

Residential Energy
Consumption Survey:

Housing Characteristics, 1980

Energy Information Administration
Office of Energy Markets and End Use
U.S. Department of Energy



June 1982



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CONTENTS

	Page
SUMMARY OF FINDINGS	
Introduction.....	1
Fuel Use.....	1
Housing Characteristics.....	10
Appliance Use.....	13
Thermal Characteristics.....	15
Conservation Activities.....	16
APPENDIXES	
A. How the Survey Was Conducted.....	279
B. Estimates of the Size of U.S. Housing Units in Square Feet.....	297
C. Limitations of the Data.....	303
D. Survey Forms.....	347
E. United States Weather Zone Map.....	409
F. United States Census Regions and Divisions.....	413
G. Residential Energy Consumption Data Items 1978 to 1981.....	417
Glossary.....	431
FIGURES	
1. Numbers of Households Using Different Fuels as Main and Secondary Heating Fuels.....	2
2. Percent Distribution of Households by Main Heating Fuel by Year.....	3
3. Percentages of Households Using Different Main Heating Fuels by Region and by Urban/Rural.....	5
4. Percentages of Single-Family and Mobile Homes with Natural Gas Available and that Use Natural Gas by Region and by Urban/Rural.....	7
5. Number of Households Using Various Fuels for Water Heating and Cooking.....	8
6. Percentage Distribution of Households by Measured Heated Square Footage of Residence.....	10
7. Mean Heated Square Footage by Heating Degree-Days and Cooling Degree-Days.....	11
8. Mean Heated Square Footage by 1979 Family Income.....	12
9. Percentage Distribution of Households by Type of Air-Conditioning for Selected Income Groups.....	13
C1. Curve to Use in Calculating the Relative Standard Error (RSE) for Estimates of the Number of Households.....	305

TABLES

	Page
A. Appliances Used by Households in Selected Income Groups.....	14
B. Percentages of Single-Family Units with Roof or Ceiling Insulation and of Households with All and No Windows with Storm Windows by Heating Degree-Days and Cooling Degree-Days.....	15
C. Presence of Roof or Ceiling Insulation and Storm Windows by Selected Income Groups.....	16
D. Conservation Activities Undertaken in 1978 and 1979 by Households in Selected Income Groups.....	17
E. Conservation Activities Undertaken in 1978 and 1979 by Census Region.....	18
1. Housing Characteristics by Census Region, Area Type, and SMSA/Non-SMSA (Million Households).....	20
2. Housing Characteristics by Census Region, Area Type, and SMSA/Non-SMSA (Percentage of Households).....	24
3. Housing Characteristics by Housing Structure and Number of Stories (Million Households).....	28
4. Housing Characteristics by Housing Structure and Number of Stories (Percentage of Households).....	32
5. Housing Characteristics by Housing Structure and Ownership (Million Households).....	36
6. Housing Characteristics by Housing Structure and Ownership (Percentage of Households).....	40
7. Housing Characteristics by Size of Residence (Million Households).....	44
8. Housing Characteristics by Size of Residence (Percentage of Households).....	47
9. Housing Characteristics by Average Square Feet Per Household.....	50
10. Housing Characteristics by Total Square Feet.....	55
11. Housing Characteristics by 1979 Family Income (Million Households).....	59
12. Housing Characteristics by 1979 Family Income (Percentage of Households).....	62
13. Housing Characteristics by Main Heating Fuel (Million Households).....	65
14. Housing Characteristics by Main Heating Fuel (Percentage of Households).....	68
15. Fuel Use Characteristics by Census Region, Area Type and SMSA/ Non-SMSA (Million Households).....	71
16. Fuel Use Characteristics by Census Region, Area Type and SMSA/ Non-SMSA (Percentage of Households).....	75
17. Fuel Use Characteristics by Housing Structure and Number of Stories (Million Households).....	79
18. Fuel Use Characteristics by Housing Structure and Number of Stories (Percentage of Households).....	83

	Page
19. Fuel Use Characteristics by Housing Structure and Ownership (Million Households).....	87
20. Fuel Use Characteristics by Housing Structure and Ownership (Percentage of Households).....	92
21. Fuel Use Characteristics by Size of Residence (Million Households).....	96
22. Fuel Use Characteristics by Size of Residence (Percentage of Household).....	101
23. Fuel Use Characteristics by Average Feet Per Household.....	105
24. Fuel Use Characteristics by Total Square Feet.....	110
25. Fuel Use Characteristics by 1979 Family Income (Million Households).....	115
26. Fuel Use Characteristics by 1979 Family Income (Percentage of Households).....	120
27. Fuel Use Characteristics by Main Heating Fuel (Million Households).....	124
28. Fuel Use Characteristics by Main Heating Fuel (Percentage of Households).....	127
29. Fuel Use Characteristics by Heating and Cooling Degree-Days (Million Households).....	130
30. Fuel Use Characteristics by Heating and Cooling Degree-Days (Percentage of Households).....	135
31. Fuel Use Characteristics by Year House Built (Million Households).....	139
32. Fuel Use Characteristics by Year House Built (Percentage of Households).....	144
33. Fuel Use Characteristics by Selected Demographic Characteristics (Million Households).....	148
34. Fuel Use Characteristics by Selected Demographic Characteristics (Percentage of Households).....	153
35. Appliance Use by Census Region, Area Type, and SMSA/Non-SMSA (Million Households).....	157
36. Appliance Use by Census Region, Area Type, and SMSA/Non-SMSA (Percentage of Households).....	159
37. Appliance Use by Housing Structure and Ownership (Million Households).....	161
38. Appliance Use by Housing Structure and Ownership (Percentage of Households).....	164
39. Appliance Use by 1979 Family Income (Million Households).....	167
40. Appliance Use by 1979 Family Income (Percentage of Households).....	169
41. Thermal Characteristics by Census Region, Area Type and SMSA/Non-SMSA (Million Households).....	172
42. Thermal Characteristics by Census Region, Area Type and SMSA/Non-SMSA (Percentage of Households).....	178
43. Thermal Characteristics by Housing Structure and Ownership (Million Households).....	182
44. Thermal Characteristics by Housing Structure and Ownership (Percentage of Households).....	188
45. Thermal Characteristics by Size of Residence (Million Households).....	192
46. Thermal Characteristics by Size of Residence (Percentage of Households).....	198

	Page
47. Thermal Characteristics by 1979 Family Income (Million Households).....	202
48. Thermal Characteristics by 1979 Family Income (Percentage of Households).....	208
49. Thermal Characteristics by Main Heating Fuel (Million Households).....	212
50. Thermal Characteristics by Main Heating Fuel (Percentage of Households).....	218
51. Thermal Characteristics by Heating and Cooling Degree-Days (Million Households).....	222
52. Thermal Characteristics by Heating and Cooling Degree-Days (Percentage of Households).....	228
53. Thermal Characteristics by Year House Built (Million Households)....	232
54. Thermal Characteristics by Year House Built (Percentage of Households).....	238
55. Thermal Characteristics by Selected Demographic Characteristics (Million Households).....	242
56. Thermal Characteristics by Selected Demographic Characteristics (Percentage of Households).....	248
57. Conservation by Census Region, Area Type and SMSA/Non-SMSA (Million Households).....	252
58. Conservation by Census Region, Area Type and SMSA/Non-SMSA (Percentage of Households).....	256
59. Conservation by 1979 Family Income (Million Households).....	260
60. Conservation by 1979 Family Income (Percentage of Households).....	264
61. Conservation by Housing Structure (Million Households).....	268
62. Conservation by Housing Structure (Percentage of Households).....	269
63. Main Heating Equipment and Heating Fuel by Secondary Equipment and Fuel (Million Households).....	270
64. Main Heating Equipment and Heating Fuel by Secondary Equipment and Fuel (Percentage of Households).....	271
65. Main Heating Fuel by Water Heating Fuel and Cooking Fuel (Million Households).....	272
66. Main Heating Fuel by Water Heating Fuel and Cooking Fuel (Percentage of Households).....	273
67. Wood Burned in 1980.....	274
A1. Population Estimates Used as Controls in Ratio Estimates.....	285
A2. Interviews Completed by Stage.....	287
A3. Response Rates by Region, Location, Type of Structure.....	289
A4. 1980 RECS Items Most Frequently Imputed.....	291
B1. Completeness of Data on Square Footage of Housing Units.....	298
B2. Variables in the Regression Equation Used to Impute the Total Square Footage of the Housing Unit.....	300
C1. Population Control Estimates for Use in Calculating Sampling Error.....	308

	Page
C2. Clustering Factor for Calculation of Sampling Error.....	309
C3. Relative Standard Errors (RSE) for Averages by Census Region, Area Type and SMSA/Non-SMSA (Percent).....	314
C4. Relative Standard Errors (RSE) for Averages by Housing Structure (Percent).....	315
C5. Relative Standard Errors (RSE) for Averages by Size of Residence (Percent).....	316
C6. Relative Standard Errors (RSE) for Averages by Family Income (Percent).....	317
C7. Relative Standard Errors (RSE) for Averages by Main Heating Fuel (Percent).....	318
C8. Relative Standard Errors (RSE) for Averages by Heating and Cooling Degree-Days (Percents).....	319
C9. Relative Standard Errors (RSE) for Averages by Year House Built (Percent).....	320
C10. Relative Standard Errors (RSE) for Averages by Selected Demographic Characteristics (Percent).....	321
C11. Relative Standard Errors (RSE) for Estimates in Table 9 (Percent).....	322
C12. Relative Standard Errors (RSE) for Estimates in Table 10 (Percent).....	327
C13. Relative Standard Errors (RSE) for Estimates in Table 23 (Percent).....	331
C14. Relative Standard Errors (RSE) for Estimates in Table 24 (Percent).....	336
C15. Relative Standard Errors (RSE) for Estimates in Table 67 (Percent).....	341
G1. Energy Consumption From Fuel Supplier Records by Individual Survey.....	419
G2. Weather Data by Individual Survey.....	420
G3. End Uses of Energy by Fuel Type.....	421
G4. Equipment and Appliance Type by Individual Survey.....	422
G5. Structural Characteristics by Individual Survey.....	423
G6. Conservation Activities by Individual Survey.....	424
G7. Data Items by Individual Survey and Year.....	425
H. Definition of Poor.....	441



SUMMARY OF FINDINGS

Introduction

The results of the 1980 Residential Energy Consumption Survey cover consumption for the period April 1980 through March 1981. It is the third in a series of surveys of residential energy use. By comparing the findings from this survey with those from the surveys of 1978 and 1979, a three-year record of residential energy use patterns can be established. In each of the three years, different samples of households were surveyed.

This report provides data on energy-related characteristics of U.S. housing as of November 1980. It gives information on housing characteristics, fuel use, appliance use, thermal characteristics, conservation activities, heating equipment, and wood fuel consumption. This is the first survey to include data on direct measurements of the area of the housing units. These square footage data are also included in the report. Data on consumption and expenditures for specific fuels will be given in a subsequent report.

Fuel Use

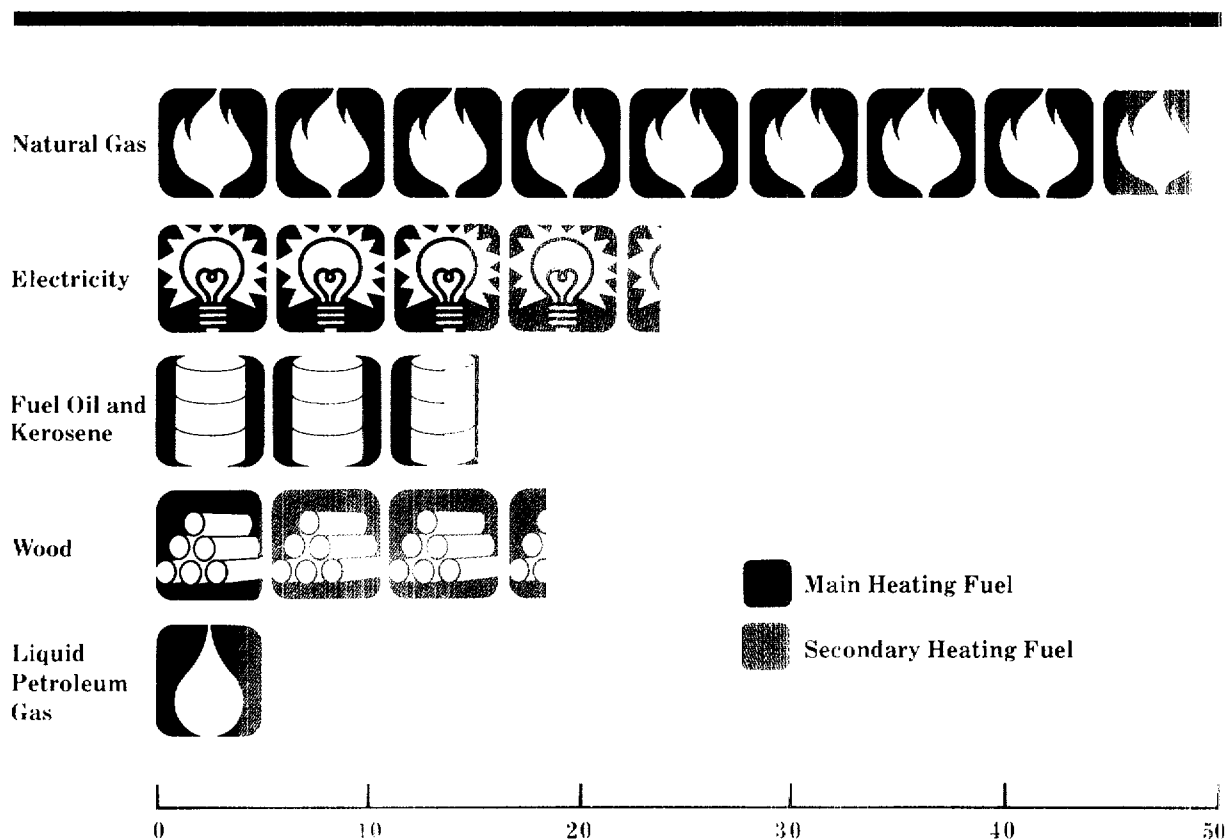
This survey found several changes in the usage pattern for main heating fuels. Electricity was estimated to be the second most-used main heating fuel, replacing fuel oil and kerosene, while wood was estimated to be the fourth most-used main heating fuel, replacing liquid petroleum gas. When main heating use and secondary heating uses were combined, wood was the third most-used fuel, exceeding the number of users of fuel oil and kerosene. Natural gas remains the dominant fuel used for main heating fuel, however.

Data on the total numbers of users of different fuels for main heating fuel and secondary heating fuel are shown in Figure 1. Natural gas was used as the main heating fuel by an estimated 44.6 (+2.4) million households or by 54.6 percent of all households.¹ An additional 3.3 (+ 0.7) million households

¹The \pm values in parentheses after a statistic quoted in the text represent two standard errors of the statistic. The standard error is a measure of the variability of an estimate that is based on a sample survey. For further explanation of standard errors, see Appendix C, "Limitations of the Data". The percentages in the text are also subject to sampling errors. Standard errors for the percentages can be calculated by following the method given in Appendix C.

used it as a secondary heating source. Electricity was estimated to be the second most-used fuel for space-heating; it was the main heating fuel for 14.3 (+1.5) million households. An estimated 13.4 (+ 1.4) million households used fuel oil and kerosene. Wood was estimated to be the main heating fuel for 4.7 (+0.8) million households, and the total number of households using wood as a main or secondary heating fuel was 18.1 (+1.7) million.

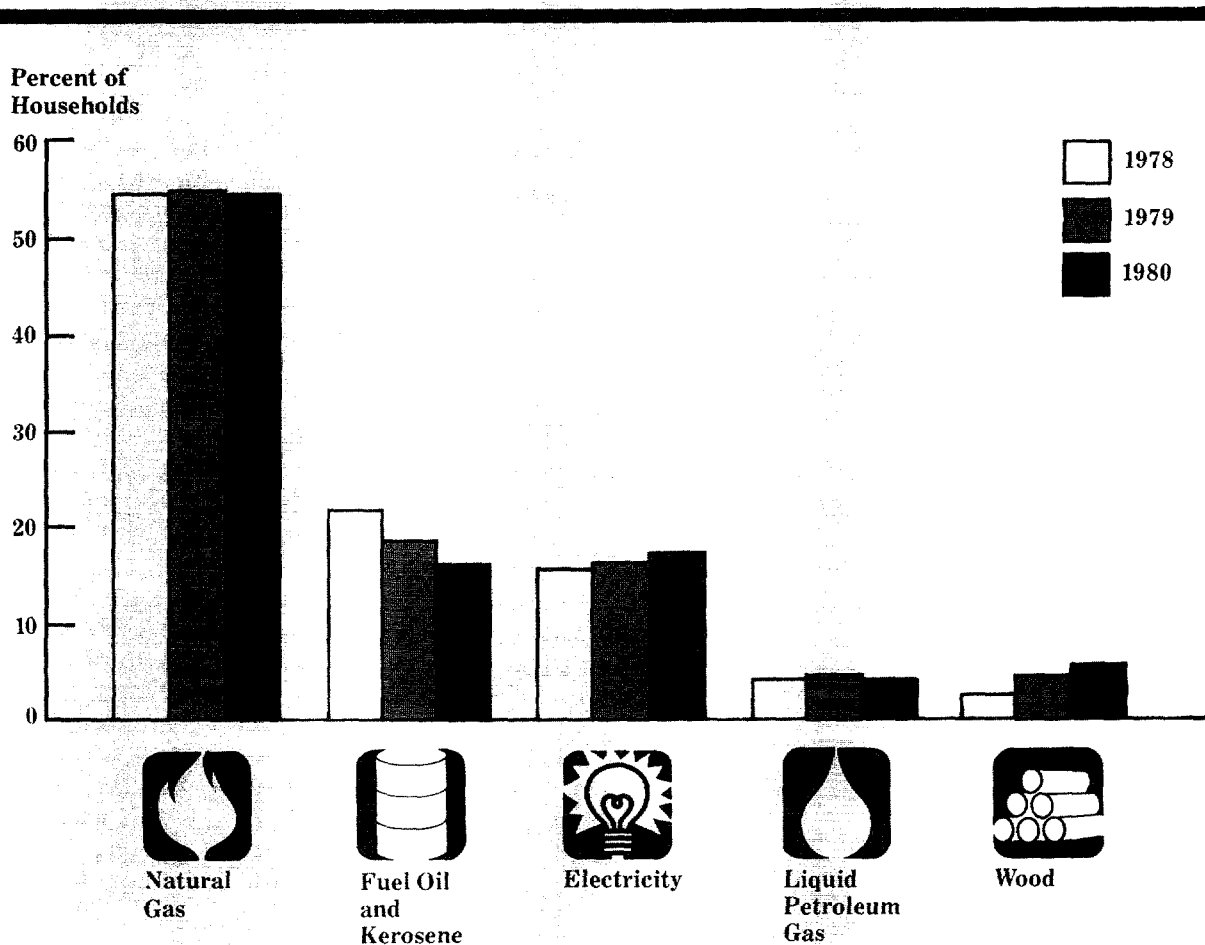
Figure 1. Numbers of Households Using Different Fuels as Main and Secondary Heating Fuels (Millions)



Source: Table 15.

The usage pattern of different fuels as the main heating fuel is the result of trends observed during the history of the RECS, as shown in Figure 2. The percentages of households using natural gas and liquid petroleum gas remained essentially constant during the past three years. There were persistent increases in the percentages of households using electricity and wood, while the estimated number of fuel oil and kerosene users consistently declined.

Figure 2. Percent Distribution of Households by Main Heating Fuel by Year



Source: 1978 National Interim Energy Consumption Survey, 1979 Household Screener Survey, 1980 Residential Energy Consumption Survey. For 1980 data, see Table 16.

Statistically, the difference of 0.9 (+2.1) million between the estimated number of households using electricity for the main heating fuel and the number estimated to use fuel oil is not significantly different from zero. However, the trends in the use of each fuel between 1978 and 1980 are statistically significant, so the survey results do represent a major change in fuel use patterns. The number of households using electricity as the main heating fuel increased 2.2 (+ 2.0) million from 1978 to 1980, while the number using wood more than doubled from 1.9 (+ 0.6) to 4.7 (+ 0.8) million.

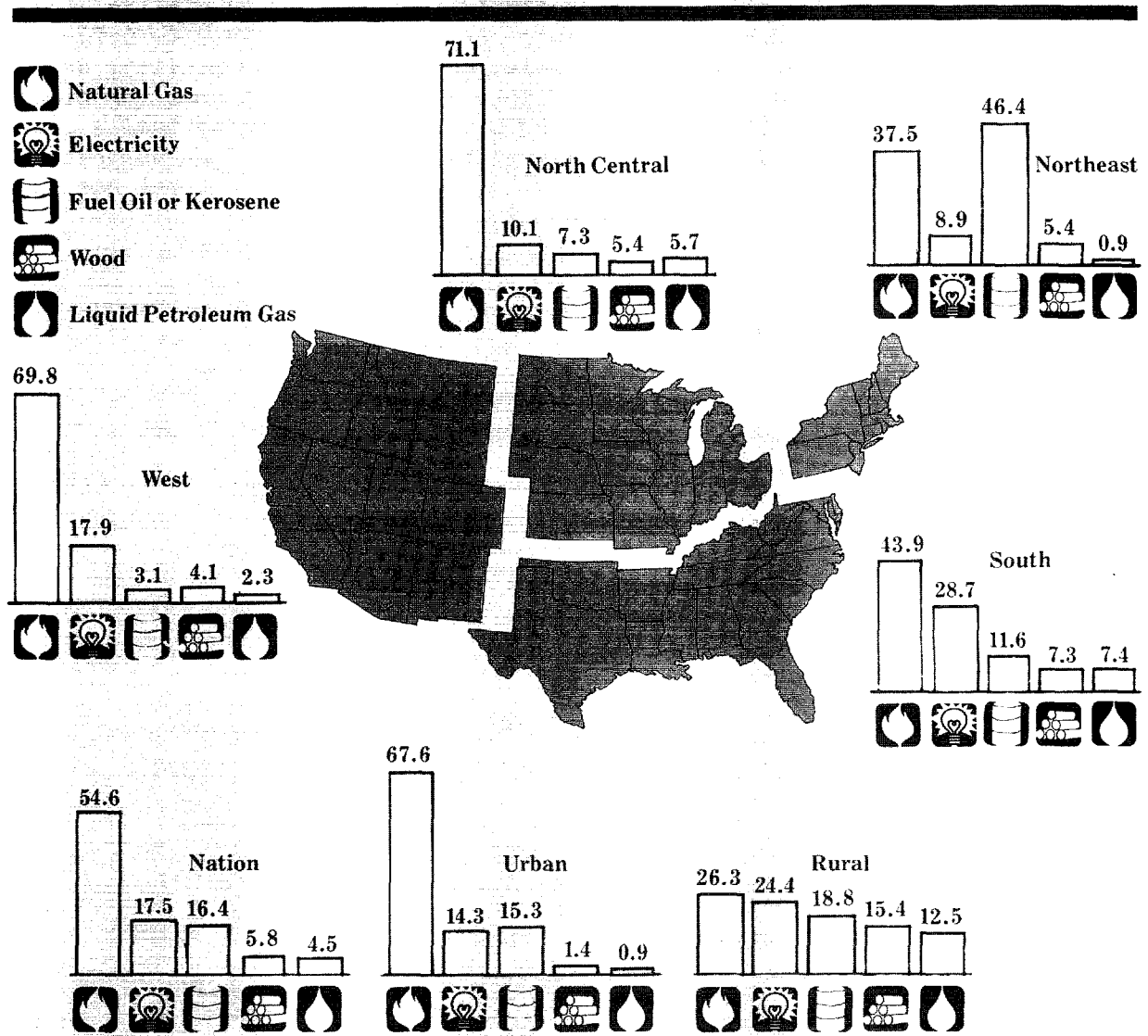
Additional data on the decline in fuel oil and kerosene use comes from the statistics for households who changed their main heating fuel in the previous year. A total of 2.0 (+ 0.5) million households changed their main heating fuels, and a majority of these, 1.2 (+ 0.4) million, were households that had been heating with fuel oil. Other households that changed were evenly distributed among the other fuels. Households that changed fuels most frequently chose natural gas as their new fuel, followed closely by wood.

An important factor in the increased use of electricity as the main heating fuel was its use in newer housing units. Electricity was the main heating fuel for 11 percent of the homes built from 1960 to 1964; 21 percent for the period 1965 to 1969; 36 percent for the period 1970 to 1974; and 50 percent for the period 1975 and later. An important reason for choosing electricity was probably the unavailability of natural gas, the preferred fuel when available. Natural gas was not available to 53 percent of the single-family and mobile homes built after 1975 and to 43 percent of homes built from 1970 to 1974. Natural gas availability is not the only reason, however. Natural gas was not used by 26 percent of the single-family and mobile homes built after 1975 where it was available. However, among all single-family and mobile homes with natural gas available, only 13 percent did not use it. So newer homes were less likely to use natural gas than older homes even where it was available.

This survey also collected data on the amount of wood burned by those households that use it. More households indicated they burned wood, than those that used it as the main or secondary heating source. Among all households burning wood, 14.2 (+ 1.4) million burned one-third of a cord or more. These households burned a total of 41.9 (+ 15.2) million cords, most of which was hardwood. Those households that used wood for the main heating fuel burned an average of 4.9 (+ 1.4) cords, for a total of 22 (+ 12) million cords. Other users of wood, who used one-third of a cord or more, burned an average of 2.0 (+ 0.4) cords, for a total of 20 (+ 5) million cords.

There were major regional variations in the distribution of main heating fuels. Figure 3 gives the proportion of households that used various fuels for the 4 Census regions and for households living in rural and urban areas. The Northeast region used fuel oil and kerosene intensively, with almost 50 percent of the households using it as their main heating fuel. In all other regions, natural gas was the most-used fuel. In the South, and to a lesser extent in the West, electricity was used by a significant minority of households.

Figure 3. Percentages of Households Using Different Main Heating Fuels by Region and Urban/Rural



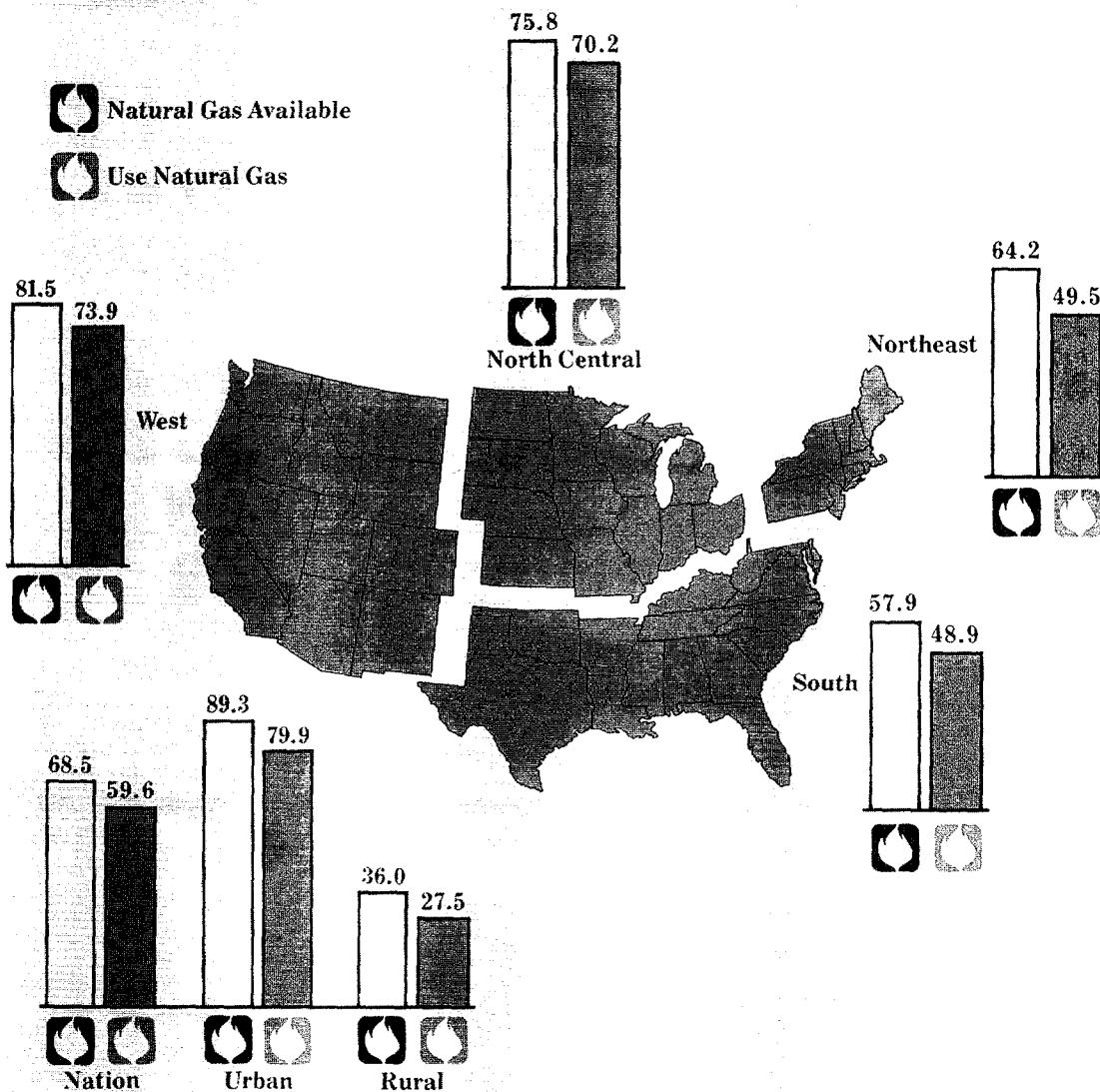
Source: Table 16.

There were differences between urban and rural households regarding main heating fuels. Both groups used natural gas more than other fuels, but 68 percent of urban households used it, while only 26 percent of rural households did. Most of the remaining urban households used electricity or fuel oil. Rural households were more uniformly distributed in their use of fuels and had substantial numbers of users of wood and liquid petroleum gas. A majority of the users of wood and liquid petroleum gas were in rural areas. Of the 4.7 (+ 0.8) million households using wood as the main heating fuel, 3.9 (+ 0.6) million were in rural areas, and 3.2 (+ 0.7) million of the 3.7 (+ 0.7) million liquid petroleum gas users were in rural areas.

One important reason for the regional variations in fuel use was the availability of natural gas. Natural gas was available to 41.7 (+ 2.6) million single-family and mobile homes in the Nation; it was not available to 19.2 (+ 1.7) million homes. Where natural gas was available, only 5.4 (+ 1.0) million, or 13 percent, of the households did not use it. Figure 4 gives the regional variation in natural gas availability. Close to 60 percent of the single-family and mobile homes in the South had natural gas available, while more than 80 percent did in the West. Almost 90 percent of the urban households had natural gas available, while only 36 percent of rural homes did.

There was less regional variation in the use of natural gas among households that had it available, as shown in Figure 4. The percentage of households that did not use it when it was available ranges from 16 percent in the South to 23 percent in the Northeast region. About one-eighth of the urban homes that have natural gas available did not use it, while almost one-fourth of the rural homes did not.

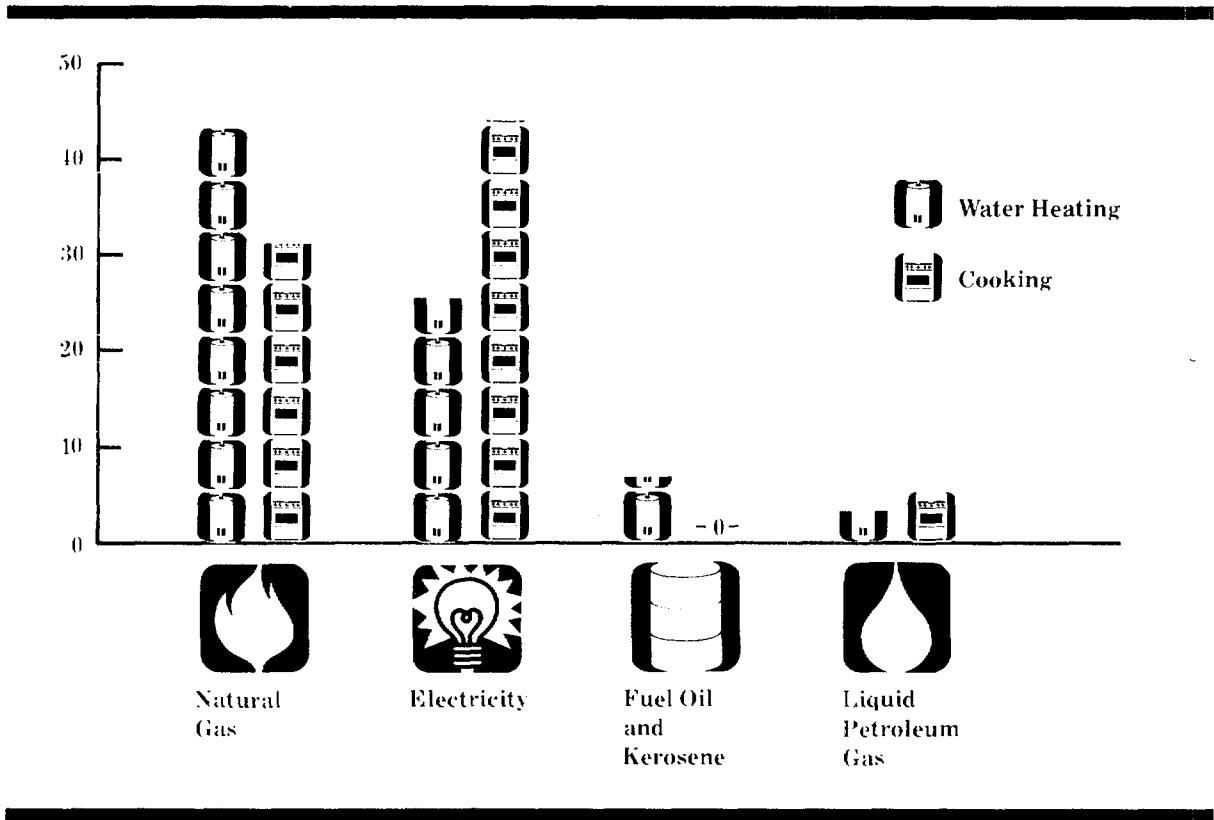
Figure 4. Percentages of Single-Family and Mobile Homes with Natural Gas Available and That Use Natural Gas by Region and by Rural/Urban



Source: Percentages calculated from data in Table 15.

Two other important residential uses for energy are water-heating and cooking. The numbers of households using the various fuels for these uses are shown in Figure 5. Natural gas was used by 54.1 percent of the households for water-heating, and electricity was used by 31.9 percent. Other fuels were used by less than 15 percent of all households. These percentages are similar to the findings in the surveys for previous years. For cooking, electricity was the dominant fuel, being used by 54.4 percent of the households. Natural gas was used by most of the remaining households, apart from a small number of users of liquid petroleum gas, primarily in rural areas.

Figure 5. Number of Households Using Various Fuels for Water-Heating and Cooking. (Millions)



Source: Table 15.

One item of note is that some of the households in this survey used solar energy for hot water-heating. This use did not show up in the 1978 survey. The renewable resources of wood and solar collectors together accounted for 0.5 (+ 0.2) million households. In some cases, a solar hot water-heating system was considered a secondary heating source and was not measured in this survey. The 1981 survey will have more complete information on the use of renewable resources.

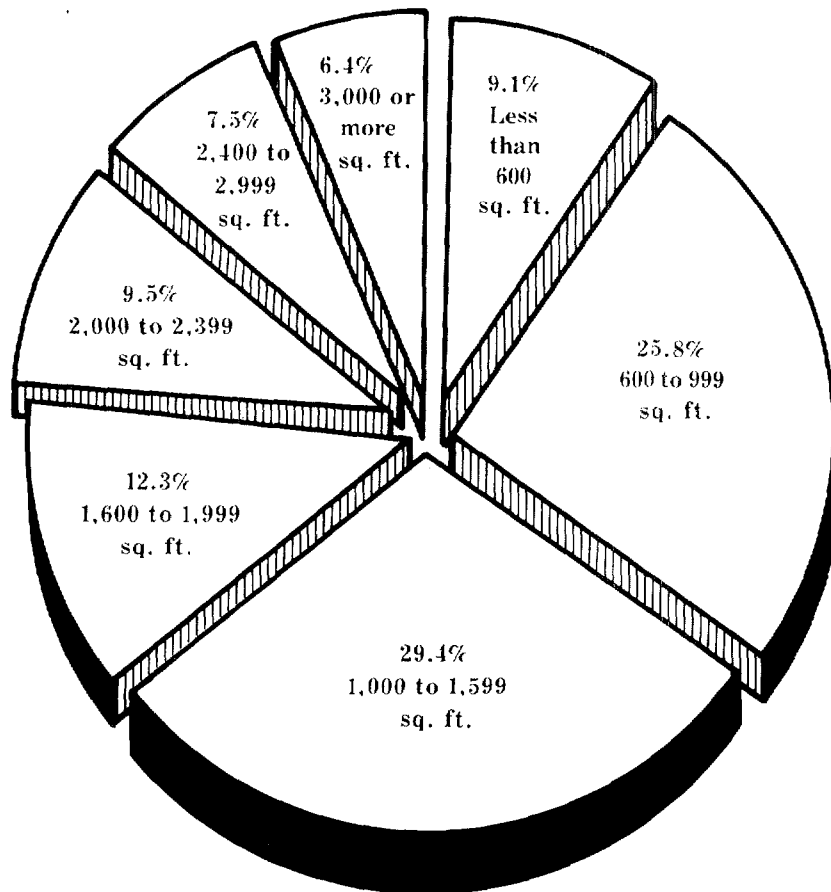
Regional variations in fuel used for water-heating paralleled those for space-heating. Most households that heated with natural gas also used it to heat water. Most other households heated water with electricity. More than 90 percent of the households used electricity and natural gas for water-heating in all regions except for the Northeast, where about one-third of the households used fuel oil or kerosene.

There were some differences among the different income groups in the fuels used for different end uses. High-income families were more likely to use natural gas and electricity for space-heating, while a higher proportion of low-income families used fuel oil, wood, and liquid petroleum gas. The distribution of fuels used for water-heating were very similar for different income groups, but there were differences in cooking fuels. Among households with incomes larger than \$35,000, 68 percent cooked with electricity and 27 percent cooked with natural gas. For poor households (125 percent level), 42 percent cooked with electricity and 48 percent cooked with natural gas. Most of the remaining households in both groups cooked with liquid petroleum gas.

Housing Characteristics

This survey includes data for the first time on the area (measured in square feet) of the housing unit obtained by direct measurement by the interviewer. For all housing units in the Nation, the average square footage for heated and unheated space was 1,745 (+ 47), and for heated space, the average was 1,499 (+ 36). Most households, about 65 percent of them, lived in housing units that ranged in size of heated area from 600 to 2,000 square feet. The total size of the residential stock was 142.5 (+ 3.8) billion square feet, of which 122.4 (+ 3.0) was heated. (The distribution of households by heated square footage is shown in Figure 6.)

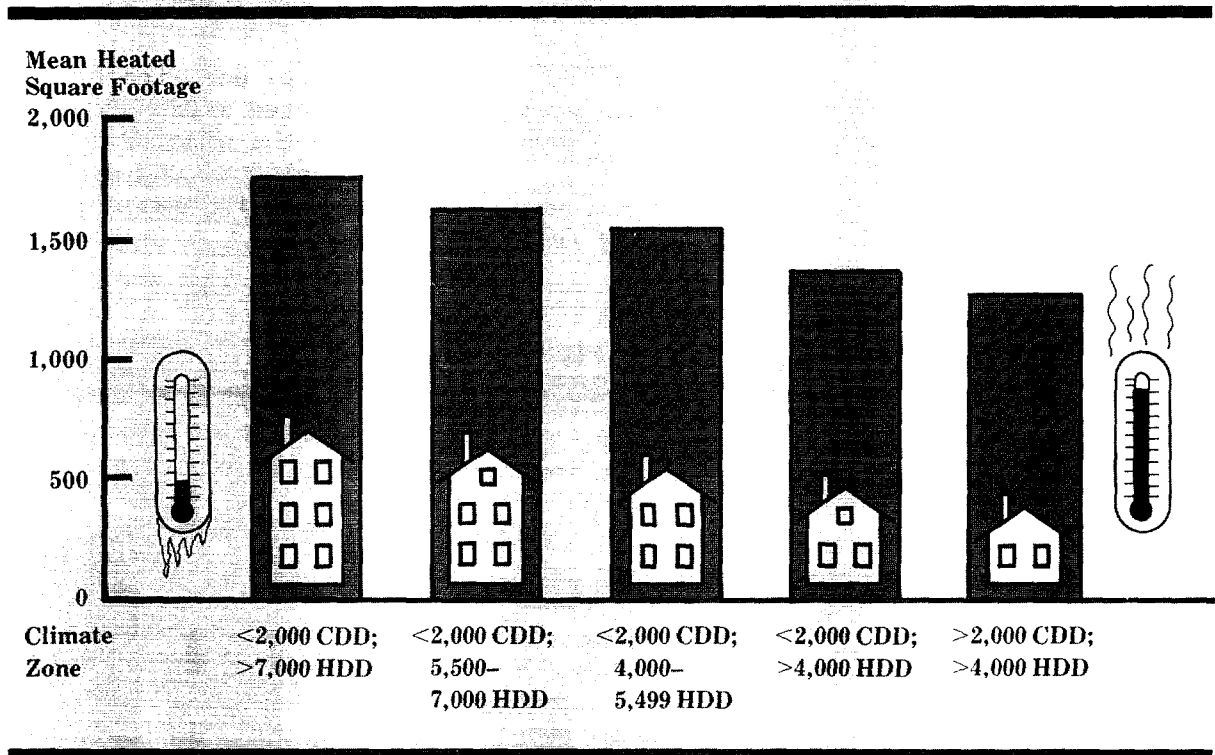
Figure 6. Percentage Distribution of Households by Measured Heated Square Footage of Residence



Source: Table 2.

Interestingly, the larger housing units were in the colder parts of the country. Figure 7 shows the average heated area for housing units in different climatic zones as measured by the number of heating degree-days and cooling degree-days. There was a steady decrease in heated square footage from 1,749 (+ 169) in the coldest zone to 1,266 (+ 90) in the warmest.

Figure 7. Mean Heated Square Footage by Annual Heating Degree-Days (HDD) and Cooling Degree-Days (CDD).

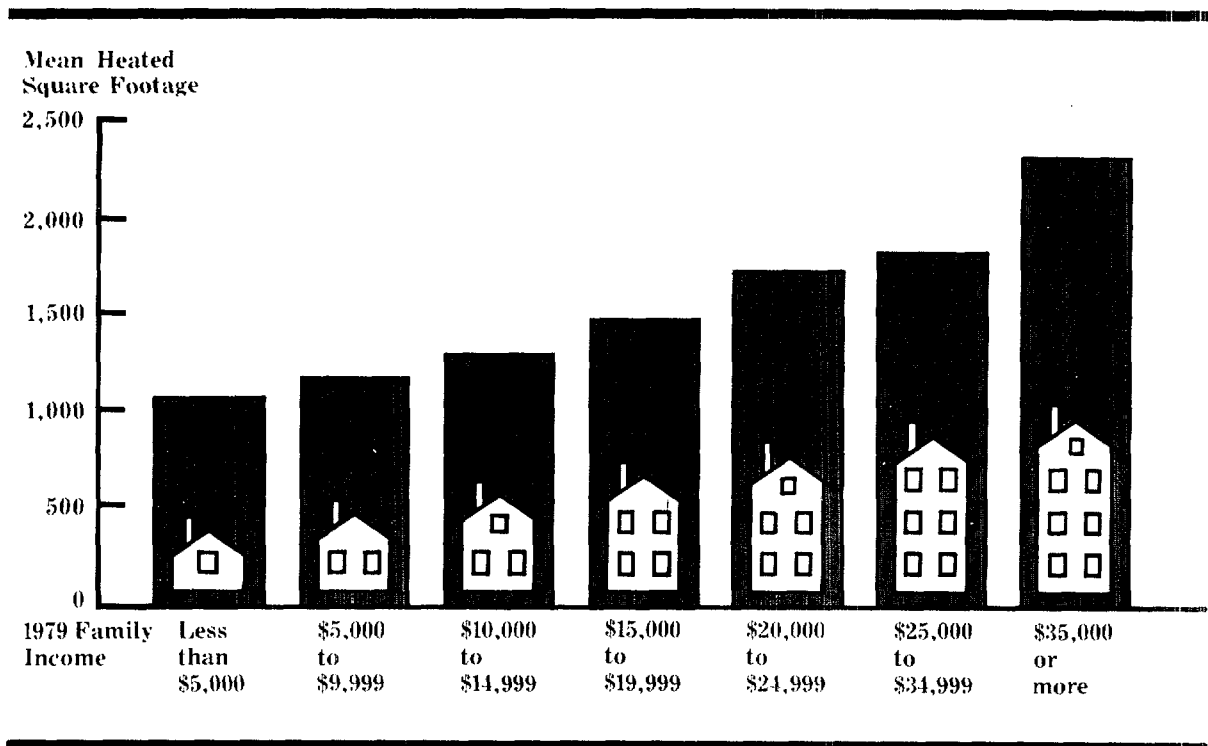


Source: Table 9.

This relationship between climatic zone and size of housing unit primarily reflects differences in the types of houses that are built in different parts of the country. On average, the largest housing units were two-story, single-family detached houses with basements. One-story units with basements came next, followed by two-story and then one-story units without basements. Other types of units, primarily multiple household units, were the smallest. The coldest parts of the country had the largest proportion of two-story houses and houses with basements. Warmer parts of the country were characterized by more one-story units and houses without basements. In the warmest section of the country, almost 70 percent of the housing units were single-family, one-story units without basements; almost all the rest were multi-family units or mobile homes. On average, multi-family units were also larger in size in the colder sections of the country than in the warmer.

There were large differences in the size of housing units occupied by families with different incomes. Figure 8 shows the average heated square footage by 1979 family income. There was a steady increase in the size of a family's housing unit with its income. Families with incomes below \$5,000 averaged homes with 1,041 (+ 62) heated square feet, while families with incomes above \$35,000 averaged 2,296 (+ 116) heated square feet.

Figure 8. Mean Heated Square Footage by 1979 Family Income



Source: Table 9.

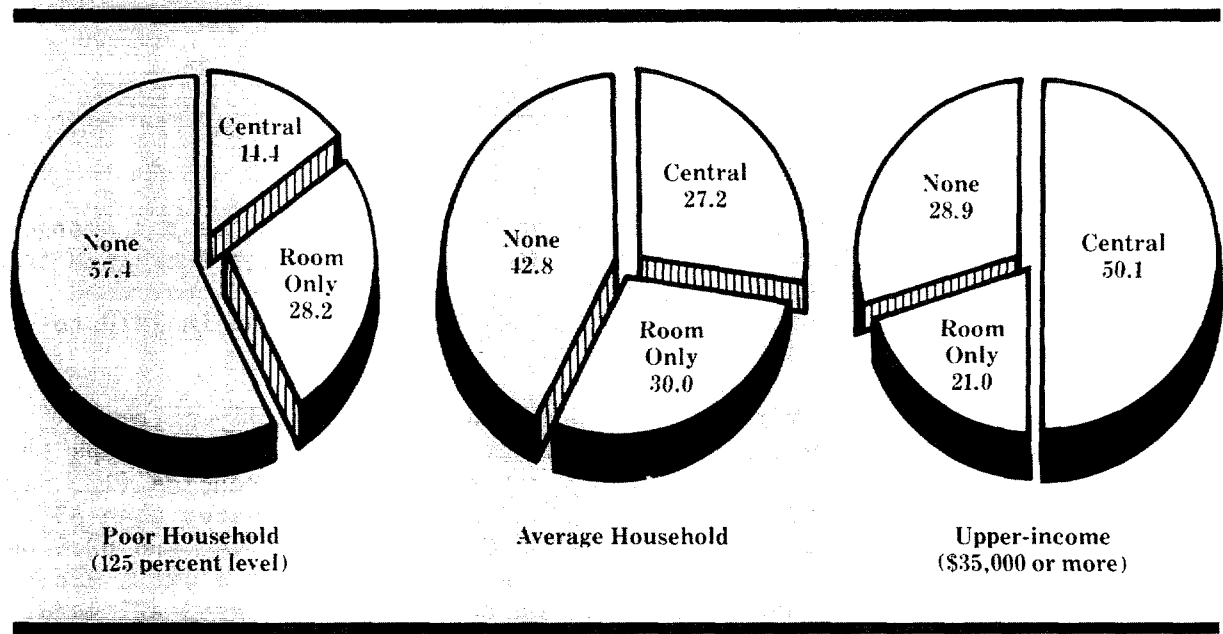
Heated square footage also increased with the number of household members, from 1,052 (+ 51) for 1 member and 1,476 (+ 40) for 2 members up to 1,855 (+ 161) for 6 or more members. Housing unit size also increased with the age of the head of the household. The estimated heated square footage was 953 (+ 49) for heads of households under 25 years of age and 1,773 (+ 66) for heads of households aged 45 to 59. For elderly households, the average dropped to 1,428 (+ 66), slightly below the mean for all households.

Appliance Use

Air-conditioners were present in a larger percentage of households in 1980 than in 1978. In 1980, 46.7 (+ 2.3) million households, or 57.2 percent of the total had air-conditioners. In the 1978 survey, 55.6 percent of the households had air-conditioning. There was also an increase in the number of households with central air-conditioning, in contrast with window units only, among those who had air-conditioning. In 1980, 27.2 percent of all households had central units, while only 22.6 percent did in 1978. There was a corresponding increase in the proportion of households with all rooms air-conditioned from 29.2 percent to 36.5 percent.

Figure 9 shows the percentage distribution of air-conditioning for households in different income categories. Twice as many households with income above \$35,000 had air-conditioning than did poor families (125 percent level), and those that had air-conditioning were much more likely to have central units. Similar differences are found in the percentages of households that air-conditioned all their rooms: 24.6, 36.5, and 54.6 percent, respectively, for the poor, average, and upper-income households.

Figure 9. Percentage Distribution of Households by Type of Air Conditioning for Selected Income Groups



Source: Table 26.

Households used a wide variety of appliances to provide services in the home. Table A gives the number of households in the Nation using some of the more common appliances. Refrigerators were used by almost all households; only 0.2 (+ 0.1) million did not use one. In addition, 11.5 (+ 1.2) million households used more than one refrigerator. Color television sets were the next most frequently used appliance. Black and white television sets, automatic clothes washers and dryers were also used by a majority of households.

Table A. Appliances Used by Households in Selected Income Groups

Appliance	Total Number of Households Using Appliance (Millions)	Percentage of Households Using Appliance		
		Poor (125 Per- cent Level) (Percent)	Average (Percent)	Income >\$35,000 (Percent)
Refrigerator.....	81.5	99	100	100
2 or More Refrigerators.....	11.5	7	14	29
Refrigerator Most Used is				
Frost-Free.....	49.2	41	60	79
Color TV.....	67.0	62	82	94
Black/White TV.....	41.9	56	51	53
Automatic Clothes Washer.....	58.4	55	72	90
Clothes Dryer (electric and gas)...	50.1	36	61	88
Dishwasher.....	30.4	11	37	75
Freezer.....	31.1	29	38	48
Two or More Ovens....	21.0	8	26	53
Microwave Oven is 1st or 2nd Most- Used.....	11.7	3	14	32

Source: Tables 39 and 40.

The proportion of households using the various appliances has not changed much since 1978, with two exceptions. Microwave oven usage increased from 8 percent in 1978 to 14 percent in 1980. The proportion of most-used refrigerators that are frost-free increased from 53 percent in 1978 to 60 percent in 1980.

There were substantial variations in appliance use by family income. Table A gives the percentages of households in selected income groups that used particular appliances. Ownership rates for poor households (125 percent level), average households and households with incomes greater than \$35,000 are compared. Almost all poor households used refrigerators, and 62.4 percent used a color television, but other appliances were used by a small minority of the poor. Most upper income families, on the other hand, used all major appliances. These were also the families most likely to use multiple appliances, such as two or more refrigerators or ovens.

Thermal Characteristics

A majority of households have housing units with major energy conservation measures incorporated to improve the thermal characteristics of the unit. More than three-fourths of all single-family houses had roof or ceiling insulation. Slightly more than one-half of all housing units in the Nation had storm windows. The numbers of homes that had improved thermal characteristics varied, as would be expected, by the climate zone in which the houses were located, as shown in Table B.

Table B. Percentages of Single-Family Units with Roof or Ceiling Insulation and of Households with All and No Windows with Storm Windows by Annual Heating Degree-Days (HDD) and Cooling Degree-Days (CDD)

Thermal Characteristics	Climate Zone				
	>7,000 HDD; <2,000 CDD	5,500- 7,000 HDD; <2,000 CDD	4,000- 5,499 HDD; <2,000 CDD	<4,000 HDD; <2,000 CDD	<4,000 HDD; >2,000 CDD
Single-Family Units with Roof or Ceiling Insulation.....	88	80	77	71	72
Households with all Windows Covered by Storm Windows.....	66	58	44	18	8
Households with no Windows Covered by Storm Windows.....	9	14	31	74	88

Source: Table 52.

Households in the colder parts of the country were the most likely to have undertaken conservation measures. In the coldest section, 88 percent of the single-family houses had roof or ceiling insulation. This percentage did not fall below 70 percent in the warmer parts of the country, so roof or attic insulation was a common feature in houses in most parts of the country. There was more variation in the percentages of housing units of all types that had storm windows. In the coldest section, 66 percent of the households had all their windows covered by storm windows or had other types of thermally efficient window units, while only 9 percent had no storm windows at all. In the warmest section, on the other hand, only 8 percent of the units had all windows protected and 88 percent did not have any at all.

There are considerable variations in the degree to which households with different incomes had houses with improved thermal characteristics. Table C gives the percentages of poor households (125 percent level) and upper-income households (family income greater than \$35,000) that had roof or ceiling insulation (single-family units only) and that had storm windows (all types of units). Almost 90 percent of the upper-income households had roof or ceiling insulation, while only slightly more than one-half of the poor did. Forty percent of the upper-income households had all their windows covered by storm windows, while only 27 percent of the poor did.

Table C. Presence of Roof or Ceiling Insulation and Storm Windows by Selected Income Groups

Thermal Characteristics	Total Number of Households with Thermal Characteristic (Millions)	Percent of Units with Thermal Characteristics		
		Poor (125 Percent Level) (Percent)	Average (Percent)	Income >\$35,000 (Percent)
Single-Family Units with Roof or Ceiling Insulation.....	43.2	54	77	89
Households with All Windows Covered by Storm Windows.....	31.4	27	38	40
Households with No Windows Covered by Storm Windows.....	34.9	56	43	39

Source: Tables 47 and 48.

Conservation Activities

A number of households in 1978 and 1979 took steps to improve the thermal integrity of their houses, as shown in Table D. Storm windows were added by 5.7 (+ 0.7) million households, while storm doors were added by 6.7 (+ 0.7) million. A larger number of households added less expensive conservation measures: 18.4 (+ 1.2) million added caulking; 15.1 (+ 1.1) million added weather-stripping; and 11.3 (+ 1.0) million added closeable shutters, plastic sheets, or insulation drapes to their windows or doors. Roof or ceiling insulation was added to 6.5 (+ 0.7) million single-family units.

Table D. Conservation Activities Undertaken in 1978 and 1979 by Households in Selected Income Groups

Conservation Activity	Total Number of Households Undertaking Conservation Activity (Million)	Income Group		
		Poor (125 Percent Level) (Percent)	Average (Percent)	Income >\$35,000 (percent)
Household Units				
Adding:				
Storm Windows.....	5.7	4	7	9
Storm Doors.....	6.7	5	8	12
Caulking.....	18.4	13	23	29
Weather-stripping....	15.1	10	19	24
Closeable Shutters, Plastic Sheets, Insulating Drapes....	11.3	14	14	13
Single-Family Units				
Adding:				
Roof or Ceiling Insulation.....	6.5	9	12	13

Source: Tables 59 and 60.

Table D also shows the percentages of households adding various conservation items for poor households (125 percent level), average households and upper-income households (1979 income greater than \$35,000). For most items, the upper-income family was more than twice as likely to add the item. The one exception is the category "closeable shutters, plastic sheets, or insulating drapes" for which similar percentages in each income group made these additions.

There is a sizeable regional variation in these activities, corresponding to the differences in climates in the regions. In the colder parts of the country, a higher percentage of households undertook conservation activities in 1978 and 1979, even though these housing units already had a higher proportion of conservation measures incorporated into the stock. The percentage of households that added conservation items in 1978 or 1979 are shown in Table E. Seven to eight percent of households added storm doors or windows in the colder Northeast and North Central regions, while only 4 percent did so in the West. There are similar differences in the percentages of households that added less expensive conservation items.

Table E. Conservation Activities Undertaken in 1978 and 1979 by Census Region
(Percent)

Conservation Activities	Northeast	North Central	South	West
Household Units				
Adding:				
Storm Windows.....	8	9	6	4
Storm Doors.....	9	10	9	4
Caulking.....	27	31	20	11
Weather-stripping.....	24	24	14	12
Closeable Shutters, Plastic Sheets, Insulation Drapes.....	17	17	13	9
Single-Family Units				
Adding:				
Roof or Ceiling Insulation.....	13	13	10	10

Source: Table 58.

TABLES

TABLE 1. HOUSING CHARACTERISTICS BY CENSUS REGION, AREA TYPE AND SMSA/NON-SMSA
(MILLION HOUSEHOLDS)

HOUSEHOLD CHARACTERISTICS	CENSUS REGION				AREA TYPE		SMSA/NON-SMSA		
	TOTAL	NORTHEAST	NORTH CENTRAL	SOUTH	WEST	URBAN	RURAL	SMSA	NONSMSA
TOTAL HOUSEHOLDS.....	81.6	17.7	21.1	27.0	16.0	55.6	25.6	55.6	26.0
ANNUAL HEATING DEGREE-DAYS AND COOLING DEGREE-DAYS									
<2,000 CDD AND >7,000 HDD.....	8.5	1.7	5.3	-	1.4	4.4	4.0	2.6	5.8
<2,000 CDD AND 5,500 TO 7,000 HDD.....	20.9	7.8	11.7	-	1.4	15.3	5.6	17.0	4.0
<2,000 CDD AND 4,000 TO 5,499 HDD.....	21.1	8.1	4.1	5.9	3.0	14.3	6.8	13.7	7.4
<2,000 CDD AND <4,000 HDD.....	19.0	-	-	10.0	9.0	13.4	5.6	13.4	5.6
>2,000 CDD AND <4,000 HDD.....	12.1	-	-	11.0	1.1	8.6	3.5	8.9	3.2
MEASURED HEATED SPACE OF RESIDENCE (IN SQ. FT.)									
LESS THAN 600.....	7.5	2.1	1.1	2.2	2.1	5.8	1.7	5.4	2.1
600 TO 999.....	21.1	3.8	5.2	7.8	4.3	15.1	6.0	14.3	6.8
1,000 TO 1,599.....	24.0	4.5	5.4	9.2	4.9	16.2	7.8	16.1	7.9
1,600 TO 1,999.....	10.0	2.1	3.0	3.1	1.7	6.5	3.5	6.6	3.4
2,000 TO 2,399.....	7.8	1.9	2.7	1.9	1.2	5.1	2.7	5.4	2.3
2,400 TO 2,999.....	6.1	1.5	2.0	1.7	.9	4.0	2.2	4.1	2.0
3,000 OR MORE.....	5.2	1.7	1.7	1.1	.8	3.4	1.8	3.6	1.6
TOTAL MEASURED SPACE OF RESIDENCE (IN SQ. FT.)									
LESS THAN 600.....	6.2	1.9	.9	1.8	1.7	5.2	1.1	4.8	1.4
600 TO 999.....	18.0	2.9	4.3	7.0	3.8	13.0	5.0	12.5	5.6
1,000 TO 1,599.....	19.8	3.2	4.0	8.2	4.5	13.6	6.2	13.2	6.6
1,600 TO 1,999.....	9.7	1.9	2.5	3.3	2.0	6.4	3.3	6.5	3.2
2,000 TO 2,399.....	9.0	2.1	3.0	2.4	1.5	6.0	3.0	6.2	2.8
2,400 TO 2,999.....	9.5	2.4	3.5	2.3	1.3	6.1	3.4	6.1	3.5
3,000 OR MORE.....	9.4	3.3	2.9	2.1	1.2	5.8	3.6	6.4	3.0
UTILITIES PAID BY HOUSEHOLD									
ALL PAID BY HOUSEHOLD.....	69.4	13.2	18.3	24.3	13.7	44.9	24.5	45.4	24.0
SOME PAID, SOME INCLUDED IN RENT.....	6.6	2.7	1.9	1.0	1.0	6.2	.4	6.0	.6
ALL INCLUDED IN RENT.....	4.2	1.4	.7	1.2	.9	3.7	.5	3.2	1.0
OTHER.....	1.5	.4	.3	.5	.3	1.2	.3	1.1	.4

SEE NOTES AT END OF TABLE

TABLE 1. HOUSING CHARACTERISTICS BY CENSUS REGION, AREA TYPE AND SMSA/NON-SMSA (MILLION HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	CENSUS REGION				AREA TYPE		SMSA/NON-SMSA	
		NORTHEAST	MIDWEST	SOUTH	WEST	URBAN	RURAL	SMSA	NONSMSA
OWN/RENT	54.3	14.4	18.7	10.1	20.3	19.3	35.1	19.3	
OWN	27.3	6.6	8.3	5.9	5.3	6.7	20.6	6.7	
RENT									
TYPE OF HOUSING STRUCTURE	53.0	15.2	19.1	9.9	19.9	20.0	33.0	20.0	
SINGLE-FAMILY DETACHED	45.5	13.3	15.9	8.2	17.2	16.8	28.7	16.8	
OWN	7.5	1.8	3.3	1.7	2.7	3.2	4.3	3.2	
RENT	3.3	1.6	1.6	.9	.4	.2	3.1	.2	
SINGLE-FAMILY ATTACHED	2.2	1.2	.4	.6	.2	.1	2.1	.1	
OWN	1.1	.4	.2	.3	.2	.1	1.0	.1	
RENT	9.9	3.3	2.9	1.7	1.2	2.1	7.9	2.1	
BUILDING WITH 2 TO 4 UNITS	2.0	1.0	.5	.2	.3	.2	1.8	.2	
OWN	7.9	2.3	1.7	1.5	.9	1.9	6.1	1.9	
RENT									
BUILDING WITH 5 OR MORE UNITS	10.8	2.1	2.8	2.3	.8	1.0	9.8	1.0	
OWN	1.0	.4	.2	.2	-.8	1.0	1.0	-.8	
RENT	9.8	2.0	2.6	2.1	.8	8.8	8.8	1.0	
MOBILE HOME	4.6	.6	2.4	1.1	3.3	1.9	1.9	2.8	
OWN	3.6	.4	1.8	.9	2.6	1.4	1.4	2.2	
RENT	1.0	.2	.6	.2	.7	.4	.4	.6	
YEAR HOUSE BUILT	23.3	7.5	4.9	2.8	6.2	7.9	15.4	7.9	
1939 OR EARLIER	7.5	1.7	2.6	1.6	1.7	2.3	5.2	2.3	
1940 TO 1949	13.7	3.5	5.0	2.9	2.7	3.3	10.4	3.3	
1950 TO 1959	7.2	1.4	2.1	1.7	1.8	1.9	5.3	1.9	
1960 TO 1964	8.1	1.1	3.3	2.0	2.8	3.0	5.1	3.0	
1965 TO 1969	10.5	2.4	4.2	2.1	4.6	3.8	6.8	3.8	
1970 TO 1974	11.3	2.3	4.8	2.9	5.7	3.9	7.5	3.9	
1975 OR LATER									
NUMBER OF ROOMS	7	.4	.3	.1	.7	.1	.7	.1	
1	2.0	.3	.4	.8	1.6	.5	1.5	.5	
2	7.9	1.9	2.4	1.7	6.4	2.1	5.8	2.1	
3	16.3	3.1	5.8	3.5	11.1	6.7	10.7	6.7	
4	18.8	3.3	6.5	3.6	12.1	12.2	12.2	5.3	
5	17.6	3.5	6.0	3.3	12.1	12.2	12.2	5.3	
6	9.5	2.6	2.9	1.6	6.1	6.5	6.5	3.0	
7	8.9	2.4	2.6	1.4	5.7	6.1	6.1	2.9	
8 OR MORE									

SEE NOTES AT FOOT OF TABLE

TABLE 1. HOUSING CHARACTERISTICS BY CENSUS REGION, AREA TYPE AND SMSA/NON-SMSA
(MILLION HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	CENSUS REGION				AREA TYPE		SMSA/NON-SMSA	
	TOTAL				URBAN	RURAL	SMSA	NONSMSA
	NORTHEAST	NORTH CENTRAL	SOUTH	WEST				
MAIN OUTSIDE WALL MATERIAL								
WOOD.....	4.4	7.0	6.7	4.5	13.5	9.1	12.3	10.2
BRICK.....	5.6	5.3	9.7	1.2	17.4	4.5	17.0	4.9
ALUMINUM SIDING.....	2.5	4.0	3.6	1.2	5.8	5.4	6.5	4.8
STHCCO.....	.5	.5	1.1	7.0	8.3	.9	8.4	.8
COMPOSITION.....	2.7	1.8	2.0	.4	4.2	2.6	4.2	2.7
CONCRETE.....	.1	.1	1.3	.3	1.3	.4	1.4	.4
STONE.....	.3	.2	.1	.1	.5	.2	.5	.2
COMBINATIONS/OTHER.....	1.6	7.1	2.4	1.3	5.0	2.4	5.3	2.1
NUMBER OF COMPLETE AND HALF BATHROOMS								
1 COMPLETE.....	11.1	12.6	14.3	8.4	33.3	13.1	31.1	15.2
1 COMPLETE AND 1 HALF.....	3.5	4.0	3.2	2.2	8.9	4.0	9.0	3.9
2 COMPLETE.....	1.7	2.6	6.6	3.9	9.3	5.5	10.3	4.5
2 COMPLETE AND 1 HALF.....	.8	1.0	1.3	.7	2.4	1.4	3.0	.8
3 COMPLETE.....	.1	.2	.6	.5	1.0	.4	1.0	.4
OTHER COMBINATIONS.....	.5	.6	1.0	.3	1.1	1.3	1.3	1.1
1979 FAMILY INCOME								
LESS THAN \$5,000.....	1.8	2.4	4.5	1.8	7.3	3.1	6.2	4.1
\$5,000 TO \$9,999.....	3.0	3.7	4.5	2.6	9.7	4.2	9.2	4.7
\$10,000 TO \$14,999.....	3.2	3.7	4.5	2.4	9.4	4.4	9.1	4.8
\$15,000 TO \$19,999.....	2.8	3.1	2.6	2.4	7.9	4.0	8.1	3.7
\$20,000 TO \$24,999.....	2.4	2.8	2.7	2.1	7.0	2.9	7.1	2.8
\$25,000 TO \$34,999.....	2.7	3.2	4.0	2.4	8.1	4.3	8.5	3.8
\$35,000 OR MORE.....	1.9	2.2	3.1	2.3	6.7	2.8	7.4	2.1
TOTAL POOR (100 PERCENT LEVEL) ..	1.7	2.6	4.9	1.8	7.5	3.4	6.5	4.4
TOTAL POOR (125 PERCENT LEVEL) ..	2.7	3.6	6.1	2.4	10.2	4.5	9.0	5.7
AGE OF HOUSEHOLD HEAD								
UNDER 25 YEARS.....	.9	1.9	2.5	1.3	4.8	1.9	4.7	2.0
25 TO 34 YEARS.....	4.4	5.0	6.4	4.5	13.8	6.4	14.1	6.1
35 TO 44 YEARS.....	3.2	3.4	4.8	2.6	9.2	4.9	9.8	4.2
45 TO 59 YEARS.....	4.4	4.9	5.9	3.7	13.2	5.8	13.2	5.7
60 YEARS AND OVER.....	4.7	5.9	7.3	3.9	15.1	6.7	13.8	8.0

SEE NOTIFS AT PNT OF TABLE

TABLE 1. HOUSING CHARACTERISTICS BY CENSUS REGION, AREA TYPE AND SMSA/NON-SMSA (MILLION HOUSEHOLDS) -Continued

HOUSEHOLD CHARACTERISTICS	CENSUS REGION				AREA TYPE		SMSA/NON-SMSA	
	TOTAL	NORTHEAST	SOUTH		URBAN	RURAL	SMSA	NON-SMSA
			NORTH CENTRAL	WEST				
ORIGIN								
WHITE.....	71.0	15.6	19.2	23.2	14.1	47.1	23.8	47.2
BLACK.....	9.2	2.1	1.8	4.5	.9	7.8	1.4	7.4
OTHER.....	1.4	-	.1	.2	1.0	1.1	.4	1.0
HOUSEHOLD MEMBERS								
1.....	15.7	3.5	3.5	5.3	3.4	12.1	3.6	11.0
2.....	26.8	5.5	7.2	6.7	5.4	18.8	8.0	18.3
3.....	14.9	3.1	3.7	5.4	2.8	9.7	5.2	9.9
4.....	13.4	3.1	3.5	4.3	2.4	8.6	4.7	9.1
5.....	6.8	1.6	1.9	2.2	1.2	4.4	2.4	4.7
6 OR MORE.....	4.0	.8	1.3	1.2	.8	2.4	1.6	2.5

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.

SOURCE: RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 2. HOUSING CHARACTERISTICS BY CENSUS REGION, AREA TYPE AND SMSA/NON-SMSA
(PERCENTAGE OF HOUSEHOLDS)

HOUSEHOLD CHARACTERISTICS	CENSUS REGION				AREA TYPE		SMSA/NON-SMSA		
	TOTAL	NORTHEAST	NORTH CENTRAL	SOUTH	WEST	URBAN	RURAL	SMSA	NONSMSA
TOTAL HOUSEHOLDS.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
ANNUAL HEATING DEGREE-DAYS AND COOLING DEGREE-DAYS									
<2,000 CDD AND >7,000 HDD.....	10.4	9.8	25.1	-	9.1	7.9	15.8	4.7	22.4
<2,000 CDD AND									
5,500 TO 7,000 HDD.....	25.7	44.4	55.4	-	8.9	27.3	22.0	30.5	15.2
<2,000 CDD AND									
4,000 TO 5,499 HDD.....	25.9	45.8	19.5	22.0	18.9	25.5	26.6	24.6	28.6
<2,000 CDD AND <4,000 HDD.....	23.3	-	-	37.2	56.3	23.9	21.9	24.2	21.4
>2,000 CDD AND <4,000 HDD.....	14.8	-	-	40.9	6.8	15.3	13.7	15.9	12.4
MEASURED HEATED SPACE OF RESIDENCE (IN SQ. FT.)									
LESS THAN 600.....	9.1	12.0	5.0	8.2	13.0	10.3	6.5	9.7	7.9
600 TO 999.....	25.8	21.3	24.8	28.8	27.2	26.9	23.5	25.8	26.0
1,000 TO 1,599.....	29.4	25.6	25.4	34.1	30.7	28.9	30.3	28.9	30.2
1,600 TO 1,999.....	12.3	12.0	14.3	11.7	10.8	11.5	13.8	11.9	13.0
2,000 TO 2,399.....	9.5	10.9	12.8	7.1	7.8	9.1	10.5	9.7	9.0
2,400 TO 2,999.....	7.5	8.7	5.6	6.2	5.6	7.1	8.4	7.4	7.7
3,000 OR MORE.....	6.4	9.5	8.0	4.1	4.8	6.1	7.0	6.5	6.1
TOTAL MEASURED SPACE OF RESIDENCE (IN SQ. FT.)									
LESS THAN 600.....	7.6	10.8	4.2	6.5	10.6	9.2	4.2	8.7	5.4
600 TO 999.....	22.1	16.5	20.4	25.9	24.0	23.2	19.5	22.4	21.4
1,000 TO 1,599.....	24.2	18.0	18.8	30.3	28.0	24.2	24.2	23.7	25.4
1,600 TO 1,999.....	11.8	10.9	11.8	12.2	12.2	11.4	12.9	11.7	12.2
2,000 TO 2,399.....	11.0	12.0	14.1	8.8	9.6	10.7	11.7	10.7	10.7
2,400 TO 2,999.....	11.7	13.4	16.8	8.6	8.1	10.9	13.3	10.9	13.3
3,000 OR MORE.....	11.6	18.4	13.9	7.7	7.4	10.3	14.2	11.5	11.7
UTILITIES PAID BY HOUSEHOLD									
ALL PAID BY HOUSEHOLD.....	85.0	74.6	86.6	90.2	85.7	80.1	95.8	81.6	92.4
SOME PAID, SOME INCLUDED IN RENT.....	8.1	15.5	8.8	3.6	6.5	11.2	1.4	10.7	2.5
ALL INCLUDED IN RENT.....	5.1	7.7	3.4	4.5	5.7	6.6	1.9	5.8	3.8
OTHER.....	1.8	2.2	1.2	1.8	2.1	2.1	1.1	1.9	1.5

SPE. NOTES AT END OF TABLE

TABLE 2. HOUSING CHARACTERISTICS BY CENSUS REGION, AREA TYPE AND SMSA/NON-SMSA
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	CENSUS REGION				AREA TYPE		SMSA/NON-SMSA	
		NORTH CENTRAL	SOUTH	WEST	URBAN	RURAL	SMSA	NONSMSA	
									NORTHEAST
OWN/RENT	66.5	62.9	68.6	63.3	60.7	79.4	63.0	74.1	
OWN.....	33.5	37.1	31.4	36.7	39.3	20.6	37.0	25.9	
RENT.....									
TYPE OF HOUSING STRUCTURE									
SINGLE-FAMILY DETACHD.....	64.9	49.5	72.0	62.2	59.0	77.8	59.3	76.8	
OWN.....	55.7	45.4	63.3	51.5	50.4	67.2	51.6	64.4	
RENT.....	9.2	4.1	8.7	10.7	8.6	10.6	7.7	12.4	
SINGLP-FAMILY ATTACHE.....	4.0	9.0	1.3	5.6	5.2	1.6	5.5	.9	
OWN.....	2.7	7.0	.3	3.6	3.6	1.0	3.8	.5	
RENT.....	1.3	2.0	1.0	2.0	1.6	.6	1.7	.4	
BUILDING WITH 2 TO 4 UNITS.....	12.2	18.6	13.9	10.8	15.6	4.7	14.1	8.0	
OWN.....	2.4	5.7	2.3	1.1	3.0	1.2	3.2	.8	
RENT.....	9.7	12.8	11.6	9.7	12.5	3.5	10.9	7.2	
BUILDING WITH 5 OR MORE UNITS.....	13.2	20.0	9.9	14.6	17.8	3.1	17.6	3.7	
OWN.....	1.2	2.3	.6	1.3	1.8	-	1.8	-	
RENT.....	12.0	17.7	9.3	13.3	16.0	3.1	15.8	3.7	
MOBILE HOME.....	5.7	2.8	3.0	6.8	2.4	12.8	3.4	10.6	
OWN.....	4.4	2.4	2.1	5.7	1.9	10.1	2.6	8.4	
RENT.....	1.3	.4	.9	1.1	.6	2.8	.8	2.2	
YEAR HOUSE BUILT									
1939 OR EARLIER.....	28.6	45.7	35.8	17.3	30.6	24.2	27.7	30.3	
1940 TO 1949.....	9.1	8.8	8.2	10.1	10.2	6.8	9.3	8.8	
1950 TO 1959.....	16.8	13.2	16.4	18.2	19.7	10.4	18.7	12.6	
1960 TO 1964.....	8.8	8.0	9.3	10.7	9.6	7.1	9.5	7.3	
1965 TO 1969.....	9.9	6.4	8.1	12.3	9.4	11.1	9.1	11.7	
1970 TO 1974.....	12.9	10.1	11.4	13.3	10.6	18.0	12.2	14.4	
1975 OR LATER.....	13.9	7.8	10.8	18.1	10.0	22.4	13.4	14.8	
NUMBER OF ROOMS									
1.....	.9	2.1	-	.7	1.3	.1	1.2	.3	
2.....	2.4	2.6	1.2	5.3	2.9	1.4	2.8	1.7	
3.....	9.7	10.8	9.0	10.6	11.5	5.7	10.5	7.9	
4.....	19.9	17.7	18.1	21.8	19.8	20.1	19.2	21.5	
5.....	23.1	18.7	25.6	22.5	21.7	26.1	21.8	25.7	
6.....	21.5	19.6	22.6	20.8	21.6	21.2	22.0	20.4	
7.....	11.6	14.7	11.5	9.7	10.9	13.0	11.6	11.4	
8 OR MORE.....	10.9	13.7	11.9	8.6	10.3	12.4	10.9	11.0	

SEE NOTES AT END OF TABLE

TABLE 2. HOUSING CHARACTERISTICS BY CENSUS REGION, AREA TYPE AND SMSA/NON-SMSA (PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	CENSUS REGION				AREA TYPE		SMSA/NON-SMSA	
		NORTHEAST	NORTH CENTRAL	SOUTH	WEST	URBAN	RURAL	SMSA	NONSMSA
MAIN OUTSIDE WALL MATERIAL									
WOOD.....	27.6	24.9	33.0	24.8	20.3	24.0	35.4	22.1	39.3
BRICK.....	26.8	31.9	25.2	36.0	7.8	31.0	17.7	30.6	18.7
ALUMINUM SIDING.....	13.8	14.0	15.2	13.2	7.2	10.4	21.1	11.6	18.3
STUCCO.....	11.3	3.0	2.5	4.2	44.2	14.8	3.6	15.1	3.2
COMPOSITION.....	8.4	15.1	8.6	7.4	2.2	7.6	10.1	7.5	10.3
CONCRETE.....	2.1	.4	.6	4.8	1.6	2.3	1.7	2.4	1.4
STONE.....	.9	1.8	1.0	.5	.3	.9	.9	1.0	.6
COMBINATIONS/OTHER.....	9.1	9.0	10.0	9.1	8.3	9.0	9.5	9.6	8.3
NUMBER OF COMPLETE AND HALF BATHROOMS									
1 COMPLETE.....	56.7	62.6	60.0	53.0	52.4	59.3	51.0	55.9	58.6
1 COMPLETE AND 1 HALF.....	15.8	19.6	19.0	11.9	13.8	15.9	15.5	16.1	15.0
2 COMPLETE.....	18.1	9.7	12.4	24.3	24.7	16.6	21.6	18.5	17.3
2 COMPLETE AND 1 HALF.....	4.7	4.8	4.7	4.8	4.2	4.3	5.4	5.4	3.2
3 COMPLETE.....	1.7	.4	1.0	2.4	3.2	1.9	1.5	1.8	1.7
OTHER COMBINATIONS.....	2.9	3.0	3.0	3.6	1.7	2.0	5.0	2.3	4.2
1979 FAMILY INCOME									
LESS THAN \$5,000.....	12.7	9.9	11.2	16.7	11.0	13.0	12.0	11.2	15.9
\$5,000 TO \$9,999.....	17.0	17.0	17.5	16.8	16.5	17.2	16.4	16.5	17.9
\$10,000 TO \$14,999.....	16.9	18.2	17.4	16.7	15.3	16.9	17.1	16.3	18.3
\$15,000 TO \$19,999.....	14.5	15.6	14.8	13.4	14.8	14.0	15.6	14.6	14.3
\$20,000 TO \$24,999.....	12.2	13.5	13.4	9.9	12.9	12.6	11.3	12.8	10.9
\$25,000 TO \$34,999.....	15.1	15.3	15.3	14.8	15.3	14.4	16.7	15.3	14.8
\$35,000 OR MORE.....	11.6	10.5	10.4	11.5	14.2	11.9	10.9	13.3	8.0
TOTAL POOR (100 PERCENT LEVEL)...	13.3	9.6	12.1	18.0	11.2	13.3	13.4	11.7	16.8
TOTAL POOR (125 PERCENT LEVEL)...	18.1	15.4	17.1	22.5	14.9	18.3	17.7	16.2	22.1
AGE OF HOUSEHOLD HEAD									
UNDER 25 YEARS.....	8.1	5.2	9.0	9.4	8.2	8.5	7.2	8.4	7.5
25 TO 34 YEARS.....	24.7	24.6	23.5	23.6	28.3	24.7	24.9	25.3	23.6
35 TO 44 YEARS.....	17.2	18.2	16.4	17.8	16.4	16.3	19.2	17.7	16.3
45 TO 59 YEARS.....	23.2	25.1	23.4	21.9	22.9	23.5	22.5	23.8	21.9
60 YEARS AND OVER.....	26.7	26.8	27.8	27.3	24.2	26.9	26.2	24.8	30.8

SEE NOTES AT END OF TABLE

TABLE 2. HOUSING CHARACTERISTICS BY CENSUS REGION, AREA TYPE AND SMSA/NON-SMSA
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	CENSUS REGION				AREA TYPE		SMSA/NON-SMSA	
		NORTHEAST	MIDWEST	SOUTH	WEST	URBAN	RURAL	SMSA	NONSMSA
ORIGIN									
WHITE.....	86.9	88.0	90.9	82.4	88.1	84.1	93.1	84.9	91.3
BLACK.....	11.3	11.7	8.4	16.7	5.5	14.0	5.4	13.3	7.1
OTHER.....	1.8	.3	.7	.9	6.4	1.9	1.5	1.8	1.6
HOUSEHOLD MEMBERS									
1.....	19.3	20.1	16.6	19.5	21.5	21.6	14.2	19.9	18.0
2.....	32.8	31.0	34.2	32.3	31.7	33.5	31.2	32.9	32.5
3.....	18.2	17.4	17.5	19.9	17.3	17.3	20.3	17.9	19.0
4.....	16.4	17.8	16.6	16.1	15.1	15.4	18.5	16.3	16.6
5.....	8.4	9.3	9.0	8.0	7.3	7.9	9.4	8.5	8.1
6 OR MORE.....	5.0	4.4	6.1	4.3	5.2	4.3	6.4	4.6	5.8

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A CASE "X" REPRESENTS OR ROUNDES TO ZERO. PERCENTAGES ARE CALCULATED ON UNPOUNDED NUMBERS. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.
SOURCE: RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 3. HOUSING CHARACTERISTICS BY HOUSING STRUCTURE AND NUMBER OF STORIES (MILLION HOUSEHOLDS)

HOUSEHOLD CHARACTERISTICS	HOUSING STRUCTURE BY NUMBER OF STORIES										OTHER HOUSING STRUCTURES
	TOTAL	SINGLE-FAMILY DETACHED					OTHER/NOT REPORTED	TOTAL	OTHER HOUSING STRUCTURES		
		1-STORY		2-STORY		TOTAL					
		WITH BASEMENT	WITHOUT BASEMENT	WITH BASEMENT	WITHOUT BASEMENT						
TOTAL HOUSEHOLDS.....	81.6	10.4	23.9	10.6	3.7	4.5	28.7				
CENSUS REGION											
NORTHEAST.....	17.7	2.3	.5	3.8	.7	1.4	8.9				
NORTH CENTRAL.....	21.1	4.9	3.1	4.7	.8	1.7	5.9				
SOUTH.....	27.0	2.1	13.7	1.3	1.3	.8	7.8				
WEST.....	16.0	1.1	6.6	.8	.9	.6	6.0				
ANNUAL HEATING DEGREE-DAYS AND COOLING DEGREE-DAYS											
<2,000 HDD AND >7,000 HDD.....	6.5	2.1	.6	2.7	.2	.6	2.2				
<2,000 HDD AND 5,500 TO 7,000 HDD.....	20.9	3.9	2.4	4.4	.8	1.9	7.6				
<2,000 HDD AND 4,000 TO 5,499 HDD.....	21.1	3.0	3.4	3.0	1.3	1.4	9.0				
<2,000 HDD AND <4,000 HDD.....	19.0	1.3	9.4	.4	1.1	.5	6.3				
>2,000 HDD AND <4,000 HDD.....	12.1	.1	8.1	.1	.3	.2	3.5				
MEASURED HEATED SPACE OF RESIDENCE (IN SQ. FT.)											
LESS THAN 600.....	7.5	.2	1.3	.1	.1	.1	5.7				
600 TO 999.....	21.1	1.3	5.5	.5	.3	.2	13.3				
1,000 TO 1,599.....	24.0	3.1	10.2	2.2	1.0	.7	6.8				
1,600 TO 1,999.....	10.0	1.7	3.6	2.0	.8	.8	1.2				
2,000 TO 2,399.....	7.8	1.6	1.9	1.8	.5	1.0	.8				
2,400 TO 2,999.....	6.1	1.4	1.0	1.8	.5	.9	.6				
3,000 OR MORE.....	5.2	1.0	.5	2.1	.5	.8	.3				
TOTAL MEASURED SPACE OF RESIDENCE (IN SQ. FT.)											
LESS THAN 600.....	6.2	.8	.7	.1	.1	.1	5.4				
600 TO 999.....	18.0	.2	4.7	.6	.1	.1	12.8				
1,000 TO 1,599.....	19.8	1.4	9.9	.6	.9	.3	6.6				
1,600 TO 1,999.....	5.7	1.9	3.7	1.1	.8	.6	1.5				
2,000 TO 2,399.....	5.0	2.1	2.6	1.9	.6	.9	.9				
2,400 TO 2,999.....	5.5	2.4	1.5	3.3	.5	1.0	.8				
3,000 OR MORE.....	5.4	2.4	.7	3.7	.7	1.5	.5				

SEE NOTES AT END OF TABLE

TABLE 3. HOUSING CHARACTERISTICS BY HOUSING STRUCTURE AND NUMBER OF STORIES
(MILLION HOUSEHOLDS) -Continued

HOUSEHOLD CHARACTERISTICS	HOUSING STRUCTURE BY NUMBER OF STORIES								OTHER HOUSING STRUCTURES	
	TOTAL	SINGLE-FAMILY DETACHED								OTHER/NCT REPORTED
		1-STORY		2-STORY		WITH BASEMENT	WITHOUT BASEMENT			
		WITH BASEMENT	WITHOUT BASEMENT	WITH BASEMENT	WITHOUT BASEMENT					
TOTAL	65.4	10.3	23.6	10.5	3.7	4.4	17.0			
UTILITIES PAID BY HOUSEHOLD	52.4									
ALL PAID BY HOUSEHOLD.....										
SOME PAID, SOME INCLUDED IN RENT.....	.1									
ALL INCLUDED IN RENT.....	.2									
OTHER.....	.3	.1	.1	.1		.1	1.2			
OWN/RENT	54.3	9.4	19.6	9.3	3.0	4.1	8.9			
OWN.....	27.3	1.0	4.3	1.3	.6	.4	19.8			
RENT.....										
YEAR HOUSE BUILT	14.8	2.5	4.2	5.2	1.4	1.5	8.5			
1939 OR EARLIER.....	5.4	1.1	2.5	1.1	.3	.4	2.0			
1940 TO 1949.....	11.3	2.4	6.2	1.6	.4	.7	2.4			
1950 TO 1959.....	7.2	1.1	2.4	.8	.2	.4	2.2			
1960 TO 1964.....	4.9	1.0	2.6	.5	.3	.4	3.2			
1965 TO 1969.....	5.1	1.4	2.5	.5	.4	.4	5.4			
1970 TO 1974.....	6.5	.9	3.4	.9	.6	.7	4.8			
1975 OR LATER.....										
NUMBER OF ROOMS	8.4	1.0	1.4	3.2	1.2	1.6	.5			
1.....	.7									
2.....	2.0		.1				1.8			
3.....	7.5		.7				6.6			
4.....	16.3	1.3	4.1	.6	.3	.2	9.7			
5.....	18.8	3.6	7.6	1.4	.5	.5	5.2			
6.....	17.6	2.8	7.2	2.7	.8	1.0	3.1			
7.....	5.5	1.5	2.7	2.3	.9	1.1	1.0			
8 OR MORE.....	8.9	1.0	1.4	3.2	1.2	1.6	.5			

SEE NOTES AT END OF TABLE

TABLE 3. HOUSING CHARACTERISTICS BY HOUSING STRUCTURE AND NUMBER OF STORIES
(MILLION HOUSEHOLDS) -Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	HOUSING STRUCTURE BY NUMBER OF STORIES							OTHER HOUSING STRUCTURES
		SINGLE-FAMILY DETACHED							
		1-STORY		2-STORY		OTHER/NOT REPORTED			
		WITH BASEMENT	WITHOUT BASEMENT	WITH BASEMENT	WITHOUT BASEMENT	OTHER/NOT REPORTED	OTHER/NOT REPORTED		
MAIN OUTSIDE WALL MATERIAL									
WOOD.....	22.5	3.4	7.5	4.1	1.5	1.4	4.7		
BRICK.....	21.9	2.3	6.2	1.4	.4	1.2	10.4		
ALUMINUM SIDING.....	11.2	1.6	1.5	2.0	.5	.6	5.1		
STUCCO.....	9.2	.5	3.5	.5	.4	.2	4.2		
COMPOSITION.....	6.8	1.2	2.0	1.1	.6	.6	1.4		
CONCRETE.....	1.7	-	.9	-	.1	-	.7		
STONE.....	.7	.2	.1	.2	-	.1	.1		
COMBINATIONS/OTHER.....	7.5	1.1	2.2	1.3	.3	.5	2.1		
NUMBER OF COMPLETE AND HALF BATHROOMS									
1 COMPLETE.....	46.3	5.2	12.1	4.2	1.3	1.3	22.1		
1 COMPLETE AND 1 HALF.....	12.5	2.5	3.2	2.5	.4	1.1	3.2		
2 COMPLETE.....	14.8	1.8	6.7	1.9	.8	1.0	2.7		
2 COMPLETE AND 1 HALF.....	3.8	.6	.7	1.1	.5	.6	.3		
3 COMPLETE.....	1.4	.2	.4	.2	.4	.2	.1		
OTHER COMBINATIONS.....	2.4	.1	.8	.6	.3	.4	.2		
1979 FAMILY INCOME									
LESS THAN \$5,000.....	10.4	.7	3.1	.6	.3	.3	5.3		
\$5,000 TO \$9,999.....	13.5	1.5	3.5	1.4	.5	.3	6.7		
\$10,000 TO \$14,999.....	13.8	1.6	4.1	1.3	.5	.5	5.9		
\$15,000 TO \$19,999.....	11.9	1.7	3.4	1.4	.4	.8	4.2		
\$20,000 TO \$24,999.....	9.5	1.5	3.2	1.7	.4	.7	2.4		
\$25,000 TO \$34,999.....	12.4	2.1	3.8	2.1	.7	.9	2.8		
\$35,000 OR MORE.....	9.4	1.4	2.8	1.9	.9	1.0	1.5		
TOTAL POOR (100 PERCENT LEVEL) ..	10.9	.6	3.4	.8	.5	.4	5.3		
TOTAL POOR (125 PERCENT LEVEL) ..	14.8	1.1	4.6	1.2	.5	.5	6.9		

SEE NOTES AT END OF TABLE

TABLE 3. HOUSING CHARACTERISTICS BY HOUSING STRUCTURE AND NUMBER OF STORIES
(MILLION HOUSEHOLDS) -Continued

HOUSEHOLD CHARACTERISTICS	HOUSING STRUCTURE BY NUMBER OF STORIES								OTHER HOUSING STRUCTURES
	TOTAL	SINGLE-FAMILY DETACHED						OTHER/NOT REPORTED	
		1-STORY		2-STORY		WITHOUT BASEMENT			
		WITH BASEMENT	WITHOUT BASEMENT	WITH BASEMENT	WITHOUT BASEMENT				
AGE OF HOUSEHOLD HEAD									
UNDER 25 YEARS.....	6.6	0.2	1.2	0.2	0.1	0.1	0.1	0.1	4.7
25 TO 34 YEARS.....	20.2	1.9	5.6	2.3	.8		1.1	1.1	8.4
35 TO 44 YEARS.....	14.1	2.0	4.0	2.0	.9		1.2	1.2	3.9
45 TO 59 YEARS.....	18.9	3.0	5.8	3.1	.9		1.2	1.2	5.0
60 YEARS AND OVER.....	21.8	3.3	7.1	3.0	.9		.9	.9	6.6
TOTAL									
	47.6	9.8	20.1	10.0	3.5		4.2	4.2	23.4
ORIGIN									
WHITE.....	9.2	.5	3.2	.5	.2		.3	.3	4.7
BLACK.....	1.4	.1	.5	.1	-		.1	.1	.6
OTHER.....									
HOUSEHOLD MEMBERS									
1.....	15.7	1.5	3.7	1.1	.3		.2	.2	8.9
2.....	26.8	3.7	8.1	3.1	.9		1.4	1.4	9.6
3.....	14.9	1.8	4.8	2.0	.7		.8	.8	4.8
4.....	13.4	1.9	4.1	2.3	.9		1.1	1.1	3.1
5.....	6.8	.9	2.2	1.2	.5		.7	.7	1.3
6 OR MORE.....	4.0	.6	1.1	.8	.3		.3	.3	.9

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.

SOURCE: RESIDENTIAL AND COMMERCIAL ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 4. HOUSING CHARACTERISTICS BY HOUSING STRUCTURE AND NUMBER OF STORIES
(PERCENTAGE OF HOUSEHOLDS)

HOUSEHOLD CHARACTERISTICS	TOTAL	HOUSING STRUCTURE BY NUMBER OF STORIES										OTHER HOUSING STRUCTURES
		SINGLE-FAMILY DETACHED										
		TOTAL	1-STORY		2-STORY		OTHER/NOT REPORTED					
			WITH BASEMENT	WITHOUT BASEMENT	WITH BASEMENT	WITHOUT BASEMENT						
TOTAL HOUSEHOLDS.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
CENSUS REGION												
NORTHEAST.....	21.6	16.5	21.8	2.3	35.8	20.0	31.7	31.1	20.6	31.7	31.7	31.1
NORTH CENTRAL.....	25.8	28.6	47.1	12.8	44.8	21.2	38.0	20.6	27.2	38.0	38.0	20.6
SOUTH.....	33.0	36.1	20.6	57.2	12.2	35.6	17.0	27.2	21.0	17.0	17.0	27.2
WEST.....	19.5	18.7	10.6	27.7	7.3	23.2	13.3	21.0	21.0	13.3	13.3	21.0
ANNUAL HEATING DEGREE-DAYS AND COOLING DEGREE-DAYS												
<2,000 CED AND >7,000 HDD.....	10.4	11.8	20.5	2.3	25.9	6.7	12.5	7.8	7.8	12.5	12.5	7.8
<2,000 CED AND 5,500 TO 7,000 HDD.....	25.7	25.3	37.6	10.1	41.7	20.9	41.8	26.4	26.4	41.8	41.8	26.4
<2,000 CED AND 4,000 TO 5,499 HDD.....	25.5	22.9	29.3	14.3	28.1	35.1	31.1	31.5	31.5	31.1	31.1	31.5
>2,000 CED AND <4,000 HDD.....	23.5	23.9	12.1	39.5	3.7	30.1	11.2	22.1	22.1	11.2	11.2	22.1
>2,000 CED AND <4,000 HDD.....	14.8	16.2	5.5	33.8	5.5	7.2	3.4	12.2	12.2	3.4	3.4	12.2
MEASURED HEATED SPACE OF RESIDENCE (IN SQ. FT.)												
LESS THAN 600.....	9.1	3.4	2.2	5.4	.9	1.4	2.7	19.8	19.8	2.7	2.7	19.8
600 TO 999.....	25.8	14.7	12.4	22.9	4.8	9.4	4.1	46.4	46.4	4.1	4.1	46.4
1,000 TO 1,599.....	29.4	32.3	29.7	42.8	20.6	26.3	15.4	23.9	23.9	15.4	15.4	23.9
1,600 TO 1,999.....	12.3	16.7	16.2	14.9	18.8	21.0	18.7	4.1	4.1	18.7	18.7	4.1
2,000 TO 2,399.....	9.5	13.2	15.9	8.0	18.3	14.6	21.6	2.7	2.7	21.6	21.6	2.7
2,400 TO 2,999.....	7.5	10.5	13.7	4.0	16.6	13.7	20.3	2.1	2.1	20.3	20.3	2.1
3,000 OR MORE.....	6.4	9.3	10.0	2.0	20.0	13.6	17.2	1.1	1.1	17.2	17.2	1.1

SEE NOTES AT END OF TABLE

TABLE 4. HOUSING CHARACTERISTICS BY HOUSING STRUCTURE AND NUMBER OF STORIES
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	HOUSING STRUCTURE BY NUMBER OF STORIES										OTHER HOUSING STRUCTURES	
	TOTAL	SINGLE-FAMILY DETACHMT										
		1-STORY		2-STORY		OTHER/NCT REPORTED						
		WITH BASEMENT	WITHOUT BASEMENT	WITH BASEMENT	WITHOUT BASEMENT	WITH BASEMENT	WITHOUT BASEMENT					
TOTAL	7.6	1.6	0.1	3.1	-	0.1	2.3	18.8				
TOTAL MEASURED SPACE OF RESIDENCE (IN SQ. FT.)	22.1	9.8	2.2	19.7	0.3	3.8	1.3	44.8				
LESS THAN 600.....	24.2	24.7	13.1	41.7	5.8	23.5	7.5	23.2				
600 TO 999.....	11.8	15.4	18.1	15.6	10.7	22.2	13.8	5.2				
1,000 TO 1,999.....	11.0	15.2	20.1	11.0	17.7	16.5	19.3	3.3				
2,000 TO 2,999.....	11.7	16.4	23.4	6.1	30.8	14.9	22.8	2.8				
3,000 OR MORE.....	11.6	16.8	23.0	2.8	34.6	18.9	33.0	1.9				
UTILITIES PAID BY HOUSEHOLD	85.0	98.9	99.2	98.9	99.1	99.5	97.7	59.3				
ALL PAID BY HOUSEHOLD.....	8.1	.2	-	.3	.2	-	-	22.7				
SOME PAID, SOME INCLUDED IN RENT.....	5.1	.4	.3	.6	.1	.1	.7	13.9				
ALL INCLUDED IN RENT.....	1.8	.6	.6	.3	.6	.4	1.9	4.0				
OTHER.....												
OWN/RENT	66.5	85.8	90.8	82.1	88.0	82.5	91.6	30.9				
OWN.....	33.5	14.2	9.2	17.9	12.0	17.5	8.4	69.1				
RENT.....												
YEAR HOUSE BUILT	28.6	28.0	24.2	17.7	49.5	36.8	32.9	29.7				
1939 OR EARLIER.....	9.1	10.3	10.5	10.7	10.1	8.8	8.9	7.1				
1940 TO 1949.....	16.8	21.3	23.4	26.1	14.9	11.4	14.8	8.4				
1950 TO 1959.....	8.8	9.3	10.4	10.2	7.4	6.5	9.3	7.8				
1960 TO 1969.....	5.9	9.2	9.8	10.8	4.7	9.3	9.4	11.3				
1970 TO 1974.....	12.9	9.7	13.1	10.4	4.6	9.6	9.5	18.9				
1975 OR LATER.....	13.5	12.3	8.5	14.1	8.7	17.6	15.3	16.8				

SEE NOTES AT END OF TABLE

TABLE 4. HOUSING CHARACTERISTICS BY HOUSING STRUCTURE AND NUMBER OF STORIES
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	HOUSING STRUCTURE BY NUMBER OF STORIES							OTHER HOUSING STRUCTURES
	TOTAL	SINGLE-FAMILY DETACHED			OTHER/INCT REPORTED	OTHER HOUSING STRUCTURES		
		1-STORY	2-STORY	OTHER/INCT REPORTED				
		WITH BASEMENT	WITHOUT BASEMENT	WITH BASEMENT	WITHOUT BASEMENT			
NUMBER OF ROOMS								
1.....	0.1	-	0.1	-	-	0.2	2.5	
2.....	2.4	0.1	0.6	-	0.4	0.8	6.3	
3.....	9.7	2.2	3.1	2.3	1.2	1.2	23.0	
4.....	19.9	12.3	17.3	6.1	9.4	4.1	33.8	
5.....	23.1	34.3	31.8	13.7	12.5	12.0	18.2	
6.....	21.5	27.0	30.1	25.5	21.2	21.5	10.9	
7.....	11.6	14.4	11.3	22.2	23.2	24.6	3.4	
8 CP MCRF.....	10.9	9.8	5.8	30.2	32.1	35.6	1.9	
MAIN OUTSIDE WALL MATERIAL								
WOOD.....	27.6	33.0	31.6	38.8	39.8	30.3	16.3	
BRICK.....	26.8	22.6	25.9	13.6	10.1	26.0	36.3	
ALUMINUM SIDING.....	13.8	15.7	6.3	18.7	13.1	13.1	17.6	
STUCCO.....	11.3	4.4	14.6	4.3	11.0	5.1	14.6	
COMPOSITION.....	8.4	11.7	8.4	10.3	15.2	13.1	4.8	
CONCRETE.....	4.1	2.2	3.7	2.2	2.0	0.6	2.5	
STONE.....	0.5	1.1	0.3	1.5	1.1	1.3	0.5	
COMBINATICS/OTHER.....	9.1	10.3	9.2	12.7	7.7	10.5	7.4	
NUMBER OF COMPLETE AND HALF BATHROOMS								
1 COMPLETE.....	56.7	50.3	50.8	40.1	35.9	29.6	77.1	
1 COMPLETE AND 1 HALF.....	15.8	23.8	13.4	23.6	11.7	23.9	11.2	
2 COMPLETE.....	18.1	17.5	27.9	18.0	20.4	21.2	9.5	
2 COMPLETE AND 1 HALF.....	4.7	5.6	3.0	10.0	13.3	13.6	1.2	
3 COMPLETE.....	1.7	1.7	1.6	2.3	10.7	3.8	0.2	
OTHER COMBINATICS.....	2.9	1.2	3.2	6.0	7.9	7.9	0.8	

SEE NOTES AT END OF TABLE

TABLE 4. HOUSING CHARACTERISTICS BY HOUSING STRUCTURE AND NUMBER OF STORIES
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	HOUSING STRUCTURE BY NUMBER OF STORIES							OTHER HOUSING STRUCTURES
	TOTAL	SINGLE-FAMILY DETACHED				OTHER/NCT REPORTED		
		1-STORY		2-STORY				
		WITH BASEMENT	WITHOUT BASEMENT	WITH BASEMENT	WITHOUT BASEMENT			
1979 FAMILY INCOME								
LESS THAN \$5,000.....	12.7	6.5	13.0	6.1	8.8	7.4	18.5	
\$5,000 TO \$9,999.....	17.0	14.1	14.6	13.3	14.2	7.3	23.2	
\$10,000 TO \$14,999.....	16.5	15.0	17.3	12.5	12.5	10.1	20.6	
\$15,000 TO \$19,999.....	14.5	16.2	14.2	13.4	12.1	17.2	14.5	
\$20,000 TO \$24,999.....	12.2	14.7	13.2	16.5	10.7	15.6	8.4	
\$25,000 TO \$34,999.....	15.1	19.9	15.9	20.3	18.0	20.8	9.7	
\$35,000 OR MORE.....	11.6	13.5	11.8	18.1	23.7	21.5	5.2	
TOTAL POOR (100 PERCENT LEVEL)...	12.3	5.9	14.1	7.3	12.5	8.7	18.5	
TOTAL POOR (125 PERCENT LEVEL)...	18.1	10.6	19.4	10.9	14.8	10.7	24.0	
AGE OF HOUSEHOLD HEAD								
UNDER 25 YEARS.....	8.1	2.3	5.2	2.3	3.7	3.1	16.3	
25 TO 34 YEARS.....	24.7	18.4	23.6	21.3	22.3	25.0	29.4	
35 TO 44 YEARS.....	17.2	18.9	16.8	19.2	25.0	27.4	13.7	
45 TO 59 YEARS.....	23.2	28.7	24.5	29.0	24.5	25.5	17.5	
60 YEARS AND OVER.....	26.7	31.6	30.0	28.2	24.5	19.0	23.1	
ORIGIN								
WHITE.....	86.9	94.6	84.5	95.0	94.2	92.1	81.5	
BLACK.....	11.3	4.4	13.2	4.4	5.1	6.7	16.2	
OTHER.....	1.8	1.0	2.3	.6	.7	1.2	2.2	
HOUSEHOLD MEMBERS								
1.....	19.3	14.5	15.3	10.1	9.2	5.1	31.2	
2.....	32.8	35.4	31.9	29.5	24.6	30.5	33.5	
3.....	18.2	17.3	20.0	19.4	18.2	18.8	16.6	
4.....	16.4	18.2	17.1	21.5	25.6	24.1	10.8	
5.....	8.4	8.7	9.2	11.5	14.4	15.0	4.6	
6 OR MORE.....	5.0	5.8	4.5	8.0	7.9	6.5	3.3	

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. PERCENTAGES ARE CALCULATED ON UNROUNDED NUMBERS. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.

