.2	.4	1.8	.7	.7	Q	11.7
$50,000 to $74,999	12.6	11.0	10.1	1.0	.6	.2	.4	.8	.2	.6	.2	.2	Q	15.4
$75,000 or More	8.3	7.4	6.9	.5	.2	Q	Q	.7	Q	.5	Q	Q	Q	20.1
Below Poverty Line														
100 Percent	14.4	7.2	4.2	3.0	1.9	.1	1.8	4.2	Q	4.1	1.1	.6	.5	11.1
125 Percent	19.4	10.1	6.5	3.7	2.4	.2	2.2	5.1	Q	5.0	1.7	1.1	.6	9.3
Eligible for Federal Assistance[3]	30.7	16.9	11.8	5.1	3.6	.4	3.2	7.9	.4	7.5	2.2	1.5	.7	9.1
Payment Method for Fuel and Electricity														
All Paid by Household	83.1	65.6	55.4	10.2	4.7	1.2	3.6	7.6	.9	6.7	5.2	4.1	1.1	7.0
Some Paid, Some in Rent	8.3	.4	Q	.3	1.7	Q	1.7	6.1	.6	5.5	Q	Q	Q	15.9
All Included in Rent	4.1	.5	Q	.5	1.0	NC	1.0	2.4	Q	2.4	.1	Q	Q	22
Other Method	1.1	.3	Q	Q	.6	.3	.3	Q	Q	Q	Q	Q	Q	31.1

See footnotes at end of table.

Table 3.3b. Household Characteristics by Type and Ownership of Housing Unit, Percent of U.S. Households, 1993 (Continued)

Housing Unit and Household Characteristics	Total	Type and Ownership of Housing Unit												RSE Row Factors
		Single-Family			Multifamily						Mobile Home			
					Two to Four Units			Five or More Units						
		Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	
RSE Column Factors:	0.4	0.4	0.4	0.9	1.1	1.9	1.3	0.9	2.5	1.0	1.2	1.4	1.8	
Foundation/Basement (More than one may apply)														
Basement	35.0	44.7	47.6	30.2	49.3	72.4	44.0	--	--	--	--	--	--	7.2
Crawlspace	25.7	35.3	34.5	39.2	15.2	8.6	16.6	--	--	--	--	--	--	10.0
Enclosed	20.1	27.6	27.1	29.9	12.5	Q	14.0	--	--	--	--	--	--	10.6
Open to Outside	5.8	7.9	7.7	9.3	3.2	Q	3.5	--	--	--	--	--	--	22.2
Concrete Slab	24.2	30.4	29.0	37.3	38.2	20.3	42.3	--	--	--	--	--	--	9.2
Other	.3	Q	Q	Q	Q	Q	Q	--	--	--	--	--	--	103.9
Not Asked (Mobile Homes and Buildings with 5 or More Units)	22.6	--	--	--	--	--	--	99.9	100.0	99.9	100.0	100.0	100.0	11.2
Garage/Carport														
Yes	48.3	68.3	72.9	45.2	--	--	--	--	--	--	18.3	19.8	12.8	7.6
1-Car Garage	14.9	21.3	21.1	22.1	--	--	--	--	--	--	3.6	3.7	Q	14.9
2-Car Garage	25.6	36.6	40.8	15.9	--	--	--	--	--	--	4.2	4.6	Q	12.4
3-Car Garage	2.2	3.1	3.6	Q	--	--	--	--	--	--	Q	Q	Q	25.6
Covered Carport	6.5	8.6	8.9	7.1	--	--	--	--	--	--	10.0	11.1	Q	20.7
No	27.8	33.4	28.9	55.6	--	--	--	--	--	--	83.0	81.8	87.4	5.0
Not Asked (Apartments)	25.1	--	--	--	100.0	100.0	100.0	100.0	100.0	100.0	--	--	--	10.8
Fuels Used for Any Use (more than one often used)														
Electricity	99.9	99.9	99.9	99.8	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NE
Natural Gas	60.4	61.9	61.4	64.2	69.1	74.7	67.9	59.6	49.8	60.7	33.1	35.4	24.6	6.9
Fuel Oil	11.3	12.1	12.8	8.7	10.9	19.5	9.0	10.0	12.8	9.7	5.7	4.2	11.1	16.3
LPG[2]	8.9	9.7	9.9	9.0	2.6	Q	1.9	Q	Q	Q	33.4	31.9	39.0	18.2
Kerosene	3.8	4.1	3.8	5.3	2.3	Q	Q	Q	NC	Q	12.5	9.5	23.5	20.5
Wood	23.0	30.6	33.2	17.2	7.5	11.2	6.6	3.2	Q	3.0	11.7	13.4	Q	16.3
Solar	1.2	1.6	1.9	Q	Q	Q	Q	Q	NC	Q	Q	Q	NC	37.3
Coal	.6	.7	.7	Q	Q	Q	Q	NC	NC	NC	Q	NC	Q	117.4
Natural Gas Available in Neighborhood														
Yes	71.4	71.4	70.7	74.8	79.3	82.5	78.6	76.2	55.8	78.4	45.9	49.0	34.3	5.3
No	28.6	28.6	29.3	25.2	20.7	17.5	21.4	23.8	44.2	21.6	54.1	51.0	65.7	11.2
1993 Family Income Category														
Less than $5,000	4.2	2.6	1.6	7.7	6.9	Q	7.8	9.2	NC	10.2	4.5	Q	13.6	18.1
$5,000 to $9,999	11.0	8.0	6.5	15.3	15.9	Q	18.1	19.2	Q	20.6	15.3	13.6	21.4	12.1
$10,000 to $14,999	11.5	9.4	8.4	14.4	15.7	Q	18.0	16.8	19.2	16.5	15.7	14.3	20.7	10.3
$15,000 to $19,999	10.0	9.0	8.3	12.4	14.0	14.1	14.0	9.7	Q	10.2	17.0	16.0	20.9	12.9
$20,000 to $24,999	9.1	8.7	8.3	10.8	10.8	Q	11.4	9.3	Q	10.1	10.2	11.7	Q	13.7
$25,000 to $34,999	14.5	14.9	15.2	13.3	10.3	13.8	9.5	13.5	21.8	12.6	19.5	21.3	12.8	10.9
$35,000 to $49,999	18.1	19.9	21.3	12.8	16.5	32.3	12.9	13.3	26.6	11.9	12.5	15.6	Q	10.3
$50,000 to $74,999	13.1	16.5	18.1	8.6	7.7	13.8	6.3	4.9	10.3	4.3	3.5	3.9	Q	14.4
$75,000 or More	8.6	11.1	12.4	4.6	2.1	Q	Q	4.1	Q	3.5	Q	Q	Q	19.5
Below Poverty Line														
100 Percent	14.9	10.7	7.5	27.0	23.6	8.1	27.1	25.9	Q	28.0	20.4	14.5	42.4	10.5
125 Percent	20.0	15.2	11.6	33.4	29.8	13.7	33.4	31.7	Q	34.0	30.4	25.8	47.7	8.7
Eligible for Federal Assistance[3]	31.7	25.3	21.2	46.1	45.3	29.3	48.9	48.5	26.7	50.8	40.4	34.7	61.6	6.5
Payment Method for Fuel and Electricity														
All Paid by Household	86.0	98.2	99.3	92.3	59.3	79.2	54.7	46.8	60.4	45.4	93.1	94.1	89.7	3.6
Some Paid, Some in Rent	8.6	.6	Q	2.9	20.9	Q	25.4	37.3	35.8	37.4	Q	Q	Q	14.4
All Included in Rent	4.2	.7	Q	4.2	12.8	NC	15.8	15.0	Q	16.4	2.5	Q	Q	21.0
Other Method	1.2	.5	Q	Q	6.9	19.3	4.1	Q	Q	Q	Q	Q	Q	28.5

See footnotes at end of table.

Table 3.3a. Household Characteristics by Type and Ownership of Housing Unit, Million U.S. Households, 1993 (Continued)

Housing Unit and Household Characteristics	Type and Ownership of Housing Unit													
		Single-Family			Multifamily						Mobile Home			
					Two to Four Units			Five or More Units						
	Total	Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	RSE Row Factors
RSE Column Factors:	0.3	0.4	0.4	0.9	1.2	1.9	1.3	0.9	2.6	1.0	1.3	1.5	1.9	
Age of Householder														
Under 25 Years	5.7	1.9	0.7	1.2	1.0	NC	1.0	2.3	Q	2.2	0.6	0.3	0.3	1.5
25 to 34 Years	19.9	11.3	8.3	3.0	2.4	0.4	2.0	4.8	0.2	4.6	1.4	1.0	.4	1.5
35 to 44 Years	21.4	16.2	13.1	3.1	1.4	.2	1.1	2.8	.2	2.6	1.1	.8	.2	1.5
45 to 59 Years	21.9	16.7	14.8	2.0	1.5	.3	1.1	2.3	.4	1.9	1.3	1.2	.2	1.5
60 Years and Over	27.8	20.7	18.9	1.7	1.8	.6	1.3	4.1	.7	3.4	1.1	1.0	C	1.5
Race of Householder														
White	80.2	58.1	49.6	8.5	5.8	1.1	4.7	11.4	1.4	9.8	5.1	4.1	1.0	1.5
Black	10.9	5.9	4.1	1.8	1.5	.3	1.3	3.2	Q	3.1	.3	.2	C	1.5
Other[4]	5.5	2.8	2.0	.8	.7	Q	.5	1.9	Q	1.8	.2	Q	C	2.0
Householder of Hispanic Descent														
Yes	7.9	4.2	3.1	1.1	1.0	.1	.8	2.2	Q	2.1	.5	.4	.2	1.5
No	88.7	62.6	52.7	9.9	7.0	1.3	5.7	14.0	1.5	12.5	5.1	4.0	1.0	1.5
Household Size														
1 Person	23.5	12.0	9.9	2.2	2.7	.4	2.3	7.5	.8	6.7	1.3	1.1	.3	1.5
2 Persons	31.7	22.9	20.0	2.9	2.1	.5	1.7	4.9	.5	4.4	1.7	1.4	.3	1.5
3 Persons	16.6	12.0	10.0	2.0	1.6	.2	1.3	1.9	.2	1.7	1.1	.8	.3	1.5
4 Persons	14.6	11.7	9.8	1.9	.9	.2	.7	1.1	Q	1.1	.9	.7	.2	1.5
5 Persons	6.8	5.5	4.2	1.3	.4	Q	.3	.5	Q	.5	.4	.3	Q	1.5
6 or More Persons	3.5	2.7	2.0	.7	.3	Q	.3	.3	NC	.3	.1	.1	C	2.0
Household Owns or Has Regular Use of a Motor Vehicle														
No	11.9	4.3	2.7	1.6	1.8	.1	1.7	5.3	.2	5.1	.5	.3	.2	1.5
Yes	84.7	62.6	53.1	9.5	6.2	1.4	4.8	10.9	1.3	9.6	5.1	4.1	.9	1.5
1 Vehicle	34.2	20.5	16.1	4.4	3.8	.7	3.1	7.7	.9	6.7	2.2	1.6	.6	1.5
2 Vehicles	36.4	29.3	25.4	3.8	2.0	.6	1.4	3.0	.3	2.6	2.2	1.9	.3	1.5
3 Vehicles	10.8	9.8	8.8	1.0	.3	Q	.3	.2	Q	.2	.5	.5	NC	1.5
4 or More Vehicles	3.2	3.0	2.7	.3	Q	Q	C	C	NC	Q	.1	.1	NC	2.5

[1] Does not include all new construction for 1993.
[2] Excludes 22.1 million households that use LPG only for outdoor grills.
[3] Below 150 percent of poverty line or 60 percent of median State income.
[4] Includes 1.7 million householders who described themselves as Hispanic rather than White, Black, or other.
NC = No cases in sample.
Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.
-- = Data not applicable.
Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.
Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.3b. Household Characteristics by Type and Ownership of Housing Unit, Percent of U.S. Households, 1993 (Continued)

Housing Unit and Household Characteristics	Total	Type and Ownership of Housing Unit												RSE Row Factors
		Single-Family			Multifamily						Mobile Home			
					Two to Four Units			Five or More Units						
		Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	
RSE Column Factors:	0.4	0.4	0.4	0.9	1.1	1.9	1.3	0.9	2.5	1.0	1.2	1.4	1.8	
Age of Householder														
Under 25 Years	5.9	2.8	1.2	10.9	12.2	NC	14.9	13.9	Q	15.0	10.4	7.4	21.5	16.5
25 to 34 Years	20.6	16.9	14.9	26.9	29.8	23.8	31.1	29.3	11.6	31.2	25.9	23.3	35.7	8.4
35 to 44 Years	22.1	24.2	23.4	28.4	16.9	16.2	17.1	17.1	12.4	17.6	19.2	19.3	19.1	9.1
45 to 59 Years	22.6	25.1	26.5	18.0	18.1	22.5	17.1	14.3	27.4	12.9	23.9	26.8	13.1	9.6
60 Years and Over	28.7	30.9	33.9	15.7	23.0	37.5	19.7	25.4	44.6	23.4	20.6	23.3	Q	8.7
Race of Householder														
White	83.0	87.0	89.0	77.2	72.4	71.9	72.5	68.6	89.2	66.4	91.7	92.3	89.3	2.6
Black	11.3	8.8	7.4	15.9	19.1	18.4	19.3	19.8	Q	21.4	4.6	4.7	Q	14.5
Other[4]	5.7	4.1	3.6	6.9	8.5	Q	8.2	11.6	Q	12.2	3.7	Q	Q	19.0
Householder of Hispanic Descent														
Yes	8.2	6.3	5.5	10.3	11.9	9.8	12.4	13.6	Q	14.6	9.4	8.2	13.8	16.8
No	91.8	93.7	94.5	89.7	88.1	90.2	87.6	86.4	96.1	85.4	90.6	91.8	86.2	1.8
Household Size														
1 Person	24.3	18.0	17.7	19.8	33.5	26.9	35.0	46.1	51.2	45.6	23.6	24.0	21.8	7.2
2 Persons	32.8	34.3	35.8	26.6	26.9	32.1	25.6	30.4	31.8	30.2	30.4	30.8	28.9	6.4
3 Persons	17.2	18.0	17.9	18.4	19.9	16.5	20.7	11.4	12.1	11.3	19.7	19.2	21.5	10.7
4 Persons	15.1	17.5	17.5	17.6	10.9	14.4	10.2	6.9	Q	7.2	16.1	15.6	18.2	11.3
5 Persons	7.0	8.2	7.5	11.8	4.6	Q	4.7	3.1	Q	3.3	7.7	7.6	Q	15.1
6 or More Persons	3.6	4.0	3.6	5.9	4.3	Q	3.9	2.1	NC	2.3	2.5	2.8	Q	21.2
Household Owns or Has Regular Use of a Motor Vehicle														
No	12.3	6.4	4.8	14.1	23.0	8.7	26.2	32.9	15.5	34.7	8.7	5.9	19.3	13.1
Yes	87.7	93.6	95.2	85.9	77.0	91.3	73.8	67.1	84.5	65.3	91.3	94.1	80.7	2.4
1 Vehicle	35.4	30.7	29.0	39.8	47.6	46.3	47.9	47.1	58.4	45.9	40.2	37.1	51.9	5.6
2 Vehicles	37.7	43.8	45.6	34.8	24.8	40.9	21.1	16.2	22.1	17.7	39.9	42.9	28.8	7.1
3 Vehicles	11.2	14.6	15.8	8.6	4.0	Q	4.0	1.4	Q	1.1	8.8	11.2	NC	17.2
4 or More Vehicles	3.3	4.4	4.8	2.6	Q	Q	Q	Q	NC	Q	2.3	3.0	NC	22.9

[1] Does not include all new construction for 1993.
[2] Excludes 22.1 million households that use LPG only for outdoor grills.
[3] Below 150 percent of poverty line or 60 percent of median State income.
[4] Includes 1.7 million householders who described themselves as Hispanic rather than White, Black, or other.
NC = No cases in sample.
Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.
NE = RSE row factor not estimated because RSE's for all statistics in this row are between 0.0 and 1.0 percent.
-- = Data not applicable
Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • Percentages are calculated on unrounded numbers. • See "Glossary" for definition of terms used in this report.
Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.4. Household Characteristics by Average Floorspace, 1993

Housing Unit and Household Characteristics	Total Households (millions)	Average Square Feet per Housing Unit		Average Heated Square Feet per Household Member				Average Heated Square Feet per Housing Unit		
		Total	Heated	All Households	Single-Family	Multifamily	Mobile Home	Single-Family	Multifamily	Mobile Home
RSE Column Factors:	1.2	0.6	0.6	0.7	0.8	1.9	2.2	0.7	1.1	1.2
Total	96.6	1,875	1,630	624	698	432	354	1,947	917	938
Census Region and Division										
Northeast	19.5	2,056	1,752	670	780	445	428	2,231	1,005	911
New England	5.1	2,101	1,735	677	773	497	378	2,171	1,080	825
Middle Atlantic	14.4	2,041	1,758	667	783	433	466	2,252	981	972
Midwest	23.3	2,170	1,882	734	825	474	368	2,259	955	954
East North Central	16.4	2,160	1,895	735	831	469	374	2,303	955	968
West North Central	6.9	2,194	1,851	733	810	490	356	2,161	955	926
South	33.5	1,706	1,515	585	636	454	322	1,738	856	923
South Atlantic	17.4	1,721	1,526	599	664	461	316	1,793	899	889
East South Central	6.0	1,796	1,594	614	672	451	336	1,796	825	929
West South Central	10.1	1,626	1,451	545	574	437	321	1,621	773	1,017
West	20.4	1,644	1,415	523	588	360	394	1,697	841	971
Mountain	5.4	1,730	1,565	605	682	419	383	1,876	845	1,001
Pacific	15.0	1,613	1,361	496	556	350	417	1,630	840	914
Urban Status										
Urban	75.8	1,854	1,613	617	695	425	364	1,966	906	933
Central City	30.6	1,540	1,360	535	626	392	422	1,750	873	928
Suburban	45.2	2,067	1,783	670	729	474	348	2,074	952	934
Rural	20.8	1,952	1,695	649	710	515	341	1,889	1,041	946
Climate Zone										
Under 2,000 CDD and--										
Over 7,000 HDD	8.7	2,218	1,916	735	799	527	370	2,209	1,018	917
5,500 to 7,000 HDD	26.5	2,085	1,804	711	813	476	402	2,214	1,007	1,010
4,000 to 5,499 HDD	22.5	1,961	1,705	654	740	422	356	2,092	892	859
Under 4,000 HDD	17.8	1,603	1,412	520	586	354	327	1,657	852	916
2,000 CDD or More and --										
Under 4,000 HDD	21.2	1,611	1,400	533	577	435	327	1,613	834	933
Heated Floorspace Category (square feet)										
Fewer than 600	7.5	591	412	219	129	260	201	313	441	420
600 to 999	21.8	907	815	368	357	390	331	847	792	823
1,000 to 1,599	27.8	1,513	1,272	475	481	678	394	1,298	1,206	1,198
1,600 to 1,999	12.4	2,110	1,788	638	637	883	534	1,790	1,777	1,705
2,000 to 2,399	9.6	2,501	2,187	748	747	866	Q	2,189	2,149	Q
2,400 to 2,999	8.2	2,982	2,661	901	904	751	Q	2,662	2,642	Q
3,000 or More	9.3	4,335	3,902	1273	1,273	1,348	Q	3,909	3,657	Q
Ownership of Unit										
Owned	63.2	2,271	1,949	719	749	544	369	2,057	1,371	977
Rented	33.4	1,128	1,027	423	466	421	297	1,388	852	794
Type and Ownership of Housing Unit										
Single-Family Detached	59.6	2,336	1,990	708	708	--	--	1,990	--	--
Owned	51.3	2,440	2,081	751	751	--	--	2,081	--	--
Rented	8.2	1,689	1,424	465	465	--	--	1,424	--	--
Single-Family Attached	7.2	1,801	1,591	614	614	--	--	1,591	--	--
Owned	4.4	2,041	1,788	716	716	--	--	1,788	--	--
Rented	2.8	1,423	1,282	469	469	--	--	1,282	--	--
Multifamily (2 to 4 units)	8.0	1,199	1,075	445	--	445	--	--	1,075	--
Owned	1.5	1,942	1,632	639	--	639	--	--	1,632	--
Rented	6.5	1,030	948	398	--	398	--	--	948	--
Multifamily (5 or more units)	16.2	861	840	424	--	424	--	--	840	--
Owned	1.6	1,210	1,120	653	--	653	--	--	1,120	--
Rented	14.7	824	810	403	--	403	--	--	810	--
Mobile Home	5.6	975	938	354	--	--	354	--	--	938
Owned	4.4	1,014	977	369	--	--	369	--	--	977
Rented	1.2	833	794	297	--	--	297	--	--	794

See footnotes at end of table.

Table 3.4. Household Characteristics by Average Floorspace, 1993 (Continued)

Housing Unit and Household Characteristics	Total Households (millions)	Average Square Feet per Housing Unit		Average Heated Square Feet per Household Member				Average Heated Square Feet per Housing Unit			RSE Row Factors
		Total	Heated	All Households	Single-Family	Multi-family	Mobile Home	Single-Family	Multi-family	Mobile Home	
RSE Column Factors:	1.2	0.6	0.6	0.7	0.8	1.6	2.2	0.7	1.1	1.2	
Year of Construction											
1939 or Before	20.4	1,993	1,705	676	775	413	Q	1,997	981	Q	3.4
1940 to 1949	6.9	1,675	1,487	594	641	391	Q	1,637	895	Q	4.6
1950 to 1959	13.1	1,890	1,619	578	603	400	Q	1,739	931	Q	4.6
1960 to 1969	15.0	1,811	1,579	656	738	435	368	1,921	864	745	4.5
1970 to 1979	18.1	1,746	1,545	597	697	449	331	2,045	891	842	3.4
1980 to 1984	8.5	1,740	1,526	562	612	482	374	1,902	907	974	4.1
1985 to 1987	5.5	1,959	1,708	610	722	384	379	2,158	870	1,100	5.3
1988 to 1990	4.7	2,118	1,844	630	717	468	346	2,201	1,014	1,106	5.7
1991 to 1993[1]	4.5	2,244	1,942	725	807	530	415	2,336	958	1,199	7.0
Observed Location of Household											
City	44.7	1,640	1,443	575	662	418	372	1,829	885	883	2.9
Town	15.8	1,898	1,614	625	676	445	378	1,811	969	989	4.1
Suburbs	19.9	2,157	1,861	683	731	474	420	2,131	990	915	4.0
Rural or Open Country	16.2	2,155	1,877	672	752	515	329	2,096	1,202	953	4.4
Total Number of Rooms (Excluding Bathrooms)											
1 or 2	3.2	531	503	358	365	357	Q	465	506	Q	8.2
3 to 5	47.4	1,259	1,125	491	573	428	341	1,361	914	857	2.1
6 to 8	40.2	2,431	2,081	700	716	504	408	2,115	1,591	1,428	2.7
9 or More	5.8	3,791	3,248	951	957	Q	NC	3,271	Q	NC	4.9
Bedrooms											
None or 1	12.9	733	687	440	570	412	403	951	635	622	4.5
2	30.0	1,365	1,212	547	666	448	359	1,410	1,049	810	2.5
3	38.5	2,174	1,869	640	678	420	349	1,939	1,462	1,148	2.4
4 or More	15.2	3,100	2,653	755	767	427	303	2,677	1,815	1,544	5.9
Other Rooms (Excluding Bathrooms)											
None or 1	4.4	794	713	383	469	355	355	1,112	586	793	6.6
2	35.6	1,240	1,111	453	520	397	325	1,383	858	860	2.4
3	31.7	1,935	1,666	635	664	531	416	1,807	1,148	1,144	2.4
4	16.3	2,666	2,286	777	792	531	469	2,328	1,541	1,566	4.3
5 or More	8.7	3,332	2,865	957	964	647	Q	2,889	1,833	Q	6.3
Full Bathrooms											
None or 1	61.6	1,500	1,312	541	618	411	323	1,616	854	790	2.0
2	30.9	2,358	2,038	699	742	532	394	2,210	1,280	1,175	2.6
3 or More	4.1	3,882	3,342	1052	1,052	Q	Q	3,353	Q	Q	6.5
Half Bathrooms											
None	71.5	1,638	1,423	564	638	424	358	1,740	879	936	1.8
1	23.9	2,518	2,191	760	801	490	326	2,341	1,237	955	3.7
2 or More	1.2	3,207	2,788	1044	1,100	Q	NC	2,869	Q	NC	9.7
Number of Stories											
Single-Family Homes	66.8	2,278	1,947	698	698	--	--	1,947	--	--	1.7
1 Story	40.6	1,938	1,653	627	627	--	--	1,653	--	--	1.9
2 Stories	22.4	2,797	2,384	796	796	--	--	2,384	--	--	2.9
3 Stories	1.6	3,181	2,833	892	892	--	--	2,833	--	--	7.7
Split-Level	2.2	2,602	2,226	723	723	--	--	2,226	--	--	7.4
Other	Q	Q	Q	Q	Q	--	--	Q	--	--	100.0
Mobile Homes	5.6	975	938	354	--	--	354	--	--	938	3.4
Multi-Story Apartment Building	24.2	972	917	432	--	432	--	--	917	--	2.8

See footnotes at end of table.

Table 3.4. Household Characteristics by Average Floorspace, 1993 (Continued)

Housing Unit and Household Characteristics	Total Households (millions)	Average Square Feet per Housing Unit: Total	Average Square Feet per Housing Unit: Heated	Average Heated Square Feet per Household Member: All Households	Average Heated Square Feet per Household Member: Single-Family	Average Heated Square Feet per Household Member: Multi-family	Average Heated Square Feet per Household Member: Mobile Home	Average Heated Square Feet per Housing Unit: Single-Family	Average Heated Square Feet per Housing Unit: Multi-family	Average Heated Square Feet per Housing Unit: Mobile Home	RSE Row Factors
RSE Column Factors:	1.2	0.6	0.6	0.7	0.8	1.6	2.2	0.7	1.1	1.2	
Outside Wall Material											
Brick	26.6	1,819	1,619	677	803	433	Q	2,175	844	Q	2.6
Wood	27.6	1,969	1,671	618	663	426	376	1,847	983	1,171	3.6
Siding	22.9	1,957	1,722	633	723	486	350	2,039	1,112	899	3.1
Stucco	10.3	1,664	1,439	533	585	405	NC	1,754	886	NC	6.1
Composition	4.1	1,943	1,650	605	638	499	331	1,713	1,403	1,110	7.4
Concrete/Block	4.3	1,548	1,326	524	589	392	Q	1,604	878	Q	7.1
Other	.8	2,298	1,961	777	793	Q	NC	2,124	Q	NC	6.1
Foundation/Basement (More than one may apply)											
Basement	33.8	2,730	2,298	832	871	498	--	2,437	1,248	--	2.5
Crawlspace	24.8	1,842	1,611	597	603	453	--	1,643	996	--	3.4
Enclosed	19.4	1,892	1,656	612	620	434	--	1,691	1,004	--	3.5
Open to Outside	5.6	1,665	1,454	542	543	481	--	1,484	842	--	7.5
Concrete Slab	23.4	1,864	1,604	576	602	366	--	1,713	882	--	3.0
Other	.3	886	733	364	Q	Q	--	687	Q	--	14.3
Not Asked (Mobile Homes and Buildings with 5 or More Units)	21.8	890	865	402	--	424	354	--	840	938	1.5
Garage/Carport											
Yes	46.7	2,469	2,076	745	751	--	416	2,100	--	998	1.3
1-Car Garage	14.4	2,116	1,769	677	681	--	390	1,781	--	884	1.9
2-Car Garage	24.7	2,751	2,295	781	785	--	397	2,305	--	1,229	2.1
3-Car Garage	2.1	3,628	3,057	1004	1,013	--	Q	3,104	--	Q	5.0
Covered Carport	6.3	1,793	1,614	653	671	--	440	1,680	--	947	4.5
No	26.9	1,652	1,494	542	583	--	342	1,611	--	927	2.6
Not Asked (Apartments)	24.2	972	917	432	--	432	--	--	917	--	1.8
Fuels Used For Any Use											
Electricity	96.6	1,876	1,631	624	699	432	354	1,948	917	938	.5
Natural Gas	58.4	1,911	1,668	629	699	417	392	1,972	926	971	1.0
Fuel Oil	10.9	2,265	1,917	714	797	446	335	2,227	1,059	768	1.8
LPG[2]	8.6	1,845	1,627	591	675	528	309	1,867	1,115	864	1.9
Kerosene	3.7	1,821	1,555	537	610	373	303	1,798	969	859	1.8
Wood	22.2	2,589	2,239	750	772	541	386	2,322	1,277	1,295	1.2
Solar	1.2	2,541	2,083	733	759	C	Q	2,177	Q	Q	1.5
Coal	.6	1,895	1,821	718	764	C	Q	1,945	Q	Q	4.1
Natural Gas Available In Neighborhood											
Yes	69.0	1,868	1,629	621	694	416	383	1,950	903	948	.5
No	27.6	1,893	1,634	632	709	492	332	1,938	968	930	1.1
1993 Family Income Category											
Less than $5,000	4.1	1,123	1,015	443	540	374	295	1,289	800	838	3.3
$5,000 to $9,999	10.8	1,216	1,079	565	724	415	379	1,357	805	745	1.8
$10,000 to $14,999	11.1	1,437	1,244	527	661	370	312	1,548	841	895	1.5
$15,000 to $19,999	9.6	1,596	1,390	571	660	414	378	1,687	896	922	1.7
$20,000 to $24,999	8.7	1,644	1,442	612	702	427	331	1,743	839	896	1.6
$25,000 to $34,999	14.1	1,879	1,642	621	686	462	359	1,917	970	992	1.5
$35,000 to $49,999	17.5	2,146	1,862	644	687	498	364	2,102	1,090	1,154	1.5
$50,000 to $74,999	12.6	2,368	2,042	654	673	486	395	2,179	1,093	1,124	1.7
$75,000 or More	8.3	2,911	2,491	810	836	539	Q	2,648	1,247	Q	1.7
Below Poverty Line											
100 Percent	14.4	1,228	1,097	392	472	320	255	1,371	827	830	3.2
125 Percent	19.4	1,293	1,150	414	496	331	266	1,433	841	828	2.7
Eligible for Federal Assistance[3]	30.7	1,387	1,216	464	551	358	287	1,517	848	835	2.2

See footnotes at end of table.

Table 3.4. Household Characteristics by Average Floorspace, 1993 (Continued)

Housing Unit and Household Characteristics	Total Households (millions)	Average Square Feet per Housing Unit		Average Heated Square Feet per Household Member				Average Heated Square Feet per Housing Unit			RSE Row Factors
		Total	Heated	All Households	Single-Family	Multi-family	Mobile Home	Single-Family	Multi-family	Mobile Home	
RSE Column Factors:	1.2	0.6	0.6	0.7	0.8	1.6	2.2	0.7	1.1	1.2	
Payment Method for Fuel and Electricity											
All Paid by Household	83.1	2,034	1,756	652	701	472	354	1,959	1,018	951	2.0
Some Paid, Some in Rent	8.3	881	847	385	427	382	362	1,207	831	749	6.6
All Included in Rent	4.1	790	758	400	493	386	353	1,170	699	839	7.6
Other Method	1.1	1,451	1,269	539	831	456	Q	1,578	1,182	Q	15.4
Age of Householder											
Under 25 Years	5.7	1,129	1,050	414	529	356	301	1,494	825	857	5.5
25 to 34 Years	19.9	1,596	1,404	466	543	354	271	1,803	879	880	2.8
35 to 44 Years	21.4	2,001	1,741	526	566	372	311	2,001	912	1,003	3.0
45 to 59 Years	21.9	2,127	1,847	706	767	462	429	2,112	965	1,018	3.1
60 Years and Over	27.8	1,934	1,655	919	978	710	567	1,890	987	901	2.8
Race of Householder											
White	80.2	1,978	1,717	674	740	481	363	2,012	940	944	1.9
Black	10.9	1,394	1,262	465	516	395	285	1,563	908	869	5.6
Other[4]	5.5	1,333	1,096	327	376	268	253	1,402	786	890	7.6
Householder of Hispanic Descent											
Yes	7.9	1,412	1,228	382	459	285	258	1,576	821	888	5.4
No	88.7	1,917	1,666	651	719	463	367	1,972	932	944	1.8
Household Size											
1 Person	23.5	1,366	1,185	1185	1,562	787	811	1,562	787	811	2.6
2 Persons	31.7	1,954	1,706	853	997	475	481	1,994	950	962	2.3
3 Persons	16.6	1,950	1,715	572	661	346	302	1,982	1,039	905	2.6
4 Persons	14.6	2,220	1,908	477	526	288	253	2,106	1,152	1,012	3.2
5 Persons	6.8	2,213	1,923	385	424	217	220	2,121	1,085	1,100	4.6
6 or More Persons	3.5	2,149	1,821	268	303	154	153	2,063	1,019	1,137	9.4
Household Owns or Has Regular Use of a Motor Vehicle											
No	11.9	1,100	979	492	648	399	355	1,370	766	710	4.7
Yes	84.7	1,985	1,722	638	701	444	354	1,986	981	960	1.9
1 Vehicle	34.2	1,592	1,377	660	782	470	406	1,692	913	863	2.7
2 Vehicles	36.4	2,145	1,869	635	691	422	328	2,063	1,107	1,016	2.3
3 Vehicles	10.8	2,475	2,156	639	673	332	326	2,264	1,209	1,056	4.4
4 or More Vehicles	3.2	2,689	2,258	534	556	277	303	2,343	1,218	1,327	8.3

[1] Does not include all new construction for 1993.
[2] Excludes 22.1 million households that use LPG only for outdoor grills.
[3] Below 150 percent of poverty line or 60 percent of median State income.
[4] Includes 1.7 million householders who described themselves as Hispanic rather than White, Black, or other.
NC = No cases in sample.
-- = Data not applicable.
Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.
Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.
Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.5. Household Characteristics by Total Floorspace, 1993

Housing Unit and Household Characteristics	Total Households		Total Square Footage				
			Total		Heated		
	(millions)	(percent)	(billions)	(percent)	(billions)	(percent)	RSE Row Factors
RSE Column Factors:	0.9	0.9	1.0	1.0	1.0	1.0	
Total	96.6	100.0	181.2	100.0	157.5	100.0	
Census Region and Main Heating Fuel							
Northeast	19.5	20.2	40.1	22.1	34.1	21.7	
Fuel Oil	7.0	7.3	15.5	8.6	13.1	8.3	
Kerosene	.3	.4	.4	.2	.3	.2	
Natural Gas	9.4	9.7	19.0	10.5	16.4	10.4	
Electricity	1.9	2.0	3.2	1.8	2.7	1.7	
Wood	.5	.5	1.3	.7	1.0	.7	
Other	.3	.3	.6	.4	.6	.4	
Midwest	23.3	24.1	50.6	27.9	43.9	27.8	
Natural Gas	16.8	17.3	36.1	19.9	31.6	20.0	
Electricity	3.0	3.1	5.6	3.1	4.7	3.0	
Fuel Oil	1.3	1.4	3.6	2.0	3.1	1.9	
LPG	1.8	1.8	4.2	2.3	3.7	2.3	
Wood	.4	.4	1.1	.6	.8	.5	
Other	Q	Q	Q	Q	Q	Q	
South	33.5	34.7	57.1	31.5	50.8	32.2	
Natural Gas	12.7	13.1	22.9	12.6	20.4	12.9	
Electricity	14.7	15.2	24.2	13.3	21.5	13.6	
Fuel Oil	1.4	1.5	3.1	1.7	2.7	1.7	
Kerosene	.6	.6	.6	.3	.5	.3	
LPG	2.4	2.5	3.6	2.0	3.3	2.1	
Wood	1.2	1.2	2.3	1.3	2.2	1.4	
Other/None	.5	.5	.5	.3	Q	Q	
West	20.4	21.1	33.5	18.5	28.8	18.3	
Natural Gas	11.9	12.4	21.6	11.9	18.8	11.9	
Electricity	5.7	5.9	7.5	4.1	6.8	4.3	
Wood	1.1	1.1	1.9	1.0	1.7	1.1	
Other/None	1.6	1.7	2.5	1.4	1.5	1.0	
Urban Status							
Urban	75.8	78.4	140.5	77.5	122.2	77.6	
Central City	30.6	31.7	47.1	26.0	41.6	26.4	
Suburban	45.2	46.8	93.4	51.6	80.6	51.2	
Rural	20.8	21.6	40.7	22.5	35.3	22.4	
Climate Zone							
Under 2,000 CDD and--							
Over 7,000 HDD	8.7	9.0	19.3	10.6	16.7	10.6	
5,500 to 7,000 HDD	26.5	27.4	55.2	30.5	47.8	30.3	
4,000 to 5,499 HDD	22.5	23.2	44.0	24.3	38.3	24.3	
Under 4,000 HDD	17.3	18.4	28.5	15.7	25.1	16.0	
2,000 CDD or More and --							
Under 4,000 HDD	21.2	21.9	34.2	18.8	29.7	18.8	
Heated Floorspace Category (square feet)							
Fewer than 600	7.5	7.8	4.4	2.5	3.1	2.0	
600 to 999	21.8	22.6	19.8	10.9	17.8	11.3	
1,000 to 1,599	27.8	28.8	42.0	23.2	35.4	22.4	
1,600 to 1,999	12.4	12.8	26.2	14.4	22.2	14.1	
2,000 to 2,399	9.6	10.0	24.1	13.3	21.1	13.4	
2,400 to 2,999	8.2	8.5	24.5	13.5	21.8	13.9	
3,000 or More	9.3	9.6	40.3	22.2	36.2	23.0	

See footnotes at end of table.

Table 3.5. Household Characteristics by Total Floorspace, 1993 (Continued)

Housing Unit and Household Characteristics	Total Households		Total Square Footage				RSE Row Factors
			Total		Heated		
	(millions)	(percent)	(billions)	(percent)	(billions)	(percent)	
RSE Column Factors:	0.9	0.9	1.0	1.0	1.0	1.0	
Ownership of Unit							
Owned	63.2	65.4	143.5	79.2	123.2	78.2	1.6
Rented	33.4	34.6	37.7	20.8	34.3	21.8	2.8
Type and Ownership of Housing Unit							
Single-Family Detached	59.6	61.7	139.2	76.8	118.6	75.3	1.6
Owned	51.3	53.1	125.3	69.1	106.8	67.8	1.8
Rented	8.2	8.5	13.9	7.7	11.7	7.4	5.9
Single-Family Attached	7.2	7.5	13.0	7.2	11.5	7.3	8.9
Owned	4.4	4.6	9.0	5.0	7.9	5.0	10.2
Rented	2.8	2.9	4.0	2.2	3.6	2.3	10.4
Multifamily (2 to 4 units)	8.0	8.3	9.6	5.3	8.6	5.5	7.5
Owned	1.5	1.5	2.9	1.6	2.4	1.5	13.8
Rented	6.5	6.7	6.7	3.7	6.2	3.9	8.2
Multifamily (5 or more units)	16.2	16.8	14.0	7.7	13.6	8.7	6.0
Owned	1.6	1.6	1.9	1.0	1.7	1.1	24.1
Rented	14.7	15.2	12.1	6.7	11.9	7.6	5.8
Mobile Home	5.6	5.8	5.4	3.0	5.2	3.3	8.7
Owned	4.4	4.6	4.5	2.5	4.3	2.7	9.7
Rented	1.2	1.2	1.0	.5	.9	.6	12.6
Year of Construction							
1939 or Before	20.4	21.1	40.6	22.4	34.7	22.0	5.0
1940 to 1949	6.9	7.1	11.6	6.4	10.3	6.5	7.9
1950 to 1959	13.1	13.5	24.7	13.6	21.1	13.4	5.4
1960 to 1969	15.0	15.5	27.2	15.0	23.7	15.1	5.1
1970 to 1979	18.1	18.8	31.7	17.5	28.0	17.8	4.2
1980 to 1984	8.5	8.8	14.7	8.1	12.9	8.2	5.3
1985 to 1987	5.5	5.7	10.8	5.9	9.4	6.0	8.5
1988 to 1990	4.7	4.9	10.0	5.5	8.7	5.5	8.0
1991 to 1993[1]	4.5	4.6	10.0	5.5	8.7	5.5	10.7
Observed Location of Household							
City	44.7	46.2	73.3	40.4	64.5	40.9	2.7
Town	15.8	16.3	29.9	16.5	25.5	16.2	6.8
Suburbs	19.9	20.6	43.0	23.7	37.1	23.6	5.1
Rural or Open Country	16.2	16.8	35.0	19.3	30.5	19.3	6.8
Total Number of Rooms (Excluding Bathrooms)							
1 or 2	3.2	3.3	1.7	.9	1.6	1.0	10.5
3 to 5	47.4	49.0	59.6	32.9	53.3	33.8	2.4
6 to 8	40.2	41.6	97.7	53.9	83.7	53.1	2.4
9 or More	5.8	6.0	22.1	12.2	19.0	12.0	8.2
Bedrooms							
None or 1	12.9	13.4	9.5	5.2	8.9	5.6	5.3
2	30.0	31.1	41.0	22.6	36.4	23.1	3.2
3	38.5	39.8	83.6	46.1	71.9	45.6	2.2
4 or More	15.2	15.7	47.2	26.0	40.4	25.6	4.2
Other Rooms (Excluding Bathrooms)							
None or 1	4.4	4.6	3.5	1.9	3.1	2.0	8.6
2	35.6	36.8	44.1	24.3	39.5	25.1	2.8
3	31.7	32.8	61.4	33.9	52.8	33.5	2.6
4	16.3	16.8	43.4	23.9	37.2	23.6	3.4
5 or More	8.7	9.0	28.9	15.9	24.8	15.7	6.2
Full Bathrooms							
None or 1	61.6	63.8	92.4	51.0	80.9	51.3	1.8
2	30.9	32.0	72.9	40.2	63.0	40.0	2.6
3 or More	4.1	4.2	15.9	8.8	13.7	8.7	8.6

See footnotes at end of table.

Table 3.5. Household Characteristics by Total Floorspace, 1993 (Continued)

Housing Unit and Household Characteristics	Total Households		Total Square Footage				RSE Row Factors
			Total		Heated		
	(millions)	(percent)	(billions)	(percent)	(billions)	(percent)	
RSE Column Factors:	0.9	0.9	1.0	1.0	1.0	1.0	
Half Bathrooms							
None	71.5	74.0	117.1	64.6	101.7	64.6	.8
1	23.9	24.8	60.3	33.3	52.5	33.3	1.8
2 or More	1.2	1.2	3.9	2.1	3.4	2.1	13.8
Number of Stories							
Single-Family Homes	66.8	69.1	152.2	84.0	130.1	82.6	.8
1 Story	40.6	42.0	78.6	43.4	67.1	42.6	1.5
2 Stories	22.4	23.2	62.7	34.6	53.4	33.9	1.8
3 Stories	1.6	1.7	5.2	2.9	4.6	2.9	14.7
Split-Level	2.2	2.2	5.6	3.1	4.8	3.0	7.6
Other	Q	Q	Q	Q	Q	Q	100.0
Mobile Homes	5.6	5.8	5.4	3.0	5.2	3.3	4.0
Multi-Story Apartment Building	24.2	25.1	23.6	13.0	22.2	14.1	.8
Outside Wall Material							
Brick	26.6	27.5	48.4	26.7	43.0	27.3	1.0
Wood	27.6	28.6	54.4	30.0	46.2	29.3	1.6
Siding	22.9	23.7	44.9	24.8	39.5	25.1	1.2
Stucco	10.3	10.7	17.1	9.5	14.8	9.4	3.5
Composition	4.1	4.2	7.9	4.3	6.7	4.2	6.2
Concrete/Block	4.3	4.4	6.6	3.7	5.7	3.6	11.5
Other	.8	.9	1.9	1.1	1.7	1.0	21.0
Foundation/Basement (More than one may apply)							
Basement	33.8	35.0	92.3	51.0	77.7	49.3	1.0
Crawlspace	24.8	25.7	45.7	25.2	40.0	25.4	1.7
Enclosed	19.4	20.1	36.7	20.3	32.1	20.4	2.1
Open to Outside	5.6	5.8	9.3	5.1	8.1	5.1	6.8
Concrete Slab	23.4	24.2	43.6	24.0	37.5	23.8	1.5
Other	.3	.3	.2	.1	.2	.1	41.5
Not Asked (Mobile Homes and Buildings with 5 or More Units)	21.3	22.6	19.4	10.7	18.9	12.0	1.7
Garage/Carport							
Yes	46.7	48.3	115.2	63.6	96.8	61.5	1.1
1-Car Garage	14.4	14.9	30.5	16.8	25.5	16.2	1.7
2-Car Garage	24.7	25.6	68.0	37.5	56.7	36.0	1.0
3-Car Garage	2.1	2.2	7.6	4.2	6.4	4.1	11.3
Covered Carport	6.3	6.5	11.3	6.2	10.1	6.4	4.9
No	26.9	27.8	44.4	24.5	40.2	25.5	1.4
Not Asked (Apartments)	24.2	25.1	23.6	13.0	22.2	14.1	1.9
Fuels Used For Any Use							
Electricity	96.6	99.9	181.2	100.0	157.5	100.0	.1
Natural Gas	58.4	60.4	111.6	61.6	97.4	61.8	1.9
Fuel Oil	10.9	11.3	24.7	13.6	20.9	13.3	1.7
LPG[2]	8.6	8.9	15.9	8.8	14.0	8.9	3.4
Kerosene	3.7	3.8	6.8	3.7	5.8	3.7	11.8
Wood	22.2	23.0	57.5	31.7	49.7	31.5	1.3
Solar	1.2	1.2	3.0	1.6	2.4	1.5	11.4
Coal	.6	.6	1.1	.6	1.0	.7	41.2
Natural Gas Available In Neighborhood							
Yes	69.0	71.4	128.9	71.1	112.4	71.3	1.2
No	27.6	28.6	52.3	28.9	45.2	28.7	3.4

See footnotes at end of table.

Table 3.5. Household Characteristics by Total Floorspace, 1993 (Continued)

Housing Unit and Household Characteristics	Total Households		Total Square Footage				RSE Row Factors
			Total		Heated		
	(millions)	(percent)	(billions)	(percent)	(billions)	(percent)	
RSE Column Factors:	0.9	0.9	1.0	1.0	1.0	1.0	
1993 Family Income Category							
Less than $5,000	4.1	4.2	4.6	2.5	4.1	2.6	7.8
$5,000 to $9,999	10.6	11.0	12.9	7.1	11.4	7.3	4.7
$10,000 to $14,999	11.1	11.5	16.0	8.8	13.8	8.8	4.2
$15,000 to $19,999	9.6	10.0	15.4	8.5	13.4	8.5	5.2
$20,000 to $24,999	8.7	9.1	14.4	7.9	12.6	8.0	5.2
$25,000 to $34,999	14.1	14.5	26.4	14.6	23.1	14.6	3.7
$35,000 to $49,999	17.5	18.1	37.5	20.7	32.5	20.6	3.8
$50,000 to $74,999	12.6	13.1	29.9	16.5	25.8	16.4	4.1
$75,000 or More	8.3	8.6	24.3	13.4	20.8	13.2	6.3
Below Poverty Line							
100 Percent	14.4	14.9	17.7	9.7	15.8	10.0	3.9
125 Percent	19.4	20.0	25.0	13.8	22.3	14.1	3.3
Eligible for Federal Assistance[3]	30.7	31.7	42.5	23.5	37.3	23.7	2.5
Payment Method for Fuel and Electricity							
All Paid by Household	83.1	86.0	169.1	93.3	146.0	92.7	1.3
Some Paid, Some in Rent	8.3	8.6	7.3	4.0	7.0	4.5	6.4
All Included in Rent	4.1	4.2	3.2	1.8	3.1	2.0	8.5
Other Method	1.1	1.2	1.6	.9	1.4	.9	17.6
Age of Householder							
Under 25 Years	5.7	5.9	6.4	3.6	6.0	3.8	8.4
25 to 34 Years	19.9	20.6	31.8	17.5	28.0	17.7	3.6
35 to 44 Years	21.4	22.1	42.8	23.6	37.2	23.6	2.9
45 to 59 Years	21.9	22.6	46.5	25.6	40.4	25.6	3.5
60 Years and Over	27.8	28.7	53.7	29.6	46.0	29.2	2.7
Race of Householder							
White	80.2	83.0	158.6	87.5	137.7	87.4	1.5
Black	10.9	11.3	15.2	8.4	13.8	8.7	6.4
Other[4]	5.5	5.7	7.4	4.1	6.1	3.9	7.7
Householder of Hispanic Descent							
Yes	7.9	8.2	11.2	6.2	9.7	6.2	7.7
No	88.7	91.8	170.1	93.8	147.8	93.8	1.3
Household Size							
1 Person	23.5	24.3	32.1	17.7	27.9	17.7	2.0
2 Persons	31.7	32.8	61.9	34.2	54.1	34.3	2.1
3 Persons	16.6	17.2	32.3	17.8	28.4	18.0	3.7
4 Persons	14.6	15.1	32.4	17.9	27.8	17.7	3.1
5 Persons	6.8	7.0	15.0	8.3	13.0	8.3	5.8
6 or More Persons	3.5	3.6	7.5	4.1	6.3	4.0	9.7
Household Owns or Has Regular Use of a Motor Vehicle							
No	11.9	12.3	13.1	7.2	11.7	7.4	5.7
Yes	84.7	87.7	168.1	92.8	145.9	92.6	1.4
1 Vehicle	34.2	35.4	54.5	30.1	47.2	29.9	2.3
2 Vehicles	36.4	37.7	78.2	43.1	68.1	43.2	2.4
3 Vehicles	10.8	11.2	26.8	14.8	23.3	14.8	5.5
4 or More Vehicles	3.2	3.3	8.7	4.8	7.3	4.6	7.8

[1] Does not include all new construction for 1993.
[2] Excludes 22.1 million households that use LPG only for outdoor grills.
[3] Below 150 percent of poverty line or 60 percent of median State income.
[4] Includes 1.7 million householders who described themselves as Hispanic rather than White, Black, or other.
Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.
Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.
Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.6a. Household Characteristics by Family Income, Million U.S. Households, 1993

Housing Unit and Household Characteristics	Total	1993 Family Income							Below Poverty Line		Eligible for Federal Assistance[1]	RSE Row Factors
		Less than $5,000	$5,000 to $9,999	$10,000 to $14,999	$15,000 to $24,999	$25,000 to $34,999	$35,000 to $49,999	$50,000 or More	100 Percent	125 Percent		
RSE Column Factors:	0.5	1.9	1.3	1.1	1.0	1.1	1.0	0.9	1.1	1.0	0.8	
Total	96.6	4.1	10.6	11.1	18.4	14.1	17.5	21.0	14.4	19.4	30.7	
Census Region and Division												
Northeast	19.5	1.0	2.0	2.0	3.1	2.6	3.8	4.8	3.0	3.9	6.3	
New England	5.1	.1	.5	.6	.9	.6	1.0	1.4	.6	.8	1.6	
Middle Atlantic	14.4	.9	1.5	1.5	2.2	2.1	2.8	3.5	2.4	3.1	4.6	
Midwest	23.3	.7	2.3	2.8	4.9	3.6	4.4	4.6	2.6	4.0	7.1	
East North Central	16.4	.4	1.6	2.0	3.4	2.4	3.0	3.5	1.8	2.7	4.9	
West North Central	6.9	.3	.7	.8	1.5	1.2	1.4	1.0	.8	1.4	2.2	
South	33.5	1.7	4.4	3.6	6.4	4.9	5.8	6.7	5.9	7.6	10.9	
South Atlantic	17.4	1.0	2.0	1.8	3.2	2.5	3.0	3.9	2.8	3.7	5.7	
East South Central	5.0	.3	.9	.7	1.1	1.1	.9	1.0	1.2	1.6	2.0	
West South Central	10.1	.4	1.4	1.1	2.1	1.4	1.9	1.9	1.8	2.4	3.2	
West	20.4	.7	1.9	2.6	4.0	2.9	3.4	4.9	2.9	3.8	6.4	
Mountain	5.4	.2	.5	.7	1.3	.8	.7	1.0	.8	1.0	1.6	
Pacific	15.0	.4	1.4	1.9	2.6	2.1	2.7	3.8	2.1	2.8	4.7	
Urban Status												
Urban	75.8	3.2	7.5	8.3	13.5	10.6	14.4	18.3	10.7	14.0	22.6	
Central City	30.6	2.1	4.0	4.3	5.6	4.1	5.0	5.5	6.3	7.7	11.9	
Suburban	45.2	1.1	3.5	3.9	7.9	6.6	9.4	12.8	4.3	6.3	10.7	
Rural	20.8	.9	3.1	2.9	4.9	3.4	3.1	2.7	3.7	5.4	8.1	
Climate Zone												
Under 2,000 CDD and--												
Over 7,000 HDD	8.7	.2	.9	1.1	2.1	1.5	1.5	1.5	1.0	1.6	2.8	
5,500 to 7,000 HDD	26.5	1.0	2.6	3.2	5.0	3.9	4.9	6.0	3.3	4.6	8.1	
4,000 to 5,499 HDD	22.5	.9	2.3	2.1	4.1	3.3	4.3	5.4	3.0	4.1	6.6	
Under 4,000 HDD	17.8	.9	2.4	2.3	2.9	2.3	3.0	3.9	3.5	4.5	6.3	
2,000 CDD or More and --												
Under 4,000 HDD	21.2	1.0	2.4	2.4	4.3	3.1	3.8	4.2	3.6	4.5	6.8	
Heated Floorspace Category (square feet)												
Fewer than 600	7.5	.8	1.9	1.3	1.6	.7	.6	.6	2.4	2.9	4.2	
600 to 999	21.8	1.9	3.9	4.0	5.1	2.7	2.7	1.6	5.6	7.3	10.5	
1,000 to 1,599	27.6	1.0	3.2	3.2	6.1	4.4	5.0	4.8	4.4	5.9	9.4	
1,600 to 1,999	12.4	Q	.8	1.1	2.3	2.2	2.6	3.3	.9	1.4	2.8	
2,000 to 2,399	9.6	Q	.4	.5	1.1	1.7	2.5	3.3	.5	.9	1.5	
2,400 to 2,999	8.2	Q	.2	.7	1.2	1.1	1.9	3.0	.4	.7	1.5	
3,000 or More	9.3	Q	.2	.3	1.0	1.2	2.1	4.5	.3	.4	.8	
Observed Location of Household												
City	44.7	2.4	5.9	5.9	8.4	5.9	7.2	8.4	8.3	10.4	16.1	
Town	15.8	.7	2.0	1.9	3.4	2.5	2.5	2.7	2.3	3.3	5.6	
Suburbs	19.9	.4	1.2	1.6	3.1	2.8	4.0	6.7	1.5	2.2	4.1	
Rural or Open Country	16.2	.6	1.5	1.7	3.4	2.8	3.2	3.1	2.2	3.4	4.9	
Ownership of Unit												
Owned	63.2	1.0	4.4	5.7	10.9	10.0	13.4	17.8	5.0	8.0	14.2	
Rented	33.4	3.0	6.1	5.4	7.5	4.1	4.0	3.2	9.4	11.4	16.5	

See footnotes at end of table.

Table 3.6b. Household Characteristics by Family Income, Percent of U.S. Households, 1993

Housing Unit and Household Characteristics	Total	1993 Family Income							Below Poverty Line		Eligible for Federal Assistance[1]	RSE Row Factors
		Less than $5,000	$5,000 to $9,999	$10,000 to $14,999	$15,000 to $24,999	$25,000 to $34,999	$35,000 to $49,999	$50,000 or More	100 Percent	125 Percent		
RSE Column Factors:	0.5	1.9	1.3	1.1	1.0	1.1	0.9	0.9	1.1	1.0	0.8	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0
Census Region and Division												
Northeast	20.2	25.8	18.8	18.4	16.9	18.7	21.8	23.1	20.9	20.2	20.5	6.3
New England	5.2	3.4	4.9	5.0	4.8	4.1	5.8	6.6	4.4	4.3	5.3	9.6
Middle Atlantic	14.9	22.4	13.9	13.4	12.1	14.6	16.0	16.5	16.5	15.9	15.2	7.8
Midwest	24.1	16.4	21.7	25.4	26.7	25.9	25.3	21.7	18.1	20.7	23.2	6.6
East North Central	16.9	9.5	15.3	17.8	18.3	17.3	17.4	16.9	12.3	13.7	16.1	8.8
West North Central	7.2	6.8	6.3	7.6	8.4	8.6	7.9	4.8	5.7	7.0	7.1	11.6
South	34.7	41.5	41.2	32.4	34.9	35.1	33.2	32.0	40.9	39.4	35.6	4.7
South Atlantic	18.0	24.1	19.0	16.5	17.4	17.7	17.2	18.4	19.7	19.0	18.5	7.8
East South Central	6.2	7.4	8.9	6.3	5.9	7.8	5.3	4.6	8.4	8.1	6.5	9.6
West South Central	10.5	10.0	13.3	9.6	11.6	9.6	10.7	9.1	12.8	12.3	10.6	10.2
West	21.1	16.3	18.3	23.8	21.5	20.3	19.7	23.2	20.2	19.7	20.7	7.0
Mountain	5.5	5.9	5.0	6.6	7.2	5.6	4.2	4.8	5.3	5.1	5.3	11.7
Pacific	15.5	10.4	13.3	17.2	14.3	14.6	15.6	18.3	14.9	14.6	15.5	8.9
Urban Status												
Urban	78.4	78.7	70.8	74.2	73.6	75.7	82.2	87.3	74.3	72.2	73.6	1.9
Central City	31.7	50.9	37.8	38.9	30.6	29.0	28.7	26.2	44.1	39.5	38.8	4.6
Suburban	46.8	27.8	33.1	35.3	43.0	46.7	53.6	61.1	30.2	32.7	34.8	4.4
Rural	21.6	21.3	29.2	25.8	26.4	24.3	17.8	12.7	25.7	27.8	26.4	6.1
Climate Zone												
Under 2,000 CDD and--												
Over 7,000 HDD	9.0	6.2	8.5	9.7	11.3	10.5	8.4	6.9	6.9	8.5	9.2	20.9
5,500 to 7,000 HDD	27.4	23.6	24.2	29.0	27.3	27.5	28.0	28.6	22.9	23.6	26.5	11.1
4,000 to 5,499 HDD	23.2	23.2	21.9	19.0	22.1	23.7	24.4	25.9	21.0	21.3	21.5	10.9
Under 4,000 HDD	18.4	22.7	22.4	20.9	16.0	16.3	17.3	18.7	24.4	23.1	20.6	12.6
2,000 CDD or More and --												
Under 4,000 HDD	21.9	24.3	23.0	21.5	23.4	22.0	21.9	19.8	24.9	23.5	22.1	10.2
Heated Floorspace Category (square feet)												
Fewer than 600	7.8	18.5	18.3	11.9	8.8	5.1	3.6	2.6	16.4	14.8	13.7	11.9
600 to 999	22.6	46.4	36.7	35.8	27.8	19.4	15.2	7.5	38.8	37.4	34.2	5.6
1,000 to 1,599	28.8	25.5	30.2	28.8	33.4	31.6	28.7	22.8	30.4	30.2	30.8	5.4
1,600 to 1,999	12.8	Q	7.6	10.0	12.5	15.5	15.1	15.7	6.1	7.3	9.1	9.6
2,000 to 2,399	10.0	Q	3.6	4.8	5.9	12.2	14.1	15.8	3.7	4.4	5.0	11.9
2,400 to 2,999	8.5	Q	1.8	6.2	6.4	8.0	11.0	14.3	2.5	3.8	4.8	12.9
3,000 or More	9.6	Q	1.9	2.4	5.3	8.2	12.3	21.3	2.1	2.0	2.6	14.9
Observed Location of Household												
City	46.2	59.7	55.7	53.2	45.7	42.3	44.1	40.1	57.9	53.6	52.6	4.4
Town	16.3	16.2	18.8	17.0	18.7	18.0	14.6	13.0	16.3	17.2	18.2	10.2
Suburbs	20.6	10.1	10.9	14.8	17.1	20.0	23.1	32.1	10.6	11.6	13.4	9.8
Rural or Open Country	16.8	14.1	14.6	15.1	18.5	19.7	18.1	14.7	15.3	17.7	15.9	10.3
Ownership of Unit												
Owned	65.4	25.7	41.9	51.1	59.2	70.9	77.0	84.7	34.9	41.1	46.3	3.6
Rented	34.6	74.3	58.1	48.9	40.8	29.1	23.0	15.3	65.1	58.9	53.7	4.4

See footnotes at end of table.

Table 3.6a. Household Characteristics by Family Income, Million U.S. Households, 1993 (Continued)

Housing Unit and Household Characteristics	Total	1993 Family Income: Less than $5,000	$5,000 to $9,999	$10,000 to $14,999	$15,000 to $24,999	$25,000 to $34,999	$35,000 to $49,999	$50,000 or More	Below Poverty Line: 100 Percent	125 Percent	Eligible for Federal Assistance[1]	RSE Row Factors
RSE Column Factors:	0.5	1.9	1.3	1.1	1.0	1.1	1.0	0.9	1.1	1.0	0.8	
Type and Ownership of Housing Unit												
Single-Family Detached	59.6	1.4	4.6	5.7	10.4	8.9	11.8	16.7	6.0	8.7	14.9	4.8
Owned	51.3	.9	3.4	4.4	8.6	7.7	10.7	15.6	3.9	6.0	11.1	5.9
Rented	8.2	.6	1.2	1.3	1.9	1.2	1.1	1.1	2.1	2.6	3.8	0.7
Single-Family Attached	7.2	.3	.8	.6	1.3	1.0	1.5	1.7	1.1	1.5	2.1	4.3
Owned	4.4	Q	.3	.2	.6	.7	1.1	1.4	.2	.4	.7	11.3
Rented	2.8	.3	.5	.3	.7	.3	.4	.4	.9	1.0	1.3	8.0
Multifamily (2 to 4 units)	8.0	.5	1.3	1.3	2.0	.8	1.3	.8	1.9	2.4	3.5	2.4
Owned	1.5	Q	Q	Q	.3	.2	.5	.2	.1	.2	.4	14.5
Rented	6.5	.5	1.2	1.2	1.7	.6	.8	.5	1.8	2.2	3.2	3.1
Multifamily (5 or more units)	16.2	1.5	3.1	2.7	3.1	2.2	2.2	1.5	4.2	5.1	7.9	3.1
Owned	1.6	NC	Q	.3	Q	.3	.4	.3	Q	Q	.4	15.8
Rented	14.7	1.5	3.0	2.4	3.0	1.9	1.8	1.2	4.1	5.0	7.5	3.3
Mobile Home	5.6	.2	.9	.9	1.5	1.1	.7	.3	1.1	1.7	2.2	4.8
Owned	4.4	Q	.6	.6	1.2	.9	.7	.2	.6	1.1	1.5	7.1
Rented	1.2	.2	.3	.2	.3	.1	C	Q	.5	.6	.7	10.1
Year of Construction												
1939 or Before	20.4	1.1	2.9	2.9	4.6	2.9	3.1	3.0	3.8	5.1	8.3	7.5
1940 to 1949	6.9	.5	.9	1.0	1.4	.8	1.2	1.1	1.3	1.9	2.3	5.3
1950 to 1959	13.1	.4	1.2	1.7	2.3	2.1	2.3	3.0	1.8	2.5	4.0	3.1
1960 to 1969	15.0	.5	1.8	1.7	3.1	2.1	2.8	3.0	2.0	2.7	4.6	3.9
1970 to 1979	18.1	.8	2.0	2.0	3.2	2.9	3.1	4.0	2.7	3.6	5.6	3.4
1980 to 1984	8.5	.4	.9	.8	1.4	1.1	1.5	2.3	1.3	1.7	2.5	1.7
1985 to 1987	5.5	.1	.5	.4	1.1	.7	1.2	1.6	.6	.9	1.3	3.1
1988 to 1990	4.7	Q	.2	.4	.7	.7	1.0	1.6	.4	.6	.9	5.4
1991 to 1993[2]	4.5	.1	.2	.3	.5	.7	1.2	1.4	.3	.5	.7	11.7
Total Number of Rooms (Excluding Bathrooms)												
1 or 2	3.2	.3	.8	.5	.6	.4	.4	.2	.8	1.0	1.6	11.3
3 to 5	47.4	3.0	7.5	7.4	10.7	7.0	6.6	5.2	9.7	12.9	19.3	5.1
6 to 8	40.2	.7	2.1	3.0	6.5	5.9	9.2	12.7	3.6	5.1	8.5	5.9
9 or More	5.8	Q	Q	.2	.5	.8	1.2	2.9	.3	.4	.7	9.2
Bedrooms												
None or 1	12.9	1.1	3.0	2.3	2.8	1.5	1.4	.8	3.3	4.0	6.3	7.3
2	30.0	1.8	4.4	4.6	6.9	4.6	4.3	3.5	5.7	7.8	12.1	5.1
3	38.5	.9	2.6	3.3	6.8	6.0	9.8	10.1	4.2	5.8	9.3	5.0
4 or More	15.2	.3	.6	1.0	1.9	2.0	2.9	6.6	1.2	1.8	2.9	7.4
Other Rooms (Excluding Bathrooms)												
None or 1	4.4	.4	.9	.7	.9	.5	.5	.4	1.1	1.4	2.1	5.8
2	35.6	2.3	5.8	5.3	7.9	5.3	5.0	4.0	7.8	10.3	15.4	3.9
3	31.7	.9	2.9	3.9	6.4	4.8	6.3	6.5	4.1	5.5	9.4	3.8
4	16.3	.3	.8	.9	2.1	2.5	3.7	6.0	1.1	1.6	2.7	7.8
5 or More	8.7	Q	.2	.4	1.0	1.0	.9	4.1	.4	.6	1.1	9.7
Full Bathrooms												
None or 1	61.6	3.6	9.5	9.3	13.9	8.9	8.9	7.6	12.5	16.7	25.9	4.1
2	30.9	.5	1.1	1.7	4.3	4.7	7.7	10.9	1.8	2.6	4.6	7.5
3 or More	4.1	NC	Q	Q	.2	.4	.8	2.5	Q	Q	.2	27.1

See footnotes at end of table.

Table 3.6b. Household Characteristics by Family Income, Percent of U.S. Households, 1993 (Continued)

Housing Unit and Household Characteristics	Total	1993 Family Income							Below Poverty Line		Eligible for Federal Assistance[1]	RSE Row Factors
		Less than $5,000	$5,000 to $9,999	$10,000 to $14,999	$15,000 to $24,999	$25,000 to $34,999	$35,000 to $49,999	$50,000 or More	100 Percent	125 Percent		
RSE Column Factors:	0.5	1.9	1.3	1.1	1.0	1.1	0.9	0.9	1.1	1.0	0.8	
Type and Ownership of Housing Unit												
Single-Family Detached	61.7	34.9	43.0	51.3	56.9	63.6	67.6	79.7	41.9	44.7	48.5	3.6
Owned	53.1	21.0	32.0	39.8	46.8	55.1	61.5	74.4	27.3	31.1	36.2	4.6
Rented	8.5	14.0	11.0	11.6	10.1	8.5	6.1	5.3	14.5	13.7	12.3	10.4
Single-Family Attached	7.5	8.5	7.4	5.0	7.3	7.2	8.4	8.2	7.9	7.6	6.7	14.0
Owned	4.6	Q	2.4	2.2	3.4	5.2	6.4	6.5	1.6	2.3	2.3	21.5
Rented	2.9	6.9	5.0	2.7	3.9	2.0	2.0	1.7	6.2	5.4	4.4	18.1
Multifamily (2 to 4 units)	8.3	13.6	12.0	11.3	10.8	5.9	7.6	3.7	13.1	12.3	11.8	11.9
Owned	1.5	Q	Q	Q	1.8	1.5	2.8	1.2	.8	1.1	1.4	24.5
Rented	6.7	12.6	11.1	10.6	9.0	4.4	4.8	2.6	12.3	11.2	10.4	13.1
Multifamily (5 or more units)	16.8	36.9	29.5	24.5	16.8	15.6	12.4	6.9	29.3	26.6	25.7	8.7
Owned	1.6	NC	Q	2.7	Q	2.4	2.4	1.4	Q	Q	1.4	35.2
Rented	15.2	36.9	28.6	21.9	16.2	13.2	10.0	5.5	28.6	25.8	24.4	8.9
Mobile Home	5.8	6.1	8.0	7.8	8.3	7.7	4.0	1.4	7.9	8.8	7.3	14.7
Owned	4.6	Q	5.7	5.7	6.6	6.7	3.9	1.1	4.4	5.9	5.0	17.3
Rented	1.2	3.9	2.4	2.2	1.7	1.1	Q	Q	3.5	2.9	2.4	20.7
Year of Construction												
1939 or Before	21.1	26.7	27.2	25.9	25.0	20.3	17.6	14.3	26.7	26.3	27.2	7.2
1940 to 1949	7.1	13.0	8.1	9.0	7.6	5.8	7.1	5.1	9.0	9.6	9.0	12.7
1950 to 1959	13.5	10.5	11.7	14.8	12.8	15.3	13.0	14.2	12.9	12.9	12.9	9.8
1960 to 1969	15.5	11.7	16.8	15.1	17.0	14.9	16.1	14.5	14.2	14.0	14.9	9.1
1970 to 1979	18.8	19.9	18.8	18.1	17.7	20.9	17.9	19.3	18.9	18.8	18.3	7.7
1980 to 1984	8.8	9.7	8.3	7.6	7.7	7.9	8.8	10.9	9.1	8.7	8.2	11.1
1985 to 1987	5.7	3.7	4.6	3.2	5.8	4.9	6.8	7.4	4.0	4.4	4.1	15.2
1988 to 1990	4.9	Q	2.2	3.5	3.9	5.2	5.6	7.5	3.0	2.8	3.0	15.1
1991 to 1993[2]	4.6	2.7	2.2	2.8	2.6	4.8	7.0	6.8	2.3	2.3	2.4	20.9
Total Number of Rooms (Excluding Bathrooms)												
1 or 2	3.3	6.3	7.8	4.6	3.5	2.6	2.4	.9	5.4	5.1	5.1	21.5
3 to 5	49.0	73.0	70.9	66.4	58.3	50.1	37.8	24.7	67.4	66.5	64.8	3.5
6 to 8	41.6	18.1	20.3	27.0	35.5	41.9	52.6	60.7	25.0	26.2	27.9	5.6
9 or More	6.0	Q	Q	2.1	2.8	5.5	7.1	13.7	2.2	2.2	2.2	18.2
Bedrooms												
None or 1	13.4	26.5	28.1	21.0	15.3	10.7	8.2	3.8	22.8	20.8	20.4	9.0
2	31.1	43.9	42.0	40.9	37.5	32.9	24.4	16.5	39.6	40.1	39.6	4.9
3	39.8	21.7	24.5	29.4	37.1	42.5	50.5	48.2	29.0	29.8	30.5	5.1
4 or More	15.7	8.0	5.5	8.6	10.1	13.9	16.9	31.5	8.5	9.4	9.5	10.1
Other Rooms (Excluding Bathrooms)												
None or 1	4.6	9.8	8.5	6.7	5.0	3.5	3.1	2.0	7.4	7.0	6.8	16.4
2	36.8	57.4	55.2	47.4	43.1	37.4	28.4	19.0	54.0	53.0	50.1	4.6
3	32.8	23.0	26.9	34.7	35.0	34.2	36.2	31.0	28.3	28.3	30.8	5.3
4	16.8	7.0	7.4	7.7	11.6	17.7	21.3	28.6	7.4	8.5	8.9	10.1
5 or More	9.0	Q	2.0	3.5	5.3	7.1	11.0	19.3	2.9	3.3	3.4	14.4
Full Bathrooms												
None or 1	63.8	88.6	89.4	83.7	75.4	63.5	51.0	36.0	86.7	86.2	84.3	2.0
2	32.0	11.4	10.0	15.6	23.6	33.3	44.3	52.1	12.8	13.3	15.1	6.6
3 or More	4.2	NC	Q	Q	1.0	3.2	4.7	11.9	Q	Q	.6	19.7

See footnotes at end of table.

Table 3.6a. Household Characteristics by Family Income, Million U.S. Households, 1993 (Continued)

Housing Unit and Household Characteristics	Total	1993 Family Income							Below Poverty Line		Eligible for Federal Assistance[1]	RSE Row Factors
		Less than $5,000	$5,000 to $9,999	$10,000 to $14,999	$15,000 to $24,999	$25,000 to $34,999	$35,000 to $49,999	$50,000 or More	100 Percent	125 Percent		
RSE Column Factors:	0.5	1.9	1.3	1.1	1.0	1.1	1.0	0.9	1.1	1.0	0.8	
Half Bathrooms												
None	71.5	3.3	9.3	9.2	14.8	10.7	12.1	12.1	12.2	16.4	25.7	0.7
1	23.9	.7	1.2	1.9	3.5	3.2	5.1	8.4	2.1	2.9	4.7	3.1
2 or More	1.2	Q	Q	Q	Q	.2	.3	.5	Q	Q	.2	23.2
Number of Stories												
Single-Family Homes	66.8	1.8	5.3	6.3	11.8	9.9	13.3	18.4	7.2	10.1	16.9	0.9
1 Story	40.6	1.1	4.1	4.5	8.3	6.3	7.3	8.5	5.2	7.3	11.8	1.0
2 Stories	22.4	.6	1.1	1.5	3.2	3.2	4.7	8.1	1.8	2.5	4.5	1.5
3 Stories	1.6	Q	Q	Q	.2	Q	.3	.8	.1	.2	.4	31.1
Split-Level	2.2	NC	Q	Q	Q	.3	.5	1.0	Q	Q	.2	23.1
Other	Q	NC	NC	NC	NC	NC	NC	Q	NC	NC	NC	100.0
Mobile Homes	5.6	.2	.9	.9	1.5	1.1	.7	.3	1.1	1.7	2.2	11.7
Multi-Story Apartment Building	24.2	2.0	4.4	4.0	5.1	3.0	3.5	2.2	6.1	7.5	11.5	1.1
Outside Wall Material												
Brick	26.6	1.4	3.8	2.9	4.4	3.8	4.8	5.5	4.7	6.0	8.7	3.0
Wood	27.6	1.2	2.9	3.1	5.3	3.9	5.2	6.0	4.4	5.8	8.9	3.0
Siding	22.9	.7	1.8	2.6	4.8	3.8	4.2	5.1	2.4	3.8	6.4	4.0
Stucco	10.3	.3	1.0	1.3	1.8	1.4	1.8	2.6	1.5	1.9	3.3	13.2
Composition	4.1	.1	.6	.6	.8	.5	.6	.7	.7	1.0	1.7	15.2
Concrete/Block	4.3	.3	.3	.5	.9	.6	.7	.9	.7	.9	1.4	17.1
Other	.8	Q	Q	Q	.3	Q	Q	.2	Q	Q	.2	38.1
Foundation/Basement (More than one may apply)												
Basement	33.8	.7	2.3	3.3	6.0	4.9	7.1	9.6	2.7	4.3	8.2	1.1
Crawlspace	24.8	.9	2.6	2.8	5.0	3.3	4.2	5.9	3.7	5.0	7.7	1.2
Enclosed	19.4	.7	1.9	2.1	3.9	2.7	3.4	4.8	2.6	3.7	5.8	1.3
Open to Outside	5.6	.3	.8	.7	1.2	.7	.8	1.1	1.1	1.4	2.0	11.1
Concrete Slab	23.4	.7	2.0	2.1	4.0	3.6	4.6	6.4	3.1	4.0	6.1	1.7
Other	.3	Q	Q	Q	Q	NC	Q	Q	Q	Q	Q	31.1
Not Asked (Mobile Homes and Buildings with 5 or More Units)	21.3	1.7	4.0	3.6	4.6	3.3	2.9	1.7	5.3	6.8	10.1	1.1
Garage/Carport												
Yes	46.7	.7	2.7	3.6	7.6	7.1	10.2	14.9	3.3	5.0	9.1	0.9
1-Car Garage	14.4	.3	1.3	1.6	3.0	2.4	3.2	2.7	1.4	2.0	4.0	3.0
2-Car Garage	24.7	.2	.7	1.3	3.0	3.6	5.6	10.3	1.1	1.7	3.1	1.9
3-Car Garage	2.1	Q	Q	Q	.3	.2	.5	1.0	Q	.1	.3	21.0
Covered Carport	6.3	Q	.7	.7	1.4	1.0	1.1	1.2	.8	1.1	1.8	11.1
No	26.9	1.3	3.6	3.7	5.9	4.1	4.0	4.1	5.1	7.1	10.5	0.9
Not Asked (Apartments)	24.2	2.0	4.4	4.0	5.1	3.0	3.5	2.2	6.1	7.5	11.5	1.1
Fuels Used For Any Use												
Electricity	96.5	4.0	10.6	11.1	18.4	14.1	17.4	21.0	14.4	19.4	30.6	0.4
Natural Gas	58.4	2.4	6.3	7.0	10.8	7.7	10.4	13.7	8.8	11.6	18.5	0.6
Fuel Oil	10.9	.4	1.0	1.0	1.9	1.7	2.4	2.5	1.3	1.9	3.1	1.3
LPG[3]	8.5	.5	1.1	1.0	1.9	1.6	1.2	1.3	1.7	2.4	3.3	1.0
Kerosene	3.7	.2	.5	.4	.8	.5	.3	.7	.8	1.1	1.5	1.1
Wood	22.2	.3	.8	1.2	2.9	2.9	5.0	9.0	1.3	2.0	3.4	0.8
Solar	1.2	NC	Q	Q	.2	.2	.2	.5	Q	Q	Q	31.0
Coal	.5	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	100.0
Natural Gas Available in Neighborhood												
Yes	69.0	2.8	7.7	8.2	13.1	9.6	12.3	15.3	10.3	13.8	22.0	0.8
No	27.6	1.3	2.9	2.9	5.2	4.4	5.2	5.7	4.0	5.6	8.3	1.7

See footnotes at end of table.

Table 3.6b. Household Characteristics by Family Income, Percent of U.S. Households, 1993 (Continued)

Housing Unit and Household Characteristics	Total	1993 Family Income							Below Poverty Line		Eligible for Federal Assistance[1]	RSE Row Factors
		Less than $5,000	$5,000 to $9,999	$10,000 to $14,999	$15,000 to $24,999	$25,000 to $34,999	$35,000 to $49,999	$50,000 or More	100 Percent	125 Percent		
RSE Column Factors:	0.5	1.9	1.3	1.1	1.0	1.1	0.9	0.9	1.1	1.0	0.8	
Half Bathrooms												
None	74.0	82.1	88.0	82.4	80.5	76.0	69.5	57.5	84.8	84.5	83.9	2.1
1	24.6	16.9	11.7	17.2	18.8	22.8	29.0	40.0	14.7	14.9	15.5	8.3
2 or More	1.2	Q	Q	Q	Q	1.2	1.5	2.5	Q	Q	.7	26.6
Number of Stories												
Single-Family Homes	69.1	43.4	50.4	56.3	64.1	70.8	76.0	87.9	49.7	52.4	55.2	3.1
1 Story	42.0	28.2	38.6	40.3	45.0	44.8	44.5	40.7	36.0	37.9	38.5	4.8
2 Stories	23.2	14.3	10.5	13.6	17.4	22.9	26.9	38.7	12.5	12.8	14.7	8.3
3 Stories	1.7	Q	Q	Q	.9	Q	1.8	3.6	1.0	1.1	1.2	31.0
Split-Level	2.2	NC	Q	Q	Q	2.4	2.9	4.7	Q	Q	.7	22.4
Other	Q	NC	NC	NC	NC	NC	NC	Q	NC	NC	NC	100.0
Mobile Homes	5.8	6.1	8.0	7.8	8.3	7.7	4.0	1.4	7.9	8.8	7.3	14.7
Multi-Story Apartment Building	25.1	50.5	41.5	35.9	27.6	21.5	20.0	10.7	42.4	38.9	37.5	6.5
Outside Wall Material												
Brick	27.5	33.6	36.1	26.0	24.2	26.9	27.3	26.2	32.7	31.1	28.5	6.1
Wood	28.6	30.8	27.1	28.1	29.0	27.5	30.0	28.4	30.3	29.8	29.0	6.5
Siding	23.7	16.2	17.2	23.1	26.0	27.0	24.2	24.3	16.7	19.4	20.9	7.0
Stucco	10.7	7.2	9.9	11.8	9.8	10.1	10.6	12.3	10.2	9.7	10.8	12.1
Composition	4.2	3.6	6.0	5.8	4.3	3.8	3.2	3.5	4.7	4.9	5.4	15.9
Concrete/Block	4.4	8.2	3.1	4.3	5.1	4.1	4.1	4.4	5.0	4.8	4.6	17.5
Other	.9	Q	Q	Q	1.5	Q	Q	.9	Q	Q	.8	36.2
Foundation/Basement (More than one may apply)												
Basement	35.0	16.8	22.0	29.4	32.7	34.7	40.7	45.6	19.1	22.1	26.7	6.5
Crawlspace	25.7	23.3	25.0	24.7	27.4	23.7	24.1	28.1	25.5	26.1	25.2	6.6
Enclosed	20.1	17.3	18.2	18.5	21.0	18.9	19.4	23.0	18.3	19.2	18.7	8.0
Open to Outside	5.8	6.3	7.1	6.3	6.5	4.9	4.8	5.4	7.5	7.2	6.6	14.2
Concrete Slab	24.2	18.3	19.1	18.9	21.9	25.5	26.1	30.3	21.6	20.7	19.9	7.7
Other	.3	Q	Q	Q	Q	NC	Q	Q	Q	Q	Q	74.0
Not Asked (Mobile Homes and Buildings with 5 or More Units)	22.6	43.1	37.5	32.4	25.0	23.3	16.4	8.3	37.2	35.3	33.0	7.0
Garage/Carport												
Yes	48.3	17.1	25.1	32.1	41.3	50.5	58.4	70.8	23.2	25.6	29.6	5.1
1-Car Garage	14.9	7.3	12.0	14.2	16.3	16.8	18.1	13.1	9.6	10.5	13.1	9.1
2-Car Garage	25.6	5.8	6.2	11.6	16.6	25.5	32.2	49.0	7.8	8.9	10.0	9.4
3-Car Garage	2.2	Q	Q	Q	1.8	1.5	2.6	4.5	Q	.7	.8	23.6
Covered Carport	6.5	Q	7.1	6.0	7.6	7.4	6.6	5.6	5.5	5.9	6.0	14.0
No	27.8	33.2	34.5	33.3	32.3	29.5	23.1	19.5	35.3	36.8	34.2	5.9
Not Asked (Apartments)	25.1	50.5	41.5	35.9	27.6	21.5	20.0	10.7	42.4	38.9	37.5	6.5
Fuels Used For Any Use												
Electricity	99.9	99.7	99.7	100.0	100.0	100.0	99.9	100.0	99.9	99.9	99.8	NE
Natural Gas	60.4	59.7	59.9	63.2	58.5	55.1	59.8	65.1	61.0	60.1	60.4	4.1
Fuel Oil	11.3	10.3	9.0	9.1	10.2	12.3	13.6	12.1	9.0	9.6	9.9	11.3
LPG[3]	8.9	11.8	10.7	9.4	10.4	11.5	6.8	6.0	11.7	12.5	10.9	13.0
Kerosene	3.8	4.0	4.9	3.9	4.6	3.4	3.3	3.3	5.5	5.5	4.8	17.5
Wood	23.0	8.3	7.7	10.6	16.0	20.4	28.8	43.0	9.1	10.3	11.2	9.3
Solar	1.2	NC	Q	Q	1.2	1.3	1.2	2.4	Q	Q	Q	30.1
Coal	.6	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	94.0
Natural Gas Available In Neighborhood												
Yes	71.4	68.6	72.4	73.6	71.5	68.6	70.2	73.0	71.9	71.3	71.9	3.2
No	28.6	31.4	27.6	26.4	28.5	31.4	29.8	27.0	28.1	28.7	28.1	8.0

See footnotes at end of table.

Table 3.6a. Household Characteristics by Family Income, Million U.S. Households, 1993 (Continued)

Housing Unit and Household Characteristics	Total	1993 Family Income						Below Poverty Line		Eligible for Federal Assistance[1]	RSE Row Factors
		Less than $5,000	$5,000 to $9,999	$10,000 to $14,999	$15,000 to $24,999	$25,000 to $34,999	$35,000 to $49,999	$50,000 or More	100 Percent	125 Percent		
RSE Column Factors:	0.5	1.9	1.3	1.1	1.0	1.1	1.0	0.9	1.1	1.0	0.8	
Below Poverty Line												
100 Percent	14.4	4.1	7.4	2.4	0.4	Q	NC	NC	14.4	14.4	14.4	1.8
125 Percent	19.4	4.1	9.3	4.3	1.7	Q	NC	NC	14.4	19.4	19.4	1.7
Eligible for Federal Assistance[1]	30.7	4.1	10.6	9.5	5.6	0.9	Q	NC	14.4	19.4	30.7	1.8
Payment Method for Fuel and Electricity												
All Paid by Household	83.1	2.9	7.7	8.9	15.7	12.5	15.7	19.8	10.6	14.7	23.8	1.6
Some Paid, Some in Rent	8.3	.6	1.6	1.4	1.7	.9	1.2	.8	2.2	2.7	4.0	13.6
All Included in Rent	4.1	.5	1.1	.7	.8	.4	.3	.2	1.4	1.7	2.5	17.0
Other Method	1.1	Q	Q	Q	.2	Q	.3	.2	.1	.2	.4	38.2
Age of Householder												
Under 25 Years	5.7	.9	1.0	1.0	1.5	.6	.5	.4	1.7	2.0	3.0	11.1
25 to 34 Years	19.9	1.0	1.6	2.0	3.9	3.0	4.5	3.8	3.5	4.3	6.3	5.3
35 to 44 Years	21.4	.5	1.1	1.6	3.3	3.7	4.7	6.5	2.2	3.3	5.0	7.6
45 to 59 Years	21.9	.5	1.3	1.6	3.6	3.4	4.5	6.9	2.3	2.9	4.5	8.0
60 Years and Over	27.8	1.2	5.6	4.9	6.1	3.4	3.2	3.4	4.8	6.9	11.9	3.2
Race of Householder												
White	80.2	2.6	7.3	8.5	15.5	12.2	15.5	18.5	9.0	12.9	22.0	1.6
Black	10.9	1.1	2.5	1.7	1.9	1.2	1.1	1.4	3.8	4.6	6.1	13.2
Other[4]	5.5	.3	.8	1.0	.9	.6	.8	1.1	1.5	1.8	2.6	11.6
Householder of Hispanic Descent												
Yes	7.9	.4	1.0	1.4	1.5	.9	1.2	1.4	2.0	2.5	3.5	11.7
No	88.7	3.6	9.6	9.7	16.8	13.1	16.3	19.6	12.4	16.8	27.1	1.6
Household Size												
1 Person	23.5	1.7	5.7	4.0	5.0	3.1	2.5	1.5	4.7	6.3	10.2	3.6
2 Persons	31.7	1.0	2.4	3.4	7.0	4.9	6.0	7.1	2.9	4.0	7.3	5.7
3 Persons	16.6	.5	1.2	1.5	2.9	2.4	3.3	4.7	2.1	2.9	4.8	7.8
4 Persons	14.6	.6	.8	.9	2.0	2.1	3.5	4.7	2.2	2.7	4.1	8.8
5 Persons	6.8	.2	.3	.7	1.0	1.1	1.5	1.9	1.4	2.0	2.5	14.3
6 or More Persons	3.5	Q	.2	.5	.5	.5	.7	1.0	1.1	1.5	1.8	16.8
Household Owns or Has Regular Use of a Motor Vehicle												
No	11.9	1.9	4.7	2.2	1.3	.6	.3	.6	5.7	6.9	9.0	11.7
Yes	84.7	2.1	5.9	8.9	17.1	13.5	16.9	20.4	8.7	12.5	21.7	1.7
1 Vehicle	34.2	1.5	4.7	6.1	8.7	5.4	4.5	3.3	6.0	8.2	13.6	3.3
2 Vehicles	36.4	.4	1.0	2.4	6.9	6.1	8.7	11.0	2.0	3.4	6.4	5.5
3 Vehicles	10.8	Q	.2	.4	1.2	.6	3.0	4.3	.4	.7	1.3	11.3
4 or More Vehicles	3.2	Q	Q	Q	.2	.4	.7	1.7	.1	.2	.3	21.2

[1] Below 150 percent of poverty line or 60 percent of median State income.
[2] Does not include all new construction for 1993.
[3] Excludes 22.1 million households that use LPG only for outdoor grills.
[4] Includes 1.7 million householders who described themselves as Hispanic rather than White, Black, or other.
NC = No cases in sample.
Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.
Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.
Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.6b. Household Characteristics by Family Income, Percent of U.S. Households, 1993 (Continued)

Housing Unit and Household Characteristics	Total	1993 Family Income							Below Poverty Line		Eligible for Federal Assistance[1]	RSE Row Factors
		Less than $5,000	$5,000 to $9,999	$10,000 to $14,999	$15,000 to $24,999	$25,000 to $34,999	$35,000 to $49,999	$50,000 or More	100 Percent	125 Percent		
RSE Column Factors:	0.5	1.9	1.3	1.1	1.0	1.1	0.9	0.9	1.1	1.0	0.8	
Below Poverty Line												
100 Percent	14.9	100.0	70.3	21.7	2.4	Q	NC	NC	100.0	74.3	46.9	5.3
125 Percent	20.0	100.0	87.5	38.4	9.0	Q	NC	NC	100.0	100.0	63.2	4.4
Eligible for Federal Assistance[1]	31.7	100.0	100.0	85.8	30.2	6.3	Q	NC	100.0	100.0	100.0	4.8
Payment Method for Fuel and Electricity												
All Paid by Household	86.0	71.7	72.8	80.3	85.2	88.9	89.8	94.2	74.0	76.0	77.5	1.9
Some Paid, Some in Rent	8.6	14.9	15.1	12.9	9.2	6.7	6.9	4.0	15.1	14.2	13.2	11.9
All Included in Rent	4.2	12.5	10.8	6.1	4.3	3.2	1.7	1.1	10.1	8.9	8.1	16.8
Other Method	1.2	Q	Q	Q	1.3	Q	1.6	.8	.9	.9	1.2	31.8
Age of Householder												
Under 25 Years	5.9	21.3	9.0	8.6	8.0	4.5	2.7	1.8	11.7	10.1	9.9	13.7
25 to 34 Years	20.6	23.7	15.5	18.0	21.2	21.6	26.1	18.2	24.1	22.4	20.5	6.5
35 to 44 Years	22.1	12.5	10.0	14.7	18.1	26.0	26.8	31.1	15.5	16.9	16.3	7.0
45 to 59 Years	22.6	13.0	12.7	14.6	19.5	23.9	25.9	32.9	15.7	14.9	14.5	7.2
60 Years and Over	28.7	29.6	52.7	44.1	33.2	24.1	18.6	16.0	33.1	35.7	38.8	5.4
Race of Householder												
White	83.0	65.0	68.9	76.4	84.5	87.2	88.8	88.0	62.8	66.8	71.7	2.1
Black	11.3	27.4	23.3	15.0	10.4	8.3	6.5	6.9	26.6	23.9	19.7	9.6
Other[4]	5.7	7.6	7.8	8.6	5.0	4.5	4.7	5.1	10.5	9.3	8.6	13.2
Householder of Hispanic Descent												
Yes	8.2	10.0	9.7	12.9	8.3	6.7	6.9	6.5	14.0	13.1	11.5	11.8
No	91.8	90.0	90.3	87.1	91.7	93.3	93.1	93.5	86.0	86.9	88.5	1.3
Household Size												
1 Person	24.3	41.0	53.7	36.4	27.1	22.3	14.2	7.4	32.6	32.6	33.2	5.4
2 Persons	32.8	23.8	22.2	30.6	36.1	34.6	34.5	33.8	20.0	20.9	23.9	5.4
3 Persons	17.2	12.9	11.4	13.6	15.8	17.1	18.7	22.6	14.4	14.8	15.5	7.3
4 Persons	15.1	14.6	7.7	8.3	10.7	14.7	19.9	22.6	15.4	13.9	13.4	8.2
5 Persons	7.0	4.5	3.3	6.2	5.5	7.9	8.8	9.0	9.7	10.2	8.2	11.3
6 or More Persons	3.6	Q	1.7	4.8	2.9	3.3	3.9	4.6	7.9	7.6	5.8	15.2
Household Owns or Has Regular Use of a Motor Vehicle												
No	12.3	47.1	44.1	20.0	7.2	4.3	3.4	2.8	39.8	35.4	29.2	9.1
Yes	87.7	52.9	55.9	80.0	92.8	95.7	96.6	97.2	60.2	64.6	70.8	2.5
1 Vehicle	35.4	38.2	44.4	54.5	47.5	38.1	25.9	15.9	42.0	42.2	44.4	4.1
2 Vehicles	37.7	10.9	9.6	21.2	37.4	43.3	49.6	52.4	14.2	17.3	20.9	5.7
3 Vehicles	11.2	Q	1.6	4.0	6.6	11.2	17.1	20.7	3.0	3.8	4.3	13.0
4 or More Vehicles	3.3	Q	Q	Q	1.3	3.1	4.0	8.1	1.0	1.2	1.1	20.8

[1] Below 150 percent of poverty line or 60 percent of median State income.
[2] Does not include all new construction for 1993.
[3] Excludes 22.1 million households that use LPG only for outdoor grills.
[4] Includes 1.7 million householders who described themselves as Hispanic rather than White, Black, or other.
NC = No cases in sample.
Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.
NE = RSE row factor not estimated because RSE's for all statistics in this row are between 0.0 and 1.0 percent.
Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • Percentages are calculated on unrounded numbers. • See "Glossary" for definition of terms used in this report.
Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.7a. Space Heating by Census Region and Climate Zone, Million U.S. Households, 1993 (Continued)

Space Heating Characteristics	Total	Census Region				Climate Zone					RSE Row Factors
		Northeast	Midwest	South	West	Fewer than 2,000 CDD and – More than 7,000 HDD	Fewer than 2,000 CDD and – 5,500 to 7,000 HDD	Fewer than 2,000 CDD and – 4,000 to 5,499 HDD	Fewer than 2,000 CDD and – Fewer than 4,000 HDD	More than 2,000 CDD and Fewer than 4,000 HDD	
RSE Column Factors:	0.5	0.9	1.1	0.8	0.8	1.6	1.3	1.2	1.2	1.1	
Secondary Heating Fuel and Equipment (more than one may apply)											
No	60.8	13.6	15.9	19.5	11.6	5.2	18.6	13.8	10.3	12.9	5.7
Yes	35.9	5.7	7.4	14.0	8.7	3.5	7.9	8.7	7.5	8.3	7.7
Natural Gas	4.1	.3	.7	1.8	1.2	.3	.6	.5	1.3	1.2	19.8
Fireplace	1.8	Q	.4	.6	.7	.2	.3	.1	.5	.6	22.1
Room Heater	1.0	Q	Q	.6	Q	Q	Q	Q	.2	.5	25.2
Central Warm-Air Furnace	.6	Q	.1	.2	.2	Q	Q	.2	.2	Q	31.6
Other Equipment	.9	Q	Q	.4	.3	Q	.4	Q	.4	.1	33.3
Electricity	14.6	2.3	3.3	6.0	3.0	1.4	3.3	3.4	3.0	3.5	10.4
Portable Heater	9.8	1.5	2.4	3.9	2.0	.8	2.2	2.3	2.2	2.3	11.9
Built-in Electric Units	4.0	.8	.7	1.7	.8	.5	1.0	.9	.7	1.0	18.0
Other Equipment	.8	Q	Q	.3	.3	Q	Q	Q	.2	.2	19.3
Fuel Oil	.4	.2	Q	Q	Q	.1	Q	Q	Q	NC	21.6
Wood	19.0	3.1	3.8	6.7	5.4	1.7	4.4	4.9	3.6	4.3	9.9
Fireplace	15.9	2.2	3.3	5.9	4.5	1.0	3.6	4.0	3.2	4.1	10.7
Heating Stove	3.4	1.0	.7	.9	.9	.7	1.0	1.0	.4	.3	15.8
Other Equipment	.2	Q	Q	Q	Q	Q	Q	Q	NC	NC	60.8
LPG	1.2	Q	.2	.8	.2	.2	.1	.2	.5	.4	29.7
Kerosene	2.6	.4	.9	1.3	Q	.2	.7	.9	.5	.3	22.7
Other	.4	Q	Q	Q	.1	Q	Q	Q	Q	Q	47.5

NC = No cases in sample.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.7b. Space Heating by Census Region and Climate Zone, Percent of U.S. Households, 1993 (Continued)

Space Heating Characteristics	Total	Census Region				Climate Zone					RSE Row Factors
		Northeast	Midwest	South	West	Fewer than 2,000 CDD and -- More than 7,000 HDD	Fewer than 2,000 CDD and -- 5,500 to 7,000 HDD	Fewer than 2,000 CDD and -- 4,000 to 5,499 HDD	Fewer than 2,000 CDD and -- Fewer than 4,000 HDD	More than 2,000 CDD and Fewer than 4,000 HDD	
RSE Column Factors:	0.5	1.0	1.2	0.9	0.8	1.4	1.2	1.1	1.0	1.1	
Secondary Heating Fuel and Equipment (more than one may apply)											
No	62.9	70.8	68.2	58.1	57.1	59.7	70.2	61.4	57.8	61.0	3.5
Yes	37.1	29.2	31.8	41.9	42.9	40.3	29.8	38.6	42.2	39.0	5.9
Natural Gas	4.2	1.7	3.1	5.3	6.1	4.0	2.4	2.3	7.4	5.9	18.9
Fireplace	1.9	Q	1.5	1.9	3.6	2.5	1.3	.6	2.9	2.8	22.1
Room Heater	1.0	Q	Q	1.9	Q	Q	Q	Q	1.0	2.4	23.8
Central Warm-Air Furnace	.6	Q	.6	.7	1.0	Q	Q	.9	1.3	Q	30.4
Other Equipment	.9	Q	Q	1.1	1.5	Q	.5	Q	2.5	.6	32.5
Electricity	15.1	11.8	14.0	17.9	15.0	16.6	12.4	15.0	17.1	16.3	8.8
Portable Heater	10.1	7.7	10.2	11.7	9.8	9.2	8.3	10.4	12.2	10.9	10.5
Built-in Electric Units	4.1	4.3	2.9	5.0	4.0	5.9	3.7	3.9	3.7	4.5	17.0
Other Equipment	.8	Q	Q	1.0	1.6	Q	Q	Q	1.1	1.2	18.4
Fuel Oil	.4	1.2	Q	Q	Q	1.5	Q	Q	Q	NC	23.0
Wood	19.7	16.0	16.4	20.0	26.3	20.0	16.7	22.0	20.2	20.2	8.9
Fireplace	16.5	11.2	14.1	17.6	22.3	11.7	13.5	17.9	18.0	19.3	9.7
Heating Stove	3.6	5.2	2.8	2.7	4.2	8.3	3.8	4.6	2.2	1.3	15.4
Other Equipment	.2	Q	Q	Q	Q	Q	Q	Q	NC	NC	56.7
LPG	1.3	Q	.8	2.4	1.0	1.8	.3	.7	2.6	1.8	28.9
Kerosene	2.7	2.0	3.8	3.8	Q	2.2	2.6	3.9	3.0	1.4	21.6
Other	.4	Q	Q	Q	.7	Q	Q	Q	Q	Q	43.4

NC = No cases in sample.
Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.
Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • Percentages are calculated on unrounded numbers. • See "Glossary" for definition of terms used in this report.
Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.8a. Space Heating by Year of Construction, Million U.S. Households, 1993

Space Heating Characteristics	Total	Year of Construction									RSE Row Factors
		1991 to 1993[1]	1988 to 1990	1985 to 1987	1980 to 1984	1970 to 1979	1960 to 1969	1950 to 1959	1940 to 1949	1939 or Before	
RSE Column Factors:	0.4	1.5	1.3	1.5	1.1	0.9	0.9	1.0	1.2	0.8	
Total	96.6	4.5	4.7	5.5	8.5	18.1	15.0	13.1	6.9	20.4	5.2
Main Heating Fuel and Equipment											
Natural Gas	50.8	2.1	1.8	2.2	3.4	7.6	6.9	8.1	4.3	12.4	7.5
Central Warm-Air Furnace	34.9	2.0	1.6	2.0	3.0	5.9	6.2	5.5	2.4	6.4	9.1
For One Housing Unit	34.1	2.0	1.6	1.9	2.9	5.8	6.0	5.4	2.3	6.0	9.3
For Two or More Units	.9	Q	NC	Q	Q	Q	Q	Q	Q	.4	39.5
Steam or Hot-Water System	8.7	Q	.1	Q	.3	1.0	1.8	.9	.7	3.6	21.9
For One Housing Unit	5.1	Q	.1	Q	.2	.3	.9	.8	.4	2.2	25.1
For Two or More Units	3.6	NC	Q	NC	Q	.7	.9	Q	.3	1.4	25.1
Floor, Wall, or Pipeless Furnace	4.3	NC	Q	Q	.1	.5	.6	1.3	.7	1.0	30.5
Room Heater/Other	2.8	Q	Q	Q	Q	.2	.3	.4	.5	1.4	33.9
Electricity	25.3	1.9	2.2	2.8	4.0	7.0	3.5	1.9	.7	1.4	10.5
Built-In Electric Units	7.0	Q	.3	.3	.8	2.3	1.4	.6	.4	.7	19.6
Central Warm-Air Furnace	9.5	.8	.9	1.1	1.7	2.8	1.2	.7	Q	.2	16.4
For One Housing Unit	9.3	.8	.9	1.1	1.7	2.7	1.1	.6	Q	.2	16.3
Heat Pump	7.5	.8	1.0	1.3	1.3	1.7	.7	.5	Q	.2	19.2
Other	1.3	Q	Q	Q	.1	.3	.3	Q	Q	.2	30.0
Fuel Oil	10.2	.1	.2	.2	.3	1.2	1.2	1.8	1.2	4.1	16.7
Steam or Hot-Water System	5.3	.1	.1	.1	.1	.6	.5	1.0	.6	2.2	21.0
For One Housing Unit	3.5	.1	.1	.1	.1	.5	.4	.7	.3	1.3	23.6
For Two or More Units	1.8	Q	Q	NC	Q	Q	Q	.3	.4	.9	31.6
Central Warm-Air Furnace	4.5	Q	.1	.1	.2	.5	.6	.7	.5	1.7	23.1
Other	.4	NC	NC	NC	NC	Q	Q	Q	Q	.2	42.2
Wood	3.1	Q	.2	.1	.3	.8	.4	.4	.2	.7	20.7
Heating Stove	2.4	Q	.2	.1	.2	.5	.4	.3	.1	.6	23.9
Other	.7	Q	Q	Q	.1	.2	Q	Q	Q	Q	35.0
LPG	4.8	.3	.2	.2	.3	1.0	.6	.5	.4	1.2	20.4
Central Warm-Air Furnace	3.1	.3	.2	.2	.3	.7	.5	.2	Q	.6	23.4
Room Heater	1.1	Q	Q	NC	NC	.2	Q	.3	.2	.4	33.7
Other	.5	Q	Q	Q	Q	Q	Q	Q	Q	.2	46.4
Kerosene	1.0	Q	Q	.1	Q	.3	Q	Q	Q	.2	34.7
Other	.4	NC	NC	NC	Q	Q	NC	Q	Q	.2	74.3
None	.9	NC	Q	NC	Q	.2	.2	.2	Q	Q	40.6
Amount of Heat Provided by Main Heating Equipment											
All or Almost All	87.3	4.2	4.3	5.1	7.9	16.4	13.5	11.7	6.1	18.2	5.6
About Three-Fourths	5.4	.2	.3	.2	.3	1.0	.9	.9	.4	1.1	17.0
Closer to One-Half	3.1	.1	.1	.1	.2	.5	.4	.3	.4	.9	22.3
No Main Equipment	.9	NC	Q	NC	Q	.2	.2	.2	Q	Q	40.6
Age of Main Heating Equipment											
Less than 2 Years	9.0	2.7	Q	.1	.4	1.1	1.2	1.4	.5	1.5	14.8
2 to 4 Years	10.6	1.5	2.1	.2	.4	1.5	1.2	1.4	.9	1.6	14.4
5 to 9 Years	17.7	Q	2.2	4.4	1.3	1.5	1.9	1.8	1.3	3.2	9.6
10 to 19 Years	21.6	Q	Q	.2	5.0	6.9	1.8	2.6	1.2	3.9	8.2
20 Years or More	21.5	Q	Q	NC	Q	5.8	5.9	3.7	1.9	6.1	8.3
Don't Know	15.3	.3	.3	.6	1.2	3.1	2.8	2.0	1.0	4.0	12.3
No Main Equipment	.9	NC	Q	NC	Q	.2	.2	.2	Q	Q	40.6

See footnotes at end of table.

Table 3.8b. Space Heating by Year of Construction, Percent of U.S. Households, 1993

Space Heating Characteristics	Total	Year of Construction									RSE Row Factors
		1991 to 1993[1]	1988 to 1990	1985 to 1987	1980 to 1984	1970 to 1979	1960 to 1969	1950 to 1959	1940 to 1949	1939 or Before	
RSE Column Factors:	0.4	1.4	1.3	1.4	1.1	0.9	0.9	1.0	1.2	0.8	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0
Main Heating Fuel and Equipment											
Natural Gas	52.6	46.4	38.0	39.2	40.4	42.1	59.3	62.1	62.2	61.0	5.9
Central Warm-Air Furnace	36.2	44.6	34.8	36.2	35.2	32.4	41.0	42.0	34.3	31.6	7.4
For One Housing Unit	35.3	44.2	34.8	35.3	34.4	31.8	40.1	41.6	33.8	29.7	7.6
For Two or More Units	.9	Q	NC	Q	Q	Q	Q	Q	Q	1.9	37.5
Steam or Hot-Water System	9.0	Q	2.6	Q	3.3	5.6	12.3	7.1	10.8	17.8	19.6
For One Housing Unit	5.3	Q	1.7	Q	2.3	1.6	6.0	6.4	6.0	11.0	23.7
For Two or More Units	3.8	NC	Q	NC	Q	4.1	6.3	Q	4.9	6.8	24.0
Floor, Wall, or Pipeless Furnace	4.4	NC	Q	Q	1.6	2.8	4.1	9.9	9.9	4.9	20.4
Room Heater/Other	2.9	Q	Q	Q	Q	1.3	1.8	3.0	7.1	6.7	23.6
Electricity	26.2	42.6	46.1	50.3	46.9	38.7	23.1	14.9	10.4	6.7	8.8
Built-In Electric Units	7.2	Q	6.1	6.2	9.3	12.8	9.1	4.8	5.5	3.4	19.1
Central Warm-Air Furnace	9.8	18.5	18.8	20.1	20.1	15.2	7.7	5.5	Q	1.0	15.4
For One Housing Unit	9.6	18.5	18.8	20.1	20.1	15.0	7.6	4.7	Q	1.0	15.3
Heat Pump	7.8	18.9	20.3	23.4	15.7	9.1	4.4	3.5	Q	1.2	17.8
Other	1.4	Q	Q	Q	1.7	1.6	1.8	Q	Q	1.1	29.0
Fuel Oil	10.6	2.9	4.5	3.0	3.2	6.6	8.0	13.6	17.1	20.1	16.2
Steam or Hot-Water System	5.5	2.2	2.1	1.3	1.3	3.5	3.5	7.4	9.2	10.8	20.7
For One Housing Unit	3.6	1.7	1.8	1.3	1.0	2.8	2.7	5.4	3.8	6.5	23.8
For Two or More Units	1.9	Q	Q	NC	Q	Q	Q	2.0	5.4	4.4	21.0
Central Warm-Air Furnace	4.7	Q	2.4	1.7	1.9	2.9	4.1	5.7	7.4	8.4	22.3
Other	.4	NC	NC	NC	NC	Q	Q	Q	Q	.9	40.6
Wood	3.2	Q	4.2	1.8	3.9	4.2	2.8	3.1	3.1	3.3	21.0
Heating Stove	2.5	Q	3.6	1.5	2.8	2.9	2.4	2.3	2.0	2.8	23.4
Other	.8	Q	Q	Q	1.1	1.3	Q	Q	Q	Q	34.4
LPG	5.0	7.6	5.2	4.4	3.7	5.3	4.3	4.0	5.2	5.9	20.5
Central Warm-Air Furnace	3.2	7.1	4.7	3.8	3.7	3.7	3.1	1.4	Q	3.1	23.1
Room Heater	1.2	Q	Q	NC	NC	1.0	Q	2.1	3.0	1.9	33.4
Other	.6	Q	Q	Q	Q	Q	Q	Q	Q	.9	45.2
Kerosene	1.0	Q	Q	1.3	Q	1.4	Q	Q	Q	1.2	34.0
Other	.4	NC	NC	NC	Q	Q	NC	Q	Q	1.1	70.5
None	.9	NC	Q	NC	Q	1.2	1.4	1.3	Q	Q	38.8
Amount of Heat Provided by Main Heating Equipment											
All or Almost All	90.3	93.9	90.3	93.3	92.8	90.3	89.7	89.9	87.7	89.3	1.3
About Three-Fourths	5.6	4.4	6.8	4.5	3.9	5.7	6.0	6.7	5.4	5.6	16.7
Closer to One-Half	3.2	1.8	2.4	2.2	2.7	2.9	2.9	2.1	5.7	4.5	22.0
No Main Equipment	.9	NC	Q	NC	Q	1.2	1.4	1.3	Q	Q	38.8
Age of Main Heating Equipment											
Less than 2 Years	9.3	60.1	Q	2.6	5.2	6.0	7.9	10.9	7.6	7.2	13.0
2 to 4 Years	11.0	33.2	43.6	2.8	4.3	8.4	8.3	10.5	12.5	7.7	12.9
5 to 9 Years	18.3	Q	45.9	80.4	15.9	8.4	12.7	14.1	18.4	15.9	7.8
10 to 19 Years	22.4	Q	Q	3.2	59.5	38.1	11.7	19.8	17.2	19.2	7.7
20 Years or More	22.2	Q	Q	NC	Q	21.0	39.0	28.3	28.2	29.8	6.2
Don't Know	15.8	6.2	7.0	11.0	14.0	16.9	18.9	15.2	14.9	19.6	11.9
No Main Equipment	.9	NC	Q	NC	Q	1.2	1.4	1.3	Q	Q	38.8

See footnotes at end of table.

Table 3.8a. Space Heating by Year of Construction, Million U.S. Households, 1993 (Continued)

Space Heating Characteristics	Total	Year of Construction: 1991 to 1993[1]	1988 to 1990	1985 to 1987	1980 to 1984	1970 to 1979	1960 to 1969	1950 to 1959	1940 to 1949	1939 or Before	RSE Row Factors
RSE Column Factors:	0.4	1.5	1.3	1.5	1.1	0.9	0.9	1.0	1.2	0.8	
Secondary Heating Fuel and Equipment (more than one may apply)											
No	60.8	2.7	2.6	3.1	5.0	11.3	9.7	8.3	4.6	13.5	6.1
Yes	35.9	1.8	2.2	2.3	3.4	6.8	5.3	4.7	2.4	6.9	7.3
Natural Gas	4.1	.4	.3	.3	.3	.5	.6	.6	.3	.9	20.1
Fireplace	1.8	.4	.1	.2	Q	.2	.2	.2	Q	.2	30.1
Room Heater	1.0	Q	Q	Q	Q	Q	Q	.2	Q	.3	27.1
Central Warm-Air Furnace	.6	Q	Q	Q	Q	Q	Q	Q	Q	Q	48.1
Other Equipment	.9	NC	Q	Q	Q	Q	Q	.1	Q	.4	38.1
Electricity	14.6	.4	.6	.8	1.3	2.4	2.2	2.1	1.0	3.8	10.1
Portable Heater	9.8	.3	.3	.5	.9	1.5	1.5	1.5	.7	2.7	13.1
Built-in Electric Units	4.0	.1	.2	.3	.4	.6	.6	.6	.2	1.0	20.1
Other Equipment	.8	Q	Q	Q	Q	.2	Q	Q	Q	Q	27.1
Fuel Oil	.4	NC	Q	NC	Q	Q	Q	Q	Q	.2	43.1
Wood	19.0	1.2	1.5	1.5	2.0	4.3	2.8	2.6	1.0	2.1	10.1
Fireplace	15.9	1.2	1.3	1.4	1.8	3.6	2.4	2.2	.7	1.3	11.1
Heating Stove	3.4	.1	.1	.1	.2	.9	.4	.5	.3	.7	20.1
Other Equipment	.2	NC	NC	Q	Q	Q	Q	Q	Q	Q	72.1
LPG	1.2	Q	.1	Q	.1	.3	Q	Q	Q	.3	31.1
Kerosene	2.6	Q	.1	.1	.1	.4	.5	.3	.2	.9	27.1
Other	.4	NC	Q	Q	Q	Q	Q	Q	Q	Q	60.1

[1] Does not include all new construction for 1993.

NC = No cases in sample.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.8b. Space Heating by Year of Construction, Percent of U.S. Households, 1993 (Continued)

Space Heating Characteristics	Total	Year of Construction									RSE Row Factors
		1991 to 1993[1]	1988 to 1990	1985 to 1987	1980 to 1984	1970 to 1979	1960 to 1969	1950 to 1959	1940 to 1949	1939 or Before	
RSE Column Factors:	0.4	1.4	1.3	1.4	1.1	0.9	0.9	1.0	1.2	0.8	
Secondary Heating Fuel and Equipment (more than one may apply)											
No	62.9	59.3	54.3	57.3	59.6	62.4	64.6	63.7	65.9	66.2	3.9
Yes	37.1	40.7	45.7	42.7	40.4	37.6	35.4	36.3	34.1	33.8	6.2
Natural Gas	4.2	8.7	6.0	5.9	3.2	2.5	3.9	4.4	4.8	4.2	20.7
Fireplace	1.9	8.1	3.1	4.0	Q	1.2	1.3	1.4	Q	.7	29.9
Room Heater	1.0	Q	Q	Q	Q	Q	Q	1.5	Q	1.5	26.6
Central Warm-Air Furnace	.6	Q	Q	Q	Q	Q	Q	Q	Q	Q	45.1
Other Equipment	.9	NC	Q	Q	Q	Q	Q	1.1	Q	1.8	37.5
Electricity	15.1	8.2	12.3	14.0	15.8	13.3	14.7	16.4	15.2	18.4	10.0
Portable Heater	10.1	5.8	6.8	9.3	10.3	8.2	9.9	11.1	9.9	13.4	12.8
Built-in Electric Units	4.1	1.4	4.0	4.7	5.2	3.5	3.8	4.9	3.2	4.8	20.2
Other Equipment	.8	Q	Q	Q	Q	1.3	Q	Q	Q	Q	26.1
Fuel Oil	.4	NC	Q	NC	Q	Q	Q	Q	Q	.7	41.5
Wood	19.7	27.8	30.8	27.3	23.9	23.8	18.5	20.0	14.6	10.1	9.4
Fireplace	16.5	26.2	28.0	25.0	21.1	20.0	16.1	16.6	10.8	6.5	10.5
Heating Stove	3.6	2.2	3.1	2.4	2.9	5.1	2.7	3.7	3.7	3.7	20.1
Other Equipment	.2	NC	NC	Q	Q	Q	Q	Q	Q	Q	67.5
LPG	1.3	Q	1.7	Q	1.2	1.7	Q	Q	Q	1.4	31.0
Kerosene	2.7	Q	2.0	1.9	1.5	2.0	3.3	2.5	2.8	4.3	27.2
Other	.4	NC	Q	Q	Q	Q	Q	Q	Q	Q	55.8

[1] Does not include all new construction for 1993.

NC = No cases in sample.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • Percentages are calculated on unrounded numbers. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.9a. Space Heating by Type and Ownership of Housing Unit, Million U.S. Households, 1993

Space Heating Characteristics	Type and Ownership of Housing Unit													
		Single-Family			Multifamily						Mobile Home			
					Two to Four Units			Five or More Units						
	Total	Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	RSE Row Factors
RSE Column Factors:	0.4	0.4	0.4	0.9	1.1	1.8	1.1	0.9	2.5	1.0	1.2	1.3	2.0	
Total	96.6	66.8	55.8	11.0	8.0	1.5	6.5	15.2	1.6	14.7	5.6	4.4	1.2	5.3
Main Heating Fuel and Equipment														
Natural Gas	50.8	37.3	31.1	6.3	4.7	.9	3.7	7.8	.6	6.4	1.8	1.5	.3	9.1
Central Warm-Air Furnace	34.9	28.8	24.6	4.1	1.7	.3	1.4	2.5	.3	2.5	1.7	1.4	.2	12.2
For One Housing Unit	34.1	28.7	24.6	4.1	1.3	.3	1.0	2.4	.3	2.1	1.7	1.4	.2	13.1
For Two or More Units	.9	Q	Q	Q	.4	Q	.4	.4	NC	.4	NC	NC	NC	31.8
Steam or Hot-Water System	8.7	3.6	3.3	.3	1.9	.6	1.4	3.1	Q	2.9	Q	Q	Q	16.2
For One Housing Unit	5.1	3.6	3.3	.3	.9	.4	.5	.6	Q	.6	Q	Q	Q	20.7
For Two or More Units	3.6	Q	Q	Q	1.0	Q	.9	2.5	Q	2.4	NC	NC	NC	16.1
Floor, Wall, or Pipeless Furnace	4.3	2.9	1.8	1.1	.5	Q	.5	.6	Q	.7	Q	Q	Q	23.2
Room Heater/Other	2.8	2.0	1.3	.7	.5	Q	.5	.3	Q	.3	Q	Q	Q	27.1
Electricity	25.3	14.3	11.7	2.6	2.3	.2	2.1	7.2	.7	6.5	1.5	1.2	.3	13.4
Built-In Electric Units	7.0	3.3	2.6	.7	1.1	Q	1.1	2.5	Q	2.3	.1	.1	Q	22.5
Central Warm-Air Furnace	9.5	4.5	3.7	.8	.7	Q	.6	3.2	.3	2.9	1.2	.9	.2	17.1
For One Housing Unit	9.3	4.5	3.7	.8	.7	Q	.6	3.0	.3	2.7	1.2	.9	.2	17.9
Heat Pump	7.5	5.8	5.1	.7	.3	Q	.2	1.3	Q	1.1	.1	.1	NC	24.5
Other	1.3	.7	.4	.3	.2	NC	.2	.3	NC	.3	.2	Q	Q	30.6
Fuel Oil	10.2	7.6	6.7	.9	.9	.3	.6	1.5	.2	1.3	.3	.2	Q	15.4
Steam or Hot-Water System	5.3	3.3	3.0	.3	.6	.2	.4	1.4	.2	1.2	Q	Q	NC	17.6
For One Housing Unit	3.5	3.3	3.0	.3	.2	Q	.1	Q	NC	Q	Q	Q	NC	27.9
For Two or More Units	1.8	Q	Q	NC	.4	Q	.3	1.4	.2	1.2	NC	NC	NC	15.7
Central Warm-Air Furnace	4.5	4.0	3.5	.6	.2	Q	Q	Q	NC	Q	.3	.2	Q	25.6
Other	.4	.3	.2	Q	Q	NC	Q	Q	NC	Q	Q	NC	Q	58.7
Wood	3.1	2.8	2.5	.3	Q	NC	Q	NC	NC	NC	.2	.2	Q	23.6
Heating Stove	2.4	2.1	1.8	.3	Q	NC	Q	NC	NC	NC	.2	.2	Q	27.2
Other	.7	.7	.7	Q	NC	NC	NC	NC	NC	NC	Q	Q	NC	39.0
LPG	4.8	3.5	3.1	.4	Q	Q	Q	Q	Q	Q	1.2	.9	.3	19.2
Central Warm-Air Furnace	3.7	2.1	1.8	.2	Q	NC	Q	Q	Q	NC	1.0	.8	.2	22.6
Room Heater	1.1	1.0	.9	Q	Q	NC	Q	NC	NC	NC	Q	Q	Q	45.7
Other	.6	.4	.3	.1	Q	Q	Q	Q	NC	Q	Q	Q	Q	58.7
Kerosene	1.0	.5	.2	.2	Q	NC	Q	Q	NC	Q	.4	.3	.1	30.5
Other	.4	Q	Q	Q	Q	Q	Q	.1	NC	.1	Q	NC	Q	65.0
None	.9	.5	.3	.2	Q	Q	Q	.3	Q	.2	Q	Q	Q	41.0
Amount of Heat Provided by Main Heating Equipment														
All or Almost All	87.3	59.1	49.4	9.7	7.5	1.3	6.1	15.5	1.5	14.1	5.1	4.1	1.0	6.2
About Three-Fourths	5.4	4.8	4.1	.6	.2	Q	Q	.2	Q	.2	.2	.2	Q	22.1
Closer to One-Half	3.1	2.5	2.0	.5	.3	Q	.3	.2	Q	.2	.1	.1	Q	25.2
No Main Equipment	.9	.5	.3	.2	Q	Q	Q	.3	Q	.2	Q	Q	Q	41.0
Age of Main Heating Equipment														
Less than 2 Years	9.0	6.9	6.0	.9	.4	Q	.3	1.7	Q	1.0	.5	.4	Q	17.7
2 to 4 Years	10.6	8.5	7.6	.9	.6	.2	.4	.6	Q	.5	.9	.8	.1	17.5
5 to 9 Years	17.7	13.9	12.0	1.9	1.1	.3	.8	1.4	.2	1.2	1.4	1.2	.2	13.3
10 to 19 Years	21.6	16.4	14.5	1.9	1.4	.3	1.1	2.3	.3	2.0	1.5	1.3	.2	11.3
20 Years or More	21.5	15.9	13.4	2.5	1.9	.4	1.4	3.0	.5	2.5	.6	.5	.2	11.5
Don't Know	15.3	4.7	1.9	2.7	2.5	Q	2.5	7.6	.2	7.4	.5	.2	.3	12.3
No Main Equipment	.9	.5	.3	.2	Q	Q	Q	.3	Q	.2	Q	Q	Q	41.0

See footnotes at end of table.

Table 3.9b. Space Heating by Type and Ownership of Housing Unit, Percent of U.S. Households, 1993

Space Heating Characteristics	Total	Type and Ownership of Housing Unit												RSE Row Factors
		Single-Family			Multifamily						Mobile Home			
					Two to Four Units			Five or More Units						
		Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	
RSE Column Factors:	0.4	0.5	0.5	0.9	1.1	1.8	1.1	0.9	2.3	1.0	1.1	1.3	2.1	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0
Main Heating Fuel and Equipment														
Natural Gas	52.6	55.9	55.7	56.7	58.1	63.3	56.9	43.2	36.9	43.9	32.4	34.5	24.6	7.8
Central Warm-Air Furnace	36.2	43.0	44.2	37.4	21.7	21.0	21.9	17.2	19.7	16.9	29.7	32.5	19.0	11.8
For One Housing Unit	35.3	43.0	44.1	37.1	16.4	19.7	15.6	14.7	19.7	14.2	29.7	32.5	19.0	12.4
For Two or More Units	.9	Q	Q	Q	5.3	Q	6.2	2.4	NC	2.7	NC	NC	NC	31.5
Steam or Hot-Water System	9.0	5.4	5.9	3.0	23.9	37.6	20.8	19.4	Q	20.0	Q	Q	Q	15.3
For One Housing Unit	5.3	5.4	5.9	2.6	10.8	27.1	7.1	3.8	Q	3.9	Q	Q	Q	20.1
For Two or More Units	3.8	Q	Q	Q	13.1	Q	13.7	15.6	Q	16.1	NC	NC	NC	16.0
Floor, Wall, or Pipeless Furnace	4.4	4.4	3.2	10.4	6.3	Q	7.2	4.9	Q	5.0	Q	Q	Q	22.5
Room Heater/Other	2.9	3.0	2.4	6.0	6.2	Q	7.1	1.8	Q	1.9	Q	Q	Q	26.3
Electricity	26.2	21.4	21.0	23.5	28.1	13.4	31.5	44.6	45.5	44.5	27.4	28.2	24.5	11.2
Built-In Electric Units	7.2	5.0	4.7	6.4	13.8	Q	16.2	15.2	Q	15.3	2.0	2.0	Q	21.4
Central Warm-Air Furnace	9.8	6.7	6.6	7.5	8.2	Q	9.5	19.5	17.7	19.7	20.7	20.7	20.5	15.7
For One Housing Unit	9.6	6.7	6.6	7.5	8.2	Q	9.5	18.5	17.7	18.6	20.7	20.7	20.5	15.9
Heat Pump	7.8	8.7	9.1	6.8	3.8	Q	3.0	8.2	Q	7.7	1.8	2.3	NC	23.9
Other	1.4	1.0	.7	2.9	2.3	NC	2.8	1.7	NC	1.8	2.9	Q	Q	30.3
Fuel Oil	10.6	11.4	12.0	8.4	10.8	19.5	8.8	9.0	11.8	8.7	5.3	4.0	Q	16.6
Steam or Hot-Water System	5.5	5.0	5.4	2.6	7.8	12.4	6.8	8.6	11.8	8.2	Q	Q	NC	17.7
For One Housing Unit	3.6	4.9	5.4	2.6	2.4	Q	1.8	Q	NC	Q	Q	Q	NC	27.4
For Two or More Units	1.9	Q	Q	NC	5.5	Q	5.0	8.4	11.8	8.1	NC	NC	NC	16.3
Central Warm-Air Furnace	4.7	6.0	6.2	5.2	2.2	Q	Q	Q	NC	Q	4.8	3.8	Q	25.3
Other	.4	.4	.4	Q	Q	NC	Q	Q	NC	Q	Q	NC	Q	55.5
Wood	3.2	4.2	4.5	3.0	Q	NC	Q	NC	NC	NC	4.1	4.4	Q	23.5
Heating Stove	2.5	3.2	3.3	2.8	Q	NC	Q	NC	NC	NC	3.6	3.7	Q	27.1
Other	.8	1.0	1.2	Q	NC	NC	NC	NC	NC	NC	Q	Q	NC	36.9
LPG	5.0	5.3	5.5	3.9	Q	Q	Q	Q	Q	Q	21.6	21.2	23.0	18.6
Central Warm-Air Furnace	3.2	3.1	3.3	1.9	Q	NC	Q	Q	Q	NC	18.2	18.6	16.8	21.7
Room Heater	1.2	1.5	1.7	Q	Q	NC	Q	NC	NC	NC	Q	Q	Q	42.8
Other	.6	.6	.6	1.1	Q	Q	Q	Q	NC	Q	Q	Q	Q	56.2
Kerosene	1.0	.7	.4	1.9	Q	NC	Q	Q	NC	Q	7.7	6.6	11.9	28.8
Other	.4	Q	Q	Q	Q	Q	Q	.9	NC	1.0	Q	NC	Q	63.9
None	.9	.7	.5	2.0	Q	Q	Q	1.7	Q	1.3	Q	Q	Q	39.9
Amount of Heat Provided by Main Heating Equipment														
All or Almost All	90.3	88.5	88.5	88.1	93.4	90.1	94.2	95.7	93.5	95.9	92.2	93.7	86.3	1.5
About Three-Fourths	5.6	7.1	7.4	5.6	2.3	Q	Q	1.4	Q	1.5	4.3	3.4	Q	21.5
Closer to One-Half	3.2	3.7	3.5	4.3	3.6	Q	4.3	1.2	Q	1.3	2.4	1.9	Q	24.6
No Main Equipment	.9	.7	.5	2.0	Q	Q	Q	1.7	Q	1.3	Q	Q	Q	39.9
Age of Main Heating Equipment														
Less than 2 Years	9.3	10.4	10.8	8.1	5.3	Q	5.0	6.7	Q	6.5	9.7	9.8	Q	17.1
2 to 4 Years	11.0	12.7	13.6	8.1	8.0	15.9	6.1	3.6	Q	3.1	16.4	17.5	12.2	16.2
5 to 9 Years	18.3	20.7	21.5	16.9	13.7	20.6	12.1	8.4	12.3	8.0	25.0	26.5	19.1	11.9
10 to 19 Years	22.4	24.6	26.0	17.4	17.3	22.3	16.2	14.2	19.4	13.6	26.5	29.8	14.3	9.7
20 Years or More	22.2	23.8	24.0	22.7	23.5	29.7	22.1	18.7	33.8	17.1	11.6	10.8	14.6	10.3
Don't Know	15.8	7.0	3.5	24.8	31.5	Q	38.1	46.7	11.8	50.4	9.7	4.6	28.8	10.8
No Main Equipment	.9	.7	.5	2.0	Q	Q	Q	1.7	Q	1.3	Q	Q	Q	39.9

See footnotes at end of table.

Table 3.9a. Space Heating by Type and Ownership of Housing Unit, Million U.S. Households, 1993 (Continued)

Space Heating Characteristics	Total	Type and Ownership of Housing Unit												RSE Row Factors
		Single-Family			Multifamily						Mobile Home			
					Two to Four Units			Five or More Units						
		Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	
RSE Column Factors:	0.4	0.4	0.4	0.9	1.1	1.8	1.1	0.9	2.5	1.0	1.2	1.3	2.0	
Secondary Heating Fuel and Equipment (more than one may apply)														
No	60.8	36.0	28.5	7.5	6.5	1.1	5.4	14.3	1.4	12.9	3.9	3.2	0.8	6.9
Yes	35.9	30.8	27.2	3.5	1.5	.4	1.1	1.9	.1	1.8	1.6	1.2	.4	11.3
Natural Gas	4.1	3.6	3.2	.4	.1	Q	Q	.3	NC	.3	Q	Q	NC	26.4
Fireplace	1.8	1.7	1.5	.1	Q	Q	NC	Q	NC	Q	NC	NC	NC	34.4
Room Heater	1.0	.9	.9	Q	NC	NC	NC	NC	NC	NC	Q	Q	NC	37.6
Central Warm-Air Furnace	.6	.6	.5	Q	Q	Q	Q	Q	NC	Q	NC	NC	NC	49.1
Other Equipment	.9	.6	.4	.2	Q	NC	Q	.2	NC	.2	NC	NC	NC	41.3
Electricity	14.6	11.8	10.3	1.5	.8	.2	.6	1.2	Q	1.1	.8	.6	.2	13.5
Portable Heater	9.8	7.6	6.5	1.1	.6	.2	.4	.9	Q	.9	.7	.4	.2	14.9
Built-in Electric Units	4.0	3.6	3.3	.3	.2	Q	.1	.1	NC	.1	Q	Q	NC	29.7
Other Equipment	.8	.5	.4	Q	Q	NC	Q	.1	Q	.1	.1	Q	Q	37.0
Fuel Oil	.4	.3	.3	Q	NC	NC	NC	Q	NC	Q	Q	NC	Q	47.5
Wood	19.0	17.5	16.0	1.5	.5	.2	Q	.5	Q	.4	.4	.4	Q	17.5
Fireplace	15.9	14.6	13.3	1.3	.5	.1	Q	.5	Q	.4	.3	.3	Q	19.4
Heating Stove	3.4	3.3	3.0	.3	.1	Q	Q	NC	NC	NC	.1	.1	Q	23.3
Other Equipment	.2	.2	.2	Q	NC	NC	NC	NC	NC	NC	NC	NC	NC	74.8
LPG	1.2	1.1	.9	.1	NC	NC	NC	NC	NC	NC	.2	.1	Q	35.1
Kerosene	2.6	2.2	1.8	.4	Q	Q	Q	NC	NC	NC	.3	.1	Q	30.5
Other	.4	.3	.2	Q	Q	Q	Q	Q	NC	Q	Q	Q	NC	64.3

NC = No cases in sample.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.9b. Space Heating by Type and Ownership of Housing Unit, Percent of U.S. Households, 1993 (Continued)

Space Heating Characteristics	Total	Type and Ownership of Housing Unit												RSE Row Factors
		Single-Family			Multifamily						Mobile Home			
					Two to Four Units			Five or More Units						
		Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	
RSE Column Factors:	0.4	0.5	0.5	0.9	1.1	1.8	1.1	0.9	2.3	1.0	1.1	1.3	2.1	
Secondary Heating Fuel and Equipment (more than one may apply)														
No	62.9	53.9	51.1	68.0	81.0	73.4	82.8	88.2	90.4	88.0	70.6	71.9	65.7	3.3
Yes	37.1	46.1	48.9	32.0	19.0	26.6	17.2	11.8	9.6	12.0	29.4	28.1	34.3	9.9
Natural Gas	4.2	5.4	5.7	3.8	1.5	Q	Q	2.0	NC	2.2	Q	Q	NC	25.2
Fireplace	1.9	2.5	2.8	1.2	Q	Q	NC	Q	NC	Q	NC	NC	NC	32.2
Room Heater	1.0	1.4	1.5	Q	NC	NC	NC	NC	NC	NC	Q	Q	NC	35.1
Central Warm-Air Furnace	.6	.8	.9	Q	Q	Q	Q	Q	NC	Q	NC	NC	NC	46.5
Other Equipment	.9	.9	.8	1.7	Q	NC	Q	1.1	NC	1.2	NC	NC	NC	39.8
Electricity	15.1	17.7	18.5	13.7	10.2	13.5	9.4	7.2	Q	7.5	14.8	13.5	19.7	12.8
Portable Heater	10.1	11.4	11.7	9.8	7.8	11.6	6.9	5.6	Q	5.9	11.9	10.2	18.2	14.1
Built-in Electric Units	4.1	5.4	5.9	3.1	2.1	Q	2.1	.9	NC	1.0	Q	Q	NC	29.2
Other Equipment	.8	.7	.6	Q	Q	NC	Q	.8	Q	.8	2.4	Q	Q	36.8
Fuel Oil	.4	.5	.6	Q	NC	NC	NC	Q	NC	Q	Q	NC	Q	44.8
Wood	19.7	26.2	28.7	13.8	6.6	11.2	5.6	3.2	Q	3.0	7.5	9.0	Q	17.8
Fireplace	16.5	21.9	23.9	11.6	5.9	9.0	Q	3.2	Q	3.0	5.5	6.9	Q	18.2
Heating Stove	3.6	4.9	5.3	2.5	.9	Q	Q	NC	NC	NC	1.9	2.2	Q	23.2
Other Equipment	.2	.3	.3	Q	NC	NC	NC	NC	NC	NC	NC	NC	NC	70.5
LPG	1.3	1.6	1.7	1.3	NC	NC	NC	NC	NC	NC	2.9	2.8	Q	34.8
Kerosene	2.7	3.3	3.2	3.4	Q	Q	Q	NC	NC	NC	4.6	3.2	Q	29.9
Other	.4	.4	.4	Q	Q	Q	Q	Q	NC	Q	Q	Q	NC	60.9

NC = No cases in sample.
Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.
Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • Percentages are calculated on unrounded numbers. • See "Glossary" for definition of terms used in this report.
Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.10. Space Heating by Average Floorspace, U.S. Households, 1993

Space Heating Characteristics	Total Households (millions)	Average Square Feet per Housing Unit		Average Heated Square Feet per Household Member				Average Heated Square Feet per Housing Unit			RSE Row Factors
		Total	Heated	All Households	Single-Family	Multi-family	Mobile Home	Single-Family	Multi-family	Mobile Home	
RSE Column Factors:	1.3	0.7	0.6	0.7	0.8	1.5	2.0	0.6	1.3	1.2	
Total	96.6	1,875	1,630	624	698	432	354	1,947	917	938	1.8
Main Heating Fuel and Equipment											
Natural Gas	50.6	1,959	1,714	649	712	435	394	1,992	939	972	2.5
Central Warm-Air Furnace	34.9	2,160	1,884	695	735	479	407	2,072	1,012	995	2.3
For One Housing Unit	34.1	2,190	1,908	701	735	496	407	2,073	1,038	995	2.3
For Two or More Units	.9	973	917	421	Q	409	NC	Q	896	NC	3.1
Steam or Hot-Water System	8.7	1,745	1,538	650	852	453	Q	2,391	934	Q	5.4
For One Housing Unit	5.1	2,397	2,066	768	858	522	Q	2,398	1,298	Q	6.4
For Two or More Units	3.6	827	794	416	Q	415	NC	Q	783	NC	4.6
Floor, Wall, or Pipeless Furnace	4.3	1,220	1,093	424	471	319	Q	1,245	763	Q	7.1
Room Heater/Other	2.8	1,261	1,101	405	446	316	Q	1,219	840	Q	7.5
Electricity	25.3	1,597	1,409	578	666	442	378	1,803	881	999	2.9
Built-In Electric Units	7.0	1,346	1,174	525	607	429	351	1,569	812	1,025	7.2
Central Warm-Air Furnace	9.5	1,510	1,358	542	623	471	379	1,799	944	1,005	4.1
For One Housing Unit	9.3	1,521	1,367	545	623	474	379	1,799	950	1,005	3.9
Heat Pump	7.5	2,039	1,770	708	764	464	474	2,019	926	1,175	6.3
Other	1.3	1,021	951	359	423	270	331	1,133	719	824	11.9
Fuel Oil	10.2	2,268	1,917	714	797	445	349	2,216	1,084	768	4.3
Steam or Hot-Water System	5.3	2,212	1,870	698	859	411	Q	2,373	1,047	Q	5.1
For One Housing Unit	3.5	2,828	2,333	857	867	590	Q	2,377	1,712	Q	6.4
For Two or More Units	1.8	1,027	981	377	Q	379	NC	Q	970	NC	6.3
Central Warm-Air Furnace	4.5	2,409	2,035	754	768	969	363	2,142	1,592	775	7.1
Other	.4	1,415	1,206	454	481	Q	Q	1,390	Q	Q	5.1
Wood	3.1	2,097	1,843	589	627	Q	304	1,900	Q	1,144	8.4
Heating Stove	2.4	2,001	1,744	558	594	Q	329	1,792	Q	1,195	6.7
Other	.7	2,416	2,170	692	726	NC	Q	2,228	NC	Q	4.1
LPG	4.8	1,823	1,630	606	708	Q	319	1,904	Q	886	5.0
Central Warm-Air Furnace	3.1	2,034	1,809	634	776	Q	332	2,255	Q	914	5.6
Room Heater	1.1	1,359	1,227	530	560	Q	Q	1,279	Q	Q	9.6
Other	.6	1,620	1,476	578	657	Q	Q	1,713	Q	Q	9.9
Kerosene	1.0	1,107	935	363	412	Q	322	1,044	Q	868	11.0
Other	.4	1,455	1,403	713	Q	521	Q	Q	785	Q	27.1
None	.9	1,092	--	--	--	--	--	--	--	--	13.9
Amount of Heat Provided by Main Heating Equipment											
All or Almost All	87.3	1,852	1,619	628	705	439	368	1,947	926	947	1.9
About Three-Fourths	5.4	2,254	1,979	681	717	522	263	2,097	1,231	930	3.8
Closer to One-Half	3.1	2,088	1,811	644	718	356	289	2,038	880	1,056	3.3
No Main Equipment	.9	1,092	--	--	--	--	--	--	--	--	13.9
Age of Main Heating Equipment											
Less than 2 Years	9.0	2,087	1,831	665	715	481	371	2,078	1,002	989	4.5
2 to 4 Years	10.6	2,134	1,833	664	722	472	340	2,034	1,075	970	4.1
5 to 9 Years	17.7	2,069	1,802	651	703	476	371	2,011	1,061	1,038	3.1
10 to 19 Years	21.6	1,997	1,744	641	690	467	371	1,989	966	959	3.1
20 Years or More	21.5	1,946	1,679	716	794	469	340	1,940	952	798	3.2
Don't Know	15.3	1,122	1,038	428	489	394	334	1,484	846	801	4.1
No Main Equipment	.9	1,092	--	--	--	--	--	--	--	--	13.9

See footnotes at end of table.