SOURCE: RESIDENTIAL AND COMMERCIAL ENERGY, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 5. HOUSING CHARACTERISTICS BY HOUSING STRUCTURE AND OWNERSHIP
(MILLION HOUSEHOLDS)

HOUSEHOLD CHARACTERISTICS	HOUSING STRUCTURE BY OWNERSHIP															
	SINGLE-FAMILY DETACHED			SINGLE-FAMILY ATTACHED			BUILDING WITH 2 TO 4 UNITS			BUILDING WITH 5 OR MORE UNITS			MOBILE HOME			
	TOTAL	OWN	RENT	TOTAL	CWN	RENT	TOTAL	OWN	RENT	TOTAL	OWN	RENT	TOTAL	CWN	RENT	
TOTAL HOUSEHOLDS.....	81.6	53.0	45.5	7.5	3.3	2.2	1.1	9.9	2.0	7.5	10.8	1.0	9.8	4.6	3.6	1.0
ANNUAL HEATING DEGREE-DAYS AND COOLING DEGREE-DAYS																
<2,000 CDD AND >7,000 HDD.....	8.5	6.2	5.6	.6	.1	-	.1	.9	.2	.8	.7	.1	.6	.5	.4	.1
<2,000 CDD AND 5,500 TO 7,000 HDD.....	20.9	13.4	11.7	1.7	.3	.2	.1	3.6	.8	2.7	2.9	.3	2.6	.8	.6	.2
<2,000 CDD AND <2,000 CDD.....	21.1	12.1	10.6	1.5	1.9	1.4	.5	2.6	.6	2.0	3.5	.3	3.2	1.0	.8	.2
<2,000 CDD AND <4,000 HDD.....	19.0	12.7	10.4	2.3	.8	.6	.3	1.9	.2	1.7	2.3	.2	2.1	1.3	1.0	.3
>2,000 CDD AND <4,000 HDD.....	12.1	8.6	7.1	1.4	.1	-	-	1.0	.2	.8	1.4	.1	1.2	1.1	.8	.3
MEASURED HEATED SPACE OF RESIDENCE (IN SQ. FT.)																
LESS THAN 600.....	7.5	1.8	.9	.9	.2	-	.1	1.7	.1	1.6	2.8	.1	2.7	1.0	.7	.3
600 TO 999.....	21.1	7.8	5.5	2.3	.6	.2	.4	4.3	.4	3.9	5.6	.3	5.4	2.7	2.1	.6
1,000 TO 1,599.....	24.0	17.1	14.7	2.4	1.1	.8	.3	3.0	.9	2.1	1.9	.4	1.5	.8	.7	.2
1,600 TO 1,999.....	10.0	8.8	7.9	.9	.5	.4	.1	.3	.1	.2	.2	.1	.1	.1	.1	-
2,000 TO 2,399.....	7.8	7.0	6.6	.3	.4	.3	.1	.3	.2	.1	.1	.1	-	.1	.1	-
2,400 TO 2,999.....	6.1	5.5	5.2	.4	.4	.3	.1	.2	.1	-	-	-	-	-	-	-
3,000 OR MORE.....	5.2	4.9	4.6	.3	.1	.1	.1	.2	.1	.1	-	-	-	-	-	-
TOTAL MEASURED SPACE OF RESIDENCE (IN SQ. FT.)																
LESS THAN 600.....	6.2	.8	.4	.5	.1	-	.1	1.6	.1	1.5	2.8	.1	2.6	.9	.7	.2
600 TO 999.....	18.0	5.2	3.4	1.8	.4	.1	.3	4.1	.4	3.7	5.6	.3	5.3	2.7	2.1	.6
1,000 TO 1,599.....	19.8	13.1	10.9	2.2	.7	.5	.2	3.0	.9	2.1	2.1	.4	1.7	.9	.7	.1
1,600 TO 1,999.....	9.7	8.2	7.1	1.0	.8	.6	.2	.4	.1	.2	.2	.1	.1	.1	.1	-
2,000 TO 2,399.....	9.0	8.1	7.3	.7	.6	.4	.1	.3	.1	.2	.1	.1	-	-	-	-
2,400 TO 2,999.....	9.5	8.7	8.0	.8	.5	.4	.1	.3	.2	.1	-	-	-	-	-	-
3,000 OR MORE.....	9.4	8.9	8.4	.5	.2	.2	.1	.3	.2	.1	-	-	-	-	-	-

SEE NOTES AT END OF TABLE

TABLE 5. HOUSING CHARACTERISTICS BY HOUSING STRUCTURE AND OWNERSHIP
(MILLION HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	HOUSING STRUCTURE BY OWNERSHIP															
	SINGLE-FAMILY DETACHED			SINGLE-FAMILY ATTACHED			BUILDING WITH 2 TO 4 UNITS			BUILDING WITH 5 OR MORE UNITS			POPULAR HOME			
	TOTAL	OWN	RENT	TOTAL	OWN	RENT	TOTAL	OWN	RENT	TOTAL	OWN	RENT		TOTAL	OWN	RENT
UTILITIES PAID BY HOUSEHOLD	69.4	52.4	45.4	7.0	3.1	2.2	0.9	6.2	2.0	4.2	3.7	0.5	3.2	4.0	3.2	0.8
ALL PAID BY HOUSEHOLD	6.6	.1	-	.1	-	-	-	2.3	-	2.3	4.0	-	4.0	.2	.1	.1
SOME PAID, SOME INCLUDED IN RENT	4.2	.2	-	.2	.1	-	.1	1.3	-	1.3	2.3	-	2.3	.3	.1	.1
ALL INCLUDED IN RENT	1.5	.3	.1	.2	-	-	-	.2	-	.2	.7	.5	.2	.2	.2	-
OTHER	23.3	14.8	11.8	3.0	1.5	1.1	.4	4.8	1.1	3.6	2.1	.1	2.0	.1	-	-
YEAR HOUSE BUILT	7.5	5.4	4.3	1.1	.3	.2	.1	1.1	.2	.9	.7	-	.6	-	-	-
1940 TO 1949	13.7	11.3	9.8	1.5	.3	.2	.1	1.1	.2	.9	.7	.1	.6	.3	.2	.1
1950 TO 1959	7.2	4.9	4.4	.6	.1	.1	.1	.7	.1	.6	1.0	.1	1.0	.4	.3	.1
1960 TO 1964	8.1	4.9	4.5	.4	.1	.1	.1	.8	.1	.7	1.5	.1	1.4	.9	.6	.3
1965 TO 1969	10.5	5.1	4.8	.3	.5	.3	.2	.5	.1	.5	2.6	.4	2.1	1.8	1.5	.3
1970 TO 1974	11.3	6.5	6.0	.6	.4	.3	.1	1.0	.2	.8	2.2	.2	2.0	1.2	1.1	.2
1975 OR LATER	.7	.2	.1	-	-	-	-	.2	-	.2	.5	-	.5	-	-	-
NUMBER OF ROOMS	2.0	1.3	.8	.5	.1	.1	.1	.5	-	.5	1.0	-	1.0	.3	.2	.1
1	7.9	6.6	4.7	1.9	.5	.2	.3	3.2	.4	2.8	4.1	.5	3.6	1.9	1.5	.4
2	16.3	13.6	11.5	2.1	.7	.4	.3	2.2	.6	1.6	1.1	.2	.9	1.2	.9	.2
3	17.6	14.4	13.0	1.4	1.1	.9	.2	1.4	.5	.9	.3	.1	.2	.3	.2	.1
4	9.5	8.5	7.7	.8	.5	.5	-	.4	.2	.1	-	-	-	.1	-	-
5	8.9	8.4	7.7	.7	.3	.2	.1	.2	.1	.1	-	-	-	-	-	-
6 OR MORE	22.5	17.9	14.3	3.6	.4	.2	.2	2.9	.6	2.4	1.1	.1	1.1	.1	.1	-
MAIN OUTSIDE WALL MATERIAL	21.9	11.5	10.6	.9	1.2	.9	.3	3.3	.5	2.8	6.0	.4	5.6	-	-	-
WOOD	11.2	6.2	5.5	.7	.3	.2	.1	.4	.1	.4	.2	-	.2	4.2	3.2	.9
BRICK	9.2	5.0	4.3	.7	.7	.5	.2	1.4	.2	1.2	2.0	.3	1.7	-	-	-
ALUMINUM SIDING	6.8	5.5	4.5	1.0	.3	.2	.2	.8	.3	.5	.2	.1	.2	-	-	-
STUCCO	1.7	1.0	.8	.2	.3	.2	.2	.3	.3	.3	.4	.1	.3	-	-	-
COMPOSITION	.7	.6	.5	-	.1	.1	-	-	-	-	-	-	-	-	-	-
CONCRETE	7.5	5.4	4.9	.4	.3	.2	.1	.8	.3	.4	.8	.1	.7	.3	.2	.1
STONE																
COMBINATIONS/OTHER																

SEE NOTES AT END OF TABLE

TABLE 5. HOUSING CHARACTERISTICS BY HOUSING STRUCTURE AND OWNERSHIP
(MILLION HOUSEHOLDS) -Continued

HOUSEHOLD CHARACTERISTICS	HOUSING STRUCTURE BY OWNERSHIP														
	SINGLE-FAMILY DETACHED			SINGLE-FAMILY ATTACHED			BUILDING WITH 2 TO 4 UNITS			BUILDING WITH 5 OR MORE UNITS			MOBILE HOME		
	TOTAL	OWN	RENT	TOTAL	CWN	RENT	TOTAL	OWN	RENT	TOTAL	CWN	RENT	TOTAL	OWN	RENT
NUMBER OF COMPLETE AND HALF BATHROOMS															
1 COMPLETE.....	46.3	24.2	18.9	5.3	2.0	1.3	0.7	8.4	1.2	7.2	8.5	0.3	8.1	3.2	2.4
1 COMPLETE AND 1 HALF.....	12.9	9.7	9.0	.7	.7	.5	.2	.6	.2	.4	1.3	.2	1.0	.6	.5
2 COMPLETE.....	14.8	12.1	11.3	.8	.4	.3	.1	.7	.4	.3	.8	.3	.5	.7	.6
2 COMPLETE AND 1 HALF.....	3.8	3.5	3.3	.1	.1	.1	-.1	.1	.1	-.1	.2	.1	.1	-.1	-.1
3 COMPLETE.....	1.4	1.4	1.3	.1	.1	.1	-.1	.1	.1	-.1	.1	-.1	-.1	-.1	-.1
OTHER COMBINATIONS.....	2.4	2.2	1.7	.5	.1	.1	-.1	.1	.1	-.1	.1	-.1	-.1	-.1	-.1
1979 FAMILY INCOME															
LESS THAN \$5,000.....	10.4	5.1	3.7	1.4	.4	.1	.3	2.1	.2	1.9	2.0	.1	1.9	.7	.5
\$5,000 TO \$9,999.....	13.9	7.2	5.8	1.4	.5	.3	.2	2.7	.3	2.3	2.4	.2	2.2	1.1	.9
\$10,000 TO \$14,999.....	13.8	7.9	6.2	1.7	.7	.5	.2	2.0	.4	1.6	2.3	.1	2.2	.9	.7
\$15,000 TO \$19,999.....	11.9	7.7	6.8	.9	.5	.3	.2	1.3	.4	.9	1.6	.2	1.4	.7	.6
\$20,000 TO \$24,999.....	9.9	7.5	6.8	.7	.5	.4	.1	.8	.3	.5	.7	.1	.7	.4	.4
\$25,000 TO \$34,999.....	12.4	5.6	8.6	1.0	.5	.4	.1	.7	.2	.5	1.0	.2	.9	.5	.4
\$35,000 OR MORE.....	9.4	8.0	7.6	.4	.3	.2	.1	.3	.1	.2	.7	.2	.5	.2	.1
TOTAL POOR (100 PERCENT LEVEL)...	10.9	5.6	3.7	1.9	.5	.1	.4	2.3	.1	2.2	1.8	.1	1.7	.7	.4
TOTAL POOR (125 PERCENT LEVEL)...	14.8	7.9	5.6	2.3	.6	.2	.4	2.9	.2	2.7	2.4	.1	2.3	.9	.6
AGE OF HOUSEHOLD HEAD															
UNDER 25 YEARS.....	6.6	2.0	.9	1.1	.2	.1	.1	1.7	.1	1.7	2.0	.1	2.0	.7	.5
25 TO 34 YEARS.....	20.2	11.8	9.0	2.8	.8	.5	.3	2.7	.4	2.4	3.7	.2	3.5	1.2	.8
35 TO 44 YEARS.....	14.1	10.2	8.9	1.3	.7	.6	.1	1.3	.3	1.0	1.1	.1	1.0	.8	.6
45 TO 59 YEARS.....	18.9	13.9	12.7	1.2	.8	.6	.2	2.0	.6	1.4	1.4	.3	1.1	.8	.7
60 YEARS AND OVER.....	21.8	15.2	14.0	1.2	.7	.5	.3	2.2	.7	1.5	2.6	.4	2.2	1.1	1.0
ORIGIN															
WHITE.....	71.0	47.6	41.5	6.1	2.6	1.7	.9	7.5	1.7	5.8	8.7	.9	7.8	4.5	3.5
BLACK.....	9.2	4.6	3.4	1.2	.6	.4	.2	2.2	.3	2.0	1.8	-.1	1.7	.1	.1
OTHER.....	1.4	.8	.5	.3	.1	.1	-.1	.2	-.1	.2	.3	.1	.2	-.1	-.1

SEE NOTES AT END OF TABLE

TABLE 5. HOUSING CHARACTERISTICS BY HOUSING STRUCTURE AND OWNERSHIP
(MILLION HOUSEHOLDS) -Continued

HOUSEHOLD CHARACTERISTICS	HOUSING STRUCTURE BY OWNERSHIP																		
	SINGLE-FAMILY DETACHED				SINGLE-FAMILY ATTACHED				BUILDING WITH 2 TO 4 UNITS				BUILDING WITH 5 OR MORE UNITS				MOBILE HOME		
	TOTAL	OWN	RENT	RENT	TOTAL	OWN	RENT	RENT	TOTAL	OWN	RENT	RENT	TOTAL	OWN	RENT	TOTAL	OWN	RENT	
HOUSEHOLD MEMBERS																			
1.....	15.7	6.8	5.6	1.1	0.5	0.3	0.2	2.8	0.5	2.3	4.6	0.4	4.2	1.0	0.8	0.3			
2.....	26.8	17.2	14.9	2.2	1.0	.6	.3	3.0	.6	2.5	4.0	.5	3.5	1.6	1.2	.4			
3.....	14.9	10.1	8.6	1.5	.6	.5	.2	1.9	.4	1.5	1.2	-	1.1	1.1	.9	.2			
4.....	13.4	10.3	9.0	1.2	.6	.4	.3	1.2	.3	.9	.6	-	.6	.6	.5	.1			
5.....	6.8	5.5	4.8	.8	.3	.2	-	.7	.2	.5	.2	-	.1	.2	.2	-			
6 OR MORE.....	4.0	3.1	2.5	.6	.3	.2	.1	.3	-	.3	.2	-	.2	.1	.1	-			

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.

SOURCE: RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 6. HOUSING CHARACTERISTICS BY HOUSING STRUCTURE AND OWNERSHIP
(PERCENTAGE OF HOUSEHOLDS)

HOUSEHOLD CHARACTERISTICS	HOUSING STRUCTURE BY OWNERSHIP															
	TOTAL		SINGLE-FAMILY DETACHED		SINGLE-FAMILY ATTACHED		BUILDING WITH 2 TO 4 UNITS		BUILDING WITH 5 OR MORE UNITS		MOBILE HOME					
	TOTAL	OWN	TOTAL	OWN	TOTAL	OWN	TOTAL	OWN	TOTAL	OWN	TOTAL	OWN				
TOTAL HOUSEHOLDS.....	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			
ANNUAL HEATING DEGREE-DAYS AND COOLING DEGREE-DAYS																
<2,000 CED AND >7,000 HDD.....	10.4	11.8	12.3	8.3	3.9	2.1	7.5	9.4	8.3	9.6	6.1	5.0	6.2	11.3	11.7	10.1
<2,000 CED AND 5,500 TO 7,000 HDD.....	25.7	25.3	25.8	22.2	9.3	7.0	14.1	36.0	42.3	34.4	27.2	30.1	26.8	16.2	15.8	17.7
<2,000 CED AND 4,000 TO 5,499 HDD.....	25.9	22.9	23.4	19.6	58.8	64.4	47.2	25.8	29.7	24.8	32.6	34.4	32.4	21.6	22.1	19.6
<2,000 CED AND <4,000 HDD.....	23.3	23.9	22.8	30.7	25.4	24.6	27.1	18.8	7.8	21.5	21.5	18.0	21.9	28.3	28.4	27.8
>2,000 CED AND <4,000 HDD.....	14.8	16.2	15.7	19.3	2.6	1.9	4.1	10.0	11.8	9.6	12.7	12.4	12.7	22.7	22.0	24.8
MEASURED HEATED SPACE OF RESIDENCE (IN SQ. FT.)																
LESS THAN 600.....	9.1	3.4	2.0	11.6	4.9	2.2	10.6	17.0	6.9	19.6	26.4	13.0	27.8	20.9	19.4	25.9
600 TO 999.....	25.8	14.7	12.0	31.0	19.6	9.5	40.7	43.2	20.2	49.0	52.3	25.9	55.0	58.7	58.7	58.6
1,000 TO 1,599.....	29.4	32.3	32.4	31.5	32.7	36.1	25.5	30.1	43.7	26.7	18.0	40.4	15.7	18.1	18.8	15.5
1,600 TO 1,999.....	12.3	16.7	17.5	11.9	16.2	18.5	11.5	3.4	6.1	2.7	2.2	11.8	1.3	1.2	1.5	-
2,000 TO 2,399.....	9.5	13.2	14.6	4.5	12.2	15.6	5.1	2.6	9.2	.9	.6	6.6	-	1.2	1.5	-
2,400 TO 2,999.....	7.5	10.5	11.3	5.2	11.6	14.6	5.3	1.8	7.4	.4	.2	.3	.2	-	-	-
3,000 OR MORE.....	6.4	9.3	10.1	4.2	2.8	3.5	1.3	1.9	6.5	.8	.2	2.1	-	-	-	-
TOTAL MEASURED SPACE OF RESIDENCE (IN SQ. FT.)																
LESS THAN 600.....	7.6	1.6	.9	6.0	3.3	.6	9.0	15.9	4.8	18.7	25.7	13.0	27.0	20.2	19.1	24.0
600 TO 999.....	22.1	9.8	7.5	23.4	13.1	5.4	29.5	41.5	19.1	47.1	51.7	25.9	54.4	58.5	58.0	60.5
1,000 TO 1,599.....	24.2	24.7	23.9	29.8	21.6	22.3	20.1	30.2	43.0	27.0	19.3	40.4	17.1	18.4	19.7	13.5
1,600 TO 1,999.....	11.8	15.4	15.7	13.8	23.5	26.1	18.0	3.9	6.8	3.1	2.2	11.8	1.3	1.6	1.5	2.0
2,000 TO 2,399.....	11.0	15.2	16.1	10.0	17.5	19.9	12.5	2.8	5.8	2.0	.6	6.6	-	.7	.8	-
2,400 TO 2,999.....	11.7	16.4	17.5	10.1	13.7	15.8	9.5	2.9	10.5	1.0	.2	.3	.2	.6	.8	-
3,000 OR MORE.....	11.6	16.8	18.4	7.0	7.2	10.0	1.3	2.8	9.9	1.0	.2	2.1	-	-	-	-

SEE NOTES AT END OF TABLE

TABLE 6. HOUSING CHARACTERISTICS BY HOUSING STRUCTURE AND OWNERSHIP
(PERCENTAGE OF HOUSEHOLDS)--Continued

HOUSEHOLD CHARACTERISTICS	HOUSING STRUCTURE BY OWNERSHIP																
	SINGLE-FAMILY DETACHED		SINGLE-FAMILY ATTACHED		BUILDING WITH 2 TO 4 UNITS		BUILDING WITH 5 OR MORE UNITS		MOBILE HOME		TOTAL						
	TOTAL	OWN	TOTAL	OWN	TOTAL	OWN	TOTAL	OWN	TOTAL	OWN	TOTAL	OWN					
UTILITIES PAID BY HOUSEHOLD	85.0	58.9	99.8	93.4	94.1	98.2	85.6	62.3	99.1	53.0	34.4	46.2	33.2	85.9	88.0	78.6	
ALL PAID BY HOUSEHOLD.....	8.1	.2	-	1.1	.8	-	2.5	23.4	-	29.2	36.9	-	40.7	4.2	2.9	8.9	
SOME PAID, SOME INCLUDED IN RENT.....	5.1	.4	-	2.7	3.7	-	11.5	12.6	-	15.8	21.7	-	24.0	5.7	4.1	11.3	
ALL INCLUDED IN RENT.....	1.8	.6	.2	3.1	1.4	1.8	.4	1.7	.9	1.9	6.9	53.8	2.1	4.2	5.0	1.2	
OTHER.....																	
YEAR HOUSE BUILT	28.6	28.0	26.0	39.9	46.9	51.2	37.9	48.1	56.6	46.0	19.7	11.8	20.6	1.1	.2	4.5	
1939 OR EARLIER.....	9.1	10.3	9.4	15.1	9.2	9.7	8.1	10.7	9.8	10.9	6.1	2.6	6.5	-	-	-	
1940 TO 1949.....	16.8	21.3	21.5	20.2	9.3	8.3	11.4	11.4	10.3	11.6	6.4	5.5	6.5	5.9	5.8	6.2	
1950 TO 1959.....	8.8	5.3	9.6	7.8	4.1	2.6	7.2	7.0	4.1	7.8	9.7	6.4	10.0	7.9	8.3	6.4	
1960 TO 1969.....	9.9	9.2	9.8	5.2	4.2	5.1	2.4	7.6	4.9	8.3	13.6	7.6	14.3	19.0	15.5	31.2	
1970 TO 1974.....	12.9	9.7	10.5	4.4	15.3	11.7	22.9	5.3	3.2	5.8	23.7	43.6	21.6	39.4	41.0	33.5	
1975 OR LATER.....	13.9	12.3	13.1	7.4	10.9	11.4	10.0	9.9	11.1	9.6	20.8	22.5	20.6	26.7	29.2	18.2	
NUMBER OF ROOMS	.9	.1	-	.3	-	-	-	1.6	-	2.0	5.1	-	5.6	.1	-	.4	
1.....	2.4	.4	.2	1.8	1.7	.3	4.5	4.9	.8	5.9	9.0	1.6	9.8	6.1	6.1	6.0	
2.....	9.7	2.5	1.7	6.9	3.8	-	11.8	19.3	6.2	22.6	33.8	15.1	35.7	15.1	19.1	19.3	
3.....	19.9	12.4	10.3	25.0	14.7	8.0	28.9	32.1	19.8	35.2	38.2	52.3	36.7	40.9	40.3	43.0	
4.....	23.1	25.7	25.3	28.0	20.7	18.5	25.4	22.4	31.2	20.2	10.5	21.9	9.3	25.5	26.1	23.5	
5.....	21.5	21.2	25.6	18.9	33.7	41.0	18.3	14.0	24.2	11.5	3.1	9.2	2.4	6.5	6.7	5.7	
6.....	11.6	16.0	17.0	10.0	15.3	21.2	2.8	3.6	10.6	1.8	.4	-	.4	1.5	1.3	2.1	
7.....	10.9	15.8	16.9	9.1	10.0	10.9	8.2	2.0	7.0	.8	-	-	-	.3	.4	-	
8 OR MORE.....																	
MAIN OUTSIDE WALL MATERIAL	27.6	33.7	31.5	47.4	13.4	9.9	20.8	29.6	28.2	30.0	10.6	6.9	10.9	3.0	3.8	-	
WOOD.....	26.8	21.7	23.2	12.4	35.6	40.3	25.6	32.8	25.0	34.7	55.5	40.2	57.1	-	-	-	
BRICK.....	13.8	11.7	12.1	8.7	7.6	7.8	7.3	4.5	4.6	4.4	1.8	2.1	1.8	89.6	88.9	91.8	
ALUMINUM SIDING.....	11.3	9.5	9.4	9.9	22.5	23.1	21.2	14.3	11.7	15.0	18.7	27.5	17.8	.5	-	2.2	
STUCCO.....	8.4	10.3	9.9	12.8	10.2	6.7	17.6	8.0	13.8	6.6	2.0	-	2.2	.6	.7	-	
COMPOSITION.....	2.1	1.9	1.9	2.5	.9	.6	1.6	2.7	.8	3.2	3.8	10.6	3.1	-	-	-	
CONCRETE.....	.9	1.1	1.2	.4	1.8	2.7	.4	.4	.4	.5	.4	-	.4	-	-	-	
STONE.....	9.1	10.1	10.8	5.8	7.9	8.8	5.9	7.7	15.9	5.6	7.3	12.7	6.8	6.4	6.5	6.0	
COMBINATIONS/OTHER.....																	

SEE NOTES AT END OF TABLE

TABLE 6. HOUSING CHARACTERISTICS BY HOUSING STRUCTURE AND OWNERSHIP
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	HOUSING STRUCTURE BY OWNERSHIP													
	SINGLE-FAMILY DETACHED		SINGLE-FAMILY ATTACHED		BUILDING WITH 2 TO 4 UNITS		BUILDING WITH 5 OR MORE UNITS		MOBILE HOME		TOTAL			
	OWN	RENT	TOTAL	OWN	RENT	TOTAL	OWN	RENT	TOTAL	OWN	RENT	TOTAL	OWN	RENT
TOTAL	41.6	70.6	60.5	56.2	69.8	84.7	62.3	90.4	78.6	33.9	83.2	65.3	66.7	78.5
56.7	45.7	41.6	70.6	60.5	56.2	69.8	84.7	62.3	90.4	78.6	33.9	83.2	65.3	66.7
15.8	16.2	15.8	9.0	21.0	22.2	18.6	6.1	10.7	4.9	11.9	24.7	10.5	13.6	14.4
18.1	22.8	24.8	10.7	12.3	14.4	7.9	7.4	20.6	4.1	7.7	32.2	5.1	16.1	17.8
4.7	6.5	7.3	1.8	2.3	2.8	1.2	1.0	3.6	.3	1.6	9.2	.8	.2	.8
1.7	2.6	2.8	1.1	1.1	1.6	-	-	-	-	.2	-	.2	-	-
2.9	4.1	3.6	6.8	2.8	2.9	2.5	.8	2.9	.3	.2	-	.2	.9	1.0
12.7	9.6	8.1	18.7	12.8	4.2	31.0	21.2	8.3	24.4	18.7	13.2	19.3	16.1	26.9
17.0	13.6	12.8	18.2	14.1	13.8	14.9	27.0	16.7	29.6	22.2	20.4	22.4	23.9	23.8
16.9	15.0	13.7	22.5	20.8	22.7	16.8	20.3	20.6	20.2	21.2	6.1	22.7	19.9	18.3
14.5	14.5	14.9	12.6	16.0	15.6	16.9	13.5	19.7	11.9	14.8	17.7	14.5	15.1	16.8
12.2	14.2	14.9	9.9	14.0	15.9	9.9	7.7	15.3	5.8	6.9	5.4	7.0	9.4	10.0
15.1	18.1	19.0	12.7	14.0	18.2	5.2	7.4	12.2	6.2	9.7	18.4	8.8	11.4	9.1
11.6	15.0	16.6	5.4	8.2	9.6	5.4	3.1	7.2	2.0	6.6	18.8	5.3	4.1	3.7
13.3	10.6	8.2	24.9	14.4	5.6	33.2	23.1	7.3	27.1	16.7	5.0	17.9	15.6	26.8
18.1	14.9	12.2	31.2	18.7	10.1	36.7	29.7	11.6	34.3	22.1	13.2	23.0	19.9	28.7
8.1	3.7	2.0	14.0	7.1	3.0	13.9	17.3	1.8	21.2	18.4	-	20.3	15.7	25.1
24.7	24.2	19.8	36.8	25.3	23.6	29.1	27.6	18.9	29.8	34.2	20.2	35.6	25.2	31.8
17.2	19.2	19.5	17.1	21.9	13.5	13.1	13.3	13.3	13.1	10.5	10.1	10.6	16.4	19.1
23.2	26.3	27.9	16.4	23.5	25.3	19.7	19.8	29.3	17.4	13.1	28.6	11.5	19.2	20.9
26.7	28.6	30.8	15.7	22.2	21.4	23.8	22.1	36.6	18.4	23.8	41.1	22.0	24.4	13.1
86.9	89.9	91.3	81.0	78.3	77.0	81.0	76.0	87.3	73.1	81.0	93.8	79.6	96.9	97.9
11.3	8.6	7.5	15.5	17.8	19.3	14.7	22.3	12.7	24.7	16.3	.9	17.9	2.1	1.3
1.8	1.5	1.2	3.6	3.9	3.7	4.3	1.7	-	2.1	2.8	5.3	2.5	1.1	1.1

SEE NOTES AT END OF TABLE

TABLE 6. HOUSING CHARACTERISTICS BY HOUSING STRUCTURE AND OWNERSHIP
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	HOUSING STRUCTURE BY OWNERSHIP															
	SINGLE-FAMILY DETACHED		SINGLE-FAMILY ATTACHED		BUILDING WITH 2 TO 4 UNITS		BUILDING WITH 5 OR MORE UNITS		MOBILE HOME		TOTAL					
	OWN	RENT	OWN	RENT	OWN	RENT	OWN	RENT	OWN	RENT	OWN	RENT				
HOUSEHOLD MEMBERS																
1.....	19.3	12.8	12.4	15.3	15.8	13.0	21.8	27.8	25.2	28.5	43.0	38.3	43.5	22.0	20.7	26.6
2.....	32.8	52.4	32.9	29.6	29.3	28.7	30.7	30.6	27.8	31.3	37.1	51.0	35.6	34.3	33.4	37.4
3.....	18.2	19.1	19.0	19.8	18.7	20.7	14.5	19.3	21.7	18.6	10.7	3.2	11.5	23.2	23.6	21.7
4.....	16.4	19.4	19.8	16.6	18.9	16.4	24.2	12.4	14.7	11.8	5.7	4.2	5.8	13.7	13.9	13.3
5.....	8.4	10.4	10.5	10.1	8.6	10.9	3.7	6.9	9.0	6.4	1.6	3.4	1.4	3.6	4.3	1.0
6 OR MORE.....	5.0	5.9	5.4	8.5	8.6	10.2	5.1	3.1	1.6	3.5	1.9	-	2.1	3.1	4.0	-

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. PERCENTAGES ARE CALCULATED ON UNPOUNDED NUMBERS. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.
SOURCE: RESIDENTIAL AND COMMERCIAL ENERGY, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 7. HOUSING CHARACTERISTICS BY SIZE OF RESIDENCE
(MILICN HOUSEHOLDS)

HOUSEHOLD CHARACTERISTICS	TOTAL	MEASURED HEATED SQUARE FOOTAGE OF RESIDENCE							
		LESS THAN 600	600 TO 999	1,000 TO 1,599	1,600 TO 1,999	2,000 TO 2,399	2,400 TO 2,999	3,000 OR MORE	
TOTAL HOUSEHOLDS.....	81.6	7.5	21.1	24.0	10.0	7.8	6.1	5.2	
ANNUAL HEATING DEGREE-DAYS AND COOLING DEGREE-DAYS									
<2,000 HDD AND >7,000 HDD.....	6.5	.3	2.0	1.9	1.3	1.0	.8		
<2,000 HDD AND 5,500 TO 7,000 HDD.....	20.9	1.5	5.0	6.1	2.5	1.8	1.8		
<2,000 HDD AND 4,000 TO 5,499 HDD.....	21.1	2.3	5.4	5.4	2.5	2.0	1.5		
<2,000 HDD AND <4,000 HDD.....	19.0	2.0	5.2	6.5	2.3	.9	.8		
>2,000 HDD AND <4,000 HDD.....	12.1	1.4	3.7	4.1	1.4	.6	.3		
UTILITIES PAID BY HOUSEHOLD									
ALL PAID BY HOUSEHOLD.....	69.4	4.0	15.1	21.7	9.7	7.7	5.1		
SOME PAID, SOME INCLUDED IN RENT.....	6.6	1.5	3.6	1.3	.1	-	-		
ALL INCLUDED IN RENT.....	4.2	1.7	1.8	.6	.1	-	-		
OTHER.....	1.5	.3	.6	.4	.1	-	.1		
OWN/RENT									
OWN.....	54.3	1.9	8.5	17.5	8.6	7.3	4.8		
RENT.....	27.3	5.5	12.6	6.5	1.4	.5	.4		
YEAR HOUSE BUILT									
1939 OR EARLIER.....	23.3	2.5	5.5	7.0	2.8	2.1	1.6		
1940 TO 1949.....	7.5	.9	2.2	2.2	.8	.4	.4		
1950 TO 1959.....	13.7	.7	3.4	4.6	2.0	1.0	.7		
1960 TO 1964.....	7.2	.7	1.6	1.9	.9	.7	.3		
1965 TO 1969.....	8.1	.9	2.2	2.0	.8	.7	.5		
1970 TO 1974.....	10.5	.9	3.4	2.8	1.2	.9	.7		
1975 OR LATER.....	11.3	.7	2.7	3.5	1.4	.9	1.0		
NUMBER OF ROOMS									
1.....	.7	.7	.1	-	-	-	-		
2.....	2.0	1.4	.5	.1	-	-	-		
3.....	7.5	2.8	4.1	.7	.1	-	-		
4.....	16.3	1.5	9.7	3.8	.7	.1	.1		
5.....	18.8	.7	4.7	8.7	2.2	1.0	.4		
6.....	17.6	.1	1.6	7.7	3.1	1.6	.8		
7.....	5.5	.1	.3	2.0	2.4	1.5	1.2		
8 OR MORE.....	8.9	-	.1	.8	1.4	1.9	2.8		

SEE NOTES AT END OF TABLE

TABLE 7. HOUSING CHARACTERISTICS BY SIZE OF RESIDENCE
(MILLION HOUSEHOLDS) -Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	MEASURED HEATED SQUARE FOOTAGE OF RESIDENCE						
		LESS THAN 600	600 TO 999	1,000 TO 1,599	1,600 TO 1,999	2,000 TO 2,399	2,400 TO 2,999	3,000 OR MORE
MAIN OUTSIDE WALL MATERIAL								
WOOD.....	22.5	2.0	5.3	6.9	2.6	2.3	1.8	1.6
BRICK.....	21.9	2.3	5.6	6.2	2.8	1.9	1.6	1.5
ALUMINUM SIDING.....	11.2	1.1	3.8	3.0	1.2	1.0	.8	.5
STUCCO.....	9.2	.9	2.4	3.2	1.2	.7	.6	.4
COMPOSITION.....	6.8	.3	1.8	2.2	.9	.8	.5	.3
CONCRETE.....	1.7	.3	.6	.5	.2	.1	.1	.2
STONE.....	.7	.1	.7	.1	.1	.1	.1	.2
COMBINATIONS/OTHER.....	7.5	.4	1.7	1.9	1.0	1.0	.7	.7
NUMBER OF COMPLETE AND HALF BATHROOMS								
1 COMPLETE.....	46.3	6.7	18.0	13.8	3.6	2.1	1.6	.6
1 COMPLETE AND 1 HALF.....	12.5	.3	1.6	4.6	2.3	1.8	1.5	.9
2 COMPLETE.....	14.6	.2	1.1	4.9	3.3	2.6	1.6	1.2
2 COMPLETE AND 1 HALF.....	3.8	-	.1	.3	.6	.8	.7	1.3
3 COMPLETE.....	1.4	-	-	-	.1	.3	.4	.6
OTHER COMBINATIONS.....	2.4	.3	.4	.3	.1	.2	.4	.7
1979 FAMILY INCOME								
LESS THAN \$5,000.....	10.4	2.3	4.0	2.7	.7	.2	.3	.2
\$5,000 TO \$9,999.....	13.5	2.0	4.9	4.2	1.1	.7	.5	.3
\$10,000 TO \$14,999.....	13.8	1.4	4.8	4.1	1.6	.9	.6	.4
\$15,000 TO \$19,999.....	11.9	.9	3.0	3.9	1.6	1.1	.9	.4
\$20,000 TO \$24,999.....	9.5	.3	1.8	3.4	1.7	1.4	.7	.7
\$25,000 TO \$34,999.....	12.4	.3	1.6	4.0	2.0	1.7	1.6	1.1
\$35,000 OR MORE.....	9.4	.2	.9	1.7	1.3	1.8	1.5	2.0
TOTAL POOR (100 PERCENT LEVEL)...	10.5	2.1	3.9	3.1	.8	.3	.4	.2
TOTAL POOR (125 PERCENT LEVEL)...	14.8	2.7	5.4	4.1	1.2	.5	.6	.3

SEE NOTES AT END OF TABLE

TABLE 7. HOUSING CHARACTERISTICS BY SIZE OF RESIDENCE
(MILLION HOUSEHOLDS) -Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	MEASURED HEATED SQUARE FOOTAGE OF RESIDENCE						
		LESS THAN 600	600 TO 999	1,000 TO 1,599	1,600 TO 1,999	2,000 TO 2,399	2,400 TO 2,999	3,000 OR MORE
AGE OF HOUSEHOLD HEAD								
UNDER 25 YEARS.....	6.6	1.2	3.4	1.4	0.4	0.2	-	0.1
25 TO 34 YEARS.....	20.2	1.9	6.2	4.1	2.4	1.5	1.3	.6
35 TO 44 YEARS.....	14.1	.9	2.7	4.1	1.6	2.0	1.5	1.4
45 TO 59 YEARS.....	18.9	1.1	3.3	5.7	2.8	2.0	1.9	2.1
60 YEARS AND OVER.....	21.8	2.5	5.5	6.4	2.8	2.2	1.4	1.0
ORIGIN								
WHITE.....	71.0	5.9	17.4	20.8	9.3	7.3	5.6	4.9
BLACK.....	9.2	1.2	3.4	2.8	.6	.5	.4	.3
OTHER.....	1.4	.4	.3	.3	.2	.1	.1	.1
HOUSEHOLD MEMBERS								
1.....	15.7	3.5	5.9	3.8	1.0	.7	.4	.3
2.....	26.6	2.1	7.7	7.9	3.4	2.3	1.9	1.6
3.....	14.9	1.0	3.6	5.1	1.8	1.6	1.0	.8
4.....	13.4	.4	2.4	3.9	2.1	1.8	1.5	1.2
5.....	6.8	.2	1.0	2.0	1.1	.9	.9	.8
6 OR MORE.....	4.0	.2	.5	1.3	.6	.5	.4	.6

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.

SOURCE: RESIDENTIAL AND COMMERCIAL ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 8. HOUSING CHARACTERISTICS BY SIZE OF RESIDENCE
(PERCENTAGE OF HOUSEHOLDS)

HOUSEHOLD CHARACTERISTICS	MEASURED HEATED SQUARE FOOTAGE OF RESIDENCE							
	TOTAL	LESS THAN 600	600 TO 999	1,000 TO 1,599	1,600 TO 1,999	2,000 TO 2,399	2,400 TO 2,999	3,000 OR MORE
TOTAL HOUSEHOLDS.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
ANNUAL HEATING DEGREE-DAYS AND COOLING DEGREE-DAYS								
<2,000 HDD AND >7,000 HDD.....	10.4	3.7	9.3	7.8	13.4	16.2	15.7	15.6
<2,000 HDD AND 5,500 TO 7,000 HDD.....	25.7	19.7	23.5	25.3	24.8	30.4	29.0	34.9
<2,000 HDD AND 4,000 TO 5,499 HDD.....	25.9	31.5	25.4	22.6	25.3	25.5	32.1	29.2
<2,000 HDD AND <4,000 HDD.....	23.2	26.6	24.4	27.2	23.0	18.5	14.1	14.4
>2,000 HDD AND <4,000 HDD.....	14.8	18.5	17.4	17.1	13.6	9.3	9.1	5.9
UTILITIES PAID BY HOUSEHOLD								
ALL PAID BY HOUSEHOLD.....	85.0	53.6	71.8	90.6	96.9	99.5	99.2	96.9
SOME PAID, SOME INCLUDED IN RENT.....	8.1	20.0	17.2	5.3	1.3	-	.7	.8
ALL INCLUDED IN RENT.....	5.1	22.7	8.4	2.5	.6	.3	-	.8
OTHER.....	1.8	3.9	2.6	1.6	1.2	.2	-	1.6
OWN/RENT								
OWN.....	66.5	26.0	40.2	73.1	86.5	94.0	91.8	92.5
RENT.....	33.5	74.0	59.8	26.9	13.5	6.0	8.2	7.5
YEAR HOUSE BUILT								
1939 OR EARLIER.....	28.6	33.7	26.2	29.1	27.7	27.6	29.6	30.1
1940 TO 1949.....	9.1	12.0	10.6	9.1	8.3	6.5	6.2	8.3
1950 TO 1959.....	16.8	11.5	16.0	19.1	20.1	15.4	16.2	13.7
1960 TO 1964.....	8.8	8.9	7.7	8.0	9.4	12.9	11.7	6.3
1965 TO 1969.....	9.9	11.7	10.4	8.5	8.2	12.8	10.9	9.6
1970 TO 1974.....	12.9	12.7	16.3	11.7	11.9	11.0	10.7	12.8
1975 OR LATER.....	13.5	9.5	12.9	14.5	14.3	13.8	14.7	19.3
NUMBER OF ROOMS								
1.....	.9	8.8	.4	-	-	-	-	-
2.....	2.4	18.6	2.3	.4	.3	-	-	-
3.....	9.7	38.2	19.7	2.9	1.1	.4	.7	.1
4.....	19.9	49.8	46.1	16.0	7.2	4.3	2.3	.4
5.....	23.1	9.0	22.1	36.5	22.4	14.8	15.6	7.7
6.....	21.5	4.5	7.8	32.2	31.3	30.9	25.5	14.5
7.....	11.6	.8	1.2	8.6	23.8	25.4	24.4	23.9
8 OR MORE.....	10.9	.4	.5	3.3	13.9	24.2	31.4	53.5

SEE NOTES AT END OF TABLE

TABLE 8. HOUSING CHARACTERISTICS BY SIZE OF RESIDENCE
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	MEASURED HEATED SQUARE FOOTAGE OF RESIDENCE						
		LESS THAN 600	600 TO 999	1,000 TO 1,599	1,600 TO 1,999	2,000 TO 2,399	2,400 TO 2,999	3,000 OR MORE
MAIN OUTSIDE WALL MATERIAL								
WOOD.....	27.6	26.9	24.9	29.0	25.2	29.7	29.0	31.0
BRICK.....	26.8	30.8	26.4	25.8	28.2	24.2	26.5	29.5
ALUMINUM SIDING.....	13.8	15.0	18.0	12.3	11.6	12.2	12.9	8.8
STUCCO.....	11.3	12.4	11.1	13.3	11.5	8.8	9.2	6.8
COMPOSITION.....	8.4	4.6	8.5	9.1	9.1	9.9	7.8	6.5
CONCRETE.....	2.1	3.7	2.9	2.0	2.0	1.2	1.1	.2
STONE.....	.5	.8	.1	.5	1.0	1.1	2.4	3.2
COMBINATIONS/OTHER.....	9.1	5.7	8.0	8.0	10.4	12.9	11.0	14.0
NUMBER OF COMPLETE AND HALF BATHROOMS								
1 COMPLETE.....	56.7	89.2	85.5	57.6	35.9	26.8	26.1	10.6
1 COMPLETE AND 1 HALF.....	15.8	3.6	7.4	19.2	22.6	22.5	25.2	16.9
2 COMPLETE.....	18.1	2.1	5.1	20.4	32.6	33.9	25.8	23.1
2 COMPLETE AND 1 HALF.....	4.7	.2	.3	1.4	6.5	10.4	10.7	24.6
3 COMPLETE.....	1.7	.2	—	.2	1.4	4.0	5.9	10.6
OTHER COMBINATIONS.....	2.9	4.5	1.7	1.3	1.0	2.3	6.3	14.2
1979 FAMILY INCOME								
LESS THAN \$5,000.....	12.7	30.3	19.0	11.1	6.8	3.1	5.1	3.9
\$5,000 TO \$9,999.....	17.0	27.4	23.3	17.7	11.0	9.2	8.7	5.8
\$10,000 TO \$14,999.....	16.9	18.6	22.8	17.0	16.1	12.1	10.2	7.5
\$15,000 TO \$19,999.....	14.5	12.3	14.4	16.3	15.6	14.0	15.1	8.0
\$20,000 TO \$24,999.....	12.2	4.1	8.6	14.0	16.6	17.8	11.4	13.9
\$25,000 TO \$34,999.....	15.1	4.7	7.7	16.6	20.5	21.2	25.5	22.0
\$35,000 OR MORE.....	11.6	2.7	4.2	7.3	13.4	22.5	24.0	38.9
TOTAL POOR (100 PERCENT LEVEL)...	13.3	28.1	18.7	12.8	8.5	3.8	7.0	4.1
TOTAL POOR (125 PERCENT LEVEL)...	18.1	36.1	25.5	17.3	12.1	6.1	9.0	6.1

SEE NOTES AT END OF TABLE

TABLE 8. HOUSING CHARACTERISTICS BY SIZE OF RESIDENCE
(PERCENTAGE OF HOUSEHOLDS)--Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	MEASURED HEATED SQUARE FOOTAGE OF RESIDENCE						
		LESS THAN 600	600 TO 999	1,000 TO 1,599	1,600 TO 1,999	2,000 TO 2,399	2,400 TO 2,999	3,000 OR MORE
AGE OF HOUSEHOLD HEAD								
UNDER 25 YEARS.....	8.1	15.5	16.1	6.0	4.3	2.0	0.5	1.0
25 TO 34 YEARS.....	24.7	25.0	29.4	26.6	23.8	19.2	20.5	12.2
35 TO 44 YEARS.....	17.2	11.7	12.9	17.0	15.7	25.2	24.7	26.1
45 TO 59 YEARS.....	23.2	14.4	15.8	23.6	27.8	25.8	31.7	41.0
60 YEARS AND OVER.....	26.7	33.3	25.9	26.8	28.5	27.8	22.6	19.6
ORIGIN								
WHITE.....	86.5	78.9	82.3	86.8	92.7	93.3	90.4	93.0
BLACK.....	11.3	16.1	16.3	11.7	5.6	6.0	7.3	6.0
OTHER.....	1.8	5.1	1.4	1.4	1.7	.7	2.3	1.0
HOUSEHOLD MEMBERS								
1.....	19.3	47.3	28.0	15.9	10.4	9.3	7.3	5.4
2.....	32.8	28.1	36.3	33.1	33.7	29.1	30.4	30.4
3.....	18.2	12.9	17.1	21.3	18.3	20.1	15.7	16.0
4.....	16.4	5.9	11.4	16.2	21.3	23.2	25.1	22.5
5.....	8.4	3.0	4.7	8.2	10.7	11.5	14.9	15.0
6 OR MORE.....	5.0	2.8	2.5	5.2	5.6	6.8	6.6	10.7

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. PERCENTAGES ARE CALCULATED ON UNROUNDED NUMBERS. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.

SOURCE: RESIDENTIAL AND COMMERCIAL ENERGY CONSUMPTION SURVEY, ENERGY USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 9. HOUSING CHARACTERISTICS BY AVERAGE SQUARE FEET PER HOUSEHOLD

HOUSEHOLD CHARACTERISTICS	HOUSEHOLDS (BILLIONS)	AVERAGE NUMBER OF SQUARE FEET PER HOUSEHOLD				AVERAGE NUMBER OF HEATED SQUARE FEET PER HOUSEHOLD		AVERAGE NUMBER OF HEATED SQUARE FEET PER MOBILE HOME	AVERAGE NUMBER OF HEATED SQUARE FEET PER HOUSEHOLD MEMBER
		MFAN		MEDIAN		SINGLE-FAMILY UNIT	MULTI-FAMILY UNIT		
		HEATED AND UNHEATED	HEATED	HEATED AND UNHEATED	HEATED				
TOTAL HOUSEHOLDS.....	81.6	1,745	1,499	1,488	1,260	1,771	914	809	534
CENSUS REGION									
NORTHEAST.....	17.7	1,972	1,623	1,782	1,374	2,091	963	913	572
NORTH CENTRAL.....	21.1	1,936	1,648	1,840	1,468	1,899	982	794	572
SOUTH.....	27.0	1,565	1,379	1,296	1,200	1,583	843	787	496
WEST.....	16.0	1,546	1,368	1,293	1,160	1,624	834	818	502
ANNUAL HEATING DEGREE-DAYS AND COOLING DEGREE-DAYS									
<2,000 CDD ANI >7,000 HDD.....	8.5	2,131	1,749	2,026	1,644	1,996	1,052	870	615
<2,000 CDD ANI 5,500 TO 7,000 HDD.....	20.9	1,910	1,612	1,752	1,378	1,954	980	854	558
<2,000 CDD ANI 4,000 TO 5,499 HDD.....	21.1	1,815	1,545	1,594	1,258	1,877	888	868	550
<2,000 CDD ANI <4,000 HDD.....	15.0	1,538	1,359	1,288	1,200	1,571	863	761	497
>2,000 CDD ANI <4,000 HDD.....	12.1	1,394	1,266	1,206	1,134	1,456	800	748	459
MEASURED HEATED SPACE OF RESIDENCE (IN SQ. FT.)									
LESS THAN 600.....	7.5	585	429	516	482	369	456	423	211
600 TO 999.....	21.1	930	803	840	805	833	787	769	336
1,000 TO 1,599.....	24.0	1,557	1,273	1,404	1,252	1,289	1,219	1,229	443
1,600 TO 1,999.....	10.0	2,117	1,783	1,920	1,772	1,785	1,754	1,768	578
2,000 TO 2,399.....	7.8	2,481	2,189	2,321	2,193	2,190	2,178	2,220	681
2,400 TO 2,999.....	6.1	2,956	2,650	2,803	2,630	2,649	2,681	NA	789
3,000 OR MORE.....	5.2	4,329	3,950	3,940	3,619	3,960	3,702	NA	1,126
TOTAL MEASURED SPACE OF RESIDENCE (IN SQ. FT.)									
LESS THAN 600.....	6.2	464	451	496	489	453	458	419	234
600 TO 999.....	18.0	799	778	801	782	784	778	764	327
1,000 TO 1,599.....	19.8	1,275	1,179	1,258	1,184	1,175	1,187	1,206	418
1,600 TO 1,999.....	9.7	1,794	1,569	1,800	1,680	1,562	1,652	1,713	535
2,000 TO 2,399.....	9.0	2,189	1,848	2,193	2,016	1,843	1,952	2,072	594
2,400 TO 2,999.....	9.5	2,672	2,149	2,663	2,268	2,148	2,166	0	680
3,000 OR MORE.....	9.4	3,976	3,178	3,629	3,072	3,174	3,286	NA	934

SEE NOTES AT END OF TABLE

TABLE 9. HOUSING CHARACTERISTICS BY AVERAGE SQUARE FEET PER HOUSEHOLD-Continued

HOUSEHOLD CHARACTERISTICS	HOUSEHOLDS (BILLIONS)	AVERAGE NUMBER OF SQUARE FEET PER HOUSEHOLD				AVERAGE NUMBER OF HEATED SQUARE FEET PER HOUSEHOLD			AVERAGE NUMBER OF MOBILE HOME	AVERAGE HEATED SQUARE FEET PER HOUSEHOLD MEMBER
		MEAN		MEDIAN		SINGLE-FAMILY UNIT	MULTI-FAMILY UNIT			
		HEATED AND UNHEATED	HEATED	HEATED AND UNHEATED	HEATED					
UTILITIES PAID BY HOUSEHOLD		1,898	1,614	1,700	1,410	1,776	1,018	839	552	
ALL PAID BY HOUSEHOLD.....	69.4									
SOME PAID, SOME INCLUDED IN RENT.....	6.6	865	844	813	803	0	844	631	398	
ALL INCLUDED IN RENT.....	4.2	763	742	662	660	983	734	540	338	
OTHER.....	1.5	1,283	1,141	979	933	1,792	982	727	511	
OWN/RENT		2,075	1,762	1,901	1,570	1,855	1,397	830	593	
OWN.....	54.3	1,090	976	872	843	1,300	833	735	393	
RENT.....	27.3									
TYPE OF HOUSING STRUCTURE		2,131	1,784	1,953	1,592	1,784	-	-	587	
SINGLE-FAMILY DETACHED.....	53.0	2,214	1,862	2,026	1,680	1,862	-	-	615	
OWN.....	45.5	1,634	1,316	1,375	1,133	1,316	-	-	424	
RENT.....	7.5	1,840	1,555	1,817	1,508	1,555	-	-	500	
SINGLE-FAMILY ATTACHED.....	3.3	2,038	1,730	1,920	1,668	1,730	-	-	532	
OWN.....	2.2	1,422	1,187	1,316	953	1,187	-	-	420	
RENT.....	1.1	1,086	1,025	903	889	-	1,025	-	404	
BUILDING WITH 2 TO 4 UNITS.....	9.9	1,624	1,489	1,316	1,232	-	1,489	-	575	
OWN.....	2.0	951	908	853	840	-	908	-	360	
RENT.....	7.9									
BUILDING WITH 5 OR MORE UNITS.....	10.8	825	812	773	749	-	812	-	418	
OWN.....	1.0	1,217	1,213	1,155	1,155	-	1,213	-	661	
RENT.....	5.8	785	771	744	733	-	771	-	394	
MOBILE HOME.....	4.6	819	809	744	732	-	-	809	317	
OWN.....	3.6	839	830	773	773	-	-	830	314	
RENT.....	1.0	749	735	720	720	-	-	735	327	

SPE. NOTES AT END OF TABLE

TABLE 9. HOUSING CHARACTERISTICS BY AVERAGE SQUARE FEET PER HOUSEHOLD-Continued

HOUSEHOLD CHARACTERISTICS	HOUSEHOLDS (BILLIONS)	AVERAGE NUMBER OF SQUARE FEET PER HOUSEHOLD				AVERAGE NUMBER OF HEATED SQUARE FEET PER HOUSEHOLD			AVERAGE NUMBER OF HEATED SQUARE FEET PER HOUSEHOLD MEMBER
		MEAN		MEDIAN	SINGLE-FAMILY UNIT	MULTI-FAMILY UNIT	MOBILE HOME		
		HEATED AND UNHEATED	HEATED					HEATED AND UNHEATED	
YEAR HOUSE BUILT									
1939 OR EARLIER.....	23.3	1,856	1,511	1,594	1,280	1,743	967	571	557
1940 TO 1949.....	7.5	1,591	1,384	1,344	1,173	1,564	786	NA	513
1950 TO 1959.....	13.7	1,729	1,507	1,508	1,295	1,631	859	566	538
1960 TO 1964.....	7.2	1,774	1,537	1,647	1,350	1,790	985	635	517
1965 TO 1969.....	8.1	1,659	1,485	1,356	1,248	1,892	902	650	510
1970 TO 1974.....	10.5	1,627	1,438	1,316	1,152	1,941	868	848	501
1975 OR LATER.....	11.3	1,791	1,582	1,496	1,320	2,004	916	979	557
NUMBER OF ROOMS									
1.....	7	379	374	379	379	0	371	0	395
2.....	2.0	581	546	529	509	577	586	315	340
3.....	7.9	802	717	663	644	800	713	608	421
4.....	16.3	1,083	962	900	858	1,094	879	789	411
5.....	18.8	1,596	1,352	1,392	1,202	1,433	1,138	978	484
6.....	17.6	1,996	1,677	1,872	1,532	1,721	1,360	1,206	530
7.....	9.5	2,539	2,165	2,392	1,999	2,194	1,646	1,325	642
8 OF MORE.....	8.9	3,143	2,730	2,880	2,486	2,725	3,042	0	722
MAIN OUTSIDE WALL MATERIAL									
WOOD.....	22.5	1,854	1,542	1,590	1,288	1,671	990	806	525
BRICK.....	21.9	1,695	1,499	1,426	1,265	1,962	864	NA	560
ALUMINUM SIDING.....	11.2	1,575	1,350	1,278	1,120	1,731	1,033	810	480
STUCCO.....	9.2	1,546	1,412	1,316	1,230	1,730	879	0	522
COMPOSITION.....	6.8	1,831	1,473	1,692	1,245	1,554	1,021	0	522
CONCRETE.....	1.7	1,230	1,169	1,077	975	1,422	772	NA	432
STONE.....	.7	3,019	2,512	2,805	2,268	2,759	615	NA	901
CC/MINATICS/OTHER.....	7.5	1,969	1,701	1,824	1,519	1,930	1,057	729	582

SEE NOTES AT END OF TABLE

TABLE 9. HOUSING CHARACTERISTICS BY AVERAGE SQUARE FEET PER HOUSEHOLD--Continued

HOUSING CHARACTERISTICS	HOUSEHOLD CHARACTERISTICS	AVERAGE NUMBER OF SQUARE FEET PER HOUSEHOLD				AVERAGE SQUARE FEET PER HOUSEHOLD				AVERAGE NUMBER OF HEATED SQUARE FEET PER HOUSEHOLD MEMBER	
		MEAN		MEDIAN		SINGLE-FAMILY UNIT		MULTI-FAMILY UNIT			
		HEATED AND UNHEATED	HEATED	HEATED AND UNHEATED	HEATED	HEATED	MOBILE HOME	HEATED	UNHEATED		
NUMBER OF COMPLETE AND HALF BATHROOMS											
	1 COMPLETE.....	1,305	1,113	1,056	960	1,355	818	691	440		
	1 COMPLETE AND 1 HALF.....	2,073	1,754	1,934	1,600	1,908	1,181	930	577		
	2 COMPLETE.....	2,161	1,882	2,000	1,750	1,980	1,409	1,240	596		
	2 COMPLETE AND 1 HALF.....	3,121	2,718	2,952	2,412	2,770	2,070	0	779		
	3 COMPLETE.....	3,239	2,927	3,025	2,700	2,960	0	NA	834		
	OTHER COMBINATIONS.....	2,846	2,427	2,592	2,296	2,504	1,593	311	739		
1979 FAMILY INCOME											
	LESS THAN \$5,000.....	1,207	1,041	933	853	1,271	809	632	507		
	\$5,000 TO \$9,999.....	1,345	1,161	1,087	994	1,452	817	721	476		
	\$10,000 TO \$14,999.....	1,503	1,271	1,200	1,064	1,504	890	873	477		
	\$15,000 TO \$19,999.....	1,690	1,444	1,488	1,260	1,667	941	919	478		
	\$20,000 TO \$24,999.....	1,997	1,690	1,806	1,520	1,848	1,089	865	524		
	\$25,000 TO \$34,999.....	2,091	1,806	1,966	1,644	1,969	1,149	904	574		
	\$35,000 OR MORE.....	2,625	2,296	2,400	2,120	2,465	1,184	899	710		
	TOTAL POOR (100 PERCENT LEVEL)...	1,266	1,095	1,001	912	1,321	834	676	371		
	TOTAL POOR (125 PERCENT LEVEL)...	1,289	1,111	1,024	936	1,320	852	677	399		
AGE OF HOUSEHOLD HEAD											
	UNDER 25 YEARS.....	1,053	953	840	826	1,268	797	790	392		
	25 TO 34 YEARS.....	1,556	1,345	1,300	1,147	1,623	854	833	441		
	35 TO 44 YEARS.....	1,981	1,719	1,813	1,520	1,955	936	847	444		
	45 TO 59 YEARS.....	2,058	1,773	1,820	1,536	1,973	1,118	905	603		
	60 YEARS AND OVER.....	1,708	1,428	1,461	1,230	1,644	878	699	752		
ORIGIN											
	WHITE.....	1,806	1,542	1,575	1,321	1,807	927	806	562		
	BLACK.....	1,318	1,217	1,050	997	1,488	877	732	383		
	OTHER.....	1,498	1,177	1,200	1,049	1,360	810	1,212	318		

SFF NOTES AT END OF TABLE

TABLE 9. HOUSING CHARACTERISTICS BY AVERAGE SQUARE FEET PER HOUSEHOLD-Continued

HOUSEHOLD CHARACTERISTICS	HOUSEHOLDS (MILLIONS)	AVERAGE NUMBER OF SQUARE FEET PER HOUSEHOLD				AVERAGE NUMBER OF HEATED SQUARE FEET PER HOUSEHOLD		AVERAGE NUMBER OF HEATED SQUARE FEET PER HOUSEHOLD	AVERAGE NUMBER OF HEATED SQUARE FEET PER HOUSEHOLD
		MEAN		MEDIAN		SINGLE-FAMILY UNIT	MULTI-FAMILY UNIT		
		HEATED AND UNHEATED	HEATED UNHEATED	HEATED AND UNHEATED	HEATED UNHEATED				
1.....	15.7	1,231	1,052	943	854	1,413	756	616	1,052
2.....	26.8	1,724	1,476	1,477	1,232	1,745	936	788	738
3.....	14.9	1,767	1,508	1,409	1,300	1,717	1,009	847	503
4.....	13.4	2,033	1,762	1,872	1,594	1,918	1,116	950	440
5.....	6.8	2,147	1,870	1,991	1,669	1,997	1,189	969	374
6 OF MORE.....	4.0	2,179	1,855	1,956	1,672	1,985	1,155	1,309	272

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS ZERO. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.

NA = NOT AVAILABLE BECAUSE THE SAMPLE DID NOT CONTAIN CASES IN THIS CELL.

C = DATA WITHHELD BECAUSE THE RELATIVE STANDARD ERROR WAS 50 PERCENT OR GREATER.

SOURCE: RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 10. HOUSING CHARACTERISTICS BY TOTAL SQUARE FEET

HOUSEHOLD CHARACTERISTICS	TOTAL HOUSEHOLDS		TOTAL SQUARE FOOTAGE	
	(MILLIONS)	(PERCENT)	TOTAL HEATED AND UNHEATED	TOTAL HEATED
	(BILLIONS)	(PERCENT)	(BILLIONS)	(PERCENT)
TOTAL HOUSEHOLDS.....	81.6	100.0	142.5	100.0
CENSUS REGION				
NORTHEAST.....	17.7	21.6	34.8	24.5
NORTH CENTRAL.....	21.1	25.8	40.8	28.6
SOUTH.....	27.0	33.0	42.2	29.6
WEST.....	16.0	19.5	24.7	17.3
ANNUAL HEATING DEGREE-DAYS AND COOLING DEGREE-DAYS				
<2,000 CDD AND >7,000 HFD.....	8.5	10.4	18.1	12.7
<2,000 CDD AND				
5,500 TO 7,000 HDD.....	20.9	25.7	40.0	28.1
<2,000 CDD AND				
4,000 TO 5,499 HDD.....	21.1	25.9	38.4	26.9
<2,000 CDD AND <4,000 HFD.....	19.0	23.3	29.2	20.5
>2,000 CDD AND <4,000 HFD.....	12.1	14.8	16.9	11.8
MEASURED HEATED SPACE OF RESIDENCE (IN SQ. FT.)				
LESS THAN 600.....	7.5	9.1	4.4	3.1
600 TO 999.....	21.1	25.8	19.6	13.8
1,000 TO 1,599.....	24.0	29.4	37.3	26.2
1,600 TO 1,999.....	10.0	12.3	21.2	14.9
2,000 TO 2,399.....	7.8	9.5	19.3	13.5
2,400 TO 2,999.....	6.1	7.5	18.1	12.7
3,000 OR MORE.....	5.2	6.4	22.6	15.9
TOTAL MEASURED SPACE OF RESIDENCE (IN SQ. FT.)				
LESS THAN 600.....	6.2	7.6	2.9	2.0
600 TO 999.....	18.0	22.1	14.4	10.1
1,000 TO 1,599.....	19.8	24.2	25.2	17.7
1,600 TO 1,999.....	9.7	11.8	17.3	12.2
2,000 TO 2,399.....	9.0	11.0	19.7	13.8
2,400 TO 2,999.....	9.5	11.7	25.4	17.8
3,000 OR MORE.....	9.4	11.6	37.5	26.3

SEE NOTES AT END OF TABLE

TABLE 10. HOUSING CHARACTERISTICS BY TOTAL SQUARE FEET-Continued

HOUSEHOLD CHARACTERISTICS	TOTAL HOUSEHOLDS		TOTAL SQUARE FOOTAGE				
	(MILLIONS)	(PERCENT)	TOTAL HEATED AND UNHEATED	(BILLIONS)	(PERCENT)	(BILLIONS)	(PERCENT)
			(BILLIONS)	(PERCENT)	(BILLIONS)	(PERCENT)	
UTILITIES PAID BY HOUSEHOLD							
ALL PAID BY HOUSEHOLD.....	69.4	85.0	131.7	92.4	112.0	91.6	
SOME PAID, SOME INCLUDED IN RENT.....	6.6	8.1	5.7	4.0	5.6	4.6	
ALL INCLUDED IN RENT.....	4.2	5.1	3.2	2.2	3.1	2.5	
OTHER.....	1.5	1.8	1.9	1.3	1.7	1.4	
OWN/RENT							
OWN.....	54.3	66.5	112.7	79.1	95.7	78.2	
RENT.....	27.3	33.5	29.8	20.9	26.6	21.8	
TYPE OF HOUSING STRUCTURE							
SINGLE-FAMILY DETACHED.....	53.0	64.9	112.9	79.3	94.5	77.3	
OWN.....	45.5	55.7	100.7	70.6	84.6	69.2	
RENT.....	7.5	9.2	12.3	8.6	9.9	8.1	
SINGLE-FAMILY ATTACHED.....	3.3	4.0	6.1	4.3	5.1	4.2	
OWN.....	2.2	2.7	4.6	3.2	3.9	3.2	
RENT.....	1.1	1.3	1.5	1.1	1.3	1.0	
BUILDING WITH 2 TO 4 UNITS.....	9.9	12.2	10.8	7.6	10.2	8.3	
OWN.....	2.0	2.4	3.2	2.3	3.0	2.4	
RENT.....	7.9	9.7	7.5	5.3	7.2	5.9	
BUILDING WITH 5 OR MORE UNITS.....	10.8	13.2	8.9	6.2	8.8	7.2	
OWN.....	1.0	1.2	1.2	.9	1.2	1.0	
RENT.....	9.8	12.0	7.7	5.4	7.5	6.2	
MOBILE HOME.....	4.6	5.7	3.8	2.7	3.8	3.1	
OWN.....	3.6	4.4	3.0	2.1	3.0	2.5	
RENT.....	1.0	1.3	.8	.5	.8	.6	
YEAR HOUSE BUILT							
1939 OR EARLIER.....	23.3	28.6	43.3	30.4	35.2	28.8	
1940 TO 1949.....	7.5	9.1	11.9	8.3	10.3	8.4	
1950 TO 1959.....	13.7	16.8	23.7	16.6	20.7	16.9	
1960 TO 1964.....	7.2	8.8	12.8	9.0	11.1	9.0	
1965 TO 1969.....	8.1	9.9	13.4	9.4	12.0	9.8	
1970 TO 1974.....	10.5	12.9	17.2	12.0	15.2	12.4	
1975 OR LATER.....	11.3	13.9	20.3	14.2	17.9	14.6	

SEE NOTES AT END OF TABLE

TABLE 10. HOUSING CHARACTERISTICS BY TOTAL SQUARE FEET--CONTINUED

HOUSEHOLD CHARACTERISTICS	TOTAL HOUSEHOLDS		TOTAL SQUARE FOOTAGE			
	(MILLIONS)	(PERCENT)	TOTAL HEATED AND UNHEATED		TOTAL HEATED	
			(BILLIONS)	(PERCENT)	(BILLIONS)	(PERCENT)
NUMBER OF ROOMS						
1.....	0.7	0.9	0.3	0.2	0.3	0.2
2.....	2.0	2.4	1.2	.8	1.1	.9
3.....	7.9	9.7	6.3	4.4	5.7	4.6
4.....	16.3	19.9	17.6	12.4	15.6	12.8
5.....	18.8	23.1	30.0	21.1	25.4	20.8
6.....	17.6	21.5	35.0	24.6	29.4	24.0
7.....	9.5	11.6	24.0	16.9	20.5	16.7
8 CF MORE.....	8.9	10.9	28.0	19.7	24.3	19.9
MAIN OUTSIDE WALL MATERIAL						
WOOD.....	22.5	27.6	41.8	29.3	34.8	28.4
BRICK.....	21.9	26.8	37.2	26.1	32.8	26.8
ALUMINUM SIDING.....	11.2	13.8	17.7	12.4	15.2	12.4
STUCCO.....	9.2	11.3	14.3	10.0	13.0	10.7
COMPOSITION.....	6.8	8.4	12.5	8.8	10.1	8.2
CONCRETE.....	1.7	2.1	2.1	1.5	2.0	1.7
STONE.....	.7	.9	2.2	1.5	1.8	1.5
COMBINATIONS/OTHER.....	7.5	9.1	14.7	10.3	12.7	10.4
NUMBER OF COMPLETE AND HALF BATHROOMS						
1 COMPLETE.....	46.3	56.7	60.5	42.4	51.6	42.1
1 COMPLETE AND 1 HALF.....	12.9	15.8	26.7	18.7	22.6	18.5
2 COMPLETE.....	14.8	18.1	32.0	22.5	27.9	22.8
2 COMPLETE AND 1 HALF.....	3.8	4.7	11.9	8.4	10.4	8.5
3 COMPLETE.....	1.4	1.7	4.6	3.2	4.2	3.4
OTHER COMBINATIONS.....	2.4	2.9	6.8	4.8	5.8	4.8
1979 FAMILY INCOME						
LESS THAN \$5,000.....	10.4	12.7	12.5	8.8	10.8	8.8
\$5,000 TO \$9,999.....	13.9	17.0	18.7	13.1	16.1	13.1
\$10,000 TO \$14,999.....	13.8	16.9	20.0	14.6	17.6	14.4
\$15,000 TO \$19,999.....	11.9	14.5	20.0	14.1	17.1	14.0
\$20,000 TO \$24,999.....	9.9	12.2	19.8	13.9	16.8	13.7
\$25,000 TO \$34,999.....	12.4	15.1	25.8	18.1	22.3	18.2
\$35,000 OR MORE.....	9.4	11.6	24.8	17.4	21.7	17.7

SPECIES AT END OF TABLE

TABLE 10. HOUSING CHARACTERISTICS BY TOTAL SQUARE FEET--Continued

HOUSEHOLD CHARACTERISTICS	TOTAL HOUSEHOLDS		TOTAL SQUARE FOOTAGE			
	(MILLIONS)	(PERCENT)	TOTAL HEATED AND UNHEATED		TOTAL HEATED	
			(BILLIONS)	(PERCENT)	(BILLIONS)	(PERCENT)
TOTAL POOR (100 PERCENT LEVEL)...	10.9	13.3	13.8	9.7	11.9	9.8
TOTAL POOR (125 PERCENT LEVEL)...	14.8	18.1	19.0	13.4	16.4	13.4
AGE OF HOUSEHOLD HEAD						
UNDER 25 YEARS.....	6.6	8.1	7.0	4.9	6.3	5.2
25 TO 34 YEARS.....	20.2	24.7	31.4	22.0	27.2	22.2
35 TO 44 YEARS.....	14.1	17.2	27.9	19.6	24.2	19.8
45 TO 59 YEARS.....	18.9	23.2	39.0	27.3	33.6	27.4
60 YEARS AND OVER.....	21.8	26.7	37.2	26.1	31.1	25.4
ORIGIN						
WHITE.....	71.0	86.9	128.2	90.0	109.4	89.4
BLACK.....	9.2	11.3	12.2	8.5	11.2	9.2
OTHER.....	1.4	1.8	2.2	1.5	1.7	1.4
HOUSEHOLD MEMBERS						
1.....	15.7	19.3	19.4	13.6	16.6	13.5
2.....	26.8	32.8	46.1	32.4	39.5	32.3
3.....	14.9	18.2	26.3	18.5	22.5	18.3
4.....	13.4	16.4	27.2	19.1	23.6	19.3
5.....	6.8	8.4	14.7	10.3	12.8	10.5
6 OF MORE.....	4.0	5.0	8.8	6.2	7.5	6.1

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "--" REPRESENTS OR ROUNDS TO ZERO. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.

SOURCE: RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 11. HOUSING CHARACTERISTICS BY 1979 FAMILY INCOME
(BILLION HOUSEHOLDS)

HOUSEHOLD CHARACTERISTICS	TOTAL	1979 FAMILY INCOME										FOOR (100 PERCENT LEVEL)	FOOP (125 PERCENT LEVEL)
		LESS THAN \$5,000	\$5,000 TO \$9,999	\$10,000 TO \$14,999	\$15,000 TO \$19,999	\$20,000 TO \$24,999	\$25,000 TO \$34,999	\$35,000 OR MORE	FOOR (100 PERCENT LEVEL)	FOOP (125 PERCENT LEVEL)			
TOTAL HOUSEHOLDS.....	81.6	10.4	13.9	13.8	11.9	9.9	12.4	9.4	10.9	14.8			
ANNUAL HEATING DEGREE-DAYS AND COOLING DEGREE-DAYS													
<2,000 HDD AND >7,000 HDD.....	8.5	.7	1.5	1.9	1.2	.9	1.3	1.0	.7	1.1			
<2,000 HDD AND 5,500 TO 7,000 HDD.....	20.9	2.4	3.4	2.9	3.4	3.3	3.2	2.2	2.4	3.5			
<2,000 HDD AND 4,000 TO 5,499 HDD.....	21.1	2.7	3.5	4.1	3.0	2.3	3.3	2.2	2.9	3.9			
<2,000 HDD AND <4,000 HDD.....	19.0	2.8	3.5	2.9	2.5	2.2	2.6	2.4	3.1	3.8			
>2,000 HDD AND <4,000 HDD.....	12.1	1.7	2.0	2.1	1.6	1.3	1.9	1.5	1.8	2.4			
TOTAL MEASURED SPACE OF RESIDENCE (IN SQ. FT.)													
LESS THAN 600.....	6.2	1.9	1.8	1.2	.8	.2	.2	.1	1.7	2.3			
600 TO 999.....	18.0	3.7	4.1	4.1	2.5	1.4	1.4	.8	3.7	4.9			
1,000 TO 1,599.....	19.8	2.5	4.0	3.5	3.3	2.6	2.7	1.3	2.9	3.8			
1,600 TO 1,999.....	9.7	.8	1.3	1.5	1.7	1.4	2.0	.9	.8	1.2			
2,000 TO 2,399.....	9.0	.4	1.0	1.3	1.3	1.5	2.0	1.6	.6	.8			
2,400 TO 2,999.....	9.5	.7	1.0	1.4	1.2	1.4	2.1	1.7	.8	1.1			
3,000 OR MORE.....	9.4	.5	.6	.9	1.1	1.3	1.9	3.0	.5	.6			
UTILITIES PAID BY HOUSEHOLD													
ALL PAID BY HOUSEHOLD.....	69.4	7.6	10.5	11.2	10.5	9.4	11.4	8.9	8.2	11.2			
SOME PAID, SOME INCLUDED IN RENT.....	6.6	1.2	1.7	1.4	.8	.4	.7	.4	1.3	1.6			
ALL INCLUDED IN RENT.....	4.2	1.2	1.3	.9	.4	.1	.2	-	1.2	1.6			
OTHER.....	1.5	.4	.3	.2	.1	.1	.2	.1	.3	.4			
OWN/RENT													
OWN.....	54.3	4.5	7.5	8.0	8.3	7.9	9.9	8.2	4.5	6.8			
RENT.....	27.3	5.8	6.3	5.9	3.6	2.1	2.4	1.2	6.4	8.0			
YEAR HOUSE BUILT													
1939 OR EARLIER.....	23.3	4.1	5.3	4.4	3.2	2.5	2.5	1.4	4.2	5.9			
1940 TO 1949.....	7.5	1.1	1.5	1.4	1.1	.9	.9	.6	1.1	1.5			
1950 TO 1959.....	13.7	1.6	2.1	2.3	1.7	2.1	2.3	1.6	1.7	2.3			
1960 TO 1964.....	7.2	.8	.8	1.3	1.0	.8	1.4	1.2	.8	1.0			
1965 TO 1969.....	8.1	.9	1.3	1.1	1.5	.9	1.3	1.1	1.0	1.3			
1970 TO 1974.....	10.5	1.1	1.2	1.7	1.8	1.4	1.9	1.4	1.2	1.5			
1975 OR LATER.....	11.3	.9	1.5	1.6	1.6	1.4	2.1	2.1	1.0	1.2			

SEE NOTES AT END OF TABLE

TABLE 11. HOUSING CHARACTERISTICS BY 1979 FAMILY INCOME
(MILLION HOUSEHOLDS) -Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	1979 FAMILY INCOME										POOR (100 PERCENT LEVEL)	POOR (125 PERCENT LEVEL)
		LESS THAN \$5,000	\$5,000 TO \$9,999	\$10,000 TO \$14,999	\$15,000 TO \$19,999	\$20,000 TO \$24,999	\$25,000 TO \$34,999	\$35,000 OR MORE	POOR (100 PERCENT LEVEL)	POOR (125 PERCENT LEVEL)			
NUMBER OF ROOMS													
1.....	0.7	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2
2.....	2.0	.7	.5	.3	.3	.3	.3	.3	.3	.3	.3	.1	.8
3.....	7.9	2.1	2.0	1.7	.9	.4	.4	.4	.4	.4	.4	.2	1.8
4.....	16.3	2.8	3.8	3.7	2.3	1.5	1.5	1.5	1.5	1.5	1.5	.6	2.6
5.....	18.8	2.3	3.6	3.1	3.0	2.3	2.3	2.3	2.3	2.3	2.3	1.6	2.8
6.....	17.6	1.4	2.1	2.9	3.1	2.8	2.8	2.8	2.8	2.8	2.8	2.1	1.7
7.....	9.5	.4	.8	1.2	1.3	1.6	1.6	1.6	1.6	1.6	1.6	1.8	.7
8 OR MORE.....	8.9	.5	.6	.7	1.0	1.2	1.2	1.2	1.2	1.2	1.2	2.9	.7
HAIN OUTSIDE WALL MATERIAL													
WOOD.....	22.5	3.3	3.6	3.9	3.3	2.8	2.8	2.8	2.8	2.8	2.8	2.2	3.6
BRICK.....	21.9	2.8	3.6	3.7	3.1	2.5	2.5	2.5	2.5	2.5	2.5	2.8	3.1
ALUMINUM SIDING.....	11.2	1.3	2.1	2.0	1.8	1.5	1.5	1.5	1.5	1.5	1.5	.7	1.2
STUCCO.....	9.2	.9	1.5	1.2	1.3	1.2	1.2	1.2	1.2	1.2	1.2	1.8	.9
COMPOSITION.....	6.8	.8	1.3	1.4	1.1	.8	.8	.8	.8	.8	.8	.6	.8
CONCRETE.....	1.7	.3	.5	.3	.3	.1	.1	.1	.1	.1	.1	.2	.4
STONE.....	.7	-.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.2	.1
COMBINATIONS/OTHER.....	7.5	.9	1.1	1.1	.9	1.0	1.0	1.0	1.0	1.0	1.0	1.1	.9
NUMBER OF COMPLETE AND HALF BATHROOMS													
1 COMPLETE.....	46.3	8.1	10.6	9.8	6.6	4.5	4.5	4.5	4.5	4.5	4.5	2.0	8.3
1 COMPLETE AND 1 HALF.....	12.9	.8	1.6	1.7	2.2	2.2	2.2	2.2	2.2	2.2	2.2	1.4	1.0
2 COMPLETE.....	14.8	.7	1.1	1.9	2.6	2.1	2.1	2.1	2.1	2.1	2.1	3.0	.8
2 COMPLETE AND 1 HALF.....	3.8	.1	.1	.1	.3	.6	.6	.6	.6	.6	.6	1.7	.1
3 COMPLETE.....	1.4	.1	.1	.1	.1	.2	.2	.2	.2	.2	.2	.7	.1
OTHER COMBINATIONS.....	2.4	.6	.3	.2	.1	.2	.2	.2	.2	.2	.2	.7	.6
AGE OF HOUSEHOLD HEAD													
UNDER 25 YEARS.....	6.6	1.3	1.9	1.5	1.0	.5	.5	.5	.5	.5	.5	.1	1.3
25 TO 34 YEARS.....	20.2	1.1	2.4	4.0	4.0	3.3	3.3	3.3	3.3	3.3	3.3	1.5	1.8
35 TO 44 YEARS.....	14.1	.8	1.4	1.9	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.5	1.4
45 TO 59 YEARS.....	18.9	1.9	1.9	2.9	2.4	2.5	2.5	2.5	2.5	2.5	2.5	3.8	2.1
60 YEARS AND OVER.....	21.8	5.4	6.3	3.6	2.3	1.4	1.4	1.4	1.4	1.4	1.4	1.5	4.4

SEE NOTES AT END OF TABLE

TABLE 11. HOUSING CHARACTERISTICS BY 1979 FAMILY INCOME
(MILLION HOUSEHOLDS) -Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	1979 FAMILY INCOME										POOR (100 PERCENT LEVEL)	POOR (125 PERCENT LEVEL)		
		LESS THAN \$5,000	\$5,000 TO \$9,999	\$10,000 TO \$14,999	\$15,000 TO \$19,999	\$20,000 TO \$24,999	\$25,000 TO \$34,999	\$35,000 OR MORE	POOR (100 PERCENT LEVEL)		POOR (125 PERCENT LEVEL)				
ORIGIN															
WHITE.....	71.0	7.6	11.5	12.0	10.3	9.3	11.5	8.9	7.5	10.7					
BLACK.....	9.2	2.7	2.1	1.6	1.4	.5	.5	.4	3.3	3.9					
OTHER.....	1.4	.1	.3	.2	.2	.2	.3	.2	.1	.2					
HOUSEHOLD MEMBERS															
1.....	15.7	4.7	3.9	3.1	1.9	.7	.8	.7	3.1	4.7					
2.....	26.8	2.9	5.4	5.2	3.2	3.3	3.9	2.9	2.8	3.8					
3.....	14.9	1.4	2.0	2.1	2.6	1.8	3.1	1.9	1.6	2.0					
4.....	13.4	.8	1.2	1.7	2.5	2.2	2.6	2.3	1.3	1.7					
5.....	6.8	.3	.6	1.1	1.1	1.4	1.2	1.1	.8	1.1					
6 OR MORE.....	4.0	.3	.7	.6	.6	.6	.6	.5	1.3	1.5					

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDES TO ZERO. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.

SOURCE: RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY RND USE DIVISION, OFFICE OF ENERGY MARKETS AND ENV USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 12. HOUSING CHARACTERISTICS BY 1979 FAMILY INCOME
(PERCENTAGE OF HOUSEHOLDS)

HOUSEHOLD CHARACTERISTICS	TOTAL	1979 FAMILY INCOME										FOOR (100 PERCENT LEVEL)	POOR (125 PERCENT LEVEL)	
		LESS THAN \$5,000	\$5,000 TO \$9,999	\$10,000 TO \$14,999	\$15,000 TO \$19,999	\$20,000 TO \$24,999	\$25,000 TO \$34,999	\$35,000 OR MORE						
		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0			
TOTAL HOUSEHOLDS.....	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	
ANNUAL HEATING DEGREE-DAYS AND COOLING DEGREE-DAYS														
<2,000 CDD AND >7,000 HDD.....	10.4	7.2	10.8	13.4	10.3	8.7	10.4	10.6	6.7	7.4				
<2,000 CDD AND >7,000 HDD.....	25.7	22.9	24.8	21.2	29.0	33.2	26.2	23.8	22.3	23.9				
<2,000 CDD AND >7,000 HDD.....	25.9	25.6	25.0	29.5	25.7	23.5	26.9	23.6	26.4	26.6				
<2,000 CDD AND <4,000 HDD.....	23.3	27.5	25.2	20.9	21.4	21.9	21.3	25.8	28.1	25.6				
>2,000 CDD AND <4,000 HDD.....	14.8	16.8	14.3	15.0	13.7	12.7	15.2	16.2	16.5	16.5				
TOTAL MEASURED SPACE OF RESIDENCE (IN SQ. FT.)														
LESS THAN 600.....	7.6	18.7	13.2	8.5	6.5	2.0	1.6	1.4	15.9	15.4				
600 TO 999.....	22.1	35.5	29.7	29.8	20.9	14.6	11.2	8.4	33.8	32.9				
1,000 TO 1,599.....	24.2	23.8	28.8	25.3	27.5	25.8	21.9	13.4	26.3	26.0				
1,600 TO 1,999.....	11.8	7.8	9.4	10.8	14.0	14.3	16.5	9.9	7.5	8.4				
2,000 TO 2,399.....	11.0	3.5	6.9	9.2	11.3	15.1	16.2	16.4	5.4	5.6				
2,400 TO 2,999.....	11.7	6.3	7.4	9.8	10.3	14.6	17.1	18.1	6.9	7.4				
3,000 OR MORE.....	11.6	4.4	4.6	6.6	9.5	13.5	15.5	32.3	4.2	4.3				
UTILITIES PAID BY HOUSEHOLD														
ALL PAID BY HOUSEHOLD.....	85.0	72.8	76.1	81.3	88.3	94.2	91.9	94.3	75.1	75.8				
SOME PAID, SOME INCLUDED IN RENT.....	8.1	12.0	12.3	10.2	7.0	3.6	5.3	4.1	11.5	10.8				
ALL INCLUDED IN RENT.....	5.1	11.8	9.3	6.7	3.8	1.1	1.3	.2	11.0	10.9				
OTHER.....	1.8	3.4	2.4	1.8	1.0	1.0	1.4	1.4	2.4	2.7				
OWN/RENT														
OWN.....	66.5	43.7	54.4	57.5	69.8	79.2	80.2	87.3	41.3	45.9				
RENT.....	33.5	56.3	45.6	42.5	30.2	20.8	19.8	12.7	58.7	54.1				

SEE NOTES AT END OF TABLE

TABLE 12. HOUSING CHARACTERISTICS BY 1979 FAMILY INCOME
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	1979 FAMILY INCOME										FOOR (100 PERCENT LEVEL)	POOR (125 PERCENT LEVEL)	
		LESS THAN \$5,000	\$5,000 TO \$9,999	\$10,000 TO \$14,999	\$15,000 TO \$19,999	\$20,000 TO \$24,999	\$25,000 TO \$34,999	\$35,000 OR MORE	FOOR (100 PERCENT LEVEL)	POOR (125 PERCENT LEVEL)				
YEAR HOUSE BUILT														
1939 OF EARLIER.....	28.6	39.2	38.0	32.1	27.1	24.9	20.0	14.5	38.3	40.0				
1940 TO 1949.....	9.1	10.3	11.0	10.1	9.5	8.6	7.3	6.1	10.4	10.5				
1950 TO 1959.....	16.8	15.0	15.5	16.5	14.4	20.9	19.0	17.0	15.6	15.3				
1960 TO 1964.....	8.8	7.3	5.8	9.3	8.1	8.1	11.2	12.8	7.5	7.0				
1965 TO 1969.....	9.9	9.0	9.2	8.3	12.4	9.0	10.2	11.9	8.7	8.6				
1970 TO 1974.....	12.9	10.5	9.6	12.2	14.8	14.1	15.1	14.9	10.7	10.3				
1975 OR LATER.....	13.9	8.7	10.8	11.5	13.8	14.3	17.3	22.7	8.9	8.3				
NUMBER OF ROOMS														
1.....	9	1.7	1.7	1.6	.3	-	-	.9	8	1.3				
2.....	2.4	6.8	3.9	1.9	1.5	.6	1.1	1.1	5.8	5.1				
3.....	9.7	20.3	14.7	12.6	8.0	4.3	3.8	1.9	16.3	15.8				
4.....	19.9	26.9	27.2	26.6	19.5	15.4	12.3	6.9	24.0	24.9				
5.....	23.1	22.1	27.6	22.6	25.7	23.3	21.4	16.8	25.6	25.9				
6.....	21.5	13.6	15.2	20.6	25.7	28.3	25.6	22.7	15.9	15.8				
7.....	11.6	4.1	5.5	8.7	11.0	16.0	19.1	19.1	5.2	5.1				
8 OR MORE.....	10.9	4.4	4.2	5.4	8.3	12.0	16.6	30.6	6.4	6.1				
RAIN OUTSIDE WALL MATERIAL														
WOOD.....	27.6	32.2	25.9	28.5	28.2	27.9	27.1	23.4	33.1	31.3				
BRICK.....	26.8	27.4	26.3	26.4	25.8	24.7	28.4	29.1	28.2	26.5				
ALUMINUM SIDING.....	13.8	12.1	15.4	14.5	15.2	15.2	14.6	7.7	11.0	12.3				
STUCCO.....	11.3	8.7	10.5	8.9	11.0	11.7	10.7	19.0	8.4	8.7				
COMPOSITION.....	8.4	7.7	9.7	10.2	9.1	8.2	6.7	5.8	7.1	8.9				
CONCRETE.....	2.1	2.7	3.3	2.3	2.4	.9	1.1	1.8	3.2	3.3				
STONE.....	.9	.3	.6	1.1	.5	1.4	.7	1.6	.5	.5				
COMBINATIONS/OTHER.....	9.1	8.9	7.9	8.2	7.9	10.0	10.7	11.5	8.5	8.5				
NUMBER OF COMPLETE AND HALF BATHROOMS														
1 COMPLETE.....	56.7	78.4	76.6	70.7	55.5	44.9	39.0	20.7	76.4	76.6				
1 COMPLETE AND 1 HALF.....	15.8	8.0	11.8	12.4	18.3	24.7	22.0	14.4	9.0	9.0				
2 COMPLETE.....	18.1	6.6	8.1	14.1	21.8	21.0	27.5	31.7	7.6	7.9				
2 COMPLETE AND 1 HALF.....	4.7	.8	.8	.9	2.7	5.6	7.0	18.4	.9	.8				
3 COMPLETE.....	1.7	.6	.4	.5	.6	2.0	2.3	7.3	.6	.5				
OTHER COMBINATIONS.....	2.9	5.5	2.3	1.3	1.2	1.9	2.3	7.5	5.5	5.1				

SEE NOTES AT END OF TABLE

TABLE 12. HOUSING CHARACTERISTICS BY 1979 FAMILY INCOME
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	1979 FAMILY INCOME										EGOR (100 PERCENT LEVEL)	POOR (125 PERCENT LEVEL)	
		LESS THAN \$5,000	\$5,000 TO \$9,999	\$10,000 TO \$14,999	\$15,000 TO \$19,999	\$20,000 TO \$24,999	\$25,000 TO \$34,999	\$35,000 CR MORE						
AGE OF HOUSEHOLD HEAD														
UNDER 25 YEARS.....	8.1	12.1	13.6	11.1	8.5	5.0	2.7	1.5	12.1	10.6				
25 TO 34 YEARS.....	24.7	10.9	17.1	28.9	33.3	32.9	31.7	16.3	16.2	15.5				
35 TO 44 YEARS.....	17.2	7.4	10.0	13.4	18.9	23.0	24.7	26.3	12.7	12.2				
45 TO 59 YEARS.....	23.2	18.0	13.5	20.6	20.2	25.4	29.6	39.9	18.9	18.5				
60 YEARS AND OVER.....	26.7	51.6	45.7	26.0	19.0	13.7	11.2	16.0	40.0	43.2				
ORIGIN														
WHITE.....	86.9	72.9	82.8	87.0	86.6	93.2	92.8	94.4	68.8	72.1				
BLACK.....	11.3	26.3	15.4	11.4	11.8	4.8	4.4	3.9	29.9	26.6				
OTHER.....	1.8	.8	1.8	1.6	1.6	2.0	2.8	1.6	1.3	1.3				
HOUSEHOLD MEMBERS														
1.....	19.3	45.7	28.0	22.1	15.7	7.3	6.5	7.0	28.1	32.0				
2.....	32.8	27.5	39.1	37.3	27.1	33.2	31.7	31.0	25.6	25.6				
3.....	18.2	13.1	14.3	15.5	21.7	17.9	25.4	20.4	15.1	13.4				
4.....	16.4	8.1	8.7	12.5	21.1	21.8	21.4	24.2	11.6	11.2				
5.....	8.4	3.0	4.5	8.2	9.2	13.6	9.9	11.7	7.8	7.7				
6 CR MORE.....	5.0	2.7	5.4	4.5	5.2	6.1	5.2	5.7	11.7	10.1				

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. PERCENTAGES ARE CALCULATED ON UNROUNDED NUMBERS. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.
SOURCE: RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND FINE USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 13. HOUSING CHARACTERISTICS BY MAIN HEATING FUEL
(MILLION HOUSEHOLDS)

HOUSEHOLD CHARACTERISTICS	TOTAL	MAIN HEATING FUEL							OTHER/ NONE
		NATURAL GAS	FUEL OIL OR KEROSENE	ELECTRICITY	LIQUID PETROLIUM GAS	WOOD			
TOTAL HOUSEHOLDS.....	81.6	44.6	13.4	14.3	3.7	4.7		1.0	
ANNUAL HEATING DEGREE-DAYS AND COOLING DEGREE-DAYS									
<2,000 CDE AND >7,000 HDD.....	8.5	4.3	1.8	.6	.5	1.3		-	
<2,000 CDE AND 5,500 TO 7,000 HDD.....	20.9	13.5	3.6	2.5	.6	.5		.2	
<2,000 CDE AND 4,000 TO 5,499 HDD.....	21.1	9.0	6.4	3.6	.6	1.3		.2	
<2,000 CDE AND <4,000 HDD.....	19.0	12.1	1.2	3.1	.9	1.4		.2	
>2,000 CDE AND <4,000 HDD.....	12.1	5.7	.4	4.5	1.0	.2		.4	
TOTAL MEASURED SPACE OF RESIDENCE (IN SQ. FT.)									
LESS THAN 600.....	6.2	3.0	1.5	1.1	.3	.1		.1	
600 TO 999.....	18.0	9.4	2.4	4.2	1.2	.6		.2	
1,000 TO 1,599.....	19.8	11.0	2.6	3.7	1.1	1.1		.3	
1,600 TO 1,999.....	9.7	6.0	1.0	1.5	.3	.8		.1	
2,000 TO 2,399.....	9.0	5.3	1.5	1.2	.3	.6		.1	
2,400 TO 2,999.....	5.5	4.9	2.0	1.4	.3	.9		.1	
3,000 OR MORE.....	9.4	5.0	2.4	1.2	.2	.6		.1	
UTILITIES PAID BY HOUSEHOLD									
ALL PAID BY HOUSEHOLD.....	69.4	37.7	10.2	12.4	3.5	4.7		.8	
SOME PAID, SOME INCLUDED IN RENT.....	6.6	4.1	1.8	.8	-	-		-	
ALL INCLUDED IN RENT.....	4.2	2.1	1.1	.8	.1	-		.1	
OTHER.....	1.5	.7	.3	.3	.1	.1		.1	
OWN/RENT									
OWN.....	54.3	29.9	8.7	8.5	2.9	3.8		.5	
RENT.....	27.3	14.7	4.7	5.8	.8	.9		.5	
YEAR HOUSE BUILT									
1939 OR EARLIER.....	23.3	13.3	6.1	.8	.9	1.8		.5	
1940 TO 1949.....	7.5	4.6	1.6	.5	.2	.4		.1	
1950 TO 1959.....	13.7	9.1	2.5	1.1	.4	.5		.1	
1960 TO 1964.....	7.2	4.6	1.1	.8	.3	.4		.1	
1965 TO 1969.....	8.1	4.8	.7	1.7	.5	.3		.1	
1970 TO 1974.....	10.5	4.6	.8	3.7	.8	.4		.1	
1975 OR LATER.....	11.3	3.6	.6	5.7	.5	.9		.1	

SEE NOTES AT END OF TABLE

TABLE 13. HOUSING CHARACTERISTICS BY MAIN HEATING FUEL
(MILLION HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	MAIN HEATING FUEL						OTHER/ NONE
		NATURAL GAS	FUEL OIL OR KEROSENE	ELECTRICITY	LIQUID PETROLEUM GAS	WOOD		
NUMBER OF ROOMS								
1.....	6.7	0.3	0.3	0.1	-	-	-	-
2.....	2.0	.9	.3	.6	0.1	0.1	-	-
3.....	7.9	3.7	1.3	2.3	.4	.2	0.1	0.1
4.....	16.3	8.7	2.5	3.2	1.1	.6	.2	.2
5.....	18.8	10.8	2.6	3.0	1.0	1.3	.2	.2
6.....	17.6	10.4	2.8	2.4	.6	1.2	.3	.3
7.....	9.5	5.2	1.8	1.3	.3	.7	.1	.1
8 OR MORE.....	8.5	4.6	1.9	1.4	.2	.7	.1	.1
MAIN OUTSIDE WALL MATERIAL								
WOOD.....	22.5	11.7	3.7	3.1	1.2	2.3	.6	.6
BRICK.....	21.9	12.5	4.0	4.6	.3	.4	-	-
ALUMINUM SIDING.....	11.2	5.2	2.0	1.9	1.3	.7	.1	.1
STUCCO.....	9.2	7.0	.5	1.6	.1	.1	.1	.1
COMPOSITION.....	6.8	3.6	1.6	.6	.4	.6	.1	.1
CONCRETE.....	1.7	.5	.2	.9	.1	.1	-	-
STONE.....	.7	.3	.3	.1	-	-	-	-
COMBINATIONS/OTHER.....	7.5	3.7	1.2	1.6	.4	.5	.1	.1
NUMBER OF COMPLETE AND HALF BATHROOMS								
1 COMPLETE.....	46.3	25.3	8.8	6.7	2.6	2.5	.6	.6
1 COMPLETE AND 1 HALF.....	12.9	7.2	1.8	2.6	.4	.7	.1	.1
2 COMPLETE.....	14.8	8.2	1.7	3.5	.6	.8	.1	.1
2 COMPLETE AND 1 HALF.....	3.6	2.0	.5	1.0	-	.2	-	-
3 COMPLETE.....	1.4	.9	.2	.3	-	-	-	-
OTHER COMBINATIONS.....	2.4	.9	.5	.2	.1	.5	.2	.2
AGE OF HOUSEHOLD HEAD								
UNDER 25 YEARS.....	6.6	3.5	.6	1.9	.4	.3	-	-
25 TO 34 YEARS.....	20.2	10.9	2.6	4.3	.9	1.3	.2	.2
35 TO 44 YEARS.....	14.1	7.7	2.2	2.3	.6	1.0	.2	.2
45 TO 59 YEARS.....	18.9	10.8	3.5	2.5	.8	1.2	.2	.2
60 YEARS AND OVER.....	21.6	11.7	4.5	3.3	1.1	.9	.2	.2

SEE NOTES AT END OF TABLE

TABLE 13. HOUSING CHARACTERISTICS BY MAIN HEATING FUEL
(MILLION HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	MAIN HEATING FUEL						OTHER/NONE
		NATURAL GAS	FUEL OIL OR KEROSENE	ELECTRICITY	LIQUID PETROLEUM GAS	WOOD		
ORIGIN								
WHITE.....	71.0	38.2	11.4	13.0	3.4	4.3	0.7	
BLACK.....	9.2	5.7	1.9	.9	.3	.4	-	
OTHER.....	1.4	.7	.1	.3	-	-	.2	
HOUSEHOLD MEMBERS								
1.....	15.7	8.2	2.7	3.6	.6	.4	.1	
2.....	26.8	14.4	4.8	4.8	1.2	1.2	.3	
3.....	14.9	8.3	2.3	2.3	.8	1.0	.1	
4.....	13.4	7.7	2.0	1.8	.6	1.2	.1	
5.....	6.8	3.8	1.0	1.1	.2	.6	.2	
6 OR MORE.....	4.0	2.1	.7	.6	.2	.3	.2	

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.
SOURCE: RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 1a. HOUSING CHARACTERISTICS BY MAIN HEATING FUEL
(PERCENTAGE OF HOUSEHOLDS)

HOUSEHOLE CHARACTERISTICS	TOTAL	MAIN HEATING FUEL						
		NATURAL GAS	FUEL OIL OR KEROSENE	ELECTRICITY	LIQUID PETROLIUM GAS	WOOD	OTHER/NONE	
TOTAL HOUSEHOLDS.....	100.C	100.0	100.0	100.0	100.0	100.0	100.0	100.0
ANNUAL HEATING DEGREE-DAYS AND COOLING DEGREE-DAYS								
<2,000 CDE AND >7,000 HDD.....	10.4	9.5	13.4	4.2	13.2	27.7	1.8	
<2,000 CDE AND 5,500 TO 7,000 HDD.....	25.7	30.3	26.8	17.3	17.4	11.6	18.0	
<2,000 CDE AND 4,000 TO 5,499 HDD.....	25.5	20.2	47.9	25.0	17.5	27.2	23.3	
<2,000 CDE AND <4,000 HDD.....	23.2	27.2	9.1	22.0	25.2	29.9	18.8	
>2,000 CDE AND <4,000 HDD.....	14.8	12.8	2.8	31.5	26.7	3.5	38.1	
TOTAL MEASURED SPACE OF RESIDENCE (IN SQ. FT.)								
LESS THAN 600.....	7.6	6.7	11.2	8.0	9.1	3.0	14.5	
600 TO 999.....	22.1	21.1	17.6	29.4	33.0	12.4	20.5	
1,000 TO 1,599.....	24.2	24.6	19.7	25.9	30.1	22.8	26.8	
1,600 TO 1,999.....	11.8	13.4	7.5	10.5	7.7	16.4	14.2	
2,000 TO 2,359.....	11.0	12.0	11.1	8.4	7.4	13.7	5.9	
2,400 TO 2,999.....	11.7	11.0	15.0	9.7	8.0	18.2	6.0	
3,000 OR MORE.....	11.6	11.2	17.8	8.1	4.7	13.5	12.0	
UTILITIES PAID BY HOUSEHOLD								
ALL PAID BY HOUSEHOLD.....	85.C	84.6	76.5	87.0	95.1	98.9	86.6	
SOME PAID, SOME INCLUDED IN RENT.....	8.1	9.1	13.2	5.4	.5	-	-	
ALL INCLUDED IN RENT.....	5.1	4.7	8.0	5.7	2.5	.7	8.1	
OTHER.....	1.8	1.5	2.3	2.0	1.9	1.1	5.3	
OWN/RENT								
OWN.....	66.5	67.0	65.1	59.5	78.9	80.5	53.7	
RENT.....	33.5	33.0	34.9	40.5	21.1	19.5	46.3	
YEAR HOUSE BUILT								
1939 OR EARLIER.....	28.6	29.8	45.3	5.4	24.9	38.0	51.7	
1940 TO 1949.....	9.1	10.3	12.2	3.1	5.9	9.2	12.3	
1950 TO 1959.....	16.8	20.4	18.6	8.0	11.4	10.4	7.5	
1960 TO 1964.....	8.8	10.3	8.0	5.7	8.6	7.8	5.2	
1965 TO 1969.....	9.5	10.8	5.2	11.8	13.9	6.6	6.9	
1970 TO 1974.....	12.9	10.4	6.3	26.2	22.9	9.5	4.2	
1975 OR LATER.....	13.5	8.0	4.6	39.8	12.5	18.5	12.2	

SEE NOTES AT END OF TABLE

TABLE 14. HOUSING CHARACTERISTICS BY MAIN HEATING FUEL
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	MAIN HEATING FUEL						OTHER/ NONE
		NATURAL GAS	FUEL OIL OR KEROSENE	ELECTRICITY	LIQUID PETROLEUM GAS	WOOD		
NUMBER OF ROOMS								
1.....	0.9	0.7	2.0	0.8	0.8	0.2	1.9	
2.....	2.4	2.0	2.0	4.5	2.7	1.1	3.2	
3.....	5.7	8.2	9.5	16.0	10.7	4.0	8.0	
4.....	19.9	19.4	18.7	22.4	30.7	13.0	15.6	
5.....	23.1	24.3	19.2	20.7	26.7	27.0	21.4	
6.....	21.5	23.3	21.1	16.7	14.9	24.6	26.5	
7.....	11.6	11.7	13.3	9.4	7.6	15.1	13.5	
8 OR MORE.....	10.5	10.4	14.1	9.6	5.9	15.0	9.9	
MAIN OUTSIDE WALL MATERIAL								
WOOD.....	27.6	26.2	27.6	21.5	32.9	48.6	59.8	
BRICK.....	26.8	28.1	30.0	32.0	7.3	9.4	5.0	
ALUMINUM SIDING.....	13.8	11.7	14.7	13.5	35.9	15.1	9.2	
STUCCO.....	11.3	15.7	3.6	10.9	.8	2.4	6.3	
COMPOSITION.....	8.4	8.0	12.1	4.4	9.8	11.8	8.2	
CONCRETE.....	2.1	1.1	1.2	6.2	2.3	1.9	1.2	
STONE.....	.9	.8	2.1	.2	.4	1.0	-	
COMBINATIONS/OTHER.....	9.1	8.4	8.6	11.3	10.6	9.8	10.2	
NUMBER OF COMPLETE AND HALF BATHROOMS								
1 COMPLETE.....	56.7	56.8	65.5	46.6	69.2	52.1	56.7	
1 COMPLETE AND 1 HALF.....	15.8	16.2	13.5	18.3	10.9	14.9	14.0	
2 COMPLETE.....	18.1	18.3	12.4	24.5	15.2	17.8	10.4	
2 COMPLETE AND 1 HALF.....	4.7	4.6	3.8	7.2	.4	4.5	1.7	
3 COMPLETE.....	1.7	2.1	1.3	2.0	.7	.5	.9	
OTHER COMBINATIONS.....	2.9	2.1	3.6	1.5	3.6	10.2	16.3	
AGE OF HOUSEHOLD HEAD								
UNDER 25 YEARS.....	8.1	7.8	4.5	13.2	9.8	6.0	3.2	
25 TO 34 YEARS.....	24.7	24.5	19.1	30.3	23.5	27.3	23.9	
35 TO 44 YEARS.....	17.2	17.3	16.8	15.9	15.7	21.7	24.0	
45 TO 59 YEARS.....	23.2	24.2	26.1	17.3	20.8	25.0	25.2	
60 YEARS AND OVER.....	26.7	26.2	33.5	23.3	30.2	20.0	23.7	

SPE NOTES AT END OF TABLE

TABLE 14. HOUSING CHARACTERISTICS BY MAIN HEATING FUEL
(PERCENTAGE OF HOUSEHOLDS)-Continued

ORIGIN	HOUSEHOLD CHARACTERISTICS	TOTAL	MAIN HEATING FUEL						OTHER/ NONE
			NATURAL GAS	FUEL OIL OR KEROSENE	ELECTRICITY	LIQUID PETROLEUM GAS	WOOD		
WHITE	86.5	85.7	85.3	91.2	91.1	90.7	71.3	
BLACK	11.3	12.7	14.3	6.4	8.3	8.3	3.2	
OTHER	1.8	1.6	.4	2.4	.6	1.0	25.4	
HOUSEHOLD MEMBERS									
1	19.3	18.4	20.4	25.5	17.1	8.2	12.1	
2	32.6	32.4	35.6	33.7	33.5	26.4	26.4	
3	18.2	18.6	17.2	16.3	22.5	20.7	14.1	
4	16.4	17.3	14.7	12.7	15.0	26.1	11.3	
5	8.4	8.5	7.1	7.8	5.7	13.1	17.3	
6 OR MORE	5.0	4.8	5.0	3.9	6.2	5.5	18.8	

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. PERCENTAGES ARE CALCULATED ON UNROUNDED NUMBERS. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.

SOURCE: RESIDENTIAL AND COMMERCIAL ENERGY USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 15. FUEL USE CHARACTERISTICS BY CENSUS REGION, AREA TYPE AND SMSA/NON-SMSA (BILLION HOUSEHOLDS, EXCEPT WHERE PERCENTS ARE INDICATED)

HOUSEHOLD CHARACTERISTICS	CENSUS REGION					AREA TYPE		SMSA/NON-SMSA	
	TOTAL	NORTHEAST	NORTH CENTRAL	SOUTH	WEST	URBAN	RURAL	SMSA	NONSMSA
TOTAL HOUSEHOLDS	81.6	17.7	21.1	27.0	16.0	56.0	25.6	55.6	26.0
MAIN HEATING EQUIPMENT									
CENTRAL WARM-AIR FURNACE.....	41.2	6.0	14.0	13.1	8.1	29.7	11.6	29.3	11.9
FORCED AIR.....	40.1	5.7	13.4	13.0	7.9	28.8	11.4	28.4	11.7
GRAVITY.....	1.1	.3	.5	.1	.2	.9	.2	.9	.2
STEAM OR HOT WATER SYSTEM.....	13.5	8.8	2.9	1.3	.5	11.1	2.3	11.3	2.2
HEAT PUMP.....	2.1	.2	.2	1.4	.3	1.0	1.1	1.6	.5
FLOOR, WALL OR PIPELESS FURNACE.....	6.7	.1	.7	2.4	3.6	5.6	1.1	4.9	1.8
OIL OR GAS ROOM HEATER.....	6.1	.4	1.1	3.8	.7	3.6	2.5	3.1	3.0
BUILT-IN ELECTRIC UNITS.....	5.3	1.1	1.2	1.6	1.3	2.7	2.7	3.0	2.4
WOOD OR COAL HEATING STOVE.....	4.0	.8	.8	1.9	.5	.7	3.3	.9	3.1
PORTABLE HEATER.....	1.0	-	-	.8	.2	.8	.2	.8	.2
FIREPLACE.....	.3	-	-	.2	.1	.1	.3	.1	.2
OTHER.....	.9	.2	.2	.3	.2	.6	.3	.6	.3
NONE.....	.5	-	-	.1	.4	.2	.3	.2	.3
MAIN HEATING FUEL									
NATURAL GAS.....	44.6	6.6	15.0	11.8	11.1	37.9	6.7	34.1	10.5
ELECTRICITY.....	14.3	1.6	2.1	7.7	2.9	8.0	6.3	9.6	4.7
FUEL OIL OR KEROSENE.....	13.4	8.2	1.5	3.1	.5	8.6	4.8	9.3	4.1
WOOD.....	4.7	1.0	1.1	2.0	.7	.8	3.9	1.0	3.7
LIQUID PETROLEUM GAS.....	3.7	.2	1.2	2.0	.4	.5	3.2	1.1	2.5
COAL.....	.3	.1	-	.1	-	.1	.2	.2	.2
OTHER/NONE.....	.7	-	-	.2	.4	.2	.4	.2	.4
CENTRAL MAIN HEATING SYSTEM FOR BUILDING (2-OR-MORE UNIT BUILDINGS)									
YES.....	9.0	4.7	2.5	1.1	.7	8.6	.4	8.0	1.0
NO.....	11.6	2.2	2.5	3.7	3.3	10.0	1.6	9.6	2.1
NO MAIN HEATING SYSTEM.....	.1	-	-	.1	-	.1	-	.1	-
SECONDARY HEATING FUEL									
WOOD.....	13.4	2.6	3.1	4.0	3.7	7.8	5.6	9.1	4.3
ELECTRICITY.....	9.2	1.7	1.8	3.6	2.2	6.3	3.0	6.3	3.0
NATURAL GAS.....	3.3	.5	.8	1.3	.8	2.8	.5	2.5	.8
FUEL OIL OR KEROSENE.....	1.9	1.0	.5	.4	.1	.7	1.2	.8	1.1
LIQUID PETROLEUM GAS.....	.9	-	.3	.4	.1	.1	.8	.2	.7
COAL.....	.2	-	-	.1	-	.1	.1	.1	.1
OTHER.....	.2	-	-	-	.1	.1	.1	.1	.1
NONE.....	52.6	11.8	14.7	17.1	9.0	38.2	14.4	36.6	16.0

SEE NOTES AT END OF TABLE

TABLE 15. FUEL USE CHARACTERISTICS BY CENSUS REGION, AREA TYPE AND SMSA/NON-SMSA (MILLION HOUSEHOLDS, EXCEPT WHERE PERCENTS ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	CENSUS REGION				AREA TYPE		SMSA/NON-SMSA	
		NORTHEAST	MIDWEST	SOUTH	WEST	URBAN	RURAL	SMSA	NONSMSA
WATER-HEATING FUEL									
NATURAL GAS.....	44.1	7.2	14.4	11.3	11.3	37.9	6.2	34.8	9.4
ELECTRICITY.....	26.1	3.9	5.2	13.2	3.8	12.0	14.1	13.9	12.2
FUEL OIL OR KEROSENE.....	7.1	6.1	.2	.8	-	5.5	1.5	5.8	1.3
LIQUID PETROLEUM GAS.....	3.6	.3	1.2	1.3	.7	.4	3.2	1.0	2.6
WOOD.....	.4	.1	-	.2	-	.1	.3	.1	.3
SOLAR.....	.1	-	-	-	.1	-	.1	-	-
OTHER.....	.1	-	-	-	.1	-	.1	.1	-
NONE.....	.3	-	-	.2	-	-	.2	-	.2
CENTRAL WATER-HEATING SYSTEM (2-OR-MORE UNIT BUILDINGS)									
YES.....	11.2	5.1	2.7	1.5	1.9	10.7	.6	10.2	1.1
NO/NO WATER-HEATING FUEL/NO HOT RUNNING WATER.....	9.5	1.7	2.3	3.3	2.2	8.0	1.4	7.5	1.9
MAIN COOKING FUEL									
ELECTRICITY.....	44.4	7.9	11.1	16.6	9.9	27.1	17.3	28.0	16.4
NATURAL GAS.....	31.6	8.7	8.6	7.9	6.4	27.9	3.7	25.8	5.8
LIQUID PETROLEUM GAS.....	5.2	1.0	1.3	2.3	.6	.8	4.4	1.7	3.5
WOOD.....	.3	.1	-	.2	-	-	.2	-	.2
NCNE/OTHER.....	.2	.1	-	.1	.1	.2	-	.1	.1
AIR CONDITIONING (A/C)									
CENTRAL AIR CONDITIONING ONLY.....	21.9	1.8	5.5	11.0	3.6	15.5	6.4	16.4	5.5
INDIVIDUAL ROOM UNITS ONLY.....	24.5	6.8	6.8	8.8	2.1	17.9	6.5	17.1	7.4
CENTRAL A/C AND ROOM UNITS.....	.3	.1	-	.2	.1	.3	.1	.2	.1
NO AIR CONDITIONING.....	34.9	9.0	8.8	7.0	10.2	22.3	12.6	21.9	13.0
CENTRAL AIR CONDITIONING SYSTEM FOR THE BUILDING (2-OR-MORE UNIT BUILDINGS)									
YES.....	1.2	.2	.2	.5	.3	1.2	-	1.2	.1
NO.....	3.8	.4	.8	2.1	.6	3.3	.5	3.4	.4
NO AIR CONDITIONING SYSTEM.....	15.7	6.3	4.0	2.2	3.2	14.2	1.5	13.1	2.5

SEE NOTES AT END OF TABLE

TABLE 15. FUEL USE CHARACTERISTICS BY CENSUS REGION, AREA TYPE AND SMSA/NON-SMSA (MILLION HOUSEHOLDS, EXCEPT WHERE PERCENTS ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	CENSUS REGION				AREA TYPE		SMSA/NON-SMSA	
	TOTAL	NORTHEAST	MIDWEST		URBAN	RURAL	SMSA	NONSMSA
			NORTH CENTRAL	SOUTH				
NUMBER OF ROOMS THAT CAN BE AIR CONDITIONED								
ALL.....	29.8	2.9	7.6	15.3	20.9	8.9	21.3	8.5
SOME.....	16.9	5.8	4.7	4.7	12.8	4.1	12.5	4.4
NONF.....	34.9	9.0	8.8	7.0	22.3	12.6	21.9	13.0
WOOD BURNED								
YES (1/3 CED OR MORE).....	14.2	3.2	3.5	4.8	5.5	8.8	7.0	7.2
NO.....	67.4	14.5	17.6	22.1	50.6	16.8	48.6	18.8
AVAILABILITY OF NATURAL GAS IN THE NEIGHBORHOOD (SINGLE FAMILY OR MOBILE HOME)								
USE ANY NATURAL GAS.....	36.3	5.4	11.3	10.8	29.8	6.5	26.9	9.4
DO NOT USE ANY NATURAL GAS.....	24.6	5.4	4.7	11.3	7.5	17.1	11.1	13.6
GAS IS AVAILABLE.....	5.4	1.6	.9	2.0	3.5	2.0	3.2	2.3
GAS IS NOT AVAILABLE.....	22.1	30.1	15.4	17.6	46.0	11.6	28.5	16.9
PERCENT.....	19.2	3.8	3.8	9.3	4.1	15.1	7.9	11.3
PERCENT.....	77.9	69.9	80.6	82.4	54.0	88.4	71.5	83.1
TYPE OF MAIN HEATING FUEL USED LAST WINTER 1979 TO 1980								
SAME FUEL WINTER 1980.....	78.1	16.7	20.4	25.8	54.3	23.8	53.6	24.5
DIFFERENT FUEL.....	2.0	.8	.5	.5	1.2	.8	1.2	.8
FUEL OIL OR KEROSENE.....	1.2	.6	.4	.2	.8	.4	.8	.4
NATURAL GAS.....	.1	-	-	.1	.1	-	.1	-
LIQUID PETROLEUM GAS.....	.2	-	.1	.1	.1	.1	.1	.1
ELECTRICITY.....	.3	.1	-	-	.1	.1	.1	.1
OTHER/FMC FUEL USED.....	-	-	-	-	-	-	-	-
NOT HEATED IN WINTER 1980 TO WINTER 1981.....	.5	-	-	.1	.2	.3	.2	.3
UNIT NOT BUILT IN WINTER 1979 TO 1980.....	1.0	.1	.2	.6	.4	.6	.7	.3

SEE NOTES AT END OF TABLE

TABLE 15. FUEL USE CHARACTERISTICS BY CENSUS REGION, AREA TYPE AND SHSA/NON-SHSA (MILLION HOUSEHOLDS, EXCEPT WHERE PERCENTS ARE INDICATED)-Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	CENSUS REGION				AREA TYPE		SHSA/NON-SHSA	
		NORTHEAST	MIDWEST	SOUTH	WEST	URBAN	RURAL	SHSA	NONSHSA
FUEL COMBINATIONS									
USE NATURAL GAS FOR MAIN HEATING.....	44.6	6.6	15.0	11.8	11.1	37.9	6.7	34.1	10.5
WATER HEAT AND COOK WITH NATURAL GAS.....	25.1	4.5	6.1	6.5	6.0	22.0	3.1	20.2	4.8
WATER HEAT WITH NATURAL GAS AND COOK WITH ELECTRICITY.....	15.7	1.7	5.8	3.7	4.5	12.9	2.8	11.7	4.0
WATER HEAT WITH ELECTRICITY AND COOK WITH NATURAL GAS.....	.9	.1	.3	.4	.1	.6	.3	.5	.4
WATER HEAT AND COOK WITH ELECTRICITY.....	2.6	.2	.8	1.1	.5	2.1	.5	1.5	1.1
OTHER.....	.3	.2	--	.1	--	.2	.1	.2	.1
USE ELECTRICITY FOR MAIN HEATING.....	14.3	1.6	2.1	7.7	2.9	8.0	6.3	9.6	4.7
WATER HEAT AND COOK WITH ELECTRICITY.....	12.3	1.5	1.8	6.7	2.3	6.2	6.0	7.9	4.4
OTHER.....	2.0	.1	.3	1.0	.6	1.8	.2	1.7	.3
USE FUEL OIL FOR MAIN HEATING.....	12.6	8.0	1.5	2.5	.5	8.4	4.2	8.9	3.7
WATER HEAT WITH FUEL OIL AND COOK WITH ELECTRICITY.....	2.9	2.3	.2	.3	--	1.8	1.1	2.0	.8
WATER HEAT WITH FUEL OIL AND COOK WITH NATURAL GAS.....	3.3	3.1	--	.2	--	3.2	--	3.1	.1
WATER HEAT AND COOK WITH ELECTRICITY.....	3.7	1.0	1.0	1.3	.4	1.7	2.0	1.8	1.9
WATER HEAT AND COOK WITH NATURAL GAS.....	1.1	.8	.1	.2	--	1.1	--	1.0	.1
OTHER.....	1.6	.9	.3	.4	--	.5	1.1	.9	.7
NONE/OTHER FUEL.....	10.2	1.4	2.4	4.9	1.5	1.8	8.5	3.0	7.2

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "--" REPRESENTS OR ROUNDS TO ZERO. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.

SOURCE: RESIDENTIAL AND COMMERCIAL ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 16. FUEL USE CHARACTERISTICS BY CENSUS REGION, AREA TYPE AND SMSA/NON-SMSA (PERCENTAGE OF HOUSEHOLDS)

HOUSEHOLD CHARACTERISTICS	CENSUS REGION				AREA TYPE		SMSA/NON-SMSA		
	TOTAL	NORTHEAST	NORTH CENTRAL	SOUTH	WEST	URBAN	RURAL	SMSA/NON-SMSA	
								SMSA	NONSMSA
TOTAL HOUSEHOLDS	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
MAIN HEATING EQUIPMENT									
CENTRAL WARM-AIR FURNACE.....	50.5	34.1	66.3	48.8	50.8	52.9	45.2	52.7	45.8
FORCED AIR.....	49.1	32.2	63.8	48.4	49.8	51.3	44.3	51.1	45.0
GRAVITY.....	1.4	1.9	2.5	.4	1.0	1.6	.8	1.6	.9
STEAM OR HOT WATER SYSTEM.....	16.5	49.9	13.7	4.8	3.0	19.9	9.2	20.2	8.5
HEAT PUMP.....	2.6	1.2	1.1	5.1	1.8	1.8	4.3	2.8	2.1
FLOOR, WALL OR PIPELESS FURNACE.....	8.2	.5	3.1	9.0	22.3	10.1	4.2	8.8	7.1
OIL OR GAS ROOM HEATER.....	7.4	2.5	5.4	14.2	4.3	6.4	9.8	5.6	11.5
BUILT-IN ELECTRIC UNITS.....	6.5	6.4	5.8	6.0	8.3	4.7	10.4	5.3	9.0
WOOD OR COAL HEATING STOVE.....	4.8	4.3	3.6	7.0	3.4	1.2	12.9	1.5	11.9
PORTABLE HEATER.....	1.2	.1	-.1	2.8	1.4	1.4	.9	1.4	.8
FIREPLACE.....	.4	.1	.1	.7	.8	.1	1.1	.3	.9
OTHER.....	1.1	1.0	.9	1.2	1.4	1.1	1.1	1.1	1.1
NONE.....	.6	-	-	.4	2.5	.4	1.1	.3	1.2
MAIN HEATING FUEL									
NATURAL GAS.....	54.6	37.5	71.1	43.9	69.8	67.6	26.3	61.3	40.2
ELECTRICITY.....	17.5	8.9	10.1	28.7	17.9	14.3	24.4	17.3	17.9
FUEL OIL OR KEROSENE.....	16.4	46.4	7.3	11.6	3.1	15.3	18.8	16.7	15.6
WOOD.....	5.8	5.4	5.4	7.3	4.1	1.4	15.4	1.9	14.2
LIQUID PETROLEUM GAS.....	4.5	.9	5.7	7.4	2.3	.9	12.5	2.1	9.8
COAL.....	.4	.8	.2	.3	.2	.2	.9	.3	.6
OTHER/NONE.....	.8	.1	.1	.8	2.6	.4	1.7	.4	1.7
SECONDARY HEATING FUEL									
WOOD.....	16.4	14.5	14.8	14.7	23.4	13.9	21.9	16.4	16.4
ELECTRICITY.....	11.3	9.7	8.3	13.3	13.6	11.2	11.6	11.3	11.4
NATURAL GAS.....	4.0	2.8	3.6	4.7	4.9	5.0	2.0	4.5	3.0
FUEL OIL OR KEROSENE.....	2.3	5.4	2.2	1.6	.4	1.3	4.7	1.4	4.2
LIQUID PETROLEUM GAS.....	1.1	.2	1.4	1.7	.6	.2	3.0	.3	2.7
COAL.....	.2	.3	-.1	.4	.1	.1	.5	.1	.5
OTHER.....	.2	.3	.1	.1	.7	.2	.3	.2	.2
NONE.....	64.4	66.9	65.6	63.5	56.3	68.2	56.1	65.8	61.5

SEE NOTES AT END OF TABLE

TABLE 16. FUEL USE CHARACTERISTICS BY CENSUS REGION, AREA TYPE AND SMSA/NON-SMSA (PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	CENSUS REGION			AREA TYPE		SMSA/NON-SMSA		
		NORTHEAST	NORTH CENTRAL	SOUTH	WEST	URBAN	RURAL	SMSA	NONSMSA
WATER-HEATING FUEL									
NATURAL GAS.....	54.1	40.8	68.2	41.9	70.7	67.7	24.2	62.5	36.0
ELECTRICITY.....	31.9	21.8	24.8	48.9	23.9	21.4	55.0	25.0	46.9
FUEL OIL OR KEROSENE.....	8.7	34.5	.9	2.8	.2	9.9	6.0	10.4	4.9
LIQUID PETROLEUM GAS.....	4.4	1.9	5.9	4.9	4.2	.7	12.3	1.8	9.9
WOOD.....	.4	.7	.1	.6	.2	.1	1.1	.1	1.1
SOLAR.....	.1	.1	-	-	.5	-	.3	.1	.2
OTHER.....	.1	.1	-	-	.2	-	.3	.1	.1
NONE.....	.3	.1	.2	.7	.1	.1	.8	.1	.9
CENTRAL WATER-HEATING SYSTEM (2-OR-MORE UNIT BUILDINGS)									
YES.....	13.8	29.0	12.9	5.5	11.9	19.0	2.2	18.2	4.2
NO/NO WATER-HEATING FUEL/NO HOT RUNNING WATER.....	11.6	9.5	10.9	12.3	13.6	14.3	5.6	13.5	7.5
MAIN COOKING FUEL									
ELECTRICITY.....	54.4	44.5	52.7	61.5	55.5	48.4	67.6	50.3	63.2
NATURAL GAS.....	38.7	49.4	40.7	25.1	40.3	49.8	14.3	46.3	22.4
LIQUID PETROLEUM GAS.....	6.4	5.4	6.3	8.5	3.8	1.5	17.0	3.1	13.3
WOOD.....	.3	.4	.1	.6	.1	.1	.9	.1	.9
NCNF/OTHER.....	.2	.3	.1	.3	.1	.3	.2	.2	.3
AIR CONDITIONING (A/C)									
CENTRAL AIR CONDITIONING ONLY.....	26.8	10.2	26.0	40.8	22.5	27.6	25.0	29.5	21.0
INDIVIDUAL ROOM UNITS ONLY.....	30.0	38.6	32.1	32.7	13.2	32.0	25.6	30.7	28.5
CENTRAL A/C AND ROOM UNITS.....	.4	.5	.1	.6	.4	.5	.3	.4	.4
NO AIR CONDITIONING.....	42.8	50.8	41.7	26.0	63.9	39.9	49.2	39.4	50.1

SEE NOTES AT END OF TABLE

TABLE 16. FUEL USE CHARACTERISTICS BY CENSUS REGION, AREA TYPE AND SHSA/NON-SHSA
(PERCENTAGE OF HOUSEHOLDS)--Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	CENSUS REGION			AREA TYPE		SHSA/NON-SHSA	
		NORTHWEST	SOUTH	WEST	URBAN	RURAL	SHSA	NONSHSA
NUMBER OF ROOMS THAT CAN BE AIR CONDITIONED								
ALL.....	36.5	16.3	56.8	25.0	37.3	34.7	38.2	32.8
SOME.....	20.7	33.0	17.3	11.2	22.8	16.1	22.4	17.1
NONE.....	42.8	50.8	26.0	63.9	39.9	49.2	39.4	50.1
WOOD BURNED								
YES (1/3 CORD OR MORE).....	17.4	18.1	18.0	17.0	9.8	34.2	12.6	27.7
NO.....	82.6	81.9	82.0	83.0	90.2	65.8	87.4	72.3
TYPE OF MAIN HEATING FUEL USED LAST WINTER 1979 TO 1980								
SAME FUEL WINTER 1980								
TO WINTER 1981.....	95.7	94.7	95.7	95.4	96.8	93.1	96.3	94.2
DIFFERENT FUEL.....	2.5	4.7	1.8	1.1	2.1	3.3	2.1	3.2
FUEL OIL OF KEROSENE.....	1.5	3.6	.6	.3	1.5	1.4	1.4	1.7
NATURAL GAS.....	.1	.1	.2	.2	.2	.1	.2	.1
LIQUID PETROLEUM GAS.....	.3	.1	.3	.2	.2	.5	.2	.4
ELECTRICITY.....	.2	-	.5	.3	.1	.5	.1	.5
OTHER/NO FUEL USED.....	.3	.8	.2	.2	.1	.7	.2	.5
NOT HEATED IN WINTER 1980								
TO WINTER 1981.....	.6	-	.4	2.5	.4	1.1	.3	1.2
UNIT NOT FUILL IN WINTER 1979 TO 1980.....	1.3	.6	2.2	1.0	.7	2.5	1.3	1.3

SEE NOTES AT END OF TABLE

TABLE 16. FUEL USE CHARACTERISTICS BY CENSUS REGION, AREA TYPE AND SMSA/NON-SMSA (PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	CENSUS REGION				AREA TYPE		SMSA/NON-SMSA	
		NORTHEAST	NORTH CENTRAL	SOUTH	WEST	URBAN	RURAL	SMSA	NONSMSA
FUEL COMBINATIONS									
USE NATURAL GAS FOR MAIN HEATING.....	54.6	37.5	71.1	43.9	69.8	67.6	26.3	61.3	40.2
WATER HEAT AND COOK WITH NATURAL GAS.....	30.7	25.3	38.3	24.2	37.8	39.3	12.0	36.4	18.6
WATER HEAT WITH NATURAL GAS AND COOK WITH ELECTRICITY.....	19.2	9.6	27.5	13.8	28.4	23.0	11.0	21.0	15.4
WATER HEAT WITH NATURAL GAS AND COOK WITH NATURAL GAS.....	1.1	.8	1.3	1.6	.4	1.1	1.1	.9	1.5
WATER HEAT AND COOK WITH ELECTRICITY.....	3.2	.9	4.0	4.2	3.0	3.8	1.9	2.7	4.2
OTHER.....	.4	1.0	.1	.2	.3	.4	.2	.3	.5
USE ELECTRICITY FOR MAIN HEATING.....	17.5	8.9	10.1	28.7	17.9	14.3	24.4	17.3	17.9
WATER HEAT AND COOK WITH ELECTRICITY.....	15.0	8.4	8.5	24.8	14.3	11.1	23.5	14.2	16.7
OTHER.....	2.5	.5	1.6	3.8	3.6	3.2	1.0	3.1	1.1
USE FUEL OIL FOR MAIN HEATING.....	15.4	45.4	7.3	9.3	3.1	15.0	16.3	16.0	14.1
WATER HEAT WITH FUEL OIL AND COOK WITH ELECTRICITY.....	3.5	13.2	.8	1.3	.1	3.2	4.3	3.7	3.2
WATER HEAT WITH FUEL OIL AND COOK WITH NATURAL GAS.....	4.0	17.3	-	.7	-	5.8	-	5.6	.5
WATER HEAT AND COOK WITH ELECTRICITY.....	4.5	5.5	4.5	4.9	2.7	3.1	7.6	3.2	7.2
NATURAL GAS.....	1.4	4.5	.4	.8	.2	2.0	.1	1.9	.3
OTHER.....	2.0	4.9	1.6	1.6	.1	1.0	4.2	1.6	2.9
NONF/OTHER FUEL.....	12.5	8.1	11.5	18.1	9.2	3.1	33.0	5.4	27.8

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. PERCENTAGES ARE CALCULATED ON UNROUNDED NUMBERS. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.
 SOURCE: RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND FUEL USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 17. FUEL USE CHARACTERISTICS BY HOUSING STRUCTURE AND NUMBER OF STORIES
(MILLION HOUSEHOLDS, EXCEPT WHERE PERCENTS ARE INDICATED)

HOUSEHOLD CHARACTERISTICS	HOUSING STRUCTURE BY NUMBER OF STORIES										OTHER HOUSING STRUCTURES
	TOTAL	SINGLE-FAMILY DETACHED				2-STORY	OTHER/RPTD	TOTAL	OTHER HOUSING STRUCTURES		
		1-STORY		2-STORY							
		WITH BASEMENT	WITHOUT BASEMENT	WITH BASEMENT	WITHOUT BASEMENT						
TOTAL HOUSEHOLDS.....	81.6	10.4	23.9	10.6	3.7	4.5	28.7				
MAIN HEATING EQUIPMENT											
CENTRAL WARM-AIR FURNACE.....	41.2	6.7	11.1	6.3	1.6	2.8	12.8				
FORCED AIR.....	40.1	6.4	11.0	6.0	1.6	2.6	12.5				
GRAVITY.....	1.1	.3	.1	.3	—	.1	.3				
STEAM OR HOT WATER SYSTEM.....	13.5	1.4	.5	2.4	.4	.9	7.8				
HEAT PUMP.....	2.1	.2	1.0	.2	.1	.1	.4				
FLOOR, WALL OR PIPELESS FURNACE.....	6.7	.5	3.5	.3	.2	.1	2.1				
OIL OR GAS ROOM HEATER.....	6.1	.2	3.6	.2	.4	.1	1.6				
BUILT-IN ELECTRIC UNITS.....	5.3	.6	1.4	.3	.2	.2	2.5				
WCGD OR COAL HEATING STOVE.....	4.0	.6	1.4	.7	.6	.2	.4				
PORTABLE HEATER.....	1.0	—	.5	—	—	—	.4				
FIREPLACE.....	.3	—	.2	—	—	—	.1				
OTHER.....	.9	.1	.3	—	—	—	.4				
NONE.....	.5	—	.3	—	—	—	.1				
MAIN HEATING FUEL											
NATURAL GAS.....	44.6	6.3	14.0	5.3	1.8	2.7	14.5				
ELECTRICITY.....	14.2	1.1	4.7	.8	.6	.5	6.6				
FUEL OIL OR KEROSENE.....	13.4	1.8	1.7	3.0	.5	.9	5.5				
WOOD.....	4.7	.8	1.5	1.1	.6	.3	.4				
LIQUID PETROLEUM GAS.....	3.7	.3	1.4	.3	.2	.1	1.4				
COAL.....	.3	—	.1	.1	—	.1	—				
OTHER/NONE.....	.7	—	.4	—	—	—	.1				
SECONDARY HEATING FUEL											
WOOD.....	13.4	2.6	4.6	2.6	1.1	1.3	1.1				
ELECTRICITY.....	5.2	1.1	3.2	1.3	.6	.5	2.5				
NATURAL GAS.....	3.3	.4	1.3	.4	.2	.2	.8				
FUEL OIL OR KEROSENE.....	1.9	.4	.2	.5	.1	.2	.5				
LIQUID PETROLEUM GAS.....	.9	.1	.4	.1	.1	—	.1				
COAL.....	.2	.1	—	.1	—	—	—				
OTHER.....	.2	—	—	—	—	—	.1				
NONE.....	52.6	5.6	14.1	5.5	1.5	2.2	23.6				

SEE NOTES AT END OF TABLE

TABLE 17. FUEL USE CHARACTERISTICS BY HOUSING STRUCTURE AND NUMBER OF STORIES
(MILLION HOUSEHOLDS, EXCEPT WHERE PERCENTS ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	HOUSING STRUCTURE BY NUMBER OF STORIES								OTHER HOUSING STRUCTURES
	TOTAL	SINGLE-FAMILY DETACHED				2-STORY		OTHER/NOT REPORTED	
		1-STORY		WITH BASEMENT	WITHOUT BASEMENT	WITH BASEMENT	WITHOUT BASEMENT		
		WITH BASEMENT	WITHOUT BASEMENT						
WATER-HEATING FUEL									
NATURAL GAS.....	44.1	5.8	13.2	5.4	1.7	2.7	15.3		
ELECTRICITY.....	26.1	3.2	8.5	3.3	1.5	1.1	8.3		
FUEL OIL OF KEROSENE.....	7.1	.8	.3	1.4	.1	.4	3.9		
LIQUID PETROLEUM GAS.....	3.6	.4	1.3	.4	.2	.2	1.1		
WOOD.....	.4	-	.1	.1	-	-	-		
SOLAR.....	.1	-	.1	-	-	-	-		
OTHER.....	.1	-	.1	-	-	-	-		
NONE.....	.3	-	.2	-	-	-	-		
MAIN COOKING FUEL									
ELECTRICITY.....	44.4	6.6	14.0	6.2	2.3	2.8	12.4		
NATURAL GAS.....	31.6	3.3	8.2	3.5	1.0	1.5	14.0		
LIQUID PETROLEUM GAS.....	5.2	.5	1.5	.7	.2	.1	2.1		
WOOD.....	.3	-	.1	.1	.1	-	-		
NONE/OTHER.....	.2	-	-	-	-	-	.2		
AIR CONDITIONING (A/C)									
CENTRAL AIR CONDITIONING ONLY.....	21.5	3.0	7.4	2.0	1.0	1.3	7.1		
INDIVIDUAL ROOM UNITS ONLY.....	24.5	3.0	7.1	3.5	.8	1.1	9.0		
CENTRAL A/C AND ROOM UNITS.....	.3	-	.2	-	.1	-	-		
NO AIR CONDITIONING.....	34.9	4.4	9.1	5.1	1.8	2.0	12.5		
NUMBER OF ROOMS THAT CAN BE AIR CONDITIONED									
ALL.....	25.8	3.7	10.6	2.3	1.1	1.5	10.6		
SOME.....	16.9	2.3	4.1	3.2	.7	1.0	5.6		
NONE.....	34.9	4.4	9.1	5.1	1.8	2.0	12.5		

SEE NOTES AT END OF TABLE

TABLE 17. FUEL USE CHARACTERISTICS BY HOUSING STRUCTURE AND NUMBER OF STORIES
(MILLION HOUSEHOLDS, EXCEPT WHERE PERCENTS ARE INDICATED)-Continued

HOUSEHOLD CHARACTERISTICS	HOUSING STRUCTURE BY NUMBER OF STORIES							OTHER HOUSING STRUCTURES
	TOTAL	SINGLE-FAMILY DETACHM				OTHER/ACT REPORTED	OTHER HOUSING STRUCTURES	
		1-STORY		2-STORY				
		WITH BASEMENT	WITHOUT BASEMENT	WITH BASEMENT	WITHOUT BASEMENT			
WOOD BURNED								
YES (1/3 CORN OF MORE).....	14.2	2.6	4.7	3.3	1.3	1.3	1.0	
NO.....	67.4	7.7	19.2	7.3	2.3	3.2	27.6	
AVAILABILITY OF NATURAL GAS IN THE NEIGHBORHOOD (SINGLE FAMILY OR MOBILE HOME)								
USE ANY NATURAL GAS.....	36.3	6.7	14.7	6.1	1.9	3.0	4.0	
DO NOT USE ANY NATURAL GAS.....	24.6	3.7	9.2	4.5	1.8	1.5	3.9	
GAS IS AVAILABLE.....	5.4	1.0	1.8	1.1	.2	.5	.8	
EFFICIENT.....	22.1	27.5	20.0	23.9	11.2	33.4	20.5	
GAS IS NOT AVAILABLE.....	19.2	2.7	7.3	3.4	1.6	1.0	3.1	
PERCENT.....	77.5	72.5	80.0	76.1	88.8	66.6	79.5	
TYPE OF MAIN HEATING FUEL USED LAST WINTER 1979 TO 1980								
SAME FUEL WINTER 1980								
TO WINTER 1981.....	78.1	10.1	22.7	10.1	3.5	4.2	27.5	
DIFFERENT FUEL.....	2.0	.3	.6	.5	.1	.2	.5	
FUEL OIL OR KEROSENE.....	1.2	.2	.2	.3	.1	.1	.3	
NATURAL GAS.....	.1	.1	.1	.1	.1	.1	.1	
LIQUID PETROLEUM GAS.....	.2	.1	.1	.1	.1	.1	.1	
ELECTRICITY.....	.2	.1	.1	.1	.1	.1	.1	
OTHER/NO FUEL USED.....	.3	.1	.1	.2	.1	.1	.1	
NOT HEATED IN WINTER 1980								
TO WINTER 1981.....	.5	.1	.3	.1	.1	.1	.1	
UNIT NOT BUILT IN WINTER 1979 TO 1980.....	1.0	.4	.2	.1	.1	.1	.6	

SEE NOTES AT END OF TABLE

TABLE 17. FUEL USE CHARACTERISTICS BY HOUSING STRUCTURE AND NUMBER OF STORIES (MILLION HOUSEHOLDS, EXCEPT WHERE PERCENTS ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	HOUSING STRUCTURE BY NUMBER OF STORIES							OTHER HOUSING STRUCTURES
	TOTAL	SINGLE-FAMILY DETACHED						
		1-STORY		2-STORY		OTHER/NOT REPORTED		
		WITH BASEMENT	WITHOUT BASEMENT	WITH BASEMENT	WITHOUT BASEMENT			
FUEL COMBINATIONS								
USE NATURAL GAS FOR MAIN HEATING.....	44.6	30.1	6.3	14.0	5.3	1.8	2.7	14.5
WATER HEAT AND COOK WITH NATURAL GAS.....	25.1	15.4	2.9	7.6	2.8	.9	1.3	9.7
WATER HEAT WITH NATURAL GAS AND COOK WITH ELECTRICITY.....	15.7	12.0	2.8	5.1	2.1	.7	1.3	3.7
WATER HEAT WITH ELECTRICITY AND COOK WITH NATURAL GAS.....	.9	.5	.2	.2	.1	-	-	.4
WATER HEAT AND COOK WITH ELECTRICITY.....	2.6	2.1	.5	1.1	.3	.1	.1	.5
OTHER.....	.3	.1	-	.1	-	-	-	.2
USE ELECTRICITY FOR MAIN HEATING.....	14.3	7.7	1.1	4.7	.8	.6	.5	6.6
WATER HEAT AND COOK WITH ELECTRICITY.....	12.3	7.0	1.1	4.3	.7	.5	.4	5.2
OTHER.....	2.0	.6	-	.5	-	.1	-	1.4
USE FUEL OIL FOR MAIN HEATING AND COOK WITH FUEL OIL AND COOK WITH ELECTRICITY.....	12.6	7.5	1.8	1.4	3.0	.4	.8	5.1
WATER HEAT WITH FUEL OIL AND COOK WITH ELECTRICITY.....	2.9	2.1	.5	.2	1.0	.1	.3	.7
WATER HEAT WITH FUEL OIL AND COOK WITH NATURAL GAS.....	3.3	.4	.1	-	.2	-	.1	2.8
WATER HEAT AND COOK WITH ELECTRICITY.....	3.7	3.2	.8	.9	1.0	.3	.2	.5
WATER HEAT AND COOK WITH NATURAL GAS.....	1.1	.5	.1	-	.3	-	.1	.6
OTHER.....	1.6	1.2	.3	.2	.5	.1	.1	.5
NONE/OTHER FUEL.....	10.2	7.8	1.2	3.7	1.5	.9	.5	2.4

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.
 SOURCE: RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY AND USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 18. FUEL USE CHARACTERISTICS BY HOUSING STRUCTURE AND NUMBER OF STORIES
(PERCENTAGE OF HOUSEHOLDS)

HOUSEHOLD CHARACTERISTICS	HOUSING STRUCTURE BY NUMBER OF STORIES										OTHER HOUSING STRUCTURES	
	TOTAL	SINGLE-FAMILY DETACHED				100.0	2-STORY		100.0	OTHER/NOT REPORTED		100.0
		1-STORY		2-STORY								
		WITH BASEMENT	WITHOUT BASEMENT	WITH BASEMENT	WITHOUT BASEMENT							
TOTAL HOUSEHOLDS.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
MAIN HEATING EQUIPMENT												
CENTRAL WARM-AIR FURNACE.....	50.5	64.5	46.5	43.2	59.8	43.2	60.9	44.6	43.6	43.6	44.6	
FORCE AIR.....	49.1	62.1	46.0	42.8	56.7	42.8	58.6	43.6	58.6	43.6	43.6	
GRAVITY.....	1.4	2.4	.5	.4	3.2	.4	2.3	1.0	2.3	1.0	1.0	
STEAM OR HOT WATER SYSTEM.....	16.5	14.0	2.1	11.1	22.4	11.1	20.6	27.2	20.6	27.2	27.2	
HEAT PUMP.....	2.6	2.3	4.0	3.9	2.3	3.9	1.9	1.5	1.9	1.5	1.5	
FLOOR, WALL OR PIPELESS FURNACE.....	8.2	4.6	14.6	5.9	3.2	5.9	2.8	7.3	2.8	7.3	7.3	
OIL OR GAS ROOM HEATER.....	7.4	1.5	15.0	11.9	1.8	11.9	1.7	5.7	1.7	5.7	5.7	
BUILT-IN ELECTRIC UNITS.....	6.5	5.6	6.0	6.4	2.9	6.4	5.1	8.8	5.1	8.8	8.8	
WOOD OF COAL HEATING STOVE.....	4.8	5.9	6.0	16.2	6.8	16.2	5.0	1.3	5.0	1.3	1.3	
PORTABLE HEATER.....	1.2	.2	2.1	.3	.3	.3	.4	1.5	.4	1.5	1.5	
FIREPLACE.....	.4	.2	1.0	.2	.3	.2	.1	.2	.1	.2	.2	
OTHER.....	1.1	1.3	1.2	1.2	.2	1.2	1.2	1.4	1.2	1.4	1.4	
NONE.....	.6	-	1.4	.7	-	.7	.3	.4	.3	.4	.4	
MAIN HEATING FUEL												
NATURAL GAS.....	54.6	60.5	58.7	47.9	50.4	47.9	59.5	50.7	59.5	50.7	50.7	
ELECTRICITY.....	17.5	10.5	19.9	15.4	7.4	15.4	10.5	23.2	10.5	23.2	23.2	
FUEL OIL OR KEROSENE.....	16.4	17.7	7.2	13.0	28.5	13.0	18.9	19.1	18.9	19.1	19.1	
WOOD.....	5.8	7.9	6.4	16.2	10.0	16.2	6.9	1.4	6.9	1.4	1.4	
LIQUID PETROLEUM GAS.....	4.5	2.8	5.7	6.4	2.6	6.4	2.1	5.0	2.1	5.0	5.0	
COAL.....	.4	.4	.4	.4	.7	.4	1.2	.1	1.2	.1	.1	
OTHER/NONE.....	.8	.3	1.6	.7	.4	.7	.8	.5	.8	.5	.5	
SECONDARY HEATING FUEL												
WOOD.....	16.4	25.5	19.3	29.8	25.0	29.8	28.1	3.9	28.1	3.9	3.9	
ELECTRICITY.....	11.3	10.2	13.6	17.0	12.2	17.0	11.9	8.7	11.9	8.7	8.7	
NATURAL GAS.....	4.0	3.8	5.3	6.3	3.4	6.3	5.1	2.9	5.1	2.9	2.9	
FUEL OIL OR KEROSENE.....	2.3	4.2	.8	2.4	5.0	2.4	4.6	1.6	4.6	1.6	1.6	
LIQUID PETROLEUM GAS.....	1.1	.8	1.7	3.8	1.3	3.8	.9	.3	.9	.3	.3	
COAL.....	.2	.6	.1	.3	.3	.3	.1	.1	.1	.1	.1	
OTHER.....	.2	.4	.1	.1	.3	.1	.1	.2	.1	.2	.2	
NONE.....	64.4	54.5	59.2	40.5	52.2	40.5	48.4	82.4	48.4	82.4	82.4	

SEE NOTIFS AT END OF TABLE

TABLE 18. FUEL USE CHARACTERISTICS BY HOUSING STRUCTURE AND NUMBER OF STORIES
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	HOUSING STRUCTURE BY NUMBER OF STORIES								OTHER HOUSING STRUCTURES
	TOTAL	SINGLE-FAMILY DETACHED						OTHER/NOT REPORTED	
		1-STORY		2-STORY		WITHOUT BASEMENT			
		WITH BASEMENT	WITHOUT BASEMENT	WITH BASEMENT	WITHOUT BASEMENT				
WATER-HEATING FUEL									
NATURAL GAS.....	54.1	54.5	56.2	55.5	50.7	46.9	60.1	53.3	
ELECTRICITY.....	31.9	33.5	31.2	35.7	31.3	42.1	25.1	29.1	
FUEL OIL OF KEROSENE.....	6.7	6.0	8.2	1.4	13.3	4.0	9.8	13.6	
LIQUID PETROLEUM GAS.....	4.4	4.6	4.1	5.4	3.5	5.5	3.9	3.9	
WOOD.....	.4	.7	.3	.6	1.0	1.2	.4	-	
SOLAP.....	.1	.2	.1	.3	-	-	-	-	
OTHER.....	.1	.1	-	.2	-	-	.4	.1	
NCNF.....	.3	.5	-	.9	.2	.3	.1	.1	
MAIN COOKING FUEL									
ELECTRICITY.....	54.4	60.4	63.5	58.8	58.8	63.6	62.3	43.4	
NATURAL GAS.....	38.7	33.2	31.6	34.5	33.3	28.4	34.1	48.7	
LIQUID PETROLEUM GAS.....	6.4	5.9	4.9	6.2	7.0	6.6	3.2	7.3	
WOOD.....	.3	.5	-	.4	.9	1.4	.4	-	
NCNF/OTHER.....	.2	-	-	.1	-	.1	-	.6	
AIR CONDITIONING (A/C)									
CENTRAL AIR CONDITIONING ONLY.....	26.8	27.9	28.5	31.2	19.0	28.1	29.5	24.8	
INDIVIDUAL ROOM UNITS ONLY.....	30.0	29.3	29.2	29.9	32.7	21.3	24.5	31.3	
CENTRAL A/C AND ROOM UNITS.....	.4	.6	.1	.7	.1	1.4	1.1	.1	
NO AIR CONDITIONING.....	42.8	42.3	42.2	38.2	48.1	49.1	45.0	41.8	

SEE NOTES AT END OF TABLE

TABLE 18. FUEL USE CHARACTERISTICS BY HOUSING STRUCTURE AND NUMBER OF STORIES
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	HOUSING STRUCTURE BY NUMBER OF STORIES							OTHER HOUSING STRUCTURES
	TOTAL	SINGLE-FAMILY DETACHED			OTHER/NCT REPORTED	OTHER HOUSING STRUCTURES	TOTAL	
		1-STORY	2-STORY					
		WITH BASEMENT	WITHOUT BASEMENT	WITH BASEMENT	WITHOUT BASEMENT			
NUMBER OF ROOMS THAT CAN BE AIR CONDITIONED								
ALL.....	36.5	35.6	44.5	21.4	30.7	33.6	36.8	
SOME.....	20.7	22.2	17.3	30.4	20.2	21.4	19.4	
NONE.....	42.8	42.2	38.2	48.1	49.1	45.0	43.8	
WOOD BURNED								
YES (1/3 COFD OR MCPB).....	17.4	25.3	19.6	31.4	36.2	28.6	3.5	
NO.....	82.6	74.7	80.4	68.6	63.8	71.4	96.5	
TYPE OF MAIN HEATING FUEL USED LAST WINTER 1979 TO 1980								
SAME FUEL WINTER 1980								
TO WINTER 1981.....	95.7	97.1	95.3	95.1	95.8	94.0	95.9	
DIFFERENT FUEL.....	2.9	2.5	2.3	4.5	3.0	3.4	1.6	
FUEL OIL OR KEROSENE.....	1.5	2.1	.8	2.4	2.5	2.3	1.2	
NATURAL GAS.....	.1	.1	.3	-	.3	.4	-	
LIQUID PETROLEUM GAS.....	.3	.1	.5	.2	-	-	.2	
ELECTRICITY.....	.2	.1	.5	.4	-	-	.1	
OTHER/NO FUEL USED.....	.3	.1	.1	1.4	.2	.7	.1	
NOT HEATED IN WINTER 1980								
TO WINTER 1981.....	.6	-	1.4	-	.7	.3	.4	
UNIT NOT FUJIT IN WINTER 1979 TO 1980.....	1.3	.4	1.0	.4	.5	2.3	2.1	

SEE NOTES AT END OF TABLE

TABLE 18. FUEL USE CHARACTERISTICS BY HOUSING STRUCTURE AND NUMBER OF STORIES
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	HOUSING STRUCTURE BY NUMBER OF STORIES							OTHER HOUSING STRUCTURES
	TOTAL	SINGLE-FAMILY DETACHED						
		1-STORY		2-STORY		OTHER/NCT REPORTED		
		WITH BASEMENT	WITHOUT BASEMENT	WITH BASEMENT	WITHOUT BASEMENT			
FUEL COMBINATIONS								
USE NATURAL GAS FOR MAIN HEATING.....	54.6	56.7	60.5	58.7	50.4	47.9	59.5	50.7
WATER HEAT AND COOK WITH NATURAL GAS.....	30.7	29.1	27.6	31.7	26.7	24.9	28.0	33.7
WATER HEAT WITH NATURAL GAS AND COOK WITH ELECTRICITY.....	19.2	22.6	26.8	21.5	19.8	19.4	27.8	13.1
WATER HEAT WITH ELECTRICITY AND COOK WITH NATURAL GAS.....	1.1	1.0	1.6	.9	.6	.9	1.0	1.3
WATER HEAT AND COOK WITH ELECTRICITY.....	3.2	3.9	4.5	4.4	3.1	2.6	2.8	1.9
OTHER.....	.4	.2	-	.2	.2	.1	-	.7
USE ELECTRICITY FOR MAIN HEATING.....	17.5	14.4	10.5	19.9	7.4	15.4	10.5	23.2
WATER HEAT AND COOK WITH ELECTRICITY.....	15.0	13.2	10.4	18.0	7.0	12.6	9.8	18.3
OTHER.....	2.5	1.2	.1	1.9	.4	2.8	.8	4.8
USE FUEL OIL FOR MAIN HEATING, WATER HEAT WITH FUEL OIL AND COOK WITH ELECTRICITY.....	15.4	14.1	17.7	5.8	28.3	12.0	18.3	17.8
WATER HEAT WITH FUEL OIL AND COOK WITH ELECTRICITY.....	3.5	4.0	5.2	.9	9.3	2.2	7.4	2.5
WATER HEAT AND COOK WITH FUEL OIL AND COOK WITH NATURAL GAS.....	4.0	.8	1.2	.1	2.0	.5	1.4	9.8
WATER HEAT AND COOK WITH ELECTRICITY.....	4.5	6.0	7.8	3.9	9.5	7.0	4.3	1.7
WATER HEAT AND COOK WITH NATURAL GAS.....	1.4	1.0	1.0	-	2.9	-	2.0	2.2
OTHER.....	2.0	2.2	2.5	.9	4.6	2.3	3.1	1.6
NCNE/OTHER FUEL.....	12.5	14.7	11.3	15.6	13.9	24.7	11.6	8.4

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. PERCENTAGES ARE CALCULATED ON UNPOUNDED NUMBERS. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.

SOURCE: RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 19. FUEL USE CHARACTERISTICS BY HOUSING STRUCTURE AND OWNERSHIP
(BILLION HOUSEHOLDS, EXCEPT WHERE PERCENTS ARE INDICATED)

HOUSEHOLD CHARACTERISTICS	HOUSING STRUCTURE BY OWNERSHIP															
	SINGLE-FAMILY DETACHED		SINGLE-FAMILY ATTACHED		BUILDING WITH 2 TO 4 UNITS		BUILDING WITH 5 OR MORE UNITS		FOR RENT		HOME OWNERSHIP					
	TOTAL	PERCENT	TOTAL	PERCENT	TOTAL	PERCENT	TOTAL	PERCENT	TOTAL	PERCENT	TOTAL	PERCENT				
TOTAL HOUSEHOLDS	81.6	53.0	45.5	7.5	3.3	2.2	1.1	9.9	2.0	7.5	10.8	1.0	9.8	4.6	3.6	1.0
MAIN HEATING EQUIPMENT																
CENTRAL WARM-AIR FURNACE.....	41.2	28.5	25.7	2.8	1.9	1.2	.7	3.4	.7	2.7	4.0	.4	3.6	3.5	2.7	.8
FORCED AIR.....	40.1	27.6	24.9	2.7	1.8	1.1	.7	3.4	.7	2.7	3.9	.4	3.5	3.5	2.7	.7
GRAVITY.....	1.1	.8	.7	.1	.1	.1	-.1	.1	-.1	.1	.1	-.1	.1	-.1	-.1	-.1
STEAM OR HOT WATER SYSTEM.....	13.5	5.7	5.2	.5	.8	.7	.1	3.1	.9	2.3	3.9	.4	3.5	-.1	-.1	-.1
HEAT PUMP.....	2.1	1.7	1.6	.1	-.1	-.1	-.1	.2	.1	-.1	.2	.1	.1	.1	.1	.1
FLOOR, WALL OR CEILING.....																
FURNACE.....	6.7	4.6	3.6	1.0	.2	.2	.1	1.0	.1	1.0	.6	-.1	.6	.2	.1	.1
OIL OR GAS FURNACE.....	6.1	4.4	3.1	1.4	.2	.1	.1	1.1	.2	1.0	.2	-.1	.2	.2	.1	.1
BUILT-IN ELECTRIC UNITS.....	5.3	2.8	2.4	.4	.2	.1	.1	.6	-.1	.6	1.6	.1	1.6	.1	.1	.1
WOOD OR COAL HEATING STOVE.....	4.0	3.6	2.8	.8	-.1	-.1	-.1	.1	-.1	.1	.1	-.1	.1	.3	.2	.1
PORTABLE HEATER.....	1.0	.6	.4	.2	-.1	-.1	-.1	.1	-.1	.1	.1	-.1	.1	.2	.1	.1
FIREPLACE.....	.3	.3	.3	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1
OTHER.....	.9	.5	.4	.1	-.1	-.1	-.1	.2	-.1	.2	.2	-.1	.1	.1	.1	.1
NONE.....	.5	.4	.1	.3	-.1	-.1	-.1	.1	-.1	.1	.1	-.1	.1	.1	.1	.1
MAIN HEATING FUEL																
NATURAL GAS.....	44.6	30.1	26.0	4.1	1.9	1.3	.6	6.6	1.1	5.5	4.6	.4	4.1	1.4	1.0	.3
ELECTRICITY.....	14.3	7.7	6.9	.8	.5	.2	.3	1.3	.2	1.1	3.7	.3	3.4	1.1	.9	.2
FUEL OIL OR KEROSENE.....	13.4	7.9	6.8	1.1	.7	.7	.1	1.6	.5	1.1	2.4	.3	2.1	.7	.5	.2
WOOD.....	4.7	4.3	3.5	.8	-.1	-.1	-.1	.1	-.1	.1	.1	-.1	.1	.3	.3	.2
LIQUID PETROLEUM GAS.....	3.7	2.3	1.9	.4	.1	-.1	-.1	.1	-.1	.1	.1	-.1	.1	1.2	.9	.2
COAL.....	.3	.3	.2	.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1
OTHER/NONE.....	.7	.5	.2	.3	-.1	-.1	-.1	.1	-.1	.1	.1	-.1	.1	.1	.1	.1
CENTRAL MAIN HEATING SYSTEM FOR BUILDING (2-OR-MORE UNIT BUILDINGS)																
YES.....	9.0	-.1	-.1	-.1	-.1	-.1	-.1	3.6	1.0	2.6	5.4	.5	4.9	-.1	-.1	-.1
NO.....	11.6	-.1	-.1	-.1	-.1	-.1	-.1	6.3	1.0	5.3	5.3	.5	4.9	-.1	-.1	-.1
NO MAIN HEATING SYSTEM.....	.1	-.1	-.1	-.1	-.1	-.1	-.1	.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1

SEE NOTES AT END OF TABLE

TABLE 19. FUEL USE CHARACTERISTICS BY HOUSING STRUCTURE AND OWNERSHIP
(MILLION HOUSEHOLDS, EXCEPT WHERE PERCENTS ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	HOUSING STRUCTURE BY OWNERSHIP																	
	SINGLE-FAMILY DETACHED		SINGLE-FAMILY ATTACHED		BUILDING WITH 2 TO 4 UNITS		BUILDING WITH 5 OR MORE UNITS		MOBILE HOME		TOTAL	OWN	RENT					
	TOTAL	OWN	RENT	TOTAL	OWN	RENT	TOTAL	OWN	RENT	TOTAL				OWN	RENT			
SECONDARY HEATING FUEL																		
WOOD.....	13.4	12.3	11.3	0.9	0.4	0.3	0.1	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
ELECTRICITY.....	9.2	6.8	5.9	.9	.4	.3	.1	.7	.2	.5	1.0	.4	.1	.9	.4	.4	.4	.4
NATURAL GAS.....	3.3	2.5	2.2	.2	-	-	-	.4	.1	.3	.4	.1	.1	.2	.1	.1	.1	.1
FUEL OIL OR KEROSENE.....	1.9	1.4	1.3	.1	-	-	-	.1	-	-	.2	-	-	.2	.2	.2	.2	.2
LIQUID PETROLEUM GAS.....	.9	.8	.7	.1	-	-	-	-	-	-	-	-	-	-	.1	.1	.1	.1
COAL.....	.2	.2	.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTHER.....	.2	.1	.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NONE.....	52.6	49.0	23.8	5.2	2.5	1.7	.8	8.4	1.5	6.9	9.0	.8	.8	8.3	3.7	2.7	1.0	1.0
WATER-HEATING FUEL																		
NATURAL GAS.....	44.1	28.9	24.9	3.9	2.2	1.6	.6	6.8	1.2	5.6	5.1	.5	.5	4.6	1.1	.8	.3	.3
ELECTRICITY.....	26.1	17.7	15.3	2.5	.7	.3	.4	1.8	.4	1.4	3.2	.2	.2	3.0	2.6	2.1	.6	.6
FUEL OIL OR KEROSENE.....	7.1	3.2	2.9	.3	.3	.3	-	1.2	.4	.8	2.4	.3	.3	2.1	.1	.1	.1	.1
LIQUID PETROLEUM GAS.....	3.6	2.5	2.0	.5	.1	-	-	.1	-	.1	-	-	-	-	.9	.7	.2	.2
WOOD.....	.4	.3	.2	.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SOLAR.....	.1	.1	.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTHER.....	.1	.1	.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NONE.....	.3	.2	.1	.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CENTRAL WATER-HEATING SYSTEM (2-OR-MORE UNIT BUILDINGS)																		
YFS.....	11.2	-	-	-	-	-	-	4.3	1.0	3.3	7.0	.5	.5	6.4	-	-	-	-
NO/NO WATER-HEATING FUEL/NO HOT RUNNING WATER.....	9.5	-	-	-	-	-	-	5.7	1.0	4.6	3.8	.5	.5	3.3	-	-	-	-
MAIN COOKING FUEL																		
ELECTRICITY.....	44.4	32.0	28.1	3.9	1.4	.8	.6	3.7	.7	3.0	5.9	.5	.5	5.4	1.4	1.2	.2	.2
NATURAL GAS.....	31.6	17.6	14.7	2.9	1.9	1.4	.5	6.0	1.2	4.8	4.8	.5	.5	4.3	1.3	.9	.4	.4
LIQUID PETROLEUM GAS.....	5.2	3.1	2.5	.6	-	-	-	.2	.1	.1	-	-	-	-	1.9	1.5	.4	.4
WOOD.....	.3	.3	.2	.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NONE/OTHER.....	.2	-	-	-	-	-	-	-	-	-	-	-	-	-	.1	.1	-	-

SEE NOTES AT END OF TABLE

TABLE 19. FUEL USE CHARACTERISTICS BY HOUSING STRUCTURE AND OWNERSHIP
(MILLION HOUSEHOLDS, EXCEPT WHERE PERCENTS ARE INDICATED)-Continued

HOUSEHOLD CHARACTERISTICS	HOUSING STRUCTURE BY OWNERSHIP															
	SINGLE-FAMILY DETACHED		SINGLE-FAMILY ATTACHED		BUILDING WITH 2 TO 4 UNITS		BUILDING WITH 5 OR MORE UNITS		MOBILE HOME		TOTAL	PERCENT				
	OWN	RENT	TOTAL	OWN	RENT	TOTAL	OWN	RENT	TOTAL	OWN			RENT			
AIR CONDITIONING (A/C)																
CENTRAL AIR CONDITIONING ONLY.....	21.9	14.8	13.8	1.0	0.9	0.6	0.3	1.2	0.3	0.9	3.9	0.7	3.2	1.2	1.0	0.2
INDIVIDUAL ROOM UNITS ONLY.....	24.5	15.5	13.4	2.1	1.1	1.0	.2	3.2	1.0	2.2	3.4	.3	3.1	1.3	1.0	.3
CENTRAL A/C AND ROOM UNITS.....	.3	.3	.3	-	-	-	-	-	-	-	-	-	-	-	-	-
NO AIR CONDITIONING.....	34.9	22.4	18.0	4.4	1.3	.7	.6	5.6	.7	4.9	3.5	-	3.5	2.2	1.6	.6
CENTRAL AIR CONDITIONING SYSTEM FOR THE BUILDING (2-OR-MORE UNIT BUILDINGS)																
YES.....	1.2	-	-	-	-	-	-	1.1	-	-	1.2	.3	.9	-	-	-
NO.....	3.8	-	-	-	-	-	-	1.1	.3	.8	2.7	.5	2.2	-	-	-
NO AIR CONDITIONING SYSTEM.....	15.7	-	-	-	-	-	-	8.8	1.7	7.1	6.9	.3	6.6	-	-	-
NUMBER OF ROOMS THAT CAN BE AIR CONDITIONED																
ALL.....	29.8	19.2	17.5	1.7	1.0	.6	.4	2.2	.4	1.7	5.5	.9	4.6	1.9	1.5	.4
SOME.....	16.9	11.4	9.9	1.4	1.0	.9	.1	2.2	.8	1.3	1.8	.1	1.7	.6	.5	.1
NONE.....	34.9	22.4	18.0	4.4	1.3	.7	.6	5.6	.7	4.9	3.5	-	3.5	2.2	1.6	.6
WOOD BURNED																
YES (1/3 COFD OF MCFE).....	14.2	13.2	11.9	1.3	.2	.2	-	.3	.2	.2	.1	-	.1	.4	.4	-
NO.....	67.4	35.8	33.6	6.2	3.1	2.0	1.0	9.6	1.8	7.8	10.7	1.0	9.7	4.2	3.2	1.0
AVAILABILITY OF NATURAL GAS IN THE NEIGHBORHOOD (SINGLE FAMILY OR MOBILE HOME)																
USE ANY NATURAL GAS.....	36.3	32.3	27.8	4.4	2.6	1.9	.7	-	-	-	-	-	-	1.4	1.1	.4
DO NOT USE ANY NATURAL GAS.....	24.6	20.7	17.6	3.1	.7	.4	.3	-	-	-	-	-	-	3.2	2.6	.6
GAS IS AVAILABLE.....	5.4	4.6	4.1	.5	.2	.2	.1	-	-	-	-	-	-	.6	.4	.1
PERCENT.....	22.1	22.4	23.3	17.3	35.3	42.1	27.6	-	-	-	-	-	-	17.3	16.2	21.8
GAS IS NOT AVAILABLE.....	19.2	16.1	13.5	2.5	.4	.2	.2	-	-	-	-	-	-	2.7	2.1	.5
PERCENT.....	77.9	77.6	76.7	82.7	64.7	57.9	72.4	-	-	-	-	-	-	82.7	83.8	78.2

SFF NOTES AT END OF TABLE

TABLE 19. FUEL USE CHARACTERISTICS BY HOUSING STRUCTURE AND OWNERSHIP
(MILLION HOUSEHOLDS, EXCEPT WHERE PERCENTS ARE INDICATED)-Continued

HOUSEHOLD CHARACTERISTICS	HOUSING STRUCTURE BY OWNERSHIP															
	SINGLE-FAMILY DETACHED		SINGLE-FAMILY ATTACHED		BUILDING WITH 2 TO 4 UNITS		BUILDING WITH 5 OR MORE UNITS		MOBILE HOME		RENT					
	TOTAL	OWN	TOTAL	OWN	TOTAL	OWN	TOTAL	OWN	TOTAL	OWN	TOTAL	OWN				
TYPE OF MAIN HEATING FUEL USED	78.1	50.6	43.5	7.1	3.2	2.2	1.0	9.4	1.8	7.7	10.4	1.0	9.4	4.4	3.4	1.0
LAST WINTER 1979 TO 1980	2.0	1.6	1.4	.2	-	-	-	.2	.1	.1	.1	-	.1	.1	.1	-
TO WINTER 1981	1.2	.9	.8	.1	-	-	-	.2	.1	.1	.1	-	.1	.1	.1	-
SAME FUEL WINTER 1980	.1	.1	.1	.1	-	-	-	-	-	-	-	-	-	-	-	-
DIFFERENT FUEL	.2	.2	.2	-	-	-	-	-	-	-	-	-	-	-	-	-
FUEL OIL OR KEROSENE	.2	.2	.2	-	-	-	-	-	-	-	-	-	-	-	-	-
NATURAL GAS	.3	.2	.2	-	-	-	-	-	-	-	-	-	-	.1	.1	-
LIQUID PETROLEUM GAS	.5	.4	.4	.1	.3	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1
ELECTRICITY	1.0	.4	.4	-	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1
OTHER/NO FUEL USED	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NOT HEATED IN WINTER 1980	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TO WINTER 1981	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
UNIT NOT BUILT IN WINTER 1979 TO 1980	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

SEE NOTES AT END OF TABLE

TABLE 19. FUEL USE CHARACTERISTICS BY HOUSING STRUCTURE AND OWNERSHIP (MILLION HOUSEHOLDS, EXCEPT WHERE PERCENTS ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	HOUSING STRUCTURE BY OWNERSHIP															
	SINGLE-FAMILY DETACHED		SINGLE-FAMILY ATTACHED		BUILDING WITH 2 TO 4 UNITS		BUILDING WITH 5 OR MORE UNITS		MOBILE HOME		TOTAL	OWN	RENT			
	OWN	RENT	OWN	RENT	OWN	RENT	OWN	RENT	OWN	RENT						
FUEL COMBINATIONS																
USE NATURAL GAS FOR MAIN HEATING.....	44.6	30.1	26.0	4.1	1.9	1.3	0.6	6.6	1.1	5.5	4.6	0.4	4.1	1.4	1.0	0.3
WATER HEAT AND COOK WITH NATURAL GAS.....	25.1	15.4	13.0	2.4	1.3	.9	.4	4.9	.9	3.9	2.6	.2	2.4	.9	.7	.2
WATER HEAT WITH NATURAL GAS AND COOK WITH ELECTRICITY.....	15.7	12.0	10.8	1.2	.5	.4	.2	1.5	.2	1.3	1.7	.2	1.5	.1	.1	-
WATER HEAT WITH ELECTRICITY AND COOK WITH NATURAL GAS.....	.9	.5	.4	.2	-	-	-	.1	-	.1	-	-	-	.3	.2	.1
WATER HEAT AND COOK WITH ELECTRICITY.....	2.6	2.1	1.8	.3	.2	.1	.1	.2	-	.2	.2	-	.1	-	-	-
OTHER.....	.3	.1	.1	-	-	-	-	.1	-	-	.1	-	.1	.1	-	-
USE ELECTRICITY FOR MAIN HEATING.....	14.3	7.7	6.9	.8	.5	.2	.3	1.3	.2	1.1	3.7	.3	3.4	1.1	.9	.2
WATER HEAT AND COOK WITH ELECTRICITY.....	12.3	7.0	6.4	.6	.4	.2	.2	1.2	.2	.9	2.9	.2	2.7	.8	.7	.1
OTHER.....	2.0	.6	.5	.2	.1	-	.1	.2	-	.2	.9	.1	.8	.2	.2	.1
USE FUEL OIL FOR MAIN HEATING.....	12.6	7.5	6.5	.9	.7	.7	.1	1.6	.5	1.1	2.4	.3	2.1	.4	.2	.1
WATER HEAT WITH FUEL OIL AND COOK WITH ELECTRICITY.....	2.9	2.1	2.0	.2	.1	.1	-	.4	.1	.3	.2	-	.2	-	-	-
WATER HEAT WITH FUEL OIL AND COOK WITH NATURAL GAS.....	3.3	.4	.4	-	.2	.2	-	.7	.2	.5	1.9	.3	1.7	-	-	-
WATER HEAT AND COOK WITH ELECTRICITY.....	3.7	3.2	2.7	.4	.1	.1	-	.1	.1	.1	.1	-	.1	.2	.1	.1
WATER HEAT AND COOK WITH NATURAL GAS.....	1.1	.5	.4	.1	.3	.3	-	.2	.1	.2	.1	-	.1	-	-	-
OTHER.....	1.6	1.2	1.0	.2	-	-	-	.2	.1	-	.1	-	.1	.2	.1	.1
NONE/OTHER FUEL.....	10.2	7.8	6.1	1.7	.1	.1	-	.4	.1	.3	.1	-	.1	1.8	1.5	.4

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.

SOURCE: RESIDENTIAL AND COMMERCIAL ENERGY USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 20. FUEL USE CHARACTERISTICS BY HOUSING STRUCTURE AND OWNERSHIP
(PERCENTAGE OF HOUSEHOLDS)

HOUSEHOLD CHARACTERISTICS	HOUSING STRUCTURE BY OWNERSHIP														
	SINGLE-FAMILY DETACHED			SINGLE-FAMILY ATTACHED			BUILDING WITH 2 TO 4 UNITS			BUILDING WITH 5 OR MORE UNITS			MOBILE HOME		
	TOTAL	OWN	RENT	TOTAL	OWN	RENT	TOTAL	OWN	RENT	TOTAL	OWN	RENT		TOTAL	OWN
TOTAL HOUSEHOLDS.....	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	100.0	100.0
MAIN HEATING EQUIPMENT															
CENTRAL WARM-AIR FURNACE.....	50.5	53.7	56.4	37.2	56.3	52.2	65.0	34.5	35.7	34.2	37.2	44.6	36.4	75.1	73.6
FORCED AIR.....	49.1	52.1	54.9	35.6	53.4	48.4	63.9	33.7	34.9	33.4	36.3	44.6	35.5	74.5	71.2
GRAVITY.....	1.4	1.6	1.6	1.5	3.0	3.9	1.1	.8	.8	.7	.9	-.9	1.0	.5	2.4
STEAM OR HOT WATER SYSTEM.....	16.5	10.7	11.3	6.8	23.6	30.1	9.8	31.7	43.3	28.7	36.0	36.9	35.9	.1	-.1
HEAT PUMP.....	2.6	3.2	3.5	1.0	.4	.6	-.6	1.6	5.7	.6	1.6	6.5	1.1	2.2	2.8
FLOOR, WALL OR PIPELESS FURNACE.....	8.2	8.7	7.9	13.6	7.4	7.1	8.2	10.4	3.3	12.1	6.0	-.9	6.5	3.6	2.5
OIL OR GAS ROOM HEATER.....	7.4	8.4	6.7	18.3	4.8	3.9	6.8	11.6	8.2	12.4	1.5	-.9	1.6	3.7	4.1
BUILT-IN ELECTRIC UNITS.....	6.5	5.2	5.3	4.8	5.2	4.5	6.8	6.2	2.0	7.3	15.2	6.7	16.1	2.2	2.5
WOOD OF COAL HEATING STOVE.....	4.8	6.8	6.2	10.2	.9	1.3	-.8	.8	.5	.8	-.8	-.8	-.8	5.7	6.3
PORTABLE HEATER.....	1.2	1.1	.8	3.0	1.1	-.1	3.3	1.1	-.1	1.4	.6	-.7	.7	4.5	3.4
PIREPLACE.....	.4	.6	.6	.5	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	1.1	1.4
OTHER.....	1.1	.9	.9	1.2	-.1	-.1	-.1	1.5	-.1	1.9	1.8	4.5	1.5	1.3	.9
NONE.....	.6	.7	.3	3.3	.2	.4	-.1	.7	1.4	.6	.2	-.2	.2	.4	.5
MAIN HEATING FUEL															
NATURAL GAS.....	54.6	56.7	57.2	54.1	58.8	58.1	60.2	66.9	56.8	69.4	42.5	44.0	42.3	29.4	28.1
ELECTRICITY.....	17.5	14.4	15.1	10.7	15.3	9.0	28.4	13.4	11.7	13.9	34.5	30.8	34.9	23.1	24.8
FUEL OIL OR KEROSENE.....	16.4	14.9	14.9	14.8	22.4	29.4	7.6	16.5	26.5	13.9	22.1	25.2	21.7	15.4	12.9
WOOD.....	5.8	8.1	7.7	10.9	.9	1.3	-.9	.9	1.2	.8	-.8	-.8	-.8	6.3	7.1
LIQUID PETROLEUM GAS.....	4.5	4.3	4.2	4.7	1.9	1.0	3.7	1.4	2.4	1.2	.7	-.7	.8	25.0	21.2
COAL.....	.4	.5	.5	.9	.5	.8	-.8	.2	-.2	.2	-.2	-.2	-.2	-.2	-.2
OTHER/NONE.....	.8	1.0	.5	4.0	.2	.4	-.4	.7	1.4	.6	.2	-.2	.2	.8	1.0
SECONDARY HEATING FUEL															
WOOD.....	16.4	23.2	25.0	12.3	10.6	12.1	7.6	4.4	11.3	2.7	1.5	.7	1.6	3.5	4.5
ELECTRICITY.....	11.3	12.8	12.9	11.9	11.2	11.7	10.1	6.7	8.2	6.3	9.5	11.3	9.3	9.1	10.6
NATURAL GAS.....	4.0	4.7	4.9	3.3	1.3	1.0	1.8	3.6	3.1	3.7	3.4	12.1	2.5	1.3	1.0
FUEL OIL OF KEROSENE.....	2.3	2.7	2.9	2.0	.8	.7	1.0	.8	1.4	.6	1.8	-.8	2.0	3.5	4.4
LIQUID PETROLEUM GAS.....	1.1	1.5	1.5	1.5	-.1	-.1	-.1	.1	.3	-.3	-.3	-.3	-.3	1.6	2.0
COAL.....	.2	.3	.3	.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	.5	.7
OTHER.....	.2	.2	.3	.1	-.1	-.1	-.1	.2	-.2	.2	-.2	-.2	-.2	.9	1.1
NONF.....	64.4	54.7	52.3	69.0	76.1	74.5	79.6	84.3	75.7	86.5	83.8	75.8	84.7	79.7	75.7

SEE NOTES AT END OF TABLE

TABLE 20. FUEL USE CHARACTERISTICS BY HOUSING STRUCTURE AND OWNERSHIP
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	HOUSING STRUCTURE BY OWNERSHIP													
	SINGLE-FAMILY DETACHED		SINGLE-FAMILY ATTACHED		BUILDING WITH 2 TO 4 UNITS		BUILDING WITH 5 OR MORE UNITS		MOBILE HOME		TOTAL			
	OWN	RENT	OWN	RENT	OWN	RENT	OWN	RENT	OWN	RENT				
WATER-HEATING FUEL														
NATURAL GAS.....	54.1	54.9	52.3	68.0	72.5	58.6	61.5	70.7	47.6	51.0	47.3	22.7	22.1	24.8
ELECTRICITY.....	31.9	33.6	33.0	21.6	14.6	36.3	18.6	17.6	29.9	23.8	30.5	56.8	57.3	55.1
FUEL OIL OF KEROSENE.....	8.7	6.3	4.2	8.5	11.9	1.4	17.7	10.4	22.2	25.2	21.9	1.1	1.4	-
LIQUID PETROLEUM GAS.....	4.4	4.6	6.5	1.8	.9	3.7	2.1	1.3	.3	-	.3	18.7	18.8	18.6
WOOD.....	.4	.7	.5	-	-	-	.1	-	-	-	-	-	-	-
SOLAR.....	.1	.2	.1	-	-	-	-	-	-	-	-	-	.4	.5
OTHER.....	.1	.1	.6	-	-	-	-	-	-	-	-	-	.4	.5
NONE.....	.3	.5	1.7	-	-	-	-	-	-	-	-	-	.3	1.5
CENTRAL WATER-HEATING SYSTEM (2-OR-MORE UNIT BUILDINGS)														
YES.....	13.8	-	-	-	-	-	43.0	48.4	41.7	64.6	51.8	66.0	-	-
NO/NO WATER-HEATING FUEL/NO HOT RUNNING WATER.....	11.6	-	-	-	-	-	57.0	51.6	58.3	35.4	48.2	34.0	-	-
MAIN COOKING FUEL														
ELECTRICITY.....	54.4	60.4	61.7	41.5	35.5	54.3	37.4	36.1	37.7	54.7	47.0	55.5	31.2	24.0
NATURAL GAS.....	38.7	33.2	32.4	56.8	63.4	42.8	60.5	61.1	60.3	44.7	53.0	43.9	27.1	25.0
LIQUID PETROLEUM GAS.....	6.4	5.9	5.4	1.2	1.1	1.4	1.6	2.8	1.3	.3	-	.3	40.2	39.4
WOOD.....	.3	.5	.5	-	-	-	.1	-	.1	-	-	-	-	-
NONE/OTHER.....	.2	-	.2	.5	-	1.6	.5	-	.6	.3	-	.4	1.6	2.0
AIR CONDITIONING (A/C)														
CENTRAL AIR CONDITIONING ONLY.....	26.8	27.9	30.2	26.3	24.9	29.1	11.7	14.7	10.9	36.1	73.1	32.3	25.6	27.7
INDIVIDUAL ROOM UNITS ONLY.....	30.0	29.3	29.5	34.5	42.8	17.0	32.1	48.8	27.8	31.4	25.4	32.1	27.2	27.9
CENTRAL A/C AND ROOM UNITS.....	.4	.6	.7	-	-	-	.1	-	-	.1	.9	-	.6	.7
NO AIR CONDITIONING.....	42.8	42.3	39.6	39.2	32.3	53.9	56.3	36.4	61.2	32.4	.5	35.7	46.6	53.8

SEE NOTES AT END OF TABLE

TABLE 20. FUEL USE CHARACTERISTICS BY HOUSING STRUCTURE AND OWNERSHIP
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	HOUSING STRUCTURE BY OWNERSHIP														
	SINGLE-FAMILY DETACHED		SINGLE-FAMILY ATTACHED		BUILDING WITH 2 TO 4 UNITS		BUILDING WITH 5 OR MORE UNITS		MOBILE HOME		TOTAL				
	OWN	RENT	OWN	RENT	OWN	RENT	OWN	RENT	OWN	RENT	OWN	RENT			
NUMBER OF ROOMS THAT CAN BE AIR CONDITIONED															
ALL.....	36.5	36.3	38.5	22.9	29.6	35.8	22.1	22.4	22.0	50.9	84.8	47.4	41.0	41.3	39.7
SOME.....	20.7	21.4	21.9	18.8	31.2	41.1	21.7	41.1	16.8	16.7	14.7	16.9	12.4	14.1	6.5
NONE.....	42.8	42.3	39.6	58.3	39.2	53.9	56.3	36.4	61.2	32.4	.5	35.7	46.6	44.6	53.8
WOOD BURNED															
YES (1/3 CORDED OR MORE).....	17.4	25.0	26.2	17.8	6.5	8.8	3.1	7.6	1.9	.7	-	.8	8.9	10.6	2.8
NO.....	82.6	75.0	73.8	82.2	93.5	91.2	96.9	92.4	98.1	99.3	100.0	99.2	91.1	89.4	97.2
TYPE OF MAIN HEATING FUEL USED LAST WINTER 1979 TO 1980															
SAME FUEL WINTER 1980															
TO WINTER 1981.....	95.7	95.5	95.7	94.5	97.2	97.7	95.1	89.5	96.5	96.7	100.0	96.4	94.7	94.2	96.2
DIFFERENT FUEL.....	2.5	2.9	3.1	2.2	-	-	1.9	3.7	1.5	1.1	-	1.2	3.1	2.9	3.8
FUEL OIL OR KEROSENE.....	1.5	1.6	1.7	1.0	-	-	1.9	3.7	1.5	.8	-	.9	1.5	.8	3.8
NATURAL GAS.....	.1	.2	.1	.8	-	-	-	-	-	-	-	-	-	-	-
LIQUID PETROLEUM GAS.....	.3	.3	.3	.2	-	-	-	-	-	-	-	-	-	1.5	1.9
ELECTRICITY.....	.2	.3	.4	-	-	-	-	-	-	.1	-	.1	.2	.3	-
OTHER/NO FUEL USED.....	.3	.4	.5	.1	-	-	-	-	-	.2	-	.2	-	-	-
NOT HEATED IN WINTER 1980															
TO WINTER 1981.....	.6	.7	.3	3.3	.2	.4	.7	1.4	.6	.2	-	.2	.4	.5	-
UNIT NOT BUILT IN WINTER 1979 TO 1980.....	1.3	.8	1.0	-	2.6	1.9	3.9	5.4	1.5	2.0	-	2.2	1.8	2.3	-

SEE NOTES AT END OF TABLE

TABLE 20. FUEL USE CHARACTERISTICS BY HOUSING STRUCTURE AND OWNERSHIP (PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	HOUSING STRUCTURE BY OWNERSHIP																				
	SINGLE-FAMILY DETACHED		SINGLE-FAMILY ATTACHED		BUILDING WITH 2 TO 4 UNITS		BUILDING WITH 5 OR MORE UNITS		MOBILE HOME												
	TOTAL	OWN	TOTAL	OWN	TOTAL	OWN	TOTAL	OWN	TOTAL	OWN											
FUEL COMBINATIONS																					
USE NATURAL GAS FOR MAIN HEATING.....	54.6	56.7	57.2	54.1	58.8	58.1	60.2	66.9	56.8	69.4	42.5	44.0	42.3	29.4	28.1	33.7					
WATER HEAT AND COOK WITH NATURAL GAS.....	30.7	29.1	28.5	32.4	38.3	39.3	36.4	48.9	45.8	49.6	24.6	24.1	24.6	19.2	18.9	20.5					
WATER HEAT WITH NATURAL GAS AND COOK WITH ELECTRICITY.....	19.2	22.6	23.7	15.6	15.6	16.1	14.7	14.8	9.4	16.1	15.4	17.5	15.2	2.2	2.1	2.5					
WATER HEAT WITH ELECTRICITY AND COOK WITH NATURAL GAS.....	1.1	1.0	.8	2.1	-	-	-	.8	.8	.8	.2	1.0	.1	5.9	5.0	9.2					
WATER HEAT AND COOK WITH ELECTRICITY.....	3.2	3.9	3.9	4.1	4.8	2.7	9.2	1.8	-	2.3	1.5	1.6	1.5	.8	1.0	-					
OTHER.....	.4	.2	.2	-	-	-	-	.6	.7	.6	.8	-	.9	1.2	1.1	1.5					
USE ELECTRICITY FOR MAIN HEATING.....	17.5	14.4	15.1	10.7	15.3	9.0	28.4	13.4	11.7	13.9	34.5	30.8	34.9	23.1	24.8	17.2					
WATER HEAT AND COOK WITH ELECTRICITY.....	15.0	13.2	14.1	8.2	11.8	7.1	21.9	11.7	11.0	11.9	26.6	21.3	27.2	17.9	20.1	9.9					
OTHER.....	2.5	1.2	1.0	2.5	3.4	2.0	6.5	1.8	.7	2.0	7.9	9.5	7.8	5.3	4.7	7.3					
USE FUEL OIL FOR MAIN HEATING.....	15.4	14.1	14.4	12.4	22.4	29.4	7.6	16.1	26.5	13.5	21.9	25.2	21.6	8.4	6.8	13.8					
WATER HEAT WITH FUEL OIL AND COOK WITH ELECTRICITY.....	3.5	4.0	4.3	2.5	2.4	3.5	-	4.1	5.3	3.8	2.2	-	2.5	-	-	-					
WATER HEAT WITH FUEL OIL AND COOK WITH NATURAL GAS.....	4.0	.8	.9	.5	6.1	8.4	1.4	6.6	8.6	6.1	18.1	25.2	17.4	-	-	-					
WATER HEAT AND COOK WITH ELECTRICITY.....	4.5	6.0	6.0	6.0	3.1	3.0	3.3	1.5	3.3	1.1	.6	-	.6	3.6	3.1	5.3					
WATER HEAT AND COOK WITH NATURAL GAS.....	1.4	1.0	.9	1.0	10.2	14.3	1.6	2.4	3.8	2.0	.5	-	.5	-	-	-					
OTHER.....	2.0	2.2	2.2	2.4	.6	.2	1.4	1.6	5.5	.6	.5	-	.6	4.8	3.7	8.6					
NONE/OTHER FUEL.....	12.5	14.7	13.4	22.8	3.6	3.5	3.7	3.6	5.0	3.2	1.1	-	1.2	39.1	40.2	35.3					

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. PERCENTAGES ARE CALCULATED ON UNROUNDED NUMBERS. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.
SOURCE: RESIDENTIAL AND COMMERCIAL ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 21. FUEL USE CHARACTERISTICS BY SIZE OF RESIDENCE
(MILLION HOUSEHOLDS, EXCEPT WHERE PERCENTS ARE INDICATED)

HOUSEHOLD CHARACTERISTICS	TOTAL	MEASURED HEATED SQUARE FOOTAGE OF RESIDENCE						
		LESS THAN 600	600 TO 999	1,000 TO 1,599	1,600 TO 1,999	2,000 TO 2,399	2,400 TO 2,999	3,000 OR MORE
TOTAL HOUSEHOLDS	81.6	7.5	21.1	24.0	10.0	7.8	6.1	5.2
MAIN HEATING EQUIPMENT								
CENTRAL WARM-AIR FURNACE.....	41.2	1.8	9.0	12.4	6.0	5.0	3.9	3.0
FORCED AIR.....	40.1	1.7	8.8	12.1	5.9	4.8	3.9	2.9
GRAVITY.....	1.1	.1	.2	.3	.2	.2	.1	.1
STEAM OR HOT WATER SYSTEM.....	13.5	1.8	3.5	3.3	1.4	1.2	1.1	1.3
HEAT PUMP.....	2.1	-	.3	.7	.4	.3	.2	.3
FLOOR, WALL OR PIPELESS FURNACE.....	6.7	.8	2.4	2.4	.6	.2	.2	.1
OIL OR GAS ROOM HEATER.....	6.1	1.2	2.4	1.8	.3	.1	.2	.1
BUILT-IN ELECTRIC UNITS.....	5.3	.6	1.9	1.6	.4	.5	.2	.2
WOOD OR COAL HEATING STOVE.....	4.0	.2	.7	1.3	.7	.4	.3	.2
PORTABLE HEATER.....	1.0	.3	.3	.2	-	.1	-	-
FIREPLACE.....	.3	-	.1	.1	-	-	-	-
OTHER.....	.9	.2	.3	.2	-	.1	-	.1
NONE.....	.5	.5	-	-	-	-	-	-
MAIN HEATING FUEL								
NATURAL GAS.....	44.6	3.5	11.2	13.5	5.9	4.3	3.4	2.8
ELECTRICITY.....	14.5	1.2	4.6	4.2	1.6	1.3	.7	.7
FUEL OIL OR KEROSENE.....	13.4	1.6	3.1	3.5	1.4	1.2	1.3	1.1
WOOD.....	4.7	.2	.8	1.4	.8	.7	.5	.4
LIQUID PETROLEUM GAS.....	3.1	.5	1.3	1.1	.3	.2	.2	.1
COAL.....	.3	-	-	.1	-	-	.1	-
OTHER/NONE.....	.7	.5	-	.1	-	-	-	-
CENTRAL MAIN HEATING SYSTEM FOR BUILDING								
(2-OR-MORE UNIT BUILDINGS)								
YES.....	9.0	2.2	4.3	1.9	.2	.2	.1	.1
NO.....	11.6	2.2	5.6	3.1	.4	.2	.1	.1
NO MAIN HEATING SYSTEM.....	.1	.1	-	-	-	-	-	-

SEE NOTES AT END OF TABLE

TABLE 21. FUEL USE CHARACTERISTICS BY SIZE OF RESIDENCE
(MILLION HOUSEHOLDS, EXCEPT WHERE PERCENTS ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	MEASURED HEATED SQUARE FOOTAGE OF RESIDENCE						
		LESS THAN 600	600 TO 999	1,000 TO 1,599	1,600 TO 1,999	2,000 TO 2,399	2,400 TO 2,999	3,000 OR MORE
SECONDARY HEATING FUEL								
WOOD.....	13.4	0.1	1.0	3.5	2.4	2.4	2.1	2.0
ELECTRICITY.....	9.2	.5	1.9	3.0	1.2	1.0	.7	.9
NATURAL GAS.....	3.3	.2	.7	.9	.4	.4	.4	.2
FUEL OIL OF KEROSENE.....	1.9	.1	.3	.7	.2	.2	.2	.2
LIQUID PETROLEUM GAS.....	.9	.1	.1	.2	.2	.1	.1	.1
COAL.....	.2	-	-	.1	-	-	-	-
OTHER.....	.2	-	-	-	-	-	-	.1
NONE.....	52.6	6.4	17.1	15.7	5.5	3.5	2.6	1.8
WATER-HEATING FUEL								
NATURAL GAS.....	44.1	3.3	11.1	13.4	5.7	4.4	3.4	2.8
ELECTRICITY.....	26.1	2.0	7.1	8.0	3.2	2.5	1.7	1.5
FUEL OIL OF KEROSENE.....	7.1	1.3	1.7	1.7	.7	.5	.6	.6
LIQUID PETROLEUM GAS.....	3.6	.6	1.1	.7	.3	.3	.3	.2
WOOD.....	.4	.1	-	.1	-	-	-	-
SOLAR.....	.1	-	-	-	-	-	-	-
OTHER.....	.1	-	-	-	-	-	-	-
NONE.....	.3	.1	.1	.1	-	-	-	-
CENTRAL WATER-HEATING SYSTEM (2-OR-MORE UNIT BUILDINGS)								
YES.....	11.2	3.0	5.3	2.3	.3	.1	.1	.1
NO/NO WATER-HEATING FUEL/NO HOT RUNNING WATER.....	9.5	1.6	4.7	2.7	.3	.2	.1	.1
MAIN COOKING FUEL								
ELECTRICITY.....	44.4	2.7	9.8	13.2	6.1	5.2	3.9	3.6
NATURAL GAS.....	31.6	3.7	9.4	9.4	3.5	2.2	1.9	1.4
LIQUID PETROLEUM GAS.....	5.2	.8	1.9	1.3	.5	.4	.3	.2
WOOD.....	.3	.1	.1	.1	-	-	-	-
NONE/OTHER.....	.2	.2	-	-	-	-	-	-

SEE NOTIFS AT END OF TABLE

TABLE 21. FUEL USE CHARACTERISTICS BY SIZE OF RESIDENCE
(MILLION HOUSEHOLDS, EXCEPT WHERE PERCENTS ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	MEASURED HEATED SQUARE FOOTAGE OF RESIDENCE						
		LESS THAN 600	600 TO 999	1,000 TO 1,999	1,600 TO 1,999	2,000 TO 2,999	2,400 TO 2,999	3,000 OR MORE
AIR CONDITIONING (A/C)								
CENTRAL AIR CONDITIONING ONLY.....	21.9	0.8	4.5	6.4	3.4	2.7	2.1	2.1
INDIVIDUAL ROOM UNITS ONLY.....	24.5	2.4	7.0	7.4	2.6	2.3	1.6	1.1
CENTRAL A/C AND ROOM UNITS.....	.3	-	.1	-	.1	-	-	.1
NO AIR CONDITIONING.....	34.9	4.3	9.6	10.1	3.9	2.8	2.4	1.9
CENTRAL AIR CONDITIONING SYSTEM FOR THE BUILDING (2-OR-MORE UNIT BUILDINGS)								
YES.....	1.2	.4	.6	.2	-	-	-	-
NO.....	3.8	2.2	2.0	1.3	.2	.1	-	-
NO AIR CONDITIONING SYSTEM.....	15.7	4.0	7.3	3.3	.4	.2	.2	.2
NUMBER OF ROOMS THAT CAN BE AIR CONDITIONED								
ALL.....	29.8	2.2	7.6	8.5	3.9	3.0	2.3	2.3
SOME.....	16.5	.9	3.9	5.4	2.2	2.0	1.4	1.0
NONE.....	34.5	4.3	9.6	10.1	3.9	2.8	2.4	1.9
WOOD BURNED								
YES (1/3 CORN OR MORE).....	14.2	.3	1.4	3.6	2.5	2.5	2.1	2.0
NO.....	67.4	7.2	19.7	20.4	7.5	5.3	4.1	3.2
AVAILABILITY OF NATURAL GAS IN THE NEIGHBORHOOD (SINGLE FAMILY OR MOBILE HOME)								
USE ANY NATURAL GAS.....	36.3	1.2	6.3	11.5	6.0	4.6	3.7	3.0
DO NOT USE ANY NATURAL GAS.....	24.6	1.7	4.9	7.5	3.4	2.9	2.2	2.0
GAS IS AVAILABLE.....	5.4	.4	.9	1.8	.7	.6	.5	.5
PERCENT.....	22.1	22.2	18.8	23.8	20.0	22.1	23.7	25.4
GAS IS NOT AVAILABLE.....	19.2	1.3	3.9	5.7	2.8	2.2	1.7	1.5
PERCENT.....	77.5	77.8	81.2	76.2	80.0	77.9	76.3	74.6

SEE NOTES AT END OF TABLE

TABLE 21. FUEL USE CHARACTERISTICS BY SIZE OF RESIDENCE
(MILLION HOUSEHOLDS, EXCEPT WHERE PERCENTS ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	MEASURED HEATED SQUARE FOOTAGE OF RESIDENCE						
		LESS THAN 600	600 TO 999	1,000 TO 1,599	1,600 TO 1,999	2,000 TO 2,399	2,400 TO 2,999	3,000 OR MORE
TYPE OF MAIN HEATING FUEL USED								
LAST WINTER 1979 TO 1980								
SAME FUEL WINTER 1980	78.1	6.7	20.4	23.0	9.6	7.5	5.9	4.9
DIFFERENT FUEL.....	2.0	.1	.4	.6	.3	.2	.2	.2
FUEL OIL OR KEROSENE.....	1.2	.1	.2	.4	.2	.1	.1	.1
NATURAL GAS.....	.1	-	-	-	-	-	-	-
LIQUID PETROLEUM GAS.....	.2	.1	.1	.1	-	-	-	-
ELECTRICITY.....	.2	-	-	.1	-	-	-	-
OTHER/NO FUEL USED.....	.3	-	-	-	.1	.1	-	-
NOT HEATED IN WINTER 1980								
TO WINTER 1981.....	.5	.5	-	-	-	-	-	-
UNIT NOT BUILT IN WINTER 1979 TO 1980.....	1.0	.1	.3	.3	.1	-	-	.1

SEE NOTES AT END OF TABLE

TABLE 21. FUEL USE CHARACTERISTICS BY SIZE OF RESIDENCE
(MILLION HOUSEHOLDS, EXCEPT WHERE PERCENTS ARE INDICATED)-Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	MEASURED HEATED SQUARE FOOTAGE OF RESIDENCE						
		LESS THAN 600	600 TO 999	1,000 TO 1,599	1,600 TO 1,999	2,000 TO 2,999	2,400 TO 2,999	3,000 OR MORE
FUEL COMBINATIONS								
USE NATURAL GAS FOR MAIN HEATING.....	44.6	3.5	11.2	13.5	5.9	4.3	3.4	2.8
WATER HEAT AND COOK WITH NATURAL GAS.....	25.1	2.3	7.2	8.2	2.9	1.8	1.5	1.2
WATER HEAT WITH NATURAL GAS AND COOK WITH ELECTRICITY.....	15.7	.7	2.9	4.4	2.5	2.2	1.6	1.5
WATER HEAT WITH ELECTRICITY AND COOK WITH NATURAL GAS.....	.5	.1	.4	.2	.1	-	-	-
WATER HEAT AND COOK WITH ELECTRICITY.....	2.6	.2	.6	.7	.4	.3	.2	.2
OTHER.....	.3	.2	.1	-	-	-	-	-
USE ELECTRICITY FOR MAIN HEATING.....	14.3	1.2	4.6	4.2	1.6	1.3	.7	.7
WATER HEAT AND COOK WITH ELECTRICITY.....	12.3	.9	3.7	3.7	1.5	1.2	.6	.7
OTHER.....	2.0	.3	.9	.5	.1	.1	.1	-
USE FUEL OIL FOR MAIN HEATING.....	12.6	1.5	2.7	3.3	1.4	1.2	1.3	1.1
WATER HEAT WITH FUEL OIL AND COOK WITH ELECTRICITY.....	2.9	.1	.3	1.0	.2	.4	.4	.5
WATER HEAT WITH FUEL OIL AND COOK WITH NATURAL GAS.....	3.3	1.0	1.3	.4	.2	.1	.1	.1
WATER HEAT AND COOK WITH ELECTRICITY.....	3.7	.2	.5	1.2	.6	.4	.5	.4
WATER HEAT AND COOK WITH NATURAL GAS.....	1.1	.1	.2	.3	.1	.2	.2	.1
OTHER.....	1.6	.1	.4	.4	.3	.2	.2	.1
NONFUEL FUEL.....	10.2	1.3	2.6	2.9	1.2	1.0	.7	.5

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.
SOURCE: RESIDENTIAL AND COMMERCIAL ENERGY USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 22. FUEL USE CHARACTERISTICS BY SIZE OF RESIDENCE
(PERCENTAGE OF HOUSEHOLDS)

HOUSEHOLD CHARACTERISTICS	TOTAL	MEASURED HEATED SQUARE FOOTAGE OF RESIDENCE						
		LESS THAN 600	600 TO 999	1,000 TO 1,599	1,600 TO 1,999	2,000 TO 2,399	2,400 TO 2,999	3,000 OR MORE
TOTAL HOUSEHOLDS.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
MAIN HEATING EQUIPMENT								
CENTRAL WARM-AIR FURNACE.....	50.5	24.3	42.9	51.8	60.5	64.1	64.4	57.4
FORCED AIR.....	49.1	23.3	41.9	50.6	58.5	61.3	62.8	56.3
GRAVITY.....	1.4	.9	1.0	1.2	1.9	2.7	1.5	1.0
STEAM OR HOT WATER SYSTEM.....	16.5	24.0	16.6	13.6	13.8	14.9	18.2	24.3
HEAT PUMP.....	2.6	-	1.5	2.8	4.3	3.8	2.5	4.8
FLOOR, WALL OR PIPELESS FURNACE.....	8.2	11.3	11.5	10.1	5.8	2.1	2.9	1.9
OIL OR GAS ROOM HEATER.....	7.4	15.5	11.6	7.6	3.1	1.7	2.7	1.1
BUILT-IN ELECTRIC UNITS.....	6.5	7.5	9.0	6.5	4.4	5.8	3.0	4.1
WOOD OR COAL HEATING STOVE.....	4.8	2.8	3.4	5.6	7.3	5.7	4.8	4.4
PORTABLE HEATER.....	1.2	4.6	1.5	1.0	.3	.7	.4	.4
FIREPLACE.....	.4	.3	.6	.4	.2	.5	.3	.6
OTHER.....	1.1	3.1	1.5	.7	.4	.8	.8	1.0
NONE.....	.6	6.6	-	-	-	-	-	-
MAIN HEATING FUEL								
NATURAL GAS.....	54.6	46.6	53.1	56.4	58.6	55.0	55.8	54.5
ELECTRICITY.....	17.5	16.0	21.7	17.6	15.6	17.4	11.1	13.6
FUEL OIL OR KEROSENE.....	16.4	21.1	14.9	14.8	14.5	15.5	21.7	21.7
WOOD.....	5.8	2.8	3.7	6.0	8.0	8.7	7.4	6.8
LIQUID PETROLEUM GAS.....	4.5	6.6	6.3	4.5	2.6	2.8	2.9	2.6
COAL.....	.4	.2	.1	.4	.5	.4	1.0	.3
OTHER/NONE.....	.8	6.7	.1	.2	.3	.3	-	.5
SECONDARY HEATING FUEL								
WOOD.....	16.4	1.1	4.5	14.5	23.8	31.3	34.4	37.4
ELECTRICITY.....	11.3	7.3	8.9	12.5	12.0	12.7	11.6	17.4
NATURAL GAS.....	4.0	2.1	3.2	3.6	4.8	5.7	7.2	4.5
FUEL OIL OR KEROSENE.....	2.5	1.9	1.3	2.8	2.2	2.6	3.1	3.8
LIQUID PETROLEUM GAS.....	1.1	1.1	.6	.8	2.0	1.7	1.3	1.3
COAL.....	.2	.5	.1	.3	.1	.3	.3	-
OTHER.....	.2	.5	.2	-	-	.6	.2	1.0
NONE.....	64.4	85.6	81.2	65.4	55.1	45.1	41.9	34.5

SEE NOTES AT END OF TABLE

TABLE 22. FUEL USE CHARACTERISTICS BY SIZE OF RESIDENCE
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	MEASURED HEATED SQUARE FOOTAGE OF RESIDENCE							
		LESS THAN 600	600 TO 999	1,000 TO 1,599	1,600 TO 1,999	2,000 TO 2,399	2,400 TO 2,999	3,000 OR MORE	
WATER-HEATING FUEL									
NATURAL GAS.....	54.1	44.5	52.4	55.9	57.3	56.2	56.1	54.2	
ELECTRICITY.....	31.9	27.3	33.6	33.2	32.3	32.5	28.3	28.8	
FUEL OIL OF KEROSENE.....	8.7	17.1	8.0	6.9	6.7	6.9	10.0	11.9	
LIQUID PETROLEUM GAS.....	4.4	7.7	5.3	3.0	3.3	4.1	4.4	4.5	
WOOD.....	.4	1.0	.2	.5	.2	.2	.8	.6	
SOLAR.....	.1	.6	.1	.1	-	-	.1	-	
OTHER.....	.1	.4	.1	.2	-	-	-	-	
NONE.....	.3	1.4	.4	.2	.1	-	.2	-	
CENTRAL WATER-HEATING SYSTEM (2-OR-MORE UNIT BUILDINGS)									
YES.....	13.8	40.0	24.9	9.5	3.1	1.6	2.4	2.8	
NO/NO WATER-HEATING FUEL/NO HOT RUNNING WATER.....	11.6	20.9	22.1	11.1	2.7	2.6	1.0	1.2	
MAIN COOKING FUEL									
ELECTRICITY.....	54.4	35.6	46.3	54.9	60.9	66.9	64.2	68.9	
NATURAL GAS.....	38.7	50.1	44.4	39.4	34.6	28.6	31.4	27.5	
LIQUID PETROLEUM GAS.....	6.4	11.1	8.8	5.3	4.5	4.5	4.4	3.1	
HOOD.....	.3	.7	.5	.3	-	-	-	.6	
NONE/OTHER.....	.2	2.4	-	.1	-	-	-	-	
AIR CONDITIONING (A/C)									
CENTRAL AIR CONDITIONING ONLY.....	26.8	10.5	21.2	26.7	33.7	34.5	34.1	39.6	
INDIVIDUAL ROOM UNITS ONLY.....	30.0	32.0	33.0	30.9	26.3	29.8	26.7	22.0	
CENTRAL A/C AND ROOM UNITS.....	.4	-	.3	.2	1.1	.1	.5	1.6	
NO AIR CONDITIONING.....	42.8	57.5	45.5	42.2	39.0	35.6	38.8	36.8	

SEE NOTES AT END OF TABLE

TABLE 22. FUEL USE CHARACTERISTICS BY SIZE OF RESIDENCE
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	MEASURED HEATED SQUARE FOOTAGE OF RESIDENCE						
		LESS THAN 600	600 TO 999	1,000 TO 1,599	1,600 TO 1,999	2,000 TO 2,399	2,400 TO 2,999	3,000 OR MORE
NUMBER OF ROOMS THAT CAN BE AIR CONDITIONED								
ALL.....	36.5	30.0	35.9	35.3	38.8	39.2	38.1	43.2
SOME.....	20.7	12.5	18.7	22.5	22.3	25.2	23.1	20.0
NONE.....	42.8	57.5	45.5	42.2	39.0	35.6	38.8	36.8
WOOD BURNED								
YES (1/3 CORE OR MORE).....	17.4	4.0	6.7	14.9	24.6	31.8	33.6	37.8
NO.....	82.6	96.0	93.3	85.1	75.4	68.2	66.4	62.2
TYPE OF MAIN HEATING FUEL USED LAST WINTER 1979 TO 1980								
SAME FUEL WINTER 1980.....	95.7	89.9	96.8	96.1	95.9	96.9	96.9	93.6
DIFFERENT FUEL.....	2.5	2.0	1.8	2.5	3.0	2.7	2.8	3.9
FUEL OIL OR KEROSENE.....	1.5	.8	1.1	1.6	1.9	1.2	1.7	2.8
NATURAL GAS.....	.1	.1	.1	.2	.1	.2	.4	.3
LIQUID PETROLEUM GAS.....	.3	.9	.3	.2	.1	.1	.1	.4
ELECTRICITY.....	.2	—	.1	.4	.4	.1	.3	.2
OTHER/NO FUEL USED.....	.2	.2	.1	.1	.6	1.1	.3	.3
NOT HEATED IN WINTER 1980 TO WINTER 1981.....	.6	6.6	—	—	—	—	—	—
UNIT NOT BUILT IN WINTER 1979 TO 1980.....	1.3	1.5	1.4	1.4	1.0	.5	.3	2.5

SEE NOTES AT END OF TABLE

TABLE 22. FUEL USE CHARACTERISTICS BY SIZE OF RESIDENCE
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	MEASURED HEATED SQUARE FOOTAGE OF RESIDENCE						
		LESS THAN 600	600 TO 999	1,000 TO 1,599	1,600 TO 1,999	2,000 TO 2,399	2,400 TO 2,999	3,000 OR MORE
FUEL COMBINATIONS								
USE NATURAL GAS FOR MAIN HEATING.....	54.6	46.6	53.1	56.4	58.6	55.0	55.8	54.5
WATER HEAT AND COOK WITH NATURAL GAS.....	30.7	30.9	33.9	34.2	29.4	22.9	24.6	23.0
WATER HEAT WITH NATURAL GAS AND COOK WITH ELECTRICITY....	19.2	9.0	13.8	18.2	24.8	28.0	26.6	28.2
WATER HEAT WITH ELECTRICITY AND COOK WITH NATURAL GAS....	1.1	1.3	2.0	1.0	.7	.2	.6	.4
WATER HEAT AND COOK WITH ELECTRICITY.....	3.2	2.6	3.0	3.0	3.7	3.9	4.0	2.9
OTHER.....	.4	2.8	.3	-	-	-	-	-
USE ELECTRICITY FOR MAIN HEATING.....	17.5	16.0	21.7	17.6	15.6	17.4	11.1	13.6
WATER HEAT AND COOK WITH ELECTRICITY.....	15.0	11.9	17.4	15.6	14.5	16.0	9.6	13.0
OTHER.....	2.5	4.2	4.4	2.0	1.0	1.4	1.5	.6
USE FUEL OIL FOR MAIN HEATING.....	15.4	19.5	12.7	14.0	14.3	15.2	21.5	21.7
WATER HEAT WITH FUEL OIL AND COOK WITH ELECTRICITY.....	3.5	1.3	1.3	4.1	2.4	5.2	6.5	9.1
WATER HEAT WITH FUEL OIL AND COOK WITH NATURAL GAS.....	4.0	13.5	6.0	1.8	2.5	1.0	1.8	2.0
WATER HEAT AND COOK WITH ELECTRICITY.....	4.5	2.1	2.6	5.0	5.6	4.8	7.5	6.9
WATER HEAT AND COOK WITH NATURAL GAS.....	1.4	.9	.9	1.3	1.3	2.1	3.2	1.6
OTHER.....	2.0	1.7	2.0	1.8	2.5	2.1	2.5	2.1
NONE/OTHER FUEL.....	12.5	17.9	12.4	12.0	11.6	12.4	11.6	10.2

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. PERCENTAGES ARE CALCULATED ON UNROUNDED NUMBERS. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.
SOURCE: RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 23. FUEL USE CHARACTERISTICS BY AVERAGE SQUARE FEET PER HOUSEHOLD

HOUSEHOLD CHARACTERISTICS	AVERAGE NUMBER OF SQUARE FEET PER HOUSEHOLD		AVERAGE NUMBER OF HEATED SQUARE FEET PER HOUSEHOLD		AVERAGE NUMBER OF HEATED SQUARE FEET PER HOUSEHOLD		AVERAGE HEATED SQUARE FEET PER HOUSEHOLD MEMBER	
	MEAN		MEDIAN		SINGLY-FAMILY UNIT			
	HEATED AND UNHEATED	HEATED	HEATED AND UNHEATED	HEATED	MOBILE HOME	MOBILE HOME		
HOUSEHOLD CHARACTERISTICS	1,745	1,499	1,488	1,260	1,771	914	809	534
ECUSE-ACIDS (BILLIONS)								
41.2	1,907	1,653	1,750	1,471	1,910	953	828	577
40.1	1,903	1,653	1,744	1,468	1,912	957	830	576
1.1	2,042	1,669	2,048	1,536	1,853	820	610	617
13.5	1,861	1,552	1,548	1,224	2,186	971	Q	582
2.1	2,121	1,856	1,821	1,716	2,046	1,161	952	652
6.7	1,271	1,134	1,152	1,010	1,300	691	742	417
6.1	1,176	1,038	987	912	1,128	779	572	389
5.3	1,467	1,261	1,082	1,024	1,635	787	875	482
4.0	1,861	1,572	1,762	1,438	1,613	1,079	1,158	471
1.0	1,083	935	844	817	1,193	598	447	428
3	1,744	1,399	1,404	1,040	1,516	NA	Q	421
9	1,350	1,200	880	812	1,712	641	246	435
5	1,076	-	960	-	-	-	-	-
MAIN HEATING FUEL								
NATURAL GAS	1,755	1,533	1,537	1,312	1,775	929	803	541
ELECTRICITY	1,545	1,366	1,236	1,132	1,751	858	832	530
FUEL OIL OR KEROSENE	1,937	1,571	1,651	1,291	1,921	967	729	574
WCOG	2,003	1,686	1,904	1,560	1,733	1,258	1,115	510
LIQUID PETROLEUM GAS	1,394	1,234	1,080	1,008	1,510	733	774	440
COAL	2,261	1,918	1,966	1,728	1,958	Q	NA	536
OTHER/NONE	1,424	571	1,120	NA	678	NA	Q	152
CENTRAL MAIN HEATING SYSTEM FOR BUILDING (2-OR-MORE UNIT BUILDINGS)								
YES	940	914	816	800	-	914	-	435
NO	962	922	844	840	-	922	-	396
NO MAIN HEATING SYSTEM	C	-	Q	-	-	-	-	-

SEE NOTES AT END OF TABLE

TABLE 23. FUEL USE CHARACTERISTICS BY AVERAGE SQUARE FEET PER HOUSEHOLD-Continued

HOUSEHOLD CHARACTERISTICS	HOUSEHOLDS (BILLIONS)	AVERAGE NUMBER OF SQUARE FEET PER HOUSEHOLD				AVERAGE NUMBER OF HEATED SQUARE FEET PER HOUSEHOLD				AVERAGE NUMBER OF HEATED SQUARE FEET PER MOBILE HOME	NUMBER OF HEATED SQUARE FEET PER HOUSEHOLD MEMBER
		MEAN		MEDIAN		SINGLE-FAMILY UNIT		MULTI-FAMILY UNIT			
		HEATED AND UNHEATED	HEATED	HEATED AND UNHEATED	HEATED	HEATED	HEATED	HEATED			
SECONDARY HEATING FUEL											
WCOAL.....	13.4	2,489	2,113	2,352	1,947	2,161	1,392	1,014	669		
ELECTRICITY.....	9.2	1,944	1,678	1,632	1,399	1,873	1,038	948	595		
NATURAL GAS.....	2.3	1,995	1,762	1,824	1,553	1,988	1,062	690	625		
FUEL OIL OF KEROSENE.....	1.9	2,047	1,660	1,809	1,437	1,867	911	1,028	510		
LIQUID PETROLEUM GAS.....	.9	1,892	1,683	1,812	1,689	1,767	Q	Q	531		
COAL.....	.2	2,452	1,401	2,484	1,415	1,439	NA	Q	561		
OTHER.....	.2	2,173	1,962	2,164	2,149	2,607	Q	Q	601		
NCNF.....	52.6	1,488	1,284	1,200	1,072	1,568	880	780	477		
WATER-HEATING FUEL											
NATURAL GAS.....	44.1	1,762	1,538	1,548	1,320	1,793	937	837	542		
ELECTRICITY.....	26.1	1,725	1,470	1,440	1,247	1,728	867	799	530		
FUEL OIL OF KEROSENE.....	7.1	1,818	1,481	1,437	1,175	2,090	902	860	563		
LIQUID PETROLEUM GAS.....	3.6	1,574	1,345	1,280	1,042	1,555	990	807	451		
WCOAL.....	.4	2,104	1,545	1,408	1,190	1,556	Q	NA	468		
SOLAR.....	.1	1,757	Q	1,472	Q	Q	NA	Q	Q		
OTHER.....	.1	1,236	781	1,070	1,070	Q	NA	Q	Q		
NCNF.....	.3	1,086	841	900	672	884	NA	Q	317		
CENTRAL WATER-HEATING SYSTEM (2-OR-MORE UNIT BUILDINGS)											
YES.....	11.2	918	888	800	778	-	888	-	424		
NO/NO WATER-HEATING FUEL/NO HOT RUNNING WATER.....	9.5	988	946	859	844	-	946	-	397		
MAIN COOKING FUEL											
ELECTRICITY.....	44.4	1,921	1,639	1,693	1,440	1,876	933	869	593		
NATURAL GAS.....	31.6	1,559	1,362	1,278	1,144	1,653	902	813	477		
LIQUID PETROLEUM GAS.....	5.2	1,409	1,191	1,120	960	1,456	950	768	407		
WCOAL.....	.3	1,895	1,109	1,350	908	1,111	Q	NA	351		
NCNF/OTHER.....	.2	646	407	480	480	Q	303	579	276		

SEE NOTES AT END OF TABLE

TABLE 23. FUEL USE CHARACTERISTICS BY AVERAGE SQUARE FEET PER HOUSEHOLD-Continued

HOUSEHOLD CHARACTERISTICS	HOUSEHOLD ECIDS (BILLIONS)	AVERAGE NUMBER OF SQUARE FEET PER HOUSEHOLD				AVERAGE NUMBER OF HEATED SQUARE FEET PER HOUSEHOLD		AVERAGE NUMBER OF HEATED SQUARE FEET PER MOBILE HOME	AVERAGE NUMBER OF SQUARE FEET PER HOUSEHOLD
		MEAN		MEDIAN		SINGLE-FAMILY UNIT	MULTI-FAMILY UNIT		
		HEATED AND UNHEATED	HEATED	HEATED AND UNHEATED	HEATED				
AIR CONDITIONING (A/C)									
CENTRAL AIR CONDITIONING ONLY.....	21.9	1,960	1,728	1,776	1,536	2,026	984	969	626
INDIVIDUAL ROOM UNITS ONLY.....	24.5	1,655	1,419	1,388	1,197	1,670	912	737	527
CENTRAL A/C AND ROOM UNITS.....	.3	2,440	2,325	1,920	1,708	2,500	0	0	750
NO AIR CONDITIONING.....	34.9	1,668	1,404	1,360	1,152	1,664	877	762	481
CENTRAL AIR CONDITIONING SYSTEM FOR THE BUILDING (2-OR-MORE UNIT BUILDINGS)									
YES.....	1.2	813	806	728	728	-	806	-	498
NO.....	3.8	1,061	1,042	919	918	-	1,042	-	520
NO AIR CONDITIONING SYSTEM.....	15.7	934	892	819	805	-	892	-	383
NUMBER OF ROOMS THAT CAN BE AIR CONDITIONED									
ALL.....	29.8	1,762	1,565	1,500	1,333	1,887	892	855	589
SOME.....	16.9	1,876	1,579	1,674	1,378	1,786	1,042	831	554
NONE.....	34.9	1,668	1,404	1,360	1,152	1,664	877	762	481
WOOD FURNED									
YES (1/3 CCED OR MORE).....	14.2	2,406	2,045	2,288	1,872	2,088	1,525	1,109	619
NO.....	67.4	1,606	1,383	1,324	1,160	1,671	903	780	512
AVAILABILITY OF NATURAL GAS IN THE NEIGHBORHOOD (SINGLE FAMILY OR MOBILE HOME)									
USE ANY NATURAL GAS.....	36.3	2,038	1,740	1,878	1,550	1,779	-	809	580
DO NOT USE ANY NATURAL GAS.....	24.6	1,982	1,634	1,758	1,440	1,757	-	808	542
GAS IS AVAILABLE.....	5.4	2,100	1,739	1,934	1,485	1,866	-	623	605
GAS IS NOT AVAILABLE.....	19.2	1,945	1,604	1,722	1,430	1,725	-	847	526

SEE NOTES AT FOOT OF TABLE

TABLE 23. FUEL USE CHARACTERISTICS BY AVERAGE SQUARE FEET PER HOUSEHOLD-Continued

HOUSEHOLD CHARACTERISTICS	HOUSEHOLDS (MILLIONS)	AVERAGE NUMBER OF SQUARE FEET PER HOUSEHOLD				AVERAGE NUMBER OF HEATED SQUARE FEET PER HOUSEHOLD		AVERAGE NUMBER OF HEATED SQUARE FEET PER HOUSEHOLD	AVERAGE NUMBER OF HEATED SQUARE FEET PER HOUSEHOLD MEMBER
		MEAN		MEDIAN	SINGLE-FAMILY UNIT	MULTI-FAMILY UNIT			
		HEATED AND UNHEATED	HEATED				HEATED AND UNHEATED		
FUEL COMBINATIONS									
USE NATURAL GAS FOR MAIN HEATING.....	44.6	1,755	1,533	1,537	1,312	1,775	929	803	541
WATER HEAT AND COOK WITH NATURAL GAS.....	25.1	1,600	1,404	1,332	1,200	1,647	934	829	486
WATER HEAT WITH NATURAL GAS AND COOK WITH ELECTRICITY.....	15.7	2,035	1,773	1,865	1,591	1,984	959	939	634
WATER HEAT WITH ELECTRICITY AND COOK WITH NATURAL GAS.....	.9	1,325	1,128	1,008	945	1,377	811	764	376
WATER HEAT AND COOK WITH ELECTRICITY.....	2.6	1,820	1,571	1,609	1,343	1,705	786	688	610
OTHER.....	.3	681	528	490	480	693	490	0	301
USE ELECTRICITY FOR MAIN HEATING.....	14.3	1,545	1,366	1,236	1,132	1,751	858	832	530
WATER HEAT AND COOK WITH ELECTRICITY.....	12.3	1,614	1,418	1,290	1,200	1,781	854	923	537
OTHER.....	2.0	1,131	1,052	862	862	1,464	873	523	479
USE FUEL OIL FOR MAIN HEATING.....	12.6	1,998	1,611	1,787	1,344	1,964	968	707	588
WATER HEAT WITH FUEL OIL AND COOK WITH ELECTRICITY.....	2.9	2,587	2,022	2,464	1,680	2,264	1,192	NA	712
WATER HEAT WITH FUEL OIL AND COOK WITH NATURAL GAS.....	3.3	1,155	1,021	817	800	1,739	842	NA	407
WATER HEAT AND COOK WITH ELECTRICITY.....	3.7	2,195	1,773	2,093	1,544	1,850	1,476	624	651
WATER HEAT AND COOK WITH NATURAL GAS.....	1.1	2,212	1,778	2,178	1,600	2,059	951	NA	579
OTHER.....	1.6	2,045	1,584	1,800	1,295	1,776	1,357	770	559
NCNE/OTHER FUEL.....	10.2	1,673	1,399	1,400	1,189	1,572	720	821	450

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS ZERO. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.