Table 3.10. Space Heating by Average Floorspace, U.S. Households, 1993 (Continued)

Space Heating Characteristics	Total Households (millions)	Average Square Feet per Housing Unit		Average Heated Square Feet per Household Member				Average Heated Square Feet per Housing Unit			RSE Row Factors
		Total	Heated	All Households	Single-Family	Multi-family	Mobile Home	Single-Family	Multi-family	Mobile Home	
RSE Column Factors:	1.3	0.7	0.6	0.7	0.8	1.5	2.0	0.6	1.3	1.2	
Secondary Heating Fuel and Equipment (more than one may apply)											
No	60.8	1,606	1,403	563	646	426	356	1,751	896	904	2.0
Yes	35.9	2,332	2,015	716	757	467	349	2,176	1,045	1,020	2.7
Natural Gas	4.1	2,258	1,960	741	763	503	Q	2,082	1,000	Q	8.1
Fireplace	1.8	2,764	2,383	879	885	Q	NC	2,475	Q	NC	9.0
Room Heater	1.0	2,027	1,817	692	693	NC	Q	1,828	NC	Q	11.7
Central Warm-Air Furnace	.6	2,400	2,016	695	687	Q	NC	2,007	Q	NC	16.8
Other Equipment	.9	1,412	1,216	534	611	311	NC	1,461	624	NC	13.0
Electricity	14.6	2,122	1,838	685	745	424	347	2,047	979	925	4.1
Portable Heater	9.8	1,980	1,693	654	717	436	332	1,916	946	850	4.7
Built-in Electric Units	4.0	2,424	2,146	759	790	420	Q	2,246	1,109	Q	8.3
Other Equipment	.8	1,796	1,711	549	679	327	358	2,121	1,028	1,095	14.3
Fuel Oil	.4	2,590	2,083	712	740	Q	Q	2,155	Q	Q	12.6
Wood	19.0	2,673	2,304	779	796	568	443	2,391	1,241	1,374	3.7
Fireplace	15.9	2,686	2,306	778	795	555	486	2,400	1,207	1,411	4.1
Heating Stove	3.4	2,640	2,326	796	816	728	345	2,374	1,726	1,267	8.3
Other Equipment	.2	3,130	2,535	898	898	NC	NC	2,535	NC	NC	30.0
LPG	1.2	1,937	1,719	608	685	NC	253	1,836	NC	954	10.0
Kerosene	2.6	2,043	1,756	611	666	Q	276	1,906	Q	838	7.1
Other	.4	2,458	2,312	872	949	Q	Q	2,594	Q	Q	22.3

NC = No cases in sample.
Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.
-- = Data not applicable.
Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.
Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.11. Space Heating by Total Floorspace, U.S. Households, 1993

Space Heating Characteristics	Total Households		Total Square Footage				
			Total		Heated		
	(millions)	(percent)	(billions)	(percent)	(billions)	(percent)	RSE Row Factors
RSE Column Factors:	0.9	0.9	1.1	1.0	1.0	1.0	
Total	96.6	100.0	181.2	100.0	157.5	100.0	
Main Heating Fuel and Equipment							
Natural Gas	50.8	52.6	99.5	54.9	87.1	55.3	1.2
Central Warm-Air Furnace	34.9	36.2	75.5	41.6	65.8	41.8	1.7
For One Housing Unit	34.1	35.3	74.6	41.2	65.0	41.3	1.7
For Two or More Units	.9	.9	.8	.5	.8	.5	2.1
Steam or Hot-Water System	8.7	9.0	15.3	8.4	13.4	8.5	2.5
For One Housing Unit	5.1	5.3	12.3	6.8	10.6	6.7	2.3
For Two or More Units	3.6	3.8	3.0	1.7	2.9	1.8	4.5
Floor, Wall, or Pipeless Furnace	4.3	4.4	5.2	2.9	4.7	3.0	6.8
Room Heater/Other	2.8	2.9	3.6	2.0	3.1	2.0	11.6
Electricity	25.3	26.2	40.5	22.3	35.7	22.7	1.3
Built-In Electric Units	7.0	7.2	9.4	5.2	8.2	5.2	3.2
Central Warm-Air Furnace	9.5	9.8	14.3	7.9	12.9	8.2	1.5
For One Housing Unit	9.3	9.6	14.2	7.8	12.7	8.1	1.5
Heat Pump	7.5	7.8	15.4	8.5	13.4	8.5	1.3
Other	1.3	1.4	1.3	.7	1.2	.8	13.5
Fuel Oil	10.2	10.6	23.2	12.8	19.6	12.5	4.8
Steam or Hot-Water System	5.3	5.5	11.8	6.5	10.0	6.3	3.8
For One Housing Unit	3.5	3.6	9.9	5.5	8.2	5.2	10.5
For Two or More Units	1.8	1.9	1.9	1.0	1.8	1.1	13.5
Central Warm-Air Furnace	4.5	4.7	10.8	6.0	9.2	5.8	5.8
Other	.4	.4	.6	.3	.5	.3	20.9
Wood	3.1	3.2	6.5	3.6	5.8	3.7	9.4
Heating Stove	2.4	2.5	4.8	2.6	4.2	2.7	10.3
Other	.7	.8	1.8	1.0	1.6	1.0	17.2
LPG	4.8	5.0	8.8	4.8	7.8	5.0	10.7
Central Warm-Air Furnace	3.1	3.2	6.3	3.5	5.6	3.5	11.2
Room Heater	1.1	1.2	1.6	.9	1.4	.9	16.7
Other	.6	.6	.9	.5	.8	.5	20.2
Kerosene	1.0	1.0	1.1	.6	.9	.6	17.9
Other	.4	.4	.6	.3	.6	.4	34.3
None	.9	.9	1.0	.5	--	--	21.9
Amount of Heat Provided by Main Heating Equipment							
All or Almost All	87.3	90.3	161.7	89.2	141.3	89.7	1.2
About Three-Fourths	5.4	5.6	12.2	6.7	10.7	6.8	7.3
Closer to One-Half	3.1	3.2	6.4	3.5	5.6	3.5	11.3
No Main Equipment	.9	.9	1.0	.5	--	--	21.9
Age of Main Heating Equipment							
Less than 2 Years	9.0	9.3	18.8	10.4	16.5	10.5	4.3
2 to 4 Years	10.6	11.0	22.7	12.5	19.5	12.4	3.8
5 to 9 Years	17.7	18.3	36.7	20.2	31.9	20.3	2.2
10 to 19 Years	21.6	22.4	43.1	23.8	37.7	23.9	1.7
20 Years or More	21.5	22.2	41.8	23.1	36.1	22.9	1.8
Don't Know	15.3	15.8	17.2	9.5	15.9	10.1	3.9
No Main Equipment	.9	.9	1.0	.5	--	--	21.9

See footnotes at end of table.

Table 3.11. Space Heating by Total Floorspace, U.S. Households, 1993 (Continued)

Space Heating Characteristics	Total Households		Total Square Footage				RSE Row Factors
			Total		Heated		
	(millions)	(percent)	(billions)	(percent)	(billions)	(percent)	
RSE Column Factors:	0.9	0.9	1.1	1.0	1.0	1.0	
Secondary Heating Fuel and Equipment (more than one may apply)							
No	60.8	62.9	97.6	53.9	85.3	54.1	2.3
Yes	35.9	37.1	83.6	46.1	72.3	45.9	3.3
Natural Gas	4.1	4.2	9.2	5.1	8.0	5.1	9.4
Fireplace	1.8	1.9	5.0	2.8	4.3	2.7	12.7
Room Heater	1.0	1.0	1.9	1.1	1.7	1.1	15.9
Central Warm-Air Furnace	.6	.6	1.4	.8	1.2	.8	23.8
Other Equipment	.9	.9	1.2	.7	1.1	.7	21.1
Electricity	14.6	15.1	31.0	17.1	26.9	17.1	5.0
Portable Heater	9.8	10.1	19.4	10.7	16.6	10.5	5.6
Built-in Electric Units	4.0	4.1	9.7	5.3	8.6	5.4	9.3
Other Equipment	.8	.8	1.4	.8	1.4	.9	14.1
Fuel Oil	.4	.4	.9	.5	.8	.5	17.8
Wood	19.0	19.7	50.8	28.0	43.8	27.8	4.6
Fireplace	15.9	16.5	42.8	23.6	36.7	23.3	4.9
Heating Stove	3.4	3.6	9.1	5.0	8.0	5.1	8.1
Other Equipment	.2	.2	.5	.3	.4	.3	32.0
LPG	1.2	1.3	2.4	1.3	2.1	1.3	15.1
Kerosene	2.6	2.7	5.3	2.9	4.5	2.9	14.7
Other	.4	.4	.9	.5	.8	.5	26.6

-- = Data not applicable.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.12a. Space Heating by Family Income, Million U.S. Households, 1993

Space Heating Characteristics	Total	1993 Family Income							Below Poverty Line		Eligible for Federal Assistance[1]	
		Less than $5,000	$5,000 to $9,999	$10,000 to $14,999	$15,000 to $24,999	$25,000 to $34,999	$35,000 to $49,999	$50,000 or More	100 Percent	125 Percent		
RSE Column Factors:	0.6	1.9	1.3	1.1	0.9	1.0	0.9	0.9	1.1	0.9	0.8	
Total	96.6	4.1	10.6	11.1	18.4	14.1	17.5	21.0	14.4	19.4	30.7	
Main Heating Fuel and Equipment												
Natural Gas	50.8	2.0	5.2	6.0	9.6	6.9	9.0	12.1	7.1	9.5	15.5	
Central Warm-Air Furnace	34.9	.8	2.7	3.6	6.2	5.3	6.8	9.6	3.4	4.9	8.4	
For One Housing Unit	34.1	.8	2.6	3.4	5.9	5.2	6.7	9.5	3.3	4.7	8.1	
For Two or More Units	.9	Q	Q	Q	.3	Q	Q	Q	Q	Q	.3	
Steam or Hot-Water System	8.7	.6	1.2	1.1	1.8	.9	1.5	1.6	1.6	2.0	3.4	
For One Housing Unit	5.1	.2	.5	.5	1.1	.5	.9	1.3	.7	1.0	1.6	
For Two or More Units	3.6	.3	.7	.6	.7	.4	.5	.3	.8	1.0	1.8	
Floor, Wall, or Pipeless Furnace	4.3	.2	.6	.8	1.0	.5	.6	.6	1.0	1.2	1.9	
Room Heater/Other	2.8	.3	.7	.6	.6	.2	.2	.2	1.1	1.4	1.7	
Electricity	25.3	1.2	3.2	2.8	4.7	4.3	4.5	5.0	4.0	5.3	8.4	
Built-In Electric Units	7.0	.5	1.3	1.1	1.4	1.3	1.0	.7	1.6	2.1	3.2	
Central Warm-Air Furnace	9.5	.4	.9	1.0	2.0	1.3	1.9	1.6	1.4	1.8	2.8	
For One Housing Unit	9.3	.4	.9	1.0	2.0	1.3	1.9	1.6	1.3	1.7	2.7	
Heat Pump	7.5	.3	.6	.5	1.0	1.2	1.4	2.6	.6	.9	1.6	
Other	1.3	Q	.3	.3	.3	.1	Q	Q	.4	.5	.8	
Fuel Oil	10.2	.4	.9	.9	1.7	1.3	2.3	2.4	1.2	1.8	2.8	
Steam or Hot-Water System	5.3	.2	.5	.5	.8	.7	1.2	1.4	.8	1.0	1.5	
For One Housing Unit	3.5	Q	.2	.3	.5	.5	.8	1.1	.2	.3	.6	
For Two or More Units	1.8	.2	.3	.3	.3	.2	.4	.2	.5	.7	.9	
Central Warm-Air Furnace	4.5	Q	.3	.4	.9	.9	1.0	1.0	.4	.6	1.1	
Other	.4	Q	Q	Q	Q	Q	Q	Q	Q	.1	.2	
Wood	3.1	Q	.3	.4	.5	.4	.7	.7	.5	.8	1.1	
Heating Stove	2.4	Q	.3	.4	.3	.3	.6	.4	.5	.7	1.0	
Other	.7	Q	Q	Q	.2	Q	.1	.2	Q	Q	.1	
LPG	4.8	.2	.7	.6	1.1	.9	.7	.6	1.0	1.4	1.8	
Central Warm-Air Furnace	3.1	Q	.2	.3	.8	.7	.5	.5	.4	.5	.8	
Room Heater	1.1	Q	.3	.2	.3	.2	Q	NC	.4	.6	.7	
Other	.6	Q	Q	Q	Q	Q	Q	Q	.2	.2	.3	
Kerosene	1.0	Q	.2	.1	.3	Q	Q	Q	.3	.4	.6	
Other	.4	Q	Q	Q	.1	Q	Q	Q	Q	Q	Q	
None	.9	Q	Q	.1	.2	Q	*	Q	.2	.2	.3	
Amount of Heat Provided by Main Heating Equipment												
All or Almost All	87.3	3.7	9.9	10.2	16.6	12.7	16.7	18.5	13.2	17.9	28.1	
About Three-Fourths	5.4	.2	.3	.3	.9	.8	1.0	1.7	.4	.6	1.2	
Closer to One-Half	3.1	.2	.3	.4	.6	.3	.6	.6	.6	.7	1.1	
No Main Equipment	.9	Q	Q	.1	.2	Q	*	Q	.2	.2	.3	
Age of Main Heating Equipment												
Less than 2 Years	9.0	.2	1.0	.7	1.5	1.2	1.9	2.4	1.2	1.6	2.4	
2 to 4 Years	10.6	.2	.8	1.0	1.7	1.8	2.2	2.9	1.1	1.6	2.8	
5 to 9 Years	17.7	.5	1.3	1.8	3.4	2.6	3.6	4.5	1.8	2.7	4.5	
10 to 19 Years	21.6	.8	2.3	2.1	3.8	3.3	4.1	5.2	2.8	4.2	6.4	
20 Years or More	21.5	1.0	2.4	2.9	4.5	3.3	3.4	4.1	3.1	4.2	7.2	
Don't Know	15.3	1.3	2.8	2.5	3.3	1.6	2.1	1.7	4.2	5.0	7.2	
No Main Equipment	.9	Q	Q	.1	.2	Q	*	Q	.2	.2	.3	

See footnotes at end of table.

Table 3.12b. Space Heating by Family Income, Percent of U.S. Households, 1993

Space Heating Characteristics	Total	1993 Family Income							Below Poverty Line		Eligible for Federal Assistance[1]	RSE Row Factors
		Less than $5,000	$5,000 to $9,999	$10,000 to $14,999	$15,000 to $24,999	$25,000 to $34,999	$35,000 to $49,999	$50,000 or More	100 Percent	125 Percent		
RSE Column Factors:	0.5	1.9	1.2	1.0	1.0	0.9	0.9	1.3	1.0	0.9	0.8	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0
Main Heating Fuel and Equipment												
Natural Gas	52.6	48.6	48.8	54.6	51.4	50.4	53.7	60.6	49.5	49.1	50.4	4.6
Central Warm-Air Furnace	36.2	20.4	25.4	34.5	35.8	38.1	41.6	48.4	24.0	25.3	27.5	6.5
For One Housing Unit	35.3	20.1	24.3	32.9	34.5	37.5	41.4	47.7	23.1	24.5	26.4	6.7
For Two or More Units	.9	Q	Q	1.6	1.2	Q	Q	Q	Q	Q	1.1	38.2
Steam or Hot-Water System	9.0	14.4	11.3	9.3	9.0	7.8	7.3	9.2	10.8	10.4	11.2	12.6
For One Housing Unit	5.3	6.0	5.1	4.9	5.3	4.5	5.2	8.0	5.0	5.1	5.4	16.9
For Two or More Units	3.8	8.3	6.2	4.4	3.7	3.2	2.1	Q	5.9	5.2	5.9	19.3
Floor, Wall, or Pipeless Furnace	4.4	5.7	5.6	6.5	4.6	3.2	3.3	2.5	6.7	6.3	6.1	18.6
Room Heater/Other	2.9	8.1	6.5	4.3	2.1	1.3	1.4	Q	8.0	7.2	5.6	17.1
Electricity	26.2	29.1	30.0	24.5	27.6	26.0	25.6	22.1	27.6	27.2	27.3	7.3
Built-In Electric Units	7.2	11.1	11.9	8.2	7.5	6.6	4.4	3.3	10.8	10.8	10.5	15.4
Central Warm-Air Furnace	9.8	10.1	9.5	9.6	12.5	9.6	9.4	7.1	9.6	9.4	9.2	13.4
For One Housing Unit	9.6	9.2	9.2	9.6	12.2	9.4	9.3	7.1	9.1	9.0	8.9	13.8
Heat Pump	7.8	6.3	5.6	4.3	6.8	9.2	10.9	11.4	4.2	4.5	5.2	16.8
Other	1.4	Q	3.0	2.4	Q	Q	.9	Q	2.9	2.6	2.5	22.8
Fuel Oil	10.6	9.8	8.5	8.8	9.7	13.4	11.9	10.6	8.6	9.1	9.3	11.0
Steam or Hot-Water System	5.5	5.3	4.9	4.1	4.6	7.0	6.5	5.9	5.3	5.1	5.0	14.2
For One Housing Unit	3.6	Q	1.9	2.4	3.2	4.8	5.2	4.9	1.6	1.5	2.1	20.3
For Two or More Units	1.9	3.8	3.0	1.7	1.4	2.2	1.4	Q	3.7	3.6	2.9	17.3
Central Warm-Air Furnace	4.7	Q	3.1	4.1	4.7	6.0	5.2	4.6	2.6	3.2	3.6	16.5
Other	.4	Q	Q	Q	Q	Q	Q	NC	Q	.7	.7	35.2
Wood	3.2	Q	2.8	3.2	2.8	3.7	3.6	2.8	3.5	4.0	3.7	16.2
Heating Stove	2.5	Q	2.6	2.7	1.8	2.8	2.5	2.0	3.3	3.6	3.2	18.2
Other	.8	Q	Q	Q	1.0	1.0	1.1	Q	Q	Q	.5	30.0
LPG	5.0	6.1	6.0	5.6	6.2	4.7	4.0	2.1	6.7	7.1	5.9	16.1
Central Warm-Air Furnace	3.2	Q	1.8	3.6	4.3	3.6	3.4	2.0	2.5	2.8	2.6	20.6
Room Heater	1.2	Q	2.9	1.6	1.2	Q	Q	NC	3.1	3.1	2.4	27.5
Other	.6	Q	1.3	Q	Q	Q	Q	Q	1.1	1.2	.9	29.9
Kerosene	1.0	Q	2.1	1.5	1.2	Q	Q	Q	2.2	2.0	1.8	25.1
Other	.4	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	72.6
None	.9	Q	Q	1.3	Q	1.1	.7	Q	1.2	1.0	.9	24.4
Amount of Heat Provided by Main Heating Equipment												
All or Almost All	90.3	90.9	93.8	89.8	91.4	89.8	89.6	86.2	91.9	92.2	91.7	1.3
About Three-Fourths	5.6	3.8	2.7	4.9	5.3	6.1	7.1	8.6	2.9	3.2	3.9	15.1
Closer to One-Half	3.2	4.3	2.9	4.0	2.6	3.0	2.6	4.1	4.0	3.6	3.5	17.3
No Main Equipment	.9	Q	Q	1.3	Q	1.1	.7	Q	1.2	1.0	.9	24.4
Age of Main Heating Equipment												
Less than 2 Years	9.3	5.5	8.7	7.6	7.2	10.9	11.5	11.3	8.7	8.1	8.0	11.6
2 to 4 Years	11.0	5.6	7.8	9.5	10.0	13.6	13.7	11.8	7.4	8.2	8.4	10.6
5 to 9 Years	18.3	12.3	12.9	16.5	19.8	19.7	20.1	24.4	12.6	13.7	14.7	7.7
10 to 19 Years	22.4	18.9	21.0	20.1	21.7	23.1	24.7	25.2	19.4	21.4	21.0	6.5
20 Years or More	22.2	25.0	23.3	24.6	25.4	20.9	19.0	18.4	21.4	21.8	23.5	6.7
Don't Know	15.8	31.7	25.7	20.3	15.2	10.7	10.3	7.8	29.3	25.8	23.5	7.9
No Main Equipment	.9	Q	Q	1.3	Q	1.1	.7	Q	1.2	1.0	.9	24.4

See footnotes at end of table.

Table 3.12a. Space Heating by Family Income, Million U.S. Households, 1993 (Continued)

Space Heating Characteristics	Total	1993 Family Income							Below Poverty Line		Eligible for Federal Assistance[1]	RSE Row Factors
		Less than $5,000	$5,000 to $9,999	$10,000 to $14,999	$15,000 to $24,999	$25,000 to $34,999	$35,000 to $49,999	$50,000 or More	100 Percent	125 Percent		
RSE Column Factors:	0.5	1.9	1.3	1.1	0.9	1.0	0.8	0.9	1.1	0.9	0.8	
Secondary Heating Fuel and Equipment (more than one may apply)												
No	60.8	3.2	8.2	8.5	12.3	9.1	10.2	9.3	10.9	14.6	22.9	
Yes	35.9	.9	2.4	2.6	6.1	4.9	7.2	11.6	3.4	4.8	7.8	
Natural Gas	4.1	Q	.3	.2	.7	.6	.9	1.2	.4	.5	.8	
Fireplace	1.8	Q	Q	Q	.3	.3	.4	.8	Q	Q	.1	
Room Heater	1.0	Q	Q	Q	.2	.2	.2	.2	Q	.2	.2	
Central Warm-Air Furnace	.6	NC	Q	Q	Q	Q	.2	.2	Q	Q	Q	
Other Equipment	.9	Q	.1	Q	.2	Q	.2	Q	.2	.2	.4	
Electricity	14.6	.5	1.3	1.5	2.9	1.9	2.5	3.9	1.9	2.5	4.0	
Portable Heater	9.8	.4	1.0	1.1	2.2	1.3	1.5	2.3	1.4	1.9	3.1	
Built-in Electric Units	4.0	Q	.2	.3	.7	.5	.9	1.3	.3	.4	.6	
Other Equipment	.8	Q	.1	Q	.1	Q	Q	.2	.2	.3	.3	
Fuel Oil	.4	NC	Q	Q	Q	Q	Q	.1	Q	Q	.1	
Wood	19.0	.2	.5	.7	2.5	2.5	4.2	8.4	.8	1.2	2.2	
Fireplace	15.9	.2	.4	.4	1.9	2.0	3.5	7.6	.6	.8	1.6	
Heating Stove	3.4	Q	Q	.4	.6	.5	.9	1.0	.2	.4	.7	
Other Equipment	.2	NC	NC	Q	Q	Q	Q	Q	NC	Q	Q	
LPG	1.2	Q	.2	Q	.2	.2	.2	.3	.2	.3	.4	
Kerosene	2.6	Q	.3	.3	.6	.4	.5	.5	.4	.6	.9	
Other	.4	Q	Q	Q	Q	Q	Q	.1	Q	Q	Q	

[1] Below 150 percent of poverty line or 60 percent of median State income.

NC = No cases in sample.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1990 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.12b. Space Heating by Family Income, Percent of U.S. Households, 1993 (Continued)

Space Heating Characteristics	Total	1993 Family Income							Below Poverty Line		Eligible for Federal Assistance[1]	RSE Row Factors
		Less than $5,000	$5,000 to $9,999	$10,000 to $14,999	$15,000 to $24,999	$25,000 to $34,999	$35,000 to $49,999	$50,000 or More	100 Percent	125 Percent		
RSE Column Factors:	0.5	1.9	1.2	1.0	1.0	0.9	0.9	1.3	1.0	0.9	0.8	
Secondary Heating Fuel and Equipment (more than one may apply)												
No	62.9	77.8	77.7	69.9	67.5	60.2	51.8	39.5	76.1	75.3	74.5	2.8
Yes	37.1	22.2	22.3	30.1	32.5	39.8	48.2	60.5	23.9	24.7	25.5	5.7
Natural Gas	4.2	Q	2.6	3.2	3.3	4.6	5.8	7.0	2.8	2.6	2.6	18.6
Fireplace	1.9	Q	Q	.9	1.5	2.2	2.9	5.0	Q	Q	.5	26.7
Room Heater	1.0	Q	1.1	.9	Q	1.1	1.3	Q	Q	1.0	.8	33.7
Central Warm-Air Furnace	.6	NC	Q	Q	Q	Q	1.3	Q	Q	Q	Q	36.3
Other Equipment	.9	Q	1.1	1.2	.9	.9	Q	Q	1.3	1.1	1.2	30.9
Electricity	15.1	13.2	11.9	14.9	15.4	15.2	16.0	18.9	13.1	13.0	13.2	8.5
Portable Heater	10.1	10.0	9.1	11.1	10.8	9.7	9.5	11.2	9.6	9.6	10.0	10.1
Built-in Electric Units	4.1	Q	1.8	3.0	4.3	5.4	5.3	5.8	2.4	2.3	2.1	19.4
Other Equipment	.8	Q	1.1	.9	Q	Q	.9	Q	1.6	1.3	1.1	22.8
Fuel Oil	.4	NC	Q	Q	Q	Q	Q	Q	Q	Q	.4	38.3
Wood	19.7	5.2	4.8	10.5	14.0	22.6	32.4	44.9	5.4	6.2	7.3	10.0
Fireplace	16.5	3.9	3.7	7.3	11.3	18.3	28.4	41.1	4.2	4.1	5.3	11.5
Heating Stove	3.6	Q	1.2	3.1	2.7	5.2	4.8	4.3	1.3	2.2	2.1	17.9
Other Equipment	.2	NC	NC	Q	Q	Q	Q	Q	NC	Q	Q	56.2
LPG	1.3	Q	1.3	.9	1.8	1.4	.9	1.7	1.6	1.7	1.3	26.5
Kerosene	2.7	Q	2.5	3.8	2.6	2.6	2.2	2.5	2.9	3.1	3.0	21.9
Other	.4	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	46.4

[1] Below 150 percent of poverty line or 60 percent of median State income.

NC = No cases in sample.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • Percentages are calculated on unrounded numbers. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.13. Total Air-Conditioning in U.S. Households, 1993

Housing Unit and Household Characteristics	Total Households (millions)	Cooled Floorspace (square feet per household)	Number of Cooling Degree-Days per Household		Air-Conditioner Use in Summer 1993[1] (percent of households)					RSE Row Factors
			1993	Normal	Total	Not at All	Only a Few Times	Quite a Bit	All Summer	
RSE Column Factors:	0.8	0.6	0.6	0.6	0.0	3.6	0.9	1.4	1.2	
Total	66.1	1,416	1,536	1,438	100.0	3.4	38.3	22.2	36.1	2.7
Type of Air-Conditioning[2]										
Central Air-Conditioning	42.1	1,756	1,679	1,587	100.0	2.4	30.5	21.2	45.9	3.4
Electric	41.9	1,758	1,682	1,589	100.0	2.3	30.4	21.3	45.9	3.4
Without a Heat Pump	30.1	1,777	1,551	1,480	100.0	2.4	32.1	22.0	43.4	3.8
With a Heat Pump	11.9	1,710	2,015	1,867	100.0	2.2	26.1	19.4	52.3	6.0
Gas[3]	.1	1,151	848	789	100.0	Q	56.4	NC	Q	44.0
Room Air-Conditioning	25.7	877	1,326	1,219	100.0	5.5	50.1	24.2	20.3	4.6
1 Unit	17.3	741	1,282	1,187	100.0	7.3	51.9	21.6	19.2	4.7
2 Units	6.3	1,053	1,385	1,261	100.0	1.4	47.7	28.8	22.2	9.8
3 or More Units	2.2	1,469	1,509	1,355	100.0	2.7	42.8	31.4	23.1	12.1
Census Region and Division										
Northeast	11.3	1,220	931	726	100.0	3.3	54.5	28.3	13.9	5.3
New England	2.3	1,116	755	543	100.0	5.5	55.9	23.3	15.3	8.8
Middle Atlantic	9.0	1,246	975	771	100.0	2.7	54.2	29.5	13.6	6.1
Midwest	17.1	1,607	816	834	100.0	4.2	50.4	23.9	21.5	5.4
East North Central	11.2	1,613	794	768	100.0	4.0	50.8	24.3	20.9	6.5
West North Central	5.9	1,596	858	959	100.0	4.5	49.7	23.0	22.7	8.6
South	29.9	1,431	2,211	2,064	100.0	1.7	20.8	19.7	57.7	3.7
South Atlantic	15.2	1,433	2,225	2,003	100.0	1.7	21.7	20.6	56.0	5.2
East South Central	5.3	1,536	1,772	1,654	100.0	1.4	21.3	22.1	55.2	7.1
West South Central	9.4	1,369	2,437	2,397	100.0	1.9	19.2	16.9	62.0	6.7
West	7.8	1,224	1,408	1,399	100.0	8.4	55.1	19.4	17.2	8.3
Mountain	2.2	1,271	2,323	2,259	100.0	4.6	43.3	20.8	31.3	14.4
Pacific	5.6	1,205	1,047	1,059	100.0	9.9	59.7	18.8	11.6	10.8
Urban Status										
Urban	52.1	1,413	1,580	1,463	100.0	3.7	38.2	22.7	35.3	3.1
Central City	19.7	1,142	1,750	1,625	100.0	4.1	37.1	23.0	35.8	4.6
Suburban	32.4	1,577	1,477	1,364	100.0	3.5	38.9	22.6	35.0	3.9
Rural	14.0	1,428	1,372	1,348	100.0	2.2	38.7	20.3	38.8	5.4
Cooling Degree-Days (CDD)-1993										
2,000 or More	17.3	1,359	2,845	2,709	100.0	1.7	19.9	16.7	61.7	5.6
1,000 to 1,999	25.2	1,438	1,454	1,314	100.0	2.9	31.6	26.9	38.6	5.1
500 to 999	18.2	1,402	772	696	100.0	4.3	54.7	23.7	17.4	5.6
Fewer than 500	5.5	1,539	334	479	100.0	8.3	72.2	13.2	6.3	8.2
Year of Construction										
1939 or Before	10.3	1,201	1,137	1,066	100.0	4.2	53.7	22.6	19.5	6.6
1940 to 1949	3.9	1,204	1,400	1,281	100.0	2.7	41.7	26.1	29.5	9.4
1950 to 1959	8.7	1,376	1,519	1,402	100.0	4.3	40.5	23.1	32.1	6.8
1960 to 1969	11.0	1,409	1,491	1,381	100.0	3.6	39.5	20.9	36.1	6.5
1970 to 1979	12.8	1,379	1,624	1,544	100.0	3.8	35.7	22.0	38.4	5.9
1980 to 1984	6.9	1,433	1,853	1,747	100.0	2.3	31.5	18.8	47.5	6.9
1985 to 1987	4.7	1,622	1,824	1,697	100.0	Q	27.3	28.1	43.8	9.4
1988 to 1990	3.9	1,722	1,554	1,459	100.0	3.2	33.1	19.7	44.1	8.3
1991 to 1993[4]	3.9	1,835	1,677	1,593	100.0	3.7	24.9	21.3	50.2	9.8
Number of Rooms Air-Conditioned in Summer 1993										
None	1.8	NC	1,182	1,134	100.0	94.4	Q	NC	NC	6.6
One or Two	11.3	432	1,288	1,161	100.0	3.1	59.7	21.3	15.9	4.8
Three	7.5	769	1,521	1,402	100.0	1.0	47.4	25.1	26.6	6.2
Four	9.7	1,066	1,647	1,543	100.0	Q	41.3	25.3	32.8	6.1
Five or More	35.8	2,015	1,607	1,522	100.0	.2	30.5	22.1	47.1	3.9

See footnotes at end of table.

Table 3.13. Total Air-Conditioning in U.S. Households, 1993 (Continued)

Housing Unit and Household Characteristics	Total Households (millions)	Cooled Floorspace (square feet per household)	Number of Cooling Degree-Days per Household		Air-Conditioner Use in Summer 1993[1] (percent of households)					RSE Row Factors
			1993	Normal	Total	Not at All	Only a Few Times	Quite a Bit	All Summer	
RSE Column Factors:	0.8	0.6	0.6	0.6	0.0	3.6	0.9	1.4	1.2	
Type and Ownership of Housing Unit										
Single-Family Detached	41.2	1,725	1,508	1,428	100.0	3.1	36.7	21.0	39.2	3.4
Owned	36.6	1,794	1,478	1,398	100.0	3.0	36.6	21.1	39.2	3.5
Rented	4.6	1,179	1,748	1,667	100.0	3.8	37.2	19.8	39.2	8.6
Single-Family Attached	5.3	1,327	1,600	1,438	100.0	3.7	35.0	24.4	36.9	9.0
Owned	3.5	1,473	1,585	1,428	100.0	Q	37.0	24.0	34.6	9.9
Rented	1.7	1,030	1,629	1,460	100.0	Q	30.8	25.0	41.6	13.3
Multifamily (2 to 4 units)	4.1	800	1,496	1,358	100.0	4.2	43.4	26.5	25.8	9.6
Owned	.9	1,138	1,390	1,254	100.0	6.7	47.7	20.6	25.0	16.9
Rented	3.1	698	1,528	1,389	100.0	3.5	42.2	28.3	26.0	10.8
Multifamily (5 or more units)	11.6	760	1,612	1,482	100.0	3.6	45.4	24.0	27.0	7.3
Owned	1.3	1,067	1,656	1,559	100.0	Q	48.2	19.1	29.2	27.3
Rented	10.3	720	1,606	1,472	100.0	3.6	45.1	24.6	26.7	6.7
Mobile Home	3.9	860	1,567	1,501	100.0	4.8	32.9	22.6	39.7	9.3
Owned	3.2	912	1,558	1,505	100.0	3.5	31.7	23.8	41.1	10.2
Rented	.7	611	1,608	1,486	100.0	Q	38.3	17.1	33.4	16.4
1993 Family Income Category										
Less than $5,000	2.5	742	1,740	1,596	100.0	4.8	33.3	21.8	40.1	9.8
$5,000 to $9,999	6.4	813	1,598	1,504	100.0	5.1	44.8	20.8	29.3	7.2
$10,000 to $14,999	6.7	957	1,593	1,490	100.0	5.8	45.6	18.6	30.0	6.8
$15,000 to $19,999	6.1	1,174	1,615	1,517	100.0	2.5	42.7	21.9	32.9	8.0
$20,000 to $24,999	5.7	1,188	1,525	1,450	100.0	2.7	40.4	22.1	34.8	7.1
$25,000 to $34,999	10.0	1,414	1,520	1,429	100.0	3.8	39.4	20.6	36.2	5.8
$35,000 to $49,999	12.8	1,564	1,519	1,430	100.0	2.8	36.2	23.1	37.9	5.2
$50,000 to $74,999	9.3	1,836	1,464	1,366	100.0	2.7	31.8	23.0	42.5	5.4
$75,000 or More	6.6	2,265	1,436	1,312	100.0	1.9	32.0	27.6	38.5	7.4
Below Poverty Line										
100 Percent	8.2	787	1,707	1,599	100.0	5.2	42.6	20.7	31.5	6.0
125 Percent	11.5	833	1,639	1,538	100.0	5.2	43.7	21.2	29.8	5.2
Eligible for Federal Assistance[5]	18.5	926	1,607	1,499	100.0	4.7	44.3	20.1	30.9	4.6

[1] "Air-Conditioner Use" refers to the central air-conditioner or (if the household has only room air-conditioners) to the most-used room air-conditioner.
[2] An estimated 1.7 million households have both a central air-conditioner and one or more room air-conditioners.
[3] Gas includes LPG and natural gas.
[4] Does not include all new construction for 1993.
[5] Below 150 percent of poverty line or 60 percent of median State income.
NC = No cases in sample.
-- = Data not applicable.
Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.
Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.
Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.14. Central Air-Conditioning in U.S. Households, 1993

Housing Unit and Household Characteristics	Total Households (millions)	Cooled Floorspace (square feet per household)	Number of Cooling Degree-Days per Household		Air-Conditioner Use in Summer 1993[1] (percent of households)					RSE Row Factors
			1993	Normal	Total	Not at All	Only a Few Times	Quite a Bit	All Summer	
RSE Column Factors:	1.0	0.5	0.6	0.6	0.0	4.1	1.1	1.5	1.0	
Total	42.1	1,756	1,679	1,587	100.0	2.4	30.5	21.2	45.9	3.4
Type of Central Air-Conditioning[2]										
Electric	41.9	1,758	1,682	1,589	100.0	2.3	30.4	21.3	45.9	3.4
Without a Heat Pump	30.1	1,777	1,551	1,480	100.0	2.4	32.1	22.0	43.4	3.8
With a Heat Pump	11.9	1,710	2,015	1,867	100.0	2.2	26.1	19.4	52.3	6.0
Gas[3]	.1	1,151	848	789	100.0	Q	56.4	NC	Q	44.3
Census Region and Division										
Northeast	3.9	2,059	899	690	100.0	2.6	43.1	30.9	23.5	8.2
New England	.6	2,210	736	525	100.0	Q	38.4	32.2	27.9	15.4
Middle Atlantic	3.3	2,030	929	721	100.0	2.8	43.9	30.6	22.7	8.9
Midwest	10.8	2,017	845	867	100.0	2.0	45.1	25.0	27.9	7.3
East North Central	6.9	2,027	811	794	100.0	Q	45.0	26.0	26.8	7.7
West North Central	3.9	1,997	905	997	100.0	1.6	45.2	23.3	29.8	11.5
South	21.8	1,644	2,259	2,115	100.0	1.6	16.4	17.3	64.7	4.6
South Atlantic	11.3	1,658	2,284	2,072	100.0	1.7	17.7	19.4	61.2	6.4
East South Central	3.5	1,815	1,793	1,670	100.0	1.2	15.2	18.7	64.9	9.4
West South Central	7.0	1,537	2,450	2,405	100.0	Q	14.9	13.3	70.2	7.5
West	5.5	1,476	1,573	1,544	100.0	6.4	48.8	22.3	22.5	9.3
Mountain	1.7	1,474	2,737	2,620	100.0	1.9	37.5	22.1	38.5	13.0
Pacific	3.8	1,478	1,048	1,059	100.0	8.4	53.9	22.4	15.3	12.1
Urban Status										
Urban	34.5	1,740	1,724	1,617	100.0	2.5	30.6	21.9	45.0	3.9
Central City	11.7	1,455	1,975	1,865	100.0	2.1	30.2	19.0	48.6	6.5
Suburban	22.8	1,886	1,595	1,490	100.0	2.7	30.8	23.3	43.2	4.6
Rural	7.6	1,830	1,478	1,451	100.0	1.9	30.2	18.3	49.6	6.1
Cooling Degree-Days (CDD)-1993										
2,000 or More	13.6	1,524	2,854	2,724	100.0	1.1	16.5	14.2	68.1	5.7
1,000 to 1,999	16.5	1,752	1,456	1,324	100.0	2.4	26.8	24.7	46.2	5.7
500 to 999	8.7	2,019	762	713	100.0	2.4	45.5	27.5	24.6	8.8
Fewer than 500	3.2	2,049	336	490	100.0	7.5	68.1	16.6	7.8	9.4
Year of Construction										
1939 or Before	2.6	2,131	1,197	1,165	100.0	2.7	40.1	17.3	39.9	11.5
1940 to 1949	1.5	1,771	1,287	1,195	100.0	NC	40.6	25.7	33.7	14.5
1950 to 1959	4.8	1,826	1,571	1,469	100.0	3.8	36.8	19.8	39.7	8.3
1960 to 1969	6.9	1,807	1,566	1,482	100.0	1.9	32.5	20.0	45.6	8.2
1970 to 1979	9.1	1,629	1,789	1,701	100.0	3.1	29.3	22.3	45.3	6.8
1980 to 1984	5.8	1,537	1,945	1,839	100.0	2.4	27.3	18.4	51.8	7.8
1985 to 1987	4.2	1,723	1,866	1,738	100.0	Q	24.0	27.8	47.9	10.1
1988 to 1990	3.5	1,842	1,614	1,522	100.0	2.8	30.2	20.5	46.6	8.7
1991 to 1993[4]	3.7	1,921	1,692	1,604	100.0	2.3	23.6	21.4	52.7	10.2
Number of Rooms Air-Conditioned in Summer 1993										
None	.9	--	1,252	1,208	100.0	100.0	--	--	--	19.2
One or Two	.8	586	2,106	1,969	100.0	Q	44.2	12.1	41.6	17.6
Three	3.3	747	1,864	1,737	100.0	NC	43.5	22.0	34.5	8.7
Four	6.2	1,063	1,823	1,708	100.0	Q	36.5	25.2	38.0	7.4
Five or More	30.7	2,078	1,634	1,549	100.0	.1	28.5	21.2	50.2	4.0
Central Air-Conditioner Age (excludes systems for more than one housing unit)										
Less than 2 Years	5.5	1,859	1,691	1,602	100.0	3.1	25.5	22.0	49.4	7.5
2 to 4 Years	6.4	1,929	1,608	1,514	100.0	.9	28.6	19.7	50.8	7.2
5 to 9 Years	10.6	1,904	1,694	1,595	100.0	1.5	27.2	23.6	47.6	6.4
10 to 19 Years	10.2	1,822	1,677	1,595	100.0	1.9	30.6	21.7	45.8	6.1
20 Years or More	3.6	1,720	1,446	1,382	100.0	9.8	38.3	15.8	36.1	11.0
Don't Know	4.8	1,101	1,943	1,830	100.0	1.4	38.1	20.0	40.5	10.5

See footnotes at end of table.

Table 3.14. Central Air-Conditioning in U.S. Households, 1993 (Continued)

Housing Unit and Household Characteristics	Total Households (millions)	Cooled Floorspace (square feet per household)	Number of Cooling Degree-Days per Household		Air-Conditioner Use in Summer 1993[1] (percent of households)					RSE Row Factors
			1993	Normal	Total	Not at All	Only a Few Times	Quite a Bit	All Summer	
RSE Column Factors:	1.0	0.5	0.6	0.6	0.0	4.1	1.1	1.5	1.0	
Type and Ownership of Housing Unit										
Single-Family Detached	27.3	2,103	1,604	1,526	100.0	2.3	28.3	20.4	48.9	4.2
Owned	25.0	2,144	1,583	1,504	100.0	2.3	28.5	20.7	48.6	4.3
Rented	2.3	1,654	1,829	1,770	100.0	Q	26.9	17.2	52.9	12.1
Single-Family Attached	3.8	1,611	1,704	1,573	100.0	1.7	27.2	24.4	46.6	9.9
Owned	2.6	1,784	1,713	1,582	100.0	2.1	28.2	24.0	45.6	10.8
Rented	1.2	1,242	1,685	1,553	100.0	Q	25.1	25.3	48.8	16.9
Multifamily (2 to 4 units)	1.4	1,050	1,871	1,774	100.0	Q	24.8	25.9	45.3	14.2
Owned	.3	1,554	2,002	1,878	100.0	Q	Q	Q	58.1	33.0
Rented	1.1	906	1,834	1,744	100.0	Q	27.0	26.6	41.6	15.8
Multifamily (5 or more units)	7.2	898	1,903	1,760	100.0	1.9	43.0	21.5	33.6	9.1
Owned	.8	1,223	2,068	1,941	100.0	NC	41.8	Q	43.1	31.6
Rented	6.3	854	1,881	1,735	100.0	2.2	43.2	22.4	32.3	8.7
Mobile Home	2.4	1,016	1,725	1,679	100.0	4.8	26.0	21.9	47.3	12.2
Owned	2.1	1,050	1,717	1,673	100.0	Q	25.8	22.7	47.9	12.7
Rented	.3	730	1,785	1,731	100.0	Q	27.9	15.2	41.6	28.5
1993 Family Income Category										
Less than $5,000	1.1	967	1,949	1,806	100.0	Q	35.6	21.1	39.2	15.1
$5,000 to $9,999	2.8	1,075	1,836	1,735	100.0	2.4	40.0	17.8	39.8	11.5
$10,000 to $14,999	3.3	1,221	1,748	1,643	100.0	6.1	38.8	17.7	37.4	9.6
$15,000 to $19,999	3.4	1,418	1,759	1,675	100.0	Q	33.9	21.1	42.8	8.6
$20,000 to $24,999	3.5	1,447	1,664	1,598	100.0	Q	37.3	17.7	42.7	8.7
$25,000 to $34,999	7.0	1,647	1,684	1,593	100.0	3.2	30.8	19.8	46.2	6.5
$35,000 to $49,999	8.6	1,845	1,710	1,634	100.0	2.2	26.5	21.8	49.6	5.8
$50,000 to $74,999	7.2	2,099	1,600	1,506	100.0	1.1	24.9	23.4	50.6	6.7
$75,000 or More	5.3	2,576	1,508	1,388	100.0	Q	26.5	25.7	46.8	8.5
Below Poverty Line										
100 Percent	3.3	1,047	1,898	1,794	100.0	5.1	39.4	20.7	34.8	9.1
125 Percent	4.8	1,113	1,787	1,686	100.0	4.4	42.1	19.6	33.8	8.0
Eligible for Federal Assistance[5]	8.5	1,211	1,793	1,684	100.0	4.3	39.2	18.0	38.4	7.1
Pays for Electricity for Central Air-Conditioning										
Yes	40.6	1,785	1,679	1,587	100.0	2.4	30.0	21.2	46.4	3.5
No	1.3	947	1,780	1,652	100.0	NC	43.3	24.6	32.1	19.6

[1] "Air-Conditioner Use" refers to the central air-conditioner for those households that also have one or more room air-conditioners.
[2] An estimated 1.7 million households have both a central air-conditioner and one or more room air-conditioners.
[3] Gas includes LPG and natural gas.
[4] Does not include all new construction for 1993.
[5] Below 150 percent of poverty line or 60 percent of median State income.
NC = No cases in sample.
-- = Data not applicable.
Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.
Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.
Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.15. Room Air-Conditioning in U.S. Households, 1993

Housing Unit and Household Characteristics	Total Households (millions)	Cooled Floorspace (square feet per household)	Number of Cooling Degree-Days per Household		Air-Conditioner Use in Summer 1993[1] (percent of households)					RSE Row Factors
			1993	Normal	Total	Not at All	Only a Few Times	Quite a Bit	All Summer	
RSE Column Factors:	0.9	0.6	0.6	0.6	0.0	2.6	0.8	1.4	1.5	
Total	25.7	877	1,326	1,219	100.0	5.9	52.1	23.5	18.5	4.5
Number of Room Air-Conditioners										
1 Unit	17.3	741	1,282	1,187	100.0	7.8	54.6	20.9	16.7	4.7
2 Units	6.3	1,053	1,385	1,261	100.0	1.8	48.5	28.3	21.4	8.7
3 or More Units	2.2	1,469	1,509	1,355	100.0	2.1	42.2	31.2	24.5	12.2
Census Region and Division										
Northeast	7.6	803	953	748	100.0	3.5	60.1	27.2	9.1	6.5
New England	1.7	705	763	550	100.0	6.9	62.3	20.3	10.5	8.4
Middle Atlantic	5.9	830	1,006	803	100.0	Q	59.5	29.1	8.8	6.9
Midwest	6.6	963	777	786	100.0	7.8	59.3	22.0	10.9	7.0
East North Central	4.5	996	773	733	100.0	6.7	60.4	21.3	11.6	9.1
West North Central	2.1	891	783	898	100.0	10.3	57.0	23.5	9.2	10.6
South	9.0	926	2,123	1,971	100.0	3.7	34.8	25.2	36.3	6.9
South Atlantic	4.2	834	2,131	1,880	100.0	3.7	35.2	23.2	37.9	10.4
East South Central	2.1	1,025	1,747	1,639	100.0	Q	35.7	27.5	34.8	8.4
West South Central	2.7	994	2,399	2,371	100.0	4.9	33.3	26.8	35.0	12.5
West	2.6	711	1,070	1,104	100.0	15.2	70.2	10.9	Q	14.0
Mountain	.6	719	1,192	1,282	100.0	18.6	62.3	13.9	Q	20.5
Pacific	2.0	709	1,034	1,052	100.0	14.2	72.5	10.0	Q	17.1
Urban Status										
Urban	19.0	841	1,345	1,207	100.0	6.7	52.9	24.0	16.3	5.5
Central City	8.3	707	1,440	1,294	100.0	7.0	46.8	28.7	17.4	7.5
Suburban	10.7	945	1,272	1,141	100.0	6.5	57.6	20.4	15.5	7.0
Rural	6.8	980	1,272	1,251	100.0	3.4	49.9	22.1	24.6	7.8
Cooling Degree-Days (CDD)--1993										
2,000 or More	4.2	861	2,861	2,704	100.0	5.8	36.1	24.5	33.6	9.7
1,000 to 1,999	9.5	924	1,459	1,304	100.0	4.5	41.2	30.5	23.8	6.8
500 to 999	9.7	842	780	681	100.0	6.1	63.2	20.2	10.4	6.5
Fewer than 500	2.4	865	330	468	100.0	10.2	78.0	7.9	3.9	11.2
Year of Construction										
1939 or Before	7.9	903	1,116	1,032	100.0	4.8	58.3	24.6	12.3	7.8
1940 to 1949	2.5	887	1,460	1,326	100.0	4.2	43.5	26.0	26.4	11.5
1950 to 1959	4.5	964	1,551	1,410	100.0	6.4	46.1	26.7	20.9	10.0
1960 to 1969	4.5	831	1,401	1,251	100.0	7.0	51.9	21.7	19.5	10.3
1970 to 1979	4.0	813	1,277	1,221	100.0	7.0	51.1	20.5	21.5	9.4
1980 to 1984	1.1	864	1,353	1,255	100.0	Q	55.9	19.8	21.8	15.6
1985 to 1987	.6	907	1,640	1,534	100.0	Q	54.4	27.3	14.7	21.0
1988 to 1990	.4	731	1,071	953	100.0	Q	59.8	11.8	21.9	20.4
1991 to 1993[2]	.3	559	1,496	1,474	100.0	25.1	39.5	17.8	Q	29.1
Number of Rooms Air-Conditioned in Summer 1993										
None	1.0	--	1,192	1,135	100.0	100.0	--	--	--	10.7
One or Two	10.5	420	1,230	1,104	100.0	3.1	61.0	21.9	14.0	4.8
Three	4.3	789	1,269	1,156	100.0	2.1	50.3	27.9	19.7	7.9
Four	3.6	1,070	1,337	1,254	100.0	Q	50.2	25.7	22.8	8.7
Five or More	6.3	1,727	1,541	1,446	100.0	3.5	45.5	25.5	25.5	8.3
Age of Most-Used Room Air-Conditioner										
Less than 2 Years	3.0	820	1,585	1,456	100.0	5.1	49.8	18.9	26.1	10.0
2 to 4 Years	4.8	880	1,356	1,224	100.0	4.1	46.4	27.8	21.7	8.5
5 to 9 Years	7.6	944	1,342	1,229	100.0	3.4	51.1	26.0	19.6	7.2
10 to 19 Years	5.4	893	1,193	1,103	100.0	6.1	55.4	21.5	17.0	7.7
20 Years or More	2.1	1,006	1,166	1,103	100.0	13.1	57.8	22.1	7.0	14.3
Don't Know	2.9	641	1,327	1,236	100.0	10.3	56.3	19.9	13.5	9.5

See footnotes at end of table.

Table 3.15. Room Air-Conditioning in U.S. Households, 1993 (Continued)

Housing Unit and Household Characteristics	Total Households (millions)	Cooled Floorspace (square feet per household)	Number of Cooling Degree-Days per Household		Air-Conditioner Use in Summer 1993[1] (percent of households)					RSE Row Factors
			1993	Normal	Total	Not at All	Only a Few Times	Quite a Bit	All Summer	
RSE Column Factors:	0.9	0.6	0.6	0.6	0.0	2.6	0.8	1.4	1.5	
Type and Ownership of Housing Unit										
Single-Family Detached	15.3	1,068	1,376	1,287	100.0	5.4	53.4	21.7	19.5	5.4
Owned	12.9	1,131	1,322	1,236	100.0	5.4	54.4	21.7	18.5	5.7
Rented	2.4	726	1,667	1,565	100.0	5.3	47.9	21.7	25.1	11.6
Single-Family Attached	1.6	592	1,364	1,134	100.0	10.3	54.3	24.5	10.9	14.7
Owned	1.1	616	1,271	1,052	100.0	Q	60.0	24.8	Q	15.1
Rented	.5	547	1,547	1,294	100.0	Q	43.3	23.9	24.9	20.0
Multifamily (2 to 4 units)	2.7	677	1,305	1,147	100.0	4.3	52.5	27.2	15.9	11.5
Owned	.6	941	1,101	960	100.0	9.3	62.0	19.3	Q	17.0
Rented	2.1	595	1,368	1,205	100.0	Q	49.6	29.7	17.9	11.9
Multifamily (5 or more units)	4.5	551	1,133	1,031	100.0	6.5	50.0	27.5	16.1	10.9
Owned	.5	896	863	849	100.0	Q	63.8	23.1	Q	34.6
Rented	4.0	503	1,170	1,056	100.0	6.2	48.1	28.1	17.7	11.0
Mobile Home	1.6	601	1,394	1,302	100.0	6.5	43.3	23.2	27.1	11.6
Owned	1.2	622	1,347	1,280	100.0	Q	43.4	25.2	25.7	13.8
Rented	.4	546	1,517	1,360	100.0	Q	43.0	17.6	31.0	19.1
1993 Family Income Category										
Less than $5,000	1.4	561	1,581	1,436	100.0	Q	31.9	22.2	40.6	11.2
$5,000 to $9,999	3.7	630	1,432	1,343	100.0	7.2	48.9	23.0	20.9	8.4
$10,000 to $14,999	3.5	721	1,443	1,343	100.0	6.6	51.9	19.4	22.2	8.8
$15,000 to $19,999	2.8	885	1,453	1,336	100.0	Q	52.4	23.5	21.0	12.7
$20,000 to $24,999	2.2	783	1,320	1,231	100.0	4.4	45.7	28.7	21.2	10.3
$25,000 to $34,999	3.5	1,016	1,273	1,182	100.0	6.0	59.8	20.0	14.3	9.4
$35,000 to $49,999	4.5	1,014	1,189	1,073	100.0	4.8	56.2	26.3	12.6	9.4
$50,000 to $74,999	2.4	1,096	1,147	1,036	100.0	8.5	55.8	20.0	15.7	10.3
$75,000 or More	1.5	1,174	1,160	1,014	100.0	7.2	52.1	33.7	7.0	13.7
Below Poverty Line										
100 Percent	5.0	621	1,582	1,472	100.0	5.7	45.2	20.3	28.8	7.3
125 Percent	7.0	652	1,541	1,441	100.0	6.3	45.2	22.0	26.4	6.2
Eligible for Federal Assistance[3]	10.3	701	1,458	1,351	100.0	5.3	48.8	21.9	24.0	5.5
Pays for Electricity for Air-Conditioning										
Yes	24.2	904	1,318	1,216	100.0	6.0	53.0	23.1	18.0	4.7
No	1.5	468	1,454	1,264	100.0	Q	38.1	30.9	26.7	15.8

[1] "Air-Conditioner Use" refers to the room air-conditioner for an estimated 1.7 million households that have both central and room air-conditioners.
[2] Does not include all new construction for 1993.
[3] Below 150 percent of poverty line or 60 percent of median State income.
NC = No cases in sample.
-- = Data not applicable.
Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.
Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.
Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.16a. Appliances by Census Region and Climate Zone, Million U.S. Households, 1993

Appliance Types and Characteristics	Total	Census Region				Climate Zone					RSE Row Factors
						Fewer than 2,000 CDD and –				More than 2,000 CDD and Fewer than 4,000 HDD	
		Northeast	Midwest	South	West	More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factors:	0.4	0.9	0.8	0.7	0.8	2.3	1.3	1.3	1.4	1.1	
Total	96.6	19.5	23.3	33.5	20.4	8.7	26.5	22.5	17.8	21.2	6.7
Air-Conditioner	66.1	11.3	17.1	29.9	7.8	4.4	16.1	16.4	10.8	18.5	5.8
Central[1]	42.1	3.9	10.8	21.8	5.5	2.4	8.9	9.2	7.1	14.5	8.7
Electric	41.9	3.9	10.7	21.8	5.5	2.4	8.8	9.2	7.1	14.5	8.7
Without a Heat Pump	30.1	3.0	9.8	13.9	3.5	2.3	7.6	6.2	4.4	9.7	9.8
With a Heat Pump	11.9	1.0	1.0	7.9	2.0	Q	1.3	3.0	2.6	4.8	14.1
Gas[2]	.1	Q	Q	Q	Q	Q	Q	Q	Q	Q	91.1
Room[1]	25.7	7.6	6.6	9.0	2.6	2.1	7.3	7.6	4.1	4.6	9.8
1 Unit	17.3	4.6	4.7	5.7	2.3	1.7	5.1	4.4	3.2	3.0	10.2
2 Units	6.3	2.3	1.6	2.2	.2	.4	1.9	2.3	.7	1.1	17.2
3 or More Units	2.2	.8	.4	1.0	Q	Q	.4	1.0	.2	.5	19.8
Clothes Washer	74.5	14.4	18.4	27.0	14.7	7.3	20.5	17.0	13.2	16.4	4.8
Clothes Dryer	68.8	12.5	18.0	24.6	13.6	6.9	19.6	15.5	11.7	15.1	4.9
Electric	54.7	9.0	13.2	22.5	10.0	5.7	14.4	12.7	9.0	12.8	5.6
Natural Gas	13.4	3.4	4.5	1.9	3.6	1.0	5.0	2.6	2.7	2.1	11.5
LPG	.7	.2	.3	.2	Q	.2	.1	.2	Q	Q	37.3
Dishwasher	43.7	8.1	9.4	15.7	10.5	3.6	11.4	10.5	7.8	10.5	5.5
Fans	88.4	17.5	22.1	31.2	17.6	7.9	24.9	19.9	15.5	20.1	5.6
Ceiling	51.8	8.6	13.2	22.1	8.0	3.9	13.6	11.1	8.6	14.6	5.9
1	22.3	4.7	6.5	6.6	4.4	2.3	7.3	4.8	3.7	4.1	7.9
2	12.0	2.1	3.4	4.7	1.7	.9	3.2	3.0	2.1	2.8	9.8
3 or more	17.6	1.8	3.3	10.7	1.9	.7	3.1	3.4	2.8	7.7	10.2
Exhaust (attic)	9.0	2.2	2.0	3.4	1.4	.3	2.4	2.8	1.4	2.1	13.2
Exhaust (other)	55.8	11.0	14.1	19.7	11.0	5.1	16.3	13.0	8.9	12.5	5.7
Portable	50.0	10.4	13.4	14.9	11.3	5.1	15.0	10.4	9.3	10.2	5.4
Whole-House	4.1	.8	1.0	1.6	.7	Q	1.2	1.0	.6	1.1	15.2
Window	12.9	4.1	4.4	3.3	1.2	1.3	5.3	3.6	1.5	1.3	11.1
Freezer	33.4	5.0	10.2	12.5	5.7	4.6	9.2	7.0	5.6	6.9	8.0
1	29.5	4.6	9.3	10.5	5.1	4.0	8.5	6.0	4.9	6.0	7.7
2 or more	3.8	.4	.9	2.0	.6	.6	.7	1.0	.7	.9	19.0
Defrost Method											
Frost-Free	11.2	1.7	2.6	4.9	2.0	1.1	2.5	2.9	2.2	2.5	10.5
Manual	22.1	3.3	7.6	7.5	3.8	3.5	6.7	4.2	3.4	4.4	10.1
Type											
Upright	16.9	3.1	4.4	5.6	3.8	2.0	4.9	3.6	2.7	3.6	8.8
Chest	16.5	1.9	5.8	6.9	1.9	2.5	4.3	3.4	2.9	3.3	12.2
Age											
Less than 2 Years	2.1	.4	.7	.7	.3	.2	.8	.4	.3	.4	20.4
2 to 4 Years	3.4	.5	1.1	1.3	.5	.6	.9	.7	.5	.8	13.7
5 to 9 Years	6.6	.8	1.6	3.1	1.1	.9	1.6	1.1	1.5	1.5	13.0
10 to 19 Years	12.6	1.9	3.8	4.8	2.2	1.6	3.6	3.0	1.8	2.7	8.9
20 Years or More	7.7	1.3	2.8	2.2	1.5	1.3	2.3	1.6	1.2	1.3	13.0
Don't Know	.9	Q	.3	.4	.2	Q	.2	.2	.2	.2	26.7

See footnotes at end of table.

Table 3.16b. Appliances by Census Region and Climate Zone, Percent of U.S. Households, 1993

Appliance Types and Characteristics	Total	Census Region				Climate Zone					RSE Row Factors
						Fewer than 2,000 CDD and --				More than 2,000 CDD and Fewer than 4,000 HDD	
						More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factors:	0.5	1.1	1.0	0.9	1.0	1.4	1.1	1.1	1.2	1.1	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0
Air-Conditioner	68.4	58.0	73.5	89.2	38.4	50.9	60.6	72.9	60.7	87.1	3.6
Central[1]	43.5	20.2	46.3	65.1	27.2	27.8	33.6	40.8	39.8	68.5	6.7
Electric	43.4	20.1	46.0	65.1	27.0	27.5	33.3	40.8	39.7	68.4	6.7
Without a Heat Pump	31.1	15.2	41.9	41.4	17.1	26.3	28.6	27.4	24.8	45.6	7.7
With a Heat Pump	12.3	4.9	4.1	23.7	9.9	Q	4.8	13.3	14.9	22.9	13.1
Gas[2]	.1	Q	Q	Q	Q	Q	Q	Q	Q	Q	76.2
Room[1]	26.6	39.0	28.4	26.7	12.7	23.8	27.7	33.9	23.1	21.8	7.7
1 Unit	17.9	23.5	20.1	17.1	11.5	19.1	19.1	19.4	18.0	14.3	8.0
2 Units	6.5	11.6	6.7	6.7	1.0	4.1	7.0	10.0	3.9	5.2	15.5
3 or More Units	2.2	3.9	1.6	2.9	Q	Q	1.6	4.4	1.1	2.3	18.9
Clothes Washer	77.1	74.0	79.0	80.5	72.1	84.1	77.4	75.7	74.2	77.5	2.1
Clothes Dryer	71.2	64.4	77.2	73.6	66.8	79.2	73.8	69.1	66.0	71.1	2.4
Electric	56.6	46.2	56.6	67.2	48.9	65.1	54.3	56.7	50.7	60.6	3.9
Natural Gas	13.9	17.4	19.4	5.7	17.7	12.0	19.0	11.5	15.0	10.1	11.2
LPG	.7	.8	1.1	.7	Q	2.2	.5	1.0	Q	Q	36.3
Dishwasher	45.2	41.5	40.4	46.9	51.6	41.0	43.0	46.6	43.8	49.5	4.0
Fans	91.5	89.9	94.8	93.2	86.5	91.0	94.2	88.8	87.2	94.8	1.3
Ceiling	53.6	44.2	56.6	65.9	39.1	44.7	51.4	49.6	48.5	68.7	3.6
1	23.0	24.3	28.0	19.8	21.5	26.4	27.7	21.2	21.0	19.5	5.8
2	12.4	10.8	14.6	14.1	8.5	10.4	12.1	13.5	11.7	13.0	7.5
3 or more	18.2	9.1	14.0	31.9	9.1	7.9	11.6	14.9	15.8	36.2	8.4
Exhaust (attic)	9.3	11.5	8.6	10.2	6.8	3.3	9.1	12.6	8.0	9.7	11.7
Exhaust (other)	57.8	56.6	60.5	58.8	54.1	59.1	61.7	57.8	49.8	58.9	3.3
Portable	51.8	53.5	57.7	44.5	55.5	59.1	56.6	46.5	52.0	48.2	3.3
Whole-House	4.2	4.1	4.3	4.7	3.4	Q	4.6	4.6	3.5	5.1	14.0
Window	13.4	21.2	18.7	9.8	5.7	14.6	19.8	16.0	8.3	6.4	9.1
Freezer	34.5	25.5	43.8	37.2	28.1	52.8	34.9	31.3	31.3	32.7	5.5
1	30.5	23.4	40.1	31.3	25.2	46.1	32.2	26.9	27.4	28.5	5.1
2 or more	4.0	2.1	3.7	5.9	2.9	6.6	2.7	4.4	3.9	4.2	17.5
Defrost Method											
Frost-Free	11.6	8.7	11.3	14.7	9.6	12.9	9.5	12.7	12.3	12.0	8.6
Manual	22.9	16.8	32.5	22.5	18.5	39.8	25.4	18.6	19.0	20.7	7.8
Type											
Upright	17.4	15.7	18.9	16.7	18.6	23.6	18.6	16.1	15.0	17.0	6.7
Chest	17.1	9.7	24.9	20.5	9.5	29.2	16.3	15.2	16.3	15.7	9.7
Age											
Less than 2 Years	2.2	1.8	3.2	2.2	1.4	2.3	3.0	1.7	1.8	2.0	19.3
2 to 4 Years	3.5	2.7	4.7	4.0	2.3	6.6	3.3	2.9	3.1	3.7	11.5
5 to 9 Years	6.8	4.3	6.8	9.1	5.5	9.8	5.9	5.0	8.6	7.2	11.0
10 to 19 Years	13.0	9.9	16.1	14.2	10.6	17.9	13.5	13.4	10.0	12.6	7.8
20 Years or More	8.0	6.5	11.9	6.5	7.4	15.0	8.6	7.3	6.5	6.3	10.9
Don't Know	.9	Q	1.1	1.2	.9	Q	.6	.9	1.3	.9	24.9

See footnotes at end of table.

Table 3.16a. Appliances by Census Region and Climate Zone, Million U.S. Households, 1993 (Continued)

Appliance Types and Characteristics	Total	Census Region				Climate Zone					RSE Row Factors
						Fewer than 2,000 CDD and --				More than 2,000 CDD and Fewer than 4,000 HDD	
						More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factors:	0.4	0.9	0.8	0.7	0.8	2.3	1.3	1.3	1.4	1.1	
Freezer Size											
Very Small (Less than 11 cf)	2.8	0.5	0.9	0.9	0.5	0.5	0.8	0.5	0.5	0.6	16.7
Small (11-14 cf)	6.7	.8	2.1	2.7	1.1	.9	1.7	1.3	1.2	1.6	14.0
Medium (15-18 cf)	12.1	1.8	3.9	4.5	2.0	1.8	3.4	2.5	2.1	2.3	10.9
Large (19-22 cf)	9.5	1.5	2.8	3.6	1.7	1.2	2.7	2.2	1.4	2.1	11.6
Very Large (23 or More cf)	2.2	.4	.5	.7	.5	.2	.7	.6	.3	.4	20.6
Heaters (other)											
Hot Tub or Spa	2.8	.3	.4	1.0	1.1	.2	.6	.6	.6	.9	17.2
Electric	1.9	.2	.4	.6	.7	.2	.4	.5	.3	.5	21.9
Natural Gas	.7	Q	Q	.2	.4	Q	Q	Q	.2	.3	26.3
LPG/Other	.2	Q	NC	.1	Q	Q	Q	Q	NC	.1	27.8
Portable Space	11.8	1.8	3.1	4.8	2.0	1.0	2.8	2.9	2.5	2.5	12.0
Electric	9.8	1.5	2.4	3.9	2.0	.8	2.2	2.3	2.2	2.3	11.9
Kerosene	2.3	.4	.9	1.1	Q	.2	.7	.8	.4	.3	24.1
Swimming Pool	.8	Q	Q	.4	.3	Q	Q	.1	.2	.4	30.8
Natural Gas	.5	Q	Q	.2	.1	Q	Q	Q	Q	.2	43.6
Electric/LPG/Other	.4	Q	Q	.1	Q	Q	Q	Q	Q	.1	50.7
Waterbed Heaters	11.9	1.4	4.1	4.1	2.3	1.4	3.9	2.3	1.5	2.7	10.8
1	9.7	1.2	3.3	3.3	1.9	1.1	3.2	1.9	1.2	2.3	11.1
2 or More	2.2	.2	.8	.8	.4	.3	.7	.4	.3	.5	21.6
Waterbed Heaters											
Used All Year	9.9	1.2	3.6	3.3	1.8	1.3	3.4	1.8	1.2	2.2	11.4
1	8.2	1.0	3.0	2.7	1.5	1.0	2.8	1.6	1.0	1.8	11.6
2 or More	1.7	.2	.6	.7	.3	.3	.6	.3	.2	.4	23.2
Office Equipment	23.3	4.8	5.5	7.2	5.8	2.1	6.4	5.9	4.1	4.9	7.7
Facsimile Machine	2.9	.6	.4	1.0	.8	.1	.6	.8	.7	.7	13.2
Laser Printer	5.3	.9	1.0	1.8	1.6	.3	1.2	1.4	1.2	1.1	10.5
Personal Computer	22.6	4.7	5.3	6.9	5.7	2.0	6.2	5.6	4.0	4.8	7.7
Photocopier	1.5	.3	.4	.6	.3	.1	.4	.4	.2	.3	20.0
Oven	94.3	18.8	22.9	32.6	20.0	8.4	25.9	22.0	17.5	20.5	3.8
Electric	59.4	9.2	13.5	23.8	12.9	6.0	15.3	13.3	11.1	13.9	5.3
Natural Gas	30.7	8.6	8.4	6.9	6.7	1.7	9.9	7.9	5.8	5.4	8.0
LPG	4.2	1.0	1.0	1.9	.4	.7	.9	.7	.6	1.3	21.9
Pumps (Electric)	18.2	4.0	4.6	6.5	3.2	2.6	5.1	3.9	2.6	4.0	10.0
Hot Tub or Spa	2.8	.3	.4	1.0	1.1	.2	.6	.6	.6	.9	17.2
Swimming Pool	4.6	1.1	.5	1.9	1.1	.2	.9	1.0	1.0	1.5	13.6
Well Water	13.0	3.0	4.0	4.5	1.4	2.4	4.0	2.8	1.4	2.4	13.5
Range	96.1	19.3	23.3	33.3	20.2	8.6	26.4	22.4	17.7	21.0	3.7
Electric	59.3	9.3	13.6	23.9	12.6	6.2	15.3	13.2	10.9	13.8	5.5
Natural Gas	32.2	9.0	8.7	7.2	7.2	1.7	10.3	8.2	6.1	5.8	8.9
LPG	4.6	1.0	1.0	2.2	.4	.7	.9	.8	.6	1.5	21.0

See footnotes at end of table.

Table 3.16b. Appliances by Census Region and Climate Zone, Percent of U.S. Households, 1993 (Continued)

Appliance Types and Characteristics	Total	Census Region				Climate Zone					RSE Row Factors
						Fewer than 2,000 CDD and --				More than 2,000 CDD and Fewer than 4,000 HDD	
		Northeast	Midwest	South	West	More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factors:	0.5	1.1	1.0	0.9	1.0	1.4	1.1	1.1	1.2	1.1	
Freezer Size											
Very Small (Less than 11 cf)	2.9	2.6	3.9	2.6	2.3	5.8	3.0	2.1	2.6	2.6	14.4
Small (11-14 cf)	6.9	4.0	9.2	8.2	5.3	10.1	6.5	5.8	7.0	7.3	11.8
Medium (15-18 cf)	12.6	9.3	16.6	13.4	9.7	20.8	12.7	11.2	11.9	11.0	8.4
Large (19-22 cf)	9.9	7.5	11.9	10.8	8.3	13.8	10.0	9.7	8.0	9.8	9.5
Very Large (23 or More cf)	2.3	2.1	2.2	2.2	2.6	2.2	2.6	2.5	1.8	1.9	19.5
Heaters (other)											
Hot Tub or Spa	2.9	1.3	1.9	3.0	5.6	2.7	2.1	2.5	3.3	4.3	16.7
Electric	2.0	1.2	1.6	1.9	3.5	2.5	1.7	2.0	1.9	2.3	21.4
Natural Gas	.7	Q	Q	.7	1.9	Q	Q	Q	1.4	1.3	24.3
LPG/Other	.2	Q	NC	.4	Q	Q	Q	Q	NC	.7	25.3
Portable Space	12.2	9.5	13.3	14.3	10.0	11.0	10.6	12.9	14.3	11.9	10.6
Electric	10.1	7.7	10.2	11.7	9.8	9.2	8.3	10.4	12.2	10.9	10.5
Kerosene	2.4	1.9	3.7	3.2	Q	1.9	2.6	3.6	2.3	1.3	23.5
Swimming Pool	.9	Q	Q	1.1	1.5	Q	Q	.6	1.4	1.7	29.6
Natural Gas	.5	Q	Q	.6	.7	Q	Q	Q	Q	1.1	42.8
Electric/LPG/Other	.4	Q	Q	.4	Q	Q	Q	Q	Q	.6	44.7
Waterbed Heaters	12.3	7.1	17.8	12.2	11.1	16.6	14.8	10.1	8.4	12.9	8.6
1	10.0	6.0	14.3	9.8	9.1	12.9	12.0	8.3	6.9	10.7	9.2
2 or More	2.3	1.1	3.4	2.4	2.0	3.7	2.8	1.8	1.5	2.2	19.8
Waterbed Heaters Used All Year	10.3	6.1	15.3	9.9	8.9	14.9	12.8	8.2	6.8	10.3	9.1
1	8.5	5.1	12.8	8.0	7.5	11.5	10.7	6.9	5.8	8.3	9.5
2 or More	1.8	1.0	2.5	2.0	1.4	3.3	2.1	1.3	1.0	2.0	21.5
Office Equipment	24.2	24.8	23.6	21.4	28.7	23.9	24.1	26.1	23.2	23.1	6.6
Facsimile Machine	3.0	3.2	1.8	3.1	4.1	1.5	2.2	3.6	3.7	3.5	16.2
Laser Printer	5.5	4.8	4.5	5.3	7.7	3.9	4.7	6.1	6.8	5.4	9.7
Personal Computer	23.3	23.9	22.8	20.5	28.0	23.3	23.3	25.0	22.4	22.4	6.6
Photocopier	1.6	1.4	1.8	1.7	1.5	1.5	1.6	1.8	1.4	1.5	19.6
Oven	97.6	96.7	98.3	97.3	98.1	96.6	97.9	97.9	98.3	96.8	NE
Electric	61.5	47.2	58.1	71.2	63.2	68.7	57.6	59.2	62.3	65.4	4.2
Natural Gas	31.8	44.4	36.2	20.6	33.1	19.7	37.3	35.1	32.6	25.6	7.8
LPG	4.3	4.9	4.2	5.6	1.8	8.2	3.3	3.3	3.5	5.9	23.9
Pumps (Electric)	18.8	20.3	19.8	19.3	15.5	29.4	19.2	17.4	14.9	18.9	8.8
Hot Tub or Spa	2.9	1.3	1.9	3.0	5.6	2.7	2.1	2.5	3.3	4.3	16.7
Swimming Pool	4.8	5.5	2.3	5.6	5.4	2.5	3.4	4.3	5.8	6.9	13.2
Well Water	13.4	15.5	17.1	13.4	7.1	27.7	15.2	12.3	7.7	11.2	12.5
Range	99.4	99.2	99.8	99.4	99.3	99.5	99.6	99.5	99.4	99.2	NE
Electric	61.4	47.6	58.3	71.3	61.9	70.8	57.6	58.9	61.3	65.0	4.2
Natural Gas	33.3	46.1	37.5	21.6	35.5	20.1	38.9	36.6	34.5	27.3	7.8
LPG	4.7	5.3	4.2	6.5	1.9	8.5	3.4	3.7	3.6	7.0	23.1

See footnotes at end of table.

Table 3.16a. Appliances by Census Region and Climate Zone, Million U.S. Households, 1993 (Continued)

Appliance Types and Characteristics	Total	Census Region				Climate Zone					RSE Row Factors
						Fewer than 2,000 CDD and --				More than 2,000 CDD and Fewer than 4,000 HDD	
		Northeast	Midwest	South	West	More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factors:	0.4	0.9	0.8	0.7	0.8	2.3	1.3	1.3	1.4	1.1	
Refrigerators	96.5	19.4	23.3	33.4	20.3	8.7	26.5	22.4	17.8	21.1	6.7
1	82.1	16.8	18.8	29.4	17.2	6.8	22.0	19.5	15.2	18.6	4.0
2 or More	14.4	2.6	4.5	4.1	3.2	1.9	4.5	2.9	2.6	2.5	9.1
Defrost Method											
Frost-Free	81.8	16.1	19.3	29.4	17.0	7.1	22.3	18.6	14.9	19.0	4.8
Manual	14.7	3.4	4.0	4.0	3.4	1.6	4.2	3.8	2.9	2.2	9.8
Type											
2-Doors (top and bottom)	71.3	14.6	18.3	24.8	13.5	7.1	20.4	16.5	11.6	15.7	4.2
2-Doors (side-by-side)	16.6	2.9	3.2	6.1	4.4	.8	4.0	3.7	3.9	4.2	8.0
Regular (single door)	7.9	1.8	1.7	2.3	2.1	.8	1.9	2.0	2.1	1.1	11.2
Half-Size/Other	.8	Q	Q	.3	.3	Q	.1	.2	.3	Q	27.7
Age											
Less than 2 Years	11.9	2.3	2.8	4.2	2.5	1.0	3.3	2.3	2.3	2.9	10.7
2 to 4 Years	16.2	3.5	3.7	5.8	3.3	1.4	4.1	3.9	3.2	3.5	8.7
5 to 9 Years	28.1	5.9	6.4	10.2	5.6	2.5	7.5	6.9	4.8	6.4	7.0
10 to 19 Years	24.9	4.7	6.1	8.5	5.6	2.6	6.9	5.6	4.4	5.4	7.6
20 Years or More	7.0	1.7	2.3	1.7	1.4	.7	2.3	1.9	1.3	.8	12.3
Don't Know	8.3	1.4	2.0	3.0	1.9	.5	2.4	1.7	1.7	2.0	12.8
Size											
Very Small (Less than 11 cf)	1.3	.3	.4	.3	.3	Q	.4	.3	.3	.2	29.8
Small (11-14 cf)	8.9	2.2	2.4	2.6	1.7	.8	2.7	2.2	1.6	1.6	11.1
Medium (15-18 cf)	52.4	10.3	13.4	18.1	10.6	5.4	14.6	12.6	9.0	10.9	5.2
Large (19-22 cf)	30.0	5.7	6.5	11.0	6.8	2.2	8.0	6.3	6.1	7.3	6.6
Very Large (23 or More cf)	3.9	.9	.6	1.4	1.0	.2	.8	1.0	.9	1.0	17.5
Through-the-Door Ice Service											
Yes	10.1	1.6	1.9	4.2	2.5	.5	2.2	2.2	2.6	2.7	10.1
No	86.3	17.9	21.4	29.2	17.8	8.2	24.3	20.2	15.2	18.4	4.5
Television Sets	95.4	19.3	22.9	33.1	20.0	8.5	26.3	22.1	17.6	21.0	6.8
Color	94.4	19.1	22.8	32.7	19.9	8.3	26.0	21.9	17.4	20.8	6.8
1	39.2	7.4	9.4	13.8	8.5	4.0	10.6	8.2	7.7	8.7	6.5
2	35.2	7.7	8.4	12.0	7.2	2.8	10.1	8.5	6.3	7.6	5.9
3	14.3	2.8	3.4	5.1	3.1	1.1	3.8	3.6	2.6	3.3	8.5
4	4.2	.8	1.2	1.2	.9	.4	1.2	1.1	.5	.9	11.4
5 or More	1.5	.4	.4	.5	.3	.1	.4	.5	.3	.3	18.9
Black/White	19.0	3.9	5.5	6.5	3.1	1.7	5.9	4.6	2.9	3.9	7.6
1	16.9	3.5	4.7	5.8	2.8	1.6	5.1	4.1	2.6	3.6	8.2
2 or More	2.1	.3	.8	.7	.3	.2	.8	.5	.3	.3	20.1

See footnotes at end of table.

Table 3.16b. Appliances by Census Region and Climate Zone, Percent of U.S. Households, 1993 (Continued)

Appliance Types and Characteristics	Total	Census Region				Climate Zone					RSE Row Factors
						Fewer than 2,000 CDD and --				More than 2,000 CDD and Fewer than 4,000 HDD	
		Northeast	Midwest	South	West	More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factors:	0.5	1.1	1.0	0.9	1.0	1.4	1.1	1.1	1.2	1.1	
Refrigerators	99.8	99.7	100.0	99.7	99.9	100.0	100.0	99.6	99.9	99.7	NE
1	85.0	86.4	80.5	87.6	84.3	78.0	83.1	86.6	85.5	87.9	1.2
2 or More	14.9	13.3	19.5	12.1	15.6	22.0	16.9	13.0	14.4	11.8	6.8
Defrost Method											
Frost-Free	84.6	82.4	83.0	87.7	83.4	81.4	84.0	82.6	83.8	89.4	1.6
Manual	15.2	17.3	17.0	12.0	16.5	18.6	16.0	16.9	16.1	10.4	8.2
Type											
2-Doors (top and bottom)	73.7	75.2	78.5	74.0	66.5	81.7	77.0	73.5	65.1	74.0	1.7
2-Doors (side-by-side)	17.1	14.8	13.8	18.1	21.6	9.3	15.1	16.3	21.7	20.0	6.6
Regular (single door)	8.2	9.1	7.2	6.9	10.4	8.8	7.4	9.0	11.6	5.1	10.4
Half-Size/Other	.8	Q	Q	.8	1.4	Q	.5	.8	1.5	Q	27.0
Age											
Less than 2 Years	12.3	11.8	12.2	12.6	12.3	11.5	12.4	10.4	13.1	13.7	9.1
2 to 4 Years	16.8	17.8	15.8	17.2	16.3	16.1	15.6	17.4	18.1	16.7	7.7
5 to 9 Years	29.1	30.5	27.5	30.4	27.4	28.6	28.5	30.6	27.2	30.1	4.8
10 to 19 Years	25.8	23.9	26.2	25.3	27.7	30.0	25.9	25.1	24.5	25.7	5.4
20 Years or More	7.3	8.6	9.8	5.2	6.7	8.4	8.7	8.4	7.1	4.0	10.6
Don't Know	8.6	7.1	8.6	9.1	9.5	5.4	8.9	7.7	9.8	9.6	11.7
Size											
Very Small (Less than 11 cf)	1.3	1.5	1.6	.9	1.4	Q	1.6	1.2	1.5	1.1	27.9
Small (11-14 cf)	9.2	11.3	10.5	7.7	8.1	9.1	10.2	9.7	8.9	7.7	9.4
Medium (15-18 cf)	54.3	53.1	57.3	54.1	52.2	62.1	55.1	56.0	50.4	51.5	2.9
Large (19-22 cf)	31.0	29.3	27.8	32.7	33.5	25.8	30.1	28.2	34.3	34.6	4.7
Very Large (23 or More cf)	4.0	4.5	2.8	4.2	4.7	2.3	3.0	4.5	4.9	4.8	17.1
Through-the-Door Ice Service											
Yes	10.5	8.0	8.0	12.5	12.4	5.2	8.3	9.7	14.5	12.7	9.2
No	89.3	91.7	92.0	87.2	87.5	94.8	91.7	89.8	85.4	87.0	1.1
Television Sets	98.8	99.3	98.4	98.9	98.4	97.4	99.1	98.5	98.8	99.1	NE
Color	97.7	98.1	97.6	97.5	97.8	96.0	98.3	97.4	97.7	97.9	NE
1	40.5	38.2	40.3	41.3	41.9	46.3	40.0	36.6	43.1	41.0	4.0
2	36.4	39.3	35.9	35.8	35.2	32.1	38.0	37.7	35.4	35.7	4.0
3	14.8	14.5	14.4	15.1	15.1	12.2	14.2	16.0	14.5	15.7	7.2
4	4.3	4.2	5.3	3.7	4.2	4.4	4.6	5.0	2.9	4.3	10.2
5 or More	1.6	1.9	1.7	1.6	1.3	1.1	1.5	2.1	1.8	1.2	18.5
Black/White	19.6	19.9	23.4	19.5	15.3	19.9	22.3	20.5	16.1	18.2	6.0
1	17.5	18.2	20.1	17.3	14.0	18.0	19.2	18.2	14.5	16.9	6.3
2 or More	2.2	1.8	3.3	2.1	1.3	1.9	3.1	2.2	1.7	1.3	19.5

See footnotes at end of table.

Table 3.16a. Appliances by Census Region and Climate Zone, Million U.S. Households, 1993 (Continued)

Appliance Types and Characteristics	Total	Census Region				Climate Zone					RSE Row Factors
		Northeast	Midwest	South	West	Fewer than 2,000 CDD and – More than 7,000 HDD	Fewer than 2,000 CDD and – 5,500 to 7,000 HDD	Fewer than 2,000 CDD and – 4,000 to 5,499 HDD	Fewer than 2,000 CDD and – Fewer than 4,000 HDD	More than 2,000 CDD and Fewer than 4,000 HDD	
RSE Column Factors:	0.4	0.9	0.8	0.7	0.8	2.3	1.3	1.3	1.4	1.1	
Water Heaters[3]	95.5	18.8	23.3	33.1	20.3	8.4	26.3	22.1	17.8	21.1	6.8
Electric	37.1	4.5	6.9	19.2	6.5	3.8	7.4	8.8	6.3	10.8	9.7
For One Housing Unit	35.8	4.4	6.6	18.8	6.0	3.6	7.2	8.6	5.9	10.6	9.9
For Two or More Units[4]	1.3	Q	.3	.4	.5	Q	.3	.2	.4	.3	16.9
Natural Gas	51.2	10.1	15.3	12.6	13.2	3.7	16.7	10.4	10.9	9.3	7.6
For One Housing Unit	44.0	7.7	13.1	12.0	11.2	3.3	14.0	8.4	9.4	8.8	8.4
For Two or More Units[4]	7.2	2.4	2.2	.6	2.0	.5	2.7	2.0	1.5	.5	17.1
Fuel Oil	4.0	3.8	Q	Q	Q	.3	1.4	2.3	Q	Q	13.1
For One Housing Unit	2.2	2.1	Q	Q	Q	.2	1.1	.8	Q	Q	15.9
For Two or More Units[4]	1.8	1.7	Q	Q	NC	Q	.2	1.5	NC	NC	22.7
LPG	2.8	.4	1.0	1.0	.4	.5	.6	Q	.4	.7	27.6
Other	.4	.1	Q	.1	.2	Q	Q	Q	Q	.1	46.8
Water Heater (for one housing unit)											
Age											
Less than 2 Years	11.4	1.9	2.7	4.5	2.4	1.2	3.0	2.1	2.0	3.1	10.9
2 to 4 Years	13.9	2.5	3.3	5.3	2.8	1.4	3.8	2.8	2.7	3.2	9.2
5 to 9 Years	21.4	3.8	5.1	8.1	4.4	1.6	5.8	5.2	3.8	5.0	9.0
10 to 19 Years	19.5	3.3	5.2	7.0	4.0	2.0	5.2	4.5	3.5	4.3	8.6
20 Years or More	7.5	1.7	2.2	2.0	1.5	.7	2.5	1.7	1.2	1.4	14.0
Don't Know	11.3	1.3	2.3	5.1	2.6	.6	2.7	2.0	2.7	3.3	12.0
Size											
Small	17.7	2.8	3.8	7.8	3.4	1.2	4.3	3.4	3.3	5.4	8.9
Medium	44.1	7.3	11.5	16.7	8.6	4.0	12.3	9.5	8.0	10.3	7.1
Large	18.0	3.2	4.3	5.7	4.7	2.0	5.0	4.1	3.5	3.4	10.1
Don't Know	5.2	1.3	1.1	1.7	1.1	.4	1.4	1.3	1.1	1.1	16.2
Other Appliances											
Electric											
Air Cleaner	5.4	1.1	1.8	1.4	1.0	.5	2.1	1.2	.6	1.0	13.8
Aquarium	4.1	.9	1.4	1.1	.8	.5	1.5	.8	.6	.7	14.9
Dehumidifier	9.1	2.5	5.1	1.2	.2	2.1	4.3	2.0	.3	.3	16.1
Evaporative Cooler	2.7	Q	Q	.5	2.2	Q	.3	.1	.7	1.5	26.3
Humidifier	13.7	3.0	6.1	2.6	2.0	2.3	5.2	3.4	1.4	1.3	10.6
Microwave Oven	81.3	15.1	20.8	27.8	17.5	7.6	22.9	18.5	14.7	17.6	3.7
Toaster Oven	27.5	7.2	4.5	10.1	5.7	1.6	6.9	7.1	5.4	6.6	7.4
Outdoor Gas Light[2]	.5	Q	Q	.3	Q	NC	Q	Q	Q	.2	46.7
Outdoor Grill	27.5	7.0	7.4	8.5	4.7	3.3	9.1	6.5	3.5	5.2	7.2
Natural Gas	2.8	.6	.6	.9	.6	Q	.9	.4	.6	.8	30.0
LPG	24.8	6.4	6.8	7.6	4.0	3.3	8.2	6.1	2.9	4.4	7.9

[1] An estimated 1.7 million households have both a central air-conditioner and one or more room air-conditioners.

[2] Gas includes LPG and natural gas.

[3] A count of households where the main water heater is totally separate from the space-heating system. Excluded from this count are 0.8 million households that use water heated by a space-heating system. Of these, most (0.6 million) employ a fuel oil space-heating system to heat water for washing and bathing. Also excluded are 0.3 million households that do not heat water using a typical water heater.

[4] An unknown number may be heated by the space-heating system.

NC = No cases in sample.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

cf = Cubic feet.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.16b. Appliances by Census Region and Climate Zone, Percent of U.S. Households, 1993 (Continued)

Appliance Types and Characteristics	Total	Census Region				Climate Zone					RSE Row Factors
						Fewer than 2,000 CDD and --				More than 2,000 CDD and Fewer than 4,000 HDD	
		Northeast	Midwest	South	West	More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factors:	0.5	1.1	1.0	0.9	1.0	1.4	1.1	1.1	1.2	1.1	
Water Heaters[3]	98.9	96.5	100.0	99.0	99.7	96.5	99.1	98.2	99.9	99.3	NE
Electric	38.4	23.0	29.7	57.4	32.0	43.2	28.1	39.2	35.6	51.1	7.6
For One Housing Unit	37.0	22.6	28.2	56.2	29.4	41.0	27.1	38.1	33.3	49.8	7.9
For Two or More Units[4]	1.4	Q	1.5	1.2	2.5	2.2	1.0	1.0	2.2	1.2	35.3
Natural Gas	53.0	51.7	65.8	37.6	64.8	43.0	63.2	46.5	61.5	43.9	6.1
For One Housing Unit	45.5	39.3	56.4	35.7	55.0	37.6	53.0	37.6	53.0	41.5	6.7
For Two or More Units[4]	7.5	12.4	9.4	1.9	9.7	5.4	10.3	8.9	8.5	2.4	17.8
Fuel Oil	4.1	19.3	Q	Q	Q	3.7	5.2	10.1	Q	Q	15.1
For One Housing Unit	2.3	10.7	Q	Q	Q	2.6	4.3	3.6	Q	Q	18.3
For Two or More Units[4]	1.9	8.6	Q	Q	NC	Q	.9	6.5	NC	NC	23.5
LPG	2.9	1.9	4.3	3.0	2.0	6.3	2.4	2.0	2.3	3.5	27.0
Other	.5	.6	Q	.4	.9	Q	Q	Q	Q	.7	39.6
Water Heater (for one housing unit)											
Age											
Less than 2 Years	11.8	9.6	11.4	13.4	11.7	13.6	11.5	9.5	11.1	14.5	9.0
2 to 4 Years	14.4	12.8	14.3	15.8	13.6	16.3	14.2	12.5	15.1	15.2	7.8
5 to 9 Years	22.2	19.7	21.8	24.2	21.6	18.9	21.8	23.1	21.6	23.6	6.9
10 to 19 Years	20.1	17.0	22.2	20.8	19.7	23.2	19.6	20.1	19.6	20.1	6.4
20 Years or More	7.8	9.0	9.5	6.0	7.6	8.5	9.5	7.5	6.6	6.6	12.4
Don't Know	11.7	6.6	9.8	15.1	13.0	6.8	10.2	8.8	15.1	15.6	10.6
Size											
Small	18.3	14.2	16.2	23.3	16.6	13.9	16.4	15.2	18.5	25.7	6.9
Medium	45.6	37.2	49.5	50.0	42.2	45.5	46.5	42.4	45.0	48.7	4.6
Large	18.6	16.7	18.5	17.0	23.0	23.0	18.7	18.2	19.7	16.0	8.4
Don't Know	5.4	6.5	4.8	5.2	5.5	4.7	5.2	5.7	6.0	5.2	15.3
Other Appliances											
Electric											
Air Cleaner	5.5	5.7	7.8	4.3	4.9	5.5	8.0	5.2	3.4	4.7	12.8
Aquarium	4.3	4.6	5.8	3.2	4.0	5.4	5.7	3.8	3.6	3.1	13.7
Dehumidifier	9.4	13.1	21.7	3.7	1.0	24.4	16.1	8.9	1.9	1.6	13.8
Evaporative Cooler	2.8	Q	Q	1.5	10.6	Q	1.2	.5	3.7	7.2	26.1
Humidifier	14.1	15.5	26.1	7.7	9.7	27.0	19.7	15.0	7.7	6.3	8.5
Microwave Oven	84.1	77.7	89.4	83.1	86.0	87.4	86.3	82.3	82.8	83.0	1.4
Toaster Oven	28.5	36.8	19.4	30.2	28.2	17.9	26.1	31.7	30.2	31.1	6.4
Outdoor Gas Light[2]	.6	Q	Q	.9	Q	NC	Q	Q	Q	.9	32.2
Outdoor Grill	28.5	35.7	31.7	25.5	22.9	38.5	34.2	29.0	19.5	24.3	5.4
Natural Gas	2.9	2.9	2.6	2.8	3.2	Q	3.3	1.9	3.4	3.7	18.9
LPG	25.7	32.8	29.1	22.7	19.8	37.6	31.0	27.1	16.1	20.7	6.2

[1] An estimated 1.7 million households have both a central air-conditioner and one or more room air-conditioners.
[2] Gas includes LPG and natural gas.
[3] A count of households where the main water heater is totally separate from the space-heating system. Excluded from this count are 0.8 million households that use water heated by a space-heating system. Of these, most (0.6 million) employ a fuel oil space-heating system to heat water for washing and bathing. Also excluded are 0.3 million households that do not heat water using a typical water heater.
[4] An unknown number may be heated by the space-heating system.
NC = No cases in sample.
Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.
NE = RSE row factor not estimated because RSE's for all statistics in this row are between 0.0 and 1.0 percent.
cf = Cubic feet.
Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.
Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.17a. Appliances by Year of Construction, Million U.S. Households, 1993

Appliance Types and Characteristics	Total	Year of Construction									RSE Row Factors
		1991 to 1993[1]	1988 to 1990	1985 to 1987	1980 to 1984	1970 to 1979	1960 to 1969	1950 to 1959	1940 to 1949	1939 or Before	
RSE Column Factors:	0.4	1.7	1.4	1.4	1.1	0.8	1.0	0.9	1.3	0.8	
Total	96.6	4.5	4.7	5.5	8.5	18.1	15.0	13.1	6.9	20.4	5.3
Air-Conditioner	66.1	3.9	3.9	4.7	6.9	12.8	11.0	8.7	3.9	10.3	6.1
Central[2]	42.1	3.7	3.5	4.2	5.8	9.1	6.9	4.8	1.5	2.6	7.3
Electric	41.9	3.6	3.5	4.1	5.8	9.1	6.8	4.8	1.5	2.6	7.3
Without a Heat Pump	30.1	2.5	2.3	2.4	3.9	6.4	5.5	3.7	1.3	2.1	8.7
With a Heat Pump	11.9	1.2	1.3	1.7	2.0	2.7	1.3	1.1	.2	.4	15.0
Gas[3]	.1	Q	NC	Q	NC	NC	Q	NC	NC	Q	105.4
Room[2]	25.7	.3	.4	.6	1.1	4.0	4.5	4.5	2.5	7.9	11.5
1 Unit	17.3	.3	.3	.5	.7	3.0	3.4	2.7	1.6	4.9	12.3
2 Units	6.3	Q	.1	.1	.2	.9	.9	1.3	.6	2.2	18.8
3 or More Units	2.2	NC	Q	Q	.2	Q	.2	.5	.3	.8	25.3
Clothes Washer	74.5	3.8	4.1	4.5	6.6	13.2	10.8	11.3	5.5	14.8	6.0
Clothes Dryer	68.8	3.7	4.0	4.4	6.2	12.6	10.2	10.1	4.7	12.9	5.3
Electric	54.7	3.2	3.4	3.7	5.2	10.7	7.9	7.0	3.8	9.8	6.5
Natural Gas	13.4	.5	.6	.6	.9	1.8	2.2	3.0	1.0	2.9	14.2
LPG	.7	.1	Q	Q	Q	Q	Q	Q	Q	.2	38.1
Dishwasher	43.7	3.3	3.4	3.8	5.0	9.2	6.3	5.7	1.9	5.2	7.3
Fans	88.4	4.4	4.5	5.2	7.9	16.8	13.9	12.0	6.0	17.6	5.4
Ceiling	51.8	3.2	3.2	3.5	4.8	9.9	7.8	6.7	3.5	9.3	6.3
1	22.3	1.3	1.0	1.3	2.0	4.5	3.2	2.7	1.8	4.5	9.1
2	12.0	.5	.9	.8	1.2	2.1	2.0	1.4	.9	2.2	11.5
3 or more	17.6	1.4	1.2	1.4	1.6	3.3	2.7	2.5	.8	2.6	10.5
Exhaust (attic)	9.0	.2	.5	.4	.9	2.2	1.6	1.5	.5	1.2	14.4
Exhaust (other)	55.8	3.9	3.7	4.2	6.1	12.0	9.2	6.7	2.8	7.3	6.3
Portable	50.0	1.3	1.9	2.2	4.4	9.5	8.3	6.7	3.9	11.8	6.5
Whole-House	4.1	.1	.2	.2	.5	1.0	.7	.8	.2	.5	19.2
Window	12.9	.2	.5	.5	.6	1.9	1.6	1.8	1.4	4.5	12.4
Freezer	33.4	1.2	1.7	1.7	2.1	6.4	5.0	5.1	2.8	7.3	7.0
1	29.5	1.1	1.5	1.4	2.0	5.7	4.5	4.6	2.5	6.2	7.1
2 or more	3.8	.1	.2	.3	.2	.7	.5	.5	.3	1.1	21.3
Defrost Method											
Frost-Free	11.2	.4	.7	.8	.9	2.1	1.6	1.7	.9	2.2	11.2
Manual	22.1	.8	.9	1.0	1.3	4.3	3.4	3.4	1.9	5.1	8.9
Type											
Upright	16.9	.7	.8	1.0	1.1	3.2	2.5	2.6	1.4	3.4	10.1
Chest	16.5	.4	.9	.7	1.0	3.2	2.4	2.5	1.4	3.9	10.0
Age											
Less than 2 Years	2.1	.1	.1	.1	.3	.4	.3	.3	Q	.4	24.7
2 to 4 Years	3.4	.2	.4	.2	.2	.6	.5	.4	.3	.7	18.9
5 to 9 Years	6.6	.4	.4	.5	.6	1.2	.9	.9	.6	1.1	14.2
10 to 19 Years	12.6	.3	.5	.6	.9	2.8	1.8	2.0	.9	2.9	10.8
20 Years or More	7.7	.1	.2	.2	.2	1.2	1.3	1.4	.9	2.1	14.8
Don't Know	.9	Q	Q	Q	Q	.2	Q	Q	.2	.2	31.1
Size											
Very Small (Less than 11 cf)	2.8	.1	.2	.1	.3	.6	.4	.4	.2	.6	20.2
Small (11-14 cf)	6.7	.3	.4	.4	.3	1.2	1.0	1.2	.6	1.3	15.6
Medium (15-18 cf)	12.1	.4	.7	.7	.7	2.3	1.8	1.7	1.2	2.6	10.9
Large (19-22 cf)	9.5	.3	.4	.4	.7	1.9	1.3	1.5	.8	2.2	12.7
Very Large (23 or More cf)	2.2	Q	Q	Q	Q	.5	.5	.4	Q	.6	22.8

See footnotes at end of table.

Table 3.17b. Appliances by Year of Construction, Percent of U.S. Households, 1993

Appliance Types and Characteristics	Total	Year of Construction									RSE Row Factors
		1991 to 1993[1]	1988 to 1990	1985 to 1987	1980 to 1984	1970 to 1979	1960 to 1969	1950 to 1959	1940 to 1949	1939 or Before	
RSE Column Factors:	0.4	1.5	1.3	1.3	1.2	0.8	1.0	0.9	1.3	0.8	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0
Air-Conditioner	68.4	87.9	83.3	85.9	81.0	70.7	73.0	66.7	56.6	50.5	2.9
Central[2]	43.5	82.3	74.7	75.6	68.9	50.3	45.6	36.8	21.7	12.7	5.1
Electric	43.4	81.7	74.7	75.4	68.9	50.3	45.3	36.8	21.7	12.5	5.1
Without a Heat Pump	31.1	55.5	48.0	43.7	45.7	35.5	36.9	28.3	18.4	10.4	7.0
With a Heat Pump	12.3	26.1	26.6	31.7	23.2	14.8	8.4	8.5	3.4	2.1	13.4
Gas[3]	.1	Q	NC	Q	NC	NC	Q	NC	NC	Q	92.2
Room[2]	26.6	6.1	9.0	11.8	12.6	22.1	29.8	34.1	36.5	38.7	10.0
1 Unit	17.9	5.7	6.9	9.2	8.2	16.3	22.7	20.6	22.5	24.3	11.3
2 Units	6.5	Q	1.9	2.0	2.4	4.9	5.8	9.8	9.2	10.6	17.7
3 or More Units	2.2	NC	Q	Q	2.1	Q	1.4	3.6	4.9	3.8	24.0
Clothes Washer	77.1	84.1	87.6	82.3	77.7	72.6	71.9	86.2	79.3	72.6	2.6
Clothes Dryer	71.2	83.1	85.5	80.7	72.9	69.2	67.7	77.0	68.6	63.5	3.0
Electric	56.6	71.0	72.7	68.1	61.3	59.0	52.6	53.6	54.4	48.0	4.1
Natural Gas	13.9	10.7	11.7	11.0	11.2	9.8	14.6	22.9	14.0	14.3	13.1
LPG	.7	1.4	Q	Q	Q	Q	Q	Q	Q	1.2	38.9
Dishwasher	45.2	74.3	71.3	68.7	58.9	50.8	42.1	43.6	26.8	25.5	4.6
Fans	91.5	97.4	96.1	95.5	93.9	92.7	92.6	91.6	87.0	86.7	1.2
Ceiling	53.6	71.8	67.5	64.5	56.8	54.4	52.0	51.1	50.4	45.5	3.8
1	23.0	28.2	21.8	23.6	23.6	24.8	21.3	21.0	25.5	22.0	7.5
2	12.4	11.6	20.0	15.4	14.0	11.4	13.0	10.6	12.9	10.7	10.3
3 or more	18.2	32.0	25.7	25.5	19.1	18.2	17.7	19.5	12.0	12.8	9.4
Exhaust (attic)	9.3	5.3	11.3	7.6	10.6	12.1	10.7	11.3	6.9	5.9	13.7
Exhaust (other)	57.8	86.2	79.2	76.6	71.5	66.3	60.9	51.6	39.9	35.8	3.3
Portable	51.8	29.4	41.2	40.8	51.7	52.1	55.3	51.3	56.5	58.1	4.2
Whole-House	4.2	2.5	3.4	3.5	5.7	5.3	4.9	5.9	2.3	2.3	19.4
Window	13.4	5.6	9.8	8.7	7.2	10.3	10.4	13.8	19.9	22.3	11.5
Freezer	34.5	26.0	35.4	31.1	25.4	35.3	33.2	39.3	40.5	36.1	5.7
1	30.5	23.9	32.2	26.3	23.2	31.4	29.9	35.1	36.1	30.6	6.0
2 or more	4.0	2.1	3.2	4.8	2.2	4.0	3.2	4.1	4.4	5.4	21.4
Defrost Method											
Frost-Free	11.6	8.4	15.8	13.8	10.1	11.5	10.8	13.2	12.4	10.8	10.3
Manual	22.9	17.7	19.6	17.3	15.3	23.9	22.4	26.1	28.1	25.3	8.1
Type											
Upright	17.4	16.1	17.0	18.5	13.5	17.9	16.9	20.0	19.9	16.8	8.8
Chest	17.1	10.0	18.4	12.6	11.9	17.5	16.3	19.2	20.6	19.3	9.6
Age											
Less than 2 Years	2.2	3.2	2.7	2.0	3.2	2.3	2.2	2.2	Q	1.8	24.8
2 to 4 Years	3.5	3.5	8.4	3.4	2.0	3.4	3.4	2.8	4.0	3.7	18.5
5 to 9 Years	6.8	8.7	9.0	9.9	6.7	6.5	6.2	7.2	8.2	5.2	13.4
10 to 19 Years	13.0	7.1	9.7	10.8	10.1	15.5	11.9	15.1	12.4	14.4	9.9
20 Years or More	8.0	3.1	5.2	4.2	2.6	6.6	8.7	11.1	12.5	10.1	14.3
Don't Know	.9	Q	Q	Q	Q	1.1	Q	Q	2.2	.9	30.0
Size											
Very Small (Less than 11 cf)	2.9	2.0	3.5	2.0	3.5	3.0	2.7	2.8	2.7	3.0	19.8
Small (11-14 cf)	6.9	6.5	7.9	7.5	4.1	6.6	6.9	8.8	8.3	6.6	14.9
Medium (15-18 cf)	12.6	9.5	14.6	13.3	8.6	12.6	11.9	13.3	17.5	12.5	10.2
Large (19-22 cf)	9.9	6.6	8.5	7.6	8.1	10.5	8.7	11.6	11.4	11.0	12.0
Very Large (23 or More cf)	2.3	Q	Q	Q	Q	2.6	3.0	2.8	Q	3.0	21.6

See footnotes at end of table.

Table 3.17a. Appliances by Year of Construction, Million U.S. Households, 1993 (Continued)

Appliance Types and Characteristics	Total	Year of Construction									RSE Row Factors
		1991 to 1993[1]	1988 to 1990	1985 to 1987	1980 to 1984	1970 to 1979	1960 to 1969	1950 to 1959	1940 to 1949	1939 or Before	
RSE Column Factors:	0.4	1.7	1.4	1.4	1.1	0.8	1.0	0.9	1.3	0.8	
Heaters (other)											
Hot Tub or Spa	2.8	0.2	0.3	0.5	0.4	0.6	0.3	0.3	Q	0.2	21.6
Electric	1.9	.1	.2	.4	.2	.4	.2	.3	Q	Q	24.7
Natural Gas	.7	.1	.1	Q	Q	.2	Q	Q	Q	Q	32.7
LPG/Other	.2	Q	Q	Q	Q	Q	Q	NC	NC	NC	50.2
Portable Space	11.8	.3	.4	.6	1.0	1.7	1.8	1.7	0.9	3.4	12.8
Electric	9.8	.3	.3	.5	.9	1.5	1.5	1.5	.7	2.7	13.8
Kerosene	2.3	Q	.1	.1	.1	.4	.4	.3	.2	.8	29.0
Swimming Pool	.8	Q	Q	Q	.2	.2	Q	Q	Q	Q	38.9
Natural Gas	.5	Q	Q	Q	Q	Q	Q	Q	Q	Q	70.7
Electric/LPG/Other	.4	NC	Q	Q	Q	Q	Q	Q	Q	Q	67.9
Waterbed Heaters	11.9	.5	.8	.8	1.1	2.7	1.7	1.5	.7	2.0	11.6
1	9.7	.4	.7	.6	.9	2.2	1.4	1.3	.5	1.6	12.1
2 or More	2.2	.1	.1	.2	.2	.5	.3	.2	Q	.4	24.6
Waterbed Heaters Used All Year	9.9	.4	.7	.6	1.0	2.3	1.5	1.3	.6	1.5	12.3
1	8.2	.3	.6	.5	.7	2.0	1.3	1.1	.5	1.3	13.0
2 or More	1.7	.1	.1	.2	.2	.4	.2	.2	Q	.3	27.9
Office Equipment	23.3	1.5	1.6	1.8	2.5	4.4	3.2	3.1	1.0	4.2	9.4
Facsimile Machine	2.9	.2	.2	.2	.4	.5	.3	.5	Q	.5	20.6
Laser Printer	5.3	.3	.4	.4	.6	1.0	.6	.9	.3	.8	17.1
Personal Computer	22.6	1.4	1.6	1.8	2.4	4.3	3.2	2.9	.9	4.0	9.6
Photocopier	1.5	Q	.1	.1	.1	.3	.2	.3	Q	.3	28.2
Oven	94.3	4.4	4.6	5.4	8.3	17.8	14.7	12.7	6.7	19.7	5.3
Electric	59.4	3.3	3.4	3.8	6.0	13.4	10.0	6.9	3.6	9.0	6.6
Natural Gas	30.7	.9	.9	1.3	2.0	3.4	4.2	5.3	2.9	9.7	10.1
LPG	4.2	.2	.3	.2	.3	.9	.6	.4	.2	1.1	21.9
Pumps (Electric)	18.2	.9	1.1	1.2	1.6	3.7	3.0	2.6	.9	3.2	10.1
Hot Tub or Spa	2.8	.2	.3	.5	.4	.6	.3	.3	Q	.2	21.6
Swimming Pool	4.6	.1	.3	.2	.6	1.2	.8	.9	.2	.4	18.1
Well Water	13.0	.7	.7	.8	1.0	2.7	2.2	1.5	.7	2.8	12.7
Range	96.1	4.4	4.7	5.5	8.4	18.1	15.0	13.0	6.9	20.2	5.3
Electric	59.3	3.3	3.4	3.8	6.0	13.4	9.9	6.9	3.6	9.0	6.6
Natural Gas	32.2	.9	.9	1.4	2.1	3.7	4.4	5.7	3.0	10.0	9.8
LPG	4.6	.2	.3	.3	.3	1.0	.7	.4	.2	1.1	21.3

See footnotes at end of table.

Table 3.17b. Appliances by Year of Construction, Percent of U.S. Households, 1993 (Continued)

Appliance Types and Characteristics	Total	Year of Construction									RSE Row Factors
		1991 to 1993[1]	1988 to 1990	1985 to 1987	1980 to 1984	1970 to 1979	1960 to 1969	1950 to 1959	1940 to 1949	1939 or Before	
RSE Column Factors:	0.4	1.5	1.3	1.3	1.2	0.8	1.0	0.9	1.3	0.8	
Heaters (other)											
Hot Tub or Spa	2.9	3.6	6.8	8.3	5.2	3.2	1.9	2.5	Q	0.9	21.1
Electric	2.0	1.9	5.1	6.6	2.8	2.1	1.1	2.1	Q	Q	24.4
Natural Gas	.7	1.5	1.1	Q	Q	.9	Q	Q	Q	Q	32.7
LPG/Other	.2	Q	Q	Q	Q	Q	Q	NC	NC	NC	43.9
Portable Space	12.2	6.2	8.1	10.9	11.2	9.6	12.1	13.2	12.7	16.7	12.0
Electric	10.1	5.8	6.8	9.3	10.3	8.2	9.9	11.1	9.9	13.4	12.8
Kerosene	2.4	Q	1.5	1.8	1.2	1.9	2.8	2.4	2.7	3.8	28.9
Swimming Pool	.9	Q	Q	Q	1.9	1.1	Q	Q	Q	Q	36.0
Natural Gas	.5	Q	Q	Q	Q	Q	Q	Q	Q	Q	61.9
Electric/LPG/Other	.4	NC	Q	Q	Q	Q	Q	Q	Q	Q	59.4
Waterbed Heaters	12.3	11.9	17.0	13.9	13.2	15.1	11.5	11.7	9.7	9.8	10.6
1	10.0	9.2	14.4	11.0	10.4	12.3	9.5	10.1	7.7	7.8	11.3
2 or More	2.3	2.7	2.6	2.9	2.7	2.9	2.0	1.6	Q	2.0	24.0
Waterbed Heaters Used All Year	10.3	9.7	14.4	11.8	11.3	12.9	9.8	9.9	8.4	7.5	11.5
1	8.5	7.2	12.2	9.0	8.8	10.9	8.4	8.5	6.7	6.2	12.4
2 or More	1.8	2.5	2.1	2.8	2.6	2.0	1.4	1.3	Q	1.4	27.2
Office Equipment	24.2	33.0	34.6	33.2	29.7	24.3	21.5	23.8	14.4	20.4	7.4
Facsimile Machine	3.0	4.3	5.2	4.0	4.9	2.5	2.0	4.2	Q	2.3	19.8
Laser Printer	5.5	6.7	8.1	8.2	7.4	5.3	4.2	6.9	4.0	3.9	16.2
Personal Computer	23.3	32.0	34.0	32.5	28.8	23.7	21.0	22.3	13.6	19.6	7.6
Photocopier	1.6	Q	2.5	2.3	1.7	1.6	1.0	2.1	Q	1.5	27.6
Oven	97.6	97.7	98.0	98.0	97.8	98.0	98.0	97.1	97.7	96.9	NE
Electric	61.5	74.0	72.5	69.6	71.4	74.1	66.2	52.9	51.7	44.1	4.1
Natural Gas	31.8	19.1	19.2	24.5	23.6	18.9	27.8	40.9	42.7	47.7	8.6
LPG	4.3	4.7	6.3	3.9	3.1	5.2	4.0	3.0	3.3	5.2	22.0
Pumps (Electric)	18.8	19.1	22.9	22.7	19.4	20.6	20.0	19.9	12.7	15.6	9.6
Hot Tub or Spa	2.9	3.6	6.8	8.3	5.2	3.2	1.9	2.5	Q	.9	21.1
Swimming Pool	4.8	1.3	5.7	3.5	6.6	6.7	5.1	7.1	2.7	2.1	19.1
Well Water	13.4	15.3	14.0	14.4	11.8	14.8	14.8	11.5	9.6	13.5	12.4
Range	99.4	99.2	99.4	100.0	99.1	99.5	99.8	99.4	99.4	99.3	NE
Electric	61.4	73.3	73.2	69.1	70.6	73.9	66.0	52.6	52.3	44.4	4.2
Natural Gas	33.3	20.9	19.9	25.9	25.0	20.2	29.4	43.3	43.6	49.2	8.3
LPG	4.7	4.9	6.3	5.0	3.5	5.7	4.4	3.2	3.5	5.6	21.3

See footnotes at end of table.

Table 3.17a. Appliances by Year of Construction, Million U.S. Households, 1993 (Continued)

Appliance Types and Characteristics	Total	Year of Construction									RSE Row Factors
		1991 to 1993[1]	1988 to 1990	1985 to 1987	1980 to 1984	1970 to 1979	1960 to 1969	1950 to 1959	1940 to 1949	1939 or Before	
RSE Column Factors:	0.4	1.7	1.4	1.4	1.1	0.8	1.0	0.9	1.3	0.8	
Refrigerators	96.5	4.5	4.7	5.5	8.5	18.1	15.0	13.1	6.9	20.3	5.3
1	82.1	4.1	4.1	4.8	7.4	15.6	12.4	10.6	5.7	17.5	5.7
2 or More	14.4	.4	.6	.7	1.1	2.5	2.6	2.4	1.2	2.8	11.1
Defrost Method											
Frost-Free	81.8	4.3	4.3	5.0	7.3	15.2	12.6	11.4	5.7	15.9	5.7
Manual	14.7	.2	.4	.4	1.1	2.9	2.4	1.7	1.1	4.4	11.8
Type											
2-Doors (top and bottom)	71.3	3.2	3.5	4.4	6.4	13.6	11.1	9.2	4.9	15.0	6.0
2-Doors (side-by-side)	16.6	1.2	1.1	.9	1.7	3.1	2.6	2.6	1.1	2.4	10.1
Regular (single door)	7.9	Q	.2	.2	.4	1.2	1.2	1.2	.9	2.6	16.0
Half-Size/Other	.8	Q	Q	Q	Q	.2	Q	Q	Q	.2	41.7
Age											
Less than 2 Years	11.9	2.2	.3	.5	.9	2.1	1.8	1.4	.8	1.9	12.6
2 to 4 Years	16.2	1.2	1.8	.5	1.0	2.6	3.0	2.1	1.2	2.9	10.2
5 to 9 Years	28.1	.5	2.1	3.5	2.1	4.5	4.1	3.8	1.6	5.9	6.4
10 to 19 Years	24.9	.3	.3	.5	3.5	5.4	3.5	3.8	2.1	5.5	9.5
20 Years or More	7.0	Q	Q	Q	.2	1.4	1.3	1.0	.6	2.4	15.6
Don't Know	8.3	.2	.3	.4	.8	2.0	1.4	1.0	.4	1.7	16.0
Size											
Very Small (Less than 11 cf)	1.3	Q	Q	Q	Q	.2	.3	Q	Q	.5	30.6
Small (11-14 cf)	8.9	.3	.2	.4	.7	1.4	1.4	1.1	.8	2.6	15.7
Medium (15-18 cf)	52.4	2.4	2.7	3.2	4.7	10.0	8.5	6.6	3.5	10.9	6.2
Large (19-22 cf)	30.0	1.5	1.5	1.7	2.7	5.8	4.1	4.8	2.3	5.7	7.8
Very Large (23 or More cf)	3.9	.3	.3	.2	.4	.7	.6	.5	.2	.6	21.2
Through-the-Door Ice Service											
Yes	10.1	.9	.8	.7	1.2	1.9	1.4	1.4	.5	1.2	12.6
No	86.3	3.5	3.9	4.8	7.2	16.2	13.6	11.7	6.4	19.1	5.6
Television Sets	95.4	4.4	4.7	5.5	8.4	18.1	14.8	12.9	6.8	19.9	5.3
Color	94.4	4.4	4.7	5.4	8.3	18.0	14.5	12.8	6.8	19.5	5.3
1	39.2	1.6	1.4	1.9	3.4	7.5	6.2	4.5	2.8	9.7	7.2
2	35.2	1.8	1.9	2.1	3.0	6.7	5.2	4.9	2.5	7.0	7.5
3	14.3	.7	.9	1.0	1.2	2.5	2.4	2.4	1.1	2.1	10.6
4	4.2	.2	.3	.5	.5	.8	.5	.6	.2	.6	17.0
5 or More	1.5	Q	.1	.1	.2	.4	.2	.4	Q	Q	27.8
Black/White	19.0	.6	.9	.8	1.8	3.1	3.1	2.8	1.5	4.3	9.3
1	16.9	.6	.8	.8	1.6	2.8	2.8	2.5	1.3	3.7	9.6
2 or More	2.1	Q	.1	.0	.2	.3	.4	.3	.2	.5	27.1

See footnotes at end of table.

Table 3.17b. Appliances by Year of Construction, Percent of U.S. Households, 1993 (Continued)

Appliance Types and Characteristics	Total	Year of Construction									RSE Row Factors
		1991 to 1993[1]	1988 to 1990	1985 to 1987	1980 to 1984	1970 to 1979	1960 to 1969	1950 to 1959	1940 to 1949	1939 or Before	
RSE Column Factors:	0.4	1.5	1.3	1.3	1.2	0.8	1.0	0.9	1.3	0.8	
Refrigerators	99.8	100.0	100.0	100.0	100.0	99.8	99.8	100.0	99.5	99.6	NE
1	85.0	91.9	86.9	87.2	87.0	85.8	82.3	81.3	82.5	85.9	1.8
2 or More	14.9	8.1	13.1	12.8	13.0	14.0	17.5	18.7	17.0	13.7	10.6
Defrost Method											
Frost-Free	84.6	96.0	91.8	91.9	86.5	83.7	83.6	87.2	83.2	78.1	1.6
Manual	15.2	4.0	8.2	8.1	13.5	16.2	16.2	12.8	16.3	21.5	11.3
Type											
2-Doors (top and bottom)	73.7	70.8	73.3	79.7	75.2	75.1	74.1	70.7	70.5	73.9	2.5
2-Doors (side-by-side)	17.1	27.1	22.3	16.5	19.6	17.0	17.4	19.8	15.7	11.7	8.8
Regular (single door)	8.2	Q	3.7	2.8	4.6	6.7	7.9	9.4	12.5	12.9	15.5
Half-Size/Other	.8	Q	Q	Q	Q	1.1	Q	Q	Q	1.2	39.2
Age											
Less than 2 Years	12.3	49.8	5.6	10.0	10.7	11.4	11.7	10.5	12.1	9.2	11.0
2 to 4 Years	16.8	27.4	37.9	8.5	11.6	14.3	19.7	16.3	17.2	14.1	9.0
5 to 9 Years	29.1	11.0	44.2	64.5	25.0	24.9	27.1	28.8	23.8	29.0	6.4
10 to 19 Years	25.8	6.2	6.2	8.5	41.3	30.0	23.0	29.1	30.9	27.0	8.0
20 Years or More	7.3	Q	Q	Q	2.1	7.9	8.7	7.3	9.3	11.9	14.4
Don't Know	8.6	4.6	5.4	7.9	9.3	11.3	9.6	8.0	6.3	8.3	15.7
Size											
Very Small (Less than 11 cf)	1.3	Q	Q	Q	Q	1.2	1.9	Q	Q	2.5	31.1
Small (11-14 cf)	9.2	5.8	5.1	7.9	8.8	7.7	9.6	8.1	11.0	12.5	14.8
Medium (15-18 cf)	54.3	53.4	57.2	57.7	55.0	55.0	56.6	50.7	51.3	53.4	3.9
Large (19-22 cf)	31.0	32.6	31.0	30.2	31.6	31.8	27.6	36.4	33.3	28.2	6.1
Very Large (23 or More cf)	4.0	7.8	6.5	3.6	4.3	4.1	4.0	4.2	2.9	2.9	20.6
Through-the-Door Ice Service											
Yes	10.5	21.0	17.7	13.3	14.8	10.4	9.3	10.5	7.4	6.0	11.7
No	89.3	79.0	82.3	86.7	85.2	89.4	90.5	89.5	92.1	93.6	1.6
Television Sets	98.8	99.0	99.4	99.7	99.0	99.6	98.2	99.0	98.8	97.7	NE
Color	97.7	98.5	99.0	98.8	98.3	99.0	96.8	97.8	98.0	96.0	NE
1	40.5	35.5	30.5	33.7	40.7	41.6	41.4	34.8	41.0	47.7	5.5
2	36.4	41.4	39.6	37.5	36.0	37.1	34.5	37.4	36.8	34.5	5.3
3	14.8	15.5	19.8	17.7	14.3	13.8	16.0	18.2	16.4	10.2	9.3
4	4.3	5.0	6.0	8.3	5.5	4.5	3.5	4.5	2.8	3.0	16.7
5 or More	1.6	Q	3.1	1.5	1.8	2.0	1.4	2.8	Q	Q	27.2
Black/White	19.6	14.2	19.5	15.3	21.0	17.1	20.8	21.3	22.0	20.9	8.0
1	17.5	13.4	16.9	14.5	18.6	15.5	18.5	19.3	18.7	18.2	8.4
2 or More	2.2	Q	2.5	.9	2.4	1.6	2.3	2.0	3.2	2.7	26.4

See footnotes at end of table.

Table 3.17a. Appliances by Year of Construction, Million U.S. Households, 1993 (Continued)

Appliance Types and Characteristics	Total	Year of Construction									RSE Row Factors
		1991 to 1993[1]	1988 to 1990	1985 to 1987	1980 to 1984	1970 to 1979	1960 to 1969	1950 to 1959	1940 to 1949	1939 or Before	
RSE Column Factors:	0.4	1.7	1.4	1.4	1.1	0.8	1.0	0.9	1.3	0.8	
Water Heaters[4]	95.5	4.5	4.7	5.5	8.5	17.9	14.8	12.9	6.9	19.9	5.3
Electric	37.1	2.1	2.7	2.9	4.5	9.3	4.9	3.6	2.0	5.2	8.6
For One Housing Unit	35.8	2.1	2.6	2.7	4.4	8.9	4.6	3.4	2.0	4.9	8.7
For Two or More Units[5]	1.3	Q	Q	Q	Q	.3	.3	Q	Q	.3	44.2
Natural Gas	51.2	2.1	1.8	2.3	3.7	7.5	9.0	8.3	4.2	12.3	8.0
For One Housing Unit	44.0	2.0	1.7	2.2	3.3	5.9	7.3	7.8	3.4	10.4	8.7
For Two or More Units[5]	7.2	Q	.1	Q	.3	1.6	1.7	.5	.8	2.0	20.1
Fuel Oil	4.0	.1	.1	.1	.1	.5	.5	.8	.4	1.5	22.5
For One Housing Unit	2.2	.1	.1	.1	Q	.3	.3	.5	.2	.6	23.8
For Two or More Units[5]	1.8	Q	Q	NC	Q	Q	.2	.3	.2	.9	33.2
LPG	2.8	.2	.1	.2	.2	.5	.4	.3	.2	.8	24.4
Other	.4	Q	NC	Q	Q	.2	Q	Q	Q	Q	51.6
Water Heater (for one housing unit)											
Age											
Less than 2 Years	11.4	2.6	.1	.4	.7	1.6	1.8	1.6	.7	1.9	13.9
2 to 4 Years	13.9	1.5	2.0	.2	.9	2.1	1.8	1.9	.8	2.7	11.6
5 to 9 Years	21.4	Q	2.1	4.0	1.4	2.5	2.8	3.2	1.6	3.8	9.1
10 to 19 Years	19.5	NC	Q	.1	3.8	5.6	2.3	2.3	1.3	4.0	10.1
20 Years or More	7.5	NC	Q	Q	.2	1.5	2.0	1.2	.6	2.0	17.6
Don't Know	11.3	.2	.3	.5	.9	2.5	1.9	1.8	.8	2.3	14.2
Size											
Small	17.7	.6	.7	1.0	1.5	3.6	2.4	2.6	1.4	4.0	10.2
Medium	44.1	2.4	2.6	2.8	4.4	7.7	7.2	6.1	2.9	7.9	7.3
Large	18.0	1.0	1.1	1.2	1.5	3.6	2.3	2.5	1.2	3.6	10.6
Don't Know	5.2	.3	.2	.3	.6	1.0	.7	.8	.3	1.2	18.7
Other Appliances											
Electric											
Air Cleaner	5.4	.3	.4	.2	.5	1.2	1.0	.6	.3	.8	17.2
Aquarium	4.1	.2	.2	.2	.4	.8	.7	.6	.2	.9	19.3
Dehumidifier	9.1	.3	.4	.4	.5	1.4	1.8	1.4	.7	2.0	15.8
Evaporative Cooler	2.7	Q	Q	.1	.3	.6	.5	.7	.2	.2	27.0
Humidifier	13.7	.6	.7	.8	1.3	2.3	2.2	1.9	.8	2.9	10.8
Microwave Oven	81.3	4.1	4.3	4.9	7.5	15.8	12.7	10.9	5.5	15.6	5.6
Toaster Oven	27.5	1.1	1.3	1.7	3.0	5.2	4.1	3.9	2.0	5.3	8.4
Outdoor Gas Light[3]	.5	Q	Q	NC	Q	Q	Q	Q	Q	Q	48.7
Outdoor Grill	27.5	1.8	1.9	2.0	2.6	5.1	4.1	4.0	1.5	4.5	8.5
Natural Gas	2.8	.1	.1	.1	.2	.5	.6	.7	Q	.2	24.3
LPG	24.8	1.6	1.8	1.9	2.4	4.7	3.5	3.4	1.4	4.2	8.9

[1] Does not include all new construction for 1993.
[2] An estimated 1.7 million households have both a central air-conditioner and one or more room air-conditioners.
[3] Gas includes LPG and natural gas.
[4] A count of households where the main water heater is totally separate from the space-heating system. Excluded from this count are 0.8 million households that use water heated by a space-heating system. Of these, most (0.6 million) employ a fuel oil space-heating system to heat water for washing and bathing. Also excluded are 0.3 million households that do not heat water using a typical water heater.
[5] An unknown number may be heated by the space-heating system.
NC = No cases in sample.
Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.
cf = Cubic feet.
Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.
Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.17b. Appliances by Year of Construction, Percent of U.S. Households, 1993 (Continued)

Appliance Types and Characteristics	Total	Year of Construction									RSE Row Factors
		1991 to 1993[1]	1988 to 1990	1985 to 1987	1980 to 1984	1970 to 1979	1960 to 1969	1950 to 1959	1940 to 1949	1939 or Before	
RSE Column Factors:	0.4	1.5	1.3	1.3	1.2	0.8	1.0	0.9	1.3	0.8	
Water Heaters[4]	98.9	99.7	99.3	99.6	99.9	98.8	98.8	98.8	99.4	97.9	NE
Electric	38.4	47.4	56.4	52.4	53.2	51.0	32.7	27.3	29.6	25.6	6.8
For One Housing Unit	37.0	47.0	55.7	50.0	52.1	49.2	30.6	26.4	29.2	24.1	6.9
For Two or More Units[5]	1.4	Q	Q	Q	Q	1.8	2.1	Q	Q	1.5	41.8
Natural Gas	53.0	46.4	37.9	42.7	43.1	41.5	59.8	63.2	61.0	60.6	5.9
For One Housing Unit	45.5	43.8	35.8	40.6	39.2	32.7	48.7	59.4	49.6	50.9	6.7
For Two or More Units[5]	7.5	Q	2.1	Q	3.9	8.9	11.1	3.8	11.4	9.8	19.2
Fuel Oil	4.1	1.9	1.9	1.2	1.0	2.9	3.4	5.8	5.8	7.2	22.1
For One Housing Unit	2.3	1.4	1.6	1.2	Q	1.8	2.0	3.6	2.9	3.0	23.8
For Two or More Units[5]	1.9	Q	Q	NC	Q	Q	1.3	2.2	2.9	4.2	31.2
LPG	2.9	3.9	3.1	2.9	2.3	2.5	2.4	2.2	2.4	4.1	24.6
Other	.5	Q	NC	Q	Q	.9	Q	Q	Q	Q	46.9
Water Heater (for one housing unit)											
Age											
Less than 2 Years	11.8	58.9	2.5	7.5	8.7	8.7	11.8	12.0	9.7	9.4	12.4
2 to 4 Years	14.4	32.6	42.2	4.0	11.2	11.5	12.3	14.2	12.0	13.2	10.3
5 to 9 Years	22.2	Q	44.8	71.9	16.7	13.8	18.8	24.8	22.7	18.8	7.0
10 to 19 Years	20.1	NC	Q	2.1	44.7	30.6	15.3	17.9	19.2	19.7	8.8
20 Years or More	7.8	NC	Q	Q	2.0	8.4	13.2	9.0	9.3	9.6	15.8
Don't Know	11.7	4.6	5.4	9.2	11.2	13.9	12.9	13.8	11.5	11.3	13.6
Size											
Small	18.3	12.5	15.3	17.6	17.7	19.8	16.2	19.6	20.2	19.5	8.9
Medium	45.6	54.1	54.5	50.3	52.5	42.2	48.2	47.0	42.6	39.0	5.1
Large	18.6	22.6	22.9	22.6	17.6	19.6	15.0	19.4	17.6	17.6	9.5
Don't Know	5.4	7.0	3.5	4.6	6.6	5.3	4.9	5.9	4.3	5.7	18.1
Other Appliances											
Electric											
Air Cleaner	5.5	5.8	9.3	3.8	6.4	6.4	6.7	4.6	4.6	4.0	16.7
Aquarium	4.3	3.6	5.0	4.0	4.3	4.1	4.5	4.8	2.6	4.5	18.6
Dehumidifier	9.4	6.8	8.4	7.3	6.2	7.8	12.2	10.9	10.7	9.9	15.2
Evaporative Cooler	2.8	Q	Q	2.3	3.0	3.6	3.1	5.3	2.6	1.0	26.5
Humidifier	14.1	14.2	14.9	15.2	15.3	12.8	14.9	14.5	11.3	14.5	9.6
Microwave Oven	84.1	91.7	92.3	88.4	88.1	87.1	84.4	83.3	80.1	76.8	1.6
Toaster Oven	28.5	24.9	26.8	31.0	35.1	28.6	27.3	29.9	28.6	26.1	6.7
Outdoor Gas Light[3]	.6	Q	Q	NC	Q	Q	Q	Q	Q	Q	42.6
Outdoor Grill	28.5	39.7	40.7	35.8	31.1	28.3	27.4	30.7	22.2	21.9	6.7
Natural Gas	2.9	3.1	1.9	1.9	2.6	2.7	4.3	5.0	Q	1.2	24.0
LPG	25.7	36.7	38.8	33.9	28.5	25.6	23.1	25.7	19.6	20.7	7.2

[1] Does not include all new construction for 1993.
[2] An estimated 1.7 million households have both a central air-conditioner and one or more room air-conditioners.
[3] Gas includes LPG and natural gas.
[4] A count of households where the main water heater is totally separate from the space-heating system. Excluded from this count are 0.8 million households that use water heated by a space-heating system. Of these, most (0.6 million) employ a fuel oil space-heating system to heat water for washing and bathing. Also excluded are 0.3 million households that do not heat water using a typical water heater.
[5] An unknown number may be heated by the space-heating system.
NC = No cases in sample.
Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.
NE = RSE row factor not estimated because RSE's for all statistics in this row are between 0.0 and 1.0 percent.
cf = Cubic feet.
Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.
Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.18a. Appliances by Type and Ownership of Housing Unit, Million U.S. Households, 1993

Appliance Types and Characteristics	Total	Type and Ownership of Housing Unit												RSE Row Factors
		Single-Family			Multifamily						Mobile Home			
					Two to Four Units			Five or More Units						
		Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	
RSE Column Factors:	0.3	0.3	0.3	0.9	1.2	2.0	1.4	1.0	3.0	1.1	1.2	1.3	2.1	
Total	96.6	66.8	55.8	11.0	8.0	1.5	6.5	16.2	1.6	14.7	5.6	4.4	1.2	5.8
Air-Conditioner	66.1	46.5	40.2	6.3	4.1	.9	3.1	11.6	1.3	10.3	3.9	3.2	.7	7.4
Central[1]	42.1	31.1	27.6	3.5	1.4	.3	1.1	7.2	.8	6.3	2.4	2.1	.3	11.2
Electric	41.9	31.0	27.6	3.5	1.4	.3	1.1	7.2	.8	6.3	2.4	2.1	.3	11.2
Without a Heat Pump	30.1	22.2	19.7	2.5	1.0	.2	.8	4.7	.4	4.4	2.1	1.9	.2	11.9
With a Heat Pump	11.9	8.8	7.8	1.0	.4	Q	.3	2.4	Q	2.0	.2	.2	Q	21.1
Gas[2]	.1	Q	Q	NC	NC	NC	NC	Q	Q	Q	NC	NC	NC	130.1
Room[1]	25.7	16.9	14.0	2.9	2.7	.6	2.1	4.5	.5	4.0	1.6	1.2	.4	10.2
1 Unit	17.3	10.4	8.4	2.1	2.0	.4	1.6	3.6	.4	3.3	1.3	.9	.4	11.9
2 Units	6.3	4.7	3.9	.7	.6	.2	.4	.7	Q	.6	.3	.2	Q	20.2
3 or More Units	2.2	1.8	1.6	.1	Q	Q	Q	.2	Q	Q	Q	Q	NC	37.9
Clothes Washer	74.5	62.4	53.6	8.8	3.9	1.2	2.7	3.5	.8	2.7	4.7	3.9	.8	7.6
Clothes Dryer	68.8	58.7	51.3	7.4	3.1	.9	2.2	2.9	.8	2.0	4.2	3.6	.6	8.1
Electric	54.7	46.1	39.9	6.2	2.3	.6	1.7	2.5	.7	1.8	3.8	3.2	.6	9.4
Natural Gas	13.4	12.0	10.9	1.1	.8	.3	.5	.4	Q	.3	.3	.3	Q	20.1
LPG	.7	.6	.5	Q	Q	Q	NC	Q	Q	NC	Q	Q	Q	70.1
Dishwasher	43.7	35.0	31.7	3.3	1.8	.5	1.4	5.9	1.1	4.8	1.0	.9	Q	10.0
Fans	88.4	62.5	52.7	9.8	6.9	1.4	5.6	13.7	1.3	12.4	5.3	4.2	1.0	5.1
Ceiling	51.8	41.3	36.9	4.4	2.9	.9	2.0	4.6	.8	3.8	3.0	2.7	.4	8.3
1	22.3	15.6	13.4	2.1	1.9	.4	1.5	3.3	.4	2.9	1.6	1.4	.2	13.5
2	12.0	9.7	8.6	1.0	.6	.3	.4	.8	.2	.6	.8	.7	Q	13.8
3 or more	17.6	16.1	14.8	1.3	.4	.2	.2	.5	Q	.3	.6	.6	Q	17.3
Exhaust (attic)	9.0	8.6	8.0	.5	.2	Q	.2	Q	NC	Q	.1	.1	NC	23.9
Exhaust (other)	55.8	40.6	36.0	4.5	3.2	.7	2.5	8.4	.8	7.6	3.7	3.0	.7	7.8
Portable	50.0	33.9	27.4	6.5	4.3	.7	3.6	8.5	.7	7.8	3.3	2.6	.7	7.2
Whole-House	4.1	3.9	3.6	.3	Q	Q	Q	Q	Q	Q	Q	Q	NC	24.0
Window	12.9	9.1	7.1	2.0	1.7	.3	1.4	1.3	Q	1.2	.8	.6	.1	13.4
Freezer	33.4	29.4	26.9	2.5	1.0	.3	.7	1.1	.2	1.0	1.9	1.6	.3	10.5
1	29.5	25.8	23.6	2.2	.9	.3	.6	1.1	Q	.9	1.7	1.5	.2	10.7
2 or more	3.8	3.5	3.2	.3	Q	Q	Q	Q	Q	Q	.2	.1	Q	26.9
Defrost Method														
Frost-Free	11.2	9.9	8.9	.9	.3	Q	.2	.4	Q	.4	.6	.6	Q	17.9
Manual	22.1	19.5	17.9	1.5	.7	.2	.5	.7	Q	.6	1.3	1.0	.3	12.0
Type														
Upright	16.9	15.2	14.2	.9	.5	.2	.3	.4	Q	.4	.8	.7	Q	15.0
Chest	16.5	14.2	12.6	1.6	.5	.2	.3	.7	Q	.6	1.1	.9	.2	13.8
Age														
Less than 2 Years	2.1	1.5	1.4	.1	.2	Q	.2	.3	Q	.2	.1	Q	Q	30.9
2 to 4 Years	3.4	2.7	2.4	.3	.2	Q	.2	.3	Q	.2	.3	.3	Q	21.5
5 to 9 Years	6.6	5.6	5.0	.6	.2	Q	.1	.2	Q	.2	.6	.5	Q	20.5
10 to 19 Years	12.6	11.6	10.6	1.0	.2	Q	.2	.3	NC	.3	.5	.4	Q	17.0
20 Years or More	7.7	7.3	6.9	.4	Q	Q	NC	Q	Q	Q	.3	.2	Q	18.4
Don't Know	.9	.7	.6	.1	Q	Q	Q	Q	Q	Q	.2	.1	Q	38.4
Size														
Very Small (Less than 11 cf)	2.8	2.1	1.8	.2	.2	Q	Q	.3	Q	.2	.3	.2	Q	25.6
Small (11-14 cf)	6.7	5.3	4.8	.5	.4	Q	.3	.5	Q	.4	.6	.4	Q	10.6
Medium (15-18 cf)	12.1	11.2	10.3	.9	.2	Q	.1	.3	Q	.2	.5	.5	Q	17.7
Large (19-22 cf)	9.5	8.8	8.1	.7	.2	Q	Q	Q	Q	Q	.4	.4	Q	17.3
Very Large (23 or More cf)	2.2	2.0	1.8	.2	Q	Q	Q	Q	Q	Q	Q	Q	NC	34.1

See footnotes at end of table.

Table 3.18b. Appliances by Type and Ownership of Housing Unit, Percent of U.S. Households, 1993

Appliance Types and Characteristics	Total	Type and Ownership of Housing Unit												RSE Row Factors
		Single-Family			Multifamily						Mobile Home			
					Two to Four Units			Five or More Units						
		Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	
RSE Column Factors:	0.3	0.4	0.4	0.9	1.2	2.0	1.4	1.1	2.5	1.1	1.0	1.1	2.1	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0
Air-Conditioner	68.4	69.6	72.1	57.4	50.9	63.5	48.0	71.5	86.0	70.0	69.9	73.1	57.9	4.3
Central[1]	43.5	46.6	49.6	31.5	17.0	20.4	16.3	44.3	54.6	43.2	42.8	48.4	21.9	9.1
Electric	43.4	46.5	49.4	31.5	17.0	20.4	16.3	44.0	53.7	43.0	42.8	48.4	21.9	9.1
Without a Heat Pump	31.1	33.3	35.4	22.6	12.5	13.2	12.3	29.0	22.7	29.7	38.5	43.6	19.5	10.8
With a Heat Pump	12.3	13.2	14.0	8.9	4.5	Q	4.0	15.0	31.0	13.3	4.3	4.8	Q	19.4
Gas[2]	.1	Q	Q	NC	NC	NC	NC	Q	Q	Q	NC	NC	NC	115.1
Room[1]	26.6	25.3	25.1	26.6	34.0	43.2	31.9	27.8	35.3	27.0	28.8	26.6	37.4	8.8
1 Unit	17.9	15.6	15.0	18.6	24.6	26.2	24.2	22.2	22.8	22.1	23.7	21.1	33.7	10.5
2 Units	6.5	7.0	7.1	6.7	8.0	13.3	6.7	4.3	Q	4.1	4.5	4.7	Q	19.8
3 or More Units	2.2	2.7	3.0	1.3	Q	Q	Q	1.3	Q	Q	Q	Q	NC	34.8
Clothes Washer	77.1	93.4	96.2	79.4	48.4	78.8	41.5	21.6	53.8	18.2	83.9	88.5	67.0	4.5
Clothes Dryer	71.2	87.8	91.9	67.0	38.6	58.5	34.1	17.5	54.2	13.7	74.8	81.2	50.8	5.4
Electric	56.6	69.0	71.6	56.1	28.6	38.8	26.3	15.2	45.8	12.0	67.7	73.0	47.9	6.5
Natural Gas	13.9	17.9	19.5	10.1	9.9	19.1	7.8	2.3	Q	1.7	5.1	6.0	Q	18.7
LPG	.7	.9	.9	Q	Q	Q	NC	Q	Q	NC	Q	Q	Q	62.4
Dishwasher	45.2	52.4	56.9	29.6	22.6	30.7	20.8	36.4	73.4	32.5	18.0	21.0	Q	7.3
Fans	91.5	93.6	94.5	88.6	86.8	92.0	85.6	84.5	85.1	84.4	94.2	96.1	87.1	1.6
Ceiling	53.6	61.8	66.2	40.0	36.1	60.5	30.6	28.3	51.8	25.8	54.5	61.1	29.8	5.7
1	23.0	23.3	24.0	19.4	23.2	27.0	22.4	20.2	24.9	19.8	28.2	31.4	16.2	8.5
2	12.4	14.5	15.5	9.2	7.9	18.0	5.6	5.2	14.8	4.2	14.8	16.5	Q	12.1
3 or more	18.2	24.1	26.6	11.4	5.0	15.5	2.6	2.8	12.2	1.8	11.5	13.2	Q	16.4
Exhaust (attic)	9.3	12.8	14.4	4.8	3.0	Q	2.3	Q	NC	Q	2.4	3.0	NC	23.0
Exhaust (other)	57.8	60.7	64.6	41.2	39.8	48.2	37.9	51.6	49.3	51.8	66.0	68.7	55.8	5.1
Portable	51.8	50.8	49.2	58.9	53.8	48.2	55.0	52.1	43.2	53.0	59.9	59.1	62.8	4.5
Whole-House	4.2	5.8	6.5	2.3	Q	Q	Q	Q	Q	Q	Q	Q	NC	21.6
Window	13.4	13.7	12.7	18.4	21.3	17.3	22.2	8.0	Q	8.4	14.1	14.6	12.2	11.9
Freezer	34.5	43.9	48.2	22.4	12.4	22.2	10.1	6.9	9.7	6.6	33.8	36.4	24.3	9.4
1	30.5	38.6	42.4	19.6	11.5	18.7	9.9	6.5	Q	6.4	30.7	33.3	21.0	9.2
2 or more	4.0	5.3	5.8	2.8	Q	Q	Q	Q	Q	Q	3.1	3.1	Q	26.6
Defrost Method														
Frost-Free	11.6	14.8	16.0	8.5	3.7	Q	2.9	2.5	Q	2.6	11.3	13.7	Q	16.9
Manual	22.9	29.2	32.2	14.0	8.6	14.8	7.2	4.4	Q	4.0	22.5	22.7	21.9	11.1
Type														
Upright	17.4	22.7	25.5	8.4	6.1	11.4	4.9	2.6	Q	2.4	13.8	15.4	Q	14.0
Chest	17.1	21.2	22.7	14.1	6.3	10.7	5.3	4.3	Q	4.2	20.0	21.0	16.2	12.9
Age														
Less than 2 Years	2.2	2.3	2.5	1.2	2.7	Q	2.3	1.7	Q	1.6	1.8	Q	Q	29.5
2 to 4 Years	3.5	4.0	4.3	2.7	2.5	Q	2.6	1.6	Q	1.4	5.2	5.7	Q	20.5
5 to 9 Years	6.8	8.4	9.0	5.2	3.0	Q	2.3	1.2	Q	1.1	10.6	11.2	Q	19.9
10 to 19 Years	13.0	17.3	19.0	8.7	3.1	Q	2.6	1.9	NC	2.1	8.1	9.1	Q	16.3
20 Years or More	8.0	10.9	12.4	3.5	Q	Q	NC	Q	Q	Q	5.2	5.3	Q	17.7
Don't Know	.9	1.0	1.0	1.1	Q	Q	Q	Q	Q	Q	2.9	2.9	Q	37.3
Size														
Very Small (Less than 11 cf)	2.9	3.1	3.3	2.3	2.0	Q	Q	1.8	Q	1.6	4.5	5.2	Q	24.7
Small (11-14 cf)	6.9	7.9	8.5	4.8	5.0	Q	4.5	2.8	Q	2.9	10.3	9.7	Q	17.5
Medium (15-18 cf)	12.6	16.7	18.5	7.7	2.5	Q	1.9	1.6	Q	1.5	9.5	10.4	Q	16.6
Large (19-22 cf)	9.9	13.2	14.6	6.1	2.3	Q	Q	Q	Q	Q	7.7	8.7	Q	16.9
Very Large (23 or More cf)	2.3	3.0	3.3	1.5	Q	Q	Q	Q	Q	Q	Q	Q	NC	30.8

See footnotes at end of table.

Table 3.18a. Appliances by Type and Ownership of Housing Unit, Million U.S. Households, 1993 (Continued)

Appliance Types and Characteristics	Total	Type and Ownership of Housing Unit												RSE Row Factors
		Single-Family			Multifamily						Mobile Home			
					Two to Four Units			Five or More Units						
		Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	
RSE Column Factors:	0.3	0.3	0.3	0.9	1.2	2.0	1.4	1.0	3.0	1.1	1.2	1.3	2.1	
Heaters (other)														
Hot Tub or Spa	2.8	2.8	2.6	0.2	NC	NC	NC	NC	NC	NC	Q	Q	NC	27.1
Electric	1.9	1.9	1.8	Q	NC	NC	NC	NC	NC	NC	Q	Q	NC	33.9
Natural Gas	.7	.7	.6	Q	NC	NC	NC	NC	NC	NC	Q	Q	NC	49.3
LPG/Other	.2	.2	.2	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	56.2
Portable Space	11.8	9.2	7.8	1.4	0.8	0.2	0.5	0.9	Q	0.9	0.9	0.6	0.3	14.5
Electric	9.8	7.6	6.5	1.1	.6	.2	.4	.9	Q	.9	.7	.4	.2	15.1
Kerosene	2.3	1.9	1.6	.3	Q	Q	Q	NC	NC	NC	.3	.1	Q	36.6
Swimming Pool	.8	.8	.8	Q	NC	NC	NC	NC	NC	NC	Q	Q	NC	53.8
Natural Gas	.5	.5	.4	Q	NC	NC	NC	NC	NC	NC	NC	NC	NC	79.1
Electric/LPG/Other	.4	.4	.4	NC	NC	NC	NC	NC	NC	NC	Q	Q	NC	77.0
Waterbed Heaters	11.9	9.5	8.0	1.5	.6	Q	.5	.8	Q	.7	.9	.8	.2	13.6
1	9.7	7.6	6.4	1.2	.5	Q	.4	.8	Q	.7	.8	.6	.2	14.2
2 or More	2.2	1.9	1.6	.3	Q	NC	Q	Q	Q	Q	.1	.1	NC	30.9
Waterbed Heaters														
Used All Year	9.9	7.9	6.6	1.3	.5	Q	.4	.7	Q	.7	.7	.6	Q	14.7
1	8.2	6.4	5.4	1.0	.4	Q	.3	.7	Q	.6	.6	.5	Q	15.4
2 or More	1.7	1.5	1.2	.3	Q	NC	Q	Q	Q	Q	.1	.1	NC	34.2
Office Equipment	23.3	18.1	16.1	2.0	1.3	.4	1.0	3.3	0.5	2.8	.6	.5	Q	11.5
Facsimile Machine	2.9	2.2	1.9	.3	Q	Q	Q	.5	Q	.4	Q	Q	NC	25.1
Laser Printer	5.3	4.2	3.8	.4	.3	Q	.2	.7	Q	.6	Q	Q	NC	19.1
Personal Computer	22.6	17.5	15.5	2.0	1.3	.3	1.0	3.1	.5	2.7	.6	.5	Q	11.7
Photocopier	1.5	1.4	1.3	Q	Q	Q	Q	Q	Q	Q	Q	Q	NC	38.3
Oven	94.3	65.6	54.9	10.7	7.6	1.4	6.2	15.7	1.5	14.2	5.4	4.3	1.1	5.9
Electric	59.4	42.8	36.7	6.1	3.7	.5	3.2	10.3	1.1	9.2	2.6	2.0	.6	8.3
Natural Gas	30.7	20.2	16.0	4.1	3.8	.9	3.0	5.4	.4	5.0	1.3	1.2	.1	10.6
LPG	4.2	2.7	2.1	.5	Q	Q	Q	Q	NC	Q	1.4	1.1	.4	21.7
Pumps (Electric)	18.2	16.7	15.2	1.5	.2	Q	Q	Q	Q	NC	1.3	1.1	.3	15.3
Hot Tub or Spa	2.8	2.8	2.6	.2	NC	NC	NC	NC	NC	NC	Q	Q	NC	27.1
Swimming Pool	4.6	4.5	4.3	Q	NC	NC	NC	NC	NC	NC	.1	.1	Q	27.0
Well Water	13.0	11.5	10.3	1.2	.2	Q	Q	Q	Q	NC	1.2	.9	.3	17.6
Range	96.1	66.7	55.7	11.0	7.9	1.5	6.4	16.0	1.6	14.4	5.5	4.4	1.2	5.8
Electric	59.3	42.5	36.4	6.1	3.8	.5	3.3	10.5	1.2	9.3	2.6	2.0	.6	8.7
Natural Gas	32.2	21.3	17.0	4.3	4.0	.9	3.1	5.4	.4	5.0	1.4	1.3	.2	10.6
LPG	4.6	2.9	2.3	.6	.1	Q	Q	Q	NC	Q	1.5	1.1	.4	21.9

See footnotes at end of table.

Table 3.18b. Appliances by Type and Ownership of Housing Unit, Percent of U.S. Households, 1993 (Continued)

Appliance Types and Characteristics	Total	Type and Ownership of Housing Unit												RSE Row Factors
		Single-Family			Multifamily						Mobile Home			
					Two to Four Units			Five or More Units						
		Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	
RSE Column Factors:	0.3	0.4	0.4	0.9	1.2	2.0	1.4	1.1	2.5	1.1	1.0	1.1	2.1	
Heaters (other)														
Hot Tub or Spa	2.9	4.1	4.6	1.6	NC	NC	NC	NC	NC	NC	Q	Q	NC	25.2
Electric	2.0	2.8	3.2	Q	NC	NC	NC	NC	NC	NC	Q	Q	NC	31.0
Natural Gas	.7	1.0	1.1	Q	NC	NC	NC	NC	NC	NC	Q	Q	NC	43.7
LPG/Other	.2	.3	.3	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	51.0
Portable Space	12.2	13.7	14.0	12.5	9.6	14.8	8.4	5.6	Q	5.9	16.2	13.4	26.7	13.4
Electric	10.1	11.4	11.7	9.8	7.8	11.6	6.9	5.6	Q	5.9	11.9	10.2	18.2	14.2
Kerosene	2.4	2.9	2.9	3.1	Q	Q	Q	NC	NC	NC	4.6	3.2	Q	35.7
Swimming Pool	.9	1.2	1.4	Q	NC	NC	NC	NC	NC	NC	Q	Q	NC	48.3
Natural Gas	.5	.7	.8	Q	NC	NC	NC	NC	NC	NC	NC	NC	NC	71.2
Electric/LPG/Other	.4	.5	.6	NC	NC	NC	NC	NC	NC	NC	Q	Q	NC	68.9
Waterbed Heaters	12.3	14.2	14.3	13.6	7.6	Q	8.0	5.2	Q	5.1	16.8	17.2	15.6	12.2
1	10.0	11.4	11.4	11.0	6.1	Q	6.1	4.7	Q	4.8	14.8	14.6	15.6	13.0
2 or More	2.3	2.8	2.9	2.6	Q	NC	Q	Q	Q	Q	2.0	2.6	NC	30.0
Waterbed Heaters Used All Year	10.3	11.9	11.9	11.8	6.4	Q	6.5	4.5	Q	4.5	13.4	13.9	Q	13.2
1	8.5	9.6	9.7	9.4	5.4	Q	5.3	4.2	Q	4.4	11.5	11.5	Q	14.1
2 or More	1.8	2.2	2.2	2.3	Q	NC	Q	Q	Q	Q	1.9	2.5	NC	33.3
Office Equipment	24.2	27.2	28.9	18.2	16.7	23.8	15.1	20.1	29.8	19.0	10.9	12.1	Q	9.6
Facsimile Machine	3.0	3.3	3.5	2.5	Q	Q	Q	3.3	Q	2.8	Q	Q	NC	22.7
Laser Printer	5.5	6.3	6.8	4.0	3.3	Q	2.4	4.3	Q	4.4	Q	Q	NC	17.7
Personal Computer	23.3	26.2	27.9	18.0	16.0	22.1	14.6	19.3	29.8	18.2	10.7	12.0	Q	9.8
Photocopier	1.6	2.1	2.4	Q	Q	Q	Q	Q	Q	Q	Q	Q	NC	29.2
Oven	97.6	98.2	98.4	97.2	94.9	94.8	95.0	96.9	98.4	96.8	96.6	97.4	93.6	NE
Electric	61.5	64.1	65.9	55.1	46.1	34.9	48.7	63.5	73.8	62.4	47.0	46.1	50.4	5.7
Natural Gas	31.8	30.2	28.7	37.5	48.1	59.4	45.5	32.9	24.6	33.8	24.2	27.3	12.6	9.3
LPG	4.3	4.0	3.8	4.6	Q	Q	Q	Q	NC	Q	25.8	24.5	30.6	20.9
Pumps (Electric)	18.8	25.0	27.2	13.5	2.6	Q	Q	Q	Q	NC	23.6	24.1	21.8	13.9
Hot Tub or Spa	2.9	4.1	4.6	1.6	NC	NC	NC	NC	NC	NC	Q	Q	NC	25.2
Swimming Pool	4.8	6.7	7.7	Q	NC	NC	NC	NC	NC	NC	2.6	3.2	Q	26.6
Well Water	13.4	17.3	18.5	11.1	2.6	Q	Q	Q	Q	NC	21.1	21.0	21.4	16.1
Range	99.4	99.8	99.8	99.5	99.1	100.0	98.9	98.4	100.0	98.2	99.2	99.3	98.9	NE
Electric	61.4	63.6	65.3	55.0	47.5	36.1	50.2	64.7	75.8	63.5	45.9	44.9	49.6	5.7
Natural Gas	33.3	31.9	30.5	39.1	50.3	62.4	47.6	33.3	24.2	34.2	25.8	28.5	15.7	9.2
LPG	4.7	4.3	4.1	5.5	1.7	Q	Q	Q	NC	Q	27.5	25.8	33.6	21.0

See footnotes at end of table.

Table 3.18a. Appliances by Type and Ownership of Housing Unit, Million U.S. Households, 1993 (Continued)

Appliance Types and Characteristics	Total	Type and Ownership of Housing Unit												RSE Row Factors
		Single-Family			Multifamily						Mobile Home			
					Two to Four Units			Five or More Units						
		Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	
RSE Column Factors:	0.3	0.3	0.3	0.9	1.2	2.0	1.4	1.0	3.0	1.1	1.2	1.3	2.1	
Refrigerators	96.5	66.7	55.7	11.0	8.0	1.5	6.5	16.2	1.6	14.6	5.6	4.4	1.2	5.8
1	82.1	53.3	43.3	10.0	7.7	1.3	6.4	15.8	1.5	14.4	5.3	4.2	1.1	5.9
2 or More	14.4	13.5	12.4	1.0	.3	.2	.1	.3	Q	.2	.2	.2	Q	18.4
Defrost Method														
Frost-Free	81.8	60.3	51.6	8.7	5.9	1.3	4.6	11.4	1.5	9.9	4.2	3.3	.8	6.3
Manual	14.7	6.4	4.2	2.3	2.1	.2	1.9	4.8	Q	4.7	1.4	1.1	.3	12.1
Type														
2-Doors (top and bottom)	71.3	47.9	39.3	8.6	6.1	1.1	5.0	12.5	1.2	11.4	4.7	3.8	1.0	6.6
2-Doors (side-by-side)	16.6	15.0	13.8	1.3	.5	.3	.2	.7	.3	.4	.3	.3	Q	15.3
Regular (single door)	7.9	3.4	2.3	1.1	1.3	Q	1.2	2.7	Q	2.7	.5	.3	.2	15.5
Half-Size/Other	.8	.4	.4	Q	Q	Q	Q	.2	NC	.2	Q	Q	NC	47.8
Age														
Less than 2 Years	11.9	8.3	7.0	1.3	.6	Q	.5	2.3	.2	2.1	.6	.5	Q	14.2
2 to 4 Years	16.2	12.0	10.1	1.8	1.3	.3	.9	2.1	.3	1.8	.9	.8	Q	11.5
5 to 9 Years	28.1	20.4	17.3	3.1	2.0	.6	1.5	3.9	.5	3.4	1.7	1.4	.3	9.7
10 to 19 Years	24.9	18.9	16.0	3.0	2.0	.4	1.6	2.6	.4	2.3	1.3	.9	.4	10.5
20 Years or More	7.0	5.2	4.4	.7	.6	Q	.6	.8	Q	.7	.4	.4	Q	16.6
Don't Know	8.3	1.9	.9	1.1	1.4	Q	1.4	4.4	Q	4.3	.6	.3	.3	15.2
Size														
Very Small (Less than 11 cf)	1.3	.5	.3	.2	.2	Q	.2	.5	NC	.5	Q	Q	Q	37.9
Small (11-14 cf)	8.9	3.9	2.7	1.1	1.0	Q	.9	3.5	.2	3.3	.6	.5	.1	14.7
Medium (15-18 cf)	52.4	33.5	27.1	6.4	5.0	.9	4.1	10.3	.9	9.3	3.6	2.8	.8	7.4
Large (19-22 cf)	30.0	25.3	22.2	3.1	1.7	.5	1.2	1.8	.4	1.4	1.2	1.0	.2	9.8
Very Large (23 or More cf)	3.9	3.6	3.4	.2	.1	Q	Q	.1	Q	Q	Q	Q	NC	31.1
Through-the-Door Ice Service														
Yes	10.1	9.3	8.8	.5	.3	Q	Q	.3	Q	.2	.2	.1	Q	21.6
No	86.3	57.4	46.9	10.5	7.7	1.3	6.3	15.9	1.4	14.5	5.4	4.3	1.2	6.0
Television Sets	95.4	66.1	55.3	10.9	7.9	1.5	6.4	16.0	1.5	14.4	5.5	4.4	1.1	5.8
Color	94.4	65.7	55.0	10.6	7.8	1.5	6.3	15.5	1.5	14.0	5.4	4.4	1.0	5.9
1	39.2	21.9	16.9	5.0	4.4	.5	4.0	9.7	.6	9.1	3.2	2.3	.8	7.5
2	35.2	26.0	22.1	3.9	2.7	.8	1.9	4.8	.8	4.0	1.7	1.6	.2	9.0
3	14.3	12.5	11.0	1.5	.6	.2	.4	.8	Q	.7	.4	.3	Q	14.7
4	4.2	3.8	3.6	.2	Q	Q	Q	.2	Q	Q	Q	Q	Q	23.4
5 or More	1.5	1.5	1.4	Q	Q	NC	Q	Q	NC	Q	Q	Q	NC	30.3
Black/White	19.0	14.3	11.9	2.4	1.2	.2	1.0	2.4	.2	2.2	1.1	.8	.3	10.6
1	16.9	12.5	10.4	2.1	1.1	.2	1.0	2.3	.2	2.1	1.0	.7	.3	11.0
2 or More	2.1	1.8	1.5	.3	Q	Q	Q	.1	Q	.1	Q	Q	Q	33.7

See footnotes at end of table.

Table 3.18b. Appliances by Type and Ownership of Housing Unit, Percent of U.S. Households, 1993 (Continued)

Appliance Types and Characteristics	Total	Type and Ownership of Housing Unit												RSE Row Factors
		Single-Family			Multifamily						Mobile Home			
					Two to Four Units			Five or More Units						
		Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	
RSE Column Factors:	0.3	0.4	0.4	0.9	1.2	2.0	1.4	1.1	2.5	1.1	1.0	1.1	2.1	
Refrigerators	99.8	99.9	99.9	99.7	99.5	100.0	99.4	99.7	100.0	99.6	100.0	100.0	100.0	NE
1	85.0	79.7	77.6	90.2	95.8	87.4	97.7	97.6	94.3	97.9	95.6	95.5	95.8	1.3
2 or More	14.9	20.2	22.3	9.5	3.7	12.6	1.7	2.1	Q	1.7	4.4	4.5	Q	17.1
Defrost Method														
Frost-Free	84.6	90.2	92.5	79.1	73.7	89.3	70.2	70.3	95.1	67.7	74.5	75.2	71.9	2.7
Manual	15.2	9.6	7.5	20.6	25.8	10.7	29.3	29.4	Q	32.0	25.5	24.8	28.1	10.1
Type														
2-Doors (top and bottom)	73.7	71.7	70.4	78.2	75.9	74.9	76.1	77.1	74.2	77.4	85.1	85.5	83.6	2.6
2-Doors (side-by-side)	17.1	22.5	24.7	11.4	6.3	17.7	3.7	4.4	21.8	2.5	5.6	6.6	Q	14.8
Regular (single door)	8.2	5.0	4.1	9.9	16.2	Q	18.7	16.7	Q	18.1	8.9	7.4	14.9	14.3
Half-Size/Other	.8	.6	.7	Q	Q	Q	Q	1.4	NC	1.5	Q	Q	NC	43.5
Age														
Less than 2 Years	12.3	12.5	12.5	12.1	7.8	Q	8.0	14.0	13.0	14.1	11.3	12.3	Q	13.2
2 to 4 Years	16.8	17.9	18.2	16.7	15.6	23.3	13.9	12.9	17.5	12.4	15.8	18.7	Q	10.9
5 to 9 Years	29.1	30.5	31.1	27.8	25.4	37.7	22.6	24.3	32.6	23.4	31.2	32.5	26.3	7.8
10 to 19 Years	25.8	28.3	28.6	26.8	25.3	26.1	25.1	16.3	24.6	15.4	23.0	20.9	30.8	8.8
20 Years or More	7.3	7.7	8.0	6.5	7.8	Q	8.5	5.0	Q	4.6	7.9	8.6	Q	15.3
Don't Know	8.6	2.9	1.5	9.8	17.6	Q	21.4	27.2	Q	29.6	10.8	6.8	25.5	13.0
Size														
Very Small (Less than 11 cf)	1.3	.7	.5	1.6	2.4	Q	2.6	3.1	NC	3.4	Q	Q	Q	35.9
Small (11-14 cf)	9.2	5.8	4.9	10.0	12.1	Q	13.7	21.3	11.1	22.4	11.0	10.7	12.1	13.9
Medium (15-18 cf)	54.3	50.2	48.6	57.9	62.5	59.0	63.3	63.3	60.4	63.6	65.4	64.6	68.3	4.1
Large (19-22 cf)	31.0	37.9	39.7	28.5	21.0	30.5	18.9	11.1	24.6	9.6	21.2	22.1	17.7	8.9
Very Large (23 or More cf)	4.0	5.4	6.1	1.7	1.5	Q	Q	.9	Q	Q	Q	Q	NC	29.2
Through-the-Door Ice Service														
Yes	10.5	14.0	15.8	4.7	3.9	Q	Q	2.0	Q	1.2	3.0	3.3	Q	20.8
No	89.3	85.9	84.1	95.0	95.6	90.1	96.9	97.7	90.3	98.5	97.0	96.7	98.1	1.1
Television Sets	98.8	98.9	99.1	98.3	98.5	99.1	98.4	98.3	99.7	98.2	98.3	99.4	94.2	NE
Color	97.7	98.3	98.7	96.3	97.7	99.1	97.4	95.7	98.9	95.4	96.6	99.2	86.6	1.1
1	40.5	32.8	30.2	45.6	55.5	30.7	61.1	59.6	36.0	62.1	56.9	53.3	70.5	4.9
2	36.4	38.9	39.7	35.2	33.2	51.1	29.1	29.6	48.4	27.6	30.9	35.6	13.1	6.4
3	14.8	18.7	19.8	13.4	8.0	13.6	6.8	5.1	Q	4.8	6.3	7.5	Q	13.8
4	4.3	5.7	6.5	1.7	Q	Q	Q	1.4	Q	Q	Q	Q	Q	20.8
5 or More	1.6	2.2	2.6	Q	Q	NC	Q	Q	NC	Q	Q	Q	NC	26.9
Black/White	19.6	21.4	21.3	21.4	15.1	13.0	15.6	14.8	10.5	15.3	19.4	17.7	25.5	9.8
1	17.5	18.7	18.6	19.1	14.1	12.0	14.6	13.9	9.8	14.4	18.2	16.6	24.0	10.2
2 or More	2.2	2.7	2.8	2.4	Q	Q	Q	.9	Q	.9	Q	Q	Q	31.1

See footnotes at end of table.

Table 3.18a. Appliances by Type and Ownership of Housing Unit, Million U.S. Households, 1993 (Continued)

Appliance Types and Characteristics	Total	Type and Ownership of Housing Unit												RSE Row Factors
		Single-Family			Multifamily						Mobile Home			
					Two to Four Units			Five or More Units						
		Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	
RSE Column Factors:	0.3	0.3	0.3	0.9	1.2	2.0	1.4	1.0	3.0	1.1	1.2	1.3	2.1	
Water Heaters[3]	95.5	65.8	55.0	10.8	8.0	1.5	6.5	16.2	1.6	14.7	5.5	4.4	1.2	6.9
Electric	37.1	24.1	20.3	3.8	2.5	.3	2.3	6.5	.8	5.7	4.0	3.1	.9	10.8
For One Housing Unit	35.8	24.0	20.2	3.8	2.3	.2	2.0	5.5	.8	4.7	4.0	3.1	.9	11.2
For Two or More Units[4]	1.3	Q	Q	Q	.3	Q	.2	1.0	Q	.9	NC	NC	NC	28.0
Natural Gas	51.2	36.9	30.4	6.5	4.8	1.0	3.9	8.3	.6	7.7	1.1	1.0	.1	9.5
For One Housing Unit	44.0	36.8	30.4	6.4	2.9	.8	2.1	3.2	.3	2.9	1.1	1.0	.1	11.4
For Two or More Units[4]	7.2	.1	Q	.1	2.0	.2	1.8	5.1	.3	4.8	NC	NC	NC	18.4
Fuel Oil	4.0	2.1	1.9	.2	.6	.2	.3	1.3	Q	1.2	Q	Q	NC	21.7
For One Housing Unit	2.2	2.1	1.9	.2	.1	Q	Q	Q	NC	Q	Q	Q	NC	31.3
For Two or More Units[4]	1.8	Q	Q	Q	.4	Q	.3	1.3	Q	1.2	NC	NC	NC	21.5
LPG	2.8	2.3	2.0	.3	Q	Q	Q	Q	Q	Q	.4	.2	.1	31.2
Other	.4	.3	.3	NC	NC	NC	NC	Q	NC	Q	Q	Q	Q	73.3
Water Heater (for one housing unit)														
Age														
Less than 2 Years	11.4	8.9	7.8	1.1	.5	Q	.5	1.2	Q	1.1	.8	.7	Q	16.5
2 to 4 Years	13.9	11.7	10.4	1.3	.7	.3	.5	.6	Q	.5	.9	.8	Q	13.7
5 to 9 Years	21.4	17.1	14.7	2.4	1.2	.4	.8	1.6	.3	1.4	1.5	1.3	.2	12.3
10 to 19 Years	19.5	15.6	13.5	2.0	1.0	.2	.8	1.8	.3	1.5	1.1	.9	.2	12.7
20 Years or More	7.5	6.2	5.5	.8	.4	.1	.3	.5	Q	.4	.4	.3	Q	20.3
Don't Know	11.3	6.0	3.0	3.0	1.4	Q	1.3	3.0	Q	2.9	.8	.4	.4	14.0
Size														
Small	17.7	10.9	8.7	2.2	1.5	.3	1.3	2.9	Q	2.7	2.4	1.8	.6	10.8
Medium	44.1	35.3	29.3	6.0	2.4	.5	1.9	4.1	.6	3.6	2.3	2.0	.3	9.6
Large	18.0	16.0	14.7	1.4	.7	.2	.4	.7	Q	.5	.5	.5	Q	16.3
Don't Know	5.2	3.2	2.2	1.0	.7	Q	.6	1.0	Q	.9	.3	.2	Q	19.8
Other Appliances														
Electric														
Air Cleaner	5.4	4.2	3.9	.3	.3	Q	.3	.5	Q	.4	.3	.3	Q	21.7
Aquarium	4.1	3.2	2.7	.4	.3	Q	.2	.4	Q	.4	.2	.2	Q	21.9
Dehumidifier	9.1	8.6	8.2	.4	.2	Q	.1	Q	NC	Q	Q	Q	Q	20.0
Evaporative Cooler	2.7	2.1	1.7	.5	Q	NC	Q	Q	NC	Q	.5	.4	Q	32.2
Humidifier	13.7	10.8	9.5	1.2	.8	.2	.6	1.4	.3	1.2	.6	.5	Q	13.0
Microwave Oven	81.3	59.5	50.7	8.8	6.0	1.2	4.9	11.0	1.4	9.6	4.8	4.0	.8	6.4
Toaster Oven	27.5	20.0	17.3	2.7	2.0	.5	1.5	4.3	.7	3.6	1.3	1.0	.3	9.5
Outdoor Gas Light[2]	.5	.5	.5	Q	Q	NC	Q	NC	NC	NC	NC	NC	NC	58.3
Outdoor Grill	27.5	24.4	22.4	1.9	.9	.3	.6	.9	.3	.6	1.4	1.2	.2	11.9
Natural Gas	2.8	2.7	2.7	Q	Q	Q	Q	Q	Q	NC	NC	NC	NC	29.5
LPG	24.8	21.6	19.7	1.9	.9	.3	.6	.9	.3	.6	1.4	1.2	.2	12.2

[1] An estimated 1.7 million households have both a central air-conditioner and one or more room air-conditioners.
[2] Gas includes LPG and natural gas.
[3] A count of households where the main water heater is totally separate from the space-heating system. Excluded from this count are 0.8 million households that use water heated by a space-heating system. Of these, most (0.6 million) employ a fuel oil space-heating system to heat water for washing and bathing. Also excluded are 0.3 million households that do not heat water using a typical water heater.
[4] An unknown number may be heated by the space-heating system.
NC = No cases in sample.
Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.
cf = Cubic feet.
Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.
Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.18b. Appliances by Type and Ownership of Housing Unit, Percent of U.S. Households, 1993 (Continued)

Appliance Types and Characteristics	Total	Type and Ownership of Housing Unit												RSE Row Factors
		Single-Family			Multifamily						Mobile Home			
					Two to Four Units			Five or More Units						
		Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	
RSE Column Factors:	0.3	0.4	0.4	0.9	1.2	2.0	1.4	1.1	2.5	1.1	1.0	1.1	2.1	
Water Heaters[3]	98.9	98.5	98.7	97.6	99.5	98.3	99.7	99.9	100.0	99.9	99.3	99.4	98.9	NE
Electric	38.4	36.1	36.4	34.6	31.6	16.9	34.9	39.9	51.4	38.7	72.1	71.2	75.3	8.0
For One Housing Unit	37.0	35.9	36.2	34.5	28.4	16.4	31.1	33.9	48.4	32.3	72.1	71.2	75.3	8.4
For Two or More Units[4]	1.4	Q	Q	Q	3.2	Q	3.8	6.0	Q	6.3	NC	NC	NC	26.8
Natural Gas	53.0	55.3	54.6	59.1	60.3	65.2	59.2	51.0	38.8	52.3	20.1	22.5	11.2	8.1
For One Housing Unit	45.5	55.1	54.5	57.9	36.0	51.8	32.3	19.5	17.9	19.6	20.1	22.5	11.2	10.2
For Two or More Units[4]	7.5	.2	Q	1.2	24.4	13.3	26.9	31.5	20.9	32.6	NC	NC	NC	17.2
Fuel Oil	4.1	3.2	3.5	1.6	6.9	14.7	5.1	8.1	Q	8.0	Q	Q	NC	20.8
For One Housing Unit	2.3	3.1	3.4	1.5	1.4	Q	Q	Q	NC	Q	Q	Q	NC	29.2
For Two or More Units[4]	7.5	.2	Q	1.2	24.4	13.3	26.9	31.5	20.9	32.6	NC	NC	NC	17.2
LPG	2.9	3.4	3.7	2.3	Q	Q	Q	Q	Q	Q	6.7	5.4	11.5	30.7
Other	.5	.5	.6	NC	NC	NC	NC	Q	NC	Q	Q	Q	Q	65.6
Water Heater (for one housing unit)														
Age														
Less than 2 Years	11.8	13.3	14.0	9.9	6.5	Q	7.6	7.5	Q	7.5	13.6	15.3	Q	14.9
2 to 4 Years	14.4	17.5	18.6	11.6	9.3	18.2	7.3	3.8	Q	3.6	15.5	17.6	Q	12.3
5 to 9 Years	22.2	25.6	26.4	21.6	14.6	24.2	12.4	10.1	18.2	9.2	27.2	29.2	19.7	10.6
10 to 19 Years	20.1	23.3	24.3	18.6	12.3	12.1	12.3	10.8	18.4	10.0	20.5	20.7	19.5	11.7
20 Years or More	7.8	9.3	9.8	6.9	5.2	9.0	4.3	2.9	Q	2.4	7.2	6.5	Q	19.3
Don't Know	11.7	9.0	5.3	27.6	17.9	Q	20.5	18.4	Q	19.4	15.0	10.1	33.6	12.1
Size														
Small	18.3	16.4	15.6	20.1	18.9	17.7	19.2	17.7	Q	18.6	42.7	39.9	53.2	8.7
Medium	45.6	52.9	52.5	54.5	29.9	32.6	29.3	25.4	35.6	24.3	41.0	44.3	28.2	7.3
Large	18.6	24.0	26.3	12.4	8.6	16.5	6.8	4.2	15.0	3.1	9.7	10.3	Q	15.1
Don't Know	5.4	4.8	4.0	9.1	8.5	Q	9.3	6.3	Q	6.2	5.5	4.8	Q	18.7
Other Appliances														
Electric														
Air Cleaner	5.5	6.3	6.9	2.8	4.0	Q	3.9	3.3	Q	2.7	5.8	6.5	Q	20.3
Aquarium	4.3	4.8	4.9	4.0	3.7	Q	3.8	2.5	Q	2.6	4.4	4.6	Q	20.6
Dehumidifier	9.4	12.9	14.6	3.9	2.5	Q	2.1	Q	NC	Q	Q	Q	Q	18.7
Evaporative Cooler	2.8	3.2	3.0	4.2	Q	NC	Q	Q	NC	Q	8.9	9.4	Q	31.1
Humidifier	14.1	16.2	17.1	11.3	10.1	16.4	8.7	8.8	16.5	8.0	11.0	11.9	Q	12.5
Microwave Oven	84.1	89.0	90.9	79.5	75.1	77.9	74.5	67.9	91.4	65.4	85.9	90.6	68.5	2.4
Toaster Oven	28.5	29.9	31.1	24.2	24.6	34.0	22.4	26.6	43.5	24.8	22.5	22.5	22.6	7.5
Outdoor Gas Light[2]	.6	.8	.9	Q	Q	NC	Q	NC	NC	NC	NC	NC	NC	51.6
Outdoor Grill	28.5	36.5	40.2	17.6	11.6	21.4	9.3	5.3	17.2	4.1	24.8	27.9	13.0	10.5
Natural Gas	2.9	4.1	4.9	Q	Q	Q	Q	Q	Q	NC	NC	NC	NC	26.0
LPG	25.7	32.4	35.4	17.3	11.4	20.5	9.3	5.3	16.8	4.1	24.8	27.9	13.0	10.8

[1] An estimated 1.7 million households have both a central air-conditioner and one or more room air-conditioners.
[2] Gas includes LPG and natural gas.
[3] A count of households where the main water heater is totally separate from the space-heating system. Excluded from this count are 0.8 million households that use water heated by a space-heating system. Of these, most (0.6 million) employ a fuel oil space-heating system to heat water for washing and bathing. Also excluded are 0.3 million households that do not heat water using a typical water heater.
[4] An unknown number may be heated by the space-heating system.
NC = No cases in sample.
Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.
NE = RSE row factor not estimated because RSE's for all statistics in this row are between 0.0 and 1.0 percent.
cf = Cubic feet.
Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.
Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.19a. Appliances by Family Income, Million U.S. Households, 1993

Appliance Types and Characteristics	Total	1993 Family Income							Below Poverty Line		Eligible for Federal Assistance[1]	RSE Row Factors
		Less than $5,000	$5,000 to $9,999	$10,000 to $14,999	$15,000 to $24,999	$25,000 to $34,999	$35,000 to $49,999	$50,000 or More	100 Percent	125 Percent		
RSE Column Factors:	0.4	2.1	1.4	1.2	1.3	0.8	1.1	0.7	1.1	1.0	0.8	
Total	96.6	4.1	10.6	11.1	9.6	22.8	10.8	27.6	14.4	19.4	30.7	3.4
Air-Conditioner	66.1	2.5	6.4	6.7	6.1	15.7	7.9	20.8	8.2	11.5	18.5	1.6
Central[2]	42.1	1.1	2.8	3.3	3.4	10.5	5.1	15.9	3.3	4.8	8.5	7.1
Electric	41.9	1.1	2.7	3.3	3.4	10.5	5.1	15.8	3.3	4.7	8.4	7.1
Without a Heat Pump	30.1	.8	1.9	2.5	2.6	7.7	3.5	11.2	2.4	3.4	5.9	8.1
With a Heat Pump	11.9	.3	.9	.8	.8	2.8	1.6	4.6	1.0	1.3	2.5	13.9
Gas[3]	.1	NC	Q	Q	Q	NC	Q	Q	Q	Q	Q	89.2
Room[2]	25.7	1.4	3.7	3.5	2.8	5.8	3.0	5.5	5.0	7.0	10.3	5.7
1 Unit	17.3	1.1	3.0	2.6	1.7	4.0	1.8	3.1	3.8	5.2	7.6	7.8
2 Units	6.3	.3	.6	.7	.9	1.4	.9	1.6	.9	1.4	2.1	14.3
3 or More Units	2.2	Q	Q	.2	.2	.4	.3	.9	.3	.4	.6	23.7
Clothes Washer	74.5	1.9	5.9	7.1	7.0	18.4	9.3	24.9	8.2	11.6	19.2	1.0
Clothes Dryer	68.8	1.4	4.6	5.9	6.3	17.5	8.9	24.2	6.1	8.9	15.4	1.3
Electric	54.7	1.1	3.9	4.7	5.2	14.1	7.3	18.5	4.9	7.2	12.4	1.8
Natural Gas	13.4	.3	.7	1.1	1.1	3.2	1.5	5.5	1.1	1.6	2.9	12.6
LPG	.7	Q	Q	Q	Q	.2	.2	.2	Q	Q	.2	44.1
Dishwasher	43.7	.7	1.2	2.7	3.1	10.2	6.5	19.4	2.1	3.2	6.1	3.7
Fans	88.4	3.3	9.2	10.1	8.6	20.9	10.3	26.0	12.4	16.8	27.1	3.6
Ceiling	51.8	1.2	3.7	5.1	5.2	12.6	7.0	17.1	5.0	7.4	12.8	5.0
1	22.3	.8	2.2	2.6	2.6	5.4	2.7	5.9	3.0	4.2	6.8	7.2
2	12.0	.2	.8	1.2	1.1	2.8	1.9	4.0	.9	1.6	2.9	10.0
3 or more	17.6	Q	.7	1.2	1.4	4.4	2.4	7.2	1.0	1.7	3.0	10.0
Exhaust (attic)	9.0	Q	.4	.5	.6	2.1	1.2	4.1	.4	.6	1.1	14.7
Exhaust (other)	55.8	1.5	4.3	5.1	4.9	13.4	7.5	19.1	5.6	7.8	13.5	5.2
Portable	50.0	2.3	6.2	6.5	5.2	11.5	5.3	13.0	8.5	11.5	17.5	4.8
Whole-House	4.1	Q	.2	.2	.3	.9	.5	1.9	.2	.3	.6	22.0
Window	12.9	.8	1.4	1.7	1.6	3.1	1.4	3.0	2.4	3.4	5.0	9.1
Freezer	33.4	.9	2.7	3.1	3.2	8.2	4.2	11.0	3.7	5.5	8.5	6.0
1	29.5	.9	2.5	2.7	2.9	7.3	3.8	9.4	3.4	5.0	7.7	6.2
2 or more	3.8	Q	.3	.4	.2	1.0	.4	1.5	.3	.5	.8	19.6
Defrost Method												
Frost-Free	11.2	.2	.7	.9	.9	2.4	1.6	4.3	1.0	1.4	2.5	10.6
Manual	22.1	.7	2.0	2.2	2.2	5.8	2.6	6.7	2.7	4.0	6.0	7.4
Type												
Upright	16.9	.3	1.0	1.3	1.4	4.0	2.2	6.5	1.2	2.1	3.6	9.5
Chest	16.5	.6	1.7	1.8	1.7	4.2	2.0	4.4	2.5	3.4	4.9	8.1
Age												
Less than 2 Years	2.1	Q	.2	.2	.2	.4	.2	.8	.4	.5	.7	22.1
2 to 4 Years	3.4	.2	.3	.3	.4	.7	.4	1.2	.5	.7	.9	16.0
5 to 9 Years	6.6	.2	.6	.7	.6	1.6	.9	2.0	.7	1.0	1.7	14.0
10 to 19 Years	12.6	.3	.8	1.1	1.1	3.2	1.5	4.6	1.1	1.7	2.8	9.4
20 Years or More	7.7	.2	.7	.8	.8	1.9	1.1	2.3	.9	1.4	2.0	12.6
Don't Know	.9	Q	Q	Q	Q	.3	.1	.2	Q	.2	.3	30.4
Size												
Very Small (Less than 11 cf)	2.8	Q	.4	.3	.2	.7	.3	.7	.4	.5	.9	19.2
Small (11-14 cf)	6.7	.2	.8	.7	.8	1.6	.7	1.9	1.2	1.6	2.2	12.0
Medium (15-18 cf)	12.1	.2	.8	1.1	1.0	3.0	1.5	4.5	.9	1.5	2.6	9.9
Large (19-22 cf)	9.5	.3	.7	.8	.9	2.3	1.3	3.3	1.0	1.5	2.3	12.0
Very Large (23 or More cf)	2.2	Q	Q	.2	.3	.6	.4	.6	.2	.3	.5	23.0

See footnotes at end of table.

Table 3.19b. Appliances by Family Income, Percent of U.S. Households, 1993

Appliance Types and Characteristics	Total	1993 Family Income							Below Poverty Line		Eligible for Federal Assistance[1]	RSE Row Factors
		Less than $5,000	$5,000 to $9,999	$10,000 to $14,999	$15,000 to $24,999	$25,000 to $34,999	$35,000 to $49,999	$50,000 or More	100 Percent	125 Percent		
RSE Column Factors:	0.5	2.0	1.4	1.2	1.2	0.8	1.0	0.7	1.1	1.0	0.8	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0
Air-Conditioner	68.4	62.1	60.0	60.3	63.7	68.9	73.2	75.2	57.0	59.5	60.2	3.0
Central[2]	43.5	27.7	26.0	29.7	35.1	46.0	47.4	57.6	23.3	24.6	27.6	6.1
Electric	43.4	27.7	25.8	29.5	35.0	46.0	47.3	57.3	23.1	24.5	27.4	6.1
Without a Heat Pump	31.1	19.4	17.6	22.2	27.0	33.6	32.3	40.6	16.5	17.8	19.4	7.5
With a Heat Pump	12.3	8.3	8.1	7.3	8.0	12.4	15.0	16.8	6.7	6.7	8.1	13.3
Gas[3]	.1	NC	Q	Q	Q	NC	Q	Q	Q	Q	Q	82.8
Room[2]	26.6	34.7	35.0	31.4	29.4	25.3	27.5	20.1	34.6	35.9	33.6	5.7
1 Unit	17.9	26.0	28.4	23.1	18.0	17.7	16.9	11.2	26.1	26.9	24.8	7.0
2 Units	6.5	6.7	5.9	6.3	8.9	5.9	8.2	5.7	6.4	7.0	6.8	14.2
3 or More Units	2.2	Q	Q	2.0	2.6	1.7	2.5	3.2	2.0	2.0	2.0	23.1
Clothes Washer	77.1	47.9	55.6	63.6	72.6	80.8	85.4	90.2	57.0	59.7	62.6	2.5
Clothes Dryer	71.2	33.8	43.4	52.7	65.9	76.8	82.4	87.5	42.3	45.9	50.4	3.1
Electric	56.6	27.1	36.6	42.1	53.8	61.8	67.0	66.9	34.3	37.0	40.5	4.1
Natural Gas	13.9	6.5	6.8	10.1	11.4	14.0	13.8	20.0	7.7	8.3	9.4	12.2
LPG	.7	Q	Q	Q	Q	1.0	1.5	.7	Q	Q	.5	43.5
Dishwasher	45.2	17.1	11.4	24.1	32.6	44.6	59.6	70.2	14.8	16.5	19.8	5.9
Fans	91.5	81.4	87.2	90.9	89.8	91.5	94.8	94.2	85.9	86.8	88.3	1.3
Ceiling	53.6	28.5	35.0	45.6	53.6	55.2	65.0	62.0	34.6	38.1	41.6	3.9
1	23.0	20.4	21.0	23.4	26.6	23.7	25.2	21.5	20.8	21.5	22.3	6.5
2	12.4	5.3	7.2	11.0	11.9	12.3	17.2	14.3	6.5	8.0	9.5	9.5
3 or more	18.2	Q	6.8	11.1	15.0	19.2	22.6	26.2	7.2	8.5	9.7	9.5
Exhaust (attic)	9.3	Q	3.5	4.2	6.7	9.3	11.4	15.0	2.6	3.3	3.7	14.2
Exhaust (other)	57.8	37.1	40.9	45.9	51.3	58.7	69.1	69.1	39.2	40.4	44.0	4.0
Portable	51.8	57.8	58.7	58.3	54.2	50.4	49.1	47.0	59.1	59.6	57.2	3.5
Whole-House	4.2	Q	1.8	2.2	3.1	3.7	4.8	6.8	1.5	1.8	2.0	21.4
Window	13.4	19.0	12.8	15.4	16.3	13.4	13.3	11.0	17.0	17.3	16.4	8.4
Freezer	34.5	22.2	25.8	27.7	33.0	36.1	39.1	39.8	25.6	28.1	27.7	5.2
1	30.5	21.3	23.3	24.6	30.5	31.9	35.0	34.2	23.4	25.7	25.0	5.4
2 or more	4.0	Q	2.4	3.2	2.5	4.3	4.0	5.6	2.2	2.4	2.6	19.3
Defrost Method												
Frost-Free	11.6	6.0	6.9	8.3	9.8	10.6	14.9	15.7	7.1	7.4	8.0	10.3
Manual	22.9	16.2	18.9	19.4	23.2	25.5	24.1	24.1	18.5	20.7	19.6	6.7
Type												
Upright	17.4	8.2	9.6	11.3	14.9	17.7	20.5	23.7	8.5	10.6	11.6	9.0
Chest	17.1	14.0	16.2	16.4	18.1	18.4	18.5	16.1	17.1	17.5	16.0	7.6
Age												
Less than 2 Years	2.2	Q	2.2	2.2	1.7	1.9	2.1	2.8	2.6	2.5	2.3	22.0
2 to 4 Years	3.5	4.2	2.9	2.5	3.9	3.1	3.7	4.3	3.8	3.6	3.0	15.9
5 to 9 Years	6.8	4.0	5.3	5.9	6.6	7.2	8.4	7.4	4.9	5.4	5.7	13.6
10 to 19 Years	13.0	6.7	7.9	9.5	11.6	14.1	13.9	16.6	7.4	8.9	9.1	8.8
20 Years or More	8.0	5.6	6.8	6.8	8.3	8.3	9.9	8.2	6.1	7.0	6.6	12.3
Don't Know	.9	Q	Q	Q	Q	1.5	1.2	.6	Q	.8	1.0	30.3
Size												
Very Small (Less than 11 cf)	2.9	Q	3.4	2.7	2.4	3.1	3.2	2.7	2.8	2.8	2.9	19.0
Small (11-14 cf)	6.9	5.8	8.0	6.1	8.2	7.1	6.2	6.8	8.1	8.2	7.1	11.9
Medium (15-18 cf)	12.6	5.8	7.3	10.2	10.2	13.3	13.8	16.4	6.5	7.9	8.5	9.4
Large (19-22 cf)	9.9	6.6	6.4	6.8	9.5	10.2	12.4	11.8	7.1	7.8	7.6	11.6
Very Large (23 or More cf)	2.3	Q	Q	2.0	2.9	2.5	3.5	2.2	1.1	1.5	1.6	22.8

See footnotes at end of table.

Table 3.19a. Appliances by Family Income, Million U.S. Households, 1993 (Continued)

Appliance Types and Characteristics	Total	1993 Family Income							Below Poverty Line		Eligible for Federal Assistance[1]	RSE Row Factors
		Less than $5,000	$5,000 to $9,999	$10,000 to $14,999	$15,000 to $24,999	$25,000 to $34,999	$35,000 to $49,999	$50,000 or More	100 Percent	125 Percent		
RSE Column Factors:	0.4	2.1	1.4	1.2	1.3	0.8	1.1	0.7	1.1	1.0	0.8	
Heaters (other)												
Hot Tub or Spa	2.8	NC	Q	Q	Q	0.4	0.4	1.8	Q	Q	0.2	19.7
Electric	1.9	NC	NC	Q	Q	.3	.3	1.2	Q	Q	.2	25.1
Natural Gas	.7	NC	Q	Q	NC	Q	Q	.5	Q	Q	Q	29.5
LPG/Other	.2	NC	NC	NC	NC	Q	Q	.2	NC	NC	Q	36.4
Portable Space	11.8	0.5	1.2	1.3	1.4	2.7	1.3	3.3	1.7	2.3	3.8	10.1
Electric	9.8	.4	1.0	1.1	1.2	2.4	1.1	2.8	1.4	1.9	3.1	10.7
Kerosene	2.3	Q	.2	.2	.4	.5	.3	.6	.3	.5	.8	23.7
Swimming Pool	.8	NC	Q	Q	Q	.2	Q	.5	Q	Q	Q	37.0
Natural Gas	.5	NC	NC	Q	NC	Q	Q	.3	NC	Q	Q	48.3
Electric/LPG/Other	.4	NC	Q	Q	Q	Q	Q	.2	Q	Q	Q	52.4
Waterbed Heaters	11.9	Q	.5	.8	1.0	3.6	1.8	4.2	.8	1.3	2.3	11.0
1	9.7	Q	.4	.7	.9	3.0	1.5	3.1	.7	1.1	2.0	12.4
2 or More	2.2	Q	Q	Q	.1	.5	.3	1.1	Q	.2	.3	22.0
Waterbed Heaters Used All Year	9.9	Q	.4	.7	.9	2.9	1.5	3.5	.6	1.0	1.9	12.1
1	8.2	Q	.4	.6	.8	2.5	1.3	2.6	.6	.9	1.6	13.5
2 or More	1.7	Q	Q	Q	Q	.4	.2	.9	Q	.2	.3	25.2
Office Equipment	23.3	.4	.5	1.0	1.3	4.7	3.8	11.7	1.1	1.7	3.0	9.7
Facsimile Machine	2.9	Q	Q	Q	Q	.5	.5	1.6	Q	Q	.3	20.2
Laser Printer	5.3	Q	Q	.2	.3	.9	.7	3.0	.3	.3	.8	18.1
Personal Computer	22.6	.4	.5	1.0	1.3	4.4	3.6	11.4	1.1	1.7	3.0	9.8
Photocopier	1.5	Q	Q	Q	Q	.3	.2	.8	Q	Q	.3	24.8
Oven	94.3	3.9	10.1	10.6	9.4	22.3	10.6	27.3	13.8	18.7	29.7	3.5
Electric	59.4	2.0	5.5	5.7	5.8	14.5	7.2	18.9	6.7	9.4	15.8	5.1
Natural Gas	30.7	1.7	4.0	4.2	3.1	6.6	3.2	7.9	6.1	7.8	11.9	7.0
LPG	4.2	.3	.5	.7	.6	1.3	.3	.5	.9	1.4	1.9	17.6
Pumps (Electric)	18.2	.2	.7	1.4	1.7	4.4	2.7	7.1	1.2	2.1	3.5	10.1
Hot Tub or Spa	2.8	NC	Q	Q	Q	.4	.4	1.8	Q	Q	.2	19.7
Swimming Pool	4.6	Q	Q	.2	.2	.8	.8	2.5	.1	.3	.5	19.9
Well Water	13.0	.2	.7	1.2	1.5	3.5	1.7	4.2	1.0	1.8	3.0	12.0
Range	96.1	4.0	10.4	11.0	9.6	22.7	10.8	27.6	14.2	19.1	30.3	3.4
Electric	59.3	2.0	5.6	5.8	5.7	14.5	7.2	18.6	6.7	9.5	15.9	5.1
Natural Gas	32.2	1.8	4.2	4.4	3.3	6.8	3.3	8.4	6.4	8.1	12.3	6.9
LPG	4.6	.3	.6	.8	.6	1.4	.4	.5	1.0	1.5	2.0	16.9

See footnotes at end of table.

Table 3.19b. Appliances by Family Income, Percent of U.S. Households, 1993 (Continued)

Appliance Types and Characteristics	Total	1993 Family Income							Below Poverty Line		Eligible for Federal Assistance[1]	RSE Row Factors
		Less than $5,000	$5,000 to $9,999	$10,000 to $14,999	$15,000 to $24,999	$25,000 to $34,999	$35,000 to $49,999	$50,000 or More	100 Percent	125 Percent		
RSE Column Factors:	0.5	2.0	1.4	1.2	1.2	0.8	1.0	0.7	1.1	1.0	0.8	
Heaters (other)												
Hot Tub or Spa	2.9	NC	Q	Q	Q	1.9	4.0	6.5	Q	Q	0.7	19.4
Electric	2.0	NC	NC	Q	Q	1.4	3.2	4.2	Q	Q	.5	24.9
Natural Gas	.7	NC	Q	Q	NC	Q	Q	1.8	Q	Q	Q	28.6
LPG/Other	.2	NC	NC	NC	NC	Q	Q	.6	NC	NC	Q	35.3
Portable Space	12.2	11.8	11.5	11.4	15.0	11.9	12.4	11.9	11.9	12.1	12.3	9.6
Electric	10.1	10.0	9.3	9.5	12.1	10.3	9.9	10.0	9.6	9.6	10.0	10.2
Kerosene	2.4	Q	2.2	2.2	4.3	2.0	3.2	2.1	2.4	2.8	2.7	23.3
Swimming Pool	.9	NC	Q	Q	Q	.9	Q	1.8	Q	Q	Q	35.9
Natural Gas	.5	NC	NC	Q	NC	Q	Q	1.0	NC	Q	Q	47.3
Electric/LPG/Other	.4	NC	Q	Q	Q	Q	Q	.8	Q	Q	Q	50.7
Waterbed Heaters	12.3	Q	4.5	7.3	10.8	15.6	16.2	15.0	5.4	6.5	7.5	10.5
1	10.0	Q	4.1	6.2	9.5	13.3	13.6	11.1	4.8	5.5	6.4	11.9
2 or More	2.3	Q	Q	Q	1.3	2.4	2.6	3.9	Q	.9	1.1	22.0
Waterbed Heaters Used All Year	10.3	Q	3.7	6.0	8.8	12.7	14.3	12.7	4.4	5.2	6.0	11.6
1	8.5	Q	3.4	5.0	8.0	10.9	12.2	9.5	3.9	4.4	5.2	13.0
2 or More	1.8	Q	Q	Q	Q	1.7	2.0	3.1	Q	.8	.9	25.0
Office Equipment	24.2	10.0	4.8	9.0	13.3	20.6	34.8	42.3	7.8	8.7	9.8	9.1
Facsimile Machine	3.0	Q	Q	Q	Q	2.0	5.0	5.9	Q	Q	.9	19.5
Laser Printer	5.5	Q	Q	1.9	3.4	3.8	6.4	10.8	1.8	1.8	2.5	17.8
Personal Computer	23.3	10.0	4.8	8.9	13.1	19.1	33.3	41.4	7.7	8.7	9.7	9.2
Photocopier	1.6	Q	Q	Q	Q	1.5	1.9	2.8	Q	Q	.8	24.5
Oven	97.6	96.8	95.3	95.6	98.0	97.9	98.1	98.9	95.7	96.3	96.7	NE
Electric	61.5	48.1	52.0	51.0	59.8	63.6	66.2	68.5	46.3	48.6	51.6	3.9
Natural Gas	31.8	42.0	38.1	38.1	32.2	28.7	29.2	28.7	42.7	40.3	38.9	6.1
LPG	4.3	6.7	5.1	6.3	5.9	5.7	3.2	1.7	6.4	7.2	6.1	17.6
Pumps (Electric)	18.8	5.4	6.7	12.8	17.4	19.4	24.6	25.7	8.4	11.0	11.6	9.8
Hot Tub or Spa	2.9	NC	Q	Q	Q	1.9	4.0	6.5	Q	Q	.7	19.4
Swimming Pool	4.8	Q	Q	1.5	2.5	3.7	7.5	8.9	1.0	1.4	1.6	19.8
Well Water	13.4	4.7	6.3	10.8	15.1	15.2	16.1	15.3	7.1	9.3	9.8	11.8
Range	99.4	98.8	98.4	99.2	99.3	99.6	99.8	99.8	98.6	98.8	99.0	NE
Electric	61.4	48.1	53.1	52.2	59.5	63.5	66.3	67.3	46.8	49.0	52.0	3.8
Natural Gas	33.3	43.2	39.4	39.7	33.9	29.8	30.7	30.6	44.6	41.8	40.1	5.9
LPG	4.7	7.5	5.4	7.1	6.1	6.3	3.3	2.0	7.0	7.8	6.6	16.9

See footnotes at end of table.

Table 3.19a. Appliances by Family Income, Million U.S. Households, 1993 (Continued)

Appliance Types and Characteristics	Total	1993 Family Income							Below Poverty Line		Eligible for Federal Assistance[1]	RSE Row Factors
		Less than $5,000	$5,000 to $9,999	$10,000 to $14,999	$15,000 to $24,999	$25,000 to $34,999	$35,000 to $49,999	$50,000 or More	100 Percent	125 Percent		
RSE Column Factors:	0.4	2.1	1.4	1.2	1.3	0.8	1.1	0.7	1.1	1.0	0.8	
Refrigerators	96.5	4.0	10.5	11.1	9.6	22.7	10.8	27.6	14.3	19.3	30.6	3.4
1	82.1	3.8	9.6	9.9	8.4	19.8	9.0	21.6	13.2	17.6	27.4	3.6
2 or More	14.4	.2	.9	1.2	1.2	3.0	1.8	6.0	1.2	1.8	3.2	10.2
Defrost Method												
Frost-Free	81.8	2.8	7.0	8.8	7.8	19.9	9.8	25.6	9.9	13.9	22.7	3.6
Manual	14.7	1.3	3.5	2.3	1.8	2.8	1.0	2.0	4.4	5.4	7.9	8.1
Type												
2-Doors (top and bottom)	71.3	2.9	8.1	8.3	7.6	17.7	8.1	18.5	10.6	14.6	23.1	3.9
2-Doors (side-by-side)	16.6	.2	.5	1.3	1.3	3.4	2.1	7.8	1.0	1.5	2.9	10.1
Regular (single door)	7.9	.8	1.8	1.4	.6	1.5	.6	1.1	2.5	3.0	4.3	10.7
Half-Size/Other	.8	Q	Q	Q	Q	.1	Q	.2	.2	.2	.3	35.5
Age												
Less than 2 Years	11.9	.5	1.0	1.3	1.1	2.6	1.4	3.9	1.7	2.3	3.6	10.1
2 to 4 Years	16.2	.5	1.3	1.4	1.8	3.7	2.1	5.3	2.1	2.8	4.4	8.8
5 to 9 Years	28.1	.8	2.2	3.1	2.7	7.0	3.6	8.7	3.4	4.8	7.8	6.3
10 to 19 Years	24.9	1.0	3.0	3.1	2.2	6.1	2.4	7.1	3.7	5.0	8.0	6.8
20 Years or More	7.0	.3	1.3	1.0	.9	1.6	.7	1.3	1.2	1.7	2.7	11.1
Don't Know	8.3	.8	1.7	1.3	.9	1.7	.6	1.3	2.3	2.8	4.0	10.9
Size												
Very Small (Less than 11 cf)	1.3	.2	.2	.3	.2	.2	Q	Q	.4	.5	.7	23.5
Small (11-14 cf)	8.9	.7	1.8	1.4	1.0	1.9	.7	1.3	2.2	2.8	4.2	10.6
Medium (15-18 cf)	52.4	2.2	6.3	6.7	5.6	12.8	5.6	13.0	8.3	11.2	17.9	4.5
Large (19-22 cf)	30.0	.9	2.1	2.6	2.5	7.0	4.0	11.0	3.3	4.6	7.4	6.3
Very Large (23 or More cf)	3.9	NC	Q	.1	.3	.7	.5	2.2	.1	.2	.4	22.5
Through-the-Door Ice Service												
Yes	10.1	Q	.3	.5	.4	2.0	1.4	5.5	.5	.9	1.2	14.1
No	86.3	3.9	10.2	10.7	9.2	20.8	9.5	22.1	13.8	18.5	29.3	3.6
Television Sets	95.4	3.9	10.4	10.9	9.5	22.6	10.7	27.5	14.0	18.9	29.9	3.4
Color	94.4	3.7	9.8	10.7	9.5	22.6	10.7	27.4	13.4	18.1	29.1	3.5
1	39.2	2.6	6.9	5.9	4.4	9.6	3.3	6.4	8.4	11.0	16.6	5.2
2	35.2	.9	2.3	3.8	3.7	9.2	4.5	10.8	3.7	5.3	9.3	5.6
3	14.3	.2	.4	.9	1.1	2.7	2.3	6.6	1.0	1.5	2.5	10.8
4	4.2	Q	.1	Q	.2	.8	.4	2.5	.2	.3	.5	19.0
5 or More	1.5	Q	NC	Q	Q	.3	.2	1.0	Q	Q	Q	24.2
Black/White	19.0	1.0	2.1	2.0	1.6	4.3	2.0	6.0	3.6	4.6	6.2	7.2
1	16.9	.8	2.0	1.7	1.5	3.9	1.7	5.3	3.1	4.0	5.5	7.7
2 or More	2.1	.2	.2	.2	Q	.3	.3	.7	.5	.6	.7	18.6

See footnotes at end of table.

Table 3.19b. Appliances by Family Income, Percent of U.S. Households, 1993 (Continued)

Appliance Types and Characteristics	Total	1993 Family Income							Below Poverty Line		Eligible for Federal Assistance[1]	RSE Row Factors
		Less than $5,000	$5,000 to $9,999	$10,000 to $14,999	$15,000 to $24,999	$25,000 to $34,999	$35,000 to $49,999	$50,000 or More	100 Percent	125 Percent		
RSE Column Factors:	0.5	2.0	1.4	1.2	1.2	0.8	1.0	0.7	1.1	1.0	0.8	
Refrigerators	99.8	99.5	99.3	100.0	99.9	99.7	100.0	100.0	99.7	99.7	99.7	NE
1	85.0	94.2	90.4	89.0	87.2	86.7	83.1	78.3	91.5	90.6	89.4	1.2
2 or More	14.9	5.2	8.9	11.0	12.6	13.0	16.9	21.7	8.2	9.1	10.3	9.6
Defrost Method												
Frost-Free	84.6	68.0	66.4	79.1	81.1	87.4	90.5	92.9	69.1	71.9	74.1	1.8
Manual	15.2	31.5	32.9	20.9	18.7	12.4	9.5	7.1	30.5	27.9	25.6	7.2
Type												
2-Doors (top and bottom)	73.7	71.9	76.8	75.0	78.5	77.5	75.0	67.1	73.6	75.2	75.2	2.0
2-Doors (side-by-side)	17.1	4.7	4.8	11.6	13.5	14.9	19.1	28.3	6.8	7.8	9.6	9.4
Regular (single door)	8.2	20.4	16.7	12.8	6.5	6.8	5.6	3.9	17.7	15.5	13.9	10.2
Half-Size/Other	.8	Q	Q	Q	Q	.6	Q	.6	1.5	1.2	1.0	34.5
Age												
Less than 2 Years	12.3	13.4	9.5	11.6	11.1	11.4	13.2	14.2	11.7	12.0	11.7	9.2
2 to 4 Years	16.8	13.2	12.7	12.9	18.4	16.3	19.7	19.1	14.5	14.3	14.4	8.2
5 to 9 Years	29.1	20.2	21.2	27.6	28.1	30.9	32.9	31.4	23.4	24.8	25.4	5.6
10 to 19 Years	25.8	23.7	28.3	27.9	23.1	26.8	22.4	25.6	25.7	25.7	26.0	6.0
20 Years or More	7.3	8.2	11.9	8.6	9.5	6.9	6.0	4.9	8.5	8.7	8.9	10.7
Don't Know	8.6	20.7	15.7	11.3	9.7	7.4	5.8	4.8	15.9	14.3	13.2	10.5
Size												
Very Small (Less than 11 cf)	1.3	4.4	2.2	2.5	1.9	1.1	Q	Q	2.6	2.5	2.4	23.3
Small (11-14 cf)	9.2	17.5	16.9	12.4	10.9	8.5	6.5	4.8	15.6	14.4	13.5	9.9
Medium (15-18 cf)	54.3	55.2	59.9	60.6	58.4	56.3	52.1	47.2	57.4	57.9	58.3	2.9
Large (19-22 cf)	31.0	22.3	19.4	23.2	25.9	30.7	36.5	39.7	22.9	23.8	24.2	5.6
Very Large (23 or More cf)	4.0	NC	Q	1.2	2.8	3.2	4.5	8.0	1.0	1.1	1.2	22.3
Through-the-Door Ice Service												
Yes	10.5	Q	2.8	4.1	4.6	8.6	12.5	20.1	3.6	4.5	4.0	13.6
No	89.3	97.2	96.5	95.9	95.3	91.2	87.5	79.9	96.1	95.3	95.7	1.2
Television Sets	98.8	95.9	97.9	97.7	98.8	99.1	99.2	99.5	97.5	97.5	97.6	NE
Color	97.7	92.3	92.8	96.4	98.6	99.0	98.9	99.1	93.2	93.7	94.8	NE
1	40.5	62.9	65.4	53.4	46.2	42.2	30.7	23.0	58.7	56.9	54.1	3.6
2	36.4	22.0	22.1	33.9	38.5	40.1	41.3	39.3	25.7	27.1	30.3	4.8
3	14.8	5.9	4.1	8.0	11.0	12.0	21.5	24.0	7.0	7.9	8.2	10.4
4	4.3	Q	1.1	Q	2.3	3.4	3.8	9.0	1.5	1.6	1.7	19.1
5 or More	1.6	Q	NC	Q	Q	1.1	1.6	3.7	Q	Q	Q	23.9
Black/White	19.6	24.7	20.3	17.7	16.9	18.7	18.0	21.7	25.2	23.7	20.3	6.6
1	17.5	19.2	18.8	15.5	15.9	17.3	15.3	19.1	21.9	20.7	18.1	7.0
2 or More	2.2	5.4	1.5	2.2	Q	1.4	2.7	2.7	3.3	3.0	2.2	18.5

See footnotes at end of table.

Table 3.19a. Appliances by Family Income, Million U.S. Households, 1993 (Continued)

Appliance Types and Characteristics	Total	1993 Family Income							Below Poverty Line		Eligible for Federal Assistance[1]	RSE Row Factors
		Less than $5,000	$5,000 to $9,999	$10,000 to $14,999	$15,000 to $24,999	$25,000 to $34,999	$35,000 to $49,999	$50,000 or More	100 Percent	125 Percent		
RSE Column Factors:	0.4	2.1	1.4	1.2	1.3	0.8	1.1	0.7	1.1	1.0	0.8	
Water Heaters[4]	95.5	4.0	10.4	10.9	9.5	22.6	10.7	27.4	14.1	19.1	30.1	3.5
Electric	37.1	1.6	4.1	4.3	4.1	9.8	4.1	9.3	5.4	7.6	11.9	6.4
For One Housing Unit	35.8	1.5	3.8	4.0	4.0	9.5	4.0	9.1	5.2	7.2	11.3	6.7
For Two or More Units[5]	1.3	Q	.3	.3	.1	.3	Q	.2	.3	.4	.7	29.8
Natural Gas	51.2	2.1	5.5	5.9	4.9	11.0	5.8	16.0	7.5	9.9	15.8	5.8
For One Housing Unit	44.0	1.6	4.2	4.8	3.9	9.4	5.1	15.0	5.9	7.9	12.5	6.3
For Two or More Units[5]	7.2	.5	1.3	1.1	.9	1.6	.7	1.0	1.6	2.0	3.3	14.8
Fuel Oil	4.0	.2	.4	.4	.2	.9	.5	1.3	.6	.8	1.2	16.2
For One Housing Unit	2.2	Q	Q	.1	.1	.5	.3	1.0	.1	.2	.4	24.9
For Two or More Units[5]	1.8	Q	.3	.3	.1	.4	.2	.3	.5	.7	.8	22.1
LPG	2.8	.1	.4	.3	.2	.9	.2	.6	.5	.8	1.1	20.7
Other	.4	Q	Q	Q	Q	Q	Q	.2	Q	Q	.1	49.2
Water Heater (for one housing unit)												
Age												
Less than 2 Years	11.4	.4	.8	1.2	1.1	2.7	1.4	3.9	1.3	1.8	3.0	11.1
2 to 4 Years	13.9	.4	1.1	1.3	1.1	3.1	1.6	5.2	1.6	2.3	3.5	8.9
5 to 9 Years	21.4	.5	1.5	2.0	2.4	5.3	2.6	7.1	2.1	3.0	5.4	7.9
10 to 19 Years	19.5	.7	2.2	1.9	1.6	4.8	2.4	5.9	2.7	3.8	5.5	8.1
20 Years or More	7.5	.3	1.1	1.0	.8	2.1	.7	1.6	1.0	1.5	2.8	13.0
Don't Know	11.3	1.0	1.8	1.8	1.3	2.3	1.1	2.1	3.0	3.7	5.0	9.5
Size												
Small	17.7	1.1	2.7	2.6	2.3	4.4	1.6	3.2	3.5	4.6	7.2	7.7
Medium	44.1	1.3	3.8	4.7	4.3	11.1	5.6	13.4	5.2	7.5	12.0	5.9
Large	18.0	.4	1.1	1.3	1.3	3.7	2.1	8.0	1.7	2.4	3.9	9.6
Don't Know	5.2	.4	.8	.6	.4	1.1	.5	1.3	1.3	1.5	2.2	14.2
Other Appliances												
Electric												
Air Cleaner	5.4	Q	.2	.4	.5	1.1	.6	2.4	.3	.6	.9	15.6
Aquarium	4.1	.1	.2	.3	.4	.8	.5	1.8	.5	.7	1.0	15.8
Dehumidifier	9.1	Q	.4	.6	.7	1.8	1.4	4.1	.3	.8	1.5	14.7
Evaporative Cooler	2.7	.1	.3	.4	.3	.7	.3	.6	.4	.5	.9	21.6
Humidifier	13.7	.3	.8	1.4	1.2	3.0	1.8	5.2	1.1	1.7	3.1	10.0
Microwave Oven	81.3	2.6	6.7	8.3	8.0	20.3	9.8	25.5	9.2	13.1	21.8	3.8
Toaster Oven	27.5	1.0	2.5	2.9	2.8	5.8	3.5	9.0	3.2	4.5	7.7	5.8
Outdoor Gas Light[3]	.5	NC	Q	Q	Q	Q	Q	.3	Q	Q	Q	39.0
Outdoor Grill	27.5	.3	.5	1.3	1.9	6.9	4.3	12.4	1.0	1.9	3.6	3.7
Natural Gas	2.8	Q	Q	Q	.2	.5	.5	1.4	Q	Q	.2	23.6
LPG	24.8	.3	.5	1.3	1.6	6.4	3.8	11.0	.9	1.8	3.4	9.5

[1] Below 150 percent of poverty line or 60 percent of median State income.
[2] An estimated 1.7 million households have both a central air-conditioner and one or more room air-conditioners.
[3] Gas includes LPG and natural gas.
[4] A count of households where the main water heater is totally separate from the space-heating system. Excluded from this count are 0.8 million households that use water heated by a space-heating system. Of these, most (0.6 million) employ a fuel oil space-heating system to heat water for washing and bathing. Also excluded are 0.3 million households that do not heat water using a typical water heater.
[5] An unknown number may be heated by the space-heating system.
NC = No cases in sample.
Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.
cf = Cubic feet.
Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.
Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.19b. Appliances by Family Income, Percent of U.S. Households, 1993 (Continued)

Appliance Types and Characteristics	Total	1993 Family Income							Below Poverty Line		Eligible for Federal Assistance[1]	RSE Row Factors
		Less than $5,000	$5,000 to $9,999	$10,000 to $14,999	$15,000 to $24,999	$25,000 to $34,999	$35,000 to $49,999	$50,000 or More	100 Percent	125 Percent		
RSE Column Factors:	0.5	2.0	1.4	1.2	1.2	0.8	1.0	0.7	1.1	1.0	0.8	
Water Heaters[4]	98.9	97.6	98.3	98.3	99.0	99.1	99.1	99.1	98.2	98.5	98.3	NE
Electric	38.4	38.5	38.4	38.5	42.8	43.0	37.4	33.6	37.8	39.1	38.9	5.5
For One Housing Unit	37.0	36.8	35.8	35.8	41.3	41.5	36.8	32.9	35.8	37.2	36.8	5.8
For Two or More Units[5]	1.4	Q	2.5	2.6	1.5	1.4	Q	.6	2.0	1.9	2.2	29.3
Natural Gas	53.0	51.0	51.6	53.4	50.4	48.3	53.9	58.0	52.2	51.0	51.5	4.6
For One Housing Unit	45.5	38.3	39.2	43.6	40.9	41.3	47.1	54.2	41.3	40.7	40.6	5.5
For Two or More Units[5]	7.5	12.8	12.4	9.8	9.5	7.0	6.8	3.8	10.9	10.2	10.9	14.1
Fuel Oil	4.1	4.2	4.1	3.5	2.5	3.8	5.0	4.9	4.4	4.2	4.0	16.1
For One Housing Unit	2.3	Q	Q	1.2	1.4	2.0	3.0	3.6	.9	.8	1.3	24.7
For Two or More Units[5]	1.9	Q	3.2	2.4	1.0	1.8	2.0	1.3	3.4	3.4	2.7	22.0
LPG	2.9	3.1	3.9	2.8	2.5	3.9	2.2	2.0	3.5	3.9	3.5	20.6
Other	.5	Q	Q	Q	Q	Q	Q	.6	Q	Q	.4	47.5
Water Heater (for one housing unit)												
Age												
Less than 2 Years	11.8	9.6	7.6	11.1	11.3	11.7	12.5	14.0	9.0	9.2	9.8	10.5
2 to 4 Years	14.4	10.8	10.3	12.1	11.9	13.6	15.0	18.7	11.0	11.6	11.5	8.5
5 to 9 Years	22.2	12.3	13.8	18.2	25.2	23.4	23.8	25.8	14.8	15.5	17.7	7.1
10 to 19 Years	20.1	16.5	20.8	17.1	16.6	20.8	22.3	21.5	19.0	19.4	17.8	7.4
20 Years or More	7.8	6.2	10.4	8.9	8.6	9.1	6.2	5.8	7.0	7.8	9.0	12.7
Don't Know	11.7	23.8	16.8	16.0	13.0	10.3	9.7	7.6	20.7	19.0	16.4	9.1
Size												
Small	18.3	26.0	25.5	23.0	23.8	19.2	14.4	11.5	24.1	24.0	23.3	7.1
Medium	45.6	33.0	35.5	42.6	44.4	48.6	51.4	48.4	36.4	38.5	39.3	5.0
Large	18.6	9.4	10.9	12.0	14.0	16.2	19.3	28.8	11.8	12.3	12.6	8.8
Don't Know	5.4	10.9	7.9	5.8	4.5	4.9	4.4	4.6	9.1	7.8	7.0	14.1
Other Appliances												
Electric												
Air Cleaner	5.5	Q	2.2	3.8	5.7	4.9	5.2	8.7	2.4	2.9	3.1	15.3
Aquarium	4.3	3.0	1.5	2.9	3.8	3.5	5.0	6.6	3.4	3.7	3.3	15.7
Dehumidifier	9.4	Q	3.5	5.5	7.3	7.9	12.9	14.9	2.3	4.0	4.7	14.2
Evaporative Cooler	2.8	3.0	2.4	3.7	3.0	3.0	3.2	2.3	3.0	2.8	2.9	21.6
Humidifier	14.1	6.3	7.3	12.8	12.4	13.2	16.2	19.0	7.3	8.9	10.2	9.5
Microwave Oven	84.1	64.2	63.6	74.3	83.2	89.0	90.7	92.6	64.2	67.6	71.2	1.9
Toaster Oven	28.5	23.7	23.5	26.3	29.6	25.6	32.3	32.5	22.0	23.2	25.0	6.1
Outdoor Gas Light[3]	.6	NC	Q	Q	Q	Q	Q	1.1	Q	Q	Q	37.8
Outdoor Grill	28.5	6.9	5.1	11.9	19.5	30.3	39.3	44.8	7.0	9.6	11.6	8.4
Natural Gas	2.9	Q	Q	Q	2.4	2.4	4.7	5.0	Q	Q	.6	23.6
LPG	25.7	6.3	4.9	11.4	17.1	27.9	34.7	39.8	6.6	9.2	11.0	9.2

[1] Below 150 percent of poverty line or 60 percent of median State income.
[2] An estimated 1.7 million households have both a central air-conditioner and one or more room air-conditioners.
[3] Gas includes LPG and natural gas.
[4] A count of households where the main water heater is totally separate from the space-heating system. Excluded from this count are 0.8 million households that use water heated by a space-heating system. Of these, most (0.6 million) employ a fuel oil space-heating system to heat water for washing and bathing. Also excluded are 0.3 million households that do not heat water using a typical water heater.
[5] An unknown number may be heated by the space-heating system.
NC = No cases in sample.
Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.
NE = RSE row factor not estimated because RSE's for all statistics in this row are between 0.0 and 1.0 percent.
cf = Cubic feet.
Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.
Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.20a. Light Usage by Census Region and Climate Zone, Million U.S. Households, 1993

Light Usage	Total	Census Region				Climate Zone					RSE Row Factors
						Fewer than 2,000 CDD and –				More than 2,000 CDD and Fewer than 4,000 HDD	
		Northeast	Midwest	South	West	More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factors:	0.4	0.8	0.8	0.6	0.8	2.4	1.4	1.3	1.4	1.1	
Total	96.6	19.5	23.3	33.5	20.4	8.7	26.5	22.5	17.8	21.2	6.6
Indoor Electric Lights											
Total Number Lights											
1 to 4 Hours											
None	9.6	2.1	1.5	3.6	2.4	.7	2.3	1.9	2.2	2.5	10.9
1	22.1	4.2	5.5	8.0	4.4	2.2	6.2	4.7	4.2	4.9	7.8
2	27.4	5.7	6.2	9.5	6.1	2.3	7.4	6.5	5.2	6.1	7.0
3	16.8	3.6	4.4	5.5	3.3	1.7	5.0	3.8	2.6	3.6	8.8
4	9.2	1.7	2.2	3.3	1.9	.8	2.2	2.6	1.7	1.9	10.8
5 or More	11.5	2.3	3.4	3.5	2.3	1.0	3.5	3.0	1.8	2.2	11.1
4 to 12 Hours											
None	13.4	2.0	2.2	5.9	3.3	.9	2.5	2.6	3.4	4.1	10.2
1	20.8	4.4	5.2	7.0	4.2	1.8	6.0	5.1	3.7	4.3	8.9
2	26.4	5.7	6.8	8.3	5.6	2.5	8.1	6.4	4.7	4.8	5.9
3	16.7	3.5	4.5	5.5	3.3	2.0	4.7	3.8	2.4	3.8	7.2
4	9.2	1.8	2.1	3.1	2.1	.8	2.6	2.1	1.7	2.0	8.9
5 or More	10.0	2.0	2.5	3.7	1.9	.7	2.7	2.6	1.9	2.2	10.1
More than 12 Hours per Day											
None	66.4	14.0	16.1	20.9	15.3	6.5	18.5	14.9	12.6	14.0	4.7
1	16.6	3.2	3.7	6.8	3.0	1.2	4.3	4.4	2.9	3.9	9.0
2	7.6	1.4	2.0	3.2	1.0	.6	2.2	1.9	1.2	1.8	11.4
3	3.3	.5	.8	1.5	.5	.2	.9	.8	.6	.9	14.8
4	1.5	.3	.4	.6	.3	.1	.4	.4	.3	.3	23.1
5 or More	1.2	.2	.3	.5	.2	Q	.3	.2	.3	.3	26.8
Incandescent Lights Used											
1 to 4 Hours per Day											
None	14.8	3.1	2.8	5.4	3.4	1.1	3.7	2.9	3.3	3.8	9.0
1	24.4	4.7	5.7	9.0	5.0	2.4	6.6	5.5	4.5	5.5	7.6
2	25.3	5.1	5.9	8.7	5.6	2.3	7.0	5.7	4.6	5.7	8.7
3	15.3	3.2	4.1	5.1	3.0	1.5	4.4	3.8	2.6	3.1	9.0
4	7.5	1.5	1.7	2.6	1.7	.7	1.7	2.1	1.6	1.4	11.1
5 or More	9.4	2.0	3.0	2.7	1.7	.8	3.1	2.5	1.3	1.7	12.4
4 to 12 Hours per Day											
None	17.4	3.0	3.1	7.0	4.3	1.4	3.5	3.5	4.1	4.9	8.6
1	24.5	5.1	6.0	8.5	5.0	2.2	6.8	5.8	4.3	5.5	8.9
2	25.8	5.5	6.6	8.6	5.2	2.4	7.7	6.2	4.4	5.2	8.8
3	13.9	2.9	4.1	4.1	2.7	1.6	4.3	3.4	2.2	2.4	9.2
4	7.4	1.6	1.6	2.6	1.6	.6	2.1	1.7	1.3	1.7	10.9
5 or More	7.5	1.4	1.9	2.7	1.5	.6	2.2	1.9	1.4	1.5	11.5
More than 12 Hours per Day											
None	70.4	14.6	17.2	22.6	16.0	6.9	19.6	15.6	13.3	15.1	4.3
1	15.7	3.2	3.2	6.7	2.6	1.0	3.9	4.4	2.7	3.7	9.6
2	6.3	1.0	2.0	2.4	1.0	.5	1.9	1.5	1.1	1.4	11.2
3	2.4	.5	.5	1.1	.4	.1	.6	.6	.4	.7	17.7
4	1.0	Q	.3	.3	.2	Q	.2	.2	.2	.2	25.8
5 or More	.8	Q	.2	.3	Q	Q	.2	.2	.2	.2	26.9

See footnotes at end of table.

Table 3.20b. Light Usage by Census Region and Climate Zone, Percent of U.S. Households, 1993

Light Usage	Total	Census Region				Climate Zone					RSE Row Factors
						Fewer than 2,000 CDD and --				More than 2,000 CDD and Fewer than 4,000 HDD	
						More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factors:	0.5	1.1	1.1	0.8	1.0	1.4	1.1	1.1	1.1	1.1	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0
Indoor Electric Lights											
Total Number Lights											
1 to 4 Hours											
None	10.0	10.7	6.5	10.9	11.8	8.4	8.6	8.5	12.5	11.9	9.9
1	22.9	21.5	23.5	24.0	21.6	24.8	23.2	20.9	23.7	23.1	5.8
2	28.4	29.1	26.6	28.4	29.8	26.2	27.8	29.0	29.2	28.8	4.7
3	17.4	18.3	19.1	16.4	16.1	19.5	18.9	17.0	14.8	17.2	6.9
4	9.5	8.8	9.5	9.9	9.5	9.2	8.5	11.4	9.6	8.8	9.4
5 or More	11.9	11.6	14.7	10.4	11.2	11.8	13.1	13.2	10.3	10.3	9.1
4 to 12 Hours											
None	13.9	10.5	9.4	17.5	16.2	9.9	9.3	11.5	18.9	19.5	8.6
1	21.6	22.7	22.3	20.8	20.8	20.7	22.5	22.6	20.7	20.4	5.0
2	27.4	29.3	29.2	24.9	27.4	28.2	30.6	28.4	26.6	22.5	3.6
3	17.3	17.7	19.4	16.4	16.0	23.1	17.7	16.8	13.7	17.9	5.0
4	9.5	9.5	9.2	9.4	10.2	9.5	9.6	9.3	9.6	9.5	6.8
5 or More	10.4	10.3	10.5	11.0	9.3	8.6	10.2	11.4	10.5	10.2	8.2
More than 12 Hours per Day											
None	68.7	71.8	69.2	62.5	75.3	74.8	69.8	66.2	70.6	65.8	2.4
1	17.2	16.2	15.7	20.3	14.7	13.5	16.1	19.4	16.1	18.5	7.4
2	7.9	7.0	8.8	9.5	5.1	6.6	8.1	8.3	6.8	8.7	9.5
3	3.5	2.8	3.5	4.4	2.5	2.9	3.2	3.4	3.3	4.2	13.4
4	1.5	1.3	1.5	1.7	1.5	1.6	1.4	1.7	1.7	1.3	22.8
5 or More	1.2	.9	1.2	1.6	1.0	Q	1.3	.9	1.5	1.5	25.0
Incandescent Lights Used											
1 to 4 Hours per Day											
None	15.3	16.0	12.2	16.1	16.8	13.0	13.8	12.8	18.6	17.8	7.7
1	25.2	24.0	24.7	26.8	24.4	27.1	24.9	24.3	25.0	25.9	5.4
2	26.2	26.3	25.3	26.0	27.5	26.0	26.3	25.5	25.8	27.1	4.7
3	15.9	16.3	17.5	15.2	14.8	17.1	16.7	16.9	14.4	14.5	6.6
4	7.8	7.5	7.5	7.8	8.3	7.8	6.5	9.2	9.0	6.8	9.5
5 or More	9.7	10.0	12.9	8.1	8.2	9.0	11.7	11.3	7.1	8.0	10.4
4 to 12 Hours per Day											
None	18.0	15.3	13.3	20.9	21.2	15.7	13.2	15.5	23.1	23.2	7.0
1	25.4	26.4	25.6	25.2	24.6	25.3	25.6	25.7	24.2	25.8	4.9
2	26.7	28.0	28.1	25.7	25.5	27.2	29.0	27.4	24.9	24.4	3.8
3	14.4	15.1	17.8	12.4	13.4	18.6	16.0	15.3	12.6	11.3	6.2
4	7.7	8.0	7.0	7.7	8.1	6.7	7.9	7.5	7.4	8.2	8.9
5 or More	7.8	7.3	8.2	8.1	7.4	6.5	8.1	8.5	7.8	7.1	9.8
More than 12 Hours per Day											
None	72.9	75.0	73.7	67.5	78.7	79.4	74.1	69.2	74.5	71.2	2.1
1	16.3	16.3	13.8	20.0	13.0	11.6	14.7	19.7	15.1	17.5	8.2
2	6.6	5.1	8.4	7.2	4.7	5.3	7.3	6.6	6.2	6.4	9.4
3	2.5	2.4	2.0	3.2	1.9	1.7	2.2	2.8	2.0	3.1	16.5
4	1.0	Q	1.1	1.0	1.1	Q	.8	.9	1.3	.9	24.8
5 or More	.8	Q	.9	1.0	Q	Q	.9	.7	.9	.8	26.5

See footnotes at end of table.

Table 3.20a. Light Usage by Census Region and Climate Zone, Million U.S. Households, 1993 (Continued)

Light Usage	Total	Census Region				Climate Zone					RSE Row Factors
						Fewer than 2,000 CDD and --				More than 2,000 CDD and Fewer than 4,000 HDD	
						More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factors:	0.4	0.8	0.8	0.6	0.8	2.4	1.4	1.3	1.4	1.1	
Fluorescent Lights Used											
1 to 4 Hours per Day											
None	75.5	15.4	18.2	26.2	15.8	6.8	20.9	18.0	14.0	15.9	4.1
1	16.1	3.2	3.8	5.5	3.5	1.4	4.2	3.6	2.9	4.0	8.4
2	3.8	.7	.9	1.4	.8	.4	1.0	.7	.6	1.0	12.9
3 or More	1.2	.2	.3	.4	.2	.1	.4	.3	.2	.3	24.5
4 to 12 Hours per Day											
None	75.1	14.7	18.7	25.7	15.9	6.5	21.3	17.8	13.8	15.8	4.1
1	15.9	3.7	3.1	5.6	3.5	1.6	3.9	3.5	3.1	3.8	8.3
2	4.3	.8	1.1	1.7	.7	.5	1.0	.8	.7	1.2	12.8
3 or More	1.4	.3	.4	.5	.2	.1	.3	.4	.2	.4	22.6
More than 12 Hours per Day											
None	88.2	18.0	21.3	29.7	19.2	8.1	24.2	20.8	16.3	18.9	3.7
1	6.7	1.2	1.6	3.0	.9	.5	1.9	1.3	1.2	1.9	14.6
2	1.1	.2	.3	.5	Q	Q	.3	.2	.2	.3	25.8
3 or More	.6	Q	Q	.3	Q	Q	Q	Q	.1	.2	32.4
Compact Fluorescent Light Bulbs Used											
Yes	8.6	2.1	2.2	2.3	2.0	1.1	2.5	1.8	1.5	1.6	10.2
No	88.1	17.4	21.1	31.2	18.3	7.6	24.0	20.6	16.2	19.6	4.5
Halogen Light Bulbs Used											
Yes	11.2	2.6	2.3	3.5	2.8	.9	3.0	2.6	2.1	2.6	8.6
No	85.4	16.9	21.0	30.0	17.6	7.8	23.4	19.8	15.7	18.6	3.9
Outdoor Lights											
Yes (more than one may apply)	63.5	10.8	15.5	22.9	14.3	6.5	16.6	13.1	12.1	15.2	5.9
Evening Only	25.9	5.4	6.3	8.8	5.5	2.6	7.1	5.6	4.9	5.8	8.3
All Night	16.6	1.6	3.9	6.9	4.2	.7	4.5	3.5	3.0	4.9	8.7
Automatic Control	18.2	3.0	4.9	6.6	3.7	1.7	5.4	3.9	2.9	4.3	8.3
High Intensity	3.2	.6	.8	1.4	.5	.2	.7	.7	.6	.9	24.2
All Wattage Less than 150	31.5	5.6	7.4	10.8	7.7	4.0	7.2	6.6	6.6	7.0	9.3
Gas Light[1]	.5	Q	Q	.3	Q	NC	Q	Q	Q	.2	37.3
No	33.1	8.7	7.8	10.6	6.0	2.2	9.9	9.3	5.7	6.0	8.5

[1] Gas includes LPG and natural gas.

NC = No cases in sample.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.20b. Light Usage by Census Region and Climate Zone, Percent of U.S. Households, 1993 (Continued)

Light Usage	Total	Census Region				Climate Zone					RSE Row Factors
						Fewer than 2,000 CDD and –				More than 2,000 CDD and Fewer than 4,000 HDD	
						More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factors:	0.5	1.1	1.1	0.8	1.0	1.4	1.1	1.1	1.1	1.1	
Fluorescent Lights Used											
1 to 4 Hours per Day											
None	78.2	78.8	78.1	78.1	77.7	78.2	78.8	80.0	78.9	74.9	1.6
1	16.6	16.5	16.5	16.5	17.2	15.8	15.8	15.8	16.5	18.9	6.4
2	3.9	3.4	4.0	4.1	4.1	4.7	3.9	3.1	3.4	4.9	12.0
3 or More	1.3	1.3	1.4	1.3	1.0	1.4	1.5	1.1	1.1	1.3	24.1
4 to 12 Hours per Day											
None	77.7	75.7	80.4	76.7	78.0	74.2	80.3	79.1	77.7	74.3	1.7
1	16.4	18.8	13.4	16.7	17.1	18.2	14.7	15.6	17.3	18.1	6.9
2	4.4	4.0	4.6	5.0	3.7	6.2	3.7	3.5	4.0	5.9	11.2
3 or More	1.5	1.5	1.5	1.6	1.2	1.3	1.3	1.8	1.1	1.7	21.8
More than 12 Hours per Day											
None	91.3	92.4	91.5	88.6	94.3	92.6	91.4	92.6	91.5	89.1	1.1
1	6.9	6.0	6.7	9.0	4.6	5.5	7.0	5.9	6.7	8.8	12.7
2	1.1	1.2	1.2	1.5	Q	Q	1.0	1.1	1.0	1.3	24.5
3 or More	.6	Q	Q	.9	Q	Q	Q	Q	.8	.8	31.3
Compact Fluorescent Light Bulbs Used											
Yes	8.9	10.5	9.2	7.0	9.9	13.0	9.4	8.1	8.7	7.4	9.5
No	91.1	89.5	90.8	93.0	90.1	87.0	90.6	91.9	91.3	92.6	1.2
Halogen Light Bulbs Used											
Yes	11.6	13.3	9.9	10.6	13.8	10.7	11.5	11.6	11.5	12.4	8.1
No	88.4	86.7	90.1	89.4	86.2	89.3	88.5	88.4	88.5	87.6	1.1
Outdoor Lights											
Yes (more than one may apply)	65.8	55.3	66.5	68.4	70.5	74.6	62.6	58.6	68.2	71.6	3.4
Evening Only	26.9	27.6	26.9	26.2	27.2	29.7	26.8	24.8	27.6	27.2	6.0
All Night	17.2	8.1	16.9	20.6	20.5	8.6	17.0	15.5	16.6	23.1	7.2
Automatic Control	18.8	15.4	21.0	19.7	18.3	19.3	20.5	17.5	16.0	20.4	6.8
High Intensity	3.3	2.9	3.2	4.1	2.3	2.6	2.7	3.2	3.6	4.1	22.9
All Wattage Less than 150	32.6	28.7	31.8	32.2	37.8	46.3	27.2	29.3	37.3	33.1	8.1
Gas Light[1]	.6	Q	Q	.9	Q	NC	Q	Q	Q	.9	31.9
No	34.2	44.7	33.5	31.6	29.5	25.4	37.4	41.4	31.8	28.4	6.7

[1] Gas includes LPG and natural gas.
NC = No cases in sample.
Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.
Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • Percentages are calculated on unrounded numbers. • See "Glossary" for definition of terms used in this report.
Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.21a. Light Usage by Type and Ownership of Housing Unit, Million U.S. Households, 1993

Light Usage	Total	Type and Ownership of Housing Unit												RSE Row Factors
		Single-Family			Multifamily						Mobile Home			
					Two to Four Units			Five or More Units						
		Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	
RSE Column Factors:	0.3	0.3	0.4	0.8	1.2	2.1	1.3	0.9	3.0	0.9	1.3	1.5	2.3	
Total	96.6	66.8	55.8	11.0	8.0	1.5	6.5	16.2	1.6	14.7	5.6	4.4	1.2	5.8
Indoor Electric Lights														
Total Number Lights														
1 to 4 Hours														
None	9.6	6.4	5.4	.9	.8	Q	.6	1.8	.2	1.6	.7	.5	.2	16.6
1	22.1	13.2	10.4	2.8	2.4	.4	2.0	4.9	.4	4.5	1.6	1.2	.4	9.2
2	27.4	18.4	15.0	3.3	2.3	.4	1.9	5.1	.5	4.6	1.7	1.3	.4	9.3
3	16.8	11.9	10.1	1.8	1.3	.3	1.0	2.6	.2	2.4	1.0	.8	.2	12.1
4	9.2	7.4	6.4	1.0	.6	.1	.4	.9	Q	.8	.4	.3	.1	15.9
5 or More	11.5	9.6	8.4	1.2	.6	.2	.5	1.0	Q	.9	.2	.2	Q	10.4
4 to 12 Hours														
None	13.4	8.2	6.3	1.9	1.4	.2	1.2	2.9	.2	2.7	.9	.7	.3	12.5
1	20.8	12.1	9.5	2.6	2.4	.4	1.9	4.9	.4	4.6	1.4	1.1	.3	9.4
2	26.4	18.1	15.1	3.0	2.0	.3	1.6	4.8	.5	4.3	1.6	1.2	.4	9.6
3	16.7	12.4	10.6	1.8	1.5	.3	1.2	1.9	.2	1.7	.9	.8	.2	10.8
4	9.2	7.4	6.5	.9	.5	.2	.3	.9	Q	.8	.3	.3	Q	14.4
5 or More	10.0	8.6	7.7	.9	.3	Q	.2	.8	Q	.6	.4	.3	Q	13.1
More than 12 Hours per Day														
None	66.4	44.6	36.9	7.7	5.7	1.1	4.6	12.3	1.2	11.1	3.8	2.9	.8	3.6
1	16.6	11.7	9.9	1.7	1.5	.2	1.2	2.5	.2	2.3	1.0	.8	.2	12.0
2	7.6	5.8	4.8	1.0	.5	Q	.4	.9	Q	.8	.5	.4	Q	13.0
3	3.3	2.7	2.4	.3	.2	Q	.1	.3	Q	.2	.2	.2	Q	24.9
4	1.5	1.2	1.0	.2	Q	Q	Q	.2	Q	.2	Q	Q	Q	35.6
5 or More	1.2	1.0	.8	.2	Q	Q	Q	Q	NC	Q	Q	Q	NC	43.7
Incandescent Lights Used														
1 to 4 Hours per Day														
None	14.8	10.1	8.5	1.6	1.1	.2	.9	2.6	.4	2.2	.9	.7	.2	12.6
1	24.4	14.9	12.1	2.8	2.5	.5	2.0	5.4	.3	5.0	1.6	1.3	.3	9.1
2	25.3	16.9	13.8	3.2	2.3	.4	1.9	4.4	.4	4.0	1.7	1.3	.4	9.3
3	15.3	11.2	9.7	1.6	1.1	.2	.9	2.2	.2	2.0	.8	.7	.2	12.7
4	7.5	5.9	4.9	1.0	.5	Q	.4	.7	Q	.6	.3	.3	Q	17.8
5 or More	9.4	7.7	6.8	1.0	.5	Q	.4	.9	Q	.8	.2	.2	Q	13.8
4 to 12 Hours per Day														
None	17.4	10.7	8.4	2.3	1.9	.3	1.7	3.6	.3	3.3	1.1	.9	.3	11.3
1	24.5	15.2	12.4	2.7	2.4	.4	2.0	5.5	.4	5.1	1.5	1.1	.4	9.4
2	25.8	18.2	15.0	3.2	1.8	.3	1.4	4.2	.5	3.7	1.6	1.2	.3	9.1
3	13.9	10.4	9.1	1.3	1.3	.3	1.0	1.5	Q	1.4	.8	.6	.1	11.9
4	7.4	5.8	5.0	.7	.5	Q	.3	.8	Q	.7	.3	.3	Q	17.2
5 or More	7.5	6.5	5.8	.7	.2	Q	.2	.5	Q	.5	.3	.3	Q	21.3
More than 12 Hours per Day														
None	70.4	47.8	39.8	8.0	5.9	1.1	4.8	12.8	1.3	11.5	3.9	3.0	.9	3.4
1	15.7	11.0	9.3	1.7	1.3	.2	1.1	2.4	.2	2.2	1.0	.8	.2	12.8
2	6.3	4.7	3.9	.8	.5	Q	.4	.7	Q	.6	.4	.3	Q	13.1
3	2.4	1.9	1.7	.2	.2	Q	Q	.2	Q	.2	.2	.2	Q	29.4
4	1.0	.7	.6	Q	Q	NC	Q	.1	Q	Q	Q	Q	Q	42.0
5 or More	.8	.6	.5	.2	Q	Q	Q	Q	NC	Q	NC	NC	NC	49.8

See footnotes at end of table.

Table 3.21b. Light Usage by Type and Ownership of Housing Unit, Percent of U.S. Households, 1993

Light Usage	Total	Type and Ownership of Housing Unit												RSE Row Factors
		Single-Family			Multifamily						Mobile Home			
					Two to Four Units			Five or More Units						
		Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	
RSE Column Factors:	0.3	0.4	0.4	0.9	1.1	2.2	1.3	0.8	2.6	0.9	1.2	1.4	2.3	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0
Indoor Electric Lights														
Total Number Lights														
1 to 4 Hours														
None	10.0	9.5	9.7	8.4	9.6	Q	9.7	11.2	14.8	10.9	12.2	11.7	14.0	14.5
1	22.9	19.8	18.7	25.2	30.0	27.7	30.6	30.0	23.5	30.7	29.0	28.3	31.9	7.4
2	28.4	27.5	26.9	30.3	29.3	27.2	29.8	31.3	31.5	31.3	29.6	29.3	31.0	7.0
3	17.4	17.8	18.2	16.0	16.3	17.3	16.1	15.9	13.5	16.1	17.9	18.8	14.6	10.7
4	9.5	11.0	11.5	8.8	7.2	8.4	6.9	5.3	Q	5.2	7.0	6.6	8.2	15.1
5 or More	11.9	14.4	15.0	11.3	7.6	10.1	7.0	6.3	Q	5.8	4.3	5.3	Q	17.6
4 to 12 Hours														
None	13.9	12.2	11.2	17.3	17.3	11.4	18.6	18.1	14.6	18.5	16.3	14.9	21.6	11.0
1	21.6	18.1	17.1	23.3	29.4	28.5	29.6	30.5	25.1	31.0	25.6	24.8	28.5	7.4
2	27.4	27.1	27.0	27.5	24.5	21.0	25.3	29.2	31.5	29.0	28.7	28.2	30.7	6.8
3	17.3	18.5	19.0	15.9	18.8	21.8	18.1	11.9	12.1	11.9	16.4	17.1	13.5	9.0
4	9.5	11.1	11.7	8.1	6.5	13.0	5.1	5.6	Q	5.3	6.0	7.0	Q	14.0
5 or More	10.4	12.9	13.9	7.8	3.5	Q	3.3	4.6	Q	4.3	7.0	7.9	Q	16.7
More than 12 Hours per Day														
None	68.7	66.7	66.2	69.5	71.1	71.4	71.0	75.8	76.5	75.7	68.0	66.9	72.2	3.3
1	17.2	17.4	17.8	15.7	18.3	16.6	18.7	15.2	13.0	15.4	18.4	18.8	17.0	10.6
2	7.9	8.6	8.6	9.0	6.4	Q	6.8	5.4	Q	5.2	9.0	9.1	Q	15.1
3	3.5	4.0	4.3	2.5	2.8	Q	2.3	1.6	Q	1.6	3.1	3.5	Q	24.6
4	1.5	1.8	1.8	1.4	Q	Q	Q	1.3	Q	1.3	Q	Q	Q	34.2
5 or More	1.2	1.5	1.4	1.9	Q	Q	Q	Q	NC	Q	Q	Q	NC	39.4
Incandescent Lights Used														
1 to 4 Hours per Day														
None	15.3	15.1	15.3	14.4	14.0	12.8	14.3	16.3	27.3	15.1	15.8	15.1	18.5	11.1
1	25.2	22.2	21.7	25.1	31.1	31.0	31.1	33.1	22.5	34.2	29.1	28.9	29.5	7.4
2	26.2	25.4	24.7	28.7	28.2	25.6	28.8	27.3	25.2	27.5	30.2	29.3	33.4	6.9
3	15.9	16.8	17.3	14.1	13.7	14.9	13.4	13.4	12.7	13.5	15.1	15.5	13.5	11.3
4	7.8	8.9	8.9	9.1	6.6	Q	5.9	4.4	Q	4.4	5.9	6.2	Q	16.9
5 or More	9.7	11.6	12.2	8.6	6.4	Q	6.5	5.5	Q	5.2	4.0	4.9	Q	19.0
4 to 12 Hours per Day														
None	18.0	16.1	15.1	21.0	24.1	17.6	25.6	22.0	20.5	22.1	20.3	19.6	22.8	9.5
1	25.4	22.7	22.3	24.8	29.7	26.9	30.3	34.1	27.6	34.8	26.2	24.5	32.5	7.4
2	26.7	27.3	26.9	29.2	22.3	23.4	22.0	26.0	32.8	25.3	28.4	28.1	29.3	7.3
3	14.4	15.5	16.3	11.9	16.0	21.2	14.8	9.4	Q	9.7	13.8	14.6	10.9	10.3
4	7.7	8.7	9.1	6.7	5.7	Q	4.9	5.2	Q	4.8	5.6	6.7	Q	16.7
5 or More	7.8	9.7	10.4	6.3	2.3	Q	2.4	3.4	Q	3.3	5.8	6.5	Q	19.9
More than 12 Hours per Day														
None	72.9	71.5	71.4	72.3	74.1	75.5	73.8	78.7	80.8	78.4	70.3	69.1	74.5	3.0
1	16.3	16.5	16.7	15.5	16.6	14.6	17.1	14.7	9.8	15.2	18.0	18.9	14.6	11.3
2	6.6	7.1	7.0	7.5	6.1	Q	6.2	4.3	Q	3.9	7.5	7.2	Q	15.4
3	2.5	2.8	3.0	1.9	2.1	Q	Q	1.1	Q	1.1	3.1	3.4	Q	29.2
4	1.0	1.1	1.1	Q	Q	NC	Q	.8	Q	Q	Q	Q	Q	39.0
5 or More	.8	.9	.8	1.6	Q	Q	Q	Q	NC	Q	NC	NC	NC	44.1

See footnotes at end of table.

Table 3.21a. Light Usage by Type and Ownership of Housing Unit, Million U.S. Households, 1993 (Continued)

Light Usage	Total	Type and Ownership of Housing Unit												RSE Row Factors
		Single-Family			Multifamily						Mobile Home			
					Two to Four Units			Five or More Units						
		Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	
RSE Column Factors:	0.3	0.3	0.4	0.8	1.2	2.1	1.3	0.9	3.0	0.9	1.3	1.5	2.3	
Fluorescent Lights Used														
1 to 4 Hours per Day														
None	75.5	50.7	41.8	8.9	6.7	1.1	5.6	13.2	1.1	12.1	4.9	3.9	1.0	3.5
1	16.1	11.9	10.2	1.7	1.0	.3	.7	2.6	.3	2.2	.6	.4	.1	12.3
2	3.8	3.1	2.7	.4	.2	Q	.2	.4	Q	.3	Q	Q	Q	21.9
3 or More	1.2	1.1	1.1	Q	Q	NC	Q	Q	Q	Q	Q	Q	NC	40.8
4 to 12 Hours per Day														
None	75.1	50.1	40.9	9.2	6.6	1.2	5.4	13.5	1.2	12.3	4.9	3.9	1.1	3.1
1	15.9	11.9	10.5	1.4	1.1	.2	.9	2.3	.3	2.0	.5	.4	Q	12.3
2	4.3	3.6	3.2	.4	.2	Q	Q	.3	Q	.3	.2	.1	Q	23.6
3 or More	1.4	1.2	1.1	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	37.7
More than 12 Hours per Day														
None	88.2	60.1	49.8	10.3	7.6	1.4	6.2	15.2	1.4	13.8	5.3	4.2	1.1	3.0
1	6.7	5.2	4.6	.6	.4	Q	.3	.9	Q	.8	.2	.2	Q	20.9
2	1.1	.9	.8	Q	Q	Q	NC	Q	Q	Q	Q	Q	NC	44.5
3 or More	.6	.5	.5	Q	Q	Q	NC	Q	NC	Q	Q	Q	NC	57.0
Compact Fluorescent Light Bulbs Used														
Yes	8.6	7.1	6.4	.7	.4	Q	.2	.9	.2	.7	.2	.2	Q	15.3
No	88.1	59.7	49.4	10.3	7.6	1.4	6.3	15.3	1.4	13.9	5.3	4.2	1.2	5.9
Halogen Light Bulbs Used														
Yes	11.2	8.6	7.6	1.0	.7	.3	.4	1.6	.2	1.4	.3	.2	Q	14.7
No	85.4	58.2	48.2	10.0	7.3	1.2	6.1	14.6	1.4	13.3	5.3	4.2	1.1	6.0
Outdoor Lights														
Yes (more than one may apply)	63.5	50.5	42.9	7.6	4.7	1.2	3.6	4.5	.3	4.1	3.8	3.1	.7	7.3
Evening Only	25.9	21.5	18.4	3.2	1.7	.5	1.1	1.1	Q	1.0	1.6	1.3	.3	10.6
All Night	16.6	13.1	10.9	2.2	1.1	.2	.9	1.6	Q	1.5	.8	.7	.1	13.2
Automatic Control	18.2	15.6	14.5	1.1	.9	.4	.5	.8	Q	.7	1.0	.9	Q	13.1
High Intensity	3.2	2.8	2.6	.2	Q	NC	Q	Q	Q	Q	.2	.2	NC	32.8
All Wattage Less than 150	31.5	23.9	19.7	4.2	3.1	.5	2.6	2.6	.2	2.3	1.9	1.4	.5	11.0
Gas Light[1]	.5	.5	.5	Q	Q	NC	Q	NC	NC	NC	NC	NC	NC	58.3
No	33.1	16.3	12.9	3.4	3.3	.3	3.0	11.8	1.2	10.6	1.7	1.3	.4	10.0

[1] Gas includes LPG and natural gas.
NC = No cases in sample.
Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.
Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.
Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.21b. Light Usage by Type and Ownership of Housing Unit, Percent of U.S. Households, 1993 (Continued)

Light Usage	Total	Type and Ownership of Housing Unit												RSE Row Factors
		Single-Family			Multifamily						Mobile Home			
					Two to Four Units			Five or More Units						
		Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	
RSE Column Factors:	0.3	0.4	0.4	0.9	1.1	2.2	1.3	0.8	2.6	0.9	1.2	1.4	2.3	
Fluorescent Lights Used														
1 to 4 Hours per Day														
None	78.2	75.9	74.9	80.7	84.0	76.7	85.7	81.5	70.5	82.6	87.9	88.3	86.4	2.3
1	16.6	17.8	18.2	15.6	12.6	21.7	10.5	15.8	22.2	15.2	10.6	10.1	12.4	11.8
2	3.9	4.6	4.9	3.4	3.1	Q	3.4	2.3	Q	2.1	Q	Q	Q	23.9
3 or More	1.3	1.7	2.0	Q	Q	NC	Q	Q	Q	Q	Q	Q	NC	36.4
4 to 12 Hours per Day														
None	77.7	75.0	73.4	83.1	82.1	80.6	82.4	83.2	75.2	84.0	88.1	87.6	89.9	2.1
1	16.4	17.9	18.9	12.7	14.3	13.5	14.5	14.4	19.5	13.8	8.4	8.6	Q	11.3
2	4.4	5.3	5.7	3.4	2.5	Q	Q	2.1	Q	1.9	2.8	3.1	Q	23.3
3 or More	1.5	1.8	2.0	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	32.8
More than 12 Hours per Day														
None	91.3	90.0	89.3	93.6	95.0	92.8	95.5	93.5	92.6	93.6	95.4	94.7	97.7	1.2
1	6.9	7.8	8.3	5.3	4.6	Q	4.5	5.4	Q	5.4	4.0	4.4	Q	20.3
2	1.1	1.4	1.5	Q	Q	Q	NC	Q	Q	Q	Q	Q	NC	39.3
3 or More	.6	.8	.9	Q	Q	Q	NC	Q	NC	Q	Q	Q	NC	50.9
Compact Fluorescent Light Bulbs Used														
Yes	8.9	10.6	11.4	6.6	4.5	Q	3.5	5.5	10.1	5.1	4.0	5.0	Q	15.4
No	91.1	89.4	88.6	93.4	95.5	91.1	96.5	94.5	89.9	94.9	96.0	95.0	99.5	NE
Halogen Light Bulbs Used														
Yes	11.6	12.9	13.6	9.4	9.3	20.1	6.9	9.9	10.7	9.8	5.3	5.5	Q	13.8
No	88.4	87.1	86.4	90.6	90.7	79.9	93.1	90.1	89.3	90.2	94.7	94.5	95.2	1.4
Outdoor Lights														
Yes (more than one may apply)	65.8	75.6	76.9	69.2	58.9	77.4	54.7	27.6	22.2	28.2	68.7	70.2	63.0	4.9
Evening Only	26.9	32.3	32.9	28.8	20.9	35.4	17.6	6.8	Q	6.8	29.1	29.1	29.4	8.9
All Night	17.2	19.6	19.6	19.7	13.7	15.1	13.4	9.6	Q	10.1	15.1	16.3	10.7	12.0
Automatic Control	18.8	23.3	25.9	10.1	11.1	24.6	8.0	4.7	Q	4.9	17.5	20.5	Q	12.3
High Intensity	3.3	4.1	4.6	1.5	Q	NC	Q	Q	Q	Q	4.2	5.3	NC	31.8
All Wattage Less than 150	32.6	35.8	35.3	38.2	38.7	36.2	39.2	15.7	15.0	15.8	34.5	32.6	41.7	9.5
Gas Light[1]	.6	.8	.9	Q	Q	NC	Q	NC	NC	NC	NC	NC	NC	51.2
No	34.2	24.4	23.1	30.8	41.1	22.6	45.3	72.4	77.8	71.8	31.3	29.8	37.0	6.9

[1] Gas includes LPG and natural gas.
NC = No cases in sample.
Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.
NE = RSE row factor not estimated because RSE's for all statistics in this row are between 0.0 and 1.0 percent.
Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • Percentages are calculated on unrounded numbers. • See "Glossary" for definition of terms used in this report.
Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.22. Indoor Light Usage by Type of Bulb, U.S. Households and Lights, 1993

Housing Unit and Household Characteristics	Total Households (millions)	Lights Used One or More Hours Per Day								RSE Row Factors
		Total Lights (millions)	Average per Household	Incandescent Lights (millions)			Fluorescent Lights (millions)			
				1 to 4 Hours	4 to 12 Hours	More than 12 Hours	1 to 4 Hours	4 to 12 Hours	More than 12 Hours	
RSE Column Factors:	0.7	0.7	0.4	0.8	0.8	1.4	1.5	1.5	2.4	
Total	96.6	522.6	5.4	212.4	196.6	44.1	28.2	29.9	11.4	2.1
Census Region and Division										
Northeast	19.5	107.5	5.5	44.1	41.7	7.9	5.6	6.3	1.9	4.7
New England	5.1	28.8	5.7	11.0	11.7	2.5	1.3	1.7	.5	9.3
Middle Atlantic	14.4	78.7	5.5	33.1	30.0	5.4	4.3	4.5	1.4	5.1
Midwest	23.3	132.3	5.7	55.3	49.8	10.7	6.8	6.8	2.8	4.3
East North Central	16.4	95.5	5.8	40.2	35.0	7.7	5.5	5.0	2.1	5.3
West North Central	6.9	36.8	5.3	15.1	14.9	3.0	1.3	1.8	.7	7.1
South	33.5	180.0	5.4	70.1	65.9	18.0	10.0	10.9	5.1	3.3
South Atlantic	17.4	92.1	5.3	34.6	34.2	8.7	5.6	6.2	2.7	4.5
East South Central	6.0	33.2	5.5	13.3	12.4	3.2	1.5	1.8	.9	5.3
West South Central	10.1	54.7	5.4	22.1	19.3	6.0	2.9	2.9	1.5	6.3
West	20.4	102.7	5.0	42.8	39.2	7.4	5.8	5.9	1.6	4.3
Mountain	5.4	26.2	4.9	11.0	10.1	1.8	1.5	1.4	.3	8.3
Pacific	15.0	76.6	5.1	31.8	29.0	5.6	4.3	4.5	1.3	4.9
Climate Zone										
Under 2,000 CDD and--										
Over 7,000 HDD	8.7	46.8	5.4	19.3	17.6	3.2	2.6	3.2	.9	15.2
5,500 to 7,000 HDD	26.5	148.4	5.6	60.9	57.6	11.8	7.7	7.1	3.2	9.0
4,000 to 5,499 HDD	22.5	127.3	5.7	53.6	47.7	11.1	6.0	6.7	2.2	8.8
Under 4,000 HDD	17.8	89.4	5.0	35.6	33.7	7.8	4.9	5.3	2.1	9.6
2,000 CDD or More and --										
Under 4,000 HDD	21.2	110.7	5.2	42.9	40.0	10.2	7.0	7.6	3.1	7.5
Heated Floorspace Category (square feet)										
Fewer than 600	7.5	25.8	3.4	11.6	9.5	1.7	1.3	1.2	.4	10.5
600 to 999	21.8	90.5	4.1	39.1	33.6	8.3	4.1	3.9	1.5	4.9
1,000 to 1,599	27.8	141.4	5.1	57.9	52.4	12.5	7.5	7.6	3.4	4.5
1,600 to 1,999	12.4	71.4	5.8	28.1	26.9	6.2	3.8	4.8	1.6	6.0
2,000 to 2,399	9.6	62.4	6.5	24.8	23.4	4.9	3.8	4.1	1.4	6.9
2,400 to 2,999	8.2	54.8	6.7	20.5	21.2	5.4	3.1	3.4	1.2	7.2
3,000 or More	9.3	76.3	8.2	30.3	29.5	5.2	4.6	5.0	1.9	3.2
Observed Location of Household										
City	44.7	226.3	5.1	93.1	84.2	18.6	13.3	12.9	4.3	3.4
Town	15.8	79.4	5.0	32.9	29.7	6.9	3.9	4.3	1.7	7.9
Suburbs	19.9	125.1	6.3	51.0	47.8	10.4	5.7	7.2	3.1	8.1
Rural or Open Country	16.2	91.7	5.6	35.4	35.0	8.2	5.3	5.5	2.3	8.0
Ownership of Unit										
Owned	63.2	373.4	5.9	147.6	141.9	30.6	21.4	23.1	8.8	2.7
Rented	33.4	149.1	4.5	64.7	54.7	13.5	6.9	6.8	2.6	4.3

See footnotes at end of table.

Table 3.22. Indoor Light Usage by Type of Bulb, U.S. Households and Lights, 1993 (Continued)

Housing Unit and Household Characteristics	Total Households (millions)	Lights Used One or More Hours Per Day								RSE Row Factors
		Total Lights (millions)	Average per Household	Incandescent Lights (millions)			Fluorescent Lights (millions)			
				1 to 4 Hours	4 to 12 Hours	More than 12 Hours	1 to 4 Hours	4 to 12 Hours	More than 12 Hours	
RSE Column Factors:	0.7	0.7	0.4	0.8	0.8	1.4	1.5	1.5	2.4	
Type and Ownership of Housing Unit										
Single-Family Detached	59.6	356.6	6.0	141.9	134.9	29.8	20.0	21.5	8.5	3.0
Owned	51.3	314.4	6.1	124.1	119.6	25.4	18.1	19.5	7.7	3.2
Rented	8.2	42.2	5.1	17.8	15.3	4.4	1.9	2.0	.8	8.7
Single-Family Attached	7.2	37.8	5.2	15.7	13.7	3.1	2.4	2.3	.7	10.8
Owned	4.4	23.8	5.4	9.3	8.4	2.0	1.7	1.8	.6	13.0
Rented	2.8	14.0	5.0	6.4	5.2	1.1	.7	.5	.1	13.9
Multifamily (2 to 4 units)	8.0	35.1	4.4	15.4	12.6	3.2	1.6	1.8	.5	9.6
Owned	1.5	7.3	4.9	3.0	2.7	.6	.4	.4	Q	16.5
Rented	6.5	27.8	4.3	12.3	9.9	2.6	1.2	1.4	.3	10.4
Multifamily (5 or more units)	16.2	68.0	4.2	29.2	25.2	5.3	3.5	3.3	1.5	7.4
Owned	1.6	7.3	4.7	2.9	2.7	.5	.6	.6	Q	26.5
Rented	14.7	60.7	4.1	26.3	22.5	4.9	2.9	2.7	1.4	7.5
Mobile Home	5.6	25.0	4.5	10.2	10.2	2.6	.8	.9	.3	11.3
Owned	4.4	20.6	4.7	8.3	8.5	2.2	.6	.7	.3	12.6
Rented	1.2	4.4	3.8	1.9	1.7	.5	.2	.2	Q	19.3
Year of Construction										
1939 or Before	20.4	104.4	5.1	42.7	38.3	8.7	5.8	6.4	2.4	6.3
1940 to 1949	6.9	35.1	5.1	14.4	12.6	3.8	1.9	1.7	.8	10.0
1950 to 1959	13.1	72.0	5.5	28.6	27.4	6.4	3.7	3.9	1.9	6.9
1960 to 1969	15.0	79.2	5.3	31.6	30.0	6.6	4.4	4.3	2.2	6.8
1970 to 1979	18.1	99.2	5.5	39.9	38.6	8.0	5.3	5.5	1.9	6.0
1980 to 1984	8.5	48.4	5.7	19.6	17.5	4.7	2.8	2.9	.8	7.9
1985 to 1987	5.5	30.3	5.5	12.8	11.5	2.0	1.6	2.0	.4	10.9
1988 to 1990	4.7	27.7	5.9	11.6	10.6	2.3	1.3	1.4	.6	9.3
1991 to 1993[1]	4.5	26.3	5.9	11.0	10.0	1.6	1.3	1.8	.5	11.4
Total Number of Rooms (Excluding Bathrooms)										
1 or 2	3.2	10.2	3.2	4.6	3.8	.6	.5	.5	Q	18.1
3 to 5	47.4	210.3	4.4	88.8	78.0	18.1	11.2	10.2	4.0	3.6
6 to 8	40.2	250.4	6.2	99.4	94.6	21.2	13.6	15.9	5.7	3.6
9 or More	5.8	51.7	8.8	19.6	20.2	4.1	3.0	3.3	1.5	10.1
Bedrooms										
None or 1	12.9	46.5	3.6	21.0	17.1	3.3	2.3	2.0	.8	8.2
2	30.0	135.2	4.5	55.5	50.3	11.7	7.8	7.4	2.6	4.7
3	38.5	222.5	5.8	89.9	84.3	18.8	11.2	13.6	4.6	3.4
4 or More	15.2	118.3	7.8	46.0	44.9	10.3	7.0	6.9	3.3	6.1
Other Rooms (Excluding Bathrooms)										
None or 1	4.4	16.3	3.7	6.8	6.2	1.2	.8	1.0	.3	13.1
2	35.6	160.2	4.5	68.7	59.7	13.9	7.7	7.2	3.0	4.2
3	31.7	168.8	5.3	68.4	63.4	14.2	9.4	9.7	3.7	4.2
4	16.3	106.9	6.6	41.4	41.0	9.1	5.7	6.7	2.9	5.1
5 or More	8.7	70.4	8.1	27.1	26.2	5.7	4.5	5.2	1.6	8.0

See footnotes at end of table.

Table 3.22. Indoor Light Usage by Type of Bulb, U.S. Households and Lights, 1993 (Continued)

Housing Unit and Household Characteristics	Total Households (millions)	Lights Used One or More Hours Per Day: Total Lights (millions)	Average per Household	Incandescent Lights (millions): 1 to 4 Hours	Incandescent Lights (millions): 4 to 12 Hours	Incandescent Lights (millions): More than 12 Hours	Fluorescent Lights (millions): 1 to 4 Hours	Fluorescent Lights (millions): 4 to 12 Hours	Fluorescent Lights (millions): More than 12 Hours	RSE Row Factors
RSE Column Factors:	0.7	0.7	0.4	0.8	0.8	1.4	1.5	1.5	2.4	
Full Bathrooms										
None or 1	61.6	287.8	4.7	120.6	107.6	25.5	14.1	14.5	5.6	3.1
2	30.9	196.2	6.3	77.3	74.0	15.4	11.7	12.9	4.8	4.0
3 or More	4.1	38.6	9.4	14.5	15.0	3.2	2.4	2.5	1.0	11.5
Half Bathrooms										
None	71.5	358.4	5.0	148.5	132.3	30.1	19.3	20.3	7.9	2.6
1	23.9	155.6	6.5	60.2	61.5	13.2	8.4	9.0	3.3	5.0
2 or More	1.2	8.6	7.1	3.7	2.7	.8	.6	.5	.2	18.9
Number of Stories										
Single-Family Homes	66.8	394.4	5.9	157.6	148.6	32.9	22.3	23.9	9.2	2.7
1 Story	40.6	218.1	5.4	86.3	80.7	19.4	12.8	13.5	5.4	3.7
2 Stories	22.4	146.8	6.6	59.4	56.2	11.1	8.2	8.7	3.2	5.2
3 Stories	1.6	14.3	8.8	5.5	5.9	1.3	.7	.8	.2	20.6
Split-Level	2.2	14.8	6.9	6.2	5.6	1.1	.6	.9	.4	15.7
Other	Q	Q	10.6	Q	Q	Q	NC	Q	NC	85.6
Mobile Homes	5.6	25.0	4.5	10.2	10.2	2.6	.8	.9	.3	11.3
Multi-Story Apartment Building	24.2	103.1	4.3	44.6	37.8	8.6	5.1	5.1	1.9	5.7
Lighting										
Indoor Light Usage										
1 to 4 Hours a Day										
Yes	87.0	493.3	5.7	212.4	176.8	38.5	28.2	27.0	10.4	2.3
No	9.6	29.3	3.0	NC	19.8	5.6	NC	2.9	1.0	7.6
4 to 12 Hours a Day										
Yes	83.2	487.8	5.9	187.3	196.6	38.8	25.1	29.9	10.2	2.3
No	13.4	34.7	2.6	25.0	NC	5.3	3.1	NC	1.2	6.2
More than 12 Hours a Day										
Yes	30.3	209.4	6.9	67.2	68.5	44.1	8.8	9.5	11.4	3.9
No	66.4	313.1	4.7	145.2	128.1	NC	19.5	20.4	NC	2.7
Compact Fluorescent Light Bulbs Used										
Yes	8.6	55.3	6.5	18.9	17.6	4.1	5.2	7.2	2.4	6.7
No	88.1	467.2	5.3	193.4	179.0	40.0	23.1	22.7	9.0	2.3
Halogen Light Bulbs Used										
Yes	11.2	72.8	6.5	28.3	27.0	5.7	4.9	5.1	1.8	6.1
No	85.4	449.8	5.3	184.1	169.6	38.4	23.3	24.8	9.6	2.3
1993 Family Income Category										
Less than $5,000	4.1	15.3	3.8	6.1	6.0	1.8	.6	.6	.3	11.6
$5,000 to $9,999	10.6	38.8	3.7	17.1	12.9	4.2	2.2	1.6	.8	7.3
$10,000 to $14,999	11.1	47.9	4.3	20.2	17.5	4.7	2.5	2.3	.8	6.7
$15,000 to $19,999	9.6	46.8	4.9	18.6	17.6	4.5	2.4	2.7	1.1	7.6
$20,000 to $24,999	8.7	42.3	4.8	16.8	16.1	3.5	2.8	2.3	.8	7.7
$25,000 to $34,999	14.1	77.2	5.5	31.5	28.8	6.7	4.0	4.2	1.9	6.1
$35,000 to $49,999	17.5	106.6	6.1	43.5	40.7	8.2	5.3	6.3	2.5	5.0
$50,000 to $74,999	12.6	83.3	6.6	34.0	30.9	6.0	4.7	5.8	1.9	5.8
$75,000 or More	8.3	64.4	7.7	24.6	26.1	4.4	3.8	4.2	1.4	9.1

See footnotes at end of table.

Table 3.22. Indoor Light Usage by Type of Bulb, U.S. Households and Lights, 1993 (Continued)

Housing Unit and Household Characteristics	Total Households (millions)	Lights Used One or More Hours Per Day: Total Lights (millions)	Average per Household	Incandescent Lights (millions): 1 to 4 Hours	Incandescent Lights (millions): 4 to 12 Hours	Incandescent Lights (millions): More than 12 Hours	Fluorescent Lights (millions): 1 to 4 Hours	Fluorescent Lights (millions): 4 to 12 Hours	Fluorescent Lights (millions): More than 12 Hours	RSE Row Factors
RSE Column Factors:	0.7	0.7	0.4	0.8	0.8	1.4	1.5	1.5	2.4	
Below Poverty Line										
100 Percent	14.4	59.2	4.1	25.5	20.8	6.9	2.7	2.4	1.0	6.1
125 Percent	19.4	81.9	4.2	34.9	28.9	9.4	3.8	3.4	1.6	5.3
Eligible for Federal Assistance[2]	30.7	132.1	4.3	55.2	48.2	13.8	6.6	5.8	2.4	4.4
Payment Method for Fuel and Electricity										
All Paid by Household	83.1	464.0	5.6	187.1	174.9	38.9	25.5	27.3	10.2	2.4
Some Paid, Some in Rent	8.3	36.2	4.4	16.0	13.0	3.3	1.6	1.5	.9	8.8
All Included in Rent	4.1	15.9	3.9	6.9	6.0	1.1	.8	.9	.2	13.0
Other Method	1.1	6.4	5.8	2.3	2.7	.7	.4	.2	Q	33.8
Age of Householder										
Under 25 Years	5.7	25.5	4.5	11.1	9.8	2.2	1.2	.9	.3	10.8
25 to 34 Years	19.9	107.5	5.4	46.9	39.9	9.2	4.2	5.1	2.3	4.9
35 to 44 Years	21.4	134.6	6.3	57.2	50.8	10.5	6.6	7.2	2.4	4.3
45 to 59 Years	21.9	125.8	5.8	48.2	48.7	10.6	7.3	8.1	2.9	5.0
60 Years and Over	27.8	129.1	4.6	49.0	47.4	11.5	9.0	8.7	3.5	4.2
Race of Householder										
White	80.2	447.6	5.6	179.7	168.7	37.4	24.9	26.6	10.3	2.5
Black	10.9	47.4	4.3	21.3	17.2	4.6	2.0	1.7	.6	8.2
Other[3]	5.5	27.5	5.0	11.3	10.7	2.0	1.3	1.6	.5	10.9
Householder of Hispanic Descent										
Yes	7.9	35.3	4.5	16.0	12.9	2.4	1.9	1.6	.6	9.5
No	88.7	487.2	5.5	196.4	183.7	41.7	26.3	28.2	10.9	2.3
Household Size										
1 Person	23.5	89.2	3.8	38.1	32.8	7.2	4.6	4.9	1.6	4.5
2 Persons	31.7	165.4	5.2	63.5	62.9	13.2	10.9	10.8	4.1	3.5
3 Persons	16.6	96.6	5.8	39.6	36.2	8.4	4.7	5.6	2.2	6.5
4 Persons	14.6	98.1	6.7	39.8	37.3	8.4	5.1	5.5	2.0	5.0
5 Persons	6.8	49.3	7.3	20.6	18.8	4.5	2.0	2.4	1.0	8.4
6 or More Persons	3.5	24.0	6.9	10.8	8.6	2.4	.9	.8	.6	10.8

[1] Does not include all new construction for 1993.
[2] Below 150 percent of poverty line or 60 percent of median State income.
[3] Includes 1.7 million householders who described themselves as Hispanic rather than White, Black, or other.
NC = No cases in sample.
Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.
Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.
Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.23a. Usage Indicators by Census Region and Climate Zone Million U.S. Households, 1993

Usage Indicators	Total	Census Region				Climate Zone					RSE Row Factors
						Fewer than 2,000 CDD and --				More than 2,000 CDD and Fewer than 4,000 HDD	
						More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factors	0.4	0.8	0.8	0.7	0.7	2.5	1.4	1.3	1.5	1.2	
Total	96.6	19.5	23.3	33.5	20.4	8.7	26.5	22.5	17.8	21.2	3.4
Weekday Home Activities											
Home Used for Business											
Yes	6.1	1.0	1.5	2.0	1.6	.7	1.8	1.1	1.3	1.3	11.4
No	90.5	18.5	21.8	31.5	18.7	8.0	24.7	21.4	16.5	19.9	3.5
Energy-Intensive Activity											
Yes	2.5	.3	.7	1.0	.6	.2	.7	.4	.4	.8	17.8
No	94.1	19.2	22.6	32.5	19.8	8.5	25.8	22.0	17.4	20.4	3.5
Someone Home All Day											
Yes	46.0	8.9	11.1	16.1	9.9	4.3	12.7	9.8	9.1	10.1	5.3
No	50.7	10.6	12.2	17.4	10.4	4.4	13.8	12.6	8.7	11.1	5.1
Heating											
Thermostat Available During Heating Season											
Yes	80.2	15.5	21.3	26.9	16.5	7.6	24.4	17.6	13.6	17.0	1.2
No	15.5	3.9	2.0	6.4	3.2	1.1	2.1	4.9	3.9	3.6	10.8
Set-Back or Clock Thermostat In Home											
Yes	10.8	2.9	2.0	2.9	3.2	.5	2.9	2.8	2.0	2.7	13.4
No	85.8	16.6	21.3	30.6	17.2	8.2	23.6	19.7	15.8	18.5	1.5
Winter Temperature Settings											
Lower When No One Home											
Yes	43.2	7.9	9.3	14.9	11.1	3.8	11.6	8.4	9.3	10.1	5.3
No	53.4	11.6	14.0	18.6	9.3	4.9	14.9	14.1	8.5	11.1	3.5
Lower During Sleeping Hours											
Yes	46.4	9.1	9.1	15.8	12.5	3.7	11.3	10.1	10.5	10.8	6.0
No	50.2	10.4	14.2	17.7	7.9	5.0	15.2	12.4	7.3	10.4	6.0
Daytime Winter Temperature When Someone Is at Home											
Heat is Turned On	89.1	18.4	22.8	30.6	17.3	8.5	25.8	21.1	15.1	18.6	4.9
63 Degrees or Less	3.3	1.1	.6	.8	.9	.4	.9	1.0	.6	.4	16.3
64 to 66 Degrees	8.9	2.5	1.6	2.4	2.5	.9	2.6	2.2	1.8	1.3	10.8
67 to 69 Degrees	22.3	5.5	6.6	5.9	4.4	3.0	7.1	5.4	3.4	3.4	8.0
70 Degrees	28.7	6.1	7.4	9.7	5.5	2.5	8.7	6.9	4.7	5.8	6.7
71 to 73 Degrees	13.9	1.9	4.2	5.7	2.1	1.0	4.1	3.3	2.0	3.6	9.5
74 Degrees or More	12.0	1.4	2.5	6.2	2.0	.7	2.4	2.3	2.5	4.1	10.3
Heat Turned Off	3.2	Q	Q	1.3	1.8	NC	.1	.2	1.7	1.2	24.0
Unknown/No Answer	4.3	1.1	.5	1.6	1.2	.2	.6	1.2	1.0	1.3	13.7

See footnotes at end of table.

Table 3.23b. Usage Indicators by Census Region and Climate Zone Percent of U.S. Households, 1993

Usage Indicators	Total	Census Region				Climate Zone					RSE Row Factors
						Fewer than 2,000 CDD and --				More than 2,000 CDD and Fewer than 4,000 HDD	
						More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factors	0.5	1.0	1.0	0.9	1.0	1.5	1.0	1.1	1.1	1.2	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0
Weekday Home Activities											
Home Used for Business											
Yes	6.3	4.9	6.5	6.0	8.1	7.7	6.7	4.8	7.2	6.1	10.6
No	93.7	95.1	93.5	94.0	91.9	92.3	93.3	95.2	92.8	93.9	NE
Energy-Intensive Activity											
Yes	2.6	1.4	3.1	2.9	2.8	2.0	2.7	1.9	2.3	3.8	17.3
No	97.4	98.6	96.9	97.1	97.2	98.0	97.3	98.1	97.7	96.2	NE
Someone Home All Day											
Yes	47.6	45.6	47.4	48.1	48.7	49.5	47.8	43.8	51.1	47.5	4.2
No	52.4	54.4	52.6	51.9	51.3	50.5	52.2	56.2	48.9	52.5	3.8
Heating											
Thermostat Available During Heating Season											
Yes	83.0	79.8	91.3	80.4	80.9	87.2	92.1	78.4	76.4	80.3	1.8
No	16.1	20.2	8.7	19.0	15.8	12.8	7.9	21.6	21.8	17.0	9.5
Set-Back or Clock Thermostat in Home											
Yes	11.2	14.7	8.5	8.6	15.5	5.6	11.0	12.4	11.4	12.5	11.8
No	88.8	85.3	91.5	91.4	84.5	94.4	89.0	87.6	88.6	87.5	1.7
Winter Temperature Settings											
Lower When No One Home											
Yes	44.7	40.6	40.1	44.5	54.4	44.1	43.8	37.3	52.5	47.6	4.1
No	55.3	59.4	59.9	55.5	45.6	55.9	56.2	62.7	47.5	52.4	3.3
Lower During Sleeping Hours											
Yes	48.1	46.7	38.9	47.2	61.2	42.7	42.8	44.8	59.2	51.0	4.2
No	51.9	53.3	61.1	52.8	38.8	57.3	57.2	55.2	40.8	49.0	3.9
Daytime Winter Temperature When Someone is at Home											
Heat is Turned On	92.2	94.3	97.8	91.5	85.1	98.1	97.3	93.8	84.9	88.0	1.8
63 Degrees or Less	3.4	5.6	2.4	2.2	4.5	4.5	3.5	4.3	3.6	1.8	14.4
64 to 66 Degrees	9.2	12.6	6.7	7.1	12.1	10.8	9.8	9.9	10.1	6.1	9.3
67 to 69 Degrees	23.1	28.0	28.3	17.6	21.5	34.1	26.9	24.0	19.3	16.1	5.7
70 Degrees	29.7	31.2	31.7	29.1	27.1	29.1	32.8	30.8	26.7	27.6	4.6
71 to 73 Degrees	14.4	10.0	18.0	16.9	10.2	11.3	15.3	14.5	11.3	16.9	7.0
74 Degrees or More	12.4	6.9	10.6	18.5	9.7	8.3	8.9	10.3	13.9	19.4	8.9
Heat Turned Off	3.3	Q	Q	3.8	9.0	NC	.5	.8	9.3	5.9	25.7
Unknown/No Answer	4.4	5.4	2.0	4.7	5.9	1.9	2.2	5.4	5.8	6.2	14.0

See footnotes at end of table.