NA = NOT AVAILABLE BECAUSE THE SAMELE DID NOT CONTAIN CASES IN THIS CELL.

C = DATA WITHHELD BECAUSE THE FIFTIVE STANDARD ERROR WAS 50 PERCENT OR GREATER.

SOURCE: RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 23. FUEL USE CHARACTERISTICS BY AVERAGE SQUARE FEET PER HOUSEHOLD-Continued

HOUSEHOLD CHARACTERISTICS	HOUSEHOLDS (BILLIONS)	AVERAGE NUMBER OF SQUARE FEET PER HOUSEHOLD				AVERAGE NUMBER OF HEATED SQUARE FEET PER HOUSEHOLD		AVERAGE NUMBER OF SQUARE FEET PER HOUSEHOLD		AVERAGE OF HEATED SQUARE FEET PER HOUSEHOLD MEMBER
		MEAN		MEDIAN		SINGLE-FAMILY UNIT	MULTI-FAMILY UNIT	MOBILE HOME		
		HEATED AND UNHEATED	HEATED	HEATED AND UNHEATED	HEATED					
TYPE OF MAIN HEATING FUEL USED LAST WINTER 1979 TO 1980										
SAME FUEL WINTER 1980 TO WINTER 1981.....	78.1	1,746	1,505	1,489	1,264	1,778	915	822	538	
DIFFERENT FUEL.....	2.0	1,967	1,662	1,729	1,470	1,852	1,239	528	523	
FUEL OTHER THAN KEROSENE.....	1.2	2,014	1,738	1,847	1,531	1,959	1,320	669	549	
NATURAL GAS.....	.1	1,947	1,728	Q	1,288	1,728	NA	NA	436	
LIQUEFIED PETROLEUM GAS.....	.2	1,194	1,139	965	925	1,456	NA	Q	375	
ELECTRICITY.....	.2	1,915	1,569	1,499	1,397	1,665	Q	Q	514	
OTHER/FUEL USED.....	.3	2,497	1,816	2,560	1,800	1,934	Q	NA	589	
NOT HEATED IN WINTER 1980 TO WINTER 1981.....										
UNIT NOT BUILT IN WINTER 1979 TO 1980.....	1.0	1,616	1,443	1,092	1,092	2,041	848	798	590	

SEE NOTES AT END OF TABLE

TABLE 24. FUEL USE CHARACTERISTICS BY TOTAL SQUARE FOOTAGE

HOUSEHOLD CHARACTERISTICS	TOTAL HOUSEHOLDS		TOTAL HEATED AND UNHEATED		TOTAL SQUARE FOOTAGE	
	(MILLIONS)	(PERCENT)	(BILLIONS)	(PERCENT)	(BILLIONS)	(PERCENT)
TOTAL HOUSEHOLDS.....	81.6	100.0	142.5	100.0	122.4	100.0
MAIN HEATING EQUIPMENT						
CENTRAL WARM-AIR FURNACE.....	41.2	50.5	78.6	55.2	68.2	55.7
FORCED AIR.....	40.1	49.1	76.4	53.6	66.3	54.2
GRAVITY.....	1.1	1.4	2.3	1.6	1.9	1.5
STEAM OR HOT WATER SYSTEM.....	13.5	16.5	25.1	17.6	20.9	17.1
HEAT PUMP.....	2.1	2.6	4.5	3.2	3.9	3.2
FLOOR, WALL OR PIPELESS FURNACE.....	6.7	8.2	8.5	6.0	7.6	6.2
CIL CR GAS ROCK HEATF.....	6.1	7.4	7.2	5.0	6.3	5.2
RADIANT IN ELECTRIC UNITS.....	5.3	6.5	7.8	5.5	6.7	5.5
WOOL OR COAL HEATING STOVE.....	4.0	4.8	7.4	5.2	6.2	5.1
PORTABLE HEATER.....	1.0	1.2	1.1	.8	.9	.8
FIREPLACE.....	.3	.4	.6	.4	.5	.4
CHEF.....	.9	1.1	1.2	.8	1.1	.9
NONE.....	.5	.6	.5	.4	—	—
MAIN HEATING FUEL						
NATURAL GAS.....	44.6	54.6	78.2	54.9	68.3	55.8
ELECTRICITY.....	14.3	17.5	22.1	15.5	19.5	16.0
FUEL OIL OR KEROSENE.....	13.4	16.4	25.9	18.2	21.0	17.2
WOOD.....	4.7	5.8	9.5	6.6	8.0	6.5
LIQUID PETROLEUM GAS.....	3.7	4.5	5.2	3.6	4.6	3.7
COAL.....	.3	.4	.7	.5	.6	.5
OTHER/NONE.....	.7	.8	.9	.7	.4	.3
CENTRAL MAIN HEATING SYSTEM FOR BUILDING (2-OR-MORE UNIT BUILDINGS)						
YES.....	9.0	11.0	8.5	5.9	8.2	6.7
NO.....	11.6	14.2	11.2	7.8	10.7	8.8
NO MAIN HEATING SYSTEM.....	.1	.1	—	—	—	—

SEE NOTES AT END OF TABLE

TABLE 24. FUEL USE CHARACTERISTICS BY TOTAL SQUARE FOOTAGE-Continued

HOUSEHOLD CHARACTERISTICS	TOTAL HOUSEHOLDS		TOTAL SQUARE FOOTAGE			
	(MILLIONS)	(PERCENT)	TOTAL HEATED AND UNHEATED		TOTAL HEATED	
			(BILLIONS)	(PERCENT)	(BILLIONS)	(PERCENT)
SECONDARY HEATING FUEL						
WOOL.....	13.4	16.4	33.3	23.4	28.3	23.1
ELECTRICITY.....	9.2	11.3	18.0	12.6	15.5	12.7
NATURAL GAS.....	3.3	4.0	6.6	4.6	5.8	4.7
FUEL OIL OR KEROSENE.....	1.9	2.3	3.9	2.7	3.2	2.6
LIQUID PETROLEUM GAS.....	.9	1.1	1.7	1.2	1.5	1.2
COAL.....	.2	.2	.4	.3	.3	.2
OTHER.....	.2	.2	.4	.3	.4	.3
NCNF.....	52.6	64.4	78.3	54.9	67.5	55.2
WATER-HEATING FUEL						
NATURAL GAS.....	44.1	54.1	77.8	54.6	67.9	55.5
ELECTRICITY.....	26.1	31.9	45.0	31.6	38.3	31.3
FUEL OIL OR KEROSENE.....	7.1	8.7	12.9	9.0	10.5	8.6
LIQUID PETROLEUM GAS.....	3.6	4.4	5.6	3.9	4.8	3.9
WOOL.....	.4	.4	.7	.5	.5	.4
SCLAF.....	.1	.1	.2	.1	.1	.1
OTHER.....	.1	.1	.1	.1	.1	.1
NCNF.....	.3	.3	.3	.2	.2	.2
CENTRAL WATER-HEATING SYSTEM (2-OR-MORE UNIT BUILDINGS)						
YES.....	11.2	13.8	10.3	7.2	10.0	8.2
NO/NO WATER-HEATING FUEL/NO HOT RUNNING WATER.....	9.5	11.6	9.4	6.6	9.0	7.3
MAIN COOKING FUEL						
ELECTRICITY.....	44.4	54.4	85.3	59.9	72.8	59.5
NATURAL GAS.....	31.6	38.7	49.2	34.5	43.0	35.1
LIQUID PETROLEUM GAS.....	5.2	6.4	7.3	5.1	6.2	5.1
WOOL.....	.3	.3	.5	.4	.3	.2
NCNF/OTHER.....	.2	.2	.1	.1	.1	.1

SPECIES AT END OF TABLE

TABLE 24. FUEL USE CHARACTERISTICS BY TOTAL SQUARE FOOTAGE-Continued

HOUSEHOLD CHARACTERISTICS	TOTAL HOUSEHOLDS		TOTAL SQUARE FOOTAGE	
	(MILLIONS)	(PERCENT)	TOTAL HEATED AND UNHEATED	TOTAL HEATED
	(BILLIONS)	(PERCENT)	(BILLIONS)	(PERCENT)
AIR CONDITIONING (A/C)				
CENTRAL AIR CONDITIONING ONLY.....	21.9	26.8	42.9	30.1
INDIVIDUAL ROOM UNITS ONLY.....	24.5	30.0	40.5	28.4
CENTRAL A/C AND ROOM UNITS.....	.3	.4	.8	.6
NO AIR CONDITIONING.....	34.9	42.8	58.3	40.9
				40.1
CENTRAL AIR CONDITIONING SYSTEM FOR THE BUILDING (2-OR-MORE UNIT BUILDINGS)				
YES.....	1.2	1.5	1.0	.7
NO.....	3.8	4.7	4.0	2.8
NO AIR CONDITIONING SYSTEM.....	15.7	19.2	14.6	10.3
				1.0
				4.0
				14.0
				.8
				3.2
				11.4
NUMBER OF ROOMS THAT CAN BE AIR CONDITIONED				
ALL.....	29.8	36.5	52.5	36.6
SOME.....	16.9	20.7	31.7	22.3
NONE.....	34.9	42.8	58.3	40.9
				46.6
				26.7
				49.0
				38.1
				21.8
				40.1
WOOD BURNED				
YES (1/3 CORD OR MORE).....	14.2	17.4	34.3	24.0
NO.....	67.4	82.6	108.2	76.0
				29.1
				93.2
				23.8
				76.2
AVAILABILITY OF NATURAL GAS IN THE NEIGHBORHOOD (SINGLE FAMILY OR MOBILE HOME)				
USE ANY NATURAL GAS.....	36.1	44.5	74.0	51.9
DO NOT USE ANY NATURAL GAS.....	24.6	30.2	48.8	34.2
GAS IS AVAILABLE.....	5.4	6.7	11.4	8.0
GAS IS NOT AVAILABLE.....	19.2	23.5	17.4	26.2
				63.2
				40.2
				9.5
				30.8
				51.7
				32.9
				7.7
				25.1

SEE NOTES AT END OF TABLE

TABLE 24. FUEL USE CHARACTERISTICS BY TOTAL SQUARE FOOTAGE-Continued

HOUSEHOLD CHARACTERISTICS	TOTAL HOUSEHOLDS		TOTAL SQUARE FOOTAGE			
	(MILLICNS)	(PERCENT)	TOTAL HEATED AND UNHEATED		TOTAL HEATED	
			(BILLIONS)	(PERCENT)	(BILLIONS)	(PERCENT)
TYPE OF MAIN HEATING FUEL USED						
LAST WINTER 1979 TO 1980						
SAME FUEL WINTER 1980	78.1	95.7	136.3	95.7	117.5	96.0
DIFFERENT FUEL	2.0	2.5	3.9	2.8	3.3	2.7
FUEL OIL OR KEROSENE	1.2	1.5	2.4	1.7	2.1	1.7
NATURAL GAS	.1	.1	.2	.2	.2	.2
LIQUID PETROLEUM GAS	.2	.3	.3	.2	.3	.2
ELECTRICITY	.2	.2	.4	.3	.3	.2
OTHER/NO FUEL USED	.3	.3	.6	.4	.5	.4
NOT HEATED IN WINTER 1980						
TO WINTER 1981	.5	.6	.5	.4	-	-
UNIT NOT BUILT IN WINTER 1979 TO 1980	1.0	1.3	1.7	1.2	1.5	1.2

SEE NOTES AT END OF TABLE

TABLE 24. FUEL USE CHARACTERISTICS BY TOTAL SQUARE FOOTAGE-Continued

HOUSEHOLD CHARACTERISTICS	TOTAL HOUSEHOLDS		TOTAL SQUARE FOOTAGE			
	(MILLIONS)	(PERCENT)	TOTAL HEATED AND UNHEATED		TOTAL HEATED (PERCENT)	
			(BILLIONS)	(PERCENT)		(BILLIONS)
FUEL COMBINATIONS						
USE NATURAL GAS FOR MAIN HEATING.....	44.6	54.6	78.2	54.9	68.3	55.8
WATER HEAT AND COOK WITH NATURAL GAS.....	25.1	30.7	40.1	28.2	35.2	28.8
WATER HEAT WITH NATURAL GAS AND COOK WITH ELECTRICITY...	15.7	19.2	32.0	22.4	27.8	22.8
WATER HEAT WITH ELECTRICITY AND COOK WITH NATURAL GAS...	.9	1.1	1.2	.8	1.0	.8
WATER HEAT AND COOK WITH ELECTRICITY.....	2.6	3.2	4.8	3.3	4.1	3.4
OTHER.....	.3	.4	.2	.1	.2	.1
USE ELECTRICITY FOR MAIN HEATING.....	14.3	17.5	22.1	15.5	19.5	16.0
WATER HEAT AND COOK WITH ELECTRICITY.....	12.3	15.0	19.8	13.9	17.4	14.2
OTHER.....	2.0	2.5	2.3	1.6	2.1	1.7
USE FUEL OIL FOR MAIN HEATING, WATER HEAT WITH FUEL OIL AND COOK WITH ELECTRICITY.....	12.6	15.4	25.1	17.6	20.2	16.5
WATER HEAT AND COOK WITH FUEL OIL AND COOK WITH ELECTRICITY.....	2.9	3.5	7.4	5.2	5.8	4.7
WATER HEAT WITH FUEL OIL AND COOK WITH NATURAL GAS.....	3.3	4.0	3.8	2.6	3.3	2.7
WATER HEAT AND COOK WITH ELECTRICITY.....	3.7	4.5	8.1	5.7	6.5	5.3
WATER HEAT AND COOK WITH NATURAL GAS.....	1.1	1.4	2.5	1.8	2.0	1.6
OTHER.....	1.6	2.0	3.4	2.4	2.6	2.1
NONF/OTHER FUEL.....	10.2	12.5	17.1	12.0	14.3	11.7

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.
 SOURCE: RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND FUEL USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 25. FUEL USE CHARACTERISTICS BY 1979 FAMILY INCOME (MILLION HOUSEHOLDS, EXCEPT WHERE PERCENTS ARE INDICATED)

HOUSEHOLD CHARACTERISTICS	TOTAL	1979 FAMILY INCOME										POOR (100 PERCENT LEVEL)	POOR (125 PERCENT LEVEL)	
		LESS THAN \$5,000	\$5,000 TO \$9,999	\$10,000 TO \$14,999	\$15,000 TO \$19,999	\$20,000 TO \$24,999	\$25,000 TO \$34,999	\$35,000 OR MORE	POOR (100 PERCENT LEVEL)		POOR (125 PERCENT LEVEL)			
		10.4	13.9	13.8	11.9	9.9	12.4	9.4	10.9	14.8				
TOTAL HOUSEHOLDS	81.6	10.4	13.9	13.8	11.9	9.9	12.4	9.4	10.9	14.8				
MAIN HEATING EQUIPMENT														
CENTRAL WARM-AIR FURNACE.....	41.2	3.6	5.7	6.1	6.4	5.9	7.4	6.1	4.0	5.4				
FORCED AIR.....	40.1	3.6	5.4	5.9	6.2	5.7	7.3	6.0	3.9	5.3				
GRAVITY.....	1.1	.1	.3	.2	.2	.2	.1	.1	.1	.1				
STEAM OR HOT WATER SYSTEM.....	13.5	1.7	2.7	2.6	1.7	1.5	1.9	1.5	1.6	2.4				
HEAT PUMP.....	2.1	.1	.2	.3	.2	.3	.5	.6	.1	.2				
FLOOR, WALL OF PIPELESS FURNACE.....	6.7	1.0	1.5	1.3	1.0	.8	.7	.5	1.0	1.4				
OIL OR GAS ROOM HEATER.....	6.1	2.1	1.4	1.2	.7	.3	.3	.1	2.1	2.7				
BUILT-IN ELECTRIC UNITS.....	5.3	.7	.8	1.1	.9	.6	.7	.4	.7	.9				
WOOD OR COAL HEATING STOVE.....	4.0	.5	.8	.9	.7	.4	.6	.2	.7	.9				
PORTABLE HEATER.....	1.0	.3	.3	.1	.1	—	.1	.1	.3	.4				
PIPEPLACE.....	.3	.1	.1	—	—	—	—	—	.1	.1				
OTHER.....	.9	.2	.2	.2	.1	.1	.1	.1	.1	.2				
NONE.....	.5	.1	.1	.1	—	—	.1	—	.1	.2				
MAIN HEATING FUEL														
NATURAL GAS.....	44.6	5.5	7.3	6.9	6.6	6.0	6.7	5.6	5.9	7.8				
ELECTRICITY.....	14.3	1.8	2.1	2.5	2.0	1.7	2.4	1.8	1.8	2.3				
FUEL OIL OR KEROSENE.....	13.4	2.0	2.5	2.4	1.8	1.4	2.0	1.4	1.7	2.6				
WOOD.....	4.7	.5	.9	1.0	.9	.4	.6	.3	.8	1.0				
LIQUID PETROLEUM GAS.....	3.7	.5	.9	.9	.4	.3	.5	.3	.6	.8				
COAL.....	.3	—	.1	.1	—	—	.1	—	—	.1				
OTHER/NONE.....	.7	.1	.1	.1	.1	—	.1	.1	.1	.2				
CENTRAL MAIN HEATING SYSTEM FOR BUILDING (2-OR-MORE UNIT BUILDINGS)														
YES.....	9.0	1.9	2.6	2.0	1.0	.3	.7	.5	1.7	2.5				
NO.....	11.6	2.2	2.4	2.3	1.9	1.2	1.1	.6	2.0	2.8				
NO MAIN HEATING SYSTEM.....	.1	—	—	—	—	—	—	—	—	—				

SEE NOTES AT END OF TABLE

TABLE 25. FUEL USE CHARACTERISTICS BY 1979 FAMILY INCOME
(MILLION HOUSEHOLDS, EXCEPT WHERE PERCENTS ARE INDICATED) - Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	1979 FAMILY INCOME										FOOR (100 PERCENT LEVEL)	POOF (125 PERCENT LEVEL)		
		LFSS THAN \$5,000	\$5,000 TO \$9,999		\$10,000 TO \$14,999		\$15,000 TO \$19,999		\$20,000 TO \$24,999		\$25,000 TO \$34,999			\$35,000 CR MOFR	
SECONDARY HEATING FUEL															
WOOD.....	13.4	0.7	0.9	1.5	1.8	1.8	3.4	3.3	0.7	1.0					
ELECTRICITY.....	9.2	.9	1.6	1.4	1.3	1.4	1.2	1.3	.9	1.5					
NATURAL GAS.....	3.3	.2	.6	.5	.5	.6	.6	.5	.3	.5					
FUEL OIL OR KEROSENE.....	1.9	.1	.3	.4	.4	.4	.4	.2	.1	.2					
LIQUID PETROLEUM GAS.....	.9	.2	.2	.2	.2	.2	.1	.1	.1	.2					
COAL.....	.2	-	-	-	-	-	.1	-	-	-					
OTHER.....	.2	.1	-	.1	-	.1	-	-	.1	-					
NONE.....	52.6	8.2	10.3	9.8	7.6	6.1	6.7	4.0	8.6	11.4					
WATER-HEATING FUEL															
NATURAL GAS.....	44.1	5.4	7.1	7.0	6.6	5.9	6.7	5.3	5.8	7.7					
ELECTRICITY.....	26.1	3.1	4.5	4.6	3.8	3.1	4.1	2.8	3.3	4.5					
FUEL OIL OR KEROSENE.....	7.1	1.0	1.4	1.3	.9	.6	1.0	.9	.9	1.4					
LIQUID PETROLEUM GAS.....	3.6	.5	.7	.9	.5	.2	.5	.3	.5	.7					
WOOD.....	.4	.2	.1	-	-	-	-	-	.2	.2					
SOLAR.....	.1	-	-	-	-	-	-	-	-	-					
OTHER.....	.1	-	-	-	-	-	-	-	-	-					
NONE.....	.3	.2	.1	-	-	-	-	-	.2	.2					
CENTRAL WATER-HEATING SYSTEM (2-OR-MORE UNIT BUILDINGS)															
YES.....	11.2	2.2	2.8	2.6	1.6	.5	1.0	.5	2.0	2.8					
NO.....	9.5	1.9	2.2	1.7	1.3	1.0	.8	.5	2.1	2.5					
NO HOT RUNNING WATER															
YES.....	44.4	4.4	6.3	7.1	6.5	6.0	7.7	6.5	4.5	6.1					
NATURAL GAS.....	31.6	4.8	6.3	5.7	4.6	3.6	4.0	2.6	5.2	7.0					
LIQUID PETROLEUM GAS.....	5.2	.9	1.1	1.0	.7	.4	.6	.4	.9	1.3					
WOOD.....	.3	.2	.1	-	-	-	-	-	.2	.2					
NONE/OTHER.....	.2	.1	.1	-	-	-	-	-	.1	.1					

SEE NOTES AT END OF TABLE

TABLE 25. FUEL USE CHARACTERISTICS BY 1979 FAMILY INCOME
(MILLION HOUSEHOLDS, EXCEPT WHERE PERCENTS ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	1979 FAMILY INCOME										FOOR (100 PERCENT LEVEL)	POOF (125 PERCENT LEVEL)
		LESS THAN \$5,000	\$5,000 TO \$9,999	\$10,000 TO \$14,999	\$15,000 TO \$19,999	\$20,000 TO \$24,999	\$25,000 TO \$34,999	\$35,000 OR MORE	PERCENT	PERCENT	PERCENT		
AIR CONDITIONING (A/C)													
CENTRAL AIR CONDITIONING ONLY.....	21.9	1.6	2.1	3.0	3.0	3.1	4.4	4.7	1.6	2.1	2.7	1.6	2.1
INDIVIDUAL ROOM UNITS ONLY.....	24.5	3.0	4.6	4.6	3.9	3.4	3.0	2.0	2.9	4.2	1.1	2.9	4.2
CENTRAL A/C AND ROOM UNITS.....	3.3	-	-	-	-	-	1.1	1.1	-	-	-	-	-
NO AIR CONDITIONING.....	34.9	5.7	7.2	6.1	4.9	3.3	4.9	2.7	6.4	8.5	8.5	6.4	8.5
CENTRAL AIR CONDITIONING SYSTEM FOR THE BUILDING (2-OR-MORE UNIT BUILDINGS)													
YES.....	1.2	.3	.4	.2	.2	-	.1	.1	.2	.3	.2	.2	.3
NO.....	3.8	.5	.5	.8	.6	.4	.5	.5	.5	.6	.5	.5	.6
NO AIR CONDITIONING SYSTEM.....	15.7	3.4	4.2	3.3	2.1	1.0	1.2	.5	3.4	4.5	3.4	3.4	4.5
NUMBER OF ROOMS THAT CAN BE AIR CONDITIONED													
ALL.....	29.8	2.9	3.5	4.5	4.2	4.1	5.0	5.2	2.7	3.8	2.7	2.7	3.8
SOME.....	16.9	1.7	2.8	3.2	2.8	2.5	2.4	1.6	1.8	2.6	1.6	1.8	2.6
NONE.....	34.9	5.7	7.2	6.1	4.9	3.3	4.9	2.7	6.4	8.5	6.4	6.4	8.5
WOOD BURNED													
YES (1/3 CEDD OR MORE).....	14.2	1.0	1.6	1.8	2.0	1.7	3.2	2.9	1.3	1.7	2.9	1.3	1.7
NO.....	67.4	9.3	12.3	12.0	9.8	8.2	9.2	6.6	9.6	9.2	6.6	9.6	13.1
AVAILABILITY OF NATURAL GAS IN THE NEIGHBORHOOD (SINGLE FAMILY OR MOBILE HOME)													
USE ANY NATURAL GAS.....	36.3	3.4	4.9	5.3	5.4	5.5	6.4	5.3	3.7	5.2	5.3	3.7	5.2
DO NOT USE ANY NATURAL GAS.....	24.6	2.9	3.9	4.2	3.5	2.9	4.2	3.1	3.1	4.2	3.1	3.1	4.2
GAS IS AVAILABLE.....	5.4	.5	.7	.8	1.0	.8	.9	.7	.5	.9	.7	.5	.7
PERCENT.....	22.1	17.1	18.6	19.9	27.7	26.6	22.5	23.1	16.4	22.5	23.1	16.4	16.7
GAS IS NOT AVAILABLE.....	19.2	2.4	3.1	3.4	2.5	2.1	3.2	2.4	2.6	3.2	2.4	2.6	3.5
PERCENT.....	77.9	82.9	81.4	80.1	72.3	73.4	77.5	76.9	83.6	77.5	76.9	83.6	83.3

SEE NOTES AT END OF TABLE

TABLE 25. FUEL USE CHARACTERISTICS BY 1979 FAMILY INCOME
(MILLION HOUSEHOLDS, EXCEPT WHERE PERCENTS ARE INDICATED)--Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	1979 FAMILY INCOME										POOR (100 PERCENT LEVEL)	POOR (125 PERCENT LEVEL)	
		LESS THAN \$5,000	\$5,000 TO \$9,999	\$10,000 TO \$14,999	\$15,000 TO \$19,999	\$20,000 TO \$24,999	\$25,000 TO \$34,999	\$35,000 OR MORE						
TYPE OF MAIN HEATING FUEL USED														
LAST WINTER 1979 TO 1980														
SAME FUEL WINTER 1980														
TO WINTER 1981.....	78.1	10.0	13.2	13.0	11.5	9.5	11.8	9.0	10.5	14.2				
DIFFERENT FUEL.....	2.0	.2	.3	.5	.2	.3	.3	.2	.2	.4				
FUEL OIL OF KEROSENE.....	1.2	.1	.2	.3	.1	.2	.2	.1	.2	.2				
NATURAL GAS.....	.1	-	-	-	-	-	-	-	-	-				
LIQUID PETROLEUM GAS.....	.2	-	.1	.1	-	-	-	-	-	-				
ELECTRICITY.....	.3	-	-	-	-	-	-	-	-	-				
OTHER/NC FUEL USED.....	.5	.1	.1	.1	-	.1	.1	.1	.1	.1				
NOT HEATED IN WINTER 1980														
TO WINTER 1981.....	1.0	-	.1	.2	.1	.1	.1	.1	.1	.2				
UNIT NOT BUILT IN WINTER 1979 TO 1980.....														

SEE NOTES AT END OF TABLE

TABLE 25. FUEL USE CHARACTERISTICS BY 1979 FAMILY INCOME
(MILLION HOUSEHOLDS, EXCEPT WHERE PERCENTS ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	1979 FAMILY INCOME										FOOR (100 PERCENT LEVEL)	FOOR (125 PERCENT LEVEL)	
		LESS THAN \$5,000	\$5,000 TO \$9,999	\$10,000 TO \$14,999	\$15,000 TO \$19,999	\$20,000 TO \$24,999	\$25,000 TO \$34,999	\$35,000 CR MOER						
FUEL COMBINATIONS														
USE NATURAL GAS FOR HEATING.....	44.6	5.5	7.3	6.9	6.6	6.0	6.7	5.6	5.9	7.8				
WATER HEAT AND COOK WITH NATURAL GAS.....	25.1	3.6	4.8	4.3	3.7	3.1	3.4	2.2	4.0	5.2				
WATER HEAT WITH NATURAL GAS AND COOK WITH ELECTRICITY.....	15.7	1.3	1.7	2.0	2.3	2.5	2.9	2.9	1.3	1.8				
WATER HEAT WITH ELECTRICITY AND COOK WITH NATURAL GAS.....	.9	.1	.2	.2	.2	.1	.1	.1	.1	.2				
WATER HEAT AND COOK WITH ELECTRICITY.....	2.6	.3	.6	.3	.4	.2	.4	.4	.3	.4				
OTHER.....	.3	.2	.1	-	-	-	-	-	.2	.2				
USE ELECTRICITY FOR HEATING.....	14.3	1.8	2.1	2.5	2.0	1.7	2.4	1.8	1.8	2.3				
WATER HEAT AND COOK WITH ELECTRICITY.....	12.3	1.3	1.7	2.1	1.8	1.6	2.0	1.6	1.4	1.8				
OTHER.....	2.0	.5	.4	.3	.3	.1	.3	.1	.4	.5				
USE FUEL OIL FOR HEATING.....	12.6	1.7	2.3	2.3	1.7	1.3	2.0	1.4	1.5	2.3				
WATER HEAT WITH FUEL OIL AND COOK WITH ELECTRICITY.....	2.9	.2	.4	.5	.4	.4	.5	.6	.2	.3				
WATER HEAT WITH FUEL OIL AND COOK WITH NATURAL GAS.....	3.3	.7	.9	.6	.4	.1	.4	.2	.6	1.0				
WATER HEAT AND COOK WITH ELECTRICITY.....	3.7	.5	.4	.6	.5	.5	.8	.4	.4	.6				
WATER HEAT AND COOK WITH NATURAL GAS.....	1.1	.1	.3	.2	.2	.2	.1	.1	.1	.2				
OTHER.....	1.6	.2	.3	.3	.3	.2	.3	.1	.2	.3				
NCNE/OTHER FUEL.....	10.2	1.4	2.1	2.2	1.5	.9	1.3	.7	1.8	2.4				

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.

SOURCE: RESIDENTIAL AND COMMERCIAL FRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND ENL USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 26. FUEL USE CHARACTERISTICS BY 1979 FAMILY INCOME
(PERCENTAGE OF HOUSEHOLDS)

HOUSEHOLD CHARACTERISTICS	1979 FAMILY INCOME										FOOF (100 PERCENT LEVEL)	POOF (125 PERCENT LEVEL)						
	TOTAL		LESS THAN \$5,000		\$5,000 TO \$9,999		\$10,000 TO \$14,999		\$15,000 TO \$19,999				\$20,000 TO \$24,999		\$25,000 TO \$34,999		\$35,000 CR MORE	
	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	100.0	100.0	100.0
TOTAL HOUSEHOLDS	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	100.0	100.0	100.0		
MAIN HEATING EQUIPMENT																		
CENTRAL WARM-AIR FURNACE	50.5	34.9	41.0	44.3	54.0	59.6	60.1	64.2	37.1	36.6								
FORCED AIR	49.1	34.4	38.9	42.9	52.1	57.6	59.2	63.6	36.2	35.6								
GRAVITY	1.4	.6	2.1	1.4	1.9	1.9	.9	.5	.9	.9								
STEAM OR HOT WATER SYSTEM	16.5	16.2	19.5	18.7	14.1	14.7	15.6	15.4	14.4	16.2								
HEAT PUMP	2.6	1.2	1.4	2.1	1.6	3.2	3.7	5.9	1.1	1.1								
FLOOR, WALL OR PIPELESS FURNACE	8.2	9.6	10.5	9.7	8.4	7.6	5.6	5.1	9.5	9.4								
OIL OR GAS ROOM HEATFF	7.4	20.0	10.4	8.3	5.9	3.0	2.1	1.5	19.7	18.6								
BUILT-IN ELECTRIC UNITS	6.5	7.0	6.0	7.7	7.9	6.2	5.9	4.3	6.1	6.0								
WOOD OR COAL HEATING STOVE	4.8	5.0	5.6	6.3	5.8	3.9	4.5	1.6	6.2	6.4								
PORTABLE HEATER	1.2	3.1	2.4	.8	.7	.4	.4	.7	2.3	2.5								
FIREPLACE	.4	.6	1.0	.2	.4	.3	.4	.1	1.0	.8								
OTHER	1.1	1.5	1.4	1.1	.9	.9	1.0	.8	1.3	1.4								
NONE	.6	.9	.8	.8	.2	.4	.6	.5	1.1	1.1								
MAIN HEATING FUEL																		
NATURAL GAS	54.6	52.7	52.7	49.9	55.9	60.2	54.2	59.5	54.0	52.7								
ELECTRICITY	17.5	17.2	15.2	17.9	17.1	17.5	19.1	18.9	16.2	15.5								
FUEL OIL OR KEROSENE	16.4	18.9	17.9	17.5	15.0	13.7	16.2	14.6	15.5	17.9								
WOOD	5.8	5.3	6.6	7.0	7.8	4.5	5.1	3.1	7.1	6.9								
LIQUID PETROLEUM GAS	4.5	4.7	6.2	6.2	3.2	3.3	4.2	2.9	5.6	5.4								
COAL	.4	.2	.6	.6	.2	.5	.5	.1	.4	.4								
OTHER/NONE	.8	1.0	.9	.9	.8	.4	.7	1.0	1.2	1.2								
SECONDARY HEATING FUEL																		
WOOD	16.4	6.6	6.6	10.6	15.4	17.7	27.6	35.3	6.4	6.5								
ELECTRICITY	11.3	8.8	11.8	10.5	11.3	14.1	9.7	13.9	8.3	9.8								
NATURAL GAS	4.0	2.4	4.1	3.8	4.1	4.0	4.6	5.3	2.9	3.4								
FUEL OIL OR KEROSENE	2.3	1.0	1.9	2.5	3.3	2.2	3.0	2.2	1.3	1.1								
LIQUID PETROLEUM GAS	1.1	1.6	1.1	1.2	1.5	.3	.8	.9	1.2	1.4								
COAL	.2	.4	.2	.3	.1	.1	.5	.1	.2	.3								
OTHER	.2	.5	.1	.4	.1	.6	.1	.1	.5	.4								
NONE	64.4	78.8	74.4	70.8	64.3	61.0	53.8	42.1	79.3	77.2								

SEE NOTES AT END OF TABLE

TABLE 26. FUEL USE CHARACTERISTICS BY 1979 FAMILY INCOME
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	1979 FAMILY INCOME											FCOR (100 PERCENT LEVEL)	POOF (125 PERCENT LEVEL)			
	TOTAL	LESS THAN \$5,000		\$5,000 TO \$9,999		\$10,000 TO \$14,999		\$15,000 TO \$19,999		\$20,000 TO \$24,999				\$25,000 TO \$34,999		\$35,000 OR MORE
WATER-HEATING FUEL																
NATURAL GAS.....	54.1	52.3	51.5	50.9	55.4	59.7	54.3	56.5	53.4	52.4	52.4	53.4	52.4	53.4	52.4	52.4
ELECTRICITY.....	31.9	29.9	32.2	33.3	32.4	31.4	33.3	30.1	30.3	30.4	30.4	30.3	30.4	30.3	30.4	30.4
FUEL OIL OR KEROSENE.....	8.7	10.0	10.3	9.1	7.4	6.1	7.9	9.3	8.7	9.8	9.8	8.7	9.8	8.7	9.8	9.8
LIQUID PETROLEUM GAS.....	4.4	4.6	4.8	6.3	4.5	2.3	3.8	3.4	4.2	4.5	4.5	4.2	4.5	4.2	4.5	4.5
WOOD.....	.4	1.5	.5	.2	.2	.2	.1	.4	1.6	1.4	1.4	1.6	1.4	1.6	1.4	1.4
SOLAR.....	.1	-	.1	-	-	.3	.2	.3	-	.2	.2	.3	.2	-	.2	-
OTHER.....	.1	.2	.1	-	-	-	.3	-	1.8	1.3	1.3	1.8	1.3	1.8	1.3	1.3
NONE.....	.3	1.5	.5	.3	-	-	-	-	-	-	-	-	-	-	-	-
CENTRAL WATER-HEATING SYSTEM (2-OR-MORE UNIT BUILDINGS)																
YES.....	13.8	21.1	20.5	18.6	13.4	5.5	7.8	5.7	18.1	19.0	19.0	18.1	19.0	18.1	19.0	19.0
NO/NO WATER-HEATING FUEL/NO HOT RUNNING WATER.....	11.6	18.6	16.1	12.5	11.3	9.6	6.5	5.0	19.4	17.1	17.1	19.4	17.1	19.4	17.1	17.1
BAIN COOKING FUEL																
ELECTRICITY.....	54.4	42.5	45.2	51.3	54.4	60.3	62.7	68.4	41.2	41.5	41.5	41.2	41.5	41.2	41.5	41.5
NATURAL GAS.....	38.7	46.0	45.8	41.1	39.1	36.0	32.2	27.4	47.7	47.7	47.7	47.7	47.7	47.7	47.7	47.7
LIQUID PETROLEUM GAS.....	6.4	8.7	8.2	7.5	6.2	3.6	5.0	4.2	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6
WOOD.....	.3	1.7	.4	.2	.1	-	-	-	1.7	1.4	1.4	1.7	1.4	1.7	1.4	1.4
NONE/OTHER.....	.2	1.0	.5	-	.1	-	.1	-	.7	.8	.8	.7	.8	.7	.8	.8
AIR CONDITIONING (A/C)																
CENTRAL AIR CONDITIONING ONLY.....	26.8	15.3	15.1	21.6	25.7	31.4	35.4	49.4	14.7	14.3	14.3	14.7	14.3	14.7	14.3	14.3
INDIVIDUAL ROOM UNITS ONLY.....	30.0	29.2	32.9	33.5	32.8	34.7	24.0	21.0	26.4	28.2	28.2	26.4	28.2	26.4	28.2	28.2
CENTRAL A/C AND ROOM UNITS.....	.4	.2	.3	.5	.2	.2	.6	.7	.1	.1	.1	.1	.1	.1	.1	.1
NO AIR CONDITIONING.....	42.8	55.3	51.7	44.4	41.2	33.7	40.0	28.9	58.8	57.3	57.3	58.8	57.3	58.8	57.3	57.3

SEE NOTES AT END OF TABLE

TABLE 26. FUEL USE CHARACTERISTICS BY 1979 FAMILY INCOME
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	1979 FAMILY INCOME										FCOR (100 PERCENT LEVEL)	POOF (125 PERCENT LEVEL)	
		LESS THAN \$5,000	\$5,000 TO \$9,999	\$10,000 TO \$14,999	\$15,000 TO \$19,999	\$20,000 TO \$24,999	\$25,000 TO \$34,999	\$35,000 OR MORE						
NUMBER OF ROOMS THAT CAN BE AIR CONDITIONED														
ALL.....	36.5	27.9	28.1	32.7	35.5	41.1	40.7	54.6	24.6	25.4				
SOME.....	20.7	16.8	20.2	22.9	23.3	25.2	19.4	16.6	16.6	17.3				
NONE.....	42.8	55.3	51.7	44.4	41.2	33.7	40.0	28.9	58.8	57.3				
WOOD BURNED														
YES (1/3 CCFD OR MORE).....	17.4	10.0	11.3	13.3	17.2	17.2	25.8	30.2	11.5	11.6				
NO.....	82.6	90.0	88.7	86.7	82.8	82.8	74.2	69.8	88.5	88.4				
TYPE OF MAIN HEATING FUEL USED LAST WINTER 1979 TO 1980														
SAME FUEL WINTER 1980														
DIFFERENT FUEL.....	95.7	96.2	96.0	94.1	97.0	95.7	95.2	95.6	96.4	96.1				
FUEL OIL OF KEROSENE.....	2.5	2.4	2.4	3.4	1.7	2.8	2.5	1.8	2.3	2.5				
NATURAL GAS.....	1.5	1.1	1.3	2.3	1.1	1.8	1.4	1.2	1.4	1.4				
LIQUID PETROLEUM GAS.....	.1	.2	.1	.2	.1	.1	.4	.1	.1	.2				
ELECTRICITY.....	.3	.3	.5	.6	.2	.2	.1	.1	.2	.3				
OTHER/NO FUEL USED.....	.3	.5	.2	.3	.4	.6	.4	.6	.4	.3				
NOT HEATED IN WINTER 1980														
TO WINTER 1981.....	.6	.9	.8	.8	.2	.4	.6	.5	1.1	1.1				
UNIT NOT BUILT IN WINTER 1979 TO 1980.....	1.3	.5	.8	1.7	1.0	1.2	1.7	2.2	.3	.4				

SEE NOTES AT END OF TABLE

TABLE 26. FUEL USE CHARACTERISTICS BY 1979 FAMILY INCOME
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	1979 FAMILY INCOME										POOR (100 PERCENT LEVEL)	POOR (125 PERCENT LEVEL)	
	TOTAL												
	LESS THAN \$5,000	\$5,000 TO \$9,999	\$10,000 TO \$14,999	\$15,000 TO \$19,999	\$20,000 TO \$24,999	\$25,000 TO \$34,999	\$35,000 OR MORE						
FUEL COMBINATIONS													
USE NATURAL GAS FOR HEATING.....	54.6	52.7	49.9	35.9	60.2	54.2	59.5	54.0	52.7				
WATER HEAT AND COOK WITH NATURAL GAS.....	30.7	34.8	31.2	31.3	31.1	27.3	23.5	36.6	35.3				
WATER HEAT WITH NATURAL GAS AND COOK WITH ELECTRICITY.....	19.2	12.9	14.7	19.6	25.6	23.2	30.5	12.3	12.1				
WATER HEAT WITH ELECTRICITY AND COOK WITH NATURAL GAS.....	1.1	.9	1.4	1.7	1.4	.5	.7	1.1	1.1				
WATER HEAT AND COOK WITH ELECTRICITY.....	3.2	2.6	2.3	3.1	2.1	3.2	4.7	2.5	2.9				
OTHER.....	.4	1.6	.2	.1	-	.1	.1	1.5	1.3				
USE ELECTRICITY FOR HEATING.....	17.5	17.2	17.9	17.1	17.5	19.1	18.9	16.2	15.5				
WATER HEAT AND COOK WITH ELECTRICITY.....	15.0	12.9	15.4	14.8	16.3	16.6	17.3	12.9	11.9				
OTHER.....	2.5	4.4	2.5	2.3	1.2	2.5	1.6	3.3	3.5				
USE FUEL OIL FOR HEATING.....	15.4	16.5	16.3	14.1	13.0	15.9	14.3	13.5	15.8				
WATER HEAT WITH FUEL OIL AND COOK WITH ELECTRICITY.....	3.5	2.0	3.3	3.2	3.6	4.0	6.5	1.6	1.9				
WATER HEAT WITH FUEL OIL AND COOK WITH NATURAL GAS.....	4.0	6.5	4.7	3.2	1.0	2.9	1.8	5.8	6.6				
WATER HEAT AND COOK WITH ELECTRICITY.....	4.5	4.8	4.7	4.1	4.8	6.1	4.0	3.3	4.0				
WATER HEAT AND COOK WITH NATURAL GAS.....	1.4	1.0	1.8	1.5	1.6	.7	.9	1.0	1.5				
OTHER.....	2.0	2.2	1.9	2.2	2.0	2.3	1.1	1.8	1.7				
NONE/OTHER FUEL.....	12.5	13.6	15.9	12.9	9.3	10.7	7.3	16.3	16.0				

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. PERCENTAGES ARE CALCULATED ON UNROUNDED NUMBERS. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.
SOURCE: RESIDENTIAL AND COMMERCIAL ENERGY USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 27. FUEL USE CHARACTERISTICS BY MAIN HEATING FUEL (MILLION HOUSEHOLDS, EXCEPT WHERE PERCENTS ARE INDICATED)

HOUSEHOLD CHARACTERISTICS	TOTAL	MAIN HEATING FUEL						
		NATURAL GAS	FUEL OIL OR KEROSENE	ELECTRICITY	LIQUID PETROLEUM GAS	WOOD	OTHER/NONE	
TOTAL HOUSEHOLDS.....	81.6	44.6	13.4	14.3	3.7	4.7	1.0	
MAIN HEATING EQUIPMENT								
CENTRAL WARM-AIR FURNACE.....	41.2	28.1	4.9	5.6	2.0	.4	.2	
FORCED AIR.....	40.1	27.2	4.8	5.5	2.0	.4	.1	
GRAVITY.....	1.1	.8	.1	.1	-	-	-	
STEAM OF HOT WATER SYSTEM.....	13.8	5.8	7.1	.2	.2	.1	-	
HEAT PUMP.....	4.1	-	-	2.1	-	-	-	
FLOOR, WALL OR PIPELESS FURNACE.....	6.7	6.0	.3	-	.3	.1	-	
OIL OR GAS ROOM HEATER.....	6.1	4.0	.5	-	1.1	-	-	
BUILT-IN ELECTRIC UNITS.....	5.3	-	-	5.3	-	-	-	
WOOD OR COAL HEATING STOVE.....	4.0	-	-	-	-	3.7	.2	
PORTABLE HEATER.....	1.0	.1	-	.9	-	-	-	
FIREPLACE.....	.3	-	-	-	-	.3	-	
OTHER.....	.5	.5	.1	.2	.1	.1	.5	
NONE.....	.5	-	-	-	-	-	-	
CENTRAL MAIN HEATING SYSTEM FOR BUILDING (2-OR-MORE UNIT BUILDINGS)								
YES.....	9.0	4.8	3.4	.7	-	-	-	
NO.....	11.6	6.4	.6	4.3	.2	.1	-	
NO MAIN HEATING SYSTEM.....	.1	-	-	-	-	-	.1	
SECONDARY HEATING FUEL								
WOOD.....	13.4	7.0	2.7	3.1	.4	.2	-	
ELECTRICITY.....	9.2	4.6	1.8	1.2	.5	1.2	.1	
NATURAL GAS.....	3.3	2.4	.2	.3	-	.4	-	
FUEL OIL OR KEROSENE.....	1.9	.3	.2	.2	-	1.0	-	
LIQUID PETROLEUM GAS.....	.9	-	.1	.1	.1	.6	-	
COAL.....	.2	.1	-	-	-	-	-	
OTHER.....	.2	.1	-	-	-	-	-	
NONE.....	52.6	30.2	8.2	9.4	2.7	1.4	.8	

SEE NOTES AT END OF TABLE

TABLE 27. FUEL USE CHARACTERISTICS BY MAIN HEATING FUEL (MILLION HOUSEHOLDS, EXCEPT WHERE PERCENTS ARE INDICATED) - Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	MAIN HEATING FUEL						OTHER/ NONE
		NATURAL GAS	FUEL OIL OR KEROSENE	ELECTRICITY	LIQUID PETROLEUM GAS	WOOD		
WATER-HEATING FUEL								
NATURAL GAS.....	44.1	40.9	1.3	1.4	-	0.4	0.1	
ELECTRICITY.....	26.1	3.6	5.0	12.5	1.5	3.1	.4	
FUEL OIL OR KEROSENE.....	7.1	.1	6.6	.1	-	.2	.1	
LIQUID PETROLEUM GAS.....	3.6	-	.4	.2	2.1	.7	.2	
WOOD.....	.4	-	-	-	-	.3	-	
SOLAR.....	.1	-	-	-	-	-	-	
OTHER.....	.1	-	-	-	-	-	.1	
NONE.....	.3	-	-	-	.1	.1	-	
CENTRAL WATER-HEATING SYSTEM (2-OR-MORE UNIT BUILDINGS)								
YES.....	11.2	6.3	3.3	1.6	-	-	-	
NO/NO WATER-HEATING FUEL/NO HOT RUNNING WATER.....	9.5	4.9	.8	3.4	.2	.1	.1	
MAIN COOKING FUEL								
ELECTRICITY.....	44.4	18.4	7.3	13.5	1.3	3.3	.6	
NATURAL GAS.....	31.6	26.1	4.5	.5	-	.3	.1	
LIQUID PETROLEUM GAS.....	5.2	-	1.5	.3	2.4	.9	.2	
WOOD.....	.3	-	.1	-	-	.2	-	
NONE/OTHER.....	.2	.1	-	-	-	-	.1	
AIR CONDITIONING (A/C)								
CENTRAL AIR CONDITIONING ONLY								
ONLY.....	21.9	12.2	1.2	7.4	.6	.4	-	
INDIVIDUAL ROOM UNITS ONLY.....	24.5	13.6	5.3	3.3	1.3	1.0	.1	
CENTRAL A/C AND ROOM UNITS.....	.3	.3	-	-	-	-	-	
NO AIR CONDITIONING.....	34.5	18.5	6.8	3.6	1.9	3.3	.8	
CENTRAL AIR CONDITIONING SYSTEM FOR THE BUILDING (2-OR-MORE UNIT BUILDINGS)								
YES.....	1.2	.5	.2	.6	-	-	-	
NO.....	3.8	1.6	.1	2.1	-	-	-	
NO AIR CONDITIONING SYSTEM.....	15.7	9.2	3.7	2.3	.2	.1	.1	

SEE NOTES AT FMT. OF TABLE

TABLE 27. FUEL USE CHARACTERISTICS BY MAIN HEATING FUEL
(MILLION HOUSEHOLDS, EXCEPT WHERE PERCENTS ARE INDICATED) - Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	MAIN HEATING FUEL							OTHER/ NONE
		NATURAL GAS	FUEL OIL OR KEROSENE	ELECTRICITY	LIQUID PETROLEUM GAS	WOOD			
NUMBER OF ROOMS THAT CAN BE AIR CONDITIONED									
ALL.....	29.8	16.6	2.2	9.0	1.2	0.7	-	-	-
SOME.....	16.9	9.4	4.3	1.7	.7	.7	-	0.1	.8
NONE.....	34.9	18.5	6.8	3.6	1.9	3.3	-	-	-
WOOD BURNED									
YPS (1/3 COEF. OF MOIST.).....	14.2	4.4	2.2	2.3	.5	4.6	-	-	-
NO.....	67.4	40.1	11.2	12.0	3.2	.2	-	-	-
AVAILABILITY OF NATURAL GAS IN THE NEIGHBORHOOD (SINGLE FAMILY OR MOBILE HOME)									
USE ANY NATURAL GAS.....	36.3	33.4	1.7	.7	-	.4	-	.1	.8
DO NOT USE ANY NATURAL GAS.....	24.6	-	7.6	8.5	3.5	4.2	-	-	-
GAS IS AVAILABLE.....	5.4	-	2.5	2.2	.3	.4	-	-	-
PERCENT.....	22.1	NA	32.5	25.8	7.8	10.2	-	7.7	7.7
GAS IS NOT AVAILABLE.....	19.2	-	5.2	6.3	3.2	3.8	-	-	-
PERCENT.....	77.9	NA	67.5	74.2	92.2	89.8	-	92.3	92.3
TYPE OF MAIN HEATING FUEL USED LAST WINTER 1979 TO 1980									
SAME FUEL WINTER 1980.....	78.1	43.4	13.2	13.5	3.5	4.0	-	.4	-
DIFFERENT FUEL.....	2.0	.8	.2	.3	.1	.7	-	-	-
FUEL OIL OR KEROSENE.....	1.2	.7	-	.1	.1	.3	-	-	-
NATURAL GAS.....	.1	-	-	-	-	.1	-	-	-
LIQUID PETROLEUM GAS.....	.2	-	-	.1	-	.1	-	-	-
ELECTRICITY.....	.2	-	-	-	-	.1	-	-	-
OTHER/NO FUEL USED.....	.2	-	.1	.1	-	.1	-	-	-
NOT HEATED IN WINTER 1980.....	.5	-	-	-	-	-	-	.5	-
UNFI NOT BUILT IN WINTER 1979 TO 1980.....	1.0	.4	-	.6	.1	-	-	-	-

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.
SOURCE: RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 28. FUEL USE CHARACTERISTICS BY MAIN HEATING FUEL
(PERCENTAGE OF HOUSEHOLDS)

HOUSEHOLD CHARACTERISTICS	TOTAL	MAIN HEATING FUEL						
		NATURAL GAS	FUEL OIL OR KEROSENE	ELECTRICITY	LIQUID PETROLEUM GAS	WOOD	OTHER/NONE	
TOTAL HOUSEHOLDS.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
MAIN HEATING EQUIPMENT								
CENTRAL WARM-AIR FURNACE.....	50.5	63.0	37.0	39.1	55.3	9.0	16.3	
FORCED AIR.....	49.1	61.1	36.1	38.7	55.3	7.4	12.6	
GRAVITY.....	1.4	1.9	.9	.4	-	1.6	3.7	
STEAM OR HOT WATER SYSTEM.....	16.5	13.1	53.5	1.3	4.4	2.4	3.6	
HEAT PUMP.....	2.6	.1	-	14.6	-	-	-	
FLOOR, WALL OR PIPELESS FURNACE.....	8.2	13.5	2.4	.2	6.9	1.3	2.8	
CIL OR GAS ROOM HEATER.....	7.4	9.1	6.7	-	30.9	-	-	
BUILT-IN ELECTRIC UNITS.....	6.5	-	-	37.2	-	-	-	
WOOD OR COAL HEATING STOVE.....	4.8	-	-	-	-	79.2	21.7	
PORTABLE HEATER.....	1.2	.2	-	6.2	.9	-	-	
FIREPLACE.....	.4	-	-	.2	-	6.5	-	
OTHER.....	1.1	1.1	.4	1.3	1.6	1.7	4.8	
NONE.....	.6	-	-	-	-	-	50.7	
SECONDARY HEATING FUEL								
WOOD.....	16.4	15.6	20.0	21.4	11.9	4.2	5.1	
ELECTRICITY.....	11.3	10.2	13.6	8.2	12.7	24.6	6.2	
NATURAL GAS.....	4.0	5.4	1.7	2.2	-	7.5	.6	
FUEL OIL OR KEROSENE.....	2.3	.7	2.0	1.3	1.1	22.1	3.4	
LIQUID PETROLEUM GAS.....	1.1	-	1.1	.6	2.3	11.8	-	
COAL.....	.2	.2	.3	.2	.1	.5	.5	
OTHER.....	.2	.3	.3	-	.1	.2	.3	
NONE.....	64.4	67.6	61.0	66.0	71.7	29.0	84.1	
WATER-HEATING FUEL								
NATURAL GAS.....	54.1	91.6	9.9	9.9	-	8.4	14.8	
ELECTRICITY.....	31.9	8.0	37.2	87.5	41.5	65.1	45.1	
FUEL OIL OR KEROSENE.....	8.7	.2	49.6	.6	-	4.0	5.3	
LIQUID PETROLEUM GAS.....	4.4	-	2.8	1.7	56.7	14.0	18.0	
WOOD.....	.4	-	.1	.1	-	6.4	2.7	
SOLAR.....	.1	-	.1	.2	-	-	4.8	
OTHER.....	.1	-	-	-	-	-	7.5	
NONE.....	.3	.1	.3	-	1.8	2.1	1.8	

SFF NOTES AT END OF TABLE

TABLE 28. FUEL USE CHARACTERISTICS BY MAIN HEATING FUEL
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	MAIN HEATING FUEL						OTHER/NONE
		NATURAL GAS	FUEL OIL OR KEROSENE	ELECTRICITY	LIQUID PETROLEUM GAS	WOOD		
CENTRAL WATER-HEATING SYSTEM (2-OR-MORE UNIT BUILDINGS)								
YES.....	13.8	14.1	24.4	11.4	0.2	0.4	1.9	
NO/NO WATER-HEATING FUEL/ NO HOT RUNNING WATER.....	11.6	11.0	5.7	24.0	5.6	1.5	9.6	
MAIN COOKING FUEL								
ELECTRICITY.....	54.4	41.2	54.8	94.2	35.1	70.5	64.1	
NATURAL GAS.....	38.7	58.6	33.6	3.7	-	6.6	12.5	
LIQUID PETROLEUM GAS.....	6.4	-	11.0	1.8	64.6	18.9	18.2	
WOOD.....	.3	-	.4	-	.4	4.0	-	
NONE/OTHER.....	.2	.2	.1	.3	-	-	5.1	
AIR CONDITIONING (A/C)								
CENTRAL AIR CONDITIONING								
ONLY.....	26.8	27.4	9.3	51.8	15.1	9.2	1.9	
INDIVIDUAL ROOM UNITS ONLY.....	30.0	30.5	39.5	22.9	34.1	20.5	13.4	
CENTRAL A/C AND ROOM UNITS.....	.4	.6	.4	.1	.3	-	-	
NO AIR CONDITIONING.....	42.8	41.5	50.9	25.2	50.4	70.3	84.6	
NUMBER OF ROOMS THAT CAN BE AIR CONDITIONED								
ALL.....	36.5	37.3	16.6	62.6	31.9	15.6	4.9	
SOME.....	20.7	21.1	32.5	12.2	17.7	14.0	10.4	
NONE.....	42.8	41.5	50.9	25.2	50.4	70.3	84.6	
WOOD BURNED								
YES (1/3 CCFD OR MORE).....	17.4	10.0	16.3	16.0	13.2	96.5	28.1	
NO.....	82.6	90.0	83.7	84.0	86.8	3.5	71.9	

SEE NOTES AT END OF TABLE

TABLE 28. FUEL USE CHARACTERISTICS BY MAIN HEATING FUEL
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	MAIN HEATING FUEL						OTHER/ NONE
		NATURAL GAS	FUEL OIL OR KEROSENE	ELECTRICITY	LIQUID PFIROLEUM GAS	WOOD		
TYPE OF MAIN HEATING FUEL USED								
LAST WINTER 1979 TO 1980								
SAME FUEL WINTER 1980	95.7	97.4	98.9	94.2	95.5	85.3	44.8	
DIFFERENT FUEL.....	4.5	1.8	1.1	1.8	2.9	14.0	3.8	
FUEL OIL OR KEROSENE.....	1.5	1.5	.1	.7	2.2	6.2	3.8	
NATURAL GAS.....	.1	-	-	.3	-	1.7	-	
LIQUID PFIROLEUM GAS.....	.3	.1	-	.4	-	2.9	-	
ELECTRICITY.....	.4	.1	-	-	-	3.0	-	
OTHER/NO FUEL USE.....	.3	.1	.5	.4	.7	.1	-	
NOT HEATED IN WINTER 1980								
TO WINTER 1981.....	.6	-	-	-	-	-	50.7	
ONLY NOT HEATED IN WINTER								
1979 TO 1980.....	1.3	.9	-	4.0	1.6	.7	.6	

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. PERCENTAGES ARE CALCULATED ON UNROUNDED NUMBERS. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.
SOURCE: RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 29. FUEL USE CHARACTERISTICS BY HEATING AND COOLING DEGREE-DAYS
(MILLION HOUSEHOLDS, EXCEPT WHERE PERCENTS ARE INDICATED)

HOUSEHOLD CHARACTERISTICS	ANNUAL HEATING DEGREE-DAYS (HDD) AND COOLING DEGREE-DAYS (CDD)			
	<2,000 CDD AND >7,000 HDD	<2,000 CDD AND 5,500 TO 7,000 HDD	<2,000 CDD AND 4,000 TO 5,499 HDD	<2,000 CDD AND >2,000 CDD <4,000 HDD
TOTAL	8.5	20.9	21.1	19.0
TOTAL HOUSEHOLDS	81.6			12.1
MAIN HEATING EQUIPMENT				
CENTRAL WARM-AIR FURNACE	4.7	12.3	9.3	9.0
FORCED AIR	4.5	11.8	9.0	8.8
GRAVITY	.2	.5	.3	.2
STEAM OR HOT WATER SYSTEM	1.7	4.8	6.5	.3
HEAT PUMP	-	.3	.4	.6
FLOOR, WALL OR PIPELESS FURNACE	.3	.3	.9	4.1
OIL OR GAS ROOM HEATER	.3	1.0	.8	1.9
BUILT-IN ELECTRIC UNITS	.4	1.6	1.9	1.0
WOOD OR COAL HEATING STOVE	.9	.5	1.2	1.3
PORTABLE HEATER	1.0	-	.1	.3
FIREPLACE	.3	-	.1	.2
OTHER	.9	.2	.1	.3
NONE	.5	-	-	.1
MAIN HEATING FUEL				
NATURAL GAS	4.3	13.5	9.0	12.1
ELECTRICITY	.6	2.5	3.6	3.1
FUEL OIL OF KEROSENE	1.8	3.6	6.4	1.2
WOOD	1.3	.5	1.3	1.4
LIQUID PETROLEUM GAS	.5	.6	.6	.9
COAL	.3	.1	.1	-
OTHER/NONE	.7	-	.1	.2
CENTRAL MAIN HEATING SYSTEM FOR BUILDING				
(2-OR-MORE UNIT BUILDINGS)				
YES	.9	3.0	4.0	.6
NO	.7	3.5	2.0	3.5
NO MAIN HEATING SYSTEM	-	-	-	-

SEE NOTES AT END OF TABLE

TABLE 29. FUEL USE CHARACTERISTICS BY HEATING AND COOLING DEGREE-DAYS (MILLION HOUSEHOLDS, EXCEPT WHERE PERCENTS ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	ANNUAL HEATING DEGREE-DAYS (HDD) AND COOLING DEGREE-DAYS (CDD)					
	<2,000 HDD AND >7,000 HDD	2,000 TO 4,000 HDD	4,000 TO 5,499 HDD	<2,000 CDD AND <4,000 HDD	>2,000 CDD AND <4,000 HDD	TOTAL
SECONDARY HEATING FUEL						
WOOD.....	1.8	3.2	3.9	3.5	1.1	13.4
ELECTRICITY.....	.9	1.9	2.0	2.9	1.5	9.2
NATURAL GAS.....	.2	.6	.8	1.0	.8	3.3
FUEL OIL OF KEROSENE.....	.7	.4	.7	.1	-.8	1.9
LIQUID PETROLEUM GAS.....	.1	.1	.3	.4	.1	.9
COAL.....	-	-	-	.1	-	.2
OTHER.....	-	-	.1	.1	-	.2
NONE.....	4.8	14.8	13.4	11.0	8.7	52.6
WATER-HEATING FUEL						
NATURAL GAS.....	3.9	13.6	9.0	12.0	5.7	44.1
ELECTRICITY.....	3.2	4.6	7.0	5.9	5.4	26.1
FUEL OIL OF KEROSENE.....	.7	1.9	4.2	.2	-	7.1
LIQUID PETROLEUM GAS.....	.6	.7	.7	.7	.8	3.6
WOOD.....	.1	-	.1	.1	-	.4
SOLAR.....	-	-	-	-	.1	.1
OTHER.....	-	-	-	-	-	.1
NONE.....	-	-	-	.2	-	.2
CENTRAL WATER-HEATING SYSTEM (2-OR-MORE UNIT BUILDINGS)						
YES.....	.9	3.5	4.5	1.7	.7	11.2
NO/NO WATER-HEATING FUEL/NO HOT RUNNING WATER.....	.7	3.0	1.6	2.5	1.7	9.5
MAIN COOKING FUEL						
ELECTRICITY.....	5.9	10.5	10.8	10.2	7.1	44.4
NATURAL GAS.....	1.5	9.4	9.1	7.6	3.9	31.6
LIQUID PETROLEUM GAS.....	1.0	1.0	1.1	1.1	1.0	5.2
WOOD.....	.1	-	.1	-	-	.3
NONE/OTHER.....	-	.1	-	.1	-	.2

SEE NOTES AT END OF TABLE

TABLE 29. FUEL USE CHARACTERISTICS BY HEATING AND COOLING DEGREE-DAYS (MILLION HOUSEHOLDS, EXCEPT WHERE PERCENTS ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	ANNUAL HEATING DEGREE-DAYS (HDD) AND COOLING DEGREE-DAYS (CDD)					
		<2,000 CDD AND >7,000 HDD	<2,000 CDD AND 5,500 TO 7,000 HDD	<2,000 CDD AND 7,000 TO 14,000 HDD	<2,000 CDD AND 14,000 TO 5,499 HDD	<2,000 CDD AND >2,000 CDD AND <4,000 HDD	>2,000 CDD AND <4,000 HDD
AIR CONDITIONING (A/C)							
CENTRAL AIR CONDITIONING ONLY.....	21.9	1.1	4.1	4.8	5.8	6.2	
INDIVIDUAL ROOM UNITS ONLY.....	24.5	1.7	6.9	7.3	4.9	3.7	
CENTRAL A/C AND ROOM UNITS.....	3.3	-	-	.1	.1	.1	
NO AIR CONDITIONING.....	34.9	5.7	9.9	9.0	8.2	2.1	
CENTRAL AIR CONDITIONING SYSTEM FOR THE BUILDING (2-OR-MORE UNIT BUILDINGS)							
YES.....	1.2	.1	.3	.3	.2	.3	
NO.....	3.8	.1	.9	.6	1.0	1.3	
NO AIR CONDITIONING SYSTEM.....	15.7	1.4	5.3	5.1	2.9	.8	
NUMBER OF ROOMS THAT CAN BE AIR CONDITIONED							
ALL.....	29.8	1.7	5.6	6.5	7.7	8.3	
SOME.....	16.9	1.1	5.4	5.7	3.1	1.6	
NONE.....	34.5	5.7	9.9	9.0	8.2	2.1	
WOOD BURNED							
YES (1/3 COFD OR MORE).....	14.2	2.7	3.0	4.2	3.4	1.1	
NO.....	67.4	5.8	18.0	17.0	15.6	11.0	
AVAILABILITY OF NATURAL GAS IN THE NEIGHBORHOOD (SINGLE FAMILY OR MOBILE HOME)							
USE ANY NATURAL GAS.....	36.3	3.4	9.9	7.9	9.7	5.4	
DO NOT USE ANY NATURAL GAS.....	24.6	3.5	4.6	7.1	5.1	4.3	
GAS IS AVAILABLE.....	5.4	.6	1.1	1.9	1.2	.6	
PERCENT.....	22.1	18.4	24.1	26.9	24.0	13.0	
GAS IS NOT AVAILABLE.....	15.2	2.9	3.5	5.2	3.9	3.8	
PERCENT.....	77.5	81.6	75.9	73.1	76.0	87.0	

SEE NOTES AT END OF TABLE

TABLE 29. FUEL USE CHARACTERISTICS BY HEATING AND COOLING DEGREE-DAYS
(MILLION HOUSEHOLDS, EXCEPT WHERE PERCENTS ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	ANNUAL HEATING DEGREE-DAYS (HDD) AND COOLING DEGREE-DAYS (CDD)					
		<2,000 CDD AND >7,000 HDD	<2,000 CDD AND 5,500 TO 7,000 HDD	<2,000 CDD AND 4,000 TO 5,499 HDD	<2,000 CDD AND <4,000 HDD	<2,000 CDD AND >2,000 CDD AND <4,000 HDD	>2,000 CDD AND <4,000 HDD
TYPE OF MAIN HEATING FUEL USED							
LAST WINTER 1979 TO 1980							
SAME FUEL WINTER 1980 TO WINTER 1981.....	76.1	8.0	20.4	20.2	18.4	11.2	
DIFFERENT FUEL.....	2.0	.4	.5	.7	.3	.1	
FUEL OIL OR KEROSENE.....	1.2	.3	.4	.4	.1	-	
NATURAL GAS.....	.1	-	-	-	.1	-	
LIQUID PETROLEUM GAS.....	.2	-	-	.1	.1	.1	
ELECTRICITY.....	.2	-	-	.1	.1	-	
OTHER/NO FUEL USED.....	.3	.1	.1	.1	-	-	
NOT HEATED IN WINTER 1980 TO WINTER 1981.....	.5	-	-	-	.1	.4	
UNIT NOT BUILT IN WINTER 1979 TO 1980.....	1.0	.1	.1	.3	.2	.4	

SEE NOTES AT END OF TABLE

TABLE 29. FUEL USE CHARACTERISTICS BY HEATING AND COOLING DEGREE-DAYS
(MILLION HOUSEHOLDS, EXCEPT WHERE PERCENTS ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	ANNUAL HEATING DEGREE-DAYS (HDD) AND COOLING DEGREE-DAYS (CDD)					
	<2,000 CDD AND >7,000 HDD	<2,000 CDD AND 15,500 TO 7,000 HDD	<2,000 CDD AND 4,000 TO 5,499 HDD	<2,000 CDD AND <4,000 HDD	>2,000 CDD AND <4,000 HDD	>2,000 CDD AND <4,000 HDD
TOTAL	4.3	13.5	9.0	12.1	5.7	5.7
USE NATURAL GAS FOR MAIN HEATING.....	1.3	8.1	5.3	7.0	3.4	3.4
WATER HEAT AND COOK WITH NATURAL GAS.....	2.5	4.5	2.9	4.2	1.7	1.7
AND COOK WITH ELECTRICITY.....	.1	.2	.1	.2	.3	.3
WATER HEAT WITH NATURAL GAS AND COOK WITH NATURAL GAS.....	.4	.6	.6	.8	.2	.2
ELECTRICITY.....	-.1	.1	.1	-.1	-.1	-.1
OTHER.....	.6	2.5	3.6	3.1	4.5	4.5
USE ELECTRICITY FOR MAIN HEATING.....	.5	2.1	3.4	2.6	3.6	3.6
WATER HEAT AND COOK WITH ELECTRICITY.....	.1	.4	.2	.6	.9	.9
OTHER.....	1.8	3.5	6.2	.8	.3	.3
USE FUEL OIL FOR MAIN HEATING AND COOK WITH FUEL OIL AND WATER HEAT WITH FUEL OIL AND COOK WITH FUEL OIL AND WATER HEAT WITH FUEL OIL AND COOK WITH NATURAL GAS.....	.5	1.1	1.1	.1	-.1	-.1
ELECTRICITY.....	-.1	.5	2.7	-.1	-.1	-.1
OTHER.....	3.7	.8	1.3	.5	.2	.2
WATER HEAT AND COOK WITH NATURAL GAS.....	1.1	.4	.6	-.1	-.1	-.1
ELECTRICITY.....	1.6	.6	.4	.1	-.1	-.1
OTHER.....	10.2	1.5	2.3	2.9	1.6	1.6

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.
SOURCE: RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY ENI USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 30. FUEL USE CHARACTERISTICS BY HEATING AND COOLING DEGREE-DAYS
(PERCENTAGE OF HOUSEHOLDS)

HOUSEHOLD CHARACTERISTICS	TOTAL	ANNUAL HEATING DEGREE-DAYS (HDD) AND COOLING DEGREE-DAYS (CDD)					
		<2,000 CDD AND >7,000 HDD		<2,000 CDD AND 4,000 TO 5,499 HDD		<2,000 CDD AND <4,000 HDD	
		100.0	100.0	100.0	100.0	100.0	100.0
TOTAL HOUSEHOLDS.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
MAIN HEATING EQUIPMENT							
CENTRAL WARM-AIR FURNACE.....	50.5	55.2	58.6	43.8	47.3	50.0	50.0
FORCED AIR.....	49.1	53.1	56.4	42.5	46.3	49.8	49.8
GRAVITY.....	1.4	2.1	2.2	1.3	.9	.3	.3
STEAM OR HOT WATER SYSTEM.....	16.5	20.6	23.1	30.7	1.4	1.2	1.2
HEAT PUMP.....	2.6	.6	1.3	1.7	3.4	6.6	6.6
FLOOR, WALL OR PIPELESS FURNACE.....	8.2	3.0	1.5	4.2	21.6	9.5	9.5
GIL OR GAS ROOM HEATER.....	7.4	3.5	4.8	3.7	9.8	17.7	17.7
BUILT-IN ELECTRIC UNITS.....	6.5	4.9	7.7	8.8	5.0	3.8	3.8
WOOD OR COAL HEATING STOVE.....	4.8	10.4	2.3	5.7	6.8	.8	.8
PORTABLE HEATER.....	1.2	.3	-	.4	1.7	4.9	4.9
FIREPLACE.....	.4	.3	-	.3	.8	.8	.8
OTHER.....	1.1	1.3	.7	.6	1.6	1.7	1.7
NONE.....	.6	-	-	-	.6	3.1	3.1
MAIN HEATING FUEL							
NATURAL GAS.....	54.6	50.2	64.6	42.5	63.8	47.1	47.1
ELECTRICITY.....	17.5	7.2	11.8	16.9	16.5	37.2	37.2
FUEL OIL OF KEROSENE.....	16.4	21.2	17.1	30.3	6.4	3.1	3.1
WOOD.....	5.8	15.5	2.6	6.1	7.4	1.4	1.4
LIQUID PETROLEUM GAS.....	4.5	5.8	3.1	3.1	4.9	8.2	8.2
COAL.....	.4	.1	.7	.7	.1	-	-
OTHER/NONE.....	.8	.2	.2	.4	.8	3.1	3.1
SECONDARY HEATING FUEL							
WOOD.....	16.4	20.7	15.1	18.5	18.2	9.0	9.0
ELECTRICITY.....	11.3	11.0	8.9	9.5	15.3	12.5	12.5
NATURAL GAS.....	4.0	2.0	2.7	3.7	5.3	6.4	6.4
FUEL OIL OF KEROSENE.....	2.3	7.7	2.1	3.3	.6	.1	.1
LIQUID PETROLEUM GAS.....	1.1	1.3	.4	1.2	2.0	.5	.5
COAL.....	.2	.3	.1	.2	.4	-	-
OTHER.....	.2	.5	.1	.3	.3	-	-
NONE.....	64.4	56.5	70.5	63.3	57.8	71.6	71.6

SEE NOTES AT END OF TABLE

TABLE 30. FUEL USE CHARACTERISTICS BY HEATING AND COOLING DEGREE-DAYS
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	TC1AI	ANNUAL HEATING DEGREE-DAYS (HDD) AND COOLING DEGREE-DAYS (CDD)					
		<2,000 HDD AND >7,000 HDD	2,000 TO 7,000 HDD	<2,000 CDD AND 4,000 TO 5,499 CDD	<2,000 CDD AND >4,000 CDD	>2,000 CDD AND <4,000 CDD	
WATER-HEATING FUEL							
NATURAL GAS.....	54.1	45.7	64.8	42.7	63.1	46.9	
ELECTRICITY.....	31.9	37.5	22.0	33.1	30.9	44.9	
FUEL OIL OF KEROSENE.....	8.7	8.1	9.3	19.9	1.0	3	
LIQUID PETROLEUM GAS.....	4.4	7.5	3.4	3.5	3.6	6.6	
WOOD.....	.4	1.0	.2	.6	.3	.3	
SOLAR.....	.1	-	-	-	.1	.6	
OTHER.....	.1	-	.1	-	.2	.2	
NONE.....	.3	.2	.2	.1	.9	.2	
CENTRAL WATER-HEATING SYSTEM (2-OR-MORE UNIT BUILDINGS)							
YES.....	13.8	10.7	16.8	21.3	8.7	5.4	
NO/NO WATER-HEATING FUEL/ NO HOT RUNNING WATER.....	11.6	8.1	14.2	7.5	13.3	14.1	
MAIN COOKING FUEL							
ELECTRICITY.....	54.4	69.2	50.0	51.1	53.8	58.4	
NATURAL GAS.....	38.7	17.9	45.0	42.9	40.2	32.5	
LIQUID PETROLEUM GAS.....	6.4	12.1	4.5	5.2	5.6	8.6	
WOOD.....	.3	.7	.2	.6	.1	.2	
NONE/OTHER.....	.2	.1	.3	.2	.3	.3	
AIR CONDITIONING (A/C)							
CENTRAL AIR CONDITIONING ONLY.....	26.8	12.7	19.5	22.6	30.5	50.9	
INDIVIDUAL ROOM UNITS ONLY.....	30.0	20.1	33.0	34.3	25.8	30.7	
CENTRAL A/C AND ROOM UNITS.....	.4	-	.1	.6	.4	1.0	
NO AIR CONDITIONING.....	42.8	67.2	47.4	42.6	43.3	17.4	

SEE NOTES AT END OF TABLE

TABLE 30. FUEL USE CHARACTERISTICS BY HEATING AND COOLING DEGREE-DAYS
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	ANNUAL HEATING DEGREE-DAYS (HDD) AND COOLING DEGREE-DAYS (CDD)					
		<2,000 HDD AND >7,000 HDD	2,000 TO 4,000 HDD	4,000 TO 5,499 HDD	<2,000 CDD AND <4,000 HDD	2,000 TO 4,000 CDD AND <4,000 HDD	>2,000 CDD AND <4,000 HDD
NUMBER OF ROOMS THAT CAN BE AIR CONDITIONED							
ALL.....	36.5	19.7	26.8	30.6	40.5	69.0	
SOME.....	26.7	13.1	25.8	26.9	16.2	13.6	
NONE.....	42.8	67.2	47.4	42.6	43.3	17.4	
WOOD BURNED							
YFS (1/3 CORD OR MORE).....	17.4	31.7	14.1	19.7	17.8	8.8	
NO.....	82.6	68.3	85.9	80.3	82.2	91.2	
TYPE OF MAIN HEATING FUEL USED LAST WINTER 1979 TO 1980							
SAME FUEL WINTER 1980 TO WINTER 1981.....	95.7	94.0	97.2	95.4	96.7	93.0	
DIFFERENT FUEL.....	2.5	4.7	2.5	3.1	1.8	.6	
FUEL CIL OF KEROSENE.....	1.5	3.4	1.8	2.1	.5	-	
NATURAL GAS.....	.1	.1	.1	.1	.4	-	
LIQUID PETROLEUM GAS.....	.3	.2	.2	.3	.3	.5	
ELECTRICITY.....	.2	-	.1	.4	.5	.1	
OTHER/NO FUEL USED.....	.3	1.0	.4	.3	.1	-	
NOT HEATED IN WINTER 1980 TO WINTER 1981.....	.6	-	-	-	.6	3.1	
UNIT NOT BUILT IN WINTER 1979 TO 1980.....	1.3	1.3	.3	1.5	.9	3.3	

SEE NOTES AT END OF TABLE

TABLE 30. FUEL USE CHARACTERISTICS BY HEATING AND COOLING DEGREE-DAYS
(PERCENTAGE OF HOUSEHOLDS)--Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	ANNUAL HEATING DEGREE-DAYS (HDD) AND COOLING DEGREE-DAYS (CDD)					
		<2,000 CDD AND >7,000 HDD		2,000 CDD AND 4,000 TO 5,499 HDD		<2,000 CDD AND >4,000 HDD	
		<2,000 CDD AND >7,000 HDD	2,000 CDD AND 4,000 TO 5,499 HDD	<2,000 CDD AND >4,000 HDD	<2,000 CDD AND >4,000 HDD	>2,000 CDD AND <4,000 HDD	>2,000 CDD AND <4,000 HDD
FUEL COMBINATIONS							
USE NATURAL GAS FOR MAIN HEATING.....	54.6	50.2	64.6	42.5	63.8	47.1	
WATER HEAT AND COOK WITH NATURAL GAS.....	30.7	14.8	38.7	25.3	36.7	28.1	
WATER HEAT WITH NATURAL GAS AND COOK WITH ELECTRICITY.....	19.2	29.0	21.6	13.5	22.0	14.0	
WATER HEAT WITH ELECTRICITY AND COOK WITH NATURAL GAS.....	1.1	1.8	1.1	.6	.8	2.1	
WATER HEAT AND COOK WITH ELECTRICITY.....	3.2	4.4	2.8	2.6	4.1	2.7	
OTHER.....	.4	.2	.5	.5	.2	.2	
USE ELECTRICITY FOR MAIN HEATING.....	17.5	7.2	11.8	16.9	16.5	37.2	
WATER HEAT AND COOK WITH ELECTRICITY.....	15.0	6.4	10.1	16.0	13.6	30.1	
OTHER.....	2.5	.7	1.7	.9	3.0	7.1	
USE FUEL OIL FOR MAIN HEATING, COOK WITH FUEL OIL AND WATER HEAT WITH FUEL OIL AND COOK WITH ELECTRICITY.....	15.4	20.8	16.6	29.6	4.2	2.3	
WATER HEAT WITH FUEL OIL AND COOK WITH FUEL OIL AND WATER HEAT WITH FUEL OIL AND COOK WITH NATURAL GAS.....	3.5	5.7	5.5	5.4	.6	-	
WATER HEAT AND COOK WITH ELECTRICITY.....	4.0	.2	2.3	12.9	.1	-	
WATER HEAT AND COOK WITH ELECTRICITY.....	4.5	9.6	3.8	6.1	2.7	2.1	
NATURAL GAS.....	1.4	.4	2.0	3.1	.2	-	
OTHER.....	2.0	4.9	3.1	2.1	.5	.2	
NONE/OTHER FUEL.....	12.5	21.9	7.0	11.0	15.5	13.4	

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. PERCENTAGES ARE CALCULATED ON UNPOUNDED NUMBERS. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.
SOURCE: RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 31. FUEL USE CHARACTERISTICS BY YEAR HOUSE BUILT
(MILLION HOUSEHOLDS, EXCEPT WHERE PERCENTS ARE INDICATED)

HOUSEHOLD CHARACTERISTICS	TOTAL	YEAR HOUSE BUILT							
		1975 OR LATER	1970 TO 1974	1965 TO 1969	1960 TO 1964	1950 TO 1959	1940 TO 1949	1939 OR EARLIER	
TOTAL HOUSEHOLDS.....	81.6	11.3	10.5	8.1	7.2	13.7	7.5	23.3	
MAIN HEATING EQUIPMENT									
CENTRAL WARM-AIR FURNACE.....	41.2	6.6	6.7	4.7	4.1	7.5	2.9	8.9	
FORCED AIR.....	40.1	6.5	6.6	4.6	4.1	7.4	2.7	8.2	
GRAVITY.....	1.1	-.1	-.1	-.1	-.1	-.1	-.2	-.6	
STEAM OR HOT WATER SYSTEM.....	13.5	-.6	-.9	-.8	1.3	1.8	1.4	6.7	
HEAT PUMP.....	2.1	1.3	-.3	-.2	-.1	-.1	-	-.1	
FLOOR, WALL OR PIPELESS FURNACE.....	6.7	-.2	-.3	-.7	-.5	1.9	1.3	1.8	
OIL OR GAS ROOM HEATER.....	6.1	-.1	-.2	-.3	-.3	1.0	-.9	3.3	
BUILT-IN ELECTRIC UNITS.....	5.3	1.4	1.6	1.0	-.4	-.4	-.3	-.3	
WOOD OR COAL HEATING STOVE.....	4.0	-.7	-.4	-.3	-.2	-.4	-.4	1.5	
PORTABLE HEATER.....	1.0	-.1	-.1	-.1	-.1	-.1	-.1	-.3	
FIREPLACE.....	3	-.1	-.1	-.1	-.1	-.1	-.1	-.3	
OTHER.....	9	-.1	-.1	-.1	-.1	-.1	-.1	-.3	
NONE.....	9	-.1	-.1	-.1	-.1	-.1	-.1	-.2	
MAIN HEATING FUEL									
NATURAL GAS.....	44.6	3.6	4.6	4.8	4.6	9.1	4.6	13.3	
ELECTRICITY.....	14.3	5.7	3.7	1.7	-.8	1.1	-.5	-.8	
FUEL OIL OR KEROSENE.....	13.4	-.6	-.8	1.7	1.1	2.5	1.6	6.1	
WOOD.....	4.7	-.9	-.4	-.3	-.4	-.5	-.4	1.8	
LIQUID PETROLEUM GAS.....	3.7	-.5	-.8	-.5	-.3	-.4	-.2	-.9	
COAL.....	3.3	-.5	-.8	-.5	-.3	-.4	-.2	-.2	
OTHER/NONE.....	1.7	-.1	-.1	-.1	-.1	-.1	-.1	-.3	
CENTRAL MAIN HEATING SYSTEM FOR BUILDING (2-OR-MORE UNIT BUILDINGS)									
YFS.....	9.0	-.6	1.3	-.7	-.7	-.9	-.9	3.9	
NC.....	11.6	2.6	1.8	1.5	1.0	-.9	-.8	2.9	
MC MAIN HEATING SYSTEM.....	1.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	

SEE NOTES AT END OF TABLE

TABLE 31. FUEL USE CHARACTERISTICS BY YEAR HOUSE BUILT
(MILLION HOUSEHOLDS, EXCEPT WHERE PERCENTS ARE INDICATED)--Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	YEAR HOUSE BUILT						
		1975 OR LATER	1970 TO 1974	1965 TO 1969	1960 TO 1964	1950 TO 1959	1940 TO 1949	1939 OR EARLIER
SECONDARY HEATING FUEL								
WOOD.....	13.4	2.7	2.0	1.7	1.4	2.0	0.8	2.8
ELECTRICITY.....	5.2	1.3	1.1	.7	1.0	1.5	.9	7.8
NATURAL GAS.....	3.3	.3	.2	.3	.2	.9	.4	1.0
FUEL OIL OR KEROSENE.....	1.9	.2	.1	.2	.2	.1	.1	.7
LIQUID PETROLEUM GAS.....	.9	.2	.1	.1	.1	.2	.1	.3
COAL.....	.2	-	-	-	-	-	-	.1
OTHER.....	.2	-	-	-	-	-	-	.1
NONE.....	52.6	6.6	7.0	5.1	4.3	8.8	5.1	15.6
WATER-HEATING FUEL								
NATURAL GAS.....	44.1	1.5	4.7	4.7	4.4	8.8	4.4	13.7
ELECTRICITY.....	26.1	6.8	4.8	2.5	1.7	3.3	1.9	5.1
FUEL OIL OR KEROSENE.....	7.1	.4	.5	.4	.8	1.2	.9	3.0
LIQUID PETROLEUM GAS.....	3.6	.5	.5	.4	.3	.4	.3	1.1
WOOD.....	.4	-	-	-	-	-	-	.2
SOLAR.....	.1	-	-	-	-	-	-	-
OTHER.....	.1	-	-	-	-	-	-	.1
NONE.....	.3	-	-	-	-	-	-	.2
CENTRAL WATER-HEATING SYSTEM (2-OR-MORE UNIT BUILDINGS)								
YES.....	11.2	1.0	1.7	1.1	.9	1.0	1.2	4.3
NO/NO WATER-HEATING FUEL/NO HOT RUNNING WATER.....	9.5	2.2	1.3	1.1	.8	.9	.5	2.6
MAIN COOKING FUEL								
ELECTRICITY.....	44.4	9.0	7.3	4.5	4.2	6.8	3.3	9.2
NATURAL GAS.....	31.6	1.6	2.3	2.9	2.6	6.2	3.7	12.3
LIQUID PETROLEUM GAS.....	5.2	.8	.9	.7	.3	.6	.4	1.5
WOOD.....	.3	-	-	-	-	-	-	.2
NONE/OTHER.....	.2	.1	-	-	-	-	-	.1

SEE NOTES AT END OF TABLE

TABLE 31. FUEL USE CHARACTERISTICS BY YEAR HOUSE BUILT
(MILLION HOUSEHOLDS, EXCEPT WHERE PERCENTS ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	YEAR HOUSE BUILT							1939 OR EARLIER
		1975 OR LATER	1970 TO 1974	1965 TO 1969	1960 TO 1964	1950 TO 1959	1940 TO 1949		
AIR CONDITIONING (A/C)									
CENTRAL AIR CONDITIONING ONLY.....	21.9	6.6	4.9	2.6	2.1	3.5	0.8	1.4	
INDIVIDUAL ROOM UNITS ONLY.....	24.5	1.7	2.2	2.4	2.1	4.8	2.8	8.5	
CENTRAL A/C AND ROOM UNITS.....	.3	-	-	-	-	.1	-	.1	
NO AIR CONDITIONING.....	34.9	3.0	3.4	3.0	3.0	5.3	3.8	13.3	
CENTRAL AIR CONDITIONING SYSTEM FOR THE BUILDING (2-OR-MORE UNIT BUILDINGS)									
YES.....	1.2	.3	.6	.2	.1	-	-	-	
NO.....	3.8	1.7	1.0	.4	.3	.2	-	.1	
NO AIR CONDITIONING SYSTEM.....	15.7	1.2	1.5	1.6	1.4	1.6	1.6	6.7	
NUMBER OF ROOMS THAT CAN BE AIR CONDITIONED									
ALL.....	29.8	7.3	5.8	3.5	2.7	5.1	1.8	3.5	
SOME.....	16.5	1.0	1.3	1.5	1.5	3.3	1.8	6.5	
NONE.....	34.9	3.0	3.4	3.0	3.0	5.3	3.8	13.3	
WOOD BURNED									
YES (1/3 CORD OR MORE).....	14.2	3.0	1.8	1.3	1.4	1.8	1.0	4.0	
NO.....	67.4	8.4	8.8	6.8	5.8	11.9	6.5	19.3	
AVAILABILITY OF NATURAL GAS IN THE NEIGHBORHOOD (SINGLE FAMILY OR MOBILE HOME)									
DO NOT USE ANY NATURAL GAS.....	36.3	2.8	3.5	3.5	3.5	8.6	3.9	10.5	
GAS IS AVAILABLE.....	24.6	5.3	4.0	2.4	1.9	3.3	1.8	5.9	
PERCENT.....	5.4	1.0	.7	.6	.4	1.1	.5	1.2	
GAS IS NOT AVAILABLE.....	22.1	18.4	18.4	23.8	18.9	32.0	27.8	21.1	
PERCENT.....	19.2	4.3	3.2	1.8	1.6	2.3	1.3	4.7	
PERCENT.....	77.9	81.6	81.6	76.2	81.1	68.0	72.2	78.9	

SEE NOTES AT END OF TABLE

TABLE 31. FUEL USE CHARACTERISTICS BY YEAR HOUSE BUILT
(MILLION HOUSEHOLDS, EXCEPT WHERE PERCENTS ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	YEAR HOUSE BUILT						
		1975 OR LATER	1970 TO 1974	1965 TO 1969	1960 TO 1964	1950 TO 1959	1940 TO 1949	1939 OR EARLIER
TYPE OF MAIN HEATING FUEL USED								
LAST WINTER 1979 TO 1980								
SAME FUEL WINTER 1980	78.1	10.1	10.3	7.9	6.9	13.4	7.2	22.3
DIFFERENT FUEL	2.0	.1	.2	.1	.3	.3	.2	.8
FUEL CUI OF KEROSENE	1.2	-	.1	.1	.1	.2	.1	.6
NATURAL GAS	.1	-	-	-	-	-	-	-
LIQUID PETROLEUM GAS	.2	-	.1	-	-	-	-	-
ELECTRICITY	.2	.1	-	-	-	-	-	.1
OTHER/NO FUEL USED	.3	-	-	-	.1	-	-	.1
NOT HEATED IN WINTER 1980	.5	.1	-	-	-	.1	.1	.2
UNIT NOT FUILL IN WINTER 1979 TC 1980	1.0	1.0	-	-	-	-	-	-

SEE NOTES AT END OF TABLE

TABLE 31. FUEL USE CHARACTERISTICS BY YEAR HOUSE BUILT
(MILLION HOUSEHOLDS, EXCEPT WHERE PERCENTS ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	YEAR HOUSE BUILT						
		1975 OR LATER	1970 TO 1974	1965 TO 1969	1960 TO 1964	1950 TO 1959	1940 TO 1949	1939 OR EARLIER
FUEL COMBINATIONS								
USE NATURAL GAS FOR MAIN HEATING.....	44.6	3.6	4.6	4.8	4.6	9.1	4.6	13.3
WATER HEAT AND COOK WITH NATURAL GAS.....	25.1	1.3	1.9	2.6	2.2	5.2	2.8	9.0
WATER HEAT WITH NATURAL GAS AND COOK WITH ELECTRICITY.....	15.7	1.8	2.2	1.9	2.1	3.1	1.3	3.2
WATER HEAT WITH ELECTRICITY AND COOK WITH NATURAL GAS.....	.5	.1	.1	.1	.1	.2	.1	.2
WATER HEAT AND COOK WITH ELECTRICITY.....	2.6	.3	.3	.2	.2	.5	.4	.8
OTHER.....	.3	-	.1	-	-	-	-	.1
USE ELECTRICITY FOR MAIN HEATING.....	14.3	5.7	3.7	1.7	.8	1.1	.5	.8
WATER HEAT AND COOK WITH ELECTRICITY.....	12.3	5.1	3.2	1.5	.7	.9	.3	.6
OTHER.....	2.0	.6	.6	.2	.1	.3	.1	.2
USE FUEL OIL FOR MAIN HEATING. WATER HEAT WITH FUEL OIL AND COOK WITH ELECTRICITY.....	12.6	.6	.7	.6	1.0	2.4	1.5	5.8
WATER HEAT WITH FUEL OIL AND COOK WITH NATURAL GAS.....	2.9	.2	.2	.2	.4	.6	.3	1.0
WATER HEAT AND COOK WITH ELECTRICITY.....	3.3	-	.2	.1	.3	.5	.5	1.7
WATER HEAT AND COOK WITH ELECTRICITY.....	3.7	.2	.2	.2	.3	.9	.4	1.3
NATURAL GAS.....	1.1	-	-	-	-	.1	.1	1.0
OTHER.....	1.6	.1	.1	.1	.1	.3	.2	.8
NONE/OTHER FUEL.....	10.2	1.5	1.5	1.0	.8	1.1	.9	3.5

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.
SOURCE: RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY AND USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 32. FUEL USE CHARACTERISTICS BY YEAR HOUSE BUILT
(PERCENTAGE OF HOUSEHOLDS)

HOUSEHOLD CHARACTERISTICS	TOTAL	YEAR HOUSE BUILT									
		1975 OR LATER	1970 TO 1974	1965 TO 1969	1960 TO 1964	1950 TO 1959	1940 TO 1949	1939 OR EARLIER			
TOTAL HOUSEHOLDS	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
MAIN HEATING EQUIPMENT											
CENTRAL WARM-AIR FURNACE	50.5	58.3	63.1	58.1	57.5	54.7	38.5	37.6			
FORCED AIR	48.1	57.8	62.2	57.3	57.4	53.7	36.3	35.1			
GRAVITY	1.4	.5	.9	.8	.1	1.0	2.2	2.6			
STEAM OR HOT WATER SYSTEM	16.5	5.2	8.8	9.7	18.2	13.1	18.5	28.6			
HEAT PUMP	2.6	11.8	2.8	2.3	1.4	.5	.4	.4			
FLOOR, WALL OR PIPELESS FURNACE	8.2	1.9	2.6	8.7	6.3	14.1	17.8	7.7			
OIL OR GAS ROOM FURNACE	7.4	1.1	2.1	3.3	4.4	7.2	12.1	14.0			
BUILT-IN ELECTRIC UNITS	6.5	12.5	15.0	12.0	5.1	2.8	3.4	1.4			
WOOD OR COAL HEATING STOVE	4.8	6.1	4.0	3.9	3.1	3.0	5.0	6.5			
PORTABLE HEATER	1.2	.8	.4	.7	1.0	2.7	1.3	1.2			
FIREPLACE	.4	.7	-	.1	1.0	.4	.7	.3			
OTHER	1.1	1.1	.9	.8	1.4	.9	1.5	1.2			
NONE	.6	.6	.3	.3	.5	.4	.8	.9			
MAIN HEATING FUEL											
NATURAL GAS	54.6	31.6	43.9	59.6	63.6	66.4	61.8	56.9			
ELECTRICITY	17.5	50.1	35.5	20.9	11.3	8.3	6.0	3.3			
FUEL OIL OR KEROSENE	16.4	5.4	8.0	8.5	14.9	18.1	21.8	26.0			
WOOD	5.8	7.7	4.3	3.9	5.1	3.6	5.9	7.7			
LIQUID PETROLEUM GAS	4.5	4.1	8.0	6.3	4.4	3.1	2.9	3.9			
COAL	.4	-	.1	.5	.2	.2	.6	.8			
OTHER/NONE	.8	1.0	.3	.3	.5	.4	1.0	1.4			
SECONDARY HEATING FUEL											
WOOD	16.4	24.0	18.8	21.2	19.1	14.8	10.7	11.8			
ELECTRICITY	11.3	11.3	10.3	9.1	13.3	11.3	11.5	12.0			
NATURAL GAS	4.0	2.4	2.1	3.7	2.7	6.4	5.9	4.2			
FUEL OIL OR KEROSENE	2.3	2.1	1.0	2.2	3.4	2.1	2.0	3.1			
LIQUID PETROLEUM GAS	1.1	1.6	.8	.9	.7	1.3	.8	1.1			
COAL	.2	.1	.3	-	.2	-	.1	.5			
OTHER	.2	.1	-	.5	.2	-	.2	.4			
NONE	64.4	58.5	66.8	62.5	60.4	64.1	68.8	66.9			

SEE NOTES AT END OF TABLE

TABLE 32. FUEL USE CHARACTERISTICS BY YEAR HOUSE BUILT
(PERCENTAGE OF HOUSEHOLDS)--Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	YEAR HOUSE BUILT							
		1975 OR LATER	1970 TO 1974	1965 TO 1969	1960 TO 1964	1950 TO 1959	1940 TO 1949	1939 OR EARLIER	
WATER-HEATING FUEL									
NATURAL GAS.....	54.1	31.2	44.5	58.4	60.6	64.2	58.4	58.7	
ELECTRICITY.....	31.5	60.2	45.5	31.4	23.0	24.2	25.1	21.8	
FUEL OIL OR KEROSENE.....	8.7	3.2	4.4	4.9	10.6	8.4	12.3	12.9	
LIQUID PETROLEUM GAS.....	4.4	4.8	4.9	5.4	4.6	2.8	3.7	4.6	
WOOD.....	.4	.2	.2	—	.5	.3	.3	.9	
SOLAR.....	.1	.3	.3	—	.1	—	—	—	
OTHER.....	.1	.1	—	—	—	—	—	.3	
NONE.....	.3	—	.2	—	.5	.1	.1	.8	
CENTRAL WATER-HEATING SYSTEM (2-OR-MORE UNIT BUILDINGS)									
YES.....	13.8	9.2	16.4	13.5	13.0	7.0	16.4	18.3	
NO/NO WATER-HEATING FUEL/NO HOT RUNNING WATER.....	11.6	19.2	12.8	14.0	11.3	6.3	6.6	11.3	
MAIN COOKING FUEL									
ELECTRICITY.....	54.4	79.0	69.5	55.9	58.7	49.9	44.8	39.4	
NATURAL GAS.....	38.7	13.7	22.3	35.6	36.5	45.4	43.2	52.6	
LIQUID PETROLEUM GAS.....	6.4	6.8	8.1	8.5	4.7	4.4	5.5	6.6	
WOOD.....	.3	—	—	—	.1	.2	.4	.8	
NONE/OTHER.....	.2	.5	.1	—	—	.1	—	.5	
AIR CONDITIONING (A/C)									
CENTRAL AIR CONDITIONING ONLY.....	26.8	58.0	46.8	32.6	28.6	25.4	10.8	6.0	
INDIVIDUAL ROOM UNITS ONLY.....	30.0	15.1	20.6	29.6	29.5	34.9	37.5	36.5	
CENTRAL A/C AND ROOM UNITS.....	.4	.1	.5	.2	.2	1.0	.6	.3	
NO AIR CONDITIONING.....	42.8	26.8	32.1	37.6	41.6	38.8	51.1	57.2	

SEE NOTES AT END OF TABLE

TABLE 32. FUEL USE CHARACTERISTICS BY YEAR HOUSE BUILT
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	YEAR HOUSE BUILT										
		1975 OR LATER	1970 TO 1974	1965 TO 1969	1960 TO 1964	1950 TO 1959	1940 TO 1949	1939 OR EARLIER				
NUMBER OF ROOMS THAT CAN BE AIR CONDITIONED												
ALL.....	36.5	64.0	55.2	43.7	37.9	37.2	24.7	15.1				
SOME.....	20.7	9.2	12.7	18.7	20.5	24.0	24.2	27.7				
NONE.....	42.8	26.8	32.1	37.6	41.6	38.8	51.1	57.2				
WOOD BURNED												
YES (1/3 CORD OF WCRE).....	17.4	26.1	16.7	16.6	19.4	13.2	12.8	17.2				
NO.....	82.6	73.9	83.3	83.4	80.6	86.8	87.2	82.8				
TYPE OF MAIN HEATING FUEL USED LAST WINTER 1979 TO 1980												
SAME FUEL WINTER 1980 TO WINTER 1981.....	95.7	89.1	97.6	98.0	95.4	97.6	96.6	95.8				
DIFFERENT FUEL.....	2.5	1.2	2.0	1.6	4.1	2.0	2.6	3.3				
FUEL OIL OR KEROSENE.....	1.5	.1	.9	.8	1.9	1.3	1.8	2.5				
NATURAL GAS.....	.1	.1	.2	-	.3	.1	.2	.2				
LIQUID PETROLEUM GAS.....	.3	.2	.5	.5	.5	.3	-	.2				
ELECTRICITY.....	.2	.5	.3	.1	.5	.1	.2	.1				
OTHER/NO FUEL USED.....	.3	.3	-	.2	1.0	.2	.4	.3				
NOT HEATED IN WINTER 1980 TO WINTER 1981.....	.6	.6	.3	.3	.5	.4	.8	.9				
UNIT NOT BUILT IN WINTER 1979 TO 1980.....	1.3	9.1	.2	-	-	-	-	-				