Table 3.23a. Usage Indicators by Census Region and Climate Zone Million U.S. Households, 1993 (Continued)

Usage Indicators	Total	Census Region				Climate Zone					RSE Row Factors
						Fewer than 2,000 CDD and –				More than 2,000 CDD and Fewer than 4,000 HDD	
		Northeast	Midwest	South	West	More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factors	0.4	0.8	0.8	0.7	0.7	2.5	1.4	1.3	1.5	1.2	
Daytime Winter Temperature When No One is at Home											
Heat is Turned On	75.0	17.8	22.5	23.8	10.9	8.4	25.0	19.6	9.3	12.8	3.3
63 Degrees or Less	17.0	4.5	4.1	4.6	3.8	2.4	5.3	3.9	2.7	2.7	9.5
64 to 66 Degrees	14.7	3.7	4.3	4.5	2.2	1.7	5.3	3.7	1.7	2.3	9.8
67 to 69 Degrees	15.6	3.8	5.1	4.9	1.8	1.9	5.3	4.1	1.7	2.7	10.7
70 Degrees	15.7	3.9	5.0	4.8	1.9	1.5	5.4	4.8	1.7	2.3	8.9
71 to 73 Degrees	6.9	1.1	2.7	2.5	.6	.6	2.5	1.8	.7	1.4	12.4
74 Degrees or More	5.1	.8	1.4	2.4	.5	.4	1.2	1.3	.7	1.6	14.5
Heat Turned Off	17.8	.6	.4	8.4	8.5	Q	1.0	1.7	7.8	7.3	11.8
Unknown/No Answer	3.8	1.1	.4	1.3	1.0	.2	.5	1.2	.8	1.1	14.2
Winter Temperature During Sleeping Hours											
Heat is Turned On	81.9	18.0	22.7	27.5	13.7	8.5	25.4	20.2	12.1	15.6	5.7
63 Degrees or Less	15.5	4.6	2.9	4.1	3.9	1.9	4.3	4.2	2.8	2.3	9.7
64 to 66 Degrees	16.6	4.3	4.5	4.8	3.0	1.8	5.4	4.5	2.3	2.6	8.3
67 to 69 Degrees	17.6	4.0	5.6	5.4	2.6	2.3	5.9	4.2	2.1	3.1	8.2
70 Degrees	17.6	3.1	5.6	6.5	2.5	1.6	5.8	4.1	2.6	3.6	9.3
71 to 73 Degrees	7.9	1.1	2.7	3.4	.7	.5	2.6	1.7	1.1	2.0	12.8
74 Degrees or More	6.6	.9	1.5	3.3	1.0	.4	1.5	1.4	1.2	2.1	12.7
Heat Turned Off	10.7	.3	Q	4.6	5.6	Q	.5	1.0	4.8	4.4	13.3
Unknown/No Answer	4.1	1.2	.4	1.4	1.1	.2	.6	1.3	.9	1.2	13.7
Air-Conditioning											
Central Air-Conditioning Use											
All Summer	19.3	.9	3.0	14.1	1.2	.2	2.4	4.2	3.3	9.2	11.6
Quite a Bit	8.9	1.2	2.7	3.8	1.2	.4	2.5	2.4	1.2	2.5	13.9
Only a Few Times	12.8	1.7	4.9	3.6	2.7	1.6	3.9	2.5	2.3	2.5	11.3
Not at All	1.0	Q	.2	.3	.4	.2	Q	.1	.3	.3	28.6
No Central System	54.6	15.5	12.5	11.7	14.8	6.3	17.6	13.3	10.7	6.7	6.4
Window Air-Conditioning Use											
All Summer	4.8	.7	.7	3.3	Q	Q	.8	1.2	1.2	1.5	15.9
Quite a Bit	6.1	2.1	1.5	2.3	.3	.2	1.6	2.4	.8	1.2	16.0
Only a Few Times	13.4	4.6	3.9	3.1	1.8	1.6	4.5	3.8	1.9	1.7	11.6
Not at All	1.5	.3	.5	.3	.4	.2	.5	.3	.3	.3	23.1
No Window Units	70.9	11.9	16.7	24.5	17.8	6.6	19.1	14.8	13.7	16.6	4.8
Hot Water											
Number of Showers/Baths Taken Each Week											
9 or Fewer	28.4	6.0	7.6	8.7	6.1	3.0	8.6	6.4	5.3	5.1	8.5
10 to 20	41.5	8.5	9.9	14.7	8.5	3.7	11.4	9.9	7.2	9.4	5.4
21 or More	26.4	5.0	5.8	9.9	5.7	1.9	6.5	6.1	5.3	6.6	7.4
Not Applicable	.3	NC	NC	.2	Q	Q	NC	Q	Q	Q	67.1

See footnotes at end of table.

Table 3.23b. Usage Indicators by Census Region and Climate Zone Percent of U.S. Households, 1993 (Continued)

Usage Indicators	Total	Census Region				Climate Zone					RSE Row Factors
						Fewer than 2,000 CDD and --				More than 2,000 CDD and Fewer than 4,000 HDD	
		Northeast	Midwest	South	West	More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factors	0.5	1.0	1.0	0.9	1.0	1.5	1.0	1.1	1.1	1.2	
Daytime Winter Temperature When No One Is at Home											
Heat is Turned On	77.6	91.5	96.7	71.1	53.3	97.2	94.2	87.1	52.2	60.3	2.6
63 Degrees or Less	17.6	23.1	17.4	13.8	18.7	27.2	20.0	17.6	15.2	12.6	7.4
64 to 66 Degrees	15.2	19.0	18.3	13.6	10.7	19.8	20.1	16.3	9.6	10.8	6.8
67 to 69 Degrees	16.2	19.5	21.9	14.5	9.1	21.7	19.8	18.3	9.6	12.5	8.6
70 Degrees	16.3	20.2	21.6	14.3	9.6	17.4	20.4	21.5	9.7	10.7	7.1
71 to 73 Degrees	7.2	5.7	11.7	7.5	2.8	6.7	9.4	7.8	4.1	6.5	10.5
74 Degrees or More	5.3	4.0	5.9	7.3	2.5	4.3	4.6	5.7	3.9	7.3	13.3
Heat Turned Off	18.4	3.0	1.6	25.0	41.7	Q	3.7	7.5	43.6	34.4	10.5
Unknown/No Answer	3.9	5.5	1.7	3.9	5.0	1.9	2.0	5.4	4.2	5.3	14.4
Winter Temperature During Sleeping Hours											
Heat is Turned On	84.7	92.5	97.5	82.0	67.1	97.6	95.9	90.1	68.0	73.7	2.2
63 Degrees or Less	16.0	23.7	12.5	12.1	18.9	22.0	16.3	18.8	15.5	10.6	8.0
64 to 66 Degrees	17.2	22.1	19.3	14.3	14.9	20.7	20.4	20.2	12.8	12.4	6.5
67 to 69 Degrees	18.2	20.8	24.0	16.1	12.7	26.8	22.1	18.7	11.9	14.7	5.8
70 Degrees	18.2	15.7	23.9	19.5	12.1	18.0	21.8	18.3	14.5	16.9	7.3
71 to 73 Degrees	8.2	5.6	11.5	10.1	3.6	5.9	9.7	7.6	6.4	9.2	10.7
74 Degrees or More	6.9	4.6	6.3	9.7	4.9	4.1	5.6	6.4	6.8	10.0	11.6
Heat Turned Off	11.0	1.5	Q	13.8	27.5	Q	1.8	4.3	26.9	20.7	12.4
Unknown/No Answer	4.3	6.0	1.9	4.2	5.4	1.9	2.2	5.6	5.1	5.6	13.9
Air-Conditioning											
Central Air-Conditioning Use											
All Summer	20.0	4.7	12.9	42.1	6.1	2.4	8.9	18.6	18.6	43.6	9.8
Quite a Bit	9.2	6.2	11.6	11.3	6.1	4.6	9.4	10.5	6.8	11.7	12.7
Only a Few Times	13.3	8.7	20.9	10.7	13.3	18.8	14.8	11.0	12.7	12.0	9.9
Not at All	1.0	Q	.9	1.0	1.7	2.0	Q	.7	1.7	1.2	28.7
No Central System	56.5	79.8	53.7	34.9	72.8	72.2	66.4	59.2	60.2	31.5	4.6
Window Air-Conditioning Use											
All Summer	5.0	3.6	3.1	9.8	Q	Q	3.2	5.2	6.7	7.2	14.0
Quite a Bit	6.3	10.6	6.2	6.7	1.4	2.4	5.9	10.5	4.3	5.5	14.2
Only a Few Times	13.9	23.4	16.8	9.3	8.9	18.3	16.8	17.1	10.5	7.9	9.8
Not at All	1.6	1.4	2.2	1.0	1.9	2.5	1.8	1.2	1.6	1.2	22.6
No Window Units	73.3	61.0	71.6	73.2	87.3	76.2	72.3	66.1	76.9	78.1	2.7
Hot Water											
Number of Showers/Baths Taken Each Week											
9 or Fewer	29.4	30.6	32.7	26.0	30.0	34.8	32.4	28.5	29.9	24.1	4.2
10 to 20	43.0	43.6	42.3	43.8	41.9	42.4	42.9	44.2	40.2	44.4	3.4
21 or More	27.3	25.8	25.0	29.6	27.8	22.1	24.7	27.0	29.8	31.1	5.5
Not Applicable	.3	NC	NC	.6	Q	Q	NC	Q	Q	Q	44.3

See footnotes at end of table.

Table 3.23a. Usage Indicators by Census Region and Climate Zone Million U.S. Households, 1993 (Continued)

Usage Indicators	Total	Census Region				Climate Zone					RSE Row Factors
						Fewer than 2,000 CDD and –				More than 2,000 CDD and Fewer than 4,000 HDD	
		Northeast	Midwest	South	West	More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factors	0.4	0.8	0.8	0.7	0.7	2.5	1.4	1.3	1.5	1.2	
Hot Water (continued)											
Loads of Laundry Washed Each Week											
1 to 5 Loads	36.5	7.6	7.8	13.2	7.9	3.2	9.5	8.9	7.0	8.0	6.4
6 to 10 Loads	25.0	4.7	6.5	9.0	4.8	2.4	7.2	5.4	4.2	5.8	6.7
11 to 15 Loads	8.6	1.4	2.7	3.1	1.3	1.2	2.4	1.8	1.3	1.9	17.6
16 or More Loads	4.3	.8	1.4	1.6	.7	.5	1.4	.9	.8	.8	16.5
No Washing Machine	22.2	5.1	4.9	6.5	5.7	1.4	6.0	5.4	4.6	4.8	8.0
Dishwasher Use											
Less Than Once a Week	2.3	.3	.6	.9	.5	.3	.6	.4	.5	.6	18.7
A Few Times a Week	21.3	4.0	3.9	7.7	5.7	1.3	5.3	5.1	3.9	5.7	8.1
Several Times a Week	11.8	2.4	2.8	4.3	2.4	1.2	3.3	3.0	1.8	2.6	9.0
Every Day	7.3	1.2	1.8	2.6	1.6	.7	1.9	1.8	1.4	1.5	17.8
More Than Every Day	1.0	.2	.3	.3	.3	Q	.3	.3	.3	.1	34.2
No Dishwasher	52.9	11.4	13.9	17.8	9.8	5.1	15.1	12.0	10.0	10.7	5.5
Cooking											
Number of Hot Meals Cooked in the Home											
2 or More a Day	34.7	6.5	8.5	11.5	8.2	3.3	8.8	8.1	7.1	7.3	6.3
1 a Day	42.8	9.7	10.2	14.6	8.2	4.2	12.2	9.9	7.1	9.5	5.5
A Few per Week	15.4	2.6	3.6	5.8	3.3	1.0	4.4	3.7	2.9	3.5	8.9
About 1 a Week	2.0	.3	.5	.9	.4	Q	.6	.4	.4	.5	19.8
Less Than 1 a Week	1.8	.3	.5	.7	.3	Q	.6	.5	.3	.4	22.3
Amount of Food Cooked in Microwave Oven											
Most or All	4.7	.9	1.1	1.4	1.3	.4	1.2	1.3	.8	1.0	14.2
About Half	13.1	1.8	4.1	4.1	3.2	1.5	4.0	2.8	2.3	2.5	9.8
Some or Very Little	22.2	3.8	6.0	7.2	5.3	2.6	6.4	5.0	4.1	4.2	7.8
Only for Defrosting, Reheating, or Snacks	41.2	8.6	9.7	15.2	7.7	3.1	11.3	9.4	7.5	9.9	6.5
No Microwave Oven	15.3	4.3	2.5	5.7	2.8	1.1	3.6	4.0	3.1	3.6	8.9
Lighting											
Indoor Light Usage											
1 to 4 Hours a Day											
Yes	87.0	17.4	21.8	29.9	18.0	8.0	24.2	20.6	15.6	18.7	3.9
No	9.6	2.1	1.5	3.6	2.4	.7	2.3	1.9	2.2	2.5	10.9
4 to 12 Hours a Day											
Yes	83.2	17.4	21.1	27.6	17.1	7.8	24.0	19.9	14.4	17.1	3.6
No	13.4	2.0	2.2	5.9	3.3	.9	2.5	2.6	3.4	4.1	10.2
More than 12 Hours a Day											
Yes	30.3	5.5	7.2	12.6	5.0	2.2	8.0	7.6	5.2	7.2	7.6
No	66.4	14.0	16.1	20.9	15.3	6.5	18.5	14.9	12.6	14.0	4.7
Outdoor Lights											
Used	63.5	10.8	15.5	22.9	14.3	6.5	16.6	13.1	12.1	15.2	5.9
Not Used	33.1	8.7	7.8	10.6	6.0	2.2	9.9	9.3	5.7	6.0	8.5

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • Percentages are calculated on unrounded numbers. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.23b. Usage Indicators by Census Region and Climate Zone Percent of U.S. Households, 1993 (Continued)

Usage Indicators	Total	Census Region				Climate Zone					RSE Row Factors
						Fewer than 2,000 CDD and --				More than 2,000 CDD and Fewer than 4,000 HDD	
		Northeast	Midwest	South	West	More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factors	*0.5*	*1.0*	*1.0*	*0.9*	*1.0*	*1.5*	*1.0*	*1.1*	*1.1*	*1.2*	
Hot Water (continued)											
Loads of Laundry Washed Each Week											
1 to 5 Loads	37.8	38.8	33.6	39.5	38.8	36.8	35.7	39.6	39.2	37.7	3.2
6 to 10 Loads	25.8	24.1	27.8	27.0	23.4	27.7	27.2	23.9	23.6	27.3	4.4
11 to 15 Loads	8.9	7.2	11.8	9.4	6.5	13.9	9.2	8.1	7.1	8.9	9.4
16 or More Loads	4.5	3.9	5.8	4.6	3.3	5.7	5.3	4.1	4.3	3.6	14.2
No Washing Machine	22.9	26.0	21.0	19.5	27.9	15.9	22.6	24.3	25.8	22.5	7.1
Dishwasher Use											
Less Than Once a Week	2.4	1.6	2.8	2.6	2.5	3.1	2.2	1.8	2.8	2.8	18.3
A Few Times a Week	22.0	20.6	16.8	22.8	27.9	15.1	20.1	22.7	21.7	26.8	7.4
Several Times a Week	12.2	12.1	11.9	12.8	11.7	13.6	12.4	13.2	10.0	12.2	7.6
Every Day	7.5	6.3	7.7	7.8	8.1	8.0	7.2	7.8	7.8	7.3	10.4
More Than Every Day	1.1	.9	1.2	.9	1.5	Q	1.2	1.2	1.5	.5	31.3
No Dishwasher	54.8	58.5	59.6	53.1	48.4	59.0	57.0	53.4	56.2	50.5	3.2
Cooking											
Number of Hot Meals Cooked in the Home											
2 or More a Day	35.9	33.3	36.5	34.3	40.2	38.4	33.1	36.0	40.0	34.6	4.1
1 a Day	44.3	50.0	43.9	43.7	40.2	48.1	46.0	44.0	39.8	44.7	3.3
A Few per Week	15.9	13.6	15.4	17.4	16.3	11.2	16.5	16.3	16.2	16.4	7.4
About 1 a Week	2.1	1.5	2.0	2.7	1.8	Q	2.2	1.6	2.5	2.4	18.0
Less Than 1 a Week	1.9	1.6	2.3	2.0	1.5	Q	2.2	2.1	1.6	1.9	20.5
Amount of Food Cooked in Microwave Oven											
Most or All	4.9	4.7	4.6	4.2	6.5	4.8	4.4	5.8	4.7	4.6	12.6
About Half	13.6	9.3	17.5	12.1	15.7	17.8	15.1	12.4	12.8	12.0	7.6
Some or Very Little	23.0	19.5	25.6	21.3	26.0	29.7	24.1	22.2	23.0	19.8	6.1
Only for Defrosting, Reheating, or Snacks	42.7	44.2	41.7	45.4	37.8	35.2	42.7	42.0	42.2	46.7	4.3
No Microwave Oven	15.9	22.3	10.6	16.9	14.0	12.6	13.7	17.7	17.2	17.0	7.6
Lighting											
Indoor Light Usage											
1 to 4 Hours a Day											
Yes	90.0	89.3	93.5	89.1	88.2	91.6	91.4	91.5	87.5	88.1	1.2
No	10.0	10.7	6.5	10.9	11.8	8.4	8.6	8.5	12.5	11.9	9.9
4 to 12 Hours a Day											
Yes	86.1	89.5	90.6	82.5	83.8	90.1	90.7	88.5	81.1	80.5	1.4
No	13.9	10.5	9.4	17.5	16.2	9.9	9.3	11.5	18.9	19.5	8.6
More than 12 Hours a Day											
Yes	31.3	28.2	30.8	37.5	24.7	25.2	30.2	33.8	29.4	34.2	5.5
No	68.7	71.8	69.2	62.5	75.3	74.8	69.8	66.2	70.6	65.8	2.4
Outdoor Lights											
Used	65.8	55.3	66.5	68.4	70.5	74.6	62.6	58.6	68.2	71.6	3.4
Not Used	34.2	44.7	33.5	31.6	29.5	25.4	37.4	41.4	31.8	28.4	6.7

NC = No cases in sample.
NE = RSE row factor not estimated because RSE's for all statistics in this row are between 0.0 and 1.0 percent.
Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.
Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • Percentages are calculated on unrounded numbers. • See "Glossary" for definition of terms used in this report.
Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.24a. Usage Indicators by Year of Construction, Million U.S. Households, 1993

Usage Indicators	Total	Year of Construction									RSE Row Factors
		1991 to 1993[1]	1988 to 1990	1985 to 1987	1980 to 1984	1970 to 1979	1960 to 1969	1950 to 1959	1940 to 1949	1940 to 1949	
RSE Column Factors:	0.3	1.4	1.4	1.4	1.1	0.8	0.9	0.9	1.3	1.3	
Total	96.6	4.7	4.7	5.5	8.5	18.1	15.0	13.1	6.9	6.9	[illegible]
Weekday Home Activities											
Home Used for Business											
Yes	6.1	.4	.4	.4	.8	1.1	.8	.9	.3	.3	16.6
No	90.5	4.3	4.3	5.1	7.7	17.1	14.2	12.2	6.6	6.6	[illegible]
Energy-Intensive Activity											
Yes	2.5	.1	.1	.2	.3	.6	.3	.4	.2	.2	2[illegible].7
No	94.1	4.6	4.6	5.3	8.2	17.6	14.8	12.6	6.7	6.7	[illegible].2
Someone Home All Day											
Yes	46.0	2.1	2.1	2.3	3.9	7.9	7.4	6.7	3.4	3.4	[illegible].2
No	50.7	2.6	2.6	3.2	4.6	10.3	7.6	6.4	3.5	3.5	[illegible].3
Heating											
Thermostat Available During Heating Season											
Yes	80.2	4.3	4.3	5.1	7.5	15.6	12.6	10.9	5.0	5.0	[illegible].0
No	15.5	.4	.4	.4	.9	2.3	2.3	2.0	1.8	1.8	[illegible].1
Set-Back or Clock Thermostat in Home											
Yes	10.8	.9	.9	.7	.9	1.9	1.5	1.7	.4	.4	[illegible].7
No	85.8	3.8	3.8	4.8	7.6	16.2	13.5	11.4	6.5	6.5	[illegible].6
Winter Temperature Settings											
Lower When No One Home											
Yes	43.2	2.2	2.2	2.9	4.1	8.2	6.7	6.3	3.1	3.1	[illegible].8
No	53.4	2.5	2.5	2.6	4.4	9.9	8.4	6.7	3.8	3.8	[illegible].5
Lower During Sleeping Hours											
Yes	46.4	2.2	2.2	2.9	4.2	8.5	7.1	7.2	3.6	3.6	[illegible].7
No	50.2	2.5	2.5	2.6	4.3	9.7	7.9	5.8	3.3	3.3	[illegible].8
Daytime Winter Temperature When Someone is at Home											
Heat is Turned On	89.1	4.5	4.5	5.1	8.0	16.6	13.7	12.0	6.4	6.4	[illegible].5
63 Degrees or Less	3.3	.1	.1	.2	.2	.7	.5	.5	.3	.3	24.3
64 to 66 Degrees	8.9	.5	.5	.4	.9	1.6	1.4	.9	.6	.6	14.0
67 to 69 Degrees	22.3	1.3	1.3	1.5	1.8	3.7	3.5	3.1	1.4	1.4	10.0
70 Degrees	28.7	1.5	1.5	1.5	2.1	5.8	4.7	4.3	1.8	1.8	[illegible].5
71 to 73 Degrees	13.9	.6	.6	.9	1.7	2.7	2.2	1.5	1.0	1.0	11.5
74 Degrees or More	12.0	.5	.5	.7	1.3	2.1	1.5	1.6	1.3	1.3	11.5
Heat Turned Off	3.2	.1	.1	.2	Q	.9	.5	.6	Q	.1	25.3
Unknown/No Answer	4.3	.1	.1	Q	.2	.7	.9	.5	.4	.4	20.5

See footnotes at end of table.

Table 3.24b. Usage Indicators by Year of Construction, Percent of U.S. Households, 1993

Usage Indicators	Total	Year of Construction									RSE Row Factors
		1991 to 1993[1]	1988 to 1990	1985 to 1987	1980 to 1984	1970 to 1979	1960 to 1969	1950 to 1959	1940 to 1949	1939 or Before	
RSE Column Factors:	0.4	1.5	1.3	1.4	1.2	0.9	0.9	1.0	1.2	0.8	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0
Weekday Home Activities											
Home Used for Business											
Yes	6.3	6.8	8.4	6.6	8.9	6.0	5.2	6.8	4.2	6.0	14.6
No	93.7	93.2	91.6	93.4	91.1	94.0	94.8	93.2	95.8	94.0	NE
Energy-Intensive Activity											
Yes	2.6	3.2	2.5	3.5	3.7	3.1	1.7	3.3	2.3	1.7	21.7
No	97.4	96.8	97.5	96.5	96.3	96.9	98.3	96.7	97.7	98.3	NE
Someone Home All Day											
Yes	47.6	42.0	45.0	41.7	45.6	43.4	49.5	51.4	49.2	51.1	5.0
No	52.4	58.0	55.0	58.3	54.4	56.6	50.5	48.6	50.8	48.9	4.4
Heating											
Thermostat Available During Heating Season											
Yes	83.0	98.2	91.6	93.0	88.9	86.2	83.6	83.4	72.1	72.6	2.0
No	16.1	1.8	7.8	7.0	10.6	12.6	15.0	15.3	26.7	26.7	12.8
Set-Back or Clock Thermostat in Home											
Yes	11.2	23.3	18.9	13.1	10.6	10.5	10.1	13.0	6.2	8.6	12.7
No	88.8	76.7	81.1	86.9	89.4	89.5	89.9	87.0	93.8	91.4	1.7
Winter Temperature Settings											
Lower When No One Home											
Yes	44.7	50.5	46.5	53.4	48.0	45.5	44.4	48.6	45.2	36.3	4.6
No	55.3	49.5	53.5	46.6	52.0	54.5	55.6	51.4	54.8	63.7	3.9
Lower During Sleeping Hours											
Yes	48.1	48.7	46.0	52.2	49.1	46.7	47.5	55.4	52.0	42.5	4.4
No	51.9	51.3	54.0	47.8	50.9	53.3	52.5	44.6	48.0	57.5	4.2
Daytime Winter Temperature When Someone Is at Home											
Heat is Turned On	92.2	97.8	95.2	93.8	94.9	91.5	91.0	91.7	92.6	90.6	1.5
63 Degrees or Less	3.4	2.0	2.0	3.4	2.5	3.9	3.1	3.6	3.7	4.1	21.4
64 to 66 Degrees	9.2	11.8	9.7	6.4	10.4	8.7	9.2	7.1	8.1	10.7	12.7
67 to 69 Degrees	23.1	30.2	26.7	27.3	20.7	20.1	23.1	24.1	20.9	23.4	7.3
70 Degrees	29.7	28.1	31.7	27.5	25.0	32.1	31.2	33.1	26.0	28.1	5.9
71 to 73 Degrees	14.4	16.6	13.6	15.9	20.6	15.0	14.4	11.5	14.4	12.3	9.7
74 Degrees or More	12.4	9.2	11.5	13.2	15.6	11.5	10.0	12.2	19.4	12.1	10.4
Heat Turned Off	3.3	Q	2.8	4.3	Q	4.8	3.2	4.4	Q	2.5	26.2
Unknown/No Answer	4.4	Q	2.0	Q	2.6	3.8	5.8	3.9	5.6	6.9	19.8

See footnotes at end of table.

Table 3.24a. Usage Indicators by Year of Construction, Million U.S. Households, 1993 (Continued)

Usage Indicators	Total	Year of Construction									RSE Row Factors
		1991 to 1993[1]	1988 to 1990	1985 to 1987	1980 to 1984	1970 to 1979	1960 to 1969	1950 to 1959	1940 to 1949	1940 to 1949	
RSE Column Factors:	0.3	1.4	1.4	1.4	1.1	0.8	0.9	0.9	1.3	1.3	
Daytime Winter Temperature When No One is at Home											
Heat is Turned On	75.0	3.9	3.9	4.2	6.6	13.8	11.4	9.5	5.2	5.2	6.0
63 Degrees or Less	17.0	.8	.8	.9	1.6	3.1	2.3	2.2	1.4	1.4	10.8
64 to 66 Degrees	14.7	.8	.8	1.1	1.5	2.6	2.4	1.9	.8	.8	10.7
67 to 69 Degrees	15.6	1.0	1.0	1.0	1.3	2.7	2.3	1.9	1.0	1.0	11.5
70 Degrees	15.7	.7	.7	.7	.9	3.1	2.7	2.2	1.0	1.0	10.9
71 to 73 Degrees	6.9	.3	.3	.3	.8	1.4	1.0	.7	.4	.4	15.6
74 Degrees or More	5.1	.2	.2	.2	.5	1.0	.7	.6	.6	.6	17.4
Heat Turned Off	17.8	.8	.8	1.2	1.7	3.6	2.8	3.2	1.4	1.4	10.2
Unknown/No Answer	3.8	.1	.1	Q	Q	.7	.8	.4	.3	.3	19.1
Winter Temperature During Sleeping Hours											
Heat is Turned On	81.9	4.3	4.3	4.7	7.3	15.2	12.5	10.6	5.7	5.7	5.7
63 Degrees or Less	15.5	.7	.7	.7	1.3	2.8	2.3	2.1	1.3	1.3	11.1
64 to 66 Degrees	16.6	.9	.9	1.1	1.5	2.7	2.6	2.2	1.3	1.3	10.4
67 to 69 Degrees	17.6	1.0	1.0	1.0	1.3	3.5	2.6	2.5	1.1	1.1	10.8
70 Degrees	17.6	1.0	1.0	.9	1.3	3.4	3.1	2.3	1.1	1.1	10.3
71 to 73 Degrees	7.9	.4	.4	.5	1.0	1.7	1.2	.7	.4	.4	15.5
74 Degrees or More	6.6	.4	.4	.5	.9	1.2	.7	.8	.6	.6	15.0
Heat Turned Off	10.7	.3	.3	.7	1.0	2.2	1.7	2.1	.8	.8	14.2
Unknown/No Answer	4.1	.1	.1	Q	.2	.7	.9	.4	.4	.4	20.3
Air-Conditioning											
Central Air-Conditioning Use											
All Summer	19.3	1.6	1.6	2.0	3.0	4.1	3.1	1.9	.5	.5	10.9
Quite a Bit	8.9	.7	.7	1.2	1.1	2.0	1.4	.9	.4	.4	14.3
Only a Few Times	12.8	1.1	1.1	1.0	1.6	2.7	2.2	1.8	.6	.6	13.0
Not at All	1.0	.1	.1	Q	Q	.3	Q	Q	NC	NC	33.7
No Central System	54.6	1.2	1.2	1.3	2.6	9.0	8.2	8.3	5.4	5.4	7.7
Window Air-Conditioning Use											
All Summer	4.8	Q	Q	.1	.2	.9	.9	.9	.7	.7	19.7
Quite a Bit	6.1	Q	Q	.2	.2	.8	1.0	1.2	.7	.7	19.1
Only a Few Times	13.4	.3	.3	.4	.6	2.0	2.3	2.1	1.1	1.1	14.6
Not at All	1.5	Q	Q	Q	Q	.3	.3	.3	Q	.1	32.1
No Window Units	70.9	4.3	4.3	4.8	7.4	14.1	10.5	8.6	4.4	4.4	5.7
Hot Water											
Number of Showers/Baths Taken Each Week											
9 or Fewer	28.4	.9	.9	1.0	1.9	5.2	4.8	3.8	2.5	2.5	9.1
10 to 20	41.5	2.2	2.2	2.5	3.9	7.7	6.6	5.3	2.9	2.9	6.7
21 or More	26.4	1.6	1.6	2.0	2.7	5.2	3.6	3.9	1.5	1.5	8.1
Not Applicable	.3	NC	NC	NC	NC	Q	Q	Q	Q	Q	98.1

See footnotes at end of table.

Table 3.24b. Usage Indicators by Year of Construction, Percent of U.S. Households, 1993 (Continued)

Usage Indicators	Total	Year of Construction									RSE Row Factors
		1991 to 1993[1]	1988 to 1990	1985 to 1987	1980 to 1984	1970 to 1979	1960 to 1969	1950 to 1959	1940 to 1949	1939 or Before	
RSE Column Factors:	0.4	1.5	1.3	1.4	1.2	0.9	0.9	1.0	1.2	0.8	
Daytime Winter Temperature When No One is at Home											
Heat is Turned On	77.6	85.0	81.8	76.9	78.3	76.3	76.0	72.9	74.8	81.4	2.6
63 Degrees or Less	17.6	21.7	17.4	16.7	18.4	17.1	15.4	16.7	20.6	18.1	9.0
64 to 66 Degrees	15.2	18.4	17.9	19.8	17.2	14.2	15.9	14.6	12.2	13.6	9.2
67 to 69 Degrees	16.2	21.3	21.1	18.9	15.7	15.1	15.6	14.4	13.8	16.6	9.3
70 Degrees	16.3	10.7	14.7	11.9	11.1	16.8	18.2	17.0	14.3	19.4	9.4
71 to 73 Degrees	7.2	9.4	6.0	5.5	9.3	7.8	6.4	5.7	5.6	8.0	14.0
74 Degrees or More	5.3	3.5	4.7	4.1	6.5	5.3	4.4	4.4	8.2	5.8	16.4
Heat Turned Off	18.4	14.9	16.2	21.4	20.1	20.1	18.7	24.4	20.5	11.9	10.2
Unknown/No Answer	3.9	Q	2.0	Q	Q	3.6	5.3	2.7	4.8	6.6	18.6
Winter Temperature During Sleeping Hours											
Heat is Turned On	84.7	92.0	91.0	86.3	86.1	84.0	83.0	80.9	82.8	85.7	2.0
63 Degrees or Less	16.0	14.0	14.6	13.4	15.6	15.2	15.0	16.3	19.2	17.8	9.8
64 to 66 Degrees	17.2	22.0	18.1	20.0	17.5	15.0	17.2	16.8	18.2	17.1	8.7
67 to 69 Degrees	18.2	25.2	20.8	18.9	15.3	19.1	17.0	19.2	15.3	17.6	8.7
70 Degrees	18.2	14.8	21.9	17.2	15.8	18.7	20.6	17.4	15.4	18.8	8.8
71 to 73 Degrees	8.2	10.6	7.8	8.4	11.4	9.3	8.2	5.3	5.8	7.9	13.5
74 Degrees or More	6.9	5.3	7.8	8.3	10.4	6.7	4.9	5.8	9.0	6.6	13.9
Heat Turned Off	11.0	8.0	7.0	12.2	11.4	12.4	11.3	16.0	11.6	7.4	14.1
Unknown/No Answer	4.3	Q	1.9	Q	2.5	3.7	5.7	3.1	5.6	6.9	19.7
Air-Conditioning											
Central Air-Conditioning Use											
All Summer	20.0	43.4	34.8	36.2	35.7	22.8	20.8	14.6	7.3	5.1	9.0
Quite a Bit	9.2	17.6	15.3	21.0	12.7	11.2	9.1	7.3	5.6	2.2	13.3
Only a Few Times	13.3	19.5	22.5	18.1	18.8	14.7	14.8	13.5	8.8	5.1	11.4
Not at All	1.0	1.9	2.1	Q	Q	1.6	Q	Q	NC	Q	31.1
No Central System	56.5	17.7	25.3	24.4	31.1	49.7	54.4	63.2	78.3	87.3	5.3
Window Air-Conditioning Use											
All Summer	5.0	Q	Q	1.7	2.7	4.7	5.8	7.1	9.6	4.9	19.1
Quite a Bit	6.3	Q	Q	3.2	2.5	4.5	6.5	9.1	9.5	9.5	17.2
Only a Few Times	13.9	Q	5.4	6.4	7.0	11.3	15.5	15.7	15.9	22.5	12.3
Not at All	1.6	Q	Q	Q	Q	1.5	2.1	2.2	Q	1.9	27.9
No Window Units	73.3	93.9	91.0	88.2	87.4	77.9	70.2	65.9	63.5	61.2	2.5
Hot Water											
Number of Showers/Baths Taken Each Week											
9 or Fewer	29.4	20.0	18.5	18.0	22.3	28.6	31.7	29.3	35.9	37.0	7.1
10 to 20	43.0	48.7	47.4	45.3	45.9	42.2	43.9	40.6	41.4	41.0	4.6
21 or More	27.3	31.3	34.2	36.7	31.9	28.9	24.0	30.0	22.3	21.5	6.7
Not Applicable	.3	NC	NC	NC	NC	Q	Q	Q	Q	Q	80.7

See footnotes at end of table.

Table 3.24a. Usage Indicators by Year of Construction, Million U.S. Households, 1993 (Continued)

Usage Indicators	Total	Year of Construction									RSE Row Factors
		1991 to 1993[1]	1988 to 1990	1985 to 1987	1980 to 1984	1970 to 1979	1960 to 1969	1950 to 1959	1940 to 1949	1940 to 1949	
RSE Column Factors:	0.3	1.4	1.4	1.4	1.1	0.8	0.9	0.9	1.3	1.3	
Hot Water (continued)											
Loads of Laundry Washed Each Week											
1 to 5 Loads	36.5	1.4	1.4	2.0	3.3	6.1	5.8	5.6	2.9	2.9	7.3
6 to 10 Loads	25.0	1.7	1.7	1.6	2.1	4.9	3.2	3.8	1.8	1.8	8.1
11 to 15 Loads	8.6	.7	.7	.6	.8	1.5	1.3	1.1	.5	.5	13.9
16 or More Loads	4.3	.3	.3	.3	.4	.7	.5	.8	.3	.3	19.6
No Washing Machine	22.2	.6	.6	1.0	1.9	5.0	4.2	1.8	1.4	1.4	11.1
Dishwasher Use											
Less Than Once a Week	2.3	.1	.1	.2	.3	.5	.5	.3	Q	.1	26.1
A Few Times a Week	21.3	1.6	1.6	1.9	2.6	4.5	3.1	2.6	.9	.9	10.2
Several Times a Week	11.8	.9	.9	1.0	1.2	2.6	1.6	1.4	.4	.4	12.2
Every Day	7.3	.7	.7	.7	.8	1.3	1.0	1.1	.4	.4	14.1
More Than Every Day	1.0	Q	Q	Q	Q	.3	.2	.2	Q	Q	40.4
No Dishwasher	52.9	1.4	1.4	1.7	3.5	8.9	8.7	7.4	5.1	5.1	6.8
Cooking											
Number of Hot Meals Cooked in the Home											
2 or More a Day	34.7	1.7	1.7	1.5	2.7	6.4	4.8	5.3	2.9	2.9	6.9
1 a Day	42.8	2.2	2.2	2.8	4.1	7.7	7.0	5.5	2.7	2.7	7.5
A Few per Week	15.4	.7	.7	1.0	1.2	3.4	2.5	1.9	.9	.9	10.8
About 1 a Week	2.0	.1	.1	.1	.2	.3	.2	.3	.2	.2	25.8
Less Than 1 a Week	1.8	Q	Q	Q	.1	.3	.5	Q	.1	.1	26.1
Amount of Food Cooked in Microwave Oven											
Most or All	4.7	.2	.2	.3	.5	1.1	.8	.5	.3	.3	16.3
About Half	13.1	.8	.8	.8	1.4	2.7	1.8	1.6	.7	.7	8.0
Some or Very Little	22.2	1.3	1.3	1.3	1.9	4.3	3.8	3.1	1.4	1.4	6.7
Only for Defrosting, Reheating, or Snacks	41.2	2.1	2.1	2.5	3.7	7.6	6.2	5.7	3.0	3.0	7.1
No Microwave Oven	15.3	.4	.4	.6	1.0	2.3	2.3	2.2	1.4	1.4	11.4
Lighting											
Indoor Light Usage											
1 to 4 Hours a Day											
Yes	87.0	4.3	4.3	5.0	7.6	16.3	13.4	11.9	6.2	6.2	5.6
No	9.6	.4	.4	.5	.9	1.8	1.6	1.1	.7	.7	13.6
4 to 12 Hours a Day											
Yes	83.2	4.2	4.2	4.7	7.3	16.0	12.8	11.3	5.8	5.8	5.6
No	13.4	.5	.5	.8	1.2	2.2	2.2	1.8	1.1	1.1	12.2
More than 12 Hours a Day											
Yes	30.3	1.4	1.4	1.5	2.9	5.6	4.9	4.5	2.5	2.5	8.1
No	66.4	3.3	3.3	4.0	5.6	12.6	10.1	8.6	4.4	4.4	5.7
Outdoor Lights											
Used	63.5	3.5	3.5	3.7	5.7	11.2	9.8	9.6	4.5	4.5	6.3
Not Used	33.1	1.2	1.2	1.8	2.8	7.0	5.2	3.5	2.4	2.4	8.7

[1] Does not include all new construction for 1993.

NC = No cases in sample.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • Percentages are calculated on unrounded numbers. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.24b. Usage Indicators by Year of Construction, Percent of U.S. Households, 1993 (Continued)

Usage Indicators	Total	Year of Construction									RSE Row Factors
		1991 to 1993[1]	1988 to 1990	1985 to 1987	1980 to 1984	1970 to 1979	1960 to 1969	1950 to 1959	1940 to 1949	1939 or Before	
RSE Column Factors:	0.4	1.5	1.3	1.4	1.2	0.9	0.9	1.0	1.2	0.8	
Hot Water (continued)											
Loads of Laundry Washed Each Week											
1 to 5 Loads	37.8	36.9	30.8	36.8	38.4	33.4	38.7	42.7	41.6	38.5	5.0
6 to 10 Loads	25.8	31.6	35.5	29.4	24.9	27.0	21.4	28.9	26.1	21.9	6.4
11 to 15 Loads	8.9	12.2	13.9	11.2	9.9	8.4	8.5	8.4	7.4	7.5	12.3
16 or More Loads	4.5	3.4	7.4	4.8	4.4	3.7	3.2	6.1	4.2	4.7	18.2
No Washing Machine	22.9	15.9	12.4	17.7	22.3	27.4	28.1	13.8	20.7	27.4	10.2
Dishwasher Use											
Less Than Once a Week	2.4	3.6	1.9	2.8	3.2	2.9	3.0	2.3	Q	1.3	24.4
A Few Times a Week	22.0	39.2	35.0	34.2	30.7	24.8	20.7	20.2	13.4	10.8	8.2
Several Times a Week	12.2	20.2	19.1	17.9	14.7	14.4	10.9	10.8	5.9	8.4	10.4
Every Day	7.5	10.7	14.6	12.7	9.4	7.0	6.4	8.7	5.2	4.4	13.0
More Than Every Day	1.1	Q	Q	Q	Q	1.7	1.1	1.6	Q	Q	36.4
No Dishwasher	54.8	25.7	28.7	31.3	41.1	49.2	57.9	56.4	73.2	74.5	4.8
Cooking											
Number of Hot Meals Cooked in the Home											
2 or More a Day	35.9	29.1	35.4	27.9	32.4	35.1	32.2	40.2	41.8	39.6	5.8
1 a Day	44.3	44.9	46.5	51.0	48.9	42.4	46.4	42.5	39.3	43.0	4.5
A Few per Week	15.9	20.5	14.2	17.3	14.3	19.0	16.5	14.2	13.6	14.3	9.0
About 1 a Week	2.1	3.8	2.2	2.4	2.9	1.8	1.6	2.0	3.2	1.4	26.2
Less Than 1 a Week	1.9	Q	Q	Q	1.6	1.7	3.2	Q	2.2	1.7	27.2
Amount of Food Cooked in Microwave Oven											
Most or All	4.9	6.1	4.4	5.2	6.1	6.2	5.4	3.7	4.2	3.4	17.5
About Half	13.6	17.2	16.2	13.8	16.3	15.0	12.3	12.2	10.7	12.5	9.7
Some or Very Little	23.0	22.9	26.6	24.2	22.6	23.9	25.3	24.1	21.0	19.6	7.0
Only for Defrosting, Reheating, or Snacks	42.7	45.5	45.1	45.3	43.1	41.9	41.3	43.3	44.1	41.3	4.9
No Microwave Oven	15.9	8.3	7.7	11.6	11.9	12.9	15.6	16.7	19.9	23.2	10.3
Lighting											
Indoor Light Usage											
1 to 4 Hours a Day											
Yes	90.0	93.0	92.0	91.4	89.9	90.0	89.3	91.3	89.2	88.7	1.3
No	10.0	7.0	8.0	8.6	10.1	10.0	10.7	8.7	10.8	11.3	12.6
4 to 12 Hours a Day											
Yes	86.1	87.8	89.7	86.3	85.9	87.9	85.3	86.2	83.9	84.6	1.6
No	13.9	12.2	10.3	13.7	14.1	12.1	14.7	13.8	16.1	15.4	10.5
More than 12 Hours a Day											
Yes	31.3	25.0	30.7	26.4	34.3	30.7	32.5	34.5	36.2	28.9	6.2
No	68.7	75.0	69.3	73.6	65.7	69.3	67.5	65.5	63.8	71.1	2.8
Outdoor Lights											
Used	65.8	74.0	75.2	68.1	67.4	61.6	65.1	73.3	65.9	59.7	3.4
Not Used	34.2	26.0	24.8	31.9	32.6	38.4	34.9	26.7	34.1	40.3	7.1

[1] Does not include all new construction for 1993.
NC = No cases in sample.
Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.
NE = RSE row factor not estimated because RSE's for all statistics in this row are between 0.0 and 1.0 percent.
Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • Percentages are calculated on unrounded numbers. • See "Glossary" for definition of terms used in this report.
Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.25a. Usage Indicators by Type and Ownership of Housing Unit, Million U.S. Households, 1993

Usage Indicators	Total	Type and Ownership of Housing Unit												RSE Row Factors
		Single-Family			Multifamily						Mobile Home			
					Two to Four Units			Five or More Units						
		Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	
RSE Column Factors:	0.3	0.4	0.4	0.9	1.1	2.0	1.3	0.9	2.9	0.9	1.3	1.4	2.2	
Total	96.6	66.8	55.8	11.0	8.0	1.5	6.5	16.2	1.6	14.7	5.6	4.4	1.2	5.8
Weekday Home Activities														
Home Used for Business														
Yes	6.1	4.8	4.3	.5	.4	Q	.3	.5	Q	.4	.4	.3	Q	19.4
No	90.5	62.0	51.4	10.5	7.6	1.4	6.2	15.7	1.4	14.3	5.2	4.1	1.1	5.9
Energy-Intensive Activity														
Yes	2.5	1.9	1.5	.3	Q	Q	Q	.3	Q	.3	.2	.2	Q	25.6
No	94.1	64.9	54.2	10.7	7.9	1.5	6.4	15.9	1.6	14.4	5.3	4.2	1.1	5.9
Someone Home All Day														
Yes	46.0	34.2	29.0	5.2	3.0	.6	2.4	6.0	.7	5.2	2.8	2.3	.6	7.8
No	50.7	32.6	26.7	5.9	5.0	.9	4.1	10.3	.8	9.5	2.7	2.1	.6	7.7
Heating														
Thermostat Available During Heating Season														
Yes	80.2	58.4	49.7	8.7	5.8	1.3	4.5	11.3	1.2	10.0	4.7	3.8	.9	6.9
No	15.5	7.9	5.8	2.1	2.1	Q	2.0	4.7	.2	4.5	.8	.5	.3	12.4
Set-Back or Clock Thermostat In Home														
Yes	10.8	9.0	8.3	.7	.6	.3	.4	1.0	Q	.7	.3	.2	Q	21.6
No	85.8	57.8	47.5	10.3	7.4	1.2	6.1	15.3	1.3	14.0	5.3	4.2	1.1	6.2
Winter Temperature Settings														
Lower When No One Home														
Yes	43.2	31.2	26.6	4.6	3.2	.7	2.6	5.9	.7	5.3	2.9	2.4	.5	8.0
No	53.4	35.6	29.2	6.4	4.8	.8	3.9	10.3	.9	9.4	2.7	2.0	.7	7.1
Lower During Sleeping Hours														
Yes	46.4	33.1	28.3	4.7	3.5	.8	2.7	7.2	.7	6.4	2.7	2.3	.4	7.7
No	50.2	33.7	27.4	6.3	4.5	.7	3.8	9.1	.8	8.2	2.9	2.1	.8	7.6
Daytime Winter Temperature When Someone is at Home														
Heat is Turned On	89.1	63.7	53.8	9.9	7.1	1.4	5.7	13.0	1.2	11.8	5.3	4.2	1.1	6.1
63 Degrees or Less	3.3	2.4	1.8	.6	.3	Q	.2	.4	Q	.4	.2	.2	Q	22.3
64 to 66 Degrees	8.9	6.2	5.1	1.1	1.0	Q	.9	1.1	Q	1.1	.6	.4	.3	15.0
67 to 69 Degrees	22.3	17.3	15.1	2.2	1.3	.4	.9	2.5	.2	2.3	1.2	1.1	.2	11.1
70 Degrees	28.7	20.2	17.2	3.0	2.6	.6	2.1	4.1	.6	3.5	1.8	1.4	.4	8.4
71 to 73 Degrees	13.9	10.0	8.8	1.2	1.0	.2	.8	2.2	.3	1.9	.7	.5	.1	12.4
74 Degrees or More	12.0	7.5	5.7	1.8	1.0	Q	.8	2.7	Q	2.5	.8	.7	.2	13.8
Heat Turned Off	3.2	1.5	1.0	.5	.4	NC	.4	1.3	Q	1.1	Q	Q	NC	31.5
Unknown/No Answer	4.3	1.7	1.0	.7	.5	Q	.5	2.0	.1	1.8	.1	Q	Q	19.9

See footnotes at end of table.

Table 3.25b. Usage Indicators by Type and Ownership of Housing Unit, Percent of U.S. Households, 1993

Usage Indicators	Total	Type and Ownership of Housing Unit												RSE Row Factors
		Single-Family			Multifamily						Mobile Home			
					Two to Four Units			Five or More Units						
	Total	Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	
RSE Column Factors:	0.3	0.4	0.5	0.9	1.1	1.9	1.3	0.9	2.8	0.9	1.1	1.3	2.2	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0
Weekday Home Activities														
Home Used for Business														
Yes	6.3	7.2	7.7	4.6	4.6	Q	4.3	3.4	Q	3.0	6.5	6.6	Q	18.8
No	93.7	92.8	92.3	95.4	95.4	94.0	95.7	96.6	92.7	97.0	93.5	93.4	94.1	1.2
Energy-Intensive Activity														
Yes	2.6	2.8	2.8	3.2	Q	Q	Q	1.8	Q	2.0	4.3	3.7	Q	24.8
No	97.4	97.2	97.2	96.8	98.7	98.7	98.6	98.2	99.9	98.0	95.7	96.3	93.7	1.2
Someone Home All Day														
Yes	47.6	51.2	52.0	46.8	37.2	39.0	36.8	36.7	47.9	35.5	51.1	51.9	48.3	6.0
No	52.4	48.8	48.0	53.2	62.8	61.0	63.2	63.3	52.1	64.5	48.9	48.1	51.7	4.8
Heating														
Thermostat Available During Heating Season														
Yes	83.0	87.4	89.0	79.2	72.7	89.9	68.7	69.4	79.6	68.3	84.4	87.1	74.1	3.0
No	16.1	11.8	10.4	18.8	26.6	Q	31.0	28.9	15.1	30.4	14.5	11.9	24.1	11.9
Set-Back or Clock Thermostat in Home														
Yes	11.2	13.4	14.8	6.6	7.9	17.7	5.6	5.9	Q	4.9	4.9	4.9	Q	21.3
No	88.8	86.6	85.2	93.4	92.1	82.3	94.4	94.1	84.8	95.1	95.1	95.1	95.1	1.8
Winter Temperature Settings														
Lower When No One Home														
Yes	44.7	46.7	47.7	41.7	40.4	44.6	39.5	36.5	42.5	35.8	51.2	54.3	39.5	5.6
No	55.3	53.3	52.3	58.3	59.6	55.4	60.5	63.5	57.5	64.2	48.8	45.7	60.5	4.3
Lower During Sleeping Hours														
Yes	48.1	49.5	50.8	43.0	43.5	51.4	41.7	44.3	47.7	43.9	48.5	52.0	35.7	5.6
No	51.9	50.5	49.2	57.0	56.5	48.6	58.3	55.7	52.3	56.1	51.5	48.0	64.3	4.8
Daytime Winter Temperature When Someone is at Home														
Heat is Turned On	92.2	95.3	96.4	89.7	89.0	96.8	87.2	80.1	80.1	80.1	95.4	94.9	97.2	1.7
63 Degrees or Less	3.4	3.6	3.3	5.0	3.8	Q	3.4	2.5	Q	2.6	3.6	3.7	Q	21.6
64 to 66 Degrees	9.2	9.2	9.1	9.9	12.2	Q	13.1	6.9	Q	7.4	10.9	8.1	21.3	13.8
67 to 69 Degrees	23.1	25.9	27.1	20.3	15.7	23.7	13.8	15.4	14.3	15.5	22.1	24.5	13.3	9.4
70 Degrees	29.7	30.3	30.9	27.2	32.8	37.0	31.9	25.3	37.5	24.0	31.7	30.9	34.7	6.3
71 to 73 Degrees	14.4	15.0	15.9	10.9	12.4	14.1	12.0	13.5	16.5	13.2	11.7	12.4	9.2	10.7
74 Degrees or More	12.4	11.2	10.2	16.3	12.1	Q	13.0	16.5	Q	17.3	15.2	15.2	15.3	12.6
Heat Turned Off	3.3	2.2	1.8	4.2	4.7	NC	5.7	7.8	Q	7.4	Q	Q	NC	29.8
Unknown/No Answer	4.4	2.5	1.8	6.1	6.3	Q	7.1	12.1	8.4	12.5	2.5	Q	Q	19.8

See footnotes at end of table.

Table 3.25a. Usage Indicators by Type and Ownership of Housing Unit, Million U.S. Households, 1993 (Continued)

Usage Indicators	Total	Type and Ownership of Housing Unit												RSE Row Factors
		Single-Family			Multifamily						Mobile Home			
					Two to Four Units			Five or More Units						
		Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	
RSE Column Factors:	0.3	0.4	0.4	0.9	1.1	2.0	1.3	0.9	2.9	0.9	1.3	1.4	2.2	
Daytime Winter Temperature When No One is at Home														
Heat is Turned On	75.0	54.9	47.5	7.4	6.0	1.4	4.6	9.9	1.1	8.8	4.3	3.5	0.8	6.7
63 Degrees or Less	17.0	13.0	11.1	1.9	1.4	.4	1.0	1.4	.2	1.2	1.2	1.0	.2	12.4
64 to 66 Degrees	14.7	11.2	9.9	1.3	1.1	.2	.9	1.5	Q	1.4	1.0	.7	.3	13.0
67 to 69 Degrees	15.6	11.6	10.0	1.6	1.1	.2	.8	1.9	Q	1.8	1.0	.9	Q	13.2
70 Degrees	15.7	10.9	9.3	1.6	1.4	.3	1.1	2.7	.4	2.3	.7	.5	.2	11.7
71 to 73 Degrees	6.9	5.0	4.5	.5	.6	Q	.5	1.1	.2	.9	.2	.2	Q	16.7
74 Degrees or More	5.1	3.2	2.6	.6	.4	Q	.3	1.3	Q	1.2	.3	.2	Q	21.8
Heat Turned Off	17.8	10.5	7.4	3.1	1.6	Q	1.5	4.6	Q	4.3	1.1	.8	.4	11.8
Unknown/No Answer	3.8	1.4	.9	.5	.5	Q	.4	1.8	.1	1.6	.1	Q	Q	20.2
Winter Temperature During Sleeping Hours														
Heat is Turned On	81.9	58.9	49.9	9.0	6.7	1.4	5.3	11.4	1.1	10.4	4.8	3.8	1.0	6.3
63 Degrees or Less	15.5	11.5	9.9	1.6	1.3	.4	.9	1.7	Q	1.5	1.0	.8	.2	12.8
64 to 66 Degrees	16.6	12.2	10.6	1.6	1.3	.3	1.0	2.1	.2	1.8	1.0	.7	.3	11.6
67 to 69 Degrees	17.6	13.4	11.6	1.8	1.2	.3	.9	2.0	Q	1.9	1.0	.9	Q	12.1
70 Degrees	17.6	12.4	10.3	2.1	1.6	.3	1.3	2.6	.3	2.3	1.1	.9	.2	11.2
71 to 73 Degrees	7.9	5.6	4.8	.8	.6	Q	.5	1.4	.2	1.1	.3	.3	Q	16.0
74 Degrees or More	6.6	3.8	2.6	1.2	.6	Q	.6	1.8	Q	1.7	.4	.2	.1	16.7
Heat Turned Off	10.7	6.3	4.9	1.4	.8	Q	.8	2.9	Q	2.6	.6	.5	.1	14.7
Unknown/No Answer	4.1	1.6	.9	.6	.5	Q	.5	1.9	.1	1.7	.1	Q	Q	20.3
Air-Conditioning														
Central Air-Conditioning Use														
All Summer	19.3	15.1	13.3	1.8	.6	.2	.4	2.4	Q	2.0	1.1	1.0	Q	11.4
Quite a Bit	8.9	6.5	5.8	.7	.4	Q	.3	1.5	Q	1.4	.5	.5	Q	13.5
Only a Few Times	12.8	8.8	7.9	.9	.3	Q	.3	3.1	.4	2.7	.6	.5	Q	13.7
Not at All	1.0	.7	.6	Q	Q	Q	Q	.1	NC	.1	Q	Q	Q	47.3
No Central System	54.6	35.7	28.1	7.6	6.6	1.2	5.5	9.1	.7	8.3	3.2	2.3	.9	7.4
Window Air-Conditioning Use														
All Summer	4.8	3.2	2.5	.7	.4	Q	.4	.7	Q	.7	.4	.3	Q	23.4
Quite a Bit	6.1	3.7	3.1	.6	.7	.1	.6	1.2	Q	1.1	.4	.3	Q	17.9
Only a Few Times	13.4	9.0	7.7	1.4	1.4	.4	1.0	2.3	.4	1.9	.7	.5	.2	13.9
Not at All	1.5	1.0	.8	.2	Q	Q	Q	.3	Q	.2	Q	Q	Q	34.7
No Window Units	70.9	49.9	41.8	8.1	5.3	.8	4.4	11.7	1.0	10.7	4.0	3.2	.7	3.9
Hot Water														
Number of Showers/Baths Taken Each Week														
9 or Fewer	28.4	16.7	14.1	2.5	3.1	.4	2.6	7.2	.8	6.4	1.5	1.2	.3	8.1
10 to 20	41.5	29.0	24.3	4.7	3.2	.7	2.5	6.8	.6	6.2	2.5	2.0	.6	7.6
21 or More	26.4	20.9	17.3	3.6	1.8	.4	1.4	2.3	.1	2.1	1.5	1.2	.3	11.1
Not Applicable	.3	.2	Q	Q	Q	Q	NC	NC	NC	NC	Q	Q	NC	102.7

See footnotes at end of table.

Table 3.25b. Usage Indicators by Type and Ownership of Housing Unit, Percent of U.S. Households, 1993 (Continued)

Usage Indicators	Total	Type and Ownership of Housing Unit												RSE Row Factors
		Single-Family			Multifamily						Mobile Home			
					Two to Four Units			Five or More Units						
		Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	
RSE Column Factors:	0.3	0.4	0.5	0.9	1.1	1.9	1.3	0.9	2.8	0.9	1.1	1.3	2.2	
Daytime Winter Temperature When No One Is at Home														
Heat is Turned On	77.6	82.2	85.1	67.4	74.4	92.8	70.2	60.8	69.1	59.9	77.1	80.5	64.7	3.2
63 Degrees or Less	17.6	19.5	19.9	17.1	17.1	26.7	14.9	8.8	12.4	8.4	21.5	23.5	14.0	10.9
64 to 66 Degrees	15.2	16.8	17.7	11.8	13.6	14.1	13.4	8.9	Q	9.6	17.2	15.5	23.4	11.8
67 to 69 Degrees	16.2	17.4	18.0	14.2	13.4	16.7	12.6	12.0	Q	12.3	17.7	20.5	Q	11.5
70 Degrees	16.3	16.4	16.7	14.5	18.0	23.5	16.7	16.5	25.0	15.6	12.1	11.8	13.3	10.7
71 to 73 Degrees	7.2	7.4	8.0	4.8	7.7	Q	8.2	6.8	13.1	6.1	4.0	4.0	Q	15.2
74 Degrees or More	5.3	4.8	4.7	5.1	4.7	Q	4.4	7.8	Q	7.9	4.7	5.1	Q	20.6
Heat Turned Off	18.4	15.7	13.3	27.9	19.4	Q	23.0	28.3	22.5	29.0	20.3	17.6	30.4	10.8
Unknown/No Answer	3.9	2.1	1.6	4.7	6.2	Q	6.8	10.9	8.4	11.2	2.6	Q	Q	20.4
Winter Temperature During Sleeping Hours														
Heat is Turned On	84.7	88.2	89.5	81.5	83.5	96.0	80.6	70.5	68.7	70.6	86.3	86.4	86.2	2.4
63 Degrees or Less	16.0	17.3	17.8	14.5	15.9	24.1	14.1	10.3	Q	10.5	17.1	17.9	14.2	11.9
64 to 66 Degrees	17.2	18.3	19.1	14.3	16.8	19.8	16.1	12.7	15.1	12.4	18.4	16.3	26.6	10.5
67 to 69 Degrees	18.2	20.1	20.9	16.1	15.2	20.2	14.1	12.2	Q	13.2	18.4	20.7	Q	10.4
70 Degrees	18.2	18.6	18.5	18.8	19.7	21.5	19.3	15.8	19.3	15.4	19.4	20.2	16.5	9.7
71 to 73 Degrees	8.2	8.3	8.6	7.0	7.7	Q	8.3	8.4	16.0	7.6	6.1	5.8	Q	14.6
74 Degrees or More	6.9	5.7	4.7	10.7	8.1	Q	8.8	11.1	Q	11.6	6.9	5.6	11.8	15.6
Heat Turned Off	11.0	9.5	8.8	12.8	9.8	Q	11.8	18.0	21.9	17.5	11.4	11.6	10.6	13.8
Unknown/No Answer	4.3	2.3	1.7	5.7	6.7	Q	7.6	11.6	9.4	11.8	2.2	Q	Q	20.5
Air-Conditioning														
Central Air-Conditioning Use														
All Summer	20.0	22.7	23.9	16.2	7.7	11.8	6.8	14.9	23.6	13.9	20.2	23.2	Q	13.5
Quite a Bit	9.2	9.7	10.4	6.3	4.4	Q	4.3	9.5	Q	9.7	9.4	11.0	Q	18.4
Only a Few Times	13.3	13.1	14.1	8.3	4.2	Q	4.4	19.1	22.8	18.7	11.1	12.5	Q	14.1
Not at All	1.0	1.0	1.1	Q	Q	Q	Q	.8	NC	.9	Q	Q	Q	43.5
No Central System	56.5	53.4	50.4	68.5	83.0	79.6	83.7	55.7	45.4	56.8	57.2	51.6	78.1	5.0
Window Air-Conditioning Use														
All Summer	5.0	4.8	4.4	6.7	5.4	Q	5.7	4.5	Q	4.8	7.8	6.8	Q	19.9
Quite a Bit	6.3	5.6	5.5	5.9	9.3	8.3	9.5	7.6	Q	7.6	6.7	6.7	Q	17.1
Only a Few Times	13.9	13.5	13.7	12.5	17.9	26.8	15.9	13.9	22.5	13.0	12.5	11.5	16.1	12.6
Not at All	1.6	1.5	1.5	1.5	Q	Q	Q	1.8	Q	1.7	Q	Q	Q	32.2
No Window Units	73.3	74.7	74.9	73.4	66.0	56.8	68.1	72.2	64.7	73.0	71.2	73.4	62.6	3.8
Hot Water														
Number of Showers/Baths Taken Each Week														
9 or Fewer	29.4	24.9	25.3	23.0	38.2	30.0	40.1	44.4	54.6	43.3	26.7	27.9	22.1	6.9
10 to 20	43.0	43.5	43.6	42.7	39.7	44.0	38.8	41.7	36.5	42.2	45.5	44.8	48.4	5.4
21 or More	27.3	31.3	31.0	32.8	21.9	25.1	21.2	13.9	8.8	14.4	27.3	26.7	29.5	9.8
Not Applicable	.3	.3	Q	Q	Q	Q	NC	NC	NC	NC	Q	Q	NC	87.8

See footnotes at end of table.

Table 3.25a. Usage Indicators by Type and Ownership of Housing Unit, Million U.S. Households, 1993 (Continued)

Usage Indicators	Total	Type and Ownership of Housing Unit												RSE Row Factors
		Single-Family			Multifamily						Mobile Home			
					Two to Four Units			Five or More Units						
		Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	
RSE Column Factors:	0.3	0.4	0.4	0.9	1.1	2.0	1.3	0.9	2.9	0.9	1.3	1.4	2.2	
Hot Water (continued)														
Loads of Laundry Washed Each Week														
1 to 5 Loads	36.5	29.5	25.4	4.1	2.5	0.8	1.6	2.4	0.5	1.9	2.1	1.8	0.4	9.0
6 to 10 Loads	25.0	21.3	18.3	3.0	1.1	.2	.8	.9	.3	.6	1.7	1.4	.3	11.7
11 to 15 Loads	8.6	7.7	6.7	.9	.2	Q	.2	.1	Q	.1	.6	.5	Q	18.4
16 or More Loads	4.3	3.9	3.2	.7	Q	Q	Q	Q	Q	Q	.3	.2	Q	22.4
No Washing Machine	22.2	4.4	2.1	2.3	4.1	.3	3.8	12.7	.7	12.0	.9	.5	.4	10.8
Dishwasher Use														
Less Than Once a Week	2.3	1.6	1.5	Q	Q	Q	Q	.5	Q	.5	Q	Q	NC	25.6
A Few Times a Week	21.3	16.0	14.3	1.7	1.0	.2	.8	3.7	.7	3.0	.5	.4	Q	19.3
Several Times a Week	11.8	10.1	9.4	.7	.4	.1	.3	1.0	.2	.8	.2	.2	Q	17.8
Every Day	7.3	6.3	5.7	.6	.2	Q	.2	.6	Q	.5	.2	.2	Q	21.8
More Than Every Day	1.0	.9	.7	Q	Q	Q	Q	Q	Q	Q	Q	Q	NC	43.6
No Dishwasher	52.9	31.8	24.0	7.8	6.2	1.0	5.2	10.3	.4	9.9	4.6	3.5	1.1	3.6
Cooking														
Number of Hot Meals Cooked in the Home														
2 or More a Day	34.7	24.4	20.1	4.3	2.7	.4	2.2	5.3	.4	5.0	2.3	1.8	.5	8.0
1 a Day	42.8	30.9	26.2	4.7	3.5	.8	2.7	6.0	.7	5.4	2.4	1.9	.5	7.9
A Few per Week	15.4	9.7	8.1	1.6	1.4	.2	1.2	3.6	.4	3.1	.7	.6	.1	12.5
About 1 a Week	2.0	1.0	.8	.2	.2	Q	.2	.6	Q	.6	Q	Q	Q	23.3
Less Than 1 a Week	1.8	.8	.6	.2	.2	Q	Q	.7	Q	.7	Q	Q	Q	30.4
Amount of Food Cooked in Microwave Oven														
Most or All	4.7	2.9	2.4	.4	.4	Q	.4	1.1	Q	1.0	.3	.3	Q	19.6
About Half	13.1	9.8	8.2	1.5	.6	Q	.5	1.9	.3	1.6	.8	.7	.1	13.8
Some or Very Little	22.2	16.6	14.4	2.2	1.7	.3	1.4	2.5	.3	2.2	1.4	1.2	.2	10.4
Only for Defrosting, Reheating, or Snacks	41.2	30.2	25.6	4.6	3.3	.7	2.6	5.5	.8	4.7	2.3	1.8	.4	8.4
No Microwave Oven	15.3	7.3	5.1	2.3	2.0	.3	1.7	5.2	Q	5.1	.8	.4	.4	11.0
Lighting														
Indoor Light Usage														
1 to 4 Hours a Day														
Yes	87.0	60.4	50.3	10.1	7.2	1.4	5.9	14.4	1.3	13.1	4.9	3.9	1.0	3.0
No	9.6	6.4	5.4	.9	.8	Q	.6	1.8	.2	1.6	.7	.5	.2	15.6
4 to 12 Hours a Day														
Yes	83.2	58.6	49.5	9.1	6.6	1.3	5.3	13.3	1.3	12.0	4.7	3.7	.9	3.1
No	13.4	8.2	6.3	1.9	1.4	.2	1.2	2.9	.2	2.7	.9	.7	.3	12.5
More than 12 Hours a Day														
Yes	30.3	22.2	18.9	3.4	2.3	.4	1.9	3.9	.4	3.6	1.8	1.5	.3	9.5
No	66.4	44.6	36.9	7.7	5.7	1.1	4.6	12.3	1.2	11.1	3.8	2.9	.8	3.6
Outdoor Lights														
Used	63.5	50.5	42.9	7.6	4.7	1.2	3.6	4.5	.3	4.1	3.8	3.1	.7	7.3
Not Used	33.1	16.3	12.9	3.4	3.3	.3	3.0	11.8	1.2	10.6	1.7	1.3	.4	10.0

NC = No cases in sample.
Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.
Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.
Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.25b. Usage Indicators by Type and Ownership of Housing Unit, Percent of U.S. Households, 1993 (Continued)

Usage Indicators	Total	Type and Ownership of Housing Unit												RSE Row Factors
		Single-Family			Multifamily						Mobile Home			
					Two to Four Units			Five or More Units						
		Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	
RSE Column Factors:	0.3	0.4	0.5	0.9	1.1	1.9	1.3	0.9	2.8	0.9	1.1	1.3	2.2	
Hot Water (continued)														
Loads of Laundry Washed Each Week														
1 to 5 Loads	37.8	44.2	45.6	37.3	31.0	56.1	25.2	14.7	34.4	12.6	38.5	40.2	32.5	7.0
6 to 10 Loads	25.8	31.9	32.9	27.1	13.2	16.6	12.5	5.5	19.2	4.0	30.2	32.5	21.5	9.6
11 to 15 Loads	8.9	11.5	12.1	8.5	2.9	Q	2.7	.9	Q	1.0	10.1	11.4	Q	17.7
16 or More Loads	4.5	5.8	5.7	6.5	Q	Q	Q	Q	Q	Q	5.1	4.4	Q	21.2
No Washing Machine	22.9	6.6	3.8	20.6	51.6	21.2	58.5	78.4	46.2	81.8	16.1	11.5	33.0	8.3
Dishwasher Use														
Less Than Once a Week	2.4	2.5	2.7	Q	Q	Q	Q	3.2	Q	3.1	Q	Q	NC	23.6
A Few Times a Week	22.0	24.0	25.6	15.8	12.6	16.3	11.8	22.7	43.8	20.5	9.0	10.1	Q	11.7
Several Times a Week	12.2	15.2	16.9	6.6	5.3	8.9	4.4	6.4	15.4	5.4	3.6	4.4	Q	16.1
Every Day	7.5	9.4	10.3	5.1	2.6	Q	3.0	3.4	Q	3.1	3.7	4.3	Q	21.2
More Than Every Day	1.1	1.3	1.3	Q	Q	Q	Q	Q	Q	Q	Q	Q	NC	41.4
No Dishwasher	54.8	47.6	43.1	70.4	77.4	69.3	79.2	63.6	26.6	67.5	82.0	79.0	93.1	3.7
Cooking														
Number of Hot Meals Cooked in the Home														
2 or More a Day	35.9	36.5	36.1	38.8	33.4	29.3	34.3	32.7	22.5	33.8	40.8	40.6	41.5	6.5
1 a Day	44.3	46.2	46.9	42.5	44.3	54.0	42.0	37.0	41.9	36.5	42.8	43.3	40.9	5.1
A Few per Week	15.9	14.6	14.5	14.7	17.1	11.9	18.2	21.9	28.7	21.2	12.6	13.1	10.7	10.6
About 1 a Week	2.1	1.5	1.4	2.1	3.0	Q	3.3	4.0	Q	4.0	Q	Q	Q	26.4
Less Than 1 a Week	1.9	1.2	1.1	1.8	2.3	Q	Q	4.4	Q	4.5	Q	Q	Q	28.1
Amount of Food Cooked in Microwave Oven														
Most or All	4.9	4.3	4.4	3.7	5.3	Q	5.9	6.9	Q	7.1	5.4	5.7	Q	18.6
About Half	13.6	14.6	14.8	13.8	7.8	Q	8.0	11.7	16.6	11.2	14.7	15.4	12.4	11.9
Some or Very Little	23.0	24.8	25.8	20.1	21.0	20.1	21.2	15.6	18.7	15.3	25.4	27.8	16.4	9.2
Only for Defrosting, Reheating, or Snacks	42.7	45.3	45.9	41.9	41.0	47.9	39.4	33.6	51.5	31.8	40.4	41.7	35.4	5.7
No Microwave Oven	15.9	11.0	9.1	20.5	24.9	22.1	25.5	32.1	Q	34.6	14.1	9.4	31.5	9.9
Lighting														
Indoor Light Usage														
1 to 4 Hours a Day														
Yes	90.0	90.5	90.3	91.6	90.4	90.8	90.3	88.8	85.2	89.1	87.8	88.3	86.0	1.6
No	10.0	9.5	9.7	8.4	9.6	Q	9.7	11.2	14.8	10.9	12.2	11.7	14.0	14.4
4 to 12 Hours a Day														
Yes	86.1	87.8	88.8	82.7	82.7	88.6	81.4	81.9	85.4	81.5	83.7	85.1	78.4	2.1
No	13.9	12.2	11.2	17.3	17.3	11.4	18.6	18.1	14.6	18.5	16.3	14.9	21.6	11.0
More than 12 Hours a Day														
Yes	31.3	33.3	33.8	30.5	28.9	28.6	29.0	24.2	23.5	24.3	32.0	33.1	27.8	8.0
No	68.7	66.7	66.2	69.5	71.1	71.4	71.0	75.8	76.5	75.7	68.0	66.9	72.2	3.3
Outdoor Lights														
Used	65.8	75.6	76.9	69.2	58.9	77.4	54.7	27.6	22.2	28.2	68.7	70.2	63.0	4.9
Not Used	34.2	24.4	23.1	30.8	41.1	22.6	45.3	72.4	77.8	71.8	31.3	29.8	37.0	6.9

NC = No cases in sample.
Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.
Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • Percentages are calculated on unrounded numbers. • See "Glossary" for definition of terms used in this report.
Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.26a. Usage Indicators by Family Income, Million U.S. Households, 1993

Usage Indicators	Total	1993 Family Income							Below Poverty Line		Eligible for Federal Assistance[1]	RSE Row Factors
		Less than $5,000	$5,000 to $9,999	$10,000 to $14,999	$15,000 to $24,999	$25,000 to $34,999	$35,000 to $49,999	$50,000 or More	100 Percent	125 Percent		
RSE Column Factors:	0.4	2.0	1.3	1.1	1.0	1.1	1.0	0.9	1.1	1.0	0.8	
Total	96.6	4.1	10.6	11.1	18.4	14.1	17.5	21.0	14.4	19.4	30.7	0.4
Weekday Home Activities												
Home Used for Business												
Yes	6.1	Q	.2	.2	.8	1.0	1.6	2.3	.3	.5	.8	16.2
No	90.5	4.0	10.4	10.9	17.6	13.1	15.9	18.7	14.1	18.9	29.8	0.4
Energy-Intensive Activity												
Yes	2.5	Q	Q	.1	.5	.3	.5	.9	.3	.3	.5	20.4
No	94.1	4.0	10.4	11.0	17.8	13.7	17.0	20.1	14.1	19.0	30.2	0.4
Someone Home All Day												
Yes	46.0	2.3	6.7	6.3	8.9	6.1	7.2	8.5	9.0	12.2	18.4	3.0
No	50.7	1.8	3.9	4.9	9.5	7.9	10.3	12.5	5.3	7.2	12.3	3.3
Heating												
Thermostat Available During Heating Season												
Yes	80.2	2.6	7.6	8.4	15.2	12.3	15.2	18.9	9.6	13.4	22.5	1.0
No	15.5	1.4	3.0	2.6	3.0	1.6	2.1	1.9	4.6	5.8	7.8	3.0
Set-Back or Clock Thermostat In Home												
Yes	10.8	.3	.6	.7	1.3	1.3	2.3	4.4	.8	1.1	1.9	14.2
No	85.8	3.8	10.0	10.5	17.0	12.8	15.1	16.6	13.6	18.2	28.8	3.5
Winter Temperature Settings												
Lower When No One Home												
Yes	43.2	1.4	4.3	4.4	7.9	6.6	7.9	10.8	5.6	7.8	11.9	5.3
No	53.4	2.6	6.3	6.8	10.5	7.5	9.6	10.2	8.8	11.5	18.8	4.1
Lower During Sleeping Hours												
Yes	46.4	1.7	4.9	4.8	8.9	6.6	8.3	11.2	6.4	9.1	13.6	5.2
No	50.2	2.3	5.7	6.3	9.5	7.5	9.2	9.8	8.0	10.3	17.1	4.5
Daytime Winter Temperature When Someone Is at Home												
Heat Is Turned On	89.1	3.3	9.4	9.8	17.1	13.0	16.6	19.9	12.2	16.6	26.9	0.6
63 Degrees or Less	3.3	.2	.5	.4	.6	.5	.5	.6	.7	.8	1.3	15.2
64 to 66 Degrees	8.9	.4	.8	1.0	1.6	1.1	1.8	2.2	1.2	1.6	2.6	10.5
67 to 69 Degrees	22.3	.6	1.4	1.6	4.1	3.2	5.1	6.3	2.0	2.8	4.8	7.8
70 Degrees	28.7	1.0	3.1	3.1	6.0	4.5	4.9	6.2	3.7	5.5	8.6	6.4
71 to 73 Degrees	13.9	.4	1.3	1.6	2.2	2.3	2.7	3.3	1.5	2.1	3.8	9.4
74 Degrees or More	12.0	.8	2.3	2.0	2.6	1.5	1.6	1.3	3.1	3.9	5.7	9.1
Heat Turned Off	3.2	.2	.4	.6	.5	.6	.5	.5	.7	1.0	1.3	24.0
Unknown/No Answer	4.3	.5	.8	.8	.9	.4	.4	.5	1.4	1.8	2.4	14.0

See footnotes at end of table.

Table 3.26b. Usage Indicators by Family Income, Percent of U.S. Households, 1993

Usage Indicators	Total	1993 Family Income							Below Poverty Line		Eligible for Federal Assistance[1]	RSE Row Factors
		Less than $5,000	$5,000 to $9,999	$10,000 to $14,999	$15,000 to $24,999	$25,000 to $34,999	$35,000 to $49,999	$50,000 or More	100 Percent	125 Percent		
RSE Column Factors:	0.5	1.9	1.3	1.1	0.9	1.1	1.0	0.9	1.1	1.0	0.8	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0
Weekday Home Activities												
Home Used for Business												
Yes	6.3	Q	1.9	1.9	4.3	7.1	8.9	10.7	2.2	2.5	2.7	15.7
No	93.7	98.0	98.1	98.1	95.7	92.9	91.1	89.3	97.8	97.5	97.3	NE
Energy-Intensive Activity												
Yes	2.6	Q	Q	1.2	2.9	2.3	2.7	4.1	1.9	1.8	1.7	20.2
No	97.4	98.6	98.6	98.8	97.1	97.7	97.3	95.9	98.1	98.2	98.3	NE
Someone Home All Day												
Yes	47.6	56.6	63.3	56.3	48.3	43.6	41.2	40.6	62.8	63.0	60.0	3.7
No	52.4	43.4	36.7	43.7	51.7	56.4	58.8	59.4	37.2	37.0	40.0	4.2
Heating												
Thermostat Available During Heating Season												
Yes	83.0	64.8	71.6	75.5	82.5	87.6	87.0	90.2	66.8	69.1	73.5	2.1
No	16.1	34.2	27.9	23.4	16.4	11.4	12.2	8.9	32.0	29.9	25.5	8.2
Set-Back or Clock Thermostat in Home												
Yes	11.2	6.8	5.5	5.9	7.3	9.2	13.3	20.9	5.8	5.8	6.1	13.4
No	88.8	93.2	94.5	94.1	92.7	90.8	86.7	79.1	94.2	94.2	93.9	1.2
Winter Temperature Settings												
Lower When No One Home												
Yes	44.7	34.9	40.6	39.2	43.1	46.9	45.0	51.4	39.1	40.4	38.7	4.0
No	55.3	65.1	59.4	60.8	56.9	53.1	55.0	48.6	60.9	59.6	61.3	2.9
Lower During Sleeping Hours												
Yes	48.1	42.7	46.4	43.5	48.4	46.9	47.6	53.2	44.6	46.7	44.3	3.9
No	51.9	57.3	53.6	56.5	51.6	53.1	52.4	46.8	55.4	53.3	55.7	3.4
Daytime Winter Temperature When Someone is at Home												
Heat is Turned On	92.2	82.4	88.7	87.7	92.8	92.8	95.0	95.1	84.9	85.9	87.8	1.4
63 Degrees or Less	3.4	5.6	4.5	3.5	3.3	3.6	2.7	3.0	5.0	4.3	4.3	15.2
64 to 66 Degrees	9.2	10.4	7.8	8.7	8.4	7.7	10.3	10.5	8.1	8.3	8.6	10.2
67 to 69 Degrees	23.1	14.8	13.7	14.8	22.2	22.6	29.0	30.0	14.2	14.4	15.7	7.1
70 Degrees	29.7	23.5	29.0	28.1	32.5	32.1	28.1	29.4	25.9	28.1	28.0	5.3
71 to 73 Degrees	14.4	9.4	12.3	14.7	12.1	16.5	15.6	15.8	10.4	10.7	12.5	9.1
74 Degrees or More	12.4	18.7	21.3	17.9	14.2	10.4	9.2	6.3	21.4	20.0	18.7	8.3
Heat Turned Off	3.3	4.7	3.7	5.0	2.5	4.1	2.9	2.6	5.2	5.0	4.3	23.5
Unknown/No Answer	4.4	12.9	7.7	7.3	4.7	3.0	2.1	2.4	10.0	9.2	7.9	14.0

See footnotes at end of table.

Table 3.26a. Usage Indicators by Family Income, Million U.S. Households, 1993 (Continued)

Usage Indicators	Total	1993 Family Income							Below Poverty Line		Eligible for Federal Assistance[1]	RSE Row Factors
		Less than $5,000	$5,000 to $9,999	$10,000 to $14,999	$15,000 to $24,999	$25,000 to $34,999	$35,000 to $49,999	$50,000 or More	100 Percent	125 Percent		
RSE Column Factors:	0.4	2.0	1.3	1.1	1.0	1.1	1.0	0.9	1.1	1.0	0.8	
Daytime Winter Temperature When No One is at Home												
Heat is Turned On	75.0	2.5	7.1	7.8	14.4	11.3	14.5	17.6	8.8	12.6	20.9	4.0
63 Degrees or Less	17.0	.6	1.4	1.6	3.0	2.5	3.2	4.6	1.9	2.7	4.4	8.4
64 to 66 Degrees	14.7	.4	1.0	1.2	2.9	2.1	3.1	4.0	1.4	2.1	3.2	9.2
67 to 69 Degrees	15.6	.5	1.1	1.5	3.0	2.6	3.4	3.6	1.6	2.2	3.9	9.4
70 Degrees	15.7	.4	1.9	1.7	3.2	2.3	2.9	3.2	2.0	2.9	5.0	9.2
71 to 73 Degrees	6.9	.3	.7	.9	1.0	1.1	1.4	1.6	.9	1.2	2.2	12.3
74 Degrees or More	5.1	.3	.9	.8	1.3	.7	.6	.6	1.1	1.5	2.3	13.6
Heat Turned Off	17.8	1.1	2.8	2.7	3.2	2.3	2.7	3.0	4.4	5.2	7.6	9.1
Unknown/No Answer	3.8	.5	.7	.6	.8	.4	.3	.4	1.2	1.5	2.1	14.9
Winter Temperature During Sleeping Hours												
Heat is Turned On	81.9	2.9	7.9	8.8	15.8	12.1	15.6	18.8	10.3	14.3	23.7	3.6
63 Degrees or Less	15.5	.5	1.4	1.6	3.0	2.3	3.0	3.6	1.8	2.6	4.2	9.0
64 to 66 Degrees	16.6	.7	1.2	1.5	3.2	2.1	3.2	4.7	1.8	2.5	4.0	8.7
67 to 69 Degrees	17.6	.5	1.3	1.4	3.6	2.9	3.5	4.4	1.7	2.4	4.2	8.0
70 Degrees	17.6	.6	2.2	2.1	3.5	2.6	3.3	3.4	2.4	3.4	6.0	7.9
71 to 73 Degrees	7.9	.2	.8	1.0	1.1	1.4	1.5	1.8	.9	1.3	2.4	12.0
74 Degrees or More	6.6	.4	.9	1.1	1.4	.8	1.0	.9	1.7	1.9	2.9	10.9
Heat Turned Off	10.7	.6	1.9	1.6	1.8	1.5	1.5	1.8	2.7	3.4	4.6	11.5
Unknown/No Answer	4.1	.5	.9	.7	.8	.4	.3	.4	1.4	1.7	2.4	14.4
Air-Conditioning												
Central Air-Conditioning Use												
All Summer	19.3	.4	1.1	1.2	3.0	3.2	4.3	6.1	1.2	1.6	3.3	9.8
Quite a Bit	8.9	.2	.5	.6	1.3	1.4	1.9	3.0	.7	.9	1.5	13.5
Only a Few Times	12.8	.4	1.1	1.3	2.5	2.1	2.3	3.2	1.3	2.0	3.3	11.2
Not at All	1.0	Q	Q	.2	Q	.2	.2	.1	.2	.2	.4	31.0
No Central System	54.6	2.9	7.8	7.8	11.5	7.1	8.9	8.6	11.0	14.6	22.2	4.5
Window Air-Conditioning Use												
All Summer	4.8	.6	.8	.8	1.1	.5	.6	.5	1.4	1.8	2.5	13.1
Quite a Bit	6.1	.3	.9	.7	1.3	.7	1.2	1.0	1.0	1.5	2.3	12.3
Only a Few Times	13.4	.4	1.8	1.8	2.5	2.1	2.6	2.2	2.2	3.1	5.0	9.0
Not at All	1.5	Q	.3	.2	.2	.2	.2	.3	.3	.4	.5	26.3
No Window Units	70.9	2.6	6.9	7.6	13.3	10.5	12.9	17.0	9.4	12.4	20.4	4.0
Hot Water												
Number of Showers/Baths Taken Each Week												
9 or Fewer	28.4	1.7	6.1	4.9	6.4	4.0	3.1	2.3	5.5	7.4	12.1	5.8
10 to 20	41.5	1.5	2.9	4.1	8.1	6.2	8.6	10.1	4.9	6.8	10.7	5.5
21 or More	26.4	.8	1.5	2.0	3.9	3.9	5.8	8.5	3.7	5.0	7.6	7.0
Not Applicable	.3	Q	Q	Q	Q	NC	NC	NC	.2	.2	.2	39.0

See footnotes at end of table.

Table 3.26b. Usage Indicators by Family Income, Percent of U.S. Households, 1993 (Continued)

Usage Indicators	Total	1993 Family Income							Below Poverty Line		Eligible for Federal Assistance[1]	RSE Row Factors
		Less than $5,000	$5,000 to $9,999	$10,000 to $14,999	$15,000 to $24,999	$25,000 to $34,999	$35,000 to $49,999	$50,000 or More	100 Percent	125 Percent		
RSE Column Factors:	0.5	1.9	1.3	1.1	0.9	1.1	1.0	0.9	1.1	1.0	0.8	
Daytime Winter Temperature When No One Is at Home												
Heat is Turned On	77.6	61.0	66.6	70.1	78.2	80.5	82.8	83.8	61.0	65.2	68.1	2.5
63 Degrees or Less	17.6	15.0	13.6	14.7	16.4	17.7	18.3	22.0	13.4	14.0	14.4	8.0
64 to 66 Degrees	15.2	10.6	9.6	11.0	15.8	14.7	17.5	19.0	9.5	10.6	10.3	8.8
67 to 69 Degrees	16.2	11.6	10.4	13.1	16.2	18.7	19.3	17.1	10.8	11.6	12.6	9.0
70 Degrees	16.3	9.8	18.0	15.6	17.6	16.6	16.7	15.3	13.7	15.2	16.2	8.8
71 to 73 Degrees	7.2	6.4	6.9	8.2	5.4	7.8	7.8	7.6	6.2	6.3	7.1	12.1
74 Degrees or More	5.3	7.5	8.2	7.4	6.8	4.9	3.2	2.8	7.5	7.5	7.4	13.1
Heat Turned Off	18.4	27.4	26.7	24.1	17.3	16.7	15.4	14.1	30.3	26.9	24.9	8.0
Unknown/No Answer	3.9	11.6	6.7	5.8	4.5	2.8	1.9	2.0	8.7	7.9	6.9	15.0
Winter Temperature During Sleeping Hours												
Heat is Turned On	84.7	72.1	74.2	79.4	85.8	86.1	89.4	89.5	71.4	73.6	77.3	1.9
63 Degrees or Less	16.0	12.3	13.2	14.8	16.2	16.1	17.4	17.3	12.8	13.5	13.7	8.5
64 to 66 Degrees	17.2	17.1	11.2	13.7	17.4	14.9	18.5	22.4	12.3	13.1	13.1	8.3
67 to 69 Degrees	18.2	12.5	12.3	12.7	19.6	20.4	20.0	21.1	11.7	12.3	13.7	7.3
70 Degrees	18.2	14.3	20.9	18.7	18.8	18.5	19.0	16.0	16.8	17.8	19.4	7.3
71 to 73 Degrees	8.2	5.6	7.6	9.3	5.9	10.2	8.8	8.5	6.2	6.9	7.7	11.7
74 Degrees or More	6.9	10.3	9.0	10.2	7.7	5.9	5.6	4.2	11.6	9.9	9.6	10.4
Heat Turned Off	11.0	15.6	17.7	14.1	9.7	10.8	8.8	8.4	18.9	17.4	14.9	10.5
Unknown/No Answer	4.3	12.3	8.1	6.5	4.5	3.1	1.8	2.1	9.8	9.0	7.9	14.4
Air-Conditioning												
Central Air-Conditioning Use												
All Summer	20.0	10.9	10.3	11.1	16.1	22.9	24.4	29.0	8.1	8.3	10.6	9.1
Quite a Bit	9.2	5.9	4.6	5.3	7.3	9.8	10.7	14.4	4.8	4.8	5.0	13.0
Only a Few Times	13.3	9.9	10.4	11.5	13.4	15.2	13.0	15.1	9.2	10.4	10.8	10.6
Not at All	1.0	Q	Q	1.8	Q	1.6	1.1	.6	1.2	1.1	1.2	30.5
No Central System	56.5	72.3	74.0	70.3	62.4	50.5	50.8	40.8	76.7	75.4	72.4	3.2
Window Air-Conditioning Use												
All Summer	5.0	14.1	7.3	7.0	5.8	3.6	3.5	2.4	10.0	9.5	8.0	12.7
Quite a Bit	6.3	7.7	8.1	6.1	7.1	5.0	6.8	4.8	7.0	7.9	7.3	12.0
Only a Few Times	13.9	11.1	17.1	16.3	13.7	15.0	14.6	10.3	15.6	16.2	16.4	8.4
Not at All	1.6	Q	2.5	2.1	1.0	1.5	1.3	1.5	2.0	2.3	1.8	25.9
No Window Units	73.3	65.3	65.0	68.6	72.4	74.9	73.8	81.0	65.4	64.1	66.4	2.4
Hot Water												
Number of Showers/Baths Taken Each Week												
9 or Fewer	29.4	41.7	57.5	44.0	34.8	28.1	17.5	11.0	38.5	38.3	39.5	4.8
10 to 20	43.0	36.4	27.0	37.0	44.2	44.2	49.5	48.3	34.2	34.9	35.0	4.4
21 or More	27.3	19.9	14.5	18.3	21.0	27.6	33.0	40.7	25.9	25.7	24.8	6.4
Not Applicable	.3	Q	Q	Q	Q	NC	NC	NC	1.3	1.0	.8	37.8

See footnotes at end of table.

Table 3.26a. Usage Indicators by Family Income, Million U.S. Households, 1993 (Continued)

Usage Indicators	Total	1993 Family Income							Below Poverty Line		Eligible for Federal Assistance[1]	RSE Row Factors
		Less than $5,000	$5,000 to $9,999	$10,000 to $14,999	$15,000 to $24,999	$25,000 to $34,999	$35,000 to $49,999	$50,000 or More	100 Percent	125 Percent		
RSE Column Factors:	0.4	2.0	1.3	1.1	1.0	1.1	1.0	0.9	1.1	1.0	0.8	
Hot Water *(continued)*												
Loads of Laundry Washed Each Week												
1 to 5 Loads	36.5	1.2	4.4	4.5	7.8	5.5	6.1	7.1	4.9	6.5	10.8	5.3
6 to 10 Loads	25.0	.5	1.2	1.8	3.9	4.3	5.6	7.7	2.2	3.1	5.4	7.6
11 to 15 Loads	8.6	.1	.2	.5	1.1	1.4	2.2	3.2	.6	1.0	1.7	12.7
16 or More Loads	4.3	.1	.2	.2	.9	.6	1.0	1.3	.5	.9	1.2	17.6
No Washing Machine	22.2	2.1	4.7	4.1	4.7	2.3	2.6	1.7	6.2	7.8	11.5	7.4
Dishwasher Use												
Less Than Once a Week	2.3	Q	Q	Q	.5	.6	.4	.5	.2	.2	.4	22.3
A Few Times a Week	21.3	.5	.8	1.6	3.5	3.6	4.7	6.6	1.2	1.6	3.2	9.9
Several Times a Week	11.8	Q	.1	.7	1.4	1.5	3.3	4.7	.4	.7	1.3	12.5
Every Day	7.3	Q	.2	.2	.7	1.1	1.8	3.3	.3	.5	1.0	15.3
More Than Every Day	1.0	Q	Q	Q	.2	.2	.2	.4	Q	.2	.2	33.2
No Dishwasher	52.9	3.4	9.4	8.4	12.1	7.1	7.2	5.4	12.3	16.2	24.6	4.4
Cooking												
Number of Hot Meals Cooked in the Home												
2 or More a Day	34.7	2.1	4.5	4.8	7.1	4.6	5.5	6.1	7.5	9.8	14.4	5.3
1 a Day	42.8	1.2	3.9	3.9	7.6	6.6	8.8	10.9	4.4	6.6	11.0	5.4
A Few per Week	15.4	.7	1.6	1.9	3.0	2.2	2.6	3.4	1.8	2.3	4.2	9.2
About 1 a Week	2.0	Q	.2	.4	.5	.3	.3	.3	.3	.3	.7	24.6
Less Than 1 a Week	1.8	Q	.4	.2	.3	.4	.3	.3	.3	.3	.5	22.6
Amount of Food Cooked in Microwave Oven												
Most or All	4.7	.2	.4	.4	1.1	.9	.7	1.0	.6	.7	1.1	16.6
About Half	13.1	.4	.9	1.0	2.6	1.9	2.6	3.7	1.1	1.6	3.0	9.7
Some or Very Little	22.2	.6	1.4	2.2	4.0	3.5	4.6	5.8	2.2	3.3	5.3	7.6
Only for Defrosting, Reheating, or Snacks	41.2	1.4	4.0	4.6	8.0	6.4	7.9	9.0	5.4	7.5	12.5	5.3
No Microwave Oven	15.3	1.5	3.9	2.9	2.7	1.4	1.6	1.4	5.2	6.3	8.8	7.6
Lighting												
Indoor Light Usage												
1 to 4 Hours a Day												
Yes	87.0	3.3	9.1	9.7	16.5	12.8	16.1	19.4	12.3	16.6	26.4	3.7
No	9.6	.8	1.5	1.4	1.9	1.3	1.3	1.5	2.1	2.7	4.3	10.2
4 to 12 Hours a Day												
Yes	83.2	3.1	7.8	9.0	15.7	12.3	16.2	19.2	10.9	14.9	24.3	3.7
No	13.4	1.0	2.8	2.1	2.7	1.8	1.3	1.8	3.5	4.4	6.3	8.6
More than 12 Hours a Day												
Yes	30.3	1.4	3.1	3.3	5.9	4.5	5.6	6.6	4.9	6.8	9.8	6.0
No	66.4	2.7	7.4	7.8	12.5	9.6	11.9	14.4	9.5	12.6	20.9	4.0
Outdoor Lights												
Used	63.5	1.8	5.3	6.3	11.8	9.6	12.4	16.3	7.3	10.4	17.0	5.0
Not Used	33.1	2.2	5.3	4.8	6.6	4.5	5.0	4.6	7.0	9.0	13.7	8.1

[1] Below 150 percent of poverty line or 60 percent of median State income.

NC = No cases in sample.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.26b. Usage Indicators by Family Income, Percent of U.S. Households, 1993 (Continued)

Usage Indicators	Total	1993 Family Income							Below Poverty Line		Eligible for Federal Assistance[1]	RSE Row Factors
		Less than $5,000	$5,000 to $9,999	$10,000 to $14,999	$15,000 to $24,999	$25,000 to $34,999	$35,000 to $49,999	$50,000 or More	100 Percent	125 Percent		
RSE Column Factors:	0.5	1.9	1.3	1.1	0.9	1.1	1.0	0.9	1.1	1.0	0.8	
Hot Water (continued)												
Loads of Laundry Washed Each Week												
1 to 5 Loads	37.8	29.4	41.2	40.7	42.4	39.1	34.7	33.9	33.7	33.8	35.4	4.4
6 to 10 Loads	25.8	12.8	11.1	16.6	21.2	30.6	32.0	36.5	15.3	16.2	17.5	6.9
11 to 15 Loads	8.9	3.6	1.8	4.1	5.9	9.8	12.5	15.2	4.4	5.3	5.6	12.6
16 or More Loads	4.5	2.1	1.6	2.1	4.8	4.2	6.0	6.3	3.6	4.4	4.0	17.5
No Washing Machine	22.9	52.1	44.4	36.4	25.8	16.2	14.9	8.0	43.0	40.3	37.4	6.0
Dishwasher Use												
Less Than Once a Week	2.4	Q	Q	Q	2.7	4.3	2.4	2.4	1.1	1.0	1.2	21.9
A Few Times a Week	22.0	13.0	7.2	14.2	19.2	25.5	26.8	31.5	8.3	8.3	10.3	8.8
Several Times a Week	12.2	Q	1.4	6.3	7.5	10.5	18.7	22.5	2.8	3.4	4.1	12.2
Every Day	7.5	Q	1.5	1.7	3.7	8.2	10.2	15.7	2.1	2.8	3.4	14.9
More Than Every Day	1.1	Q	Q	Q	1.2	1.3	.9	1.9	Q	1.0	.7	32.5
No Dishwasher	54.8	82.9	88.6	75.9	65.6	50.2	41.1	25.9	85.2	83.5	80.2	2.4
Cooking												
Number of Hot Meals Cooked in the Home												
2 or More a Day	35.9	51.2	42.4	43.1	38.6	32.6	31.7	29.0	52.3	50.6	47.0	4.1
1 a Day	44.3	29.0	37.1	35.1	41.2	46.9	50.2	51.8	30.8	34.3	35.7	4.3
A Few per Week	15.9	16.3	15.3	16.9	16.1	15.6	15.0	16.4	12.7	11.9	13.6	7.5
About 1 a Week	2.1	Q	1.9	3.2	2.6	2.3	1.5	1.4	1.8	1.4	2.1	24.2
Less Than 1 a Week	1.9	Q	3.3	1.7	1.5	2.6	1.6	1.3	2.3	1.8	1.6	22.5
Amount of Food Cooked in Microwave Oven												
Most or All	4.9	4.3	3.8	4.0	5.9	6.2	4.2	4.7	3.9	3.8	3.7	16.3
About Half	13.6	9.2	8.1	9.4	14.0	13.6	15.1	17.8	7.5	8.5	9.6	9.3
Some or Very Little	23.0	15.4	13.7	19.6	21.9	24.9	26.4	27.9	15.4	16.8	17.1	7.0
Only for Defrosting, Reheating, or Snacks	42.7	35.3	38.1	41.3	43.4	45.3	45.0	42.8	37.4	38.5	40.8	4.2
No Microwave Oven	15.9	35.8	36.4	25.7	14.8	9.9	9.3	6.8	35.8	32.4	28.8	6.4
Lighting												
Indoor Light Usage												
1 to 4 Hours a Day												
Yes	90.0	81.3	86.0	87.3	89.9	91.0	92.4	92.7	85.5	85.9	86.1	1.4
No	10.0	18.7	14.0	12.7	10.1	9.0	7.6	7.3	14.5	14.1	13.9	9.8
4 to 12 Hours a Day												
Yes	86.1	76.3	73.8	80.8	85.2	87.3	92.6	91.6	75.9	77.1	79.3	1.8
No	13.9	23.7	26.2	19.2	14.8	12.7	7.4	8.4	24.1	22.9	20.7	7.8
More than 12 Hours a Day												
Yes	31.3	33.8	29.7	29.6	31.9	31.8	31.8	31.3	34.1	35.0	32.0	5.0
No	68.7	66.2	70.3	70.4	68.1	68.2	68.2	68.7	65.9	65.0	68.0	2.4
Outdoor Lights												
Used	65.8	45.0	49.6	56.9	64.3	68.0	71.1	77.9	51.1	53.5	55.4	3.5
Not Used	34.2	55.0	50.4	43.1	35.7	32.0	28.9	22.1	48.9	46.5	44.6	5.3

[1] Below 150 percent of poverty line or 60 percent of median State income.

NC = No cases in sample.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

NE = RSE row factor not estimated because RSE's for all statistics in this row are between 0.0 and 1.0 percent.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • Percentages are calculated on unrounded numbers. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.27a. Conservation by Census Region and Climate Zone, Million U.S. Households, 1993

Conservation-Related Items	Total	Census Region				Climate Zone					RSE Row Factors
						Fewer than 2,000 CDD and --				More than 2,000 CDD and Fewer than 4,000 HDD	
						More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factors	0.4	0.8	0.8	0.7	0.8	2.3	1.4	1.3	1.5	1.2	
Total	96.6	19.5	23.3	33.5	20.4	8.7	26.5	22.5	17.8	21.2	6.5
Adequacy of Insulation (all households)											
Well Insulated	36.0	7.2	8.8	13.1	6.9	3.5	10.3	8.1	5.9	8.2	6.2
Adequately Insulated	38.4	8.1	9.5	12.7	8.1	3.5	10.3	9.4	6.8	8.5	5.2
Poorly Insulated	22.2	4.2	5.0	7.7	5.4	1.7	6.0	4.9	5.1	4.5	7.2
Demand-Side Management Programs											
Were Any Offered by a Utility											
Yes	34.8	7.1	8.9	10.4	8.4	4.8	9.8	6.9	6.3	7.0	6.2
No	40.0	8.2	9.0	15.6	7.1	2.3	10.4	11.0	7.3	9.0	7.9
Don't Know	21.8	4.1	5.4	7.5	4.8	1.6	6.3	4.5	4.3	5.2	8.5
Program Participation In Past 12 Months											
No Program Offered	40.0	8.2	9.0	15.6	7.1	2.3	10.4	11.0	7.3	9.0	7.9
Don't Know	2.7	.6	.7	.8	.6	.3	.6	.9	.6	.4	16.8
No	46.4	9.0	11.7	14.8	10.9	5.0	13.4	8.8	8.8	10.4	5.9
Yes (more than one may apply)	7.6	1.6	1.9	2.4	1.8	1.2	2.1	1.8	1.2	1.4	13.0
Energy Audit	1.4	.3	.5	.3	.4	.3	.4	.3	.2	.3	23.0
Load-Control Program	2.6	.2	.8	1.3	.3	.5	.4	.6	.3	.7	25.1
Equipment or Service	1.7	.4	.3	.4	.5	.3	.5	.3	.2	.3	25.2
Rebate or Incentive	.5	Q	.2	Q	.2	.1	Q	Q	Q	Q	35.6
Encouraged to Switch Fuels	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	100.0
Time-of-Use Rate	1.6	.4	.5	.5	.2	.4	.3	.4	.2	.3	29.5
Does the Home Have Any of the Following:											
Set-Back/Clock Thermostat											
Yes	10.8	2.9	2.0	2.9	3.2	.5	2.9	2.8	2.0	2.7	12.4
No	85.8	16.6	21.3	30.6	17.2	8.2	23.6	19.7	15.8	18.5	4.5
Regular Heating System/ Furnace Maintenance											
Yes	49.4	12.9	13.8	14.1	8.7	5.7	15.9	12.4	6.0	9.5	5.8
No	47.2	6.6	9.5	19.4	11.6	3.0	10.6	10.1	11.8	11.7	6.5
Trees Shading the Afternoon Summer Sun											
Yes	44.9	7.9	10.6	17.1	9.4	4.1	11.3	10.1	8.5	11.0	6.5
No	51.7	11.6	12.7	16.4	10.9	4.6	15.2	12.3	9.3	10.2	5.6

See footnotes at end of table.

Table 3.27b. Conservation by Census Region and Climate Zone, Percent of U.S. Households, 1993

Conservation-Related Items	Total	Census Region				Climate Zone					RSE Row Factors
						Fewer than 2,000 CDD and --				More than 2,000 CDD and Fewer than 4,000 HDD	
		Northeast	Midwest	South	West	More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factors	0.5	1.0	1.0	0.9	1.0	1.4	1.0	1.1	1.2	1.1	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0
Adequacy of Insulation (all households)											
Well Insulated	37.3	37.1	37.9	39.0	34.0	40.3	38.8	36.2	33.4	38.7	3.8
Adequately Insulated	39.7	41.5	40.8	38.0	39.6	40.3	38.7	41.8	38.0	40.0	3.2
Poorly Insulated	23.0	21.4	21.2	23.0	26.4	19.4	22.5	22.0	28.6	21.3	5.3
Demand-Side Management Programs											
Were Any Offered by a Utility											
Yes	36.0	36.7	38.3	30.9	41.3	55.6	37.1	30.7	35.2	33.1	0.0
No	41.3	42.3	38.5	46.6	35.0	25.9	39.3	49.2	40.9	42.3	5.8
Don't Know	22.6	21.0	23.2	22.5	23.7	18.5	23.6	20.1	23.9	24.6	6.8
Program Participation in Past 12 Months											
No Program Offered	41.3	42.3	38.5	46.6	35.0	25.9	39.3	49.2	40.9	42.3	5.8
Don't Know	2.8	3.1	3.0	2.3	3.0	3.2	2.3	3.9	3.1	1.7	16.5
No	48.0	46.2	50.3	44.1	53.3	57.5	50.5	39.0	49.3	49.3	3.9
Yes (more than one may apply)	7.9	8.3	8.2	7.0	8.6	13.4	7.9	7.9	6.6	6.6	12.0
Energy Audit	1.5	1.4	2.0	1.0	1.9	3.7	1.4	1.2	1.3	1.2	22.3
Load-Control Program	2.7	.9	3.4	3.9	1.4	5.5	1.6	2.8	1.8	3.3	24.6
Equipment or Service	1.7	2.0	1.3	1.3	2.7	3.5	2.1	1.5	1.1	1.3	24.9
Rebate or Incentive	.5	Q	.9	Q	.9	1.6	Q	Q	Q	Q	32.7
Encouraged to Switch Fuels	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	100.0
Time-of-Use Rate	1.6	1.9	2.1	1.4	1.2	4.2	1.2	2.0	.9	1.3	29.5
Does the Home Have Any of the Following:											
Set-Back/Clock Thermostat											
Yes	11.2	14.7	8.5	8.6	15.5	5.6	11.0	12.4	11.4	12.5	11.8
No	88.8	85.3	91.5	91.4	84.5	94.4	89.0	87.6	88.6	87.5	1.6
Regular Heating System/ Furnace Maintenance											
Yes	51.1	66.0	59.2	42.0	42.8	65.5	59.9	55.1	33.8	44.7	3.8
No	48.9	34.0	40.8	58.0	57.2	34.5	40.1	44.9	66.2	55.3	4.1
Trees Shading the Afternoon Summer Sun											
Yes	46.5	40.3	45.4	51.0	46.2	46.7	42.5	45.1	47.5	51.9	4.0
No	53.5	59.7	54.6	49.0	53.8	53.3	57.5	54.9	52.5	48.1	3.4

See footnotes at end of table.

Table 3.27a. Conservation by Census Region and Climate Zone, Million U.S. Households, 1993 (Continued)

Conservation-Related Items	Total	Census Region				Climate Zone					RSE Row Factors
						Fewer than 2,000 CDD and –				More than 2,000 CDD and Fewer than 4,000 HDD	
		Northeast	Midwest	South	West	More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factors	0.4	0.8	0.8	0.7	0.8	2.3	1.4	1.3	1.5	1.2	
Doors and Windows											
Glass in Sliding Doors to the Outside											
Single Pane	12.2	0.4	0.8	5.4	5.6	0.2	1.2	1.5	4.1	5.2	1.3
Double Pane	18.3	3.7	6.0	4.7	3.9	1.9	6.7	5.0	1.9	2.8	9.1
Untreated	17.5	3.5	5.7	4.5	3.8	1.8	6.4	4.8	1.8	2.7	9.4
Low-E Coating	.8	.2	.2	.2	.1	.1	.3	.2	Q	Q	24.8
Triple Pane	.4	.1	Q	Q	Q	Q	.2	Q	Q	Q	33.3
No Doors	65.8	15.2	16.3	23.4	10.8	6.6	18.4	15.9	11.7	13.2	5.3
Glass in Most Windows											
Single Pane	61.5	10.0	13.0	24.0	14.4	4.8	14.3	11.9	14.3	16.2	4.4
Double Pane	34.2	9.2	9.9	9.2	5.9	3.8	11.8	10.3	3.4	4.8	5.9
Untreated	32.5	8.7	9.3	8.9	5.7	3.4	11.3	9.9	3.3	4.6	6.2
Low-E Coating	1.7	.6	.6	.4	.2	.4	.5	.5	.1	.2	23.7
Triple Pane	.9	.2	.4	.1	.1	.1	.4	.2	Q	Q	36.2
Coverings on Windows											
Storm Windows	36.5	10.5	14.1	9.8	2.1	5.5	14.4	10.0	3.4	3.1	8.6
Plastic Coverings	3.7	.5	1.0	1.3	.9	.4	1.1	.8	.6	.8	17.9
Neither	56.4	8.5	8.2	22.3	17.3	2.8	10.9	11.7	13.8	17.2	5.2
Frames in Most Windows											
Metal	53.3	8.0	8.4	22.4	14.5	2.1	11.0	11.8	11.3	17.1	5.9
Nonmetal	43.3	11.5	14.9	11.0	5.9	6.6	15.5	10.6	6.4	4.0	7.1
Number of Original Windows Replaced											
All	10.7	4.3	2.8	2.3	1.4	1.0	3.5	3.8	1.3	1.0	21.5
Some	15.5	3.6	4.4	3.7	3.8	2.2	4.5	3.5	3.0	2.4	9.8
None	70.3	11.6	16.1	27.4	15.2	5.4	18.5	15.2	13.5	17.7	4.4
Type of Replacement Windows											
Single Pane	10.3	2.0	2.0	3.3	2.9	1.0	2.1	2.0	2.8	2.4	10.0
Double Pane	15.2	5.7	4.7	2.6	2.2	2.1	5.5	5.1	1.5	1.0	10.3
Untreated	13.7	5.2	4.2	2.4	2.0	1.8	5.0	4.6	1.4	.9	10.7
Low-E Coating	1.5	.5	.6	.2	.2	.4	.5	.5	.2	Q	25.4
Triple Pane	.7	.2	.4	Q	Q	Q	.4	Q	Q	Q	21.7
None Replaced	70.4	11.6	16.1	27.5	15.2	5.4	18.5	15.2	13.5	17.8	4.4
Age of Replacement Windows											
Less than 2 Years	7.2	1.9	1.8	2.0	1.5	1.0	2.0	1.5	1.4	1.2	12.2
2-4 Years	7.1	2.3	1.7	1.8	1.4	.7	1.9	2.5	1.1	1.0	12.3
5-9 Years	6.5	2.1	2.0	1.3	1.2	.7	2.0	2.0	1.0	.7	11.2
10-19 Years	4.2	1.3	1.3	.8	.8	.6	1.6	1.0	.6	.5	15.2
20 Years or More	1.2	.4	.3	.2	.3	.2	.5	.2	.2	Q	24.6
None Replaced	70.4	11.6	16.1	27.5	15.2	5.4	18.5	15.2	13.5	17.8	4.4

See footnotes at end of table.

Table 3.27b. Conservation by Census Region and Climate Zone, Percent of U.S. Households, 1993 (Continued)

Conservation-Related Items	Total	Census Region				Climate Zone					RSE Row Factors
		Northeast	Midwest	South	West	Fewer than 2,000 CDD and -- More than 7,000 HDD	Fewer than 2,000 CDD and -- 5,500 to 7,000 HDD	Fewer than 2,000 CDD and -- 4,000 to 5,499 HDD	Fewer than 2,000 CDD and -- Fewer than 4,000 HDD	More than 2,000 CDD and Fewer than 4,000 HDD	
RSE Column Factors	0.5	1.0	1.0	0.9	1.0	1.4	1.0	1.1	1.2	1.1	
Doors and Windows											
Glass in Sliding Doors to the Outside											
Single Pane	12.6	2.2	3.5	16.0	27.5	Q	4.6	6.6	23.3	24.6	10.2
Double Pane	18.9	19.1	25.6	13.9	19.2	21.9	25.2	22.3	10.7	13.0	8.4
Untreated	18.1	17.8	24.5	13.5	18.6	20.5	24.2	21.2	10.3	12.8	8.6
Low-E Coating	.8	1.3	1.0	.5	.6	1.4	1.1	1.1	Q	Q	24.6
Triple Pane	.4	.6	Q	Q	Q	Q	.7	Q	Q	Q	39.8
No Doors	68.1	78.1	70.1	69.9	53.1	75.4	69.5	70.7	66.0	62.3	3.0
Glass in Most Windows											
Single Pane	63.6	51.6	55.9	71.7	70.7	55.1	54.0	53.0	80.1	76.5	2.2
Double Pane	35.4	47.3	42.3	27.6	28.8	43.4	44.5	46.0	19.3	22.8	4.0
Untreated	33.6	44.4	39.9	26.5	27.8	39.3	42.5	44.0	18.5	21.9	4.3
Low-E Coating	1.7	2.9	2.4	1.1	.9	4.1	2.0	2.1	.8	.9	23.4
Triple Pane	.9	1.1	1.8	.4	.5	1.5	1.4	1.0	Q	Q	24.4
Coverings on Windows											
Storm Windows	37.8	53.8	60.6	29.2	10.4	63.6	54.5	44.4	19.3	14.8	5.9
Plastic Coverings	3.8	2.5	4.1	4.0	4.4	4.4	4.2	3.4	3.3	3.9	0.0
Neither	58.3	43.7	35.3	66.6	85.2	32.0	41.3	52.2	77.4	81.0	3.8
Frames in Most Windows											
Metal	55.1	41.0	36.0	66.9	71.1	23.6	41.4	52.7	63.7	80.6	4.1
Nonmetal	44.8	59.0	64.0	32.8	28.9	76.4	58.6	47.3	36.2	19.0	4.8
Number of Original Windows Replaced											
All	11.0	21.9	11.9	6.7	6.7	11.9	13.3	16.8	7.3	4.8	10.0
Some	16.1	18.7	18.8	11.2	18.5	25.7	16.8	15.4	16.9	11.3	8.0
None	72.8	59.4	69.3	81.8	74.8	62.4	69.9	67.8	75.7	83.5	2.3
Type of Replacement Windows											
Single Pane	10.6	10.4	8.6	9.9	14.5	11.8	7.9	8.9	15.5	11.3	8.4
Double Pane	15.8	29.3	20.3	7.8	10.7	24.7	20.6	22.8	8.6	4.7	8.7
Untreated	14.2	26.7	17.8	7.1	9.7	20.5	18.9	20.7	7.6	4.3	8.9
Low-E Coating	1.6	2.6	2.5	.7	1.1	4.1	1.7	2.1	1.0	Q	24.5
Triple Pane	.7	.9	1.8	Q	Q	Q	1.6	Q	Q	Q	18.3
None Replaced	72.9	59.4	69.3	82.1	74.8	62.4	69.9	67.8	75.8	83.9	2.3
Age of Replacement Windows											
Less than 2 Years	7.5	9.7	7.8	5.8	7.5	11.7	7.7	6.9	7.9	5.7	10.5
2-4 Years	7.3	11.6	7.3	5.3	6.7	8.3	7.1	11.0	5.9	4.6	11.5
5-9 Years	6.7	10.5	8.4	3.9	5.7	8.4	7.7	9.0	5.7	3.2	9.9
10-19 Years	4.3	6.6	5.6	2.4	3.8	6.4	5.9	4.5	3.4	2.2	13.9
20 Years or More	1.3	2.1	1.5	.5	1.5	2.8	1.8	.9	1.2	Q	23.9
None Replaced	72.9	59.4	69.3	82.1	74.8	62.4	69.9	67.8	75.8	83.9	2.3

See footnotes at end of table.

Table 3.27a. Conservation by Census Region and Climate Zone, Million U.S. Households, 1993 (Continued)

Conservation-Related Items	Total	Census Region				Climate Zone					RSE Row Factors
						Fewer than 2,000 CDD and --				More than 2,000 CDD and Fewer than 4,000 HDD	
		Northeast	Midwest	South	West	More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factors	0.4	0.8	0.8	0.7	0.8	2.3	1.4	1.3	1.5	1.2	
Conservation Measures (Single-Family Units and Mobile Homes Only)	72.4	12.5	18.0	27.4	14.5	7.3	18.9	16.0	13.2	17.0	5.3
Types of Insulation In/around Home											
Roof/Ceiling											
Yes	58.6	10.4	15.1	21.8	11.4	6.5	15.8	13.1	9.8	13.5	6.0
No	6.4	1.0	1.3	2.6	1.5	.4	1.4	1.3	1.7	1.6	15.0
Don't Know	7.4	1.1	1.6	3.0	1.7	.4	1.8	1.6	1.7	1.9	11.8
Outside Walls											
Yes	50.7	9.4	13.7	18.6	8.9	6.0	14.3	11.5	7.5	11.4	7.0
No	11.4	1.7	2.1	4.4	3.3	.6	2.3	2.4	3.2	2.9	12.5
Don't Know	10.3	1.4	2.2	4.4	2.3	.7	2.3	2.1	2.5	2.7	11.5
Floor Insulation											
No Basement/Crawlspace	17.8	1.4	1.3	10.2	4.9	.3	1.6	2.3	4.0	9.6	13.9
Basement/Crawlspace	49.0	10.5	15.3	14.6	8.6	6.3	15.9	12.9	8.3	5.6	5.4
Heated	20.8	5.1	9.2	3.7	2.8	4.2	8.5	5.8	1.5	.9	10.4
None or Part Heated	28.2	5.4	6.1	10.9	5.7	2.1	7.4	7.2	6.8	4.7	8.9
Floor Not Insulated	15.7	3.0	4.1	5.6	3.0	1.5	4.2	3.6	3.6	2.7	12.3
Floor Insulated	12.5	2.4	2.0	5.4	2.7	.6	3.2	3.6	3.2	2.0	12.2
All Parts Insulated	5.9	1.2	1.1	2.5	1.0	.4	1.6	1.9	1.3	.7	14.3
Some Parts Insulated	1.6	.5	.3	.5	.3	Q	.6	.5	.2	.2	26.5
Don't Know	5.0	.7	.6	2.3	1.5	Q	1.0	1.2	1.6	1.0	13.1
Water Heater											
Yes	17.4	3.1	3.8	5.3	5.2	2.2	4.4	3.6	3.9	3.3	8.0
No	51.5	8.9	13.6	20.4	8.6	5.0	13.8	11.6	8.3	12.8	5.4
Don't Know	3.5	.5	.6	1.7	.7	.1	.8	.8	1.0	.8	17.4
Hot Water Pipes											
Yes	21.9	4.2	4.8	9.2	3.7	2.4	5.5	4.8	3.8	5.4	8.2
No	42.6	7.5	12.2	14.2	8.7	4.7	12.0	9.7	7.3	9.0	6.6
Don't Know	7.8	.7	1.0	4.0	2.1	.2	1.4	1.5	2.1	2.6	13.4
Heating/Cooling Ducts											
Yes	21.4	1.9	3.2	12.6	3.7	1.0	3.6	3.5	4.6	8.7	11.2
No	42.6	9.6	13.2	11.2	8.6	5.9	13.6	10.6	6.5	5.9	7.1
Don't Know	8.4	1.0	1.6	3.6	2.2	.4	1.7	1.9	2.1	2.4	11.6
Weather Stripping											
Yes	45.7	8.7	12.1	16.8	8.1	5.1	12.9	10.1	7.1	10.5	7.2
No	23.3	3.5	5.3	8.9	5.6	2.0	5.5	5.2	5.1	5.5	8.9
Don't Know	3.4	.3	.6	1.7	.8	.2	.5	.7	1.0	.9	10.3
Caulking											
Yes	51.2	9.2	13.7	19.7	8.6	5.7	13.9	11.5	7.9	12.2	6.7
No	17.1	2.9	3.5	5.9	4.9	1.3	4.1	3.6	4.2	3.9	9.9
Don't Know	4.1	.4	.9	1.8	1.0	.3	.9	.9	1.1	.9	16.9

NC = No cases in sample.
Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.
Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.
Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.27b. Conservation by Census Region and Climate Zone, Percent of U.S. Households, 1993 (Continued)

Conservation-Related Items	Total	Census Region				Climate Zone					RSE Row Factors
		Northeast	Midwest	South	West	Fewer than 2,000 CDD and -- More than 7,000 HDD	Fewer than 2,000 CDD and -- 5,500 to 7,000 HDD	Fewer than 2,000 CDD and -- 4,000 to 5,499 HDD	Fewer than 2,000 CDD and -- Fewer than 4,000 HDD	More than 2,000 CDD and Fewer than 4,000 HDD	
RSE Column Factors	0.5	1.0	1.0	0.9	1.0	1.4	1.0	1.1	1.2	1.1	
Conservation Measures (Single-Family Units and Mobile Homes Only)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Types of Insulation In/around Home											
Roof/Ceiling											
Yes	81.0	83.3	83.7	79.5	78.4	89.4	83.4	81.9	74.1	79.2	1.7
No	8.8	7.9	7.4	9.4	10.2	4.9	7.3	8.0	12.9	9.6	13.0
Don't Know	10.2	8.8	8.9	11.1	11.4	5.8	9.2	10.1	13.0	11.2	9.8
Outside Walls											
Yes	70.0	75.4	76.4	67.9	61.6	82.1	75.4	72.0	56.9	67.1	3.1
No	15.8	13.4	11.6	16.1	22.4	8.2	12.4	15.1	24.4	16.9	10.7
Don't Know	14.2	11.2	12.0	16.0	16.0	9.7	12.2	12.9	18.7	16.0	9.9
Floor Insulation											
No Basement/Crawlspace	24.6	11.4	7.0	37.1	33.9	4.7	8.3	14.3	30.6	56.2	12.4
Basement/Crawlspace	67.7	84.2	85.1	53.4	59.1	86.3	84.0	80.9	62.8	32.9	2.9
Heated	28.8	40.8	51.1	13.5	19.6	57.5	44.9	36.0	11.1	5.4	7.9
None or Part Heated	38.9	43.4	34.0	39.8	39.5	28.8	39.2	44.9	51.7	27.5	5.7
Floor Not Insulated	21.6	24.2	22.7	20.2	20.8	21.0	22.4	22.2	27.5	15.9	9.3
Floor Insulated	17.3	19.3	11.2	19.6	18.7	7.8	16.7	22.6	24.2	11.6	10.4
All Parts Insulated	8.2	9.8	6.4	9.3	6.9	5.5	8.2	11.9	9.9	4.3	13.1
Some Parts Insulated	2.2	4.1	1.7	1.9	1.8	Q	3.0	3.1	1.8	1.4	24.5
Don't Know	6.9	5.4	3.1	8.4	10.1	Q	5.5	7.6	12.5	5.9	16.0
Water Heater											
Yes	24.0	24.9	21.1	19.2	36.1	30.1	23.2	22.6	29.3	19.7	6.9
No	71.1	71.1	75.5	74.5	59.1	68.3	72.6	72.2	63.3	75.6	2.7
Don't Know	4.9	4.0	3.4	6.2	4.8	1.7	4.2	5.1	7.4	4.8	15.6
Hot Water Pipes											
Yes	30.3	33.8	26.6	33.6	25.6	32.6	29.1	30.3	28.8	31.8	6.2
No	58.9	60.5	67.7	51.8	60.1	64.3	63.5	60.5	55.4	52.7	3.3
Don't Know	10.8	5.8	5.6	14.6	14.3	3.2	7.4	9.2	15.8	15.5	12.1
Heating/Cooling Ducts											
Yes	29.5	15.0	17.9	46.0	25.3	13.3	18.8	22.1	34.9	51.2	8.1
No	58.8	77.0	73.4	40.7	59.3	81.8	72.0	66.0	49.3	34.9	3.7
Don't Know	11.7	8.1	8.7	13.2	15.4	4.9	9.2	11.8	15.8	13.9	11.1
Weather Stripping											
Yes	63.2	69.7	67.4	61.1	56.2	69.9	68.3	63.0	53.8	62.0	3.5
No	32.2	28.1	29.2	32.6	38.5	27.2	28.9	32.4	38.6	32.7	6.8
Don't Know	4.7	2.2	3.4	6.3	5.4	2.9	2.8	4.6	7.6	5.4	18.1
Caulking											
Yes	70.7	74.0	76.0	71.9	59.1	78.1	73.5	72.0	59.6	72.0	2.7
No	23.6	22.9	19.2	21.4	33.8	18.4	21.7	22.4	31.7	22.7	7.8
Don't Know	5.7	3.0	4.8	6.7	7.1	3.5	4.8	5.6	8.7	5.3	15.8

NC = No cases in sample.
Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.
Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • Percentages are calculated on unrounded numbers. • See "Glossary" for definition of terms used in this report.
Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.28a. Conservation by Year of Construction, Million U.S. Households, 1993

Conservation-Related Items	Total	Year of Construction									RSE Row Factors
		1991 to 1993[1]	1988 to 1990	1985 to 1987	1980 to 1984	1970 to 1979	1960 to 1969	1950 to 1959	1940 to 1949	1939 or Before	
RSE Column Factors	0.3	1.7	1.4	1.5	1.1	0.9	1.0	0.9	1.2	0.8	
Total	96.6	4.5	4.7	5.5	8.5	18.1	15.0	13.1	6.9	20.4	1.2
Adequacy of Insulation (all households)											
Well Insulated	36.0	2.7	2.6	2.6	3.4	6.7	5.9	4.5	2.2	5.5	2.0
Adequately Insulated	38.4	1.4	1.5	2.0	3.8	7.9	6.0	5.1	2.7	8.0	1.6
Poorly Insulated	22.2	.4	.6	.8	1.3	3.6	3.1	3.5	2.0	6.9	3.5
Demand-Side Management Programs											
Were Any Offered by a Utility											
Yes	34.8	1.8	1.9	2.4	3.0	6.1	5.1	5.1	2.4	7.1	1.8
No	40.0	1.5	2.0	2.0	3.4	8.2	6.1	5.2	2.9	8.7	1.6
Don't Know	21.8	1.2	.8	1.1	2.1	3.9	3.8	2.8	1.6	4.6	3.2
Program Participation In Past 12 Months											
No Program Offered	40.0	1.5	2.0	2.0	3.4	8.2	6.1	5.2	2.9	8.7	1.6
Don't Know	2.7	.2	.1	Q	.2	.6	.3	.4	.2	.7	25.2
No	46.4	2.4	2.0	2.8	4.0	8.0	7.8	6.5	3.4	9.5	0.9
Yes (more than one may apply)	7.6	.4	.6	.6	.8	1.4	.8	1.0	.5	1.5	15.3
Energy Audit	1.4	Q	.1	.1	Q	.3	.2	.2	Q	.3	29.8
Load-Control Program	2.6	.2	.3	.3	.4	.4	.3	.3	Q	.3	26.7
Equipment or Service	1.7	Q	.2	.1	.2	.4	.2	.1	Q	.4	30.3
Rebate or Incentive	.5	Q	Q	Q	Q	Q	Q	Q	NC	Q	61.1
Encouraged to Switch Fuels	Q	Q	NC	Q	Q	Q	Q	Q	NC	Q	100.0
Time-of-Use Rate	1.6	Q	.1	.1	.1	.3	Q	.3	Q	.3	31.6
Does the Home Have Any of the Following:											
Set-Back/Clock Thermostat											
Yes	10.8	1.0	.9	.7	.9	1.9	1.5	1.7	.4	1.7	10.7
No	85.8	3.4	3.8	4.8	7.6	16.2	13.5	11.4	6.5	18.6	0.4
Regular Heating System/ Furnace Maintenance											
Yes	49.4	2.2	2.5	3.0	4.5	8.6	8.1	6.5	3.3	10.8	0.8
No	47.2	2.2	2.2	2.5	4.0	9.6	6.9	6.6	3.7	9.6	0.9
Trees Shading the Afternoon Summer Sun											
Yes	44.9	1.2	1.4	2.1	3.5	8.4	7.6	7.3	3.7	9.8	1.2
No	51.7	3.2	3.3	3.4	5.0	9.7	7.4	5.8	3.3	10.6	0.6

See footnotes at end of table.

Table 3.28b. Conservation by Year of Construction, Percent of U.S. Households, 1993

Conservation-Related Items	Total	Year of Construction									RSE Row Factors
		1991 to 1993[1]	1988 to 1990	1985 to 1987	1980 to 1984	1970 to 1979	1960 to 1969	1950 to 1959	1940 to 1949	1939 or Before	
RSE Column Factors	0.4	1.4	1.4	1.4	1.2	0.9	1.0	0.9	1.2	0.8	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0
Adequacy of Insulation (all households)											
Well Insulated	37.3	60.2	55.5	47.3	39.9	36.8	39.2	34.2	32.3	27.0	5.2
Adequately Insulated	39.7	31.2	32.0	37.2	44.8	43.6	40.1	38.8	39.2	39.1	5.4
Poorly Insulated	23.0	8.6	12.6	15.4	15.3	19.6	20.7	27.0	28.5	33.9	8.3
Demand-Side Management Programs											
Were Any Offered by a Utility											
Yes	36.0	39.8	39.7	42.9	35.2	33.4	34.1	39.4	35.2	34.8	0.0
No	41.3	34.4	42.8	36.9	40.0	45.2	40.3	39.5	41.3	42.8	5.8
Don't Know	22.6	25.9	17.6	20.2	24.9	21.3	25.5	21.1	23.4	22.4	7.9
Program Participation In Past 12 Months											
No Program Offered	41.3	34.4	42.8	36.9	40.0	45.2	40.3	39.5	41.3	42.8	5.8
Don't Know	2.8	4.2	1.7	Q	2.5	3.1	2.3	2.8	2.8	3.2	24.5
No	48.0	53.5	42.7	50.8	47.7	44.1	51.8	49.8	48.9	46.5	4.5
Yes (more than one may apply)	7.9	7.9	12.9	10.7	9.8	7.5	5.6	8.0	7.0	7.4	14.5
Energy Audit	1.5	Q	3.2	1.4	Q	1.8	1.6	1.2	Q	1.4	29.0
Load-Control Program	2.7	3.6	6.8	6.3	4.6	2.4	2.1	2.1	Q	1.4	26.1
Equipment or Service	1.7	Q	3.3	2.7	1.8	2.3	1.2	1.1	Q	2.0	29.2
Rebate or Incentive	.5	Q	Q	Q	Q	Q	Q	Q	NC	Q	49.6
Encouraged to Switch Fuels	Q	Q	NC	Q	Q	Q	Q	Q	NC	Q	100.0
Time-of-Use Rate	1.6	Q	2.9	2.7	1.7	1.4	Q	2.1	Q	1.5	30.1
Does the Home Have Any of the Following:											
Set-Back/Clock Thermostat											
Yes	11.2	23.3	18.9	13.1	10.6	10.5	10.1	13.0	6.2	8.6	12.7
No	88.8	76.7	81.1	86.9	89.4	89.5	89.9	87.0	93.8	91.4	1.7
Regular Heating System/ Furnace Maintenance											
Yes	51.1	49.7	53.7	54.2	53.0	47.3	54.2	49.4	47.1	53.0	4.6
No	48.9	50.3	46.3	45.8	47.0	52.7	45.8	50.6	52.9	47.0	4.9
Trees Shading the Afternoon Summer Sun											
Yes	46.5	27.5	29.5	37.4	40.8	46.4	50.8	55.7	52.9	48.1	5.3
No	53.5	72.5	70.5	62.6	59.2	53.6	49.2	44.3	47.1	51.9	4.1

See footnotes at end of table.

Table 3.28a. Conservation by Year of Construction, Million U.S. Households, 1993 (Continued)

Conservation-Related Items	Total	Year of Construction									RSE Row Factors
		1991 to 1993[1]	1988 to 1990	1985 to 1987	1980 to 1984	1970 to 1979	1960 to 1969	1950 to 1959	1940 to 1949	1939 or Before	
RSE Column Factors	0.3	1.7	1.4	1.5	1.1	0.9	1.0	0.9	1.2	0.8	
Doors and Windows											
Glass in Sliding Doors to the Outside											
Single Pane	12.2	0.6	0.6	1.1	1.7	3.7	2.5	1.3	0.4	0.4	14.4
Double Pane	18.3	1.3	1.4	1.5	2.6	4.7	3.7	1.7	.4	.9	11.7
Untreated	17.5	1.1	1.3	1.5	2.6	4.5	3.6	1.5	.4	.9	12.0
Low-E Coating	.8	.1	.1	.1	NC	.1	Q	Q	Q	Q	22.2
Triple Pane	.4	Q	Q	Q	Q	.2	Q	Q	NC	Q	52.4
No Doors	65.8	2.5	2.7	2.9	4.2	9.5	8.8	10.0	6.1	19.0	5.9
Glass in Most Windows											
Single Pane	61.5	1.6	1.8	2.4	4.9	11.5	9.6	9.5	5.3	15.0	5.8
Double Pane	34.2	2.9	2.9	3.1	3.6	6.4	5.2	3.5	1.6	5.1	7.6
Untreated	32.5	2.6	2.7	2.9	3.5	6.2	5.0	3.2	1.4	4.9	7.9
Low-E Coating	1.7	.2	.2	.1	Q	.2	.3	.3	.1	.2	24.8
Triple Pane	.9	Q	Q	Q	Q	.2	Q	Q	Q	.2	31.9
Coverings on Windows											
Storm Windows	36.5	.9	1.1	1.3	1.9	5.5	5.9	5.2	3.2	11.4	3.0
Plastic Coverings	3.7	Q	.1	.2	.3	.8	.3	.5	.4	.9	22.1
Neither	56.4	3.5	3.5	4.1	6.3	11.8	8.7	7.3	3.3	8.0	3.2
Frames in Most Windows											
Metal	53.3	3.0	3.2	4.0	6.7	12.8	9.9	6.3	2.5	4.7	2.0
Nonmetal	43.3	1.5	1.5	1.4	1.7	5.2	5.1	6.8	4.4	15.6	2.7
Number of Original Windows Replaced											
All	10.7	Q	Q	Q	.2	.8	1.7	2.5	1.3	4.1	14.0
Some	15.5	.2	.3	.2	.8	2.1	2.7	2.9	1.6	4.8	12.7
None	70.3	4.3	4.4	5.2	7.5	15.2	10.7	7.7	4.1	11.5	5.5
Type of Replacement Windows											
Single Pane	10.3	.1	.2	.1	.3	1.1	1.4	2.1	1.4	3.6	15.4
Double Pane	15.2	Q	.1	.2	.7	1.7	2.8	3.3	1.4	4.9	12.3
Untreated	13.7	Q	.1	.1	.7	1.5	2.5	2.8	1.2	4.6	13.0
Low-E Coating	1.5	NC	Q	Q	Q	.2	.3	.5	.2	.3	29.4
Triple Pane	.7	NC	Q	NC	Q	Q	Q	Q	Q	.3	26.0
None Replaced	70.4	4.3	4.4	5.2	7.5	15.2	10.7	7.7	4.1	11.5	5.5
Age of Replacement Windows											
Less than 2 Years	7.2	.2	.1	.1	.3	1.1	1.1	1.4	.9	1.8	16.7
2-4 Years	7.1	Q	.2	.1	.4	.9	1.4	1.3	.6	2.2	16.5
5-9 Years	6.5	NC	Q	Q	.2	.8	1.2	1.4	.7	2.2	16.1
10-19 Years	4.2	NC	NC	NC	Q	Q	.6	1.1	.4	1.9	17.2
20 Years or More	1.2	NC	NC	NC	NC	Q	Q	Q	.2	.8	25.9
None Replaced	70.4	4.3	4.4	5.2	7.5	15.2	10.7	7.7	4.1	11.5	5.5

See footnotes at end of table.

Table 3.28b. Conservation by Year of Construction, Percent of U.S. Households, 1993 (Continued)

Conservation-Related Items	Total	Year of Construction									RSE Row Factors
		1991 to 1993[1]	1988 to 1990	1985 to 1987	1980 to 1984	1970 to 1979	1960 to 1969	1950 to 1959	1940 to 1949	1939 or Before	
RSE Column Factors	0.4	1.4	1.4	1.4	1.2	0.9	1.0	0.9	1.2	0.8	
Doors and Windows											
Glass in Sliding Doors to the Outside											
Single Pane	12.6	14.2	12.3	19.1	19.5	20.6	16.5	10.1	5.3	1.9	13.2
Double Pane	18.9	28.5	29.6	28.1	30.4	25.8	24.9	12.9	6.3	4.6	9.8
Untreated	18.1	25.1	28.0	26.9	30.4	25.1	23.9	11.8	5.9	4.5	10.1
Low-E Coating	.8	3.4	1.6	1.2	NC	.7	Q	Q	Q	Q	22.6
Triple Pane	.4	Q	Q	Q	Q	1.0	Q	Q	NC	Q	46.6
No Doors	68.1	57.0	57.9	52.5	49.9	52.6	58.4	76.7	88.4	93.1	3.9
Glass in Most Windows											
Single Pane	63.6	35.0	38.7	43.5	57.3	63.3	64.1	72.4	76.3	73.8	3.6
Double Pane	35.4	64.3	60.6	55.6	42.2	35.4	34.9	26.9	22.5	25.0	5.4
Untreated	33.6	59.2	57.2	52.9	41.9	34.1	33.2	24.4	20.8	24.1	5.7
Low-E Coating	1.7	5.1	3.4	2.7	Q	1.3	1.7	2.5	1.7	.9	25.0
Triple Pane	.9	Q	Q	Q	Q	.8	Q	Q	Q	1.2	30.0
Coverings on Windows											
Storm Windows	37.8	21.2	22.3	22.8	22.4	30.2	39.4	40.2	46.9	56.2	7.1
Plastic Coverings	3.8	Q	2.9	3.3	3.6	4.4	2.3	4.2	5.8	4.5	0.0
Neither	58.3	78.2	74.7	73.9	74.0	64.9	58.2	55.6	47.2	39.2	3.8
Frames in Most Windows											
Metal	55.1	67.3	68.5	73.7	79.4	70.7	66.1	47.9	36.6	23.2	4.1
Nonmetal	44.8	32.7	31.5	26.3	20.6	28.9	33.8	52.1	63.4	76.8	6.1
Number of Original Windows Replaced											
All	11.0	Q	Q	Q	2.3	4.5	11.1	18.8	18.3	20.1	12.0
Some	16.1	3.7	6.0	3.8	9.6	11.5	17.7	22.5	23.0	23.5	11.7
None	72.8	95.4	93.4	94.3	88.1	83.6	71.1	58.6	58.7	56.5	2.1
Type of Replacement Windows											
Single Pane	10.6	2.1	4.0	2.4	3.2	5.9	9.6	15.9	20.2	17.8	14.6
Double Pane	15.8	Q	2.4	3.2	8.6	9.6	18.4	25.1	20.3	24.2	10.8
Untreated	14.2	Q	2.3	2.7	8.3	8.4	16.4	21.6	18.0	22.5	11.5
Low-E Coating	1.6	NC	Q	Q	Q	1.2	2.0	3.5	2.3	1.7	28.1
Triple Pane	.7	NC	Q	NC	Q	Q	Q	Q	Q	1.6	24.5
None Replaced	72.9	95.4	93.4	94.3	88.1	84.0	71.2	58.6	58.7	56.5	2.1
Age of Replacement Windows											
Less than 2 Years	7.5	4.5	3.0	2.5	4.1	6.2	7.3	11.0	12.6	9.0	16.0
2-4 Years	7.3	Q	3.4	2.0	5.1	4.8	9.6	9.9	9.2	10.6	15.4
5-9 Years	6.7	NC	Q	Q	2.5	4.2	7.8	11.0	9.7	10.7	13.4
10-19 Years	4.3	NC	NC	NC	Q	Q	3.9	8.7	6.4	9.1	15.8
20 Years or More	1.3	NC	NC	NC	NC	Q	Q	Q	3.4	4.1	24.6
None Replaced	72.9	95.4	93.4	94.3	88.1	84.0	71.2	58.6	58.7	56.5	2.1

See footnotes at end of table.

Table 3.28a. Conservation by Year of Construction, Million U.S. Households, 1993 (Continued)

Conservation-Related Items	Total	Year of Construction									RSE Row Factors
		1991 to 1993[1]	1988 to 1990	1985 to 1987	1980 to 1984	1970 to 1979	1960 to 1969	1950 to 1959	1940 to 1949	1939 or Before	
RSE Column Factors	0.3	1.7	1.4	1.5	1.1	0.9	1.0	0.9	1.2	0.8	
Conservation Measures (Single-Family Units and Mobile Homes Only)	72.4	3.6	3.9	4.1	6.1	12.4	10.8	11.3	5.6	14.6	1.7
Types of Insulation In/around Home											
Roof/Ceiling											
Yes	58.6	3.3	3.4	3.6	5.4	10.3	9.3	8.9	4.4	10.1	0.8
No	6.4	Q	Q	.1	.2	.8	.6	1.3	.7	2.6	16.6
Don't Know	7.4	.2	.4	.5	.6	1.3	1.0	1.2	.5	1.9	14.8
Outside Walls											
Yes	50.7	3.2	3.5	3.5	4.9	9.4	7.8	6.7	3.3	8.4	0.8
No	11.4	Q	.2	.1	.3	1.1	1.5	2.7	1.5	4.0	15.6
Don't Know	10.3	.3	.2	.5	.9	1.9	1.5	2.0	.7	2.3	13.3
Floor Insulation											
No Basement/Crawlspace	17.8	1.4	1.4	1.6	2.9	3.7	2.9	2.4	.7	1.0	12.6
Basement/Crawlspace	49.0	1.8	1.9	1.9	2.3	6.7	7.3	8.8	4.8	13.6	7.1
Heated	20.8	.9	1.0	.8	1.2	3.4	3.5	3.2	1.5	5.4	11.0
None or Part Heated	28.2	.8	.9	1.0	1.1	3.3	3.9	5.6	3.3	8.2	9.3
Floor Not Insulated	15.7	.3	.3	.3	.4	1.3	2.1	3.2	2.1	5.7	13.7
Floor Insulated	12.5	.6	.5	.7	.7	2.1	1.8	2.4	1.2	2.5	12.7
All Parts Insulated	5.9	.4	.4	.4	.3	1.2	.6	1.0	.5	1.0	16.5
Some Parts Insulated	1.6	Q	Q	Q	Q	.3	.2	.2	.2	.4	34.2
Don't Know	5.0	.2	.1	.2	.3	.6	.9	1.1	.4	1.1	19.3
Water Heater											
Yes	17.4	.7	1.1	1.0	1.6	3.4	2.5	2.7	1.5	2.8	9.9
No	51.5	2.7	2.6	2.9	4.2	8.3	7.8	8.0	3.9	11.1	6.5
Don't Know	3.5	.2	.2	.2	.4	.7	.4	.6	.2	.7	20.1
Hot Water Pipes											
Yes	21.9	1.5	1.7	1.3	2.3	4.1	2.7	2.9	1.5	3.9	9.0
No	42.6	1.7	1.8	2.2	3.1	6.8	6.8	7.2	3.6	9.5	7.1
Don't Know	7.8	.4	.5	.6	.7	1.5	1.3	1.2	.4	1.2	13.9
Heating/Cooling Ducts											
Yes	21.4	1.9	1.8	1.9	2.9	4.2	3.3	2.6	.8	2.0	10.1
No	42.6	1.2	1.5	1.6	2.3	6.5	6.4	7.3	4.3	11.4	7.5
Don't Know	8.4	.4	.5	.6	1.0	1.6	1.1	1.4	.5	1.2	14.2
Weather Stripping											
Yes	45.7	2.7	2.8	2.7	4.0	7.8	6.8	6.5	3.3	9.3	7.4
No	23.3	.8	.9	1.3	1.7	3.9	3.6	4.3	2.2	4.7	9.1
Don't Know	3.4	.2	.2	.2	.5	.7	.4	.5	Q	.7	20.8
Caulking											
Yes	51.2	2.8	2.7	3.1	4.4	9.1	7.8	7.7	3.6	10.0	6.7
No	17.1	.6	.9	.9	1.3	2.5	2.4	2.8	1.8	3.9	10.6
Don't Know	4.1	.2	.2	.2	.4	.8	.5	.7	.2	.8	19.9

[1] Does not include all new construction for 1993.

NC = No cases in sample.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.28b. Conservation by Year of Construction, Percent of U.S. Households, 1993 (Continued)

Conservation-Related Items	Total	Year of Construction									RSE Row Factors
		1991 to 1993[1]	1988 to 1990	1985 to 1987	1980 to 1984	1970 to 1979	1960 to 1969	1950 to 1959	1940 to 1949	1939 or Before	
RSE Column Factors	0.4	1.4	1.4	1.4	1.2	0.9	1.0	0.9	1.2	0.8	
Conservation Measures (Single-Family Units and Mobile Homes Only)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Types of Insulation in/around Home											
Roof/Ceiling											
Yes	81.0	91.6	87.8	86.5	87.5	83.3	85.9	78.7	79.0	69.2	2.2
No	8.8	Q	Q	1.5	2.9	6.5	5.3	11.1	12.7	17.8	16.9
Don't Know	10.2	6.3	9.1	12.0	9.7	10.2	8.8	10.2	8.3	13.0	14.6
Outside Walls											
Yes	70.0	90.5	89.4	84.9	79.9	76.2	72.1	59.1	59.0	57.4	2.9
No	15.8	Q	4.8	2.4	5.3	8.8	13.7	23.6	27.7	27.2	14.1
Don't Know	14.2	7.6	5.8	12.7	14.8	15.0	14.2	17.3	13.4	15.4	12.6
Floor Insulation											
No Basement/Crawlspace	24.6	37.9	35.0	38.4	46.9	29.7	26.9	20.9	13.2	6.5	10.6
Basement/Crawlspace	67.7	48.9	48.8	44.7	37.9	54.1	67.9	78.0	85.9	92.8	4.2
Heated	28.8	25.8	26.7	20.3	19.6	27.2	32.1	28.1	26.3	36.7	9.5
None or Part Heated	38.9	23.1	22.1	24.4	18.3	27.0	35.8	49.9	59.6	56.1	7.5
Floor Not Insulated	21.6	7.7	8.7	6.6	6.8	10.3	19.2	28.7	37.8	38.7	12.5
Floor Insulated	17.3	15.4	13.4	17.8	11.5	16.7	16.6	21.2	21.7	17.4	11.7
All Parts Insulated	8.2	10.5	9.5	10.1	5.4	9.8	5.8	8.9	9.7	7.1	15.9
Some Parts Insulated	2.2	Q	Q	Q	Q	2.4	2.1	2.1	4.0	2.8	32.3
Don't Know	6.9	4.3	3.2	5.7	4.7	4.5	8.7	10.1	8.1	7.5	19.1
Water Heater											
Yes	24.0	20.5	29.1	25.3	25.4	27.8	23.7	23.8	26.2	19.2	8.1
No	71.1	75.1	66.5	70.2	68.8	66.9	72.3	71.0	69.7	75.8	3.0
Don't Know	4.9	4.3	4.4	4.5	5.8	5.3	4.0	5.2	4.1	5.1	19.7
Hot Water Pipes											
Yes	30.3	41.2	42.7	31.4	37.7	33.4	25.0	25.6	27.1	27.0	6.6
No	58.9	46.9	45.4	53.3	50.2	54.9	62.6	64.0	65.2	65.0	3.9
Don't Know	10.8	11.8	12.0	15.3	12.1	11.8	12.3	10.4	7.6	8.0	13.1
Heating/Cooling Ducts											
Yes	29.5	53.2	47.4	45.1	46.9	34.3	30.2	23.2	14.6	13.3	7.8
No	58.8	34.6	39.6	39.4	36.9	52.4	59.4	64.7	76.6	78.2	4.9
Don't Know	11.7	12.2	13.0	15.5	16.2	13.2	10.4	12.2	8.8	8.5	13.2
Weather Stripping											
Yes	63.2	74.2	71.3	63.9	64.7	63.5	63.3	57.2	58.9	63.2	3.9
No	32.2	21.0	24.5	30.3	27.3	31.2	33.4	38.2	38.7	32.3	7.7
Don't Know	4.7	4.8	4.2	5.8	7.9	5.4	3.3	4.6	Q	4.5	20.3
Caulking											
Yes	70.7	77.6	70.5	73.7	71.7	73.8	72.5	68.3	64.2	68.3	3.1
No	23.6	17.1	24.2	21.0	21.1	19.9	22.5	25.1	32.0	26.4	9.1
Don't Know	5.7	5.3	5.2	5.2	7.2	6.3	5.0	6.5	3.8	5.3	19.6

[1] Does not include all new construction for 1993.

NC = No cases in sample.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • Percentages are calculated on unrounded numbers. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.29a. Conservation by Type and Ownership of Housing Unit, Million U.S. Households, 1993

Conservation-Related Items	Total	Type and Ownership of Housing Unit												RSE Row Factors
		Single-Family			Multifamily						Mobile Home			
					Two to Four Units			Five or More Units						
		Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	
RSE Column Factors	0.3	0.3	0.4	0.8	1.2	2.0	1.4	0.9	2.9	0.9	1.3	1.5	2.1	
Total	96.6	66.8	55.8	11.0	8.0	1.5	6.5	16.2	1.6	14.7	5.6	4.4	1.2	5.8
Adequacy of Insulation (all households)														
Well Insulated	36.0	27.3	25.0	2.3	2.2	.4	1.8	5.0	.7	4.3	1.6	1.5	.1	8.7
Adequately Insulated	38.4	25.9	21.9	3.9	3.3	.7	2.6	6.9	.6	6.3	2.3	1.8	.5	7.9
Poorly Insulated	22.2	13.7	8.8	4.8	2.5	.4	2.1	4.3	.2	4.1	1.7	1.1	.5	10.3
Demand-Side Management Programs														
Were Any Offered by a Utility														
Yes	34.8	28.0	24.6	3.4	2.1	.6	1.5	3.1	.4	2.7	1.6	1.3	.3	9.7
No	40.0	26.0	21.1	4.9	4.0	.6	3.4	6.8	.7	6.2	3.1	2.4	.7	8.3
Don't Know	21.8	12.8	10.1	2.7	1.9	.2	1.6	6.3	.5	5.8	.8	.6	.2	11.1
Program Participation in Past 12 Months														
No Program Offered	40.0	26.0	21.1	4.9	4.0	.6	3.4	6.8	.7	6.2	3.1	2.4	.7	8.3
Don't Know	2.7	1.3	1.0	.3	.3	Q	.3	1.0	Q	.9	Q	Q	Q	23.8
No	46.4	33.0	27.8	5.2	3.3	.7	2.7	8.1	.7	7.4	1.9	1.6	.4	8.1
Yes (more than one may apply)	7.6	6.5	5.8	.6	.4	.1	.2	.4	Q	.3	.4	.3	Q	20.7
Energy Audit	1.4	1.3	1.1	.2	Q	Q	Q	Q	NC	Q	Q	Q	Q	35.5
Load-Control Program	2.6	2.2	2.1	.2	Q	Q	Q	.1	Q	Q	.2	Q	Q	40.4
Equipment or Service	1.7	1.3	1.1	.2	Q	Q	Q	Q	Q	Q	Q	Q	Q	40.2
Rebate or Incentive	.5	.5	.5	NC	NC	NC	NC	NC	NC	NC	Q	Q	NC	60.3
Encouraged to Switch Fuels	Q	Q	Q	NC	Q	Q	NC	NC	NC	NC	Q	Q	NC	100.0
Time-of-Use Rate	1.6	1.4	1.3	.1	Q	NC	Q	Q	Q	Q	Q	Q	Q	44.6
Does the Home Have Any of the Following:														
Set-Back/Clock Thermostat														
Yes	10.8	9.0	8.3	.7	.6	.3	.4	1.0	Q	.7	.3	.2	Q	21.4
No	85.8	57.8	47.5	10.3	7.4	1.2	6.1	15.3	1.3	14.0	5.3	4.2	1.1	6.2
Regular Heating System/ Furnace Maintenance														
Yes	49.4	35.7	31.1	4.6	3.7	.9	2.8	7.7	.9	6.9	2.3	1.9	.4	7.7
No	47.2	31.1	24.6	6.5	4.3	.6	3.7	8.5	.7	7.8	3.3	2.5	.8	9.0
Trees Shading the Afternoon Summer Sun														
Yes	44.9	36.8	31.7	5.1	2.6	.6	2.0	3.1	.4	2.8	2.4	1.8	.5	9.7
No	51.7	30.0	24.1	5.9	5.4	.9	4.5	13.1	1.2	11.9	3.2	2.6	.7	7.3

See footnotes at end of table.

Table 3.29b. Conservation by Type and Ownership of Housing Unit, Percent of U.S. Households, 1993

Conservation-Related Items	Total	Type and Ownership of Housing Unit												RSE Row Factors
		Single-Family			Multifamily						Mobile Home			
					Two to Four Units			Five or More Units						
		Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	
RSE Column Factors	0.4	0.4	0.4	0.8	1.1	2.0	1.3	0.9	2.6	0.9	1.1	1.3	1.9	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0
Adequacy of Insulation (all households)														
Well Insulated	37.3	40.8	44.8	20.7	27.4	26.3	27.6	30.7	45.5	29.1	28.6	33.4	10.7	7.3
Adequately Insulated	39.7	38.7	39.3	35.5	41.5	46.6	39.9	42.6	38.9	43.0	41.5	40.7	44.2	5.4
Poorly Insulated	23.0	20.5	15.9	43.8	31.1	25.1	32.5	26.7	15.7	27.9	29.9	25.9	45.1	8.0
Demand-Side Management Programs														
Were Any Offered by Utility or Other Group														
Yes	36.0	41.8	44.0	30.7	26.7	42.0	23.3	19.1	24.3	18.5	29.5	30.0	27.6	0.0
No	41.3	39.0	37.9	44.6	49.9	42.2	51.6	41.9	42.0	41.9	56.0	55.5	57.8	5.6
Don't Know	22.6	19.2	18.1	24.7	23.4	15.7	25.1	39.0	33.7	39.6	14.5	14.5	14.6	9.4
Program Participation In Past 12 Months														
No Program Offered	41.3	39.0	37.9	44.6	49.9	42.2	51.6	41.9	42.0	41.9	56.0	55.5	57.8	5.6
Don't Know	2.8	2.0	1.9	2.6	4.0	Q	4.1	5.9	Q	6.1	Q	Q	Q	22.0
No	48.0	49.4	49.8	47.0	41.8	45.2	41.0	49.8	46.8	50.2	34.9	35.2	33.8	5.7
Yes (more than one may apply)	7.9	9.7	10.4	5.9	4.4	9.0	3.3	2.3	Q	1.9	7.8	7.7	Q	19.5
Energy Audit	1.5	1.9	1.9	1.7	Q	Q	Q	Q	NC	Q	Q	Q	Q	30.7
Load-Control Program	2.7	3.3	3.7	1.5	Q	Q	Q	.9	Q	Q	3.0	Q	Q	37.6
Equipment or Service	1.7	2.0	2.0	2.1	Q	Q	Q	Q	Q	Q	Q	Q	Q	35.4
Rebate or Incentive	.5	.7	.9	NC	NC	NC	NC	NC	NC	NC	Q	Q	NC	50.4
Encouraged to Switch Fuels	Q	Q	Q	NC	Q	Q	NC	NC	NC	NC	Q	Q	NC	100.0
Time-of-Use Rate	1.6	2.1	2.3	1.1	Q	NC	Q	Q	Q	Q	Q	Q	Q	38.7
Does the Home Have Any of the Following:														
Set-Back/Clock Thermostat														
Yes	11.2	13.4	14.8	6.6	7.9	17.7	5.6	5.9	Q	4.9	4.9	4.9	Q	20.8
No	88.8	86.6	85.2	93.4	92.1	82.3	94.4	94.1	84.8	95.1	95.1	95.1	95.1	1.8
Regular Heating System/ Furnace Maintenance														
Yes	51.1	53.5	55.8	41.5	46.1	62.1	42.5	47.5	55.1	46.7	41.2	43.6	32.1	5.5
No	48.9	46.5	44.2	58.5	53.9	37.9	57.5	52.5	44.9	53.3	58.8	56.4	67.9	5.0
Trees Shading the Afternoon Summer Sun														
Yes	46.5	55.1	56.8	46.4	32.3	39.3	30.7	19.4	25.0	18.8	42.5	42.0	44.3	6.9
No	53.5	44.9	43.2	53.6	67.7	60.7	69.3	80.6	75.0	81.2	57.5	58.0	55.7	4.1

See footnotes at end of table.

Table 3.29a. Conservation by Type and Ownership of Housing Unit, Million U.S. Households, 1993 (Continued)

Conservation-Related Items	Total	Type and Ownership of Housing Unit												RSE Row Factors
		Single-Family			Multifamily						Mobile Home			
					Two to Four Units			Five or More Units						
		Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	
RSE Column Factors	0.3	0.3	0.4	0.8	1.2	2.0	1.4	0.9	2.9	0.9	1.3	1.5	2.1	
Doors and Windows														
Glass in Sliding Doors to the Outside														
Single Pane	12.2	8.3	7.1	1.2	0.5	Q	0.4	3.0	0.6	2.4	0.4	0.3	Q	18.4
Double Pane	18.3	14.2	13.0	1.2	.8	0.2	.6	2.9	.5	2.4	.4	.3	Q	18.1
Untreated	17.5	13.5	12.3	1.2	.8	.2	.6	2.9	.5	2.4	.4	.3	Q	18.2
Low-E Coating	.8	.7	.7	Q	Q	Q	NC	Q	Q	Q	NC	NC	NC	40.8
Triple Pane	.4	.3	.3	NC	Q	Q	NC	Q	Q	Q	NC	NC	NC	66.1
No Doors	65.8	44.1	35.4	8.7	6.6	1.2	5.4	10.3	.4	9.9	4.8	3.7	1.1	6.1
Glass in Most Windows														
Single Pane	61.5	41.6	32.9	8.7	5.4	.9	4.5	10.2	.8	9.4	4.3	3.2	1.1	6.6
Double Pane	34.2	24.5	22.2	2.3	2.6	.6	2.0	5.8	.7	5.1	1.2	1.2	Q	9.9
Untreated	32.5	22.9	20.7	2.3	2.5	.6	2.0	5.8	.7	5.1	1.2	1.2	Q	8.9
Low-E Coating	1.7	1.6	1.6	Q	Q	Q	Q	Q	Q	Q	Q	Q	NC	33.9
Triple Pane	.9	.7	.7	Q	Q	Q	Q	Q	NC	Q	Q	Q	NC	35.9
Coverings on Windows														
Storm Windows	36.5	27.6	23.9	3.7	3.0	.7	2.3	3.4	Q	3.4	2.4	2.1	.3	9.4
Plastic Coverings	3.7	2.3	1.8	.6	.3	Q	.3	.5	Q	.4	.6	.4	.2	21.7
Neither	56.4	36.8	30.1	6.7	4.7	.7	4.0	12.2	1.4	10.8	2.6	2.0	.6	7.2
Frames in Most Windows														
Metal	53.3	31.1	26.1	5.0	3.8	.6	3.2	13.2	1.2	12.0	5.2	4.0	1.1	7.7
Nonmetal	43.3	35.7	29.6	6.1	4.2	.9	3.3	2.9	.3	2.6	.4	.4	Q	9.1
Number of Original Windows Replaced														
All	10.7	7.3	6.2	1.0	1.1	.4	.7	2.2	.2	2.0	.1	.1	Q	14.0
Some	15.5	13.0	11.3	1.7	1.0	.3	.7	.6	.2	.5	.9	.7	.2	12.8
None	70.3	46.6	38.2	8.3	5.9	.8	5.1	13.4	1.2	12.2	4.5	3.6	1.0	6.4
Type of Replacement Windows														
Single Pane	10.3	7.7	6.0	1.7	1.0	.2	.7	.9	Q	.8	.7	.5	.2	13.5
Double Pane	15.2	11.9	10.9	1.0	1.1	.4	.7	1.9	.2	1.6	.3	.3	Q	13.3
Untreated	13.7	10.5	9.5	1.0	1.0	.4	.7	1.9	.2	1.6	.3	.3	Q	13.4
Low-E Coating	1.5	1.4	1.4	Q	Q	Q	Q	Q	NC	Q	Q	Q	NC	39.6
Triple Pane	.7	.7	.7	Q	Q	Q	NC	NC	NC	NC	NC	NC	NC	34.7
None Replaced	70.4	46.6	38.2	8.3	5.9	.8	5.1	13.4	1.2	12.2	4.5	3.6	1.0	6.4
Age of Replacement Windows														
Less than 2 Years	7.2	5.5	4.5	.9	.6	.1	.5	.6	Q	.6	.5	.3	Q	17.0
2-4 Years	7.1	5.1	4.5	.6	.7	.3	.4	1.0	Q	.8	.4	.3	Q	17.2
5-9 Years	6.5	5.1	4.6	.5	.4	.1	.2	.8	Q	.7	.1	Q	Q	17.1
10-19 Years	4.2	3.5	3.1	.3	.4	Q	.2	.3	Q	.3	Q	Q	NC	22.0
20 Years or More	1.2	1.1	.8	.2	Q	Q	Q	Q	NC	Q	Q	Q	NC	41.9
None Replaced	70.4	46.6	38.2	8.3	5.9	.8	5.1	13.4	1.2	12.2	4.5	3.6	1.0	6.4

See footnotes at end of table.

Table 3.29b. Conservation by Type and Ownership of Housing Unit, Percent of U.S. Households, 1993 (Continued)

Conservation-Related Items	Total	Type and Ownership of Housing Unit												RSE Row Factors
		Single-Family			Multifamily						Mobile Home			
					Two to Four Units			Five or More Units						
		Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	
RSE Column Factors	0.4	0.4	0.4	0.8	1.1	2.0	1.3	0.9	2.6	0.9	1.1	1.3	1.9	
Doors and Windows														
Glass in Sliding Doors to the Outside														
Single Pane	12.6	12.4	12.7	10.9	6.1	Q	6.6	18.7	40.3	16.4	7.0	7.4	Q	14.6
Double Pane	18.9	21.2	23.3	10.7	10.6	14.2	9.8	17.9	32.8	16.3	6.3	7.6	Q	14.4
Untreated	18.1	20.2	22.1	10.7	10.2	12.1	9.8	17.6	31.3	16.1	6.3	7.6	Q	14.8
Low-E Coating	.8	1.0	1.2	Q	Q	Q	NC	Q	Q	Q	NC	NC	NC	34.4
Triple Pane	.4	.4	.5	NC	Q	Q	NC	Q	Q	Q	NC	NC	NC	55.6
No Doors	68.1	65.9	63.5	78.4	82.8	79.0	83.6	63.2	25.3	67.3	86.7	85.0	92.9	3.7
Glass in Most Windows														
Single Pane	63.6	62.2	58.9	78.7	67.4	57.8	69.6	63.1	54.3	64.0	76.8	71.6	96.1	3.2
Double Pane	35.4	36.7	39.8	20.9	32.4	41.7	30.3	35.9	44.2	35.0	22.2	27.1	Q	7.3
Untreated	33.6	34.3	37.0	20.8	31.5	37.9	30.0	35.7	42.7	35.0	22.0	26.8	Q	7.6
Low-E Coating	1.7	2.4	2.8	Q	Q	Q	Q	Q	Q	Q	Q	Q	NC	28.7
Triple Pane	.9	1.1	1.2	Q	Q	Q	Q	Q	NC	Q	Q	Q	NC	29.7
Coverings on Windows														
Storm Windows	37.8	41.4	42.8	33.9	37.3	48.6	34.7	21.2	Q	22.9	43.6	47.4	29.7	7.6
Plastic Coverings	3.8	3.5	3.1	5.3	3.8	Q	4.0	2.9	Q	3.1	10.0	8.1	17.1	0.0
Neither	58.3	55.1	54.0	60.7	58.9	48.7	61.3	75.3	91.9	73.6	46.4	44.6	53.2	4.3
Frames in Most Windows														
Metal	55.1	46.6	46.9	45.0	47.3	37.2	49.6	81.2	77.8	81.6	92.7	91.8	96.3	3.4
Nonmetal	44.8	53.4	53.1	55.0	52.7	62.8	50.4	18.2	20.7	17.9	7.3	8.2	Q	7.7
Number of Original Windows Replaced														
All	11.0	10.9	11.2	9.4	13.2	23.7	10.8	13.3	11.9	13.5	2.6	3.1	Q	13.4
Some	16.1	19.4	20.3	15.0	13.1	22.3	11.0	3.9	10.3	3.2	16.0	15.3	18.4	11.9
None	72.8	69.7	68.5	75.5	73.7	54.1	78.2	82.2	76.3	82.8	81.5	81.6	81.0	2.7
Type of Replacement Windows														
Single Pane	10.6	11.5	10.7	15.4	12.2	16.7	11.1	5.7	Q	5.5	12.8	11.8	16.8	12.3
Double Pane	15.8	17.9	19.6	9.0	14.0	28.7	10.7	11.6	15.3	11.2	5.7	6.6	Q	12.8
Untreated	14.2	15.7	17.1	8.7	12.9	24.3	10.3	11.5	15.3	11.1	5.5	6.3	Q	12.9
Low-E Coating	1.6	2.2	2.5	Q	Q	Q	Q	Q	NC	Q	Q	Q	NC	33.4
Triple Pane	.7	1.0	1.2	Q	Q	Q	NC	NC	NC	NC	NC	NC	NC	28.9
None Replaced	72.9	69.7	68.5	75.5	73.7	54.1	78.2	82.8	77.8	83.3	81.5	81.6	81.0	2.7
Age of Replacement Windows														
Less than 2 Years	7.5	8.2	8.2	8.5	7.6	8.9	7.3	3.9	Q	3.9	8.4	7.9	Q	16.2
2-4 Years	7.3	7.6	8.0	5.8	8.3	17.4	6.3	5.9	Q	5.3	7.0	7.5	Q	16.0
5-9 Years	6.7	7.7	8.2	5.0	4.8	10.1	3.6	5.1	Q	4.9	2.5	Q	Q	16.6
10-19 Years	4.3	5.2	5.6	2.9	4.6	Q	3.8	1.9	Q	2.0	Q	Q	NC	21.0
20 Years or More	1.3	1.6	1.5	2.2	Q	Q	Q	Q	NC	Q	Q	Q	NC	36.4
None Replaced	72.9	69.7	68.5	75.5	73.7	54.1	78.2	82.8	77.8	83.3	81.5	81.6	81.0	2.7

See footnotes at end of table.

Table 3.29a. Conservation by Type and Ownership of Housing Unit, Million U.S. Households, 1993 (Continued)

Conservation-Related Items	Total	Type and Ownership of Housing Unit												RSE Row Factors
		Single-Family			Multifamily						Mobile Home			
					Two to Four Units			Five or More Units						
		Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	
RSE Column Factors	0.3	0.3	0.4	0.8	1.2	2.0	1.4	0.9	2.9	0.9	1.3	1.5	2.1	
Conservation Measures (Single-Family Units and Mobile Homes Only)	72.4	66.8	55.8	11.0	--	--	--	--	--	--	5.6	4.4	1.2	5.3
Types of Insulation In/around Home														
Roof/Ceiling														
Yes	58.6	54.4	48.5	5.9	--	--	--	--	--	--	4.2	3.5	.7	3.6
No	6.4	6.0	4.2	1.8	--	--	--	--	--	--	.4	.3	Q	18.7
Don't Know	7.4	6.5	3.1	3.3	--	--	--	--	--	--	.9	.5	.4	13.8
Outside Walls														
Yes	50.7	46.1	41.7	4.3	--	--	--	--	--	--	4.6	3.9	.7	7.3
No	11.4	11.2	8.5	2.7	--	--	--	--	--	--	.3	.2	Q	15.5
Don't Know	10.3	9.6	5.6	4.0	--	--	--	--	--	--	.7	.4	.3	14.4
Floor Insulation														
No Basement/Crawlspace	17.8	17.8	13.8	4.0	--	--	--	--	--	--	--	--	--	14.1
Basement/Crawlspace	49.0	49.0	41.9	7.1	--	--	--	--	--	--	--	--	--	5.8
Heated	20.8	20.8	18.8	2.0	--	--	--	--	--	--	--	--	--	12.7
None or Part Heated	28.2	28.2	23.1	5.1	--	--	--	--	--	--	--	--	--	8.8
Floor Not Insulated	15.7	15.7	12.9	2.7	--	--	--	--	--	--	--	--	--	13.0
Floor Insulated	12.5	12.5	10.1	2.4	--	--	--	--	--	--	--	--	--	14.4
All Parts Insulated	5.9	5.9	5.3	.6	--	--	--	--	--	--	--	--	--	19.2
Some Parts Insulated	1.6	1.6	1.5	.2	--	--	--	--	--	--	--	--	--	41.1
Don't Know	5.0	5.0	3.4	1.6	--	--	--	--	--	--	--	--	--	21.2
Water Heater														
Yes	17.4	15.7	13.7	2.0	--	--	--	--	--	--	1.7	1.5	.2	10.7
No	51.5	47.9	40.4	7.5	--	--	--	--	--	--	3.5	2.7	.8	6.9
Don't Know	3.5	3.2	1.6	1.6	--	--	--	--	--	--	.3	.2	.2	19.4
Hot Water Pipes														
Yes	21.9	18.8	17.0	1.9	--	--	--	--	--	--	3.1	2.7	.4	9.5
No	42.6	40.7	34.3	6.4	--	--	--	--	--	--	1.9	1.4	.5	7.7
Don't Know	7.8	7.3	4.5	2.7	--	--	--	--	--	--	.5	.3	.3	13.8
Heating/Cooling Ducts														
Yes	21.4	18.9	17.1	1.8	--	--	--	--	--	--	2.5	2.1	.3	12.3
No	42.6	40.4	33.8	6.6	--	--	--	--	--	--	2.2	1.6	.5	7.6
Don't Know	8.4	7.5	4.8	2.7	--	--	--	--	--	--	.9	.6	.3	14.6
Weather Stripping														
Yes	45.7	42.5	37.6	4.9	--	--	--	--	--	--	3.2	2.6	.6	7.2
No	23.3	21.3	16.5	4.8	--	--	--	--	--	--	2.0	1.5	.4	10.0
Don't Know	3.4	3.0	1.7	1.4	--	--	--	--	--	--	.4	.2	.2	20.9
Caulking														
Yes	51.2	47.9	42.5	5.4	--	--	--	--	--	--	3.3	2.8	.5	6.9
No	17.1	15.4	11.2	4.2	--	--	--	--	--	--	1.7	1.3	.5	11.3
Don't Know	4.1	3.6	2.1	1.4	--	--	--	--	--	--	.5	.3	.2	19.3

NC = No cases in sample.
Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.
-- = Data not applicable.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.29b. Conservation by Type and Ownership of Housing Unit, Percent of U.S. Households, 1993 (Continued)

Conservation-Related Items	Total	Type and Ownership of Housing Unit												RSE Row Factors
		Single-Family			Multifamily						Mobile Home			
					Two to Four Units			Five or More Units						
		Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	
RSE Column Factors	0.4	0.4	0.4	0.8	1.1	2.0	1.3	0.9	2.6	0.9	1.1	1.3	1.9	
Conservation Measures (Single-Family Units and Mobile Homes Only)	100.0	100.0	100.0	100.0	--	--	--	--	--	--	100.0	100.0	100.0	100.0
Types of Insulation in/around Home														
Roof/Ceiling														
Yes	81.0	81.4	86.9	53.6	--	--	--	--	--	--	75.6	80.5	57.5	4.2
No	8.8	8.9	7.5	16.1	--	--	--	--	--	--	7.4	7.4	Q	15.4
Don't Know	10.2	9.7	5.6	30.2	--	--	--	--	--	--	17.0	12.1	35.1	12.6
Outside Walls														
Yes	70.0	69.0	74.8	39.3	--	--	--	--	--	--	82.5	87.6	63.5	3.8
No	15.8	16.7	15.2	24.5	--	--	--	--	--	--	4.9	4.3	Q	14.3
Don't Know	14.2	14.3	10.0	36.2	--	--	--	--	--	--	12.6	8.1	29.4	13.4
Floor Insulation														
No Basement/Crawlspace	24.6	26.6	24.8	35.8	--	--	--	--	--	--	--	--	--	10.3
Basement/Crawlspace	67.7	73.4	75.2	64.2	--	--	--	--	--	--	--	--	--	4.0
Heated	28.8	31.2	33.8	18.1	--	--	--	--	--	--	--	--	--	10.8
None or Part Heated	38.9	42.2	41.4	46.1	--	--	--	--	--	--	--	--	--	6.8
Floor Not Insulated	21.6	23.4	23.2	24.6	--	--	--	--	--	--	--	--	--	10.8
Floor Insulated	17.3	18.7	18.2	21.5	--	--	--	--	--	--	--	--	--	12.0
All Parts Insulated	8.2	8.8	9.5	5.6	--	--	--	--	--	--	--	--	--	16.4
Some Parts Insulated	2.2	2.4	2.6	1.4	--	--	--	--	--	--	--	--	--	35.9
Don't Know	6.9	7.5	6.1	14.6	--	--	--	--	--	--	--	--	--	18.0
Water Heater														
Yes	24.0	23.5	24.6	17.7	--	--	--	--	--	--	30.9	34.3	18.3	9.0
No	71.1	71.7	72.4	68.2	--	--	--	--	--	--	63.3	61.9	68.6	3.7
Don't Know	4.9	4.8	2.9	14.1	--	--	--	--	--	--	5.7	3.8	13.1	18.8
Hot Water Pipes														
Yes	30.3	28.2	30.4	16.8	--	--	--	--	--	--	55.6	61.8	32.7	7.1
No	58.9	60.9	61.5	58.3	--	--	--	--	--	--	34.6	32.3	43.3	5.3
Don't Know	10.8	10.9	8.1	24.9	--	--	--	--	--	--	9.7	5.9	24.0	12.3
Heating/Cooling Ducts														
Yes	29.5	28.3	30.7	16.4	--	--	--	--	--	--	44.1	48.9	26.5	9.7
No	58.8	60.5	60.7	59.4	--	--	--	--	--	--	38.9	36.9	46.8	6.1
Don't Know	11.7	11.2	8.6	24.2	--	--	--	--	--	--	16.9	14.3	26.7	12.4
Weather Stripping														
Yes	63.2	63.6	67.4	44.2	--	--	--	--	--	--	57.8	60.1	49.4	4.6
No	32.2	31.9	29.6	43.5	--	--	--	--	--	--	35.4	34.8	37.8	7.7
Don't Know	4.7	4.5	3.0	12.3	--	--	--	--	--	--	6.7	5.1	12.8	19.7
Caulking														
Yes	70.7	71.7	76.2	48.9	--	--	--	--	--	--	59.5	64.4	41.3	4.4
No	23.6	23.0	20.0	38.0	--	--	--	--	--	--	30.8	28.7	38.8	9.2
Don't Know	5.7	5.3	3.8	13.1	--	--	--	--	--	--	9.7	6.9	19.9	17.5

NC = No cases in sample.
Q= Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.
-- = Data not applicable.
Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • Percentages are calculated on unrounded numbers. • See "Glossary" for definition of terms used in this report.
Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.30a. Conservation by Family Income, Million U.S. Households, 1993

Conservation-Related Items	Total	1993 Family Income							Below Poverty Line		Eligible for Federal Assistance[1]	RSE Row Factors
		Less than $5,000	$5,000 to $9,999	$10,000 to $14,999	$15,000 to $24,999	$25,000 to $34,999	$35,000 to $49,999	$50,000 or More	100 Percent	125 Percent		
RSE Column Factors:	0.4	2.2	1.2	1.0	1.0	0.9	0.9	1.4	1.1	1.0	0.8	
Total	96.6	4.1	13.5	17.9	15.5	18.2	19.3	8.3	14.4	19.4	30.7	3.4
Adequacy of Insulation (all households)												
Well Insulated	36.0	1.2	4.9	6.2	5.2	7.0	8.0	3.6	4.7	6.4	10.2	5.5
Adequately Insulated	38.4	1.4	4.6	6.5	6.6	7.8	8.0	3.4	4.6	6.6	11.0	5.4
Poorly Insulated	22.2	1.5	4.0	5.1	3.6	3.3	3.3	1.3	5.1	6.3	9.5	6.7
Demand-Side Management Programs												
Were Any Offered by a Utility												
Yes	34.8	.8	2.7	5.5	5.0	7.7	8.8	4.2	3.1	4.4	7.7	6.3
No	40.0	2.1	7.1	8.1	6.7	6.8	6.6	2.6	7.6	10.1	15.1	5.5
Don't Know	21.8	1.1	3.6	4.3	3.8	3.6	3.9	1.5	3.7	4.9	7.9	7.7
***Program Participation* In Past 12 Months**												
No Program Offered	40.0	2.1	7.1	8.1	6.7	6.8	6.6	2.6	7.6	10.1	15.1	5.5
Don't Know	2.7	Q	.7	.4	.4	.4	.4	.3	.4	.7	1.1	19.8
No	46.4	1.8	4.8	8.3	7.5	9.5	10.2	4.3	5.6	7.4	12.6	5.2
Yes (more than one may apply)	7.6	.2	.8	1.1	.9	1.5	2.1	1.1	.7	1.1	1.9	14.2
Energy Audit	1.4	Q	Q	.2	.2	.2	.5	.2	.1	.2	.3	24.8
Load-Control Program	2.6	Q	.2	.3	.3	.5	.8	.4	Q	.3	.4	26.8
Equipment or Service	1.7	Q	.2	.3	.2	.2	.5	.2	.2	.3	.5	29.0
Rebate or Incentive	.5	NC	NC	Q	Q	Q	.2	.2	NC	Q	Q	96.5
Encouraged to Switch Fuels	Q	NC	Q	Q	Q	Q	Q	Q	Q	Q	Q	100.0
Time-of-Use Rate	1.6	NC	Q	.3	.2	.4	.4	.2	Q	.1	.2	31.7
Does the Home Have Any of the Following:												
Set-Back/Clock Thermostat												
Yes	10.8	.3	.7	1.1	1.3	2.2	3.3	1.9	.8	1.1	1.9	13.4
No	85.8	3.8	12.8	16.7	14.2	16.0	15.9	6.4	13.6	18.2	28.8	3.5
Regular Heating System/ Furnace Maintenance												
Yes	49.4	1.6	5.2	8.5	7.9	10.0	11.0	5.3	5.3	7.5	12.8	5.0
No	47.2	2.5	8.3	9.4	7.5	8.2	8.3	3.0	9.1	11.9	17.9	4.8
Trees Shading the Afternoon Summer Sun												
Yes	44.9	1.4	5.0	7.6	7.1	9.1	10.1	4.6	5.0	7.1	11.8	5.2
No	51.7	2.7	8.5	10.3	8.4	9.0	9.1	3.7	9.4	12.3	18.9	4.7

See footnotes at end of table.

Table 3.30b. Conservation by Family Income, Percent of U.S. Households, 1993

Conservation-Related Items	Total	1993 Family Income							Below Poverty Line		Eligible for Federal Assistance[1]	RSE Row Factors
		Less than $5,000	$5,000 to $9,999	$10,000 to $14,999	$15,000 to $24,999	$25,000 to $34,999	$35,000 to $49,999	$50,000 or More	100 Percent	125 Percent		
RSE Column Factors	0.5	2.0	1.2	1.0	1.0	0.9	0.9	1.3	1.1	0.9	0.8	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0
Adequacy of Insulation (all households)												
Well Insulated	37.3	28.4	36.2	34.9	33.5	38.7	41.5	42.7	32.8	33.2	33.2	4.6
Adequately Insulated	39.7	34.3	34.3	36.6	42.9	42.9	41.4	41.2	31.7	34.1	36.0	4.4
Poorly Insulated	23.0	37.3	29.6	28.4	23.6	18.4	17.1	16.0	35.5	32.7	30.8	5.6
Demand-Side Management Programs												
Were Any Offered by a Utility												
Yes	36.0	20.5	20.2	30.7	32.4	42.4	45.9	50.9	21.3	22.6	25.3	0.0
No	41.3	51.6	52.8	45.2	43.2	37.7	34.1	31.0	53.1	52.1	49.1	4.5
Don't Know	22.6	27.9	27.1	24.1	24.4	19.9	20.0	18.1	25.6	25.4	25.6	6.8
Program Participation In Past 12 Months												
No Program Offered	41.3	51.6	52.8	45.2	43.2	37.7	34.1	31.0	53.1	52.1	49.1	4.5
Don't Know	2.8	Q	5.4	2.1	2.6	2.1	2.1	4.1	2.8	3.7	3.5	19.4
No	48.0	43.2	35.9	46.4	48.5	52.1	53.0	51.7	39.0	38.4	41.2	3.9
Yes (more than one may apply)	7.9	4.0	5.9	6.3	5.7	8.1	10.8	13.2	5.0	5.8	6.2	13.4
Energy Audit	1.5	Q	Q	1.1	1.3	1.2	2.7	2.3	.9	.9	1.0	24.4
Load-Control Program	2.7	Q	1.5	1.8	2.3	2.8	4.2	4.5	Q	1.4	1.4	26.3
Equipment or Service	1.7	Q	1.4	1.7	1.6	1.4	2.5	2.4	1.2	1.4	1.6	28.6
Rebate or Incentive	.5	NC	NC	Q	Q	Q	.8	2.0	NC	Q	Q	35.1
Encouraged to Switch Fuels	Q	NC	Q	Q	Q	Q	Q	Q	Q	Q	Q	100.0
Time-of-Use Rate	1.6	NC	Q	1.7	1.3	2.1	1.8	2.5	Q	.7	.8	31.2
Does the Home Have Any of the Following:												
Set-Back/Clock Thermostat												
Yes	11.2	6.8	5.2	6.3	8.3	11.9	17.4	23.2	5.8	5.8	6.1	12.6
No	88.8	93.2	94.8	93.7	91.7	88.1	82.6	76.8	94.2	94.2	93.9	1.3
Regular Heating System/ Furnace Maintenance												
Yes	51.1	38.6	38.4	47.5	51.4	54.9	57.0	63.6	37.1	38.6	41.7	3.8
No	48.9	61.4	61.6	52.5	48.6	45.1	43.0	36.4	62.9	61.4	58.3	3.4
Trees Shading the Afternoon Summer Sun												
Yes	46.5	34.5	36.8	42.5	45.7	50.4	52.5	55.4	35.0	36.7	38.4	4.2
No	53.5	65.5	63.2	57.5	54.3	49.6	47.5	44.6	65.0	63.3	61.6	3.1

See footnotes at end of table.

Table 3.30a. Conservation by Family Income, Million U.S. Households, 1993 (Continued)

Conservation-Related Items	Total	1993 Family Income							Below Poverty Line		Eligible for Federal Assistance[1]	RSE Row Factors
		Less than $5,000	$5,000 to $9,999	$10,000 to $14,999	$15,000 to $24,999	$25,000 to $34,999	$35,000 to $49,999	$50,000 or More	100 Percent	125 Percent		
RSE Column Factors:	0.4	2.2	1.2	1.0	1.0	0.9	0.9	1.4	1.1	1.0	0.8	
Doors and Windows												
Glass in Sliding Doors to the Outside												
Single Pane	12.2	0.3	1.1	1.9	2.2	2.4	2.7	1.6	1.3	1.8	2.9	10.8
Double Pane	18.3	.4	1.1	1.9	2.7	3.9	5.6	2.6	1.1	1.6	2.9	10.7
Untreated	17.5	.4	1.1	1.9	2.6	3.8	5.3	2.4	1.1	1.6	2.9	10.9
Low-E Coating	.8	NC	NC	Q	Q	.1	.3	.2	NC	Q	Q	23.0
Triple Pane	.4	NC	NC	NC	Q	.2	Q	Q	NC	NC	NC	47.1
No Doors	65.8	3.3	11.3	14.0	10.6	11.7	10.9	4.0	12.0	15.9	24.9	4.2
Glass in Most Windows												
Single Pane	61.5	3.0	10.1	12.3	10.5	10.7	10.4	4.5	10.8	14.2	22.2	4.1
Double Pane	34.2	1.0	3.3	5.3	4.8	7.3	8.7	3.8	3.5	5.0	8.2	6.0
Untreated	32.5	1.0	3.3	5.1	4.6	6.9	8.2	3.4	3.5	5.0	8.1	6.1
Low-E Coating	1.7	Q	Q	.2	.2	.4	.6	.3	Q	Q	.1	25.8
Triple Pane	.9	Q	Q	.2	.2	.2	.1	.1	Q	Q	.2	32.5
Coverings on Windows												
Storm Windows	36.5	1.3	4.8	6.8	6.5	7.4	6.9	2.9	4.6	6.5	10.9	5.6
Plastic Coverings	3.7	.4	.7	.8	.8	.5	.4	.2	.9	1.2	1.6	15.4
Neither	56.4	2.4	8.0	10.2	8.2	10.3	12.0	5.3	8.9	11.6	18.1	4.8
Frames in Most Windows												
Metal	53.3	2.4	7.7	10.2	8.8	9.5	10.5	4.1	8.6	11.6	17.6	5.0
Nonmetal	43.3	1.6	5.8	7.6	6.6	8.6	8.7	4.3	5.8	7.8	13.0	5.4
Number of Original Windows Replaced												
All	10.7	.4	1.5	2.1	1.9	2.1	2.1	.6	1.7	2.3	3.5	10.6
Some	15.5	.5	1.7	2.8	2.0	3.0	3.6	1.9	2.1	2.8	4.4	9.2
None	70.3	3.1	10.3	12.9	11.6	13.1	13.5	5.9	10.6	14.3	22.6	3.8
Type of Replacement Windows												
Single Pane	10.3	.6	1.8	2.1	1.6	1.6	1.8	.9	2.1	2.8	4.1	10.3
Double Pane	15.2	.4	1.3	2.6	2.2	3.4	3.8	1.5	1.6	2.1	3.7	9.8
Untreated	13.7	.4	1.3	2.5	2.0	3.0	3.2	1.3	1.6	2.1	3.6	10.0
Low-E Coating	1.5	Q	Q	Q	.2	.4	.5	.2	Q	Q	.1	28.2
Triple Pane	.7	NC	Q	Q	Q	Q	.2	Q	Q	Q	Q	31.1
None Replaced	70.4	3.1	10.3	13.0	11.6	13.1	13.5	5.9	10.6	14.3	22.7	3.8
Age of Replacement Windows												
Less than 2 Years	7.2	.4	1.0	1.2	1.0	1.5	1.7	.4	1.3	1.7	2.3	12.7
2-4 Years	7.1	.2	.8	1.3	1.1	1.4	1.5	.7	.9	1.3	2.1	12.6
5-9 Years	6.5	.2	.7	1.3	.8	1.4	1.5	.8	.8	1.2	1.9	12.6
10-19 Years	4.2	.1	.5	.8	.7	.7	.8	.4	.4	.7	1.2	17.1
20 Years or More	1.2	Q	.2	.3	.3	Q	.2	Q	.2	.3	.4	30.5
None Replaced	70.4	3.1	10.3	13.0	11.6	13.1	13.5	5.9	10.6	14.3	22.7	3.8

See footnotes at end of table.

Table 3.30b. Conservation by Family Income, Percent of U.S. Households, 1993 (Continued)

Conservation-Related Items	Total	1993 Family Income							Below Poverty Line		Eligible for Federal Assistance[1]	RSE Row Factors
		Less than $5,000	$5,000 to $9,999	$10,000 to $14,999	$15,000 to $24,999	$25,000 to $34,999	$35,000 to $49,999	$50,000 or More	100 Percent	125 Percent		
RSE Column Factors	0.5	2.0	1.2	1.0	1.0	0.9	0.9	1.3	1.1	0.9	0.8	
Doors and Windows												
Glass in Sliding Doors to the Outside												
Single Pane	12.6	8.0	8.3	10.5	14.0	13.2	14.1	19.4	9.0	9.5	9.4	10.3
Double Pane	18.9	9.6	8.1	10.8	17.1	21.7	29.2	31.5	7.7	8.3	9.4	10.2
Untreated	18.1	9.6	8.1	10.7	16.7	20.9	27.7	28.7	7.7	8.3	9.3	10.4
Low-E Coating	.8	NC	NC	Q	Q	.8	1.5	2.9	NC	Q	Q	22.3
Triple Pane	.4	NC	NC	NC	Q	.9	Q	Q	NC	NC	NC	43.2
No Doors	68.1	82.4	83.6	78.6	68.3	64.2	56.4	48.4	83.4	82.2	81.1	2.5
Glass in Most Windows												
Single Pane	63.6	74.8	74.9	69.0	67.8	58.9	53.9	53.5	74.9	73.2	72.3	2.5
Double Pane	35.4	23.9	24.7	29.6	31.1	40.2	45.4	45.0	24.4	26.0	26.9	5.1
Untreated	33.6	23.8	24.5	28.7	29.8	38.0	42.4	41.1	24.2	25.8	26.4	5.3
Low-E Coating	1.7	Q	Q	1.0	1.2	2.2	3.0	3.9	Q	Q	.5	25.2
Triple Pane	.9	Q	Q	1.1	1.0	1.0	.7	1.5	Q	Q	.7	32.0
Coverings on Windows												
Storm Windows	37.8	31.6	35.3	38.0	41.8	40.6	35.9	35.0	31.7	33.8	35.6	4.9
Plastic Coverings	3.8	8.9	5.1	4.7	4.9	2.8	1.9	1.9	6.4	6.2	5.3	0.0
Neither	58.3	58.9	59.6	57.1	53.3	56.6	62.2	63.1	61.8	59.9	58.9	3.2
Frames in Most Windows												
Metal	55.1	59.5	56.8	57.3	57.0	52.4	54.8	48.9	59.6	59.7	57.3	3.5
Nonmetal	44.8	39.9	43.2	42.4	42.9	47.6	45.2	51.1	40.2	40.2	42.5	4.5
Number of Original Windows Replaced												
All	11.0	10.4	11.2	11.5	12.1	11.6	11.0	6.7	11.7	11.6	11.5	10.0
Some	16.1	13.0	12.4	15.9	13.1	16.6	18.7	22.5	14.6	14.4	14.5	8.6
None	72.8	76.0	76.3	72.3	74.7	71.9	70.3	70.9	73.5	73.9	73.8	2.1
Type of Replacement Windows												
Single Pane	10.6	14.1	13.5	11.9	10.1	8.6	9.2	10.4	14.8	14.6	13.4	9.6
Double Pane	15.8	9.3	10.0	14.8	14.3	18.8	19.6	17.7	11.1	11.0	12.1	9.3
Untreated	14.2	9.2	9.8	13.9	12.8	16.7	16.8	15.1	11.0	10.8	11.7	9.5
Low-E Coating	1.6	Q	Q	Q	1.4	2.1	2.8	2.7	Q	Q	.4	27.3
Triple Pane	.7	NC	Q	Q	Q	Q	.9	Q	Q	Q	Q	29.0
None Replaced	72.9	76.6	76.3	72.6	74.8	71.9	70.3	70.9	73.7	74.0	74.0	2.1
Age of Replacement Windows												
Less than 2 Years	7.5	8.9	7.2	6.6	6.6	8.4	8.9	5.1	9.3	8.6	7.6	12.1
2-4 Years	7.3	4.5	6.2	7.5	7.0	7.5	8.0	9.0	6.6	6.5	6.7	12.4
5-9 Years	6.7	4.8	5.0	7.1	5.0	7.5	7.6	9.2	5.7	6.0	6.3	12.2
10-19 Years	4.3	3.3	4.0	4.7	4.8	3.9	4.2	4.7	3.1	3.4	3.9	16.8
20 Years or More	1.3	Q	1.3	1.5	1.7	Q	1.0	Q	1.5	1.4	1.4	29.6
None Replaced	72.9	76.6	76.3	72.6	74.8	71.9	70.3	70.9	73.7	74.0	74.0	2.1

See footnotes at end of table.

Table 3.30a. Conservation by Family Income, Million U.S. Households, 1993 (Continued)

Conservation-Related Items	Total	1993 Family Income							Below Poverty Line		Eligible for Federal Assistance[1]	RSE Row Factors
		Less than $5,000	$5,000 to $9,999	$10,000 to $14,999	$15,000 to $24,999	$25,000 to $34,999	$35,000 to $49,999	$50,000 or More	100 Percent	125 Percent		
RSE Column Factors:	0.4	2.2	1.2	1.0	1.0	0.9	0.9	1.4	1.1	1.0	0.8	
Conservation Measures (Single-Family Units and Mobile Homes Only)	72.4	2.0	8.0	12.3	11.4	14.6	16.6	7.5	8.3	11.8	19.2	4.1
Types of Insulation In/around Home												
Roof/Ceiling												
Yes	58.6	1.2	5.4	8.9	8.9	12.8	14.6	6.7	5.2	7.8	13.2	4.9
No	6.4	.4	1.4	1.4	1.1	.8	1.0	.3	1.6	2.0	2.9	12.7
Don't Know	7.4	.4	1.2	1.9	1.3	1.0	1.0	.5	1.5	2.0	3.1	11.6
Outside Walls												
Yes	50.7	1.1	4.5	7.7	8.3	10.7	12.7	5.7	4.4	6.7	11.3	5.5
No	11.4	.5	2.0	2.3	1.6	1.9	2.0	1.0	2.1	2.7	4.3	9.6
Don't Know	10.3	.4	1.5	2.3	1.5	2.0	1.8	.8	1.9	2.4	3.6	10.0
Floor Insulation												
No Basement/Crawlspace	17.8	.5	1.8	2.7	2.6	3.7	4.6	1.9	2.2	2.8	4.3	10.5
Basement/Crawlspace	49.0	1.2	5.2	8.0	7.8	9.8	11.5	5.5	5.0	7.4	12.6	4.9
Heated	20.8	.2	1.3	2.8	3.2	4.5	5.8	3.0	1.1	1.8	3.7	9.6
None or Part Heated	28.2	1.0	3.9	5.2	4.6	5.3	5.7	2.5	3.9	5.5	8.9	6.6
Floor Not Insulated	15.7	.6	2.3	3.2	2.5	2.7	2.9	1.4	2.4	3.2	5.2	9.2
Floor Insulated	12.5	.4	1.6	2.0	2.0	2.6	2.8	1.1	1.6	2.3	3.7	10.4
All Parts Insulated	5.9	.1	.6	.8	.9	1.3	1.5	.6	.5	.8	1.5	14.9
Some Parts Insulated	1.6	Q	.2	.2	.3	.5	.4	.1	.1	.2	.4	28.1
Don't Know	5.0	.2	.8	1.1	.8	.8	.9	.4	.9	1.3	1.8	14.0
Water Heater												
Yes	17.4	.4	1.6	2.9	2.7	3.6	4.2	2.1	1.8	2.6	4.0	8.5
No	51.5	1.4	5.6	8.7	8.2	10.5	11.9	5.2	5.7	8.1	13.6	5.1
Don't Know	3.5	.2	.8	.7	.6	.5	.6	.2	.9	1.1	1.6	18.0
Hot Water Pipes												
Yes	21.9	.6	2.0	3.5	3.5	4.4	5.6	2.3	2.2	3.3	5.3	7.6
No	42.6	1.0	4.6	7.5	6.5	8.9	9.5	4.6	4.5	6.5	11.2	5.7
Don't Know	7.8	.4	1.3	1.3	1.4	1.3	1.5	.6	1.6	2.1	2.7	11.6
Heating/Cooling Ducts												
Yes	21.4	.3	1.5	2.8	3.1	4.8	5.9	3.0	1.6	2.3	3.7	10.3
No	42.6	1.2	5.3	7.9	7.0	8.2	9.1	3.8	5.1	7.5	12.6	5.4
Don't Know	8.4	.5	1.2	1.5	1.3	1.5	1.6	.7	1.6	2.0	2.8	12.0
Weather Stripping												
Yes	45.7	1.0	3.7	7.0	7.2	10.2	11.5	5.1	3.8	5.7	9.7	5.5
No	23.3	.9	3.6	4.6	3.7	4.0	4.5	2.1	3.7	5.1	8.1	7.3
Don't Know	3.4	.1	.7	.7	.5	.4	.6	.3	.8	1.1	1.4	17.2
Caulking												
Yes	51.2	1.0	4.1	6.0	6.0	11.3	13.2	5.7	4.2	6.5	11.1	5.3
No	17.1	.8	3.1	3.2	2.9	2.6	2.8	1.6	3.2	4.1	6.4	8.3
Don't Know	4.1	.2	.8	1.1	.5	.7	.6	.2	.9	1.2	1.7	15.9

[1] Below 150 percent of poverty line or 60 percent of median State income.

NC = No cases in sample.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.30b. Conservation by Family Income, Percent of U.S. Households, 1993 (Continued)

Conservation-Related Items	Total	1993 Family Income							Below Poverty Line		Eligible for Federal Assistance[1]	RSE Row Factors
		Less than $5,000	$5,000 to $9,999	$10,000 to $14,999	$15,000 to $24,999	$25,000 to $34,999	$35,000 to $49,999	$50,000 or More	100 Percent	125 Percent		
RSE Column Factors	0.5	2.0	1.2	1.0	1.0	0.9	0.9	1.3	1.1	0.9	0.8	
Conservation Measures (Single-Family Units and Mobile Homes Only)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Types of Insulation in/around Home												
Roof/Ceiling												
Yes	81.0	61.9	67.4	72.9	78.4	87.5	88.1	89.0	62.5	65.8	69.0	2.4
No	8.8	19.2	17.0	11.5	9.9	5.4	5.8	4.5	19.0	16.9	15.0	12.2
Don't Know	10.2	18.9	15.6	15.6	11.7	7.1	6.1	6.4	18.5	17.3	16.0	10.9
Outside Walls												
Yes	70.0	52.4	56.3	62.7	72.6	73.3	76.7	76.3	52.9	56.6	58.8	3.4
No	15.8	25.7	24.9	18.9	14.4	13.1	12.3	13.5	24.8	22.7	22.3	9.2
Don't Know	14.2	21.9	18.8	18.4	13.0	13.6	11.1	10.2	22.3	20.7	18.9	9.2
Floor Insulation												
No Basement/Crawlspace	24.6	26.4	22.0	21.7	22.5	25.5	27.9	25.8	26.0	23.6	22.4	9.1
Basement/Crawlspace	67.7	61.2	64.8	65.2	68.5	67.1	69.5	72.9	60.3	62.1	65.8	3.4
Heated	28.8	11.4	16.4	22.5	28.4	30.6	35.1	40.1	13.0	15.4	19.3	9.0
None or Part Heated	38.9	49.8	48.4	42.7	40.1	36.5	34.4	32.8	47.3	46.7	46.6	5.3
Floor Not Insulated	21.6	30.5	28.6	26.0	22.2	18.7	17.5	18.6	28.4	27.4	27.3	8.3
Floor Insulated	17.3	19.3	19.8	16.7	17.8	17.8	16.9	14.2	18.9	19.3	19.3	9.8
All Parts Insulated	8.2	7.3	7.5	6.5	8.2	9.1	9.1	7.7	6.1	6.8	7.7	14.5
Some Parts Insulated	2.2	Q	2.2	1.4	2.6	3.2	2.3	1.6	1.6	1.6	2.1	27.6
Don't Know	6.9	11.4	10.2	8.8	7.1	5.4	5.5	4.9	11.2	10.9	9.5	14.0
Water Heater												
Yes	24.0	19.9	20.2	23.9	23.3	24.4	25.1	27.7	21.3	22.3	21.0	7.8
No	71.1	69.8	70.2	70.8	71.5	72.3	71.3	69.5	68.3	68.3	70.9	2.8
Don't Know	4.9	10.4	9.6	5.3	5.1	3.4	3.6	2.9	10.4	9.4	8.1	15.5
Hot Water Pipes												
Yes	30.3	29.6	25.4	28.9	30.4	30.4	33.4	30.7	26.1	27.5	27.4	6.7
No	58.9	51.9	57.9	60.8	57.2	61.0	57.4	60.8	54.8	55.2	58.4	3.9
Don't Know	10.8	18.5	16.7	10.3	12.4	8.7	9.2	8.5	19.1	17.3	14.2	10.8
Heating/Cooling Ducts												
Yes	29.5	15.1	19.0	23.0	26.9	33.2	35.2	39.5	18.8	19.2	19.5	8.8
No	58.8	59.0	66.1	64.7	61.3	56.2	55.0	51.1	61.9	63.7	65.7	4.0
Don't Know	11.7	25.9	14.8	12.3	11.8	10.6	9.8	9.4	19.3	17.1	14.8	11.2
Weather Stripping												
Yes	63.2	49.4	46.5	56.7	62.8	69.9	69.5	68.4	45.4	48.3	50.4	3.7
No	32.2	43.3	45.0	37.2	32.6	27.3	26.8	27.9	44.8	42.7	42.4	5.6
Don't Know	4.7	7.3	8.4	6.1	4.6	2.8	3.7	3.7	9.8	8.9	7.1	17.2
Caulking												
Yes	70.7	50.8	51.8	65.0	69.8	77.2	79.3	75.5	50.5	54.9	57.7	3.3
No	23.6	40.9	38.3	25.9	25.6	18.2	17.1	21.6	39.2	35.0	33.3	7.1
Don't Know	5.7	8.3	9.8	9.1	4.6	4.7	3.7	2.9	10.3	10.0	9.0	15.5

[1] Below 150 percent of poverty line or 60 percent of median State income.

NC = No cases in sample.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • Percentages are calculated on unrounded numbers. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.31a. Equipment Purchase by Census Region and Climate Zone, Million U.S. Households, 1993

Equipment Purchase and Purchase Considerations	Total	Census Region				Climate Zone					RSE Row Factors
						Fewer than 2,000 CDD and –				More than 2,000 CDD and Fewer than 4,000 HDD	
						More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factors:	0.5	1.0	0.8	0.7	0.9	2.1	1.1	1.1	1.4	1.1	
Total	96.6	19.5	23.3	33.5	20.4	8.7	26.5	22.5	17.8	21.2	7.4
Main Heating System Purchased After January 1, 1990											
No	83.6	17.0	20.2	27.9	18.5	7.2	23.3	19.7	15.5	18.0	4.2
Yes	13.0	2.4	3.1	5.6	1.8	1.5	3.2	2.7	2.3	3.2	10.3
Came with Home Purchase	4.2	.5	1.0	2.1	.6	.4	1.0	.8	.7	1.3	21.3
Household Selected	1.0	.2	.2	.4	.2	.1	.3	.2	.2	.3	24.0
Standard with New Home	3.2	.3	.8	1.7	.4	.3	.7	.6	.5	1.0	26.1
Purchased Replacement	8.8	1.9	2.1	3.5	1.2	1.1	2.2	2.0	1.6	1.9	10.3
Water Heater Purchased After January 1, 1990											
No	79.6	16.6	19.1	26.8	17.0	6.7	22.2	18.8	14.9	16.9	3.9
Yes	17.0	2.8	4.2	6.7	3.3	2.0	4.3	3.6	2.9	4.3	9.5
Came with Home Purchase	4.2	.6	.9	2.1	.7	.4	1.0	.8	.7	1.4	21.5
Household Selected	.7	.1	.1	.3	.1	.1	.2	.1	.1	.2	28.1
Standard with New Home	3.5	.5	.8	1.8	.5	.3	.8	.6	.6	1.2	23.7
Purchased Replacement	12.8	2.2	3.3	4.6	2.7	1.5	3.2	2.9	2.2	2.9	10.1
Central Air-Conditioning Equipment Purchased After January 1, 1990											
No	88.5	18.6	21.3	29.1	19.5	8.1	24.8	20.7	16.3	18.6	4.9
Yes	8.1	.9	2.0	4.4	.8	.6	1.7	1.7	1.5	2.6	14.5
Came with Home Purchase	3.3	.3	.8	2.0	.3	.2	.5	.6	.6	1.3	23.8
Household Selected	.6	Q	.2	.3	.0	Q	.1	.1	.1	.2	33.4
Standard with New Home	2.7	.2	.6	1.6	.2	.2	.4	.5	.5	1.1	25.3
Purchased Replacement	4.9	.6	1.2	2.5	.6	.4	1.1	1.1	1.0	1.3	15.7
Replaced Central Unit	2.4	Q	.4	1.5	.2	Q	.4	.5	.3	1.1	19.7
Replaced Window Unit	.9	Q	.2	.5	Q	Q	Q	.2	.3	Q	31.0
New Additional Unit	.3	Q	Q	Q	Q	Q	Q	Q	Q	Q	51.9
No Equipment Before	1.3	.3	.5	.4	Q	Q	.4	.3	.2	Q	26.5
Refrigerator Purchased After January 1, 1990											
No	80.4	16.3	19.7	27.6	16.8	7.3	22.3	19.1	14.6	17.1	4.0
Yes	16.2	3.2	3.6	5.9	3.5	1.4	4.2	3.4	3.2	4.1	8.7
Came with Home Purchase	2.7	.4	.4	1.2	.7	.2	.6	.5	.4	1.0	21.3
Household Selected	1.4	.2	.2	.7	.3	.2	.3	.2	.2	.6	28.3
Standard with New Home	1.4	.3	.2	.6	.4	Q	.3	.3	.2	.4	23.7
Purchased Replacement	13.5	2.8	3.2	4.6	2.9	1.2	3.6	2.8	2.8	3.1	9.7

See footnotes at end of table.

Table 3.31b. Equipment Purchase by Census Region and Climate Zone, Percent of U.S. Households, 1993

Equipment Purchase and Purchase Considerations	Total	Census Region				Climate Zone					RSE Row Factors
						Fewer than 2,000 CDD and --				More than 2,000 CDD and Fewer than 4,000 HDD	
		Northeast	Midwest	South	West	More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factors:	0.5	1.2	1.0	0.8	1.0	1.5	1.0	1.0	1.2	1.1	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0
Main Heating System Purchased After January 1, 1990											
No	86.5	87.5	86.6	83.2	91.0	82.9	87.9	87.8	87.0	84.7	1.4
Yes	13.5	12.5	13.4	16.8	9.0	17.1	12.1	12.2	13.0	15.3	8.2
Came with Home Purchase	4.4	2.7	4.3	6.3	2.9	5.0	3.8	3.4	3.9	6.2	20.8
Household Selected	1.1	1.1	1.0	1.3	.7	1.4	1.1	.9	1.0	1.2	23.2
Standard with New Home	3.3	1.6	3.2	5.0	2.2	3.6	2.7	2.6	2.9	4.9	23.8
Purchased Replacement	9.1	9.7	9.1	10.5	6.1	12.1	8.3	8.8	9.1	9.1	8.5
Water Heater Purchased After January 1, 1990											
No	82.4	85.5	82.1	80.0	83.7	77.6	83.9	83.8	83.8	79.7	1.6
Yes	17.6	14.5	17.9	20.0	16.3	22.4	16.1	16.2	16.2	20.3	7.6
Came with Home Purchase	4.4	3.0	3.9	6.2	3.2	4.9	3.8	3.3	3.7	6.5	21.3
Household Selected	.7	.7	.6	.8	.7	1.1	.7	.6	.5	.9	25.5
Standard with New Home	3.7	2.3	3.3	5.3	2.5	3.8	3.1	2.8	3.2	5.6	23.7
Purchased Replacement	13.2	11.5	14.0	13.8	13.0	17.5	12.3	12.8	12.5	13.8	8.3
Central Air-Conditioning Equipment Purchased After January 1, 1990											
No	91.6	95.5	91.4	86.8	96.0	92.9	93.8	92.3	91.5	87.6	1.4
Yes	8.4	4.5	8.6	13.2	4.0	7.1	6.2	7.7	8.5	12.4	13.4
Came with Home Purchase	3.4	1.4	3.3	5.9	1.3	2.7	2.1	2.8	3.1	6.1	23.6
Household Selected	.6	Q	.7	1.0	.2	Q	.4	.4	.5	1.2	32.2
Standard with New Home	2.8	1.1	2.6	4.8	1.1	Q	1.6	2.4	2.6	5.0	24.3
Purchased Replacement	5.0	3.1	5.3	7.4	2.7	4.4	4.2	4.9	5.4	6.2	14.4
Replaced Central Unit	2.5	Q	1.9	4.6	1.2	Q	1.5	2.3	1.7	5.1	18.6
Replaced Window Unit	1.0	Q	1.1	1.5	Q	Q	Q	.9	1.9	Q	30.7
New Additional Unit	.3	Q	Q	Q	Q	Q	Q	Q	Q	Q	46.5
No Equipment Before	1.3	1.5	2.2	1.1	Q	2.5	1.7	1.4	1.2	Q	25.6
Refrigerator Purchased After January 1, 1990											
No	83.2	83.4	84.4	82.5	82.7	83.9	84.1	85.1	82.2	80.6	1.5
Yes	16.8	16.6	15.6	17.5	17.3	16.1	15.9	14.9	17.8	19.4	7.2
Came with Home Purchase	2.8	2.3	1.7	3.7	3.2	2.4	2.4	2.3	2.2	4.7	21.4
Household Selected	1.4	.9	1.0	2.0	1.5	1.8	1.2	.7	1.0	2.7	28.6
Standard with New Home	1.4	1.4	.7	1.7	1.8	Q	1.2	1.6	1.1	2.0	22.6
Purchased Replacement	14.0	14.3	13.9	13.8	14.1	13.7	13.5	12.7	15.6	14.7	8.2

See footnotes at end of table.

Table 3.31a. Equipment Purchase by Census Region and Climate Zone, Million U.S. Households, 1993 (Continued)

Equipment Purchase and Purchase Considerations	Total	Census Region				Climate Zone					RSE Row Factors
						Fewer than 2,000 CDD and --				More than 2,000 CDD and Fewer than 4,000 HDD	
		Northeast	Midwest	South	West	More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factors:	0.5	1.0	0.8	0.7	0.9	2.1	1.1	1.1	1.4	1.1	
Purchase Considerations (Those who selected for new home or purchased new equipment)											
Price											
Heating Equipment	9.8	2.1	2.4	4.0	1.4	1.2	2.5	2.2	1.8	2.2	9.7
Important	7.3	1.5	1.6	3.2	1.0	.7	1.8	1.8	1.4	1.7	11.5
Not Important	2.3	.5	.7	.7	.4	.4	.7	.4	.4	.5	17.1
Don't Know	.2	Q	Q	Q	Q	Q	Q	Q	Q	Q	50.8
Water Heater	13.5	2.4	3.4	4.9	2.8	1.6	3.4	3.0	2.3	3.1	9.8
Important	9.5	1.6	2.4	3.5	2.1	1.1	2.4	2.1	1.7	2.2	11.2
Not Important	3.7	.7	.9	1.3	.7	.6	.9	.8	.6	.8	16.7
Don't Know	.3	Q	Q	Q	Q	NC	Q	Q	Q	Q	59.1
Central Air-Conditioning	5.5	.7	1.4	2.8	.6	.4	1.2	1.2	1.0	1.6	14.9
Important	4.2	.5	1.0	2.3	.5	Q	1.0	.9	.8	1.3	14.1
Not Important	1.1	.1	.4	.4	.1	.2	.3	.2	.2	.3	30.5
Don't Know	Q	Q	Q	Q	Q	NC	Q	Q	Q	Q	100.0
Refrigerator	14.9	3.0	3.5	5.3	3.2	1.3	3.9	3.0	3.0	3.7	9.1
Important	12.4	2.4	2.8	4.5	2.8	1.1	3.1	2.6	2.6	3.1	10.3
Not Important	2.2	.5	.5	.8	.4	.3	.7	.4	.4	.5	13.0
Don't Know	.3	Q	Q	Q	Q	Q	Q	Q	Q	Q	59.8
Energy Efficiency											
Heating Equipment	9.8	2.1	2.4	4.0	1.4	1.2	2.5	2.2	1.8	2.2	9.7
Important	8.9	1.9	2.2	3.5	1.2	1.1	2.3	2.0	1.6	2.0	10.7
Not Important	.7	Q	Q	.3	.2	Q	.2	Q	.2	.2	28.3
Don't Know	.3	Q	Q	Q	Q	Q	Q	Q	Q	Q	57.4
Water Heater	13.5	2.4	3.4	4.9	2.8	1.6	3.4	3.0	2.3	3.1	9.8
Important	11.7	2.0	3.0	4.3	2.4	1.5	2.8	2.6	2.0	2.8	10.2
Not Important	1.4	.3	.4	.5	.3	Q	.5	.2	.2	.3	28.8
Don't Know	.4	Q	Q	Q	Q	NC	Q	.2	Q	Q	38.8
Central Air-Conditioning	5.5	.7	1.4	2.8	.6	.4	1.2	1.2	1.0	1.6	14.9
Important	5.0	.5	1.3	2.6	.5	.4	1.1	1.1	.9	1.5	14.9
Not Important	.3	Q	Q	.1	Q	NC	Q	Q	Q	Q	49.2
Don't Know	Q	Q	NC	Q	Q	NC	NC	Q	Q	Q	100.0
Refrigerator	14.9	3.0	3.5	5.3	3.2	1.3	3.9	3.0	3.0	3.7	9.1
Important	12.7	2.5	2.9	4.6	2.6	1.2	3.2	2.7	2.6	3.1	10.0
Not Important	1.9	.4	.4	.6	.5	.2	.5	.3	.4	.6	20.2
Don't Know	.3	Q	Q	Q	Q	Q	Q	Q	Q	Q	54.3

See footnotes at end of table.

Table 3.31b. Equipment Purchase by Census Region and Climate Zone, Percent of U.S. Households, 1993 (Continued)

Equipment Purchase and Purchase Considerations	Total	Census Region				Climate Zone					RSE Row Factors
						Fewer than 2,000 CDD and --				More than 2,000 CDD and Fewer than 4,000 HDD	
		Northeast	Midwest	South	West	More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factors:	0.5	1.2	1.0	0.8	1.0	1.5	1.0	1.0	1.2	1.1	
Purchase Considerations (Those who selected for new home or purchased new equipment)											
Price											
Heating Equipment	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NE
Important	74.0	71.3	66.6	81.1	70.1	61.7	70.3	81.0	75.4	76.5	5.3
Not Important	23.7	25.0	31.5	16.6	28.4	36.1	26.7	17.3	21.4	21.7	14.3
Don't Know	2.4	Q	Q	Q	Q	Q	Q	Q	Q	Q	52.5
Water Heater	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NE
Important	70.8	65.9	69.9	71.2	75.1	65.8	69.9	70.4	74.4	72.1	5.4
Not Important	27.1	30.9	27.8	26.9	23.5	34.2	27.2	25.5	24.3	27.0	13.7
Don't Know	2.1	Q	Q	Q	Q	NC	Q	Q	Q	Q	47.1
Central Air-Conditioning	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NE
Important	77.6	73.1	68.8	83.1	77.0	52.4	78.1	80.1	80.4	80.6	7.7
Not Important	20.1	21.3	30.6	14.3	21.5	47.6	21.1	16.9	15.4	16.9	23.5
Don't Know	Q	Q	Q	Q	Q	NC	Q	Q	Q	Q	100.0
Refrigerator	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NE
Important	83.3	80.3	80.7	84.2	87.7	80.0	79.5	85.1	86.9	84.3	3.2
Not Important	14.8	18.4	15.8	14.4	11.2	19.0	17.6	13.8	11.8	13.7	15.5
Don't Know	1.8	Q	Q	Q	Q	Q	Q	Q	Q	Q	55.3
Energy Efficiency											
Heating Equipment	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NE
Important	90.7	91.3	94.9	89.3	86.6	94.5	90.6	92.6	86.5	90.3	2.7
Not Important	6.7	Q	Q	7.9	11.1	Q	6.8	Q	10.3	7.5	28.1
Don't Know	2.6	Q	Q	Q	Q	Q	Q	Q	Q	Q	51.6
Water Heater	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NE
Important	86.5	83.8	87.1	87.3	86.6	93.1	81.6	86.5	85.2	89.5	3.4
Not Important	10.5	11.5	10.6	10.4	9.7	Q	15.1	7.7	10.5	9.9	26.5
Don't Know	3.0	Q	Q	Q	Q	NC	Q	5.9	Q	Q	37.3
Central Air-Conditioning	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NE
Important	92.2	81.8	95.7	94.1	87.0	100.0	86.8	92.7	88.3	96.6	3.6
Not Important	5.9	Q	Q	4.0	Q	NC	Q	Q	Q	Q	41.5
Don't Know	Q	Q	NC	Q	Q	NC	NC	Q	Q	Q	100.0
Refrigerator	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NE
Important	85.2	85.7	84.5	86.7	83.2	85.7	83.1	88.5	86.8	83.4	3.3
Not Important	12.8	12.1	12.2	12.3	15.0	13.3	13.7	9.6	12.0	15.0	18.5
Don't Know	1.9	Q	Q	Q	Q	Q	Q	Q	Q	Q	50.2

See footnotes at end of table.

Table 3.31a. Equipment Purchase by Census Region and Climate Zone, Million U.S. Households, 1993 (Continued)

Equipment Purchase and Purchase Considerations	Total	Census Region				Climate Zone					RSE Row Factors
						Fewer than 2,000 CDD and –				More than 2,000 CDD and Fewer than 4,000 HDD	
		Northeast	Midwest	South	West	More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factors:	0.5	1.0	0.8	0.7	0.9	2.1	1.1	1.1	1.4	1.1	
Purchase Considerations (Those who selected for new home or purchased new equipment)											
Rebate/Financing											
Heating Equipment	9.8	2.1	2.4	4.0	1.4	1.2	2.5	2.2	1.8	2.2	9.7
Important	2.1	.4	.6	.9	.2	.3	.5	.5	.2	.6	19.5
Not Important	7.1	1.6	1.7	2.8	1.1	.8	1.8	1.5	1.3	1.6	11.4
Don't Know	.6	Q	Q	.3	Q	Q	Q	Q	.2	Q	36.9
Water Heater	13.5	2.4	3.4	4.9	2.8	1.6	3.4	3.0	2.3	3.1	9.8
Important	2.6	.6	.6	.9	.5	.2	.7	.7	.5	.4	20.7
Not Important	10.4	1.6	2.7	3.9	2.2	1.4	2.5	2.1	1.7	2.6	11.4
Don't Know	.5	.2	Q	.1	Q	NC	Q	.2	Q	Q	39.7
Central Air-Conditioning	5.5	.7	1.4	2.8	.6	.4	1.2	1.2	1.0	1.6	14.9
Important	1.2	Q	.3	.7	.1	Q	.2	.3	.1	.5	24.0
Not Important	4.0	.5	1.1	2.0	.5	.3	1.0	.9	.8	1.1	16.0
Don't Know	.3	Q	Q	Q	Q	Q	Q	Q	Q	Q	67.9
Reputation of Manufacturer											
Heating Equipment	9.8	2.1	2.4	4.0	1.4	1.2	2.5	2.2	1.8	2.2	9.7
Important	7.4	1.6	1.9	3.1	.7	.9	1.9	1.6	1.2	1.7	12.0
Not Important	2.1	.4	.4	.7	.5	.2	.5	.5	.4	.4	18.1
Don't Know	.4	Q	Q	.1	Q	Q	Q	Q	Q	Q	41.8
Central Air-Conditioning	5.5	.7	1.4	2.8	.6	.4	1.2	1.2	1.0	1.6	14.9
Important	4.6	.5	1.2	2.4	.4	.4	1.0	1.0	.8	1.3	15.7
Not Important	.7	Q	.1	.3	.2	Q	.2	.2	.2	.2	32.4
Don't Know	Q	Q	NC	Q	Q	NC	NC	Q	Q	Q	100.0
Availability											
Water Heater	13.5	2.4	3.4	4.9	2.8	1.6	3.4	3.0	2.3	3.1	9.8
Important	11.6	2.1	2.7	4.3	2.5	1.3	2.9	2.6	2.0	2.7	10.6
Not Important	1.7	.2	.6	.6	.2	.3	.4	.3	.3	.4	22.4
Don't Know	.2	Q	Q	Q	Q	NC	Q	Q	Q	Q	67.7
Refrigerator	14.9	3.0	3.5	5.3	3.2	1.3	3.9	3.0	3.0	3.7	9.1
Important	11.7	2.4	2.5	4.4	2.5	1.1	2.8	2.6	2.3	2.9	10.6
Not Important	2.9	.5	.9	.8	.6	.3	.9	.4	.6	.7	17.9
Don't Know	.3	Q	Q	Q	Q	Q	.2	Q	Q	Q	36.8
Size											
Refrigerator	14.9	3.0	3.5	5.3	3.2	1.3	3.9	3.0	3.0	3.7	9.1
Important	13.6	2.7	3.0	5.0	2.9	1.2	3.4	2.8	2.7	3.4	10.1
Not Important	1.1	.2	.4	.3	.2	Q	.4	.1	.2	.2	28.2
Don't Know	.2	Q	Q	Q	Q	Q	Q	Q	Q	Q	63.2

NC = No cases in sample.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • "Important" combines responses of "Very Important" and "Somewhat Important." • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.31b. Equipment Purchase by Census Region and Climate Zone, Percent of U.S. Households, 1993 (Continued)

Equipment Purchase and Purchase Considerations	Total	Census Region				Climate Zone					RSE Row Factors
						Fewer than 2,000 CDD and --				More than 2,000 CDD and Fewer than 4,000 HDD	
		Northeast	Midwest	South	West	More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factors:	0.5	1.2	1.0	0.8	1.0	1.5	1.0	1.0	1.2	1.1	
Purchase Considerations (Those who selected for new home or purchased new equipment)											
Rebate/Financing											
Heating Equipment	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NE
Important	21.8	19.1	25.3	23.1	16.2	24.4	21.6	23.5	13.4	25.9	16.9
Not Important	72.5	75.3	72.3	70.0	75.6	71.6	74.1	70.1	74.9	71.3	5.6
Don't Know	5.7	Q	Q	6.9	Q	Q	Q	Q	11.7	Q	36.1
Water Heater	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NE
Important	18.9	23.4	18.8	18.4	16.4	12.8	21.6	22.2	22.4	13.5	19.9
Not Important	77.3	68.4	78.2	79.4	80.0	87.2	73.5	70.8	75.5	83.9	5.0
Don't Know	3.8	8.2	Q	2.3	Q	NC	4.9	7.0	Q	Q	37.1
Central Air-Conditioning	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NE
Important	22.1	Q	23.4	23.8	19.2	22.9	19.1	22.6	12.7	29.8	20.7
Not Important	72.9	78.8	75.9	69.5	75.5	75.2	80.1	72.4	72.7	67.1	6.6
Don't Know	5.0	Q	Q	Q	Q	Q	Q	Q	Q	Q	59.9
Reputation of Manufacturer											
Heating Equipment	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NE
Important	74.9	75.1	82.3	78.0	53.1	79.5	75.4	74.4	68.4	77.5	5.3
Not Important	21.1	20.3	16.2	18.4	38.5	18.6	21.1	22.1	23.2	19.8	15.8
Don't Know	4.1	Q	Q	3.7	Q	Q	Q	Q	Q	Q	37.6
Central Air-Conditioning	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NE
Important	84.0	79.0	89.7	85.3	70.0	96.7	84.2	80.8	80.4	85.1	4.9
Not Important	13.7	Q	10.3	12.0	27.4	Q	15.8	14.4	15.4	13.3	30.1
Don't Know	Q	Q	NC	Q	Q	NC	NC	Q	Q	Q	100.0
Availability											
Water Heater	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NE
Important	85.8	86.9	80.2	86.8	90.2	79.1	84.3	88.1	87.0	88.0	3.2
Not Important	12.8	10.2	18.6	12.4	8.9	20.9	13.0	10.9	11.3	11.6	21.4
Don't Know	1.3	Q	Q	Q	Q	NC	Q	Q	Q	Q	59.5
Refrigerator	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NE
Important	78.5	79.9	71.0	82.8	78.2	78.5	71.6	85.9	78.6	79.6	4.5
Not Important	19.2	17.4	25.5	15.4	20.2	19.9	24.5	12.8	20.1	17.8	16.0
Don't Know	2.3	Q	Q	Q	Q	Q	3.9	Q	Q	Q	37.0
Size											
Refrigerator	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NE
Important	91.5	91.3	86.4	94.2	92.6	91.7	87.0	94.2	91.9	93.5	2.6
Not Important	7.1	7.3	10.3	5.2	6.6	Q	10.2	4.6	6.8	6.0	27.0
Don't Know	1.4	Q	Q	Q	Q	Q	Q	Q	Q	Q	58.7

NC = No cases in sample.
Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.
NE = RSE row factor not estimated because RSE's for all statistics in this row are between 0.0 and 1.0 percent.
Notes: • "Important" combines responses of "Very Important" and "Somewhat Important." • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • Percentages are calculated on unrounded numbers. • See "Glossary" for definition of terms used in this report.
Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.32a. Equipment Purchase by Year of Construction, Million U.S. Households, 1993

Equipment Purchase and Purchase Considerations	Total	Year of Construction									RSE Row Factors
		1991 to 1993[1]	1988 to 1990	1985 to 1987	1980 to 1984	1970 to 1979	1960 to 1969	1950 to 1959	1940 to 1949	1939 or Before	
RSE Column Factors:	0.4	1.1	1.4	2.0	1.1	0.9	0.9	0.8	1.4	0.8	
Total	96.6	4.5	4.7	5.5	8.5	18.1	15.0	13.1	6.9	20.4	5.1
Main Heating System Purchased After January 1, 1990											
No	83.6	1.7	3.6	5.4	7.9	16.3	13.3	11.1	6.0	18.4	5.8
Yes	13.0	2.8	1.1	.1	.6	1.8	1.7	2.0	.9	2.0	12.9
Came with Home Purchase	4.2	2.8	1.1	Q	Q	Q	Q	Q	Q	Q	14.9
Household Selected	1.0	.6	.3	Q	NC	Q	NC	NC	Q	Q	17.9
Standard with New Home	3.2	2.1	.8	NC	Q	Q	Q	Q	Q	Q	17.3
Purchased Replacement	8.8	Q	Q	.1	.5	1.7	1.6	2.0	.8	1.8	13.7
Water Heater Purchased After January 1, 1990											
No	79.6	1.7	3.6	5.0	7.4	15.5	12.7	10.6	5.9	17.3	6.0
Yes	17.0	2.8	1.1	.5	1.1	2.6	2.3	2.5	1.0	3.1	10.8
Came with Home Purchase	4.2	2.7	1.0	Q	Q	Q	Q	Q	Q	Q	15.5
Household Selected	.7	.4	.2	Q	Q	Q	NC	Q	Q	Q	19.7
Standard with New Home	3.5	2.3	.8	Q	Q	Q	Q	Q	Q	Q	17.3
Purchased Replacement	12.8	Q	.1	.5	1.0	2.6	2.2	2.4	1.0	2.9	11.6
Central Air-Conditioning Equipment Purchased After January 1, 1990											
No	88.5	2.1	3.8	5.3	7.9	16.9	14.0	11.9	6.7	19.9	5.7
Yes	8.1	2.4	1.0	.1	.5	1.2	1.0	1.1	.2	.5	17.9
Came with Home Purchase	3.3	2.3	.8	Q	Q	Q	Q	Q	Q	Q	17.2
Household Selected	.6	.5	.1	Q	NC	NC	NC	Q	Q	NC	26.7
Standard with New Home	2.7	1.8	.7	NC	Q	Q	Q	NC	NC	Q	18.8
Purchased Replacement	4.9	.1	.1	Q	.5	1.2	1.0	1.1	.2	.5	20.6
Replaced Central Unit	2.4	Q	Q	Q	.3	.8	.6	.4	Q	Q	22.7
Replaced Window Unit	.9	Q	Q	Q	Q	.2	.2	.3	Q	Q	42.6
New Additional Unit	.3	Q	NC	NC	Q	Q	Q	Q	Q	Q	59.7
No Equipment Before	1.3	.1	.1	Q	Q	.2	Q	.3	Q	.3	34.6
Refrigerator Purchased After January 1, 1990											
No	80.4	2.2	3.8	4.9	7.2	15.3	12.5	11.1	5.7	17.7	5.7
Yes	16.2	2.3	.9	.6	1.3	2.9	2.5	2.0	1.2	2.7	10.0
Came with Home Purchase	2.7	1.5	.4	.1	Q	Q	Q	Q	Q	Q	16.6
Household Selected	1.4	.8	.2	Q	Q	Q	Q	Q	Q	Q	23.7
Standard with New Home	1.4	.7	.3	Q	Q	Q	Q	Q	NC	Q	17.9
Purchased Replacement	13.5	.7	.4	.4	1.2	2.7	2.4	1.8	1.2	2.6	11.

See footnotes at end of table.

Table 3.32b. Equipment Purchase by Year of Construction, Percent of U.S. Households, 1993

Equipment Purchase and Purchase Considerations	Total	Year of Construction									RSE Row Factors
		1991 to 1993[1]	1988 to 1990	1985 to 1987	1980 to 1984	1970 to 1979	1960 to 1969	1950 to 1959	1940 to 1949	1939 or Before	
RSE Column Factors:	0.5	1.0	1.3	1.8	1.2	0.8	0.9	0.9	1.4	0.8	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0
Main Heating System Purchased After January 1, 1990											
No	86.5	37.0	76.1	97.6	93.0	90.1	88.9	84.7	87.3	90.2	2.0
Yes	13.5	63.0	23.9	2.4	7.0	9.9	11.1	15.3	12.7	9.8	11.3
Came with Home Purchase	4.4	62.1	22.4	Q	Q	Q	Q	Q	Q	Q	12.2
Household Selected	1.1	14.4	6.4	Q	NC	Q	NC	NC	Q	Q	17.7
Standard with New Home	3.3	47.7	16.0	NC	Q	Q	Q	Q	Q	Q	14.4
Purchased Replacement	9.1	Q	Q	2.2	6.4	9.6	10.9	15.2	12.0	9.0	12.5
Water Heater Purchased After January 1, 1990											
No	82.4	37.7	76.5	90.6	87.0	85.4	84.5	81.1	85.4	85.0	2.2
Yes	17.6	62.3	23.5	9.4	13.0	14.6	15.5	18.9	14.6	15.0	9.5
Came with Home Purchase	4.4	61.1	21.2	Q	Q	Q	Q	Q	Q	Q	12.8
Household Selected	.7	9.0	3.8	Q	Q	Q	NC	Q	Q	Q	20.1
Standard with New Home	3.7	52.1	17.4	Q	Q	Q	Q	Q	Q	Q	14.4
Purchased Replacement	13.2	Q	2.3	9.1	12.2	14.2	14.8	18.2	14.3	14.4	10.6
Central Air-Conditioning Equipment Purchased After January 1, 1990											
No	91.6	46.0	79.8	97.3	93.8	93.3	93.3	91.2	96.9	97.5	1.8
Yes	8.4	54.0	20.2	2.7	6.2	6.7	6.7	8.8	3.1	2.5	16.6
Came with Home Purchase	3.4	50.8	17.7	Q	Q	Q	Q	Q	Q	Q	14.4
Household Selected	.6	10.2	2.5	Q	NC	NC	NC	Q	Q	NC	26.1
Standard with New Home	2.8	40.7	15.1	NC	Q	Q	Q	NC	NC	Q	16.1
Purchased Replacement	5.0	3.2	2.6	Q	5.5	6.5	6.5	8.7	3.0	2.4	20.0
Replaced Central Unit	2.5	Q	Q	Q	3.6	4.4	3.9	3.3	Q	Q	21.1
Replaced Window Unit	1.0	Q	Q	Q	Q	.9	1.5	2.2	Q	Q	40.9
New Additional Unit	.3	Q	NC	NC	Q	Q	Q	Q	Q	Q	52.9
No Equipment Before	1.3	2.2	2.3	Q	Q	.9	Q	2.6	Q	1.3	34.0
Refrigerator Purchased After January 1, 1990											
No	83.2	49.5	81.7	90.0	84.9	84.2	83.1	84.8	82.4	86.8	1.8
Yes	16.8	50.5	18.3	10.0	15.1	15.8	16.9	15.2	17.6	13.2	8.5
Came with Home Purchase	2.8	34.6	9.5	2.3	Q	Q	Q	Q	Q	Q	14.9
Household Selected	1.4	18.5	3.9	Q	Q	Q	Q	Q	Q	Q	21.7
Standard with New Home	1.4	16.1	5.6	Q	Q	Q	Q	Q	NC	Q	17.4
Purchased Replacement	14.0	15.9	8.9	7.7	14.3	15.0	15.8	14.1	17.4	12.7	10.0

See footnotes at end of table.

Table 3.32a. Equipment Purchase by Year of Construction, Million U.S. Households, 1993 (Continued)

Equipment Purchase and Purchase Considerations	Total	Year of Construction									RSE Row Factors
		1991 to 1993[1]	1988 to 1990	1985 to 1987	1980 to 1984	1970 to 1979	1960 to 1969	1950 to 1959	1940 to 1949	1939 or Before	
RSE Column Factors:	0.4	1.1	1.4	2.0	1.1	0.9	0.9	0.8	1.4	0.8	
Purchase Considerations (Those who selected for new home or purchased new equipment)											
Price											
Heating Equipment	9.8	0.7	0.4	0.1	0.5	1.8	1.6	2.0	0.8	1.9	13.4
Important	7.3	.5	.2	Q	.4	1.3	1.3	1.6	.5	1.3	15.1
Not Important	2.3	.2	.1	Q	Q	.4	.3	.3	.3	.5	23.5
Don't Know	.2	Q	Q	NC	Q	Q	Q	Q	NC	Q	67.7
Water Heater	13.5	.5	.3	.5	1.1	2.6	2.2	2.4	1.0	3.0	11.1
Important	9.5	.3	.3	.2	.7	1.8	1.7	1.8	.7	2.1	13.4
Not Important	3.7	.2	Q	.3	.4	.7	.5	.6	.2	.9	20.6
Don't Know	.3	Q	Q	Q	NC	Q	Q	Q	Q	Q	61.1
Central Air-Conditioning	5.5	.6	.2	.1	.5	1.2	1.0	1.1	.2	.5	19.5
Important	4.2	.5	.2	Q	.4	1.0	.8	.8	.1	.4	20.1
Not Important	1.1	.1	Q	Q	Q	.2	.2	.3	Q	Q	36.9
Don't Know	Q	Q	NC	NC	Q	NC	Q	Q	NC	NC	100.0
Refrigerator	14.9	1.5	.6	.5	1.2	2.8	2.5	1.9	1.2	2.6	10.5
Important	12.4	1.3	.5	.4	1.0	2.3	2.0	1.7	1.0	2.2	11.3
Not Important	2.2	.2	.1	Q	.2	.4	.4	.2	.2	.4	26.1
Don't Know	.3	NC	Q	Q	Q	Q	Q	Q	Q	Q	68.9
Energy Efficiency											
Heating Equipment	9.8	.7	.4	.1	.5	1.8	1.6	2.0	.8	1.9	13.4
Important	8.9	.7	.3	.1	.5	1.6	1.5	1.8	.8	1.8	14.7
Not Important	.7	Q	Q	Q	Q	Q	Q	.1	Q	Q	36.8
Don't Know	.3	NC	Q	NC	Q	Q	Q	Q	Q	Q	66.1
Water Heater	13.5	.5	.3	.5	1.1	2.6	2.2	2.4	1.0	3.0	11.1
Important	11.7	.4	.3	.4	.9	2.3	2.1	2.0	.9	2.4	12.1
Not Important	1.4	Q	NC	Q	Q	.2	Q	.3	Q	.5	29.4
Don't Know	.4	Q	Q	Q	Q	Q	NC	Q	Q	Q	56.9
Central Air-Conditioning	5.5	.6	.2	.1	.5	1.2	1.0	1.1	.2	.5	19.5
Important	5.0	.6	.2	.1	.4	1.1	.9	1.0	.2	.4	20.0
Not Important	.3	Q	Q	NC	Q	Q	Q	Q	Q	Q	57.8
Don't Know	Q	NC	NC	NC	Q	NC	NC	Q	NC	NC	100.0
Refrigerator	14.9	1.5	.6	.5	1.2	2.8	2.5	1.9	1.2	2.6	10.5
Important	12.7	1.2	.5	.5	1.0	2.5	2.1	1.6	1.0	2.3	11.4
Not Important	1.9	.3	.1	Q	.2	.2	.2	.3	.2	.3	28.8
Don't Know	.3	NC	Q	Q	Q	Q	Q	Q	Q	Q	62.5

See footnotes at end of table.

Table 3.32b. Equipment Purchase by Year of Construction, Percent of U.S. Households, 1993 (Continued)

Equipment Purchase and Purchase Considerations	Total	Year of Construction									RSE Row Factors
		1991 to 1993[1]	1988 to 1990	1985 to 1987	1980 to 1984	1970 to 1979	1960 to 1969	1950 to 1959	1940 to 1949	1939 or Before	
RSE Column Factors:	0.5	1.0	1.3	1.8	1.2	0.8	0.9	0.9	1.4	0.8	
Purchase Considerations (Those who selected for new home or purchased new equipment)											
Price											
Heating Equipment	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NE
Important	74.0	66.9	64.3	Q	82.6	75.4	77.3	78.9	63.5	71.0	7.5
Not Important	23.7	31.8	26.1	Q	Q	24.4	20.5	17.6	36.5	25.9	20.2
Don't Know	2.4	Q	Q	NC	Q	Q	Q	Q	NC	Q	59.7
Water Heater	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NE
Important	70.8	63.5	88.5	43.5	61.8	70.4	76.0	75.4	75.5	69.1	7.2
Not Important	27.1	33.4	Q	52.9	38.2	26.6	22.4	23.3	20.0	28.9	17.2
Don't Know	2.1	Q	Q	Q	NC	Q	Q	Q	Q	Q	53.5
Central Air-Conditioning	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NE
Important	77.6	78.5	91.1	90.6	79.6	81.0	77.6	70.3	67.2	77.4	9.3
Not Important	20.1	20.1	Q	Q	Q	19.0	20.5	24.1	Q	Q	31.0
Don't Know	Q	Q	NC	NC	Q	NC	Q	Q	NC	NC	100.0
Refrigerator	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NE
Important	83.3	87.4	76.4	87.7	77.4	83.9	80.9	88.8	83.1	82.2	4.5
Not Important	14.8	12.6	19.0	Q	17.3	14.7	17.2	10.7	15.7	15.2	23.3
Don't Know	1.8	NC	Q	Q	Q	Q	Q	Q	Q	Q	62.9
Energy Efficiency											
Heating Equipment	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NE
Important	90.7	97.3	86.5	91.7	90.1	89.5	89.4	89.1	91.2	92.9	4.1
Not Important	6.7	Q	Q	Q	Q	Q	Q	7.4	Q	Q	34.5
Don't Know	2.6	NC	Q	NC	Q	Q	Q	Q	Q	Q	58.7
Water Heater	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NE
Important	86.5	92.2	97.6	83.4	89.0	87.1	93.7	85.0	86.3	79.6	3.8
Not Important	10.5	Q	NC	Q	Q	8.9	Q	11.7	Q	15.9	27.1
Don't Know	3.0	Q	Q	Q	Q	Q	NC	Q	Q	Q	49.3
Central Air-Conditioning	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NE
Important	92.2	95.6	94.8	100.0	90.6	93.5	95.7	88.0	87.2	88.5	4.9
Not Important	5.9	Q	Q	NC	Q	Q	Q	Q	Q	Q	48.9
Don't Know	Q	NC	NC	NC	Q	NC	NC	Q	NC	NC	100.0
Refrigerator	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NE
Important	85.2	80.1	78.6	92.3	81.9	89.5	87.4	81.2	84.7	86.8	4.3
Not Important	12.8	19.9	16.8	Q	16.3	8.7	9.9	16.9	13.7	10.9	26.4
Don't Know	1.9	NC	Q	Q	Q	Q	Q	Q	Q	Q	57.1

See footnotes at end of table.

Table 3.32a. Equipment Purchase by Year of Construction, Million U.S. Households, 1993 (Continued)

Equipment Purchase and Purchase Considerations	Total	Year of Construction									RSE Row Factors
		1991 to 1993[1]	1988 to 1990	1985 to 1987	1980 to 1984	1970 to 1979	1960 to 1969	1950 to 1959	1940 to 1949	1939 or Before	
RSE Column Factors:	0.4	1.1	1.4	2.0	1.1	0.9	0.9	0.8	1.4	0.8	
Purchase Considerations (Those who selected for new home or purchased new equipment)											
Rebate/Financing											
Heating Equipment	9.8	0.7	0.4	0.1	0.5	1.8	1.6	2.0	0.8	1.9	13.4
Important	2.1	.1	.1	Q	.1	.4	.3	.5	.2	.4	26.9
Not Important	7.1	.6	.2	.1	.4	1.3	1.1	1.4	.6	1.4	15.5
Don't Know	.6	Q	Q	Q	Q	Q	Q	Q	Q	Q	46.8
Water Heater	13.5	.5	.3	.5	1.1	2.6	2.2	2.4	1.0	3.0	11.1
Important	2.6	Q	.1	Q	.1	.5	.4	.5	.3	.6	26.4
Not Important	10.4	.4	.2	.5	.9	2.0	1.8	1.8	.7	2.2	13.2
Don't Know	.5	Q	Q	Q	Q	Q	Q	Q	Q	.2	46.5
Central Air-Conditioning	5.5	.6	.2	.1	.5	1.2	1.0	1.1	.2	.5	19.5
Important	1.2	.1	.1	Q	.1	.3	.2	Q	Q	Q	30.8
Not Important	4.0	.5	.1	Q	.3	.9	.7	.9	Q	.3	21.1
Don't Know	.3	Q	NC	Q	Q	NC	Q	Q	NC	Q	78.1
Reputation of Manufacturer											
Heating Equipment	9.8	.7	.4	.1	.5	1.8	1.6	2.0	.8	1.9	13.4
Important	7.4	.5	.2	.1	.5	1.4	1.2	1.5	.6	1.3	15.6
Not Important	2.1	.2	.1	Q	Q	.3	.4	.4	.2	.5	24.5
Don't Know	.4	Q	Q	NC	Q	Q	Q	Q	Q	Q	48.0
Central Air-Conditioning	5.5	.6	.2	.1	.5	1.2	1.0	1.1	.2	.5	19.5
Important	4.6	.5	.2	Q	.4	1.1	.8	.9	.2	.4	19.9
Not Important	.7	.1	Q	Q	Q	.1	.2	.2	Q	Q	39.5
Don't Know	Q	NC	NC	NC	Q	NC	NC	Q	NC	Q	100.0
Availability											
Water Heater	13.5	.5	.3	.5	1.1	2.6	2.2	2.4	1.0	3.0	11.1
Important	11.6	.3	.2	.4	1.0	2.1	2.0	2.1	.9	2.5	12.3
Not Important	1.7	.1	Q	Q	Q	.4	.3	.3	Q	.4	27.6
Don't Know	.2	Q	Q	Q	NC	Q	NC	Q	Q	Q	71.3
Refrigerator	14.9	1.5	.6	.5	1.2	2.8	2.5	1.9	1.2	2.6	10.5
Important	11.7	1.2	.4	.3	.9	2.3	1.9	1.6	.9	2.2	12.4
Not Important	2.9	.3	.1	.2	.3	.5	.5	.3	.3	.3	23.0
Don't Know	.3	Q	Q	Q	Q	Q	Q	Q	Q	Q	40.3
Size											
Refrigerator	14.9	1.5	.6	.5	1.2	2.8	2.5	1.9	1.2	2.6	10.5
Important	13.6	1.4	.5	.5	1.0	2.6	2.3	1.7	1.1	2.4	11.1
Not Important	1.1	.1	Q	Q	Q	.2	Q	.2	Q	.2	35.9
Don't Know	.2	NC	Q	Q	Q	Q	Q	Q	NC	Q	72.3

[1] Does not include all new construction for 1993.

NC = No cases in sample.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • "Important" combines responses of "Very Important" and "Somewhat Important." • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.32b. Equipment Purchase by Year of Construction, Percent of U.S. Households, 1993 (Continued)

Equipment Purchase and Purchase Considerations	Total	Year of Construction									RSE Row Factors
		1991 to 1993[1]	1988 to 1990	1985 to 1987	1980 to 1984	1970 to 1979	1960 to 1969	1950 to 1959	1940 to 1949	1939 or Before	
RSE Column Factors:	0.5	1.0	1.3	1.8	1.2	0.8	0.9	0.9	1.4	0.8	
Purchase Considerations (Those who selected for new home or purchased new equipment)											
Rebate/Financing											
Heating Equipment	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NE
Important	21.8	14.0	28.2	Q	24.9	20.6	20.0	25.9	19.9	22.5	23.6
Not Important	72.5	80.7	62.2	79.8	69.0	76.0	69.8	70.1	75.0	72.3	7.9
Don't Know	5.7	Q	Q	Q	Q	Q	Q	Q	Q	Q	41.6
Water Heater	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NE
Important	18.9	Q	30.7	Q	13.7	18.3	17.2	22.0	27.1	20.6	22.6
Not Important	77.3	86.3	66.9	94.1	84.6	77.3	82.0	74.2	68.4	73.2	5.5
Don't Know	3.8	Q	Q	Q	Q	Q	Q	Q	Q	6.1	42.3
Central Air-Conditioning	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NE
Important	22.1	15.9	39.2	Q	27.5	26.9	22.4	Q	Q	Q	26.9
Not Important	72.9	82.7	60.8	Q	64.8	73.1	66.4	82.0	Q	70.9	10.1
Don't Know	5.0	Q	NC	Q	Q	NC	Q	Q	NC	Q	68.2
Reputation of Manufacturer											
Heating Equipment	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NE
Important	74.9	71.7	54.9	87.9	85.6	82.6	73.1	75.4	76.3	69.1	7.4
Not Important	21.1	24.8	34.3	Q	Q	16.1	23.3	17.8	21.4	26.7	21.5
Don't Know	4.1	Q	Q	NC	Q	Q	Q	Q	Q	Q	43.0
Central Air-Conditioning	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NE
Important	84.0	82.7	86.6	97.0	89.8	88.5	82.7	77.1	78.4	85.3	7.2
Not Important	13.7	17.3	Q	Q	Q	11.5	17.3	15.5	Q	Q	34.8
Don't Know	Q	NC	NC	NC	Q	NC	NC	Q	NC	Q	100.0
Availability											
Water Heater	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NE
Important	85.8	72.4	82.5	83.6	93.6	82.0	88.3	88.2	88.1	84.8	4.6
Not Important	12.8	24.5	Q	Q	Q	16.1	11.7	11.5	Q	14.0	25.7
Don't Know	1.3	Q	Q	Q	NC	Q	NC	Q	Q	Q	67.7
Refrigerator	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NE
Important	78.5	78.8	69.7	67.7	69.4	81.5	75.9	82.0	74.7	85.0	6.0
Not Important	19.2	20.9	24.4	30.8	27.9	16.7	20.7	16.6	21.1	12.7	21.0
Don't Know	2.3	Q	Q	Q	Q	Q	Q	Q	Q	Q	44.9
Size											
Refrigerator	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NE
Important	91.5	91.8	86.9	96.0	84.7	92.3	95.5	89.7	91.1	91.5	3.0
Not Important	7.1	8.2	Q	Q	Q	6.3	Q	9.4	Q	6.2	35.3
Don't Know	1.4	NC	Q	Q	Q	Q	Q	Q	NC	Q	66.8

[1] Does not include all new construction for 1993.

NC = No cases in sample.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

NE = RSE row factor not estimated because RSE's for all statistics in this row are between 0.0 and 1.0 percent.

Notes: • "Important" combines responses of "Very Important" and "Somewhat Important." • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • Percentages are calculated on unrounded numbers. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.33a. Equipment Purchase by Type and Ownership of Housing Unit, Million U.S. Households, 1993

Equipment Purchase and Purchase Considerations	Total	Type and Ownership of Housing Unit												RSE Row Factors
		Single-Family			Multifamily						Mobile Home			
					Two to Four Units			Five or More Units						
		Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	
RSE Column Factors:	0.3	0.3	0.3	1.0	1.4	1.9	1.8	1.4	2.8	1.0	1.0	1.1	2.2	
Total	96.6	66.8	55.8	11.0	8.0	1.5	6.5	16.2	1.6	14.7	5.6	4.4	1.2	5.8
Main Heating System Purchased After January 1, 1990														
No	83.6	55.3	44.7	10.6	7.6	1.2	6.4	16.0	1.4	14.6	4.7	3.6	1.1	6.0
Yes	13.0	11.5	11.1	.4	.4	.3	.1	.3	Q	Q	.8	.8	Q	15.3
Came with Home Purchase	4.2	3.8	3.8	NC	Q	Q	NC	Q	Q	NC	.4	.4	NC	29.7
Household Selected	1.0	1.0	1.0	NC	NC	NC	NC	NC	NC	NC	.1	.1	NC	34.8
Standard with New Home	3.2	2.8	2.8	NC	Q	Q	NC	Q	Q	NC	.3	.3	NC	34.7
Purchased Replacement	8.8	7.7	7.3	.4	.3	.2	.1	.3	Q	Q	.4	.4	Q	19.4
Water Heater Purchased After January 1, 1990														
No	79.6	51.6	41.2	10.3	7.6	1.3	6.3	16.0	1.3	14.6	4.5	3.4	1.1	6.1
Yes	17.0	15.2	14.5	.7	.4	.2	.2	.3	.2	Q	1.1	1.0	Q	16.0
Came with Home Purchase	4.2	3.7	3.7	NC	Q	Q	NC	Q	Q	NC	.4	.4	NC	31.7
Household Selected	.7	.7	.7	NC	NC	NC	NC	NC	NC	NC	Q	Q	NC	44.4
Standard with New Home	3.5	3.1	3.1	NC	Q	Q	NC	Q	Q	NC	.4	.4	NC	33.5
Purchased Replacement	12.8	11.5	10.8	.7	.4	.2	.2	.2	.2	Q	.7	.6	Q	17.2
Central Air-Conditioning Equipment Purchased After January 1, 1990														
No	88.5	59.5	48.5	10.9	7.9	1.4	6.5	16.1	1.4	14.7	5.0	3.9	1.2	5.9
Yes	8.1	7.3	7.2	Q	Q	Q	Q	Q	Q	NC	.5	.5	NC	22.1
Came with Home Purchase	3.3	2.9	2.9	NC	Q	Q	NC	Q	Q	NC	.3	.3	NC	34.4
Household Selected	.6	.5	.5	NC	NC	NC	NC	NC	NC	NC	Q	Q	NC	60.6
Standard with New Home	2.7	2.4	2.4	NC	Q	Q	NC	Q	Q	NC	.3	.3	NC	37.5
Purchased Replacement	4.9	4.5	4.3	Q	Q	Q	Q	Q	Q	NC	.2	.2	NC	28.3
Replaced Central Unit	2.4	2.1	2.1	Q	Q	Q	Q	Q	Q	NC	Q	Q	NC	39.8
Replaced Window Unit	.9	.9	.8	Q	NC	NC	NC	NC	NC	NC	Q	Q	NC	65.0
New Additional Unit	.3	.3	.3	NC	Q	Q	NC	NC	NC	NC	Q	Q	NC	90.3
No Equipment Before	1.3	1.2	1.2	Q	NC	NC	NC	Q	Q	NC	Q	Q	NC	62.9
Refrigerator Purchased After January 1, 1990														
No	80.4	53.2	43.7	9.6	7.4	1.2	6.1	15.1	1.3	13.9	4.7	3.5	1.1	6.2
Yes	16.2	13.6	12.1	1.5	.6	.2	.4	1.1	.3	.8	.9	.9	Q	9.4
Came with Home Purchase	2.7	2.2	2.1	.1	Q	Q	Q	.1	Q	Q	.3	.3	NC	31.1
Household Selected	1.4	1.3	1.3	Q	Q	Q	NC	Q	NC	Q	Q	Q	NC	54.6
Standard with New Home	1.4	.9	.8	Q	Q	Q	Q	.1	Q	Q	.3	.3	NC	38.4
Purchased Replacement	13.5	11.4	10.0	1.4	.6	.2	.4	1.0	.2	.8	.5	.5	Q	4.6

See footnotes at end of table.

Table 3.33b. Equipment Purchase by Type and Ownership of Housing Unit, Percent of U.S. Households, 1993

Equipment Purchase and Purchase Considerations	Total	Type and Ownership of Housing Unit												RSE Row Factors
		Single-Family			Multifamily						Mobile Home			
					Two to Four Units			Five or More Units						
		Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	
RSE Column Factors:	0.3	0.3	0.3	1.1	1.4	1.7	1.8	1.8	2.6	1.7	1.0	1.0	0.9	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0
Main Heating System Purchased After January 1, 1990														
No	86.5	82.8	80.1	96.3	95.0	81.4	98.2	98.2	88.1	99.3	84.9	82.1	95.4	2.4
Yes	13.5	17.2	19.9	3.7	5.0	18.6	1.8	1.8	Q	Q	15.1	17.9	Q	16.3
Came with Home Purchase	4.4	5.6	6.7	NC	Q	Q	NC	Q	Q	NC	7.2	9.1	NC	27.3
Household Selected	1.1	1.4	1.7	NC	NC	NC	NC	NC	NC	NC	1.5	1.9	NC	33.1
Standard with New Home	3.3	4.2	5.0	NC	Q	Q	NC	Q	Q	NC	5.7	7.2	NC	31.4
Purchased Replacement	9.1	11.6	13.1	3.7	4.3	15.2	1.8	1.7	Q	Q	7.9	8.8	Q	17.7
Water Heater Purchased After January 1, 1990														
No	82.4	77.2	73.9	93.6	94.6	85.0	96.8	98.4	86.5	99.7	80.5	76.2	96.7	2.0
Yes	17.6	22.8	26.1	6.4	5.4	15.0	3.2	1.6	13.5	Q	19.5	23.8	Q	14.2
Came with Home Purchase	4.4	5.6	6.7	NC	Q	Q	NC	Q	Q	NC	7.4	9.4	NC	28.5
Household Selected	.7	1.0	1.2	NC	NC	NC	NC	NC	NC	NC	Q	Q	NC	39.9
Standard with New Home	3.7	4.6	5.5	NC	Q	Q	NC	Q	Q	NC	7.3	9.2	NC	30.8
Purchased Replacement	13.2	17.2	19.4	6.4	5.0	12.9	3.2	1.4	11.2	Q	12.1	14.5	Q	15.6
Central Air-Conditioning Equipment Purchased After January 1, 1990														
No	91.6	89.0	87.1	98.8	98.9	95.3	99.7	99.1	90.5	100.0	90.2	87.6	100.0	2.0
Yes	8.4	11.0	12.9	Q	Q	Q	Q	Q	Q	NC	9.8	12.4	NC	20.2
Came with Home Purchase	3.4	4.3	5.2	NC	Q	Q	NC	Q	Q	NC	6.0	7.7	NC	32.0
Household Selected	.6	.8	1.0	NC	NC	NC	NC	NC	NC	NC	Q	Q	NC	54.9
Standard with New Home	2.8	3.5	4.2	NC	Q	Q	NC	Q	Q	NC	5.0	6.4	NC	35.2
Purchased Replacement	5.0	6.7	7.8	Q	Q	Q	Q	Q	Q	NC	3.7	4.7	NC	26.4
Replaced Central Unit	2.5	3.2	3.8	Q	Q	Q	Q	Q	Q	NC	Q	Q	NC	30.4
Replaced Window Unit	1.0	1.3	1.4	Q	NC	NC	NC	NC	NC	NC	Q	Q	NC	58.9
New Additional Unit	.3	.4	.5	NC	Q	Q	NC	NC	NC	NC	Q	Q	NC	82.2
No Equipment Before	1.3	1.8	2.1	Q	NC	NC	NC	Q	Q	NC	Q	Q	NC	47.9
Refrigerator Purchased After January 1, 1990														
No	83.2	79.7	78.3	86.5	91.9	83.4	93.9	93.2	81.8	94.4	84.0	80.5	97.2	2.2
Yes	16.8	20.3	21.7	13.5	8.1	16.6	6.1	6.8	18.2	5.6	16.0	19.5	Q	11.8
Came with Home Purchase	2.8	3.3	3.8	1.0	Q	Q	Q	.7	Q	Q	6.2	7.9	NC	28.3
Household Selected	1.4	2.0	2.3	Q	Q	Q	NC	Q	NC	Q	Q	Q	NC	49.0
Standard with New Home	1.4	1.4	1.5	Q	Q	Q	Q	.6	Q	Q	5.5	6.9	NC	30.8
Purchased Replacement	14.0	17.0	17.9	12.5	7.5	15.1	5.8	6.1	15.2	5.2	9.8	11.6	Q	12.9

See footnotes at end of table.

Table 3.33a. Equipment Purchase by Type and Ownership of Housing Unit, Million U.S. Households, 1993 (Continued)

Equipment Purchase and Purchase Considerations	Total	Type and Ownership of Housing Unit												RSE Row Factors
		Single-Family			Multifamily						Mobile Home			
					Two to Four Units			Five or More Units						
		Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	
RSE Column Factors:	0.3	0.3	0.3	1.0	1.4	1.9	1.8	1.4	2.8	1.0	1.0	1.1	2.2	
Purchase Considerations (Those who selected for new home or purchased new equipment)														
Price														
Heating Equipment	9.8	8.7	8.3	0.4	0.3	0.2	0.1	0.3	Q	Q	0.5	0.5	Q	18.4
Important	7.3	6.4	6.1	.3	.3	.2	Q	Q	Q	Q	.5	.4	Q	21.1
Not Important	2.3	2.1	2.0	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	30.1
Don't Know	.2	.2	.1	Q	Q	Q	Q	Q	NC	Q	NC	NC	NC	109.6
Water Heater	13.5	12.2	11.5	.7	.4	.2	.2	.2	0.2	Q	.7	.6	Q	17.0
Important	9.5	8.7	8.2	.5	.3	Q	Q	Q	Q	Q	.4	.4	Q	18.2
Not Important	3.7	3.2	3.1	.1	Q	Q	Q	Q	Q	Q	.3	.3	NC	29.1
Don't Know	.3	.3	.2	Q	Q	NC	Q	NC	NC	NC	NC	NC	NC	89.3
Central Air-Conditioning	5.5	5.0	4.9	Q	Q	Q	Q	Q	Q	NC	.3	.3	NC	26.0
Important	4.2	3.8	3.7	Q	Q	Q	Q	Q	Q	NC	.2	.2	NC	25.4
Not Important	1.1	1.1	1.0	Q	Q	Q	NC	NC	NC	NC	Q	Q	NC	53.8
Don't Know	Q	Q	Q	Q	NC	NC	NC	NC	NC	NC	NC	NC	NC	100.0
Refrigerator	14.9	12.7	11.3	1.4	.6	.2	.4	1.0	.2	0.8	.6	.6	Q	14.3
Important	12.4	10.7	9.5	1.2	.5	.2	.3	.7	.2	.5	.5	.4	Q	16.4
Not Important	2.2	1.8	1.7	Q	Q	Q	Q	.2	Q	Q	.1	.1	NC	35.4
Don't Know	.3	Q	Q	Q	Q	NC	Q	Q	NC	Q	Q	NC	Q	102.7
Energy Efficiency														
Heating Equipment	9.8	8.7	8.3	.4	.3	.2	.1	.3	Q	Q	.5	.5	Q	18.4
Important	8.9	8.0	7.7	.3	.3	.2	Q	.2	Q	Q	.4	.4	Q	20.4
Not Important	.7	.5	.4	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	60.0
Don't Know	.3	.2	.1	Q	Q	NC	Q	Q	NC	Q	Q	Q	NC	112.1
Water Heater	13.5	12.2	11.5	.7	.4	.2	.2	.2	.2	Q	.7	.6	Q	17.0
Important	11.7	10.6	10.1	.5	.3	.2	Q	.2	Q	Q	.6	.5	Q	18.0
Not Important	1.4	1.2	1.1	Q	Q	Q	Q	Q	Q	Q	.1	.1	NC	39.4
Don't Know	.4	.3	.2	Q	Q	NC	Q	Q	Q	Q	NC	NC	NC	89.0
Central Air-Conditioning	5.5	5.0	4.9	Q	Q	Q	Q	Q	Q	NC	.3	.3	NC	26.0
Important	5.0	4.6	4.5	Q	Q	Q	NC	Q	Q	NC	.2	.2	NC	26.1
Not Important	.3	.3	.3	NC	Q	Q	Q	NC	NC	NC	Q	Q	NC	85.9
Don't Know	Q	Q	Q	Q	NC	NC	NC	NC	NC	NC	NC	NC	NC	100.0
Refrigerator	14.9	12.7	11.3	1.4	.6	.2	.4	1.0	.2	.8	.6	.6	Q	14.3
Important	12.7	11.0	9.8	1.2	.5	.2	.3	.7	.2	.5	.4	.4	Q	15.3
Not Important	1.9	1.6	1.4	.2	Q	Q	Q	Q	Q	Q	.1	.1	Q	36.8
Don't Know	.3	Q	Q	Q	Q	NC	Q	.1	NC	.1	Q	NC	Q	45.0

See footnotes at end of table.

Table 3.33b. Equipment Purchase by Type and Ownership of Housing Unit, Percent of U.S. Households, 1993 (Continued)

Equipment Purchase and Purchase Considerations	Total	Type and Ownership of Housing Unit												RSE Row Factors
		Single-Family			Multifamily						Mobile Home			
					Two to Four Units			Five or More Units						
		Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	
RSE Column Factors:	0.3	0.3	0.3	1.1	1.4	1.7	1.8	1.8	2.6	1.7	1.0	1.0	0.9	
Purchase Considerations (Those who selected for new home or purchased new equipment)														
Price														
Heating Equipment	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	Q	Q	100.0	100.0	Q	NE
Important	74.0	73.8	74.3	64.0	73.8	84.1	Q	Q	Q	Q	85.7	87.6	Q	9.2
Not Important	23.7	24.3	24.1	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	24.6
Don't Know	2.4	1.9	1.6	Q	Q	Q	Q	Q	NC	Q	NC	NC	NC	99.4
Water Heater	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	Q	100.0	100.0	Q	NE
Important	70.8	71.4	71.1	76.3	70.8	Q	Q	Q	Q	Q	63.2	61.0	Q	10.0
Not Important	27.1	26.5	27.1	16.4	Q	Q	Q	Q	Q	Q	36.8	39.0	NC	23.1
Don't Know	2.1	2.1	1.7	Q	Q	NC	Q	NC	NC	NC	NC	NC	NC	80.1
Central Air-Conditioning	100.0	100.0	100.0	Q	Q	Q	Q	Q	Q	NC	100.0	100.0	NC	NE
Important	77.6	76.2	76.5	Q	Q	Q	Q	Q	Q	NC	92.2	92.2	NC	8.9
Not Important	20.1	21.2	21.3	Q	Q	Q	NC	NC	NC	NC	Q	Q	NC	38.4
Don't Know	Q	Q	Q	Q	NC	NC	NC	NC	NC	NC	NC	NC	NC	100.0
Refrigerator	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	Q	NE
Important	83.3	84.8	84.6	86.6	78.2	85.1	73.8	70.7	81.2	67.5	78.4	79.6	Q	7.1
Not Important	14.8	14.3	14.9	Q	Q	Q	Q	18.0	Q	Q	19.2	20.4	NC	31.2
Don't Know	1.8	Q	Q	Q	Q	NC	Q	Q	NC	Q	Q	NC	Q	95.4
Energy Efficiency														
Heating Equipment	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	Q	Q	100.0	100.0	Q	NE
Important	90.7	92.5	93.3	76.9	81.9	93.3	Q	66.0	Q	Q	79.5	80.7	Q	6.8
Not Important	6.7	5.6	5.3	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	55.6
Don't Know	2.6	1.9	1.4	Q	Q	NC	Q	Q	NC	Q	Q	Q	NC	102.2
Water Heater	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	Q	100.0	100.0	Q	NE
Important	86.5	87.2	88.3	69.1	83.5	95.6	Q	71.6	Q	Q	81.3	80.2	Q	6.4
Not Important	10.5	10.1	9.9	Q	Q	Q	Q	Q	Q	Q	18.7	19.8	NC	36.1
Don't Know	3.0	2.8	1.8	Q	Q	NC	Q	Q	Q	Q	NC	NC	NC	79.5
Central Air-Conditioning	100.0	100.0	100.0	Q	Q	Q	Q	Q	Q	NC	100.0	100.0	NC	NE
Important	92.2	92.5	92.7	Q	Q	Q	NC	Q	Q	NC	93.2	93.2	NC	6.2
Not Important	5.9	5.5	5.6	NC	Q	Q	Q	NC	NC	NC	Q	Q	NC	74.8
Don't Know	Q	Q	Q	Q	NC	NC	NC	NC	NC	NC	NC	NC	NC	100.0
Refrigerator	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	Q	NE
Important	85.2	86.7	87.0	84.1	86.9	93.1	83.0	70.8	83.4	66.9	76.5	79.0	Q	6.2
Not Important	12.8	12.5	12.3	13.7	Q	Q	Q	Q	Q	Q	21.1	21.0	Q	32.3
Don't Know	1.9	Q	Q	Q	Q	NC	Q	14.0	NC	18.3	Q	NC	Q	34.3

See footnotes at end of table.

Table 3.33a. Equipment Purchase by Type and Ownership of Housing Unit, Million U.S. Households, 1993 (Continued)

Equipment Purchase and Purchase Considerations	Total	Type and Ownership of Housing Unit												RSE Row Factors
		Single-Family			Multifamily						Mobile Home			
					Two to Four Units			Five or More Units						
		Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	
RSE Column Factors:	0.3	0.3	0.3	1.0	1.4	1.9	1.8	1.4	2.8	1.0	1.0	1.1	2.2	
Purchase Considerations (Those who selected for new home or purchased new equipment)														
Rebate/Financing														
Heating Equipment	9.8	8.7	8.3	0.4	0.3	0.2	0.1	0.3	Q	Q	0.5	0.5	Q	18.4
Important	2.1	1.9	1.9	Q	Q	Q	NC	Q	Q	Q	.1	.1	Q	38.5
Not Important	7.1	6.4	6.2	.2	.2	Q	Q	.2	Q	Q	.3	.3	Q	21.2
Don't Know	.6	.4	.3	Q	Q	Q	Q	Q	NC	Q	Q	Q	NC	76.8
Water Heater	13.5	12.2	11.5	.7	.4	.2	.2	.2	0.2	Q	.7	.6	Q	17.0
Important	2.6	2.2	2.1	.1	Q	Q	Q	Q	Q	NC	.2	.2	Q	34.4
Not Important	10.4	9.5	9.1	.5	.2	Q	Q	.2	Q	Q	.5	.5	Q	20.5
Don't Know	.5	.5	.4	Q	Q	NC	Q	Q	Q	NC	NC	NC	NC	88.5
Central Air-Conditioning	5.5	5.0	4.9	Q	Q	Q	Q	Q	Q	NC	.3	.3	NC	26.0
Important	1.2	1.1	1.1	NC	Q	Q	NC	Q	Q	NC	Q	Q	NC	43.4
Not Important	4.0	3.6	3.6	Q	Q	Q	Q	Q	Q	NC	.2	.2	NC	28.8
Don't Know	.3	.3	.2	Q	NC	NC	NC	NC	NC	NC	Q	Q	NC	116.2
Reputation of Manufacturer														
Heating Equipment	9.8	8.7	8.3	.4	.3	.2	.1	.3	Q	Q	.5	.5	Q	18.4
Important	7.4	6.7	6.5	Q	.2	Q	Q	.2	Q	Q	.3	.3	Q	22.5
Not Important	2.1	1.7	1.6	.2	Q	Q	Q	Q	NC	Q	.2	.2	Q	30.2
Don't Know	.4	.3	.2	Q	Q	Q	Q	Q	Q	Q	Q	Q	NC	85.3
Central Air-Conditioning	5.5	5.0	4.9	Q	Q	Q	Q	Q	Q	NC	.3	.3	NC	26.0
Important	4.6	4.2	4.1	Q	Q	Q	NC	Q	Q	NC	.2	.2	NC	28.4
Not Important	.7	.6	.6	Q	Q	Q	Q	NC	NC	NC	Q	Q	NC	58.7
Don't Know	Q	Q	Q	Q	NC	NC	NC	NC	NC	NC	NC	NC	NC	100.0
Availability														
Water Heater	13.5	12.2	11.5	.7	.4	.2	.2	.2	.2	Q	.7	.6	Q	17.0
Important	11.6	10.5	9.8	.6	.4	.2	Q	.2	Q	Q	.6	.6	Q	17.9
Not Important	1.7	1.6	1.5	Q	Q	Q	Q	Q	Q	Q	Q	Q	NC	38.0
Don't Know	.2	.2	.1	Q	NC	NC	NC	NC	NC	NC	NC	NC	NC	115.4
Refrigerator	14.9	12.7	11.3	1.4	.6	.2	.4	1.0	.2	0.8	.6	.6	Q	14.3
Important	11.7	10.2	9.1	1.1	.4	.1	.2	.7	Q	.5	.5	.5	Q	15.9
Not Important	2.9	2.3	2.1	.2	.2	Q	Q	Q	Q	Q	.1	.1	NC	31.4
Don't Know	.3	.1	Q	Q	Q	NC	Q	Q	NC	Q	Q	Q	Q	92.0
Size														
Refrigerator	14.9	12.7	11.3	1.4	.6	.2	.4	1.0	.2	.8	.6	.6	Q	14.3
Important	13.6	11.8	10.5	1.3	.5	.2	.3	.8	.2	.6	.5	.5	Q	15.0
Not Important	1.1	.8	.7	Q	Q	Q	Q	Q	NC	Q	Q	Q	Q	50.9
Don't Know	.2	Q	Q	Q	Q	NC	Q	Q	NC	Q	Q	NC	Q	108.5

NC = No cases in sample.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • "Important" combines responses of "Very Important" and "Somewhat Important." • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.33b. Equipment Purchase by Type and Ownership of Housing Unit, Percent of U.S. Households, 1993 (Continued)

Equipment Purchase and Purchase Considerations	Total	Type and Ownership of Housing Unit												RSE Row Factors
		Single-Family			Multifamily						Mobile Home			
					Two to Four Units			Five or More Units						
		Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	Total	Own	Rent	
RSE Column Factors:	0.3	0.3	0.3	1.1	1.4	1.7	1.8	1.8	2.6	1.7	1.0	1.0	0.9	
Purchase Considerations (Those who selected for new home or purchased new equipment)														
Rebate/Financing														
Heating Equipment	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	Q	Q	100.0	100.0	Q	NE
Important	21.8	21.8	22.6	Q	Q	Q	NC	Q	Q	Q	22.1	21.7	Q	29.4
Not Important	72.5	73.5	74.4	56.6	50.8	Q	Q	84.9	Q	Q	62.1	60.7	Q	12.1
Don't Know	5.7	4.6	3.1	Q	Q	Q	Q	Q	NC	Q	Q	Q	NC	69.7
Water Heater	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	Q	100.0	100.0	Q	NE
Important	18.9	17.9	17.9	18.8	Q	Q	Q	Q	Q	NC	26.9	25.8	Q	31.4
Not Important	77.3	78.3	79.0	66.6	49.5	Q	Q	82.8	Q	Q	73.1	74.2	Q	10.5
Don't Know	3.8	3.8	3.1	Q	Q	NC	Q	Q	Q	NC	NC	NC	NC	78.5
Central Air-Conditioning	100.0	100.0	100.0	Q	Q	Q	Q	Q	Q	NC	100.0	100.0	NC	NE
Important	22.1	22.5	23.1	NC	Q	Q	NC	Q	Q	NC	Q	Q	NC	34.1
Not Important	72.9	72.3	73.7	Q	Q	Q	Q	Q	Q	NC	74.5	74.5	NC	12.6
Don't Know	5.0	5.2	3.2	Q	NC	NC	NC	NC	NC	NC	Q	Q	NC	102.3
Reputation of Manufacturer														
Heating Equipment	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	Q	Q	100.0	100.0	Q	NE
Important	74.9	76.9	78.5	Q	54.7	Q	Q	70.9	Q	Q	57.2	58.3	Q	11.6
Not Important	21.1	20.1	19.2	38.6	Q	Q	Q	Q	NC	Q	35.3	33.4	Q	27.2
Don't Know	4.1	3.0	2.3	Q	Q	Q	Q	Q	Q	Q	Q	Q	NC	78.0
Central Air-Conditioning	100.0	100.0	100.0	Q	Q	Q	Q	Q	Q	NC	100.0	100.0	NC	NE
Important	84.0	84.6	84.6	Q	Q	Q	NC	Q	Q	NC	72.9	72.9	NC	10.5
Not Important	13.7	12.9	13.1	Q	Q	Q	Q	NC	NC	NC	Q	Q	NC	50.6
Don't Know	Q	Q	Q	Q	NC	NC	NC	NC	NC	NC	NC	NC	NC	100.0
Availability														
Water Heater	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	Q	100.0	100.0	Q	NE
Important	85.8	85.8	85.8	86.4	89.5	89.5	Q	73.2	Q	Q	88.6	87.9	Q	6.3
Not Important	12.8	12.7	13.0	Q	Q	Q	Q	Q	Q	Q	Q	Q	NC	34.8
Don't Know	1.3	1.5	1.2	Q	NC	NC	NC	NC	NC	NC	NC	NC	NC	101.1
Refrigerator	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	Q	NE
Important	78.5	80.5	80.5	81.1	57.2	52.0	60.4	65.7	Q	65.9	78.7	82.1	Q	8.3
Not Important	19.2	18.3	18.7	15.8	38.1	Q	Q	Q	Q	Q	14.4	15.3	NC	26.3
Don't Know	2.3	1.1	Q	Q	Q	NC	Q	Q	NC	Q	Q	Q	Q	84.6
Size														
Refrigerator	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	Q	NE
Important	91.5	93.2	93.5	90.9	86.6	93.1	82.5	79.3	100.0	72.9	80.4	83.9	Q	4.8
Not Important	7.1	6.4	6.2	Q	Q	Q	Q	Q	NC	Q	Q	Q	Q	47.1
Don't Know	1.4	Q	Q	Q	Q	NC	Q	Q	NC	Q	Q	NC	Q	101.2

NC = No cases in sample.
Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.
NE = RSE row factor not estimated because RSE's for all statistics in this row are between 0.0 and 1.0 percent.
Notes: • "Important" combines responses of "Very Important" and "Somewhat Important." • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • Percentages are calculated on unrounded numbers. • See "Glossary" for definition of terms used in this report.
Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.34a. Equipment Purchase by Family Income, Million U.S. Households, 1993

Equipment Purchase and Purchase Considerations	Total	1993 Family Income							Below Poverty Line		Eligible for Federal Assistance[1]	RSE Row Factors
		Less than $5,000	$5,000 to $9,999	$10,000 to $14,999	$15,000 to $24,999	$25,000 to $34,999	$35,000 to $49,999	$50,000 or More	100 Percent	125 Percent		
RSE Column Factors:	0.4	2.2	1.6	1.2	0.9	0.9	0.8	0.7	1.3	1.1	0.8	
Total	96.6	4.1	10.6	11.1	18.4	14.1	17.5	21.0	14.4	19.4	30.7	3.4
Main Heating System Purchased After January 1, 1990												
No	83.6	4.0	9.8	10.2	16.5	11.9	14.5	16.9	13.4	17.9	28.2	3.6
Yes	13.0	.1	.8	1.0	1.9	2.2	3.0	4.0	1.0	1.4	2.5	11.6
Came with Home Purchase	4.2	Q	.1	.2	.5	.7	1.2	1.5	.2	.2	.4	20.6
Household Selected	1.0	Q	Q	Q	.2	.2	.3	.3	Q	Q	.1	27.5
Standard with New Home	3.2	Q	.1	.1	.3	.5	.9	1.2	.1	.2	.3	23.5
Purchased Replacement	8.8	Q	.7	.8	1.5	1.5	1.8	2.5	.8	1.2	2.1	12.1
Water Heater Purchased After January 1, 1990												
No	79.6	3.7	9.6	9.6	15.6	11.2	13.8	15.9	13.1	17.3	27.2	3.8
Yes	17.0	.3	1.0	1.5	2.7	2.8	3.6	5.0	1.3	2.1	3.5	10.0
Came with Home Purchase	4.2	Q	Q	.2	.5	.7	1.3	1.4	.2	.2	.4	20.0
Household Selected	.7	Q	Q	Q	.1	.1	.2	.2	Q	Q	.1	34.9
Standard with New Home	3.5	Q	Q	.2	.4	.6	1.1	1.2	.1	.2	.3	22.0
Purchased Replacement	12.8	.3	1.0	1.2	2.2	2.1	2.3	3.6	1.1	1.8	3.1	10.9
Central Air-Conditioning Equipment Purchased After January 1, 1990												
No	88.5	4.0	10.3	10.8	17.3	12.6	15.5	18.0	14.2	19.1	29.8	3.4
Yes	8.1	Q	.2	.4	1.0	1.4	2.0	3.0	.2	.3	.8	17.0
Came with Home Purchase	3.3	Q	Q	.1	.4	.5	1.0	1.2	.1	.1	.2	22.7
Household Selected	.6	NC	NC	Q	.1	Q	.1	.3	Q	Q	Q	34.9
Standard with New Home	2.7	Q	Q	.1	.2	.5	.9	.9	Q	.1	.2	24.8
Purchased Replacement	4.9	Q	.2	.2	.7	.9	1.0	1.8	.1	.2	.6	21.4
Replaced Central Unit	2.4	Q	Q	Q	.3	.4	.5	1.0	Q	Q	.2	26.9
Replaced Window Unit	.9	NC	Q	Q	Q	Q	Q	.3	NC	NC	Q	41.6
New Additional Unit	.3	Q	NC	Q	Q	Q	Q	Q	Q	Q	Q	58.8
No Equipment Before	1.3	Q	Q	Q	.2	.3	.3	.4	Q	Q	.2	35.2
Refrigerator Purchased After January 1, 1990												
No	80.4	3.6	9.8	9.8	15.7	11.6	13.7	16.3	12.9	17.1	26.9	3.5
Yes	16.2	.4	.8	1.4	2.7	2.4	3.8	4.7	1.5	2.2	3.8	8.9
Came with Home Purchase	2.7	Q	Q	.2	.4	.5	.8	.8	.1	.2	.3	22.5
Household Selected	1.4	Q	Q	Q	.1	.2	.4	.5	Q	.1	.1	35.0
Standard with New Home	1.4	Q	Q	.1	.2	.3	.4	.3	.1	.1	.2	27.4
Purchased Replacement	13.5	.4	.8	1.2	2.3	2.0	3.0	3.9	1.4	2.0	3.5	9.7

See footnotes at end of table.

Table 3.34b. Equipment Purchase by Family Income, Percent of U.S. Households, 1993

Equipment Purchase and Purchase Considerations	Total	1993 Family Income							Below Poverty Line		Eligible for Federal Assistance[1]	RSE Row Factors
		Less than $5,000	$5,000 to $9,999	$10,000 to $14,999	$15,000 to $24,999	$25,000 to $34,999	$35,000 to $49,999	$50,000 or More	100 Percent	125 Percent		
RSE Column Factors:	0.4	2.2	1.4	1.0	0.9	0.8	0.7	1.0	1.4	1.2	0.9	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0
Main Heating System Purchased After January 1, 1990												
No	86.5	97.4	92.0	90.2	88.9	82.3	80.5	83.5	93.3	92.5	91.9	1.2
Yes	13.5	2.6	8.0	9.8	11.1	17.7	19.5	16.5	6.7	7.5	8.1	11.0
Came with Home Purchase	4.4	Q	1.0	2.2	2.6	7.0	8.1	5.1	1.1	1.2	1.2	19.4
Household Selected	1.1	Q	Q	.7	1.0	1.7	1.9	.9	Q	Q	.2	26.7
Standard with New Home	3.3	Q	1.0	1.4	1.5	5.3	6.3	4.2	1.0	1.0	1.0	22.1
Purchased Replacement	9.1	Q	7.0	7.6	8.5	10.8	11.4	11.3	5.6	6.3	6.9	11.4
Water Heater Purchased After January 1, 1990												
No	82.4	92.2	90.5	85.4	83.4	79.2	75.9	77.9	90.9	89.3	88.5	1.5
Yes	17.6	7.8	9.5	14.6	16.6	20.8	24.1	22.1	9.1	10.7	11.5	9.2
Came with Home Purchase	4.4	Q	.5	3.0	2.5	6.9	7.9	5.1	1.2	1.2	1.3	19.6
Household Selected	.7	Q	Q	.6	.6	1.0	1.0	1.0	Q	Q	.2	32.8
Standard with New Home	3.7	Q	Q	2.4	1.9	5.9	6.8	4.1	1.0	1.0	1.1	21.6
Purchased Replacement	13.2	7.0	8.9	11.6	14.1	13.8	16.2	17.0	7.9	9.5	10.1	10.1
Central Air-Conditioning Equipment Purchased After January 1, 1990												
No	91.6	98.7	97.6	95.3	93.0	89.0	85.7	86.8	98.6	98.6	97.3	1.6
Yes	8.4	Q	2.4	4.7	7.0	11.0	14.3	13.2	1.4	1.4	2.7	15.6
Came with Home Purchase	3.4	Q	Q	1.7	1.8	5.4	6.5	4.3	.6	.6	.7	21.6
Household Selected	.6	NC	NC	.4	.8	.5	1.2	.9	Q	Q	Q	35.9
Standard with New Home	2.8	Q	Q	1.4	1.1	4.9	5.2	3.5	Q	.5	.6	23.8
Purchased Replacement	5.0	Q	2.0	2.9	5.2	5.5	7.8	8.8	.8	.8	2.0	20.1
Replaced Central Unit	2.5	Q	Q	1.1	2.6	2.6	4.2	4.5	Q	Q	.8	24.5
Replaced Window Unit	1.0	NC	Q	Q	Q	Q	1.7	Q	NC	NC	Q	39.6
New Additional Unit	.3	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	55.2
No Equipment Before	1.3	Q	Q	.8	1.1	1.8	1.8	2.2	Q	Q	.5	33.9
Refrigerator Purchased After January 1, 1990												
No	83.2	89.3	90.4	87.1	85.2	79.1	77.4	78.8	89.6	88.4	87.6	1.3
Yes	16.8	10.7	9.6	12.9	14.8	20.9	22.6	21.2	10.4	11.6	12.4	8.0
Came with Home Purchase	2.8	Q	.6	1.9	2.0	4.3	4.6	3.4	.8	1.1	1.1	21.8
Household Selected	1.4	Q	Q	.6	1.0	2.0	2.9	1.5	Q	.5	.4	32.8
Standard with New Home	1.4	Q	Q	1.3	.9	2.2	1.7	2.0	.6	.5	.7	26.7
Purchased Replacement	14.0	9.4	9.0	11.0	12.8	16.6	18.0	17.8	9.6	10.5	11.3	8.9

See footnotes at end of table.