SEE NOTES AT END OF TABLE

TABLE 32. FUEL USE CHARACTERISTICS BY YEAR HOUSE BUILT
(PERCENTAGE OF HOUSEHOLDS)—Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	YEAR HOUSE BUILT							
		1975 OR LATER	1970 TO 1974	1965 TO 1969	1960 TO 1964	1950 TO 1959	1940 TO 1949	1939 OR EARLIER	
FUEL COMBINATIONS									
USE NATURAL GAS FOR MAIN HEATING.....	54.6	31.6	43.9	59.6	63.6	66.4	61.8	56.9	
WATER HEAT AND COOK WITH NATURAL GAS.....	30.7	11.4	18.4	32.4	30.1	38.3	37.9	38.5	
WATER HEAT WITH NATURAL GAS AND COOK WITH ELECTRICITY.....	19.2	15.8	21.3	23.8	29.4	22.8	17.4	13.7	
WATER HEAT WITH NATURAL GAS AND COOK WITH NATURAL GAS.....	1.1	1.1	1.1	1.4	.9	1.3	1.6	.8	
WATER HEAT WITH ELECTRICITY AND COOK WITH NATURAL GAS.....	3.2	3.0	2.5	2.1	2.7	3.7	4.9	3.3	
WATER HEAT AND COOK WITH ELECTRICITY.....	.4	.3	.6	-	.5	.2	-	.5	
USE ELECTRICITY FOR MAIN HEATING.....	17.5	50.1	35.5	20.9	11.3	8.3	6.0	3.3	
WATER HEAT AND COOK WITH ELECTRICITY.....	15.0	45.2	30.2	18.6	9.3	6.5	4.5	2.4	
OTHER.....	2.5	5.0	5.3	2.3	2.0	1.9	1.6	.9	
USE FUEL OIL FOR MAIN HEATING AND WATER HEAT WITH FUEL OIL AND COOK WITH ELECTRICITY.....	15.4	4.9	6.7	7.0	14.5	17.4	20.2	24.9	
WATER HEAT WITH FUEL OIL AND COOK WITH NATURAL GAS.....	3.5	1.9	2.3	2.3	5.4	4.2	3.5	4.3	
WATER HEAT WITH FUEL OIL AND COOK WITH NATURAL GAS.....	4.0	-	1.6	.7	4.2	3.4	7.3	7.0	
WATER HEAT AND COOK WITH ELECTRICITY.....	4.5	2.2	2.1	2.7	4.2	6.8	6.0	5.5	
WATER HEAT AND COOK WITH NATURAL GAS.....	1.4	-	-	-	-	.8	.7	4.1	
OTHER.....	2.0	.7	.7	1.2	.7	2.1	2.6	3.6	
NONE/OTHER FUEL.....	12.5	13.4	13.9	12.5	10.6	8.0	12.0	14.9	

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. PERCENTAGES ARE CALCULATED ON UNROUNDED NUMBERS. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.
SOURCE: RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 33. FUEL USE CHARACTERISTICS BY SELECTED DEMOGRAPHIC CHARACTERISTICS
(MILLION HOUSEHOLDS, EXCEPT WHERE PERCENTS ARE INDICATED)

HOUSEHOLD CHARACTERISTICS	SELECTED DEMOGRAPHIC CHARACTERISTICS									
	AGE OF HOUSEHOLD HEAD		ORIGIN		NUMBER OF HOUSEHOLD MEMBERS					
	35 OR LESS	36 TO 59	WHITE, OTHER	BLACK	1	2	3	4	5 OR MORE	
TOTAL	28.4	31.5	21.8	72.4	9.2	15.7	26.8	14.9	13.4	10.9
MAIN HEATING EQUIPMENT										
CENTRAL WARM-AIR FURNACE.....	41.2	17.0	10.2	37.9	3.3	6.6	13.7	8.1	7.3	5.5
FORCED AIR.....	40.1	16.7	9.7	36.9	3.2	6.4	13.3	7.9	7.3	5.3
GRAVITY.....	1.1	.3	.5	1.1	.1	.2	.4	.3	-	.2
STEAM OR HOT WATER SYSTEM.....	13.5	4.1	4.1	11.2	2.3	3.2	4.7	2.0	1.9	1.7
HEAT PUMP.....	2.1	.9	.5	2.0	.1	.3	.7	.4	.4	.3
FLOOR, WALL OR PIPELESS FURNACE.....	6.7	2.3	1.8	5.7	1.0	1.4	2.4	1.2	1.1	.7
OIL OR GAS ROOM HEATER.....	6.1	1.9	2.4	4.6	1.5	1.7	1.9	1.0	.8	.8
BUILT-IN ELECTRIC UNITS.....	5.3	2.6	1.1	4.9	.4	1.4	1.6	1.0	.6	.7
WOOD OR COAL HEATING STOVE.....	4.0	1.7	.8	3.6	.4	.3	1.0	.8	1.0	.7
PORTABLE HEATER.....	1.0	.2	.4	.9	.1	.4	.3	.1	.1	.1
FIREPLACE.....	.3	.1	.1	.3	.1	.1	.1	.1	-	.1
OTHER.....	.9	.3	.3	.8	.1	.3	.2	.2	.1	.2
NONE.....	.5	.2	.1	.5	-	.1	.1	.1	.1	.1
MAIN HEATING FUEL										
NATURAL GAS.....	44.6	17.7	11.7	38.9	5.7	8.2	14.4	8.3	7.7	5.9
ELECTRICITY.....	14.3	4.5	3.3	13.4	.9	3.6	4.8	2.3	1.8	1.7
FUEL OIL OF KEROSENE.....	13.4	5.5	4.5	11.4	1.9	2.7	4.8	2.3	2.0	1.6
WOOD.....	4.7	2.1	.9	4.3	.4	.4	1.2	1.0	1.2	.9
LIQUID PETROLEUM GAS.....	3.7	1.2	1.1	3.4	.3	.6	1.2	.8	.6	.4
COAL.....	.3	.2	.1	.3	-	.1	.1	-	-	.1
OTHER/NONE.....	.7	.3	.2	.6	-	.1	.1	.1	.1	.3
CENTRAL MAIN HEATING SYSTEM FOR BUILDING (2-OR-MORE UNIT BUILDINGS)										
YES.....	9.0	3.6	2.8	7.0	2.0	3.7	2.9	1.2	.7	.5
NO.....	11.6	6.7	1.9	9.7	1.9	3.6	4.1	1.9	1.2	.8
NO MAIN HEATING SYSTEM.....	.1	-	-	.1	-	.1	-	-	-	-

SEE NOTES AT END OF TABLE

TABLE 33. FUEL USE CHARACTERISTICS BY SELECTED DEMOGRAPHIC CHARACTERISTICS
(MILLION HOUSEHOLDS, EXCEPT WHERE PERCENTS ARE INDICATED) - Continued

HOUSEHOLD CHARACTERISTICS	SELECTED DEMOGRAPHIC CHARACTERISTICS									
	AGE OF HOUSEHOLD HEAD		ORIGIN		NUMBER OF HOUSEHOLD MEMBERS					
	35 OR LESS	36 TO 59	60 AND OVER	WHITE, OTHER	BLACK	1	2	3	4	5 OR MORE
TOTAL										
SECONDARY HEATING FUEL										
WOOD.....	13.4	6.5	2.8	13.1	0.3	1.2	4.1	2.7	3.0	2.3
ELECTRICITY.....	9.2	3.6	2.6	8.5	.8	1.9	2.8	1.6	1.7	1.3
NATURAL GAS.....	3.3	1.4	1.0	2.8	.5	.6	1.2	.5	.5	.5
FUEL OIL OR KEROSENE.....	1.9	.8	.4	1.8	.1	.2	.6	.4	.4	.4
LIQUID PETROLEUM GAS.....	.9	.4	.3	.8	-	.1	.3	.2	.2	.1
COAL.....	.2	.1	.1	.2	-	.1	-	-	-	-
OTHER.....	.2	.1	-	.2	-	-	.1	-	.1	-
NONE.....	52.6	18.5	14.6	45.1	7.5	11.7	17.6	9.5	7.4	6.3
WATER-HEATING FUEL										
NATURAL GAS.....	44.1	17.5	11.4	38.3	5.9	8.2	14.1	8.0	7.8	6.0
ELECTRICITY.....	26.1	9.4	6.8	24.5	1.6	5.1	8.6	5.0	4.0	3.3
FUEL OIL OR KEROSENE.....	7.1	2.8	2.3	5.7	1.4	1.7	2.6	1.0	.9	.8
LIQUID PETROLEUM GAS.....	3.6	1.4	.9	3.4	.2	.5	1.1	.8	.6	.6
WOOD.....	.4	.1	.1	.3	.1	-	.1	.1	-	.1
SOLAR.....	.1	.1	-	.1	-	-	-	-	-	-
OTHER.....	.1	-	-	.1	-	-	-	-	-	-
NONE.....	.3	.1	.2	.1	.1	.1	.1	-	-	.1
CENTRAL WATER-HEATING SYSTEM (2-OR-MORE UNIT BUILDINGS)										
YES.....	11.2	3.3	3.0	9.0	2.2	4.6	3.7	1.5	.8	.6
NO/NO WATER-HEATING FUEL/NO HOT RUNNING WATER.....	9.5	2.3	1.7	7.7	1.7	2.8	3.3	1.6	1.0	.7
MAIN COOKING FUEL										
ELECTRICITY.....	44.4	16.9	11.2	41.8	2.6	8.2	15.1	8.2	7.6	5.4
NATURAL GAS.....	31.6	12.4	8.8	25.4	6.2	6.5	9.9	5.5	5.0	4.7
LIQUID PETROLEUM GAS.....	5.2	1.9	1.5	4.8	.4	.8	1.7	1.2	.7	.8
WOOD.....	.3	.1	.2	.2	-	.1	.1	.1	-	.1
NCNF/OTHER.....	.2	.1	.1	.2	-	.1	-	-	-	-

SEE NOTES AT END OF TABLE

TABLE 33. FUEL USE CHARACTERISTICS BY SELECTED DEMOGRAPHIC CHARACTERISTICS (MILLION HOUSEHOLDS, EXCEPT WHERE PERCENTS ARE INDICATED)--Continued

HOUSEHOLD CHARACTERISTICS	SELECTED DEMOGRAPHIC CHARACTERISTICS												
	TOTAL	AGE OF HOUSEHOLD HEAD				ORIGIN			NUMBER OF HOUSEHOLD MEMBERS				
		35 OR LESS	36 TO 59	60 AND OVER	WHITE, OTHER	BLACK	1	2	3	4	5 OF MORE		
AIR CONDITIONING (A/C)													
CENTRAL AIR CONDITIONING ONLY.....	21.9	7.3	9.6	5.0	20.5	1.4	3.7	7.6	4.3	3.8	2.5		
INDIVIDUAL ROOM UNITS ONLY.....	24.5	8.0	9.0	7.5	21.7	2.8	5.1	8.7	4.4	3.4	3.0		
CENTRAL A/C AND ROOM UNITS.....	3.3	-	1.1	1.1	3.3	-	-	1.1	-	1.1	1.1		
NO AIR CONDITIONING.....	34.9	13.0	12.8	9.2	29.9	5.1	6.9	10.3	6.2	6.1	5.4		
CENTRAL AIR CONDITIONING SYSTEM FOR THE BUILDING (2-OR-MORE UNIT BUILDINGS)													
YES.....	1.2	4	2	6	1.1	.1	.7	4	-	.1	-		
NO.....	3.8	2.1	1.2	.6	3.5	.3	1.3	1.7	.6	.2	.1		
NO AIR CONDITIONING SYSTEM.....	15.7	7.8	4.3	3.6	12.1	3.6	5.4	5.0	2.5	1.5	1.3		
NUMBER OF ROOMS THAT CAN BE AIR CONDITIONED													
ALL.....	29.8	10.3	11.9	7.6	27.4	2.4	6.0	10.5	5.5	4.8	3.0		
SOME.....	16.9	5.1	6.8	5.1	15.1	1.8	2.9	6.0	3.2	2.4	2.5		
NONE.....	34.9	13.0	12.8	9.2	29.9	5.1	6.9	10.3	6.2	6.1	5.4		
WOOD BURNED													
YES (1/3 cord or more).....	14.2	4.4	7.1	2.7	13.7	.6	1.0	4.0	2.9	3.7	2.6		
NO.....	67.4	24.0	24.3	19.1	58.8	8.6	14.7	22.8	12.0	9.7	8.3		
AVAILABILITY OF NATURAL GAS IN THE NEIGHBORHOOD (SINGLE FAMILY OR MOBILE HOME)													
USE ANY NATURAL GAS.....	36.3	10.3	15.7	10.3	32.4	3.9	5.0	11.8	6.9	7.0	5.6		
DO NOT USE ANY NATURAL GAS.....	24.6	7.8	10.1	6.7	23.3	1.4	3.3	7.9	4.9	4.5	3.9		
GAS IS AVAILABLE.....	5.4	1.5	2.4	1.5	5.1	.3	.8	1.9	1.0	1.0	.7		
PERCENT.....	22.1	19.8	23.9	22.1	22.1	22.8	24.8	24.3	20.0	22.7	17.5		
GAS IS NOT AVAILABLE.....	19.2	6.2	7.7	5.2	18.1	1.0	2.5	6.0	3.9	3.5	3.3		
PERCENT.....	77.9	80.2	76.1	77.9	77.9	77.2	75.2	75.7	80.0	77.3	82.5		

SEE NOTES AT END OF TABLE

TABLE 33. FUEL USE CHARACTERISTICS BY SELECTED DEMOGRAPHIC CHARACTERISTICS
(MILLION HOUSEHOLDS, EXCEPT WHERE PERCENTS ARE INDICATED)-Continued

HOUSEHOLD CHARACTERISTICS	SELECTED DEMOGRAPHIC CHARACTERISTICS										
	AGE OF HOUSEHOLD HEAD		ORIGIN		NUMBER OF HOUSEHOLD MEMBERS						
	35 OR LESS	36 TO 59	60 AND OVER	WHITE, OTHER	BLACK	1	2	3	4	5 OR MORE	
TOTAL	78.1	26.9	30.1	21.0	69.1	9.0	15.2	25.7	14.2	12.8	10.3
TYPE OF MAIN HEATING FUEL USED											
LAST WINTER 1979 TO 1980											
SAME FUEL WINTER 1980											
DIFFERENT FUEL	2.0	.7	.8	.5	1.9	.1	.3	.5	.4	.4	.4
FUEL OIL OR KEROSENE	1.2	.4	.5	.3	1.1	.1	.2	.3	.2	.2	.3
NATURAL GAS	.1	-	.1	-	.1	-	-	-	-	-	-
LIQUID PETROLEUM GAS	.2	.1	-	.1	.2	-	-	.1	.1	-	-
ELECTRICITY	.2	.1	.1	-	.2	-	-	.1	-	.1	-
OTHER/NO FUEL USED	.3	.1	.1	.1	.2	-	.1	.1	.1	-	-
NOT HEATED IN WINTER 1980											
TO WINTER 1981	.5	.2	.2	.1	.5	-	.1	.1	.1	.1	.1
UNIT NOT FUILL IN WINTER 1979 TO 1980	1.0	.5	.3	.2	1.0	.1	.2	.5	.2	.1	.1

SEE NOTES AT END OF TABLE

TABLE 33. FUEL USE CHARACTERISTICS BY SELECTED DEMOGRAPHIC CHARACTERISTICS
(MILLION HOUSEHOLDS, EXCEPT WHERE PERCENTS ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	SELECTED DEMOGRAPHIC CHARACTERISTICS												
	TOTAL	AGE OF HOUSEHOLD HEAD		ORIGIN		NUMBER OF HOUSEHOLD MEMBERS							
		35 OR LESS	36 TO 59	60 AND OVER	WHITE, OTHER	BLACK	1	2	3	4	5 OF MORE		
FUEL COMBINATIONS													
USE NATURAL GAS FOR MAIN HEATING.....	44.6	15.2	17.7	11.7	38.9	5.7	8.2	14.4	8.3	7.7	5.5		
WATER HEAT AND COOK WITH NATURAL GAS.....	25.1	8.4	9.9	6.7	20.7	4.4	4.7	7.8	4.5	4.3	3.7		
WATER HEAT WITH NATURAL GAS AND COOK WITH ELECTRICITY.....	15.7	5.5	6.5	3.7	14.8	.9	2.6	5.4	2.9	2.9	1.9		
WATER HEAT WITH ELECTRICITY AND COOK WITH NATURAL GAS.....	.9	.4	.3	.2	.8	.1	.2	.3	.2	.1	.1		
WATER HEAT AND COOK WITH ELECTRICITY.....	2.6	.8	.9	.9	2.4	.2	.6	.9	.6	.3	.2		
OTHER.....	.3	--	.1	.2	.3	--	.2	--	--	--	--		
USE ELECTRICITY FOR MAIN HEATING.....	14.3	6.5	4.5	3.3	13.4	.9	3.6	4.8	2.3	1.8	1.7		
WATER HEAT AND COOK WITH ELECTRICITY.....	12.3	5.5	4.0	2.8	11.5	.7	2.8	4.2	2.1	1.6	1.5		
OTHER.....	2.0	1.0	.5	.6	1.8	.2	.8	.6	.2	.2	.2		
USE FUEL OIL FOR MAIN HEATING.....	12.6	3.1	5.2	4.3	10.7	1.8	2.6	4.4	2.2	1.8	1.5		
WATER HEAT WITH FUEL OIL AND COOK WITH ELECTRICITY.....	2.9	.7	1.3	.9	2.7	.2	.4	1.0	.6	.4	.4		
WATER HEAT WITH FUEL OIL AND COOK WITH NATURAL GAS.....	3.3	.9	1.2	1.2	2.1	1.2	1.1	1.2	.3	.3	.4		
WATER HEAT AND COOK WITH ELECTRICITY.....	3.7	.8	1.5	1.3	3.6	.1	.7	1.3	.6	.7	.4		
WATER HEAT AND COOK WITH NATURAL GAS.....	1.1	.3	.4	.4	.8	.3	.2	.3	.3	.2	.2		
OTHER.....	1.6	.4	.8	.5	1.6	.1	.2	.6	.4	.2	.2		
NCNE/OTHER FUEL.....	10.2	3.6	4.1	2.5	9.4	.8	1.3	3.1	2.0	2.1	1.7		

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "--" REPRESENTS OR ROUNDS TO ZERO. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.
SOURCE: RESIDENTIAL AND COMMERCIAL ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 34. FUEL USE CHARACTERISTICS BY SELECTED DEMOGRAPHIC CHARACTERISTICS
(PERCENTAGE OF HOUSEHOLDS)

HOUSEHOLD CHARACTERISTICS	SELECTED DEMOGRAPHIC CHARACTERISTICS												
	AGE OF HOUSEHOLE HEAD			ORIGIN			NUMBER OF HOUSEHOLD MEMBERS			5 OF MORE			
	35 OR LESS	36 TO 59	60 AND OVER	WHITE, OTHER	BLACK	1	2	3	4	100.0	100.0	100.0	
TOTAL HOUSEHOLDS	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
MAIN HEATING EQUIPMENT													
CENTRAL WARM-AIR FURNACE.....	50.5	54.0	46.7	52.4	35.8	42.0	51.1	54.6	54.8	50.5			
FORCED AIR.....	49.1	53.0	44.6	50.9	35.2	40.6	49.6	52.7	54.5	48.7			
GRAVITY.....	1.4	1.0	2.1	1.5	.6	1.4	1.4	1.8	.4	1.8			
STEAM OR HOT WATER SYSTEM.....	16.5	16.5	19.0	16.4	24.9	20.6	17.6	13.4	13.9	15.3			
HEAT PUMP.....	2.6	2.8	2.4	2.8	.9	2.1	2.7	2.7	2.8	2.6			
FLOOR, WARM UP PIPELESS													
FURNACE.....	8.2	7.3	8.0	7.9	10.6	8.6	9.0	7.9	8.3	6.3			
OIL OR GAS ROOM HEATER.....	7.4	6.2	11.0	6.3	16.4	10.7	7.0	6.4	5.7	7.5			
BUILT-IN ELECTRIC UNITS.....	6.5	5.2	5.0	6.8	4.5	9.1	6.0	6.6	4.4	6.6			
WOOD OR COAL HEATING STOVE.....	4.8	5.5	3.6	4.9	4.2	2.0	3.9	5.4	7.8	6.9			
PORTABLE HEATER.....	1.2	.7	1.7	1.3	.8	2.4	1.3	.8	.8	.6			
FIREFLACE.....	.4	.3	.6	.5	.1	.3	.4	.5	.2	1.0			
OTHER.....	1.1	1.0	1.3	1.0	1.5	1.7	.8	1.1	.7	1.6			
NONE.....	.6	.7	.6	.7	.1	.6	.4	.6	.5	1.3			
MAIN HEATING FUEL													
NATURAL GAS.....	54.6	56.3	53.7	53.8	61.3	52.3	54.0	55.8	57.5	54.4			
ELECTRICITY.....	17.5	14.2	15.3	18.5	10.0	23.1	18.0	15.7	13.6	15.4			
FUEL OIL OF KEROSENE.....	16.4	17.5	20.5	15.8	20.8	17.3	17.8	15.5	14.7	14.8			
WOOD.....	5.8	6.7	4.3	6.0	4.2	2.5	4.7	6.6	9.2	8.0			
LIQUID PETROLEUM GAS.....	4.5	3.9	5.1	4.7	3.3	4.0	4.6	5.6	4.1	4.0			
COAL.....	.4	.5	.3	.4	.2	.2	.4	.2	.3	.9			
OTHER/NONE.....	.8	.9	.7	.9	.2	.6	.5	.7	.5	2.3			
SECONDARY HEATING FUEL													
WOOD.....	16.4	20.7	13.1	18.0	3.6	7.6	15.4	18.4	22.8	20.9			
ELECTRICITY.....	11.3	11.3	12.1	11.7	8.3	12.3	10.5	10.6	12.4	11.6			
NATURAL GAS.....	4.0	4.5	4.6	3.9	5.0	3.7	4.5	3.3	4.1	4.5			
FUEL OIL OF KEROSENE.....	2.3	2.6	1.7	2.5	.9	1.1	2.1	2.4	3.1	3.6			
LIQUID PETROLEUM GAS.....	1.1	1.4	1.2	1.2	.5	.4	1.1	1.3	1.5	1.2			
COAL.....	.2	.3	.4	.2	.3	.4	.2	.1	.1	.3			
OTHER.....	.2	.4	.1	.2	.2	.1	.3	.1	.6	.2			
NONE.....	64.4	58.8	66.9	62.3	81.2	74.6	65.9	63.7	55.5	57.8			

SEE NOTES AT END OF TABLE

TABLE 34. FUEL USE CHARACTERISTICS BY SELECTED DEMOGRAPHIC CHARACTERISTICS
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	SELECTED DEMOGRAPHIC CHARACTERISTICS													
	TOTAL	AGE OF HOUSEHOLD HEAD			ORIGIN			NUMBER OF HOUSEHOLD MEMBERS						
		35 OR LESS	36 TO 50	60 AND OVER	WHITE, OTHER	BLACK	1	2	3	4	5 OR MORE			
WATER-HEATING FUEL														
NATURAL GAS.....	54.1	53.4	55.7	52.5	52.8	63.7	52.2	52.8	53.6	58.4	55.2			
ELECTRICITY.....	31.9	34.8	29.9	31.2	33.8	17.1	32.2	32.2	33.6	30.2	30.6			
FUEL OIL OR KEROSENE.....	8.7	6.7	9.0	10.7	7.9	14.7	11.0	9.8	6.8	6.4	7.7			
LIQUID PETROLEUM GAS.....	4.4	4.5	4.4	4.0	4.6	2.2	3.3	4.2	5.1	4.5	5.1			
WOOD.....	.4	.3	.5	.5	.4	.8	.2	.4	.7	.3	.7			
SOLAR.....	.1	.1	.2	.1	.1	.1	.2	.1	.1	.1	.1			
OTHER.....	.1	.1	.1	.1	.1	.2	.2	.1	.1	.2	.1			
NONE.....	.3	.1	.2	.8	.2	1.3	.7	.3	.1	.1	.5			
CENTRAL WATER-HEATING SYSTEM (2-OR-MORE UNIT BUILDINGS)														
YES.....	13.8	17.4	10.4	13.9	12.4	24.2	29.1	13.8	10.0	6.3	5.8			
NO/NO WATER-HEATING FUEL/NO HOT-RUNNING WATER.....	11.6	19.0	7.4	8.0	10.7	18.9	17.9	12.4	10.6	7.4	6.9			
MAIN COOKING FUEL														
ELECTRICITY.....	54.4	57.1	53.9	51.6	57.8	27.9	52.0	56.3	55.0	56.8	49.2			
NATURAL GAS.....	38.7	36.5	39.5	40.3	35.0	67.4	41.3	37.0	36.7	37.7	42.6			
LIQUID PETROLEUM GAS.....	6.4	6.2	6.1	6.9	6.6	4.3	5.4	6.2	7.8	5.4	7.4			
WOOD.....	.3	.1	.3	.8	.3	.2	.3	.3	.5	.1	.5			
NONE/OTHER.....	.2	.1	.3	.4	.3	.2	.9	.1	.1	.1	.1			
AIR CONDITIONING (A/C)														
CENTRAL AIR CONDITIONING ONLY.....	26.8	25.7	30.4	23.0	28.3	14.8	23.8	28.4	28.7	28.1	22.8			
INDIVIDUAL ROOM UNITS ONLY.....	30.0	28.3	28.6	14.3	30.0	30.3	32.2	32.6	29.4	25.2	27.2			
CENTRAL A/C AND ROOM UNITS.....	.4	.2	.5	.6	.4	.2	.3	.4	.2	.7	.5			
NO AIR CONDITIONING.....	42.8	45.8	40.6	42.1	41.3	54.7	43.7	38.6	41.7	45.9	49.5			

SEE NOTES AT END OF TABLE

TABLE 34. FUEL USE CHARACTERISTICS BY SELECTED DEMOGRAPHIC CHARACTERISTICS
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	SELECTED DEMOGRAPHIC CHARACTERISTICS													
	TOTAL	AGE OF HOUSEHOLD HEAD			ORIGIN		NUMBER OF HOUSEHOLD MEMBERS							
		35 OR LESS	36 TO 59	60 AND OVER	WHITE, OTHER	BLACK	1	2	3	4	5 OR MORE			
NUMBER OF ROOMS THAT CAN BE AIR CONDITIONED														
ALL.....	36.5	37.9	34.7	37.8	25.9	38.1	39.2	36.7	35.9	27.9				
SOME.....	20.7	21.5	23.2	20.9	19.4	18.2	22.2	21.6	18.2	22.5				
NONE.....	42.8	40.6	42.1	41.3	54.7	43.7	38.6	41.7	45.9	49.5				
WOOD BURNED														
YES (1/3 CEDD OR MORE).....	17.4	22.6	12.4	18.9	6.3	6.6	14.9	19.4	27.8	24.0				
NO.....	82.6	77.4	87.6	81.1	93.7	93.4	85.1	80.6	72.2	76.0				
TYPE OF MAIN HEATING FUEL USED LAST WINTER 1979 TO 1980														
SAME FUEL 1981.....	95.7	95.8	96.5	95.4	97.6	96.7	95.9	95.3	95.3	94.5				
TO WINTER 1980.....	2.5	2.6	2.1	2.6	1.5	1.7	1.8	2.8	3.2	3.7				
DIFFERENT FUEL.....	1.8	1.6	1.3	1.6	.8	1.0	1.1	1.6	1.6	2.7				
FUEL OIL OF KEROSENE.....	.1	.2	.1	.1	.2	.1	.1	.1	.4	.3				
NATURAL GAS.....	.3	.5	.2	.3	.1	.1	.2	.5	.4	.3				
LIQUID PETROLEUM GAS.....	.2	.3	.2	.2	.4	.1	.2	.2	.6	.4				
ELECTRICITY.....	.3	.3	.3	.3	.1	.4	.2	.4	.3	.4				
OTHER/NC FUEL USED.....	.6	.7	.6	.7	.1	.6	.4	.6	.5	1.3				
NOT HEATED IN WINTER 1980 TO WINTER 1981.....	1.3	1.9	.8	1.3	.8	1.0	1.9	1.2	.9	.5				
UNIT NOT BUILT IN WINTER 1979 TO 1980.....														

SEE NOTES AT END OF TABLE

TABLE 34. FUEL USE CHARACTERISTICS BY SELECTED DEMOGRAPHIC CHARACTERISTICS
(PERCENTAGE OF HOUSEHOLDS) -Continued

HOUSEHOLD CHARACTERISTICS	SELECTED DEMOGRAPHIC CHARACTERISTICS									
	AGE OF HOUSEHOLD HEAD		ORIGIN		NUMBER OF HOUSEHOLD MEMBERS			5 OF MORT		
	35 OR LESS	36 TO 59	60 AND OVER	WHITE, OTHER	BLACK	1	2	3	4	5
TOTAL	53.5	56.3	53.7	53.8	61.3	52.3	54.0	55.8	57.5	54.4
FUEL COMBINATIONS										
USE NATURAL GAS FOR MAIN HEATING.....	54.6	56.3	53.7	53.8	61.3	52.3	54.0	55.8	57.5	54.4
WATER HEAT AND COOK WITH NATURAL GAS.....	30.7	31.6	30.8	28.6	47.5	29.6	29.3	30.5	32.5	34.0
WATER HEAT WITH NATURAL GAS AND COOK WITH ELECTRICITY.....	19.2	20.6	17.2	20.4	9.8	16.6	20.1	19.6	22.0	17.1
WATER HEAT WITH ELECTRICITY AND COOK WITH NATURAL GAS.....	1.1	1.0	.8	1.1	1.4	1.0	1.1	1.5	.7	1.3
WATER HEAT AND COOK WITH ELECTRICITY.....	3.2	2.8	4.0	3.3	2.4	3.7	3.4	4.2	2.3	1.8
OTHER.....	.4	.2	.9	.4	.3	1.4	.1	-	-	.3
USE ELECTRICITY FOR MAIN HEATING.....	17.5	14.2	15.3	18.5	10.0	23.1	18.0	15.7	13.6	15.4
WATER HEAT AND COOK WITH ELECTRICITY.....	15.0	12.6	12.7	15.9	7.9	17.9	15.7	14.2	12.3	13.6
OTHER.....	2.5	1.6	2.6	2.5	2.1	5.2	2.3	1.5	1.2	1.9
USE FUEL OIL FOR MAIN HEATING. WATER HEAT WITH FUEL OIL AND COOK WITH ELECTRICITY.....	15.4	16.5	19.5	14.8	19.6	16.6	16.4	14.9	13.4	14.2
WATER HEAT WITH FUEL OIL AND COOK WITH NATURAL GAS.....	3.5	4.1	3.9	3.8	1.6	2.8	3.9	4.0	3.1	3.5
WATER HEAT WITH FUEL OIL AND COOK WITH NATURAL GAS.....	4.0	3.9	5.4	2.9	12.7	7.0	4.3	2.2	2.0	3.7
WATER HEAT AND COOK WITH ELECTRICITY.....	4.5	4.8	6.1	4.9	1.0	4.4	4.7	4.2	5.1	3.7
WATER HEAT AND COOK WITH NATURAL GAS.....	1.4	1.3	1.8	1.1	3.6	1.0	1.2	1.9	1.6	1.4
OTHER.....	2.0	2.4	2.3	2.2	.6	1.4	2.3	2.6	1.6	1.9
NCNF/OTHER FUEL.....	12.5	13.0	11.5	12.9	9.1	8.0	11.6	13.7	15.5	16.0

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. PERCENTAGES ARE CALCULATED ON UNROUNDED NUMBERS. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.
SOURCE: RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 35. APPLIANCE USE BY CENSUS REGION, AREA TYPE AND SMSA/NON-SMSA
(BILLION HOUSEHOLDS)

HOUSEHOLD CHARACTERISTICS	TOTAL	CENSUS REGION				AREA TYPE		SMSA/NON-SMSA	
		NORTHEAST	NORTH CENTRAL	SOUTH	WEST	URBAN	RURAL	SMSA	NONSMSA
TOTAL HOUSEHOLDS	81.6	17.7	21.1	27.0	16.0	56.0	25.6	55.6	26.0
TYPE APPLIANCES USED									
ELECTRIC APPLIANCES USED									
TELEVISION SET (COICH).....	67.0	14.4	17.7	21.5	13.4	46.3	20.6	46.2	20.7
TELEVISION SET (E/W).....	41.9	10.3	11.4	13.3	6.9	29.6	12.3	29.4	12.5
CLOTHES WASHER (AUTOMATIC)...	58.4	12.6	15.3	19.6	10.9	38.1	20.3	38.5	19.9
CLOTHES WASHER (WRINGER).....	2.9	.7	1.2	.9	.2	1.3	1.5	1.4	1.5
RANGE (STOVE-TOP OF BURNERS).....	43.8	7.7	11.0	16.3	8.8	26.6	17.2	27.5	16.3
CLOTHES DRYER.....	38.3	7.3	10.2	14.0	6.9	22.3	16.0	23.3	15.0
DISHWASHER.....	30.4	6.2	6.8	10.0	7.4	20.6	9.9	22.2	8.3
HUMIDIFIER.....	11.0	2.1	6.8	1.4	.7	6.8	4.3	6.9	4.2
DEHUMIDIFIER.....	7.3	2.2	3.8	1.2	.1	4.6	2.8	4.8	2.5
EVAPORATIVE COOLER.....	3.2	-	.1	.7	2.3	2.7	.5	2.4	.8
GAS APPLIANCES-USED									
RANGE (STOVE-TOP OF BURNERS).....	37.5	9.7	10.2	10.4	7.1	29.3	8.2	28.0	9.5
CLOTHES DRYER.....	11.8	2.6	4.7	2.0	2.4	9.6	2.2	9.5	2.3
OUTDOOR GAS GRILL.....	7.1	2.3	1.9	1.8	1.0	4.8	2.2	5.1	1.9
OUTDOOR GAS LIGHT.....	1.6	.1	.7	.6	.2	1.3	.3	1.3	.3
SWIMMING POOL HEATER.....	.4	-	.1	-	.2	.3	-	.3	-
NUMBER OF REFRIGERATORS USED									
1.....	70.0	15.3	16.6	24.1	14.0	48.7	21.3	47.7	22.3
2 OR MORE.....	11.5	2.4	4.4	2.7	1.9	7.3	4.2	7.8	3.7
NONE.....	.2	-	-	.1	-	.1	.1	.1	.1
MOST USED REFRIGERATOR									
ELECTRIC.....	81.2	17.5	21.0	26.8	15.9	55.7	25.5	55.3	25.9
FROST-FREE.....	49.2	9.8	12.4	17.2	9.7	32.4	16.8	33.0	16.1
NOT FROST-FREE.....	32.0	7.7	8.6	9.5	6.2	23.3	8.7	22.3	9.7
GAS.....	.3	.1	-	.1	.1	.2	-	.2	.1
NONE.....	.2	-	-	.1	-	.1	.1	.1	.1

SEP NOTES AT END OF TABLE

TABLE 35. APPLIANCE USE BY CENSUS REGION, AREA TYPE AND SMSA/NON-SMSA (MILLION HOUSEHOLDS) -Continued

HOUSEHOLD CHARACTERISTICS	CENSUS REGION				AREA TYPE		SMSA/NON-SMSA		
	TOTAL	NORTHEAST	NORTH CENTRAL	SOUTH	WEST	URBAN	RURAL	SMSA	NONSMSA
SECOND REFRIGERATOR USED									
ELECTRIC.....	11.4	2.4	4.4	2.7	1.9	7.2	4.2	7.7	3.7
FROST-FREE.....	3.4	.5	1.0	1.2	.6	2.2	1.1	2.1	1.2
NOT FROST-FREE.....	8.0	1.8	3.4	1.5	1.3	5.0	3.1	5.6	2.4
GAS.....	.1	-	-	-	-	.1	-	.1	-
NONE.....	70.2	15.3	16.7	24.2	14.0	48.8	21.4	47.8	22.3
NUMBER OF SEPARATE FREEZERS USED									
1.....	28.5	4.6	8.6	10.7	4.5	15.5	13.0	15.8	12.7
2 OR MORE.....	2.6	.3	1.0	1.0	.3	.9	1.7	.9	1.7
NONE.....	50.5	12.7	11.5	15.2	11.1	39.6	10.9	38.9	11.6
MOST USED FREEZER									
ELECTRIC.....	31.1	5.0	8.6	11.7	4.8	16.4	14.7	16.7	14.4
FROST-FREE.....	8.3	1.2	2.2	3.4	1.5	4.8	3.5	4.8	3.5
NOT FROST-FREE.....	22.8	3.8	7.4	8.3	3.4	11.6	11.2	11.9	11.0
NONE.....	50.5	12.7	11.5	15.2	11.1	39.6	10.9	38.9	11.6
NUMBER OF OVENS USED									
1.....	57.2	13.4	14.1	19.5	10.2	39.2	17.9	38.2	18.9
2.....	18.8	2.8	5.6	6.1	4.4	12.6	6.2	13.4	5.5
3 OR MORE.....	2.2	.2	.6	.6	.8	1.5	.7	1.6	.6
NONE.....	3.5	1.3	.8	.8	.6	2.7	.8	2.5	1.0
MOST USED OVEN									
ELECTRIC.....	45.0	7.7	11.3	16.8	9.1	27.6	17.4	28.6	16.3
MICROWAVE.....	3.5	.4	1.2	1.0	.9	2.2	1.3	2.4	1.1
OTHER ELECTRIC.....	41.5	7.3	10.1	15.8	8.3	25.4	16.1	26.2	15.2
GAS.....	33.0	8.6	9.0	9.2	6.2	25.8	7.3	24.5	8.5
OTHER/NONE.....	3.7	1.3	.8	.9	.6	2.7	1.0	2.5	1.2
SECOND OVEN USED									
ELECTRIC.....	17.6	2.5	4.7	5.9	4.5	11.5	6.1	12.1	5.4
MICROWAVE.....	8.2	.9	2.4	2.9	2.1	5.1	3.1	5.4	2.7
OTHER ELECTRIC.....	9.4	1.6	2.3	3.1	2.5	6.4	3.0	6.7	2.7
GAS.....	3.2	.4	1.4	.8	.7	2.6	.6	2.8	.5
OTHER/NONE.....	60.9	14.8	15.0	20.3	10.7	41.9	18.9	40.7	20.1

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.
 SOURCE: RESIDENTIAL AND COMMERCIAL FRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND FUEL USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 36.- APPLIANCE USE BY CENSUS REGION, AREA TYPE AND SHSA/NON-SHSA (PERCENTAGE OF HOUSEHOLDS)

HOUSEHOLD CHARACTERISTICS	CENSUS REGION				AREA TYPE		SHSA/NON-SHSA		
	TOTAL	NORTHEAST	NORTH CENTRAL	SOUTH	WEST	URBAN	RURAL	SHSA/NON-SHSA	
								SHSA	NONSHSA
TOTAL HOUSEHOLDS.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
TYPE APPLIANCES USED									
ELECTRIC APPLIANCES USED									
TELEVISION SET (COLOR).....	82.0	81.4	83.8	79.9	84.0	82.7	80.6	83.1	79.7
TELEVISION SET (B/W).....	51.3	58.4	54.1	49.3	43.1	52.8	48.1	52.8	48.0
CLOTHES WASHER (AUTOMATIC)...	71.6	71.3	72.6	72.8	68.5	68.0	79.4	69.3	76.6
CLOTHES WASHER (WRINGER).....	3.5	3.7	5.7	2.9	1.4	2.4	6.0	2.5	5.7
RANGE (STOVE-TOP OF BURNERS).....	53.7	43.7	52.1	60.6	55.0	47.5	67.1	49.5	62.6
CLOTHES DRYER.....	46.9	41.2	48.5	51.9	42.9	39.9	62.4	41.9	57.8
DISHWASHER.....	37.2	35.2	32.2	37.0	46.5	36.7	38.5	39.8	31.7
HUMIDIFIER.....	13.5	12.1	32.1	5.3	4.5	12.1	16.5	12.3	16.1
DEHUMIDIFIER.....	9.0	12.7	16.0	4.5	5.5	8.1	10.8	8.6	9.8
EVAPORATIVE COOLER.....	3.9	.3	.4	2.8	14.3	4.8	1.9	4.3	2.9
GAS APPLIANCES USED									
RANGE (STOVE-TOP OF BURNERS).....	45.9	55.2	46.3	38.6	44.8	52.2	32.1	50.3	36.6
CLOTHES DRYER.....	14.4	14.7	22.4	7.6	15.1	17.1	8.5	17.0	8.9
OUTDOOR GAS GRILL.....	8.6	12.8	9.1	6.8	6.6	8.6	8.8	9.2	7.4
OUTDOOR GAS LIGHT.....	1.9	.3	3.3	2.1	1.5	2.3	1.0	2.3	1.0
SWIMMING POOL HEATER.....	.4	.1	.5	.1	1.3	.6	.1	.6	.1
NUMBER OF REFRIGERATORS USED									
1.....	85.7	86.3	78.9	89.5	87.6	86.9	83.2	85.8	85.5
2 OR MORE.....	14.0	13.4	20.9	10.2	12.2	12.9	16.4	14.0	14.1
NONE.....	.2	.3	.2	.3	.2	.2	.4	.2	.3
MOST USED REFRIGERATOR									
ELECTRIC.....	99.4	99.2	99.7	99.4	99.4	99.4	99.4	99.4	99.4
PROST-FREE.....	60.2	55.4	58.1	64.0	60.7	57.8	65.5	59.4	62.0
NOT PROST-FREE.....	39.2	43.8	40.6	35.4	38.7	41.6	33.9	40.0	37.5
GAS.....	.4	.6	.2	.3	.4	.4	.2	.4	.2
NONF.....	.2	.3	.2	.3	.2	.2	.4	.2	.3

SEE NOTES AT END OF TABLE

TABLE 36. APPLIANCE USE BY CENSUS REGION, AREA TYPE AND SWSA/NON-SWSA (PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	CENSUS REGION						AREA TYPE		SWSA/NON-SWSA	
	TOTAL	NORTHEAST	MIDWEST		SOUTH	WEST	URBAN	RURAL	SWSA	NON-SWSA
			NORTH CENTRAL	SOUTH						
SECOND REFRIGERATOR USED										
ELECTRIC.....	14.0	13.4	20.8	10.1	12.1	12.8	16.4	13.9	14.1	
FROST-FREE.....	4.1	3.0	4.9	4.4	3.8	4.0	4.4	3.8	4.7	
NCT FROST-FREE.....	9.8	10.4	15.9	5.7	8.2	8.9	12.0	10.1	9.3	
GAS.....	.1	.1	.1	.1	.1	.1	.1	.1	.1	
NONE.....	86.0	86.6	79.1	85.8	87.8	87.1	83.6	86.0	85.9	
NUMBER OF SEPARATE FREEZERS USED										
1.....	34.9	26.3	40.9	35.9	28.1	27.6	50.8	28.4	48.8	
2 OR MORE.....	3.2	1.8	4.6	3.7	2.2	1.6	6.6	1.6	6.6	
NONE.....	61.9	71.9	54.5	56.5	69.7	70.7	42.6	70.0	44.6	
HOT USED FREEZER										
ELECTRIC.....	38.1	28.1	45.5	43.5	30.3	29.3	57.4	30.0	55.4	
FROST-FREE.....	10.1	6.6	10.6	12.7	9.2	8.5	13.7	8.7	13.3	
NCT FROST-FREE.....	28.0	21.4	35.0	30.8	21.2	20.8	43.7	21.3	42.1	
NONE.....	61.9	71.9	54.5	56.5	69.7	70.7	42.6	70.0	44.6	
NUMBER OF OVENS USED										
1.....	70.0	76.0	66.9	72.2	63.7	70.0	70.0	68.7	72.8	
2.....	23.0	15.6	26.4	22.6	27.6	22.5	24.2	24.0	21.0	
3 OR MORE.....	2.6	1.0	2.8	2.1	5.1	2.7	2.6	2.8	2.3	
NONE.....	4.3	7.4	3.8	3.1	3.6	4.8	3.2	4.5	3.9	
HOT USED OVEN										
ELECTRIC.....	55.1	43.7	53.6	62.3	57.3	49.2	67.8	51.5	62.7	
MICROWAVE.....	4.3	2.2	5.5	3.9	5.6	3.9	5.0	4.3	4.2	
OTHER ELECTRIC.....	50.8	41.5	48.0	58.5	51.7	45.3	62.8	47.2	58.5	
GAS.....	40.5	48.8	42.5	34.3	39.0	46.0	28.4	44.0	32.8	
OTHER/NONE.....	4.5	7.5	3.9	3.4	3.7	4.8	3.8	4.5	4.5	
SECOND OVEN USED										
ELECTRIC.....	21.5	13.9	22.3	21.7	28.4	20.5	23.7	21.8	20.8	
MICROWAVE.....	10.0	5.0	11.6	10.4	13.0	9.1	12.1	9.8	10.6	
OTHER ELECTRIC.....	11.5	8.9	10.7	11.4	15.5	11.4	11.6	12.1	10.3	
GAS.....	4.0	2.2	6.7	2.8	4.2	4.7	2.4	5.0	1.8	
OTHER/NONE.....	74.5	83.9	71.0	75.4	67.4	74.8	73.9	73.2	77.4	

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. PERCENTAGES ARE CALCULATED ON UNROUNDED NUMBERS. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.
 SOURCE: RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND ENR. USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 37. APPLIANCE USE BY HOUSING STRUCTURE AND OWNERSHIP
(MILLION HOUSEHOLDS)

HOUSEHOLD CHARACTERISTICS	HOUSING STRUCTURE BY OWNERSHIP															
	SINGLE-FAMILY DETACHED		SINGLE-FAMILY ATTACHED		BUILDING WITH 2 TO 4 UNITS		BUILDING WITH 5 OR MORE UNITS		FOR RENT		OWN					
	TOTAL	RENT	TOTAL	RENT	TOTAL	RENT	TOTAL	RENT	TOTAL	RENT	TOTAL	RENT				
TOTAL HOUSEHOLDS.....	81.6	53.0	45.5	7.5	3.3	2.2	1.1	9.9	2.0	7.9	10.8	1.0	9.8	4.6	3.6	1.0
TYPE APPLIANCES USED																
ELECTRIC APPLIANCES USED																
TELEVISION SET (COLOR).....	67.0	46.5	40.8	5.7	2.9	2.0	.8	6.9	1.9	5.0	7.4	1.0	6.5	3.4	2.8	.6
TELEVISION SET (B/W).....	41.9	26.6	22.9	3.7	1.8	1.3	.5	5.7	1.0	4.6	5.5	.5	5.0	2.3	1.8	.5
CLOTHES WASHER (AUTOMATIC) ..	58.4	45.6	40.6	5.0	2.6	2.0	.6	4.6	1.4	3.1	2.4	.6	1.8	3.3	2.7	.6
CLOTHES WASHER (WRINGER).....	2.9	2.3	1.9	.4	.1	.1	-.	.2	.1	.1	.1	-.	.1	.1	.1	-.
RANGE (STOVE-TCP CR																
BURNERS).....	43.8	31.8	28.0	3.8	1.3	.8	.5	3.6	.7	2.9	5.7	.4	5.3	1.3	1.1	.2
CLOTHES DRYER.....	38.3	31.4	28.1	3.2	1.2	.9	.3	2.3	.6	1.7	1.2	.4	.9	2.2	1.8	.4
DISHWASHER.....	30.4	23.1	21.9	1.2	1.2	.9	.2	1.4	.6	.8	3.9	.7	3.2	.8	.7	.1
HUMIDIFIER.....	11.0	9.0	8.3	.7	.2	.1	.1	.9	.2	.6	.6	.1	.5	.4	.3	.1
DEHUMIDIFIER.....	7.3	6.8	6.3	.4	.1	.1	-.	.2	.1	.1	.1	-.	.1	.1	.1	-.
EVAPORATIVE COOLER.....	3.2	2.2	1.7	.5	.2	.1	-.	.1	-.	.1	.1	-.	.1	.6	.5	.1
GAS APPLIANCES USED																
RANGE (STOVE-TCP CR																
BURNERS).....	37.5	21.2	17.6	3.6	1.9	1.4	.5	6.3	1.3	4.9	4.8	.6	4.3	3.2	2.5	.8
CLOTHES DRYER.....	11.8	9.7	8.9	.8	.8	.7	.1	.7	.5	.2	.4	.2	.2	.3	.3	-.
CUTDOOR GAS GRILL.....	7.1	6.2	5.9	.3	.2	.2	-.	.3	.2	.1	.2	-.	.2	.1	.1	-.
CUTDOOR GAS LIGHT.....	1.6	1.4	1.3	.1	.1	.1	-.	-.	-.	-.	.1	-.	.1	-.	-.	-.
SWIMMING POOL HEATER.....	.4	.4	.4	-.	-.	-.	-.	-.	-.	-.	-.	-.	-.	-.	-.	-.
NUMBER OF REFRIGERATORS USED																
1.....	70.0	42.6	36.2	6.5	2.9	1.9	1.0	9.5	1.8	7.7	10.5	1.0	9.5	4.4	3.4	1.0
2 OR MORE.....	11.5	10.2	9.2	1.0	.3	.3	-.	.4	.2	.2	.2	-.	.2	.2	.2	-.
NONE.....	.2	.1	.1	.1	-.	-.	-.	-.	-.	-.	-.	-.	-.	-.	-.	-.

SEE NOTES AT END OF TABLE

TABLE 37. APPLIANCE USE BY HOUSING STRUCTURE AND OWNERSHIP
(MILLION HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	HOUSING STRUCTURE BY OWNERSHIP														
	SINGLE-FAMILY DETACHED			SINGLE-FAMILY ATTACHED			BUILDING WITH 2 TO 4 UNITS			BUILDING WITH 5 OR MORE UNITS			MOBILE HOME		
	TOTAL	OWN	RENT	TOTAL	OWN	RENT	TOTAL	OWN	RENT	TOTAL	OWN	RENT	TOTAL	OWN	RENT
MOST USED REFRIGERATOR															
ELECTRIC.....	81.2	52.7	45.2	7.5	3.3	2.2	1.0	9.9	2.0	7.9	10.7	1.0	9.7	4.6	1.0
FROST-FREE.....	49.2	38.1	33.9	4.2	2.1	1.6	.5	3.8	1.2	2.6	3.4	.8	2.6	1.8	.3
NOT FROST-FREE.....	32.0	14.6	11.3	3.3	1.1	.6	.5	6.1	.8	5.3	7.3	.2	7.1	2.8	.7
GAS.....	.3	.2	.2	-	-	-	-	-	-	-	-	-	-	-	-
NONE.....	.2	.1	.1	.1	-	-	-	-	-	-	-	-	-	-	-
SECOND REFRIGERATOR USED															
ELECTRIC.....	11.4	10.1	9.2	1.0	.3	.3	-	.4	.2	.2	.2	-	.2	.2	-
FROST-FREE.....	3.4	3.1	2.8	.3	.1	.1	-	.1	.1	.1	.1	-	-	-	-
NOT FROST-FREE.....	8.0	7.0	6.3	.7	.2	.2	-	.3	.1	.2	.2	-	.2	.2	-
GAS.....	.1	.1	.1	-	-	-	-	-	-	-	-	-	-	-	-
NONE.....	70.2	42.8	36.2	6.5	3.0	1.9	1.0	9.5	1.8	7.7	10.5	1.0	9.6	4.4	1.0
NUMBER OF SEPARATE FREEZERS USED															
1.....	28.5	24.3	22.1	2.3	.9	.7	.2	1.4	.5	.8	.5	.1	.4	1.4	.1
2 OR MORE.....	2.6	2.5	2.4	.2	-	-	-	-	-	-	-	-	-	.1	-
NONE.....	50.5	26.1	21.0	5.1	2.4	1.5	.9	8.5	1.5	7.1	10.3	.9	9.3	3.2	.9
MOST USED FREEZER															
ELECTRIC.....	31.1	26.8	24.4	2.4	.9	.7	.2	1.4	.5	.8	.5	.1	.4	1.5	.1
FROST-FREE.....	8.3	7.0	6.3	.6	.3	.2	.1	.5	.1	.3	.2	.1	.1	.4	-
NOT FROST-FREE.....	22.8	19.9	18.1	1.8	.6	.5	.1	.9	.4	.5	.3	-	.3	1.1	.1
NONE.....	50.5	26.1	21.0	5.1	2.4	1.5	.9	8.5	1.5	7.1	10.3	.9	9.3	3.2	.9
NUMBER OF CENS USED															
1.....	57.2	33.9	28.1	5.8	2.6	1.7	.9	8.3	1.4	6.9	8.8	.7	8.1	3.7	.9
2.....	18.8	15.4	14.1	1.4	.6	.5	.1	1.1	.4	.6	1.1	.2	.8	.6	-
3 OR MORE.....	2.2	1.8	1.8	.1	-	-	-	.1	.1	-	.1	.1	-	.1	-
NONE.....	3.5	1.8	1.5	.3	.1	.1	-	.5	.1	.4	.8	-	.8	.3	.1

SEE NOTES AT END OF TABLE

TABLE 37. APPLIANCE USE BY HOUSING STRUCTURE AND OWNERSHIP
(MILLION HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	HOUSING STRUCTURE BY OWNERSHIP															
	SINGLE-FAMILY DETACHED		SINGLE-FAMILY ATTACHED		BUILDING WITH 2 TO 4 UNITS		BUILDING WITH 5 OR MORE UNITS		MOBILE HOME		TOTAL					
	OWN	RENT	OWN	RENT	OWN	RENT	OWN	RENT	OWN	RENT	OWN	RENT				
MOST USED CVEN																
ELECTRIC.....	45.0	32.4	28.4	4.0	1.4	0.8	0.6	3.8	0.8	3.1	5.8	0.5	5.3	1.6	1.3	0.3
MICROWAVE.....	3.5	2.9	2.7	.3	.1	.1	.1	.2	.1	.1	.2	.1	.1	.1	.1	.1
OTHER ELECTRIC.....	41.5	29.5	25.8	3.7	1.3	.8	.5	3.6	.7	2.9	5.6	.4	5.2	1.5	1.2	.3
GAS.....	33.0	18.6	15.4	3.2	1.8	1.3	.5	5.6	1.2	4.5	4.2	.5	3.6	2.8	2.1	.7
OTHER/NONE.....	3.7	2.0	1.6	.4	.1	.1	.1	.5	.1	.4	.8	.1	.8	.3	.2	.1
SECOND OVER USED																
ELECTRIC.....	17.6	14.6	13.5	1.2	.5	.3	.1	.9	.4	.5	.9	.2	.7	.6	.6	.1
MICROWAVE.....	8.2	7.0	6.5	.5	.3	.2	.1	.2	.1	.1	.4	.1	.3	.4	.3	.1
OTHER ELECTRIC.....	9.4	7.6	6.9	.7	.2	.1	.1	.7	.3	.4	.6	.1	.4	.3	.3	.1
GAS.....	3.2	2.5	2.3	.2	.1	.1	.1	.3	.1	.1	.3	.1	.2	.1	.1	.1
OTHER/NONE.....	60.9	35.9	29.7	6.1	2.7	1.8	1.0	8.7	1.4	7.3	9.6	.7	8.9	4.0	3.0	1.0

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.

SOURCE: RESIDENTIAL AND COMMERCIAL FRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 38. APPLIANCE USE BY HOUSING STRUCTURE AND OWNERSHIP
(PERCENTAGE OF HOUSEHOLDS)

HOUSEHOLD CHARACTERISTICS	HOUSING STRUCTURE BY OWNERSHIP														
	SINGLE-FAMILY DETACHED		SINGLE-FAMILY ATTACHED		BUILDING WITH 2 TO 4 UNITS		BUILDING WITH 5 OR MORE UNITS		POBILP HOME		TOTAL				
	OWN	RENT	OWN	RENT	OWN	RENT	OWN	RENT	OWN	RENT	OWN	RENT			
TOTAL HOUSEHOLDS.....	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		
TYPE APPLIANCES USED															
ELECTRIC APPLIANCES USED															
TELEVISION SET (COLOR).....	82.0	87.7	89.8	75.5	90.7	77.5	69.2	93.8	62.9	68.8	94.7	66.1	72.2	76.8	55.8
TELEVISION SET (B/W).....	51.3	50.2	50.3	49.6	54.1	44.7	45.9	52.1	58.2	50.9	46.0	51.4	45.9	50.1	49.4
CLOTHES WASHER (AUTOMATIC)...	71.6	66.1	89.2	67.0	90.2	54.8	45.9	72.2	39.2	22.4	60.3	18.5	70.7	75.2	54.6
CLOTHES WASHER (WRINGER)....	3.5	4.4	4.3	5.2	3.2	1.8	2.3	4.9	1.7	.6	-	.7	3.1	3.7	.7
RANGE (STOVE-TOP CR BURNERS).....	53.7	60.0	61.6	50.7	40.6	51.6	36.1	35.6	36.2	53.2	44.5	54.1	28.8	30.2	24.1
CLOTHES DRYER.....	46.9	55.2	61.9	42.9	36.5	30.6	23.4	30.4	21.7	11.5	38.1	8.7	46.9	49.5	37.8
DISHWASHER.....	37.2	43.6	48.1	16.3	35.8	41.7	14.3	28.7	10.7	36.6	71.8	32.9	16.4	19.4	6.0
HUMIDIFIER.....	13.5	17.0	18.2	9.3	6.2	7.5	8.6	12.5	7.7	5.5	8.4	5.2	8.7	8.7	8.9
DEHUMIDIFIER.....	9.0	12.8	13.9	5.7	3.5	4.3	2.4	6.1	1.5	1.2	1.0	1.2	1.6	2.0	-
EVAPORATIVE COOLER.....	3.9	4.2	3.7	6.7	4.8	1.5	1.4	-	1.7	.8	-	.9	12.3	13.1	9.4
GAS APPLIANCES USED															
RANGE (STOVE-TOP CR BURNERS).....	45.9	40.0	38.8	47.7	58.0	64.6	63.0	65.9	62.2	45.0	55.5	43.9	69.8	68.4	74.8
CLOTHES DRYER.....	14.4	18.3	19.7	10.0	22.9	30.1	7.0	25.4	2.4	3.4	16.9	2.0	5.6	7.2	-
CUTDOGF GAS GRILL.....	8.6	11.8	13.0	4.3	6.5	8.2	3.1	7.9	1.9	1.6	1.4	1.6	2.7	2.9	1.9
OUTDOOR GAS LIGHT.....	1.9	2.6	2.8	1.3	3.8	3.8	-	-	-	.5	-	.6	.6	.7	-
SWIMMING POOL HEATER.....	.4	.7	.8	-	-	-	-	-	-	-	-	-	-	-	-
NUMBER OF REFRIGERATORS USED															
1.....	85.7	80.5	79.6	85.9	89.4	85.6	95.4	90.5	96.7	97.4	96.1	97.5	95.2	95.2	95.4
2 OR MORE.....	14.0	19.3	20.3	13.2	10.2	14.4	4.4	9.5	3.1	2.3	3.9	2.1	4.8	4.8	4.6
NONE.....	.2	.2	.1	.9	.4	-	.2	.2	.2	.3	-	.3	-	-	-

SEE NOTES AT END OF TABLE

TABLE 38. APPLIANCE USE BY HOUSING STRUCTURE AND OWNERSHIP
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	HOUSING STRUCTURE BY OWNERSHIP														
	SINGLF-FAMILY DETACHED			SINGLF-FAMILY ATTACHED			BUILDING WITH 2 TO 4 UNITS			BUILDING WITH 5 OR MORE UNITS			MOBILE HOME		
	TOTAL	OWN	RENT	TOTAL	OWN	RENT	TOTAL	OWN	RENT	TOTAL	OWN	RENT	TOTAL	OWN	RENT
MOST USED REFRIGERATOR															
ELECTRIC.....	99.4	99.4	99.5	99.1	99.4	98.6	99.4	99.2	99.5	99.4	100.0	99.3	99.6	99.8	99.0
FPOST-FREF.....	60.2	71.9	74.6	55.4	64.7	71.0	51.5	38.0	59.7	32.6	31.4	80.8	26.4	38.3	41.5
NOT FFCST-FREF.....	39.2	27.5	24.9	43.7	34.4	28.4	47.1	61.4	39.5	66.9	67.9	19.2	73.0	61.3	58.3
GAS.....	.4	.3	.4	-.4	.6	-.6	-.4	.8	.8	.3	.3	.3	.4	.2	1.0
NONE.....	.2	.2	.1	.9	.4	-.4	1.4	.2	.2	.3	.3	.3	-.3	-.3	-.3
SECOND REFRIGERATOR USED															
ELECTRIC.....	14.0	19.2	20.1	13.2	10.2	14.4	1.2	4.4	9.5	3.1	2.3	3.9	2.1	4.8	4.6
FPOST-FREF.....	4.1	5.9	6.2	3.9	2.8	4.1	-.6	1.1	3.1	-.6	-.2	2.1	-.2	-.3	-.3
NOT FFCST-FREF.....	9.8	13.3	13.9	9.3	7.4	10.3	1.2	3.3	6.4	2.4	2.1	1.9	2.1	4.6	4.6
GAS.....	.1	.1	.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1
NONE.....	86.0	80.7	79.7	86.8	89.8	85.6	98.8	95.6	90.5	96.9	97.7	96.1	97.9	95.2	95.4
NUMBER OF SEPARATE FREEZERS USED															
1.....	34.9	45.9	48.5	30.0	26.4	31.4	15.8	14.0	27.1	10.7	4.8	7.3	4.5	30.2	10.2
2 OR MORE.....	3.2	4.8	5.2	2.1	.1	.2	-.2	-.2	-.2	-.2	-.2	-.2	-.2	1.9	2.4
NONE.....	61.9	49.3	46.3	67.9	73.5	68.4	84.2	86.0	72.9	89.3	95.2	92.7	95.5	67.9	89.8
MOST USED FREEZER															
ELECTRIC.....	38.1	50.7	53.7	32.1	26.5	31.6	15.8	14.0	27.1	10.7	4.8	7.3	4.5	32.1	10.2
FPOST-FREF.....	10.1	13.1	13.9	8.5	9.6	11.0	6.7	4.6	6.6	4.0	1.6	6.3	1.1	8.3	2.0
NOT FFCST-FREF.....	28.0	37.5	39.8	23.6	17.0	20.6	9.2	9.4	20.5	6.6	3.2	1.0	3.4	23.8	8.2
NONE.....	61.9	45.3	46.3	67.9	73.5	68.4	84.2	86.0	72.9	89.3	95.2	92.7	95.5	67.9	89.8
NUMBER OF OVENS USED															
1.....	70.0	63.9	61.8	76.7	78.4	74.7	86.2	83.2	68.1	87.0	81.3	68.9	82.6	79.1	91.0
2.....	23.0	29.2	31.0	18.0	17.5	20.9	10.4	11.0	22.4	8.1	9.8	21.7	8.5	13.7	3.2
3 OR MORE.....	2.6	3.5	3.9	.9	.3	.5	-.1	1.1	5.1	.1	1.2	9.3	.3	1.5	1.9
NONE.....	4.3	3.4	3.2	4.5	3.7	3.9	3.4	4.7	4.5	4.8	7.8	-.1	8.6	5.8	5.8

SEE NOTES AT END OF TABLE

TABLE 38. APPLIANCE USE BY HOUSING STRUCTURE AND OWNERSHIP
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	HOUSING STRUCTURE BY OWNERSHIP															
	SINGLE-FAMILY DETACHED		SINGLE-FAMILY ATTACHED		BUILDING WITH 2 TO 4 UNITS		BUILDING WITH 5 OR MORE UNITS		MOBILE HOME		TOTAL					
	OWN	RENT	OWN	RENT	OWN	RENT	OWN	RENT	OWN	RENT	OWN	RENT				
MOST USED OVEN																
ELECTRIC.....	55.1	61.1	62.5	52.7	41.5	36.3	52.5	38.5	37.8	38.6	53.4	47.0	54.1	34.5	36.5	27.6
MICROWAVE.....	4.3	5.5	5.9	3.7	1.7	.9	3.5	2.1	4.1	1.5	1.8	8.5	1.1	2.3	2.9	-
OTHER ELECTRIC.....	50.8	55.6	56.7	49.1	39.8	35.5	49.0	36.4	33.7	37.1	51.7	38.5	53.0	32.3	33.6	27.6
GAS.....	40.5	35.2	34.0	42.4	54.7	44.1	56.7	57.7	57.7	56.5	38.8	53.0	37.4	59.7	57.7	66.7
OTHER/NONE.....	4.5	3.7	3.5	4.9	3.7	3.9	3.4	4.8	4.5	4.9	7.8	-	8.6	5.8	5.8	5.8
SECOND OVEN USED																
ELECTRIC.....	21.5	27.6	29.6	15.8	13.8	15.4	10.4	9.2	20.8	6.3	8.4	20.5	7.2	13.8	16.8	3.2
MICROWAVE.....	10.0	13.2	14.4	6.3	8.2	10.0	4.2	2.0	5.6	1.1	3.3	7.3	2.8	7.8	9.5	2.0
OTHER ELECTRIC.....	11.5	14.4	15.2	9.5	5.7	5.4	6.3	7.2	15.2	5.2	5.2	13.2	4.3	6.0	7.3	1.3
GAS.....	4.0	4.7	5.1	2.5	4.0	5.9	-	2.8	6.7	1.8	2.5	10.6	1.7	1.1	1.5	-
OTHER/NONE.....	74.5	67.7	65.3	81.7	82.1	78.6	89.6	88.0	72.5	91.9	89.1	68.9	91.1	85.1	81.7	96.8

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. PERCENTAGES ARE CALCULATED ON UNROUNDED NUMBERS. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.

SOURCE: RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 39. APPLIANCE USE BY 1979 FAMILY INCOME
(BILLION HOUSEHOLDS)

HOUSEHOLD CHARACTERISTICS	TOTAL	1979 FAMILY INCOME										POOR (100 PERCENT LEVEL)	POOR (125 PERCENT LEVEL)
		LESS THAN \$5,000	\$5,000 TO \$9,999	\$10,000 TO \$14,999	\$15,000 TO \$19,999	\$20,000 TO \$24,999	\$25,000 TO \$34,999	\$35,000 OR MORE					
		10.4	13.5	13.8	11.9	9.9	12.4	9.4	10.9	14.8			
TOTAL HOUSEHOLDS	81.6	10.4	13.5	13.8	11.9	9.9	12.4	9.4	10.9	14.8			
TYPE APPLIANCES USED													
ELECTRIC APPLIANCES USED													
TELEVISION SET (COLOR).....	67.0	6.3	9.7	11.1	10.2	9.2	11.6	8.9	6.6	9.2		9.2	
TELEVISION SET (E/W).....	41.9	5.6	7.4	6.7	5.7	5.1	6.4	5.0	6.2	8.3		8.3	
CLOTHES WASHER (AUTOMATIC)...	58.4	5.0	7.9	8.8	8.9	9.6	10.7	8.5	5.9	8.1		8.1	
CLOTHES WASHER (WRINGER).....	2.9	.7	.8	.5	.3	.2	.2	.1	.8	1.1		1.1	
RANGE (STOVE-TOP OF BURNERS).....	43.8	4.2	6.1	7.0	6.4	5.8	7.7	6.5	4.4	5.9		5.9	
CLOTHES DRYER.....	38.3	2.7	4.4	5.5	5.9	6.2	7.5	6.2	3.1	4.2		4.2	
DISHWASHER.....	30.4	1.1	2.1	3.8	4.6	4.9	6.9	7.1	1.2	1.6		1.6	
HUMIDIFIER.....	11.0	.4	1.4	1.6	1.7	1.6	2.2	2.1	.5	.7		.7	
DEHUMIDIFIER.....	7.3	.2	.7	.8	1.0	1.2	1.8	1.6	.3	.4		.4	
EVAPORATIVE COOLER.....	3.2	.4	.7	.6	.4	.5	.4	.2	.5	.7		.7	
GAS APPLIANCES USED													
RANGE (STOVE-TOP OF BURNERS).....	37.5	5.9	7.6	6.8	5.4	4.1	4.7	3.0	6.3	8.5		8.5	
CLOTHES DRYER.....	11.8	.5	1.3	1.6	1.9	1.8	2.5	2.1	.7	1.1		1.1	
OUTDOOR GAS GRILL.....	7.1	.2	.3	.5	1.1	1.2	1.7	2.1	.2	.3		.3	
OUTDOOR GAS LIGHT.....	1.6	.1	.2	.2	.2	.2	.3	.4	.1	.2		.2	
SWIMMING POOL HEATER.....	.4	-	-	-	-	.1	.1	.2	-	-		-	
NUMBER OF REFRIGERATORS USED													
1.....	70.0	9.7	12.4	12.7	10.1	8.2	10.2	6.8	10.1	13.6		13.6	
2 OR MORE.....	11.5	.6	1.4	1.1	1.7	1.7	2.2	2.7	.7	1.1		1.1	
NONE.....	.2	.1	.1	-	-	-	-	-	.1	.1		.1	
MOST USED REFRIGERATOR													
ELECTRIC.....	81.2	10.3	13.7	13.8	11.8	9.9	12.3	9.4	10.8	14.6		14.6	
FROST-FREE.....	49.2	4.0	6.6	7.7	7.7	6.8	8.9	7.4	4.6	6.0		6.0	
MOST FROST-FREE.....	32.0	6.3	7.1	6.0	4.1	3.1	3.4	2.0	6.2	8.6		8.6	
GAS.....	.3	-	.1	-	-	-	-	-	.1	.1		.1	
NONE.....	.2	.1	.1	-	-	-	-	-	.1	.1		.1	

SEE NOTES AT END OF TABLE

TABLE 39. APPLIANCE USE BY 1979 FAMILY INCOME
(MILLION HOUSEHOLDS) - Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	1979 FAMILY INCOME										FOOR (100 PERCENT LEVEL)	POOE (125 PERCENT LEVEL)	
		LESS THAN \$5,000	\$5,000 TO \$9,999	\$10,000 TO \$14,999	\$15,000 TO \$19,999	\$20,000 TO \$24,999	\$25,000 TO \$34,999	\$35,000 CR MOFE						
SECOND REFRIGERATOR USED														
ELECTRIC.....	11.4	0.6	1.4	1.1	1.7	1.7	2.2	2.7	0.7	1.1				
FROST-FREE.....	3.4	.1	.4	.3	.4	.5	.7	1.0	.1	.2				
NOT FROST-FREE.....	8.0	.5	1.0	.8	1.3	1.2	1.5	1.7	.6	.9				
GAS.....	.1	-	-	-	-	-	-	-	-	-				
NONE.....	70.2	9.8	12.4	12.7	10.1	8.2	10.2	6.8	10.2	13.7				
NUMBER OF SEPARATE FREEZERS USED														
1.....	28.5	2.5	3.6	4.2	4.2	4.3	5.4	4.2	3.0	4.0				
2 OR MORE.....	2.6	.2	.4	.4	.4	.3	.5	.4	.2	.3				
NONE.....	50.5	7.7	9.7	9.3	7.2	5.3	6.5	4.9	7.7	10.4				
MOST USED FREEZER														
ELECTRIC.....	31.1	2.7	4.2	4.5	4.6	4.7	5.9	4.6	3.2	4.3				
FROST-FREE.....	8.3	.5	.9	1.3	1.3	1.2	1.8	1.3	.7	1.0				
NOT FROST-FREE.....	22.8	2.1	3.3	3.2	3.3	3.5	4.1	3.3	2.5	3.4				
NONE.....	50.5	7.7	9.7	9.3	7.2	5.3	6.5	4.9	7.7	10.4				
NUMBER OF OVENS USED														
1.....	57.2	8.6	11.2	10.7	8.6	6.4	7.5	4.2	9.2	12.5				
2.....	18.8	.8	1.7	2.3	2.7	2.9	4.1	4.2	.8	1.1				
3 OR MORE.....	2.2	.1	.1	.2	.2	.3	.4	.8	.1	.1				
NONE.....	3.5	.9	.8	.6	.3	.3	.3	.2	.8	1.1				
MOST USED OVEN														
ELECTRIC.....	45.0	4.3	6.2	7.1	6.6	6.0	7.9	6.7	4.4	6.0				
MICROWAVE.....	3.5	.1	.3	.3	.6	.5	.8	.9	-	.1				
OTHER ELECTRIC.....	41.5	4.2	6.0	6.8	6.0	5.5	7.1	5.8	4.3	5.9				
GAS.....	33.0	5.1	6.7	6.1	4.9	3.6	4.1	2.5	5.6	7.5				
OTHER/NONE.....	3.7	1.0	.9	.6	.3	.3	.3	.2	.9	1.2				
SECOND OVEN USED														
ELECTRIC.....	17.6	.7	1.4	2.2	2.4	2.7	3.8	4.4	.7	.9				
MICROWAVE.....	8.2	.2	.4	.8	1.0	1.4	2.2	2.1	.2	.3				
OTHER ELECTRIC.....	9.4	.5	1.0	1.3	1.4	1.3	1.6	2.3	.5	.6				
GAS.....	3.2	.2	.4	.3	.5	.5	.8	.5	.1	.2				
OTHER/NONE.....	60.9	9.6	12.0	11.3	9.0	6.7	7.8	4.5	10.1	13.6				

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. SEE GLOSSARY FOR DEFINITIONS OF TERMS USE IN THIS TABLE.
SOURCE: RESIDENTIAL AND COMMERCIAL ENERGY USE DIVISION, OFFICE OF ENERGY MARKETS AND ENR USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 40. APPLIANCE USE BY 1979 FAMILY INCOME (PERCENTAGE OF HOUSEHOLDS)

HOUSEHOLD CHARACTERISTICS	TOTAL	1979 FAMILY INCOME										POOR (100 PERCENT LEVEL)	POOR (125 PERCENT LEVEL)	
		LESS THAN \$5,000	\$5,000 TO \$9,999	\$10,000 TO \$14,999	\$15,000 TO \$19,999	\$20,000 TO \$24,999	\$25,000 TO \$34,999	\$35,000 CP	MOER	100.0	100.0			
		100.0	100.0	100.0	100.0	100.0	100.0	100.0						
TOTAL HOUSEHOLDS.....	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	100.0
TYPE APPLIANCES USED														
ELECTRIC APPLIANCES USED														
TELEVISION SET (COLOR).....	82.0	60.7	70.2	80.3	86.3	92.2	93.6	94.2	94.2	93.6	94.2	94.2	60.6	62.4
TELEVISION SET (E/W).....	51.3	53.4	53.4	48.2	48.1	51.1	52.1	53.3	53.3	52.1	53.3	53.3	57.3	55.9
CLOTHES WASHER (AUTOMATIC)...	71.6	48.1	57.4	63.7	75.3	86.7	86.2	90.3	90.3	86.2	90.3	90.3	53.7	54.7
CLOTHES WASHER (WRINGER).....	3.5	6.8	6.1	3.7	2.6	1.6	1.8	1.2	1.2	1.8	1.2	1.2	7.6	7.2
RANGE (STOVE-TOP OF BURNERS).....	53.7	40.8	43.6	50.6	54.2	58.9	62.6	68.9	68.9	62.6	68.9	68.9	40.1	40.1
CLOTHES IRYER.....	46.9	25.8	32.0	39.7	49.7	62.2	60.5	65.3	65.3	60.5	65.3	65.3	28.4	28.2
DISHWASHER.....	37.2	10.4	15.3	27.7	38.8	49.0	55.5	74.8	74.8	55.5	74.8	74.8	10.7	11.1
HUMIDIFIER.....	13.5	4.3	10.1	11.6	14.0	16.0	17.9	22.5	22.5	17.9	22.5	22.5	4.9	5.0
DEHUMIDIFIER.....	9.0	2.4	5.3	5.7	8.3	12.5	14.3	16.7	16.7	14.3	16.7	16.7	2.5	2.9
EVAPORATIVE COOLER.....	3.9	3.4	5.3	4.4	3.7	4.8	3.2	1.6	1.6	3.2	1.6	1.6	4.2	4.5
GAS APPLIANCES USED														
RANGE (STOVE-TOP OF BURNERS).....	45.9	56.4	54.6	49.1	45.9	41.7	37.7	32.0	32.0	37.7	32.0	32.0	57.5	57.5
CLOTHES IRYER.....	14.4	5.1	9.7	11.5	16.3	18.2	19.9	22.3	22.3	19.9	22.3	22.3	6.2	7.7
OUTDOOR GAS GRILL.....	8.6	1.5	1.9	3.9	9.5	11.7	13.5	22.5	22.5	13.5	22.5	22.5	1.9	1.7
OUTDOOR GAS LIGHT.....	1.9	1.1	1.2	1.5	1.8	2.1	2.4	3.9	3.9	2.4	3.9	3.9	.9	1.2
SWIMMING POOL HEATER.....	.4	-	-	.1	.4	.8	.4	1.8	1.8	.4	1.8	1.8	-	-
NUMBER OF REFRIGERATORS USED														
1.....	85.7	93.6	89.3	91.9	85.1	82.7	82.2	71.5	71.5	82.2	71.5	71.5	92.6	91.8
2 OR MORE.....	14.0	5.7	10.3	7.9	14.7	17.3	17.7	28.5	28.5	17.7	28.5	28.5	6.7	7.4
NONE.....	.2	.7	.4	.2	.2	-	.2	-	-	.2	-	-	.7	.7
MOST USED REFRIGERATOR														
ELECTRIC.....	99.4	99.2	98.7	99.6	99.4	99.7	99.8	99.6	99.6	99.8	99.6	99.6	98.7	98.9
FROST-FREE.....	60.2	38.1	47.5	55.9	65.0	68.6	72.3	78.8	78.8	72.3	78.8	78.8	41.8	40.9
NCT FROST-FREE.....	39.2	61.1	51.2	43.7	34.5	31.1	27.4	20.8	20.8	27.4	20.8	20.8	56.9	58.0
GAS.....	.4	.1	.9	.2	.4	.3	.1	.4	.4	.1	.4	.4	.5	.4
NONE.....	.2	.7	.4	.2	.2	-	.2	-	-	.2	-	-	.7	.7

SEE NOTES AT END OF TABLE

TABLE 40. APPLIANCE USE BY 1979 FAMILY INCOME
(PERCENTAGE OF HOUSEHOLDS)--Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	1979 FAMILY INCOME										FOOR (100 PERCENT LEVEL)	POOF (125 PERCENT LEVEL)
		LESS THAN \$5,000	\$5,000 TO \$9,999	\$10,000 TO \$14,999	\$15,000 TO \$19,999	\$20,000 TO \$24,999	\$25,000 TO \$34,999	\$35,000 OR MORE	FOOR (100 PERCENT LEVEL)	POOF (125 PERCENT LEVEL)			
SECOND REFRIGERATOR USED													
ELECTRIC.....	14.0	5.7	10.1	7.9	14.6	17.2	17.7	28.4	6.7	7.4			
FROST-FREE.....	4.1	.9	3.0	2.0	3.7	4.7	5.5	10.4	1.0	1.4			
NOT FROST-FREE.....	9.8	4.8	7.1	5.9	10.8	12.5	12.1	18.0	5.7	6.1			
GAS.....	.1	-.2	-.2	-.1	-.1	.1	-.2	.2	-.1	-.2			
NONE.....	86.0	94.3	89.7	92.1	85.3	82.7	82.3	71.5	93.3	92.6			
NUMBER OF SEPARATE FREEZERS USED													
1.....	34.9	23.6	27.3	30.1	35.7	43.5	43.6	44.2	27.1	27.0			
2 OR MORE.....	3.2	2.1	2.8	2.8	3.3	3.5	4.1	4.1	2.1	2.3			
NONE.....	61.9	74.3	69.9	67.2	61.0	53.0	52.3	51.7	70.8	70.7			
MOST USED FREEZER													
FLFCTPIC.....	38.1	25.7	30.1	32.8	39.0	47.0	47.7	48.3	29.2	29.3			
FROST-FREE.....	10.1	5.1	6.2	9.6	11.1	11.8	14.6	13.5	6.4	6.5			
NOT FROST-FREE.....	28.0	20.7	23.8	23.3	27.9	35.2	33.1	34.7	22.8	22.8			
NONE.....	61.9	74.3	69.9	67.2	61.0	53.0	52.3	51.7	70.8	70.7			
NUMBER OF OVENS USED													
1.....	70.0	83.1	80.5	77.2	72.6	64.7	60.4	44.8	84.1	84.4			
2.....	23.0	7.6	12.5	17.0	22.7	29.3	33.5	44.5	7.6	7.2			
3 OR MORE.....	2.6	.9	1.0	1.3	2.0	3.4	3.3	8.2	.6	.9			
NONE.....	4.3	8.5	6.0	4.5	2.8	2.6	2.8	2.6	7.7	7.6			
MOST USED OVEN													
ELECTRIC.....	55.1	41.6	45.0	51.5	55.7	60.9	64.0	71.2	40.0	40.8			
MICROWAVE.....	4.3	.6	1.9	2.3	5.0	5.4	6.7	9.4	.3	.6			
OTHER ELECTRIC.....	50.8	41.0	43.1	49.2	50.7	55.5	57.3	61.8	39.6	40.1			
GAS.....	40.5	49.0	48.7	44.0	41.5	36.5	33.2	26.2	51.3	50.8			
OTHER/NONE.....	4.5	9.4	6.3	4.5	2.8	2.6	2.8	2.6	8.7	8.4			

SEE NOTES AT END OF TABLE

TABLE 40. APPLIANCE USE BY 1979 FAMILY INCOME
(PERCENTAGE OF HOUSEHOLDS) -Continued

HOUSEHOLD CHARACTERISTICS	1979 FAMILY INCOME										POOR (100 PERCENT LEVEL)	POOR (125 PERCENT LEVEL)		
	TOTAL	\$5,000 TO \$9,999		\$10,000 TO \$14,999		\$15,000 TO \$19,999		\$20,000 TO \$24,999		\$25,000 TO \$34,999			\$35,000 OR MORE	
		LFSS THAN \$5,000												
SECOND OVEN USE	21.5	6.4	10.2	15.7	20.0	27.5	30.5	47.0	6.4	6.4	6.4	6.4		
ELECTRIC.....	10.0	1.7	3.1	6.0	8.4	14.5	17.8	22.4	2.0	2.0	2.0	2.1		
MICROWAVE.....	11.5	4.6	7.1	9.7	11.6	13.0	12.7	24.6	4.4	4.4	4.4	4.3		
OTHER ELECTRIC.....	4.0	1.5	3.0	2.4	4.4	4.9	6.3	5.6	1.2	1.2	1.2	1.2		
GAS.....	74.5	92.1	86.8	81.9	75.6	67.6	63.2	47.3	92.4	92.4	92.4	92.4		
OTHER/NOINF.....														

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. PERCENTAGES ARE CALCULATED ON UNBOUNDED NUMBERS. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.
SOURCE: RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 41. THERMAL CHARACTERISTICS BY CENSUS REGION, AREA TYPE AND SMSA/NON-SMSA (MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED)

HOUSEHOLD CHARACTERISTICS	CENSUS REGION				AREA TYPE		SMSA/NON-SMSA		
	TOTAL	NORTHEAST	NORTH CENTRAL	SOUTH	WEST	URBAN	RURAL	SMSA/NON-SMSA	
								SMSA	NONSMSA
TOTAL HOUSEHOLDS.....	81.6	17.7	21.1	27.0	16.0	56.0	25.6	55.6	26.0
NUMBER OF WINDOWS									
1 TO 6.....	13.7	3.5	2.5	3.9	3.8	11.5	2.3	11.1	2.6
7 TO 12.....	33.6	5.4	7.9	12.9	7.4	21.9	11.7	21.6	12.0
13 TO 18.....	21.9	4.7	6.7	7.4	3.0	13.9	8.0	14.4	7.5
19 OR MORE.....	12.2	4.0	3.8	2.9	1.5	8.5	3.7	8.2	4.0
NONE.....	.2		.1		.1	.2		.2	
AVERAGE NUMBER OF WINDOWS...	12.4	13.7	13.4	11.8	10.6	12.2	12.9	12.2	12.9
SIZE AND NUMBER OF WINDOWS									
LARGE (24 SQ. FT. OR LARGER)									
1.....	19.1	3.9	7.0	4.6	3.5	13.1	6.0	13.1	5.9
2.....	10.6	2.1	2.7	2.6	3.1	7.4	3.2	7.5	3.0
3 OR MORE.....	16.7	3.7	3.3	4.0	5.7	12.2	4.5	12.6	4.1
NONE/NO WINDOWS.....	35.3	7.9	8.1	15.6	3.7	23.3	12.0	22.4	12.9
AVERAGE NUMBER OF LARGE SIZE WINDOWS.....	1.7	1.8	1.5	1.3	2.6	1.9	1.4	1.9	1.4
MEDIUM (MORE THAN 6, LESS THAN 24 SQ. FT.)									
1 TO 4.....	17.3	2.7	3.6	5.1	5.8	12.8	4.5	12.6	4.7
5 TO 8.....	23.8	4.1	6.6	8.4	4.7	16.0	7.8	15.6	8.2
9 TO 12.....	16.8	3.7	4.8	6.6	1.7	10.8	6.1	11.1	5.7
13 OR MORE.....	16.0	5.1	4.6	5.1	1.3	10.4	5.6	10.4	5.6
NONE/NO WINDOWS.....	7.6	2.0	1.4	1.7	2.5	6.0	1.7	5.9	1.7
AVERAGE NUMBER OF MEDIUM SIZE WINDOWS.....	8.0	9.4	8.7	8.3	5.2	7.7	8.7	7.8	8.6
SMALL (6 SQ. FT. OR SMALLER)									
1.....	15.1	3.9	2.6	5.1	3.5	11.0	4.2	10.7	4.4
2.....	14.9	2.5	2.7	5.9	3.8	10.1	4.8	10.2	4.6
3.....	7.8	1.4	2.0	2.9	1.5	5.1	2.7	5.1	2.7
4 OR MORE.....	21.4	4.5	7.9	5.1	4.0	13.9	7.5	13.4	8.1
NONE/NO WINDOWS.....	22.4	5.4	5.8	7.9	3.2	15.9	6.5	16.2	6.2
AVERAGE NUMBER OF SMALL SIZE WINDOWS.....	2.6	2.5	3.2	2.2	2.8	2.5	2.9	2.5	2.9

SEE NOTES AT END OF TABLE

TABLE 41. THERMAL CHARACTERISTICS BY CENSUS REGION, AREA TYPE AND SMSA/NON-SMSA (MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	CENSUS REGION			AREA TYPE		SMSA/NON-SMSA	
		NORTHEAST	NORTH CENTRAL	SOUTH	URBAN	RURAL	SMSA	NONSMSA
NUMBER OF STORM WINDOWS								
1 TO 6.....	8.9	2.8	3.0	1.8	6.2	2.7	6.1	2.9
7 TO 12.....	18.0	4.3	7.7	4.7	10.5	7.5	10.7	7.3
13 TO 18.....	12.4	4.0	5.2	2.8	7.4	5.0	7.5	4.9
19 OR MORE.....	7.4	3.0	3.0	1.2	5.1	2.3	4.9	2.5
NONE/NO WINDOWS.....	34.9	3.5	2.1	16.5	26.8	8.1	26.5	8.4
AVERAGE NUMBER OF STORM WINDOWS.....	7.0	10.7	11.2	4.5	6.4	8.3	6.4	8.3
AVERAGE NUMBER OF LARGE SIZE STORM WINDOWS.....	.8	1.2	1.3	.4	.8	.9	.8	.9
AVERAGE NUMBER OF MEDIUM SIZE STORM WINDOWS.....	4.9	7.9	7.5	3.3	4.5	5.9	4.5	5.8
AVERAGE NUMBER OF SMALL SIZE STORM WINDOWS.....	1.3	1.6	2.4	.7	1.2	1.6	1.1	1.7
PERCENT OF WINDOWS WITH STORM WINDOWS								
100 PERCENT.....	31.4	9.4	13.1	7.2	19.0	12.4	19.1	12.3
76 TO 99 PERCENT.....	7.3	2.5	2.8	1.6	4.9	2.4	4.7	2.6
51 TO 75 PERCENT.....	3.8	1.0	1.8	.6	2.3	1.5	2.5	1.3
1 TO 50 PERCENT.....	4.3	1.2	1.2	1.1	3.0	1.3	2.9	1.5
NONE/NO WINDOWS.....	34.9	3.5	2.1	16.5	26.8	8.1	26.5	8.4

SEE NOTES AT END OF TABLE

TABLE 41. THERMAL CHARACTERISTICS BY CENSUS REGION, AREA TYPE AND SHSA/NON-SHSA (MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	CENSUS REGION				AREA TYPE			SHSA/NON-SHSA	
		NORTHEAST	NORTH CENTRAL	SOUTH	WEST	UREAN	RURAL	SHSA	NONSHSA	
NUMBER OF OUTSIDE DOORS										
1.....	7.8	2.5	1.8	1.8	1.6	6.9	0.9	6.5	1.3	
2.....	36.5	7.2	9.8	12.8	6.7	24.9	11.6	23.8	12.7	
3.....	22.5	4.3	6.0	7.9	4.4	14.2	8.3	14.7	7.8	
4 OR MORE.....	12.2	1.9	2.8	4.3	3.2	7.6	4.6	8.1	4.0	
NONE.....	2.6	1.7	.6	.2	.1	2.5	.1	2.4	.1	
AVERAGE NUMBER OF DOORS.....	2.5	2.2	2.5	2.6	2.7	2.4	2.8	2.4	2.7	
TYPE AND NUMBER OF OUTSIDE DOORS										
STANDARD DOORS										
1.....	12.6	3.1	2.2	3.4	3.7	10.4	2.1	10.5	2.0	
2.....	41.7	7.7	11.5	14.2	8.3	27.4	14.3	27.2	14.5	
3.....	17.4	3.6	4.6	6.4	2.7	11.1	6.3	10.7	6.6	
4 OR MORE.....	6.5	1.3	1.8	2.4	1.0	3.8	2.6	3.9	2.6	
NONE/NO DOORS.....	3.5	2.0	.9	.4	.2	3.3	.2	3.3	.3	
AVERAGE NUMBER OF STANDARD DOORS.....	2.2	2.0	2.2	2.3	2.1	2.1	2.4	2.1	2.4	
SLIDING GLASS DOORS										
1.....	15.8	2.5	3.7	5.0	4.6	10.1	5.7	11.6	4.2	
2 OR MORE.....	4.9	.4	.7	1.5	2.3	3.4	1.5	3.9	1.0	
NONE/NO DOORS.....	61.0	14.8	16.7	20.4	9.1	42.6	18.4	40.1	20.9	
AVERAGE NUMBER OF SLIDING GLASS DOORS.....	.3	.2	.2	.3	.6	.3	.4	.4	.3	

SEE NOTES AT END OF TABLE

TABLE 41. THERMAL CHARACTERISTICS BY CENSUS REGION, AREA TYPE AND SMSA/NON-SMSA (MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	CENSUS REGION				AREA TYPE		SMSA/NON-SMSA	
		NORTHEAST	NORTH CENTRAL	SOUTH	WEST	URBAN	RURAL	SMSA	NONSMSA
NUMBER OF STORM DOORS									
1.....	13.0	2.9	3.9	4.7	1.5	8.2	4.8	8.0	5.0
2.....	22.0	6.0	9.5	5.1	1.4	14.3	7.6	13.7	8.2
3.....	8.5	2.5	3.4	2.6	.4	4.9	4.1	5.1	3.9
4 OR MORE.....	2.9	.7	1.2	.8	.1	1.4	1.4	1.8	1.1
NONE/NC DOORS.....	34.9	5.5	3.1	13.8	12.5	27.2	7.6	27.1	7.6
AVERAGE NUMBER OF STORM DOORS.....	1.2	1.5	1.8	1.0	.4	1.0	1.5	1.1	1.5
AVERAGE NUMBER OF STANDARD STORM DOORS.....	1.0	1.3	1.6	.8	.3	.9	1.3	.9	1.3
AVERAGE NUMBER OF SLIDING GLASS STORM DOORS.....	.2	.2	.2	.1	.1	.1	.2	.1	.2
PERCENT OF OUTSIDE DOORS WITH STORM DOORS									
100 PERCENT.....	26.3	7.6	11.4	6.1	1.3	16.7	9.6	16.2	10.1
51 TO 99 PERCENT.....	7.6	2.0	3.0	1.9	.6	4.5	3.1	4.7	2.8
1 TO 50 PERCENT.....	12.9	2.5	3.6	5.2	1.6	7.7	5.2	7.6	5.3
NONE/NC DOORS.....	34.9	5.5	3.1	13.8	12.5	27.2	7.6	27.1	7.8

SEE NOTES AT END OF TABLE

TABLE 41. THERMAL CHARACTERISTICS BY CENSUS REGION, AREA TYPE AND SMSA/NON-SMSA (MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED)-Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	CENSUS REGION			AREA TYPE		SMSA/NON-SMSA		
		NORTHEAST	NORTH CENTRAL	SOUTH	WEST	URBAN	RURAL	SMSA	NONSMSA
TOTAL SINGLE-FAMILY UNITS.....	56.3	10.3	15.4	19.7	10.8	36.0	20.3	36.1	20.2
HAVE ROOF OR CEILING INSULATION (SINGLE-FAMILY UNITS)									
YES.....	43.2	8.1	12.7	14.6	7.8	27.1	16.1	27.9	15.3
ALL INSULATED.....	38.6	7.1	11.3	13.3	6.9	23.9	14.7	24.6	13.9
PART INSULATED.....	4.1	1.0	1.1	1.1	.8	2.8	1.3	2.8	1.3
DON'T KNOW AMOUNT/	.5	-	.2	.1	.1	.4	.1	.5	.1
NO.....	8.1	1.4	1.5	3.3	2.0	5.2	3.0	4.7	3.4
DON'T KNOW/NOT REPORTED.....	4.9	.8	1.3	1.8	1.0	3.6	1.3	3.5	1.5
TYPE OF INSULATION									
PATS ONLY.....	21.5	5.5	5.5	7.2	3.3	13.4	8.1	13.8	7.7
AVERAGE NUMBER OF INCHES..	5.3	5.6	5.6	5.0	4.9	5.1	5.6	5.1	5.6
LOOSE FILL ONLY.....	11.7	1.0	3.9	4.1	2.7	7.3	4.4	7.5	4.1
AVERAGE NUMBER OF INCHES..	6.5	5.9	7.5	6.0	6.0	6.0	7.2	6.2	7.1
PATS AND LOOSE FILL ONLY....	4.7	.8	2.0	1.2	.7	2.9	1.8	2.9	1.8
AVERAGE NUMBER OF INCHES..	10.2	9.9	10.8	10.2	9.7	10.1	10.6	10.4	10.2
OTHER/COMBINATIONS.....	3.2	.6	.9	1.3	.5	2.0	1.3	2.1	1.2
DON'T KNOW TYPE/	2.1	.3	.4	.8	.7	1.6	.5	1.5	.6
NO INSULATION/DON'T KNOW/	13.1	2.2	2.8	5.1	3.0	8.8	4.3	8.2	4.9
NOT REPORTED.....									

SEE NOTES AT END OF TABLE

TABLE 41. THERMAL CHARACTERISTICS BY CENSUS REGION, AREA TYPE AND SMSA/NON-SMSA (BILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	CENSUS REGION				AREA TYPE		SMSA/NON-SMSA	
		NORTHEAST	NORTH CENTRAL	SOUTH	WEST	URBAN	RURAL	SMSA	NONSMSA
HAVE WALL INSULATION (SINGLE-FAMILY UNITS)									
YES.....	36.2	7.5	11.5	12.0	5.3	21.2	15.0	21.9	14.3
ALL WALLS.....	29.6	6.0	9.6	9.7	4.3	16.9	12.7	17.9	11.7
SOME WALLS.....	6.6	1.4	1.9	2.3	1.0	4.3	2.3	4.0	2.6
NO.....	11.5	1.6	2.1	4.4	3.4	8.3	3.3	7.7	3.8
DON'T KNOW/NOT REPORTED.....	8.5	1.3	1.8	3.4	2.1	6.5	2.0	6.4	2.1
FLOOR INSULATION (SINGLE-FAMILY UNITS)									
HAVE BASEMENT/CRAWL SPACE.....	48.0	9.3	13.8	13.7	7.2	27.3	16.7	27.0	17.0
HEATED.....	13.0	3.9	6.6	1.4	1.1	9.0	4.0	8.8	4.1
NOT HEATED.....	31.0	5.4	7.3	12.3	6.1	18.3	12.8	18.2	12.8
HAVE FLOOR INSULATION.....	4.9	1.0	1.2	2.1	.5	2.1	2.8	2.4	2.5
ALL PARTS INSULATED.....	3.9	.7	.9	1.8	.4	1.6	2.3	1.8	2.1
SOME PARTS INSULATED.....	1.0	.3	.3	.3	.1	.5	.5	.6	.4
NO FLOOR INSULATION.....	21.8	3.8	4.9	8.3	4.8	13.2	8.6	13.1	8.7
DON'T KNOW/NOT REPORTED.....	4.4	.6	1.2	1.9	.7	3.0	1.4	2.8	1.6
NO BASEMENT/CRAWL SPACE.....	12.3	1.1	1.6	6.0	3.6	8.7	3.6	9.0	3.3
INSULATION CHARACTERISTICS (SINGLE-FAMILY UNITS)									
UNITS WITH SOME OF ALL STORM WINDOWS, AND SOME OR ALL STORM DOORS, AND ROOF OR CEILING INSULATION.....	27.4	7.4	11.8	6.7	1.6	16.0	11.5	16.2	11.2
UNITS WITH ONE OR MORE OF THESE TYPES OF INSULATION..	50.6	10.2	15.3	16.8	8.2	32.0	18.5	32.5	18.1
UNITS WITH NONE OF THESE TYPES OF INSULATION.....	5.7	.1	.1	2.9	2.6	3.9	1.8	3.6	2.1

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.
 SOURCE: RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND FINI USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 42. THERMAL CHARACTERISTICS BY CENSUS REGION, AREA TYPE AND SHSA/NON-SHSA (PERCENTAGE OF HOUSEHOLDS)

HOUSEHOLD CHARACTERISTICS	CENSUS REGION				AREA TYPE		SHSA/NON-SHSA	
	NORTH CENTRAL		SOUTH		URBAN	RURAL	SHSA	NONSHSA
	NORTHEAST	WEST	SOUTH	WEST	URBAN	RURAL	SHSA	NONSHSA
TOTAL HOUSEHOLDS.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER OF WINDOWS								
1 TO 6.....	16.8	11.9	14.4	24.1	20.5	8.9	20.0	10.0
7 TO 12.....	47.1	37.6	47.7	46.5	39.1	45.5	38.9	45.9
13 TO 18.....	26.8	32.0	27.3	19.1	24.8	31.2	25.9	28.7
19 OR MORE.....	15.0	18.0	10.6	9.6	15.2	14.4	14.8	15.3
NONE.....	.3	.5	-	.7	.4	-	.4	-
SIZE AND NUMBER OF WINDOWS								
LARGE (24 SQ. FT. OR LARGER)								
1.....	23.4	33.4	17.3	21.8	23.4	23.3	23.6	22.8
2.....	12.9	12.7	9.8	19.5	13.2	12.3	13.5	11.7
3 OR MORE.....	20.5	15.5	14.9	35.6	21.8	17.4	22.6	15.9
NCNF/NC WINDOWS.....	43.2	38.4	58.0	23.1	41.5	47.0	40.3	49.6
MEDIUM (MORE THAN 6, LESS THAN 24 SQ. FT.)								
1 TO 4.....	21.2	17.2	19.1	36.4	22.9	17.6	22.6	18.2
5 TO 8.....	29.2	31.3	31.3	29.2	28.6	30.5	28.0	31.7
9 TO 12.....	20.6	23.0	24.4	10.8	19.2	23.6	20.0	22.0
13 OR MORE.....	19.6	21.8	18.8	7.9	18.6	21.8	18.8	21.4
NCNF/NC WINDOWS.....	9.4	6.6	6.5	15.7	10.7	6.5	10.6	6.7
SMALL (6 SQ. FT. OR SMALLER)								
1.....	18.5	12.5	19.0	21.7	19.6	16.2	19.3	16.9
2.....	18.2	12.9	21.8	23.7	18.0	18.6	18.4	17.9
3.....	9.6	9.7	10.7	9.4	9.1	10.6	9.1	10.5
4 OR MORE.....	26.3	37.4	19.0	24.9	24.8	29.3	24.0	31.0
NCNF/NC WINDOWS.....	27.4	27.5	29.5	20.2	28.4	25.2	29.2	23.7

SFF NOTES AT END OF TABLE

TABLE 42. THERMAL CHARACTERISTICS BY CENSUS REGION, AREA TYPE AND SMSA/NON-SMSA (PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	CENSUS REGION				AREA TYPE		SMSA/NON-SMSA	
		NORTHEAST	NORTH CENTRAL	SOUTH	WEST	UREAN	RURAL	SMSA	NONSMSA
NUMBER OF STORM WINDOWS									
1 TO 6.....	11.0	16.0	14.4	6.8	7.9	11.1	10.6	10.9	11.0
7 TO 12.....	22.1	24.2	36.7	17.3	8.4	18.8	29.2	19.3	28.1
13 TO 18.....	15.2	22.5	24.8	10.3	2.6	13.2	19.6	13.5	18.7
19 OR MORE.....	9.1	17.2	14.1	4.5	1.1	9.1	9.1	8.7	9.8
NONE/NO WINDOWS.....	42.7	20.0	10.1	61.1	80.0	47.9	31.5	47.6	32.4
PERCENT OF WINDOWS WITH STORM WINDOWS									
100 PERCENT.....	38.4	53.3	62.4	26.6	10.3	33.9	48.4	34.4	47.1
76 TO 99 PERCENT.....	8.9	14.4	13.3	5.9	2.1	8.7	9.3	8.5	9.9
51 TO 75 PERCENT.....	4.6	5.6	8.6	2.1	2.5	4.2	5.7	4.5	5.0
1 TO 50 PERCENT.....	5.3	6.7	5.6	4.2	5.1	5.4	5.0	5.2	5.6
NONE/NO WINDOWS.....	42.7	20.0	10.1	61.1	80.0	47.9	31.5	47.6	32.4
NUMBER OF OUTSIDE DOORS									
1.....	9.6	14.4	8.6	6.8	10.1	12.2	3.7	11.7	5.0
2.....	44.8	40.8	46.7	47.6	41.9	44.5	45.4	42.8	48.9
3.....	27.6	24.5	28.5	29.1	27.3	25.3	32.6	26.5	30.0
4 OR MORE.....	14.9	10.7	13.4	15.8	20.1	13.5	18.0	14.6	15.5
NONE.....	3.2	9.6	2.8	.7	.6	4.5	.3	4.4	.6
TYPE AND NUMBER OF OUTSIDE DOORS									
STANDARD DOORS									
1.....	15.4	17.8	10.6	12.8	23.4	18.6	8.3	18.9	7.8
2.....	51.1	43.4	54.4	52.8	52.3	48.9	55.9	48.9	55.8
3.....	21.3	20.5	22.0	23.8	17.0	19.8	24.6	19.3	25.5
4 OR MORE.....	7.9	7.2	6.5	5.0	6.1	6.8	10.3	7.0	9.8
NONE/NO DOORS.....	4.3	11.2	4.5	1.6	1.2	5.9	.9	5.9	1.1
SLIDING GLASS DOORS									
1.....	19.3	14.2	17.3	18.7	28.7	18.0	22.1	20.9	16.0
2 OR MORE.....	6.0	2.2	3.2	5.6	14.5	6.0	6.0	7.1	3.7
NONE/NO DOORS.....	74.7	83.6	75.4	75.7	56.8	76.0	71.9	72.1	80.3

SEE NOTES AT END OF TABLE

TABLE 42. THERMAL CHARACTERISTICS BY CENSUS REGION, AREA TYPE AND SMSA/NON-SMSA
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	CENSUS REGION				AREA TYPE		SMSA/NON-SMSA	
	TOTAL	NORTHEAST	MIDWEST		URBAN	RURAL	SMSA	NON-SMSA
			NORTH CENTRAL	SOUTH				
NUMBER OF STORM DOORS								
1.....	15.9	16.6	18.6	17.4	14.6	18.8	14.3	19.3
2.....	26.9	33.8	44.9	18.8	25.6	29.8	24.7	31.6
3.....	10.9	14.4	15.9	5.6	8.7	15.9	9.1	14.9
4 OR MORE.....	3.5	4.0	5.8	3.0	2.5	5.6	3.2	4.1
NONE/NC DOORS.....	42.7	31.2	14.8	51.2	48.6	29.8	48.6	30.1
PERCENT OF OUTSIDE DOORS WITH STORM DOORS								
100 PERCENT.....	32.2	42.9	54.0	22.6	29.8	37.7	29.2	38.8
51 TO 99 PERCENT.....	9.3	11.6	14.4	6.9	8.0	12.1	8.5	10.8
1 TO 50 PERCENT.....	15.8	14.4	16.9	19.3	13.7	20.4	13.7	20.3
NONE/NC DOORS.....	42.7	31.2	14.8	51.2	48.6	29.8	48.6	30.1
TOTAL SINGLE-FAMILY UNITS.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
HAVE ROOF OR CEILING INSULATION (SINGLE-FAMILY UNITS)								
YES.....	76.8	78.5	82.1	74.1	75.4	79.1	77.2	75.9
ALL INSULATED.....	68.5	68.3	73.3	67.6	66.4	72.2	68.3	68.9
PART INSULATED.....	7.3	9.9	7.4	5.7	7.8	6.3	7.7	6.6
DON'T KNOW AMOUNT/NOT REPORTED.....	1.0	.3	1.4	.7	1.2	.6	1.3	.4
NO.....	14.5	13.3	9.5	16.8	14.4	14.5	13.1	16.9
DON'T KNOW/NOT REPORTED.....	8.8	8.2	8.5	9.1	10.1	6.4	9.7	7.3
TYPE OF INSULATION								
PATTS ONLY.....	38.2	53.0	35.9	36.5	37.1	40.1	38.4	37.9
LOOSE FILL ONLY.....	20.7	9.8	25.0	20.7	20.3	21.4	20.9	20.3
BATTS AND LOOSE FILL ONLY.....	8.3	7.5	13.2	6.1	8.1	8.7	8.0	8.8
OTHER/COMBINATIONS.....	5.8	5.7	5.6	6.4	5.5	6.2	5.7	5.8
DON'T KNOW TYPE/NOT REPORTED.....	3.8	2.5	2.4	4.3	4.4	2.7	4.2	3.1
NO INSULATION/DON'T KNOW/NOT REPORTED.....	23.2	21.5	17.9	25.9	24.6	20.9	22.8	24.1

SEE NOTES AT END OF TABLE

TABLE 42. THERMAL CHARACTERISTICS BY CENSUS REGION, AREA TYPE AND SMSA/NON-SMSA (PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	CENSUS REGION				AREA TYPE		SMSA/NON-SMSA	
		NORTHEAST	MIDWEST CENTRAL	SOUTH	WEST	URBAN	RURAL	SMSA	NONSMSA
HAVE WALL INSULATION (SINGLE-FAMILY UNITS)									
YES.....	64.4	72.2	74.2	60.9	49.2	59.0	74.0	60.8	70.8
ALL WALLS.....	52.6	58.2	62.1	49.3	39.5	47.0	62.5	49.7	57.7
SOME WALLS.....	11.8	14.0	12.1	11.6	9.7	12.0	11.4	11.1	13.1
NO.....	20.5	15.5	13.8	22.1	31.8	23.0	16.1	21.4	18.9
DON'T KNOW/NOT REPORTED.....	15.1	12.2	11.9	17.1	19.0	18.1	9.9	17.8	10.3
FLOOR INSULATION (SINGLE-FAMILY UNITS)									
HAVE BASEMENT/CRAWL SPACE.....	78.2	89.5	85.7	69.4	66.8	75.9	82.3	75.0	83.9
HEATED.....	23.0	37.5	42.5	7.0	10.5	25.0	19.5	24.4	20.5
NOT HEATED.....	55.1	52.0	47.3	62.4	56.3	50.9	62.8	50.5	63.4
HAVE FLOOR INSULATION.....	8.7	10.0	7.9	10.6	5.0	5.9	13.7	6.6	12.4
ALL PARTS INSULATED.....	6.9	6.8	6.0	9.2	3.8	4.4	11.2	5.0	10.2
SOME PARTS INSULATED.....	1.8	3.2	1.9	1.4	1.2	1.5	2.4	1.7	2.1
NO FLOOR INSULATION.....	38.7	36.4	31.7	42.2	44.4	36.7	42.1	36.2	43.1
DON'T KNOW/NOT REPORTED.....	7.8	5.6	7.7	9.5	6.8	8.3	7.0	7.7	8.0
NO BASEMENT/CRAWL SPACE.....	21.8	10.5	10.3	30.6	33.2	24.2	17.7	25.0	16.1
INSULATION CHARACTERISTICS (SINGLE-FAMILY UNITS)									
UNITS WITH SOME OF ALL STORM WINDOWS, AND SOME OR ALL STORM DOORS, AND ROOF OR CEILING INSULATION.....	48.8	71.3	76.8	33.8	14.4	44.4	56.4	45.0	55.4
UNITS WITH ONE OR MORE OF THESE TYPES OF INSULATION..	89.8	98.6	99.1	85.4	76.3	89.1	91.2	90.0	89.6
UNITS WITH NONE OF THESE TYPES OF INSULATION.....	10.2	1.4	.9	14.6	23.7	10.9	8.8	10.0	10.4

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. PERCENTAGES ARE CALCULATED ON UNROUNDED NUMBERS. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.
 SOURCE: RESIDENTIAL AND COMMERCIAL ENERGY, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 43. THERMAL CHARACTERISTICS BY HOUSING STRUCTURE AND OWNERSHIP
(MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED)

HOUSEHOLD CHARACTERISTICS	HOUSING STRUCTURE BY OWNERSHIP															
	SINGLE-FAMILY DETACHED		SINGLE-FAMILY ATTACHED		BUILDING WITH 2 TO 4 UNITS		BUILDING WITH 5 OR MORE UNITS		MOBILE HOME		TOTAL					
	OWN	RENT	OWN	RENT	OWN	RENT	OWN	RENT	OWN	RENT	OWN	RENT				
TOTAL HOUSEHOLDS.....	81.6	53.0	45.5	7.5	3.3	2.2	1.1	9.9	2.0	7.9	10.8	1.0	9.8	4.6	3.6	1.0
NUMBER OF WINDOWS																
1 TO 6.....	13.7	2.1	1.5	.6	.6	.3	.3	3.0	.2	2.8	7.7	.7	7.1	.3	.2	-
7 TO 12.....	33.6	22.4	18.9	3.5	1.2	.7	.5	4.9	1.0	3.9	2.5	.2	2.3	2.6	2.1	.6
13 TO 18.....	21.9	17.2	15.0	2.2	1.1	.9	.2	1.6	.5	1.1	.3	.1	.2	1.7	1.2	.4
19 OR MORE.....	12.2	11.3	10.0	1.3	.3	.3	.1	.5	.3	.2	-	-	-	.1	.1	-
NONE.....	.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AVERAGE NUMBER OF WINDOWS.....	12.4	14.5	14.8	13.0	11.7	12.7	9.7	9.5	12.9	8.7	5.1	6.3	5.0	11.6	11.6	11.6
SIZE AND NUMBER OF WINDOWS																
LARGE (24 SQ. FT. OR LARGER)																
1.....	19.1	14.3	12.8	1.5	.6	.5	.1	1.6	.4	1.1	2.2	.2	2.0	.5	.4	.1
2.....	10.6	7.0	6.4	.7	.6	.4	.2	.9	.1	.7	1.5	.2	1.3	.6	.4	.1
3 OR MORE.....	16.7	11.3	10.0	1.3	.8	.6	.3	1.7	.4	1.3	2.0	.3	1.7	.9	.7	.2
NONE/NC WINDOWS.....	35.3	20.4	16.3	4.1	1.2	.8	.4	5.8	1.0	4.7	5.1	.4	4.8	2.8	2.1	.6
AVERAGE NUMBER OF LARGE SIZE WINDOWS.....	1.7	1.9	1.9	1.6	2.2	2.1	2.2	1.4	1.8	1.3	1.3	2.0	1.2	1.3	1.3	1.1
MEDIUM (MORE THAN 6, LESS THAN 24 SQ. FT.)																
1 TO 4.....	17.3	7.9	6.7	1.2	.7	.6	.2	2.5	.4	2.1	5.1	.4	4.8	1.0	.8	.2
5 TO 8.....	23.8	15.9	13.6	2.3	.7	.4	.3	3.5	.6	2.9	2.1	.3	1.8	1.6	1.3	.4
9 TO 12.....	16.8	12.8	10.9	1.9	.8	.6	.2	1.8	.5	1.3	.4	-	.4	1.0	.8	.2
13 OR MORE.....	16.0	13.7	11.9	1.7	.6	.5	.1	.9	.3	.6	.2	-	.2	.6	.4	.1
NONE/NC WINDOWS.....	7.6	2.7	2.3	.4	.4	.1	.3	1.2	.2	1.0	3.0	.3	2.7	.4	.3	.1
AVERAGE NUMBER OF MEDIUM SIZE WINDOWS.....	8.0	9.5	9.6	8.9	7.7	8.5	6.1	6.4	8.6	5.9	3.1	3.5	3.0	6.9	6.8	7.1
SMALL (6 SQ. FT. OR SMALLER)																
1.....	15.1	8.0	6.6	1.5	.6	.5	.1	2.8	.5	2.2	2.8	.2	2.6	.9	.8	.2
2.....	14.9	10.2	8.9	1.4	.7	.6	.2	1.9	.5	1.5	1.0	-	1.0	1.0	.7	.3
3.....	7.8	5.9	5.2	.7	.4	.3	.1	.6	.1	.5	.4	-	.3	.5	.4	.1
4 OR MORE.....	21.4	17.5	15.8	1.7	.5	.4	.2	1.2	.4	.8	.4	.1	.4	1.7	1.4	.3
NONE/NC WINDOWS.....	22.4	11.3	9.1	2.2	1.0	.5	.5	3.3	.5	2.9	6.2	.7	5.5	.5	.4	.1
AVERAGE NUMBER OF SMALL SIZE WINDOWS.....	2.6	3.2	3.3	2.5	1.8	2.1	1.3	1.7	2.6	1.5	.8	.0	.8	3.4	3.4	3.4

SEE NOTES AT END OF TABLE

TABLE 43. THERMAL CHARACTERISTICS BY HOUSING STRUCTURE AND OWNERSHIP
(MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	HOUSING STRUCTURE BY OWNERSHIP														
	SINGLE-FAMILY DETACHED		SINGLE-FAMILY ATTACHED		BUILDING WITH 2 TO 4 UNITS		BUILDING WITH 5 OR MORE UNITS		MOBILE HOME		TOTAL				
	OWN	RENT	OWN	RENT	OWN	RENT	OWN	RENT	OWN	RENT	OWN	RENT			
NUMBER OF STORM WINDOWS															
1 TO 6.....	8.9	3.5	2.7	0.7	0.3	0.2	0.1	1.8	0.3	1.5	3.3	0.4	2.9	0.2	0.1
7 TO 12.....	18.0	13.1	11.8	1.3	.8	.6	.2	2.4	.7	1.7	.6	—	.6	1.1	1.0
13 TO 18.....	12.4	10.1	9.2	.9	.7	.6	.1	.7	.3	.4	.2	—	.1	.7	.6
19 OR MORE.....	7.4	6.9	6.3	.6	.2	.1	—	.3	.2	.1	—	—	—	.1	.1
NONE/NO WINDOWS.....	34.9	19.5	15.4	4.1	1.4	.8	.6	4.8	.5	4.3	6.7	.6	6.1	2.5	1.9
AVERAGE NUMBER OF STORM WINDOWS.....	7.0	8.7	9.2	5.4	6.8	8.0	4.2	4.8	8.9	3.8	1.7	2.0	1.7	5.1	5.5
AVERAGE NUMBER OF LARGE SIZE STORM WINDOWS.....	.8	1.0	1.0	.4	.8	.9	.5	.6	.9	.5	.4	.6	.4	.5	.6
AVERAGE NUMBER OF MEDIUM SIZE STORM WINDOWS.....	4.9	6.1	6.4	4.1	5.3	6.2	3.3	3.5	6.6	2.8	1.1	1.2	1.1	3.3	3.5
AVERAGE NUMBER OF SMALL SIZE STORM WINDOWS.....	1.3	1.7	1.8	1.0	.7	.9	.4	.7	1.4	.5	.2	.2	.2	1.3	1.4
PERCENT OF WINDOWS WITH STORM WINDOWS															
100 PERCENT.....	31.4	22.1	20.2	1.9	1.2	.9	.4	3.1	.9	2.2	3.4	.3	3.1	1.5	1.2
76 TO 99 PERCENT.....	7.3	5.4	4.9	.5	.4	.4	—	.9	.3	.7	.1	—	.1	.4	.3
51 TO 75 PERCENT.....	3.8	3.1	2.6	.5	.1	—	—	.4	.1	.3	.2	—	.2	.1	.1
1 TO 50 PERCENT.....	4.3	2.9	2.4	.5	.2	.2	—	.7	.2	.5	.4	.1	.3	.2	.1
NONE/NO WINDOWS.....	34.9	19.5	15.4	4.1	1.4	.8	.6	4.8	.5	4.3	6.7	.6	6.1	2.5	1.9

SEE NOTES AT END OF TABLE

TABLE 43. THERMAL CHARACTERISTICS BY HOUSING STRUCTURE AND OWNERSHIP
(MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	HOUSING STRUCTURE BY OWNERSHIP														
	SINGLE-FAMILY DETACHED		SINGLE-FAMILY ATTACHED		BUILDING WITH 2 TO 4 UNITS		BUILDING WITH 5 OR MORE UNITS		MOBILE HOME		TOTAL				
	OWN	RENT	TOTAL	OWN	RENT	TOTAL	OWN	RENT	TOTAL	OWN	RENT	TOTAL			
NUMBER OF OUTSIDE DOORS	7.8	0.4	0.2	0.3	0.2	0.1	2.2	0.3	2.0	4.5	0.2	4.4	0.2	0.2	0.1
1.....	36.5	22.2	17.9	4.2	1.7	1.0	5.3	1.0	4.3	3.5	.4	3.1	3.9	3.0	.9
2.....	22.5	19.2	17.1	2.1	.8	.2	1.3	.5	.8	.7	.2	.6	.5	.4	.1
3.....	12.2	11.0	10.1	.9	.5	.1	.5	.2	.3	.2	—	.1	.1	.1	—
4 OR MORE.....	2.6	—	—	—	—	—	.7	.1	.6	1.9	.2	1.6	—	—	—
AVERAGE NUMBER OF DOORS.....	2.5	2.9	3.0	2.6	2.5	2.4	1.9	2.2	1.8	1.3	1.6	1.3	2.1	2.1	2.0
TYPE AND NUMBER OF OUTSIDE DOORS	12.6	2.4	2.1	.8	.4	.3	2.7	.3	2.4	6.1	.4	5.7	.5	.4	.1
STANDARD DOORS	41.7	29.3	24.7	4.7	1.7	.5	5.1	1.1	4.0	1.9	.2	1.7	3.8	2.8	.9
1.....	17.4	15.2	13.4	1.8	.7	.1	1.0	.3	.7	.2	—	.2	.3	.3	.1
2.....	6.5	6.0	5.3	.7	.2	.1	.3	.1	.2	—	—	—	—	—	—
3 OR MORE.....	3.5	.1	.1	—	—	—	.8	.2	.6	2.7	.5	2.2	—	—	—
NONE/NC DOORS.....	2.2	2.5	2.5	2.4	2.1	2.0	1.7	2.0	1.7	1.0	.7	1.0	2.0	2.0	2.0
AVERAGE NUMBER OF STANDARD DOORS.....	15.8	11.1	10.5	.6	.6	.3	1.0	.2	.8	2.6	.6	2.1	.5	.4	.1
SLIDING GLASS DOORS	4.9	3.7	3.5	.2	.3	—	.1	.1	.1	.7	.1	.6	—	—	—
1.....	61.0	38.2	31.5	6.7	2.4	1.6	8.8	1.7	7.1	7.5	.3	7.2	4.1	3.2	1.0
2 OR MORE.....	.3	.4	.4	.1	.4	.4	.1	.2	.1	.4	.9	.3	.1	.1	.1
AVERAGE NUMBER OF SLIDING GLASS DOORS.....	SEE NOTES AT END OF TABLE														

TABLE 43. THERMAL CHARACTERISTICS BY HOUSING STRUCTURE AND OWNERSHIP (MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	HOUSING STRUCTURE BY OWNERSHIP																
	SINGLE-FAMILY DETACHED			SINGLE-FAMILY ATTACHED			BUILDING WITH 2 TO 4 UNITS			BUILDING WITH 5 OR MORE UNITS			TOTAL				
	TOTAL	OWN	RENT	TOTAL	OWN	RENT	TOTAL	OWN	RENT	TOTAL	OWN	RENT	TOTAL	OWN	RENT		
NUMBER OF STORM DOORS																	
1.....	13.0	7.8	6.6	1.2	0.5	0.4	0.1	1.9	0.4	1.4	1.4	1.5	0.1	1.4	1.4	1.1	0.3
2.....	22.0	17.6	15.7	1.9	1.1	.8	.3	1.8	.6	1.2	1.2	.9	.2	.7	.7	.6	.1
3.....	8.9	8.3	7.9	.4	.3	.2	-	.2	.1	.1	.1	.1	.1	-	.1	.1	-
4 OR MORE.....	2.9	2.7	2.6	.1	.1	.1	-	.1	.1	.1	.1	-	-	-	-	-	-
NONE/NC DOORS.....	34.9	16.7	12.8	3.9	1.4	.7	.6	6.0	.8	5.2	5.2	8.4	.7	7.7	2.4	1.8	.7
AVERAGE NUMBER OF STORM DOORS.....	1.2	1.5	1.6	.9	1.2	1.4	.7	.6	1.1	.5	.3	.3	.6	.3	.7	.7	.5
AVERAGE NUMBER OF STANDARD STORM DOORS.....	1.0	1.3	1.4	.9	1.0	1.2	.7	.6	1.1	.5	.1	.1	.1	.1	.6	.7	.5
AVERAGE NUMBER OF SLIDING GLASS STORM DOORS.....	.2	.2	.2	-	.1	.2	.1	-	.1	-	-	.2	.5	.1	-	-	-
PERCENT OF OUTSIDE DOORS WITH STORM DOORS																	
100 PERCENT.....	26.3	20.2	18.5	1.7	1.3	1.1	.3	2.5	.8	1.7	1.5	1.5	.3	1.2	.8	.6	.1
51 TO 99 PERCENT.....	7.6	6.7	6.0	.7	.2	.1	.1	.3	.1	.2	.3	.3	-	.2	.1	.1	-
1 TO 50 PERCENT.....	12.9	9.4	8.1	1.2	.4	.3	.1	1.2	.3	.8	.6	.6	-	.6	1.4	1.1	.3
NONE/NC DOORS.....	34.9	16.7	12.8	3.9	1.4	.7	.6	6.0	.8	5.2	5.2	8.4	.7	7.7	2.4	1.8	.7

SEE NOTES AT END OF TABLE

TABLE 43. THERMAL CHARACTERISTICS BY HOUSING STRUCTURE AND OWNERSHIP
(MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	HOUSING STRUCTURE BY OWNERSHIP														
	SINGLE-FAMILY DETACHED			SINGLE-FAMILY ATTACHED			BUILDING WITH 2 TO 4 UNITS			BUILDING WITH 5 OR MORE UNITS			MOBILE HOME		
	TOTAL	OWN	RENT	TOTAL	OWN	RENT	TOTAL	OWN	RENT	TOTAL	OWN	RENT	TOTAL	OWN	RENT
TOTAL SINGLE-FAMILY UNITS.....	56.3	53.0	45.5	7.5	3.3	2.2	1.1	-	-	-	-	-	-	-	-
HAVE ROOF OR CEILING INSULATION (SINGLE-FAMILY UNITS)															
YES.....	43.2	41.4	38.1	3.3	1.8	1.4	.4	-	-	-	-	-	-	-	-
ALL INSULATED.....	38.6	37.1	34.4	2.7	1.5	1.1	.4	-	-	-	-	-	-	-	-
PART INSULATED.....	4.1	3.8	3.2	.6	.2	.2	-	-	-	-	-	-	-	-	-
DON'T KNOW AMOUNT/NOT REPORTED.....	.5	.5	.5	.1	-	-	-	-	-	-	-	-	-	-	-
NO.....	8.1	7.3	5.3	2.0	.8	.6	.2	-	-	-	-	-	-	-	-
DON'T KNOW/NOT REPORTED.....	4.9	4.2	2.0	2.2	.7	.3	.4	-	-	-	-	-	-	-	-
TYPE OF INSULATION															
BATTS ONLY.....	21.5	20.5	18.8	1.7	1.0	.7	.3	-	-	-	-	-	-	-	-
AVERAGE NUMBER OF INCHES.....	5.3	5.3	5.4	4.3	4.7	4.8	4.5	-	-	-	-	-	-	-	-
LOOSE FILL ONLY.....	11.7	11.4	10.4	.9	.3	.3	-	-	-	-	-	-	-	-	-
AVERAGE NUMBER OF INCHES.....	6.5	6.5	6.6	5.3	4.3	4.3	3.0	-	-	-	-	-	-	-	-
BATTS AND LOOSE FILL ONLY.....	4.7	4.6	4.4	.2	.1	.1	-	-	-	-	-	-	-	-	-
AVERAGE NUMBER OF INCHES.....	10.3	10.3	10.3	9.4	14.5	14.5	NA	-	-	-	-	-	-	-	-
OTHER/COMBINATIONS.....	3.2	3.1	2.9	.2	.2	.2	-	-	-	-	-	-	-	-	-
DON'T KNOW TYPE/NOT REPORTED.....	2.1	1.9	1.5	.4	.2	.2	.1	-	-	-	-	-	-	-	-
NO INSULATION/DON'T KNOW/NOT REPORTED.....	13.1	11.6	7.4	4.2	1.5	.9	.7	-	-	-	-	-	-	-	-

SEE NOTES AT END OF TABLE

TABLE 43. THERMAL CHARACTERISTICS BY HOUSING STRUCTURE AND OWNERSHIP (MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	HOUSING STRUCTURE BY OWNERSHIP														
	SINGLE-FAMILY DETACHED			SINGLE-FAMILY ATTACHED			BUILDING WITH 2 TO 4 UNITS			BUILDING WITH 5 OR MORE UNITS			MOBILE HOME		
	TOTAL	OWN	RENT	TOTAL	OWN	RENT	TOTAL	OWN	RENT	TOTAL	OWN	RENT	TOTAL	OWN	RENT
HAVE WALL INSULATION (SINGLE-FAMILY UNITS)															
YES.....	36.2	34.7	31.9	2.8	1.5	1.2	0.4	-	-	-	-	-	-	-	-
ALL WALLS.....	29.6	28.4	26.4	2.1	1.1	.8	.4	-	-	-	-	-	-	-	-
SOME WALLS.....	6.6	6.3	5.5	.7	.4	.4	.0	-	-	-	-	-	-	-	-
NO.....	11.5	10.8	8.4	2.4	.8	.6	.2	-	-	-	-	-	-	-	-
DON'T KNOW/NOT REPORTED.....	8.5	7.5	5.2	2.3	1.0	.5	.5	-	-	-	-	-	-	-	-
FLOOR INSULATION (SINGLE-FAMILY UNITS)															
HAVE BASEMENT/CRAWL SPACE.....	44.0	41.6	35.8	5.8	2.4	1.8	.6	-	-	-	-	-	-	-	-
HEATED.....	13.0	12.0	11.0	1.0	1.0	.8	.2	-	-	-	-	-	-	-	-
NOT HEATED.....	31.0	29.6	24.8	4.9	1.4	1.0	.4	-	-	-	-	-	-	-	-
HAVE FLOOR INSULATION.....	4.9	4.8	4.5	.3	.1	.1	.1	-	-	-	-	-	-	-	-
ALL PARTS INSULATED.....	3.9	3.8	3.4	.3	.1	.1	.1	-	-	-	-	-	-	-	-
SOME PARTS INSULATED.....	1.0	1.0	1.0	-	-	-	-	-	-	-	-	-	-	-	-
NO FLOOR INSULATION.....	21.8	20.8	17.5	3.3	1.0	.7	.3	-	-	-	-	-	-	-	-
DON'T KNOW/NOT REPORTED.....	4.4	4.1	2.8	1.2	.3	.2	.1	-	-	-	-	-	-	-	-
NO BASEMENT/CRAWL SPACE.....	12.3	11.4	9.7	1.7	.9	.5	.4	-	-	-	-	-	-	-	-
INSULATION CHARACTERISTICS (SINGLE-FAMILY UNITS)															
UNITS WITH SOME OR ALL STORM WINDOWS, AND SOME OR ALL STORM DOORS, AND ROOF OR CEILING INSULATION.....	27.4	26.4	24.8	1.6	1.0	.9	.2	-	-	-	-	-	-	-	-
UNITS WITH ONE OF MORE OF THESE TYPES OF INSULATION..	50.6	47.8	42.5	5.3	2.7	2.0	.7	-	-	-	-	-	-	-	-
UNITS WITH NONE OF THESE TYPES OF INSULATION.....	5.7	5.2	3.0	2.2	.6	.2	.3	-	-	-	-	-	-	-	-

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.
 SOURCE: RESIDENTIAL AND COMMERCIAL ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 44. THERMAL CHARACTERISTICS BY HOUSING STRUCTURE AND OWNERSHIP
(PERCENTAGE OF HOUSEHOLDS)

HOUSEHOLD CHARACTERISTICS	HOUSING STRUCTURE BY OWNERSHIP														
	SINGLE-FAMILY DETACHED			SINGLE-FAMILY ATTACHED			BUILDING WITH 2 TO 4 UNITS			BUILDING WITH 5 OR MORE UNITS			MOBILE HOME		
	TOTAL	OWN	RENT	TOTAL	OWN	RENT	TOTAL	OWN	RENT	TOTAL	OWN	RENT		TOTAL	OWN
TOTAL HOUSEHOLDS.....	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	100.0	100.0
NUMBER OF WINDOWS															
1 TO 6.....	16.8	4.0	3.3	8.0	18.6	13.7	28.8	30.1	10.9	14.9	71.9	68.6	72.3	5.5	6.2
7 TO 12.....	41.1	42.3	41.5	46.7	36.9	33.3	44.6	49.0	49.9	48.8	23.0	22.3	23.1	56.5	57.4
13 TO 18.....	26.8	22.4	33.1	28.7	34.3	40.7	20.8	16.3	25.0	14.1	2.6	7.0	2.1	35.6	34.1
19 OR MORE.....	15.0	21.3	22.0	16.7	10.2	12.3	5.8	4.5	14.2	2.1	.4	2.1	.2	2.3	2.4
NONE.....	3										2.1		2.3		
SIZE AND NUMBER OF WINDOWS															
LARGE (24 SQ. FT. OR LARGER)															
1.....	23.4	27.0	28.2	19.4	18.9	22.0	12.5	15.6	20.8	14.3	20.0	17.8	20.3	9.8	9.8
2.....	12.9	13.3	14.0	8.9	18.5	17.2	21.2	8.6	6.9	9.0	13.9	20.3	13.2	12.1	11.7
3 OR MORE.....	20.5	21.2	22.0	16.8	25.6	24.9	27.2	17.6	20.0	17.0	18.4	25.1	17.8	18.5	19.5
NONE/NC WINDOWS.....	43.2	38.5	35.8	55.0	36.9	35.9	39.1	58.2	52.3	59.7	47.6	36.8	48.7	59.5	58.9
MEDIUM (MORE THAN 6, LESS THAN 24 SQ. FT.)															
1 TO 4.....	21.2	15.0	14.8	16.4	22.3	24.6	17.4	24.8	17.8	26.6	47.6	35.1	48.9	22.4	22.6
5 TO 8.....	29.2	30.0	29.9	30.8	21.4	19.4	25.6	35.6	30.3	36.9	19.1	28.9	18.1	35.4	34.8
9 TO 12.....	20.6	24.1	24.1	24.7	25.3	28.8	17.9	18.1	26.9	15.9	4.0	2.1	4.3	20.9	21.5
13 OR MORE.....	19.6	25.8	26.2	23.1	19.7	22.8	13.2	9.3	16.4	7.5	1.8	4.3	1.5	12.6	12.3
NONE/NC WINDOWS.....	9.4	5.1	5.1	5.1	11.3	4.4	25.9	12.2	8.6	13.1	27.4	29.7	27.2	8.6	8.8
SMALL (6 SQ. FT. OR SMALLER)															
1.....	18.5	15.2	14.4	19.5	19.0	22.1	12.2	28.1	27.0	28.3	25.6	15.4	26.6	19.9	20.9
2.....	18.2	19.3	19.5	18.0	22.6	25.6	16.3	19.5	22.5	18.8	9.2	2.8	9.9	21.1	18.7
3.....	9.6	11.2	11.4	9.9	11.2	14.0	5.4	6.3	5.8	6.4	3.4	4.2	3.3	11.7	11.5
4 OR MORE.....	26.3	33.0	34.7	23.1	16.0	16.5	14.8	12.4	21.2	10.2	4.1	7.6	3.7	37.4	38.6
NONE/NC WINDOWS.....	27.4	21.4	20.0	29.5	31.3	21.8	51.3	33.7	23.4	36.3	57.8	70.1	56.5	9.8	10.3

SEE NOTES AT END OF TABLE

TABLE 44. THERMAL CHARACTERISTICS BY HOUSING STRUCTURE AND OWNERSHIP
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	HOUSING STRUCTURE BY OWNERSHIP															
	TOTAL		SINGLE-FAMILY DETACHED		SINGLE-FAMILY ATTACHED		BUILDING WITH 2 TO 4 UNITS		BUILDING WITH 5 OR MORE UNITS		MOBILE HOME					
	OWN	RENT	OWN	RENT	OWN	RENT	OWN	RENT	OWN	RENT	OWN	RENT				
NUMBER OF STORE WINDOWS																
1 TO 6.....	11.0	6.5	6.0	9.5	8.4	7.3	10.6	17.8	13.9	18.8	30.4	35.1	29.9	3.9	3.5	5.2
7 TO 12.....	22.1	24.7	25.9	16.9	25.2	27.3	20.9	23.9	34.5	21.2	5.8	-	6.4	24.2	26.2	16.9
13 TO 18.....	15.2	19.0	20.3	11.4	20.7	25.7	10.2	7.1	13.5	5.5	1.5	4.5	1.2	16.1	16.4	15.2
19 OR MORE.....	9.1	12.0	13.8	7.9	4.5	6.1	1.2	3.0	11.7	.8	.1	-	.1	1.3	1.7	-
NONE/NC WINDOWS.....	42.7	36.8	33.9	54.3	41.1	33.6	57.1	48.1	26.4	53.6	62.3	60.3	62.5	54.5	52.2	62.7
PERCENT OF WINDOWS WITH STORM WINDOWS																
100 PERCENT.....	38.4	41.7	44.4	25.4	37.6	39.4	33.7	31.1	43.9	27.8	31.9	34.4	31.6	32.3	34.3	25.4
76 TO 99 PERCENT.....	8.9	10.2	10.8	7.1	12.8	16.7	4.6	9.6	14.1	8.4	1.0	-	1.1	7.9	8.2	7.0
51 TO 75 PERCENT.....	4.6	5.8	5.7	6.3	2.1	1.4	3.6	4.4	5.6	4.1	1.5	-	1.6	1.4	1.5	.8
1 TO 50 PERCENT.....	5.3	5.4	5.2	6.9	6.4	9.0	.9	6.9	10.1	6.1	3.3	5.3	3.1	3.9	3.8	4.1
NONE/NC WINDOWS.....	42.7	36.8	33.9	54.3	41.1	33.6	57.1	48.1	26.4	53.6	62.3	60.3	62.5	54.5	52.2	62.7
NUMBER OF OUTSIDE DOORS																
1.....	9.6	1.1	.8	3.1	7.7	8.2	6.6	22.2	12.7	24.6	42.0	16.5	44.7	4.6	4.2	5.7
2.....	44.8	41.8	39.4	56.3	52.7	46.4	65.8	53.3	49.2	54.6	32.3	39.2	31.6	83.2	83.1	83.6
3.....	27.6	36.2	37.5	28.2	25.7	30.8	15.1	12.7	22.9	10.2	6.9	17.8	5.8	10.8	10.9	10.6
4 OR MORE.....	14.9	20.8	22.2	12.4	13.9	14.6	12.5	4.6	8.8	3.5	1.5	2.0	1.4	1.4	1.8	-
NONE.....	3.2	-	-	-	-	-	-	7.2	7.4	7.1	17.3	24.5	16.6	-	-	-
TYPE AND NUMBER OF OUTSIDE DOORS																
STANDARD DOORS																
1.....	15.4	4.6	4.6	4.6	23.7	19.8	32.0	27.5	14.5	30.8	56.5	39.2	58.2	10.9	12.2	6.4
2.....	51.1	55.4	54.3	62.0	50.5	51.2	49.1	51.2	55.6	50.0	17.2	15.5	17.4	80.8	78.7	88.5
3.....	21.3	28.6	29.4	23.8	20.8	25.4	11.0	10.1	15.6	8.7	1.5	-	1.7	7.4	8.0	5.2
4 OR MORE.....	7.9	11.3	11.6	9.5	5.0	3.6	7.9	3.1	5.6	2.5	-	-	-	.5	.7	-
NONE/NC DOORS.....	4.3	.1	.1	-	-	-	-	8.1	8.6	8.0	24.8	45.3	22.7	.3	.4	-
SLIDING GLASS DOORS																
1.....	19.3	20.9	23.1	7.6	18.8	13.5	30.0	10.0	11.8	9.5	24.3	55.6	21.1	10.2	11.4	6.1
2 OR MORE.....	6.0	7.0	7.7	2.7	9.9	12.9	3.8	1.3	2.8	.9	6.3	12.5	5.7	.9	1.2	-
NONE/NC DOORS.....	74.7	72.1	69.2	89.7	71.3	73.7	66.3	88.7	85.4	89.6	69.4	31.9	73.2	88.8	87.4	93.9

SEE NOTES AT END OF TABLE

TABLE 44. THERMAL CHARACTERISTICS BY HOUSING STRUCTURE AND OWNERSHIP
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	HOUSING STRUCTURE BY OWNERSHIP															
	SINGLE-FAMILY DETACHED			SINGLE-FAMILY ATTACHED			BUILDING WITH 2 TO 4 UNITS			BUILDING WITH 5 OR MORE UNITS						
	TOTAL	OWN	RENT	TOTAL	OWN	RENT	TOTAL	OWN	RENT	TOTAL	OWN	RENT				
NUMBER OF STORM DOORS																
1.....	15.9	14.7	14.5	16.3	14.2	16.8	8.6	18.7	21.5	18.0	13.6	9.6	14.0	30.1	31.5	25.0
2.....	26.9	33.1	34.5	24.9	33.2	35.5	28.3	17.9	28.9	15.1	8.0	15.7	7.2	14.6	16.2	8.6
3.....	10.9	15.6	17.3	5.5	8.2	10.7	3.0	1.8	4.4	1.1	.9	7.6	.2	2.5	2.6	2.3
4 OR MORE.....	3.5	5.1	5.6	1.7	2.7	4.0	—	.9	4.5	—	—	—	—	.2	.3	—
NONE/NC DOORS.....	42.7	31.5	28.1	51.5	41.7	33.0	60.1	60.7	40.6	65.7	77.6	67.1	78.7	52.7	49.4	64.1
PERCENT OF OUTSIDE DOORS WITH STORM DOORS																
100 PERCENT.....	32.2	38.2	40.7	23.0	40.8	47.6	26.4	24.9	40.4	21.0	14.0	29.9	12.3	16.2	17.9	10.4
51 TO 99 PERCENT.....	9.3	12.7	13.3	9.0	5.9	6.3	4.9	2.8	3.7	2.6	2.5	3.0	2.5	1.7	1.9	1.0
1 TO 50 PERCENT.....	15.8	17.6	17.8	16.5	11.6	13.0	8.6	11.6	15.4	10.7	5.9	—	6.5	29.4	30.7	24.6
NONE/NC DOORS.....	42.7	31.5	28.1	51.5	41.7	33.0	60.1	60.7	40.6	65.7	77.6	67.1	78.7	52.7	49.4	64.1
TOTAL SINGLE-FAMILY UNITS.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	—	—	—	—	—	—	—	—	—
HAVE ROOF OR CEILING INSULATION (SINGLE-FAMILY UNITS)																
YES.....	76.8	78.2	83.8	44.5	53.5	60.9	37.9	—	—	—	—	—	—	—	—	—
ALL INSULATED.....	68.5	70.0	75.7	35.5	45.4	50.1	35.6	—	—	—	—	—	—	—	—	—
PART INSULATED.....	7.3	7.3	7.1	8.1	7.3	10.8	—	—	—	—	—	—	—	—	—	—
DON'T KNOW AMOUNT.....	1.0	1.0	1.0	.9	.7	—	2.2	—	—	—	—	—	—	—	—	—
NOT REPORTED.....	14.5	13.9	11.7	26.8	24.0	24.6	22.8	—	—	—	—	—	—	—	—	—
DON'T KNOW/NOT REPORTED.....	8.8	7.9	4.5	28.7	22.5	14.5	39.4	—	—	—	—	—	—	—	—	—
TYPE OF INSULATION																
BATT ONLY.....	38.2	38.7	41.3	22.5	30.4	31.6	27.9	—	—	—	—	—	—	—	—	—
LOOSE FILL ONLY.....	20.7	21.5	23.0	12.3	8.5	11.8	1.5	—	—	—	—	—	—	—	—	—
FATS AND LOOSE FILL ONLY.....	8.3	8.7	9.8	2.1	2.4	2.6	2.0	—	—	—	—	—	—	—	—	—
OTHER/COMBINATIONS.....	5.8	5.8	6.3	2.4	5.3	7.4	1.0	—	—	—	—	—	—	—	—	—
DON'T KNOW TYPE.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
NOT REPORTED.....	3.8	3.6	3.4	5.0	6.8	7.4	5.5	—	—	—	—	—	—	—	—	—
NO INSULATION/DON'T KNOW/NOT REPORTED.....	23.2	21.8	16.2	55.5	46.5	39.1	62.1	—	—	—	—	—	—	—	—	—

SEE NOTES AT END OF TABLE

TABLE 44. THERMAL CHARACTERISTICS BY HOUSING STRUCTURE AND OWNERSHIP
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	HOUSING STRUCTURE BY OWNERSHIP														
	SINGLE-FAMILY DETACHED			SINGLE-FAMILY ATTACHED			BUILDING WITH 2 TO 4 UNITS			BUILDING WITH 5 OR MORE UNITS			MOBILE HOME		
	TOTAL	OWN	RENT	TOTAL	OWN	RENT	TOTAL	OWN	RENT	TOTAL	OWN	RENT	TOTAL	OWN	RENT
HAVE WALL INSULATION (SINGLE-FAMILY UNITS)															
YES.....	64.4	65.5	70.1	37.7	46.9	52.6	34.8	-	-	-	-	-	-	-	-
ALL WALLS.....	52.6	53.7	57.9	27.8	34.8	35.2	33.9	-	-	-	-	-	-	-	-
SOME WALLS.....	11.8	11.8	12.1	9.9	17.4	9	-	-	-	-	-	-	-	-	-
NO.....	20.5	20.3	18.4	31.8	23.2	26.1	17.0	-	-	-	-	-	-	-	-
DON'T KNOW/NOT REPORTED.....	15.1	14.2	11.5	30.5	29.9	21.3	48.2	-	-	-	-	-	-	-	-
FLOOR INSULATION (SINGLE-FAMILY UNITS)															
HAVE BASEMENT/CRAWL SPACE.....	78.2	78.5	78.7	77.4	73.1	79.4	59.6	-	-	-	-	-	-	-	-
HEATED.....	23.0	22.6	24.3	12.6	29.6	35.4	17.5	-	-	-	-	-	-	-	-
NOT HEATED.....	55.1	55.9	54.4	64.7	43.1	43.6	42.1	-	-	-	-	-	-	-	-
HAVE FLOOR INSULATION.....	8.7	9.0	9.8	4.3	3.3	3.6	2.6	-	-	-	-	-	-	-	-
ALL PARTS INSULATED.....	6.9	7.1	7.6	4.2	2.8	2.9	2.6	-	-	-	-	-	-	-	-
SOME PARTS INSULATED.....	1.8	1.9	2.2	.2	.4	.7	-	-	-	-	-	-	-	-	-
NO FLOOR INSULATION.....	38.7	39.2	38.4	44.0	30.5	32.7	25.8	-	-	-	-	-	-	-	-
DON'T KNOW/NOT REPORTED.....	7.8	7.7	6.3	16.4	9.3	7.3	13.7	-	-	-	-	-	-	-	-
NO BASEMENT/CRAWL SPACE.....	21.8	21.5	21.3	22.6	27.2	21.0	40.4	-	-	-	-	-	-	-	-
INSULATION CHARACTERISTICS (SINGLE-FAMILY UNITS)															
UNITS WITH SOME OR ALL STORM WINDOWS, AND SOME OR ALL STORM DOORS, AND ROOF OR CEILING INSULATION.....	48.8	45.8	54.6	21.3	31.4	39.5	14.3	-	-	-	-	-	-	-	-
UNITS WITH CMF OF PCRE OF THESE TYPES OF INSULATION..	89.8	90.3	93.5	70.6	83.2	89.3	70.2	-	-	-	-	-	-	-	-
UNITS WITH CMF OF THESE TYPES OF INSULATION.....	10.2	9.7	6.5	29.4	16.8	10.7	29.8	-	-	-	-	-	-	-	-

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. PERCENTAGES ARE CALCULATED ON UNROUNDED NUMBERS. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.
SOURCE: RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 45. THERMAL CHARACTERISTICS BY SIZE OF RESIDENCE
(MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED)

HOUSEHOLD CHARACTERISTICS	TOTAL	MEASURED HEATED SQUARE FOOTAGE OF RESIDENCE									
		LESS THAN 600	600 TO 999	1,000 TO 1,599	1,600 TO 1,999	2,000 TO 2,399	2,400 TO 2,999	3,000 CR MOFF			
TOTAL HOUSEHOLDS.....	81.6	7.5	21.1	24.0	10.0	7.8	6.1	5.2			
NUMBER OF WINDOWS											
1 TO 6.....	13.7	3.9	6.6	2.7	.3	.1	.1				
7 TO 12.....	33.6	2.7	10.5	12.2	3.6	2.3	1.4	.9			
13 TO 18.....	21.9	.7	3.3	6.6	4.3	3.3	2.2	1.5			
19 OR MORE.....	12.2	.1	.5	2.5	1.7	2.1	2.5	2.8			
NONE.....	.2	-	.2	-	-	-	-	-			
AVERAGE NUMBER OF WINDOWS.....	12.4	6.9	8.8	11.9	14.3	15.7	17.8	22.1			
SIZE AND NUMBER OF WINDOWS											
LARGE (24 SQ. FT. OR LARGER)											
1.....	19.1	.9	4.5	5.8	2.6	2.1	2.0	1.2			
2.....	10.6	.7	3.2	3.2	1.3	1.2	.9	.9			
3 OR MORE.....	16.7	1.4	3.2	4.7	2.3	1.8	1.5	1.8			
NONE/NC WINDOWS.....	35.2	4.5	11.1	10.3	3.8	2.6	1.7	1.3			
AVERAGE NUMBER OF LARGE SIZE WINDOWS.....	1.7	1.3	1.2	1.6	1.8	2.0	2.3	3.7			
MEDIUM (MORE THAN 6, LESS THAN 24 SQ. FT.)											
1 TO 4.....	17.2	2.8	6.0	4.8	1.6	1.0	.6	.6			
5 TO 8.....	23.8	2.0	7.3	7.6	2.8	2.0	1.3	.9			
9 TO 12.....	16.8	.6	3.6	5.8	2.8	1.9	1.3	.9			
13 OR MORE.....	16.0	.3	1.6	4.0	2.5	2.6	2.5	2.6			
NONE/NC WINDOWS.....	7.6	1.8	2.7	1.8	.3	.4	.4	.3			
AVERAGE NUMBER OF MEDIUM SIZE WINDOWS.....	8.0	4.1	5.8	7.9	9.4	10.0	11.3	13.9			
SMALL (6 SQ. FT. OR SMALLER)											
1.....	15.1	2.1	5.4	4.3	1.2	1.1	.6	.4			
2.....	14.5	1.1	3.6	5.0	2.1	1.4	1.0	.7			
3.....	7.8	.4	1.4	3.0	1.1	.7	.6	.6			
4 OR MORE.....	21.4	1.0	3.0	5.4	3.3	3.2	2.9	2.5			
NONE/NC WINDOWS.....	22.4	2.9	7.7	6.3	2.2	1.3	1.0	1.0			
AVERAGE NUMBER OF SMALL SIZE WINDOWS.....	2.6	1.6	1.7	2.5	3.2	3.6	4.2	4.4			

SEE NOTES AT END OF TABLE

TABLE 45. THERMAL CHARACTERISTICS BY SIZE OF RESIDENCE
(MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	MEASURED HEATED SQUARE FOOTAGE OF RESIDENCE						
		LESS THAN 600	600 TO 999	1,000 TO 1,599	1,600 TO 1,999	2,000 TO 2,999	2,400 TO 2,999	3,000 OR MORE
NUMBER OF STORM WINDOWS								
1 TO 6.....	8.9	1.5	3.7	2.2	0.6	0.5	0.3	0.3
7 TO 12.....	18.0	.7	4.5	6.1	2.8	1.7	1.2	1.0
13 TO 18.....	12.4	.2	1.4	3.5	2.4	2.4	1.5	1.0
19 OR MORE.....	7.4	-	.2	1.1	1.1	1.3	1.6	2.1
NONE/NO WINDOWS.....	34.9	5.1	11.3	11.1	3.1	1.9	1.5	.9
AVERAGE NUMBER OF STORM WINDOWS.....	7.0	1.9	3.8	6.0	9.1	10.9	12.3	16.1
AVERAGE NUMBER OF LARGE SIZE STORM WINDOWS.....	.8	.2	.5	.6	.9	1.2	1.4	2.3
AVERAGE NUMBER OF MEDIUM SIZE STORM WINDOWS.....	4.9	1.3	2.7	4.3	6.4	7.6	8.5	11.1
AVERAGE NUMBER OF SMALL SIZE STORM WINDOWS.....	1.3	.4	.6	1.1	1.8	2.2	2.4	2.7
PERCENT OF WINDOWS WITH STORM WINDOWS								
100 PERCENT.....	31.4	1.7	6.8	9.0	4.5	4.0	2.8	2.6
76 TO 99 PERCENT.....	7.3	.3	1.3	1.9	1.2	.9	.9	.9
51 TO 75 PERCENT.....	3.8	.1	.7	.8	.6	.6	.5	.5
1 TO 50 PERCENT.....	4.3	.3	.9	1.2	.6	.5	.4	.4
NONE/NO WINDOWS.....	34.9	5.1	11.3	11.1	3.1	1.9	1.5	.9

SEE NOTES AT END OF TABLE

TABLE 45. THERMAL CHARACTERISTICS BY SIZE OF RESIDENCE
(MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	MEASURED HEATED SQUARE FOOTAGE OF RESIDENCE						
		LESS THAN 600	600 TO 999	1,000 TO 1,599	1,600 TO 1,999	2,000 TO 2,399	2,400 TO 2,999	3,000 OR MORE
NUMBER OF OUTSIDE DOORS								
1.....	7.8	2.5	4.0	1.0	0.1	-	0.1	0.1
2.....	36.5	3.4	12.0	12.0	3.9	2.5	1.7	1.1
3.....	22.5	.4	3.0	7.8	3.8	3.3	2.4	1.8
4 OR MORE.....	12.2	.2	1.0	2.7	2.1	2.0	2.0	2.2
NONE.....	2.6	.9	1.1	.4	.1	-	-	-
AVERAGE NUMBER OF DOORS.....	2.5	1.6	2.0	2.5	2.9	3.1	3.3	3.6
TYPE AND NUMBER OF OUTSIDE DOORS								
STANDARD DOORS								
1.....	12.6	2.8	5.3	2.8	.7	.3	.3	.3
2.....	41.7	3.0	11.3	13.2	5.4	4.3	2.5	1.9
3.....	17.4	.4	2.3	5.7	2.8	2.3	2.4	1.6
4 OR MORE.....	6.5	.1	.6	1.5	.9	.9	1.0	1.3
NONE/NC DOORS.....	3.5	1.0	1.6	.7	.2	-	-	.1
AVERAGE NUMBER OF STANDARD DOORS.....	2.2	1.4	1.8	2.2	2.4	2.5	2.7	2.9
SLIDING GLASS DOORS								
1.....	15.8	.7	2.8	4.7	2.7	2.0	1.4	1.5
2 OR MORE.....	4.9	-	.5	1.1	.8	1.0	.7	.8
NONE/NC DOORS.....	61.0	6.7	17.9	18.2	6.5	4.8	4.0	2.9
AVERAGE NUMBER OF SLIDING GLASS DOORS.....	.3	.1	.2	.3	.5	.5	.6	.7

SEE NOTES AT END OF TABLE

TABLE 45. THERMAL CHARACTERISTICS BY SIZE OF RESIDENCE
(MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	MEASURED HEATED SQUARE FOOTAGE OF RESIDENCE						
		LESS THAN 600	600 TO 999	1,000 TO 1,599	1,600 TO 1,999	2,000 TO 2,399	2,400 TO 2,999	3,000 OR MORE
NUMBER OF STORM DOORS								
1.....	13.0	1.1	4.1	3.9	1.5	1.0	0.9	0.6
2.....	22.0	.6	4.0	7.4	3.9	2.7	2.0	1.3
3.....	8.9	-	.6	2.2	1.6	1.7	1.4	1.4
4 OR MORE.....	2.5	-	.1	.4	.4	.6	.5	.9
NONE/NC DOORS.....	34.9	5.7	12.3	10.1	2.7	1.8	1.4	1.0
AVERAGE NUMBER OF STORM DOORS.....	1.2	.3	.7	1.1	1.6	1.8	1.8	2.2
AVERAGE NUMBER OF STANDARD STORM DOORS.....	1.0	.3	.6	1.0	1.4	1.6	1.6	1.8
AVERAGE NUMBER OF SLIDING GLASS STORM DOORS.....	.2	-	.1	.1	.2	.3	.3	.4
PERCENT OF OUTSIDE DOORS WITH STORM DOORS								
100 PERCENT.....	26.3	1.0	4.8	7.9	4.3	3.5	2.5	2.4
51 TO 99 PERCENT.....	7.6	.1	.8	2.1	1.3	1.2	1.1	1.0
1 TO 50 PERCENT.....	12.9	.7	3.2	3.9	1.7	1.3	1.2	.9
NONE/NC DOORS.....	34.9	5.7	12.3	10.1	2.7	1.8	1.4	1.0

SEE NOTES AT END OF TABLE

TABLE 45. THERMAL CHARACTERISTICS BY SIZE OF RESIDENCE
(MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	MEASURED HEATED SQUARE FOOTAGE OF RESIDENCE						
		LESS THAN 600	600 TO 999	1,000 TO 1,599	1,600 TO 1,999	2,000 TO 2,399	2,400 TO 2,999	3,000 OR MORE
TOTAL SINGLE-FAMILY UNITS.....	56.3	1.9	8.4	18.2	9.4	7.4	5.9	5.0
HAVE ROOF OR CEILING INSULATION (SINGLE-FAMILY UNITS)								
YES.....	43.2	.7	5.0	13.8	7.8	6.4	5.0	4.4
ALL INSULATED.....	38.6	.6	4.3	12.2	6.9	6.0	4.5	4.1
PART INSULATED.....	4.1	.1	.6	1.3	.8	.4	.5	.3
DON'T KNOW AMOUNT/								
NO.....	.5	—	.1	.2	.1	—	—	—
DON'T KNOW/NOT REPORTED.....	8.1	.9	1.9	2.9	.9	.6	.5	.4
	4.9	.3	1.5	1.5	.6	.4	.5	.2
TYPE OF INSULATION								
BATS ONLY.....	21.5	.3	2.5	6.7	4.1	3.2	2.5	2.2
AVERAGE NUMBER OF INCHES..	5.3	8.7	4.9	5.1	5.2	5.5	5.3	5.6
LOOSE FILL ONLY.....	11.7	.2	1.3	4.1	2.0	1.7	1.3	1.0
AVERAGE NUMBER OF INCHES..	6.5	5.9	5.6	6.0	6.2	7.3	7.4	7.3
BATS AND LOOSE FILL ONLY...	4.7	.1	.4	1.2	.8	.9	.6	.7
AVERAGE NUMBER OF INCHES..	10.3	9.9	9.8	10.9	10.9	10.1	9.5	10.2
OTHER/COMBINATIONS.....	3.2	.1	.5	1.1	.4	.4	.3	.4
DON'T KNOW TYPE/								
NO INSULATION/DON'T KNOW/	2.1	.1	.3	.7	.5	.2	.2	.2
NOT REPORTED.....	13.1	1.2	3.4	4.4	1.5	1.0	.9	.6

SEE NOTES AT END OF TABLE

TABLE 45. THERMAL CHARACTERISTICS BY SIZE OF RESIDENCE
(MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	MEASURED HEATED SQUARE FOOTAGE OF RESIDENCE					
		LESS THAN 600	600 TO 999	1,000 TO 1,599	1,600 TO 1,999	2,000 TO 2,399	2,400 TO 2,999 OR MORE
HAVE WALL INSULATION (SINGLE-FAMILY UNITS)							
YES.....	36.2	0.6	4.3	11.1	6.2	5.9	3.9
ALL WALLS.....	29.6	.4	3.3	8.8	5.1	4.9	3.4
SOME WALLS.....	6.6	1.2	1.0	2.2	1.1	1.0	.5
NO.....	11.5	1.0	2.4	4.2	1.7	.8	.6
DON'T KNCH/NOT REFCRTD.....	8.5	.3	1.7	3.0	1.5	.7	.5
FLOOR INSULATION (SINGLE-FAMILY UNITS)							
HAVE BASEMENT/CRAWL SPACE.....	44.0	1.3	6.3	13.7	7.1	6.2	4.4
HEATED.....	13.0	.1	.3	1.3	2.3	3.0	3.0
NOT HEATED.....	31.0	1.2	6.0	12.3	4.8	3.2	1.3
HAVE FLOOR INSULATION.....	4.5	.1	.6	1.7	.8	.8	.4
ALL PARTS INSULATED.....	3.9	-	.6	1.3	.7	.6	.3
SOME PARTS INSULATED.....	1.0	-	.1	.4	.2	.2	.1
NO FLOOR INSULATION.....	21.8	1.1	4.4	9.0	3.1	2.1	.7
DON'T KNCH/NOT REPORTED.....	4.4	1.1	1.0	1.6	.9	.3	.2
NO BASEMENT/CRAWL SPACE.....	12.3	.6	2.2	4.5	2.2	1.2	.7
INSULATION CHARACTERISTICS (SINGLE-FAMILY UNITS)							
UNITS WITH SOME OR ALL STORM WINDOWS, AND SOME OR ALL STORM DOORS, AND ROOF OR CEILING INSULATION.....	27.4	.4	2.6	7.3	5.2	4.7	3.5
UNITS WITH CNF OR PCRE OF THESE TYPES OF INSULATION..	50.6	1.1	6.6	16.2	9.0	7.2	4.8
UNITS WITH NONE OF THESE TYPES OF INSULATION.....	5.7	.8	1.8	2.0	.4	.2	.2

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.

SOURCE: RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 46. THERMAL CHARACTERISTICS BY SIZE OF RESIDENCE
(PERCENTAGE OF HOUSEHOLDS)

HOUSEHOLD CHARACTERISTICS	TOTAL	MEASURED HEATED SQUARE FOOTAGE OF RESIDENCE							
		LESS THAN 600	600 TO 999	1,000 TO 1,599	1,600 TO 1,999	2,000 TO 2,399	2,400 TO 2,999	3,000 OR MORE	
TOTAL HOUSEHOLDS.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
NUMBER OF WINDOWS									
1 TO 6.....	16.8	52.8	31.1	11.1	3.5	1.5	1.8	.1	
7 TO 12.....	41.1	36.7	49.9	50.9	36.4	29.0	22.6	16.3	
13 TO 18.....	26.8	8.8	15.7	27.6	43.0	42.3	35.5	29.5	
19 OR MORE.....	15.0	1.3	2.3	10.5	17.1	27.2	40.2	54.1	
NONE.....	.5	.5	1.0	-	-	-	-	-	
SIZE AND NUMBER OF WINDOWS									
LARGE (24 SQ. FT. OR LARGER)									
1.....	23.4	11.5	21.4	24.1	25.6	27.2	33.2	23.4	
2.....	12.9	9.6	10.9	13.4	13.3	15.3	15.1	17.0	
3 OR MORE.....	20.5	18.8	15.0	19.4	23.2	23.7	23.8	35.3	
NONE/NC WINDOWS.....	43.2	60.1	52.6	43.1	37.8	33.9	27.9	24.3	
MEDIUM (MORE THAN 6, LESS THAN 24 SQ. FT.)									
1 TO 4.....	21.2	37.1	28.3	20.0	16.5	12.2	10.5	10.7	
5 TO 8.....	29.2	27.3	34.4	31.6	28.1	25.6	20.8	17.2	
9 TO 12.....	20.6	7.9	17.0	24.2	27.6	24.1	21.8	17.2	
13 OR MORE.....	15.6	4.2	7.4	16.7	24.8	32.8	40.5	50.0	
NONE/NC WINDOWS.....	9.4	23.5	12.8	7.6	3.1	5.3	6.3	4.9	
SMALL (6 SQ. FT. OR SMALLER)									
1.....	18.5	28.3	25.4	17.8	12.4	14.4	10.4	7.5	
2.....	18.2	15.1	16.9	21.0	20.8	17.9	15.9	13.4	
3.....	5.6	5.1	6.8	12.4	11.5	8.7	9.9	11.8	
4 OR MORE.....	26.3	13.0	14.4	22.6	33.0	41.7	47.5	48.5	
NONE/NC WINDOWS.....	27.4	38.4	36.5	26.2	22.2	17.2	16.3	18.7	

SEE NOTES AT END OF TABLE

TABLE 46. THERMAL CHARACTERISTICS BY SIZE OF RESIDENCE
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	MEASURED HEATED SQUARE FOOTAGE OF RESIDENCE						
		LESS THAN 600	600 TO 999	1,000 TO 1,599	1,600 TO 1,999	2,000 TO 2,399	2,400 TO 2,999	3,000 CR MORE
NUMBER OF STORM WINDOWS								
1 TO 6.....	11.0	19.5	17.3	9.1	6.2	5.9	5.0	5.3
7 TO 12.....	22.1	9.3	21.5	25.5	27.5	22.0	20.1	18.5
13 TO 18.....	15.2	2.7	6.5	14.7	24.2	31.3	24.1	18.7
19 OR MORE.....	9.1	-	2.9	4.4	11.2	16.7	26.6	40.4
NONE/NC WINDOWS.....	42.7	68.6	53.8	46.3	30.9	24.1	24.1	17.0
PERCENT OF WINDOWS WITH STORM WINDOWS								
100 PERCENT.....	38.4	22.7	32.3	37.5	44.6	50.8	46.4	50.0
76 TO 99 PERCENT.....	8.9	3.5	6.1	7.8	12.2	11.2	14.4	17.1
51 TO 75 PERCENT.....	4.6	1.8	3.3	3.2	6.3	7.5	8.2	9.0
1 TO 50 PERCENT.....	5.3	3.5	4.5	5.2	6.0	6.4	6.8	6.8
NONE/NO WINDOWS.....	42.7	68.6	53.8	46.3	30.9	24.1	24.1	17.0
NUMBER OF OUTSIDE DOORS								
1.....	5.6	34.0	19.0	4.3	.9	.3	1.1	1.0
2.....	44.8	45.7	56.9	50.2	38.7	31.8	27.1	21.2
3.....	27.6	5.9	14.0	32.6	38.5	42.1	39.6	34.1
4 OR MORE.....	14.9	2.7	4.8	11.3	20.5	25.8	32.1	42.9
NONE.....	3.2	11.7	5.3	1.7	1.4	-	-	.8
TYPE AND NUMBER OF OUTSIDE DOORS								
STANDARD DOORS								
1.....	15.4	38.0	25.1	11.6	7.0	3.7	5.2	6.2
2.....	51.1	40.7	53.5	55.2	54.3	55.7	40.4	36.5
3.....	21.3	5.4	10.7	23.9	27.6	29.0	38.4	30.8
4 CR MORE.....	7.9	2.0	3.0	6.5	9.5	11.4	16.0	25.4
NONP/NC DOORS.....	4.3	13.9	7.7	2.8	1.6	.1	-	1.2
SLIDING GLASS DOORS								
1.....	19.3	9.1	13.1	19.8	26.9	25.9	22.8	28.4
2 CR MORE.....	6.0	.6	2.3	4.4	8.0	12.7	11.6	15.5
NONE/NC DOORS.....	74.7	90.3	84.7	75.8	65.1	61.4	65.5	56.1

SEE NOTES AT END OF TABLE

TABLE 46. THERMAL CHARACTERISTICS BY SIZE OF RESIDENCE
(PERCENTAGE OF HOUSEHOLDS)--Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	MEASURED HEATED SQUARE FOOTAGE OF RESIDENCE										
		LESS THAN 600	600 TO 999	1,000 TO 1,599	1,600 TO 1,999	2,000 TO 2,399	2,400 TO 2,999	3,000 OR MORE				
NUMBER OF STORM DOORS												
1.....	15.9	14.1	19.4	16.2	15.0	12.3	14.8	11.7				
2.....	26.5	8.7	19.0	30.9	38.7	35.2	32.3	25.5				
3.....	10.9	.3	2.9	9.2	15.6	21.9	22.7	27.5				
4 CP MORE.....	3.5	.1	.4	1.7	4.2	7.6	7.9	17.1				
NONE/NC DOORS.....	42.7	76.8	58.4	42.0	26.6	23.1	22.3	18.2				
PERCENT OF OUTSIDE DOORS WITH STORM DOORS												
100 PERCENT.....	32.2	13.2	22.7	33.0	42.6	44.8	40.9	45.7				
51 TO 99 PERCENT.....	9.3	1.0	3.6	8.6	13.4	16.0	18.0	18.7				
1 TO 50 PERCENT.....	15.8	9.0	15.3	16.5	17.4	16.1	18.9	17.4				
NONE/NC DOORS.....	42.7	76.8	58.4	42.0	26.6	23.1	22.3	18.2				
TOTAL SINGLE-FAMILY UNITS.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0				
HAVE ROOF OR CEILING INSULATION (SINGLE-FAMILY UNITS)												
YES.....	76.8	36.2	59.8	75.9	83.5	86.7	84.1	88.2				
ALL INSULATED.....	68.5	31.1	51.0	67.2	73.5	81.2	75.4	81.0				
PART INSULATED.....	7.3	5.1	7.5	7.4	8.8	5.2	8.0	6.5				
DON'T KNOW AMOUNT/.....	1.0	-	1.2	1.3	1.2	.2	.7	.7				
NO.....	14.5	48.6	23.0	15.7	9.7	8.4	8.4	7.3				
DON'T KNOW/NOT REPORTED.....	8.8	15.3	17.3	8.4	6.7	5.0	7.6	4.5				
TYPE OF INSULATION												
BATTS ONLY.....	38.2	16.1	29.7	36.7	43.8	43.0	42.5	43.7				
LOOSE FILL ONLY.....	20.7	8.4	15.8	22.7	21.0	23.3	22.8	19.7				
BATTS AND LOOSE FILL ONLY.....	8.3	3.3	5.1	6.4	9.1	12.1	10.7	13.0				
OTHER/COMBINATIONS.....	5.8	4.2	5.6	6.1	4.5	5.7	5.5	7.8				
DON'T KNOW TYPE/.....	3.8	4.2	3.6	4.0	5.2	2.6	2.6	3.9				
NO INSULATION/DON'T KNOW/.....	23.2	63.8	40.2	24.1	16.5	13.3	15.9	11.8				
NOT REPORTED.....												

SEE NOTES AT END OF TABLE

TABLE 46. THERMAL CHARACTERISTICS BY SIZE OF RESIDENCE
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	MEASURED HEATED SQUARE FOOTAGE OF RESIDENCE							3,000 OR MORE
	LESS THAN 600	600 TO 999	1,000 TO 1,599	1,600 TO 1,999	2,000 TO 2,399	2,400 TO 2,999		
TOTAL								
HAVE WALL INSULATION (SINGLE-FAMILY UNITS)								
YES.....	30.7	50.5	60.9	66.6	79.7	71.5	78.3	
ALI WALLS.....	19.1	38.7	48.6	54.8	66.4	61.8	68.0	
SOME WALLS.....	11.6	11.9	12.3	11.8	13.3	9.7	10.2	
NO.....	52.4	28.8	22.9	17.9	11.2	13.6	12.3	
DON'T KNOW/NOT REPORTED.....	16.9	20.7	16.2	15.5	9.1	14.9	9.4	
FLOOR INSULATION (SINGLE-FAMILY UNITS)								
HAVE BASEMENT/CRAWL SPACE.....	69.0	74.2	75.1	76.1	83.8	85.2	87.0	
HEATED.....	4.6	3.2	7.4	24.8	40.6	48.8	60.6	
NOT HEATED.....	55.1	70.9	67.7	51.3	43.2	36.5	26.4	
HAVE FLOOR INSULATION.....	8.7	7.7	9.4	8.7	11.2	7.9	7.6	
ALI PARTS INSULATED.....	6.5	6.6	7.2	7.0	8.5	6.3	6.1	
SCOPE PARTS INSULATED.....	1.8	1.1	2.2	1.7	2.7	1.6	1.4	
NO FLOOR INSULATION.....	38.7	51.8	49.5	33.3	28.4	23.1	13.9	
DON'T KNOW/NOT REPORTED.....	7.8	11.4	8.8	9.3	3.6	5.5	5.0	
NO BASEMENT/CRAWL SPACE.....	21.8	25.8	24.9	23.9	16.2	14.8	13.0	
INSULATION CHARACTERISTICS (SINGLE-FAMILY UNITS)								
UNITS WITH SOME OF ALL STORM WINDOWS, AND SOME OR ALL STORM DOORS, AND ROOF OF CEILING INSULATION.....	48.8	31.3	40.3	55.4	64.0	61.6	70.7	
UNITS WITH ONE OR MORE OF THESE TYPES OF INSULATION..	85.8	78.3	89.2	95.6	96.8	95.2	96.5	
UNITS WITH NONE OF THESE TYPES OF INSULATION.....	10.2	21.7	10.8	4.4	3.2	4.8	3.5	

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. PERCENTAGES ARE CALCULATED ON UNFOUNDED NUMBERS. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.

SOURCE: RESIDENTIAL AND COMMERCIAL ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 47. THERMAL CHARACTERISTICS BY 1979 FAMILY INCOME
(MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED)

HOUSEHOLD CHARACTERISTICS	TOTAL	1979 FAMILY INCOME										POOR (100 PERCENT LEVEL)	POOR (125 PERCENT LEVEL)
		LESS THAN \$5,000	\$5,000 TO \$9,999	\$10,000 TO \$14,999	\$15,000 TO \$19,999	\$20,000 TO \$24,999	\$25,000 TO \$34,999	\$35,000 OR MORE					
		10.4	13.9	13.8	11.9	9.9	12.4	9.4	10.9	14.8			
TOTAL HOUSEHOLDS.....	81.6	10.4	13.9	13.8	11.9	9.9	12.4	9.4	10.9	14.8			
NUMBER OF WINDOWS													
1 TO 6.....	13.7	3.0	3.0	2.9	1.8	1.0	1.3	.8	2.7	3.5			
7 TO 12.....	33.6	4.5	6.4	5.8	5.2	3.9	4.7	3.0	5.1	6.9			
13 TO 18.....	21.9	1.9	3.1	3.8	3.2	3.1	4.0	2.8	2.2	3.0			
19 OR MORE.....	12.2	.9	1.2	1.4	1.6	1.9	2.4	2.8	.9	1.3			
NONE.....	.2	--	.1	--	--	--	--	.1	--	.1			
AVERAGE NUMBER OF WINDOWS...	12.4	10.1	10.8	11.4	12.2	13.8	13.6	16.1	10.4	10.5			
SIZE AND NUMBER OF WINDOWS													
LARGE (24 SQ. FT. OR LARGER)													
1.....	19.1	1.7	2.8	3.3	2.8	2.8	3.7	1.9	1.9	2.7			
2.....	10.6	1.2	1.4	1.5	1.7	1.5	1.7	1.6	1.3	1.7			
3 OR MORE.....	16.7	1.6	2.6	2.4	2.3	2.1	2.8	2.9	1.8	2.3			
NONE/NO WINDOWS.....	35.3	5.9	7.0	6.6	5.1	3.5	4.1	3.0	6.0	8.0			
AVERAGE NUMBER OF LARGE SIZE WINDOWS.....	1.7	1.3	1.5	1.4	1.7	2.0	1.8	2.7	1.4	1.3			
MEDIUM (MORE THAN 6, LESS THAN 24 SQ. FT.)													
1 TO 4.....	17.3	2.3	3.3	3.1	2.5	2.1	2.5	1.5	2.4	3.3			
5 TO 8.....	23.8	3.4	4.4	4.1	3.5	2.6	3.3	2.6	3.6	5.0			
9 TO 12.....	16.8	1.7	3.0	3.0	2.7	2.2	2.5	1.7	2.1	2.7			
13 OF MORE.....	16.0	1.5	1.8	2.4	2.1	2.3	3.1	2.7	1.5	2.1			
NONE/NO WINDOWS.....	7.6	1.4	1.3	1.3	1.0	.7	.9	1.0	1.3	1.7			
AVERAGE NUMBER OF MEDIUM SIZE WINDOWS.....	8.0	6.9	7.1	7.7	7.8	8.8	8.7	9.7	7.1	7.1			
SMALL (6 SQ. FT. OR SMALLER)													
1.....	15.1	2.4	3.2	2.8	2.1	1.6	1.9	1.1	2.5	3.6			
2.....	14.9	1.8	2.4	2.1	2.5	1.9	2.1	2.1	2.0	2.5			
3.....	7.8	.8	1.2	1.5	1.0	.9	1.5	1.0	.9	1.1			
4 OR MORE.....	21.4	1.8	2.7	3.3	3.2	3.3	3.8	3.3	1.9	2.7			
NONE/NO WINDOWS.....	22.4	3.6	4.5	4.2	3.1	2.2	3.0	1.9	3.7	4.9			
AVERAGE NUMBER OF SMALL SIZE WINDOWS.....	2.6	1.9	2.1	2.3	2.7	3.0	3.1	3.7	2.0	2.0			

SEE NOTES AT END OF TABLE

TABLE 47. THERMAL CHARACTERISTICS BY 1979 FAMILY INCOME (MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	1979 FAMILY INCOME										FOUR (100 PERCENT LEVEL)	POOR (125 PERCENT LEVEL)	
		LESS THAN \$5,000	\$5,000 TO \$9,999	\$10,000 TO \$14,999	\$15,000 TO \$19,999	\$20,000 TO \$24,999	\$25,000 TO \$34,999	\$35,000 OR MORE						
NUMBER OF STORM WINDOWS														
1 TO 6.....	8.9	1.4	1.6	1.9	1.2	1.0	1.0	1.0	1.0	1.0	1.0	0.7	1.3	2.0
7 TO 12.....	18.0	1.8	3.1	3.1	2.9	2.5	2.5	2.5	2.5	3.2	3.2	1.4	1.8	2.7
13 TO 18.....	12.4	.9	1.5	2.0	1.9	2.0	2.0	2.0	2.0	2.3	2.3	1.7	.8	1.3
19 OR MORE.....	7.4	.3	.6	.9	1.1	1.1	1.1	1.1	1.1	1.5	1.5	2.0	.3	.5
NONE/NO WINDOWS.....	34.9	6.0	6.8	6.0	4.7	3.4	3.4	3.4	3.4	4.4	4.4	3.7	6.7	8.3
AVERAGE NUMBER OF STORM WINDOWS.....	7.0	4.1	5.1	6.3	7.3	8.7	8.7	8.7	8.7	8.6	8.6	10.0	3.8	4.2
AVERAGE NUMBER OF LARGE SIZE STORM WINDOWS.....	.8	.4	.5	.7	.8	1.1	1.1	1.1	1.1	.9	.9	1.3	.4	.4
AVERAGE NUMBER OF MEDIUM SIZE STORM WINDOWS.....	4.9	3.1	3.7	4.5	5.1	6.0	6.0	6.0	6.0	5.9	5.9	6.7	2.8	3.1
AVERAGE NUMBER OF SPALL SIZE STORM WINDOWS.....	1.3	.6	.9	1.0	1.3	1.6	1.6	1.6	1.6	1.7	1.7	2.0	.5	.7
PERCENT OF WINDOWS WITH STORM WINDOWS														
100 PERCENT.....	31.4	2.8	4.8	5.0	4.8	4.5	4.5	4.5	4.5	5.6	5.6	3.8	2.7	4.0
76 TO 99 PERCENT.....	7.3	.6	1.0	1.1	1.3	1.0	1.0	1.0	1.0	1.1	1.1	1.1	.5	.9
51 TO 75 PERCENT.....	3.8	.5	.4	.7	.5	.5	.5	.5	.5	.7	.7	.5	.5	.7
1 TO 50 PERCENT.....	4.3	.5	.8	1.0	.5	.5	.5	.5	.5	.5	.5	.4	.5	.9
NONE/NO WINDOWS.....	34.9	6.0	6.8	6.0	4.7	3.4	3.4	3.4	3.4	4.4	4.4	3.7	6.7	8.3

SEE NOTES AT END OF TABLE

TABLE 47. THERMAL CHARACTERISTICS BY 1979 FAMILY INCOME
(MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED)-Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	1979 FAMILY INCOME										FOOR (100 PERCENT LEVEL)	FOOB (125 PERCENT LEVEL)	
		LESS THAN \$5,000	\$5,000 TO \$9,999	\$10,000 TO \$14,999	\$15,000 TO \$19,999	\$20,000 TO \$24,999	\$25,000 TO \$34,999	\$35,000 CP MORE						
NUMBER OF OUTSIDE DOORS														
1.....	7.8	1.7	1.8	1.8	1.3	0.5	0.6	0.2				1.6	1.9	
2.....	36.5	5.5	7.5	6.9	5.3	4.2	4.7	2.6				5.9	7.9	
3.....	22.5	1.9	2.7	3.1	3.6	3.5	4.5	3.3				2.1	3.0	
4 OR MORE.....	12.2	.8	1.1	1.4	1.4	1.7	2.5	3.3				.9	1.2	
NONE.....	2.6	.6	.8	.6	.3	.1	.1	.1				.5	.8	
AVERAGE NUMBER OF DOORS.....	2.5	2.1	2.1	2.3	2.4	2.7	2.8	3.3				2.1	2.2	
TYPE AND NUMBER OF OUTSIDE DOORS														
STANDARD DOORS														
1.....	12.6	2.3	2.4	2.3	2.1	1.0	1.4	.9				2.1	2.6	
2.....	41.7	5.2	7.4	7.3	5.9	5.4	6.1	4.4				5.6	7.8	
3.....	17.4	1.6	2.2	2.4	2.6	2.7	3.4	2.4				1.9	2.5	
4 OR MORE.....	6.5	.6	.8	.9	.7	.7	1.2	1.5				.7	.9	
NONE/NC DOORS.....	3.5	.6	.9	.9	.5	.1	.3	.2				.6	.9	
AVERAGE NUMBER OF STANDARD DOORS.....	2.2	2.0	2.0	2.1	2.1	2.3	2.4	2.5				2.0	2.0	
SLIDING GLASS DOORS														
1.....	15.8	1.0	1.5	2.0	2.6	2.6	3.0	3.0				.9	1.3	
2 OR MORE.....	4.9	.2	.3	.4	.7	.6	1.1	1.6				.2	.3	
NONE/NC DOORS.....	61.0	9.2	12.1	11.4	8.5	6.7	8.2	4.8				9.8	13.2	
AVERAGE NUMBER OF SLIDING GLASS DOORS.....	.3	.1	.1	.2	.3	.4	.5	.8				.1	.1	

SEE NOTES AT END OF TABLE

TABLE 47. THERMAL CHARACTERISTICS BY 1979 FAMILY INCOME
(BILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED)-Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	1979 FAMILY INCOME										POOR (100 PERCENT LEVEL)	POOR (125 PERCENT LEVEL)	
		LESS THAN \$5,000	\$5,000 TO \$9,999	\$10,000 TO \$14,999	\$15,000 TO \$19,999	\$20,000 TO \$24,999	\$25,000 TO \$34,999	\$35,000 OR MORE						
NUMBER OF STORM DOORS														
1.....	13.0	1.5	2.2	2.5	2.1	1.8	2.0	1.1	1.7	2.2	1.1	1.7	2.2	
2.....	22.0	2.1	3.5	3.8	3.5	3.0	3.6	2.4	2.1	3.2	2.4	2.1	3.2	
3.....	8.9	.6	.8	.9	1.4	1.3	2.2	1.7	.6	.8	1.7	.6	.8	
4 OR MORE.....	2.9	.1	.3	.3	.2	.5	.6	.9	.1	.3	.9	.1	.3	
NONE/NC DOORS.....	34.9	6.1	7.1	6.3	4.6	3.3	4.0	3.4	6.4	8.3	3.4	6.4	8.3	
AVERAGE NUMBER OF STORM DOORS.....	1.2	.8	.9	1.0	1.2	1.4	1.5	1.6	.8	.8	1.6	.8	.8	
AVERAGE NUMBER OF STANDARD STORM DOORS.....	1.0	.7	.8	.9	1.0	1.2	1.2	1.3	.7	.8	1.3	.7	.8	
AVERAGE NUMBER OF SLIDING GLASS STORM DOORS.....	.2	.1	.1	.1	.2	.2	.3	.3	-	.1	.3	-	.1	
PERCENT OF OUTSIDE DOORS WITH STORM DOORS														
100 PERCENT.....	26.3	2.6	4.0	4.4	4.1	3.6	4.4	3.1	2.5	3.7	3.1	2.5	3.7	
51 TO 99 PERCENT.....	7.6	.5	.7	.9	1.0	1.2	1.7	1.5	.5	.8	1.5	.5	.8	
1 TO 50 PERCENT.....	12.9	1.2	2.1	2.2	2.0	1.7	2.2	1.4	1.5	2.0	1.4	1.5	2.0	
NONE/NC DOORS.....	34.9	6.1	7.1	6.3	4.6	3.3	4.0	3.4	6.4	8.3	3.4	6.4	8.3	

SEE NOTES AT END OF TABLE

TABLE #7. THERMAL CHARACTERISTICS BY 1979 FAMILY INCOME
(MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	1979 FAMILY INCOME										FOOR (100 PERCENT LEVEL)	FOOF (125 PERCENT LEVEL)	
		\$5,000 TO \$9,999		\$10,000 TO \$14,999		\$15,000 TO \$19,999		\$20,000 TO \$24,999		\$25,000 TO \$34,999				\$35,000 CR MORE
		LESS THAN \$5,000												
TOTAL SINGLE-FAMILY UNITS.....	56.3	5.5	7.7	8.6	8.2	8.0	10.1	8.2	6.1	8.5				
HAVE ROOF OR CEILING INSULATION (SINGLE-FAMILY UNITS)														
YES.....	43.2	2.8	4.9	6.1	6.4	6.8	8.8	7.3	3.1	4.6				
ALL INSULATED.....	38.6	2.6	4.4	5.4	5.7	6.0	7.8	6.7	2.9	4.2				
PART INSULATED.....	4.1	.1	.5	.6	.7	.8	.9	.5	.2	.3				
DCN'T KNW AMOUNT/														
NOT RECFEFTD.....	.5	-	.1	.1	.1	-	.2	.1	-	-				
NO.....	8.1	1.9	1.8	1.4	1.2	.7	.7	.5	2.1	2.7				
DCN'T KNW/NOT RECFEFTD.....	4.9	.8	.9	1.1	.6	.5	.6	.4	.9	1.3				
TYPE OF INSULATION														
RATS ONLY.....	21.5	1.3	2.4	3.1	3.3	3.6	4.4	3.6	1.7	2.2				
AVERAGE NUMBER OF INCHES..	5.3	4.8	5.2	5.2	5.6	5.2	5.3	5.4	4.6	4.8				
LOOSE FILL ONLY.....	11.7	.8	1.4	1.5	1.7	1.9	2.3	2.0	.7	1.2				
AVERAGE NUMBER OF INCHES..	6.5	5.1	6.6	6.5	6.6	6.4	6.3	7.0	5.3	5.5				
FATS AND LOOSE FILL ONLY..	4.7	.3	.5	.5	.6	.7	1.2	1.0	.3	.5				
AVERAGE NUMBER OF INCHES..	10.3	10.0	9.8	10.5	9.9	10.6	11.2	9.5	11.0	11.3				
OTHER/COMBINATIONS.....	3.2	.3	.3	.5	.5	.4	.7	.5	.2	.3				
DCN'T KNW TYPE/														
NOT RECFEFTD.....	2.1	.2	.3	.5	.3	.3	.3	.3	.2	.3				
NO INSULATION/DCN'T KNW/														
NOT RECFEFTD.....	13.1	2.7	2.7	2.5	1.8	1.2	1.2	.9	3.0	3.9				

SEE NOTES AT END OF TABLE

TABLE 47. THERMAL CHARACTERISTICS BY 1979 FAMILY INCOME
(MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED) - Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	1979 FAMILY INCOME										FOOB (100 PERCENT LEVEL)	POOB (125 PERCENT LEVEL)	
		LESS THAN \$5,000	\$5,000 TO \$9,999	\$10,000 TO \$14,999	\$15,000 TO \$19,999	\$20,000 TO \$24,999	\$25,000 TO \$34,999	\$35,000 CR MOFF						
HAVE WALL INSULATION (SINGLE-FAMILY UNITS)														
YES.....	36.2	2.5	4.1	5.3	5.5	7.2	6.3	2.7	4.0			2.7	4.0	
ALL WALLS.....	29.6	2.0	3.1	4.1	4.4	6.0	5.5	2.3	3.2			2.3	3.2	
SOME WALLS.....	6.6	.5	1.0	1.1	1.1	1.2	.8	.5	.8			.5	.8	
NO.....	11.5	2.1	2.2	1.9	1.5	1.4	.9	2.2	3.0			2.2	3.0	
DON'T KNOW/NOT REPORTED.....	8.5	.9	1.4	1.5	1.2	1.4	1.1	1.1	1.6			1.1	1.6	
FLOOR INSULATION (SINGLE-FAMILY UNITS)														
HAVE BASEMENT/CRAWL SPACE.....	44.0	4.4	6.2	6.8	6.5	7.8	6.1	4.6	6.5			4.6	6.5	
HEATED.....	13.0	.7	1.4	1.6	2.0	2.7	2.4	.7	1.1			.7	1.1	
NOT HEATED.....	31.0	3.6	4.8	5.2	4.4	5.2	3.7	3.9	5.4			3.9	5.4	
HAVE FLOOR INSULATION.....	4.9	.3	.4	.7	.8	1.0	.7	.3	.4			.3	.4	
ALL PARTS INSULATED.....	3.9	.3	.3	.5	.6	.8	.7	.2	.4			.2	.4	
SOME PARTS INSULATED.....	1.0	-	.1	.2	.2	.3	-	-	-			-	-	
NO FLOOR INSULATION.....	21.8	2.8	3.8	3.6	3.0	3.3	2.5	3.1	4.2			3.1	4.2	
DON'T KNOW/NOT REPORTED.....	4.4	.6	.6	.9	.6	.8	.5	.6	.9			.6	.9	
NO BASEMENT/CRAWL SPACE.....	12.3	1.1	1.4	1.8	1.7	2.2	2.1	1.5	2.0			1.5	2.0	
INSULATION CHARACTERISTICS (SINGLE-FAMILY UNITS)														
UNITS WITH SOME OF ALL STOPWINDOWS, AND SOME OR ALL STICW DOORS, AND ROOF OR CEILING INSULATION.....	27.4	1.5	3.1	3.9	4.1	5.7	4.6	1.5	2.4			1.5	2.4	
UNITS WITH ONE OF MOFF OF THESE TYPES OF INSULATION..	50.6	4.1	6.3	7.6	7.6	9.5	7.9	4.5	6.5			4.5	6.5	
UNITS WITH NONE OF THESE TYPES OF INSULATION.....	5.7	1.4	1.4	1.0	.6	.5	.4	1.6	2.0			1.6	2.0	

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.
SOURCE: RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 48. THERMAL CHARACTERISTICS BY 1979 FAMILY INCOME
(PERCENTAGE OF HOUSEHOLDS)

HOUSEHOLD CHARACTERISTICS	TOTAL	1979 FAMILY INCOME										FOOR (100 PERCENT LEVEL)	POOR (125 PERCENT LEVEL)				
		\$5,000		\$9,999		\$10,000 TO \$14,999		\$15,000 TO \$19,999		\$20,000 TO \$24,999				\$25,000 TO \$34,999		\$35,000 OR MORE	
		LFSS THAN \$5,000	\$5,000 TO \$9,999	\$10,000 TO \$14,999	\$15,000 TO \$19,999	\$20,000 TO \$24,999	\$25,000 TO \$34,999	\$35,000 OR MORE									
TOTAL HOUSEHOLDS.....	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	100.0			
NUMBER OF WINDOWS																	
1 TO 5.....	16.8	29.2	21.8	20.6	15.0	10.0	8.5	23.9	15.0	10.0	10.2	8.5	24.8	23.9			
7 TO 12.....	41.1	43.8	46.4	41.6	43.9	39.8	31.5	43.9	43.9	39.8	38.4	31.5	46.4	46.9			
13 TO 18.....	26.8	18.1	22.5	27.4	27.1	31.3	29.2	27.1	27.1	31.3	32.4	29.2	20.2	20.4			
19 OR MORE.....	15.0	8.5	8.8	10.3	13.6	19.0	10.0	13.6	19.0	19.0	19.1	10.0	8.5	8.5			
NONE.....	.3	.4	.6	—	.4	—	.8	.4	—	—	—	.8	.2	.4			
SIZE AND NUMBER OF WINDOWS																	
LARGE (24 SQ. FT. OR LARGER)																	
1.....	23.4	16.5	20.1	24.0	23.9	28.1	20.6	23.9	23.9	28.1	30.0	20.6	17.0	18.5			
2.....	12.9	11.2	10.4	10.6	14.1	15.4	16.5	14.1	14.1	15.4	14.1	16.5	11.6	11.7			
3 OR MORE.....	20.5	15.0	18.8	17.6	19.1	21.4	30.6	19.1	21.4	21.4	22.9	30.6	16.2	15.9			
NONE/NO WINDOWS.....	43.2	57.2	50.8	47.8	42.9	35.1	32.3	42.9	35.1	35.1	33.1	32.3	55.2	54.0			
MEDIUM (MCFE THAN 6, LESS THAN 24 SQ. FT.)																	
1 TO 4.....	21.2	22.5	23.6	22.4	21.1	20.9	15.8	21.1	20.9	20.9	20.5	15.8	21.6	22.2			
5 TO 8.....	29.2	32.6	32.0	29.7	29.5	26.0	27.0	29.5	26.0	26.0	26.6	27.0	33.1	33.7			
9 TO 12.....	20.6	16.3	21.8	21.4	22.9	22.1	18.2	22.9	22.1	22.1	20.5	18.2	19.1	18.4			
13 OR MORE.....	19.6	14.8	13.2	17.3	18.0	23.5	28.6	18.0	23.5	23.5	25.1	28.6	14.1	14.4			
NONE/NO WINDOWS.....	9.4	13.7	9.4	9.2	8.5	7.5	10.3	8.5	7.5	7.4	7.4	10.3	12.1	11.3			
SMALL (6 SQ. FT. OR SMALLER)																	
1.....	18.5	23.6	23.1	20.0	17.4	16.5	11.6	17.4	16.5	16.5	15.6	11.6	23.1	24.2			
2.....	18.2	16.9	17.1	15.1	21.1	19.5	22.1	21.1	19.5	17.1	17.1	22.1	18.3	16.9			
3.....	9.6	7.5	8.4	10.7	8.7	8.9	10.7	8.7	8.9	11.9	10.7	10.7	7.9	7.2			
4 OR MORE.....	26.3	17.7	19.3	23.9	26.8	32.9	35.2	26.8	32.9	31.1	31.1	35.2	17.1	18.6			
NONE/NO WINDOWS.....	27.4	34.3	32.1	30.3	25.9	22.1	20.3	25.9	22.1	24.3	24.3	20.3	33.6	33.2			

SEE NOTES AT END OF TABLE

TABLE 48. THERMAL CHARACTERISTICS BY 1979 FAMILY INCOME
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	1979 FAMILY INCOME										FOOR (100 PERCENT LEVEL)	POOR (125 PERCENT LEVEL)	
	TOTAL												
	LESS THAN \$5,000	\$5,000 TO \$9,999	\$10,000 TO \$14,999	\$15,000 TO \$19,999	\$20,000 TO \$24,999	\$25,000 TO \$34,999	\$35,000 GR MORE						
NUMBER OF STORM WINDOWS													
1 TO 6.....	11.0	12.6	13.7	10.5	9.7	8.1	7.0	12.1	13.3				
7 TO 12.....	22.1	22.6	22.2	24.8	24.7	25.8	15.3	16.9	18.6				
13 TO 18.....	15.2	10.6	14.5	16.3	20.5	18.8	18.1	7.0	8.7				
19 OR MORE.....	9.1	4.3	6.5	8.9	11.2	12.0	20.8	2.9	3.1				
NONE/NO WINDOWS.....	42.7	49.2	43.2	39.5	33.9	35.3	38.7	61.0	56.3				
PERCENT OF WINDOWS WITH STORM WINDOWS													
100 PERCENT.....	38.4	34.6	36.3	40.9	45.5	45.6	40.2	24.7	26.7				
76 TO 99 PERCENT.....	8.9	7.4	8.2	10.7	9.9	9.2	11.8	4.8	6.4				
51 TO 75 PERCENT.....	4.6	3.2	5.3	4.4	5.2	5.5	4.8	4.5	4.5				
1 TO 50 PERCENT.....	5.3	5.7	7.0	4.5	5.5	4.4	4.6	4.9	6.0				
NONE/NO WINDOWS.....	42.7	49.2	43.2	39.5	33.9	35.3	38.7	61.0	56.3				
NUMBER OF OUTSIDE DOORS													
1.....	9.6	12.7	12.7	10.8	4.7	4.6	2.5	14.5	13.1				
2.....	44.8	54.0	50.2	44.4	42.2	37.7	27.1	54.0	53.2				
3.....	27.6	19.5	22.5	30.2	35.4	36.1	35.0	18.9	20.1				
4 OR MORE.....	14.9	7.5	9.9	12.2	17.2	20.6	34.7	7.9	7.9				
NONE.....	3.2	5.5	4.7	2.4	.5	1.2	.7	4.8	5.7				
TYPE AND NUMBER OF OUTSIDE DOORS													
STANDARD DOORS													
1.....	15.4	17.5	16.9	18.0	10.5	11.1	9.9	19.4	17.9				
2.....	51.1	53.7	52.5	49.9	54.1	49.5	46.1	51.8	52.6				
3.....	21.3	16.2	17.7	21.8	27.2	27.8	25.6	17.1	17.1				
4 OR MORE.....	7.9	6.0	6.7	6.0	7.1	9.6	15.8	6.6	6.4				
NONE/NO DOORS.....	4.3	6.7	6.2	4.4	1.2	2.0	2.5	5.1	6.1				
SLIDING GLASS DOORS													
1.....	19.3	11.0	14.5	22.3	25.9	24.2	32.1	8.4	8.9				
2 OR MORE.....	6.0	1.9	2.9	5.7	6.4	9.2	17.2	1.6	1.9				
NONE/NO DOORS.....	74.7	87.1	82.7	71.9	67.7	66.6	50.7	89.9	89.2				

SEE NOTES AT END OF TABLE

TABLE 48. THERMAL CHARACTERISTICS BY 1979 FAMILY INCOME
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	1979 FAMILY INCOME										POOR (100 PERCENT LEVEL)	POOR (125 PERCENT LEVEL)	
	TOTAL												
	LESS THAN \$5,000	\$5,000 TO \$9,999	\$10,000 TO \$14,999	\$15,000 TO \$19,999	\$20,000 TO \$24,999	\$25,000 TO \$34,999	\$35,000 OR MORE	POOR (100 PERCENT LEVEL)	POOR (125 PERCENT LEVEL)				
NUMBER OF STORM DOORS													
1.....	15.9	14.1	17.8	18.0	17.6	15.8	11.2	15.5	14.9				
2.....	26.9	20.2	27.8	29.3	30.7	28.8	25.4	18.9	21.3				
3.....	10.9	5.8	6.6	12.1	13.5	17.7	17.5	5.3	5.5				
4 OR MORE.....	3.5	1.4	1.9	1.5	4.6	5.1	9.9	1.3	1.9				
NONE/NC DOORS.....	42.7	58.5	45.8	39.1	33.6	32.6	35.9	59.9	56.4				
PERCENT OF OUTSIDE DOORS WITH STORM DOORS													
100 PERCENT.....	32.2	25.0	31.8	35.0	36.5	35.9	33.2	22.5	24.7				
51 TO 99 PERCENT.....	9.3	5.0	6.5	8.7	12.4	13.4	15.8	4.9	5.6				
1 TO 50 PERCENT.....	15.8	11.5	15.9	17.2	17.6	18.1	15.1	13.6	13.3				
NONE/NC DOORS.....	42.7	58.5	45.8	39.1	33.6	32.6	35.9	58.9	56.4				
TOTAL SINGLE-FAMILY UNITS.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0				
HAVE ROOF OR CEILING INSULATION (SINGLE-FAMILY UNITS)													
YES.....	76.8	50.5	71.1	77.8	85.5	87.8	88.8	50.9	53.7				
ALL INSULATED.....	68.5	48.2	62.8	68.9	75.0	77.5	81.5	46.9	49.6				
PART INSULATED.....	7.3	2.3	7.2	8.2	10.2	8.6	6.0	4.0	3.9				
DN'T KNW AMOUNT/NOT RECORDED.....	1.0	-	1.1	.7	.3	1.7	1.3	-	.2				
NO.....	14.5	34.8	16.3	14.6	8.2	6.7	5.9	34.4	31.2				
DN'T KNW/NOT RECORDED.....	8.8	14.7	12.6	7.6	6.3	5.5	5.3	14.7	15.2				
TYPE OF INSULATION													
BATS ONLY.....	38.2	23.1	35.5	39.9	44.6	43.4	43.4	27.4	26.3				
LOOSE FILL ONLY.....	20.7	14.8	17.9	20.5	23.3	23.1	24.5	12.0	14.6				
BATS ANT JOCSF FILL ONLY.....	8.3	4.9	5.8	7.5	8.8	11.6	11.7	5.2	5.3				
OTHER/COMBINATIONS.....	5.8	4.8	6.0	6.6	5.6	6.8	5.7	3.7	3.8				
DN'T KNW TYPE/NOT RECORDED.....	3.8	2.9	5.9	3.3	3.2	2.9	3.5	2.7	3.6				
NO INSULATION/DN'T KNW/NOT RECORDED.....	23.2	49.5	28.9	22.2	14.5	12.2	11.2	49.1	46.3				

SPP NOTES AT END OF TABLE

TABLE 48. THERMAL CHARACTERISTICS BY 1979 FAMILY INCOME
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	1979 FAMILY INCOME										ECOB (100 PERCENT LEVEL)	POOE (125 PERCENT LEVEL)					
	LESS THAN \$5,000		\$5,000 TO \$9,999		\$10,000 TO \$14,999		\$15,000 TO \$19,999		\$20,000 TO \$24,999				\$25,000 TO \$34,999		\$35,000 CR MOFF		
TOTAL																	
HAVE WALL INSULATION (SINGLE-FAMILY UNITS)																	
YES.....	64.4	45.0	52.9	61.1	66.4	68.7	71.9	76.1	44.9	46.4							
ALL WALLS.....	52.6	36.4	40.4	48.2	53.2	55.6	59.9	66.8	37.1	37.2							
SOME WALLS.....	11.8	8.6	12.5	12.9	13.2	13.1	12.0	9.3	7.8	9.2							
NO.....	20.5	37.7	29.3	22.0	18.6	18.2	14.3	11.0	36.9	34.8							
DON'T KNOW/NOT RECORDED.....	15.1	17.3	17.8	17.0	15.0	13.1	13.8	13.0	18.2	18.8							
FLOOR INSULATION (SINGLE-FAMILY UNITS)																	
HAVE BASEMENT/CRAWL SPACE.....	78.2	79.1	81.2	79.0	78.9	77.7	77.9	74.0	75.1	76.7							
HEATED.....	23.0	12.8	18.2	18.4	24.9	26.8	26.6	29.3	11.4	12.8							
NOT HEATED.....	55.1	66.3	63.1	60.6	54.1	50.8	51.2	44.7	63.7	63.9							
HAVE FLOOR INSULATION.....	8.7	5.1	5.7	8.7	9.9	10.7	10.4	8.6	4.1	4.7							
ALL PARTS INSULATED.....	6.9	4.6	4.6	6.0	7.4	8.4	7.8	8.1	3.7	4.3							
SOME PARTS INSULATED.....	1.8	.5	1.2	2.7	2.5	2.2	2.6	.5	.4	.4							
NO FLOOR INSULATION.....	38.7	50.6	49.0	41.3	36.9	34.8	33.2	30.6	50.3	49.1							
DON'T KNOW/NOT REPORTED.....	7.8	10.6	8.4	10.6	7.2	5.4	7.7	5.5	9.3	10.0							
NO BASEMENT/CRAWL SPACE.....	21.8	20.9	18.8	21.0	21.1	22.3	22.2	26.0	24.9	23.3							
INSULATION CHARACTERISTICS (SINGLE-FAMILY UNITS)																	
UNITS WITH SOME OF ALL STORM WINDOWS, AND SOME CR ALL STORM DOORS, AND ROOF OR CEILING INSULATION.....	48.8	26.5	41.1	44.7	50.4	56.8	56.9	55.6	24.9	28.3							
UNITS WITH ONE OR MORE OF THESE TYPES OF INSULATION..	89.8	74.6	82.3	88.7	92.6	93.5	94.9	95.7	73.2	76.8							
UNITS WITH NONE OF THESE TYPES OF INSULATION.....	10.2	25.4	17.7	11.3	7.4	6.5	5.1	4.3	26.8	23.2							

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. PERCENTAGES ARE CALCULATED ON UNCOUNTED NUMBERS. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.
SOURCE: RESIDENTIAL AND COMMERCIAL ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 49. THERMAL CHARACTERISTICS BY MAIN HEATING FUEL
(MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED)

HOUSEHOLD CHARACTERISTICS	TOTAL	MAIN HEATING FUEL						OTHER/NONE
		NATURAL GAS	FUEL OIL OR KEROSENE	ELECTRICITY	LIQUID FUELS/GAS	WOOD		
TOTAL HOUSEHOLDS.....	81.6	44.6	13.4	14.3	3.7	4.7	1.0	
NUMBER OF WINDOWS								
1 TO 6.....	13.7	6.2	1.9	4.9	.7	.3	.1	
7 TO 12.....	33.6	19.4	4.2	5.8	2.0	1.9	.4	
13 TO 18.....	21.9	12.1	4.1	2.6	1.2	1.6	.3	
19 OR MORE.....	12.2	6.8	3.2	.8	.3	.9	.2	
NONE.....	.2	-	-	.2	-	-	-	
AVERAGE NUMBER OF WINDOWS...	12.4	12.7	14.4	9.1	11.9	14.3	14.1	
SIZE AND NUMBER OF WINDOWS								
LARGE (24 SQ. FT. OF LARGER)								
1.....	19.1	11.1	3.1	3.0	.7	1.1	.2	
2.....	10.6	6.2	1.4	2.0	.3	.5	.1	
3 OR MORE.....	16.7	9.6	2.7	2.9	.5	.8	.2	
NONE/NO WINDOWS.....	35.3	17.7	6.2	6.5	2.2	2.3	.5	
AVERAGE NUMBER OF LARGE SIZE WINDOWS.....	1.7	1.8	1.8	1.6	1.1	1.4	2.3	
MEDIUM (MORE THAN 6, LESS THAN 24 SQ. FT.)								
1 TO 4.....	17.3	9.4	1.6	4.7	.7	.6	.2	
5 TO 8.....	23.8	13.9	3.1	4.1	1.2	1.5	.2	
9 TO 12.....	16.8	9.3	3.1	2.1	1.0	1.1	.2	
13 OR MORE.....	16.0	8.4	4.1	1.4	.5	1.3	.3	
NONE/NO WINDOWS.....	7.6	3.5	1.5	2.0	.3	.2	.1	
AVERAGE NUMBER OF MEDIUM SIZE WINDOWS.....	8.0	8.0	9.9	5.8	7.9	9.5	9.2	
SMALL (6 SQ. FT. OR SMALLER)								
1.....	15.1	8.2	2.6	2.7	.5	.7	.2	
2.....	14.5	8.8	1.9	2.7	.6	.7	.2	
3.....	7.8	4.5	1.4	1.2	.3	.4	.2	
4 OR MORE.....	21.4	12.6	3.6	2.0	1.2	1.8	.2	
NONE/NO WINDOWS.....	22.4	10.5	3.6	5.7	1.1	1.1	.4	
AVERAGE NUMBER OF SMALL SIZE WINDOWS.....	2.6	2.8	2.7	1.7	3.0	3.5	2.6	

SEE NOTES AT END OF TABLE

TABLE 49. THERMAL CHARACTERISTICS BY MAIN HEATING FUEL
(MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED)-Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	MAIN HEATING FUEL						OTHER/ NONE
		NATURAL GAS	FUEL OIL OR KEROSENE	ELECTRICITY	LIQUID PETROLEUM GAS	WOOD		
NUMBER OF STORM WINDOWS								
1 TO 6.....	8.5	4.2	1.4	2.5	0.3	0.4	0.1	
7 TO 12.....	16.0	9.8	2.9	3.1	.9	1.2	.1	
13 TO 18.....	12.4	6.3	3.0	1.3	.6	1.1	-	
19 OR MORE.....	7.4	3.9	2.2	.5	.2	.5	.1	
NONE/NO WINDOWS.....	34.9	20.3	3.8	6.9	1.7	1.5	.7	
AVERAGE NUMBER OF STORM WINDOWS.....	7.0	6.7	10.2	4.8	6.5	8.7	4.8	
AVERAGE NUMBER OF LARGE SIZE STORM WINDOWS.....	.8	.8	1.0	.8	.7	.8	.9	
AVERAGE NUMBER OF MEDIUM SIZE STORM WINDOWS.....	4.5	4.6	7.7	3.3	4.1	6.1	3.1	
AVERAGE NUMBER OF SMALL SIZE STORM WINDOWS.....	1.3	1.3	1.5	.8	1.7	1.8	.8	
PERCENT OF WINDOWS WITH STORM WINDOWS								
100 PERCENT.....	31.4	15.6	6.1	5.8	1.5	2.1	.2	
76 TO 99 PERCENT.....	7.3	4.2	1.8	.6	.3	.4	-	
51 TO 75 PERCENT.....	3.8	2.1	.7	.5	.2	.3	-	
1 TO 50 PERCENT.....	4.3	2.3	.9	.5	.1	.4	.1	
NONE/NO WINDOWS.....	34.9	20.3	3.8	6.9	1.7	1.5	.7	

SEE NOTES AT END OF TABLE

TABLE 49. THERMAL CHARACTERISTICS BY MAIN HEATING FUEL
(MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED) - Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	MAIN HEATING FUEL						OTHER/ NONE
		NATURAL GAS	FUFL CIL OR KEROSENE	ELECTRICITY	LIQUID PETROLEUM GAS	WOOD		
NUMBER OF OUTSIDE DOORS								
1.....	7.8	3.5	1.6	2.4	0.1	0.1	-	
2.....	26.5	20.5	5.6	5.8	2.2	1.9	0.5	
3.....	32.5	13.0	3.2	3.5	1.0	1.7	.3	
4 OR MORE.....	12.2	6.4	1.8	2.5	.3	1.1	.1	
NONE.....	2.6	1.2	1.2	.1	-	-	-	
AVERAGE NUMBER OF DOORS.....	2.5	2.5	2.3	2.5	2.5	2.9	2.6	
TYPE AND NUMBER OF OUTSIDE DOORS								
STANDARD DOORS								
1.....	12.6	6.0	1.6	4.4	.3	.3	-	
2.....	41.7	24.1	6.1	6.2	2.3	2.4	.6	
3.....	17.4	9.8	2.9	2.2	.8	1.4	.3	
4 OR MORE.....	6.5	3.3	1.3	.9	.3	.6	.1	
NONE/NO DOORS.....	3.5	1.4	1.4	.7	-	-	-	
AVERAGE NUMBER OF STANDARD DOORS.....	2.2	2.2	2.1	1.9	2.3	2.6	2.4	
SLIDING GLASS DOORS								
1.....	15.8	8.3	1.3	4.8	.3	1.0	.1	
2 OR MORE.....	4.5	2.5	.3	1.7	.1	.3	-	
NONE/NO DOORS.....	61.0	33.8	11.8	7.9	3.3	3.4	.8	
AVERAGE NUMBER OF SLIDING GLASS DOORS.....	.3	.3	.2	.6	.1	.4	.3	

SEE NOTES AT END OF TABLE

TABLE 49. THERMAL CHARACTERISTICS BY MAIN HEATING FUEL
(MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED) - Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	MAIN HEATING FUEL						OTHER/ NONE
		NATURAL GAS	FUEL OIL OR KEROSENE	ELECTRICITY	LIQUID PETROLEUM GAS	WOOD		
NUMBER OF STORM DOORS								
1.....	13.0	7.0	2.2	2.4	0.7	0.7	-	
2.....	22.0	12.7	4.0	2.9	.9	1.4	0.1	
3.....	8.9	4.3	1.9	1.3	.4	.9	.1	
4 OF MORE.....	2.9	1.2	.7	.6	.1	.2	-	
NONE/NO DOORS.....	34.9	19.4	4.6	7.1	1.5	1.6	.7	
AVERAGE NUMBER OF STORM DOORS.....	1.2	1.1	1.4	1.0	1.2	1.5	.7	
AVERAGE NUMBER OF STANLARD STORM DOORS.....	1.0	1.0	1.3	.7	1.1	1.2	.6	
AVERAGE NUMBER OF SLIDING GLASS STORM DOORS.....	.2	.1	.1	.3	.1	.2	.1	
PERCENT OF OUTSIDE DOORS WITH STORM DOORS								
100 PERCENT.....	26.3	14.3	5.3	3.8	1.1	1.7	.2	
51 TO 99 PERCENT.....	7.6	4.0	1.3	1.2	.4	.6	.1	
1 TO 50 PERCENT.....	12.9	6.9	2.2	2.2	.7	.9	-	
NONE/NO DOORS.....	34.9	19.4	4.6	7.1	1.5	1.6	.7	

SFF NOTFS AT PNE OF TABLE

TABLE 49. THERMAL CHARACTERISTICS BY MAIN HEATING FUEL
(MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED) - Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	MAIN HEATING FUEL						OTHER/ NONE
		NATURAL GAS	FUEL OIL OR KEROSENE	ELECTRICITY	LIQUID PETROLEUM GAS	WOOD		
TOTAL SINGLE-FAMILY UNITS.....	56.3	32.0	8.6	8.2	2.3	4.3	0.8	
HAVE ROOF OR CEILING INSULATION (SINGLE-FAMILY UNITS)								
YES.....	43.2	24.1	6.6	7.3	1.7	3.3	.2	
ALL INSULATED.....	38.6	21.6	5.5	6.9	1.5	2.9	.2	
PART INSULATED.....	4.1	2.2	1.0	.3	.2	.4	-	
DON'T KNOW AMOUNT/ NOT RECORDED.....	.5	.4	.1	.1	-	-	-	
NO.....	8.1	4.7	1.3	.4	.4	.8	.5	
DON'T KNOW/NOT REPORTED.....	4.9	3.1	.8	.5	.2	.3	.1	
TYPE OF INSULATION								
PATTS ONLY.....	21.5	11.4	4.0	3.2	.9	1.9	.1	
AVERAGE NUMBER OF INCHES..	5.2	5.0	5.2	6.0	4.7	6.0	6.6	
LOOSE FILL ONLY.....	11.7	6.9	1.2	2.2	.5	.7	.1	
AVERAGE NUMBER OF INCHES..	6.5	6.0	5.6	7.5	8.4	7.2	8.2	
BATTS AND ICOSSE FILL ONLY..	4.7	2.7	.7	.7	.1	.5	-	
AVERAGE NUMBER OF INCHES..	10.3	10.0	9.6	12.3	10.6	10.2	7.8	
OTHER/COMBINATIONS.....	3.2	1.8	.5	.6	.1	.2	-	
DON'T KNOW TYPE/ NOT RECORDED.....	2.1	1.3	.2	.6	.1	-	-	
NO INSULATION/DON'T KNOW/ NOT REPORTED.....	13.1	7.9	2.1	.9	.6	1.1	.6	

SEE NOTES AT END OF TABLE

TABLE 49. THERMAL CHARACTERISTICS BY MAIN HEATING FUEL
(MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED) - Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	MAIN HEATING FUEL						OTHER/NONE
		NATURAL GAS	FUEL OIL OF KEROSENE	ELECTRICITY	LIQUID FUELS/GAS	WOOD		
HAVE WALL INSULATION (SINGLE-FAMILY UNITS)								
YES.....	36.2	18.9	5.8	6.5	1.6	3.1	0.3	
ALL WALLS.....	29.6	15.3	4.5	6.0	1.3	2.3	.1	
SOME WALLS.....	6.6	3.6	1.3	.5	.3	.8	.1	
NO.....	11.5	7.4	1.6	.7	.5	.9	.4	
DON'T KNOW/NOT REPORTED.....	8.5	5.7	1.2	1.0	.2	.3	.1	
FLOOR INSULATION (SINGLE-FAMILY UNITS)								
HAVE BASEMENT/CRAWL SPACE.....	44.0	24.8	8.1	4.9	1.9	3.8	.6	
HEATED.....	13.0	8.2	2.3	1.0	.3	1.0	.1	
NOT HEATED.....	31.0	16.6	5.8	3.9	1.5	2.8	.4	
HAVE FLOOR INSULATION.....	4.5	1.7	.7	1.8	.2	.5	-.	
ALL PARTS INSULATED.....	3.9	1.2	.5	1.6	.1	.4	-.	
SOME PARTS INSULATED.....	1.0	.5	.2	.2	-.	.1	-.	
NO FLOOR INSULATION.....	21.8	12.2	4.4	1.5	1.2	2.1	.4	
DON'T KNOW/NOT REPORTED.....	4.4	2.7	.7	.6	.2	.2	-.	
NO BASEMENT/CRAWL SPACE.....	12.3	7.2	.6	3.3	.4	.5	.3	
INSULATION CHARACTERISTICS (SINGLE-FAMILY UNITS)								
UNITS WITH SOME OF ALL STORM WINDOWS, AND SOME OR ALL STORM DOORS, AND ROOF OR CEILING INSULATION.....	27.4	14.2	5.5	4.2	1.1	2.3	.2	
UNITS WITH ONE OR MORE OF THESE TYPES OF INSULATION..	50.6	28.5	8.3	7.7	2.0	3.8	.3	
UNITS WITH NONE OF THESE TYPES OF INSULATION.....	5.7	3.5	.3	.5	.4	.6	.5	

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.
SOURCE: RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 50. THERMAL CHARACTERISTICS BY MAIN HEATING FUEL
(PERCENTAGE OF HOUSEHOLDS)

HOUSEHOLD CHARACTERISTICS	TOTAL	MAIN HEATING FUEL						
		NATURAL GAS	FUPL OIL OR KEPCSFNE	ELECTRICITY	LIQUID PETROLIUM GAS	WOOD	OTHR/ NONE	
TOTAL HOUSEHOLDS.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
NUMBER OF WINDOWS								
1 TO 6.....	16.8	14.0	14.5	34.1	8.2	5.8	9.4	
7 TO 12.....	41.1	43.5	31.1	40.3	53.2	39.9	42.6	
13 TO 18.....	26.8	27.2	30.4	18.2	31.7	34.2	29.8	
19 OR MORE.....	15.0	15.3	24.0	5.8	6.8	19.8	18.2	
NONE.....	.3	-	-	1.6	-	.2	-	
SIZE AND NUMBER OF WINDOWS								
LARGE (24 SQ. FT. OR LARGER)								
1.....	23.4	24.9	23.0	20.7	18.6	23.5	15.9	
2.....	12.9	13.9	10.6	14.0	8.8	11.1	9.5	
3 OR MORE.....	26.5	21.6	20.1	20.1	14.1	16.0	24.7	
NONE/NO WINDOWS.....	43.2	39.6	46.3	45.2	58.4	49.4	49.8	
MEDIUM (MORE THAN 6, LESS THAN 24 SQ. FT.)								
1 TO 4.....	21.2	21.1	12.1	33.1	19.5	13.7	18.8	
5 TO 8.....	29.2	31.1	23.1	28.4	31.4	31.1	20.3	
9 TO 12.....	20.6	20.9	22.9	14.8	27.0	23.1	23.1	
13 OR MORE.....	15.6	18.9	30.7	9.7	14.1	27.3	27.7	
NONE/NO WINDOWS.....	5.4	7.9	11.2	13.9	8.1	4.8	10.0	
SMALL (6 SQ. FT. OR SMALLER)								
1.....	18.5	18.5	21.3	18.6	13.5	15.3	17.6	
2.....	18.2	19.7	14.4	18.9	15.4	16.3	16.3	
3.....	5.6	10.1	10.3	8.4	8.4	8.0	4.4	
4 OR MORE.....	26.2	28.2	26.9	14.2	33.2	37.6	25.5	
NONE/NO WINDOWS.....	27.4	23.5	27.1	39.9	29.5	23.9	36.2	

SEE NOTES AT END OF TABLE

TABLE 50. THERMAL CHARACTERISTICS BY MAIN HEATING FUEL
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	MAIN HEATING FUEL							OTHER/ NONE
		NATURAL GAS	FUEL OIL OR KEROSENE	ELECTRICITY	LIQUID PETROLEUM GAS	WOOD			
NUMBER OF STORM WINDOWS									
1 TO 6.....	11.0	9.5	10.4	17.4	9.4	9.2	7.7		
7 TO 12.....	24.1	22.0	21.5	21.6	25.3	25.1	12.0		
13 TO 18.....	15.2	14.1	22.8	9.1	15.7	23.8	5.1		
19 OR MORE.....	9.1	8.8	16.6	3.6	4.9	10.0	7.8		
NONE/NO WINDOWS.....	42.7	45.6	28.7	48.3	44.7	32.0	67.3		
PERCENT OF WINDOWS WITH STORM WINDOWS									
100 PERCENT.....	38.4	35.0	45.7	40.8	40.1	45.2	19.0		
76 TO 99 PERCENT.....	8.9	9.5	13.4	3.9	7.4	8.6	.6		
51 TO 75 PERCENT.....	4.6	4.7	5.4	3.5	4.7	6.5	1.2		
1 TO 50 PERCENT.....	5.3	5.2	6.8	3.5	3.1	7.6	11.9		
NONE/NO WINDOWS.....	42.7	45.6	28.7	48.3	44.7	32.0	67.3		
NUMBER OF OUTSIDE DOORS									
1.....	5.6	8.0	11.8	16.7	4.0	2.3	3.7		
2.....	44.6	46.0	42.0	40.7	60.4	39.4	52.5		
3.....	27.6	29.0	23.8	24.1	26.2	35.7	30.5		
4 OR MORE.....	14.5	14.3	13.3	17.4	9.4	22.6	13.3		
NONE.....	3.2	2.7	9.2	1.0	-	-	-		
TYPE AND NUMBER OF OUTSIDE DOORS									
STANDARD DOORS									
1.....	15.4	13.5	12.1	30.5	7.2	5.7	3.7		
2.....	51.1	54.0	45.9	43.2	63.2	50.7	60.4		
3.....	21.3	21.9	21.9	15.2	22.1	30.0	28.2		
4 OR MORE.....	7.5	7.4	9.5	6.4	7.5	13.6	6.8		
NONE/NO DOORS.....	4.3	3.2	10.6	4.8	-	-	.8		
SLIDING GLASS DOORS									
1.....	19.3	18.6	9.6	31.5	8.3	20.1	13.4		
2 OR MORE.....	6.0	5.6	2.0	11.5	2.4	7.1	2.8		
NONE/NO DOORS.....	74.7	75.8	88.1	55.0	89.3	72.8	83.8		

SEE NOTES AT END OF TABLE

TABLE 50. THERMAL CHARACTERISTICS BY MAIN HEATING FUEL
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	MAIN HEATING FUEL							OTHER/ NONE
		NATURAL GAS	FUEL OIL OR KEROSENE	ELECTRICITY	LIQUID FUEL GAS	WOOD			
NUMBER OF STORM DOORS									
1.....	15.5	15.6	16.7	16.6	18.7	14.7	4.1		
2.....	26.9	28.6	29.6	20.3	29.4	28.8	6.2		
3.....	16.9	9.6	14.2	9.1	10.8	19.5	12.7		
4 OF MORE.....	3.5	2.7	5.4	4.4	3.1	3.6	3.5		
NONE/NO DOORS.....	42.7	43.5	34.1	49.6	41.9	33.3	73.5		
PERCENT OF OUTSIDE DOORS WITH STORM DOORS									
100 PERCENT.....	32.2	32.1	39.6	26.7	29.4	35.4	15.9		
51 TO 99 PERCENT.....	9.3	9.1	9.8	8.2	10.2	12.5	6.5		
1 TO 50 PERCENT.....	15.8	15.4	16.5	15.5	18.5	18.8	4.1		
NONE/NO DOORS.....	42.7	43.5	34.1	49.6	41.9	33.3	73.5		
TOTAL SINGLE-FAMILY UNITS.....									
	100.0	100.0	100.0	100.0	100.0	100.0	100.0		
HAVE ROOF OR CEILING INSULATION (SINGLE-FAMILY UNITS)									
YES.....	76.8	75.4	76.2	89.4	73.3	75.2	27.6		
ALL INSULATED.....	68.5	67.5	63.9	84.2	65.3	65.6	26.9		
PART INSULATED.....	7.3	6.8	11.4	4.2	8.0	9.4	.7		
DON'T KNOW AMOUNT.....	1.0	1.2	.9	1.0	-	.2	-		
NOT REPORTED.....	14.5	14.8	14.8	4.3	18.7	18.8	64.8		
DON'T KNOW/NOT REPORTED.....	8.8	9.8	9.0	6.3	8.0	6.0	7.6		
TYPE OF INSULATION									
PATS ONLY.....	38.2	35.5	46.5	39.5	39.6	42.6	13.1		
LOOSE FILL ONLY.....	26.7	21.7	14.3	26.9	21.6	16.3	7.9		
PATS AND LOOSE FILL ONLY.....	8.3	8.3	7.7	8.9	3.8	12.2	2.3		
OTHER/COMBINATIONS.....	5.8	5.8	5.6	7.2	5.9	3.7	3.6		
DON'T KNOW TYPE.....	3.8	4.2	1.7	6.9	2.4	.4	.7		
NOT REPORTED.....	23.2	24.6	23.8	10.6	26.7	24.8	72.4		
NO INSULATION/DON'T KNOW/NOT REPORTED.....									