Table 3.34a. Equipment Purchase by Family Income, Million U.S. Households, 1993 (Continued)

Equipment Purchase and Purchase Considerations	Total	1993 Family Income							Below Poverty Line		Eligible for Federal Assistance[1]	RSE Row Factors
		Less than $5,000	$5,000 to $9,999	$10,000 to $14,999	$15,000 to $24,999	$25,000 to $34,999	$35,000 to $49,999	$50,000 or More	100 Percent	125 Percent		
RSE Column Factors:	0.4	2.2	1.6	1.2	0.9	0.9	0.8	0.7	1.3	1.1	0.8	
Purchase Considerations (Those who selected for new home or purchased new equipment)												
Price												
Heating Equipment	9.8	Q	0.7	0.8	1.6	1.6	2.1	2.8	0.8	1.3	2.2	11.4
Important	7.3	Q	.6	.6	1.2	1.2	1.5	2.1	.6	1.0	1.7	13.4
Not Important	2.3	Q	Q	.2	.3	.4	.6	.7	.1	.2	.5	24.8
Don't Know	.2	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	66.7
Water Heater	13.5	0.3	1.0	1.3	2.4	2.2	2.6	3.8	1.2	1.9	3.2	10.6
Important	9.5	.2	.7	.9	1.8	1.6	1.9	2.5	.8	1.4	2.4	12.0
Not Important	3.7	Q	.3	.3	.5	.6	.6	1.2	.3	.4	.7	20.1
Don't Know	.3	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	60.2
Central Air-Conditioning	5.5	Q	.2	.3	.8	1.0	1.1	2.1	.1	.2	.7	19.8
Important	4.2	Q	Q	.2	.6	.7	.9	1.7	Q	.1	.5	20.0
Not Important	1.1	Q	Q	Q	.2	.2	.2	.4	Q	Q	.2	36.0
Don't Know	Q	NC	NC	NC	Q	Q	Q	Q	Q	Q	Q	100.0
Refrigerator	14.9	.4	.8	1.3	2.5	2.2	3.4	4.4	1.4	2.1	3.6	9.3
Important	12.4	.4	.6	1.1	2.0	1.8	2.9	3.6	1.2	1.8	3.1	10.4
Not Important	2.2	Q	.2	Q	.4	.4	.4	.7	.2	.3	.4	24.4
Don't Know	.3	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	67.8
Energy Efficiency												
Heating Equipment	9.8	Q	.7	.8	1.6	1.6	2.1	2.8	.8	1.3	2.2	11.4
Important	8.9	Q	.6	.7	1.5	1.5	2.0	2.6	.6	1.0	1.9	12.6
Not Important	.7	NC	Q	Q	.1	Q	Q	.2	.1	.1	.2	37.2
Don't Know	.3	Q	Q	Q	Q	Q	Q	Q	Q	Q	.1	51.7
Water Heater	13.5	.3	1.0	1.3	2.4	2.2	2.6	3.8	1.2	1.9	3.2	10.6
Important	11.7	.2	.8	1.0	2.1	2.0	2.2	3.4	.8	1.5	2.6	11.6
Not Important	1.4	Q	.2	.2	.2	.2	.2	.3	.3	.3	.4	26.0
Don't Know	.4	Q	Q	Q	Q	Q	Q	Q	Q	Q	.1	49.5
Central Air-Conditioning	5.5	Q	.2	.3	.8	1.0	1.1	2.1	.1	.2	.7	19.8
Important	5.0	Q	.2	.2	.7	.9	1.1	1.9	.1	.1	.6	20.9
Not Important	.3	Q	NC	Q	Q	Q	Q	.2	Q	Q	Q	57.6
Don't Know	Q	NC	NC	NC	Q	Q	Q	NC	Q	Q	Q	100.0
Refrigerator	14.9	.4	.8	1.3	2.5	2.2	3.4	4.4	1.4	2.1	3.6	9.3
Important	12.7	.4	.5	1.0	2.1	1.9	3.0	3.9	1.1	1.7	2.9	10.2
Not Important	1.9	Q	.2	.2	.3	.3	.4	.5	.2	.3	.6	25.6
Don't Know	.3	Q	Q	Q	Q	Q	Q	Q	Q	Q	.1	80.6

See footnotes at end of table.

Table 3.34b. Equipment Purchase by Family Income, Percent of U.S. Households, 1993 (Continued)

Equipment Purchase and Purchase Considerations	Total	1993 Family Income							Below Poverty Line		Eligible for Federal Assistance[1]	RSE Row Factors
		Less than $5,000	$5,000 to $9,999	$10,000 to $14,999	$15,000 to $24,999	$25,000 to $34,999	$35,000 to $49,999	$50,000 or More	100 Percent	125 Percent		
RSE Column Factors:	0.4	2.2	1.4	1.0	0.9	0.8	0.7	1.0	1.4	1.2	0.9	
Purchase Considerations (Those who selected for new home or purchased new equipment)												
Price												
Heating Equipment	100.0	Q	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NE
Important	74.0	Q	83.2	73.5	77.8	69.0	74.7	70.2	78.9	81.9	76.0	6.5
Not Important	23.7	Q	16.5	21.1	19.6	29.6	22.7	29.8	17.9	16.0	20.7	22.8
Don't Know	2.4	Q	Q	Q	Q	Q	Q	NC	Q	Q	Q	62.3
Water Heater	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NE
Important	70.8	71.3	69.8	75.5	74.0	68.3	70.4	65.0	72.0	73.4	75.2	6.3
Not Important	27.1	Q	28.4	21.2	23.9	29.9	27.7	33.4	26.1	23.8	21.7	16.5
Don't Know	2.1	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	55.8
Central Air-Conditioning	100.0	Q	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NE
Important	77.6	Q	90.4	74.0	69.1	78.3	80.8	79.1	Q	77.5	74.7	9.6
Not Important	20.1	Q	Q	21.2	28.8	16.7	17.8	20.9	Q	Q	24.0	31.4
Don't Know	Q	NC	NC	Q	Q	Q	Q	NC	Q	Q	Q	100.0
Refrigerator	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NE
Important	83.3	91.2	76.6	84.9	83.5	85.3	84.0	78.7	82.1	84.7	85.6	4.2
Not Important	14.8	Q	18.3	11.1	14.9	13.8	14.7	21.3	12.8	12.0	11.3	23.4
Don't Know	1.8	Q	Q	Q	Q	Q	Q	NC	Q	Q	Q	65.6
Energy Efficiency												
Heating Equipment	100.0	Q	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NE
Important	90.7	Q	89.4	80.9	94.1	93.0	94.4	89.0	77.0	82.2	84.9	4.1
Not Important	6.7	NC	Q	11.5	Q	Q	Q	Q	16.4	11.7	9.8	31.8
Don't Know	2.6	Q	Q	Q	Q	Q	Q	NC	Q	Q	5.4	48.6
Water Heater	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NE
Important	86.5	60.5	80.4	84.7	89.3	84.2	89.7	91.9	73.2	79.8	82.4	4.4
Not Important	10.5	Q	16.7	10.3	7.6	12.8	8.2	Q	22.3	15.7	12.9	24.5
Don't Know	3.0	Q	Q	Q	Q	Q	Q	Q	Q	Q	4.6	46.1
Central Air-Conditioning	100.0	Q	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NE
Important	92.2	Q	96.0	88.6	94.0	91.5	97.3	83.4	80.3	85.4	88.7	5.7
Not Important	5.9	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	51.0
Don't Know	Q	NC	NC	Q	Q	Q	Q	NC	Q	Q	Q	100.0
Refrigerator	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NE
Important	85.2	90.0	71.5	81.8	87.4	85.4	88.4	88.0	78.6	80.8	80.3	4.3
Not Important	12.8	Q	21.7	14.2	11.3	13.1	10.9	12.0	15.5	14.3	15.9	24.4
Don't Know	1.9	Q	Q	Q	Q	Q	Q	NC	Q	Q	3.8	49.1

See footnotes at end of table.

Table 3.34a. Equipment Purchase by Family Income, Million U.S. Households, 1993 (Continued)

Equipment Purchase and Purchase Considerations	Total	1993 Family Income							Below Poverty Line		Eligible for Federal Assistance[1]	RSE Row Factors
		Less than $5,000	$5,000 to $9,999	$10,000 to $14,999	$15,000 to $24,999	$25,000 to $34,999	$35,000 to $49,999	$50,000 or More	100 Percent	125 Percent		
RSE Column Factors:	0.4	2.2	1.6	1.2	0.9	0.9	0.8	0.7	1.3	1.1	0.8	
Purchase Considerations (Those who selected for new home or purchased new equipment)												
Rebate/Financing												
Heating Equipment	9.8	Q	0.7	0.8	1.6	1.6	2.1	2.8	0.8	1.3	2.2	11.4
Important	2.1	Q	.2	.2	.4	.4	.6	.4	.3	.3	.6	21.7
Not Important	7.1	Q	.3	.6	1.1	1.2	1.4	2.4	.5	.8	1.4	14.2
Don't Know	.6	Q	Q	Q	Q	Q	Q	Q	Q	.1	.3	37.1
Water Heater	13.5	0.3	1.0	1.3	2.4	2.2	2.6	3.8	1.2	1.9	3.2	10.6
Important	2.6	Q	.3	.3	.4	.4	.4	.7	.3	.5	.8	21.8
Not Important	10.4	.2	.7	.8	1.9	1.7	2.1	3.0	.8	1.2	2.2	12.4
Don't Know	.5	Q	Q	Q	Q	Q	Q	Q	Q	.1	.2	38.9
Central Air-Conditioning	5.5	Q	.2	.3	.8	1.0	1.1	2.1	.1	.2	.7	19.8
Important	1.2	Q	Q	Q	.2	.2	.2	.5	Q	Q	.2	31.1
Not Important	4.0	Q	Q	.1	.6	.7	.8	1.6	Q	Q	.3	21.0
Don't Know	.3	NC	Q	NC	Q	Q	Q	Q	Q	Q	Q	77.0
Reputation of Manufacturer												
Heating Equipment	9.8	Q	.7	.8	1.6	1.6	2.1	2.8	.8	1.3	2.2	11.4
Important	7.4	Q	.5	.6	1.1	1.2	1.7	2.2	.5	.8	1.6	14.1
Not Important	2.1	Q	Q	.2	.4	.4	.4	.6	.2	.3	.5	23.4
Don't Know	.4	Q	Q	Q	Q	Q	Q	Q	Q	.1	.1	38.3
Central Air-Conditioning	5.5	Q	.2	.3	.8	1.0	1.1	2.1	.1	.2	.7	19.8
Important	4.6	Q	.2	.2	.6	.8	.9	1.8	Q	.1	.6	21.4
Not Important	.7	Q	NC	Q	.1	Q	.1	.3	Q	Q	Q	40.6
Don't Know	Q	NC	Q	NC	Q	Q	Q	Q	Q	Q	Q	100.0
Availability												
Water Heater	13.5	.3	1.0	1.3	2.4	2.2	2.6	3.8	1.2	1.9	3.2	10.6
Important	11.6	.2	.9	1.1	2.1	1.8	2.3	3.1	1.0	1.6	2.9	11.4
Not Important	1.7	Q	Q	Q	.2	.4	.2	.7	.1	.2	.3	27.0
Don't Know	.2	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	73.8
Refrigerator	14.9	.4	.8	1.3	2.5	2.2	3.4	4.4	1.4	2.1	3.6	9.3
Important	11.7	.3	.6	1.1	2.0	1.7	2.6	3.4	1.1	1.7	2.8	10.8
Not Important	2.9	Q	Q	Q	.4	.4	.7	1.0	.2	.3	.6	22.6
Don't Know	.3	Q	Q	Q	Q	Q	Q	Q	.1	.1	.1	35.8
Size												
Refrigerator	14.9	.4	.8	1.3	2.5	2.2	3.4	4.4	1.4	2.1	3.6	9.3
Important	13.6	.4	.5	1.2	2.2	2.0	3.1	4.2	1.2	1.8	3.1	10.2
Not Important	1.1	Q	.2	Q	.2	Q	.2	.2	.2	.2	.4	29.9
Don't Know	.2	Q	Q	Q	Q	Q	Q	NC	Q	Q	Q	71.7

[1] Below 150 percent of poverty line or 60 percent of median State income.

NC = No cases in sample.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • "Important" combines responses of "Very Important" and "Somewhat Important." • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1990 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Table 3.34b. Equipment Purchase by Family Income, Percent of U.S. Households, 1993 (Continued)

Equipment Purchase and Purchase Considerations	Total	1993 Family Income							Below Poverty Line		Eligible for Federal Assistance[1]	RSE Row Factors
		Less than $5,000	$5,000 to $9,999	$10,000 to $14,999	$15,000 to $24,999	$25,000 to $34,999	$35,000 to $49,999	$50,000 or More	100 Percent	125 Percent		
RSE Column Factors:	0.4	2.2	1.4	1.0	0.9	0.8	0.7	1.0	1.4	1.2	0.9	
Purchase Considerations (Those who selected for new home or purchased new equipment)												
Rebate/Financing												
Heating Equipment	100.0	Q	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NE
Important	21.8	Q	28.7	26.4	21.0	28.4	15.9	Q	31.3	26.5	25.5	18.9
Not Important	72.5	Q	55.1	62.4	75.7	68.5	79.8	90.2	57.5	61.9	62.0	7.3
Don't Know	5.7	Q	Q	11.2	Q	Q	Q	NC	Q	11.5	12.5	33.0
Water Heater	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NE
Important	18.9	Q	24.8	22.5	15.7	17.2	16.8	21.2	25.4	27.1	24.8	19.8
Not Important	77.3	75.2	69.4	71.9	79.2	78.7	80.8	78.6	67.7	65.3	68.2	6.3
Don't Know	3.8	Q	Q	Q	Q	Q	Q	Q	Q	7.6	6.9	36.0
Central Air-Conditioning	100.0	Q	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NE
Important	22.1	Q	Q	32.5	19.8	17.4	19.8	28.3	Q	Q	32.9	27.3
Not Important	72.9	Q	Q	60.1	75.7	79.3	78.5	70.6	Q	Q	47.9	10.3
Don't Know	5.0	NC	Q	Q	Q	Q	Q	Q	Q	Q	Q	71.1
Reputation of Manufacturer												
Heating Equipment	100.0	Q	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NE
Important	74.9	Q	74.0	65.9	75.2	76.4	80.9	70.8	65.2	66.9	71.4	6.9
Not Important	21.1	Q	21.1	24.1	23.0	20.8	15.2	29.2	23.3	24.3	22.4	20.8
Don't Know	4.1	Q	Q	10.0	Q	Q	Q	NC	Q	8.8	6.2	36.6
Central Air-Conditioning	100.0	Q	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NE
Important	84.0	Q	86.2	74.5	88.9	85.0	85.1	82.6	Q	74.5	86.0	7.9
Not Important	13.7	Q	Q	20.6	Q	11.7	12.8	17.4	Q	Q	Q	37.8
Don't Know	Q	NC	Q	Q	Q	Q	Q	NC	Q	Q	Q	100.0
Availability												
Water Heater	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NE
Important	85.8	85.1	93.1	87.7	84.4	85.5	86.9	78.1	85.7	87.8	90.0	3.9
Not Important	12.8	Q	Q	10.6	14.1	13.6	12.1	20.1	12.4	10.5	8.7	26.1
Don't Know	1.3	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	70.6
Refrigerator	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NE
Important	78.5	74.3	79.5	83.5	76.3	78.5	77.2	78.5	80.4	81.0	78.7	5.0
Not Important	19.2	Q	14.1	12.9	20.9	19.4	21.7	21.5	12.2	13.9	17.7	21.0
Don't Know	2.3	Q	Q	Q	Q	Q	Q	NC	7.3	5.1	3.6	34.7
Size												
Refrigerator	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NE
Important	91.5	91.2	74.2	91.9	91.6	91.7	94.2	96.9	82.2	85.3	87.5	3.1
Not Important	7.1	Q	20.7	Q	7.1	7.5	5.4	Q	12.3	11.1	9.8	29.5
Don't Know	1.4	Q	Q	Q	Q	Q	Q	NC	Q	Q	Q	69.6

[1] Below 150 percent of poverty line or 60 percent of median State income.

NC = No cases in sample.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

NE = RSE row factor not estimated because RSE's for all statistics in this row are between 0.0 and 1.0 percent.

Notes: • "Important" combines responses of "Very Important" and "Somewhat Important." • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • Percentages are calculated on unrounded numbers. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1993 Residential Energy Consumption Survey (for specific titles of forms, see Appendix D).

Appendix A

How the Survey Was Conducted

Appendix A

How the Survey Was Conducted

Introduction

The Residential Energy Consumption Survey (RECS) was designed by the Energy Information Administration (EIA) to provide information about energy consumption within the residential sector. The RECS is conducted in two major parts: the Household Survey and the Energy Suppliers Survey. The Household Survey collects information about the housing unit through personal interviews with a representative national sample of households. In the Energy Suppliers Survey, data concerning actual energy consumption are obtained from household billing records maintained by the energy suppliers. The data are collected by questionnaires mailed to all the suppliers for the households in the Household Survey. This report is based on the results of the Household Survey. A later report, *Household Energy Consumption and Expenditures 1993,* will present the results of the Energy Suppliers Survey. Copies of the data collection forms for the Household Survey, and the adjunct Rental Agent Survey are reproduced in Appendix D, "Survey Forms."

This appendix contains detailed information about the Sample Design, Household Survey, its adjunct Rental Agent Survey, Confidentiality of the Data, and Public Use Data File Preparation.

Sample Design

The universe for the RECS includes all housing units occupied as a primary residence in the 50 States and the District of Columbia, which was estimated to be 96,630,000 households as of July 1993. These data represent a change from past RECS where the date was November of the survey year. The change was made to give greater weight to the consumption and expenditures data, which are collected for calendar year 1993 for which July 1993 is the midpoint. The change means the time separation between the date used to estimate the universe of households for the 1993 RECS is 2 2/3 years following the date used for the 1990 RECS. Estimates of annual change need to consider that the period covered was less than 3 years.

Since 1980, each RECS has used a multistage probability sample design to select a representative sample of U.S. households. This sample design was developed especially for the RECS. The sample for the 1993 RECS was redesigned to reflect population figures newly available from the 1990 Decennial Census.[20]

The overall plan for the 1993 RECS included a basic sample of approximately 5,000 completed household interviews, plus supplemental samples totaling approximately 2,050 completed interviews. The basic sample was designed to represent the total population of households in the United States, with specified levels of precision for each of the nine geographically defined Census divisions. The supplemental samples, included in the plan to meet special analytical needs, were designed to provide disproportionately large samples of (1) new housing units (construction completed in 1987 or later) and (2) households living below the poverty level, particularly those using electricity, fuel oil, or kerosene as the main space-heating fuel.

[20]For more details about the RECS sample design for the 1993 RECS as well as earlier RECS, see Energy Information Administration, *Sample Design for the Residential Energy Consumption Survey,* DOE/EIA-0555(94)/1 (August 1994).

Multistage Area Probability Sample

In the sample design used for the 1993 RECS, the total land area of the 50 States and the District of Columbia was divided into 1,786 Primary Sampling Units (PSU's). These PSU's were based on county and independent city boundary lines, population characteristics,[21] and on Metropolitan Statistical Areas (MSA's) as defined in June 1990.

The nine geographically defined Census divisions were a primary mode of stratification of PSU's in the 1993 RECS sample design. Strata were separately defined, within Census divisions, for four States with large populations (California, Florida, New York, and Texas) and for Alaska and Hawaii because of their unique weather conditions. Stratification was also based on metropolitan or nonmetropolitan definitions of PSU's and, to the extent feasible, on dominant residential space-heating fuel and weather conditions. PSU's were grouped into 116 strata (Figure A1).

In some cases a single PSU comprising all or part of a large metropolitan area was large enough in population to be a stratum by itself. PSU's of this type are called Self-Representing (SR) because the sample from each PSU represents only that PSU. In other strata, one PSU was selected from among two or more PSU's in the stratum. Each of the PSU's selected from these strata is called Non-Self-Representing (NSR) because each PSU also represents the nonselected PSU's in its stratum. Of the 116 strata in the 1993 RECS sample design, 31 are SR PSU's and 85 are NSR.

Procedures for selection of specific PSU's from the NSR strata maximized the retention of PSU's from the preceding RECS design.[22] The benefits of retaining PSU's from the 1984 design included savings in housing unit listing and interviewer recruiting in some PSU's and the reduction of variance in estimates of change across time. PSU's were retained from the earlier design in all but 22 of the 116 strata.

Households in the 1993 RECS sample were selected from 1,610 second-stage sampling units (SSU's) or listing segments. Some 149 of the SSU's used for the 1993 RECS were a supplement to the basic design, specially selected in areas that were expected (on the basis of Census statistics or a canvass of informed local sources) to include large proportions of new housing units.

In 35 of the 116 PSU's, SSU's from the 1984 design were carried over to the 1993 RECS; newly selected SSU's were used in the remaining 81 PSU's. In the plan for the 1996 RECS, newly selected SSU's will replace all of the SSU's carried over from the 1984 design.

Listing segments in the 1993 RECS design consist of one or more Census blocks selected directly from Census statistics based on the 1990 enumeration. In the selection process, blocks were combined as necessary, to create segments with a minimum of 50 housing units (a minimum of 96 housing units was used for the supplemental group of new construction SSU's). Prior to selection, blocks within PSU's were stratified geographically. Within MSA PSU's, there was an additional stratification by energy-related characteristics, including income estimates and other variables contained in census data.[23]

Detailed field listings were created by field workers who visited the segment and identified each housing unit by street address, apartment number, or other obvious features.

[21]Boundary definitions for counties, independent cities, and equivalent units were generally those used by the Census of Population and Housing, 1990. There were 3,140 such units in the 1990 Census. Prior to 1983, MSA's were referred to as Standard Metropolitan Statistical Areas. Additional detail on RECS sample design can be found in Energy Information Administration, *Sample Design for the Residential Energy Consumption Survey*, DOE/EIA-0555(94)/1 (August 1994).

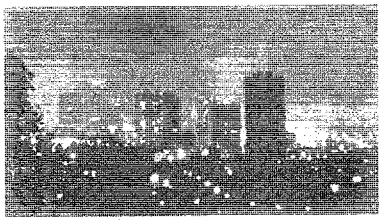
[22]Leslie Kish and Alistair Scott, "Retaining Units After Changing Strata and Probabilities," *Journal of the American Statistical Association*, Vol. 66, Number 335, Applications Section (September, 1971).

[23]Procedures used to select SSU's for the 1993 RECS design differed somewhat from procedures that were used for selection of SSU's carried over from the 1984 design. The stratification by energy-related characteristics was not used in the 1984 design. SSU's in the 1984 design were generally much larger (usually complete Census tracts or enumeration districts) and were divided into many listing segments with a minimum of 25 housing units per listing segment. One such listing segment was selected for the 1993 RECS.

Figure A1. Multistage Area Probability Sample Activities for the 1993 RECS

Primary Sampling Units (PSU)

PSU's are metropolitan areas generally defined as including a central city of 50,000 or larger population, or groups of counties containing small cities and rural areas. The United States was divided into PSU's from which a sample of PSU's was selected



Secondary Sampling Unit (SSU)

A number of SSU's, usually 10 or more, are selected in each PSU. SSU's consist of one or more Census blocks, selected directly from Census statistics. Blocks are combined, as necessary, to create SSU's that contained at least 50 housing units in the Census enumeration.

In most cases, a detailed listing of street addresses (with other description, as necessary) is created for the entire SSU. Some SSU's that contain very large numbers of housing units are divided into smaller listing segments and one listing segment is selected for the detailed address listing.

Ultimate Clusters

Groups of housing units. An ultimate cluster of approximately 5 housing units was selected from the list of housing units for each sampled segment. The housing units in the ultimate clusters were selected to be used for the RECS.

Source: Energy Information Administration, Office of Energy Markets and End Use, the 1993 Residential Energy Consumption Survey.

Following the field-listing step, a *penultimate cluster* of approximately 50 housing units was selected from each listing segment. Addresses of these housing units were placed in a computer file used for actual sample selection. An ultimate cluster of housing units to be contacted for interview (averaging about six housing units for the 1993 RECS) is randomly selected by computer from the penultimate cluster, and these housing units constituted the assignments given to interviewers.

Populations of Special Interest

Two populations were of particular interest in the 1993 RECS: (1) households living below the poverty level, and (2) new housing units. Two supplemental samples were created by oversampling each of these populations.

Households Living Below The Poverty Level. Households living below the poverty level have been of interest in some earlier RECS, most recently in 1987. The purpose of oversampling these households is to meet the analytical needs of the Office of Family Assistance, Family Support Administration (FSA). The FSA is interested in households living below the poverty level that use electricity, fuel oil, or kerosene as the main space-heating fuel. The number of households in the population using these fuels is smaller than the number using natural gas. Consequently, these households had to be oversampled in the 1993 RECS sample design to insure that an adequate number of them were included in the final sample.

New Housing Units. The 1993 survey is the first RECS to include an oversample of newly built housing units. The oversample was included in the 1993 RECS because of the importance of obtaining accurate data on the energy characteristics of new housing units. For the 1993 survey, new construction includes housing units completed in 1987 or later, covering the approximately 6 1/2 years preceding the field period for the 1993 RECS. Procedures were designed to include new single-family and multifamily units, new construction in older neighborhoods, and clusters of new construction.

Procedures for oversampling each of the populations were based on interviewer observations and judgments recorded during interviewer visits to sample segments prior to the actual interviewing field period. After completing their listing of housing units in the listing segment, interviewers were instructed to rate the general income level of these households based on their observations and their general knowledge of the area. Interviewers placed each listing segment into one of four groups: wealthy (highest 25 percent), upper middle class (second quartile), lower middle class (third quartile), or poor or near poor (lowest 25 percent). Whenever possible, listing segments that were rated on income were also rated on main home-heating fuel.

In addition to rating the income level of households in each listing segment, interviewers were also instructed to judge the year that construction was completed for each housing unit listed. Interviewers made inquiries among neighborhood residents and informed community sources, as necessary, in order to arrive at their classification of date of construction. Housing units were classified in the following groups: (1) almost certainly built in 1987 or later, (2) probably built in 1987 or later, (3) probably built before 1987, and (4) almost certainly built before 1987.

The selection of additional housing units in the two populations of interest was accomplished by increasing the sampling rates of these groups. The new housing units were selected by increasing sampling rates for all housing units judged to be "new" regardless of income and heating-fuel classifications. The oversampling of housing units for the below-poverty-level households was carried out only for "old" housing units in selected segments. Listing segments used for the below-poverty-level supplement and the relative sampling rates used for specific classes of housing units are shown in Table A1.

Table A1. Relative Sampling Rates Based on Income Rating and Main Home-Heating Fuels: Housing Units Classified as Built Before 1987

Main Home-Heating Fuel	Income Rating		
	Upper Middle or Highest	Lower Middle	Poor or Near Poor
Electricity or Fuel Oil/Kerosene	1.0	1.3	2.3
All Other Fuels	1.0	1.0	1.8

Source: Energy Information Administration, Office of Energy Markets and End Use, The 1993 Residential Energy Consumption Survey.

A relative sampling rate of 1.0 in Table A1 means that the overall sampling rate applied to households in a sample segment is the rate established for the basic sample. Relative sampling rates higher than 1.0 were used for households in the oversampled groups shown in Table A1. (For example, a relative sampling rate of 1.3 means that households in the group were sampled at a rate 30 percent higher than the rate established for the basic sample.)

It is not possible to divide the sample into the basic sample and supplemental sample, but it is possible to estimate how many observations of various types were added as a result of the supplemental new construction sample and the supplemental low-income sample.

The outcome of the oversampling procedure for households below the poverty level is summarized in Table A2. An estimated 857 interviews were completed in the households selected as part of the low-income supplement.[24] Some 32.3 percent of completed interviews in the supplemental sample were with households living below the poverty level, compared with 15.2 percent of completed interviews in the main sample. The corresponding figures for the Low-Income Home Energy Assistance Program (LIHEAP) level were 55.1 percent and 32.0 percent, respectively.

Table A2. Poverty Status and Home-Heating Fuels in the 1993 RECS: Main and Supplemental Low-Income Samples

Poverty Status and Home-Heating Fuel	Basic Sample Household		Supplemental Sample Households	
	Number	Percent	Number	Percent
All Households	4,921	100.0	857	100.0
Below Poverty Level	749	15.2	277	32.3
Electricity	196	4.0	74	8.6
Fuel Oil/Kerosene	88	1.8	31	3.6
Other Fuels	465	9.5	173	20.1
Not Below Poverty Level	4,172	84.8	580	67.7
Below LIHEAP Level	1,574	32.0	472	55.1
Electricity	399	8.1	133	15.5
Fuel Oil/Kerosene	198	4.0	63	7.3
Other Fuels	977	19.9	277	32.3
Not Below LIHEAP Level	3,347	68.0	385	44.9

Notes: •Households are classified according to the poverty status of the family or nonfamily householder. The actual reference period for income reported in the 1993 RECS was the 12 months preceding the RECS interview; the interview date for most households was within the final calendar quarter of 1993. •Table shows unweighted numbers and percentages of completed units. •See Glossary for the definition of poverty.

Source: Energy Information Administration, Office of Energy Markets and End Use, the 1993 Residential Energy Consumption Survey.

The supplemental sample of new housing units was selected at a uniform sampling rate for all housing units judged to be constructed in 1987 or later. The outcome of the oversampling procedure for new housing units is summarized in Table A3. An estimated 1,333 interviews were completed in housing units that were part of the new housing unit supplement. Based on responses to pertinent questions in the household interview, some 60.9 percent of housing units in the supplement were actually completed in 1987 or later, compared with 10.1 percent of housing units in the basic sample.

[24]For each observation, the contribution to the basic sample and each of the supplemental samples can be estimated using the observation probability of selection assuming only the basic sample was selected (basic sample probability) and the probability of selection assuming that the basic sample and the supplemental samples were selected (total sample probability). If the basic sample probability equaled the total sample probability, the observation was part of the basic sample. If the basic sample probability was less than the total sample probability, then the observation could have been in either the basic sample or one of the supplemental samples. In this case, the ratio of the basic sample probability to the total sample probability is used to assign a portion of the sample to the basic sample and a portion to the supplemental samples. (Note that this ratio equals the inverse of the ratio of the sampling rate for the basic sample to sampling rate for the total sample.) In particular, if the basic sample probability is 60 percent of the total sample probability, then the observation counts as 0.6 observations in the basic sample and 0.4 observations in either of the two supplemental samples. Which supplemental sample gets the estimated 0.4 observations can be determined by the type of SSU, interviewer's judgment of the age of the housing units and the interviewer's judgment of the income of the households in the listing segment.

Table A3. Housing Units Constructed in 1987 or Later in 1993 RECS: Basic and Supplemental New Construction Samples

Year Construction of Housing Unit Completed	Basic Sample Households		Supplemental Sample Households	
	Number	Percent	Number	Percent
All Households	4,921	100.0	1,333	100.0
1987 or Later	495	10.1	813	60.9
Before 1987	4,425	89.9	521	39.1

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457, A and B of the 1993 Residential Energy Consumption Survey (RECS). RECS Public Use Data Files and unreleased data.

Primary Sampling Units (PSU's)

PSU's are either metropolitan areas containing a central city of 50,000 or larger population, or they are groups of counties containing small cities and rural areas. The United States was divided into PSU's from which a sample of PSU's was selected.

Secondary Sampling Units (SSU's)

A number of SSU's, usually 10 or more, are selected in each PSU. SSU's consist of one or more Census blocks, selected directly from Census statistics. Blocks are combined, as necessary, to create SSU's that contain at least 50 housing units.

In most cases, a detailed listing of street addresses (with other description, as necessary) is created for the entire SSU. Some SSU's that contain very large numbers of housing units are divided into smaller listing segments and one listing segment is selected for the detailed address listing.

Ultimate Clusters

Specific addresses chosen from each of the listing segments comprise the ultimate clusters of the 1993 RECS sample. Each of these clusters contains approximately 6 housing units.

Household Survey

A complete RECS interview consists of a completed household questionnaire and a signed Authorization Form. Interviewers used Form EIA-457A, "Household Questionnaire," to conduct the personal interviews in the sampled housing units. The Authorization Form allowed the interviewing contractor to obtain records of energy consumption from the housing unit's energy supplier(s).

A total of 9,869 units were eligible to participate in the RECS. Completed interviews were obtained for 7,111 (81.2 percent) of these households. This section describes the procedures involved in collecting the completed interviews.

Conducting the Interviews

Data Collection Dates

Approximately three-quarters of the personal interviews were completed between October 1993 and mid-February 1994; 99 percent were completed by mid-March 1994. In a few sample locations with low response rates interviewing continued through March 1994. Telephone interviewing began late in March 1994 and continued through late April. We continued to receive Authorization Forms throughout May 1994. All of the 115 completed mail questionnaires were received in May 1994.

The Interview

The interviews were conducted with the householder or the householder's spouse and lasted , on average, 64 minutes, with 78 percent of the interviews lasting between 30 and 75 minutes. The questions covered energy-related features of the household such as the type and amount of insulation, the number of windows and doors, the type of heating and cooling systems, the fuels used for heating and cooling, energy conservation improvements, the receipt of government assistance for the cost of heating, and demographic data on household members. The interview also collected information about the characteristics and use of vehicles available to the household for use in the Residential Transportation Energy Consumption Survey.

At the end of the interview, respondents were asked to sign an Authorization Form and the interviewer also measured the dimensions of the housing unit. (See "Estimates of Housing Unit Size" in Appendix B, "Quality of the Data.")

Interviewer Training

In October 1993, three-day regional training sessions were held in four cities: Chicago, IL; Los Angeles, CA; Atlanta, GA; and Washington, DC. These sessions were attended by 212 (91 percent) of the 234 interviewers who completed at least one personal interview. Each session was led by a group of trainers who had attended a two-day trainers' workshop in Princeton, NJ. All training sessions were monitored by Department of Energy staff.

Training materials, including a 138-page manual, *Instructions for Interviewers, 1993 RECS*, were sent to all interviewers prior to the training session. All interviewers were required to review the training materials and complete a practice interview before attending the training session. These practice interviews were sent to the survey contractor, evaluated by the contractor's staff, and returned to the interviewers at training session. A completed evaluation form accompanied each practice questionnaire and, where appropriate, comments were written in the questionnaire margins.

The three-day training session for interviewers was based largely on the *Instructions for Interviewers, 1993 RECS* manual. The training sessions included: discussion of general interviewing techniques, background on the Residential Energy Consumption Survey series, instruction on sampling issues and the use of the address lists, a question-by-question review of the household questionnaire, procedures for measuring respondents' homes, a discussion of how to find and record Vehicle Identification Numbers (VIN's), and a review of administrative requirements. In one large meeting, one of two senior trainers instructed the entire group of interviewers on basic concepts. Interviewers and trained facilitators subsequently formed small groups, which worked through exercises that reinforced the concepts learned in the large group. Individual, remedial instruction was given by the senior trainers to certain interviewers whose understanding of the work appeared inferior to that of the group. In the final small-group session, each interviewer took an open-book quiz, which was reviewed immediately thereafter.

In January 1994, a special, two-day version of the three-day training was held in Atlanta, GA, to train additional interviewers. Since only 11 interviewers attended, all training was done in a small group. Four interviewers who could not attend any of the regional trainings were trained on the telephone.

The first two RECS interviews completed by each interviewer were reviewed by the contractor's staff. Extensive written feedback was given to each interviewer and additional telephone training was provided when warranted.

The Interviewers

A total of 234 interviewers completed one or more personal interviews for this study. Eighty-three interviewers (35 percent) had completed interviews on a prior RECS. The remainder were conducting their first RECS, but had interviewing experience either with other survey research organizations or with the U.S. Bureau of the Census.

Interviewers were paid on an hourly basis for their work on RECS, which included time for home study, review of completed interviews, actual interviewing time, and travel to and from sampled housing units. The use of personal vehicles and other travel expenses were reimbursed at standard mileage rates. Interviewers working in locations believed to present a hazard to their safety were compensated for the use of an escort.

Interviewers conducted an average of 30 interviews. Twenty-six interviewers completed fewer than six interviews each, with an average of 3 per interviewer. Thirty-seven interviewers completed 50 or more interviews each, with an average of 82 per interviewer. Twenty percent of the personal interviews were verified by telephone or mail to ensure that interviews were conducted as intended.

Data Collection Procedures

In an effort to minimize nonresponse and, therefore, maximize the validity of the survey data, a multiwave, multicontact approach was employed. Before the initial contacts, a letter was sent to each household with a street address. The letter, from the Director of the Office of Energy Markets and End Use, briefly described the purposes and stressed the importance of the survey. Beginning in October 1993, interviewers made up to seven or more callbacks at different times of the day, throughout the week, in an effort to minimize the number of uncontacted households. The interviewers also queried neighbors regarding the most opportune times to contact the prospective respondent. By the end of the first wave, it was apparent that 198 addresses were nonresidential and an additional 829 were ineligible (Table A4). Some 5,434 personal interviews were completed, leaving 3,408 nonrespondents in this wave.

A second wave was initiated in an effort to contact households that were not available during the first wave and to attempt to convince selected first-wave refusals to reconsider. A new set of letters preceded the renewed effort and, in most cases, the sampled housing units were assigned to a different interviewer. Again, up to seven or more attempts were made to contact the prospective respondents. At the end of this wave, an additional 70 addresses were found to be ineligible. As a result of the second wave, an additional 1,104 interviews were completed, leaving 1,940 nonrespondents.

A third wave was initiated in an effort to reach nonrespondents in a number of locations that had low completion rates. Nineteen addresses were found to be ineligible and an additional 380 personal interviews were completed in the third wave.

Next, telephone interviewers attempted to contact households where a personal interview was not completed and for whom we already had or were able to acquire a telephone number (using a CD-ROM-based reverse directory). The telephone questionnaire, an adapted version of the mail questionnaire for use on the phones, was administered to respondents via computer-assisted telephone interviewing (CATI). Interviews were completed with 197, or 25 percent, of the 786 households eligible for this phase of data collection.

These households were mailed Authorization Forms and asked to sign and return them (a telephone interview was counted as complete only if the signed Authorization Form was returned by the household). The form was accompanied by letters from the Director of Energy Markets and End Use and the survey contractor's Project Director stressing the importance of the research and asking for their cooperation. Interim reminder calls were made to households who hadn't returned their signed forms.

Seventy-four, or 38 percent, of the 196 Authorization Forms were returned (one household was dropped because they completed a personal interview after the telephone contact). Four other (of the 196) households did not pay for their fuels; since an authorization form was not required, these were also considered complete. A total of 78 additional interviews were generated from this effort.

Table A4. Interviews Completed by Stage in the 1993 RECS

Units	Personal Interviews Attempted			Status After Third Wave	Status After Telephone Followup	Status After Mail Followup	Final Status
	First Wave	Second Wave	Third Wave				
Total Listed Units	9,869	3,114	1,282	9,869	786	1,528	9,869
Out of Scope Units							
Business, Other	67	0	0	67	--	--	67
Not Habitable	42	0	0	42	--	--	42
Nonhousing Unit	89	0	0	89	--	--	89
Subtotal Out of Scope	198	0	0	198	--	--	198
Housing Units	9,671	3,114	1,282	9,671	786	1,528	9,671
Ineligible Units							
Vacant	664	42	6	712	--	--	712
Seasonal Vacant	165	28	13	206	--	--	206
Subtotal Ineligible	829	70	19	918	--	--	918
Eligible Units (or number contacted)	8,842	3,044	1,263	8,753	786	1,528	8,753
Not Completed							
No One Home	1,177	657	339	233	--	--	196
Eligible Respondent Not Home	117	76	22	45	--	--	38
Refused[1]	1,741	926	423	1,335	--	--	1,201
Illness	58	28	9	37	--	--	31
Language Barrier	92	26	4	40	--	--	39
Wrong Respondent or Unit	17	9	5	11	--	--	11
Prohibited Access (Code 77)[2]	60	111	32	17	--	--	17
Other	146	107	49	117	--	--	109
Subtotal Not Completed	3,408	1,940	883	1,835	--	--	1,642
Total Interviews Completed	5,434	1,104	380	6,918	78	115	7,111

[1]A household that refused an interview during any one of the three waves was classified as a "refusal" for the status after the third wave, even though no one was at home in the second or third wave.

[2]Includes households that moved after initial contact.

-- Data not applicable.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A and B of the 1993 Residential Energy Consumption Survey (RECS). RECS Public Use Data Files and unreleased data.

In a final attempt to reduce nonresponse, an abbreviated version of the questionnaire (adapted for self-administration) was mailed to most of the remaining nonrespondents. As a result of this effort, 115 additional households responded. After three waves of personal interview attempts, a telephone contact, and the mailed questionnaire, 1,642 households or 18.8 percent of all eligible housing units had not responded.

These efforts were successful in accomplishing the following improvements in response.

- Approximately 79 percent of the households were contacted and agreed to be interviewed personally. Roughly 1 percent of households granted a telephone interview and satisfied the Authorization Form requirement. An additional 1 percent of the sampled households completed and returned mailed questionnaires.

- Of the 7,111 responses, 76.4 percent were obtained during the first wave of contacts; 15.5 percent were obtained during the second wave; and 5.3 percent resulted from third-wave contacts. Some 1.1 percent responded to the telephone followup and 1.6 percent responded to the mailed questionnaire.

- Of all households that participated in the personal interviews, 24.2 percent required only one visit in the first wave, and 60.6 percent were completed with no more than two first-wave callbacks.

- In the second and third waves, a total of 701 personal interviews (representing 10.1 percent of all completed personal interviews) were conducted with respondents who had previously refused to participate. Sixty-one households who refused to participate in an in-person interview did complete a telephone interview and returned the signed Authorization Form. These households represent 78.2 percent of all completed telephone interviews.

In addition, of the 115 mailed questionnaires that were completed and returned, 73 were from households that refused to participate in person.

Of special concern during the fieldwork was the prevalence of sample units where access was prohibited primarily because of security measures. Special efforts to contact officials charged with the security reduced the number of households we could not contact to 17, down from a high of 111 households at the end of the second wave (Table A4). Households with prohibited access constituted a very small part of the total 1,642 households where we could not complete an interview.

Response Rates and Household Characteristics

This section of the report compares various response and nonresponse rates across Census region, urban status, and housing structure type (Table A5). As evident in this table, personal interviewers were most successful in the South (81.0 percent) and the Midwest (80.4 percent), in rural areas (84.2 percent), and in single family and mobile homes (79.6 percent). Conversely, the interviewers had their lowest success rates in the Northeast (75.8 percent), in urban and suburban areas (77.6 percent), and in buildings with two to four residential units (74.7 percent). When comparing these groups, it is important to remember that their characteristics are not necessarily independent. For example, apartment buildings are concentrated in urban areas.

The total response-rate patterns generally were not affected by including the mailed-questionnaire responses and telephone interviews. However, response rates for the mail and telephone efforts tended to be highest where the refusal rate to the personal interview was highest.

Table A5. Response Rates in the 1993 RECS by Region, Urban Status, Type of Structure, and Rotation Groups
(Percentage of Eligible Housing Units)

Housing Characteristics	Response Rates[1]					Personal Interview Nonresponse Rates	
	Personal Interviews	Followup Efforts			Total Responses	Refusals	Unable to Contact
		Telephone	Mail	Total			
Total	79.0	0.9	1.3	2.2	81.2	15.3	5.7
Census Region							
Northeast	75.8	1.0	1.5	2.6	78.3	16.6	7.7
Midwest	80.4	1.5	1.4	2.9	83.3	15.5	4.1
South	81.0	0.7	1.1	1.8	82.8	13.8	5.2
West	77.9	0.5	1.4	1.9	79.8	16.0	6.1
Urban Status							
Urban (Central City)	77.8	0.6	1.1	1.7	79.4	15.5	6.8
Suburban	77.6	1.1	1.9	2.9	80.5	17.1	5.4
Rural	84.2	0.9	0.6	1.5	85.7	11.1	4.7
Structure Type							
Single-Family or Mobile Home	79.6	1.0	1.3	2.3	81.9	15.8	4.6
Buildings with Two to Four Units	74.7	1.1	1.4	2.5	77.1	17.0	8.4
Buildings with Five or More Units	78.6	0.3	1.3	1.7	80.2	12.0	9.4

[1]As a percent of the total eligible number of housing units.
Note: Because of rounding, data may not sum to totals.
Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457, A and B of the 1993 Residential Energy Consumption Survey (RECS). RECS Public Use Data Files and unreleased data.

Data Editing

Completed interviews were mailed by the interviewers to the survey contractor headquarters. The first step in the review process was to verify the accuracy of the basic identifying information. Second, the questionnaires were manually reviewed to ensure completeness and logical consistency of selected patterns of responses. Third, the questionnaires were prepared for translation into machine-readable form. Keypunching of the data was 100 percent verified. Finally, the data were machine edited to further ensure completeness, logical consistency, and the legitimacy of coded values.

The contractor attempted to resolve inconsistencies or ambiguities in the data internally, by referencing other parts of the questionnaire. When these efforts failed to resolve an important problem, particularly those involving heating fuels or heating equipment and/or relationships between questionnaire responses, the contractor made a followup contact with the rental agent or a telephone contact with a member of the household in question.

Adjusting for Nonresponse

The two major types of nonresponse are unit nonresponse and item nonresponse. Unit nonresponse occurs when a sampled household does not participate in the survey. Item nonresponse occurs when a particular item of interest is missing from a completed questionnaire. With both types of nonresponse, the missing data must be imputed. The next two sections provide details on the procedures followed for each type of imputation. A third section deals with a special category of item nonresponse--the size of housing units in square feet.

Unit Nonresponse

Weight adjustment was used to reduce unit nonresponse bias in the survey statistics. Weights were calculated for each sample household. The household weight reflected the selection probability for that household and additional adjustments. These adjustments included correcting for potential biases arising from the failure to list all housing units in the sample area and failure to contact all sample housing units. Contacts were not successful with 18.8 percent of the eligible units.

The adjustment for these noninterviews (i.e., unit nonresponse) was designed to spread the effects of nonresponse over the subset of interviewed households sharing similar characteristics. Clusters of noninterview adjustment cells were formed according to the following sequence:

- Geographic domains: Clusters of PSU's in the major geographic domains used in the sample stratification. These clusters included the nine Census divisions, Alaska, Hawaii, and the self-representing PSU's (i.e., the large metropolitan areas) in the four largest Census divisions.

- Weighting classes: These are based on the differential sampling of low-income households and newly constructed housing units. For low-income households clusters of SSU's were oversampled based on income and the type of home-heating fuel. Weight classes for newly constructed housing units were determined by interviewers' estimates (made at the time of field listings) of the date of construction of each housing unit. Also, separate clusters were created for subsampling in large segments.

- Weather zones: Geographic areas based on county-level long-term heating and cooling degree day averages.

- Housing unit type: Single-family, detached or attached; multifamily, two to four units or five or more units.

A large number of weight-adjustment cells were formed by the cross-tabulation of the characteristics listed above. In general, the noninterview weight was equal to the total number of households in the weight adjustment cell (interviews plus noninterviews) divided by the number of interviews. However, when this weight adjustment was greater than 2.0, cells were collapsed until the noninterview weight was reduced to 2.0 or below. Cells were collapsed, as necessary, in the reverse order of the listing of characteristics above. Housing unit types were collapsed first, followed, if necessary, by weather zones, and so on.

The failure to list all housing units in the field-listing task is a common problem in surveys of this type. The result is an undercount of housing units in the sample area and, hence, an underestimate of the number of households in the universe. The undercount in the 1993 RECS was in the range of 4 to 5 percent. This problem was treated in two ways in the RECS. One treatment occurred during the interviewing process. The second treatment occurred in the estimation process. During the interviewing stage, unlisted housing units or households were discovered by querying the responding household to determine if other households were present in the unit. In addition, the interviewer was instructed to conduct an interview at all housing units contained in the geographical area between the interviewed household and the next listed address. This method reduced the number of missed households, but did not completely eliminate the noncoverage problem.

The noncoverage problem was also treated by using ratio estimation to adjust selected estimates of household counts to official population values. Ratio adjustment took place in five stages for the 1993 RECS.

First Stage. The first-stage adjustment was computed from Census information for PSU's in NSR strata only. The purpose of this adjustment was to reduce the contribution of the variance arising from the sampling of PSU's. A separate factor was created for each of 36 cells (four Census regions classified by 9 space-heating fuel categories). The factors varied from 1.1688 for natural gas in the Northeast to 0.7897 for liquefied petroleum gas in the Midwest. The implementation of this factor reduced somewhat the amount of variance caused by the sampling of PSU's. The first-stage adjustment for Cell c is given by:

$$R_{1c} = N_c / M_c \qquad (7)$$

Where N_c is the total number of households (1990 Census population) in Cell c for all PSU's in RECS NSR strata (including those PSU's not selected for RECS). M_c is an estimate of N_c obtained from the 1990 Census data for the NSR PSU's that were selected for the 1993 RECS. In particular, M_c is given by the sum (over all NSR PSU's selected for RECS) of the product of the PSU sampling weight and the number of households in Cell c (1990 Census population) for the selected PSU's.

For all observations in NSR PSU's, the household's weights were multiplied by R_{1c} where c is the cell in which the observation falls.

Second Stage. The second-stage factor adjusted the weights from the survey so that the sum of the weights in the 13 Division-State categories shown in Table A6 were equal to the CPS estimates for the population in the 13 categories. The second-stage adjustment for Category k is given by:

$$R_{2k} = H_k / G_k \qquad (8)$$

Where H_k is the CPS estimate of the number of households in Category k, and G_k is the sum of the RECS households' weights before the second-stage ratio adjustment over all households in Category k. H_k is the July 1993 value for each of the 13 cells, based on a linear extrapolation from the March 1992 and March 1993 CPS estimates.

For all observations in Category k, the households' weights were multiplied by R_{2k}. This second-stage factor reduced the between-PSU variance.

Table A6. U.S. Population Estimates Used as Controls in Ratio Adjustment of Sampling in the 1993 RECS

	Thousands of Households
New England	5,067
Middle Atlantic (minus New York State)	7,607
East North Central	16,352
West North Central	6,949
South Atlantic (minus Florida)	11,793
East South Central	6,002
West South Central (minus Texas)	3,682
Mountain (minus California)	5,359
Pacific	3,870
New York	6,803
Florida	5,574
Texas	6,447
California	11,125
Total United States	**96,630**

Source: Linear extrapolation from U.S. Bureau of the Census, Current Population Survey, March 1992 and March 1993.

Third Stage. The third stage in the weight adjustments was similar to the second stage. The only difference was that, instead of the 13 categories used in the second stage, the following 12 combinations of MSA status and Census region were used:

MSA Status	Census Region
Central City of MSA	Northeast
Central City of MSA	Midwest
Central City of MSA	South
Central City of MSA	West
Balance of MSA	Northeast
Balance of MSA	Midwest
Balance of MSA	South
Balance of MSA	West
NonMSA	Northeast
NonMSA	Midwest
NonMSA	South
NonMSA	West

This third-stage factor reduced both the between-PSU variance and the within-PSU variance.

Fourth Stage. The fourth stage in the weight adjustments was similar to the second stage. The only difference was that, instead of the 13 categories used in the second stage, the following three categories were used:

1. One-person households, male householder,
2. One-person households, female householder,
3. All other households.

The purpose of this fourth stage was to reduce possible bias in the RECS sample due to undercoverage of one-person households, particularly those comprised of a single male.

Fifth Stage. The fifth and final stage in the weight adjustments was exactly like the second stage. The final household weights will (for each of the categories in Table A6) sum to control totals shown in that table.

Item Nonresponse

Item nonresponse occurs when respondents do not know the answer or refuse to answer a question or when an interviewer does not ask a question or does not record an answer. Imputations were made for nonresponse on about two-thirds of the nonresponse items.

"Hot-deck" imputation was the method used most frequently (Table A7). The hot-deck procedure requires sorting the file of households by variables related to the missing item. A household is then selected that has the same value for the related variables, and this "donor" household supplies the value for the variable that is missing in the "donee" household.

Table A7. Imputation Methods Used for the 1993 RECS Household Questionnaire

Imputation Method	Questionnaire Items Subject to Imputation	
	Number	Percent
Not Imputed	181	32
Imputed	378	68
Hot-Deck	287	51
Random	39	7
Deductive	17	3
Allocation	35	6
Total Items*	559	100

*There are an additional 43 questionnaire items for which there were no missing values or for which values were determined by explicit editing rules in the initial stages of questionnaire editing.

Source: Energy Information Administration, Office of Energy Markets and End Use, Form EIA-457 A of the 1993 Residential Energy Consumption Survey (RECS). RECS Public Use Data Files.

Less frequently used imputation methods included random selection from the known values of a variable and deductive and allocation procedures.

The random-selection procedure was used primarily to impute for continuous numerical values and missing numbers that were conditional on other numbers (e.g., number of storm windows is conditional on total number of windows).

Deductive procedures were used primarily for missing information on fuels used for specific purposes and on methods of payment for fuels. The amount of missing data on these items was generally quite small. Other information available from the questionnaire or from related data sources (utility bills and rental agent survey) provided reasonably accurate assignments for the missing data.

Allocation procedures use explicit rules for assigning values to missing information about a household member's age, sex, or relationship to the householder. The procedures are based on the configuration of known information on these variables for other household members.

Table A8 lists the most frequently imputed items in the 1993 RECS. The amount of item imputations for the 193 households receiving telephone interviews or mail questionnaires was considerable, since these questionnaires contained only a small subset of questions from the household interview. For the telephone and mail questionnaires, a modified hot-deck imputation method was used. A hot-deck matrix was created for phone/mail questionnaires and personal-interview households using Census region, type of housing unit structure, space-heating fuel, hot-water fuel, and presence and type of air-conditioning. Whenever possible, a donor personal-interview household was chosen for each phone or mail questionnaire household from the same cell of the hot-deck matrix. For 99 percent of the phone/mail questionnaires, donors matched on all hot-deck variables.

Because each cell of the matrix usually contained several possible donors, a donor was chosen from the cell on the basis of how closely it matched the phone/mail questionnaire household on a number of additional variables. These variables were income, number of household members, number of household vehicles, age of householder, tenure, number of rooms, model year of newest vehicle, and household structure (married couple, other). Except for information on household vehicles, which was taken directly from the phone/mail questionnaire, the entire set of responses from the donor household was imputed to the phone/mail questionnaire household. This means that all responses for phone/mail questionnaire households are imputed except for the following: weather data, fuel-consumption data acquired from the household's energy suppliers, the geographic location of the phone/mail questionnaire household, information about household vehicles, and those items in the hot-deck imputation process for which an exact match was obtained.

Table A8. Household Questionnaire Items Most Frequently Imputed in the 1993 RECS

Imputed Item	Cases Imputed	Percentage of Total Sample[1] (6,918)	Method of Imputing	Question Number on Questionnaire
Income in past 12 months	818	12	Hot deck	L-10
Number of windows replaced	815	12	Hot deck	H-12
DSM program participation	655	9	Hot deck	I-2
Regular maintenance of heating system	440	6	Hot deck	H-3 b
Availability of natural gas	430	6	Special/Hot deck	B-12
Year building constructed	392	6	Hot deck	B-7
Type of defrosting of separate freezer	388	6	Hot deck	G-12 c
Use of whole house cooling fan	379	5	Hot deck	H-15 d
Use of attic exhaust fan	377	5	Hot deck	H-15 c
Amount of heat from main equipment	356	5	Hot deck	C-5
Use of ceiling fan	353	5	Hot deck	H-15 e
Use of window fan	351	5	Hot deck	H-15 a
Portion of house cooled by air-conditioning	343	5	Hot deck	D-2
Use of portable fan	339	5	Hot deck	H-15 b
Size of separate freezer	323	5	Hot deck	G-10 c
Age of separate freezer	299	4	Hot deck	G-9 c
Type of basement or foundation	294	4	Hot deck	O-2
Years expects to remain in home	277	4	Hot deck	O-5
Water heater size	264	4	Hot deck	E-3
Age of replacement windows	262	4	Hot deck	H-14
Basement insulation	247	4	Hot deck	O-4
Quality of home's insulation	223	3	Hot deck	H-1
Use of central air-conditioning	222	3	Hot deck	D-4
Home is part of condominium	219	3	Hot deck	B-4
Knowledge of energy assistance programs	219	3	Hot deck	M-2
Government help weatherizing	213	3	Hot deck	M-1

[1]Mail questionnaires and telephone interviews are not included in the percentage. To account for these, add three percentage points to the percentage points given.

Source: Energy Information Administration, Office of Energy Markets and End Use, Form EIA-457 A of the 1993 Residential Energy Consumption Survey (RECS). RECS Public Use Data Files.

Rental-Agent Survey

The Rental-Agent Survey is an adjunct to the Household Survey and is used to verify information furnished by certain RECS households on fuels used, main heating equipment, how fuels are paid for, and other energy-related topics. Telephone interviews were conducted using Form EIA-457C, "Rental Agents, Landlords, and Apartment Managers Telephone Survey," with the rental agents and landlords of the following types of RECS households: households that did not pay for their fuels, households who paid a third party for their fuel and who rent their living quarters or own and occupy living quarters in a multi-unit building.

The interviews with rentals agents or their representatives were conducted in early Summer 1994. Altogether, 285 landlords or rental agents were interviewed; these interviews encompassed 625 households in 326 buildings. The 625 households represented 81.8 percent of the 764 total households who were eligible for inclusion in the rental agent survey.

Comparisons were made between rental agents' and household respondents' reports on their building's year of construction; main space-heating and water-heating fuels; main space-heating equipment; fuel for cooking range; central air-conditioning information; and how the fuels for all of these uses are paid for. Each discrepancy was examined and changes were made to the household data whenever it was judged that the rental agent was more knowledgeable than the household respondent on the different items of information.

Generally, the person who paid for a specific fuel for a specific use was deemed the more knowledgeable person. However, error resolutions were made only after careful examination and consideration of all available sources of information including the rental-agent questionnaire, the household questionnaire, utility-survey data, and questionnaires of other households located in the same building. Landlords and rental agents were usually judged more knowledgeable about the year the building was built and the type of main heating equipment; household respondents were typically deemed more reliable sources concerning central air-conditioning and fuel for cooking range.

Confidentiality of Information

The EIA does not receive nor take possession of the names or addresses of individual respondents or any other individually identifiable energy data that could be specifically linked with a household respondent. All names and addresses and identifiable information are maintained by the survey contractor for verification purposes only. The household records that are placed on the public use data file do not have name or address information. Additional measures have been taken to mask the data for further confidentiality protection. Unlike other EIA surveys, the consumption surveys pledge confidentiality to their respondents.

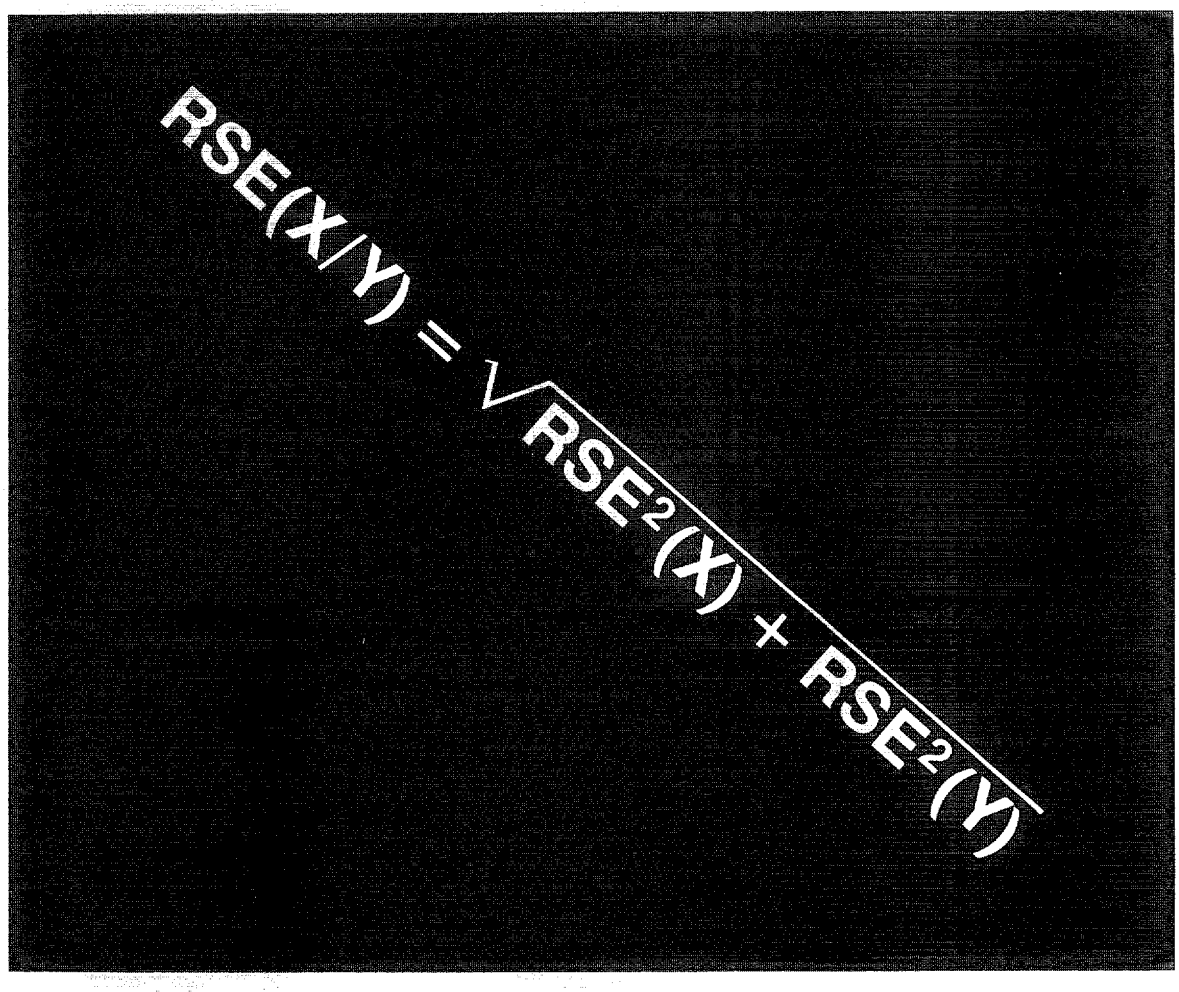
Public-Use Data File Preparation

Housing Characteristics 1993 was produced with the survey data file received in November 1994. These data come from the Household Survey and the adjunct Rental-Agent Survey. The Energy Suppliers Survey data were added and a later data file (March, 1995) will be used to produce the *Household Energy Consumption and Expenditures 1993* report. Following this publication, a final data file containing both the housing characteristics and energy supply data for the 1993 RECS will be prepared for release to the public. Geographic identifiers other than the Census region and Census division are removed from the data to insure that the identity of the individual respondents is kept confidential.

The public-use data released to the public through the National Technical Information Service (NTIS). (See Appendix F for information on how to order this data file from NTIS.) The file is available both on magnetic tape for use with a main frame computer and on floppy diskettes for use with personal computers.

Appendix B

Quality of the Data



Appendix B

Quality of the Data

Introduction

All the statistics published in this report are estimates of population values, such as the total amount of natural gas consumed in housing units that use natural gas. These estimates are based on observations from a randomly chosen subset of the entire population of occupied housing units. As a result, the estimates can differ from the true population values. This appendix deals with the nonsampling and sampling errors and other related factors affecting the quality of the data. The two main sections of this appendix are: Nonsampling Error and Estimation of Sampling Error.

The differences between the estimated values and the actual population values are of two types, sampling errors and nonsampling errors. Nonsampling errors are also known as systematic errors or biases, and are presented in the section "Nonsampling Error."

In addition, response adjustments and ratio estimations were incorporated into the survey estimator to help reduce both sampling and nonsampling error. Nonresponse (both unit and item) adjustment procedures for the Household Survey are discussed in Appendix A, "How the Survey Was Conducted" in the sections entitled "Adjustments for Unit Nonresponse" and "Adjustments for Item Nonresponse."

Unlike the sampling error, the magnitude of the nonsampling error cannot be estimated from the sample data. For this reason, avoiding biases and systematic errors at the outset is a primary objective of all stages of survey design and field procedures. The wording and format of survey questionnaires; the procedures used to select and train interviewers; and the quality control built into the data collection, receipt, and processing operations were all designed to minimize these sources of error. For a discussion of these procedures, see Appendix A, "How the Survey Was Conducted."

Sampling error is the random difference between a survey estimate and a population value that occurs because the survey estimate is calculated from a randomly chosen subset of the entire population. The section, "Estimation of Sampling Error in this appendix," describes how the sampling error is estimated and presented for statistics given in this report.

Nonsampling Error

Nonsampling errors can occur for the following reasons:

- Differences between the target population (residential sector) and the population from which the sample is selected (occupied primary residential housing units)
- Interviewer errors, respondent misunderstandings, questionnaire-design errors, and data-processing errors
- Systematic nonresponse for certain segments of the population (unit nonresponse)
- Nonresponse on certain questions from the questionnaire for some respondents (item nonresponse).

The segments, "Completeness of Data" and "Quality of Specific Data Items," describe some of the sources of nonsampling error and how the survey is designed and conducted to minimize such errors. "Completeness of Data," describes the nonsampling errors that occur for the first reason in the list above.

"Quality of Specific Data Items," discusses the derivation of some statistical data and reviews some of the nonsampling errors that occur for the second, third, and fourth reasons in the list above. These errors would be expected to occur even if the survey attempted to contact the occupants of every occupied housing unit in the country. (For example, the results of the Decennial Census conducted by the Bureau of the Census are subject to these nonsampling errors.)

Completeness of Data: Noncovered Housing Units

Data are not collected for the following two types of housing units:

- **Vacant housing units.** These units may use energy for minimal heating for protection from the weather and minimal lighting for security. The American Housing Survey (AHS) conducted by the Bureau of the Census estimated that there were 6.4 million vacant, year-round housing units (that were not held for "occasional" use) in 1993.

- **Seasonal units or second homes for the owner's use.** In the AHS estimates there were 2.5 million year-round homes held for "occasional" use and 3.1 million "seasonal" units in 1993.

These two types of units are not included in the RECS survey primarily because of the difficulty in acquiring data and limitations in the availability of funds for the RECS. The RECS data are collected by interviewing an occupant of the housing unit. By definition, a vacant housing unit is not occupied at the time RECS field workers attempt to interview the occupants of the unit. Hence, for vacant units, someone other than the occupants would need to be contacted. For many vacant units, this would add substantially to the cost of acquiring data for the unit. By definition, second homes are housing units that are not the primary residence of the occupants. Hence, for many second homes, the occupants may be living somewhere else at the time the interviewers are in the neighborhood of these second homes. As a result, contacting and interviewing the occupants of second homes may be costly and difficult.

Some effects of these omissions are an underestimation of the total number of residential housing units, the number of units in subcategories, and the amount of energy consumed in the residential sector.

Quality of Specific Data Items

Estimates of Window Stock and Window Area

Respondents to the 1993 RECS were asked to report the number of windows in their home (Question H-8). Each window that opened separately was counted as one window. Also counted were windows fixed in place, e.g., picture windows. Basement, attic, garage, and porch windows were included only if they were located in heated areas of the home. The estimate of total windows in the U.S. was a weighted total of the responses to this question.

The respondent was asked to select one description for most of the windows in their home (Question H-9). We did not ask for a description of each window in the home. Therefore, in order to estimate the number of windows of a particular description, we had to assume that every window in a given home was of the description reported in Question H-9.

The estimate of the number of windows that had been replaced was based on the question that asked whether all, some, or none of the original windows had been replaced (Question H-12). If all the windows had been replaced, then the number of windows replaced was equal to the number of windows in the home; if only some of the windows had been replaced, then we let the number of windows replaced equal one-third the number of windows in the home. If all the windows had been replaced, the type of replacement window was the same as the type reported to describe most of the windows in the home (Question H-9). If some had been replaced then their type was reported in a separate question (Question H-13).

Window area was based on the assumption that an "average" window was 15 square feet. This figure was based on an analysis of the 1980 RECS. In 1980, the RECS collected not only the total number of windows but also the number of small, medium, and large windows. A small window was defined as less than 6 square feet, medium as 6 to 24 square feet, and large as more than 24 square feet. We compared estimates derived from values using the three sizes (defining small as 4 square feet, medium as 15 square feet, and large as 30 square feet) and estimates made assuming all windows were "medium" sized windows (15 square feet). Estimates of total window area and mean window area by type of home and Census region did not differ much using the two methods. Therefore, we concluded that it was not necessary to collect the size category for each window because using 15 feet square feet as an average window size would produce reasonable estimates.

The number of sliding glass doors was collected in question H-6. Sliding glass doors were assumed to be a standard size of 6 feet by 6 feet 8 inches (40 square feet).

The computation of window area as a percent of floorspace used heated floorspace rather than total home area, because basement, attic, garage, and porch windows were included only if they were found in a heated area. About one percent of the households in the sample reported having no heated area in their homes. These homes were all located in the West or the South, so we assumed that no heating was required because of the climate. Since the windows in these homes were still counted, we used the total home area for these cases.

Poverty

The U.S. Bureau of the Census provides a threshold of poverty based on family income and the number of household members (Table B1). Households with incomes below the poverty threshold are defined as "Below 100 Percent of Poverty." Households with income below 125 percent of the poverty threshold are defined as "Below 125 Percent of Poverty." Because the RECS income data were collected using categories of income, an exact match of Census thresholds could not be made. Table B1 provides a cross-reference between the Census thresholds and the RECS income categories. An additional source of error in the determination of poverty status is the nonsampling error in the reported family income.

Table B1. Definition of Poverty in the United States as Used in the 1993 RECS
(Dollars)

Number of Persons per Family	Below 100 Percent of Poverty		Below 125 Percent of Poverty	
	1993 RECS Income Range Less Than[1]	Census Threshold[2]	1993 RECS Income Range Less Than[1]	125 Percent Threshold[2]
1 and respondent is 64 or Younger	7,500	7,517	9,000	9,396
1 and respondent is 65 or Older	7,500	6,930	9,000	8,663
2 and householder is 64 or Younger	10,000	9,726	12,500	12,158
2 and householder is 65 or Older	9,000	8,741	11,000	10,926
3	11,000	11,521	14,000	14,401
4	15,000	14,764	17,500	18,455
5	17,500	17,459	22,500	21,824
6	20,000	19,710	25,000	24,638
7	22,500	22,240	27,500	27,800
8	25,000	24,773	30,000	30,966
9 or More	30,000	29,605	35,000	37,006

[1]The income category that contained the Census threshold was taken as the upper limit in defining poverty when the Census threshold was equal to or above the midpoint of the income category. For example, the threshold of $7,517 was above the category $6,000 to $7,499, but was below the midpoint of $8,250 for the next highest category $7,500 to $8,999.

[2]Preliminary data from the Bureau of the Census (see Source). The average poverty thresholds were derived by increasing the 1992 thresholds by a factor of 1.02993, which reflects the percent change in the average annual Consumer Price Index between 1992 and 1993. These estimates may differ by a few dollars from the thresholds that will be published by the Bureau of the Census in their final report on the 1993 poverty population.

Sources: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A and B of the 1993 Residential Energy Consumption Survey (RECS); RECS Public Use Data Files; • U.S. Bureau of the Census, Housing and Household Economic Statistics Division, Poverty and Wealth Statistics Branch, private communication, September 1994.

Gas Central Air-Conditioning

Some respondents who have electric central air-conditioners incorrectly report that they have gas air-conditioners. In the 1993 RECS, the question on the fuel used to run the air-conditioner was deliberately worded in a way that would suppress answers that the fuel was natural gas or propane. The question in 1993 elicited 54 answers of natural gas and 5 answers of propane from a total of 6,918 personal interviews. This was somewhat fewer responses than received in the 1990 RECS when 74 respondents reported using natural gas and 3 propane out of a total of 4,840 personal interviews. There is a danger that the question discourages some who have gas air-conditioning from responding affirmatively, but the overriding bias in asking about air-conditioning fuel is an inflated estimate of gas air-conditioning. The best method available in the RECS is to look for a pattern in the natural gas utility bills that indicates increased usage during periods of demand for air-conditioning. When bills were not available, a follow-up call was made to the household to confirm usage of natural gas or propane. The final data file contained nine households confirmed to use natural gas and one household using propane for central air-conditioning.

Estimates of Housing-Unit Size

Interviewers for the 1993 RECS were given a retractable 50-foot metal tape measure to ascertain the dimensions of housing units. The instructions were to measure the "area enclosed from the weather." This included garages attached to the house, heated or finished attics, and basements enclosed from the weather (see "Floorspace" in "Glossary" for further definition). Interviewers indicated on a rough-drawn diagram of the floor plan which areas were heated and unheated and recorded the dimensions of these areas. Distinguishing heated areas from unheated areas separates the portion of the housing unit that places the demand on the heating system, and provides a more useful basis for analyzing residential energy consumption. All measurements were rounded to the nearest foot during the interview or during the editing process. Interviewers decided whether to measure the home from the inside, taking into account the thickness of inside walls, or from the outside.

Interviewers attempted to measure the size of all 6,918 housing units where personal interviews were conducted. In 6,563 cases, usable measurements were acquired. In 355 cases, the measurements either were not usable or were not made. Although most cases contained the basic information, some imputations were required to produce a final set of 3 measurements for the outside dimensions for each housing unit:

HOME AREA = total square footage of floorspace enclosed from the weather
HEATED = total square footage of heated floorspace
UNHEATED = HOME AREA - HEATED = total square footage of unheated floorspace.

Various pieces of information were missing and were imputed (Table B2). The following three sections describe the imputation procedures followed for each of the three major categories of data.

Table B2. Completeness of Data on Square Footage of Housing Units in the 1993 RECS

Amount of Information Collected	Number of Households	Percent
Complete Set of Dimensions	4,595	66
Outside Measurement of Home	2,990	43
Inside Measurements of Home	1,605	23
Some Data Missing	1,968	28
Information available on heated and unheated areas. Unknown whether dimensions are for inside or outside of home.	1,574	23
Total floorspace known but information on heated and unheated areas is missing. Also may be unknown whether dimensions are for inside or outside of home.	251	4
Basement dimensions missing.	73	1
Information available for all floors except basement. Basement total floorspace known, but information on heated and unheated areas for basement is missing.	70	1
No Usable Measurements	355	5
Total	6,918	100

Notes: • The floorspace for the 193 households responding by mail was imputed through a hot-deck procedure. • These mail questionnaires are not included in this table. • Components may not sum to totals due to independent rounding.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1993 Residential Energy Consumption Survey (RECS). RECS Public Use Data Files.

Treatment of Housing Units with Complete Measurements. Complete dimensions were available for 4,595 homes, but the measurements for the 1,605 homes where the measuring was done from inside the home needed to be standardized to outside dimensions. The scaling factor for adjusting inside dimensions to outside dimensions is a function of the floorspace of the first floor, the total floorspace of the home, and the type of housing unit (Equation 3).

$$SCALE = 1.15686 + .0000017 \times FSFF - .0000011 \times TFS - .11503 \times IMH + .065626 \times ISAH \quad (3)$$

Where:

FSFF is the floorspace of the first floor
TFS is the total floorspace of the home
IMH is the indicator variable for the mobile home and,
ISAH is the indicator variable for the single-family attached home.

The scale factor decreases when the dwelling is a mobile home and when the total floorspace increases. The scale factor increases as the floorspace of the first floor increases and when the dwelling is a single-family attached home. These scale factors, which increased the inside measurements, ranged from 1.04 to 1.22. The median was 1.16.

Equation 3 was developed in the following manner: Regression prediction equations were developed independently for homes measured from the inside and homes measured from the outside. Both equations were used to generate estimates of floorspace for homes measured from the inside. The relationship between the ratio of predicted "outside" to "inside" floorspace, the actual inside floorspace for the first floor, the actual inside total floorspace for these homes, and the housing type were used in fitting the regression Equation 3 for the scale factor.

Treatment of Housing Units with Some Missing Data. The 1,574 cases lacking information as to whether the measurements were made from inside or outside of the home, or a combination of inside and outside, were treated as outside measurements. This was because average predictions based on regression equations using homes measured outside matched average totals for this group very closely, while predictions based on regression equations using homes measured inside underestimated the total square footage.

The 251 cases lacking information on the ratio of heated to unheated space borrowed that ratio from housing units with complete data, on a PSU-by-PSU basis. For most of these cases, information was also lacking as to whether the measurements were inside or outside, and measurements were again assumed to be outside. In 22 of these 251 cases, the measurements were known to be inside measurements and scale factors were used to increase the floorspace estimates.

For the 73 cases with missing basement dimensions, the basement floorspace was imputed by using a simple regression based on the floorspace of the first floor. The heated and unheated areas were determined or imputed and then added to known totals for the remaining floors. In 16 of these 73 cases, the measurements for the remaining floors were known to be inside measurements and scale factors were used to increase the floorspace estimates.

There were 70 cases in which the ratio of heated to unheated space for the basement was unknown. This ratio was imputed by using an appropriate empirical distribution of heated to unheated ratios. Three such distributions were used: one for single-family homes with basements only; one for homes with a basement plus crawl space and/or slab; and one for basements of homes in buildings with two to four units. In 10 of these 70 cases, the measurements were known to be inside measurements and scale factors were used to increase the floorspace estimates.

Treatment of Housing Units with No Usable Measurements. The following regression equation was used for the 355 cases with no usable data. After HOME AREA had been imputed using this equation, the ratio of heated to unheated space was imputed using the same procedures described above for housing units for which that ratio was missing.

HOMEAREA= Intercept
x Dwelling Type Factor
x Heating Equipment Type Factor
x Household Type Factor

Intercept = 135.7 x NROOMS
+ 19.0 x WINDOWS
+ 106.0 x $(TOTBATH)^2$
+ 46.0 x NUMAPPL
+ 785.1 x HVCLSFUN

Where: NROOMS is number of rooms
WINDOWS is number of windows
TOTBATH is number of bathrooms
NUMAPPL is number of major appliances (freezer, refrigerator, dishwasher, clothes washer, clothes dryer, air-conditioner, color TV and black and white TV)
HVCLSFUN is a dummy variable that has a value of 1 if the housing unit has a basement

Dwelling Type Factor = 1
+ 0.095 x SFDTMSTR
- 0.274 x MOBHOME
- 0.031 x RWHS2STR

Where: SFDTMSTR is a dummy variable that equals 1 if the housing unit is a multi-story, detached single-family home
MOBHOME is a dummy variable that equals 1 if the housing unit is a mobile home
RWHS2STR is a dummy variable that equals 1 if the housing unit is a multi-story, attached single-family home

Heating Equipment Type Factor = 1
- 0.049 x (RMHTER + PORTHT + CKSTV)
- 0.001 x WOODMHT

Where: RMHTER, PORTHT, and CKSTV are dummy variables that equal 1 if the home's main heating equipment is a room heater, a portable electric or kerosene heater, or a cookstove, respectively
WOODMHT is a dummy variable that equals 1 if the home's main heating fuel is wood

Household Type Factor = 1
- 0.080 x RENTHOME
+ 0.054 x HIGHINCM
+ 0.043 x MIDDINCM
- 0.003 x (POORHSLD x SINGMHLD)
+ 0.077 x HOMEBA80
- 0.025 x HOMEBB59

Where: RENTHOME is a dummy variable that equals 1 if the household rents the home
HIGHINCM is a dummy variable that equals 1 if the household income is above $50,000
MIDDINCM is a dummy variable that equals 1 if the household income is between $25,000 and $49,999
POORHSLD is a dummy variable that equals 1 if the household income is between $0 and $13,999
SINGMHLD is a dummy variable that equals 1 if there is a single person in the household
HOMEBA80 is a dummy variable that equals 1 if the home was built after 1980
HOMEBB59 is a dummy variable that equals 1 if the home was built before 1959

The prediction equations for outside dimensions were used in the imputations because regression equations based on cases with inside measurements did not yield fits that were substantially better. This procedure eliminated the need to standardize these estimates to outside dimensions.

Estimation of Sampling Error

Sampling error is the random difference between a survey estimate and a population value. It occurs because the survey estimate is calculated from a randomly chosen subset of the entire population. The sampling error averaged over all possible samples would be zero, but there is only one sample for the 1993 RECS. Therefore, the sampling error is nonzero and unknown for the particular sample chosen. However, the sample design permits sampling errors to be estimated. This section describes how the sampling error is estimated and how they are made available to readers of this report who are interested in the precision of the estimates in this report.

Throughout this report, standard errors are given as percents of their estimated values; that is, as relative standard errors (RSE). The RSE is also known as the coefficient of variation. Computations of standard errors are more conveniently described, however, in terms of the estimation variance, which is the square of the standard error.

For a given population parameter Y that is estimated by the survey statistic Y', the relative standard error of Y', $RSE_{Y'}$, is given by:

$$\mathrm{RSE}_{Y'} = \left(\frac{S_{Y'}}{Y'}\right) \times 100 \ . \tag{4}$$

Thus the standard error of Y', is given by:

$$S_{Y'} = \left(\frac{\mathrm{RSE}_{Y'}}{100}\right) \times Y' \ . \tag{5}$$

This section provides an explanation and example of the procedures used to calculate approximate RSE's for each statistic shown in Tables 3.1a through 3.34b in Chapter 3. This section also includes a discussion of the derivation of the procedures used to calculate the approximate RSE's and explanations of the procedures used to calculate the RSE for percentages and for ratios.

For some surveys, a convenient algebraic formula for computing variances can be obtained. However, the RECS used a multistage area sample design of such complexity (see Appendix A, "How the Survey Was Conducted") that it is virtually impossible to construct an exact algebraic expression for estimating variances. In particular, convenient formulas based on an assumption of simple random sampling, typical of most standard statistical packages, are entirely inappropriate for the RECS estimates. Such formulas tend to give severely understated standard errors, making the estimates appear much more accurate than is the case. Instead, the method used to estimate sampling variances for this survey was balanced half-sample replication. The balanced half-sample replication method involves calculating the value for a statistic using the full sample and calculating the value for each of a systematic set of half samples. (Each half sample contains approximately one-half of the observations contained in the full sample.) The variance is estimated using the differences between the value of the statistic calculated using the full sample and the values of the statistic calculated using each of the half samples.

The half samples are determined by first collapsing the 116 strata used in the sample design into 78 "super" strata to achieve a pairing of the sampling strata. The observations in each of the "super" strata are divided into two sets to form a pair, where each set in the pair contained approximately one-half of the observations in the "super" strata. The 78 "super" strata can be divided into the following groups:

- Thirty-eight of the "super" strata consisted of two non-self-representing Primary Sampling Units (PSU's) belonging to the same Census division, with the observations from one PSU constituting one set in the pair and the observations from the other PSU constituting the other set.

- Thirty-one of the "super" strata consisted of single, large metropolitan areas that were sampled with certainty. The pairs for these "super" strata were formed by dividing the Secondary Sampling Units (SSU) selected from the PSU into two groups. The observations in one of the groups of SSU's constitute one set in the pair. The observations in the other group of SSU's constitute the other set. There was no between-PSU component of variance for self-representing PSU's.

- The nine remaining "super" strata each consisted of a single nonself-representing PSU that was treated as a self-representing PSU. These nine PSU's were not matched due to a desire to: (1) match PSU's with other PSU's in the same Census division, (2) match PSU's consisting of MSA's with PSU's consisting of other MSA's, (3) match PSU's consisting of non-MSA counties with other non-MSA PSU's, and (4) treat Alaska and Hawaii as two separate and unique strata.

Half-sample replication involved repeatedly drawing pair members from the 78 "super" strata. Each replication was called a "half sample" because only one member of the pair within each of the 78 "super" strata was selected. For each half sample, the sampling weights were ratio adjusted upward. The result of the adjustment is that the sum of the weights for each of the 13 cells (nine Census divisions and four States) equals the appropriate control total (See Table A6). In this way, each half sample can produce unbiased survey statistics based on roughly one-half of the data. Using different combinations of members from the 78 pairs, it is possible to produce a total of $2^{78} = 3 \times 10^{23}$ unique half samples. Although desirable for good variance estimation, such an extremely large number of half samples would be computationally infeasible. However, the method of balanced half-sample replication allows a small number of half samples (approximately equal to the number of "super" strata) to produce estimates of variance that are identical to estimates based on all possible unique half samples for linear survey statistics. The use of ratio adjustments in RECS means that even a statistic giving the number of households in a category is not a linear statistic. For nonlinear survey statistics, the variance estimate computed using the method of balanced half samples is approximately equal to the variance estimate computed using all possible half samples. With this balancing method, each half sample is constructed by using an orthogonal matrix to control the selection of pair members from the "super" strata. For the 1993 RECS, 96 balanced half samples were used in variance estimation.

The variances are estimated using the balanced half-sample replication method in the following way. Let Y' be an estimate of the population characteristic Y (for example, total number of households in the West Census region whose main space-heating fuel is natural gas). Then, the estimated variance of Y' is given by:

$$S_{Y'}^2 = \left(\frac{1}{96}\right) \sum_{k=1}^{96} (Y_k' - Y')^2 . \quad (6)$$

Where Y_k' is the k^{th} half-sample estimate of Y. The standard error of Y' is given by:

$$S_{Y'} = \sqrt{S_{Y'}^2} . \quad (7)$$

As mentioned above and in Appendix A, "How the Survey Was Conducted," the national total number of households is not estimated from the survey results. The household weights are ratio adjusted so that the total weighted number of households equals the number obtained from the CPS. The same is true for the total number of households in the 13 cells mentioned above (nine Census divisions plus four States). The balanced half-sample replicate procedure used for RECS assumes that the CPS numbers are exact and are not subject to error. Any error in the CPS results can be considered as a bias in the RECS results and not as part of the sampling error for RECS. The weights for each half sample are also constructed such that the national total and the total for the 13 cells match the CPS numbers. As a result, the half-sample estimate for the RSE of the national total number of households and the RSE's for the totals in the 13 cells will always be zero. Also, the half-sample estimate of the RSE will be close to zero whenever the statistic involved is a household count that is close to a control total. Examples of this are the national total for the number of households that use electricity and the number of households that have a refrigerator.

Generalized Variances

For every estimate in this report, the RSE was computed by the balanced half-sample replication methods described above. This RSE was used for any statistical tests or confidence intervals given in the text, or to determine if the estimate was too inaccurate to publish (RSE greater than 50 percent).

Space limitations prevent publishing the complete set of RSE's with this document. Instead, a generalized variance technique is provided, by which the reader can compute an approximate RSE for each of the estimates in the detailed tables. For the statistic in the i^{th} row and j^{th} column of a particular table, the approximate RSE is given by:

$$RSE_{i,j} = R_i \times C_j, \quad (8)$$

where R_i is the RSE row factor given in the last column of row i, and C_j is the RSE column factor given at the top of column j. This value for the relative standard error can be used to construct confidence intervals and to perform hypothesis tests by standard statistical methods. However, because the generalized variance procedure gives only approximate RSE's, such confidence intervals and statistical tests must also be regarded as only approximate.

Derivation of Row and Column Factors

The row and column factors are determined from a two-factor analysis of the table of RSE's on the basis of the model

$$\log(RSE_{i,j}) = m + a_i + b_j . \quad (9)$$

The least-squares estimates for this model are given by:

$$m = \overline{\log(RSE)}$$

$$a_i = \overline{\log(RSE_i)} - \overline{\log(RSE)} \qquad (10)$$

$$b_j = \overline{\log(RSE_j)} - \overline{\log(RSE)}$$

where $\overline{\log(RSE)}$ is the mean of $\log(RSE_{i,j})$ over all rows i and columns j, $\overline{\log(RSE_i)}$ is the mean over all columns j for a particular row i, and $\overline{\log(RSE_j)}$ is the mean over all rows i for a particular column j. The row and column RSE factors are then computed as

$$R_i = \log^{-1}(m + a_i)$$

$$= \log^{-1}(\overline{\log(RSE_i)}) \qquad (11)$$

$$C_j = \log^{-1}(b_j)$$

$$= \log^{-1}(\overline{\log(RSE_j)} - \overline{\log(RSE)}) .$$

The RSE row factor, R_i, is thus the geometric mean of the RSE's in row i, and the RSE column factor, C_j, is an adjustment factor with geometric mean equal to 1.0.

For a few table cells, there were no sample cases, hence no estimate and no RSE. As a result, some of the arrays of directly estimated RSE's had a few missing values. In such cases, the formulas given above for row and column factors still apply, but only after appropriate estimates have been substituted for the missing values.

The estimation procedure used to obtain the row and column factors does not use RSE's that are less than 1.0 percent or greater than 50.0 percent. In addition, if the statistic for a cell is not listed for any reason (high RSE, small cell sample size, or missing data), the RSE for that cell is not used in the procedure. The RSE for this cell is treated as if there was a missing value for this cell. This convention is used because the product of the row and column factors frequently is an inaccurate estimate for these RSE's. Using these cells in the calculation of the row and column factors may result in factors that give inaccurate RSE estimates for other cells.

Whenever a household count is a control total, its RSE is zero. Hence, RSE's of control totals are not used in the row column factor calculations. Rows that contain only control totals have a row factor equal to zero. Rows that only contain household counts that are close to control totals do not have a listed row factor. A footnote tells the reader that the RSE's for all statistics in these rows are less than 1.0 percent. This occurs because the half-sample estimates for the RSE's for all statistics in the row are less than 1.0 percent. The row factors for these rows should be a positive number but the number will be small.

For detailed discussions of the accuracy of the RSE approximation, the procedure for estimating confidence intervals, and the statistical tests of hypotheses, see *Nonresidential Buildings Energy Consumption Survey: Commercial Buildings Consumption and Expenditures 1983,* DOE/EIA-0318(83) (Washington, DC, September 1986).

Determination of Relative Standard Error for Percentages Based on Household Counts

The following procedure can be used for estimates where the population of the numerator is a subset of the population of the denominator. Let X be an estimate of the number of households that have both characteristic C_1 and characteristic C_2. Let Z be an estimate of the number of households that have characteristic C_1 but do not have characteristic C_2. Set Y = X + Z. Then Y is an estimate of the number of households that have characteristic C_1. Set p = 100 X/Y. Then p is an estimate of the percentage of households that have characteristic C_2 among all households that have characteristic C_1. The RSE of p can be approximated using:

$$RSE(p) = \sqrt{[RSE(X)]^2 - [RSE(Y)]^2}. \quad (12)$$

The following example illustrates this equation. Among the 50.8 million households that used natural gas as their main space-heating fuel, 34.9 million or 69 percent used a central warm-air furnace as the main space-heating equipment (Table 3.7a). The approximate RSE for 50.8 million households that use natural gas as their main space-heating fuel was 3.75 percent. The approximate RSE of the 34.9 million households that used a natural gas central warm-air furnace as their main space-heating equipment was 4.55 percent.

Using the above equation the RSE of the percent is:

$$RSE(p) = \sqrt{4.55^2 - 3.75^2}$$

$$RSE(p) = 2.58. \quad (13)$$

This approximation works best when RSE(X) and RSE(Y) are estimated using the row column procedure or a generalized variance equation. The approximation may differ greatly from the correct value if RSE(X) and RSE(Y) are half-sample estimates. This equation may also produce inaccurate approximations when it is applied to percentages that are not based on household counts or are based on ratios of household counts that cannot be characterized as described above.

Determination of the Relative Standard Error for Ratios

This procedure can be used when the population of the numerator is not a subset of the denominator, but instead is one estimate divided by another. The following equation provides an approximate RSE for ratios not presented in the tables.

$$RSE\left(\frac{X}{Y}\right) = \sqrt{[RSE(X)]^2 + [RSE(Y)]^2}. \quad (14)$$

The following example illustrates this equation. The number of households in the coldest climate zone in the country where the main space-heating fuel is natural gas was 4.3 million. The approximate RSE (as determined by the row-column method) was 12.00 percent (Table 3.7a). The number in the warmest climate zone where the main space-heating fuel is natural gas was 8.7 million households, with an approximate RSE of 8.25 percent. The ratio of these estimates shows that 2.02 times as many households in the warmest climate zone use natural gas as their main space-heating fuel as in the coldest climate zone. The RSE of this ratio is:

$$RSE\left(\frac{X}{Y}\right) = \sqrt{12.00^2 + 8.25^2}$$

$$RSE\left(\frac{X}{Y}\right) = 14.56. \quad (15)$$

The standard error of the ratio is:

2.02 x (14.56/100) = 0.29

The half-width for the 95 percent confidence interval is:

1.96 x 0.29 = 0.58

The confidence interval for the ratio is 2.02 (± 0.58).

Determination of the Standard Error of the Difference Between Two Statistics

The procedure used to compute the standard error of the difference between two statistics follows:

$$S_{X_1-X_2} = \sqrt{[S_{X_1}]^2 + [S_{X_2}]^2} . \quad (16)$$

This procedure assumes the two statistics are not correlated. Using the above example, the standard error of the 4.3 million households in the coldest climate zone that heat with natural gas is 0.16 million households (Table 3.7a). (The RSE is 12.00 percent.) The standard error of the 8.7 million households in the warmest climate zone that heat with natural gas is 0.72 million households. (The RSE is 8.25 percent.) The difference between the number of households in the coldest climate zone and the warmest climate zone was 4.4 million households. The standard error of this difference is:

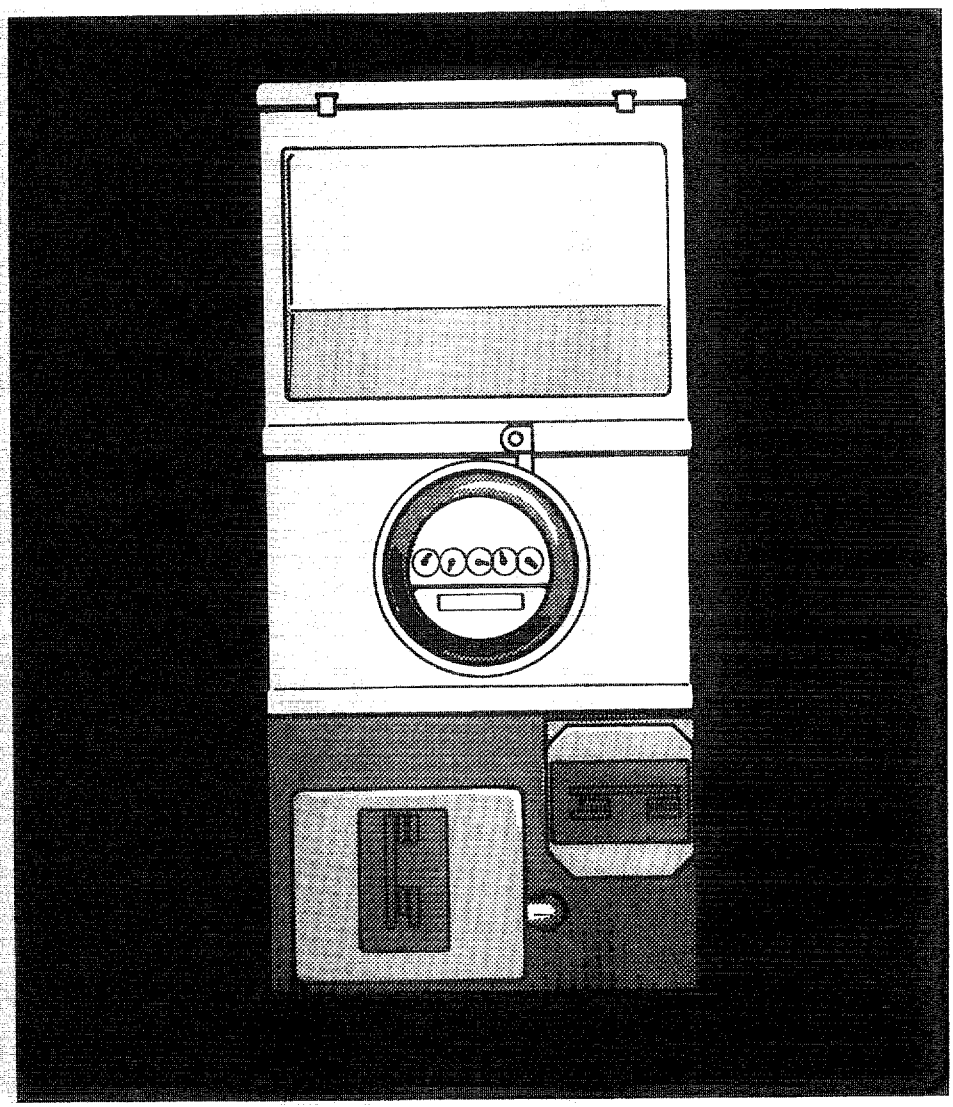
$$S_{X_1-X_2} = \sqrt{0.16^2 + 0.72^2} \quad (17)$$

$$S_{X_1-X_2} = 0.74.$$

If 1.96 times the standard error is greater than the difference between the statistics, the difference is not statistically significant. In this example, 1.96 times the standard error equals 1.45 million households, while the difference is 4.4 million households. Therefore, it can be said that there is a statistically significant difference between the number of households that heat with natural gas in the coldest climate zone and the number in the warmest climate zone of the country.

Appendix C

RECS Coverage Related to EIA Supply Surveys



Appendix C

RECS Coverage Related to EIA Supply Surveys

Introduction

The primary purpose of the Residential Energy Consumption Survey (RECS) is to collect accurate data on energy consumption that can be displayed by detailed characteristics of the household and the housing unit. The data are collected by first contacting the household and then later contacting the energy supplier that supplies the household. RECS provides detailed information about the users and uses of energy and is conducted triennially.

The Energy Information Administration (EIA) also collects data annually on total energy supplied to each major sector via supply surveys of companies that sell or distribute electricity, fuel oil, kerosene, and natural gas to residential customers. Because the RECS and the supply surveys have slightly different definitions of the residential sector, they generally produce different estimates of residential energy consumption. This discussion examines the differences between the RECS and the supply surveys' coverage of the residential sector.

Survey Coverage

RECS Coverage

The RECS design covers all year-round, occupied, residential housing units that are primary residences. It includes multifamily units, mobile homes, farm homes, single-family homes, and homes on military bases. The definition specifically excludes seasonal units, vacant units, and second homes. Because the RECS collects extensive information about each sample unit, one can be explicit about which units are included in RECS and which are excluded. (See Appendix B, section on "Nonsampling Error.")

Supply Coverage

The supply surveys use the following forms to collect data on residential energy consumption:

Form EIA-861, *Annual Electric Utility Report*

Form EIA-176, *Annual Report of Natural and Supplemental Gas Supply and Disposition*

Form EIA-821, *Annual Fuel Oil and Kerosene Sales Report.*[25]

Form EIA-861 is sent to all electric utilities in the United States. Utilities are requested to classify electricity sales as residential if they are supplied to private households and apartment buildings that use electricity primarily for space heating, water heating, air-conditioning, lighting, clothes drying, refrigeration, and cooking.

Form EIA-176 must be submitted by all gas pipeline companies and other plant operators that deliver gas directly to consumers. The form defines residential consumers as "consumers using gas for heating, air-conditioning, cooking, water heating, and other residential users in single- and multifamily dwellings and apartments and mobile homes."

Form EIA-821 is sent to a sample of fuel oil distributors to collect information on fuel oil and kerosene sales.

[25]The data collected on EIA-821 are published as collected and also in an adjusted form. The adjusted data ensure that total sales data equal published volume estimates of products supplied from EIA's *Petroleum Supply Annual.*

In all three forms, seasonal, vacant, and second homes are included in the definition of the residential sector. In forms EIA-861 and EIA-176, consumers who use fuel for both residential and commercial purposes are classified according to the predominant use. Consequently, farm homes or homes on military bases would be classified as residential only if the majority of the fuel supplied was used for residential purposes. Form EIA-821 excludes farm homes and apartment buildings from the residential sector.

Consumption Estimates

Electricity

According to the 1989 American Housing Survey, there were 12 million (11 percent of all residential housing units) seasonal and vacant housing units.[25] About 4 million of these units used electricity for heat and many others probably used some amount of electricity for lights, air-conditioners, and appliances. The 1990 RECS identified 0.9 million farm households whose electricity bills covered both farm and household use. In other words, the supply surveys covered at least 3 million more electricity consumers than the RECS. Consequently, the supply estimates should be higher than the RECS estimates. In 1990, the supply estimate did exceed the RECS estimate by 4 percent (Table C1).

Table C1. Comparison of Residential Energy Consumption Estimates from the Consumption Survey and Supply Surveys, 1990
(Quadrillion Btu)

Energy Source	Consumption Survey (RECS)	Supply Surveys	Difference (RECS-Supply Survey)	Two Standard Errors (RECS Sampling Error)
Electricity	3.03	3.15	-.12	.16
Natural Gas	4.86	4.52	.34	[1].30
Fuel Oil	.98	.84	.14	[1].11
Kerosene	.07	.06	.01	.02
Liquefied Petroleum Gas[2]	.28	.37	-.09	[1].06

[1]Statistically significant at the 95-percent confidence level.

[2]The liquefied petroleum gas (LPG) data, presented for comparison with the RECS, are derived from estimates provided by the American Petroleum Institute.

Note: The data are shown for 1990, the latest year in which RECS consumption estimates are available. A second report, *Household Energy Consumption and Expenditures 1993*, to follow this report will contain consumption estimates for 1993.

Sources: Energy Information Administration. RECS data are from: *Household Energy Consumption and Expenditures 1990*, DOE/EIA-0321/1(87). Supply data are from: *State Energy Data Report, Consumption Estimates, 1994*, DOE/EIA-0214(92).

Natural Gas

The 1989 American Housing Survey estimates that about 33 percent of the seasonal or vacant units heat with natural gas. On the other hand, the 1990 RECS identified few farm households that used natural gas. Therefore, one would expect EIA supply data to equal or exceed RECS data. However, the 1990 RECS estimate of natural gas consumption is 0.34 quadrillion Btu above EIA supply data (Table C1).

[25]U.S. Department of Commerce, Bureau of the Census, *American Housing Survey for the United States in 1989*, H150/89 (July 1991).

An EIA assessment[26] of RECS and the natural gas supply data system for the years 1978 to 1982 attempted to explain the fact that RECS natural gas consumption data were higher than the Form EIA-176 data. One possible reason for the higher RECS estimates is that the RECS classifies large apartment buildings as residential but the supply surveys classify some large apartment buildings as commercial. Twenty-two large utilities were called to determine how they classify large apartments. About half said they classified them as commercial. Large apartment buildings are often billed at commercial rates because they master-metered and they use large amounts of fuel. Although the 1990 RECS did not identify master-metered apartments, it did report that 7.9 million households used natural gas for their main space-heat but did not pay directly for their main space-heating fuel. These 7.9 million households used 0.38 quadrillion Btu of natural gas.

Fuel Oil and Kerosene

The 1989 American Housing Survey data estimated that 1.3 of the 12 million vacant or seasonal households heated with fuel oil, while 0.2 million heated with kerosene. The 1990 RECS estimated that the number of multifamily units that heated with fuel oil was 2.7 million while the number that heated with kerosene was either too small or too unreliable to report. Based on these numbers, one would expect the RECS estimates of fuel oil consumption to exceed the supply estimates. The RECS estimates of consumption of both fuel oil and kerosene exceed EIA supply data. However, only the difference in fuel oil consumption is statistically significant.

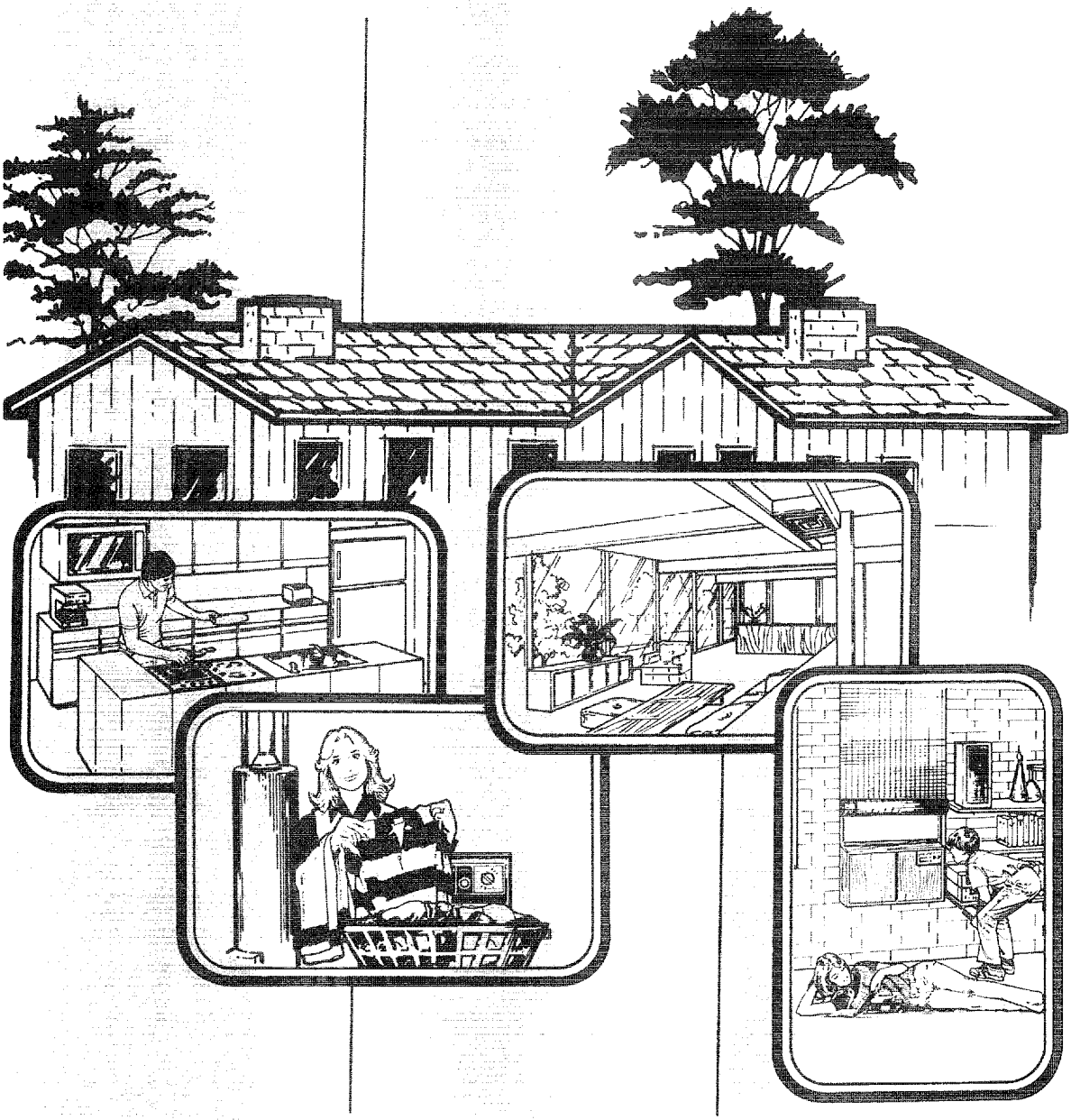
Conclusion

The RECS survey coverage (primary, occupied residences) is defined differently from the "residential sector" as used for EIA supply surveys. Differences in the estimates of residential consumption and supply are thought to be attributable largely to the resulting differences in coverage of residential units between the RECS and the supply surveys.

[26]Energy Information Administration, *An Assessment of the Quality of Selected EIA Data Series: Energy Consumption Data*, DOE-EIA-0292(85) (April 1986) p. 71.

Appendix D

Survey Forms



Appendix D

Survey Forms

This appendix contains copies of the data collection forms used in this report of the 1993 Residential Energy Consumption Survey (RECS): Forms EIA-457A through C were used to produce this report and appear in this appendix; Forms EIA-457D through G were mailed to energy suppliers and Form EIA-457H was used to collect data from households on individual lights, but they do not appear in this appendix. The data and forms from energy suppliers and the lighting supplement will be reported in the second RECS report, *Household Energy Consumption and Expenditures 1993*. (The original color of each form is indicated.)

- EIA-457A Household Questionnaire - white (including the Authorization Form - yellow and a vehicle data form - blue).
- EIA-457B Household Mail Questionnaire - white.
- EIA-457C Rental Agent Form - white.
- EIA-457D Liquefied Petroleum Gas Usage - blue (NOT INCLUDED HERE).
- EIA-457E Electricity Usage - yellow (NOT INCLUDED HERE).
- EIA-457F Utility Gas Usage - pink (NOT INCLUDED HERE).
- EIA-457G Fuel Oil or Kerosene Usage - green (NOT INCLUDED HERE).
- EIA-457H Lighting Supplement - yellow (NOT INCLUDED HERE).

1993 Residential Energy Consumption Survey
Form EIA-457A

TABLE OF CONTENTS

SECTION A: PREINTERVIEW OBSERVATION 1

SECTION B: HOUSING TYPE 2

SECTION C: HOME HEATING 8

SECTION D: AIR CONDITIONING 16

SECTION E: WATER HEATING 21

SECTION F: LIGHTS 25

SECTION G: APPLIANCES 27
- Cooking 27
- Refrigerators and Freezers 29
- Washer and Dryer 33
- Dishwasher/TV/Waterbeds 34
- Other Appliances 35
- Pools and Hot Tubs 36

SECTION H: CONSERVATION MEASURES AND USAGE 38
- Insulation 38
- New Technologies 40
- Windows/Doors 41
- Cooling Fans 44

SECTION I: DEMAND SIDE MANAGEMENT 45

SECTION J: FUEL USED 48
- Electricity 48
- Natural Gas 49
- Bottled Gas (LPG or Propane) 50
- Fuel Oil 51
- Kerosene 53
- Wood 55

SECTION K: FUEL BILLS 57
- Additional Suppliers 67
- Authorization Form 68
- Nonhousehold Uses 69

SECTION L: BACKGROUND INFORMATION 74
- Income 78

SECTION M: PROGRAM PARTICIPATION 80

SECTION N: VEHICLES 83
- Vehicle Identification Number 94

NEW HOME SUPPLEMENT 95

SECTION O: HOUSING MEASUREMENTS 98
- Garage/Basement 98
- Measurements 100

SECTION P: INTERVIEWER OBSERVATION 111

Form EIA-457A (1993)

Form Approval
OMB No.: 1905-0092
Expires: June 30, 1996

U.S. Department of Energy

1-4

1993 Residential Energy Consumption Survey

Household Questionnaire

TIME BEGAN:_____

INTRODUCTION TO INTERVIEW

Hello, I am _____ from Response Analysis Corporation, a social science research firm. Here is my identification. We are conducting a study for the U.S. Department of Energy about energy consumption in homes.

Although your response is voluntary, we hope you will participate in this important study of energy usage. Your name and address will be kept strictly confidential.

I have some questions I would like to ask the person who rents or owns this residence.

Did you receive the letter from the Department of Energy regarding this survey? (IF NOT, HAND A COPY OF THE LETTER TO THE RESPONDENT.)

INTERVIEWER: IF ASKED ABOUT CONFIDENTIALITY, REFER THE RESPONDENT TO THE BACK OF THE LETTER.

GO TO SECTION B ON PAGE 2.

PSURAC 10-15

Location #:_____

HURAC 16-17

Housing Unit #:_____

1993 Residential Energy Consumption Survey
Form EIA-457A

Section A: PREINTERVIEW OBSERVATION

A-1. INTERVIEWER: CIRCLE TYPE OF BUILDING IN WHICH RESPONDENT LIVES

TYPEHUQ

a. SINGLE-FAMILY DETACHED 2
b. SINGLE-FAMILY ATTACHED (TOWNHOUSE, DUPLEX, OR ROWHOUSE) 3
c. MOBILE HOME OR TRAILER . . . . . 1 --> [A-3]
d. HOUSE OR BUILDING WITH 2 TO 4 APARTMENT UNITS . . . 4 --> [A-3]
e. HOUSE OR BUILDING WITH 5 OR MORE APARTMENT UNITS . . . . . 5 --> [A-3]

19

INTERVIEWER: MARK FOLDOUT PAGE UNDER A-1 "HOUSING STRUCTURE."

IF SINGLE-FAMILY, RECORD

A-2. INTERVIEWER: CIRCLE STYLE OF SINGLE-FAMILY HOME OR TOWNHOUSE BASED ON GENERAL APPEARANCE FROM OUTSIDE.

STORIES

a. ONE STORY 1
b. TWO STORIES 2
c. THREE STORIES 3
d. SPLIT-LEVEL 4
e. OTHER (SPECIFY): _____ 5

19

A-3. INTERVIEWER: CIRCLE ONE NUMBER BELOW TO SHOW THE KIND OF AREA THAT THIS HOUSEHOLD IS IN.

URBRUR

a. CITY 1
b. TOWN 2
c. SUBURBS 3
d. RURAL OR OPEN COUNTRY 4

20

1993 Residential Energy Consumption Survey
Form EIA-457A

Section B: HOUSING TYPE

B-1. First, I have some questions about your household so I can better understand your answers to the home energy use questions that come later. Does any other family besides your own or a person unrelated to you share this home/apartment with you?

SHARELQT

YES 1 *21*
NO . . . . . 0 --> [B-3]

IF "YES" ON B-1, ASK:

B-2. Does the additional family (or unrelated person):

a. Live and eat separately from other persons in the apartment or building?

LIVEATSP

YES 1 *22*
NO . . . . . 0 --> [B-3]

b. Have direct access from outside the building or through a common hall?

DIRACC

YES . . . . . 1 --> [BOX 1] *23*
NO . . . . . 0 --> [B-3]

BOX 1

INTERVIEWER: IF THE ANSWERS IN B-2 ARE BOTH "YES", THEN THIS ADDRESS HAS SEPARATE LIVING QUARTERS. FOLLOW THESE INSTRUCTIONS:

- WRITE THE ADDRESS FOR THE SEPARATE LIVING QUARTERS ON YOUR HOUSING UNIT ADDRESS LIST.
- SEE THE SAMPLING INSTRUCTIONS IN YOUR TRAINING MANUAL TO DETERMINE WHETHER AN ADDITIONAL INTERVIEW SHOULD BE COMPLETED.

CHECK ONE OF THESE AND PROCEED AS INSTRUCTED:

___ YES, AN ADDITIONAL INTERVIEW IS REQUIRED. READ TO RESPONDENT "Please **exclude** the family members and the space of the separate living quarters from this interview."

___ NO, AN ADDITIONAL INTERVIEW IS NOT REQUIRED. READ TO RESPONDENT "Please **include** the family members and the space of the separate living quarters in this interview."

B-3. Do you or members of your household own this home or do you rent?

KOWNRENT

a. OWN/BUYING 1
b. RENT 2 *24*
c. OCCUPIED WITHOUT PAYMENT OF RENT 3

INTERVIEWER: MARK FOLDOUT PAGE UNDER B-3 "TENURE".

B-4. Is this home/apartment part of a condominium or cooperative?

KOWNCOND

YES, CONDOMINIUM 1
YES, COOPERATIVE 2 *25*
NO 0

INTERVIEWER: IF "CONDOMINIUM," MARK B-4 UNDER "CONDOMINIUM" ON FOLDOUT PAGE.

IF "RENT," OR "OCCUPIED WITHOUT PAYMENT OF RENT" ON B-3, ASK; OTHERWISE --> [B-7]

B-5. Is this residence in a public housing project -- that is, is it owned by a housing authority?

HUPROJ

YES . . . . . 1 --> [B-7]
NO 0 *26*
DON'T KNOW 6

IF "NO" OR "DON'T KNOW" ON B-5, ASK:

B-6. Is your household paying lower rent because the federal, State, or local government is paying part of the cost?

RENTHELP

YES 1
NO 0 *27*
DON'T KNOW 6

INTERVIEWER: MILITARY HOUSING DOES NOT QUALIFY AS PAYING LOWER RENT FOR QUESTION B-6.

1993 Residential Energy Consumption Survey
Form EIA-457A

B-7. Please turn to Exhibit B-7. Approximately, in what year was this (house/building) built?

YEARMADE *28-29*

BEFORE 1940	01	1988	09
1940-1949	02	1989	10
1950-1959	03	1990	11
1960-1969	04	1991	12
1970-1979	05	1992	13
1980-1984	06	1993	14
1985-1986	07	1994	15
1987	08		

INTERVIEWER: IF BUILT IN 1988 OR LATER, MARK UNDER B-7 "BUILT 1988 OR LATER" ON FOLDOUT PAGE.

B-8. Did your household move into this home/apartment after December 1991?

OCCUPY *30*

YES . . . 1
NO . . . 0 --> [B-10]

IF "YES" ON B-8, ASK:

B-9. In what year and month did your household move in?

OCCUPYY *31*

YEAR
1992 . . . 1
1993 . . . 2
1994 . . . 3

OCCUPYM *32-33*

MONTH

JANUARY	01	JULY	07
FEBRUARY	02	AUGUST	08
MARCH	03	SEPTEMBER	09
APRIL	04	OCTOBER	10
MAY	05	NOVEMBER	11
JUNE	06	DECEMBER	12

INTERVIEWER: IF "1993 or 1994" MARK UNDER B-9 "YEAR MOVED IN" ON FOLDOUT PAGE.

B-10. How many of each of the following rooms does this home/apartment have? (ASK EACH ITEM AND RECORD NUMBER FOR EACH.)

INTERVIEWER: FOR ONE-ROOM EFFICIENCY OR STUDIO APARTMENT, RECORD "0 BEDROOMS" AND CORRECT NUMBER OF BATHROOMS.

a. Bedrooms? — NUMBER: [ ] — NONE . . . 0 — **BEDROOMS** *34*

INTERVIEWER: **FULL BATHROOM** -- SINK WITH RUNNING WATER AND FLUSH TOILET AND BATHTUB OR SHOWER.

HALF BATHROOM -- TOILET OR BATHTUB OR SHOWER.

b. Full bathrooms? — NUMBER: [ ] — NONE . . . 0 — **NCOMBATH** *35*

c. Half bathrooms? — NUMBER: [ ] — NONE . . . 0 — **NHAFBATH** *36*

d. All other rooms; do not count laundry room, foyers, or unfinished storage space. Only count porches if they are enclosed and used year-round. — NUMBER: [ ] — NONE . . . 0 — **OTHROOMS** *37*

B-11. Please turn to Exhibit B-11. What is the **major** type of outside wall construction material for this home/apartment? IF TWO MATERIALS ARE USED, CIRCLE THE ONE USED MORE.

WALLTYPE *38-39*

a. BRICK . . . 01
b. WOOD . . . 02
c. SIDING (ALUMINUM, VINYL, OR STEEL) . . . 03
d. STUCCO . . . 04
e. COMPOSITION (ASBESTOS SHINGLE, ETC.) . . . 05
f. STONE . . . 06
g. CONCRETE OR CONCRETE BLOCK . . . 07
h. GLASS . . . 08
i. OTHER (SPECIFY): _____ . . . 21
j. DON'T KNOW . . . 96

B-12. Is natural gas from underground pipes available in this neighborhood?

UGASHERE

YES 1
NO 0
DON'T KNOW 6

40

THIS PAGE INTENTIONALLY LEFT BLANK.

1993 Residential Energy Consumption Survey
Form EIA-457A

SECTION C: HOME HEATING

MAIN SPACE HEATING

C-1. Please turn to Exhibit C-1. What is the one main equipment used for heating your home?

INTERVIEWER: CIRCLE ONLY ONE UNDER C-1.

C-2. Please turn to the "Blue Card". For the main heating equipment in your home, what type of fuel or fuels does your household use with that equipment?

INTERVIEWER: ASK ABOUT MAIN HEATING FUELS EVEN IF EQUIPMENT IS NOT KNOWN.

SHADED CELLS INDICATE FUEL NOT USED IN THAT TYPE OF EQUIPMENT.

MAIN HEATING FUELS AND EQUIPMENT

C-1. MAIN EQUIPMENT EQUIPM 41-42	MAIN HEATING EQUIPMENT	C-2. [CIRCLE ALL THAT APPLY] ELECTRICITY	NATURAL GAS	LPG/PROPANE	FUEL OIL	KEROSENE	WOOD	COAL or COKE	SOLAR	OTHER SPECIFY:	DON'T KNOW FUEL
03	a. CENTRAL WARM-AIR FURNACE WITH DUCTS TO INDIVIDUAL ROOMS (NOT Heat Pump)	05	01	02	03	04	07	06	08	21	96
02	b. STEAM/HOT WATER SYSTEM WITH RADIATORS/CONVECTORS IN ROOM OR PIPES IN FLOOR	05	01	02	03	04	07	06	08	21	96
05	c. BUILT-IN ELECTRIC UNITS (Permanently installed in wall, ceiling, or baseboard.)	05									96
04	d. HEAT PUMP	05									96
06	e. FLOOR/WALL/PIPELESS FURNACE - NOT PORTABLE	05	01	02	03	04	07	06		21	96
07	f. ROOM HEATER (Burning Gas, Oil, or Kerosene.) - NOT PORTABLE		01	02	03	04					96
08	g. HEATING STOVE BURNING WOOD, COAL OR COKE						07	06		21	96
10	h. PORTABLE ELECTRIC HEATER(S)	05									96
11	i. PORTABLE KEROSENE HEATER(S)					04					96
09	j. FIREPLACE(S)	05	01	02			07	06		21	96
12	k. COOKING STOVE (Used to heat home as well as for cooking.)	05	01	02	03	04	07	06		21	96
21	l. EQUIPMENT NOT LISTED (SPECIFY): -->	05	01	02	03	04	07	06	08		96
96	m. DON'T KNOW EQUIPMENT	05	01	02	03	04	07	06	08	21	96
00	n. NO HEATING EQUIPMENT USED --> [D-1]										

MFUELA
MFUELB
MFUELC
43-48

INTERVIEWER: IF TWO FUELS ARE MARKED FOR MAIN EQUIPMENT, WRITE HERE THE FUEL THAT PROVIDES MORE HEAT:_____

RECORD ON FOLDOUT PAGE. FOR ALL FUELS CIRCLED IN C-2, CIRCLE "1" IN "FUEL USED" COLUMN. ALSO, IF ELECTRICITY OR NATURAL GAS "FOR HOME HEATING", CIRCLE "1" FOR "YES" IN "USAGE" COLUMN.

MFUELM
49-50

One Main Home Heating Fuel = FUELHEAT

1993 Residential Energy Consumption Survey
Form EIA-457A

C-3. Please turn back to Exhibit C-1. What other types of heating equipment are used in your home, including those that are used JUST occasionally?

INTERVIEWER: FOR "OTHER HEATING FUELS AND EQUIPMENT" GRID ON NEXT PAGE, CIRCLE ALL THAT APPLY UNDER C-3.

C-4. Please turn to the "Blue Card". For each type of other heating equipment that you have, I'm going to ask you what type of fuel or fuels you use with that equipment. Let's start with...?

INTERVIEWER: READ EACH TYPE OF EQUIPMENT MENTIONED IN C-3, CIRCLE TYPE OF FUEL USED. IF "NO OTHER HEATING EQUIPMENT" IS USED, CIRCLE "00" UNDER C-3 AND SKIP TO C-6.

ASK ABOUT SUPPLEMENTAL HEATING FUELS EVEN IF EQUIPMENT IS NOT KNOWN.

SHADED CELLS INDICATE FUEL NOT USED IN THAT TYPE OF EQUIPMENT.

OTHER HEATING FUELS AND EQUIPMENT

	C-3. OTHER EQUIP	NOTE: Variable names substituted for names of energy sources for C-4 - refer to C-2 for names used. / OTHER HEATING EQUIPMENT	C-4. [CIRCLE ALL THAT APPLY] ELECAUX	UGASAUX	LPGAUX	FOILAUX	KEROAUX	WOODAUX	COALAUX	SOLARAUX	OTHERAUX	DKFUEL	
EQUIPAUX	00	a. NO OTHER HEATING EQUIPMENT USED --> [C-6]											
WARMAIR	03	b. CENTRAL WARM-AIR FURNACE WITH DUCTS TO INDIVIDUAL ROOMS	05	01	02	03	04	07	06	08	21	96	WARMAIR1 WARMAIR2 WARMAIR3
STEAMR	02	c. STEAM/HOT WATER SYSTEM WITH RADIATORS/CONVECTORS IN ROOM OR PIPES IN FLOOR	05	01	02	03	04	07	06	08	21	96	STEAMR1 STEAMR2 STEAMR3
PERMELEC	05	d. BUILT-IN ELECTRIC UNITS	05									96	
REVERSE	04	e. HEAT PUMP	05									96	
PIPELESS	06	f. FLOOR/WALL/PIPELESS FURNACE - NOT PORTABLE	05	01	02	03	04	07	06		21	96	PIPELES1 PIPELES2 PIPELES3
ROOMHEAT	07	g. ROOM HEATER - NOT PORTABLE		01	02	03	04					96	ROOMHT1 ROOMHT2 ROOMHT3
WOODKILN	08	h. HEATING STOVE BURNING WOOD, COAL OR COKE						07	06		21	96	WOODKIL1 WOODKIL2 WOODKIL3
CARRYEL	10	i. PORTABLE ELECTRIC HEATER(S)	05									96	
CARRYKER	11	j. PORTABLE KEROSENE HEATER(S)					04					96	
CHIMNEY	09	k. FIREPLACE(S)	05	01	02			07	06		21	96	CHIMNEY1 CHIMNEY2 CHIMNEY3
RANGE	12	l. COOKING STOVE	05	01	02	03	04	07	06		21	96	RANGE1 RANGE2 RANGE3
DIFEQUIP	21	m. OTHER EQUIPMENT (SPECIFY): -->	05	01	02	03	04	07	06	08		96	DIFEQ1 DIFEQ2 DIFEQ3
	96	n. DON'T KNOW EQUIPMENT	05	01	02	03	04	07	06	08	21	96	

INTERVIEWER: RECORD ON FOLDOUT PAGE. FOR ALL FUELS CIRCLED IN C-4, CIRCLE "1" IN "FUEL USED" COLUMN. IF ELECTRICITY OR NATURAL GAS, ALSO CIRCLE "1" FOR "YES" "FOR HOME HEATING" IN "USAGE" COLUMN.

1993 Residential Energy Consumption Survey
Form EIA-457A

IF OTHER HEATING EQUIPMENT USED, ASK: OTHERWISE --> [C-6]:

C-5. Going back to your main heating equipment - (EQUIPMENT FROM C-1). Does this equipment provide all or almost all of the heat for your home, about three-fourths, or closer to half of the heat for your home?

EQMAMT *155*

- ALL OR ALMOST ALL (MORE THAN 95%) 1
- ABOUT THREE-FOURTHS (67%-94%) 2
- CLOSER TO HALF (66% OR LESS) 3
- DON'T KNOW 6

IF "SOLAR HEATING" ON C-2 OR C-4, ASK; OTHERWISE --> [C-7]:

C-6. Does your solar heating system REQUIRE pumps or fans (other than ceiling fans) to circulate warm air or hot fluids between solar collectors and the rooms they heat?

ACTSOLAR *196*

- YES 1
- NO 0
- DON'T KNOW 6

HOME TEMPERATURES

C-7. At what temperature does your household usually keep your home in the winter?

a. During the day, when someone is at home?

TEMPHOME *203-6*

- DEGREES FAHRENHEIT: . . . . . ☐☐
- HEAT TURNED OFF 95

b. During the day, when no one is at home?

TEMPGONE *207-8*

- DEGREES FAHRENHEIT: . . . . . ☐☐
- HEAT TURNED OFF 95

c. During sleeping hours?

TEMPNITE *209-10*

- DEGREES FAHRENHEIT: . . . . . ☐☐
- HEAT TURNED OFF 95

INTERVIEWER: IF RESPONDENT KEEPS DIFFERENT PARTS OF THE HOUSE AT DIFFERENT TEMPERATURES, WE WANT THE TEMPERATURE IN THE PART OF THE HOUSE WHERE THE PEOPLE ARE. IF, FOR EXAMPLE, THE HEAT IS TURNED OFF UPSTAIRS DURING THE DAY BECAUSE THE FAMILY IS DOWNSTAIRS, WE WANT THE DOWNSTAIRS TEMPERATURE.

IF THE RESPONDENT DOESN'T KNOW THE TEMPERATURE, BUT KNOWS THERMOSTAT SETTING, RECORD THERMOSTAT SETTING. OTHERWISE, PROBE FOR BEST ESTIMATE

C-8. Please look at Exhibit C-8. For your main heating equipment, can you use a thermostat to adjust the temperature in your home during the heating season?

THERMAIN *211*

- YES 1
- NO 0
- DON'T KNOW 6

INTERVIEWER: IF NEEDED, PLEASE READ "A thermostat automatically responds to temperature changes and turns the heat on/off until the desired temperature is reached."

1993 Residential Energy Consumption Survey
Form EIA-457A

C-9. Please turn to the "Yellow Card". Approximately, how old is your household's main heating equipment?

EQUIPAGE

LESS THAN 2 YEARS OLD	1	
2 - 4 YEARS OLD	2	
5 - 9 YEARS OLD	3 --> [C-16]	
10 - 19 YEARS OLD	4 --> [C-16]	212
20 YEARS OR OLDER	5 --> [C-16]	
DON'T KNOW	6 --> [C-16]	

IF MAIN HEATING EQUIPMENT LESS THAN 5 YEARS OLD, ASK; OTHERWISE --> [C-16]

C-10. Since January 1, 1990, has your household purchased a new main heating system either to replace an older system or as part of the purchase of a new home?

HEATNEW

YES, PURCHASED REPLACEMENT	1 --> [C-12]	
YES, CAME WITH HOME PURCHASE	2	213
NO	0 --> [C-16]	

IF "CAME WITH HOME PURCHASE" ON C-10, ASK:

C-11. Did your household select the system or did the system come standard with the newly purchased home?

HTSELECT

HOUSEHOLD SELECTED	1 --> [C-15]	214
STANDARD WITH NEW HOME	0 --> [C-16]	

C-12. How well was the older equipment working when your household replaced it? Was it working very well, well, not well, or not working at all?

HEATWORK

VERY WELL	1	
WELL	2	
NOT WELL	3	215
NOT WORKING AT ALL	4	
DID NOT HAVE HEATING SYSTEM BEFORE/ WAS NOT REPLACED	5 --> [C-15]	
DON'T KNOW	6	

C-13. Does the new heating system use the same fuel as the heating equipment it replaced?

FUELTWIN

YES	1	
NO	0	216
DON'T KNOW	6	

C-14. How do you like your new heating system compared to the old one? Do you like it better than the old, the same, or did you like the old equipment better?

HEATLIKE

LIKE IT BETTER THAN OLD	1	
LIKE IT SAME AS OLD	2	217
LIKED OLD EQUIPMENT BETTER	3	
DON'T KNOW	6	

C-15. Thinking back to why your household decided to purchase this new heating system. Please tell me, for each of the following reasons, whether it was very important, somewhat important, or not important to your decision.

	VERY IMPORTANT	SOMEWHAT IMPORTANT	NOT IMPORTANT	DON'T KNOW	
a. Purchase Price a.	1	2	3	6	HTPRICE 218
b. Reputation of Manufacturer b.	1	2	3	6	HTREPUTE 219
c. Energy Efficiency c.	1	2	3	6	HTEFFICT 220
d. Rebate or Availability of Low-Interest Financing d.	1	2	3	6	HTREBATE 221

INTERVIEWER: ASK EVERYONE C-16.

C-16. Does the main system for heating your home also heat one or more other apartments, condos, households, businesses, or farm buildings?

HEATOTH

YES	1	
NO, HEATING EQUIPMENT IS FOR RESPONDENT'S HOME ONLY	0	222
DON'T KNOW	6	

1993 Residential Energy Consumption Survey
Form EIA-457A

Section D. AIR CONDITIONING

D-1. Does your household have air-conditioning equipment (either a central system with, or without a heat pump, or wall, or window units?) CIRCLE ALL THAT APPLY.

AIRCOND

YES, CENTRAL SYSTEM WITH A HEAT PUMP	1	CENACHP	232
YES, CENTRAL SYSTEM WITHOUT A HEAT PUMP	2	COOLMAIN	233
YES, INDIVIDUAL (WINDOW/WALL) UNITS	3	COOLUNIT	234
NO	0 --> [E-1]		235

INTERVIEWER: RECORD ON FOLDOUT PAGE.

CIRCLE ON THE FOLDOUT PAGE UNDER ELECTRICITY "FOR AIR-CONDITIONING", CIRCLE "1" FOR "YES" UNDER "USAGE" COLUMN IF INDIVIDUAL "WINDOW OR WALL UNITS."

D-2. Last summer did your household's air-conditioning (central or window/wall units) cool your entire house or some of the rooms?

ACHOUSE

ENTIRE HOUSE OR APARTMENT	1 --> [D-4]	
SOME OF THE ROOMS	2	236
DID NOT LIVE HERE LAST SUMMER	3 --> [D-4]	
NO ROOMS COOLED	0 --> [D-4]	

IF "SOME OF THE ROOMS" ON D-2, ASK:

D-3. How many rooms were cooled by your household's air-conditioning last summer?

ACROOMS

NUMBER OF ROOMS: ☐☐ 237-8

CENTRAL AIR-CONDITIONING

INTERVIEWER: IF "CENTRAL SYSTEM" ON D-1, ASK. OTHERWISE SKIP TO BOX 2, PAGE 20.

D-4. Please turn to Exhibit D-4. Which statement on this exhibit best describes the way your household used the central air-conditioner(s) last summer?

USECENAC

DID NOT USE AT ALL	0	
TURNED ON ONLY A FEW DAYS OR NIGHTS WHEN REALLY NEEDED	1	
TURNED ON QUITE A BIT	2	239
TURNED ON JUST ABOUT ALL SUMMER	3	
NOT HERE LAST SUMMER	4	
OTHER (SPECIFY): _____	5	

D-5. Does your household's central air-conditioner run on electricity or is it one of the few that uses *natural gas or bottled gas?* (DO NOT COUNT FREON AS GAS)

FUELCOOL

ELECTRICITY	05	
NATURAL GAS (GAS FROM UNDERGROUND PIPES)	01	240-41
BOTTLED GAS (LPG OR PROPANE)	02	
DON'T KNOW	96	

INTERVIEWER: CHECK FOLDOUT PAGE. CIRCLE "FUEL USED" COLUMN IF FUEL NOT ALREADY MARKED.

ALSO, IF ELECTRICITY, "FOR AIR CONDITIONING," CIRCLE "1" FOR "YES" UNDER THE "USAGE" COLUMN.

IF NATURAL GAS, "FOR OTHER" APPLIANCES CIRCLE "1" FOR "YES" UNDER THE "USAGE" COLUMN.

D-6. Does your household's central air-conditioning equipment that cools your home also cool other apartments, condos, houses, businesses, or farm buildings?

ACOTHERS

NO, A/C IS FOR RESPONDENT'S HOME ONLY	0	
YES, A/C COOLS ONE OR MORE OTHER APARTMENTS, HOUSES, OR BUSINESSES	1 --> [BOX 2]	242
DON'T KNOW	6 --> [BOX 2: PAGE 20]	

1993 Residential Energy Consumption Survey
Form EIA-457A

IF "NO, A/C IS FOR RESIDENTS HOME ONLY" ON D-6, ASK:

D-7. Please look at the "Yellow Card". How old is your household's central air-conditioning equipment?

AGECENAC

LESS THAN 2 YEARS OLD	1	
2 - 4 YEARS OLD	2	
5 - 9 YEARS OLD	3 --> [BOX 2]	
10 - 19 YEARS OLD	4 --> [BOX 2]	243
20 YEARS OR OLDER	5 --> [BOX 2]	
DON'T KNOW	6 --> [BOX 2]	

D-8. Since January 1, 1990, has your household purchased new central air-conditioning equipment for this home or acquired new central air-conditioning as part of the purchase of a new home?

ACNEW

YES, PURCHASED FOR EXISTING HOME	1 --> [D-10]	
YES, CAME WITH HOME PURCHASE	2	244
NO	0 --> [BOX 2]	
DON'T KNOW	6 --> [BOX 2]	

IF "CAME WITH HOME PURCHASE" ON D-8, ASK:

D-9. Did your household select the model or did the model come standard with the new home?

ACSELECT

HOUSEHOLD SELECTED	1 --> [D-12]	
STANDARD WITH NEW HOME	0 --> [BOX 2]	245
DON'T KNOW	6 --> [BOX 2]	

IF "PURCHASED FOR EXISTING HOME" ON D-8, ASK:

D-10. Did the new central air-conditioning equipment replace another central air-conditioner, replace a window/wall air conditioner, add to the existing equipment in your home, or did your household have no air-conditioning equipment before this purchase?

ACREPLAC

REPLACED CENTRAL UNIT	1	
REPLACED WINDOW/WALL UNIT	2	
ADDITIONAL EQUIPMENT	3 --> [D-12]	246
NO EQUIPMENT BEFORE	4 --> [D-12]	
DON'T KNOW	6 --> [D-12]	

D-11. How well was the old air-conditioner working when you replaced it? Very well, well, not well, or not working at all?

ACWORK

VERY WELL	1	
WELL	2	
NOT WELL	3	247
NOT WORKING AT ALL	4	
DON'T KNOW	6	

D-12. Thinking back to why your household decided to purchase this new air-conditioner. Please tell me, for each of the following reasons, whether it was very important, somewhat important, or not important to your decision.

	VERY IMPORTANT	SOMEWHAT IMPORTANT	NOT IMPORTANT	DON'T KNOW	
a. Purchase Price a.	1	2	3	6	ACPRICE 248
b. Reputation of Manufacturer b.	1	2	3	6	ACREPUTE 249
c. Energy Efficiency c.	1	2	3	6	ACEFFICT 250
d. Rebate or Availability of Low-Interest Financing d.	1	2	3	6	ACREBATE 251

1993 Residential Energy Consumption Survey
Form EIA-457A

WINDOW/WALL AIR-CONDITIONING

BOX 2

INTERVIEWER: IF "INDIVIDUAL WINDOW/WALL UNITS" ON D-1, ASK. OTHERWISE SKIP TO E-1, PAGE 21.

D-13. How many window or wall air-conditioning units does your household have?

NUMBERAC

NUMBER OF WINDOW/WALL UNITS: ..... [ ] 253

D-14. (Is the window/wall air conditioner a heat pump?) How many of the window/wall air-conditioners are heat pumps?

WWHTPUMP

NO/NONE	0
YES/ONE	1
TWO	2
THREE OR MORE	3
DON'T KNOW	6

254

D-15. Please turn to the "Yellow Card". About how old is your household's **MOST-USED** unit? "Most-Used" is the unit that is used more often than any other unit.

WWACAGE

LESS THAN 2 YEARS	1
2 - 4 YEARS	2
5 - 9 YEARS	3
10 - 19 YEARS	4
20 YEARS OR OLDER	5
DON'T KNOW	6

255

D-16. Please look at Exhibit D-16. Which statement best describes the way your household used the (most used) wall or window unit air conditioner(s) last summer?

USEWWAC

DID NOT USE AT ALL	0
TURNED ON ONLY A FEW DAYS OR NIGHTS WHEN REALLY NEEDED	1
TURNED ON QUITE A BIT	2
TURNED ON JUST ABOUT ALL SUMMER	3
DID NOT LIVE HERE LAST SUMMER	4
OTHER (SPECIFY): _____	5

256

Section E. WATER HEATING

E-1. Please turn to the "Blue Card". Which fuel is used most for heating water for washing or bathing? CIRCLE ONLY ONE.