SEE NOTES AT END OF TABLE

TABLE 50. THERMAL CHARACTERISTICS BY MAIN HEATING FUEL
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	MAIN HEATING FUEL						OTHER/ NONE
		NATURAL GAS	FUEL OIL OR KEROSENE	ELECTRICITY	LIQUID FUELS	WOOD		
HAVE WALL INSULATION (SINGLE-FAMILY UNITS)								
YES.....	64.4	59.0	67.7	80.0	69.3	71.4	74.9	
ALL WALLS.....	52.6	47.8	52.6	73.7	54.3	54.0	17.1	
SOME WALLS.....	11.8	11.2	15.1	6.3	14.9	17.4	17.8	
NO.....	20.5	23.1	18.3	8.0	23.6	21.8	50.8	
DON'T KNOW/NOT REPORTED.....	15.1	17.9	14.0	12.1	7.2	6.9	14.3	
FLOOR INSULATION (SINGLE-FAMILY UNITS)								
HAVE BASEMENT/CRAWL SPACE.....	78.2	77.5	93.5	59.7	81.1	88.3	67.9	
HEATED.....	23.0	25.6	26.4	12.1	15.0	24.1	14.7	
NOT HEATED.....	55.1	51.9	67.1	47.5	66.1	64.2	53.2	
HAVE FLOOR INSULATION.....	8.7	5.2	8.0	21.8	7.7	12.3	4.0	
ALL PARTS INSULATED.....	6.5	3.8	5.5	19.5	6.1	9.8	2.1	
SOME PARTS INSULATED.....	1.8	1.4	2.5	2.3	1.7	2.5	1.9	
NO FLOOR INSULATION.....	38.7	38.2	51.4	18.6	49.6	47.7	45.9	
DON'T KNOW/NOT REPORTED.....	7.8	8.5	7.7	7.1	8.8	4.3	3.3	
NO BASEMENT/CRAWL SPACE.....	21.8	22.5	6.5	40.4	18.9	11.7	32.1	
INSULATION CHARACTERISTICS (SINGLE-FAMILY UNITS)								
UNITS WITH SOME OF ALL STORM WINDOWS, AND SOME OR ALL STORM DOORS, AND ROOF OR CEILING INSULATION.....	48.8	44.2	63.2	51.5	49.2	53.5	20.6	
UNITS WITH ONE OR MORE OF THESE TYPES OF INSULATION..	85.8	89.1	96.2	94.0	84.5	86.8	41.9	
UNITS WITH NONE OF THESE TYPES OF INSULATION.....	10.2	10.9	3.8	6.0	15.5	13.2	58.1	

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. PERCENTAGES ARE CALCULATED ON UNROUNDED NUMBERS. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.
SOURCE: RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 51. THERMAL CHARACTERISTICS BY HEATING AND COOLING DEGREE-DAYS (MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED)

HOUSEHOLD CHARACTERISTICS	ANNUAL HEATING DEGREE-DAYS (HDD) AND COOLING DEGREE-DAYS (CDD)					
	TOTAL	<2,000 CDD AND ANE >7,000 HDD	<2,000 CDD AND 5,500 TO 7,000 HDD	<2,000 CDD AND 4,000 TO 5,499 HDD	<2,000 CDD AND ANE <4,000 HDD	>2,000 CDD AND <4,000 HDD
TOTAL HOUSEHOLDS.....	81.6	8.5	20.9	21.1	19.0	12.1
NUMBER OF WINDOWS						
1 TO 6.....	13.7	.8	2.9	4.4	3.3	2.3
7 TO 12.....	33.6	2.6	8.0	7.9	9.2	5.9
13 TO 18.....	21.9	3.0	5.9	5.6	4.5	2.9
19 OR MORE.....	12.2	2.1	4.0	3.2	1.9	1.0
NONE.....	.7	-	.1	-	.1	-
AVERAGE NUMBER OF WINDOWS.....	12.4	14.7	13.3	12.4	11.2	11.1
SIZE AND NUMBER OF WINDOWS						
LARGE (24 SQ. FT. OR LARGER)						
1.....	19.1	2.6	6.2	4.8	3.6	1.9
2.....	10.6	.9	2.9	2.8	2.7	1.4
3 OR MORE.....	16.7	1.3	3.7	4.6	4.7	2.3
NONE/NC WINDOWS.....	35.3	3.7	8.2	8.9	8.0	6.5
AVERAGE NUMBER OF LARGE SIZE WINDOWS.....	1.7	1.4	1.6	1.8	2.0	1.6
MEDIUM (MORE THAN 6, LESS THAN 24 SQ. FT.)						
1 TO 4.....	17.3	1.3	3.8	4.4	4.6	3.2
5 TO 8.....	23.8	2.2	6.0	5.9	5.7	4.0
9 TO 12.....	16.8	1.9	4.5	4.4	3.8	2.2
13 OR MORE.....	16.0	2.4	4.9	4.2	2.6	1.8
NONE/NC WINDOWS.....	7.6	.6	1.6	2.3	2.3	.8
AVERAGE NUMBER OF MEDIUM SIZE WINDOWS.....	8.0	9.6	8.7	8.2	6.9	7.3
SMALL (6 SQ. FT. OR SMALLER)						
1.....	15.1	.9	3.3	4.1	4.0	2.8
2.....	14.5	1.0	3.0	3.5	4.2	3.2
3.....	7.8	.9	2.0	1.7	2.2	1.1
4 OR MORE.....	21.4	3.6	6.7	5.4	3.7	2.0
NONE/NC WINDOWS.....	22.4	2.1	5.9	6.5	5.0	3.0
AVERAGE NUMBER OF SMALL SIZE WINDOWS.....	2.6	3.7	3.0	2.4	2.3	2.2

SEE NOTES AT END OF TABLE

TABLE 51. THERMAL CHARACTERISTICS BY HEATING AND COOLING DEGREE-DAYS (MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	ANNUAL HEATING DEGREE-DAYS (HDD) AND COOLING DEGREE-DAYS (CDD)					
		<2,000 CDD AND >7,000 HDD	<2,000 CDD AND 15,500 TO 7,000 HDD	<2,000 CDD AND 14,000 TO 5,499 HDD	<2,000 CDD AND <4,000 HDD	>2,000 CDD AND <4,000 HDD	
NUMBER OF STORM WINDOWS							
1 TO 6.....	8.9	1.0	3.5	3.0	0.9	0.5	
7 TO 12.....	18.0	2.6	7.0	5.6	2.3	.6	
13 TO 18.....	12.4	2.5	4.5	3.9	1.3	.3	
19 OR MORE.....	7.4	1.7	3.1	2.0	.4	.1	
NONE/NC WINDOWS.....	34.9	.7	2.9	6.6	14.1	10.6	
AVERAGE NUMBER OF STORM WINDOWS.....	7.0	12.6	10.6	8.4	2.9	1.1	
AVERAGE NUMBER OF LARGE SIZE STORM WINDOWS.....	.8	1.1	1.2	1.1	.3	.1	
AVERAGE NUMBER OF MEDIUM SIZE STORM WINDOWS.....	4.5	8.6	7.3	6.0	2.1	.8	
AVERAGE NUMBER OF SMALL SIZE STORM WINDOWS.....	1.3	2.8	2.1	1.3	.5	.2	
PERCENT OF WINDOWS WITH STORM WINDOWS							
100 PERCENT.....	31.4	5.6	12.2	9.3	3.4	.9	
75 TO 99 PERCENT.....	7.3	1.0	3.0	2.5	.6	.2	
51 TO 75 PERCENT.....	3.8	.8	1.5	1.2	.2	.1	
1 TO 50 PERCENT.....	4.3	.4	1.4	1.6	.7	.3	
NONE/NC WINDOWS.....	34.9	.7	2.9	6.6	14.1	10.6	

SFF NOTES AT END OF TABLE

TABLE 51. THERMAL CHARACTERISTICS BY HEATING AND COOLING DEGREE-DAYS
(MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	ANNUAL HEATING DEGREE-DAYS (HDD) AND COOLING DEGREE-DAYS (CDD)					
	<2,000 CDD AND >7,000 HDD	<2,000 CDD AND 15,500 TO 7,000 HDD	<2,000 CDD AND 4,000 TO 5,499 HDD	<2,000 CDD AND <4,000 HDD	<2,000 CDD AND <4,000 HDD	>2,000 CDD AND <4,000 HDD
TOTAL						
7.8	0.7	2.0	2.6	1.5	1.0	
36.5	4.0	9.6	8.6	8.6	5.7	
22.5	2.3	6.0	5.7	5.1	3.4	
12.2	1.2	2.6	2.8	3.7	1.9	
2.6	.2	.8	1.5	.1	.1	
2.5	2.5	2.4	2.3	2.7	2.6	
NUMBER OF OUTSIDE DOORS						
1.....						
2.....						
3.....						
4 OR MORE.....						
NONE.....						
AVERAGE NUMBER OF DOORS.....						
TYPE AND NUMBER OF OUTSIDE DOORS						
STANDARD DOORS						
1.....						
2.....						
3.....						
4 OR MORE.....						
NONE/NC DOORS.....						
AVERAGE NUMBER OF STANDARD DOORS.....						
12.6	.8	2.7	3.7	3.2	2.1	
41.7	4.8	10.7	9.7	10.1	6.4	
17.4	1.9	4.7	4.2	3.8	2.8	
6.5	.6	1.6	1.8	1.7	.7	
3.5	.3	1.2	1.8	.1	.1	
2.2	2.2	2.2	2.0	2.3	2.2	
SLIDING GLASS DOORS						
1.....						
2 OR MORE.....						
NONE/NC DOORS.....						
AVERAGE NUMBER OF SLIDING GLASS DOORS.....						
15.8	1.5	3.7	3.8	4.1	2.7	
4.5	.3	.7	1.1	1.9	.8	
61.0	6.7	16.5	16.3	12.9	8.6	
.2	.3	.3	.3	.5	.4	

SEE NOTES AT END OF TABLE

TABLE 51. THERMAL CHARACTERISTICS BY HEATING AND COOLING DEGREE-DAYS
(MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	ANNUAL HEATING DEGREE-DAYS (HDD) AND COOLING DEGREE-DAYS (CDD)					
	TOTAL	<2,000 CDD AND >7,000 HDD	5,500 TO 7,000 CDD AND HDD	<2,000 CDD AND 4,000 TO 5,499 TC HDD	<2,000 CDD AND <4,000 HDD	>2,000 CDD AND <4,000 HDD
NUMBER OF STORM DOORS						
1.....	13.0	1.6	4.0	3.7	2.1	1.5
2.....	22.0	3.8	8.1	6.6	2.5	.9
3.....	8.5	1.3	3.2	3.0	1.1	.2
4 OR MORE.....	2.9	.5	1.0	.9	.3	.1
NONE/NO DOORS.....	34.9	1.2	4.6	6.8	12.9	9.3
AVERAGE NUMBER OF STORM DOORS.....	1.2	1.8	1.6	1.4	.6	.4
AVERAGE NUMBER OF STANDARD STORM DOORS.....	1.0	1.6	1.4	1.2	.5	.3
AVERAGE NUMBER OF SLIDING GLASS STORM DOORS.....	.2	.2	.2	.2	.1	.1
PERCENT OF OUTSIDE DOORS WITH STORM DOORS						
100 PERCENT.....	26.3	4.7	9.9	8.2	2.8	.8
51 TO 99 PERCENT.....	7.6	1.1	2.9	2.4	.8	.3
1 TO 50 PERCENT.....	12.9	1.5	3.6	3.7	2.4	1.7
NONE/NO DOORS.....	34.9	1.2	4.6	6.8	12.9	9.3

SEE NOTES AT END OF TABLE

TABLE 51. THERMAL CHARACTERISTICS BY HEATING AND COOLING DEGREE-DAYS (MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	ANNUAL HEATING DEGREE-DAYS (HDD) AND COOLING DEGREE-DAYS (CDD)					
		<2,000 CDD AND >7,000 HDD	<2,000 CDD AND 5,500 TO 7,000 HDD	<2,000 CDD AND TC 5,499 HDD	<2,000 CDD AND ANE <4,000 HDD	<2,000 CDD AND ANE <4,000 HDD	>2,000 CDD AND <4,000 HDD
TOTAL SINGLE-FAMILY UNITS.....	56.3	6.4	13.7	14.1	13.5	8.7	
HAVE ROOF OR CEILING INSULATION (SINGLE-FAMILY UNITS)							
YES.....	42.2	5.6	11.0	10.8	9.5	6.2	
ALL INSULATED.....	38.6	5.1	9.6	9.7	8.6	5.6	
PART INSULATED.....	4.1	.5	1.1	1.1	.9	.5	
DON'T KNOW AMOUNT/NOT REPORTED.....	.5	-	.2	.1	.1	.1	
NO.....	8.1	.4	1.5	1.8	2.7	1.7	
DON'T KNOW/NOT REPORTED.....	4.9	.4	1.2	1.4	1.3	.7	
TYPE OF INSULATION							
BATTS ONLY.....	21.5	2.3	6.1	5.8	4.4	2.9	
AVERAGE NUMBER OF INCHES..	5.3	6.0	5.5	5.2	4.9	4.9	
LOOSE FILL ONLY.....	11.7	1.7	2.6	2.8	2.7	1.9	
AVERAGE NUMBER OF INCHES..	6.5	8.0	7.0	6.2	5.5	6.2	
BATTS AND LOOSE FILL ONLY...	4.7	1.2	1.2	1.0	.7	.7	
AVERAGE NUMBER OF INCHES..	10.3	10.9	10.2	10.3	9.2	10.5	
OTHER/COMBINATIONS.....	5.2	.3	.8	.8	.9	.5	
DON'T KNOW TYPE/NOT REPORTED.....	2.1	.1	.3	.5	.8	.3	
NO INSULATION/DON'T KNOW/NOT REPORTED.....	13.1	.7	2.7	3.2	4.0	2.5	

SEE NOTES AT END OF TABLE

TABLE 51. THERMAL CHARACTERISTICS BY HEATING AND COOLING DEGREE-DAYS (MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	ANNUAL HEATING DEGREE-DAYS (HDD) AND COOLING DEGREE-DAYS (CDD)					
		<2,000 CDD AND >7,000 HDD	<2,000 CDD AND 15,500 TO 7,000 HDD	<2,000 CDD AND 14,000 TO 5,499 HDD	<2,000 CDD AND >2,000 CDD AND <4,000 HDD	>2,000 CDD AND <4,000 HDD	
HAVE WALL INSULATION (SINGLE-FAMILY UNITS)							
YES.....	36.2	5.0	9.9	9.6	7.1	4.6	
ALL WALLS.....	29.6	4.1	8.2	7.7	5.8	3.8	
SOME WALLS.....	6.6	.9	1.7	1.9	1.3	.8	
NO.....	11.5	.7	2.2	2.4	4.0	2.4	
DO NOT KNOW/NOT REPORTED.....	8.5	.7	1.6	2.1	2.4	1.7	
FLOOR INSULATION (SINGLE-FAMILY UNITS)							
HAVE BASEMENT/CRAWL SPACE.....	44.0	6.1	12.1	12.4	10.0	3.4	
HEATED.....	13.0	3.0	5.4	4.2	.3	-	
NOT HEATED.....	31.0	3.1	6.7	8.2	9.7	3.3	
HAVE FLOOR INSULATION.....	4.5	.6	1.0	1.7	1.3	.2	
ALL PARTS INSULATED.....	3.9	.5	.7	1.4	1.1	.1	
SOME PARTS INSULATED.....	1.0	.2	.3	.3	.1	.1	
NO FLOOR INSULATION.....	21.8	2.1	4.8	5.2	6.9	2.8	
DO NOT KNOW/NOT REPORTED.....	4.4	.4	.8	1.3	1.5	.3	
NO BASEMENT/CRAWL SPACE.....	12.3	.3	1.6	1.6	3.5	5.3	
INSULATION CHARACTERISTICS (SINGLE-FAMILY UNITS)							
UNITS WITH SOME OR ALL STORM WINDOWS, AND SOME OR ALL STORM DOORS, AND ROOF OR CEILING INSULATION.....	27.4	5.0	9.8	8.7	3.2	.8	
UNITS WITH ONE OR MORE OF THESE TYPES OF INSULATION.....	50.6	6.3	13.5	13.5	10.7	6.6	
UNITS WITH NONE OF THESE TYPES OF INSULATION.....	5.7	-	.2	.6	2.9	2.1	

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.
 SOURCE: RESIDENTIAL AND COMMERCIAL ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 52. THERMAL CHARACTERISTICS BY HEATING AND COOLING DEGREE-DAYS
(PERCENTAGE OF HOUSEHOLDS)

HOUSEHOLD CHARACTERISTICS	ANNUAL HEATING DEGREE-DAYS (HDD) AND COOLING DEGREE-DAYS (CDD)					
	<2,000 CDD AND >7,000 HDD	<2,000 CDD AND 15,500 TO 7,000 HDD	<2,000 CDD AND 4,000 TO 5,499 HDD	<2,000 CDD AND >4,000 HDD	>2,000 CDD AND <4,000 HDD	TOTAL
TOTAL HOUSEHOLDS.....	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER OF WINDOWS						
1 TO 6.....	9.0	13.8	21.0	17.6	18.9	
7 TO 12.....	30.5	38.1	37.5	48.5	48.8	
13 TO 18.....	35.5	28.3	26.5	23.5	23.9	
19 OR MORE.....	24.7	19.1	15.1	10.1	8.4	
NONE.....	.3	.7	—	.4	—	
SIZE AND NUMBER OF WINDOWS						
LARGE (24 SQ. FT. OR LARGER)						
1.....	30.8	29.4	22.6	19.1	15.8	
2.....	10.2	13.7	13.1	14.1	11.4	
3 OR MORE.....	15.7	17.7	21.9	24.8	19.1	
NONE/NC WINDOWS.....	43.3	39.2	42.3	41.9	53.8	
MEDIUM (MORE THAN 6, LESS THAN 24 SQ. FT.)						
1 TO 4.....	15.8	18.3	20.6	24.3	26.1	
5 TO 8.....	25.9	28.8	27.8	29.9	33.4	
9 TO 12.....	22.4	21.6	20.8	19.9	18.4	
13 OR MORE.....	28.7	23.5	20.1	13.7	15.1	
NONE/NC WINDOWS.....	7.2	7.8	10.7	12.1	7.0	
SMALL (6 SQ. FT. OR SMALLER)						
1.....	11.0	16.0	19.5	20.9	22.8	
2.....	11.3	14.5	16.4	22.1	26.5	
3.....	10.6	9.5	7.8	11.5	9.1	
4 OR MORE.....	42.9	32.0	25.5	19.2	16.9	
NONE/NC WINDOWS.....	24.3	28.0	30.7	26.3	24.7	

SEP NOTES AT END OF TABLE

TABLE 52. THERMAL CHARACTERISTICS BY HEATING AND COOLING DEGREE-DAYS
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	ANNUAL HEATING DEGREE-DAYS (HDD) AND COOLING DEGREE-DAYS (CDD)				
		<2,000 CDD AND >7,000 HDD	<2,000 CDD AND 5,500 TO 7,000 HDD	<2,000 CDD AND TC 5,499 HED	<2,000 CDD AND >4,000 HDD	>2,000 CDD AND <4,000 HDD
NUMBER OF STORM WINDOWS						
1 TO 6.....	11.4	16.9	14.4	4.7	4.1	
7 TO 12.....	30.6	33.4	26.5	11.9	4.8	
13 TO 18.....	29.1	21.4	18.3	6.8	2.2	
19 OR MORE.....	5.1	14.6	9.7	2.3	1.1	
NONE/NO WINDOWS.....	42.7	13.7	31.2	74.2	87.7	
PERCENT OF WINDOWS WITH STORM WINDOWS						
100 PERCENT.....	38.4	58.0	44.1	17.7	7.6	
76 TO 99 PERCENT.....	8.9	14.4	11.7	3.2	1.5	
51 TO 75 PERCENT.....	4.6	7.1	5.7	1.3	.8	
1 TO 50 PERCENT.....	5.3	6.8	7.4	3.5	2.4	
NONE/NO WINDOWS.....	42.7	13.7	31.2	74.2	87.7	
NUMBER OF OUTSIDE DOORS						
1.....	5.6	9.5	12.3	8.0	8.4	
2.....	44.8	46.0	40.5	45.1	47.5	
3.....	27.6	28.6	26.9	27.1	27.8	
4 OR MORE.....	14.9	12.2	13.3	19.5	15.8	
NONE.....	3.2	3.7	6.9	.4	.5	
TYPE AND NUMBER OF OUTSIDE DOORS						
STANDARD DOORS						
1.....	15.4	12.9	17.4	17.0	17.5	
2.....	51.1	51.1	45.9	53.2	52.7	
3.....	21.3	22.4	19.8	20.1	23.1	
4 OR MORE.....	7.9	7.7	8.3	9.0	6.1	
NONE/NO DOORS.....	4.3	5.8	8.6	.7	.6	
SLIDING GLASS DOORS						
1.....	19.3	17.5	18.0	21.7	22.4	
2 OR MORE.....	6.0	3.5	5.1	10.2	6.8	
NONE/NO DOORS.....	74.7	79.0	76.9	68.0	70.8	

SEE NOTES AT END OF TABLE

TABLE 52. THERMAL CHARACTERISTICS BY HEATING AND COOLING DEGREE-DAYS
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	ANNUAL HEATING DEGREE-DAYS (HDD) AND COOLING DEGREE-DAYS (CDD)					
		<2,000 CDD AND ANI	5,500 TO 7,000 HDD	<2,000 CDD AND ANI	4,000 TO 5,499 HDD	<2,000 CDD AND ANI	>2,000 CDD AND ANI
NUMBER OF STORM DOORS							
1.....	15.5	18.8	19.2	17.6	11.2	12.6	
2.....	26.5	45.4	38.5	31.4	13.3	7.7	
3.....	10.9	15.8	15.3	14.3	6.0	1.9	
4 OR MORE.....	3.5	5.6	4.9	4.4	1.5	1.1	
NONE/NO DOORS.....	42.7	14.5	22.1	32.3	68.0	76.8	
PERCENT OF OUTSIDE DOORS WITH STORM DOORS							
100 PERCENT.....	32.2	55.0	47.1	38.8	15.0	6.3	
51 TO 99 PERCENT.....	5.3	13.3	13.6	11.5	4.3	2.8	
1 TO 50 PERCENT.....	15.8	17.2	17.2	17.5	12.7	14.2	
NONE/NO DOORS.....	42.7	14.5	22.1	32.3	68.0	76.8	
TOTAL SINGLE-FAMILY UNITS.....	100.0	100.0	100.0	100.0	100.0	100.0	
HAVE ROOF OR CEILING INSULATION (SINGLE-FAMILY UNITS)							
YES.....	76.8	88.3	80.3	77.1	70.6	71.7	
ALL INSULATED.....	68.5	80.5	70.4	69.0	63.3	64.1	
PART INSULATED.....	7.3	7.5	8.4	7.5	6.4	6.2	
DON'T KNOW AMOUNT/NOT REPORTED.....	1.0	.3	1.5	.6	.9	1.3	
NO.....	14.5	5.8	11.0	13.0	20.1	19.8	
DON'T KNOW/NOT REPORTED.....	8.8	5.9	8.7	9.9	9.3	8.5	
TYPE OF INSULATION							
BATTS ONLY.....	38.2	35.6	44.7	41.3	32.9	32.9	
LOOSE FILL ONLY.....	20.7	27.0	18.8	19.9	20.0	21.6	
BATTS AND LOOSE FILL ONLY.....	8.3	18.7	8.8	6.9	4.9	7.6	
OTHER/COMBINATIONS.....	5.8	4.7	5.9	5.4	6.5	5.6	
DON'T KNOW TYPE/NOT REPORTED.....	3.8	2.3	2.1	3.6	6.3	4.0	
NO INSULATION/DON'T KNOW/NOT REPORTED.....	23.2	11.7	19.7	22.9	29.4	28.3	

SEE NOTES AT END OF TABLE

TABLE 52. THERMAL CHARACTERISTICS BY HEATING AND COOLING DEGREE-DAYS
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	ANNUAL HEATING DEGREE-DAYS (HDD) AND COOLING DEGREE-DAYS (CDD)					
	<2,000 CDD AND >7,000 HDD		<2,000 CDD AND 14,000 TO 5,499 REC		<2,000 CDD AND <4,000 HDD	
	<2,000 CDD AND >7,000 HDD	>7,000 HDD	<2,000 CDD AND 14,000 TO 5,499 REC	>14,000 TO 5,499 REC	<2,000 CDD AND <4,000 HDD	>2,000 CDD AND <4,000 HDD
TOTAL	79.4	64.4	68.3	52.8	52.8	52.5
HAVE WALL INSULATION (SINGLE-FAMILY UNITS)						
YES.....	79.4	64.4	68.3	52.8	52.8	52.5
ALL WALLS.....	65.1	52.6	54.7	43.2	43.2	43.4
SOME WALLS.....	14.3	11.8	13.6	9.5	9.5	9.1
NO.....	10.3	20.5	16.7	29.5	29.5	27.5
DON'T KNOW/NOT REPORTED.....	10.3	15.1	14.9	17.7	17.7	20.0
FLOOR INSULATION (SINGLE-FAMILY UNITS)						
HAVE BASEMENT/CRAWL SPACE.....	95.9	78.2	88.5	74.3	74.3	38.7
HEATED.....	46.8	23.0	29.9	2.6	2.6	2.2
NOT HEATED.....	49.1	55.1	58.6	71.7	71.7	38.3
HAVE FLOOR INSULATION.....	10.2	8.7	12.4	9.5	9.5	1.9
ALL PARTS INSULATED.....	7.4	6.5	10.2	8.5	8.5	1.3
SOME PARTS INSULATED.....	2.7	1.8	2.2	1.0	1.0	0.6
NO FLOOR INSULATION.....	33.3	38.7	36.8	50.9	50.9	32.4
DON'T KNOW/NOT REPORTED.....	5.6	7.8	9.4	11.3	11.3	4.0
NO BASEMENT/CRAWL SPACE.....	4.1	21.8	11.5	25.7	25.7	61.4
INSULATION CHARACTERISTICS (SINGLE-FAMILY UNITS)						
UNITS WITH SOME OR ALL STORM WINDOWS, AND SOME OR ALL STORM DOORS, AND ROOF OR CEILING INSULATION.....	78.9	48.8	61.6	23.4	23.4	8.8
UNITS WITH ONE OF THESE OF THESE TYPES OF INSULATION..	99.3	85.8	96.0	78.9	78.9	76.1
UNITS WITH NONE OF THESE TYPES OF INSULATION.....	.7	10.2	4.0	21.1	21.1	23.9

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. PERCENTAGES ARE CALCULATED ON UNROUTED NUMERALS. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.
SOURCE: RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 53. THERMAL CHARACTERISTICS BY YEAR HOUSE BUILT
(MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED)

HOUSEHOLD CHARACTERISTICS	TOTAL	YEAR HOUSE BUILT									
		1975 OR LATER	1970 TO 1974	1965 TO 1969	1960 TO 1964	1950 TO 1959	1940 TO 1949	1939 OR EARLIER			
TOTAL HOUSEHOLDS.....	81.6	11.3	10.5	8.1	7.2	13.7	7.5	23.3			
NUMBER OF WINDOWS											
1 TO 6.....	13.7	3.2	2.8	1.7	1.4	1.1	.9	2.5			
7 TO 12.....	33.6	5.0	4.3	3.5	3.0	6.1	3.0	8.6			
13 TO 18.....	21.9	2.2	2.5	1.9	2.0	4.5	2.1	6.7			
19 OR MORE.....	12.2	.9	.7	.9	.8	2.0	1.4	5.5			
MCNF.....	2	-	.2	-	-	-	-	-			
AVERAGE NUMBER OF WINDOWS.....	12.4	10.1	9.9	11.5	11.7	13.2	13.2	14.5			
SIZE AND NUMBER OF WINDOWS											
LARGE (24 SQ. FT. OR LARGER)											
1.....	19.1	2.3	2.3	2.3	2.4	4.3	1.6	3.9			
2.....	10.6	1.7	1.7	1.1	1.3	1.9	.7	2.0			
3 OR MORE.....	16.7	2.6	2.3	1.7	1.4	2.7	1.6	4.4			
NONE/NC WINDOWS.....	35.3	4.7	4.3	3.0	2.0	4.8	3.5	13.0			
AVERAGE NUMBER OF LARGE SIZE WINDOWS.....	1.7	1.7	1.6	1.8	1.8	1.6	1.8	1.8			
MEDIUM (MORE THAN 6, LESS THAN 24 SQ. FT.)											
1 TO 4.....	17.3	3.9	3.1	2.2	1.8	2.1	1.3	3.0			
5 TO 8.....	23.8	3.2	3.0	2.6	2.4	4.7	2.1	5.9			
9 TO 12.....	16.8	1.5	1.6	1.4	1.4	3.5	1.9	5.5			
13 OR MORE.....	16.0	1.4	1.2	1.2	.9	2.3	1.7	7.2			
NONE/NC WINDOWS.....	7.6	1.4	1.6	.7	.7	1.0	.5	1.7			
AVERAGE NUMBER OF MEDIUM SIZE WINDOWS.....	8.0	6.2	6.1	7.0	7.0	8.3	8.8	10.1			
SMALL (6 SQ. FT. OR SMALLER)											
1.....	15.1	2.1	1.9	1.6	1.1	2.0	1.6	4.9			
2.....	14.5	2.4	1.9	1.5	1.2	2.7	1.5	3.6			
3.....	7.6	1.0	.9	.8	.8	1.6	.7	1.9			
4 OR MORE.....	21.4	2.2	2.3	2.2	2.1	4.5	1.9	6.4			
NONE/NC WINDOWS.....	22.4	3.7	3.6	2.1	2.0	2.9	1.7	6.4			
AVERAGE NUMBER OF SMALL SIZE WINDOWS.....	2.6	2.2	2.2	2.7	3.0	3.3	2.7	2.6			

SEE NOTES AT END OF TABLE

TABLE 53. THERMAL CHARACTERISTICS BY YEAR HOUSE BUILT
(MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	YEAR HOUSE BUILT							
		1975 OR LATER	1970 TO 1974	1965 TO 1969	1960 TO 1964	1950 TO 1959	1940 TO 1949	1939 OR EARLIER	
NUMBER OF STORM WINDOWS									
1 TO 6.....	6.5	2.0	1.5	0.7	0.8	1.0	0.5	2.6	
7 TO 12.....	18.0	2.7	2.3	1.7	1.5	2.9	1.6	5.2	
13 TO 18.....	12.4	1.3	1.4	1.0	1.1	2.5	1.0	4.0	
19 OF MORE.....	7.4	.7	.4	.6	.5	1.2	.6	3.4	
NONE/NO WINDOWS.....	34.9	4.6	4.9	4.1	3.4	6.1	3.7	8.2	
AVERAGE NUMBER OF STORM WINDOWS.....	7.0	6.0	5.5	6.0	6.4	7.3	6.3	8.8	
AVERAGE NUMBER OF LARGE SIZE STORM WINDOWS.....	.8	.9	.7	.7	.8	.7	.6	.9	
AVERAGE NUMBER OF MEDIUM SIZE STORM WINDOWS.....	4.5	4.0	3.7	3.9	4.1	4.9	4.7	6.6	
AVERAGE NUMBER OF SMALL SIZE STORM WINDOWS.....	1.2	1.1	1.1	1.3	1.5	1.7	1.0	1.3	
PERCENT OF WINDOWS WITH STORM WINDOWS									
100 PERCENT.....	31.4	5.6	4.3	2.9	2.8	4.9	2.0	8.8	
76 TO 99 PERCENT.....	7.3	.4	.6	.5	.5	1.4	.9	3.0	
51 TO 75 PERCENT.....	3.8	.3	.4	.2	.2	.6	.5	1.6	
1 TO 50 PERCENT.....	4.2	.3	.3	.4	.3	.8	.4	1.8	
NONE/NO WINDOWS.....	34.9	4.6	4.9	4.1	3.4	6.1	3.7	8.2	

SEE NOTES AT END OF TABLE

TABLE 53. THERMAL CHARACTERISTICS BY YEAR HOUSE BUILT
(MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	YEAR HOUSE BUILT							
		1975 OR LATER	1970 TO 1974	1965 TO 1969	1960 TO 1964	1950 TO 1959	1940 TO 1949	1939 OR EARLIER	
NUMBER OF OUTSIDE DOORS									
1.....	7.6	1.5	1.3	0.7	0.8	0.7	0.6	2.2	
2.....	36.5	4.0	4.6	3.5	2.7	6.8	4.1	11.0	
3.....	22.5	3.5	2.7	2.2	2.2	4.3	1.5	6.1	
4 OR MORE.....	12.2	2.3	1.7	1.5	1.2	1.7	.9	2.9	
NCNE.....	2.6	.1	.3	.3	.3	.1	.3	1.2	
AVERAGE NUMBER OF DOORS.....	2.5	2.7	2.5	2.6	2.5	2.6	2.4	2.4	
TYPE AND NUMBER OF OUTSIDE DOORS									
STANDARD DOORS									
1.....	12.6	3.0	2.8	1.4	1.2	1.0	.8	2.4	
2.....	41.7	5.3	5.1	4.3	3.4	8.0	4.3	11.3	
3.....	17.4	1.9	1.6	1.6	1.6	3.5	1.4	5.8	
4 OR MORE.....	6.5	.6	.5	.4	.6	1.1	.7	2.6	
NONE/NC DOORS.....	3.5	.5	.6	.4	.4	.2	.3	1.3	
AVERAGE NUMBER OF STANDARD DOORS.....	2.2	1.9	1.9	2.0	2.1	2.3	2.3	2.3	
SLIDING GLASS DOORS									
1.....	15.8	4.3	3.9	2.3	1.8	1.8	.7	1.0	
2 OR MORE.....	4.5	1.8	1.2	.9	.4	.4	.1	.2	
NONE/NC DOORS.....	61.0	5.2	5.5	4.9	5.0	11.5	6.7	22.1	
AVERAGE NUMBER OF SLIDING GLASS DOORS.....	.3	.8	.6	.6	.4	.2	.1	.1	

SEE NOTES AT END OF TABLE

TABLE 53. THERMAL CHARACTERISTICS BY YEAR HOUSE BUILT
(MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	YEAR HOUSE BUILT						
		1975 OR LATER	1970 TO 1974	1965 TO 1969	1960 TC 1964	1950 TO 1959	1940 TO 1949	1939 CR EARLIER
NUMBER OF STORM DOORS								
1.....	13.0	2.1	2.0	1.4	1.0	1.5	1.0	3.9
2.....	22.0	2.0	2.4	1.7	2.2	4.8	2.2	6.5
3.....	8.5	1.3	1.0	.8	.9	1.6	.7	2.6
4 OR MORE.....	2.9	.5	.4	.3	.2	.4	.2	.8
NONE/NC DOORS.....	34.9	5.3	4.7	3.9	2.9	5.3	3.3	9.5
AVERAGE NUMBER OF STORM DOORS.....	1.2	1.1	1.1	1.1	1.3	1.3	1.1	1.2
AVERAGE NUMBER OF STANDARD STORM DOORS.....	1.0	.7	.8	.8	1.1	1.2	1.1	1.2
AVERAGE NUMBER OF SLIDING GLASS STORM DOORS.....	.2	.4	.3	.2	.2	.1	.1	-
PERCENT OF OUTSIDE DOORS WITH STORM DOORS								
100 PERCENT.....	26.3	2.8	2.8	2.0	2.3	5.5	2.5	8.4
51 TO 99 PERCENT.....	7.6	1.1	1.2	.8	1.0	1.3	.5	1.7
1 TO 50 PERCENT.....	12.9	2.1	1.9	1.4	1.0	1.7	1.2	3.7
NONE/NC DOORS.....	34.9	5.3	4.7	3.9	2.9	5.3	3.3	9.5

SEE NOTES AT END OF TABLE

TABLE 53. THERMAL CHARACTERISTICS BY YEAR HOUSE BUILT
(MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	YEAR HOUSE BUILT						
		1975 OR LATER	1970 TO 1974	1965 TO 1969	1960 TO 1964	1950 TO 1959	1940 TO 1949	1939 OR EARLIER
TOTAL SINGLE-FAMILY UNITS.....	56.3	6.9	5.6	5.0	5.1	11.6	5.7	16.4
HAVE ROOF OR CEILING INSULATION (SINGLE-FAMILY UNITS)								
YFS.....	43.2	6.4	5.0	4.5	4.4	9.3	4.1	9.5
ALL INSULATED.....	38.6	6.0	4.8	4.2	4.0	8.2	3.5	7.8
PART INSULATED.....	4.1	.4	.1	.2	.3	.9	.5	1.6
DON'T KNOW AMOUNT/	.5	-	-	.1	-	.2	-	.1
NO.....	8.1	.2	.2	.2	.4	1.2	1.1	4.9
DON'T KNOW/NCT REPORTED.....	4.9	.2	.4	.3	.3	1.2	.6	2.0
TYPE OF INSULATION								
BATTS ONLY.....	21.5	3.2	2.7	2.4	2.4	4.5	2.1	8.2
AVERAGE NUMBER OF INCHES..	5.2	6.2	5.9	5.6	4.8	4.9	4.9	4.9
LOOSE FILL ONLY.....	11.7	1.9	1.1	1.2	1.1	2.5	.9	2.9
AVERAGE NUMBER OF INCHES..	6.5	8.1	6.8	6.3	7.1	5.5	5.9	6.0
RATS AND LOOSE FILL ONLY..	4.7	.5	.5	.5	.4	1.1	.5	1.1
AVERAGE NUMBER OF INCHES..	10.3	14.0	10.0	10.7	10.1	9.7	9.4	9.7
OTHER/COMBINATIONS.....	3.2	.4	.3	.2	.3	.7	.4	.9
DON'T KNOW TYPE/								
NO REPORTED.....	2.1	.5	.3	.2	.1	.4	.2	.4
NO INSULATION/DON'T KNOW/								
NOT REPORTED.....	13.1	.4	.6	.5	.7	2.3	1.7	6.8

SEE NOTES AT END OF TABLE

TABLE 53. THERMAL CHARACTERISTICS BY YEAR HOUSE BUILT
(MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	YEAR HOUSE BUILT							1939 OR EARLIER
		1975 OR LATER	1970 TO 1974	1965 TO 1969	1960 TO 1964	1950 TO 1959	1940 TO 1949		
HAVE WALL INSULATION (SINGLE-FAMILY UNITS)									
YES.....	36.2	6.0	4.5	3.7	3.4	7.1	3.2	8.3	
ALL WALLS.....	29.6	5.7	4.3	3.4	3.0	5.6	2.4	5.2	
SOME WALLS.....	6.6	.3	.2	.3	.5	1.5	.8	3.0	
NO.....	11.5	.2	.3	.6	.7	2.4	1.5	5.7	
DN'T KNW/NOT REPORTED.....	6.5	.6	.8	.7	1.0	2.1	1.0	2.4	
FLOOR INSULATION (SINGLE-FAMILY UNITS)									
HAVE BASEMENT/CRAWL SPACE.....	44.0	4.0	3.5	3.3	3.8	8.9	5.1	15.3	
HEATED.....	13.0	1.4	1.2	1.2	1.3	2.5	1.3	4.1	
NOT HEATED.....	31.0	2.6	2.3	2.2	2.6	6.5	3.7	11.2	
HAVE FLOOR INSULATION.....	4.9	.9	.8	.7	.5	.6	.4	1.0	
ALL PARTS INSULATED.....	3.9	.8	.7	.6	.4	.5	.3	.7	
SOME PARTS INSULATED.....	1.0	.1	.1	.1	.1	.2	.1	.3	
NO FLOOR INSULATION.....	21.8	1.3	1.1	1.2	1.6	4.8	3.0	8.7	
DN'T KNW/NOT REPORTED.....	4.4	.3	.4	.3	.5	1.1	.3	1.4	
NO BASEMENT/CRAWL SPACE.....	12.3	2.9	2.1	1.7	1.2	2.7	.7	1.0	
INSULATION CHARACTERISTICS (SINGLE-FAMILY UNITS)									
UNITS WITH SOME OR ALL STORM WINDOWS, AND SOME OR ALL STORM DOORS, AND ROOF OR CEILING INSULATION.....	27.4	3.7	3.1	2.6	2.7	5.7	2.6	7.1	
UNITS WITH ONE OR MORE OF THESE TYPES OF INSULATION..	50.6	6.6	5.4	4.8	4.7	10.5	4.8	13.8	
UNITS WITH NONE OF THESE TYPES OF INSULATION.....	5.7	.3	.3	.2	.4	1.1	.9	2.6	

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.
SOURCE: RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY AND USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 54. THERMAL CHARACTERISTICS BY YEAR HOUSE BUILT
(PERCENTAGE OF HOUSEHOLDS)

HOUSEHOLD CHARACTERISTICS	TOTAL	YEAR HOUSE BUILT									
		1975 OR LATER	1970 TO 1974	1965 TO 1969	1960 TO 1964	1950 TO 1959	1940 TO 1949	1939 OR EARLIER			
TOTAL HOUSEHOLDS.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER OF WINDOWS											
1 TO 6.....	16.6	28.5	27.0	21.2	19.5	8.3	12.5	10.6			
7 TO 12.....	41.1	44.0	40.6	43.4	42.2	44.8	40.5	36.9			
13 TO 18.....	26.8	19.6	23.8	23.7	27.2	32.7	28.0	28.8			
19 OR MORE.....	15.0	7.7	6.7	11.7	11.1	14.3	19.0	23.7			
NONP.....	.3	.2	1.9								
SIZE AND NUMBER OF WINDOWS											
LARGE (24 SQ. FT. OR LARGER)											
1.....	23.4	20.3	21.9	27.8	33.0	31.5	21.3	16.9			
2.....	12.5	15.0	16.0	13.6	18.7	14.2	10.0	8.8			
3 OR MORE.....	20.5	23.1	21.7	21.4	20.1	19.5	21.1	18.7			
NONE/NC WINDOWS.....	43.2	41.6	40.4	37.2	28.1	34.8	47.6	55.6			
MEDIUM (MORE THAN 6, LESS THAN 24 SQ. FT.)											
1 TO 4.....	21.2	34.5	29.2	27.4	24.4	15.3	17.1	12.8			
5 TO 8.....	29.2	27.9	28.7	31.8	33.6	34.2	27.6	25.4			
9 TO 12.....	20.6	13.3	15.4	16.7	19.1	25.7	26.1	23.6			
13 OR MORE.....	15.6	12.2	11.8	15.3	12.8	17.1	23.1	30.7			
NONE/NC WINDOWS.....	9.4	12.1	14.9	8.9	10.1	7.6	6.2	7.5			
SMALL (6 SQ. FT. OR SMALLER)											
1.....	18.5	18.3	17.8	19.1	15.2	14.9	20.9	21.2			
2.....	18.2	20.9	17.7	19.0	16.8	20.0	20.4	15.6			
3.....	5.6	9.2	8.8	9.9	11.0	11.6	9.6	8.4			
4 OR MORE.....	26.3	19.2	21.4	26.5	29.6	32.5	25.7	27.2			
NONE/NC WINDOWS.....	27.4	32.3	34.3	25.5	27.4	21.1	23.4	27.6			

SEE NOTES AT END OF TABLE

TABLE 54. THERMAL CHARACTERISTICS BY YEAR HOUSE BUILT
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	YEAR HOUSE BUILT							
		1975 OR LATER	1970 TO 1974	1965 TO 1969	1960 TO 1964	1950 TO 1959	1940 TO 1949	1939 OR EARLIER	
NUMBER OF STORM WINDOWS									
1 TO 6.....	11.0	17.3	13.9	8.7	10.5	7.1	6.4	11.3	
7 TO 12.....	22.1	24.2	21.9	21.2	20.8	21.3	21.6	22.4	
13 TO 18.....	15.2	11.5	13.6	12.9	14.8	18.5	13.9	17.0	
19 OR MORE.....	5.1	6.0	3.9	7.1	7.2	8.9	8.5	14.4	
NONE/NO WINDOWS.....	42.7	41.0	46.7	50.1	46.7	44.2	49.6	35.0	
PERCENT OF WINDOWS WITH STORM WINDOWS									
100 PERCENT.....	38.4	49.7	41.2	35.4	39.2	35.7	26.8	37.8	
76 TO 99 PERCENT.....	6.5	3.7	5.5	6.8	6.6	9.9	12.3	12.7	
51 TO 75 PERCENT.....	4.6	2.8	3.4	2.9	3.4	4.6	6.2	6.7	
1 TO 50 PERCENT.....	5.3	2.8	3.2	4.9	4.1	5.6	5.1	7.8	
NONE/NO WINDOWS.....	42.7	41.0	46.7	50.1	46.7	44.2	49.6	35.0	
NUMBER OF OUTSIDE DOORS									
1.....	9.6	12.9	11.9	8.6	10.9	5.4	8.6	9.6	
2.....	44.8	35.0	43.4	42.9	36.9	49.9	54.7	47.0	
3.....	27.6	30.7	26.0	27.2	30.4	31.4	20.8	26.1	
4 OR MORE.....	14.5	20.3	15.9	18.1	17.4	12.5	12.4	12.2	
NONE.....	3.2	1.0	2.9	3.3	4.3	.8	3.6	5.1	
TYPE AND NUMBER OF OUTSIDE DOORS									
STANDARD DOORS									
1.....	15.4	26.6	26.3	17.6	16.6	7.3	10.5	10.2	
2.....	51.1	46.6	48.6	53.4	47.5	58.1	57.5	48.5	
3.....	21.3	17.1	15.0	19.8	22.0	25.8	18.3	24.7	
4 OR MORE.....	7.5	5.4	4.4	4.6	8.7	7.7	9.8	11.2	
NONE/NO DOORS.....	4.3	4.4	5.6	4.6	5.2	1.2	3.9	5.4	
SLIDING GLASS DOORS									
1.....	19.3	38.3	36.6	28.4	24.9	13.2	8.9	4.3	
2 OR MORE.....	6.0	15.6	11.3	10.6	5.1	3.1	1.2	.8	
NONE/NO DOORS.....	74.7	46.0	52.1	61.0	70.0	83.8	89.9	94.9	

SEE NOTES AT END OF TABLE

TABLE 54. THERMAL CHARACTERISTICS BY YEAR HOUSE BUILT
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	YEAR HOUSE BUILT							
		1975 OR LATER	1970 TO 1974	1965 TO 1969	1960 TO 1964	1950 TO 1959	1940 TO 1949	1939 OR EARLIER	
NUMBER OF STORM DOORS									
1.....	15.9	18.8	19.3	16.9	13.6	11.1	13.8	16.8	
2.....	26.5	18.0	22.8	20.7	31.2	35.3	30.1	27.9	
3.....	10.9	11.9	9.2	10.1	12.3	11.8	8.8	11.3	
4 OR MORE.....	3.5	4.4	4.1	3.7	2.9	3.2	2.7	3.4	
NONE/NC DOORS.....	42.7	46.9	44.5	48.4	40.0	38.5	44.6	40.6	
PERCENT OF OUTSIDE DOORS WITH STORM DOORS									
100 PERCENT.....	32.2	25.1	26.1	24.6	32.0	40.2	33.2	36.2	
51 TO 99 PERCENT.....	5.3	9.3	11.5	9.5	14.2	9.2	6.5	7.5	
1 TO 50 PERCENT.....	15.8	18.7	17.8	17.4	13.8	12.0	15.8	15.7	
NONE/NC DOORS.....	42.7	46.9	44.5	48.4	40.0	38.5	44.6	40.6	
TOTAL SINGLE-FAMILY UNITS.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
HAVE ROOF OR CEILING INSULATION (SINGLE-FAMILY UNITS)									
YES.....	76.8	93.8	89.1	90.1	86.1	79.8	71.1	58.2	
ALL INSULATED.....	68.5	87.9	86.1	83.6	79.0	70.4	61.6	47.5	
PART INSULATED.....	7.3	5.2	2.2	4.4	6.2	8.0	8.7	10.0	
DON'T KNOW AMOUNT/NOT REPORTED.....	1.0	.6	.8	2.1	.9	1.4	.8	.6	
NO.....	14.5	3.1	3.7	4.5	7.1	10.2	18.9	29.7	
DON'T KNOW/NOT REPORTED.....	8.8	3.1	7.2	5.4	6.8	10.0	9.9	12.1	
TYPE OF INSULATION									
BATTS ONLY.....	38.2	46.9	47.4	48.0	47.3	38.4	36.7	25.9	
LOOSE FILL ONLY.....	20.7	27.4	20.0	24.3	21.7	21.8	14.9	18.0	
BATTS AND LOOSE FILL ONLY.....	8.3	7.2	9.6	9.2	8.8	9.7	9.4	6.6	
OTHER/COMBINATIONS.....	5.8	5.5	6.0	4.9	5.6	6.4	6.5	5.3	
DON'T KNOW TYPE/NOT REPORTED.....	3.8	6.7	6.0	3.7	2.7	3.5	3.6	2.4	
NO INSULATION/DON'T KNOW/NOT REPORTED.....	23.2	6.2	10.9	9.9	13.9	20.2	28.9	41.8	

SEE NOTES AT END OF TABLE

TABLE 54. THERMAL CHARACTERISTICS BY YEAR HOUSE BUILT
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	YEAR HOUSE BUILT							
	TOTAL	1975 OR LATER	1970 TO 1974	1965 TO 1969	1960 TO 1964	1950 TO 1959	1940 TO 1949	1939 OR EARLIER
HAVE WALL INSULATION (SINGLE-FAMILY UNITS)								
YES.....	64.4	87.5	80.4	74.5	67.7	61.0	55.7	50.5
ALL WALLS.....	52.6	83.6	76.1	67.8	58.7	48.3	41.4	31.9
SOME WALLS.....	11.8	3.9	4.3	6.8	9.0	12.7	14.3	18.6
NO.....	20.5	3.6	5.6	12.0	13.4	20.9	26.9	34.9
DON'T KNOW/NOT REPORTED.....	15.1	8.9	13.9	13.5	18.9	18.0	17.4	14.6
FLOOR INSULATION (SINGLE-FAMILY UNITS)								
HAVE BASEMENT/CRAWL SPACE.....	78.2	58.5	62.1	66.7	75.5	77.0	98.1	93.7
HEATED.....	23.0	21.0	20.7	23.2	24.9	21.2	23.2	25.3
NOT HEATED.....	55.1	37.3	41.5	43.5	50.6	55.8	64.9	68.4
HAVE FLOOR INSULATION.....	6.5	13.4	14.1	13.7	9.0	5.3	6.7	6.3
ALL PARTS INSULATED.....	1.8	11.4	11.8	11.7	7.9	3.9	5.0	4.1
SOME PARTS INSULATED.....	38.7	2.0	2.2	2.0	1.1	1.4	1.7	2.1
NO FLOOR INSULATION.....	7.8	19.4	20.2	23.0	30.8	41.4	53.0	53.4
DON'T KNOW/NOT REPORTED.....	21.8	4.5	7.2	6.7	10.7	9.1	5.2	8.7
NO BASEMENT/CRAWL SPACE.....		41.6	37.9	33.3	24.5	23.0	11.9	6.3
INSULATION CHARACTERISTICS (SINGLE-FAMILY UNITS)								
UNITS WITH SOME OR ALL STORM WINDOWS, AND SOME OR ALL STORM DOORS, AND ROOF OF CEILING INSULATION.....	48.8	54.3	54.3	51.4	53.3	49.2	44.6	43.5
UNITS WITH ONE OR MORE OF THESE TYPES OF INSULATION..	89.8	95.8	95.0	95.1	93.0	90.7	84.3	84.3
UNITS WITH NONE OF THESE TYPES OF INSULATION.....	10.2	4.2	5.0	4.9	7.0	9.3	15.7	15.7

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. PERCENTAGES ARE CALCULATED ON UNROUTED NUMBERS. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.
SOURCE: RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 55. THERMAL CHARACTERISTICS BY SELECTED DEMOGRAPHIC CHARACTERISTICS (MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED)

HOUSEHOLD CHARACTERISTICS	SELECTED DEMOGRAPHIC CHARACTERISTICS										
	TOTAL	AGE OF HOUSEHOLD HEAD			ORIGIN		NUMBER OF HOUSEHOLD MEMBERS				
		35 OR LESS	36 TO 59	60 AND OVER	WHITE, OTHER	BLACK	1	2	3	4	5 OR MORE
TOTAL HOUSEHOLDS.....	81.6	28.4	31.5	21.8	72.4	9.2	15.7	26.8	14.9	13.4	10.9
NUMBER OF WINDOWS											
1 TO 6.....	13.7	7.3	3.4	3.0	11.6	2.2	5.6	4.7	1.8	.9	.7
7 TO 12.....	33.6	12.0	12.5	9.1	29.2	4.4	5.9	11.4	6.6	5.1	4.6
13 TO 18.....	21.9	6.5	9.3	6.0	19.9	2.0	2.9	6.8	4.0	4.7	3.5
19 OR MORE.....	12.2	2.5	6.2	3.5	11.5	.7	1.1	3.8	2.4	2.6	2.2
NONE.....	.2	-	-	.2	.2	-	.7	-	-	-	-
AVERAGE NUMBER OF WINDOWS...	12.4	10.6	13.8	12.7	12.6	10.8	9.4	12.1	13.0	14.2	14.3
SIZE AND NUMBER OF WINDOWS											
LARGE (24 SQ. FT. OR LARGER)											
1.....	19.1	6.4	7.8	4.9	17.5	1.6	2.7	6.4	3.7	3.6	2.7
2.....	10.6	4.1	4.2	2.3	9.8	.8	1.9	3.3	2.0	1.8	1.7
3 OR MORE.....	16.7	4.9	7.3	4.5	14.6	2.1	3.0	5.6	3.0	2.7	2.3
NONE/NC WINDOWS.....	35.3	13.0	12.2	10.1	30.6	4.7	8.1	11.5	6.2	5.2	4.2
AVERAGE NUMBER OF LARGE SIZE WINDOWS.....	1.7	1.4	2.0	1.7	1.7	1.8	1.4	1.8	1.7	1.9	1.9
MEDIUM (MCFE THAN 6, LESS THAN 24 SQ. FT.)											
1 TO 4.....	17.3	7.9	5.9	3.5	15.3	2.0	4.7	6.0	2.5	2.4	1.8
5 TO 8.....	23.8	8.3	9.2	6.4	20.7	3.2	4.4	7.8	4.5	3.7	3.5
9 TO 12.....	16.8	5.3	6.3	5.2	14.8	2.0	2.2	5.8	3.5	3.1	2.3
13 OR MORE.....	16.0	4.1	7.4	4.5	14.9	1.1	1.9	4.6	3.3	3.3	2.9
NONE/NC WINDOWS.....	7.6	2.9	2.6	2.2	6.7	1.0	2.5	2.6	1.2	.9	.4
AVERAGE NUMBER OF MEDIUM SIZE WINDOWS.....	8.0	7.0	8.7	8.4	8.1	7.2	6.1	7.7	8.7	9.0	9.5
SMALL (6 SQ. FT. OR SMALLER)											
1.....	15.1	5.5	5.3	4.3	12.7	2.4	3.7	5.1	2.7	2.1	1.6
2.....	14.9	5.5	5.5	3.9	13.2	1.6	2.4	4.9	3.1	2.4	2.1
3.....	7.8	2.4	3.4	2.0	7.0	.8	1.2	2.6	1.3	1.4	1.4
4 OR MORE.....	21.4	5.8	9.7	5.9	20.1	1.4	2.9	7.0	3.8	4.5	3.3
NONE/NC WINDOWS.....	22.4	9.1	7.6	5.7	19.4	3.0	5.7	7.2	4.1	2.9	2.5
AVERAGE NUMBER OF SMALL SIZE WINDOWS.....	2.6	2.2	3.1	2.6	2.8	1.8	1.9	2.6	2.5	3.4	2.9

SEE NOTES AT END OF TABLE

TABLE 55. THERMAL CHARACTERISTICS BY SELECTED DEMOGRAPHIC CHARACTERISTICS
(MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	SELECTED DEMOGRAPHIC CHARACTERISTICS																			
	TOTAL	AGE OF HOUSEHOLD HEAD			ORIGIN		NUMBER OF HOUSEHOLD MEMBERS													
		35 OR LESS	36 TO 59	60 AND OVER	WHITE, OTHER	BLACK	1	2	3	4	5 OR MORE									
NUMBER OF STORM WINDOWS																				
1 TO 6.....	8.9	4.3	2.5	2.2	8.1	0.9	2.7	3.2	1.4	0.9	0.8									
7 TO 12.....	18.0	6.0	7.1	5.0	16.6	1.4	2.9	6.2	3.7	2.7	2.6									
13 TO 18.....	12.4	3.6	5.3	3.5	11.8	.5	1.5	4.2	2.3	2.8	1.6									
19 OR MORE.....	7.4	1.3	4.2	1.9	7.1	.3	.6	2.2	1.4	1.7	1.6									
NCNF/NO WINDOWS.....	34.9	13.2	12.4	9.3	28.8	6.1	8.2	11.0	6.1	5.2	4.3									
AVERAGE NUMBER OF STORM WINDOWS.....	7.0	5.5	8.3	7.1	7.5	3.4	4.6	7.0	7.3	8.5	8.4									
AVERAGE NUMBER OF LARGE SIZE STORM WINDOWS.....	.8	.6	1.0	.8	.8	.6	.6	.8	.8	.9	.9									
AVERAGE NUMBER OF MEDIUM SIZE STORM WINDOWS.....	4.9	3.9	5.7	5.1	5.2	2.4	3.3	4.8	5.3	5.8	6.0									
AVERAGE NUMBER OF SMALL SIZE STORM WINDOWS.....	1.3	1.0	1.6	1.2	1.4	.5	.8	1.3	1.3	1.8	1.5									
PERCENT OF WINDOWS WITH STORM WINDOWS																				
100 PERCENT.....	31.4	10.4	12.6	8.4	29.8	1.6	5.1	11.0	5.5	5.6	4.1									
76 TO 99 PERCENT.....	7.3	2.1	3.1	2.1	6.6	.6	1.2	2.1	1.6	1.3	1.1									
51 TO 75 PERCENT.....	3.8	1.3	1.6	.9	3.5	.3	.6	1.2	.8	.6	.6									
1 TO 50 PERCENT.....	4.3	1.5	1.7	1.1	3.8	.5	.7	1.5	.8	.6	.8									
NCNF/NO WINDOWS.....	34.9	13.2	12.4	9.3	28.8	6.1	8.2	11.0	6.1	5.2	4.3									

SEE NOTES AT END OF TABLE

TABLE 55. THERMAL CHARACTERISTICS BY SELECTED DEMOGRAPHIC CHARACTERISTICS (MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	SELECTED DEMOGRAPHIC CHARACTERISTICS														
	TOTAL	AGE OF HOUSEHOLD HEAD			ORIGIN			NUMBER OF HOUSEHOLD MEMBERS							
		35 OR LESS	36 TO 59	60 AND OVER	WHITE/ OTHER	BLACK	1	2	3	4	5 OR MORE				
NUMBER OF OUTSIDE DOORS															
1.....	7.8	4.0	2.0	1.8	6.3	1.5	3.2	2.6	1.0	0.6	0.4				
2.....	36.5	13.7	12.8	10.1	32.1	4.5	7.3	12.4	6.7	5.6	4.5				
3.....	22.5	6.6	10.2	5.8	20.5	2.0	2.9	6.8	4.7	4.5	3.7				
4 OR MORE.....	12.2	3.1	5.9	3.2	11.6	.6	1.3	4.0	2.1	2.6	2.1				
NONE.....	2.6	1.1	.6	.9	1.9	.7	1.0	.9	.4	.1	.2				
AVERAGE NUMBER OF DOORS.....	2.5	2.3	2.7	2.5	2.6	2.1	2.1	2.5	2.6	2.4	2.8				
TYPE AND NUMBER OF OUTSIDE DOORS															
STANDARD DOORS															
1.....	12.6	6.3	3.5	2.8	10.8	1.8	4.3	4.2	1.9	1.3	.9				
2.....	41.7	14.5	16.1	11.1	37.0	4.7	7.0	14.0	7.9	7.2	5.7				
3.....	17.4	4.7	7.8	4.9	15.9	1.5	2.2	5.1	3.5	3.4	3.1				
4 OR MORE.....	6.5	1.4	3.0	2.0	6.0	.5	.8	2.3	1.1	1.3	1.0				
NONE/NC DOORS.....	3.5	1.6	1.0	1.0	2.8	.7	1.5	1.2	.5	.2	.2				
AVERAGE NUMBER OF STANDARD DOORS.....	2.2	2.0	2.3	2.2	2.2	1.9	1.8	2.2	2.2	2.4	2.4				
SLIDING GLASS DOORS															
1.....	15.8	6.2	6.9	2.6	14.9	.9	2.3	5.0	3.1	3.1	2.2				
2 OR MORE.....	4.9	1.3	2.5	1.1	4.7	.2	.8	1.5	.7	1.1	.8				
NONE/NC DOORS.....	61.0	20.9	22.1	18.0	52.8	8.2	12.7	20.2	11.0	9.1	7.9				
AVERAGE NUMBER OF SLIDING GLASS DOORS.....	.3	.3	.4	.3	.4	.1	.3	.3	.3	.4	.4				

SEE NOTES AT END OF TABLE

TABLE 55. THERMAL CHARACTERISTICS BY SELECTED DEMOGRAPHIC CHARACTERISTICS
(MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	SELECTED DEMOGRAPHIC CHARACTERISTICS									
	AGE OF HOUSEHOLD HEAD		ORIGIN		NUMBER OF HOUSEHOLD MEMBERS					
	35 OR LESS	36 TO 59	60 AND OVER	WHITE, OTHER	BLACK	1	2	3	4	5 OR MORE
TOTAL										
NUMBER OF STORM DOORS										
1.....	13.0	4.8	3.0	12.0	1.0	2.5	4.2	2.6	2.0	1.7
2.....	22.0	9.1	6.7	20.1	1.9	3.3	7.5	4.1	4.3	2.8
3.....	8.9	4.4	2.5	8.4	.5	.8	2.9	1.7	1.8	1.7
4 OR MORE.....	2.9	1.6	.8	2.8	-	.3	.8	.5	.7	.6
NONE/NO DOORS.....	34.9	11.6	8.9	29.1	5.8	8.9	11.3	5.9	4.7	4.0
AVERAGE NUMBER OF STORM DOORS.....	1.2	1.4	1.2	1.2	.7	.8	1.2	1.2	1.4	1.4
AVERAGE NUMBER OF STANDARD STORM DOORS.....	1.0	1.2	1.2	1.1	.6	.7	1.0	1.1	1.2	1.2
AVERAGE NUMBER OF SLIDING GLASS STORM DOORS.....	.2	.2	.1	.2	.1	.1	.1	.2	.2	.2
PERCENT OF OUTSIDE DOORS WITH STORM DOORS										
100 PERCENT.....	26.3	10.8	8.4	24.1	2.2	4.2	9.0	4.5	4.9	3.7
51 TO 99 PERCENT.....	7.6	3.9	1.6	7.2	.3	.7	2.2	1.7	1.6	1.3
1 TO 50 PERCENT.....	12.9	4.8	2.9	12.0	.9	1.9	4.3	2.7	2.2	1.9
NONE/NO DOORS.....	34.9	11.6	8.9	29.1	5.8	8.9	11.3	5.9	4.7	4.0

SEE NOTES AT END OF TABLE

TABLE 55. THERMAL CHARACTERISTICS BY SELECTED DEMOGRAPHIC CHARACTERISTICS
(MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	SELECTED DEMOGRAPHIC CHARACTERISTICS										
	TOTAL	AGE OF HOUSEHOLD HEAD			ORIGIN		NUMBER OF HOUSEHOLD MEMBERS				
		35 OR LESS	36 TO 59	60 AND OVER	WHITE, OTHER	BLACK	1	2	3	4	5 OF MORE
TOTAL SINGLE-FAMILY UNITS.....	56.3	16.1	24.3	15.9	51.1	5.2	7.3	18.1	10.7	10.9	9.2
HAVE ROOF OR CEILING INSULATION (SINGLE-FAMILY UNITS)											
YES.....	43.2	11.8	19.8	11.6	40.7	2.5	4.7	14.2	8.5	8.8	7.0
ALL INSULATED.....	38.6	10.3	17.6	10.6	36.4	2.1	4.4	12.6	7.6	7.9	6.1
PART INSULATED.....	4.1	1.4	1.9	.8	3.7	.4	.3	1.3	.7	.9	.9
DON'T KNOW AMOUNT/											
NOT REPORTED.....	.5	.1	.3	.2	.5	-	.1	.2	.1	-	.1
NO.....	8.1	2.0	2.7	3.4	6.3	1.9	1.6	2.6	1.3	1.1	1.5
DON'T KNOW/NOT REPORTED.....	4.9	2.2	1.8	1.0	4.2	.8	1.0	1.3	1.0	1.0	.8
TYPE OF INSULATION											
BATTS ONLY.....	21.5	5.6	10.4	5.6	20.0	1.5	2.0	6.7	4.4	4.8	3.6
AVERAGE NUMBER OF INCHES..	5.3	5.6	5.3	5.0	5.3	5.9	5.3	5.0	5.2	5.5	5.6
LOOSE FILL ONLY.....	11.7	3.5	5.0	3.1	11.1	.6	1.5	3.9	2.3	2.2	1.8
AVERAGE NUMBER OF INCHES..	6.5	6.8	6.2	6.6	6.6	4.4	5.9	6.6	6.5	6.3	6.8
BATTS AND LOOSE FILL ONLY...	4.7	1.3	2.2	1.2	4.6	1.1	.4	1.6	.8	1.1	.9
AVERAGE NUMBER OF INCHES..	10.3	11.5	10.3	9.0	10.3	7.2	9.2	10.1	11.1	10.4	10.4
OTHER/COMBINATIONS.....	3.2	.8	1.4	1.0	3.1	.2	.5	1.3	.7	.4	.4
DON'T KNOW TYPE/											
NOT REPORTED.....	2.1	.7	.7	.7	1.9	.2	.4	.8	.3	.4	.3
NO INSULATION/DON'T KNOW/											
NOT REPORTED.....	13.1	4.2	4.5	4.3	10.4	2.6	2.6	4.0	2.3	2.1	2.2

SEE NOTES AT END OF TABLE

TABLE 55. THERMAL CHARACTERISTICS BY SELECTED DEMOGRAPHIC CHARACTERISTICS
(MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	SELECTED DEMOGRAPHIC CHARACTERISTICS										
	AGE OF HOUSEHOLD HEAD		ORIGIN		NUMBER OF HOUSEHOLD MEMBERS				5 OR MORE		
	35 OR LESS	36 TO 59	60 AND OVER	WHITE, OTHER	BLACK	1	2	3		4	
TOTAL											
HAVE WALL INSULATION (SINGLE-FAMILY UNITS)											
YES.....	36.2	16.7	9.5	34.2	2.0	3.8	11.6	6.9	7.7	6.2	
ALL WALLS.....	29.6	13.7	7.9	28.0	1.6	3.1	9.6	5.6	6.3	5.0	
SOME WALLS.....	6.6	3.0	1.6	6.2	.4	.7	2.0	1.3	1.4	1.2	
NO.....	11.5	4.2	4.3	9.6	2.0	2.2	4.0	2.2	1.5	1.6	
DON'T KNOW/NOT REPORTED.....	8.5	3.4	2.1	7.3	1.2	1.3	2.5	1.6	1.7	1.4	
FLOOR INSULATION (SINGLE-FAMILY UNITS)											
HAVE BASEMENT/CRAWL SPACE.....	44.0	18.9	13.1	40.3	3.7	5.9	14.4	8.3	8.2	7.2	
HEATED.....	13.0	6.3	3.6	12.0	1.0	1.3	4.1	2.2	3.0	2.4	
NOT HEATED.....	31.0	12.6	9.5	28.3	2.7	4.6	10.3	6.1	5.3	4.9	
HAVE FLOOR INSULATION.....	4.9	2.4	1.1	4.7	.1	.4	1.6	1.1	1.0	.8	
ALL PARTS INSULATED.....	3.9	1.8	.9	3.7	.1	.3	1.2	.9	.8	.6	
SOME PARTS INSULATED.....	1.0	.6	.2	1.0	-.	-.	.3	.2	.3	.2	
NO FLOOR INSULATION.....	21.8	8.5	7.4	19.8	2.0	3.5	7.5	4.2	3.4	3.1	
DON'T KNOW/NOT REPORTED.....	4.4	1.7	1.1	3.7	.6	.7	1.2	.8	.9	.9	
NO BASEMENT/CRAWL SPACE.....	12.3	5.4	2.8	10.9	1.4	1.4	3.8	2.5	2.7	2.0	
INSULATION CHARACTERISTICS (SINGLE-FAMILY UNITS)											
UNITS WITH SOME OR ALL STORM WINDOWS, AND SOME OR ALL STORM DOORS, AND ROOF OR CEILING INSULATION.....	27.4	12.9	7.6	26.3	1.1	2.7	9.2	5.3	5.6	4.6	
UNITS WITH ONE OR MORE OF THESE TYPES OF INSULATION..	50.6	22.3	14.0	46.9	3.6	6.3	16.4	9.8	10.0	8.1	
UNITS WITH NONE OF THESE TYPES OF INSULATION.....	5.7	2.0	1.9	4.2	1.5	1.1	1.7	.9	.9	1.1	

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.
SOURCE: RESIDENTIAL AND COMMERCIAL ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 56. THERMAL CHARACTERISTICS BY SELECTED DEMOGRAPHIC CHARACTERISTICS
(PERCENTAGE OF HOUSEHOLDS)

HOUSEHOLD CHARACTERISTICS	SELECTED DEMOGRAPHIC CHARACTERISTICS										
	TOTAL	AGE OF HOUSEHOLD HEAD			ORIGIN		NUMBER OF HOUSEHOLD MEMBERS				
		35 OR LESS	36 TO 59	60 AND OVER	WHITE, OTHER	BLACK	1	2	3	4	5 OR MORE
TOTAL HOUSEHOLDS.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER OF WINDOWS											
1 TO 6.....	16.8	25.8	13.9	16.0	23.3	35.7	17.6	12.0	7.1	6.0	
7 TO 12.....	41.1	42.3	39.6	40.3	47.5	37.4	42.6	44.6	38.2	41.9	
13 TO 18.....	26.8	23.0	29.7	27.5	21.7	18.6	25.4	27.0	34.9	31.8	
19 OR MORE.....	15.0	8.7	16.1	15.9	7.6	7.2	14.2	16.4	19.8	20.3	
NONE.....	.3	.2	.1	.3	.1	1.1	.2	.1	.1	.1	
SIZE AND NUMBER OF WINDOWS											
LARGE (24 SQ. FT. OR LARGER)											
1.....	23.4	22.6	24.9	24.1	17.8	17.1	24.0	24.6	26.9	24.9	
2.....	12.9	14.3	13.2	13.5	8.2	11.9	12.2	13.2	13.5	15.2	
3 OR MORE.....	20.5	17.4	23.2	20.2	22.8	19.2	21.0	20.2	20.4	21.2	
NONE/NO WINDOWS.....	43.2	45.7	38.7	42.2	51.2	51.7	42.8	42.0	39.2	38.6	
MEDIUM (MCFE THAN 6, LESS THAN 24 SQ. FT.)											
1 TO 4.....	21.2	27.7	18.8	21.2	21.5	29.9	22.4	16.7	17.6	16.2	
5 TO 8.....	29.2	29.1	29.3	28.6	34.2	27.7	29.1	29.9	27.9	32.2	
9 TO 12.....	20.6	18.8	20.0	20.5	21.8	14.1	21.7	23.2	22.9	21.0	
13 OR MORE.....	19.6	14.3	23.6	20.6	11.9	12.3	17.1	22.2	24.6	26.7	
NONE/NO WINDOWS.....	9.4	10.1	8.3	9.2	10.5	16.0	9.7	7.9	7.0	3.9	
SMALL (6 SQ. FT. OR SMALLER)											
1.....	18.5	19.5	16.9	17.6	26.2	23.3	18.9	18.0	16.0	14.5	
2.....	18.2	19.5	17.4	18.3	17.5	15.1	18.2	20.8	17.8	19.7	
3.....	9.6	8.5	10.8	9.7	8.9	7.4	9.6	8.7	10.7	12.5	
4 OR MORE.....	26.3	20.6	30.7	27.7	14.8	18.2	26.3	25.3	33.4	30.3	
NONE/NO WINDOWS.....	27.4	31.9	24.1	26.8	32.5	35.9	27.0	27.2	22.0	23.0	

SEE NOTES AT END OF TABLE

TABLE 56. THERMAL CHARACTERISTICS BY SELECTED DEMOGRAPHIC CHARACTERISTICS
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	SELECTED DEMOGRAPHIC CHARACTERISTICS													
	TOTAL	AGE OF HOUSEHOLD HEAD			ORIGIN		NUMBER OF HOUSEHOLD MEMBERS							
		35 OR LESS	36 TO 59	60 AND OVER	WHITE, OTHER	BLACK	1	2	3	4	5 OR MORE			
NUMBER OF STORM WINDOWS														
1 TO 6.....	11.0	7.9	9.9	11.2	9.4	16.9	11.8	9.4	7.1	7.2				
7 TO 12.....	22.1	22.5	22.7	22.9	15.4	18.2	23.3	24.6	20.1	23.7				
13 TO 18.....	15.2	16.7	16.2	16.4	5.9	9.4	15.6	15.6	20.8	15.0				
19 OR MORE.....	9.1	13.4	8.7	9.8	3.1	3.6	8.1	9.2	12.9	14.3				
NONE/NO WINDOWS.....	42.7	39.5	42.5	39.7	66.2	51.8	41.3	41.3	39.1	39.7				
PERCENT OF WINDOWS WITH STORM WINDOWS														
100 PERCENT.....	38.4	40.1	38.6	41.1	17.4	32.3	41.1	37.2	42.0	38.0				
76 TO 99 PERCENT.....	8.9	9.9	9.7	9.2	7.0	7.5	7.8	11.1	9.8	9.7				
51 TO 75 PERCENT.....	4.6	5.1	4.3	4.8	3.7	3.8	4.4	5.2	4.7	5.6				
1 TO 50 PERCENT.....	5.3	5.4	5.0	5.2	5.7	4.5	5.4	5.3	4.5	7.0				
NONE/NO WINDOWS.....	42.7	39.5	42.5	39.7	66.2	51.8	41.3	41.3	39.1	39.7				
NUMBER OF OUTSIDE DOORS														
1.....	9.6	6.4	8.2	8.7	15.9	20.4	9.8	6.4	4.2	4.1				
2.....	44.8	40.7	46.3	44.3	48.4	46.6	46.4	45.2	41.9	41.2				
3.....	27.6	32.3	26.7	28.4	21.6	18.3	25.4	31.7	33.4	33.8				
4 OR MORE.....	14.9	18.7	14.7	16.0	6.5	8.2	15.0	14.2	19.8	19.4				
NONE.....	3.2	1.9	4.1	2.6	7.5	6.5	3.4	2.5	.7	1.5				
TYPE AND NUMBER OF OUTSIDE DOORS														
STANDARD DOORS														
1.....	15.4	11.2	12.7	14.9	19.4	27.4	15.6	12.6	9.7	8.2				
2.....	51.1	51.2	51.1	51.1	51.1	44.2	52.2	52.9	53.8	52.2				
3.....	21.3	24.8	22.5	21.9	16.2	13.8	19.2	23.7	25.6	28.5				
4 OR MORE.....	7.9	9.6	9.2	8.3	5.2	5.2	8.4	7.6	9.5	9.3				
NONE/NO DOORS.....	4.3	3.2	4.4	3.9	8.1	9.5	4.6	3.1	1.4	1.8				
SLIDING GLASS DOORS														
1.....	19.3	21.9	12.1	20.5	9.7	14.4	18.8	21.0	23.5	20.1				
2 OR MORE.....	6.0	7.8	5.2	6.5	1.9	4.9	5.7	4.8	8.2	7.1				
NONE/NO DOORS.....	74.7	70.3	82.7	72.9	89.4	80.7	75.5	74.2	68.3	72.7				

SEE NOTES AT END OF TABLE

TABLE 56. THERMAL CHARACTERISTICS BY SELECTED DEMOGRAPHIC CHARACTERISTICS
(PERCENTAGE OF HOUSEHOLDS)--Continued

HOUSEHOLD CHARACTERISTICS	SELECTED DEMOGRAPHIC CHARACTERISTICS																			
	TOTAL	AGE OF HOUSEHOLD HEAD			ORIGIN		NUMBER OF HOUSEHOLD MEMBERS													
		35 OR LESS	36 TO 59	60 AND OVER	WHITE, OTHER	BLACK	1	2	3	4	5 OR MORE									
NUMBER OF STORM DOORS																				
1.....	15.9	18.5	15.2	13.6	16.5	11.3	15.9	15.6	17.8	14.8	15.4									
2.....	26.9	21.6	28.1	30.7	27.7	20.4	20.7	28.0	27.6	31.9	26.1									
3.....	10.9	7.2	14.0	11.4	11.7	5.3	5.0	11.0	11.6	13.2	15.7									
4 OR MORE.....	3.5	2.0	4.9	3.5	3.9	.5	2.0	3.0	3.1	4.9	5.8									
NONE/NC DOORS.....	42.7	50.7	36.8	40.8	40.2	62.6	56.5	42.4	39.9	35.2	36.9									
PERCENT OF OUTSIDE DOORS WITH STORM DOORS																				
100 PERCENT.....	32.2	25.1	34.2	38.7	33.3	24.0	26.9	33.5	30.5	36.4	34.0									
51 TO 99 PERCENT.....	9.3	7.4	12.4	7.1	10.0	3.7	4.5	8.1	11.8	12.3	11.7									
1 TO 50 PERCENT.....	15.8	16.8	16.6	13.4	16.6	9.7	12.1	16.0	17.9	16.1	17.4									
NONE/NC DOORS.....	42.7	50.7	36.8	40.8	40.2	62.6	56.5	42.4	39.9	35.2	36.9									
TOTAL SINGLE-FAMILY UNITS.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0									
HAVE ROOF OF CEILING INSULATION (SINGLE-FAMILY UNITS)																				
YES.....	76.8	73.6	81.3	72.9	79.6	48.8	64.8	78.2	78.7	81.1	76.0									
ALL INSULATED.....	68.5	64.3	72.4	66.8	71.2	41.6	59.6	69.6	71.0	72.4	66.0									
PART INSULATED.....	7.3	8.9	7.7	4.9	7.3	6.9	4.0	7.3	6.7	8.3	9.3									
DON'T KNOW AMOUNT.....	1.0	.4	1.2	1.2	1.0	.3	1.2	1.3	1.0	.4	.7									
NOT REPORTED.....	14.5	12.7	11.3	21.1	12.3	36.0	22.2	14.6	12.3	10.0	15.8									
DON'T KNOW/NOT REPORTED.....	8.8	13.6	7.4	6.0	8.1	15.2	13.0	7.2	9.0	8.9	8.3									
TYPE OF INSULATION																				
BATTS ONLY.....	39.2	34.7	42.6	35.0	39.2	28.2	26.8	36.8	41.4	43.9	39.5									
LOOSE FILL ONLY.....	20.7	21.9	20.7	19.5	21.6	11.4	20.6	21.7	21.0	20.0	19.5									
BATTS AND LOOSE FILL ONLY.....	8.3	7.9	9.1	7.5	8.9	2.1	5.7	8.6	7.0	9.8	9.6									
OTHER/COMBINATIONS.....	5.8	5.0	5.9	6.2	6.0	3.4	6.6	6.9	6.1	4.0	4.5									
DON'T KNOW TYPE.....	3.8	4.1	3.0	4.7	3.8	3.8	5.2	4.3	3.2	3.4	2.9									
NOT REPORTED.....	23.2	26.4	18.7	27.1	20.4	51.2	35.2	21.8	21.3	18.9	24.0									
NC INSULATION/DON'T KNOW/NOT REPORTED.....																				

SEE NOTFS AT ENF OF TABEL

TABLE 56. THERMAL CHARACTERISTICS BY SELECTED DEMOGRAPHIC CHARACTERISTICS
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	SELECTED DEMOGRAPHIC CHARACTERISTICS									
	AGE OF HOUSEHOLD HEAD		ORIGIN		NUMBER OF HOUSEHOLD MEMBERS					
	35 OR LESS	36 TO 59	60 AND OVER	WHITT, OTHER	BLACK	1	2	3	4	5 OR MORE
TOTAL										
HAVE WALL INSULATION (SINGLE-FAMILY UNITS)										
YES.....	64.4	68.8	59.8	66.9	39.2	52.0	64.1	64.4	70.9	67.1
ALL WALLS.....	52.6	56.5	49.4	54.8	30.8	42.3	52.9	52.2	59.2	53.9
SOME WALLS.....	11.8	12.3	10.3	12.1	8.5	9.8	11.2	12.2	12.7	13.2
NO.....	20.5	17.1	27.2	18.7	38.2	30.2	22.1	20.4	13.8	17.7
DON'T KNOW/NOT REPORTED.....	15.1	14.1	13.0	14.4	22.6	17.8	13.8	15.2	15.4	15.2
FLOOR INSULATION (SINGLE-FAMILY UNITS)										
HAVE BASEMENT/CRAWL SPACE.....	78.2	77.8	82.6	78.8	72.1	80.4	79.3	77.2	75.4	78.7
HEATED.....	23.0	26.0	22.7	23.4	18.8	17.8	22.8	20.3	27.2	25.8
NOT HEATED.....	55.1	51.7	59.9	55.3	53.3	62.4	56.5	56.8	48.2	52.9
HAVE FLOOR INSULATION.....	8.7	9.1	6.7	9.3	2.8	4.8	8.7	10.3	9.4	9.1
ALL PARTS INSULATED.....	6.9	7.5	5.5	7.3	2.3	4.3	6.8	8.6	6.9	6.9
SOME PARTS INSULATED.....	1.8	2.3	1.1	2.0	.5	.5	1.9	1.7	2.4	2.2
NO FLOOR INSULATION.....	38.7	34.8	46.6	38.7	38.1	48.4	41.4	39.1	30.9	34.2
DON'T KNOW/NOT REPORTED.....	7.8	7.1	6.6	7.3	12.3	9.3	6.4	7.4	7.9	9.6
NO BASEMENT/CRAWL SPACE.....	21.8	22.3	17.4	21.2	27.9	19.7	20.7	22.8	24.6	21.3
INSULATION CHARACTERISTICS (SINGLE-FAMILY UNITS)										
UNITS WITH SOME OF ALL STORM WINDOWS, AND SOME OR ALL STORM DOORS, AND ROOF OR CEILING INSULATION.....	48.8	53.2	47.7	51.5	21.8	37.3	50.7	49.5	51.2	50.4
UNITS WITH ONE OF FCOFF OF THESE TYPES OF INSULATION..	89.8	91.6	87.8	91.8	70.8	85.6	90.4	91.3	91.9	87.8
UNITS WITH NONE OF THESE TYPES OF INSULATION.....	10.2	8.4	12.2	8.2	29.2	14.4	9.6	8.7	8.1	12.2

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. PERCENTAGES ARE CALCULATED ON UNROUTED NUMBERS. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.
SOURCE: RESIDENTIAL AND COMMERCIAL ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 57. CONSERVATION BY CENSUS REGION, AREA TYPE AND SMSA/NON-SMSA (MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED)

HOUSEHOLD CHARACTERISTICS	TOTAL	CENSUS REGION				AREA TYPE		SMSA/NON-SMSA	
		NORTHEAST	NOFTH CENTRAL	SOUTH	WEST	URBAN	RURAL	SMSA	NONSMSA
		17.7	21.1	27.0	16.0	56.0	25.6	55.6	26.0
TOTAL HOUSEHOLDS.....	81.6	17.7	21.1	27.0	16.0	56.0	25.6	55.6	26.0
HOME ENERGY AUDIT DURING THE PAST YEAR									
YES.....	4.2	.8	.9	1.1	1.4	2.9	1.2	3.0	1.2
NO.....	77.4	16.9	20.1	25.8	14.5	53.0	24.4	52.5	24.9
DON'T KNOW/NOT REPORTED.....	.1	-	-	-	-	.1	-	.1	-
ENERGY AUDIT PROVIDER									
GAS OR ELECTRIC COMPANY.....	1.7	.2	.3	.5	.8	1.3	.4	1.2	.5
FUEL OIL OR LPG SUPPLIER.....	.2	.2	-	-	-	.2	-	.2	.1
OTHER PROVIDER.....	2.1	.4	.6	.6	.6	1.5	.7	1.5	.6
NO ENERGY AUDIT/ DON'T KNOW PROVIDER/ NOT REPORTED.....	77.6	16.9	20.2	25.9	14.6	53.1	24.5	52.7	24.9
TOTAL HOUSEHOLDS ADDING ITEMS DURING 1979 OR 1980									
STORM DOORS.....	6.7	1.6	2.0	2.4	.7	4.0	2.7	4.3	2.4
1979.....	3.2	.9	.8	1.2	.3	1.9	1.3	2.0	1.2
1980.....	3.6	.7	1.2	1.3	.4	2.2	1.4	2.4	1.3
AVERAGE NUMBER ADDED.....	1.5	1.4	1.5	1.6	1.5	1.5	1.7	1.5	1.6
STORM WINDOWS.....	5.7	1.5	1.8	1.7	.7	3.7	2.0	3.8	1.8
1979.....	2.9	.8	.9	.9	.3	1.9	1.0	2.1	.8
1980.....	2.8	.7	1.0	.8	.3	1.8	1.0	1.8	1.0
AVERAGE NUMBER ADDED.....	7.5	6.5	6.0	5.9	7.3	7.2	8.0	7.1	8.2
CAULKING.....	18.4	4.8	6.6	5.4	1.7	12.0	6.4	12.3	6.2
1979.....	5.8	1.5	2.1	1.8	.5	3.8	2.0	3.9	1.9
1980.....	12.6	3.3	4.5	3.5	1.2	8.3	4.4	8.4	4.2
WEATHER STRIPPING.....	15.1	4.2	5.1	3.8	2.0	9.3	5.7	9.7	5.3
1979.....	5.5	1.7	1.7	1.4	.7	3.4	2.1	3.6	1.9
1980.....	9.5	2.5	3.3	2.4	1.3	5.9	3.6	6.2	3.4
CLOSEABLE SHUTTERS, PLASTIC SHEETS, INSULATING DRAPES.....	11.3	3.0	3.5	3.5	1.4	6.7	4.6	7.2	4.2
1979.....	3.8	1.1	1.1	1.0	.5	2.6	1.2	2.7	1.1
1980.....	7.6	1.8	2.4	2.4	.9	4.1	3.4	4.5	3.1

SEE NOTES AT END OF TABLE

TABLE 57. CONSERVATION BY CENSUS REGION, AREA TYPE AND SMSA/NON-SMSA (BILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	CENSUS REGION				AREA TYPE		SMSA/NON-SMSA		
	TOTAL	NORTHEAST	NORTH CENTRAL	SOUTH	WEST	URBAN	RURAL	SMSA	NONSMSA
		10.3	15.4	19.7	10.8	20.3	36.0	20.3	36.1
TOTAL SINGLE-FAMILY UNITS.....	56.3								
SINGLE-FAMILY UNITS ADDING ITEMS DURING 1979 OR 1980									
ROOF OR CEILING INSULATION....	6.5	1.4	2.0	2.0	1.1	4.4	2.1	4.4	2.2
1979.....	3.1	.7	1.1	.8	.4	2.0	1.1	2.1	1.0
1980.....	3.4	.6	.9	1.2	.7	2.3	1.1	2.3	1.1
OUTSIDE WALL INSULATION.....	3.8	1.0	1.2	1.1	.5	2.3	1.5	2.4	1.4
1979.....	1.8	.6	.6	.4	.2	1.0	.7	1.1	.6
1980.....	2.0	.4	.6	.7	.3	1.2	.7	1.2	.8
FLOOR INSULATION.....	1.8	.4	.6	.5	.2	1.0	.8	1.1	.7
1979.....	.9	.2	.3	.3	.1	.5	.4	.5	.4
1980.....	.9	.2	.4	.3	.1	.5	.4	.6	.3
TOTAL SINGLE-FAMILY UNITS AND MOBILE HOMES.....	60.9	10.9	16.1	22.1	11.9	37.3	23.6	38.0	23.0
KNOWS ABOUT WEATHERIZATION PROGRAM (SINGLE-FAMILY UNITS OR MOBILE HOME)									
YES.....	9.2	2.0	3.3	2.6	1.3	5.0	4.2	4.4	4.7
USED THE PROGRAM									
NO.....	8.2	1.9	3.0	2.3	1.1	4.4	3.8	4.0	4.2
YES, ADDED ONE OR MORE ITEMS.....	.9	.1	.3	.3	.2	.5	.4	.4	.5
ATTIC INSULATION ADDED.....	.4	.1	.1	.2	.1	.2	.2	.2	.2
STORM WINDOWS ADDED.....	.3	-	.1	.1	.1	.1	.2	.1	.2
STORM DOORS ADDED.....	.2	-	.1	.1	-	.1	.1	-	.1
WALL INSULATION ADDED.....	.1	.1	.1	.1	-	.1	.1	-	.1
OTHER ITEMS ADDED.....	.5	.1	.2	.2	.1	.3	.2	.2	.3
NO.....	51.6	8.9	12.8	19.5	10.5	32.2	19.4	33.4	18.2
NOT REPORTED.....	.1	-	-	-	.1	.1	-	.1	.1

SEP NOTES AT END OF TABLE

TABLE 57. CONSERVATION BY CENSUS REGION, AREA TYPE AND SMSA/NON-SMSA (MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	CENSUS REGION				AREA TYPE		SMSA/NON-SMSA	
		NORTHEAST	NORTH CENTRAL	SOUTH	WEST	URBAN	RURAL	SMSA	NONSMSA
SINGLE-FAMILY UNITS OR MOBILE HOMES ADDING ITEMS DURING 1979 OR 1980									
WOOD BURNING STOVE.....	4.1	1.2	1.0	1.5	0.4	1.2	2.9	1.6	2.4
1979.....	1.8	.5	.5	.7	.2	.6	1.2	.7	1.1
1980.....	2.3	.7	.5	.8	.2	.6	1.7	.9	1.4
INSULATION AROUND HOT WATER PIPES.....	2.7	.6	.7	.9	.5	1.3	1.4	1.4	1.3
1979.....	1.1	.3	.3	.4	.1	.6	.5	.6	.5
1980.....	1.6	.3	.4	.5	.3	.7	.9	.8	.8
INSULATION AROUND WATER HEATER.....	2.5	.4	.4	.7	1.0	1.3	1.2	1.5	1.0
1979.....	.9	.2	.2	.3	.2	.5	.4	.6	.3
1980.....	1.6	.2	.2	.5	.7	.8	.8	.9	.7
AUTOMATIC OR CLOCK THERMOSTAT.....	2.5	.6	.8	.8	.4	1.8	.7	1.9	.6
1979.....	1.3	.3	.4	.4	.2	.9	.4	1.0	.3
1980.....	1.2	.3	.4	.4	.2	.9	.3	.9	.3
ADJUSTMENTS TO THERMOSTAT.....	2.1	.3	.7	.7	.3	1.5	.6	1.4	.7
1979.....	.9	.2	.4	.2	.2	.6	.3	.5	.4
1980.....	1.2	.2	.3	.5	.2	.9	.3	.9	.3
INSULATION AROUND HEATING DUCTS.....	1.3	.3	.3	.6	.2	.7	.6	.7	.6
1979.....	.6	.1	.1	.3	.1	.5	.2	.4	.3
1980.....	.7	.1	.2	.3	.1	.3	.4	.3	.4
ELECTRICAL OR MECHANICAL FURNACE IGNITION.....	.9	.2	.4	.2	.1	.7	.2	.6	.3
1979.....	.5	.1	.3	.1	—	.4	.1	.3	.2
1980.....	.5	.1	.2	.2	.1	.3	.1	.3	.2
SMALLER NOZZLE OF BURNER.....	.9	.4	.2	.2	.1	.6	.3	.7	.3
1979.....	.3	.1	.1	—	—	.3	.1	.2	.1
1980.....	.6	.3	.1	.1	.1	.4	.2	.4	.1

SFF NOTES AT END OF TABLE

TABLE 57. CONSERVATION BY CENSUS REGION, AREA TYPE AND SMSA/NON-SMSA (MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	CENSUS REGION				AREA TYPE		SMSA/NON-SMSA	
		NORTHEAST	NORTH CENTRAL	SOUTH	WEST	URBAN	RURAL	SMSA	NONSMSA
SINGLE-FAMILY UNITS OR MOBILE HOMES ADDING ITEMS DURING 1979 OR 1980									
AN ADDITIONAL THERMOSTAT.....	0.7	0.1	0.3	0.2	0.1	0.4	0.3	0.4	0.3
1979.....	.4	-	.2	.1	-	.2	.1	.3	.1
1980.....	.3	.1	.1	.1	-	.1	.2	.2	.1
AUTOMATIC FLUF DOOR.....	.5	.1	.3	-	-	.3	.2	.3	.2
1979.....	.3	-	.2	-	-	.2	.1	.2	.1
1980.....	.2	.1	.1	-	-	.2	.1	.1	.1
HEAT PUMP.....	.3	-	-	.3	-	.2	.1	.3	-
1979.....	.2	-	-	.1	-	.1	.1	.1	-
1980.....	.2	-	-	.1	-	.1	.1	.2	-
FLAME RETENTION HEAD BURNER.....	.3	.2	-	.1	-	.3	-	.3	-
1979.....	.2	.1	-	.1	-	.2	-	.1	-
1980.....	.2	.1	-	-	-	.2	-	.2	-
ENERGY CCST METER.....	.2	-	.1	-	.1	.1	.1	.1	.1
1979.....	.1	-	-	-	-	-	-	-	-
1980.....	.1	-	.1	-	.1	.1	-	.1	-

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.
 SOURCE: RESIDENTIAL AND COMMERCIAL ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, IFF 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 58. CONSERVATION BY CENSUS REGION, AREA TYPE AND SMSA/NON-SMSA
(PERCENTAGE OF HOUSEHOLDS)

HOUSEHOLD CHARACTERISTICS	CENSUS REGION				AREA TYPE		SMSA/NON-SMSA		
	TOTAL	NORTHEAST	NORTH CENTRAL	SOUTH	WFST	URBAN	RURAL	SMSA	NONSMSA
		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
TOTAL HOUSEHOLDS.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
HOME ENERGY AUDIT DURING THE PAST YEAR									
YES.....	5.1	4.4	4.4	4.1	8.6	5.3	4.8	5.4	4.4
NO.....	94.8	95.6	95.6	95.8	91.1	94.6	95.2	94.5	95.5
DON'T KNOW/NOT REPORTED.....	.1	-	-	.1	.3	.1	-	.1	-
ENERGY AUDIT PROVIDER									
GAS OR ELECTRIC COMPANY.....	2.1	1.2	1.3	1.8	4.8	2.3	1.7	2.2	1.9
FUEL OIL OR LPG SUPPLIER.....	.3	1.0	.1	.1	-	.3	.2	.3	.2
OTHER PROVIDER.....	2.6	2.0	2.8	2.1	3.8	2.6	2.6	2.7	2.3
NO ENERGY AUDIT/ DON'T KNOW PROVIDER/ NOT REPORTED.....	95.0	95.7	95.8	96.0	91.5	94.8	95.5	94.7	95.6
TOTAL HOUSEHOLDS ADEING ITEMS DURING 1979 OR 1980									
STORM DOORS.....	8.2	9.1	9.6	8.8	4.4	7.2	10.5	7.8	9.2
1979.....	3.9	5.2	4.0	4.3	1.8	3.3	5.2	3.6	4.7
1980.....	4.4	4.1	5.8	4.6	2.7	3.9	5.6	4.3	4.8
STORM WINDOWS.....	6.9	8.4	8.8	6.2	4.1	6.5	7.8	6.9	7.0
1979.....	3.6	4.4	4.3	3.3	2.1	3.4	4.0	3.7	3.2
1980.....	3.5	4.0	4.6	3.0	2.2	3.2	4.0	3.2	4.0
CAULKING.....	22.6	27.1	31.4	19.9	10.7	21.5	25.0	22.1	23.7
1979.....	7.1	8.4	5.8	6.7	2.9	6.8	7.9	7.0	7.4
1980.....	15.5	18.7	21.6	13.2	7.7	14.7	17.1	15.1	16.3
WEATHER STRIPPING.....	18.5	24.0	24.1	14.1	12.2	16.7	22.4	17.5	20.4
1979.....	6.8	9.6	8.3	5.3	4.1	6.1	8.3	6.5	7.4
1980.....	11.7	14.4	15.8	8.8	8.1	10.6	14.1	11.1	13.0
CLOSFARLE SHUITFRS, PLASTIC SHEETS, INSULATING DRAPES.....	13.9	16.8	16.8	12.8	8.6	12.0	18.1	12.9	16.0
1979.....	4.6	6.4	5.3	3.8	3.2	4.6	4.6	4.8	4.1
1980.....	9.2	10.4	11.4	9.1	5.4	7.3	13.5	8.0	11.9

SEE NOTES AT END OF TABLE

TABLE 58. CONSERVATION BY CENSUS REGION, AREA TYPE AND SHSP/NON-SHSA
(PERCENTAGE OF HOUSEHOLDS) -Continued

HOUSEHOLD CHARACTERISTICS	CENSUS REGION				AREA TYPE		SHSA/NON-SHSA		
	TOTAL	NORTHEAST	NORTH CENTRAL	SOUTH	WEST	URBAN	RURAL	SMSA	NONSMSA
		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
TOTAL SINGLE-FAMILY UNITS.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
SINGLE-FAMILY UNITS ADDING ITEMS DURING 1979 OR 1980									
ROOF OR CEILING INSULATION.....	11.6	13.4	13.0	10.1	10.4	12.2	10.5	12.1	10.7
1979.....	5.5	7.2	7.4	4.0	3.9	5.6	5.2	5.8	5.0
1980.....	6.1	6.3	5.6	6.1	6.5	6.5	5.3	6.3	5.6
OUTSIDE WALL INSULATION.....	6.7	9.4	7.8	5.6	4.5	6.3	7.3	6.5	6.9
1979.....	3.1	5.5	3.8	2.1	1.9	2.9	3.7	3.2	3.1
1980.....	3.5	4.0	4.0	3.4	2.6	3.4	3.7	3.4	3.8
FLOOR INSULATION.....	3.2	4.2	4.1	2.8	1.6	2.9	3.7	3.0	3.4
1979.....	1.6	2.4	1.8	1.5	.7	1.5	1.8	1.4	1.8
1980.....	1.6	1.8	2.3	1.3	1.0	1.4	1.9	1.6	1.6
TOTAL SINGLE-FAMILY UNITS AND MOBILE HOMES.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
KNOWS ABOUT WEATHERIZATION PROGRAM (SINGLE-FAMILY UNITS OR MOBILE HOME)									
YES.....	15.0	18.1	20.4	11.8	11.0	13.3	17.7	11.7	20.6
USED THE PROGRAM									
NO.....	13.5	17.2	18.7	10.2	9.3	11.9	16.1	10.6	18.3
YES, ADDED ONE OR MORE ITEMS.....	1.4	.9	1.6	1.5	1.5	1.3	1.6	1.0	2.2
ATTIC INSULATION ADDED.....	.6	.5	.5	.7	.7	.5	.8	.5	.9
STORM WINDOWS ADDED.....	.5	.2	.7	.5	.4	.3	.8	.2	1.0
STORM DOORS ADDED.....	.3	.2	.4	.3	.2	.2	.4	.1	.5
WALL INSULATION ADDED.....	.2	.5	.1	.2	.3	.2	.2	.1	.4
OTHER ITEMS ADDED.....	.8	.9	.9	.7	.7	.8	.8	.6	1.1
NO.....	84.7	81.7	79.5	88.0	88.3	86.3	82.2	88.1	79.2
NOT REPORTED.....	.2	.1	.1	.2	.7	.4	.2	.2	.2

SEE NOTES AT END OF TABLE

TABLE 58. CONSERVATION BY CENSUS REGION, AREA TYPE AND SMSA/NON-SMSA (PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	CENSUS REGION				AREA TYPE			SMSA/NON-SMSA	
		NORTHEAST	NORTH CENTRAL	SOUTH	WEST	URBAN	RURAL	SMSA	NON-SMSA	
SINGLE-FAMILY UNITS OR MOBILE HOMES ADDING ITEMS DURING 1979 OR 1980										
WOOD BURNING STOVE.....	6.7	10.7	6.3	6.8	3.4	3.2	12.2	4.3	10.6	
1979.....	3.0	4.6	3.0	3.1	1.4	1.6	5.1	1.9	4.7	
1980.....	3.7	6.2	3.3	3.7	2.0	1.6	7.0	2.4	5.9	
INSULATION AROUND HOT WATER PIPES.....	4.4	5.5	4.6	4.1	3.9	3.5	5.8	3.7	5.6	
1979.....	1.8	2.4	1.8	1.9	1.2	1.6	2.1	1.7	2.0	
1980.....	2.6	3.0	2.8	2.2	2.7	1.9	3.7	2.0	3.6	
INSULATION AROUND WATER HEATER.....	4.1	4.0	2.3	3.3	8.0	3.6	5.0	3.9	4.0	
1979.....	1.5	2.2	1.2	1.2	1.9	1.4	1.7	1.6	1.3	
1980.....	2.6	1.8	1.1	2.1	6.1	2.1	3.3	2.3	3.0	
AUTOMATIC CF CLOCK THERMOSTAT.....	4.1	5.1	4.9	3.7	3.0	4.8	3.0	5.0	2.7	
1979.....	2.1	2.3	2.6	2.0	1.6	2.5	1.6	2.6	1.3	
1980.....	2.0	2.8	2.2	1.7	1.4	2.4	1.4	2.3	1.4	
ADJUSTMENTS TO THERMOSTAT.....	3.5	2.9	4.6	3.2	2.9	3.9	2.7	3.8	2.9	
1979.....	1.5	1.4	2.5	.8	1.4	1.5	1.4	1.3	1.7	
1980.....	2.0	1.4	2.0	2.5	1.5	2.4	1.2	2.5	1.2	
INSULATION AROUND HEATING DUCTS.....	2.2	2.6	2.0	2.6	1.3	2.0	2.5	1.9	2.7	
1979.....	1.0	1.3	.9	1.2	.7	1.2	.8	1.0	1.1	
1980.....	1.1	1.3	1.1	1.4	.6	.8	1.7	.9	1.5	
ELECTRICAL OF MECHANICAL FURNACE IGNITION.....	1.5	1.7	2.5	1.1	.8	1.8	1.0	1.6	1.3	
1979.....	.7	.7	1.7	.3	.3	.9	.4	.8	.7	
1980.....	.8	1.0	.8	.8	.5	.9	.6	.8	.7	
SMALLER NOZZLE OF BURNER.....	1.5	3.7	1.5	.7	.9	1.7	1.2	1.7	1.1	
1979.....	.6	1.2	.8	.1	.4	.7	.4	.6	.5	
1980.....	.9	2.5	.7	.6	.5	1.0	.8	1.1	.6	

SEE NOTES AT END OF TABLE

TABLE 58. CONSERVATION BY CENSUS REGION, AREA TYPE AND SWSA/NON-SWSA (PERCENTAGE OF HOUSEHOLDS)—Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	CENSUS REGION				AREA TYPE		SWSA/NON-SWSA	
		NORTHEAST	MIDWEST	SOUTH	WEST	URBAN	RURAL	SWSA	NON-SWSA
SINGLE-FAMILY UNITS OR MOBILE HOMES ADDING ITEMS DURING 1979 OR 1980	1.1	1.2	1.7	0.9	0.6	1.3	1.1	1.1	
AN ADDITIONAL THERMOSTAT	.6	.4	1.0	.6	.3	.5	.7	.5	
1979	.5	.8	.7	.3	.3	.8	.4	.6	
1980	.8	1.3	2.1	.9	.2	.8	.8	.9	
AUTOMATIC FLUE DOOR	.5	.5	1.4	.6	.1	.3	.5	.4	
1979	.4	.8	.7	.3	.1	.5	.3	.5	
1980	.6	.3	-	.6	.3	.5	.8	.2	
HEAT PUMP	.3	.2	-	.3	.3	.3	.4	.1	
1979	.3	.1	-	.3	.3	.2	.4	.1	
1980	.6	1.9	.3	.8	.2	.1	.8	.2	
FLAME RETENTION HEAD BURNER	.3	1.1	.1	.4	-	.1	.4	.1	
1979	.3	.8	.2	.3	.1	.1	.4	.1	
1980	.1	-	.4	.7	.2	.2	.3	.3	
ENERGY COST METER	.2	-	.4	.1	.2	.1	.1	.1	
1979	.2	-	.4	.3	.5	.1	.2	.2	
1980									

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. PERCENTAGES ARE CALCULATED ON UNROUNDED NUMBERS. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.
 SOURCE: RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND ENR USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 59. CONSERVATION BY 1979 FAMILY INCOME
(BILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED)

HOUSEHOLD CHARACTERISTICS	TOTAL	1979 FAMILY INCOME										POOR (100 PERCENT LEVEL)	POOR (125 PERCENT LEVEL)
		LESS THAN \$5,000	\$5,000 TO \$9,999	\$10,000 TO \$14,999	\$15,000 TO \$19,999	\$20,000 TO \$24,999	\$25,000 TO \$34,999	\$35,000 OR MORE	POOR (100 PERCENT LEVEL)	POOR (125 PERCENT LEVEL)			
TOTAL HOUSEHOLDS.....	81.6	10.4	13.5	13.8	11.9	9.9	12.4	9.4	10.9	14.8			
HOME ENERGY AUDIT DURING THE PAST YEAR													
YES.....	4.2	.3	.6	.6	.7	.6	.6	.7	.4	.5			
NO.....	77.4	10.0	13.2	13.2	11.2	9.3	11.7	8.7	10.5	14.2			
DON'T KNOW/NOT REPORTED.....	.1	-	-	-	-	-	-	-	-	-			
ENERGY AUDIT PROVIDER													
GAS OR ELECTRIC COMPANY.....	1.7	.1	.3	.3	.3	.3	.2	.2	.1	.2			
FUEL OIL OR LPG SUPPLIER.....	.2	-	-	.1	.1	-	-	-	-	-			
OTHER PROVIDER.....	2.1	.2	.2	.2	.3	.3	.4	.5	.2	.3			
NO ENERGY AUDIT/ DON'T KNOW PROVIDER/ NOT REPORTED.....	77.6	10.0	13.3	13.2	11.2	9.3	11.7	8.7	10.5	14.3			
TOTAL HOUSEHOLDS ADDING ITEMS DURING 1979 OR 1980													
STORM DOORS													
1979.....	6.7	.4	.7	1.0	1.1	1.1	1.3	1.1	.6	.8			
1980.....	3.2	.2	.4	.4	.6	.5	.6	.6	.2	.4			
AVERAGE NUMBER AIDED.....	3.6	.3	.3	.6	.6	.6	.7	.5	.3	.4			
STORM WINDOWS													
1979.....	5.7	.4	.7	1.5	1.4	1.5	1.5	1.7	1.7	1.6			
1980.....	2.9	.2	.4	.9	.9	.9	1.0	.9	.4	.6			
AVERAGE NUMBER AIDED.....	2.8	.2	.3	.5	.5	.5	.5	.4	.2	.3			
CAULKING													
1979.....	7.5	7.1	6.8	7.6	7.8	7.0	7.4	8.3	7.0	6.6			
1980.....	18.4	1.1	2.3	2.7	2.7	2.8	4.0	2.7	1.3	1.9			
AVERAGE NUMBER AIDED.....	5.8	.3	.7	.8	.9	.8	1.3	1.0	.4	.6			
WEATHER STRIPPING													
1979.....	12.6	.8	1.6	1.9	1.8	2.0	2.7	1.8	.9	1.3			
1980.....	15.1	.8	1.8	2.5	2.5	2.2	2.9	2.3	1.0	1.4			
AVERAGE NUMBER AIDED.....	5.5	.3	.5	.8	1.0	.8	1.1	1.0	.4	.4			
CLOSEABLE SHUTTERS, PLASTIC SHIFTS, INSULATING DRAPES													
1979.....	9.5	.6	1.3	1.7	1.4	1.5	1.8	1.3	.7	1.0			
1980.....	11.3	1.1	1.9	2.1	1.9	1.5	1.6	1.2	1.6	2.0			
AVERAGE NUMBER AIDED.....	3.8	.3	.5	.7	.7	.5	.6	.5	.5	.6			
1979.....	7.6	.7	1.5	1.5	1.2	1.0	1.0	.7	1.1	1.4			
1980.....													