FUELH2O

("O" is a letter)

ELECTRICITY	05
NATURAL GAS (GAS FROM UNDERGROUND PIPES)	01
BOTTLED GAS (LPG OR PROPANE)	02
FUEL OIL	03
KEROSENE OR COAL OIL	04
COAL OR COKE	06
WOOD	07
SOLAR	08
OTHER (SPECIFY): _____	21
DON'T KNOW	96
NO WATER HEATING DONE FOR WASHING/BATHING	00 --> [F-1]

266 67

INTERVIEWER: CHECK FOLDOUT PAGE. CIRCLE "1" UNDER "FUEL USED" IF FUEL NOT ALREADY MARKED.

ALSO, IF ELECTRICITY OR NATURAL GAS, "FOR HOT WATER" CIRCLE "1" FOR "YES" UNDER "USAGE" COLUMN.

E-2. Does the main equipment for heating water for your home also heat water for other apartments, condos, houses, businesses, or farm buildings?

WHEATOTH

NO, HOT WATER EQUIPMENT IS FOR RESPONDENT'S HOME ONLY	0
YES	1 --> [E-9]
DON'T KNOW	6 --> [E-9]

263

IF "NO, HOT WATER EQUIPMENT IS FOR RESPONDENT'S HOME ONLY" ON E-2, ASK:

E-3. Please turn to Exhibit E-3. How large is your household's main water heater tank?

WHEATSIZ

SMALL (30 GALLONS OR LESS)	1
MEDIUM (31 TO 49 GALLONS)	2
LARGE (50 GALLONS OR MORE)	3
DON'T KNOW	6

269

E-4. Please look at the "Yellow Card". Approximately how old is your household's main water heater? (INTERVIEWER: PROBE FOR BEST GUESS.)

WHEATAGE

LESS THAN 2 YEARS	1	
2 - 4 YEARS	2	
5 - 9 YEARS	3 --> [E-9]	
10 - 19 YEARS	4 --> [E-9]	270-71
20 YEARS OR MORE	5 --> [E-9]	
DON'T KNOW	6 --> [E-9]	
NO SEPARATE WATER HEATER	0 --> [E-9]	

E-5. Since January 1, 1990, has your household purchased *a new main water heater either to replace* an older one or as part of the purchase of a new home?

WHEATNEW

YES, PURCHASED REPLACEMENT	1 --> [E-7]	
YES, CAME WITH HOME PURCHASE	2	272
NO	0 --> [E-9]	
DON'T KNOW	6 --> [E-9]	

IF "CAME WITH HOME PURCHASE" ON E-5, ASK:

E-6. Did your household select the model or did the model come standard with the new home?

WHEATSEL

HOUSEHOLD SELECTED	1 --> [E-8]	
STANDARD WITH NEW HOME	0 --> [E-9]	273
DON'T KNOW	6 --> [E-9]	

IF "PURCHASED REPLACEMENT" ON E-5, ASK:

E-7. Does the new water heater use the same fuel as the equipment it replaced?

WHTSAME

YES	1	
NO	0	274
DON'T KNOW	6	

E-8. Think back to why your household decided to purchase this new water heater. Please tell me, for each of the following reasons, whether it was very important, somewhat important, or not important to your decision.

	VERY IMPORTANT	SOMEWHAT IMPORTANT	NOT IMPORTANT	DON'T KNOW	
a. Purchase Price a.	1	2	3	6	WHPRICE 275
b. Immediate Availability b.	1	2	3	6	WHAVAIL 276
c. Energy Efficiency c.	1	2	3	6	WHEFFICT 277
d. Rebate or Availability of Low-Interest Financing d.	1	2	3	6	WHREBATE 278

E-9. Please turn to Exhibit E-9. The following questions will help us learn about your household's hot water usage. How many baths or showers are taken in the household in a week? Please be sure to count all the times a bath or shower is used by anyone in the house.

SHOWERS

9 OR FEWER A WEEK	1	
10 - 20 A WEEK	2	279
21 OR MORE A WEEK	3	
DON'T KNOW	6	

E-10. In addition to (FUEL FROM E-1), does your household use any other fuel for heating water for washing or bathing?

UAUXH2OF

YES	1	280
NO	0 --> [F-1]	

1993 Residential Energy Consumption Survey
Form EIA-457A

E-11. Please turn to the "Blue Card." What is this additional water heating fuel?

FAUXH2O
("O" is a letter)

ELECTRICITY	05
NATURAL GAS (GAS FROM UNDERGROUND PIPES)	01
BOTTLED GAS (LPG OR PROPANE)	02
FUEL OIL	03
KEROSENE OR COAL OIL	04
COAL OR COKE	06
WOOD	07
SOLAR	08
OTHER (SPECIFY): _____	21
DON'T KNOW	96

281-82

INTERVIEWER: CHECK FOLDOUT PAGE. CIRCLE "1" FOR "FUEL USED" IF FUEL NOT ALREADY CIRCLED.

ALSO, IF ELECTRICITY OR NATURAL GAS USED "FOR HOT WATER", CIRCLE "1" FOR "YES" UNDER THE "USAGE" COLUMN ON THE FOLDOUT PAGE.

Section F. LIGHTS

INDOOR LIGHTS

F-1. Please turn to Exhibit F-1. Thinking of a typical November weekday, please tell me the number of indoor lights your household has turned on for each of the following time periods.

	F-1. NUMBER OF LIGHTS	F-2. NUMBER OF FLUORESCENT LIGHTS
a. More than 12 hours per day	LGT12 NONE 00	FLRLGT12 NONE 00
b. Between 4 hours and 12 hours per day	LGT4 NONE 00	FLRLGT4 NONE 00
c. Between 1 hour and 4 hours per day	LGT1 NONE 00	FLRLGT1 NONE 00

293-96
297-300
301-04

FOR EACH ANSWER OF 1 LIGHT OR MORE IN "a" THROUGH "c" IN F-1 ABOVE, ASK F-2:

F-2. Of the (NUMBER) indoor lights on (HOURS), how many are fluorescent? _____

OUTDOOR LIGHTS

F-3. Please turn to Exhibit F-3. Thinking about a typical November weekday, please indicate all the statements that describe the outdoor lights used by your household.

		YES	NO		
a.	NO OUTDOOR LIGHTS OR RARELY USED	1	0	OUTLGTNO	305
b.	OUTDOOR LIGHTS TURNED ON DURING THE EVENING, BUT TURNED OFF BEFORE BEDTIME	1	0	OUTLGTEV	306
c.	OUTDOOR LIGHTS LEFT ON ALL NIGHT	1	0	OUTLGTNT	307
d.	OUTDOOR LIGHTS WITH A TIMER, MOTION SENSOR, OR PHOTOSENSOR	1	0	OUTLGTTI	308
e.	OUTDOOR GAS LIGHT	1	0	GASLIGHT	309
f.	HIGH INTENSITY DISCHARGE (HID) OUTDOOR LIGHTS, SUCH AS METAL HALIDE OR HIGH PRESSURE SODIUM LIGHTS	1	0	OUTLGTHI	310
g.	TOTAL WATTAGE OF ALL OUTDOOR LIGHTS IS LESS THAN 150 WATTS	1	0	OUTLGTLW	311
h.	DON'T KNOW	1	0	OUTLGTDK	312

INTERVIEWER: RECORD ON FOLDOUT PAGE. IF GAS OUTDOOR LIGHT, CIRCLE "1" FOR "YES" ON THE "USAGE" COLUMN UNDER NATURAL GAS "FOR OTHER APPLIANCES."

Section G. APPLIANCES

COOKING

G-1. Turn to the "Blue Card". What fuel is used most for cooking in your home/apartment?

FUELFOOD

ELECTRICITY	05
NATURAL GAS (GAS FROM UNDERGROUND PIPES)	01
BOTTLED GAS (LPG OR PROPANE)	02
FUEL OIL	03
KEROSENE OR COAL OIL	04
COAL OR COKE	06
WOOD	07
SOLAR	08
OTHER (SPECIFY): _____	21
DON'T KNOW	96
NO COOKING DONE	00 --> [G-6]

331-32

INTERVIEWER: CHECK FOLDOUT PAGE. CIRCLE "1" FOR "FUEL USED" IF FUEL NOT ALREADY CIRCLED.

ALSO, IF ELECTRICITY OR NATURAL GAS, "FOR COOKING" CIRCLE "1" FOR "YES" UNDER THE "USAGE" COLUMN.

G-2. Please turn to Exhibit G-2. Which of these categories best describes, on average, how often hot meals are usually cooked in your home?

NUMMEAL

a. 2 OR MORE TIMES A DAY	1
b. ONCE A DAY	2
c. A FEW TIMES PER WEEK	3
d. ABOUT ONCE A WEEK	4
e. LESS THAN ONCE A WEEK	5
f. DON'T KNOW	6

333

1993 Residential Energy Consumption Survey
Form EIA-457A

G-3. Please turn to Exhibit G-3. Which of the following equipment is used for cooking in your home/apartment?

G-3. COOKING EQUIPMENT USED	YES	NO	G-4. TYPE OF FUEL USED		
a. Stovetop or Burners (DO NOT INCLUDE GAS GRILLS)	1	0	Electricity	5	ELSTOVE
			Natural Gas	1	NGSTOVE
			Bottled Gas (LPG or Propane)	2	LPSTOVE
STOVE 334			Other	8	OTHSTOVE
b. Oven (NOT MICROWAVE OR TOASTER OVEN)	1	0	Electricity	5	ELOVEN
			Natural Gas	1	NGOVEN
			Bottled Gas (LPG or Propane)	2	LPOVEN
OVEN 335			Other	8	OTHOVEN
c. Toaster Oven	1	0			
TOASTER 344					
d. Outdoor Gas Grill	1	0	Natural Gas	1	BARBECUE
			Bottled Gas (LPG or Propane)	2	LPGBROIL
GRILL 345					
e. Microwave Oven	1	0			
MICRO 348					

INTERVIEWER: FOR STANDARD COMBINATION UNITS, OVEN AND STOVETOP, RECORD BOTH AS "YES".

FOR EACH "YES" ON G-3, ASK:

G-4. Which fuel is used for (COOKING EQUIPMENT)?

INTERVIEWER: CHECK FOLDOUT PAGE. CIRCLE "1" FOR "FUEL USED" IF FUELS NOT ALREADY CIRCLED.

DO NOT MARK BOTTLED GAS (LPG OR PROPANE) IF ONLY USE OF BOTTLED GAS (LPG OR PROPANE) IS FOR AN OUTDOOR GRILL.

ALSO, IF ELECTRICITY OR NATURAL GAS "FOR COOKING" CIRCLE "1" FOR "YES" UNDER THE "USAGE" COLUMN.

IF MICROWAVE USED, ASK:

G-5. Please turn to Exhibit G-5. How much of your food is cooked in the microwave?

AMTMICRO

a. MOST OR ALL 1
b. ABOUT HALF 2
c. SOME OR VERY LITTLE 3
d. USED ONLY FOR SNACKS, DEFROSTING OR REHEATING FOOD 4
e. DON'T KNOW 6

349

REFRIGERATORS AND FREEZERS

G-6. How many refrigerators in your home are used either regularly or occasionally?

NUMFRIG

ONE 1
TWO 2
THREE OR MORE 3
NONE 0

350

INTERVIEWER: CIRCLE COLUMNS A AND B ON PAGE 31 IF TWO OR MORE REFRIGERATORS.

CIRCLE ONLY COLUMN A ON GRID IF ONE REFRIGERATOR.

G-7. Does your household use a separate freezer that is not part of the refrigerator?

SEPFREEZ

YES 1
NO . . . . . 0 --> [BOX 3]

351

INTERVIEWER: CIRCLE COLUMN C ON GRID IF "YES"

IF "YES" ON G-7, ASK:

G-8. How many freezers in your home are used either regularly or occasionally?

NUMFREEZ

ONE . . . . . 1 --> [BOX 3]
TWO . . . . . 2 --> [BOX 3]
THREE OR MORE . . . . . 3 --> [BOX 3]

352

BOX 3

IF ONLY ONE REFRIGERATOR, ASK COLUMN A

IF MORE THAN ONE REFRIGERATOR, ASK COLUMNS A AND B
READ FOR COLUMN "A": "Let's start with the refrigerator used most often."

READ FOR COLUMN "B": "Next I'd like to ask the same questions for the second most used refrigerator."

IF MORE THAN ONE FREEZER, ASK ABOUT THE LARGEST ONE.

IF NO REFRIGERATOR OR FREEZER, SKIP TO G-22.

1993 Residential Energy Consumption Survey
Form EIA-457A

ASK ALL FOR COLUMN "A" BEFORE GOING ON TO COLUMN "B" OR "C"

COLUMN:	A (Most Used) Refrigerator	B Second Most Used Refrigerator	C (Largest) Freezer
G-9. Please look at the top of Exhibit G-9. How old is your household's (COLUMN A, B or C)?	353 AGERFRI1	358 AGERFRI2	363 AGEFRZR
a. LESS THAN 2 YEARS OLD	1	1	1
b. 2-4 YEARS OLD	2	2	2
c. 5-9 YEARS OLD	3	3	3
d. 10-19 YEARS OLD	4	4	4
e. 20 YEARS OLD OR MORE	5	5	5
f. DON'T KNOW	6	6	6
G-10. Please look at the bottom of Exhibit G-9. What is the size of your household's (COLUMN A, B, or C)?	354 SIZRFRI1	359 SIZRFRI2	364 SIZFREEZ
a. VERY SMALL (10 CUBIC FEET OR LESS)	1	1	1
b. SMALL (11-14 CUBIC FEET)	2	2	2
c. MEDIUM (15-18 CUBIC FEET)	3	3	3
d. LARGE (19-22 CUBIC FEET)	4	4	4
e. VERY LARGE (23+ CUBIC FEET)	5	5	5
f. DON'T KNOW	6	6	6
G-11. Please turn to Exhibit G-11. What type is your household's (COLUMN A or B)?	355 TYPERFR1	360 TYPERFR2	
a. HALF-SIZE OR QUARTER	1	1	
b. REGULAR WITH SINGLE DOOR	2	2	
c. TWO DOORS - TOP AND BOTTOM	3	3	
d. TWO DOORS - SIDE BY SIDE	4	4	
e. OTHER (SPECIFY:)_____	5	5	
f. DON'T KNOW	6	6	
G-12. What type of defrosting does your household's (COLUMN A, B, or C) have, manual or frost free?	356 REFRIGT1	361 REFRIGT2	365 FREEZER
a. MANUAL DEFROST	1	1	1
b. FROST-FREE (AUTOMATIC OR SEMI-AUTOMATIC DEFROST)	2	2	2
c. NO WORKING FREEZER SECTION (VOLUNTEERED)	3	3	
d. DON'T KNOW	6	6	6

CONTINUE ON NEXT PAGE

COLUMN:	A (Most Used) Refrigerator	B Second Most Used Refrigerator	C (Largest) Freezer
G-13. Does your household's most-used refrigerator have a through-the-door ice service? (COLUMN A only)	367 ICE		
YES	1		
NO	0		
G-14. How many months in 1993 was the second most used refrigerator turned on? (COLUMN B only)		368 MONRFRI2	
a. 1-3 Months		1	
b. 4-6 Months		2	
c. 7-9 Months		3	
d. 10-12 Months		4	
G-15. Is the freezer an upright or chest model? (COLUMN C only).			369 UPRTFRZR
a. AN UPRIGHT (VERTICAL CABINET WITH DOOR ON FRONT)			1
b. A CHEST-TYPE (HORIZONTAL CABINET WITH DOOR ON TOP)			2

G-16. Since January 1, 1990, has your household purchased a <u>new</u> refrigerator to replace an older one, or as part of the purchase of a new home?

FRIGNEW

YES, PURCHASED REPLACEMENT	1 --> [G-18]	370
YES, CAME WITH HOME PURCHASE	2	371
NO	0 --> [G-22]	372

IF "YES, CAME WITH HOME PURCHASE" IN G-16, ASK:

G-17. Did your household select the model or did the model come standard with the newly purchased home?

FRIGSEL

HOUSEHOLD SELECTED	1 --> [G-18]	373
STANDARD WITH NEW HOME	0 --> [G-22]	

1993 Residential Energy Consumption Survey
Form EIA-457A

IF "YES, PURCHASED REPLACEMENT" ON G-16, ASK:

FRIGREPL

G-18. Was the new refrigerator a replacement for your household's most-used refrigerator?

YES 1
NO . . . . . 0 --> [G-21] 374
DON'T KNOW 6

FRIGDISP

G-19. What did your household do with the old refrigerator?

USE AS SECOND REFRIGERATOR 1
SOLD, GAVE AWAY, OR DONATED TO CHARITY FOR FURTHER USE 2 375
DISCARDED WITHOUT FURTHER USE 3
OTHER (SPECIFY): _____ 5
DON'T KNOW 6

FRIGWORK

G-20. How well was the old refrigerator working when your household bought the new one? Very well, well, not well, or not working at all.

VERY WELL 1
WELL 2
NOT WELL 3 376
NOT WORKING AT ALL 4
DON'T KNOW 6

G-21. Think back to why your household decided to purchase your new refrigerator. Please tell me, for each of the following reasons, whether it was very important, somewhat important, or not important to your decision.

	VERY IMPORTANT	SOMEWHAT IMPORTANT	NOT IMPORTANT	DON'T KNOW	
a. Purchase Price . . . . . a.	1	2	3	6	RFPRICE 377
b. Size . . . . . b.	1	2	3	6	RFSIZE 378
c. Energy Efficiency . . . . . c.	1	2	3	6	RFEFFICT 379
d. Availability . . . . . d.	1	2	3	6	RFAVAIL 380

WASHER AND DRYER

G-22. Does your household **use** a clothes washer in your home/apartment?

CWASHER

YES 1 381
NO . . . . . 0 --> [G-24]

INTERVIEWER: DO NOT INCLUDE COMMUNITY WASHERS AND DRYERS THAT ARE LOCATED IN THE BASEMENT OR LAUNDRY ROOM OF APARTMENT BUILDING.

IF "YES" ON G-22, ASK:

G-23. Please look at Exhibit G-23. How many loads of laundry are washed in your household's clothes washer in an average week?

WASHLOAD

1 TO 5 LOADS 1
6 TO 10 LOADS 2
11 TO 15 LOADS 3 382
16 OR MORE LOADS 4
DON'T KNOW 6

G-24. Does your household **use** an electric or gas clothes dryer in your home/apartment?

DRYER

a. ELECTRIC CLOTHES DRYER . . . . . 1 ELDRYER 383
b. NATURAL GAS CLOTHES DRYER . . . . . 2 NGDRYER 384
c. BOTTLED GAS CLOTHES DRYER . . . . . 3 LPDRYER 385
d. NONE USED 0 386

INTERVIEWER: CHECK FOLDOUT PAGE. CIRCLE "1" FOR APPROPRIATE "FUEL USED" IF NOT ALREADY CIRCLED.

ALSO, IF NATURAL GAS DRYER, "FOR OTHER APPLIANCES" CIRCLE "1" FOR "YES" UNDER "USAGE" COLUMN.

1993 Residential Energy Consumption Survey
Form EIA-457A

DISHWASHER

G-25. Does your household **use** an automatic dishwasher?

DISHWASH

YES 1 387
NO . . . . . 0 –> [G-27]

IF "YES" ON G-25, ASK:

G-26. Please turn to Exhibit G-26. How often does your household **use** the dishwasher in an average week?

DWASHUSE

A FEW TIMES A WEEK (1 - 3) 1
SEVERAL TIMES A WEEK (4 - 6) 2
EVERY DAY OF THE WEEK (7) 3 388
MORE THAN EVERY DAY (8+) 4
DON'T KNOW 6

TV

G-27. How many color television sets does your household **use**?

TVCOLOR

COLOR TV SETS . . . . . NUMBER: [ ] 389

G-28. How many black and white television sets does your household **use**?

TVBLACK

BLACK AND WHITE TV SETS . . . . . NUMBER: [ ] 390

WATERBEDS

G-29. Does your household **use** any waterbed heaters?

WATERBED

YES 1 391
NO . . . . . 0 –> [G-32]

IF "YES" ON G-29, ASK:

G-30. How many waterbed heaters does your household **use**?

NOWTBDHT

ONE 1
TWO 2 392
THREE OR MORE 3

G-31. How many of these waterbed heaters are **used** all year long?

WTBEDUSE

NONE 0
ONE 1 393
TWO 2
THREE OR MORE 3

OTHER APPLIANCES

G-32. Please turn to Exhibit G-32. Please tell me which of the appliances on the Exhibit are **used** in your home/apartment? (CIRCLE ALL THAT APPLY.)

		YES	NO		
a.	HEATED AQUARIUM (20 GALLONS OR LARGER)	1	0	AQUARIUM	394
b.	ELECTRIC DEHUMIDIFIER	1	0	NOTMOIST	395
c.	ELECTRIC HUMIDIFIER	1	0	MOISTURE	396
d.	ELECTRIC PUMP FOR WELL WATER	1	0	WELLPUMP	397
e.	EXHAUST FAN (INCLUDE BATHROOM, KITCHEN OR BASEMENT EXHAUST FANS)	1	0	EXHFAN	398
f.	AIR CLEANER (PORTABLE FLOOR OR FURNACE MODEL)	1	0	CLEANER	399
g.	EVAPORATIVE COOLER (SWAMP COOLER)	1	0	SWAMPCOL	400
h.	PERSONAL COMPUTER	1	0	COMPUTER	401
i.	LASER PRINTER FOR COMPUTER (NOT DOT MATRIX)	1	0	PRINTER	402
j.	FACSIMILE MACHINE (FAX)	1	0	FAX	403
k.	PHOTOCOPIER (SEPARATE FROM FACSIMILE MACHINE)	1	0	COPIER	404

POOLS AND HOT TUBS

INTERVIEWER: CHECK A-1 "HOUSING STRUCTURE" ON FOLDOUT PAGE. IF SINGLE FAMILY OR MOBILE HOME, ASK THE FOLLOWING QUESTIONS; OTHERWISE, SKIP TO H-1 ON PAGE 38.

SWIMPOOL

G-33. Does your home have its own swimming pool with a filtering system?

YES 1 *407*
NO . . . . . 0 --> [G-36]

IF "YES" ON G-33, ASK:

POOL

G-34. Is it a heated pool?

YES, HEATED 1 *406*
NO . . . . . 0 --> [G-36]

IF "YES" ON G-34, ASK:

FUELPOOL

G-35. Please turn to the "Blue Card" and tell me what fuel is used **most often** to heat the pool water? (IF MORE THAN ONE FUEL USED, CHECK FUEL USED MOST OFTEN.)

ELECTRICITY 05
NATURAL GAS (UNDERGROUND PIPES) 01
BOTTLED GAS (LPG OR PROPANE GAS) 02
FUEL OIL 03
KEROSENE OR COAL OIL 04 *407-09*
COAL OR COKE 06
WOOD 07
SOLAR 08
OTHER (SPECIFY): _____ 21
DON'T KNOW 96

INTERVIEWER: CHECK FOLDOUT PAGE. CIRCLE "1" FOR "FUEL USED" IF NOT ALREADY CIRCLED.

ALSO, IF NATURAL GAS, "FOR OTHER APPLIANCES" CIRCLE "1" FOR "YES" UNDER "USAGE" COLUMN.

RECBATH

G-36. Does your home have a heated hot tub, spa, or jacuzzi, other than a bathtub?

YES 1 *409*
NO . . . . . 0 --> [H-1]

INTERVIEWER: IF AFTER EACH USE, THE WATER DRAINS OUT, CIRCLE "NO" FOR G-36 AND SKIP TO H-1.

IF "YES" ON G-36, ASK:

FUELTUB

G-37. Please turn to the "Blue Card". Which fuel is used to heat the water in your hot tub, spa, or jacuzzi? (IF MORE THAN ONE FUEL USED, CIRCLE FUEL USED MOST OFTEN)

ELECTRICITY 05
NATURAL GAS (GAS FROM UNDERGROUND PIPES) 01
BOTTLED GAS (LPG OR PROPANE GAS) 02
FUEL OIL 03
KEROSENE OR COAL OIL 04 *410-11*
COAL OR COKE 06
WOOD 07
SOLAR 08
OTHER (SPECIFY): _____ 21
DON'T KNOW 96

INTERVIEWER: CHECK FOLDOUT PAGE. CIRCLE "1" FOR "FUEL USED" IF NOT ALREADY CIRCLED.

ALSO, IF NATURAL GAS, "FOR OTHER APPLIANCES" CIRCLE "1" FOR "YES" UNDER "USAGE" COLUMN.

Section H. CONSERVATION MEASURES AND USAGE

INSULATION

H-1. Overall, would you say that this home/apartment is well insulated, adequately insulated, or poorly insulated? Insulation includes window caulking or weather stripping.

ADQINSUL

WELL INSULATED 1
ADEQUATELY INSULATED 2
POORLY INSULATED 3 412
NO INSULATION (VOLUNTEERED) 4
DON'T KNOW 6

INTERVIEWER: CHECK A-1 "HOUSING STRUCTURE" ON THE FOLDOUT PAGE. IF SINGLE-FAMILY HOME OR MOBILE HOME, ASK H-2, OTHERWISE SKIP TO H-3.

H-2. Does your home have any of the following insulation?

	YES	NO	DON'T KNOW		
a. Roof or Ceiling Insulation	1	0	6	HINATTIC	413
b. Insulation in Outside Walls	1	0	6	WALLINS	414
c. Insulation (Blanket) Around the Hot Water Heater	1	0	6	WATERINS	415
d. Insulation Around Hot Water Pipes	1	0	6	PIPEINS	416
e. Insulation Around Heating and/or Cooling Ducts	1	0	6	DUCTS	417
f. Weather Stripping Around Any Windows or Doors to the Outside	1	0	6	STRIP	418
g. Caulking	1	0	6	CAULKADD	419

INTERVIEWER: ASK EVERYONE

H-3. Does your home have any of the following?

	YES	NO	DON'T KNOW		
a. Automatic Set-back or Clock Thermostat	1	0	6	SETBACK	420
b. Regular Maintenance of Heating System/ Furnace	1	0	6	EQPTUNUP	421
c. Large Tree(s) That Shade Your House or Apartment from the Afternoon Summer Sun	1	0	6	TREESHAD	422

1993 Residential Energy Consumption Survey
Form EIA-457A

NEW TECHNOLOGIES

H-4. Please turn to Exhibit H-4. There are new products designed to save energy. They are just becoming available and most people may not have heard about them yet. Have you heard of any of the following:

NEW PRODUCTS	H-4. Have Heard YES	H-4. Have Heard NO	H-5. Used In Home YES	H-5. Used In Home NO	H-5. Used In Home DK	
a. Low-E Window Glass	KLOWE 1	0	ULOWE 1	0	6	423-24
b. Instantaneous (or Point-of-Use) Water Heater	KINSTWH 1	0	UINSTWH 1	0	6	425-26
c. Ground-Source Heat Pump	KGRUNDHP 1	0	UGRUNDHP 1	0	6	427-28
d. Water-Source Heat Pump	KWATERHP 1	0	UWATERHP 1	0	6	429-30
e. Thermal Storage	KHTSTORE 1	0	UHTSTORE 1	0	6	431-32
f. Heat Pump Water Heater	KHPWHTR 1	0	UHPWHTR 1	0	6	433-34
g. "Combo Heater" Gas-Fired Water Heater with Heat Exchanger for Space Heating	KCOMBO 1	0	UCOMBO 1	0	6	435-36
h. Halogen Light Bulbs	KHALOGEN 1	0	UHALOGEN 1	0	6	437-38
i. Compact Fluorescent Light Bulbs	KCFLUOR 1	0	UCFLUOR 1	0	6	439-40

FOR EACH "YES" ON H-4, ASK, OTHERWISE --> [H-6]

H-5. Does your household use (NEW PRODUCT) in your home?

WINDOWS/DOORS

H-6. How many sliding glass doors does your household have that go from a heated area to the outside or to an unheated area?

NUMBER OF SLIDING GLASS DOORS: ____ DOOR1SUM 441

NONE ..... 0 --> [H-8]

INTERVIEWER: COUNT EACH PAIR OF SLIDING GLASS DOORS AS ONE DOOR.

H-7. Please turn to Exhibit H-7. Which describes the glass in your sliding door? DOOR1GLS 442

- SINGLE PANE GLASS 1
- DOUBLE PANE GLASS 2
- DOUBLE PANE GLASS WITH LOW-E COATING 3
- TRIPLE PANE GLASS 4
- TRIPLE PANE GLASS WITH LOW-E COATING 5
- DON'T KNOW 6

INTERVIEWER: IF ASKED, LOW-E COATING IS A TRANSPARENT, MICROSCOPIC LAYER OF METALLIC MATERIAL APPLIED AT THE FACTORY TO THE INSIDE OF A DOUBLE- OR TRIPLE- PANE GLASS TO REDUCE HEAT TRANSFER.

H-8. Please turn to Exhibit H-8. How many windows does your home have? Each window that opens **separately** should be counted as one window. Include basement, attic, garage, and porch windows **only if these areas are heated.**

NUMBER OF WINDOWS ..... ____ WINDOWS 443-44

INTERVIEWER: IF ASKED, DOUBLE HUNG SLIDER WINDOWS COUNT AS ONE WINDOW. EACH WINDOW THAT OPENS SEPARATELY SHOULD BE COUNTED AS ONE WINDOW. ALSO COUNT WINDOWS THAT ARE FIXED IN PLACE. **DO NOT** INCLUDE WINDOWS (GLASS PANELS) IN DOORS.

H-9. Please turn to Exhibit H-9. Which best describes most of the windows in your home? Do not consider storm windows.

WINDOWGL

SINGLE-PANE GLASS	1	
DOUBLE-PANE GLASS	2	
DOUBLE-PANE GLASS WITH LOW-E COATING	3	445
TRIPLE-PANE GLASS	4	
TRIPLE-PANE GLASS WITH LOW-E COATING	5	
DON'T KNOW	6	

INTERVIEWER: IF ASKED, LOW-E COATING IS A TRANSPARENT, MICROSCOPIC LAYER OF METALLIC MATERIAL APPLIED AT THE FACTORY TO THE INSIDE OF A DOUBLE- OR TRIPLE- PANE GLASS TO REDUCE HEAT TRANSFER

H-10. Do you have storm windows or plastic coverings on most of your windows?

STRMPLAC

YES, STORM WINDOWS	1	446
YES, PLASTIC COVERINGS	2	447
NO	0	448

INTERVIEWER READ: "Please do not consider storm windows in answering the following questions."

H-11. Exhibit H-9 shows the location of the window frame. Is most of the window glass held in place by a metal or nonmetal frame? (If storm windows are present, answer for regular windows, not the storm windows.)

WFRAME

METAL (ALUMINUM OR STEEL)	1	
NONMETAL (WOOD OR VINYL)	2	449
OTHER	3	
DON'T KNOW	6	

H-12. How many of the original windows have been replaced, all, some, or none of the windows? (Exclude additions onto the house.)

ORIGWIND

ALL OF THE WINDOWS	1 --> [H-14]	
SOME OF THE WINDOWS	2	450
NONE OF THE WINDOWS	0 --> [H-15]	
DON'T KNOW	6 --> [H-15]	

IF "SOME" ON H-12, ASK:

H-13. Please turn to Exhibit H-13. Which best describes most of the replacement windows? CIRCLE ONE ONLY.

WINDREP

SINGLE-PANE GLASS	1	
DOUBLE-PANE GLASS	2	
DOUBLE-PANE GLASS WITH LOW-E COATING	3	451
TRIPLE-PANE GLASS	4	
TRIPLE-PANE GLASS WITH LOW-E COATING	5	
DON'T KNOW	6	

H-14. Please turn to the "Yellow Card". Approximately how long ago were the windows replaced?

WINDAGE

LESS THAN 2 YEARS	1	
2 - 4 YEARS	2	
5 - 9 YEARS	3	452
10 - 19 YEARS	4	
20 YEARS OR MORE	5	
DON'T KNOW	6	

1993 Residential Energy Consumption Survey
Form EIA-457A

COOLING FANS

H-15. Which fans did your household use to assist in cooling your home last summer?

TYPES OF HOUSEHOLD FANS	YES	NO	NOT HERE LAST SUMMER	DON'T KNOW	
WINDFAN a. Window Fan	1	0	5	6	453
PORTFAN b. Portable Table or Floor Fan	1	0	5	6	454
ATTICEXH c. Attic Exhaust Fan	1	0	5	6	455
ATTICFAN d. "Whole House" Cooling Fan (usually in attic or entrance to attic)	1	0	5	6	456
CFAN e. Ceiling Fan	1	0	5	6	457

NUMCFAN IF USE CEILING FAN ON H-15, ASK:

H-16. How many ceiling fans does your household use? Number: ☐ 458

HOME ACTIVITIES

H-17. On a typical weekday in this home, is there:

	YES	NO	DON'T KNOW		
a. Operation of a home-based service or business?	1	0	6	HBUSNESS	459
b. Some other activity requiring a lot of energy? If "YES" (SPECIFY): _____	1	0	6	OTHWORK	460
c. Someone home all day?	1	0	6	ATHOME	461

INTERVIEWER: "Lot of Energy" DOES NOT MEAN HUMAN ENERGY, SUCH AS HOUSEWORK

Section I. DEMAND-SIDE MANAGEMENT

INTERVIEWER READ: "This next Section applies only to your experiences living in this home/apartment."

I-1. Please turn to Exhibit I-1. Are any of these programs offered by your electric utility, natural gas utility, or through some other group? **DSMPROG**

YES . . . 1
NO . . . 0 --> [BOX 4: PAGE 48] 465
DON'T KNOW . . . 6

I-2. Has your household participated in any of these programs for this home during the last 12 months? **DSMPARTI**

YES . . . 1
NO . . . 0 --> [BOX 4] 466
DON'T KNOW . . . 6 --> [BOX 4: PAGE 48]

INTERVIEWER: CHECK FOLDOUT PAGE. IF HOUSEHOLD USES NATURAL GAS, ASK I-3, OTHERWISE SKIP TO I-4.

I-3. Were these electric or natural gas programs? (CIRCLE ALL THAT APPLY.)

ELECTRIC PROGRAM . . . 5 **ELPROG** 467
NATURAL GAS PROGRAM . . . 1 **NGPROG** 468
DON'T KNOW . . . 6 469

INTERVIEWER: IF THE RESPONDENT HAS QUESTIONS CONCERNING DEFINITIONS FOR THE FOLLOWING QUESTIONS, REFER TO EXHIBIT I-1.

I-4. Has your household had a home energy audit within the past 12 months? **ENGAUPGM**

YES . . . 1
NO . . . 0 470
DON'T KNOW . . . 6

1993 Residential Energy Consumption Survey
Form EIA-457A

I-5. Has your household participated in a load control program within the past 12 months where you agreed to allow your electric utility to shut off some equipment in your home during the weekday in return for a discount on your utility bill?

LDCNTPGM

YES	1		
NO	0 --> [I-7]		471
DON'T KNOW	6 --> [I-7]		

IF "YES" ON I-5, ASK:

I-6. Was the discount offered for the air-conditioner, the water heater, or other appliance or equipment? (CIRCLE ALL THAT APPLY)

	YES	NO		
AIR-CONDITIONER	1	0	**LOADAC**	472
WATER HEATER	1	0	**LOADWH**	473
OTHER APPLIANCE/EQUIPMENT	1	0	**LOADOTH**	474
DON'T KNOW	1	0		475

I-7. Has your household participated in an energy conservation program in the last 12 months where you received some equipment or service, such as a water heater blanket, low flow showerhead, or furnace maintenance?

CONSEPGM

YES	1	
NO	0 --> [I-9]	476
DON'T KNOW	6 --> [I-9]	

IF "YES" ON I-7, ASK:

I-8. Please turn to Exhibit I-8. Which energy conservation items were received by your household?

	YES	NO		
COMPACT FLUORESCENT LIGHT BULBS	1	0	**CONCFLOR**	477
LOW-FLOW SHOWERHEAD	1	0	**CONSHOWR**	478
WATER HEATER BLANKET	1	0	**CONWH**	479
INSULATION	1	0	**CONINS**	480
CAULKING/WEATHER STRIPPING	1	0	**CONCAULK**	481
ENERGY-CONSERVING WINDOWS	1	0	**CONWIND**	482
MAINTENANCE–HEATING SYSTEM, ETC.	1	0	**CONMAINH**	483
OTHER ITEM (SPECIFY): _____	1	0	**CONOTH**	484
DON'T KNOW	1	0		485

I-9. Did your household receive, within the last 12 months, a low interest loan, rebate or other financial incentive to encourage you to buy energy-efficient equipment?

REBATPGM

YES	1	
NO	0 --> [I-12]	495
DON'T KNOW	6 --> [I-12]	

IF "YES" ON I-9, ASK:

I-10. Please turn to Exhibit I-10. For what type of equipment did your household get a rebate or other financial incentive? (CIRCLE ALL THAT APPLY)

	YES	NO		
AIR CONDITIONING EQUIPMENT	1	0	**MONAC**	496
WATER HEATER	1	0	**MONWH**	497
HEATING EQUIPMENT	1	0	**MONFURN**	498
REFRIGERATOR	1	0	**MONFRIG**	499
COMPACT FLUORESCENT LIGHT BULBS	1	0	**MONCFLOR**	500
OTHER (SPECIFY): _____	1	0	**MONOTH**	501
DON'T KNOW	1	0		502

I-11. How important was the utility's financial assistance in making the decision to purchase the energy efficient equipment? Was it very important, somewhat important, or would you have bought it anyway?

MONIMPOR

VERY IMPORTANT	2	
SOMEWHAT IMPORTANT	1	503
WOULD HAVE BOUGHT IT ANYWAY	0	
DON'T KNOW	6	

I-12. Has your household participated in a program within the last 12 months that encouraged you to switch fuels for certain equipment in your home?

FUELPGM

YES	1	
NO	0	504
DON'T KNOW	6	

I-13. Has your household participated in a time-of-use rate program within the last 12 months, where you receive cheaper electric rates if you use electricity at certain times of the day when demand is lowest?

TOU

YES	1	
NO	0	505
DON'T KNOW	6	

1993 Residential Energy Consumption Survey
Form EIA-457A

Section J. FUEL USED

BOX 4

INTERVIEWER: USE THE FOLDOUT PAGE TO CHECK AND UPDATE THE ANSWERS TO THE FOLLOWING QUESTIONS.

INTERVIEWER READ: "To be sure that I have the correct information about which fuels are used for certain purposes, I need to double check the following."

J-1. I have circled that your household uses (READ EACH FUEL CIRCLED "YES" UNDER "FUEL USED" ON THE FOLDOUT PAGE.) Is that correct?

INTERVIEWER: CHECK [ ] IF NO CHANGES, OTHERWISE INDICATE CHANGES ON FOLDOUT.

J-2. During 1993, did your household use (READ EACH FUEL NOT CIRCLED "YES" UNDER "FUEL USED" ON THE FOLDOUT PAGE. CIRCLE EACH "YES" OR "NO.")

ELECTRICITY

J-3. Now, let's talk about electricity. I have circled that electricity is used for (READ EACH USE CIRCLED "YES" UNDER "USAGE" ON THE FOLDOUT PAGE.) Is that correct?

INTERVIEWER: CHECK [ ] IF NO CHANGES, OTHERWISE INDICATE CHANGES ON FOLDOUT.

J-4. During 1993, did your household use electricity for (READ EACH FUEL NOT CIRCLED "YES" UNDER "USAGE" ON THE FOLDOUT PAGE. CIRCLE EACH "YES" OR "NO.")

FOR EACH USAGE OF ELECTRICITY, ASK:

J-5. Did your household pay for the electricity used for (USE), or was it included in the rent or condo fee, or was it paid some other way? (CIRCLE THE ANSWER UNDER "HOW USAGE IS PAID" FOR EACH "YES" CIRCLED UNDER "USAGE.")

NATURAL GAS

BOX 5

INTERVIEWER: CHECK FOLDOUT PAGE. IF NATURAL GAS USED, CONTINUE, OTHERWISE CHECK HERE [ ] AND SKIP TO BOX 6, (BOTTLED GAS) PAGE 50.

J-6. Now let's talk about natural gas. I have circled that natural gas is used for (READ EACH USE CIRCLED "YES" UNDER "USAGE" ON THE FOLDOUT PAGE.) Is that correct?

INTERVIEWER: CHECK [ ] IF NO CHANGES, OTHERWISE INDICATE CHANGES ON FOLDOUT.

J-7. During 1993, did your household use natural gas for (READ EACH USAGE NOT CIRCLED "YES" UNDER "USAGE" ON THE FOLDOUT PAGE. CIRCLE EACH "YES" OR "NO".)

FOR EACH USAGE OF NATURAL GAS, ASK:

J-8. Did your household pay for the natural gas used for (USE), or was it included in the rent or condo fee, or was it paid some other way? (CIRCLE THE ANSWER UNDER "HOW USAGE IS PAID" FOR EACH "YES" CIRCLED UNDER "USAGE.")

J-9. Does your household combine with others in your building or development (Home Owners Association) to buy or contract for natural gas from someone other than the local gas utility and then have the local utility deliver the gas? Gas bought this way is often called "gas transported for the account of others," "transported gas," "spot market gas," or "direct purchase gas."

TRANSGAS

YES 1
NO . . . . . 0 --> [BOX 6] 517
DON'T KNOW . . . . . 6 --> [BOX 6]

IF "YES" ON J-9, ASK:

J-10. Can you give me the name of the company or broker or another contact person that can give me more information about direct purchase gas?

NAMETGAS

Contact Person: _____

Telephone Number: ( ) _____

Company Name: _____ 518

Address: _____

City/State/ZIP: _____

Unable to provide more information 0

BOTTLED GAS (LPG OR PROPANE)

BOX 6

INTERVIEWER: CHECK FOLDOUT PAGE, IF "BOTTLED GAS" USED, CONTINUE, OTHERWISE CHECK HERE [ ] SKIP TO BOX 7 (FUEL OIL), PAGE 51.

J-11. Is your bottled gas paid for by your household, included in your rent or condo fee, or is it paid by some other means?

(Refer to PAYLPG)

PAID BY HOUSEHOLD	1	
INCLUDED IN RENT OR CONDO FEE	2 --> [BOX 7]	520
OTHER WAY (SPECIFY ON FOLDOUT PAGE)	5 --> [BOX 7]	

INTERVIEWER: CIRCLE THE ANSWER UNDER "HOW USAGE IS PAID" FOR BOTTLED GAS ON FOLDOUT PAGE.

J-12. Is bottled gas delivered to your home?

LPGDELV

YES	1	
NO	0 --> [BOX 7]	521
DON'T KNOW	6 --> [BOX 7]	

INTERVIEWER: MARK UNDER "FUEL DELIVERED" ON FOLDOUT PAGE.

IF "YES" ON J-12, ASK:

J-13. How many different companies delivered bottled gas to you since January 1, 1993?

NDIFLPCO

ONE	1	
TWO	2	522
THREE OR MORE	3	
DON'T KNOW	6	

J-14. About how many deliveries did your household get in the past 12 months?

NLPDELNC

NUMBER OF DELIVERIES	[ ]	
NOT SURE	96	523-24
DID NOT LIVE HERE FULL 12 MONTHS	95 --> [BOX 7]	

FUEL OIL

BOX 7

INTERVIEWER: CHECK FOLDOUT PAGE, IF FUEL OIL USED, CONTINUE, OTHERWISE CHECK HERE [ ] AND SKIP TO BOX 8 (KEROSENE SECTION), PAGE 53.

J-15. Is your fuel oil paid by your household, included in your rent or condo fee, or is it paid some other way?

(Refer to PAYFO)

PAID BY HOUSEHOLD	1	
INCLUDED IN RENT OR CONDO FEE	2 --> [BOX 8]	526
OTHER WAY (SPECIFY ON FOLDOUT PAGE)	5 --> [BOX 8: PAGE 53]	

INTERVIEWER: CIRCLE THE ANSWER UNDER "HOW USAGE IS PAID" FOR FUEL OIL ON FOLDOUT PAGE.

J-16. Please turn to Exhibit J-16. About how much fuel oil did your household use in the past 12 months, just approximately?

QUANTFO

a. 99 GALLONS OR LESS	1	
b. 100-499 GALLONS	2	
c. 500-999 GALLONS	3	527
d. 1,000 GALLONS OR MORE	4	
e. DON'T KNOW	6	

J-17. Is fuel oil delivered to your home?

FODEL

YES	1	
NO	0 --> [BOX 8]	528
DON'T KNOW	6 --> [BOX 8: PAGE 53]	

INTERVIEWER: MARK UNDER "FUEL DELIVERED" ON FOLDOUT PAGE.

1993 Residential Energy Consumption Survey
Form EIA-457A

NDIFFOCO

J-18. How many different companies delivered fuel oil to your household since January 1, 1993?

ONE 1
TWO 2
THREE OR MORE 3
DON'T KNOW 6

529

NFODELNO

J-19. About how many deliveries did your household get in the past 12 months?

NUMBER OF DELIVERIES . . . . . [ ]
NOT SURE 96

530-31

KEROSENE

BOX 8

INTERVIEWER: CHECK FOLDOUT PAGE. IF KERosene IS USED, CONTINUE, OTHERWISE, CHECK HERE [ ] AND SKIP TO J-28, PAGE 55.

J-20. Is kerosene delivered to your (home/apartment)?

KERODEL

YES 1
NO . . . . . 0 —> [J-23]
DON'T KNOW . . . . . 6 --> [J-23]

533

INTERVIEWER: MARK UNDER "FUEL DELIVERED" ON FOLDOUT PAGE.

IF "YES" ON J-20, ASK:

J-21. How many different companies delivered kerosene to your household since January 1, 1993?

NDIFKRCO

ONE 1
TWO 2
THREE OR MORE 3
DON'T KNOW 6

534

J-22. About how many deliveries did your household get in the past 12 months?

NOKRDEL

NUMBER OF DELIVERIES . . . . . [ ]
NOT SURE 96

535-36

1993 Residential Energy Consumption Survey
Form EIA-457A

J-23. Did your household buy kerosene in the past 12 months and bring it home, that is, cash and carry?

KEROCASH

YES 1
NO . . . . . 0 --> [J-28] *537*
DON'T KNOW . . . . . 6 --> [J-28]

IF "YES" ON J-23, ASK:

J-24. How many times in the past 12 months did your household buy kerosene and bring it home?

NOKRCASH

NUMBER OF TIMES . . . . . ☐☐
NOT SURE 96 *538-39*
DID NOT LIVE HERE FULL 12 MONTHS 95

J-25. Please turn to Exhibit J-25. These are common sizes for kerosene containers. On average how much kerosene did your household buy and bring home each time?

NKRGALNC

1 GALLON 1
3 GALLONS 2
5 GALLONS 3 *540*
55 GALLONS 4
OTHER (SPECIFY):_____ 5
NOT SURE 6

J-26. About how much per gallon did your household pay for kerosene, on the average?

PRICEKER

PRICE . . . . . $_____ PER GALLON --> [J-28] *541-43*
NOT SURE 996

IF "NOT SURE" ON J-26, ASK:

J-27. About how much did you pay for kerosene each time your household bought it (total amount)?

TOTPAYKR

PRICE . . . . . $_____ IN TOTAL *544-48*
NOT SURE 99996

WOOD

INTERVIEWER: ASK EVERYONE.

J-28. Please turn to Exhibit J-28. We may have covered this before. Have any wood logs or other wood such as wood scraps or pellets been burned in the past 12 months? (CIRCLE ALL THAT APPLY.)

YES, WOOD LOGS . . . . . 1 **WOODLOGS** *549*
YES, WOOD SCRAPS SUCH AS MILL WASTE OR BARK . . . . 2 **WDSCRAP** *550*
YES, WOOD PELLETS . . . . . 3 **WDPELLET** *551*
NO WOOD BURNED . . . . . 0 --> [BOX 9: PAGE 57] **NOWDBURN** *552*

J-29. Please turn to Exhibit J-29. Where were the wood, scraps, pellets or other material burned? (CIRCLE ALL THAT APPLY.)

HEATING STOVE . . . . . 1 **WDSTOVE** *553*
FIREPLACE INSERT . . . . . 2 **WDINSERT** *554*
FIREPLACE WITHOUT INSERT . . . . . 3 --> [J-31] **WDFIREPL** *555*
FURNACE . . . . . 4 --> [J-31] **WDFURNAC** *556*
PELLET STOVE . . . . . 5 --> [BOX 9: PAGE 57] **PELLETST** *557*

IF "HEATING STOVE" OR "FIREPLACE INSERT" ON J-29, ASK:

J-30. Does the (heating stove/fireplace insert) have EPA certification?

EPACERT

YES 1
NO 0 *558*
DON'T KNOW 6

IF "YES, WOOD LOGS" OR "YES, WOOD SCRAPS" ON J-28, ASK; OTHERWISE --> [BOX 9]

J-31. Please turn to Exhibit J-31. Using the pictures, about how much wood has your household burned in the past 12 months?

WOODAMT

LESS THAN 1/4 CORD . . . . . 1 --> [J-33]
1/4 TO 1/3 OF A CORD . . . . . 2 --> [J-33]
ABOUT 1/2 CORD . . . . . 3 --> [J-33] *559*
MORE THAN 1/2 BUT LESS THAN ONE FULL CORD . . 4 --> [J-33]
ONE CORD OR MORE 5

1993 Residential Energy Consumption Survey
Form EIA-457A

IF "ONE CORD OR MORE" IN J-31, ASK:

CORDPLUS

J-32. Please turn to Exhibit J-32. Using the pictures as references, how many cords were burned?

NUMBER OF CORDS BURNED: ..... ☐ CORDS 560-61

INTERVIEWER: PROBE FOR RESPONDENT'S BEST ESTIMATE OF NUMBER OF CORDS BURNED. RECORD ANSWER TO NEAREST CORD, OR CORD PLUS FRACTION. (FOR EXAMPLE: 1, 1 1/2, 4, 10, 12, AND SO ON).

J-33. Did your household purchase any firewood for your home in the past 12 months?

GETWOOD

YES 1 562
NO ..... 0 --> [BOX 9]

J-34. Please look again at Exhibit J-34. Which category best describes how much wood your household bought the last time you bought wood?

BUYAMT

LESS THAN 1/4 CORD 1
1/4 TO 1/3 OF A CORD 2
ABOUT 1/2 CORD 3 563
MORE THAN 1/2 CORD BUT LESS THAN ONE FULL CORD 4
ONE CORD OR MORE ..... 5 --> [J-36]

J-35. Please turn to Exhibit J-35. How much did your household pay for that wood?

PRICEWD

a. $10 OR LESS ..... 01 --> [BOX 9]
b. $11 - $25. ..... 02 --> [BOX 9]
c. $26 - $50. ..... 03 --> [BOX 9]
d. $51 - $75. ..... 04 --> [BOX 9] 564-65
e. $76 - $100. ..... 05 --> [BOX 9]
f. $101 OR MORE. ..... 06 --> [BOX 9]
g. DON'T KNOW ..... 96 --> [BOX 9]

IF "ONE CORD OR MORE" IN J-34, ASK:

CORDPRIC

J-36. How much did your household pay per cord of wood?

PRICE PER CORD ..... $____.00 566-68
DON'T KNOW 996

Section K: FUEL BILLS

BOX 9

INTERVIEWER: CHECK THE FOLDOUT PAGE. IF THE HOUSEHOLD PAYS FOR ANY TYPE OF ENERGY, COMPLETE THIS SECTION. IF ALL FUELS ARE INCLUDED IN RENT, FEES OR OTHER, CHECK HERE [ ] AND SKIP TO BOX 16, PAGE 71.

ELECTRICITY BILL

INTERVIEWER: CHECK FOLDOUT PAGE, IF ELECTRICITY BILL IS PAID BY THE HOUSEHOLD, CONTINUE. OTHERWISE CHECK HERE [ ] AND SKIP TO BOX 10, PAGE 59.

K-1. What is the name, address, telephone number and account number for your household's electricity supplier?

SUPPLIER NAME:_____

STREET ADDRESS:_____

CITY:_____ 581

STATE:_____ ZIP:_____

TELEPHONE:_____

ACCOUNT NUMBER:_____ 582

INTERVIEWER: IT IS VERY IMPORTANT TO OBTAIN THE ACCOUNT NUMBERS FROM THE RESPONDENT. PLEASE ENCOURAGE THEM TO LOOK UP THE NUMBERS, IF POSSIBLE.

1993 Residential Energy Consumption Survey
Form EIA-457A

K-2. Does your electricity bill come addressed to you or is it in another name?

BILNAMEL

a. SAME NAME . . . . . 1 --> [BOX 10] 583
b. ANOTHER NAME 2

K-3. What is the billing name and address?

BILLING NAME:_____

STREET ADDRESS:_____ 584

CITY:_____

STATE:_____ ZIP:_____

K-4. Please turn to the "Beige Card". Just for our records, what is the relationship of this person to you?

RELSHPEL

a. SPOUSE 01
b. PARTNER 02
c. PARENT OR GRANDPARENT 03
d. SIBLING 04
e. CHILD OR GRANDCHILD 05 585-86
f. OTHER RELATED INDIVIDUAL 06
g. ROOMMATE 07
h. OTHER UNRELATED INDIVIDUAL OR COMPANY 08
i. REFUSED 09

NATURAL GAS BILL

BOX 10

INTERVIEWER: CHECK FOLDOUT PAGE, IF NATURAL GAS BILL IS PAID BY THE HOUSEHOLD, CONTINUE. OTHERWISE CHECK HERE [ ] AND SKIP TO BOX 11, ON PAGE 61.

K-5. What is the name, address, telephone number and account number for your household's natural gas supplier?

SUPPLIER NAME:_____

STREET ADDRESS:_____

CITY:_____ 588

STATE:_____ ZIP:_____

TELEPHONE:_____

ACCOUNT NUMBER:_____ 589

INTERVIEWER: IT IS VERY IMPORTANT TO OBTAIN THE ACCOUNT NUMBERS FROM THE RESPONDENT. PLEASE ENCOURAGE THEM TO LOOK UP THE NUMBERS, IF POSSIBLE.

K-6. Does your natural gas bill come addressed to you or is it in another name?

BILNAMNG

a. SAME NAME . . . . . 1 --> [BOX 11] 590
b. ANOTHER NAME 2

K-7. What is the billing name and address?

BILLING NAME:_____

STREET ADDRESS:_____ 591

CITY:_____

STATE:_____ ZIP:_____

1993 Residential Energy Consumption Survey
Form EIA-457A

K-8. Please turn to the "Beige Card". Just for our records, what is the relationship of this person to you?

RELSHPNG

a. SPOUSE 01
b. PARTNER 02
c. PARENT OR GRANDPARENT 03
d. SIBLING 04
e. CHILD OR GRANDCHILD 05 592-93
f. OTHER RELATED INDIVIDUAL 06
g. ROOMMATE 07
h. OTHER UNRELATED INDIVIDUAL OR COMPANY 08
i. REFUSED 09

BOTTLED GAS (LPG) BILL

BOX 11

INTERVIEWER: CHECK FOLDOUT PAGE, IF BOTTLED GAS BILL IS PAID BY THE HOUSEHOLD, AND BOTTLED GAS IS DELIVERED TO HOUSEHOLD CONTINUE, OTHERWISE CHECK HERE [ ] AND SKIP TO BOX 12, ON PAGE 63.

K-9. What is the name, address, telephone number and account number for your household's bottled gas supplier?

SUPPLIER NAME: _____

STREET ADDRESS: _____

CITY: _____ 595

STATE: _____ ZIP: _____

TELEPHONE: _____

ACCOUNT NUMBER: _____ 596

INTERVIEWER: IT IS VERY IMPORTANT TO OBTAIN THE ACCOUNT NUMBERS FROM THE RESPONDENT. PLEASE ENCOURAGE THEM TO LOOK UP THE NUMBERS, IF POSSIBLE.

K-10. Does your bottled gas bill come addressed to you or is it in another name?

BILNAMLP

a. SAME NAME . . . . . 1 --> [BOX 12] 597
b. ANOTHER NAME 2

K-11. What is the billing name and address?

BILLING NAME: _____

STREET ADDRESS: _____ 598

CITY: _____

STATE: _____ ZIP: _____

K-12. Please turn to "Beige Card". Just for our records, what is the relationship of this person to you?

RELSHPLP

a. SPOUSE 01
b. PARTNER 02
c. PARENT OR GRANDPARENT 03
d. SIBLING 04
e. CHILD OR GRANDCHILD 05 599-600
f. OTHER RELATED INDIVIDUAL 06
g. ROOMMATE 07
h. OTHER UNRELATED INDIVIDUAL OR COMPANY 08
i. REFUSED 09

INTERVIEWER: RECORD ADDITIONAL SUPPLIERS ON PAGE 67.

FUEL OIL BILL

BOX 12

INTERVIEWER: CHECK FOLDOUT PAGE, IF THE FUEL OIL BILL IS PAID BY THE HOUSEHOLD AND FUEL OIL IS DELIVERED TO THE HOUSEHOLD CONTINUE, OTHERWISE, CHECK HERE [ ] AND SKIP TO BOX 13, PAGE 65.

K-13. What is the name, address, telephone number and account number for your household's fuel oil supplier?

SUPPLIER NAME: _____

STREET ADDRESS: _____

CITY: _____ 602

STATE: _____ ZIP: _____

TELEPHONE: _____

ACCOUNT NUMBER: _____ 603

INTERVIEWER: IT IS VERY IMPORTANT TO OBTAIN THE ACCOUNT NUMBERS FROM THE RESPONDENT. PLEASE ENCOURAGE THEM TO LOOK UP THE NUMBERS, IF POSSIBLE.

K-14. Does your fuel oil bill come addressed to you or is it in another name?

BILNAMFO

a. SAME NAME . . . . . 1 --> [BOX 13] 604
b. ANOTHER NAME 2

K-15. What is the billing name and address?

BILLING NAME: _____

STREET ADDRESS: _____ 605

CITY: _____

STATE: _____ ZIP: _____

K-16. Please turn to the "Beige Card". Just for our records, what is the relationship of this person to you?

RELSHPFO

a.	SPOUSE	01
b.	PARTNER	02
c.	PARENT OR GRANDPARENT	03
d.	SIBLING	04
e.	CHILD OR GRANDCHILD	05
f.	OTHER RELATED INDIVIDUAL	06
g.	ROOMMATE	07
h.	OTHER UNRELATED INDIVIDUAL OR COMPANY	08
i.	REFUSED	09

605.07

INTERVIEWER: RECORD ADDITIONAL SUPPLIERS ON PAGE 67.

KEROSENE BILL

BOX 13

INTERVIEWER: CHECK FOLDOUT PAGE, IF THE KEROSENE IS DELIVERED TO THE HOUSEHOLD CONTINUE, OTHERWISE CHECK HERE [ ] AND SKIP TO BOX 14, PAGE 68.

K-17. What is the name, address, telephone number and account number for your household's kerosene supplier?

SUPPLIER NAME: _____

STREET ADDRESS: _____

CITY: _____ *609*

STATE: _____ ZIP: _____

TELEPHONE: _____

ACCOUNT NUMBER: _____ *610*

INTERVIEWER: IT IS VERY IMPORTANT TO OBTAIN THE ACCOUNT NUMBERS FROM THE RESPONDENT. PLEASE ENCOURAGE THEM TO LOOK UP THE NUMBERS, IF POSSIBLE.

K-18. Does your kerosene bill come addressed to you or is it in another name?

BILNAMKR

a.	SAME NAME	1	–> [BOX 14, PAGE 68]
b.	ANOTHER NAME	2	

611

K-20. What is the billing name and address?

BILLING NAME: _____

STREET ADDRESS: _____ *612*

CITY: _____

STATE: _____ ZIP: _____

K-21. Please turn to the "Beige Card". Just for our records, what is the relationship of this person to you?

RELSHPKR

a. SPOUSE 01
b. PARTNER 02
c. PARENT OR GRANDPARENT 03
d. SIBLING 04
e. CHILD OR GRANDCHILD 05 *613-14*
f. OTHER RELATED INDIVIDUAL 06
g. ROOMMATE 07
h. OTHER UNRELATED INDIVIDUAL OR COMPANY 08
i. REFUSED 09

INTERVIEWER: RECORD ADDITIONAL SUPPLIERS ON PAGE 67.

INTERVIEWER: USE THIS PAGE TO RECORD ADDITIONAL BOTTLED GAS/FUEL OIL/KEROSENE SUPPLIERS

ADDITIONAL SUPPLIERS

FUEL:

[ ] BOTTLED GAS
[ ] FUEL OIL
[ ] KEROSENE

SUPPLIER NAME: _____
STREET ADDRESS: _____
CITY: _____
STATE: _____
TELEPHONE: _____
ACCOUNT NUMBER: _____ *615*

NOTES: _____

FUEL:

[ ] BOTTLED GAS
[ ] FUEL OIL
[ ] KEROSENE

SUPPLIER NAME: _____
STREET ADDRESS: _____
CITY: _____
STATE: _____
TELEPHONE: _____
ACCOUNT NUMBER: _____ *616*

NOTES: _____

FUEL:

[ ] BOTTLED GAS
[ ] FUEL OIL
[ ] KEROSENE

SUPPLIER NAME: _____
STREET ADDRESS: _____
CITY: _____
STATE: _____
TELEPHONE: _____
ACCOUNT NUMBER: _____ *617*

NOTES: _____

1993 Residential Energy Consumption Survey
Form EIA-457A

AUTHORIZATION FORM

BOX 14

INTERVIEWER: COMPLETE THE AUTHORIZATION FORM NOW FOR ANY FUELS PAID FOR BY THE HOUSEHOLD (SEE FOLDOUT PAGE). USE THE YELLOW PAGE INSERTED IN THE QUESTIONNAIRE.

ON THE AUTHORIZATION FORM:

STEP 1: ENTER THE NAME OF EACH COMPANY THAT SUPPLIED FUEL TO THE HOUSEHOLD IN THE APPROPRIATE BOX. THIS INFORMATION WAS OBTAINED ON THE PREVIOUS PAGES.

STEP 2: EITHER YOU OR THE RESPONDENT ENTER THE RESPONDENT'S NAME, ADDRESS, AND TELEPHONE NUMBER.

STEP 3: HAVE THE RESPONDENT SIGN THE AUTHORIZATION FORM.

READ TO RESPONDENT:

The Department of Energy is interested in how much energy households use and pay for and household participation in energy programs. With your permission on this form, your supplier of electricity, natural gas, bottled gas, fuel oil or kerosene will provide your household information to Response Analysis Corporation, who is conducting this survey for the Department of Energy.

All your information is kept confidential and will be combined with information from other households across the United States to indicate national and regional trends.

K-22. Will you please enter your name, address, and sign this Authorization Form.

SIGNFORM

AUTHORIZATION FORM SIGNED 1 *618*
AUTHORIZATION FORM NOT SIGNED 0

NONHOUSEHOLD USES

BOX 15

INTERVIEWER: CHECK FOLDOUT PAGE. IF USE OF ANY FUEL IS PAID BY HOUSEHOLD, ASK. OTHERWISE, GO TO BOX 16, PAGE 71.

K-23. Please turn to the "Pink Card". Look at the top. Do any of your household fuel bills in 1993 include fuel used for any of the purposes listed on the card?

KFUELOT

YES 1
NO . . . . . 0 --> [BOX 16] *619*
DON'T KNOW . . . . . 6 --> [BOX 16: PAGE 71]

IF "YES" ON K-23, ASK:

K-24. For which of the purposes listed at the top of the card are costs of fuel included in your household fuel bills? (CIRCLE ALL THAT APPLY.)

FARM BUILDINGS OR MACHINERY	1	**FARM**	*620*
THE HOUSE OR APARTMENT OF ANOTHER HOUSEHOLD	2	**TENANT**	*621*
A BUSINESS OR OFFICE	3	**BUSINESS**	*622*
SOME USE OTHER THAN FOR YOUR OWN HOUSEHOLD (SPECIFY): _____	4	**OTHERUSE**	*623*

K-25. Which fuel bills include costs of fuel used for purposes other than your own living quarters? (CIRCLE ALL THAT APPLY.)

NATURAL GAS (FROM UNDERGROUND PIPES)	1	**BILLUG**	*624*
BOTTLED GAS (LPG OR PROPANE)	2	**BLPGUSE**	*625*
FUEL OIL	3	**BILLFOIL**	*626*
KEROSENE OR COAL OIL	4	**BILLKER**	*627*
ELECTRICITY	5	**BILLEL**	*628*

INTERVIEWER: ASK THE FOLLOWING QUESTIONS FOR EACH FUEL CIRCLED IN K-25.

IF "NATURAL GAS (FROM UNDERGROUND PIPES)" ON K-25, ASK:

BILLUGP

K-26. Please refer again to the "Pink Card." What portion of the natural gas bill is for nonhousehold uses in 1993?

VERY LITTLE (1-4%) 0
SOME (5-33%) 1
ABOUT HALF (34-66%) 2
ABOUT 3/4 (67-95%) 3
MOST ALL OF IT (96-99%) 4

629

IF "BOTTLED GAS" ON K-25, ASK:

BILLLPGP

K-27. Please refer again to the "Pink Card". What portion of the bottled gas bill is for nonhousehold uses in 1993?

VERY LITTLE (1-4%) 0
SOME (5-33%) 1
ABOUT HALF (34-66%) 2
ABOUT 3/4 (67-95%) 3
MOST ALL OF IT (96-99%) 4

630

IF "FUEL OIL" ON K-25, ASK:

BILLFOLP

K-28. Please refer again to the "Pink Card". What portion of the fuel oil bill is for nonhousehold uses in 1993?

VERY LITTLE (1-4%) 0
SOME (5-33%) 1
ABOUT HALF (34-66%) 2
ABOUT 3/4 (67-95%) 3
MOST ALL OF IT (96-99%) 4

631

IF "KEROSENE OR COAL OIL" ON K-25, ASK:

BILLKERP

K-29. Please refer again to the "Pink Card". What portion of the kerosene bill is for nonhousehold uses in 1993?

VERY LITTLE (1-4%) 0
SOME (5-33%) 1
ABOUT HALF (34-66%) 2
ABOUT 3/4 (67-95%) 3
MOST ALL OF IT (96-99%) 4

632

IF "ELECTRICITY" ON K-25, ASK:

K-30. Please refer again to the "Pink Card". What portion of the electric bill is for nonhousehold uses in 1993?

BILLELP

VERY LITTLE (1-4%) 0
SOME (5-33%) 1
ABOUT HALF (34-66%) 2
ABOUT 3/4 (67-95%) 3
MOST ALL OF IT (96-99%) 4

633

BOX 16

INTERVIEWER: ASK K-31 ONLY IF DATA NOT AVAILABLE FROM AUTHORIZATION FORM. OTHERWISE SKIP TO BOX 17.

K-31. For interview verification purposes, may I have your name, phone number, and mailing address please? My supervisor may want to call you to see if I really have talked to you.

RESPONDENT'S NAME: _____

STREET ADDRESS: _____

CITY OR TOWN/STATE/ZIP CODE: _____

TELEPHONE NUMBER: AREA CODE: (____) _____

BOX 17

INTERVIEWER: CHECK FOLDOUT PAGE, IF "CONDOMINIUM" OR "RENT" OR "OCCUPIED WITHOUT PAYMENT OF RENT", ASK K-32, OTHERWISE SKIP TO L-1.

K-32. We may be needing some additional information about fuels used in this building (house). May I have the name of the person or company to whom you pay rent or who is responsible for paying the fuel bills for this building (house)?

LEASER

NAME: _____

STREET ADDRESS: _____

634

CITY OR TOWN/STATE/ZIP CODE: _____

TELEPHONE NUMBER: AREA CODE: (____) _____

1993 Residential Energy Consumption Survey
Form EIA-457A

IF LIVES IN AN APARTMENT OR MOBILE HOME COMPLEX ASK, OTHERWISE, --> L-1.

COMPLEXN

K-33. Does this (building/development/complex/park) have a name? *635*

YES 1
NO ..... 0 --> [L-1]

K 34. What is the name?

NAME: _____

THIS PAGE INTENTIONALLY LEFT BLANK

1993 Residential Energy Consumption Survey
Form EIA-457A

SECTION L: BACKGROUND INFORMATION

INTERVIEWER: ASK EVERYONE

L-1. Now I have some questions about the people who live here. Please tell me their relationship to (HOUSEHOLDER) and their ages on their last birthday. First, I need to get this information for (HOUSEHOLDER).

COMPLETE INFORMATION IN COLUMN A THROUGH C FOR HOUSEHOLDER FIRST. THEN ASK FOR EACH REMAINING PERSON. RECORD RELATIONSHIP, NOT NAMES.

INTERVIEWER: PERSONS WHO ARE NORMALLY MEMBERS OF THE HOUSEHOLD, BUT WHO ARE NOW LIVING AWAY FROM HOME (e.g., college students or members of the armed forces) SHOULD NOT BE LISTED

PERSON NUMBER	CHECK BOX IN THIS COLUMN TO IDENTIFY RESPONDENT	L-1. COLUMN A RELATIONSHIP TO HOUSEHOLDER	COLUMN B SEX	COLUMN C AGE	L-3. COLUMN D EMPLOYMENT STATUS (AGE 14+)	
			FEMALE / MALE		FULL TIME / PART TIME / NOT EMPLOYED	
1	ANSWERHH [ ]	HOUSEHLD Householder	HHSEX 1 2	HHAGE	EMPLOYHH 1 2 0	646-52
2	ANSWER02 [ ]	KIN02	SEX02 1 2	YEARS02	EMPLOY02 1 2 0	653-59
3	ANSWER03 [ ]	KIN03	SEX03 1 2	YEARS03	EMPLOY03 1 2 0	660-66
4	ANSWER04 [ ]	KIN04	SEX04 1 2	YEARS04	EMPLOY04 1 2 0	667-73
5	ANSWER05 [ ]	KIN05	SEX05 1 2	YEARS05	EMPLOY05 1 2 0	674-80
6	ANSWER06 [ ]	KIN06	SEX06 1 2	YEARS06	EMPLOY06 1 2 0	681-87
7	ANSWER07 [ ]	KIN07	SEX07 1 2	YEARS07	EMPLOY07 1 2 0	688-94
8	ANSWER08 [ ]	KIN08	SEX08 1 2	YEARS08	EMPLOY08 1 2 0	695-701
9	ANSWER09 [ ]	KIN09	SEX09 1 2	YEARS09	EMPLOY09 1 2 0	702-08
10	ANSWER10 [ ]	KIN10	SEX10 1 2	YEARS10	EMPLOY10 1 2 0	709-15
11	ANSWER11 [ ]	KIN11	SEX11 1 2	YEARS11	EMPLOY11 1 2 0	716-22
12	ANSWER12 [ ]	KIN12	SEX12 1 2	YEARS12	EMPLOY12 1 2 0	723-29

NHSLDMEM 730-31

L-2. I have listed (READ RELATIONSHIPS FROM L-1 IN GRID). Have I missed: [QUESTIONS ANSWERED "YES" ADD TO LISTING]

	YES	NO
a. Any babies or small children?	1	0
b. Any lodgers, boarders, or persons in your employment who live there?	1	0
c. Anyone who usually lives here but is away traveling or in the hospital?	1	0
d. Anyone else staying here who does not have a regular residence elsewhere?	1	0

INTERVIEWER: MARK NUMBER OF HOUSEHOLD MEMBERS UNDER "HOUSEHOLD MEMBERS" ON FOLDOUT PAGE.

INTERVIEWER: FOR EACH PERSON 14 YEARS OR OLDER ON L-1 COLUMN C, ASK L-3.

L-3. Is (he/she) now employed full-time, that is 30 hours or more per week, employed part-time, or not employed? (RECORD UNDER L-3 COLUMN D ON GRID)

L-4. How many people in this household drive a car on a fairly regular basis – that is, at least once a month?

DRIVEMON

NUMBER OF REGULAR DRIVERS: [ ]
NONE 00
DON'T KNOW 96

732-33

1993 Residential Energy Consumption Survey
Form EIA-457A

L-5. For background statistical purposes, I have a few questions about the (householder). Please look at Exhibit L-5. What is the highest grade or year (HOUSEHOLDER) completed in school or college?

GRADE SCHOOL/HIGH SCHOOL
- KINDERGARTEN TO 4TH GRADE . . . 04
- 5TH, 6TH, 7TH OR 8TH GRADES . . . 08
- 9TH TO 11TH GRADES . . . 11
- 12TH GRADE OR HIGH SCHOOL DIPLOMA . . . 12

GRADHH

COLLEGE:
- 1 YEAR . . . 13
- 2 YEARS . . . 14
- 3 YEARS . . . 15 *734-35*
- 4 YEARS . . . 16
- 5 YEARS . . . 17
- 6 OR MORE YEARS OF COLLEGE . . . 18

- NEVER ATTENDED SCHOOL . . . 00
- DON'T KNOW . . . 96

L-6. Please look at Exhibit L-6. Which best describes (HOUSEHOLDER)?

MARRIED

- NOW MARRIED . . . 1
- WIDOWED . . . 2
- DIVORCED OR SEPARATED . . . 3 *736*
- NEVER MARRIED . . . 4
- UNMARRIED LIVING WITH PARTNER . . . 5

L-7. Is (HOUSEHOLDER) of Spanish or Hispanic origin or descent?

SDESCENT

- YES . . . 1
- NO . . . 0 *737*
- DON'T KNOW . . . 6

L-8. Please turn to Exhibit L-8. Which of the groups on the exhibit best describes (HOUSEHOLDER)?

ORIGIN

- WHITE . . . 1
- BLACK . . . 2
- AMERICAN INDIAN, ALASKAN NATIVE . . . 3 *738*
- ASIAN, PACIFIC ISLANDER . . . 4
- OTHER (SPECIFY): _____ . . . 5

INCOME

L-9. Please turn to Exhibit L-9. In the past 12 months, did you or any member of your **family** living here receive any income or benefits from these sources? When we say "family," we mean all related persons living in this household.

(INTERVIEWER: READ AND MARK "YES" OR "NO" FOR EACH ITEM.)

	YES	NO		
a. Wages and salaries	1	0	**WAGES**	*739*
b. Self-employed from a business or farm	1	0	**SELFHIRE**	*740*
c. Social Security or Railroad Retirement	1	0	**SSECURTY**	*741*
d. Pensions and other retirement funds	1	0	**PENSIONS**	*742*
e. Food Stamps	1	0	**FSTAMPS**	*743*
f. Aid to Families with Dependent Children (AFDC)	1	0	**AFDC**	*744*
g. Unemployment Compensation	1	0	**UNEMPLOY**	*745*
h. Supplemental Security Income (SSI)	1	0	**SSI**	*746*
i. General assistance or other public assistance	1	0	**OTHERAID**	*747*

L-10. Now please look at the next Exhibit L-10. This is a list of income groups. Please tell me which group letter best describes the total combined income in the past 12 months of all members of your **family** living here, from all sources -- wages, interest, alimony, Social Security, and so forth -- before taxes and deductions.

MONEYPY

CIRCLE NUMBER FOR INCOME GROUP

A.	LESS THAN $3,000	01		O.	$22,500 - $24,999	15	
B.	$3,000 - $3,999	02		P.	$25,000 - $27,499	16	CHECK
C.	$4,000 - $4,999	03		Q.	$27,500 - $29,999	17	BOX 18
D.	$5,000 - $5,999	04		R.	$30,000 - $32,499	18	--> NEXT
E.	$6,000 - $7,499	05		S.	$32,500 - $34,999	19	PAGE
F.	$7,500 - $8,999	06	SKIP	T.	$35,000 - $39,999	20	
G.	$9,000 - $9,999	07	--> TO	U.	$40,000 - $44,999	21	748-49
H.	$10,000 - $10,999	08	BOX 19				
I.	$11,000 - $12,499	09	PAGE 80	V.	$45,000 - $49,999	22	SKIP
J.	$12,500 - $13,999	10		W.	$50,000 - $74,999	23	--> TO
K.	$14,000 - $14,999	11		X.	$75,000 - $99,999	24	N-1 ON
L.	$15,000 - $17,499	12		Y.	$100,000 OR MORE	25	PAGE
M.	$17,500 - $19,999	13					
N.	$20,000 - $22,499	14			DON'T KNOW	96	
					REFUSED	97	-->

PROBE IF "DON'T KNOW" OR "REFUSED" ON L-10, ASK:

L-11. Was your family income in the last 12 months under $45,000?

INC45PLU

YES, INCOME UNDER $45,000	1	--> [BOX 19]
NO	0	--> [N-1]
DON'T KNOW	6	--> [BOX 19]
REFUSED	7	--> [BOX 19]

750

BOX 18

INTERVIEWER: CHECK INCOME FROM L-10 WITH NUMBER OF HOUSEHOLD MEMBERS ON FOLDOUT PAGE. IF IT MATCHES BELOW, GO TO [N-1] ON PAGE 83. OTHERWISE, GO TO BOX 19 ON THE NEXT PAGE.

If Income Group	Number of Household Members is	then
O	1	go to [N-1]
P	1 or 2	go to [N-1]
Q	1 or 2	go to [N-1]
R	1, 2, or 3	go to [N-1]
S	1, 2, or 3	go to [N-1]
T	1, 2, 3, or 4	go to [N-1]
U	1, 2, 3, 4, or 5	go to [N-1]

1993 Residential Energy Consumption Survey
Form EIA-457A

Section M: PROGRAM PARTICIPATION

BOX 19

INTERVIEWER: THESE QUESTIONS REFER TO ANY HOME THE RESPONDENT OCCUPIED IN THE LAST YEAR.

M-1. Please turn to Exhibit M-1. This shows some examples of how a person can weatherize a home, for example, improve the heating system, insulate walls, insulate the hot water heater, weather strip or caulk, and so on. During the last year -- from October 1992 to September 1993 -- did you receive any help from the government in paying the costs of weatherizing your home?

WEATHERZ

YES 1
NO 0 *761*
DON'T KNOW 6

M-2. Are you aware of an **energy assistance program** that helps people pay for their heating, cooling, and other home energy costs? Some names used for the program are HEAP, LIHEAP, and HEAT. It is run by State, county, or local government. The assistance can be paid directly to the household or to the electric or gas company or fuel supplier. If heat is included in a household's rent, the payment can be used to help reduce the rent. Are you aware of this energy assistance program?

KNOWHEAP

YES 1 *762*
NO 0

M-3. Please turn to Exhibit M-3. During the last year -- from October 1992, through September 1993 -- did anyone in your household receive government assistance for any of the following:

	YES	NO	DON'T KNOW		
a. Help in paying home heating costs?	1	0	6	**HEATAID**	*763*
b. Help in paying home cooling or air-conditioning costs?	1	0	6	**COOLAID**	*764*
c. Help with other home energy costs?	1	0	6	**LIFELINE**	*765*
d. Emergency supplies, such as blankets, portable heaters, or temporary emergency shelter due to loss of home heat?	1	0	6	**LIHEAPEM**	*766*

INTERVIEWER: IF ALL "NO" OR "DON'T KNOW" IN M-3, SKIP TO M-7.

IF "YES" IN M-3, ASK M-4., OTHERWISE --> [M-7]

M-4. Please describe this help.

IF "YES" IN M-3a, (HEATING ASSISTANCE), ASK:

M-5. Please turn to EXHIBIT M-5. You mentioned that your household got help in paying for home heating costs. How were these payments received? (READ EACH AND CIRCLE "YES" OR "NO")

	YES	NO	DON'T KNOW		
a. Check to household	1	0	6	**CASHAID**	*767*
b. Sent directly to utility company or fuel dealer	1	0	6	**FUELPAID**	*768*
c. Coupon/voucher to household	1	0	6	**VOUCHERS**	*769*
d. Two-party check to household	1	0	6	**CHECK2PM**	*770*
e. Other (SPECIFY): _____	1	0	6	**OTHERPMT**	*771*

M-6. About how much money for your heating assistance did **you or your utility or fuel supplier** receive from October 1992 to September 1993?

GOVTAMT

AMOUNT RECEIVED . . . . . $_____.00 *772-75*
NOT SURE 9999

M-7. Please think about the home or homes you lived in last year – that is, the time period from October 1992 to September 1993. Was there ever a time during that period when you wanted to use your main source of heat, but could not, for one or more of the following reasons: (CIRCLE "YES" OR "NO" FOR EACH ITEM.)

	YES	NO		
a. Your heating system was broken and you were unable to pay for its repair or replacement?	1	0	NOPYFIX	776
b. You ran out of fuel oil, kerosene, LPG, coal, or wood because you were unable to pay for a delivery?	1	0	NOPYFL	777
c. The utility company discontinued your gas or electric service because you were unable to pay your bill?	1	0	NOPYEL	778

INTERVIEWER: IF ALL ITEMS MARKED "NO," SKIP TO N-1.

IF YES TO M-7 "a," "b," or "c", ASK: OTHERWISE --> [N-1].

NNOHEAT

M-8. Thinking about these times that you went without heat–how many separate times were there?

TOTAL TIMES: ☐ 779-80

HRSNOHT

M-9. Altogether, how many hours or days were you without heat from October 1992 to September 1993?

HOURS: ☐ OR DAYS: ☐ 781-83

M-10. During which month or months were you without heat? (CHECK ALL THAT APPLY.)

01 OCTOBER ('92)	NOHOCT	784-85	08 MAY ('93)	NOHMAY	788-89
02 NOVEMBER ('92)	NOHNOV	786-87	09 JUNE ('93)	NOHJUN	800-01
03 DECEMBER ('92)	NOHDEC	788-89	10 JULY ('93)	NOHJUL	802-03
04 JANUARY ('93)	NOHJAN	790-91	11 AUGUST ('93)	NOHAUG	804-05
05 FEBRUARY ('93)	NOHFEB	792-93	12 SEPTEMBER ('93)	NOHSEP	806-07
06 MARCH ('93)	NOHMAR	794-95			
07 APRIL ('93)	NOHAPR	796-97	96 NOT SURE		808-09

OTHERWAY

M-11. During these times, were you able to heat your home in some other way?

YES 1
NO 0 810

Section N: VEHICLES

N-1. Do you or other members of your household own or have the regular use of any cars, trucks, vans, or similar vehicles? (DO NOT INCLUDE MOTORCYCLES OR MOPEDS. SEE INSTRUCTIONS ON NEXT PAGE.)

DRIVECAR 913

YES 1
NO . . . . . 0 --> [BOX 20: PAGE 95]

INTERVIEWER: "REGULAR USE" MEANS THE VEHICLE IS KEPT AT HOME AND IS AVAILABLE FOR SOME PERSONAL USE.

N-2. How many do you have?

NUMBER OF VEHICLES: ☐ VEHICLES 914-15

N-2. IF HOUSEHOLD HAS MORE THAN EIGHT VEHICLES, MARK ANSWERS FOR THE EIGHT VEHICLES USED MOST. USE VEHICLE SUPPLEMENT FORM FOR VEHICLES 5-8.

INTERVIEWER READ TO RESPONDENT: "I'd like you to describe each vehicle your household owns or uses. First, let's start with the vehicle you use most often."

ASK SERIES OF QUESTIONS FOR EACH VEHICLE.

SPECIAL INSTRUCTIONS:

N-4. MODEL NAME: A MODEL NAME MAY CONSIST OF SEVERAL PARTS – BE SURE TO GET THE COMPLETE MODEL NAME. HERE ARE SOME EXAMPLES, WHERE THE COMPLETE MODEL NAME IS IN PARENTHESES: FORD (GALAXY), CHEVROLET (V10 SUBURBAN, GMC (V15 JIMMY), TOYOTA (2WD CARGO VAN). IF RESPONDENT DOES NOT KNOW THE MODEL NAME OF A TRUCK, PROBE FOR SIZE (1/2 TON, 3/4 TON, ETC.)

N-30. EXPLAIN WHAT THE VIN IS IF RESPONDENT DOES NOT KNOW. IF RESPONDENT QUESTIONS NEED FOR VIN, SAY: "The VIN is a set of codes assigned to a vehicle at the factory that, when decoded, describes several of the vehicle's characteristics. These characteristics may then be used to calculate an estimated miles per gallon for that specific type of vehicle."

SHOW EXHIBIT N-30 OF POSSIBLE VIN LOCATIONS. ATTEMPT TO SECURE VIN FROM ONE OF THESE DOCUMENT SOURCES. RECORD THE VIN AND VERIFY FOR CORRECTNESS.

IF VEHICLE AVAILABLE–RECORD VIN FROM VEHICLE ITSELF.

1993 Residential Energy Consumption Survey
Form EIA-457A

VEHICLES PAGE

QUESTION	
N-3. What is the make?	MAKE
N-4. What is the model name? (SEE INSTRUCTIONS)	MODEL
N-5. What is the model year?	YEAR
N-6. Please turn to Exhibit N-6. What is the type of vehicle? (CIRCLE ONE). WRITE ADDITIONAL IDENTIFYING INFORMATION IN MARGIN.	CAR . . . . . 01 STATION WAGON . . . . . 02 LARGE VAN . . . . . 03 MINI VAN . . . . . 04 PICKUP TRUCK . . . . . 05 SPORT-UTILITY VEHICLE 06 OTHER (SPECIFY): 21
N-7. Does it have an air conditioner?	YES . . . . . 1 NO 0
N-8. Does it have an automatic transmission or manual shift?	AUTOMATIC TRANSMISSION 1 MANUAL SHIFT . . . . . 2 DON'T KNOW 6
N-9. How many cylinders does the engine have?	3-CYLINDERS . . . . . 03 4-CYLINDERS . . . . . 04 5-CYLINDERS . . . . . 05 6-CYLINDERS . . . . . 06 8-CYLINDERS . . . . . 08 OTHER . . . . . 21 DON'T KNOW 96

	VEHICLE #1	VEHICLE #2	VEHICLE #3	VEHICLE #4
N-3.	MAKE **MAKEC01** 916-17	MAKE **MAKEC02** 992-93	MAKE **MAKEC03** 1067-68	MAKE **MAKEC04** 1153-54
N-4.	MODEL MODELC01 918-19	MODEL MODELC02 994-95	MODEL MODELC03 1069-70	MODEL MODELC04 1155-56
N-5.	19____ **YEAR01** 920-21	19____ **YEAR02** 995-97	19____ **YEAR03** 1071-72	19____ **YEAR04** 1157-58
N-6.	CAR . . . . . 01 STATN WAGON . 02 LARGE VAN . . . 03 MINI VAN . . . . . 04 PICK UP TRUCK 05 SPORT UTILITY . 06 _____ . 21 **TYPE01** 922-23	CAR . . . . . 01 STATN WAGON . 02 LARGE VAN . . . 03 MINI VAN . . . . . 04 PICK UP TRUCK 05 SPORT UTILITY . 06 _____ . 21 **TYPE02** 998-99	CAR . . . . . 01 STATN WAGON . 02 LARGE VAN . . . 03 MINI VAN . . . . . 04 PICK UP TRUCK 05 SPORT UTILITY . 06 _____ . 21 **TYPE03** 1073-74	CAR . . . . . 01 STATN WAGON . . 02 LARGE VAN . . . . 03 MINI VAN . . . . . 04 PICK UP TRUCK . 05 SPORT UTILITY . . 06 _____ . . 21 **TYPE04** 1159-60
N-7.	YES . . . . . 1 NO 0 **AIRCND01** 924	YES . . . . . 1 NO 0 **AIRCND02** 1000	YES . . . . . 1 NO 0 **AIRCND03** 1075	YES . . . . . 1 NO 0 **AIRCND04** 1161
N-8.	AUTOMATIC . . . . 1 MANUAL . . . . . 2 DON'T KNOW . . . 6 **TRNS01** 925	AUTOMATIC . . . . 1 MANUAL . . . . . 2 DON'T KNOW . . . 6 **TRNS02** 1001	AUTOMATIC . . . . 1 MANUAL . . . . . 2 DON'T KNOW . . . 6 **TRNS03** 1076	AUTOMATIC . . . . 1 MANUAL . . . . . 2 DON'T KNOW . . . 6 **TRNS04** 1162
N-9.	3 CYLINDERS . . 03 4 CYLINDERS . . 04 5 CYLINDERS . . 05 6 CYLINDERS . . 06 8 CYLINDERS . . 08 OTHER . . . . . 21 DON'T KNOW . . 96 **CYLS01** 926-27	3 CYLINDERS . . 03 4 CYLINDERS . . 04 5 CYLINDERS . . 05 6 CYLINDERS . . 06 8 CYLINDERS . . 08 OTHER . . . . . 21 DON'T KNOW . . 96 **CYLS02** 1002-03	3 CYLINDERS . . 03 4 CYLINDERS . . 04 5 CYLINDERS . . 05 6 CYLINDERS . . 06 8 CYLINDERS . . 08 OTHER . . . . . 21 DON'T KNOW . . 96 **CYLS03** 1077-78	3 CYLINDERS . . . 03 4 CYLINDERS . . . 04 5 CYLINDERS . . . 05 6 CYLINDERS . . . 06 8 CYLINDERS . . . 08 OTHER . . . . . 21 DON'T KNOW . . . 96 **CYLS04** 1163-64

1993 Residential Energy Consumption Survey
Form EIA-457A

QUESTION	
N-10. Does it have front-wheel, rear-wheel, or 4-wheel drive? (IF RESPONDENT SAYS COMBINATION THAT INCLUDES 4-WHEEL DRIVE, MARK 4-WHEEL DRIVE.)	FRONT-WHEEL . . . . . 1 REAR-WHEEL . . . . . 2 4-WHEEL . . . . . 3 OTHER: (Specify) . . . . . 5 DON'T KNOW 6
N-11. Does the fuel system use a carburetor, fuel injection, or is it a diesel engine or an electric vehicle?	CARBURETOR . . . . . 1 FUEL INJECTION . . . . . 2 DIESEL . . . . . 3—>[N-13] ELECTRIC . . . . . 4—>[N-14] OTHER: (Specify) . . . . . 5 DON'T KNOW 6
N-12. Please turn to Exhibit N-12. During the past year, what type of fuel did this vehicle use?	UNLEADED GASOLINE Regular (87-88.9 Octane) . . . . . 01 Mid-grade (89-90.9 Octane) . . . 02 Premium (91 or Greater Octane) 03 LEADED GASOLINE . . . . . 04 ETHANOL BLEND (Gasohol) . . . 05 NATURAL GAS . . . . . 06 PROPANE . . . . . 07 ALCOHOL . . . . . 08 OTHER: (Specify) . . . . . 21 DON'T KNOW 96
N-13. When fuel was purchased for this vehicle during the past year, was most of the fuel purchased at full-service pumps or self-service pumps? (IF "MINI-SERVICE," RECORD AS SELF-SERVICE.)	FULL-SERVICE . . . . . 1 SELF-SERVICE . . . . . 2 BOTH EQUALLY . . . . . 3 OTHER: (Specify) . . . . . 5 DON'T KNOW 6
N-14. Did you get this vehicle within the past 12 months or did you get it before that? (CIRCLE ONE, THEN ASK APPROPRIATE FOLLOW-UP QUESTION)	WITHIN PAST 12 MONTHS . . . . . 1 BEFORE THAT . . . . . 2->[N-17]

	VEHICLE #1	VEHICLE #2	VEHICLE #3	VEHICLE #4
N-10.	FRONT WHEEL . . 1 REAR WHEEL . . . 2 4 WHEEL . . . . . 3 _____ 5 DON'T KNOW . . . 6 **DRIVE01** *928*	FRONT WHEEL . . 1 REAR WHEEL . . . 2 4 WHEEL . . . . . 3 _____ 5 DON'T KNOW . . . 6 **DRIVE02** *1004*	FRONT WHEEL . . 1 REAR WHEEL . . . 2 4 WHEEL . . . . . 3 _____ 5 DON'T KNOW . . . 6 **DRIVE03** *1079*	FRONT WHEEL . . 1 REAR WHEEL . . . 2 4 WHEEL . . . . . 3 _____ 5 DON'T KNOW . . . 6 **DRIVE04** *1155*
N-11.	CARBURETOR . . 1 FUEL INJECTION 2 DIESEL—>[N-13] . 3 ELECTRIC—>[N-14] 4 _____ 5 DON'T KNOW . . . 6 **FUELSY01** *929*	CARBURETOR . . 1 FUEL INJECTION 2 DIESEL—>[N-13] . 3 ELECTRIC—>[N-14] 4 _____ 5 DON'T KNOW . . . 6 **FUELSY02** *1005*	CARBURETOR . . 1 FUEL INJECTION 2 DIESEL—>[N-13] . 3 ELECTRIC—>[N-14] 4 _____ 5 DON'T KNOW . . . 6 **FUELSY03** *1080*	CARBURETOR . . 1 FUEL INJECTION 2 DIESEL—>[N-13] . 3 ELECTRIC—>[N-14] 4 _____ 5 DON'T KNOW . . . 6 **FUELSY04** *1156*
N-12.	UNLEADED GAS Reg. (87-88.9 oct)01 Mid. (89-90.9 oct).02 Prem. (91+ oct) . 03 LEADED GAS . . 04 ETHANOL BND . 05 NATURAL GAS . 06 PROPANE . . . . 07 ALCOHOL . . . . 08 OTHER—>[N-14] 21 _____ DON'T KNOW . . 96 **BTYPE01** *930-31*	UNLEADED GAS Reg. (87-88.9 oct).01 Mid. (89-90.9 oct). 02 Prem. (91+ oct) . .03 LEADED GAS . . 04 ETHANOL BND . 05 NATURAL GAS . 06 PROPANE . . . . 07 ALCOHOL . . . . 08 OTHER—>[N-14] 21 _____ DON'T KNOW . . 96 **BTYPE02** *1006-07*	UNLEADED GAS Reg. (87-88.9 oct)01 Mid. (89-90.9 oct)02 Prem. (91+ oct) . 03 LEADED GAS . . 04 ETHANOL BND . 05 NATURAL GAS . 06 PROPANE . . . . 07 ALCOHOL . . . . 08 OTHER—>[N-14] 21 _____ DON'T KNOW . . 96 **BTYPE03** *1081-82*	UNLEADED GAS Reg. (87-88.9 oct)01 Mid. (89-90.9 oct).02 Prem. (91+ oct) . .03 LEADED GAS . . 04 ETHANOL BND . 05 NATURAL GAS . 06 PROPANE . . . . 07 ALCOHOL . . . . 08 OTHER—>[N-14] 21 _____ DON'T KNOW . . 96 **BTYPE04** *1157-58*
N-13.	FULL SERVICE . . 1 SELF SERVICE . . 2 BOTH . . . . . 3 _____ 5 DON'T KNOW . . . 6 **BSERV01** *932*	FULL SERVICE . . 1 SELF SERVICE . . 2 BOTH . . . . . 3 _____ 5 DON'T KNOW . . . 6 **BSERV02** *1008*	FULL SERVICE . . 1 SELF SERVICE . . 2 BOTH . . . . . 3 _____ 5 DON'T KNOW . . . 6 **BSERV03** *1083*	FULL SERVICE . . 1 SELF SERVICE . . 2 BOTH . . . . . 3 _____ 5 DON'T KNOW . . . 6 **BSERV04** *1159*
N-14.	WITHIN 12 MNTHS 1 BEFORE—>[N-17] 2 **ACQUIR01** *933*	WITHIN 12 MNTHS 1 BEFORE—>[N-17] 2 **ACQUIR02** *1009*	WITHIN 12 MNTHS 1 BEFORE—>[N-17] 2 **ACQUIR03** *1084*	WITHIN 12 MNTHS 1 BEFORE—>[N-17] 2 **ACQUIR04** *1170*

1993 Residential Energy Consumption Survey
Form EIA-457A

QUESTION	
IF "WITHIN PAST 12 MONTHS," ASK:	MONTH . . . . .
N-15. In what month and year did you get it?	YEAR . . . . .
N-16. Approximately how many miles has it been driven since you obtained it?	MILES . . . . .
IF "BEFORE THAT," ASK:	MILES PAST 12 MOS. . . . .
N-17. Approximately how many miles has it been driven in the past 12 months?	
N-18. What is your best estimate of the average miles per gallon (MPG) for this vehicle?	MPG . . . . . DON'T KNOW 6
N-19. Please look at Exhibit N-19. What is the basis for your estimate of miles per gallon?	FUEL PURCHASE LOG . . . . . 1 COMPUTER . . . . . 2 ADVERTISED . . . . . 3 ROUGH ESTIMATE . . . . . 4 DON'T KNOW 6
N-20. What is the sex of the household member who usually drives this vehicle?	FEMALE . . . . . 1 MALE . . . . . 2 DON'T KNOW DRIVER 6
N-21. What is the approximate age of the household member who usually drives this vehicle?	AGE . . . . . DON'T KNOW AGE 96

	VEHICLE #1	VEHICLE #2	VEHICLE #3	VEHICLE #4
N-15.	MONTH MOACQ01 YEAR YRACQ01 *934-37*	MONTH MOACQ01 YEAR YRACQ02 *1010-13*	MONTH MOACQ01 YEAR YRACQ03 *1085-88*	MONTH MOACQ01 YEAR YRACQ04 *1171-74*
N-16.	MILES MILESP01 *938-42*	MILES MILESP02 *1014-18*	MILES MILESP03 *1089-93*	MILES ->[N-19] MILESP04 *1175-79*
N-17.	MILES MILESA01 *943-47*	MILES MILESA02 *1019-23*	MILES MILESA03 *1094-98*	MILES MILESA04 *1180-84*
N-18.	MPG DK—>[N-20] 96 BMPG01 *948-49*	MPG DK—>[N-20] 96 BMPG02 *1024-25*	MPG DK—>[N-20] 96 BMPG03 *1099-1100*	MPG DK—>[N-20] 96 BMPG04 *1185-86*
N-19.	LOG . . . . . 1 COMPUTER . . . . 2 ADVERTISED . . . 3 ESTIMATE . . . . . 4 DON'T KNOW . . . 6 BMPGSC01 *950*	LOG . . . . . 1 COMPUTER . . . . 2 ADVERTISED . . . 3 ESTIMATE . . . . . 4 DON'T KNOW . . . 6 BMPGSC02 *1026*	LOG . . . . . 1 COMPUTER . . . . 2 ADVERTISED . . . 3 ESTIMATE . . . . . 4 DON'T KNOW . . . 6 BMPGSC03 *1101*	LOG . . . . . 1 COMPUTER . . . . 2 ADVERTISED . . . 3 ESTIMATE . . . . . 4 DON'T KNOW . . . 6 BMPGSC04 *1187*
N-20.	FEMALE . . . . . 1 MALE . . . . . 2 DON'T KNOW . . . 8 BSEX01 *951*	FEMALE . . . . . 1 MALE . . . . . 2 DON'T KNOW . . . 8 BSEX02 *1027*	FEMALE . . . . . 1 MALE . . . . . 2 DON'T KNOW . . . 8 BSEX03 *1102*	FEMALE . . . . . 1 MALE . . . . . 2 DON'T KNOW . . . 8 BSEX04 *1188*
N-21.	AGE DON'T KNOW . . 96 BAGE01 *952-53*	AGE DON'T KNOW . . 96 BAGE02 *1028-29*	AGE DON'T KNOW . . 96 BAGE03 *1103-04*	AGE DON'T KNOW . . 96 BAGE04 *1189-90*

1993 Residential Energy Consumption Survey
Form EIA-457A

QUESTION	
N-22. Please look at Exhibit N-22. Where is this vehicle usually parked at home?	GARAGE . . . . . 1 CARPORT . . . . . 2 DRIVEWAY . . . . . 3 STREET . . . . . 4 PARKING LOT . . . . . 5 PARKING GARAGE . . . . . 6 IT VARIES . . . . . 7 OTHER: (Specify)_____ 8
N-23. Other than commuting, is this vehicle used for business purposes?	YES . . . . . 1 NO . . . . . 0 DON'T KNOW 6
IF USED FOR BUSINESS PURPOSES, ASK: N-24. What percent of total miles is for business purposes?	PERCENT . . . . . . DON'T KNOW 96
N-25. Is this vehicle owned or leased by your employer?	YES . . . . . 1 NO . . . . . 0 DON'T KNOW 6
IF "YES" ON N-25, ASK: N-26. Please look at Exhibit N-26. How would you best describe the organization or business that owns or leases this vehicle?	POLICE/FIRE . . . . . 1 OTHER GOVERNMENT . . . . . 2 TAXI . . . . . 3 UTILITY COMPANY . . . . . 4 SALES . . . . . 5 AUTO DEALER . . . . . 6 OTHER BUSINESS 7
N-27. Is this vehicle refueled at a central site?	YES . . . . . 1 NO . . . . . 0 DON'T KNOW 6

	VEHICLE #1	VEHICLE #2	VEHICLE #3	VEHICLE #4
N-22.	GARAGE . . . . . 1 CARPORT . . . . . 2 DRIVEWAY . . . . . 3 STREET . . . . . 4 PARKING LOT . . . 5 PARKING GARAGE 6 VARIES . . . . . 7 _____ 8 **BPARK01** *954*	GARAGE . . . . . 1 CARPORT . . . . . 2 DRIVEWAY . . . . . 3 STREET . . . . . 4 PARKING LOT . . . 5 PARKING GARAGE 6 VARIES . . . . . 7 _____ 8 **BPARK02** *1030*	GARAGE . . . . . 1 CARPORT . . . . . 2 DRIVEWAY . . . . . 3 STREET . . . . . 4 PARKING LOT . . . 5 PARKING GARAGE 6 VARIES . . . . . 7 _____ 8 **BPARK03** *1105*	GARAGE . . . . . 1 CARPORT . . . . . 2 DRIVEWAY . . . . . 3 STREET . . . . . 4 PARKING LOT . . . 5 PARKING GARAGE 6 VARIES . . . . . 7 _____ 8 **BPARK04** *1181*
N-23.	YES . . . . . 1 NO—>[N-28] . . . . 0 DON'T KNOW . . . 6 **BJOBUS01** *955*	YES . . . . . 1 NO—>[N-28] . . . . 0 DON'T KNOW . . . 6 **BJOBUS02** *1031*	YES . . . . . 1 NO—>[N-28] . . . . 0 DON'T KNOW . . . 6 **BJOBUS03** *1106*	YES . . . . . 1 NO—>[N-28] . . . . 0 DON'T KNOW . . . 6 **BJOBUS04** *1182*
N-24.	_____ DON'T KNOW . . 96 **BJOBPC01** *956-57*	_____ DON'T KNOW . . 96 **BJOBPC02** *1032-33*	_____ DON'T KNOW . . 96 **BJOBPC03** *1107-08*	_____ DON'T KNOW . . 96 **BJOBPC04** *1183-84*
N-25.	YES . . . . . 1 NO—>[N-28] . . . . 0 DK—>[N-28] 6 **BOWNED01** *958*	YES . . . . . 1 NO—>[N-28] . . . . 0 DK—>[N-28] 6 **BOWNED02** *1034*	YES . . . . . 1 NO—>[N-28] . . . . 0 DK—>[N-28] 6 **BOWNED03** *1109*	YES . . . . . 1 NO—>[N-28] . . . . 0 DK—>[N-28] 6 **BOWNED04** *1185*
N-26.	POLICE/FIRE . . . . 1 OTHER GOVN . . . 2 TAXI . . . . . 3 UTIL COMPANY . . 4 SALES . . . . . 5 AUTO DEALER . . 6 OTHR BUSINESS . 7 **BBUSIN01** *959*	POLICE/FIRE . . . . 1 OTHER GOVN . . . 2 TAXI . . . . . 3 UTIL COMPANY . . 4 SALES . . . . . 5 AUTO DEALER . . 6 OTHR BUSINESS . 7 **BBUSIN02** *1035*	POLICE/FIRE . . . . 1 OTHER GOVN . . . 2 TAXI . . . . . 3 UTIL COMPANY . . 4 SALES . . . . . 5 AUTO DEALER . . 6 OTHR BUSINESS . 7 **BBUSIN03** *1110*	POLICE/FIRE . . . . 1 OTHER GOVN . . . 2 TAXI . . . . . 3 UTIL COMPANY . . 4 SALES . . . . . 5 AUTO DEALER . . 6 OTHR BUSINESS . 7 **BBUSIN04** *1186*
N-27.	YES . . . . . 1 NO . . . . . 0 DON'T KNOW . . . 6 **BCENTR01** *960*	YES . . . . . 1 NO . . . . . 0 DON'T KNOW . . . 6 **BCENTR02** *1036*	YES . . . . . 1 NO . . . . . 0 DON'T KNOW . . . 6 **BCENTR03** *1111*	YES . . . . . 1 NO . . . . . 0 DON'T KNOW . . . 6 **BCENTR04** *1187*

1993 Residential Energy Consumption Survey
Form EIA-457A

QUESTION	
N-28. Is the vehicle here now? (CIRCLE ANSWER, READ APPROPRIATE FOLLOW-UP QUESTION.)	YES VEHICLE HERE . . . . 1 NO . . . . . 0->[N29]
IF "YES," READ: I would like to get the Vehicle Identification Number and odometer reading directly from the vehicle. I'll do that at the end of the interview. Do you know what a Vehicle Identification Number or VIN is? (IF DON'T KNOW, EXPLAIN VIN BY SHOWING EXHIBIT N-30. THEN, ASK QUESTIONS N-3 THRU N-30 FOR NEXT VEHICLE.	
N-29. **ODOMETER READING** RECORD FROM OBSERVATION OR ASK IF "NO" ON N-28.: Approximately what is the odometer reading for this vehicle? RECORD WHETHER ACTUAL OR ESTIMATE.	ODOMETER . . . . . . Actual Reading . . . . . 1 Estimate . . . . . 2 DON'T KNOW 6
N-30. **VEHICLE IDENTIFICATION NUMBER** I would like to get the Vehicle Identification Number or VIN Number for this vehicle. Do you know what the VIN Number is? (IF DON'T KNOW, EXPLAIN VIN BY SHOWING EXHIBIT N-30.) RECORD FROM OBSERVATION OR ASK IF "NO" ON N-28: Do you have any records that may contain the VIN Number such as an insurance card, registration, title, or bill of sale?	VIN FROM OBSERVATION . . . . . 4 VIN FROM RECORDS . . . . . 5 VIN REFUSED . . . . . 7 VIN NOT OBTAINED 8

INTERVIEWER: ASK N-3 THRU N-30 FOR NEXT VEHICLE.

	VEHICLE #1	VEHICLE #2	VEHICLE #3	VEHICLE #4
N-28.	HERE . . . . . 1 NO—>[N-29] 0 **BHERE01** 961	HERE . . . . . 1 NO—>[N-29] 0 **BHERE02** 1037	HERE . . . . . 1 NO—>[N-29] 0 **BHERE03** 1112	HERE . . . . . 1 NO—>[N-29] 0 **BHERE04** 1198
	BODOM01 932-37	BODOM02 1038-43	BODOM05 1113-18	BODOM04 1199-1204
N-29.	(Circle One) ACTUAL . . . . . 1 ESTIMATE . . . . . 2 DON'T KNOW . . . 6 **BODOMS01** 968	(Circle One) ACTUAL . . . . . 1 ESTIMATE . . . . . 2 DON'T KNOW . . . 6 **BODOMS02** 1044	(Circle One) ACTUAL . . . . . 1 ESTIMATE . . . . . 2 DON'T KNOW . . . 6 **BODOMS03** 1119	(Circle One) ACTUAL . . . . . 1 ESTIMATE . . . . . 2 DON'T KNOW . . . 6 **BODOMS04** 1205
N-30.	OBSERVATION . . 4 RECORDS . . . . . 5 REFUSED . . . . . 7 NOT OBTAINED . 8 GET VIN #, WRITE IN NEXT PAGE VINSC01 969	OBSERVATION . . 4 RECORDS . . . . . 5 REFUSED . . . . . 7 NOT OBTAINED . 8 GET VIN #, WRITE IN NEXT PAGE VINSC02 1045	OBSERVATION . . 4 RECORDS . . . . . 5 REFUSED . . . . . 7 NOT OBTAINED . 8 GET VIN #, WRITE IN NEXT PAGE VINSC03 1120	OBSERVATION . . . 4 RECORDS . . . . . 5 REFUSED . . . . . 7 NOT OBTAINED . . 8 GET VIN #, WRITE IN NEXT PAGE VINSC04 1206

1993 Residential Energy Consumption Survey
Form EIA-457A

VIN #1:

VIN01 970 ____ 986

VIN #2

VIN02 1046 ____ 1062

VIN #3

VIN03 1121 ____ 1137

VIN #4

VIN04 0207 ____ 1223

NEW HOME SUPPLEMENT

BOX 20

INTERVIEWER: CHECK FOLDOUT PAGE. ASK THIS SECTION IF SINGLE-FAMILY HOME, OWNED (NOT RENTED), AND BUILT IN 1988 OR LATER. OTHERWISE GO TO THE LIGHTING SUPPLEMENT, IF HOUSEHOLD HAS BEEN SELECTED FOR THE LIGHTING SUPPLEMENT. (SEE THE HOUSING UNIT RECORD SHEET.)

INTERVIEWER READ: "Since this is a (relatively) new house, I have a few questions about this house."

NH-1. Do you know which side of your home faces the South?

FACESOTH 1234

YES 1
NO . . . . . 0 --> [NH-3]

If "YES" on NH-1, ASK:

NH-2. Using your best estimate, does the side of your home facing the South have more, the same, or less glass area than the North side of your home?

SOGLASS 1235

MORE GLASS AREA 1
SAME GLASS AREA 2
LESS GLASS AREA 3
NO GLASS AREA ON SOUTH SIDE 0

INTERVIEWER READ: "Here are some questions that relate to the technical characteristics of your house. You might remember some of these items from the materials you received when you bought the house."

NH-3. What is your best estimate of the R-value of the insulation in the roof or ceiling, or perhaps you know the inches of insulation? (R-VALUES RANGE FROM 4 TO 49.)

RINROOF 123639 RVORIN

R-VALUE ____ OR INCHES ____ . . . . . --> [NH-5]
DON'T KNOW 9996
NO INSULATION . . . . . 0000 --> [NH-5]

1993 Residential Energy Consumption Survey
Form EIA-457A

IF "DON'T KNOW" ON NH-3, ASK:

BLDGCODE

NH-4. When you purchased your home, were you informed that the insulation in your roof or ceiling meets or exceeds the building code for your location?

MEETS THE BUILDING CODES 1
EXCEEDS THE BUILDING CODES 2 *1240*
DON'T REMEMBER/NOT INFORMED 6

INTERVIEWER: CHECK FOLDOUT PAGE. IF CENTRAL AIR CONDITIONING CONTINUE, OTHERWISE SKIP TO NH-7.

IF HAS CENTRAL AIR-CONDITIONING, ASK; OTHERWISE –> [NH-7]

CAPACITY

NH-5. For your central air-conditioner, what is your best estimate of the size of the cooling capacity in tons or Btu? (12,000 Btu per hour = 1 ton cooling capacity.)

TONS [ ] OR BTU/HOUR [ ] *1241-44*

TONORBTU

DON'T KNOW 9996

ACHGHEF

NH-6. Is your air-conditioner a high-efficiency unit?

YES 1
NO 0 *1249*
DON'T KNOW 6

EQPHGHEF

NH-7. Is your heating equipment a high-efficiency unit?

YES 1
NO 0 *1250*
DON'T KNOW 6

ZONEHEAT

NH-8. Can you set thermostats for your main heating equipment so that you have different temperatures in sections of your home? This is usually called "Zoned-Heating".

YES 1
NO/NO THERMOSTAT 2 *1251*
DON'T KNOW 6

HASINFO

NH-9. Please don't try to find them, but we are interested in whether you maintain files or still have the brochures pertaining to information about the characteristics of your home and major appliances?

YES 1
NO 0 *1252*
DON'T KNOW 6

INTERVIEWER: SEE THE HOUSING UNIT RECORD SHEET. IF THE HOUSING UNIT HAS BEEN SELECTED FOR THE LIGHTING SUPPLEMENT, GO TO THE LIGHTING SUPPLEMENT, OTHERWISE CONTINUE WITH SECTION O.

1993 Residential Energy Consumption Survey
Form EIA-457A

Section O. HOUSING MEASUREMENTS

GARAGE

BOX 21

INTERVIEWER: CHECK FOLDOUT PAGE: IF SINGLE-FAMILY OR MOBILE HOME, CONTINUE. OTHERWISE, SKIP TO O-2.

O-1. Please turn to Exhibit O-1. Which of these does your home have here? CIRCLE ALL THAT APPLY.

	YES	NO		
a. NO GARAGE	1	0	GARAGENO	1266
b. ONE-CAR GARAGE	1	0	GARAGE1C	1267
c. TWO-CAR GARAGE	1	0	GARAGE2C	1268
d. THREE OR MORE CAR GARAGE	1	0	GARAGE3C	1269
e. COVERED CARPORT	1	0	CARPORT	1270

BASEMENT

IF SINGLE-FAMILY HOME OR BUILDING WITH 2-4 UNITS, ASK. OTHERWISE --> [O-5].

HOMEBASE

O-2. Please turn to Exhibit O-2. Does your home have a basement, an enclosed crawl space, a crawl space open to the outside, a concrete slab, or a combination of these?

A BASEMENT	1		
CRAWL SPACE -- ENCLOSED	2		
CRAWL SPACE -- OPEN TO THE OUTSIDE	3		1271
CONCRETE SLAB	4 --> [O-5]		
COMBINATION (MARK ALL BELOW THAT APPLY)	5		
BASEMENT	1	CELLAR	1272
CRAWL SPACE -- ENCLOSED	2	AREASHUT	1273
CRAWL SPACE -- OPEN TO THE OUTSIDE	3	AREAOPEN	1274
CONCRETE SLAB	4	CONCRETE	1275

INTERVIEWER: REMEMBER TO INCLUDE BASEMENT ON DIAGRAM. DO NOT INCLUDE CRAWL SPACE.

O-3. About how much of the basement/crawl space would you say is warm enough to sit, work, or play in during the winter months -- all, part, or none?

BASEHEAT

ALL	1	
PART	2	1276
NONE	0	

O-4. Do you have insulation in the floor area above the basement/crawl space?

BASEINS

YES, ALL	1	
YES, PART	2	1277
NO	0	
DON'T KNOW	6	

O-5. Please turn to Exhibit O-5. How much longer do you plan to live in this home?

YRSMORE

LESS THAN 1 YEAR	01	
1-2 YEARS	02 --> [O-7]	
3-5 YEARS	03 --> [O-7]	
6-10 YEARS	04 --> [O-7]	1278-79
MORE THAN 10 YEARS	05 --> [O-7]	
REST OF MY LIFE/AS LONG AS I CAN	06 --> [O-7]	
NOT SURE	96	

IF "LESS THAN 1 YEAR" ON O-5, ASK:

O-6. Do you know where and when you may be moving?

KNOWMOVE

YES	1	
ADDRESS OR CITY: _____		1280
MONTH/YEAR: _____		
NO	2	

1993 Residential Energy Consumption Survey
Form EIA-457A

MEASUREMENTS

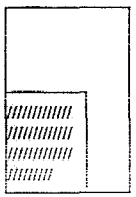
INTERVIEWER: ALWAYS DO MEASUREMENTS FROM THE OUTSIDE WHERE POSSIBLE. IF NOT POSSIBLE, READ TO RESPONDENT: "With your home, I think it would be most appropriate to measure the inside."

UNHEATED AREAS: WITHIN THE HOUSING UNIT THAT YOU MEASURE, INDICATE UNHEATED AREA(S) IN THE DIAGRAMS WITH SHADING. GIVE DIMENSIONS OF UNHEATED AREA(S).

USE BLANK PAGES FACING MEASUREMENT PAGES FOR ADDITIONAL SKETCHES, MEASUREMENTS, AND EXPLANATIONS.

RECORD ALL MEASUREMENTS ON DIAGRAMS TO NEAREST FOOT.

DO NOT INCLUDE OPEN PORCH IN DIAGRAM

SHADE UNHEATED AREAS THIS WAY. . . . . 

O-7. To understand the usage of energy in your (house/apartment), we need to know its size in square feet. With your permission, I would like to measure your home.

MEASURE

MEASUREMENTS FOLLOW 1
RESPONDENT REFUSED . . . . . 7 –> [BOX 22: *1281*
OTHER: _____ 2 PAGE 110]

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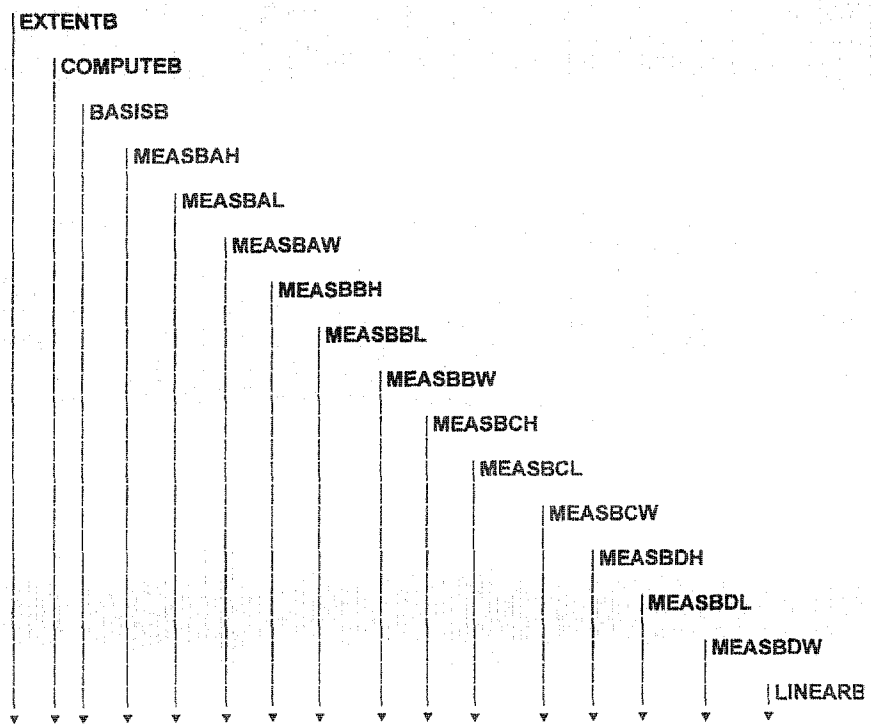
Form EIA-457A

NOTES REGARDING BASEMENT MEASUREMENTS



Floor Codes			Unit A			Unit B			Unit C			Unit D			# of Units
1301	02	03	04	05-06	07-08	09	10-11	12-13	14	15-16	17-18	19	20-21	22-23	24

BASEMENT MEASUREMENTS FOR HOME/APARTMENT

Single-Family Home or Townhouse [ ]	Apartment in 2-4 Unit Building [ ]	Apartment in 5+ Unit Building [ ]	Mobile Home [ ]
Garage type: [ ] No garage this floor [ ] Heated attached (INCLUDE) [ ] Unheated attached (INCLUDE/SHADE) [ ] Detached (DO NOT INCLUDE)	EXCLUDE GARAGE	DO NOT MEASURE BASEMENT	MOBILE HOMES DO NOT HAVE BASEMENTS
Include all enclosed space in basement Do not measure crawl space	Include only space for exclusive or primary use by household		
Floor is: [ ] All heated [ ] All unheated (SHADE) [ ] Partially heated (SHADE UNHEATED PART)			

INTERVIEWER: REMEMBER TO SHADE UNHEATED AREAS. IN A BASEMENT, THE AREA IS HEATED IF IT WARM ENOUGH TO SIT, WORK, OR PLAY IN DURING THE WINTER.

Diagram for Floor with Rectangular Shape	Diagram for Floor if Other than Rectangular
[ ]	

INTERVIEWER: Measurements based on [ ] Inside [ ] Outside [ ] Other: Specify _____

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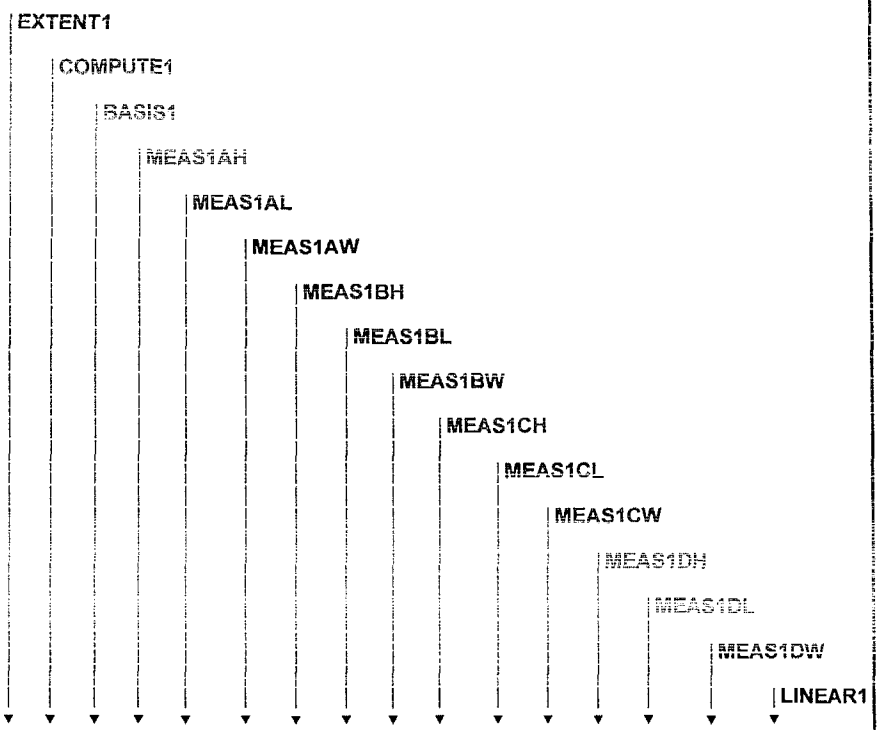
Form EIA-457A

NOTES REGARDING FIRST FLOOR MEASUREMENTS



Floor Codes			Unit A			Unit B			Unit C			Unit D			# of Units
1326	27	28	29	30-31	32-33	34	35-36	37-38	39	40-41	42-43	44	45-46	47-48	49

FIRST FLOOR MEASUREMENTS FOR HOME/APARTMENT

Single-Family Home or Townhouse [ ]	Apartment in 2-4 Unit Building [ ]	Apartment in 5+ Unit Building [ ]	Mobile Home [ ]
Include all space enclosed from the weather			
Garage type: [ ] No garage [ ] Heated attached (INCLUDE) [ ] Unheated attached (INCLUDE/ SHADE) [ ] Detached (DO NOT INCLUDE)	EXCLUDE GARAGE	EXCLUDE GARAGE	Garage type: [ ] No garage [ ] Heated attached (INCLUDE) [ ] Unheated Attached (INCLUDE/ SHADE) [ ] Detached (DO NOT INCLUDE)
Floor is: [ ] All heated [ ] All unheated - SHADE [ ] Part heated and part unheated - SHADE UNHEATED PART			
Porch type: [ ] No porch [ ] Heated Enclosed Porch - INCLUDE IN DRAWING [ ] Unheated Enclosed Porch -- INCLUDE IN DRAWING AND SHADE [ ] Open Porch -- DO NOT INCLUDE			

Diagram for Floor with Rectangular Shape	Diagram for Floor if Other than Rectangular
[ ] [ ]	

INTERVIEWER: Measurements based on [ ] Inside [ ] Outside [ ] Other: Specify _____

IF NO ADDITIONAL FLOORS OR ATTIC, GO TO BOX 22, PAGE 110.

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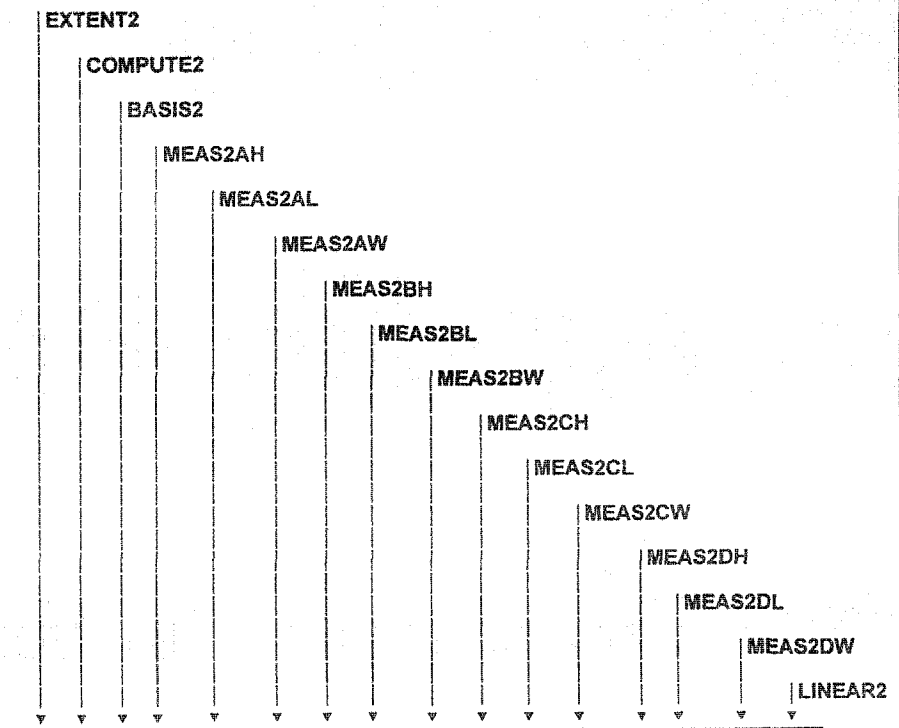
Form EIA-457A

NOTES REGARDING SECOND FLOOR MEASUREMENTS



Floor Codes			Unit A			Unit B			Unit C			Unit D			# of Units
1351	52	53	54	55-56	57-58	59	60-61	62-63	64	65-66	67-68	69	70-71	72-73	74

SECOND FLOOR OF HOME/APARTMENT

Single-Family Home or Townhouse [ ]	Apartment in 2-4 Unit Building [ ]	Apartment in 5+ Unit Building [ ]	Mobile Home [ ]
Garage type: [ ] No garage [ ] Heated attached (INCLUDE) [ ] Unheated attached (INCLUDE/SHADE) [ ] Detached (DO NOT INCLUDE)	EXCLUDE GARAGE	EXCLUDE GARAGE	Garage type: [ ] No garage [ ] Heated attached (INCLUDE) [ ] Unheated attached (INCLUDE/SHADE) [ ] Detached (DO NOT INCLUDE)

Floor is:
[ ] All heated
[ ] All unheated - SHADE
[ ] Part heated and part unheated - SHADE UNHEATED PART

Porch type:
[ ] No Porch
[ ] Heated Enclosed Porch - INCLUDE IN DRAWING
[ ] Unheated Enclosed Porch -- INCLUDE IN DRAWING AND SHADE
[ ] Open Porch -- DO NOT INCLUDE

Diagram for Floor with Rectangular Shape	Diagram for Floor if Other than Rectangular
[ ] [ ]	

INTERVIEWER: Measurements based on [ ] Inside [ ] Outside [ ] Other: Specify _____

IF NO ADDITIONAL FLOORS OR ATTIC, GO TO BOX 22, PAGE 110.

1993 Residential Energy Consumption Survey
Form EIA-457A

THIRD FLOOR OF HOME/APARTMENT

Single-Family Home or Townhouse [ ]	Apartment in 2-4 Unit Building [ ]	Apartment in 5+ Unit Building [ ]	Mobile Home [ ]

Include all space enclosed from the weather

Floor is:
- [ ] All heated
- [ ] All unheated - SHADE
- [ ] Part heated and part unheated - SHADE UNHEATED PART

Porch type:
- [ ] No porch
- [ ] Heated Enclosed Porch - INCLUDE IN DRAWING
- [ ] Unheated Enclosed Porch – INCLUDE IN DRAWING AND SHADE
- [ ] Open Porch – DO NOT INCLUDE

Diagram for Floor with Rectangular Shape	Diagram for Floor if Other than Rectangular
[ ] [ ]	

INTERVIEWER: Measurements based on [ ] Inside [ ] Outside [ ] Other: Specify _____

IF NO ADDITIONAL FLOORS OR ATTIC, GO TO BOX 22, PAGE 110.

FOR OFFICE USE ONLY

Floor Codes			Unit A			Unit B			Unit C			Unit D			# of Units
1376	77	78	79	80-81	82-83	84	85-86	87-88	89	90-91	92-93	94	95-96	97-98	99

THIRD FLOOR OF HOME/APARTMENT

NOTE: THIS PAGE WAS NOT IN THE ORIGINAL QUESTIONNAIRE.

EXTENT3
COMPUTE3
BASIS3
MEAS3AH
MEAS3AL
MEAS3AW
MEAS3BH
MEAS3BL
MEAS3BW
MEAS3CH
MEAS3CL
MEAS3CW
MEAS3DH
MEAS3DL
MEAS3DW
LINEAR3

Floor Codes			Unit A			Unit B			Unit C			Unit D			# of Units
1376	77	78	79	80-81	82-83	84	85-86	87-88	89	90-91	92-93	94	95-96	97-98	99

ATTIC OF HOME

INTERVIEWER: IF APARTMENT IN 2-4 UNITS, ATTIC MUST BE FOR EXCLUSIVE USE OF HOUSEHOLD.

IF APARTMENT IN 5+ UNITS BUILDING, **DO NOT INCLUDE**

Single-Family Home or Townhouse [ ]	Apartment in 2-4 Unit Building [ ]	Apartment in 5+ Unit Building [ ]	Mobile Home [ ]

Attic is:

[ ] Heated - DRAW
[ ] All unheated and finished - DRAW
[ ] Part heated and part unheated - SHADE UNHEATED PART
[ ] Unheated and unfinished - DO NOT DRAW

Diagram for Attic with Rectangular Shape	Diagram for Floor if Other than Rectangular
[ ] [ ]	

INTERVIEWER: Measurements based on [ ] Inside [ ] Outside [ ] Other: Specify _____

FOR OFFICE USE ONLY

Floor Codes			Unit A			Unit B			Unit C			Unit D			# of Units
1400	01	02	03	04-05	06-07	08	09-10	11-12	13	14-15	16-17	18	19-20	21-22	23

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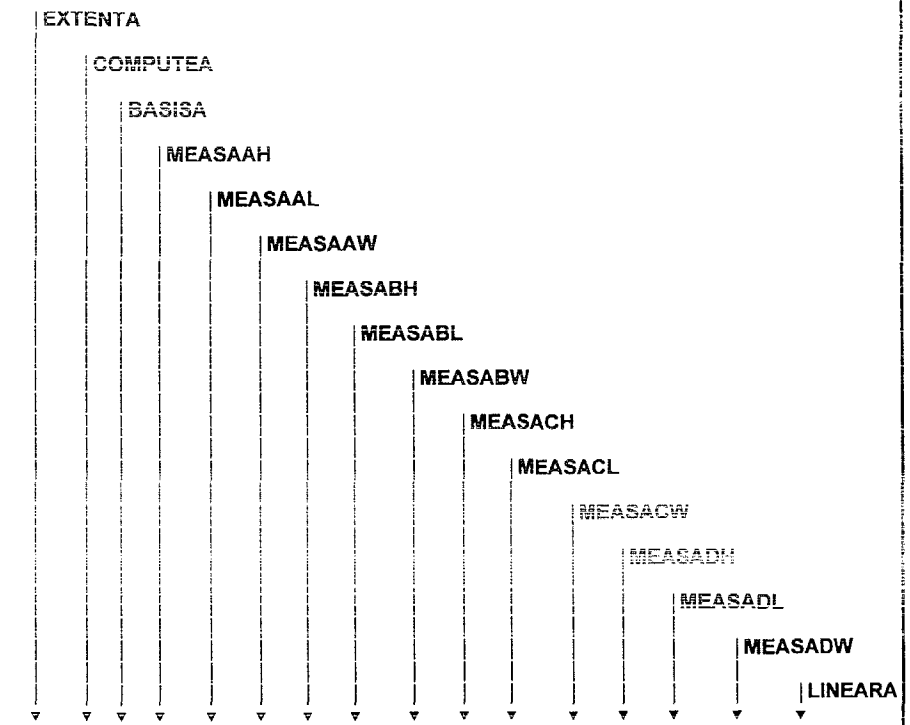
Form EIA-457A

THIRD FLOOR OF HOME/APARTMENT

NOTE: THIS PAGE WAS NOT IN THE ORIGINAL QUESTIONNAIRE.



Floor Codes			Unit A			Unit B			Unit C			Unit D			# of Units
1400	01	02	03	04-05	06-07	08	09-10	11-12	13	14-15	16-17	18	19-20	21-22	23

BOX 22

INTERVIEWER: DID YOU REMEMBER TO INSPECT VEHICLES FOR VIN NUMBERS AND ODOMETER READINGS?
YES . . . . . [ ]
NO - PLEASE DO SO NOW (VINS ON PAGE 94) . . . . . [ ]

This is the end of the interview. Thank you very much for your help.

TIME ENDED:_____

INSIDE
LINEARFL
PREHEAT
PREUN
PREHOME

ME	FL	Heated	Unheated	DK Heated/ Unheated
1470-71	72	73-77	78-82	83-87

Section P. INTERVIEWER OBSERVATION

FILL IN AND CHECK THAT ALL INFORMATION IS COMPLETE:

MINUTES

P-1. LENGTH OF INTERVIEW: _____ MINUTES 1424-26 NMONINTV

P-2. INTERVIEWER'S SIGNATURE: _____

DATE: _____ 1427-30 NDAYINTV

P-3. INTERVIEWER'S I.D.#: _____ 1431-34

FILL THIS OUT AFTER YOU COMPLETE THE INTERVIEW.

P-4. WHAT PROBLEMS, IF ANY, DID YOU HAVE IN MEASURING THIS (HOME/APARTMENT)?

_____

_____

_____

_____

_____

P-5. WHAT EFFECT, IF ANY, DID THESE PROBLEMS HAVE ON THE ACCURACY OF YOUR MEASUREMENTS?

_____

_____

_____

_____

_____

1993 Residential Energy Consumption Survey
Form EIA-457A

P-6. WHAT IS UNIQUE OR UNUSUAL ABOUT THIS HOUSEHOLD THAT IS RELATED TO ITS USE OF ENERGY?

P-7. WHICH QUESTION WAS THE MOST TROUBLESOME FOR THE RESPONDENT TO UNDERSTAND OR ANSWER?

P-8. WAS THERE A PROBLEM GETTING THE AUTHORIZATION FORM SIGNED? WHAT COULD BE DONE TO DEAL WITH THIS IN THE FUTURE?

P-9. WHAT ELSE WOULD IT BE HELPFUL FOR US TO KNOW ABOUT THIS HOUSING UNIT OR INTERVIEW?

P-10. DO YOU HAVE ANY SUGGESTIONS TO IMPROVE THE SURVEY FOR HOMES LIKE THIS ONE?

1993 Residential Energy Consumption Survey
Form EIA-457A

FOLDOUT PAGE

A-1. Housing Structure	B-3. Tenure	B-4. Condominium	B-7. When Home Built	B-9. Year Moved In
Single Family Detached ☐	Own . . . ☐	Yes . . . ☐	Built 1988 or Later . . . ☐	1993 . . . ☐
Single Family Attached . ☐	Rent . . . ☐			1994 . . . ☐
Apartments 2-4 Units . . ☐	Occupy W/O Payment ☐			
5+ Units . . . . . ☐				
Mobile Home . . . . . ☐				

FUEL DELIVERED TO HOUSEHOLD	
J-12. Bottled Gas	☐
J-17. Fuel Oil	☐
J-20. Kerosene	☐

L-1. HOUSEHOLD MEMBERS					
1 . . ☐	2 . . ☐	3 . . ☐	4 . . ☐	5 . . ☐	6 or more . . ☐

FUEL USED YES	NO	DK	FUEL/USAGE CATEGORIES	USAGE (Recorded During Interview) YES	NO	DK	HOW USAGE IS PAID: PAID BY HH	IN RENT/ CONDO FEE	OTHER: Specify		
1			ELECTRICITY USED:							1440	USEEL
			a. For home heating *ELWARM*	1	0	6	1	2	5->	1441-42	*PELLHEAT*
			b. For hot water *ELWATER*	1	0	6	1	2	5->	1443-44	*PELHOTWA*
			c. For cooking *ELFOOD*	1	0	6	1	2	5->	1445-46	*PELCOOK*
			d. For air conditioning *ELCOOL*	1	0	6	1	2	5->	1447-48	*PELAC*
			e. For lighting and appliances *ELOTHER*	1			1	2	5->	1449-50	*PELLIGHT*
1	0	6	NATURAL GAS USED:							1451	USENG
			f. For home heating *UGWARM*	1	0	6	1	2	5->	1452-53	*PGASHEAT*
			g. For hot water *UGWATER*	1	0	6	1	2	5->	1454-55	*PGASHTWA*
			h. For cooking *UGCOOK*	1	0	6	1	2	5->	1456-57	*PUGCOOK*
			i. For other appliances (clothes dryer, outdoor lights, central air conditioning) *UGOTH*	1	0	6	1	2	5->	1458-59	*PUGOTH*
1	0	6	BOTTLED GAS (LPG OR PROPANE USED: Do not mark used if only use is for outdoor grill				1	2	5->	1460-61	USELP *PAYLPG*
1	0	6	FUEL OIL USED:				1	2	5->	1462-63	USEFO *PAYFO*
1	0	6	KEROSENE USED:							1464	USEKERO
1	0	6	WOOD BURNED:							1465	USEWOOD
1	0	6	COAL USED:							1466	USECOAL
1	0	6	SOLAR USED:							1467	USESOLAR

1993 Residential Energy Consumption Survey
Form EIA-457A

Form EIA-457A (1993)

SECOND GAS COMPANY

BOTTLED GAS (LPG or Propane)

PRINT FULL NAME OF GAS COMPANY

THIRD GAS COMPANY

BOTTLED GAS (LPG or Propane)

PRINT FULL NAME OF GAS COMPANY

SECOND FUEL OIL/KEROSENE COMPANY

FUEL OIL or KEROSENE

PRINT FULL NAME OF OIL COMPANY

THIRD FUEL OIL/KEROSENE COMPANY

FUEL OIL or KEROSENE

PRINT FULL NAME OF OIL COMPANY

Form EIA-457A (1993)

Form Approval
OMB No.: 1905-0092
Expires: June 30,1996

U.S. DEPARTMENT OF ENERGY
Authorization Form
RESIDENTIAL ENERGY CONSUMPTION SURVEY

I hereby give permission to the company (companies) below to provide information to Response Analysis Corporation (or other designee of the U.S. Department of Energy) for confidential use in connection with their survey for the U.S. Department of Energy.

This authorization covers the following data for the period from October 1, 1992 through December 21, 1996:

1) the total amount of fuels used by my household
2) the total price charged for fuels used by my household
3) participation in demand-side management, energy audit, and other programs

Companies are authorized to provide this information by monthly periods or by delivery date, whichever applies. A photocopy of this authorization may be accepted with the same authority as the original.

Signature: _____ Date: _____

PLEASE PRINT YOUR NAME: _____

ADDRESS: _____ APT. NO. _____

CITY OR POST OFFICE: _____ STATE _____ ZIP CODE _____

TELEPHONE: AREA CODE _____ NUMBER _____

[ ] Demand-side management and information about energy audit and other programs is not to be released if this box is initialed by the authorizing person.

PLEASE COMPLETE ONE BLOCK BELOW FOR EACH FUEL USED BY THE HOUSEHOLD. IF MORE THAN ONE SUPPLIER OF A PARTICULAR FUEL, USE THE OTHER SIDE OF THIS SHEET.

ELECTRICITY

PRINT FULL NAME OF ELECTRIC COMPANY

NATURAL GAS or BOTTLED GAS

PRINT FULL NAME OF GAS COMPANY

FUEL OIL or KEROSENE

PRINT FULL NAME OF OIL COMPANY

1993 Residential Energy Consumption Survey
Nationwide Survey on Household Energy Use (Mail)
Form EIA-457B

Form EIA-457B (1993)

Form Approval: September 17, 1993
OMB No.: 1905-0092
Expires: June 30, 1996

U. S. DEPARTMENT OF ENERGY
1993 Residential Energy Consumption Survey

Nationwide Survey on Household Energy Use

Please complete this form and return in the postage paid envelope to:

U.S. Department of Energy
c/o Response Analysis
377 Wall Street
P.O. Box 158
Princeton, N.J. 08542

This survey is being conducted for the U.S. Department of Energy by Response Analysis Corporation. The survey is voluntary and is authorized under the Federal Energy Administration Act of 1974 (Public Law 93-275), as amended. Information about specific households will be kept strictly confidential. The data will be summarized within large groupings for statistical purposes.

Housing Unit

1. Do you or members of your household own or rent your present home? (Please mark one box.)

1 ☐ Owned or being bought
2 ☐ Rented
3 ☐ Occupied without payment of rent

(119)

2. What type of home is it? (Please mark one box.)

1 ☐ Mobile home or trailer
2 ☐ Single-family house
4 ☐ Apartment in house or building divided into 2, 3, or 4 apartments
5 ☐ Apartment in building of 5 or more apartments
6 ☐ Other (SPECIFY):_____

(120)

The numbers in parentheses are for office use only.

The code number at the right lets us know that your questionnaire has been returned.

Printed with soy ink on recycled paper

1993 Residential Energy Consumption Survey
Nationwide Survey on Household Energy Use (Mail)
Form EIA-457B

Form Approval: September 17, 1993
OMB No.: 1905-0092
Expires: June 30, 1996

3. Did you move into your present home in 1992, 1993 or 1994?

1 ☐ Yes
0 ☐ No, please skip to question 5. *(121)*

4. If you moved to your present home in 1992 or later: In what month and year did you move to your present home?

Month: _____ Year: _____ *(122-25)*

5. How many finished rooms are in your home? (Do **not** include bathrooms, closets, foyers, or laundry rooms. Include enclosed porches that are used year-round.)

☐☐ Number of rooms *(126-27)*

6. Approximately, in what year was this home built?

01 ☐ 1939 or before
02 ☐ 1940 to 1949
03 ☐ 1950 to 1959
04 ☐ 1960 to 1969
05 ☐ 1970 to 1979
06 ☐ 1980 to 1984
07 ☐ 1985 to 1986
08 ☐ 1987
09 ☐ 1988
10 ☐ 1989
11 ☐ 1990
12 ☐ 1991
13 ☐ 1992
14 ☐ 1993
15 ☐ 1994

(128-29)

Main Heating Fuel

7. Which fuel is used most to heat your home? (Please mark only one fuel.)

01 ☐ Gas from underground pipes serving the neighborhood
02 ☐ Bottled Gas (LPG or Propane)
03 ☐ Fuel Oil
04 ☐ Kerosene or Coal Oil
05 ☐ Electricity
06 ☐ Coal or Coke
07 ☐ Wood
08 ☐ Solar Collectors
21 ☐ Other Fuel (SPECIFY): _____
00 ☐ No Fuel Used (If "No Fuel Used," please skip to question 9.
96 ☐ Don't Know

(130-31)

8. How do you pay for your main heating fuel? (Please mark **one** answer.)

1 ☐ We pay directly to the utility or fuel company
2 ☐ The cost is included in the rent for our home (house or apartment)
3 ☐ Other (SPECIFY): _____

(132)

Water Heating Fuel

9. Which fuel is used by your household for heating water for washing? (Please mark **one** answer.)

01 ☐ Gas from underground pipes serving the neighborhood
02 ☐ Bottled Gas (LPG or Propane)
03 ☐ Fuel Oil
04 ☐ Kerosene or Coal Oil
05 ☐ Electricity
06 ☐ Coal or Coke
07 ☐ Wood
08 ☐ Solar Collectors
21 ☐ Other Fuel (SPECIFY): _____
00 ☐ No Fuel Used (If "No Fuel Used," please skip to question 11.
96 ☐ Don't Know

(133-34)

10. How do you pay for your main water heating fuel? (Please mark **one** answer.)

1 ☐ We pay directly to the utility or fuel company
2 ☐ The cost is included in the rent for our home (house or apartment)
5 ☐ Other (SPECIFY): _____

(135)

Cooking Fuel

11. Which fuel is used most for cooking by your household? (Please mark **one** answer.)

01 ☐ Gas from underground pipes serving the neighborhood
02 ☐ Bottled Gas (LPG or Propane)
03 ☐ Fuel Oil
04 ☐ Kerosene or Coal Oil
05 ☐ Electricity
06 ☐ Coal or Coke
07 ☐ Wood
08 ☐ Solar Collectors
21 ☐ Other Fuel (SPECIFY): _____
00 ☐ No Fuel Used (If "No Fuel Used," please skip to question 13.
96 ☐ Don't Know

(136-37)

12. How do you pay for your main cooking fuel?

1 ☐ We pay directly to the utility or fuel company
2 ☐ The cost is included in the rent for our home (house or apartment).
5 ☐ Other (SPECIFY): _____

(138)

Air-Conditioning and Appliances

13. Do you have air-conditioning in your home? (Please mark **all** that apply.)

1 ☐ Yes, individual room units
2 ☐ Yes, central electric air-conditioning
3 ☐ Yes, central gas air-conditioning
4 ☐ No (If "No," please skip to question 15.)

(139-42)

1993 Residential Energy Consumption Survey
Nationwide Survey on Household Energy Use (Mail)
Form EIA-457B

14. How do you pay for your air-conditioning costs?

1 ☐ We pay directly to the gas or electric company
2 ☐ The cost is included in the rent for our home (house or apartment)
3 ☐ Other (SPECIFY):_____ *(143)*

15. How do you pay for your electricity costs for lighting and household appliances other than air-conditioning?

1 ☐ We pay directly to the electric company
2 ☐ The cost is included in the rent for our home (house or apartment)
3 ☐ Other (SPECIFY):_____ *(144)*

Vehicles

16. How many cars, trucks, vans, motor homes, or similar vehicles do you or other members of your household own or have the regular use of? (Include station wagons, passenger vans, cargo vans, jeeps, or similar vehicles and company vehicles kept at home. Do not count motorcycles or mopeds.)

☐☐ Number of vehicles *(145-46)*

0 ☐ None (If "None," please skip to question 22.)

Please describe each car, truck, van, motor home, or similar vehicle below. If you have more than five vehicles, describe the five used most by your household.

17. VEHICLE #1

Make: _____
Model Name: _____
Model Year: 19_____

Type:
01 ☐ Car
02 ☐ Station wagon
03 ☐ Large van
04 ☐ Mini van *(147-78)*
05 ☐ Pickup truck
06 ☐ Sport-utility vehicle
21 ☐ Other (SPECIFY):_____

18. VEHICLE #2

Make: _____
Model Name: _____
Model Year: 19_____

Type:
01 ☐ Car
02 ☐ Station wagon *(179-210)*
03 ☐ Large van
04 ☐ Mini van
05 ☐ Pickup truck
06 ☐ Sport-utility vehicle
21 ☐ Other (SPECIFY):_____

19. VEHICLE #3

Make: _____
Model Name: _____
Model Year: 19_____

Type:
01 ☐ Car
02 ☐ Station wagon *(211-42)*
03 ☐ Large van
04 ☐ Mini van
05 ☐ Pickup truck
06 ☐ Sport-utility vehicle
21 ☐ Other (SPECIFY):_____

20. VEHICLE #4

Make: _____
Model Name: _____
Model Year: 19_____

Type:
01 ☐ Car
02 ☐ Station wagon *(243-74)*
03 ☐ Large van
04 ☐ Mini van
05 ☐ Pickup truck
06 ☐ Sport-utility vehicle
21 ☐ Other (SPECIFY):_____

21. VEHICLE #5

Make: _____
Model Name: _____
Model Year: 19_____

Type:
01 ☐ Car
02 ☐ Station wagon *(275-306)*
03 ☐ Large van
04 ☐ Mini van
05 ☐ Pickup truck
06 ☐ Sport-utility vehicle
21 ☐ Other (SPECIFY):_____

For Statistical Purposes

All information is confidential.

22. How many people live in your household, including yourself? (Please count children as well as adults. Include all members of your household whether or not they are related to you.)

☐☐ Number of people in household *(307-08)*

23. What is the age of the head of your household?

☐☐ Age (years) *(309-10)*

24. What is the gender of the head of your household?

1 ☐ Female
2 ☐ Male *(311)*

1993 Residential Energy Consumption Survey
Nationwide Survey on Household Energy Use (Mail)
Form EIA-457B

25. What is the marital status of the head of your household?

1 ☐ Now married
2 ☐ Widowed
3 ☐ Divorced or separated
4 ☐ Never married

(312)

26. Please mark the box for the total combined income in the last 12 months of all members of your family (living in your household). Include income from all sources--before taxes and deductions.

01 ☐ Less than $5,000
02 ☐ $ 5,000 - $ 9,999
03 ☐ $10,000 - $14,999
04 ☐ $15,000 - $19,999
05 ☐ $20,000 - $24,999
06 ☐ $25,000 - $44,999
07 ☐ $45,000 - $74,999
08 ☐ $75,000 or over

(313-14)

27. Are you .....

1 ☐ Head of household
2 ☐ Husband or wife of head of household
3 ☐ Other (SPECIFY): _____

(315)

PLEASE READ THIS IF YOU PAY DIRECTLY TO A COMPANY FOR ELECTRICITY, GAS FROM UNDERGROUND PIPES SERVING THE NEIGHBORHOOD, BOTTLED GAS, FUEL OIL, OR KEROSENE DELIVERED TO YOUR HOUSEHOLD.

We hope you will help in the next phase of our survey by filing in the names and addresses of companies that supply your household and by signing the form on the following page. This will permit us to obtain accurate information on energy consumption and your participation in energy-related programs sponsored by your energy supplier.

Information on the amount and cost of fuels used by households in all parts of the United States is needed to help establish important national energy policies.

The information provided by you and by fuel companies will be used only in statistical summaries for the U.S. Department of Energy survey.

PLEASE FOLD AND RETURN IN THE ENCLOSED ENVELOPE. POSTAGE IS PREPAID.

THANK YOU VERY MUCH FOR YOUR HELP!

Form Approval: September 17, 1993
OMB No.: 1905-0092
Expires: June 30, 1996

U.S. DEPARTMENT OF ENERGY
Authorization Form
RESIDENTIAL ENERGY CONSUMPTION SURVEY

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This authorization covers the following data for the period from October 1, 1992 through December 21, 1996:

1) the total amount of fuels used by my household
2) the total price charged for fuels used by my household
3) participation in demand-side management, energy audit, and other programs

Companies are authorized to provide this information by monthly periods or by delivery date, whichever applies. A photocopy of this authorization may be accepted with the same authority as the original.

Signature: _____ Date: _____

[ ] Demand-side management and information about energy audit and other programs is not to be released if this box is initialed by the authorizing person.

PLEASE PRINT

YOUR NAME: _____

ADDRESS: _____ APT. NO.

CITY OR POST OFFICE: _____ STATE _____ ZIP CODE

TELEPHONE: AREA CODE _____ NUMBER _____

PLEASE COMPLETE ONE BLOCK BELOW FOR EACH FUEL USED BY THE HOUSEHOLD.
(IF MORE THAN ONE SUPPLIER OF A PARTICULAR FUEL, USE THE OTHER SIDE OF THIS SHEET.)

ELECTRICITY

PRINT FULL NAME OF ELECTRIC COMPANY
LOCATION OF COMPANY (IF KNOWN) - CITY AND STATE
TELEPHONE
AREA CODE: _____ NUMBER: _____

NATURAL GAS or BOTTLED GAS

PRINT FULL NAME OF GAS COMPANY
LOCATION OF COMPANY (IF KNOWN) - CITY AND STATE
TELEPHONE
AREA CODE: _____ NUMBER: _____

FUEL OIL or KEROSENE

PRINT FULL NAME OF OIL COMPANY
LOCATION OF COMPANY (IF KNOWN) - CITY AND STATE
TELEPHONE
AREA CODE: _____ NUMBER: _____

We estimate that it will take 20 minutes to complete this questionnaire. Send comments regarding this estimate or any other aspects of this collection of information, including suggestions for reducing the length of this questionnaire, to the Energy Information Administration, Office of Statistical Standards, EI-73, 1000 Independence Avenue, S.W., Washington, D.C. 20585; and the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, D.C. 20503.

1993 Residential Energy Consumption Survey
Rental Agents, Landlords, and Apartment Managers
Form EIA-457C

Form EIA-457C (1993)

Form Approval:
OMB No.: 1905-0092
Expires: June 30, 1996

1993 RESIDENTIAL ENERGY CONSUMPTION SURVEY

RENTAL AGENTS, LANDLORDS, AND APARTMENT MANAGERS

Telephone Survey

01-04
05
06-06
07-12
13-14
15-16

TIME STARTED: ____ : ____ AM PM

Hello, this is _____ from Response Analysis Corporation in Princeton, N.J. I'm calling about the Department of Energy study on residential energy uses that we recently wrote you about. Your answers will be kept strictly confidential.

IF LETTER NOT RECEIVED: We will send you another copy and call back in a few days.

To begin, please think about the building at [**ADDRESS ON CONTROL CARD.**]

1. As of January 1994, how many separate housing units were in this building?

NUMBER OF UNITS: ☐ *17-19*
[IF LESS THAN 5 UNITS, SKIP TO Q. 3].

IF "5 OR MORE UNITS," ASK:

2. How many floors, or stories, were in the building?

NUMBER OF FLOORS: ☐ *20-21*

3. About when was the building built? (IF NOT KNOWN, ASK FOR "BEST ESTIMATE.")

BEFORE 1940	01	1988	09
1940-1949	02	1989	10
1950-1959	03	1990	11
1960-1969	04	1991	12
1970-1979	05	1992	13
1980-1984	06	1993	14
1985-1986	07	1994	15
1987	08		

22-23

1993 Residential Energy Consumption Survey
Rental Agents, Landlords, and Apartment Managers
Form EIA-457C

These next questions refer specifically to **[IDENTIFY SPECIFIC HOUSING UNIT]**.

4. As of January, 1994, what was the MAIN fuel used for home heating?

ELECTRICITY	05	--> [Q. 5]	
GAS FROM UNDERGROUND PIPES	01	-> [Q. 6]	
BOTTLED GAS (LPG OR PROPANE)	02		
FUEL OIL	03		
RESIDUAL FUEL OIL	10		
KEROSENE OR COAL OIL	04		24-25
COAL OR COKE	06	--> [Q. 7]	
WOOD	07	--> [Q. 7]	
SOLAR	08	-> [Q. 8]	
DISTRICT HEAT - STEAM OR HOT WATER	09		
OTHER (SPECIFY): _____	21		
NO SPACE HEATING FUEL USED	00	--> [Q. 11]	
DON'T KNOW	96	--> [Q. 10]	

IF ELECTRICITY USED FOR HOME HEATING, ASK:

5. What was the main heating equipment? Was it built-in electric units, heat pump, central warm-air furnace, portable heaters, or what?

BUILT-IN ELECTRIC UNITS	05	-> [Q. 8]	26-27
HEAT PUMP(S)	04		
CENTRAL WARM AIR-FURNACE (WITH DUCTS)	03		
PORTABLE HEATERS	10		
OTHER (SPECIFY): _____	21		
DON'T KNOW	96		

IF GAS FROM UNDERGROUND PIPES, BOTTLED GAS, FUEL OIL, RESIDUAL FUEL OIL, KEROSENE, OR COAL OIL USED FOR HOME HEATING, ASK:

6. What was the main heating equipment? Was it steam or hot water system with radiators or convectors in rooms or pipes in the floor; a central warm-air furnace; a floor, wall or pipeless furnace; room heaters; portable kerosene heaters; or what?

STEAM OR HOT WATER SYSTEM WITH RADIATORS OR CONVECTORS IN ROOMS OR PIPES IN FLOOR	02	-> [Q. 8]	28-29
CENTRAL WARM-AIR FURNACE (WITH DUCTS)	03		
FLOOR, WALL, OR PIPELESS FURNACE	06		
ROOM HEATERS BURNING GAS, OIL, KEROSENE (NON-PORTABLE)	07		
PORTABLE KEROSENE HEATER(S)	11		
OTHER (SPECIFY): _____	21		
DON'T KNOW	96		

IF WOOD, COAL, OR COKE USED FOR HOME HEATING, ASK:

7. What was the main heating equipment? Was it a steam or hot water system with radiators or convectors in rooms or pipes in the floor, a heating stove, a fireplace, or what?

STEAM OR HOT WATER SYSTEM WITH RADIATORS OR CONVECTORS IN ROOMS OR PIPES IN FLOOR	02	
HEATING STOVE	08	
FIREPLACE(S)	09	30-31
OTHER (SPECIFY): _____	21	
DON'T KNOW	96	

8. Could this building modify its present heating equipment to switch to a different main heating fuel within one week's time without substantially reducing the area heated or the temperature maintained in the heated area?

YES	1		
NO	0	--> [Q. 10]	32
DON'T KNOW	6	--> [Q. 10]	

IF "YES," FOR Q. 8, ASK:

9. If the building did have to switch the main heating fuel within one week's time, what fuels could be used instead of [FUEL IN Q. 4]? (CIRCLE ALL THAT APPLY.)

	Could use	
GAS FROM UNDERGROUND PIPES	1	33
BOTTLED GAS (LPG OR PROPANE)	1	34
FUEL OIL	1	35
KEROSENE OR COAL OIL	1	36
ELECTRICITY	1	37
COAL OR COKE	1	38
WOOD	1	39
SOLAR	1	40
DISTRICT HEAT-STEAM OR HOT WATER	1	41
RESIDUAL FUEL OIL	1	42
OTHER (SPECIFY): _____	1	43

10. As of January 1994, was the main heating fuel paid for by the tenant or by the landlord?

TENANT	1	
LANDLORD	2	44
OTHER (SPECIFY): _____	5	

1993 Residential Energy Consumption Survey
Rental Agents, Landlords, and Apartment Managers
Form EIA-457C

11. As of January 1994, what was the main fuel used for heating water?

GAS FROM UNDERGROUND PIPES	01	
BOTTLED GAS (LPG OR PROPANE)	02	
FUEL OIL	03	
KEROSENE OR COAL OIL	04	
ELECTRICITY	05	
COAL OR COKE	06	45-46
WOOD	07	
SOLAR	08	
DISTRICT HEAT - STEAM OR HOT WATER	09	
RESIDUAL FUEL OIL	10	
OTHER (SPECIFY): _____	21	
NO WATER HEATING FUEL	00 --> [Q. 13]	
DON'T KNOW	96	

12. Was the main water heating fuel paid for by the tenant or by the landlord?

TENANT	1	
LANDLORD	2	47
OTHER (SPECIFY): _____	5	

13. As of January 1994, what was the main fuel used for the cooking range?

GAS FROM UNDERGROUND PIPES	01	
BOTTLED GAS (LPG OR PROPANE)	02	
FUEL OIL	03	
KEROSENE OR COAL OIL	04	
ELECTRICITY	05	48-49
COAL OR COKE	06	
WOOD	07	
OTHER (SPECIFY): _____	21	
NO COOKING RANGE	00 --> [Q. 15]	
DON'T KNOW	96	

14. Was the main cooking fuel paid for by the tenant or by the landlord?

TENANT	1	
LANDLORD	2	50
OTHER (SPECIFY): _____	5	

15. In the summer of 1993, was this housing unit air conditioned by a central system?

YES	1	51
NO	0 --> [Q. 19]	

IF "YES" FOR Q. 15, ASK:

16. Did the central air-conditioning system that cooled this housing unit also cool other housing units, businesses, or buildings as well?

NO, A/C SYSTEM COOLS THIS HOUSING UNIT ONLY	0	
YES, A/C SYSTEM COOLS OTHER HOUSING UNITS, BUSINESSES OR BUILDINGS	1	52
DON'T KNOW	6	

17. *Did the central air-conditioning system use electricity, gas from underground pipes, or district chilled water?*

ELECTRICITY	05	
GAS FROM UNDERGROUND PIPES	01	
DISTRICT CHILLED WATER	09	53-54
OTHER	07	
DON'T KNOW	96	

18. Was the air-conditioning fuel paid for by the tenant or by the landlord?

TENANT	1	
LANDLORD	2	55
OTHER (SPECIFY): _____	5	

19. As of January 1994, was electricity for lighting within the housing unit paid for by the tenant or by the landlord?

TENANT	1	
LANDLORD	2	56
OTHER (SPECIFY): _____	5	

IF NATURAL GAS USED IN THIS BUILDING, CONTINUE;
OTHERWISE SKIP TO Q. 23.

20. What is the name of the company that delivers the natural gas to this building and in what city and state are they located?

Company Name: _____ 57

City and State: _____

1993 Residential Energy Consumption Survey
Rental Agents, Landlords, and Apartment Managers
Form EIA-457C

21. Do you or your company buy or contract for natural gas from someone other than the local gas utility and then have the local utility deliver the gas to this building? Gas bought this way is often called "gas transported for the account of others," "transported gas," "spot market gas," or "direct purchase gas."

YES 1
NO . . . . . 0 --> [Q. 23] *58*
DON'T KNOW . . . . . 6 --> [Q. 23]

IF "YES" ON Q. 21, ASK:

22. What is the name of the company or broker or another contact person that can give me more information about the direct purchase gas used in this building?

Contact Person: _____

Telephone: _____

Company Name: _____ *59*

Address: _____

City/State/ZIP: _____

Unable to provide more information 6

23. What is the name and location of the utility that supplies electricity to this building?

Company Name: _____ *60*

City and State: _____

24. Since January 1, 1990, has an energy audit been performed on this building?

YES 1
NO . . . . . 0 --> [Q. 26] *61*
DON'T KNOW . . . . . 6 --> [Q. 26]

IF "YES" FOR Q. 24, ASK:

25. In what year was that?

1990 0
1991 1
1992 . . . . . 2 *62*
1993 3
1994 4
DON'T KNOW 6

26. During 1993, did this building participate in any type of energy conservation program that was sponsored by a utility company? This would include programs carried out by another party, such as a private contractor or an energy service company?

YES 1
NO . . . . . 0 --> **BOX** *63*
DON'T KNOW . . . . . 6 --> **BOX**

IF "YES" FOR Q. 26, ASK:

27. I will describe some of the types of energy conservation programs utilities may offer. For each one, please tell whether or not this building participated in such a program during 1993. Did this building participate in a (READ LIST) during 1993?

	YES	NO	DON'T KNOW	
a. Lighting program	1	0	6	*64*
b. Water heating program	1	0	6	*65*
c. Building weatherization or insulation program . . .	1	0	6	*66*
d. Heating, ventilation, and air-conditioning equipment program	1	0	6	*67*
e. Direct electricity load control program	1	0	6	*68*
f. Time-of-use program with special rates for using electricity at off-peak periods	1	0	6	*69*

IF OTHER UNITS ARE ON CONTROL CARD, ASK ABOUT NEXT UNIT USING THE NEXT QUESTIONNAIRE.

IF NO OTHER UNITS ON CONTROL CARD, END THE INTERVIEW.

Thank you very much for your time and help. Have a nice day!

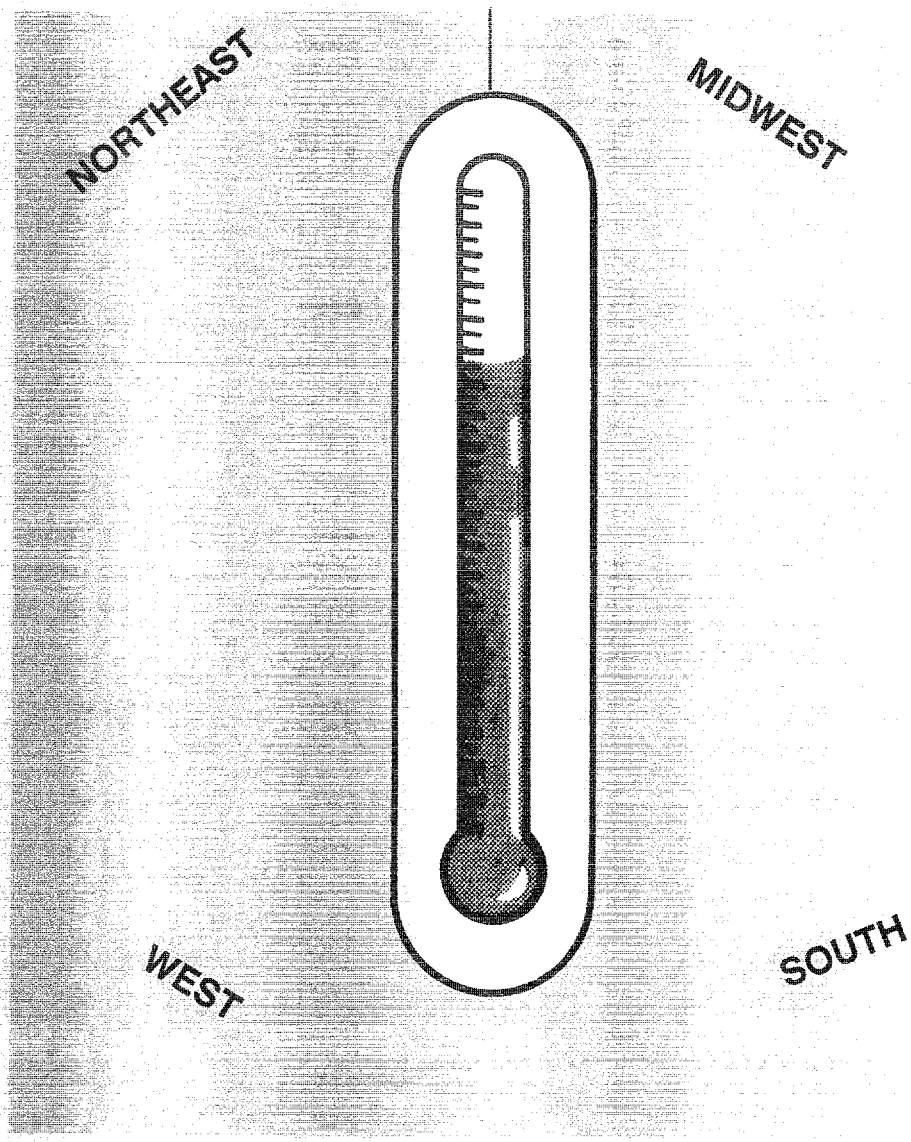
INTERVIEWER:_____ DATE COMPLETED:___/___/___ *70-71*

TIME COMPLETED: ____:____ AM / PM LENGTH OF INTERVIEW: _____ MINUTES *72-73*

Page intentionally left blank.

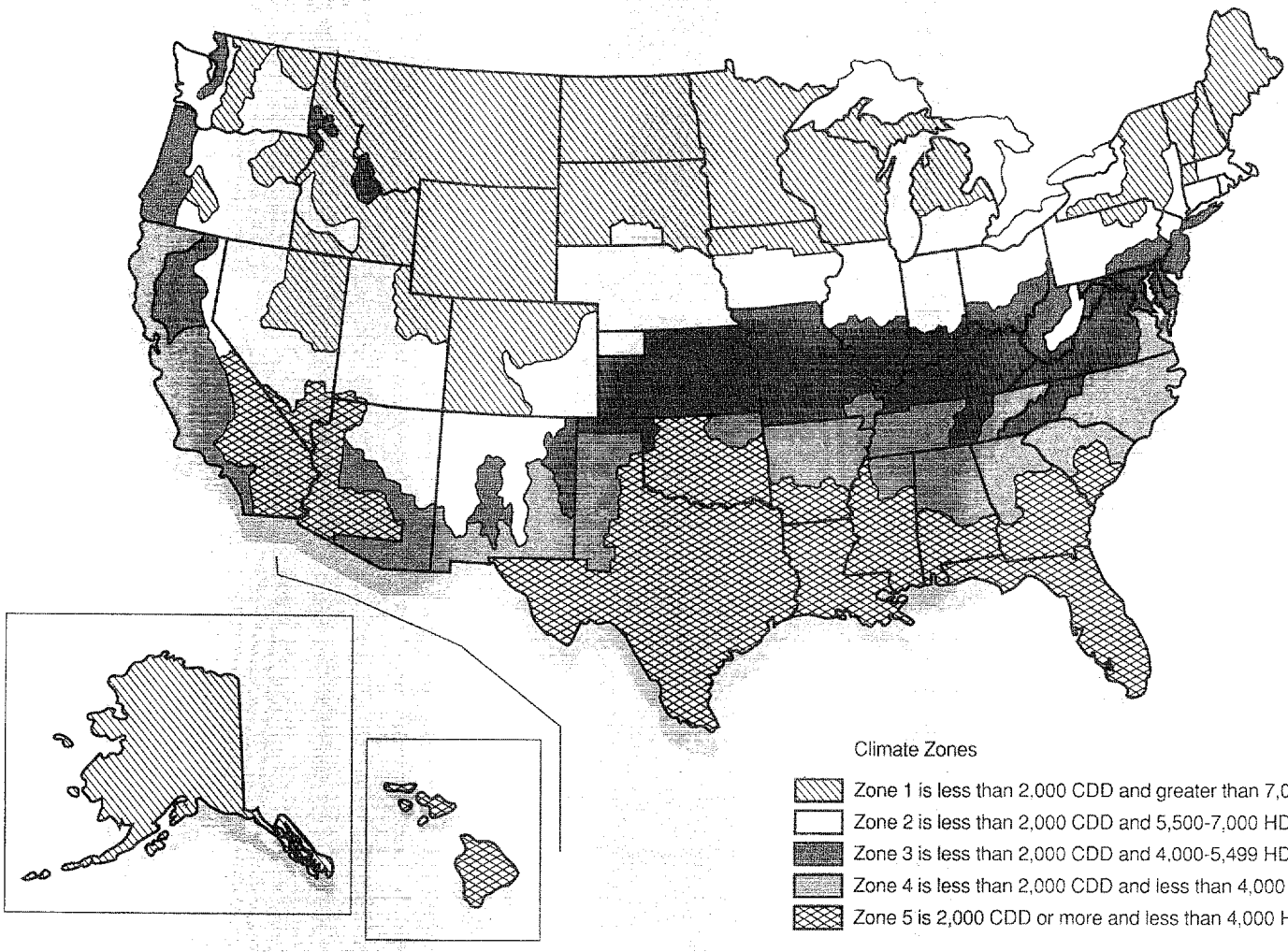
Appendix E

U.S. Climate Zone and Census Regions and Divisions Maps

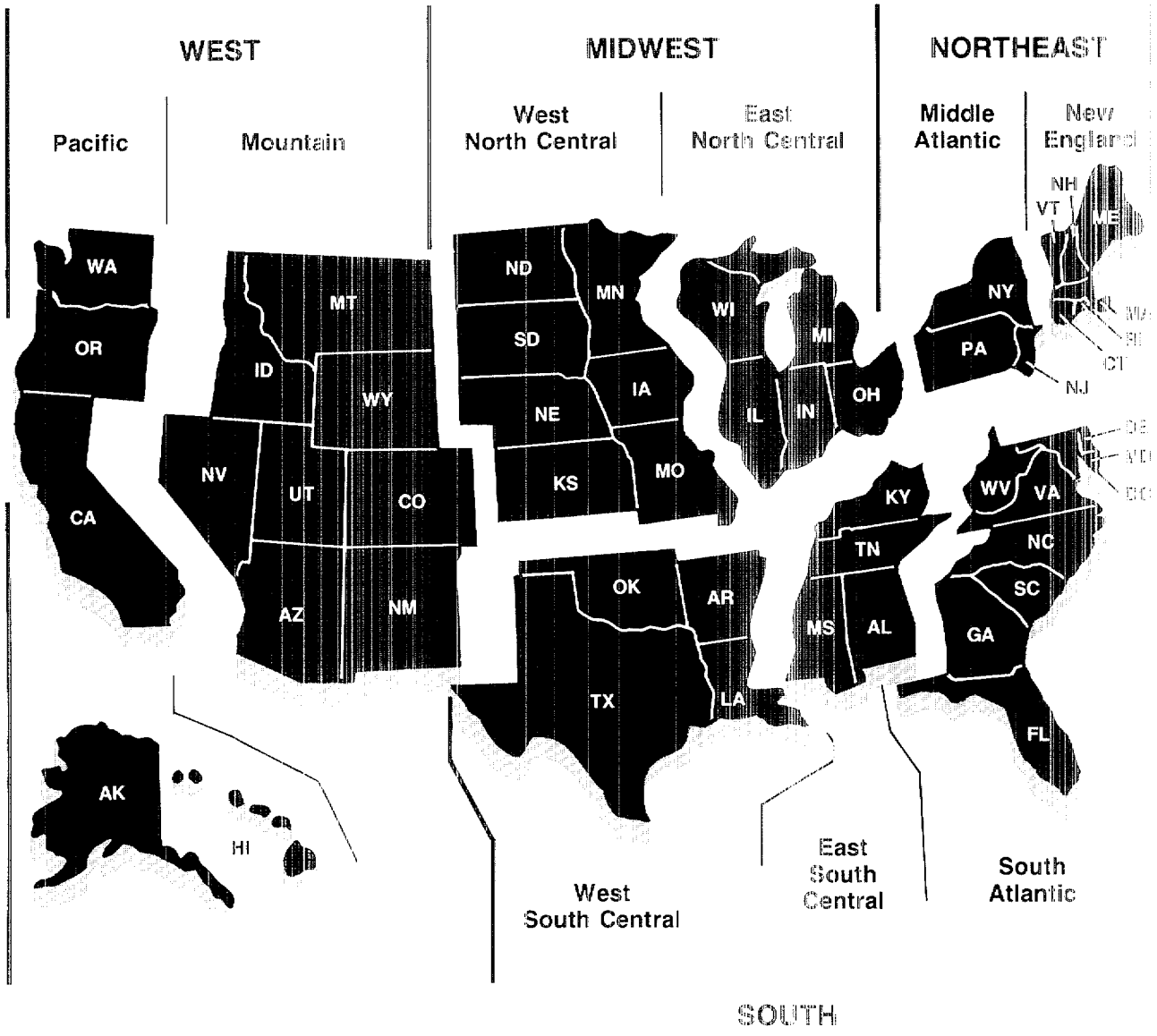


Appendix E

U.S. Climate Zone and Census Regions and Divisions Maps

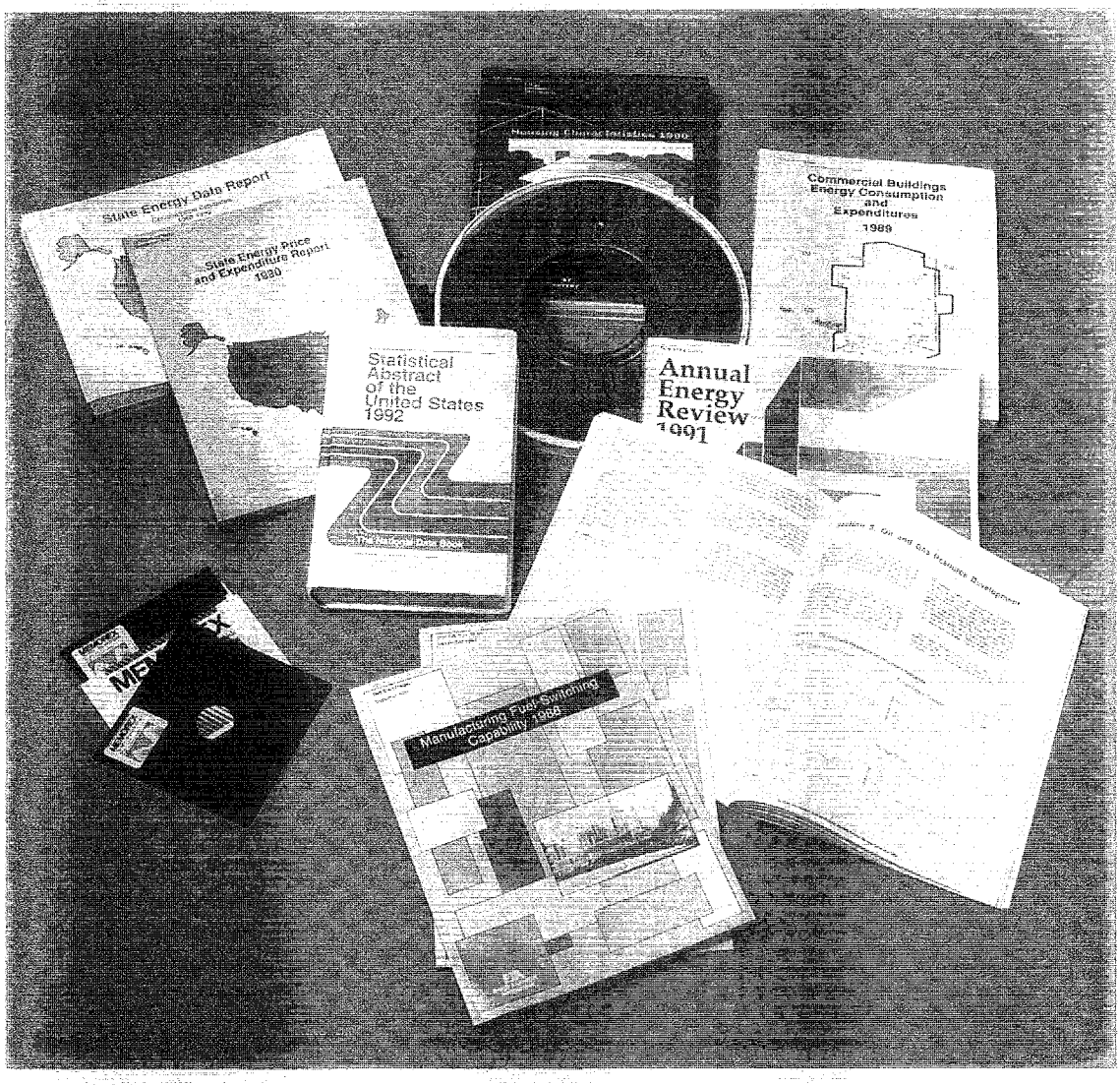


U.S. Census Regions and Divisions



Appendix F

Related EIA Publications on Energy Consumption



Appendix F

Related EIA Publications on Energy Consumption

For information about how to obtain these publications, see the inside cover of this report. Please note that the prices quoted here are subject to change.

In addition to the reports listed below, public use data tapes and data diskettes for the residential, residential transportation, and commercial sectors are available from the National Technical Information Service (NTIS). To obtain information on how to order the tapes/diskettes, you may call NTIS at 703-487-4807, FAX number 703-321-8547. Data diskettes can also be obtained from the Office of Scientific and Technical Information (OSTI). For OSTI ordering information, call 615-576-8401.

Residential Sector

Housing Characteristics

Note: The survey name was dropped from the beginning of the report title starting with the 1987 data reports.

Housing Characteristics 1990; May 1992, DOE/EIA-0314(90), GPO Stock No. 061-003-00754-6, $23.00.

Housing Characteristics 1987; May 1989, DOE/EIA-0314(87), GPO Stock No. 061-003-00619-1, $13.00.

Residential Energy Consumption Survey: Housing Characteristics 1984; October 1986, DOE/EIA-0314(-84), GPO Stock No. 061-003-00499-7, $12.00.

Residential Energy Consumption Survey: Housing Characteristics, 1982; August 1984, DOE/EIA-0314(82), GPO Stock No. 061-003-00393-1, $7.00.

Residential Energy Consumption Survey Housing Characteristics, 1981; August 1983, DOE/EIA-0314(81), GPO Stock No. 061-003-00330-3, $6.50.

Residential Energy Consumption Survey: Housing Characteristics, 1980; June 1982, DOE/EIA-0314, GPO Stock No. 061-003-00256-1, $11.00.

Residential Energy Consumption Survey: Characteristics of the Housing Stock and Households, 1978; February 1980, DOE/EIA-0207/2, GPO Stock No. 061-003-00093-2, $4.25.

Residential Energy Consumption Survey: Conservation; February 1980, DOE/EIA-0207/3, GPO Stock No. 061-003-00087-8, $6.00.

Preliminary Conservation Tables from the National Interim Energy Consumption Survey; August 1979, DOE/EIA-0193/P (no GPO Stock No.).

Characteristics of the Housing Stock and Households: Preliminary Findings from the National Interim Energy Consumption Survey; October 1979, DOE-/EIA-0199/P (no GPO Stock No. available).

Consumption and Expenditures

Note: The survey name was dropped from the beginning of the report title starting with the 1987 data reports. The titles were changed to *Household Energy Consumption and Expenditures 1987, Part 1: National* and *Part 2: Regional.*

"Household Energy Consumption and Expenditures 1990," *Monthly Energy Review,* August 1993, DOE/EIA-0035(93/08).

Household Energy Consumption and Expenditures 1990; February 1993, DOE/EIA-0321/1(90), GPO Stock No. 061-003-00795-3, $22.00.

Household Energy Consumption and Expenditures 1990\S; DOE/EIA-0321/2(90), GPO Stock No. 061-003-00796-1, $21.00.

Household Energy Consumption and Expenditures 1987, Part 1: National Data; October 1989, DOE/EIA-0321/1(87), GPO Stock No. 061-003-00635-3, $15.00. Note: Energy end-use data are included in this report.

Household Energy Consumption and Expenditures 1987, Part 2: Regional Data; DOE/EIA-0321/2(87) (no GPO Stock No. available), $16.00.

Residential Energy Consumption Survey: Consumption and Expenditures, April 1984 Through March 1985, Part 1: National Data; March 1987, DOE/EIA-0321/1(84), GPO Stock No. 061-003-00519-5, $9.50.

Residential Energy Consumption Survey: Consumption and Expenditures, April 1984 Through March 1985, Part 2: Regional Data; May 1987, DOE/EIA-0321/2(84), GPO Stock No. 061-003-00528-4, $17.00. Note: Energy end-use data are included in this report.

Residential Energy Consumption Survey: Consumption and Expenditures, April 1982 Through March 1983, Part 1: National Data; November 1984, DOE/EIA-0-321/1(82), GPO Stock No. 061-003-00411-3, $7.00.

Residential Energy Consumption Survey: Consumption and Expenditures, April 1982 Through March 1983, Part 2: Regional Data; December 1984, DOE/EIA-0-321/2(82), GPO Stock No. 061-003-00414-8, $9.50.

Residential Energy Consumption Survey: Consumption and Expenditures, April 1981 Through March 1982, Part 1: National Data; September 1983, DOE/EIA-0-321/1(81), GPO Stock No. 061-003-00340-1, $6.00.

Residential Energy Consumption Survey: Consumption and Expenditures, April 1981 Through March 1982, Part 2: Regional Data; October 1983, DOE/EIA-032-1/2(81), GPO Stock No. 061-003-00357-5, $8.00.

Residential Energy Consumption Survey: Consumption and Expenditures, April 1980 Through March 1981, Part 1: National Data; September 1982, DOE/EIA-0321/1(80), GPO Stock No. 061-003-00278-1, $7.50.

Residential Energy Consumption Survey: Consumption and Expenditures, April 1980 Through March 1981, Part 2: Regional Data; June 1983, DOE/EIA-0321/2(80), GPO Stock No. 061-003-00319-2, $7.00.

Residential Energy Consumption Survey: 1979-1980 Consumption and Expenditures, Part 1: National Data (Including Conservation); April 1981, DOE/EIA-0262/1, GPO Stock No. 061-003-00191-2, $6.50.

Residential Energy Consumption Survey: 1979-1980 Consumption and Expenditures, Part II: Regional Data; May 1981, DOE/EIA-0262/2, GPO Stock No. 061-003-00189-1, $8.50.

Residential Energy Consumption Survey: Consumption and Expenditures, April 1978 Through March 1979; July 1980, DOE/EIA-0207/5, GPO Stock No. 061-003-00131-9, $7.50.

Single-Family Households: Fuel Oil Inventories and Expenditures: National Interim Energy Consumption Survey; December 1979, DOE/EIA-0207/1, GPO Stock No. 061-003-00075-4, $3.50.

Other Publications on the Residential Sector

Energy Consumption Series—*Sample Design for the Residential Energy Consumption Survey,* August 1994, DOE/EIA-0555(94)/1, GPO Stock No. 061-003-00865-8, $6.50.

Energy Consumption Series—*User-Needs Study of the 1993 Residential Energy Consumption Survey,* September 1993, DOE/EIA-0555(93)/2, GPO Stock No. 061-003-00819-4, $13.00.

"End-Use Consumption of Residential Energy" *Monthly Energy Review* (Article), pp. vii-xiv, July 1987, DOE/EIA-0035(87/07).

Residential Energy Consumption Survey: Trends in Consumption and Expenditures 1978-1984 June 1987, DOE/EIA-0482, GPO Stock No. 061-003-00535-7, $12.00.

Residential Conservation Measures; July 1986, SR/EEUD/86/01 (no GPO Stock No.).

An Economic Evaluation of Energy Conservation and Renewable Energy Tax Credits; October 1985, Service Report (no GPO Stock No.).

Residential Energy Consumption and Expenditures by End Use for 1978, 1980, and 1981; December 1984, DOE/EIA-0458, GPO Stock No. 061-003-00415-6, $4.50.

Weatherization Program Evaluation, SR-EEUD-84-1; August 1984 (available from the Office of the Assistant Secretary for Conservation and Renewable Energy, Department of Energy).

Residential Energy Consumption Survey: Regression Analysis of Energy Consumption by End Use; October 1983, DOE/EIA-0431, GPO Stock No. 061-00300-347-8, $5.00.

National Interim Energy Consumption Survey: Exploring the Variability In Energy Consumption; July 1981, DOE/EIA-0272, GPO Stock No. 061-003-00-205-6, $5.00.

National Interim Energy Consumption Survey: Exploring the Variability in Energy Consumption--A Supplement; October 1981, DOE/EIA-0272/S, GPO Stock No. 061-003-00217-0, $4.50.

Energy Use by U.S. Households; November 1980, DOE/EIA-0248 (brochure, no GPO Stock No.).

Residential Transportation Sector

Note: The survey name was dropped from the beginning of the report title starting with the 1988 data report, and the report title changed to *Household Vehicles Energy Consumption 1988.*

Household Vehicles Energy Consumption 1991; December 1993, DOE/EIA-0464(91), GPO Stock No. 061-003-00652-3, $14.00.

"Energy Preview: Residential Transportation Energy Consumption Survey Preliminary Estimates, 1991," *Monthly Energy Review*, January 1993, DOE/EIA-0035(93/01).

Household Vehicles Energy Consumption 1988; February 1990, DOE/EIA-0464(88), GPO Stock No. 061-003-00652-3, $11.00.

Residential Transportation Energy Consumption Survey: Consumption Patterns of Household Vehicles 1985; April 1987, DOE/EIA-0464(85), GPO Stock No. 061-003-00521-7, $8.50.

Residential Transportation Energy Consumption Survey: Consumption Patterns of Household Vehicles, 1983; January 1985, DOE/EIA-0464(83), GPO Stock No. 061-003-00420-2, $4.50.

Residential Energy Consumption Survey: Consumption Patterns of Household Vehicles, Supplement: January 1981 to September 1981; February 1983, DOE/EIA-0328, GPO Stock No. 061-003-00297-8, $4.75.

Residential Energy Consumption Survey: Consumption Patterns of Household Vehicles, June 1979 to December 1980; April 1982, DOE/EIA-0319 (no GPO Stock No.).

Commercial Sector

Note: The name of the Nonresidential Buildings Energy Consumption Survey was changed to the Commercial Buildings Energy Consumption Survey, beginning with the 1989 survey. The survey name was also dropped from the report title at that time and subsequently.

Characteristics of Buildings

Commercial Buildings Characteristics 1992; April 1994, DOE/EIA-0246(92), GPO Stock No. 061-003-00850-0, $28.00.

"Commercial Buildings Characteristics 1992," *Monthly Energy Review*, January 1994, DOE/EIA-0035(94/01).

Commercial Buildings Characteristics 1989; June 1991, DOE/EIA-0246(89), GPO Stock No. 061-003-00699-0, $18.00.

Nonresidential Buildings Energy Consumption Survey: Characteristics of Commercial Buildings, 1986; September 1988, DOE/EIA-0246(86), GPO Stock No. 061-003-00580-2, $16.00.

Nonresidential Buildings Energy Consumption Survey: Characteristics of Commercial Buildings, 1983; July 1985, DOE/EIA-0246(83), GPO Stock No. 061-003-00439-3, $7.50.

Nonresidential Buildings Energy Consumption Survey: Characteristics of Commercial Buildings, 1983; A Supplemental Reference, DOE/EIA-M008, $22.95. Available from the NTIS, Order No. DE-85015581.

Nonresidential Buildings Energy Consumption Survey: Fuel Characteristics and Conservation Practices; June 1981, DOE/EIA-0278, GPO Stock No. 061-003-00200-5, $9.00.

Nonresidential Buildings Energy Consumption Survey: Building Characteristics; March 1981, DOE/EIA--0246, GPO Stock No. 061-003-00171-8, $6.50.

Consumption and Expenditures

Commercial Buildings Consumption and Expenditures 1989; April 1992, DOE/EIA-0318(89), GPO Stock No. 061-003-00753-8, $25.00.

Nonresidential Buildings Energy Consumption Survey: Commercial Buildings Consumption and Expenditures 1986; May 1989, DOE/EIA-0318(86), GPO Stock No. 061-003-00613-2, $19.00.

Nonresidential Buildings Energy Consumption Survey: Commercial Buildings, Consumption and Expenditures 1983; September 1986, DOE/EIA-0318(83), GPO Stock No. 061-003-00496-2, $13.00.

Nonresidential Buildings Energy Consumption Survey: 1979 Consumption and Expenditures, Part 1: Natural Gas and Electricity; March 1983, DOE/EIA-0318/1, GPO Stock No. 061-003-00298-6, $9.50.

Nonresidential Buildings Energy Consumption Survey: 1979 Consumption and Expenditures, Part 2: Steam, Coal, Fuel Oil, LPG, and Total Fuels; December 1983, DOE/EIA-0318(79)/2, GPO Stock No. 061-003-00366-4, $6.00.

Other Publications on the Commercial Sector

Energy Consumption Series— *Energy End-Use Intensities in Commercial Buildings*, September 1994, DOE/EIA-0555(94)/2, GPO Stock No. 061-003-0087-9, 9.00.

"Assessment of Energy Use in Multibuilding Facilities," *Monthly Energy Review*, December 1993, DOE/EIA-0035(93/12).

Energy Consumption Series—*Assessment of Energy Use in Multibuilding Facilities*, August 1993, DOE/EIA-0555(93)/1, GPO Stock No. 061-003-00817-8, $7.50.

Energy Consumption Series—*User-Needs Study for the 1992 Commercial Buildings Energy Consumption Survey*, September 1992, DOE/EIA-0555(92)/4, GPO Stock No. 061-003-00770-8, $8.50.

Energy Consumption Series—*Lighting in Commercial Buildings*; March 1992, DOE/EIA-0555(92)/1, GPO Stock No. 061-003-00749-0, $6.50.

Industrial Sector

Manufacturing Consumption of Energy 1991, December 1994, DOE/EIA-0512(91), GOP Stock No. 061-003-0087-9, $34.00.

"Energy Preview: Manufacturing Energy Consumption Survey Preliminary Estimates, 1991," *Monthly Energy Review*, September 1993, DOE/EIA-0035(93/01).

"Energy Efficiency in the Manufacturing Sector," *Monthly Energy Review* (Article), p.1, December 1992.

Manufacturing Energy Consumption Survey: Changes in Energy Intensity in the Manufacturing Sector 1980-1988, December 1991, DOE/EIA-0552(80-88) GPO Stock No. 061-003-00734-1, $4.75.

Manufacturing Energy Consumption Survey: Manufacturing Fuel-Switching Capability 1988; September 1991, DOE/EIA-0515(88), GPO Stock No. 061-003-00720-1, $9.00.

Manufacturing Energy Consumption Survey: Consumption of Energy, 1988; May 1991, DOE/EIA-0512(88), GPO Stock No. 061-003-00703-8, $11.00.

Manufacturing Energy Consumption Survey: Energy Efficiency in Manufacturing, 1985; January 1990, DOE/EIA-0516(85), GPO Stock No. 061-003-00650-7, $4.25.

Manufacturing Energy Consumption Survey: Fuel-Switching Capability, 1985; December 1988, DOE/EIA-0515(85), GPO Stock No. 061-003-00601-9, $3.50.

Manufacturing Energy Consumption Survey: Methodological Report, 1985; November 1988, DOE/EIA-0514(85), GPO Stock No. 061-003-00595-1, $6.00.

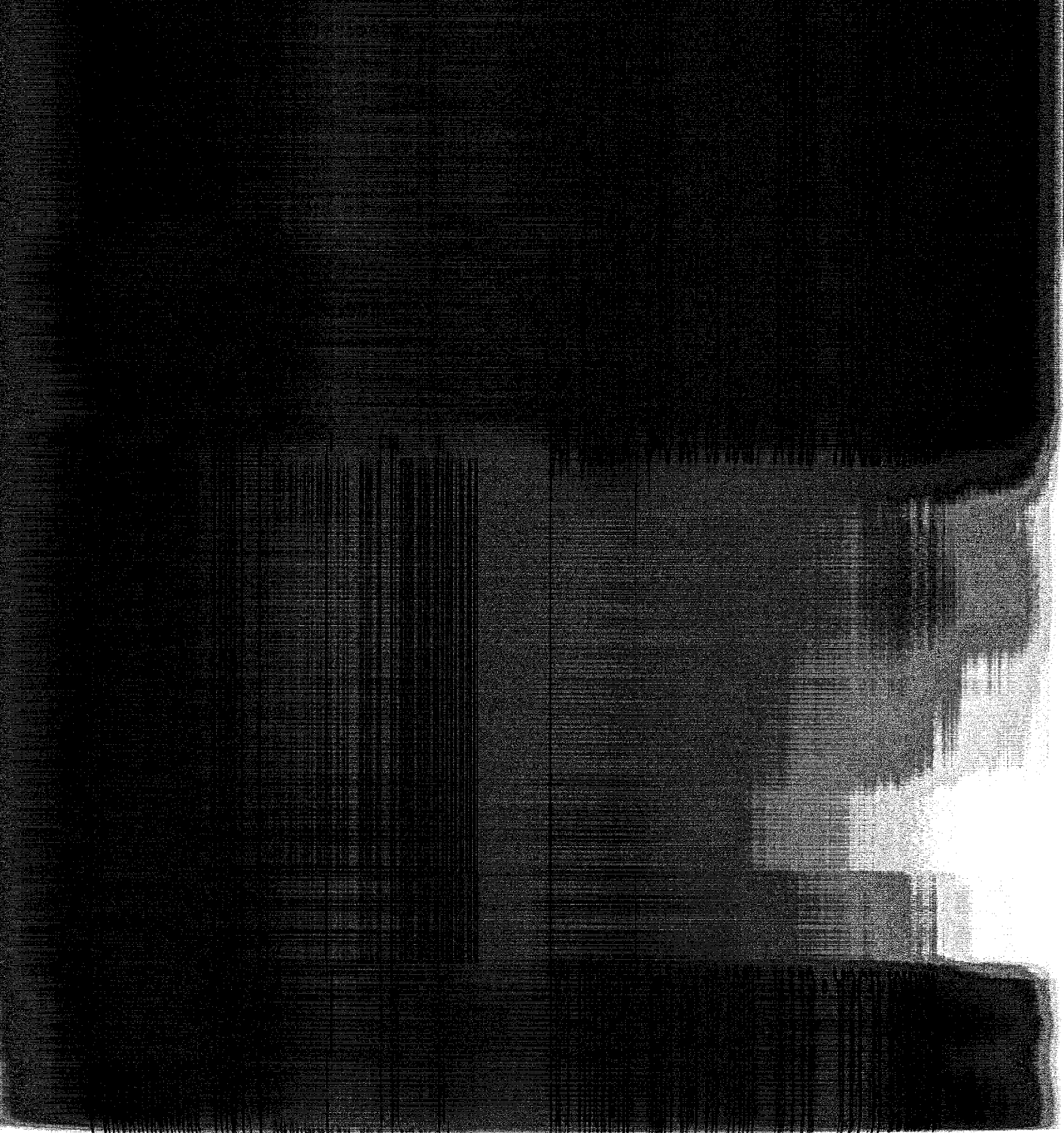
Manufacturing Energy Consumption Survey: Consumption of Energy, 1985; November 1988, DOE/EIA-0512(85), GPO Stock No. 061-003-00594-2, $6.00.

"Manufacturing Sector Energy Consumption 1985 Provisional Estimates," *Monthly Energy Review* (Article), pp. vii-x, January 1987, DOE/EIA-0035 (87/01).

Report on the 1980 Manufacturing Industries' Energy Consumption Study and Survey of Large Combustors; February 1983, DOE/EIA-0358, GPO Stock No. 061-003-00293-5, $5.00.

Industrial Energy Consumption, Survey of Large Combustors: Report on Alternate Fuel-Burning Capabilities of Large Boilers in 1979; February 1982, DOE/EIA-0304, GPO Stock No. 061-003-0233-1, $2.50.

Methodological Report of the 1980 Manufacturing Industries Survey of Large Combustors (EIA-463); March 1982, DOE/EIA-0306 (no GPO Stock No.).



1981-1982; Monthly Billing Data; Order No. PB84-1-20476, $220.

Order No. PB92-504232, $140.

Availability of Natural Gas in the Neighborhood: Respondents are asked "Is gas from underground pipes available in this neighborhood?" The meaning of "available" and "neighborhood" is left to individual interpretation by the respondents. The intent of this question is to determine whether a residence could be "readily" hooked up to a gas line.

Average: The simple arithmetic average for a population; that is, the sum of all the values in a population divided by the size of the population. Population means are estimated by computing the weighted sum of the sample values, then dividing by the sum of the sample weights. (See **Weight**.)

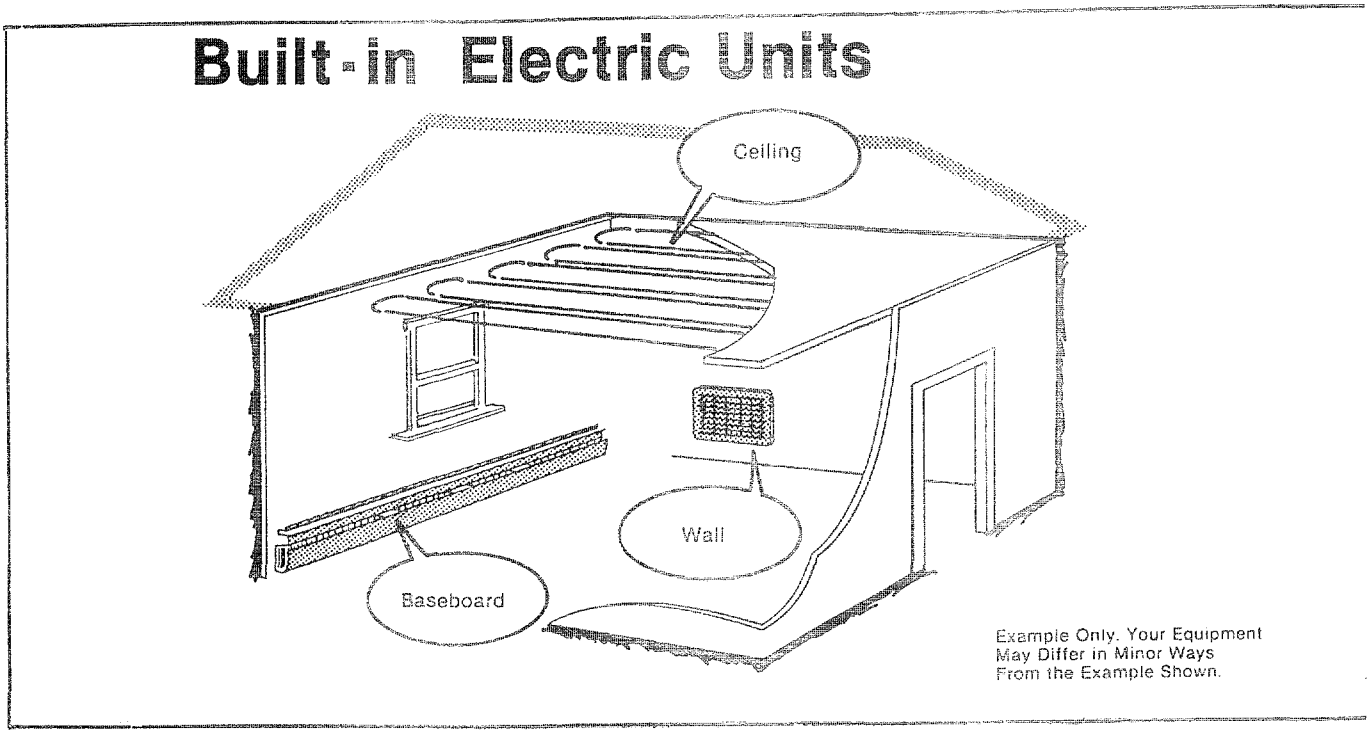
Basement: An enclosed space in which a person can walk upright under all or part of the building.

Bathroom: A full bathroom contains a sink with running water, a flush toilet, and a bathtub or shower. A half bathroom contains a toilet or bathtub or shower.

Bedroom: Room intended for sleeping. If not presently used for sleeping, number of bedrooms are those that would be listed as descriptive of the apartment or house if it were on the market for sale or rent. A one-room efficiency or studio apartment has no bedrooms.

Bottled Gas: See **Liquefied Petroleum Gas**.

Built-In Electric Units: An individual-resistance electric-heating unit that is permanently installed in the floors, walls, ceilings, or baseboards and is part of the electrical installation of the building. Electric space-heating devices that are plugged into an electric socket or outlet are not considered built in. (See **Heating Equipment** and **Portable Electric Heater**.)



Cash and Carry: Kerosene, fuel oil, or bottled gas (tank or propane) purchased with cash, check, or credit card and taken home by the purchaser. The purchaser provides the container or pays extra for the container.

Caulking: Moldable sealing material around windows or doors to the outside that reduces the passage of air and moisture when put into cracks around the frames of windows or doors, or cracks in other stationary parts of a house. Caulking comes in a tube and is claylike so it can be molded by hand to fit the space being treated. Caulking can be applied either to the inside or to the outside of the home. It includes materials known as "sealants," "putty," and "glazing compounds."

Glossary

Adequacy of Insulation: The perception of the respondent as to the adequacy of insulation present in the housing unit, how "good" the insulation in the unit is.

Air Cleaner: A device using filters or electro-static precipitators to remove indoor-air pollutants such as tobacco smoke, dust, and pollen. Most portable units are 40 watts when operated on low speed and 100 watts on high speed. (See **Appliances**.)

Air-conditioning: Cooling and dehumidification of the air in a building by a refrigeration unit driven by electricity or gas. This definition excludes fans, blowers, or evaporative cooling systems ("swamp coolers") that are not connected to a refrigeration unit. Air-conditioning units that are not currently in working condition or are not used are included if they are in place in the housing unit. (See **Refrigeration Unit**.)

Air-Conditioning Equipment: A system that cools the air in a housing unit by a refrigeration unit driven by electricity or natural gas, either a central system or window or wall units. Excluded are fans, blowers, or evaporative cooling systems ("swamp coolers") that are not connected to a refrigeration unit. Air-conditioning units that were not in working condition or were not used, are still included in RECS if they are in place in the housing unit. Some central-air-conditioners are heat pumps.

Window/wall units have cooling capacities ranging from 5,200 Btu/hour to 28,000 Btu/hour. Units rated between 10,000 Btu/hour and about 14,000 Btu/hour are available for either 120- or 240-volt power supplies. Units larger than 14,000 Btu/hour operate on 240-volts. Units smaller than 10,000 Btu/hour are 120-volts. Central air-conditioning units typically range between 12,000 Btu/hour and 48,000 Btu/hour. (See **Appliances** and **Air-conditioning**.)

Appliances: Appliances used in the home during the year, including those loaned to the householder for regular use. Appliances possessed by the household but not used are not counted, except for air-conditioning equipment. Appliances temporarily not in working condition but generally used by the household are included, only if a repair person has been called or the appliance has been taken to a repair shop.

Aquarium: A tank used as a container for fish that holds 20 or more gallons of heated water and is usually made of glass. A 20-gallon tank is approximately 30 inches by 12 inches by 12 inches.

Attic Exhaust Fan: Removes hot air from the attic by an electric-powered fan. (See **Appliances**.)

Attic Insulation: Insulating materials in the attic, either placed underneath the roof, on the roof, or on the floor of the attic. (See **Roof Insulation** and **Ceiling Insulation**.)

Authorization Form: The one-page form signed by the respondent that gives permission to the energy supplier to release information about the energy used in the housing unit, and participation in special programs such as audit, DSM, and energy assistance programs. The form contains the name of each energy supplier.

Automatic Set-Back or Clock Thermostat: A thermostat that can be set to turn the heating/cooling system off and on at certain predetermined times.

Automatic Control: A device that controls when a lamp is turned on and when it is turned off. Such devices may be activated by a clock, darkness or movement.

Automobile: Includes standard passenger car, 2-seater car and station wagons; excludes passenger vans, cargo vans, motor homes, pickup trucks, and sport-utility or similar vehicles. (See **Vehicles**.)

CDD: See **Cooling Degree-Days (CDD)**.

Ceiling Fan: Fans, installed on the ceiling, used to ventilate a room.

Ceiling Insulation: Insulating materials placed between the ceiling and the roof. (See **Insulation**.)

Census Division: A geographic area consisting of several States defined by the U.S. Department of Commerce, Bureau of the Census. (See the map in Appendix F.) The States are grouped into four regions and nine divisions:

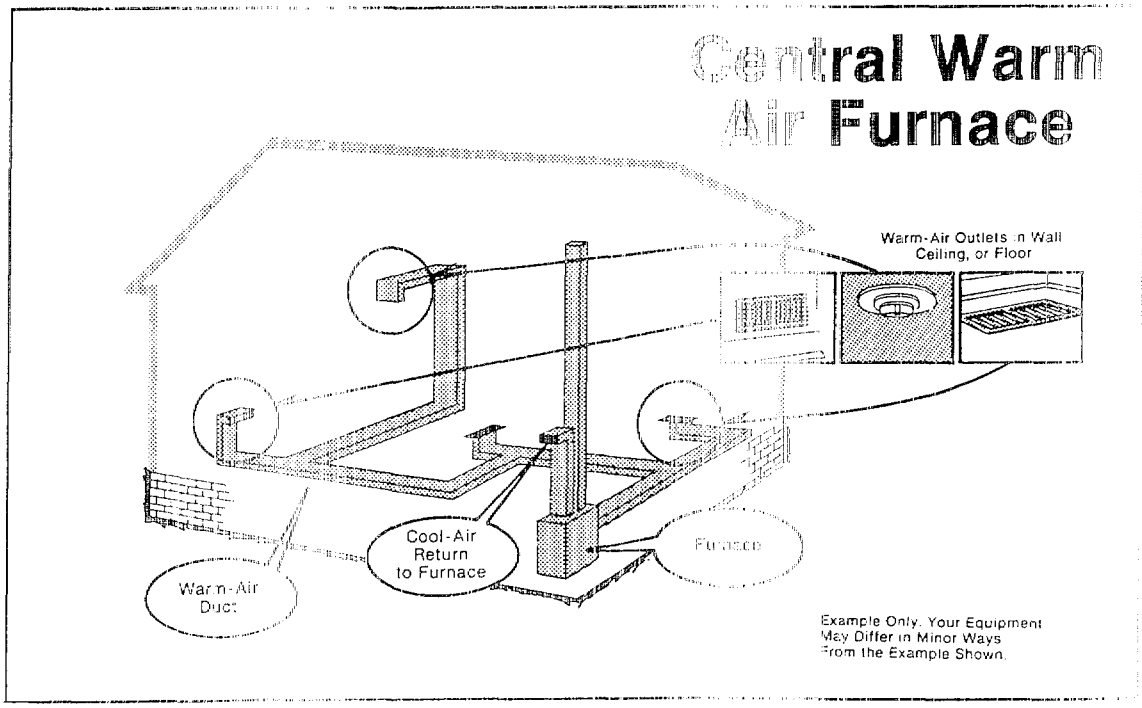
Region	Division	States
Northeast	New England	Connecticut, Maine, Massachusetts, New Hampshire, Vermont, and Rhode Island
	Middle Atlantic	New Jersey, New York, and Pennsylvania
Midwest	East North Central	Illinois, Indiana, Michigan, Ohio, and Wisconsin
	West North Central	Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota
South	South Atlantic	Delaware, the District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, and West Virginia
	East South Central	Alabama, Kentucky, Mississippi, and Tennessee
	West South Central	Arkansas, Louisiana, Oklahoma, and Texas
West	Mountain	Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming
	Pacific	Alaska, California, Hawaii, Oregon, and Washington

Census Region: See **Census Division** and the map in Appendix F.

Central Air-Conditioning: See **Air-Conditioning Equipment**.

Central City: Usually one or more legally incorporated cities within the Metropolitan Statistical Area (MSA) that is significantly large by itself or large relative to the largest city in the MSA. Additional criteria for being classified "central city" include having at least 75 jobs for each 100 employed residents and having at least 40 percent of the resident workers employed within the city limits. Every MSA has at least one central city, which is usually the largest city. Central cities are commonly regarded as relatively large communities with a denser population and a higher concentration of economic activities than the outlying or suburban areas of the MSA. "Suburban" are those parts of the MSA that are not designated as central city. (See **Metropolitan Statistical Areas**, **Urban**, **Suburban**, and **Rural**.)

Central Warm-Air Furnace: A type of space-heating equipment in which a central combustor or resistance unit--generally using gas, fuel oil, or electricity--provides warm air that circulates through ducts leading to the various rooms. Heat pumps are not included in this category. A forced-air furnace is one in which a fan is used to force the air through the ducts. In a gravity furnace, air is circulated by gravity, relying on the natural flow of warm air up and cold air down; the warm air rises through ducts and the cold air falls through ducts that return it to the furnace to be reheated, thus completing the circulation cycle. (See **Heating Equipment.**)



City: Classification based on interviewer judgment, not based on characteristics of the county where the area is found. (See **Observed Location of Household.**)

Climate Zone: One of five climatically distinct areas, defined by long-term weather conditions affecting the heating and cooling loads in buildings. The zones were developed by the Energy End Use and Integrated Statistics Division (EEUISD) from seven distinct climate categories originally identified by the American Institute of Architects (AIA) for the U.S. Department of Energy and the U.S. Department of Housing and Urban Development. The zones were determined according to the 30-year average (1961-1990) of the annual heating and cooling degree-days (base 65 degrees Fahrenheit). The zones are defined as follows:

EEUISD Climate Zone	AIA Climate Zone	Average Annual Cooling Degree-Days	Average Annual Heating Degree-Days
1	1	Less than 2,000	More than 7,000
2	2	Less than 2,000	5,500 to 7,000
3	3	Less than 2,000	4,000 to 5,499
4	4	Less than 2,000	2,000 to 3,999
5	4	Less than 2,000	Less than 2,000
6	5	2,000 or More	Less than 2,000
7	5	2,000 or More	2,000 to 3,999

An individual household was assigned to a climate zone according to the 30-year average annual degree-days for an appropriate nearby weather station. (See **Heating Degree-Days (HDD)** and **Cooling Degree-Days (CDD).**)

Clothes Dryer: An appliance that dries laundry through the application of heat and rapid air movement. The hot air used is typically heated by electricity or gas, either natural gas or liquefied petroleum gas. (See **Appliances**.)

Clothes Washer: An appliance for automatically cleaning home laundry. It has an opening on its top or its front offering access to the washer tub. An agitator, located within the tub, moves the articles to be cleaned through the wash water. The machine is powered by an electric motor connected to the tub and agitator via a transmission, clutches, and linkages. In front-loading machines, the articles are moved by a rotating tub rather than an agitator. (See **Appliances**.)

Coal: A combustible mineral substance (carbonized vegetable matter); in this report, the term includes its derivative, coke, which is formed by destructive distillation or imperfect combustion. Only statistics on the number of households using coal are collected in RECS. (See **Fuel**.)

Combo Heater Gas-Fired Water Heater with Heat Exchanger for Space Heating: The water heater is used to heat the home by running the heated water through a water-air coil as a fan forces the heated air through ducts.

Compact Fluorescent Lamps: See **Lights**.

Compressor: Used in air-conditioning equipment and usually powered by an electric motor; most compressors are of the reciprocating (piston) type which compress the refrigerant to maintain the proper pressure in the air-conditioning system. The compressor is contained in the outdoor unit of central air-conditioning systems, which usually contains a condenser also. The refrigerant circulates through the tubes with finned surfaces (the condenser), which remove heat and condenses the refrigerant to a liquid. (See **Refrigeration Unit**.)

Condominium: A type of ownership that enables a person to own an apartment or house in a project of similar units. The owner has his/her own deed and, most likely, his/her own mortgage on the unit. The owner also holds a common or joint ownership in all common areas, such as hallways, entrances, and elevators. Ownership may cover single-family houses, including row houses and townhouses, as well as apartments.

Condo Fee: In condominiums, the fee paid to the homeowners association for maintenance, management, insurance, and, in some cases, utilities.

Conservation Program: A program in which a utility company furnishes free home weatherization services or at reduced cost, or provides free or low-cost devices for saving energy, such as energy-efficient light bulbs, flow restrictors, weather stripping, and water heater insulation.

Control Total: The number of elements in the population or a subset of the population. The sample weights for the observed elements in a survey are adjusted so that they add up to the control total. The value of a control total is not obtained from the survey; it is obtained from an outside source. For the RECS, the control totals were obtained from the Current Population Survey. (See Table A6, in Appendix A, "How the Survey Was Conducted.")

Cooking Stove: A stove built for preparing food. In this survey, it may also be used as the main heating equipment. (See **Heating Equipment** and **Appliances**.)

Cooled Floorspace: See **Floorspace**.

Cooling Degree-Days (CDD): A measure of how hot a location was over a period of time, relative to a base temperature. In this report, the base temperature is 65 degrees Fahrenheit, and the period of time is one year. The cooling degree-days for a single day is the difference between that day's average temperature and the base temperature if the daily average is greater than the base; it is zero if the daily average temperature is less than or equal to the base temperature. The cooling degree-days for a longer period of time is the sum of the daily cooling degree-days for the days in that period. Annual cooling degree-days averaged over 30 years from 1951 to 1980 are called **Normal Cooling Degree-Days**. Average daily temperature is the mean of the maximum and minimum temperature for a 24-hour period. Cooling degree-days can also be calculated using a base temperature other than 65 degrees. The computation is performed in an analogous manner.

Since the 1987 RECS, cooling degree-days for households are taken from records of an appropriate nearby weather station. In previous RECS, weather data were assigned to households according to the NOAA division in which the household was located. (See **Heating Degree-Days (HDD)**, **Climate Zone** and **NOAA Division**.)

Cooperative: A type of ownership where a group of housing units are owned by a corporation of member-owners. Each individual member is entitled to occupy an individual housing unit and is a shareholder in the corporation that owns the property. Ownership may cover single-family houses, row houses, and townhouses as well as apartments.

Crawl Space: Space between the ground and the floor of a house in which a person cannot walk upright. An enclosed crawl space is one not accessible from the outside of the house (except by a door or window) because the walls of the space protect it from the weather. A crawl space "open to the outside" is one that is accessible from outside the house--even though it may be covered by a trellis or lathwork, or some kind of brickwork that leaves space for circulation of air.

Dehumidifier: An appliance that removes moisture from the air (often needed in summer when the high moisture content of air makes it uncomfortable). (See **Appliances, Humidifier,** and **Humidity.**)

Demand: The rate of energy consumption per unit time. The term is commonly applied to electricity for which demand is typically measured in watts (W) or kilowatts (kW).

Dishwasher: A built-in or portable appliance used for automatically cleaning dishware, utensils, and cutlery. The national appliance efficiency standards required that, by 1988, dishwashers be equipped with an option to dry without heat. (See **Appliances.**)

Door: A movable, usually solid barrier for opening and closing an entrance way. Outside doors lead from a heated area to the outside or to an unheated area, such as a porch or garage. Doors leading to a heated hallway in an apartment building, doors permanently sealed shut, and doors to an unheated attic or basement are not counted because they are not usually fitted with storm doors. Therefore, an apartment with one door leading to a heated hallway would have zero doors. Double doors are counted as one door. A pair of sliding glass doors is counted as one door. The definition of "standard" doors includes doors both with and without glass panels.

Demand-Side Management (DSM) Programs: A term used to describe a variety of programs being sponsored by utility companies to encourage customers to modify their energy use. These programs are generally designed to reduce demand, or modify patterns of demand as an alternative to increasing new capacity.

Double Pane: Two panes of glass, usually parallel, with space between them used in doors and windows. The space may be filled with air or special gas.

DSM: See **Demand-Side Management (DSM) Programs.**

Electric Pump for Well Water: A pump that forces the water from a well below ground level up into the water pipes that circulate through the house. When this pump is not working, there is a limited supply of running water in the house. (See **Appliances.**)

Electricity: Metered electric power supplied by a central utility company to a residence via underground or aboveground power lines. Electricity generated on site for the exclusive use of a residence is estimated using the regression equations used to impute electricity. Since there are no volumetric measures of electricity as with the fossil fuels, electricity is measured as the amount of power used at any instant (demand expressed in W or kW) or as power used over a given time (consumption expressed in kWh). The heat equivalent for electricity that comes into the home is 3,412 Btu per kWh, but this is a derived form of energy and does not represent the amount of energy needed to generate the electricity and transmit it to the building. Generation and transmission requires about 3.3 times 3,412 or 11,620 Btu per kWh.

Eligible for Federal Assistance: Households are categorized as eligible for federal energy assistance if their income is below the federal maximum standard. The federal standard is 150 percent of the poverty line or 60 percent of Statewide median income, whichever is the higher income. Individual States can set the standard at a lower level than the federal maximum. (See **Poverty Line.**)

Energy Source: A type of energy or fuel consumed by the household. For this report, the energy sources identified are electricity, natural gas, fuel oil, kerosene, liquefied petroleum gas (propane), wood, coal, and solar. (See **Electricity, Natural Gas, Fuel Oil, Kerosene, Liquefied Petroleum Gas (LPG), Wood, Coal,** and **Solar Energy.**)

Energy Supplier: Fuel companies supplying electricity, natural gas, fuel oil, kerosene or LPG to the household. (See **Authorization Form** and Appendix A, "How the Survey Was Conducted".)

Energy Assistance Program: See **Low-Income Home Energy Assistance Program (LIHEAP)**.

Energy Audit: A program carried out by a utility company in which an auditor inspects a home and suggests ways energy can be saved. This may be part of Demand-Side Management Programs.

Evaporative Cooler (Swamp Cooler): An air-cooling unit that turns air into moist, cool air by saturating the air with water vapor. It does not cool air by use of a refrigeration unit. Evaporative cooling techniques are most commonly found in warm, dry climates such as in the Southwest. (See **Appliances**.)

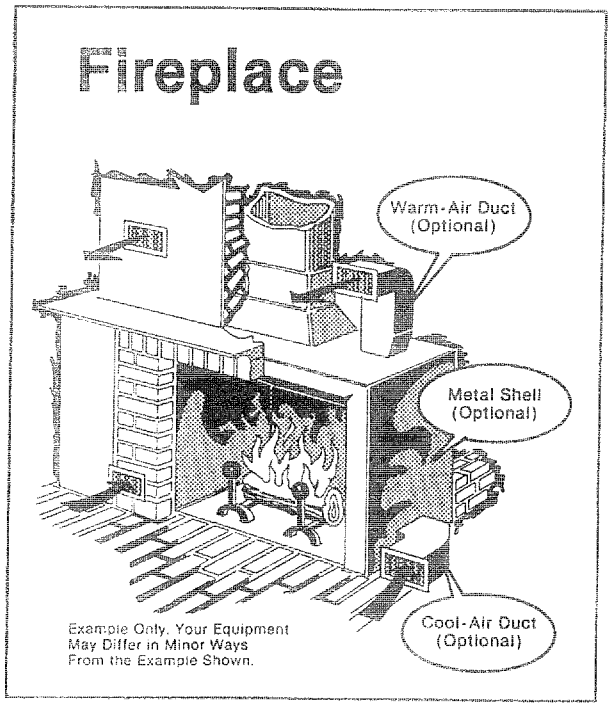
Exhaust Fan: Small fans located in the wall or ceiling which exhaust air, odors, and moisture from the bathroom, kitchen, or basement to the outside. (See **Fan**.)

Facsimile Machine (FAX): Equipment that transmits and receives printed material over telephone lines. (See **Appliances**.)

Family Income Category: The income grouping for the total combined income (before taxes and deductions) of all members of the family from all sources, for the 12 months prior to the interview. Sources of income include the following: wages, salaries, tips, commissions, interest, dividends, rental income, Social Security or railroad retirement, pensions, food stamps, Aid to Families with Dependent Children, unemployment compensation, Supplemental Security Income, General Assistance and other public assistance. This definition includes the total income of all family members who lived in the household during the 12 months prior to the interview, regardless of whether they were living there at the time of the interview. Income of nonfamily members of the household is not included. "Family" includes the following types of relationships: mother, father, sister, brother, son, daughter, father-in-law, uncle, aunt, niece, grandchild, foster child (and similar relationships).

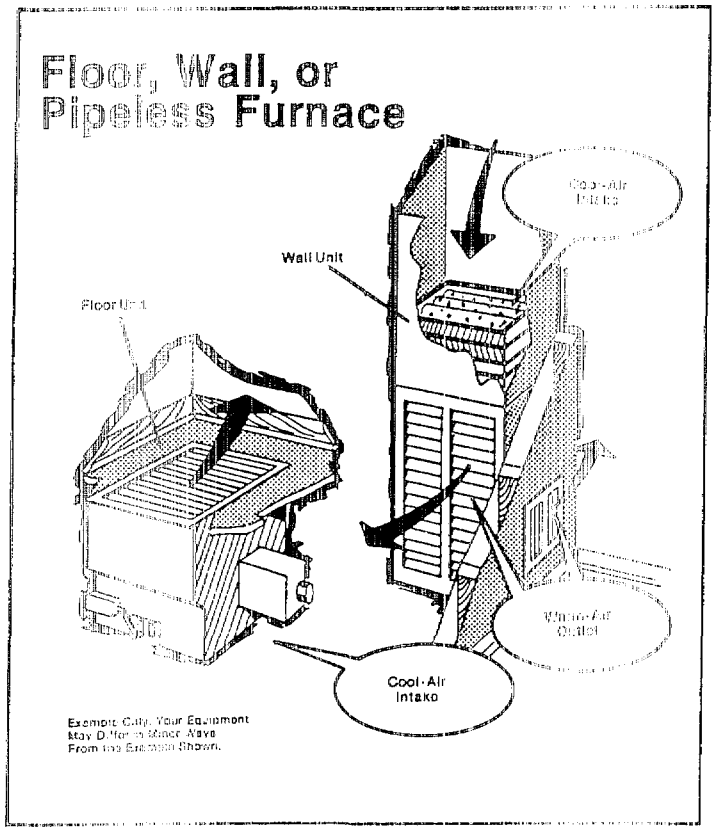
Fan: Mechanical ventilation equipment. (See **Whole-House Cooling Fan, Attic Exhaust Fan, Exhaust Fan, Window Fan, Ceiling Fan,** and **Portable Table or Floor Fan**).

Fireplace: Usually a masonry unit which burns wood, that is built into the wall of a house and has a permanent chimney. Fireplaces in mobile homes are included. Fireplaces may have glass doors or metal shields to cover the opening into the room. Accessories such as convective grates or radiant grates may be present to increase the efficiency of the fireplace. A free-standing fireplace that can be detached from its chimney is a heating stove. (See **Heating Equipment** and **Heating Stove Burning Wood, Coal or Coke**.)



Fireplace Insert: A heating stove that occupies most of the burning area of a fireplace. Fireplace accessories such as glass doors, metal shields to cover the opening into the room, convective or radiant grates, or air circulation devices (including fans) are not considered fireplace inserts.

Floor, Wall, or Pipeless Furnace: Space-heating equipment consisting of a ductless combustor or resistance unit having an enclosed chamber where fuel is burned or where electrical-resistance heat is generated to warm the rooms of a building. A floor furnace is located below the floor and delivers heated air to the room immediately above it (if under a partition) to the room on each side. A wall furnace is installed in a partition or in an outside wall and delivers heated air to the rooms on one or both sides of the wall. A pipeless furnace is installed in a basement and delivers heated air through a large register in the floor of the room or hallway immediately above. (See **Heating Equipment**.)



Floorspace: In this survey, the floor area of the housing unit that is enclosed from the weather. Basements are included, whether or not they contain finished space. The finished space and the heated space in attics are included. Garages are included if they have a wall in common with the house. Crawl spaces are not included, even if they are enclosed from the weather. Sheds and other buildings that are not attached to the house are not included. Floorspace in square feet is derived from an actual measurement made by the interviewer using a metallic retractable, 50-foot tape measure. For details on how the measurement was made and how the data were treated see Appendix A, "Estimates of Housing Unit Size." To convert square feet to square meters multiply the square feet by .093. To convert square meters to square feet, multiply the square meters by 10.765.

"Heated Floorspace" is the portion of the floorspace that is heated during most of the winter season. Rooms that are shut off during the heating season to save fuel are not counted as heated square footage. Attached garages that are unheated and unheated areas in basements and attics are not counted as heated square feet.

"Cooled Floorspace" is computed as heated floorspace times the percentage of rooms that are cooled over total rooms. If the housing unit has no heated floorspace then total floorspace is substituted for heated floorspace in the computation of cooled floorspace.

Fluorescent Lamps: Usually long, narrow, white tubes connected to a fixture at both ends of the lamp; some are circular tubes. These lights are typically found in kitchen and basement work areas. Newer types ("compact" fluorescent lamps), looking somewhat more like a conventional bulb, are being made, which can be screwed into fixtures. (See **Lights**.)

Freezer: A cabinet designed as a unit for storing food at temperatures of about 0 degrees Fahrenheit and having a refrigeration unit driven by an electric motor. It is a separate appliance, not part of the refrigerator and can be an upright model (vertical cabinet with the door opening outward) or a chest model (horizontal cabinet with the door opening upward). (See **Appliances**.)

Frost-Free: A freezer either separate from or within a refrigerator that automatically defrosts itself every 12 or 24 hours.

Fuel: The primary fuel or energy source delivered to a residential site. It may be converted to some other form of energy at the site. Electricity is included as a fuel. Other primary fuels are coal, fuel oil, kerosene, liquefied petroleum gas (LPG), natural gas, wood, and solar.

Fuel Oil: No. 1, No. 2, or No. 4 grade fuel oil or residual oil that is burned for space- or water-heating purposes. No. 1 distillate fuel oil is used mostly as a blending stock to assure that heavier grades of fuel flow under severe cold weather conditions. No. 2 fuel oil is the most common form of heating oil. No. 2 distillate collectively refers to No. 2 heating oil and No. 2 diesel fuel. Although these products are not precisely identical, they are essentially interchangeable in most applications. No. 4 distillate is a blend of No. 2 and No. 5 or No. 6 residual fuel oil, used in large stationary diesel engines and boilers equipped with fuel preheating equipment. (See **Fuel**.)

Furnace: That part of a boiler or warm-air space-heating plant in which combustion takes place. (See **Heating Equipment**.)

Garage: A space large enough to accommodate a car, with a door opening at least 6 feet wide and 7 feet high.

Gas Air-conditioning: Cooling and dehumidification of the air in a building by a refrigeration unit driven by gas (either natural gas or LPG). These are extremely rare. (See **Refrigeration Unit**.)

Group Quarters: These are excluded from the RECS. Living arrangement for institutional groups containing ten or more unrelated persons. Group quarters are typically found in hospitals, nursing or rest homes, military barracks, ships, halfway houses, college dormitories, fraternity and sorority houses, convents, monasteries, shelters, jails, and correctional institutions. Group quarters may also be found in houses or apartments shared by ten or more unrelated persons. Group quarters are often equipped with a dining area for residents. (See **Housing Unit**.)

Halogen Lamp: A type of incandescent lamp that lasts much longer and is more efficient than the common incandescent lamp. The lamp uses a halogen gas, usually iodine or bromine, that causes the evaporating tungsten to be redeposited on the filament, thus prolonging its life. (See **Incandescent Lamp**.)

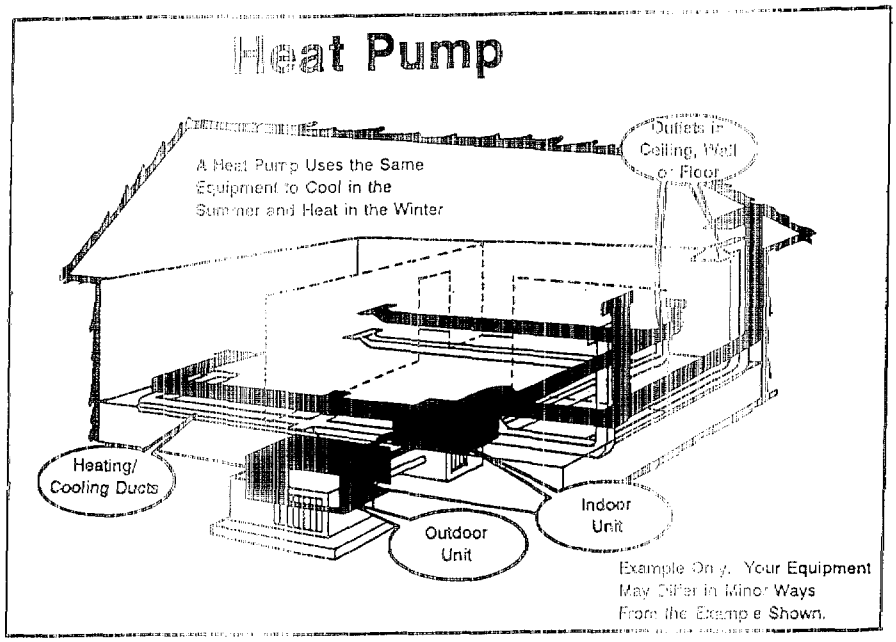
Heating Degree-Days (HDD): A measure of how cold a location was over a period of time, relative to a base temperature. In this report, the base temperature used is 65 degrees Fahrenheit and the period of time is one year. The heating degree-days for a single day is the difference between the base temperature and the day's average temperature if the daily average is less than the base; it is zero if the daily average temperature is greater than or equal to the base temperature. The heating degree-days for a longer period of time is the sum of the daily heating degree-days for days in that period. Annual heating degree-days averaged over 30 years from 1951 to 1980 is called **Normal Heating Degree-Days**. Average daily temperature is the mean of the maximum and minimum temperature for a 24-hour period. Heating degree-days can also be calculated using a base temperature other than 65 degrees. The computation is performed in an analogous manner.

Since the 1987 RECS, heating degree-days for households are taken from records of an appropriate nearby weather station. In previous RECS, weather data were assigned to households according to the NOAA division in which the household was located. (See **Cooling Degree-Days (CDD)** and **Climate Zone**.)

Heat Pump (Reverse Cycle System): A year-round heating and air-conditioning system in which refrigeration equipment supplies both heating and cooling through ducts leading to individual rooms. A heat pump generally consists of a compressor, both indoor and outdoor coils, and a thermostat. In the RECS, only electricity is allowed as the power source.

The heat pump, when attached to a central furnace, is either the main or secondary heating equipment (depending on how often the heat pump operates). If it operates for a short time before the furnace comes on, the heat pump is secondary (or additional) heating equipment. If the heat pump is sufficient to provide the desired warmth, the heat pump is the main heating equipment. Some heat pumps are single-package systems in which the indoor and outdoor coils are contained in the same unit. A window or wall unit heat pump is a single-package system.

An "air-source" heat pump, the most common, extracts heat from the outdoor air. When the outdoor air approaches the freezing point (32 degrees Fahrenheit), the system does not work very well and requires a backup heating fuel. Sometimes a light comes on in the house to indicate the backup system is operating. A "water-source" heat pump extracts heat from underground water. A "ground-source" heat pump extracts heat from the soil. A water or ground-source heat pump is more efficient than the air-source heat pump because the ground (and water) are relatively constant in temperatures even in extreme air temperatures and the temperature is closer to desired indoor temperatures. (See **Heating Equipment**.)



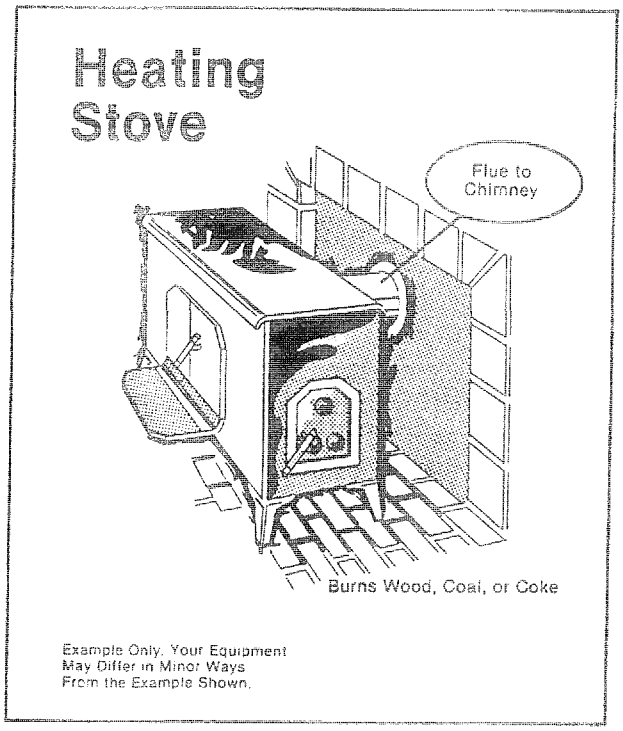
Heat Pump Water Heater: Draws heat from the surrounding space and transfers it to the water.

Heated: A room or space warmed by space-heating equipment. Basements and other areas where the space-heating equipment or heating ducts are located may be considered heated if they are warm enough to sit, work, or play in during the winter months. If a housing unit has no space-heating equipment, then there are no heated areas in the housing unit.

Heated Floorspace: See **Floorspace**.

Heating Equipment: The equipment used for heating ambient air in the housing unit, such as: central warm-air furnace, heat pump, built-in electric units, steam or hot-water system, floor, wall, or pipeless furnace, heating stove, room heater, fireplace, portable heater. The main space-heating equipment is reported as such even if it is temporarily out of order. A "cooking stove" may be used as the main space-heating equipment even though it was built for preparing food. (See also description of specific types of space-heating equipment, **Central Warm-Air Furnace, Heat Pump, Built-In Electric Units, Steam or Hot-Water System, Floor, Wall or Pipeless Furnace, Heating Stove, Room Heater**.)

Heating Stove Burning Wood, Coal, or Coke: Any free-standing box or controlled-draft stove; or a stove installed in a fireplace opening, using the chimney of the fireplace. Stoves are made of cast iron, sheet metal, or plate steel. Free-standing fireplaces that can be detached from their chimneys are considered heating stoves. (See **Heating Equipment**.)



High Efficiency: The respondent's perception of the level of efficiency of new equipment; high efficiency was not defined.

High-Intensity Discharge (HID) Lamp: A lamp that produces light by passing electricity through gas, which causes the gas to glow. Examples of HID lamps are mercury vapor lamps, metal halide lamps, and high- pressure sodium lamps. HID lamps have extremely long life and emit far more lumens per fixture than do fluorescent lights. These are usually used for outdoor lights around homes. (See **Lights**.)

Hispanic Descent: This, like the question on origin, was determined by the respondent. The respondent was asked, "Is the householder of Spanish or Hispanic origin or descent?" and the respondent's answer was recorded.

Hot-Deck Imputation: A statistical procedure for deriving a probable response to a questionnaire item concerning a household or vehicle, for which a response is missing. To perform the procedure, an analyst sorts the households or vehicles by variables related to the missing item. Thus, a series of sort categories are formed, which are internally homogeneous with respect to the sort variables. Within each category, households or vehicles for which the questionnaire item is not missing are randomly selected to serve as "donors" to supply values for the missing item of "recipient" households or vehicles. (See **Imputation** and Appendix A, "How the Survey Was Conducted.")

Hot Tub: Water-filled wood, plastic, or ceramic container in which up to 12 people can lounge. Normally equipped with a heater which heats the water from 80 degrees to 106 degrees Fahrenheit. It may also have jets to bubble the water. The water is not drained after each use. An average-size hot tub holds 200 to 400 gallons of water. All reported hot tubs were assumed to include an electric pump. These are also called Spas or Jacuzzis. (See **Appliances**.)

Household: A family, an individual, or a group of up to nine unrelated persons, occupying the same housing unit. "Occupy" means the housing unit was the person's usual or permanent place of residence at the time of the first field contact. Household members include babies, lodgers, boarders, employed persons who live in the housing unit, and persons who usually live in the household but are away traveling or in a hospital. The household does not include persons who are normally members of the household but who were away from home as college students or members of the armed forces at the time of the contact. The household does not include persons temporarily visiting with the household if they have a place of residence elsewhere, persons who take their meals with the household but usually lodge or sleep elsewhere, domestic employees or other persons employed by the household who do not sleep in the same housing unit, or persons who are former members of the household, but have since become inmates of correction or penal institutions, mental institutions, homes for the aged or needy, homes or hospitals for the chronically ill or handicapped, nursing homes, convents or monasteries, or other places in which residents may remain for long periods of time. By definition, in the RECS, the number of households is the same as the number of occupied housing units. (See Primary **Residence**.)

Household Member: See Household.

Householder: The person (or one of the people) in whose name the home is owned or rented. If there is no lease or similar agreement, or if the person who owns the home or pays the rent does not live in the housing unit, the householder is the person responsible for paying the household bills, or whoever is generally in charge.

Housing Unit: A house, an apartment, a group of rooms, or a single room if it is either occupied, or intended for occupancy, as separate living quarters by a family, an individual, or a group of one to nine unrelated persons. Separate living quarters means the occupants (1) live and eat separately from other persons in the house or apartment and (2) have direct access from the outside of the building or through a common hall--that is, they can get to it without going through someone else's living quarters. Housing units do not include group quarters such as prisons or nursing homes where ten or more unrelated persons live. A common dining area used by residents is an indication of group quarters. Hotel and motel rooms are considered housing units if occupied as the usual or permanent place of residence. (See **Primary Residence, Group Quarters, Year-Round Unit, Seasonal Unit,** and **Migratory Unit.**)

Housing Unit Record Sheet: A form (pink sheet) completed by interviewers for each housing unit assigned for contact. Included on the form was the type of housing unit as well as information about each visit.

Humidifier: An appliance that adds moisture to the air (often needed in winter when indoor air is very dry). It may be a portable unit or attached to the heating system. (See **Appliances.**)

Humidity: The moisture content of air. Relative humidity is the ratio of the amount of water vapor actually present in the air to the greatest amount possible at the same temperature. (See Dehumidifier and **Humidifier.**)

Imputation: A statistical method used to fill in values for missing items, designed to minimize the bias of estimates. (See **Hot-Deck Imputation** and Appendix A, "How the Survey Was Conducted.")

Incandescent Lamps: Incandescent bulbs are the most common and least energy-efficient household lamps. Electricity runs through a tungsten filament that glows and produces a soft, warm light. Because so much of the energy used is lost as heat, these are highly inefficient sources of light. These common general-service bulbs emit light in all directions. Incandescent *reflector* lamps provide directed lighting used in track lights and outdoor spotlighting. (See **Halogen Lamp.**)

Instantaneous Water Heater: Also called a "tankless" or "point-of-use" water heater. The water is heated at the point of use as it is needed.

Insulation: Any material or substance that provides a high resistance to the flow of heat from one surface to another. The different types include blanket or batt, foam, or loose fill which are used to reduce heat transfer by conduction. Dead air space is an insulating medium in storm windows as it reduces passage of heat through conduction and convection. Reflective materials are used to reduce heat transfer by radiation. (See **Ceiling Insulation, Roof Insulation, Insulation Around Heating and/or Cooling Ducts, Insulation Around Water Heater,** and **Insulation Around Hot-Water Pipes.**)

Insulation Around Heating and/or Cooling Ducts: Extra insulation around the heating and/or cooling ducts, intended to reduce the loss of hot or cold air as it travels to different parts of the residence.

Insulation Around Hot-Water Pipes: Wrapping of insulating material around hot-water pipes to reduce the loss of heat through the pipes.

Insulation Around Water Heater: Blanket insulation wrapped around the water heater to reduce loss of heat. To qualify under this definition, this wrapping must be in addition to any insulation provided by the manufacturer.

Jacuzzi: See **Hot Tub.**

Kerosene: A distilled product of oil or coal with the generic name kerosene, having properties similar to those of No. 1 fuel oil. It is sometimes sold under the names "range oil," "stove oil," or "coal oil." (See **Fuel.**)

Lamp: A term generally used to describe artificial light. The term is often used when referring to a "bulb" or "tube." (See **Lights.**)

Laser Printer for Computer (not dot matrix): A computer printer that uses toner, a black powder, for the printer's ink. It provides high quality printing. (See **Appliances.**)

Lights: All of the light bulbs controlled by one switch are counted as one light. For example, a chandelier with multiple lights controlled by one switch is counted as one light. A floor lamp with two separate globes or bulbs controlled by two separate switches would be counted as two lights. Indoor and outdoor lights were counted if they were under the control of the householder. This would exclude lights in the hallway of multifamily buildings. (See **Fluorescent Lamps, High-Intensity Discharge (HID) Lamp,** and **Incandescent Lamps.**)

LIHEAP: See **Low-Income Home Energy Assistance Program.**

Liquefied Petroleum Gas (LPG): Any fuel gas supplied to a residence in liquid form, such as propane or butane. It is usually delivered by tank truck and stored near the residence in a tank or cylinder until used. Propane was the most common liquefied petroleum gas supplied to RECS households. (See **Fuel.**)

Load Control Program: A program in which the utility company offers a lower rate in return for having permission to turn off the air-conditioner or water heater for short periods of time by remote control. This control allows the utility to reduce peak demand.

Low-E Glass: Low-emission glass reflects up to 90 percent of long-wave radiation (heat), but lets in short-wave radiation (light). Windows are glazed with a coating that bonds a microscopic, transparent, metallic substance to the inside surface of the double-pane or triple-pane windows. This is an energy conservation feature.

Low-Flow Showerheads: An energy conservation feature that reduces the amount of water flow through the showerhead from 5 to 6 gallons a minute to 3 gallons a minute.

Low-Income Home Energy Assistance Program (LIHEAP): The purpose of LIHEAP is to assist eligible households to meet the cost of heating or cooling in residential dwellings. The Federal government provides the funds to the States that administer the program.

LPG: See **Liquefied Petroleum Gas (LPG)**.

Main: Used Most, as in "Main Heating Equipment," which is the equipment used most for space heating. (See **Used Most**.)

Master-Metering: Measurement of electricity or natural gas consumption of several tenants or housing units using a single meter. That is, one meter measures the energy usage for several households collectively. RECS identifies households that pay their own fuel bills, but does not specifically identify a household as "master metered."

Mean Indoor Temperature: The "usual" temperature inside the housing unit. If different sections of the house are kept at different temperatures, the reported temperature is for the section where the people are. A thermostat setting is accepted if the temperature is not known.

Metropolitan: See **Urban**.

Metropolitan Statistical Area (MSA): Areas defined by the U.S. Office of Management and Budget in 1992. An MSA is (1) a county or group of contiguous counties that contain at least one city of 50,000 inhabitants or more, or (2) an urbanized area of at least 50,000 inhabitants and a total MSA population of at least 100,000 (75,000 in New England). The contiguous counties are included in an MSA if, according to certain criteria, they are essentially metropolitan in character and are socially and economically integrated with the central city. In New England, MSA's consist of towns and cities, rather than counties. (See **Urban**, **Central City**, **Suburban**, and **Rural**.)

Microwave Oven: A household cooking appliance consisting of a compartment designed to cook or heat food by means of microwave energy. It may also have a browning coil and convection heating as additional features. (See **Appliances**.)

Mini Van: New type of small van that first appeared with that designation in 1984; any of the smaller vans built on an automobile type frame. Earlier models such as the Volkswagen van are now included in this category. (See **Van**.)

Migratory Unit: Housing unit intended for occupancy by migratory workers employed in farm work during the crop season. Usually excluded from the RECS, since it is not often the primary residence for more than 6 months of the year. (See **Primary Residence**.)

Mobile Home: A housing unit built on a movable chassis and moved to the site. It may be placed on a permanent or temporary foundation and may contain one room or more. If rooms are added to the structure, it is considered a single-family housing unit. A manufactured house assembled on site is a single-family housing unit, not a mobile home.

MSA: See **Metropolitan Statistical Area**.

Multifamily (2 to 4 units): A unit in a building with two to four housing units--a structure that is divided into living quarters for two, three, or four families or households and in which one household lives above another. This category also includes houses originally intended for occupancy by one family (or for some other use) that have since been converted to separate dwellings for two to four families. Typical arrangements in these types of living quarters are separate apartments downstairs and upstairs or one apartment on each of three or four floors.

Multifamily (5 or more units): A unit in a building with five or more housing units--a structure that contains living quarters for five or more households or families and in which one household lives above another.

Multistage Area Probability Sample: A sample design executed in stages with geographic "clusters" of sampling units selected at each stage. This procedure reduces survey expense while maintaining representative national coverage. (See Appendix A, "How the Survey Was Conducted.")

Natural Gas: Hydrocarbon gas (mostly methane) supplied as an energy source to individual buildings by pipelines from a central utility company. Natural gas does not refer to liquefied petroleum gas. A few households were supplied by a privately owned gas well.

Nonmetropolitan: See **Rural.**

Normal Degree-Days: Annual cooling or heating degree-days averaged over 30 years (from 1961 to 1990). (See **Cooling Degree-Days (CDD)** and **Heating Degree-Days (HDD).**)

Observed Location of Household: A judgment made by the interviewer at the time the interviewer visited the area to conduct the interview. The four categories were city, town, suburbs, and rural or open country. (Compare with **Urban Status.**)

Occupied Housing Unit: A unit in which someone was living as his or her usual or permanent place of residence at the time of the interviewer's first visit to the unit. (See **Housing Unit.**)

Origin: The primary ethnic background of the person considered to be the householder as determined by the respondent. Each respondent was asked, "Which of the groups on this exhibit best describes the householder?" The groups included: white, black or Negro, American Indian, Alaskan native, Asian, and Pacific Islander. The word "race" was not used in either the questionnaire or the instructions.

Outside Central City: See **Suburban.**

Oven: An appliance which is an enclosed compartment supplied with heat and used for cooking food. Toaster ovens are not considered ovens. The range stove top or burners and the oven are considered two separate appliances, although they are often purchased as one appliance. (See **Appliances.**)

Owned/Rented: The relationship of a housing unit's occupants to the structure itself, not the land on which the structure is located. "Owned" means the owner or co-owner is a member of the household and the housing unit is either fully paid for or mortgaged. A household is classified "rented" even if the rent is paid by someone not living in the unit. "Rent free" means the unit is not owned or being bought and no money is paid or contracted for rent. Such units are usually provided in exchange for services rendered or as an allowance or favor from a relative or friend not living in the unit. Unless shown separately, rent-free households are grouped with rented households.

Ownership: See **Owned/Rented.**

Peak Demand: The maximum rate of energy consumption per unit time over a period of measurement. (See **Demand.**)

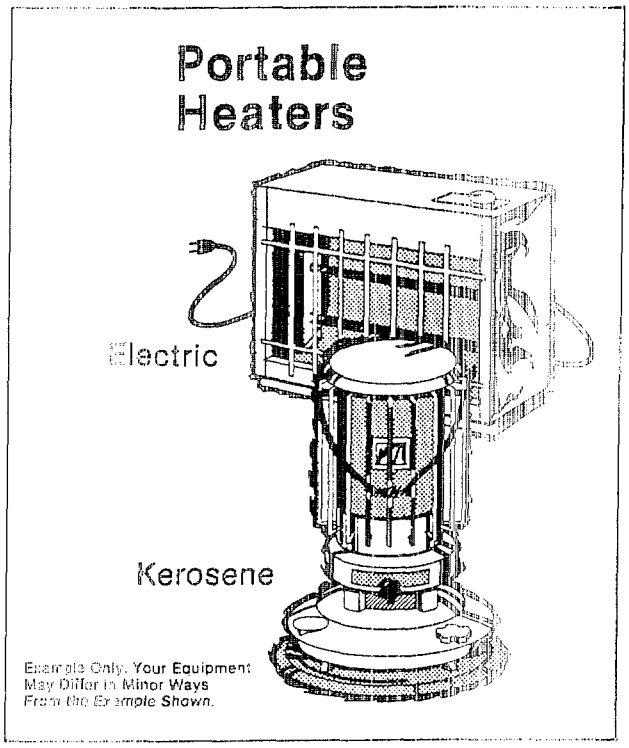
Perceptions of Householders: Items in which the opinions of the respondent were being sought, in order to gain insight into particular energy-related behavior. Technical definitions were not used as prompts by the interviewers, nor was the information provided verified by the interviewer. (See **Adequacy of Insulation** and **High Efficiency.**)

Personal Computer: A microcomputer for producing written, programmed, or coded material, playing games, or doing calculations; included as an appliance in RECS. Lap-top and notebook computers are excluded. (See **Appliances.**)

Pink Sheet: See **Housing Unit Record Sheet.**

Plastic Coverings: Transparent material in good condition (no holes or tears) used to cover a window or other opening in the housing unit in an attempt to reduce heat loss or gain that is removed each year and not reused. (See **Storm Windows.**)

Portable Electric Heater: A heater that uses electricity and that can be picked up and moved.



Portable Kerosene Heater: A heater that uses kerosene and that can be picked up and moved.

Portable Table or Floor Fan: Box fans, oscillating fans, table or floor fans, or other fans that can be moved. (See **Fan** and **Appliances**.)

Poverty Line: Low-income classifications to which certain households are assigned. "Below 100 percent of poverty" encompasses a group of households with incomes below the poverty level as defined by the U.S. Bureau of the Census and the Office of Management and Budget. "Below 125 percent of poverty" includes a group of households with incomes below 125 percent of the poverty level. These groups of the poor and near-poor represent alternative levels for defining poverty. The poverty line varies with the number of family members in the household and the income of the entire family. (See **Eligible for Federal Assistance**.)

Primary Residence: A housing unit in which a householder spends the largest part of the calendar year; it is the householder's usual or permanent residence. This would normally be a year-round housing unit. It would generally exclude **migratory** and **seasonal** units. However, if a seasonal unit happened to be occupied for half of the year by the householder, that unit would be considered the primary residence. (See **Householder, Housing Unit, Migratory Unit, Seasonal Unit, Year-Round Unit,** and **Second Home**.)

Primary Sampling Unit (PSU): A sampling unit selected at the first stage in multistage area probability sampling. A PSU typically consists of one to several contiguous counties--for example, a metropolitan area with surrounding suburban counties. (See Appendix A, "How the Survey Was Conducted.")

Propane: See **Liquefied Petroleum Gas**.

PSU: See **Primary Sampling Unit (PSU)**.

Public Housing: Housing units owned by a local housing authority or other local public agency such as a housing and redevelopment authority or a housing development agency. These organizations receive subsidies from the Federal or State government, but the local agency owns the property. To live in such a project, one must apply to the local housing authority.

Race: See **Origin**.

Radiator: A heating unit usually exposed to view within the room or space to be heated; it transfers heat by radiation to objects within visible range and by conduction to the surrounding air, which in turn is circulated by natural convection; it is usually fed by steam or hot water. (See **Heating Equipment**.)

Range: The range burners or stove top and the oven are considered two separate appliances. Counted also with range tops are stand-alone "cook tops." (See **Appliances**.)

Rebate Program: A utility company-sponsored conservation program whereby the utility company returns a portion of the purchase price or cost when a more energy-efficient refrigerator, water heater, air-conditioner, or other appliance is purchased.

Reflective Film: Transparent covering for glass that helps keep out heat from the sun.

Refrigeration Unit: Lowers the temperature through a mechanical process. In a typical refrigeration unit, electricity powers a motor that runs a pump to compress a refrigerant to maintain proper pressure. (A "refrigerant" is a substance that changes between liquid and gaseous states under desirable temperature and pressure conditions.) Heat from the compressed liquid is removed and discharged from the unit, and the refrigerant then evaporates when pressure is reduced. The refrigerant picks up heat as it evaporates and it returns to the compressor to repeat the cycle.

A few refrigeration units use gas (either natural gas or LPG) in an absorption process that does not use a compressor. The gas is burned to heat a chemical solution in which the refrigerant has been absorbed. Heating drives off the refrigerant which is later condensed. The condensed refrigerant evaporates by a release of pressure, and it picks up heat as it evaporates. The evaporated refrigerant is then absorbed back into the chemical solution, the heat is removed from the solution and discharged as wasted heat, and the process repeats itself. By definition, refrigerators, freezers, and air-conditioning equipment all contain refrigeration units.

Refrigerator: A cabinet designed for cooling food at temperatures above 32 degrees Fahrenheit. Most also have a second compartment for freezing and storing frozen foods at temperatures of 8 degrees Fahrenheit or below. (See **Appliances**.)

Regression Imputation: A statistical technique for predicting the value of a numerical variable that is missing. The technique involves developing a regression equation that predicts the value of the missing variable based upon variables that are not missing or have already been imputed. A random error is usually added to the predicted value. The sum of the predicted value and the random error is used as the imputed value for the missing variable. (See **Imputation**.)

Relative Standard Error: See **RSE or Relative Standard Error**.

Renewable Energy: Energy obtained from sources that are essentially inexhaustible (unlike, for example, the fossil fuels, of which there is a finite supply). Renewable sources of energy include wood, waste, geothermal, wind, photovoltaic, and solar thermal energy.

Rent: See **Owned/Rented**.

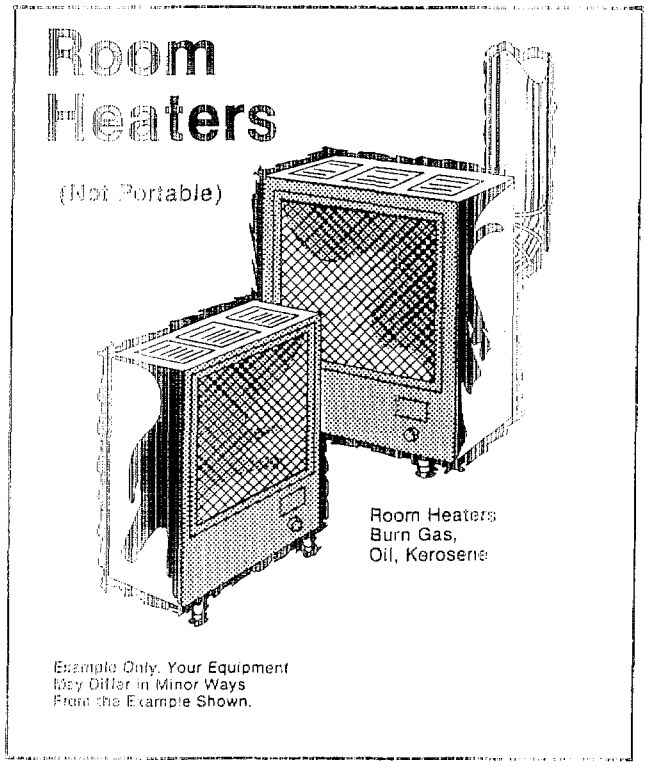
Residential: Occupied housing units, including mobile homes, single-family housing units (attached and detached), and apartments. Residential does not include vacant housing units or second homes. The definition of "occupied housing units" is the same as that used by the U.S. Bureau of the Census. (See **Household** and **Housing Unit**.)

Residential Energy Consumption Survey (RECS): A national multistage probability sample survey conducted by the Energy End Use and Integrated Statistics Division of the Energy Information Administration. The RECS provides baseline information on how households in the United States use energy.

Roof Insulation: Insulating materials placed underneath the roof or on the roof. (See **Insulation.**)

Room Air-conditioner: Air-conditioning units that typically fit into the window or wall and are designed to cool only one room. (See **Appliances** and **Air-conditioning**.)

Room Heater Burning Gas, Oil, Kerosene: Any of the following heating equipment: circulating heaters, convectors, radiant gas heaters, space heaters, or other nonportable room heaters that may or may not be connected to a flue, vent, or chimney. (See **Heating Equipment**.)



Rooms: Subdivisions of a living unit. Whole rooms are rooms such as living rooms, dining rooms, bedrooms, kitchens, lodgers' rooms, finished basements or attic rooms, recreation rooms, and permanently enclosed sun porches that are used year-round. Rooms used for offices by a person living in the unit are included. "Finished" means that the ceiling and walls are covered with finishing materials.

Not considered to be rooms are bathrooms, halls, foyers, or vestibules, balconies, closets, alcoves, pantries, strip or pullman kitchens, laundry or furnace rooms, unfinished attics or basements, open porches, and unfinished space used for storage.

A partially divided room, such as a dinette next to a kitchen or a living room, is considered a separate room only if there is a partition from floor to ceiling--but not if the partition consists solely of shelves or cabinets. If a room is used by occupants of more than one unit, the room is included with the unit from which it is most easily reached. (See **Bedroom** and **Bathroom**.)

R-Value: A measure of a material's resistance to heat flow in units of Fahrenheit degrees x hours x square feet per Btu. The higher the R-value of a material, the greater its insulating capability. The R-value of some insulating materials is: 3.7 per inch for fiberglass and for cellulose, 2.5 per inch for vermiculite, and over 4 per inch for foam. All building materials have some R-value. For example, a 4-inch brick has an R-value of 0.8 and half-inch plywood has an R-value of 0.6 The following table converts the most common R-values to inches: For a different "R" value, divide it by 3 to get the number of inches.

R-Value	Inches
3	1
11	3.5
19	6
52	18

RSE Column Factor: An adjustment factor that appears above each column of the published tables and is used to compute RSE's. For a survey estimate in a particular row and column of a table (that is, a particular "cell"), the approximate RSE is obtained by multiplying the RSE row factor by the RSE column factor for that cell. (See **RSE or Relative Standard Error, RSE Row Factor**, and the "Generalized Variances" section of Appendix B, "Quality of the Data.")

RSE or Relative Standard Error: A measure of the reliability or precision of a survey statistic on a percentage scale. Variability occurs in survey statistics because the different samples that could be drawn would each produce different values for the survey statistics. The RSE is defined as the standard error of a survey estimate, divided by the survey estimate, then multiplied by 100. (Standard error is the square root of the variance.) For example, an RSE of 50 percent means that the standard error is half as large as the survey estimate. (See Appendix B, "Quality of the Data.")

RSE Row Factor: A factor that appears to the right of each row of the published tables and is used to compute RSE's. For a survey estimate in a particular row and column of a table (that is, a particular "cell"), the approximate RSE is obtained by multiplying the RSE row factor by the RSE column factor for that particular cell. The row factor is equal to the geometric mean of the RSE's in a particular row of the tables. (See **RSE or Relative Standard Error, RSE Column Factor**, and the "Generalized Variances" section of Appendix B, "Quality of the Data.")

Rural: Households not located within Metropolitan Statistical Areas as defined by the U.S. Office of Management and Budget for 1993. (See **Metropolitan Statistical Area** and **Urban Status**.)

Rural or Open Country: Classification based on interviewer judgment, not based on characteristics of the county where the area is found. (See **Observed Location of Household**.)

Sampling: The procedure used to select housing units for interview from the population of all residential housing units in the United States. (See **Multistage Area Probability Sample** and Appendix A, "How the Survey Was Conducted.")

Seasonal Energy Efficiency Ratio (SEER): Ratio of cooling output to power consumption. It is the Btu of cooling output during its normal annual usage divided by the total electric energy input in watt-hours during the same period. This is a measure of the cooling performance for rating central air-conditioners and central heat pumps. The appliance standards require a minimum SEER of 10 for split system central air-conditioners and for split system central heat pumps that took effect in 1992. The average heat pump or central air-conditioner sold in 1986 had a SEER of about 9.

Seasonal Unit: Housing unit intended for occupancy at only certain seasons of the year. Seasonal unit includes units intended only for recreational use, such as beach cottages and hunting cabins. It is not likely that this type of unit will be the usual residence for a household, since it may not be fit for living quarters for more than half of the year. (See **Primary Residence.**)

Secondary Heating Equipment: Space-heating equipment used less often than the main space-heating equipment. (See **Main.**)

Secondary Heating Fuel: Fuel used in secondary space-heating equipment.

Second Home: By definition, a second home is not the primary residence of a householder. Second homes are not included in the RECS count of occupied housing units. (See **Housing Unit, Primary Residence,** and **Seasonal Unit.**)

Setback Temperature Behavior: These data were derived from differences in the temperature settings reported by respondents for their daytime temperature when someone is at home, daytime temperature when no one is at home, and the temperature for sleeping hours (assumed to be nighttime). For example, if a respondent's reported temperature setting was lower when no one was at home than when someone was at home, respondents were assumed to be "setting" back the temperature.

Single-Family: A unit that provides living space for one household or family. The structure may be detached or attached to another unit. Attached houses are considered single-family houses as long as the house itself is not divided into more than one housing unit and has an independent outside entrance. A single-family house is contained within walls extending from the basement (or the ground floor, if there is no basement) to the roof. (A mobile home with one or more rooms added is classified as a single-family home.) Townhouses, rowhouses, and duplexes are considered single-family attached housing units, as long as there is no household living above another one within the walls that go from the basement to the roof to separate the units.

Solar Energy: The radiant energy of the sun, which can be converted into other forms of energy, such as heat or electricity.

Spa: See **Hot Tub.**

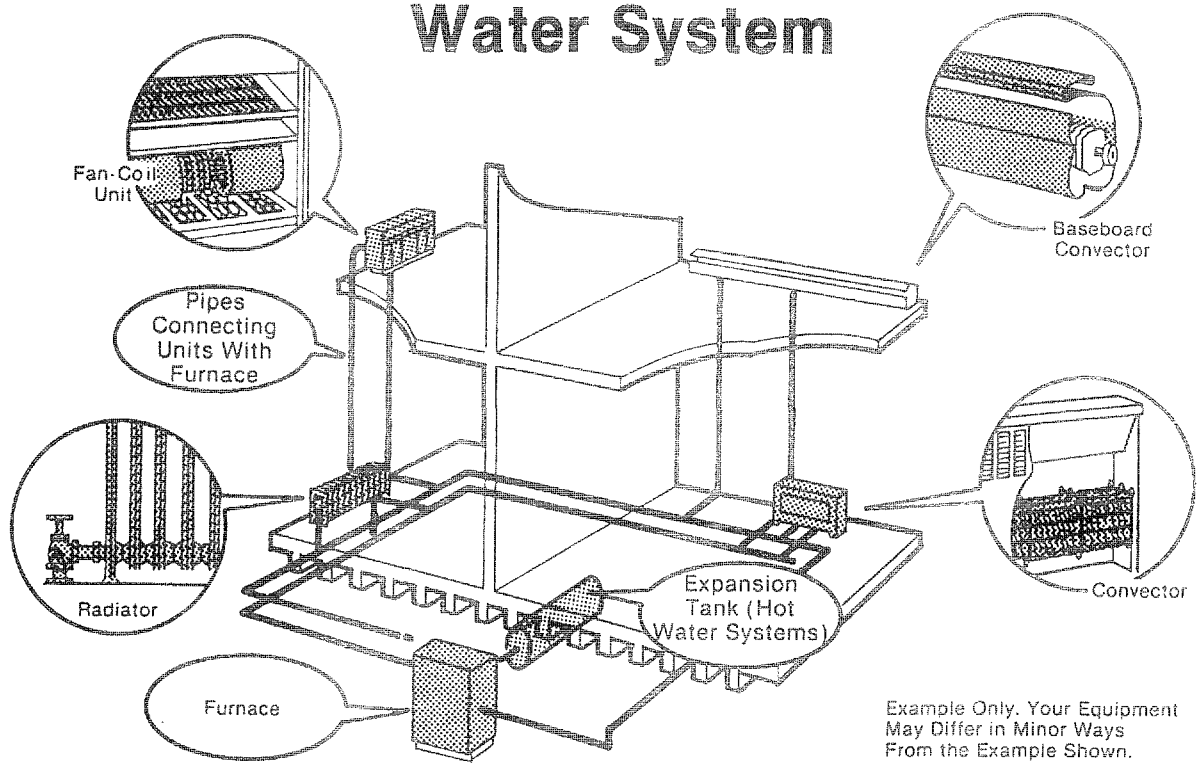
Space Heating: The use of energy to generate heat for warmth in housing units using space-heating equipment. The equipment could be the main space-heating equipment or secondary space-heating equipment. It does not include the use of energy to operate appliances (such as lights, televisions, and refrigerators) that give off heat as a byproduct. (See **Heating Equipment, Heated,** and **Floorspace**).

Space-Heating Equipment: See **Heating Equipment.**

Square Feet: See **Floorspace.**

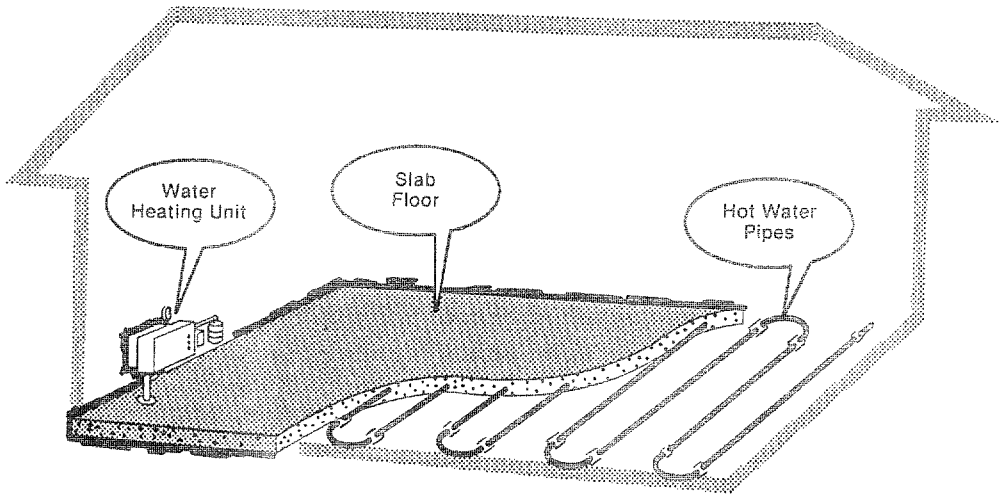
Steam or Hot-Water System: Either of two types of a central space-heating system that supplies steam or hot water to radiators, convectors, or pipes. The more common type supplies either steam or hot water to conventional radiators, baseboard radiators, convectors, heating pipes embedded in the walls or ceilings, or heating coils or equipment that are part of a combined heating/ventilating or heating/air-conditioning system. The other type supplies radiant heat through pipes that carry hot water and are inlaid in a concrete slab floor. (See **Heating Equipment.**)

Steam or Hot Water System



Example Only. Your Equipment May Differ in Minor Ways From the Example Shown.

Hot Water Pipes Running Through Slab Floor



Example Only. Your Equipment May Differ in Minor Ways From the Example Shown.

Stories: Floors or levels in a building, not including basements. When the building is a split level, the larger number of stories is used.

Storm Door: A second door installed outside or inside a prime door creating an insulating air space. Included are sliding glass doors made of double glass or of insulating glass such as thermopane; sliding glass doors with glass or plexiglass placed on either the outside or inside of the door to create an insulating air space are also considered storm doors. Not included are doors or sliding glass doors covered by plastic sheets or doors with storm window covering on just the glass portion of the door.

Storm Window: A window or glazing material placed outside or inside a window creating an insulating air space. Plastic material over windows is counted as a storm window if the same plastic material can be used year after year or if the plastic is left in place year round and is in good condition (no holes or tears). If the plastic material must be put up new each year, it is not counted as a storm window. It is counted as "plastic coverings." Glass or plexiglass placed over windows on either the interior or exterior side are counted as storm windows. (See **Plastic Coverings.**)

Stove: See **Heating Stove Burning Wood, Coal, or Coke** and **Cooking Stove.**

Structure: One of four categories used to categorize the building in which the housing unit was located. For the RECS, the categories were single-family, multifamily (2 to 4 units), multifamily (5 or more units), and mobile home. (See **Single-Family, Multifamily--2 to 4 units, Multifamily--5 or more units,** and **Mobile Home.**)

Suburban: Those parts of the MSA that are not designated as central city. Suburban areas are referred to as "outside central city." (See **Metropolitan Statistical Area.**)

Suburbs: Classification based on interviewer judgment, not based on characteristics of the county where the area is found. (See **Observed Location of Household.**)

Swamp Cooler: See **Evaporative Cooler (Swamp Cooler).**

Swimming Pool Heater: Optional heating equipment that heats the pool water to an acceptable level of comfort, usually 80 to 85 degrees Fahrenheit. (See **Appliances.**)

Swimming Pool Pump: An electric pump for filtering and circulating the water.

Temperature: Household reported estimates of the indoor temperature. If different sections of the house are kept at different temperatures, the temperature requested is for the part of the house being used. If the heat is turned off upstairs during the day because the family is downstairs, the downstairs temperature is used. If the temperature is unknown, the thermostat setting is used.

Thermal Storage: Storing heat for space heating use at a later time. For example, ceramic bricks can be charged up to 1,200 degrees Fahrenheit in an 8-hour period and the heat can be released over the next 16 hours.

Thermostat: A device that adjusts the amount of heating and cooling produced and/or distributed by automatically responding to the temperature in the environment.

Toaster Oven: Portable table-top appliance used for heating or broiling food. It is not included under oven in this survey.

Total Floorspace: Floorspace summed or aggregated over all households in a category (such as households in the United States). In this survey, aggregate floorspace was estimated by multiplying each household's square footage by its weight, then summing over all sample households of interest to represent nationwide totals. (See **Floorspace** and **Weight.**)

Town: Classification based on interviewer judgment, not based on characteristics of the county where the area is found. (See **Observed Location of Household.**)

Transported Gas: Natural gas physically delivered to a building by a utility but not bought from that utility. A separate transaction is made to purchase the volume of gas and the utility is paid for the use of its pipeline to deliver the gas.

Triple Pane: Three panes of glass, usually parallel, with airspaces between each pair of panes. (See **Storm Door** and **Storm Window**.)

Urban: Urban refers to a group of households located within Metropolitan Statistical Areas (MSA's), as defined by the U.S. Office of Management and Budget in 1993. For this report, urban is composed of central city and suburban areas. An MSA is (1) a county or group of contiguous counties that contain at least one city of 50,000 inhabitants or more, or (2) an urbanized area of at least 50,000 inhabitants and a total MSA population of at least 100,000 (75,000 in New England). The contiguous counties are included in an MSA if, according to certain criteria, they are essentially metropolitan in character and are socially and economically integrated with the central city. In New England, MSA's consist of towns and cities rather than counties. (See **Central City**, **Suburban**, and **Rural**.)

Urban Status: Refers to geographic location of the households based on Federal Government definitions of Metropolitan Statistical Areas (MSA's) for 1993. (See **Urban**, **Rural**, **Central City**, and **Suburban**.)

Used Most: Used more days in the year. When two or more fuels are used for the same purpose (such as to heat water or heat a swimming pool), the fuel used more days is the one "used most." When the household uses more than one refrigerator, freezer, window/wall air-conditioning unit, or motor vehicle, the one used more days is the one "used most." If a decision could not be made on the basis of days used, respondents chose the one used more intensely.

Vacant Housing Unit: A housing unit not occupied when the first RECS field contact was made. An occupied seasonal or migratory housing unit is classified as vacant at the time of the first contact if all of its occupants had a usual place of residence elsewhere.

Van: Includes large vans used for personal use but excludes mini-vans. All pre-1983 vans were categorized as vans except for Volkswagen vans which were categorized as mini-vans.

Vehicles: For this survey, motorized vehicles used by U.S. households for personal transportation. Excluded are motorcycles, mopeds, large trucks, and buses. Included are automobiles, station wagons, passenger vans, cargo vans, motor homes, pickup trucks, and sport-utility vehicles. To be included, vehicles must be: (1) owned by members of the household, or (2) company cars not owned by household members but regularly available to household members for their personal use and ordinarily kept at home, or (3) rented or leased for 1 month or more.

Wall Insulation: Insulating materials within or on the walls between heated or air-conditioned areas of the building and unheated or unconditioned areas or the outside. (See **Insulation**.)

Water-Bed Heater: An appliance that uses an electric resistance coil to maintain the temperature of the water in a water bed at a comfortable level. (See **Appliances**.)

Water Heated by a Space-Heating System: Some heating systems provide hot water as well as heat the home. The water is heated in a coil that is part of the heating system. There is no separate hot water tank for these systems.

Water Heater: An automatically controlled, thermally insulated vessel designed for heating water and storing heated water at temperatures less than 180 degrees Fahrenheit.

Water Heater Blanket: See **Insulation Around Water Heater.**

Water-Heating Fuel: The fuel used to heat water for washing or bathing. The hot water may be available anywhere in the same building as the respondent's living quarters--in a hallway, in a room used by several units in the building, in the basement, or in an enclosed porch--provided the household has access to it.

Watt (W): The unit of electrical power equal to 1 ampere (amp) under a pressure of 1 volt. Equal to 1/746 horsepower.

Watthour (WH): An electrical energy unit of measure equal to 1 watt of power supplied to, or taken from, an electric circuit steadily for 1 hour.

Weather Stripping: Any of several kinds of crack-filling material around any windows or doors to the outside used to reduce the passage of air and moisture around movable parts of a door or window. Weather stripping is available in strips or rolls of metal, vinyl, or foam rubber and can be applied on the inside or outside of a building.

Weight: The number of households in the United States that a particular sample unit represents. To estimate the total value of an attribute (such as **Floorspace**) in the U.S. residential population as a whole, each sample household's value is multiplied by the household's weight. Summing the weighted sample values provides an estimate of the nationwide total. (See **Multistage Area Probability Sample, Total Floorspace** and Appendix B, "Quality of the Data.")

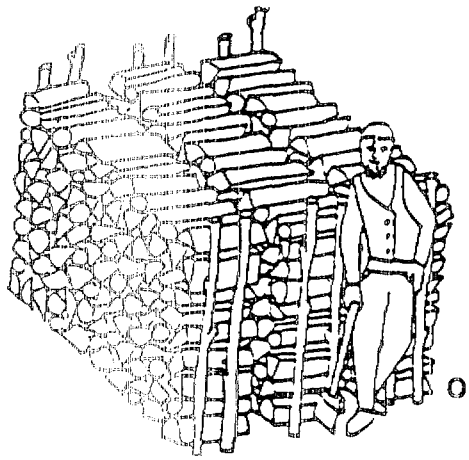
Well Pump: See **Electric Pump for Well Water.**

Whole-House Cooling Fan: A very large fan located in an upstairs ceiling or attic wall that pulls air through the house and out through the attic. The attic must have good air circulation--with fairly large vents--for such a fan to work well. (See **Appliances.**)

Window Fan: Fan located in a window. Does not include portable table or floor fan. (See **Appliances.**)

Windows: Openings in the building envelope that contain framed glass. Windows in unheated spaces such as a garage or unheated basement are not counted. Generally, each window that opens separately is counted as one window. Panes of glass in a large window are not counted separately unless they open separately. Double-hung slider windows count as one window. Windows (glass panels) in doors are not counted.

Wood: Products from trees including logs, scraps such as mill waste or bark, manufactured logs, and pellets burned for their heat or aesthetic value. (See **Wood Pellets.**)



One Cord or More

Wood-Burning Stove: See **Heating Stove.**

Wood Pellets: Sawdust compressed into uniform diameter pellets to be burned in a heating stove.

Year of Construction: The year the structure was originally completed or the year any part of the structure was first occupied. For mobile homes, year of construction is the model year.

Year-Round Unit: Housing unit occupied or intended for occupancy at any time during the year. (See **Housing Unit** and **Seasonal Unit.**)

Electronic Publishing System (EPUB)

EPUB is an electronic publishing system maintained by the Energy Information Administration (EIA) of the U.S. Department of Energy. EPUB allows the general public to electronically access selected energy data from many of EIA's statistical reports. The system is a menu-driven, bulletin-board-type system with extensive online help capabilities that can be accessed free of charge 24 hours a day by using a terminal or PC with an asynchronous modem. (EPUB will be taken down briefly at midnight for backup.)

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Following is a listing of some of the data and reports that are provided on EPUB:

Heating fuel data
Updated the 2nd week of the month.

Oxygenates data
Updated approximately the 25th of the month.

Weekly Petroleum Status Report
Updated on Wednesdays (Thursdays in the event of a holiday) at 9 a.m.

Petroleum Supply Monthly
Updated on the 20th of the month.

Petroleum Marketing Monthly
Updated on the 20th of the month.

Natural Gas Monthly
Updated on the 20th of the month.

Weekly Coal Production
Updated on Fridays at 5 p.m.

Quarterly Coal Report
Updated 60 days after the end of the quarter.

Electric Power Monthly
Updated on the 1st of the month.

Monthly Energy Review
Updated the last week of the month.

Short-Term Energy Outlook
Updated 60 days after the end of the quarter.

Winter Fuels Report (October through April)
Updated every Thursday at 5 p.m.

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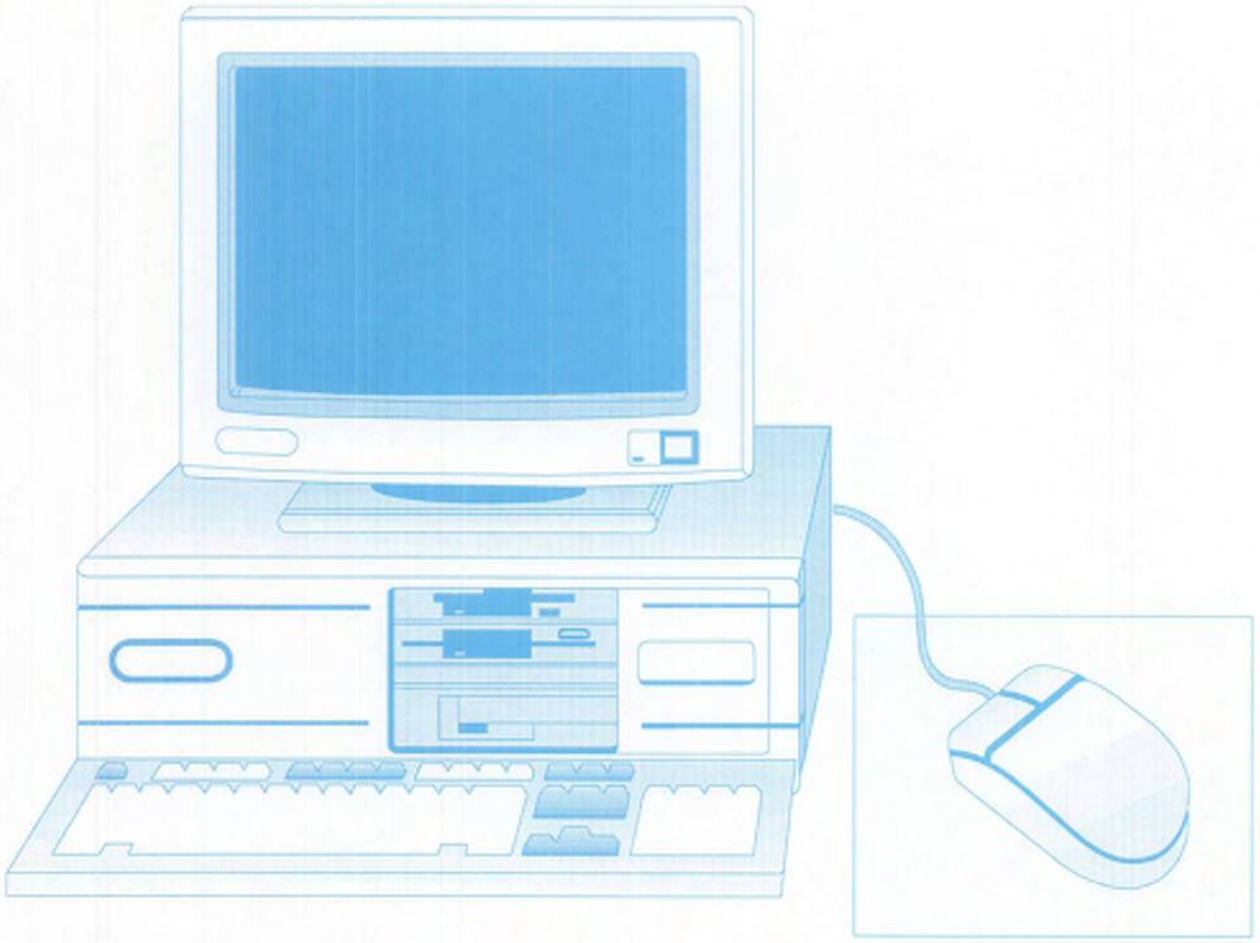

RECS Data on Diskettes

The public use data for the 1993 Residential Energy Consumption Survey RECS) are available on diskette.

- For IBM-PC and compatible microcomputers
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