SEE NOTES AT END OF TABLE

TABLE 59. CONSERVATION BY 1979 FAMILY INCOME
(MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED)--Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	1979 FAMILY INCOME										POOR (100 PERCENT LEVEL)	POOR (125 PERCENT LEVEL)				
		LESS THAN \$5,000		\$5,000 TO \$9,999		\$10,000 TO \$14,999		\$15,000 TO \$19,999		\$20,000 TO \$24,999				\$25,000 TO \$34,999		\$35,000 OR MORE	
TOTAL SINGLE-FAMILY UNITS.....	56.3	5.5	7.7	8.6	8.2	8.0	10.1	8.2	6.1	8.5							
SINGLE-FAMILY UNITS ADDED DURING 1979 OR 1980																	
ROOF OR CEILING INSULATION.....	6.5	.5	.6	.9	.9	1.0	1.5	1.1	.5	.8					.8		
1979.....	3.1	.2	.4	.3	.4	.5	.8	.6	.3	.4					.4		
1980.....	3.4	.3	.4	.6	.5	.5	.7	.5	.3	.4					.4		
OUTSIDE WALL INSULATION.....	3.8	.3	.4	.6	.5	.7	.8	.6	.3	.4					.4		
1979.....	1.8	.2	.1	.2	.3	.4	.4	.3	.1	.2					.2		
1980.....	2.0	.1	.2	.4	.2	.3	.4	.3	.2	.2					.2		
FLOOR INSULATION.....	1.8	.1	.1	.2	.3	.2	.4	.5	.1	.1					.2		
1979.....	.9	.1	.1	.1	.2	.1	.2	.3	.1	.1					.1		
1980.....	.9	.1	.1	.1	.1	.1	.3	.2	.1	.1					.1		
TOTAL SINGLE-FAMILY UNITS AND MOBILE HOMES.....	60.9	6.2	8.8	9.5	8.9	8.4	10.6	8.4	6.8	9.4							
KNOWS ABOUT WEATHERIZATION PROGRAM (SINGLE-FAMILY UNITS OR MOBILE HOME)																	
YES.....	9.2	1.4	1.6	1.3	1.4	1.2	1.3	.9	1.4	2.0							
NO.....	8.2	1.0	1.4	1.2	1.2	1.2	1.3	.9	1.0	1.5							
USED THE PROGRAM																	
YES, AIDED ONE OF MORE ITEMS.....	.9	.3	.2	.1	.2	.1	.1	.1	.4	.5							
ATTIC INSULATION ADDED.....	.4	.2	.1	.1	.1	.1	.1	.1	.2	.2							
STORM WINDOWS ADDED.....	.3	.2	.1	.1	.1	.1	.1	.1	.2	.2							
STORM DOORS ADDED.....	.2	.1	.1	.1	.1	.1	.1	.1	.1	.1							
WALL INSULATION ADDED.....	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1							
OTHER ITEMS ADDED.....	.5	.1	.1	.1	.2	.2	.3	.2	.2	.2							
NO.....	51.6	4.8	7.1	8.2	7.5	7.2	9.3	7.5	5.4	7.3							
NOT REPORTED.....	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1							

SEE NOTES AT END OF TABLE

TABLE 59. CONSERVATION BY 1979 FAMILY INCOME
(MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	1979 FAMILY INCOME										POOR (100 PERCENT LEVEL)	POOR (125 PERCENT LEVEL)
		LESS THAN \$5,000	\$5,000 TO \$9,999	\$10,000 TO \$14,999	\$15,000 TO \$19,999	\$20,000 TO \$24,999	\$25,000 TO \$34,999	\$35,000 OR MORE					
SINGLE-FAMILY UNITS OR MOBILE HOMES ADDING ITEMS DURING 1979 OR 1980													
WOOD BURNING STOVE.....	4.1	0.2	0.4	0.8	0.7	0.6	0.9	0.4	0.3	0.5			
1979.....	1.8	.1	.2	.2	.4	.4	.4	.2	.1	.2			
1980.....	2.3	.1	.2	.6	.4	.2	.5	.2	.2	.3			
INSULATION AROUND HOT WATER PIPES.....	2.7	.1	.3	.5	.6	.4	.5	.4	.2	.3			
1979.....	1.1	.1	.1	.1	.2	.2	.2	.2	.1	.1			
1980.....	1.6	.1	.2	.4	.4	.2	.2	.2	.1	.2			
INSULATION AROUND WATER HEATER.....	2.5	.1	.3	.4	.3	.5	.5	.4	.1	.2			
1979.....	.9	-	.1	.1	.2	.2	.2	.2	-	.1			
1980.....	1.6	.1	.2	.3	.1	.3	.3	.2	.1	.2			
AUTOMATIC OR CLOCK THERMOSTAT.....	2.5	.1	.2	.4	.4	.4	.5	.6	.2	.2			
1979.....	1.3	-	.1	.2	.2	.2	.3	.4	.1	.1			
1980.....	1.2	.1	.1	.2	.2	.2	.2	.2	.1	.1			
ADJUSTMENTS TO THERMSTAT.....	2.1	.1	.3	.2	.3	.3	.4	.4	.1	.1			
1979.....	.9	.1	.1	.1	.1	.1	.2	.2	.1	.1			
1980.....	1.2	-	.1	.2	.2	.2	.2	.2	-	.3			
INSULATION AROUND HEATING DUCTS.....	1.3	.1	.1	.2	.2	.2	.2	.2	.1	.3			
1979.....	.6	-	.1	.1	.1	.1	.1	.1	.1	.2			
1980.....	.7	-	.1	.2	.1	.1	.1	.1	.1	.1			
ELECTRICAL OR MECHANICAL FURNACE IGNITION.....	.9	-	.1	.2	.1	.1	.1	.1	.1	.3			
1979.....	.5	-	-	.1	.1	.1	.1	.1	.1	.1			
1980.....	.5	-	-	.1	.1	.1	.1	.1	.1	.1			
SMALLER NOZZLE OF BURNER.....	.9	-	.1	.2	.2	.2	.2	.2	.1	.1			
1979.....	.3	-	.1	.1	.1	.1	.1	.1	.1	.1			
1980.....	.6	-	.1	.1	.1	.1	.1	.1	.1	.1			

SEE NOTES AT END OF TABLE

TABLE 59. CONSERVATION BY 1979 FAMILY INCOME (MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED) -Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	1979 FAMILY INCOME										POOR (100 PERCENT LEVEL)	POOR (125 PERCENT LEVEL)	
		LESS THAN \$5,000	\$5,000 TO \$9,999	\$10,000 TO \$14,999	\$15,000 TO \$19,999	\$20,000 TO \$24,999	\$25,000 TO \$34,999	\$35,000 OR MORE						
SINGLE-FAMILY UNITS OR MOBILE HOMES ADDING ITEMS DURING 1979 OR 1980														
AN ADDITIONAL THERMOSTAT.....	0.7	-	-	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
1979.....	.4	-	-	.1	-	-	-	-	-	-	-	-	-	-
1980.....	.3	-	-	-	.1	-	-	-	-	-	-	-	-	-
AUTOMATIC FLUE DOOR.....	.5	-	-	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1
1979.....	.3	-	-	-	-	-	-	-	-	-	-	-	-	-
1980.....	.2	-	-	.1	-	-	-	-	-	-	-	-	-	-
HEAT PUMP.....	.3	-	-	-	-	-	-	-	-	-	-	-	-	-
1979.....	.2	-	-	-	-	-	-	-	-	-	-	-	-	-
1980.....	.2	-	-	-	-	-	-	-	-	-	-	-	-	-
FLAME RETENTION HEAD BURNER..	.3	-	-	-	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1
1979.....	.2	-	-	-	-	-	-	-	-	-	-	-	-	-
1980.....	.2	-	-	-	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1
ENERGY COST METER.....	.2	-	-	-	-	-	-	-	-	-	-	-	-	-
1979.....	.1	-	-	-	-	-	-	-	-	-	-	-	-	-
1980.....	.1	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.

SOURCE: RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 60. CONSERVATION BY 1979 FAMILY INCOME
(PERCENTAGE OF HOUSEHOLDS)

HOUSEHOLD CHARACTERISTICS	TOTAL	1979 FAMILY INCOME										FOOR (100 PERCENT LEVEL)	POOF (125 PERCENT LEVEL)
		LESS THAN \$5,000	\$5,000 TO \$9,999	\$10,000 TO \$14,999	\$15,000 TO \$19,999	\$20,000 TO \$24,999	\$25,000 TO \$34,999	\$35,000 OR MORE					
		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0			
TOTAL HOUSEHOLDS	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
HOME ENERGY AUDIT DURING THE PAST YEAR													
YES.....	5.1	4.4	4.3	5.6	6.0	5.2	7.8	3.4	3.5				
NO.....	94.8	95.4	95.6	94.4	94.0	94.8	92.2	96.3	96.2				
DON'T KNOW/NOT REPORTED.....	.1	.1	.1	—	—	—	—	.3	.2				
ENERGY AUDIT PROVIDER													
GAS OR ELECTRIC COMPANY.....	2.1	2.4	2.2	2.3	3.0	1.4	2.6	1.3	1.5				
FUEL OIL OR LPG SUPPLIER.....	.3	—	.4	.5	.4	.3	—	—	.1				
OTHER PROVIDER.....	2.6	1.6	1.6	2.8	2.6	3.3	5.0	2.1	1.8				
NO ENERGY AUDIT/													
DON'T KNOW PROVIDER/													
NOT REPORTED.....	95.0	95.9	95.8	94.5	94.0	95.0	92.4	96.6	96.5				
TOTAL HOUSEHOLDS ADDING ITEMS DURING 1979 OR 1980													
STORM DOORS.....	8.2	5.2	7.0	9.2	11.4	10.7	11.5	5.2	5.3				
1979.....	3.9	2.7	3.0	4.7	5.3	5.0	6.0	2.2	2.4				
1980.....	4.4	2.4	4.1	4.9	6.1	5.9	5.7	3.1	2.8				
STORM WINDOWS.....	6.9	4.7	6.8	7.4	8.9	8.3	9.4	3.5	3.9				
1979.....	3.6	2.7	3.0	3.9	3.9	4.7	5.7	1.6	1.9				
1980.....	3.5	2.2	3.8	3.9	5.2	3.7	3.8	1.9	2.0				
CAULKING.....	22.6	16.9	19.5	22.9	28.6	32.5	28.8	11.8	12.8				
1979.....	7.1	5.0	5.9	7.6	8.3	10.5	10.1	3.4	3.9				
1980.....	15.5	11.9	13.6	15.3	20.3	22.0	18.7	8.5	8.9				
WEATHER STRIPPING.....	18.5	13.0	18.3	20.9	22.6	23.5	24.0	9.3	9.7				
1979.....	6.8	3.8	6.1	8.8	7.9	9.0	10.1	3.2	2.9				
1980.....	11.7	9.2	12.2	12.1	14.8	14.5	13.9	6.1	6.8				
CLOSEABLE SHUTTERS,													
PLASTIC SHEETS,													
INSULATING DRAPES.....	13.9	14.0	15.3	15.8	15.5	12.7	12.6	14.5	13.7				
1979.....	4.6	3.5	4.7	5.5	5.5	4.8	5.4	4.4	4.3				
1980.....	9.2	10.5	10.6	10.3	10.1	8.0	7.2	10.1	9.5				

SEE NOTES AT END OF TABLE

TABLE 60. CONSERVATION BY 1979 FAMILY INCOME
(PERCENTAGE OF HOUSEHOLDS) -Continued

HOUSEHOLD CHARACTERISTICS	1979 FAMILY INCOME										FOOR (100 PERCENT LEVEL)	POOF (125 PERCENT LEVEL)
	TOTAL	LESS THAN \$5,000	\$5,000 TO \$9,999	\$10,000 TO \$14,999	\$15,000 TO \$19,999	\$20,000 TO \$24,999	\$25,000 TO \$34,999	\$35,000 OR MORE	FOOR (100 PERCENT LEVEL)	POOF (125 PERCENT LEVEL)		
		100.0	100.0	100.0	100.0	100.0	100.0	100.0				
TOTAL SINGLE-FAMILY UNITS.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
SINGLE-FAMILY UNITS ADDING ITEMS DURING 1979 OR 1980												
ROOF OR CEILING INSULATION.....	11.6	8.9	8.4	10.1	11.0	12.7	14.9	13.3	9.0	9.2	9.0	9.2
1979.....	5.5	4.0	3.5	3.6	4.9	6.8	7.8	6.9	4.1	4.3	4.1	4.3
1980.....	6.1	4.9	4.9	6.5	6.1	5.9	7.1	6.4	4.9	4.9	4.9	4.9
OUTSIDE WALL INSULATION.....	6.7	5.3	4.7	6.5	6.3	8.2	7.7	7.2	4.7	5.2	4.7	5.2
1979.....	3.1	2.8	1.5	2.1	3.4	4.7	3.7	3.6	2.3	2.7	2.3	2.7
1980.....	3.5	2.6	3.2	4.4	2.9	3.5	4.0	3.6	2.5	2.5	2.5	2.5
FLOOR INSULATION.....	3.2	2.1	1.6	1.9	3.5	2.4	4.3	5.8	2.1	2.4	2.1	2.4
1979.....	1.6	1.0	.7	1.2	1.9	1.2	1.6	3.2	.9	1.1	.9	1.1
1980.....	1.6	1.1	.9	.7	1.6	1.2	2.8	2.6	1.2	1.2	1.2	1.2
TOTAL SINGLE-FAMILY UNITS AND MOBILE HOMES.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
KNOWS ABOUT WEATHERIZATION PROGRAM (SINGLE-FAMILY UNITS OR MOBILE HOME)												
YES.....	15.0	21.8	18.8	13.6	15.5	14.8	12.5	10.6	20.4	21.5	20.4	21.5
NO.....	13.5	16.0	16.2	12.7	13.7	14.6	12.1	10.3	14.8	16.3	14.8	16.3
USED THE PROGRAM												
YES, AT LEAST ONE OF MORE ITEMS.....	1.4	5.6	2.3	.8	1.9	.2	.4	.3	5.3	5.1	5.3	5.1
ATTIC INSULATION ADDED.....	.6	2.9	1.0	.2	.5	-	.1	.3	2.6	2.5	2.6	2.5
STORM WINDOWS ADDED.....	.5	2.8	.7	.3	.1	-	.2	-	2.5	2.1	2.5	2.1
STORM DOORS ADDED.....	.3	1.5	.5	-	.1	-	-	-	1.4	1.2	1.4	1.2
WALL INSULATION ADDED.....	.2	1.3	.2	-	.1	-	.1	.3	1.1	.9	1.1	.9
OTHER ITEMS ADDED.....	.8	2.3	1.3	.2	1.8	.2	.2	.1	2.4	2.4	2.4	2.4
NO.....	84.7	77.2	81.0	86.2	84.4	85.1	87.5	89.0	78.7	77.8	78.7	77.8
NOT REPORTED.....	.2	1.0	.2	.2	-	.1	-	.4	.9	.7	.9	.7

SEE NOTIFS AT END OF TABLE

TABLE 60. CONSERVATION BY 1979 FAMILY INCOME
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	1979 FAMILY INCOME										POOR (100 PERCENT LEVEL)	POOR (125 PERCENT LEVEL)	
		LESS THAN \$5,000	\$5,000 TO \$9,999	\$10,000 TO \$14,999	\$15,000 TO \$19,999	\$20,000 TO \$24,999	\$25,000 TO \$34,999	\$35,000 OR MORE						
SINGLE-FAMILY UNITS OR MOBILE HOMES ADDING ITEMS DURING 1979 OR 1980														
WOOD BURNING STOVE.....	6.7	3.8	4.7	8.9	8.0	6.7	8.5	4.7	4.7	4.7	4.7	4.7	4.7	5.3
1979.....	3.0	1.7	2.1	2.4	4.0	4.4	3.3	2.6	1.8	2.6	2.6	1.8	2.6	2.6
1980.....	3.7	2.1	2.6	6.5	4.0	2.3	5.2	2.1	2.9	2.1	2.1	2.9	2.7	2.7
INSULATION AROUND HOT WATER PIPES.....	4.4	2.4	3.0	4.9	6.4	4.8	4.4	4.3	2.5	4.3	4.3	2.5	2.7	2.7
1979.....	1.8	1.0	1.3	1.2	2.4	2.4	2.2	2.0	.8	2.0	2.0	.8	1.3	1.3
1980.....	2.6	1.4	1.7	3.7	4.0	2.4	2.2	2.3	1.6	2.3	2.3	1.6	1.4	1.4
INSULATION AROUND WATER HEATER.....	4.1	2.1	3.0	4.2	3.6	6.2	4.6	4.6	2.1	4.6	4.6	2.1	2.5	2.5
1979.....	1.5	.2	.9	1.4	1.9	2.3	1.5	2.1	-.7	2.1	2.1	-.7	1.8	1.8
1980.....	2.6	1.9	2.1	2.8	1.7	3.9	3.1	2.5	2.1	2.5	2.5	2.1	1.8	1.8
AUTOMATIC OR CLOCK THERMOSTAT.....	4.1	1.8	2.5	3.9	4.1	4.4	4.8	6.5	2.3	4.8	4.8	2.3	2.0	2.0
1979.....	2.1	.7	.9	1.9	1.9	2.1	2.7	4.3	1.0	2.7	2.7	1.0	.9	.9
1980.....	2.0	1.1	1.5	2.0	2.3	2.3	2.1	2.2	1.3	2.1	2.1	1.3	1.1	1.1
ADJUSTMENTS TO THERMOSTAT.....	3.5	2.0	3.1	2.6	3.6	3.6	4.1	4.8	1.9	4.1	4.8	1.9	2.2	2.2
1979.....	1.5	1.2	1.6	.9	1.6	1.5	1.9	1.4	1.3	1.9	1.4	1.3	1.4	1.4
1980.....	2.0	.8	1.5	1.6	2.0	2.1	2.2	3.4	.6	2.2	3.4	.6	.8	.8
INSULATION AROUND HEATING DUCTS.....	2.2	1.2	1.4	2.5	1.7	2.7	2.2	3.4	1.2	2.2	3.4	1.2	1.2	1.2
1979.....	1.0	.6	.6	.6	.6	1.5	1.2	2.1	.3	1.2	2.1	.3	.6	.6
1980.....	1.1	.6	.8	1.9	1.1	1.2	.9	1.3	.8	.9	1.3	.8	.6	.6
ELECTRICAL OR MECHANICAL FURNACE IGNITION.....	1.5	-	.9	1.9	1.2	1.7	1.4	3.3	-	1.4	3.3	-	.2	.2
1979.....	.7	-	.4	.8	.7	.8	.7	1.6	-	.7	1.6	-	.2	.2
1980.....	.8	-	.4	1.1	.4	.9	.7	1.7	-	.7	1.7	-	.2	.2
SMALLER NOZZLE OR BURNER.....	1.5	.5	1.1	1.7	2.6	1.3	1.5	1.5	.3	1.5	1.5	.3	.1	.1
1979.....	.6	-	.3	.5	1.2	.8	.4	.6	-	.4	.6	-	.1	.1
1980.....	.9	.5	.7	1.1	1.4	.5	1.1	.9	.3	1.1	.9	.3	.3	.3

SEE NOTES AT END OF TABLE

TABLE 60. CONSERVATION BY 1979 FAMILY INCOME
(PERCENTAGE OF HOUSEHOLDS)-Continued

HOUSEHOLD CHARACTERISTICS	TOTAL	1979 FAMILY INCOME										FOUR (100 PERCENT LEVEL)	POOR (125 PERCENT LEVEL)
		LESS THAN \$5,000	\$5,000 TO \$9,999	\$10,000 TO \$14,999	\$15,000 TO \$19,999	\$20,000 TO \$24,999	\$25,000 TO \$34,999	\$35,000 OR MORE					
SINGLE-FAMILY UNITS OR MOBILE HOMES ADDING ITEMS DURING 1979 OR 1980													
AN ADDITIONAL THERMOSTAT.....	1.1	0.7	0.4	1.0	1.2	1.2	1.5	1.7	0.6	0.7			
1979.....	.6	.5		.6	.6	.6	1.2	1.0	.4	.3			
1980.....	.5	.2	.4	.4	.9	.9	.3	1.0	.2	.4			
AUTOMATIC FLUE DOOR.....	.8	.1		.6	.9	.9	1.3	1.7	.1	.1			
1979.....	.5	.1			.5	.7	.6	1.2	.1	.1			
1980.....	.4			.6	.4	.3	.6	.5					
HEAT PUMP.....	.6	.5	.2	.4	.1	.5	.1	2.2	.5	.3			
1979.....	.3	.2				.5		1.3	.2	.1			
1980.....	.3	.3	.2	.4	.1	.5		1.3	.2	.1			
FLAME RETENTION HEAD BURNER.....	.6	.1		.4	.9	.7	.9	.8	.1	.2			
1979.....	.3			.2	.6	.3	.3	.4					
1980.....	.3	.1		.2	.3	.3	.5	.5	.1	.1			
ENERGY COST METER.....	.1	.1		.5	.1	.3	.4	.6	.1	.1			
1979.....	.1	.1		.1	.1	.2	.1	.1	.1	.1			
1980.....	.2			.4		.1	.4	.5					

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SOURCE: RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 61. CONSERVATION BY HOUSING STRUCTURE
(MILLION HOUSEHOLDS, EXCEPT WHERE AVERAGES ARE INDICATED)

HOUSEHOLD CHARACTERISTICS	TOTAL	HOUSING STRUCTURE					MOBILE HOME
		SINGLE-FAMILY DETACHED	SINGLE-FAMILY ATTACHED	BUILDING WITH 2 TO 4 UNITS	BUILDING WITH 5 OR MORE UNITS		
TOTAL HOUSEHOLDS.....	81.6	53.0	3.3	9.9	10.8	4.6	
HOME ENERGY AUDIT DURING THE PAST YEAR							
YES.....	4.2	3.4	.2	.3	.1	.1	
NO.....	77.4	49.5	3.1	9.6	10.7	4.5	
DON'T KNOW/NOT REPORTED.....	.1	-	-	-	-	-	
ENERGY AUDIT PROVIDER							
GAS OR ELECTRIC COMPANY.....	1.7	1.4	.1	.1	.1	.1	
FUEL OIL OR LPG SUPPLIER.....	.2	.1	-	.1	-	-	
OTHER PROVIDER.....	2.1	1.8	.1	.1	-	-	
NO ENERGY AUDIT/ DON'T KNOW PROVIDER/ NOT REPORTED.....	77.6	49.7	3.1	9.6	10.7	4.5	
TOTAL HOUSEHOLDS ADDING ITEMS DURING 1979 OR 1980							
STORM DOORS.....	6.7	5.8	.3	.4	.1	.1	
1979.....	3.2	2.7	.2	.2	-	-	
1980.....	3.6	3.1	.1	.2	.1	-	
AVERAGE NUMBER ADDED.....	1.5	1.6	1.5	1.6	1.1	1.2	
STORM WINDOWS.....	5.7	4.5	.4	.4	.2	.1	
1979.....	2.9	2.3	.3	.2	-	-	
1980.....	2.8	2.3	.1	.2	.2	.1	
AVERAGE NUMBER ADDED.....	7.5	7.7	7.2	6.2	5.6	8.5	
CAULKING.....	18.4	15.2	.7	1.5	.4	.7	
1979.....	5.8	4.8	.3	.5	1	.2	
1980.....	12.6	10.3	.4	1.0	.3	.5	
WEATHER STRIPING.....	15.1	11.5	.7	1.3	.7	.9	
1979.....	5.5	4.3	.3	.5	.2	.3	
1980.....	9.5	7.3	.4	.8	.5	.6	
CLOSEABLE SHUTTERS, PLASTIC SHEETS, INSULATING DRAPES.....	11.3	7.6	.6	1.5	.8	.9	
1979.....	3.8	2.5	.2	.5	.3	.2	
1980.....	7.6	5.1	.3	1.0	.5	.7	

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.

SOURCE: RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 62. CONSERVATION BY HOUSING STRUCTURE
(PERCENTAGE OF HOUSEHOLDS)

HOUSEHOLD CHARACTERISTICS	HOUSING STRUCTURE					
	TOTAL	SINGLE-FAMILY DETACHED	SINGLE-FAMILY ATTACHED	BUILDING WITH 2 TO 4 UNITS	BUILDING WITH 5 OR MORE UNITS	MOBILE HOME
TOTAL HOUSEHOLDS.....	100.0	100.0	100.0	100.0	100.0	100.0
HOME ENERGY AUDIT DURING THE PAST YEAR						
YES.....	5.1	6.4	7.2	3.3	.7	2.9
NO.....	94.8	93.5	92.5	96.7	99.2	97.1
DON'T KNOW/NOT RECORDED.....	.1	.1	.3	.1	.1	-.
ENERGY AUDIT PROVIDER						
GAS OR ELECTRIC COMPANY.....	2.1	2.6	3.4	.9	.7	2.2
FUEL OIL OR LPG SUPPLIER.....	.3	.3	-.	.8	-.	-.8
OTHER PROVIDER.....	2.6	3.4	3.8	1.4	-.	-.8
NO ENERGY AUDIT/ DON'T KNOW PROVIDER/ NOT RECORDED.....	95.0	93.7	92.8	97.0	99.3	97.1
TOTAL HOUSEHOLDS ADDING ITEMS DURING 1979 OR 1980						
STORM DOORS.....	8.2	10.9	10.1	3.5	1.4	2.5
1979.....	3.9	5.2	5.9	2.0	.1	1.5
1980.....	4.4	5.9	4.2	1.6	1.3	1.0
STORM WINDOWS.....	6.9	8.6	11.8	3.9	2.1	2.3
1979.....	3.6	4.4	8.1	2.3	.2	1.2
1980.....	3.5	4.3	3.8	1.7	1.9	1.1
CAULKING.....	22.6	28.6	21.4	15.2	3.8	14.1
1979.....	7.1	9.1	8.4	4.6	.9	3.5
1980.....	15.5	19.5	13.0	10.5	2.9	10.6
WEATHER STRIPPING.....	16.5	21.8	21.5	12.7	6.5	18.3
1979.....	6.8	8.1	9.1	5.1	1.7	5.8
1980.....	11.7	13.7	12.4	7.6	4.9	12.5
CLOSEABLE SHUTTERS, PLASTIC SHEETS, INSULATING TRAPES.....	13.5	14.3	16.8	14.8	7.3	20.1
1979.....	4.6	4.7	7.3	5.2	2.7	5.4
1980.....	9.2	9.6	9.5	9.6	4.6	14.7

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SOURCE: RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 63. MAIN HEATING EQUIPMENT AND HEATING FUEL BY SECONDARY HEATING EQUIPMENT AND HEATING FUEL (MILLION HOUSEHOLDS)

HOUSEHOLD CHARACTERISTICS	MAIN HEATING FUEL BY MAIN HEATING EQUIPMENT											
	NATURAL GAS			FUEL OIL			ELECTRICITY			WOOD		LPG
	CENTRAL HEAT- WARM-AIR FURNACE	STAMP OR HOT WATER SYSTEM	FLOOR, WALL, PIPELESS FURNACE	ROOM HEATER	STEAM OR HOT WATER SYSTEM	CENTRAL WARM- AIR FURNACE	BUILT-IN ELECTRIC UNITS	CENTRAL WARM- AIR FURNACE	HEATING STOVE	WOOD	CENTRAL WARM- AIR FURNACE	IPG
TOTAL	28.1	5.8	6.0	4.0	7.1	4.7	5.3	2.1	3.7	2.0	7.1	
TOTAL HOUSEHOLDS.....	81.6											
SECONDARY HEATING FUEL AND SECONDARY HEATING EQUIPMENT												
WOOD.....												
FIREPLACE.....	13.4		.5	.1	1.3	1.2	1.2		.8			
STOVE.....	10.0		.5	.1	.7	.7	.7		.6			
OTHER.....	3.3				.6	.5	.5		.1			
ELECTRICITY.....												
PORTABLE HEATER.....	9.2		1.0	.5	.9	.6	.8		.2			
BUILT-IN ELECTRIC UNITS.....	5.8		.6	.4	.8	.4	.3		.1			
HEAT PUMP.....	2.8		.4	.1	.1	.1	.3					
OTHER.....	.4						.1					
NATURAL GAS.....	3.3		.6	.1	.2		.1		.3			
FUEL OIL.....	1.3								.8			
LPG.....	.9								.4			
OTHER.....	.9				.1	.2	.1		.1			
NONE.....	52.6	18.2	4.3	3.3	4.6	2.7	3.7	1.0	1.1	1.5	4.5	
SECONDARY HEATING EQUIPMENT												
FIREPLACE.....	11.2		.5	.1	.7	.7	.7		.6			
PORTABLE HEATER.....	6.1		.6	.4	.8	.4	.4		.1			
WOOD OR COAL HEATING STOVE.....	3.5				.6	.5	.3		.1			
BUILT-IN ELECTRIC UNITS.....	2.8		.4	.1	.1	.1	.3		.6			
OIL OR GAS ROOM HEATER.....	2.3		.5		.1	.2	.1		.4			
CENTRAL WARM-AIR FURNACE.....	1.4								.9			
FLOOR, WALL, OR PIPELESS FURNACE.....												
STAMP OR HOT WATER SYSTEM.....	.5						.1		.1			
HEAT PUMP.....	.3						.1		.1			
OTHER.....	.5				.2							
NONE.....	52.6	18.2	4.3	3.3	4.6	2.7	3.7	1.0	1.1	1.5	4.5	

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "--" REPRESENTS OR ROUNDS TO ZERO. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.
 SOURCE: RESIDENTIAL AND COMMERCIAL ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 64. MAIN HEATING EQUIPMENT AND HEATING FUEL BY SECONDARY HEATING EQUIPMENT AND HEATING FUEL (PERCENTAGE OF HOUSEHOLDS)

HOUSEHOLD CHARACTERISTICS	MAIN HEATING FUEL BY MAIN HEATING EQUIPMENT												
	NATURAL GAS			FUEL OIL			ELECTRICITY			WOOD		LPG	
	CENTRAL SYSTEM OR ROOM HEATER			CENTRAL WARM-AIR FURNACE			CENTRAL WARM-AIR FURNACE			BUILT-IN HEATING STOVE		CENTRAL OTHER/ NONE	
	FURNACE	WATER SYSTEM	PIPELESS	WATER SYSTEM	WATER SYSTEM	WATER SYSTEM	WATER SYSTEM	WATER SYSTEM	WATER SYSTEM	WATER SYSTEM	WATER SYSTEM	WATER SYSTEM	WATER SYSTEM
TOTAL HOUSEHOLDS.....	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
SECONDARY HEATING FUEL AND SECONDARY HEATING EQUIPMENT													
WOOD.....	16.4	20.5	9.1	8.2	2.1	18.0	25.3	17.5	22.6	37.9	1.4	15.2	10.2
FIREPLACE.....	12.3	18.3	6.7	8.0	2.1	10.0	14.2	11.8	13.3	30.4	.6	6.9	5.6
STOVE.....	4.1	2.3	2.4	.2	-	8.1	10.7	5.7	8.9	6.5	.5	8.1	4.6
OTHER.....	.1	-	-	-	-	-	.3	-	.4	1.0	.2	.2	-
ELECTRICITY.....	11.3	8.4	11.2	16.1	12.6	12.1	13.1	13.5	3.0	9.4	25.9	9.6	14.0
PORTABLE HEATER.....	7.1	5.0	9.3	9.5	10.9	10.5	8.6	6.2	2.8	5.3	5.7	7.0	10.6
BUILT-IN ELECTRIC UNITS.....	3.4	3.3	1.5	6.3	1.2	1.5	3.1	6.0	-	.8	14.9	1.4	2.0
HEAT PUMP.....	.3	.4	.4	-	-	.1	1.0	.9	-	-	1.5	-	.7
OTHER.....	.5	.2	.3	.3	.5	3.2	.3	.4	.2	3.3	3.7	1.2	.7
NATURAL GAS.....	4.0	5.4	3.1	9.3	1.7	3.2	.3	1.2	2.4	.9	7.9	-	3.3
FUEL OIL.....	1.6	.2	2.4	-	-	.2	.2	-	-	.9	21.9	-	3.0
LPG.....	1.1	-	-	-	-	.5	1.1	.2	.5	-	10.7	2.0	4.4
OTHER.....	1.1	.7	.9	.1	1.4	1.6	3.3	1.2	.6	2.3	1.5	.4	1.6
NONE.....	64.5	64.7	73.2	66.3	82.2	64.4	57.0	66.4	70.7	48.2	30.8	72.8	63.4
SECONDARY HEATING EQUIPMENT													
FIREPLACE.....	13.7	20.7	7.5	8.7	3.0	10.3	14.8	13.0	14.2	30.9	1.1	7.9	7.0
PORTABLE HEATER.....	7.5	5.1	10.2	10.1	10.9	11.1	9.5	6.8	2.8	6.4	6.0	7.4	10.6
WOOD OR COAL HEATING STOVE.....	4.3	2.4	2.5	.2	.5	8.4	10.7	6.1	9.1	6.5	.8	8.5	5.3
BUILT-IN ELECTRIC UNITS.....	3.4	3.3	1.5	6.3	1.2	1.5	3.1	6.0	-	.8	14.9	1.4	2.0
OIL OR GAS ROOM HEATER.....	2.8	2.3	.9	7.7	-	.9	3.4	.7	1.7	1.8	10.5	.8	4.3
CENTRAL WARM-AIR FURNACE.....	1.7	.2	.5	-	.7	.1	.3	-	.5	3.4	25.3	-	3.4
FLOOR, WALL OR PIPELESS FURNACE.....	.7	.8	-	-	.8	-	-	-	1.0	-	3.6	.4	1.2
STEAM OR HOT WATER SYSTEM.....	.7	.2	3.3	.2	-	.4	-	-	-	-	4.9	.8	.7
HEAT PUMP.....	.3	.1	.4	-	-	.1	1.0	.9	-	-	1.5	-	.7
OTHER.....	.6	.3	-	.4	.7	3.0	-	.1	-	1.0	.5	-	1.3
NONE.....	64.5	64.7	73.2	66.3	82.2	64.4	57.0	66.4	70.7	48.2	30.8	72.8	63.4

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SOURCE: RESIDENTIAL AND COMMERCIAL ENERGY USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 65. WATER HEATING FUEL AND COOKING FUEL BY TYPE OF MAIN HEATING FUEL (BILLION HOUSEHOLDS)

HOUSEHOLD CHARACTERISTICS	TOTAL	TYPE OF MAIN HEATING FUEL						
		NATURAL GAS	ELECTRICITY	FUEL OIL OR KEROSENE	WOOD	LIQUID PETROLEUM GAS	OTHER/NONE	
TOTAL HOUSEHOLDS.....	81.6	44.6	14.2	13.4	4.7	3.7	1.0	
WATER-HEATING FUEL								
NATURAL GAS.....	44.1	40.9	1.4	1.4	.4	-	.1	
ELECTRICITY.....	26.1	3.6	12.5	5.0	3.1	1.5	.4	
FUEL OIL OR KEROSENE.....	7.1	.1	.1	6.6	.2	-	.1	
LIQUID PETROLEUM GAS.....	3.6	-	.2	.4	.6	2.1	.2	
OTHER/NONE.....	.8	.1	-	.1	.4	.1	.2	
WATER-HEATING FUEL: NATURAL GAS BY MOST USED COOKING FUEL								
NATURAL GAS.....	27.1	25.1	.4	1.2	.3	-	.1	
ELECTRICITY.....	16.9	15.7	.9	.2	.1	-	-	
LIQUID PETROLEUM GAS.....	-	-	-	-	-	-	-	
OTHER/NONE.....	.1	.1	-	-	-	-	-	
WATER-HEATING FUEL: ELECTRICITY BY MOST USED COOKING FUEL								
NATURAL GAS.....	1.1	.9	.1	.1	-	-	-	
ELECTRICITY.....	22.8	2.6	12.2	4.1	2.7	.7	.4	
LIQUID PETROLEUM GAS.....	2.0	-	.1	.8	.3	.8	-	
OTHER/NONE.....	.2	-	-	-	.1	-	-	
WATER-HEATING FUEL: FUEL OIL OR KEROSENE BY MOST USED COOKING FUEL								
NATURAL GAS.....	3.4	.1	-	3.3	-	-	-	
ELECTRICITY.....	3.2	-	.1	2.9	.2	-	-	
LIQUID PETROLEUM GAS.....	.4	-	-	.4	-	-	-	
OTHER/NONE.....	-	-	-	-	-	-	-	
WATER-HEATING FUEL: LIQUID PETROLEUM GAS BY MOST USED COOKING FUEL								
NATURAL GAS.....	-	-	-	-	-	-	-	
ELECTRICITY.....	1.0	-	.1	.1	.2	.5	.1	
LIQUID PETROLEUM GAS.....	2.5	-	.1	.3	.5	1.5	-	
OTHER/NONE.....	-	-	-	-	-	-	-	
OTHER/NONE.....	.8	.1	-	.1	.4	.1	.2	

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 SOURCE: RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 66. WATER HEATING FUEL AND COOKING FUEL BY TYPE OF MAIN HEATING FUEL (PERCENTAGE OF HOUSEHOLDS)

HOUSEHOLD CHARACTERISTICS	TOTAL	TYPE OF MAIN HEATING FUEL						
		NATURAL GAS	ELECTRICITY	FUEL OIL CR	WOOD	LIQUID PETROLEUM GAS	OTHER/NONE	TOTAL
TOTAL HOUSEHOLDS.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
WATER-HEATING FUEL								
NATURAL GAS.....	54.1	91.6	9.7	10.1	8.5	-	-	14.8
ELECTRICITY.....	31.9	8.0	87.7	37.1	65.3	41.5	-	45.1
FUEL OIL CR.....	8.7	.2	.6	49.3	4.1	-	-	5.3
LIQUID PETROLEUM GAS.....	4.4	-	1.7	3.0	13.7	56.7	-	18.0
OTHER/NONE.....	1.0	.2	.3	.5	8.5	1.8	-	16.9
WATER-HEATING FUEL: NATURAL GAS BY MOST USED COOKING FUEL								
NATURAL GAS.....	33.2	56.2	2.9	8.6	6.5	-	-	11.5
ELECTRICITY.....	20.7	35.2	6.6	1.3	2.0	-	-	1.3
LIQUID PETROLEUM GAS.....	-	-	-	.1	-	-	-	-
OTHER/NONE.....	.1	.2	.2	-	-	-	-	1.9
WATER-HEATING FUEL: ELECTRICITY BY MOST USED COOKING FUEL								
NATURAL GAS.....	1.3	2.0	.5	.7	-	-	-	-
ELECTRICITY.....	27.9	5.9	86.0	30.5	57.8	19.9	-	39.6
LIQUID PETROLEUM GAS.....	2.5	-	1.0	5.6	6.2	21.6	-	4.6
OTHER/NONE.....	.2	.1	.1	.3	1.3	-	-	.9
WATER-HEATING FUEL: FUEL OIL OR KEROSENE BY MOST USED COOKING FUEL								
NATURAL GAS.....	4.1	.2	-	24.3	-	-	-	1.0
ELECTRICITY.....	4.0	.1	.6	21.7	3.7	-	-	4.3
LIQUID PETROLEUM GAS.....	.5	-	-	3.1	.4	-	-	-
OTHER/NONE.....	-	-	-	.2	-	-	-	-
WATER-HEATING FUEL: LIQUID PETROLEUM GAS BY MOST USED COOKING FUEL								
NATURAL GAS.....	-	-	-	-	-	-	-	-
ELECTRICITY.....	1.2	-	1.0	.9	3.9	14.6	-	3.5
LIQUID PETROLEUM GAS.....	3.1	-	.7	2.1	9.8	41.8	-	13.6
OTHER/NONE.....	-	-	-	-	-	.4	-	.8
OTHER/NONE.....	1.0	.2	.3	.5	8.5	1.8	-	16.9

NOTE: IPTA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. PERCENTAGES ARE CALCULATED ON UNBOUNDED NUMBERS. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.
 SOURCE: RESIDENTIAL AND COMMERCIAL ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE 67. WOOD BURNED IN 1980

HOUSEHOLD CHARACTERISTICS	NUMBER OF HOUSEHOLDS BURNING WOOD		TOTAL NUMBER OF CORDS BURNED		AVERAGE OF CORDS BURNED PER HOUSEHOLD		MOST RECENT PURCHASE (1980)	
	(MILLIONS)	(PERCENT)	(MILLIONS)	(PPRCFNT)	NUMBER OF CORDS	PER HOUSEHOLD	NUMBER OF HOUSEHOLDS REPORTING	AVERAGE PRICE PER CORD PAID IN 1980 (DOLLARS)
TOTAL HOUSEHOLDS	14.2	100.0	41.9	100.0	2.9	2.3	77	
CENSUS REGION								
NORTHEAST.....	3.2	22.5	0	30.5	4.0	.7	68	
NORTH CENTRAL.....	3.5	24.4	12.3	29.4	3.5	.5	74	
SOUTH.....	4.8	34.0	11.7	28.0	2.4	.4	88	
WEST.....	2.7	19.1	5.0	12.0	1.8	.5	82	
URBAN/RURAL								
URBAN.....	5.5	38.4	9.8	23.4	1.8	1.3	81	
RURAL.....	8.8	61.6	32.1	76.5	3.7	1.0	72	
ANNUAL HEATING DEGREE-DAYS (HDD) AND COOLING DEGREE-DAYS (CDD)								
<2000 CDD AND >7000 HDD.....	2.7	18.6	15.6	37.3	5.8	.6	59	
<2000 CDD AND 5500 TO 7000 HDD.....	3.0	20.8	7.4	17.7	2.5	.5	73	
<2000 CDD AND 4000 TO 5499 HDD.....	4.2	29.2	10.9	26.0	2.6	.7	87	
<2000 CDD AND <4000 HDD.....	3.4	23.7	6.3	15.0	1.9	.4	84	
>2000 CDD AND <4000 HDD.....	1.1	7.5	1.6	3.9	1.5	.1	89	
YEAR HOUSE BUILT								
1939 OR EARLIER.....	4.0	28.1	18.2	43.5	4.5	.6	56	
1940 TO 1949.....	1.0	6.7	2.7	6.4	2.8	.1	79	
1950 TO 1959.....	1.8	12.7	3.7	8.8	2.0	.2	86	
1960 TO 1964.....	1.4	9.8	3.2	7.6	2.3	.3	77	
1965 TO 1969.....	1.3	9.5	3.5	8.3	2.6	.4	82	
1970 TO 1974.....	1.8	12.4	4.0	9.6	2.3	.3	97	
1975 OR LATER.....	3.0	20.7	6.6	15.9	2.2	.4	84	
MEASURED HEATED SPACE OF RESIDENCE (IN SQ FT)								
LESS THAN 1000.....	1.7	12.0	5.8	13.8	3.4	.1	65	
1,000 TO 1,599.....	3.6	25.1	9.2	22.0	2.6	.6	76	
1,600 TO 1,999.....	2.5	17.3	6.7	16.0	2.7	.4	64	
2,000 TO 2,999.....	2.5	17.3	8.2	19.7	3.3	.5	83	
3,000 TO 3,999.....	2.1	14.5	6.4	15.3	3.1	.3	92	
4,000 OR MORE.....	2.0	13.8	5.6	13.3	2.8	.4	75	

SEE NOTES AT END OF TABLE

TABLE 67. WOOD BURNED IN 1980-Continued

HOUSEHOLD CHARACTERISTICS	NUMBER OF HOUSEHOLDS BURNING WOOD		TOTAL NUMBER OF CORDS BURNED		AVERAGE NUMBER OF CORDS BURNED PER HOUSEHOLD	MOST RECENT PURCHASE (1980)	
	(MILLIONS)	(PERCENT)	(MILLIONS)	(PERCENT)		NUMBER OF HOUSEHOLDS REPORTING	AVERAGE PRICE PER CORD PAID IN 1980 (DOLLARS)
1979 FAMILY INCOME							
LESS THAN \$5,000.....	1.0	7.3	3.9	9.4	3.8	0.1	61
\$5,000 TO \$9,999.....	1.6	11.0	6.2	14.8	4.0	.2	63
\$10,000 TO \$14,999.....	1.8	12.9	6.8	16.3	3.7	.2	72
\$15,000 TO \$19,999.....	2.0	14.3	6.7	16.1	3.3	.2	61
\$20,000 TO \$24,999.....	1.7	12.0	4.9	11.6	2.9	.3	81
\$25,000 TO \$34,999.....	3.2	22.4	7.6	18.1	2.4	.4	80
\$35,000 OR MORE.....	2.9	20.0	5.7	13.7	2.0	.8	85
AMOUNT OF WOOD BURNED							
1/3-1 CORD.....	6.2	43.3	4.3	10.2	.7	1.2	87
2 CORDS.....	2.6	18.4	4.9	11.6	1.9	.4	73
3 CORDS.....	1.8	12.6	5.3	12.7	3.0	.2	70
4 CORDS.....	1.0	7.2	4.0	9.6	3.9	.1	64
5 CORDS OR MORE.....	2.6	18.6	23.4	55.9	8.8	.3	54
WOOD IS MAIN HEATING FUEL							
YES.....	4.5	31.8	22.1	52.8	4.9	.4	51
NO.....	9.7	68.2	19.8	47.2	2.0	1.8	83
WOOD BURNED IN							
FIREPLACE ONLY.....	6.6	46.7	9.5	22.8	1.4	1.4	86
AIRTIGHT STOVE ONLY.....	3.6	25.2	13.6	32.6	3.8	.5	68
NONAIRTIGHT STOVE ONLY.....	2.1	14.4	7.0	16.8	3.4	.1	44
FURNACE ONLY.....	1.1	7.4	7.0	16.8	6.6	0	0
COMBINATION OF ABOVE.....	.9	6.2	4.5	10.9	5.1	.1	56
TYPE OF WOOD BURNED							
HARDWOODS.....	12.0	84.3	37.2	88.9	3.1	2.0	78
SOFTWOODS.....	1.7	12.2	4.0	9.6	2.3	.2	71
DON'T KNOW/NOT SPECIFIED.....	.5	3.4	.6	1.5	1.3	.1	69

SEE NOTES AT END OF TABLE

TABLE 67. WOOD BURNED IN 1980-Continued

HOUSEHOLD CHARACTERISTICS	NUMBER OF HOUSEHOLDS BURNING WOOD		TOTAL NUMBER OF CORDS BURNED		AVERAGE NUMBER OF CORDS BURNED PER HOUSEHOLD	MOST RECENT PURCHASE (1980)	
	(MILLIONS)	(PERCENT)	(MILLIONS)	(PERCENT)		NUMBER OF HOUSEHOLDS REPORTING (MILLIONS)	AVERAGE PRICE PAID IN 1980 (DOLLARS)
AMOUNT OF WOOD BURNED THAT WAS PURCHASED							
ALL.....	3.2	22.2	8.0	19.1	2.5	1.5	77
SOME.....	2.1	15.0	6.0	14.4	2.8	.7	76
NONE PURCHASED/NOT REPORTED.....	8.9	62.8	27.8	66.5	3.1	-	NA
AVERAGE PRICE PER CORD PAID IN 1980							
LESS THAN \$50.....	.4	2.7	Q	4.5	5.0	.4	30
\$50 TO \$75.....	1.0	7.0	2.8	6.7	2.8	1.0	64
OVER \$75.....	.9	6.3	1.0	2.5	1.1	.9	111
NONE PURCHASED/NOT KNOWN/NOT REPORTED.....	12.0	84.1	36.1	86.3	3.0	-	NA
PRICE INCLUDES DELIVERY							
YES.....	4.1	28.8	10.5	25.2	2.6	1.9	80
NO.....	1.1	8.0	3.4	8.1	3.0	.3	60
DON'T KNOW/NOT REPORTED/NONE PURCHASED.....	9.0	63.3	27.9	66.8	3.1	-	Q

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS OR ROUNDS TO ZERO. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.

NA = NOT AVAILABLE BECAUSE THE SAMPLE DID NOT CONTAIN CASES IN THIS CELL.

Q = DATA WITHHELD BECAUSE THE RELATIVE STANDARD ERROR WAS 50 PERCENT OR GREATER.

SOURCE: RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

Appendix A



Appendix A

HOW THE SURVEY WAS CONDUCTED

Introduction

The Residential Energy Consumption Surveys (RECS) have been designed by the Energy Information Administration (EIA) to provide information concerning energy consumption within the residential sector. Information concerning the housing unit is collected through personal interviews with adult residents of a representative national sample of households. Data concerning actual energy consumption is obtained from fuel records maintained by the household's fuel suppliers.¹ An inventory of motor vehicles used by the household residents is also obtained at the time of the personal interview.²

This survey is the first RECS to: use a national sample custom-designed to meet the analytic objectives for surveys of residential energy use; sample as many as 5,500 households; provide two-day personal training sessions for interviewers; include households in Alaska and Hawaii and households on military bases; collect data on household consumption of wood; and have interviewers measure the square footage of the housing unit. Plans are to continue the RECS survey incorporating these new features and, in addition, to collect longitudinal data by revisiting a probability subsample of households at two-year intervals.

¹The most recent report published using the billing data from the fuel suppliers is: Residential Energy Consumption Survey: 1979-1980 Consumption and Expenditures Part I: National Data (including Conservation), DOE/EIA-0262/1, April 1981, and Residential Energy Consumption Survey: 1978-1980 Consumption and Expenditures, Part II: Regional Data, DOE/EIA-0262/2, May 1981.

²The Household Transportation Survey is a survey of household automobile usage and gasoline consumption using rotating subsamples from the residential survey. The methodology and the first results have been reported in Residential Energy Consumption Survey: Consumption Patterns of Household Vehicles, June to August 1979, DOE/EIA-0207/4, June 1980. Data for the Household Transportation Panel were collected for the period June 1979 through September 1981.

Data Collection

The fieldwork for this study was conducted by a contractor, Response Analysis Corporation of Princeton, New Jersey. The original sample consisted of 7,338 units, of which some 106 were either not used for dwelling purposes or were not habitable. Of the 7,232 habitable housing units, 598 were ineligible for this study due to a current vacancy or seasonal occupancy (occupants did not live in the units for more than half the year). Personal interviews were conducted at 5,804 of the 6,634 eligible units, for a response rate of 87.5 percent. Subsequently, mail questionnaires were sent to 648 of the 798 households that had not participated in personal interviews. Completed questionnaires were returned by 247 of these households, or 38.1 percent of those mailed. Of the total eligible households, responses were received from 91.2 percent (or 6,051 households).

The fieldwork for this study was begun in October 1980, but because the survey utilized a new sample design, materials and interviewers had to be located for a number of new sample locations. As a result, the sample work took longer to complete and the interviewing schedule was extended through April 1981. Most mail questionnaires were completed in April or May although some mail questionnaires were received in June 1981. January 1981 represents the mid-point of data collection, but November 1980 was selected as the date for determining the independent estimates of the size of the universe of households used in the ratio estimation of survey results. The primary reason for selecting November 1980 was to continue a 12-month interval between survey dates which had been established for the NIECS and Screener surveys. In addition, future RECS surveys are planned so that November is the mid-point of data collection.

The Interview

The average personal interview lasted 58 minutes with 80 percent of the interviews lasting between 35 and 86 minutes. The interview covered: structural features of the house related to energy such as insulation, doors, and windows; the heating and cooling systems and the fuels used in these systems; use of wood; energy conservation efforts; household appliances; vehicles and commuting to work; participation in a Government-sponsored weatherization program or energy audit; and, demographic data on household members. The questionnaire is reproduced in Appendix D.

At the end of the interview, respondents were asked to sign a waiver authorizing the contractor to obtain records of energy consumption from the housing unit's energy supplier(s). At this time, the interviewer also measured the dimensions of the housing unit using a retractable 50-foot metal tape measure and recording the dimensions on a rough-drawn diagram of the floor plan (See Appendix B for further details on the measurement of housing units).

Interviewers

During the period September 24 to November 1, 1980, 323 interviewers attended one of the 41 training sessions held in one of 37 locations around the country. Each session was led by a trainer, most of whom had participated in a prior four-day workshop in Princeton, New Jersey. The two-day training session for interviewers covered interviewing techniques generally, background of the residential energy consumption surveys, the household questionnaire, how to measure respondents' homes, the sampling tasks, and administrative requirements.

The training session also included a practice interview with another interviewer serving as respondent. Self-corrected tests were used in the training. The basic training document was the 62-page, "Instructions for Interviewers".

Each interviewer was required to submit a practice interview for review by RAC before proceeding to interview at the assigned housing units.

Most of the 346 interviewers used in this survey had previous interviewing experience. About 20 percent had worked on previous RECS surveys; most of the remainder were conducting their first RECS survey but had other interviewing experience either with other survey research organizations or with the U.S. Bureau of the Census. Fewer than 20 percent of the interviewers had no previous interviewing experience. The need for recruiting new interviewers will decrease in the future as trained interviewers become available in each PSU. Of the 323 interviewers who attended training sessions, 294 completed one or more interviews. Another 52 interviewers received individual training prior to conducting interviews.

Interviewers were paid on an hourly basis for their work on RECS, including time for home study, attendance at training sessions, review of completed interviews, actual interviewing time, and travel time to and from training sessions and sample clusters. Interviewers were also reimbursed at standard mileage rates for use of personal vehicles and other travel expenses. Interviewers working in locations believed to present a hazard to their safety were compensated for use of an escort.

Each interviewer conducted an average of 17 interviews. Fifty-one interviewers each completed fewer than six interviews; the average for this group of 51 interviewers was 2.9 completed interviews. The most interviews completed by one interviewer was 72. Twenty percent of the personal interviews were verified by telephone or mail to ensure that interviews were conducted as intended.

Sample Design

The sample of households used as the basis for the 1980 estimates was selected using a probability sampling design developed especially for the Residential Energy Consumption Survey (RECS). The 1980 survey represents the first time the design was used. The design required a sample with a minimum level of precision within each of the ten Federal regions and nine Census Divisions. This requirement meant disproportionate sampling in each of the 17 intersections which are created by the overlap between the Federal regions and the Census Divisions.

The 3,141 counties and independent cities in the 50 States and the District of Columbia were divided into 1,782 Primary Sampling Units (PSU's) on the basis of Standard Metropolitan Statistical Areas (SMSA), county and independent city boundary lines, and population characteristics. The PSU's were grouped into 131 strata having roughly similar population totals within each of the 17 intersections. Each stratum contained PSU's similar in several characteristics including, among others, the dominant space-heating fuel and, in some strata, similar weather conditions. Some PSU's comprising all or part of large metropolitan areas were large enough in population to comprise a stratum by themselves; 31 of the PSU's are of this type and are called self-representing (SR) because the sample from that PSU represented only that PSU. In the other 100 strata, one PSU was selected from among two or more PSU's in the stratum. Each of the 100 PSU's selected from these strata are called nonself-representing (NSR) PSU's because each PSU also represents the nonselected PSU's in its stratum.

A number of intermediate probability sampling stages preceded the final selection of RECS households. These stages included the selection of minor civil divisions (MCD's) such as cities, towns, townships, and other Census divisions within each PSU. Within the MCD's, Census tracts or enumeration districts (ED's) were selected. Finally, a segment of 25 or more housing units was selected within a tract or ED. Segments were formed from field counts in easily identified geographic units. Definition of urban/rural and metropolitan statistical areas is based on definitions using the 1970 Census results. These definitions will be updated at some time in the future to use results from the 1980 Census.

The 131 PSU's were selected in early 1980. The population size of PSU's were 1978 population estimates from the U.S. Bureau of the Census. Other data used in stratification, such as the dominant home heating fuel, came from the 1970 Census. For selection within PSU's, 1980 projected household counts for subareas of the PSU were used. The projections were based on data for minor civil divisions (MCD's) provided by the National Planning Data Corporation. Within selected MCD's, the procedure for deriving estimated numbers of households in tracts and enumeration districts was based on data from a combination of sources including Reuben H. Donnelley household address counts, 1970 Census data, and contacts with local sources of information.

Detailed field listings were created for each segment by sending a person to visit the area and identify each housing unit by street address or apartment number or other observable feature. A cluster of 25 housing units was selected from the sample segment. The ultimate cluster to be contacted for interviews (averaging about four housing units) was systematically selected from the cluster and these housing units constituted the assignments given to the interviewers. The number of ultimate clusters totaled 1,667 of which 152 clusters were for a supplementary sample of 500 households described below.

A supplementary sample of 500 households was a special feature of the design. This sample was selected in 25 strata formed by combining the 131 original strata. One PSU was selected from each of the combined strata by a probability selection among the strata forming a given one of the 25 strata. Two PSU's were self-representing and the other 23 sample PSU's were selected with probability proportionate to stratum size. The supplementary sample constitutes a national sample on its own, but is included here with the larger national sample to increase the precision of the estimates and because no special use was made of the supplementary sample households. There were early plans to use these households as a test for energy audit procedures and for reinterviews to check the reliability of information. Due to budgetary limitations, these reliability checks were not undertaken.

Survey Estimates

Survey estimates were developed to project sample results to the universe. The universe includes all households in the 50 States and the District of Columbia. Households on military installations are included. Definition of "household" is the same as that used by the Bureau of the Census. At the time of the survey, November 1980, the universe was estimated to contain 81,645,000 households based on the 1980 Census and Current Population Survey (CPS) estimates of the population updated by the 1980 Census.

Weights were calculated for each sample household. The household weight reflected the probability of selection for that household and additional adjustments to correct for potential biases arising from the failure to contact all sample housing units and the failure to list all housing units in the sample area. Contacts were not successful with 8.8 percent of the eligible units.

The adjustment for these noninterviews was designed to spread the effects of noninterviews over the interviewed sample of households in the final cluster. This same procedure was used in the National Interim Energy Consumption Survey (NIECS) and the Screener (see Glossary), but because the cluster size is smaller for the RECS (approximately four households, on the average, for the RECS as compared with about 10 in the NIECS), the effects were spread over additional clusters within the PSU whenever the adjustment exceeded 2.0. In these cases, only that part of the noninterview adjustment that exceeded 2.0 was spread over the remaining ultimate clusters in the PSU.

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. This problem is treated in two ways in the RECS. One treatment occurs during the interviewing process and the second in the estimation process. During the interviewing stage, unlisted housing units or households are discovered by querying the household where interviews are conducted to determine if other households are present in the unit. In addition, the interviewer is instructed to conduct an interview at all housing units contained in the geographical area between the interviewed household and the next listed address. This tactic reduces the number of missed households but does not eliminate the noncoverage problem altogether.

The noncoverage problem is also treated by using ratio estimation to adjust selected estimates of households to official population values. Ratio adjustment took place in two stages for the RECS. The first stage adjustment was computed from information for PSU's in NSR strata only. A separate factor was created for each of twenty cells (four regions classified by five home-heating fuel categories). The first-stage adjustment for cell C was given by:

$$R_{1c} = \frac{N_c}{N'_c}$$

where N_c is the 1970 population Census total number of households in cell C for all PSU's in RECS NSR strata, and

N'_c is an estimate of N_c generated by applying RECS PSU sampling weights to 1970 Census household totals for cell C in RECS NSR sample PSU's.

The implementation of this factor reduced somewhat the amount of variance due to the sampling of PSU's. The second stage factor adjusted data from the survey after nonresponse adjustment and first stage ratio estimation to independently derived estimates of the number of households in twelve categories shown in Table A1. The second stage adjustment for category k was given by

$$R_{2k} = \frac{H_k}{H'_k}$$

where H'_k is the RECS estimate of the total number of households in category k, and

H_k is an independent estimate of the total.

The numerator is based on a linear interpolation of values for each of the twelve cells between the 1980 Census figure and Current Population Survey estimate for March 1981. The second stage factor reduced both the between PSU variance and the within PSU variance. An additional effect of applying this factor is that the final sample estimate of the number of households for each cell shown in Table A1 equals the control estimate.

Table A1. Population Estimates Used as Controls in Ratio Estimates

<u>Census Region</u>	<u>SMSA- Central City</u>	<u>SMSA-Outside Central City</u>	<u>Non-SMSA</u>	<u>Total</u>
Northeast.....	5,901,000	8,018,500	3,748,900	17,668,400
North Central...	5,862,400	7,969,700	7,242,100	21,074,200
South.....	7,251,100	8,074,800	11,625,300	26,951,200
West.....	5,312,700	7,238,600	3,399,900	15,951,200
Total.....	24,327,200	31,301,600	26,016,200	81,645,000

Minimizing Nonresponse

In an effort to maximize the validity of the survey data, a multi-wave, multi-contact approach was employed. Prior to the initial contacts, two letters were sent to each household. A letter from the Administrator of the EIA, briefly described the purposes and stressed the importance of the survey. A subsequent letter from the contractor announced the impending arrival of the interviewer. To elicit rapport and cooperation, a \$2 incentive was given to the respondent before the interview. Ninety-three percent of the respondents accepted the \$2.

Beginning in October 1980, interviewers made up to seven or more call-backs at different times of the day and 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, 106 addresses were found to be nonresidential and an additional 551 were found to be ineligible. Some 5,261 personal interviews were completed leaving 1,420 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 47 addresses were found to be ineligible. Also, some 32 previously contacted potential respondents had moved and were removed from consideration. As a result of the second wave, an additional 521 interviews were completed leaving 820 nonrespondents.

A third wave was initiated in an effort to reach nonrespondents in locations that had low completion rates. The third wave produced 22 additional personal interviews.

In a final attempt to reduce nonresponse, an abbreviated version of the questionnaire (adapted for self-administration) was mailed to the remaining nonrespondents. The \$2 incentive was included in the mailing. As a result of this effort, 247 additional households responded.

After three waves of personal interview attempts and one mailed questionnaire, 551 households had not responded and 32 households had moved leaving a total of 583 nonrespondents or 8.8 percent of all eligible housing units. These results are displayed in Table A2.

These efforts were successful in accomplishing the following:

- o Approximately 88 percent of the households were contacted and agreed to be interviewed personally. An additional 3.7 percent of the sample households completed and returned mailed questionnaires.
- o Of the 6,051 responses, 86.9 percent were obtained during the first wave of contacts; 8.6 percent were obtained during the second wave; and less than 0.4 percent resulted from third wave contacts. Some 4.1 percent were responses to the mailed questionnaire.
- o Of all households which participated in the personal interviews, 33.3 percent required only one visit and 74.1 percent were completed with no more than two call-backs.
- o A total of 199 personal interviews were completed in the second and third waves with respondents who had previously refused to participate, representing 3.4 percent of all completed personal interviews. In addition, of the 247 mailed questionnaires which were completed and returned, 152 were from households which previously refused to participate.

Table A2. Interviews Completed by Stage

	Personal Interviews			Status	Mail	Final Status
	First Wave	Second Wave	Third Wave	After Third Wave		
Total Listed Units.....	7,338	1,420	820	7,338	798	7,338
Non-Housing Units						
Business, Other.....	43	-	-	43	-	43
Not Habitable.....	38	-	-	38	-	38
Non-Housing Unit.....	25	-	-	25	-	25
Subtotal.....	<u>106</u>	-	-	<u>106</u>	-	<u>106</u>
Housing Units.....	7,232	1,420	820	7,232	798	7,232
Ineligible Units						
Vacant.....	393	37	-	430	-	430
Seasonal Occupied.....	7	-	-	7	-	7
Seasonal Vacant.....	151	10	-	161	-	161
Subtotal.....	<u>551</u>	<u>47</u>	-	<u>598</u>	-	<u>598</u>
Eligible Units.....	6,681	1,373	820	6,634	798	6,634
Not Completed--Personal						
Moved After Contact...	-	32	-	32	-	32
No One Home.....	575	194	16	145	-	145
Eligible Respondent						
Not Home.....	40	15	-	12	-	12
Refused.....	669	406	16	^a 555	-	^a 555
Illness.....	38	8	-	8	-	8
Language Barrier.....	27	7	-	9	-	9
Wrong Respondent or						
Unit.....	2	5	-	2	-	2
Not Contacted.....	33	154	757	23	-	23
Other.....	36	31	9	44	-	44
Subtotal.....	<u>1,420</u>	<u>820</u>	<u>798</u>	<u>798</u>	-	<u>798</u>
Not Completed--Mail						
Unusable Address.....	-	-	-	-	55	55
Post Master Return....	-	-	-	-	61	61
Returned Blank.....	-	-	-	-	51	51
Returned Unusable.....	-	-	-	-	3	3
Not Returned.....	-	-	-	-	284	284
Other Not Mailed.....	-	-	-	-	97	97
Subtotal.....	-	-	-	-	<u>551</u>	<u>551</u>
Total Interviews						
Completed.....	5,261	521	22	5,804	247	6,051

^aA household that refused an interview during any one of the three waves was classified as a "refusal" for the final status even though no one was at home in the second or third wave.

Evaluation of Response and Nonresponse Characteristics

This section of the report will compare various response and nonresponse category rates across census region, location type, and structure type. These rates are reported in Table A3.

Several patterns are clear from Table A3. First, personal interviews enjoyed the most success in the South (89.8 percent), in non-SMSA areas (91.4 percent), and among residents of mobile homes (90.9 percent). Conversely, the interviewers had their lowest success rates in the Northeast (83.8 percent), SMSA central cities (83.3 percent), and in buildings with five or more residential units (79.0 percent). It is important to keep in mind when looking at the categories that make up these groupings that there is no guarantee that the characteristics are independent. Rather, it is highly likely that they overlap. That is to say that the Northeast has a high concentration of central cities and large apartment buildings.

The categories which were least successful for the personal interviewers were the most responsive for the mailed questionnaire. The opposite situation also holds: the categories where personal interviewers had the most success were the least responsive to the mailed questionnaire.

An added factor with regard to the results of the mail questionnaire could be the number of potential respondents who received the mail questionnaires. For example, the Northeast had a higher response rate since more were mailed out to that area of the country. This indeed turns out to be the case. Response rates by region for only those respondents to whom questionnaires were mailed are virtually the same (data not shown).

The total response rate patterns with regard to highest and lowest rates are not affected by the addition of the responses to the mailed questionnaire. However, the range from highest to lowest decreases with only one exception. The highest "refusal" and "unable to contact" rates correspond to the lowest success rates for the personal interviewers, the exception being that noncentral city SMSA urban areas have a higher refusal rate (10.9 percent) than the SMSA central city areas (10.1 percent). The lowest refusal rate categories match the highest personal interviewers success groups.

Table A3. Response Rates by Region, Location, and Type of Structure

Characteristic	Percent of Eligible Housing Units				
	Response Rates			Personal Interview Nonresponse Rates	
	Personal Interview	Mail Questionnaire	Total Response	Refuse	Unable to Contact
Total.....	87.5	3.7	91.2	8.6	3.9
Census Region					
Northeast.....	83.8	4.9	88.7	10.5	5.7
North Central.....	87.4	3.7	91.1	9.0	3.6
South.....	89.8	3.1	92.9	6.8	3.4
West.....	87.9	3.5	91.4	8.8	3.3
Location Type					
SMSA Central City....	83.3	5.5	88.8	10.1	6.5
SMSA Other Urban.....	85.9	4.7	90.6	10.9	3.1
SMSA Rural.....	89.3	2.9	92.2	8.5	2.2
Non-SMSA.....	91.4	1.9	93.3	5.6	3.0
Structure Type					
Single-Family House..	88.9	3.3	92.2	6.4	2.7
Mobile Home.....	90.9	2.1	93.0	8.4	2.7
Buildings with 2-4 Units.....	86.5	4.4	90.9	8.6	4.9
Buildings with 5 or More Units.....	79.0	6.4	85.4	10.7	10.3

Adjustment for 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 to most items which were to be used for making national estimates and items which had less than 10 percent nonresponse. Items for which national estimates are made but for which imputations were not made include questions on the presence, type, and amount of attic and floor insulation; the presence of wall insulation; and the cost of adding storm windows, doors, and insulation. For these items, the number of missing cases was considered large enough that the imputations would have introduced too much additional error.

The most frequently used imputation procedure was "hot-deck." This procedure requires sorting the file of households by variables related to the missing item. A household is then selected which has the same value on the related variables and this "donor" household supplies the value for the variable which is missing in the "donee" household.

Less frequently used imputation methods included regression estimates and use of modal values. Regression procedures were used to impute the total square footage of the housing unit in the three percent of the cases where all data were missing. Discussion of the regression procedure and other imputations involved in the square footage estimates is found in Appendix B. A few variables were imputed by assigning modal values; this was done when the distribution of available data showed a highly skewed distribution.

Table A4 shows the most frequently imputed items, the number of cases requiring imputation, and the method used.

The 247 mail questionnaires had considerable missing data since the mail questionnaire was a small subset of questions from the household interview. For the mail questionnaires, the hot-deck imputation method was used. Households were selected by sorting the file by Census region, type of structure, space-heating fuel, hot water fuel, air-conditioning fuel, number of rooms, and number of persons in the household. The donor household was matched on these characteristics and the entire set of response from the donor household was imputed to the mailed questionnaire household. This meant that all the responses for the mailed questionnaire households were imputed except the seven matching items, weather data, fuel consumption data acquired from the household's fuel suppliers, and the geographical location of the mail questionnaire household.

Table A4. 1980 RECS Items Most Frequently Imputed

Item	Cases Imputed	Percent of All Interviews ^a (6,051)	Method of Imputing
1979 Family Income.....	787	13	Hot-deck
Same Main-Heating Fuel Used Last Winter.....	422	7	Hot-deck, but no cases were imputed as having changed fuels.
Most-Used Oven is/is Not Microwave.....	281	5	Hot-deck
Availability of Natural Gas.....	254	4	Hot-deck
Year House Was Built.....	241	4	Hot-deck
Square Footage of Housing Unit.....	b	b	b
Central Heating System for the Building.....	183	3	Hot-deck
Condominium or Cooperative.....	167	3	Hot-deck
Central Water-Heating System for the Building.....	122	2	Hot-deck
Second Oven is/is Not a Microwave.....	115	2	Hot-deck
Hispanic.....	109	2	Hot-deck
Self-Cleaning Features of Most-Used Oven.....	79	1	Hot-deck
Warm Air Forced Through Ducts.....	78	1	Hot-deck
Number of Cords of Wood Burned.....	74	1	Hot-deck
Age of Respondent.....	67	1	Hot-deck
Type of Freezer Compartment in Most-Used Refrigerator...	53	1	Hot-deck
Age of Second Person in Household.....	49	1	Hot-deck
Most-Used Freezer is/is Not Frost-Free.....	44	1	Hot-deck
Energy Used by Second Oven..	38	1	Hot-deck
Employment Status of Third Person in the Household.....	37	1	Hot-deck

^aMail questionnaires are not included. To account for these, add four percentage points to the percent listed.

^bSee Appendix B for details on the square footage imputations.

Rental Agent Survey

Telephone and/or in-person interviews were carried out with rental agents and landlords of selected RECS households who did not pay directly to utility companies and fuel suppliers for household fuel use. Primary purposes of the rental agent survey were to obtain additional information on fuels for specified end uses and on actual fuel consumption for buildings containing these households. The rental agent survey was limited to those primary sampling units where there were at least three or more households whose fuel was included in their rent.

After an advance letter from DOE, telephone interviews were attempted wherever it was possible to reach the rental agent or his/her deputy by phone. Telephone interviewing was conducted during the week of June 22, 1981.

Personal interviews were conducted under the following circumstances: when it was not possible to reach the rental agent by telephone; where interviewer travel costs would not be excessively high; and, when a signed authorization had not been received. The personal interview included a request for the rental agent's signature on an authorization form that would permit Response Analysis to contact utility companies for building consumption data.

Rental agents whose utility bills covered nonresidential purposes were not requested to sign an authorization form if five percent or more of the billing was for nonresidential purposes. Personal contacts were made during July and early August, 1981.

Altogether, 283 rental agents were interviewed by telephone or in-person. These 283 interviews covered 551 households in 346 structures.

In those cases when a discrepancy occurred between the rental agent's report and the household's report, the rental agent's report was accepted as the "true" one. Altogether, 104 changes were made, 31 in the main heating fuel, 27 in supplementary heating fuel, 40 in water-heating fuel, and 6 in air-conditioning fuel.

The fuel consumption records acquired from the fuel suppliers will be used to determine whether modifications should be made in the consumption imputations for households not paying their own fuel bills. Results of this analysis will not be available until 1983.

Editing Completed Questionnaires

Interviewers mailed completed questionnaires to the contractor, where they were carefully reviewed. The first step in the review process was to verify the accuracy of the basic identifying information. Next, the questionnaires were manually reviewed by two editors to insure completeness and the logical consistency of selected patterns of responses and to prepare the questionnaires for translation into machine-readable form. All keypunching was fully verified. Finally, the data were machine-edited to further insure completeness, logical consistency, and the legitimacy of coded values. The computer editing utilized a proprietary software package called EDITOR II.

The contractor attempted to resolve inconsistencies or ambiguities in the data internally, by reference to other parts of the questionnaire. In the event that these efforts failed to resolve the problem, the contractor made telephone contact with a member of the household in question.

Additional editing resolved discrepancies among the household interview, the rental agent survey, and the information from fuel suppliers. For example, information on the fuel used in apartment buildings was taken from the rental agent survey to correct the data from the household. In other cases, a fuel supplier reported supplying kerosene to a household, not fuel oil as was reported by the household. The data, therefore, do not always represent the respondents' reports, exclusively.



APPENDIX B



Appendix B

ESTIMATES OF THE SIZE OF U.S. HOUSING UNITS IN SQUARE FEET

Interviewers for the 1980 RECS survey were given 50-foot tape measures and were instructed to measure the dimensions of each housing unit. The instructions were to measure the "area enclosed from the weather". This included garages attached to the house, attics that were either heated or finished, and basements that were enclosed from the weather (See "Square Feet" in Glossary for further definition). Interviewers also recorded the dimensions of areas that were heated and unheated. This further breakdown into heated and unheated areas provides a closer approximation to the area of the housing unit which places the demand on the heating system and, therefore, is the figure which may prove to be more useful in analysis of residential energy consumption. All measurements were rounded to the nearest foot by the interviewer or in the editing process. Interviewers were given an option of measuring the home from the inside, taking into account the thickness of inside walls, or from the outside. In 108 cases, the measurements were taken from a floor plan. These measurements provide the first data on a national sample of all types of residential housing units including apartment units and mobile homes.

In 97 percent of the cases, usable measurements were acquired. In 3 percent, the measurements were either not usable or were not made. Although most cases contained the basic information, some imputations were required to produce a final set of three figures for each housing unit:

HOMEAREA = total square footage of area enclosed from the weather

HEATED = total square footage of heated area

UNHEATED = HOMEAREA-HEATED = total square footage of unheated area.

Table B1 indicates the number of cases with missing data. The imputations required: standardizing all measurements to outside measurements when the measurement was inside; characterizing a measurement as inside or outside when this was unknown; apportioning the total space between heated and unheated when this proportion was unknown; and estimating the total square footage when the measurements were not made or not usable.

Scaling Up to Outside Measurements

As shown in Table B1, 4,729 homes had complete dimensions for the total area, the heated area, and the unheated area. The only adjustment required was to scale up the measurement for the 2,076 homes that were measured on the inside. The inside measurements were standardized to outside dimensions. The scaling value was determined for each housing unit as a quadratic function of HOMEAREA for the housing unit.¹

$$\text{SCALE} = 1.034 + 6.5\text{E}-05 \times \text{HOMEAREA} - 6.0\text{E}-09 \times (\text{HOMEAREA})^2 \quad (1)$$

This formula indicates that the larger the HOMEAREA, the larger will be the scaling-up value. These scale values, which increased the inside measurements, ranged from 6.4 percent to 17.4 percent depending on the size of HOMEAREA. For any case where HOMEAREA was less than 500, SCALE was set to 1.064; for HOMEAREA greater than 3,000, SCALE was set to 1.174.

Table B1. Completeness of Data on Square Footage of Housing Units

<u>Amount of Information Collected</u>	<u>Number of Households</u>	<u>Percent</u>
Complete Set of Dimensions.....	4,729	82
Outside Measurement of Home.....	2,653	46
Inside Measurement of Home.....	2,076	36
Unknown Whether Dimensions are for Inside or Outside of the Home.....	715	12
Information Available on Heated and Unheated Areas.....	574	10
Information on Heated and Unheated Areas Also is Missing....	141	2
Basement Dimensions Missing.....	176	3
All Dimensions Missing or Not Usable.....	184	3
Total.....	<u>5,804</u>	<u>100</u>

¹This equation was developed in the following manner: a regression model of square footage for the 2,653 housing units with complete data was applied to the 2,076 housing units with complete inside dimensions. The ratio of the estimated outside measurements to the actual inside measurements was computed. A quadratic equation was fit that expressed the relationship between the ratio and the inside measurement.

Treatment of Housing Units With Some Missing Data

The 574 cases lacking information as to whether the measurements were inside or outside measurements or where the measurements may have been a combination of both inside and outside measurements were treated to a hot-deck imputation scheme.¹ Those cases where the imputed method of measurement became inside were then scaled up to outside dimensions using equation 1.

The 141 cases lacking information on the ratio of heated to unheated space as well as whether the measurements were inside or outside were treated to a hot-deck procedure. The donor household provided information as to whether the measurement was inside or outside and also provided the ratio of heated to unheated area. The inside measurements were scaled up to outside dimensions.

For the 176 cases missing basement dimensions, the basement area was imputed using a simple regression based on the area of the first floor. The heated and unheated areas were determined or imputed and then added to known totals for the remaining floors. The total area was then scaled up to outside dimensions, if necessary.

Regression Model

Regression equations were used for the 184 cases with no usable data. One of the regression equations is given below.

$$\begin{aligned} \text{HOMEAREA} = & -222 + 111 \times \text{NROOMS} + 137 \times \text{TYPEHOME} \\ & + 257 \times (\text{NCOMBATH} + .5 \times \text{NHAFBATH}) \\ & + 17.3 \times \text{BUILTYR} + 6.2 \times \text{INCOME79} \\ & + 16.8 \times (\text{DOOR1ALL} + \text{DOOR2ALL} + \text{DOOR3ALL} + \text{WINDOWS}) \\ & + 669 \times \text{BASEMENT} \end{aligned} \quad (2)$$

The variables within the equation are described in Table B2. Another equation used the size of the largest room as an additional independent variable for cases when this information was available. A third equation was developed for houses without basements.

¹See Glossary for explanation of hot-deck imputation.

Having imputed HOMEAREA using the regression model, a hot-deck procedure was used to impute the ratio of heated and unheated space. All estimates were then scaled up. This was necessary since the regression equation estimated inside dimensions.

Table B2. Variables in the Regression Equation Used to Impute the Total Square Footage of the Housing Unit

Variable Definition	Question Number
NROOMS - Number of Rooms in the home.....	7
TYPEHOME - Single-Family or Nonsingle-Family (Mobile home included with Nonsingle-Family).....	Item 1 in the Housing Unit Record Sheet
NCOMBATH - Number of Complete Bathrooms ^a	15
NHAFBATH - Number of Half-Bathrooms ^a	15
BUILTYR - Year the Home was Built.....	3
INCOME79 - 1979 Family Income.....	154
DOOR1ALL - Number of Sliding Glass Doors to the Outside ^a	59
DOOR2ALL - Number of Outside Doors with Glass Panels ^a	59
DOOR3ALL - Number of Regular Outside Doors ^a	59
WINDOWS - Number of Windows in the Home.....	65
BASEMENT - Basement in/Not in the Single-Family or Mobile Home.....	54

^aFor each of the variables NCOMBATH, NHAFBATH, DOOR1ALL, DOOR2ALL, and DOOR3ALL, the values for "five or more" were collapsed into one category.

^bFor this analysis, values for houses built from 1975 to 1981 have been collapsed into one category.

Appendix C

Appendix C

LIMITATIONS OF THE DATA

Introduction

Data from the 1980 Residential Energy Consumption Survey are subject to many sources of sampling error, nonsampling error, and bias. Sampling error is a measure of the variability in the data because a sample of households was surveyed rather than the entire population. Because the survey used probability sampling techniques, it is possible to estimate sampling errors of the survey estimates and use these sampling errors as a guide in making inferences from the sample estimates to the total population.

Nonsampling error and bias are measures of variability due to the conduct of the survey. They can include population undercoverage during sampling, response bias and variance, interviewer error, coding and/or punching error, and nonresponse bias. 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 discussion of these procedures, see Appendix A--"How the Survey was Conducted"). In addition, response adjustments and ratio estimation were incorporated into the survey estimator to help reduce both sampling and nonsampling error. These procedures are also discussed in Appendix A.

Summary and Display of Sampling Errors

The form of the sampling error that is presented in this Appendix is the relative standard error. For a given survey statistic, Y' , the relative standard error, $RSE(Y')$, is given by

$$RSE(Y') = (SY'/Y') \times 100\%$$

Thus the standard error of Y' , the error form used in the text of this report, is given by

$$SY' = RSE(Y') \times Y'/100.$$

Averages and Aggregate Totals

Tables C3 to C15 present estimated relative errors in percent for averages and aggregate totals of square feet and other estimates which are not counts of households.

In order to generalize the error estimates for statistics other than household counts, we would still need an estimate of the number of households or some other measure of size over which the estimate applies. In addition, a different generalization may be required for each type of statistic (i.e., one for average square footage, another for average number of windows, another for amount of wood burned, etc.). For these reasons, the RSE's of statistics that are not household counts are displayed in tables and are not generalized.

Unless otherwise noted, the average is:

$$\frac{\sum V_i W_i}{\sum W_i}$$

in which

V_i is the value of the variable for the i^{th} household and
 W_i is the weight for the i^{th} household.

The summation for most averages is over the entire sample of 6,051 households. When the value of the variable is zero, the household makes no contribution to the numerator but does contribute its weight to the denominator.

The following averages were calculated on a subset of the sample as indicated.

<u>Item</u>	<u>Base</u>
1. Average number of inches of batt insulation	1. Households reporting some inches of batt insulation
2. Average number of inches of loose-fill insulation	2. Households reporting some inches of loose-fill insulation.
3. Average number of inches of batts and loose-fill insulation	3. Households reporting some inches of batts and some inches of loose-fill insulation
4. Average number of storm windows added	4. Households adding one or more storm windows
5. Average number storm doors added	5. Households adding one or more storm doors
6. Average number of cords burned per household	6. Households burning 1/3 of a cord or more
7. Average price per cord	7. Households burning 1/3 of a cord or more and purchasing 1/4 or more of their wood who reported a price in cord units for a purchase of wood in 1980.

Number of Households

The estimated relative errors were generalized for sample statistics that are numbers of households with a particular set of characteristics. Equation 2 (page 305) represents the generalization and Figure C1 presents a plot of the resulting error curve on a log to log scale.

There are two reasons why the summary error curve is used:

- (1) Showing an error estimate for every statistic in the detailed tables would mean producing an error table for each detailed table, thus greatly increasing the size of the report.

- (2) Because the half-sample variance estimates are themselves subject to sampling error, certain variance estimates would be misleading simply because they are outliers.

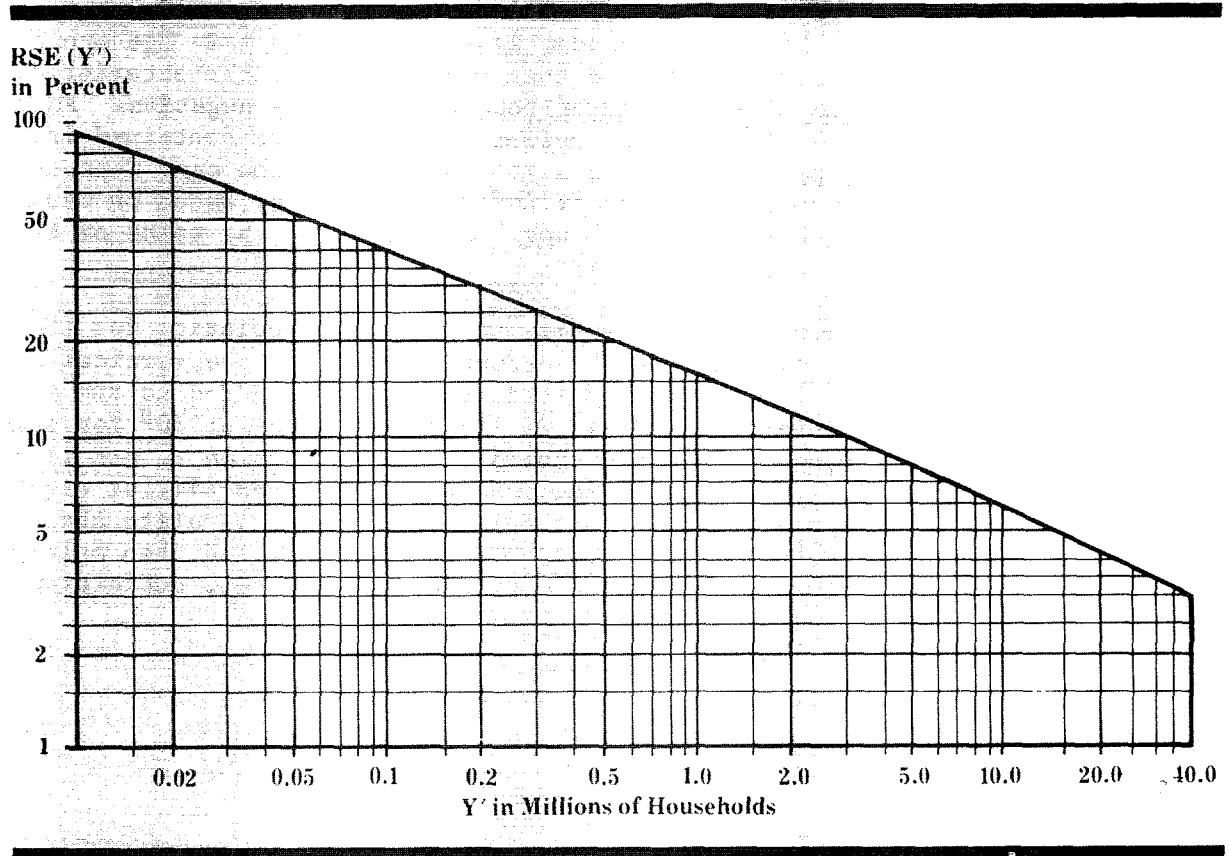
The error formula was constructed from variance estimates computed for selected statistics in the report by a least squares estimate of the model:

$$\log[\text{RSE}(Y')] = A + B + C[\log(Y')] + D[\log(Y')]^2 \quad (1)$$

where A, B, C, and D are the parameters whose least squares estimate determines the shape of the curve. The logarithms used in estimating the parameters of the model were all computed using base 10. The number of households Y' is given in units of millions of households. The value of RSE(Y') is given in percent. The value of B depends on the characteristics used in defining the cell. Equation 2 and Figure C1 are presented as if B=0. The adjustments to RSE (Y') for nonzero values of B will be discussed later.

$$\log[\text{RSE}(Y')] = 1.2005 - .4269 \times [\log(Y')] - .0241 \times [\log(Y')]^2 \quad (2)$$

Figure C1. Curve to Use in Calculating the Relative Standard Error (RSE) for Estimates of the Number of Households



Use of Error Curve and Equation

An estimate of the standard error for any statistic in this report that is in terms of numbers of households can be obtained using either Equation 2 or Figure C1. The formula or figure can be applied directly only if the estimated number of households is less than one half of the appropriate control estimate. In this report, the categories for "SMSA Central City" and "SMSA Other" were combined into one SMSA category. Hence, the corresponding control estimates were combined. In Table C1, the number of households in SMSA's and those in non-SMSA areas is given by Census region. These are control estimates or sums of control estimates and are therefore not subject to sampling error. They are subject to possible design bias. When the estimated number of households exceeds one-half of the appropriate control estimate, then the standard error should be calculated for the statistic equal to the control estimate minus the estimate. This resulting standard error will also be the standard error of the original estimated household count.

The value of B, the cell definition factor, depends partly on the amount of clustering of the characteristics used in defining the cell. In particular, the value of B depends on the strength of the tendency of households with similar characteristics to live in groups within each replicate pair. If the characteristic is highly clustered, the value of B is positive. If the characteristic is widely spread out, the value of B is negative. For example, one characteristic used in the report is heating and cooling degree-days. People that live close to each other experience the same weather conditions; consequently, the value of B for heating and cooling degree-days is positive. On the other hand, there is some clustering of households headed by people of the same age group, but this tendency is less pronounced than for most other characteristics. As a result, the value of B for age of household head is negative. As a final example, consider the Census regions households are contained in. Everyone in the same pair of replicate groups lives in the same Census region. Therefore, there is no way of defining a cluster based on Census region within a pair of replicate groups. As a result, the value of B for Census regions is near zero.

Most cells in the tables of this report use two characteristics for their definition, one for the horizontal breakdown and one for the vertical breakdown. The factor for the vertical definition should be added to the factor for the horizontal definition. Table C2 lists the values of 10^B for some of the cell definitions used in the tables. If a definition is not listed, use $B=0.0$ ($10^B=1.0$) or use a value for a variable that has similar clustering tendency. If we use 10^B to adjust $RSE(Y')$ we first calculate the initial estimate of $RSE(Y')$ from Equation 2 or Figure C1 and then multiply this value by the values for 10^B that correspond to the cell definition.

Determination of Relative Standard Error

The following is a set of steps that give an algorithm for obtaining the relative standard error for any statistic in this report.

Step 1: Is the statistic a household count?

Yes: Go to Step 2 (Note: A simplified procedure for deriving relative standard errors may be followed. This procedure would use Steps 4 and 5 and would produce overestimates of sampling error for some statistics.)

No: Obtain the relative standard errors from Tables C3 to C1. If the statistic is a percentage, go to the section entitled "Percents" on page 311.

Step 2: Is the statistic one of the 20 control estimates given in Table A1 or a sum of two or more control estimates? (See Table A1, Appendix A.)

Yes: Set the RSE equal to zero and skip to Step 6.

No: Go to Step 3.

Step 3: Is the estimated household count less than one half of the appropriate control estimate? (See Table C1, Column C for these values).

Yes: Use estimate directly in Step 4.

No: Use the value equal to the control minus the estimate to calculate the RSE. Call this value the control complement (see Table C1, Column D) and go to Step 4.

Step 4: Use Figure C1 or Equation 2 to obtain the initial RSE of the estimate or its control complement. Denote this value as RSE (I).

Step 5: Is the vertical or horizontal cell definition that corresponds to the household count one of the clustering factors listed in Column A of Table C2 or similar to one that is listed?

Yes: Multiply the RSE (I) by the corresponding factor or factors and go to Step 6.

No: Use RSE (I) as is and go to Step 6.

Step 6: Was the RSE (I) computed using the control complement?

Yes: $RSE\ of\ Y' = RSE\ (I) \times (Control\ Complement)/Y'$

No: $RSE\ of\ Y' = RSE\ (I)$

Table C1. Population Control Estimates for Use In Calculating Sampling Error
(Millions of Households)

Column A Type of Aggregate	Column B Control Estimates	Column C Upper Bound for Direct Application of Formula C1 or Figure C1	Column D Control Complement of Y'
National.....	81.6	40.8	81.6 - Y'
Census Region			
Northeast.....	17.7	8.8	17.7 - Y'
North Central.....	21.1	10.5	21.1 - Y'
South.....	27.0	13.5	27.0 - Y'
West.....	16.0	8.0	16.0 - Y'
SMSA Status			
SMSA.....	55.6	27.8	55.6 - Y'
Non-SMSA.....	26.0	13.0	26.0 - Y'

Note: Column C = Column B/2.

Table C2. Clustering Factor for Calculation of Sampling Error

<u>Column A</u> <u>Cell Definition</u>	<u>Column B</u> <u>Value of 10^B</u>
Heating and Cooling Degree-Days.....	1.5
Availability of Natural Gas for Nonusers of Natural Gas.....	1.2
Utilities Paid by Household.....	1.2
Use Any Natural Gas.....	1.1
Main Heating Fuel.....	1.1
Type of Housing Structure (Crossed with Own/Rent).....	1.1
Main Heating Equipment.....	1.1
Main Cooking Fuel.....	1.1
Main Outside Wall Material.....	1.1
Main Water-Heating Fuel.....	1.1
Urban/Rural Status.....	1.1
Origin (Race).....	1.1
Number of Stories.....	1.1
Census Region.....	1.0
SMSA Status.....	1.0
Secondary Heating Fuel.....	1.0
Central Main Heating System for Building.....	1.0
Year House Built.....	1.0
Amount of Wood Burned.....	1.0
Types of Appliances Used.....	1.0
Own/Rent.....	.9
Number of Windows.....	.9
Number of Complete and Half-Bathrooms.....	.9
Income.....	.9
Size of Dwelling (Square Feet or Number of Rooms).....	.8
Insulation Characteristics.....	.8
Conservation Measures (Storm Windows Added, etc.).....	.8
Demographic Characteristic (Age of Head and Number of Household Members).....	.8

Example 1: Table 13 shows that 14.3 million households heat with electricity nationally.

- Step 1: This is a household count.
- Step 2: This is not a control value.
- Step 3: The upper boundary for national statistics is 40.8, thus enabling either Equation 2 or Figure C1 to be directly applied to $Y' = 14.3$.
- Step 4: Equation 2 gives $\log [RSE(Y')] = 0.68$ and $RSE(Y') = 4.7$ percent.
Using Figure C1, and reading up from 14.3 million households on the horizontal axis until the curve and then to the left to the vertical axis, the RSE is read at 4.7 percent.
- Step 5: The factor for main heating fuel is 1.1.
This gives an RSE of $(4.7)(1.1) = 5.2$ percent.
- Step 6: The relative standard error equals 5.2 percent.

Example 2: Table 15 shows that 11.1 million households heat with natural gas in the West.

- Step 1: This is a household count.
- Step 2: This is not a control value.
- Step 3: The upper boundary for using Equation 2 or Figure C1 on household counts for the West is 8.0 million households. Therefore, the control complement = $16.0 - 11.1 = 4.9$ should be used in determining the RSE.
- Step 4: Equation 2 or Figure C1 gives $RSE = 7.8$ percent.
- Step 5: The factor for main heating fuel is 1.1; the factor for Census region is 1.0.
This gives an RSE of 8.6 percent for the 4.85 million households that do not heat with natural gas in the West.
- Step 6: The relative standard error equals $(8.6)(4.9) / (11.1) = 3.8$ percent.

The standard error of 0.4 million households applies to both the 11.1 million households that heat with natural gas in the West and the 4.9 million households that do not.

Percents. Estimates of the relative standard errors can be obtained using the approximation

$$RSE (X'/Y') = \sqrt{RSE^2 (X') - RSE^2 (Y')} .$$

This approximation applies to percentages derived from aggregate totals and numbers of households. For some percentages, the estimate of the RSE can be obtained directly from Tables C3 to C15.

Computation of Sampling Errors

The complex multi-stage, multi-frame design of the survey makes it virtually impossible to construct an exact algebraic variance estimator. The method used to produce variances for this survey is balanced half-sampled replication (see References 1 and 2.) In order to apply the half-sample technique to this survey, the 131 Primary Sampling Units (PSU's) were grouped into 81 strata. Thirty-one of the strata were self-representing; that is, they consisted of large metropolitan areas that came into the sample with certainty. In these strata, segments were divided into two replication groups. Each of the remaining 50 strata consisted of two sample PSU's belonging to one of 17 intersections created by the overlap between the 10 Federal regions and the nine Census Divisions. The two replication groups in these strata consisted of one PSU each.

In order to save time and effort, a fully balanced half-sample design was not used. Instead, the half-samples were balanced only among strata in the same Census region. If a fully balanced design were used, it would require 82 half-samples. By balancing only within Census regions, a balanced design could be constructed using 32 half-samples.

The survey was constructed so that the results in each Census region can stand alone. No PSU lines cross Census region boundaries. The nonself-representing PSU's were paired within Census regions. All controlled selection was done within each Census region. The ratio estimation was also done within each Census region. Consequently, the national totals can be considered to be the sum of four independent totals for the four Census regions. Therefore, the variances of a national total is the sum of the variance for its four corresponding regional totals. This fact was used as one justification for balancing the half-sample design only within Census regions.

The 32 half-sample design is defined by a 32 x 81 matrix of +1's and -1's. The 32 rows correspond to the 32 half-samples and the 81 columns correspond to the 81 pairs of replication groups. The +1's and -1's determine which of the groups in the pairs is used in each half-sample. All column totals are 0. Therefore, each of the groups is used in exactly 16 of the halfsamples. The columns for sets of pairs that fall within the same Census region are orthogonal. This is not necessarily true for columns corresponding to pairs that fall into different Census regions.

The 32 x 81 design matrix was constructed using a 32 x 32 orthogonal matrix adapted from an article by Plackett and Burman (Reference 3). The rows of this 32 x 32 matrix were randomly sorted. The sorting preserves orthogonality. For each Census region, K columns were randomly selected from the sorted matrix. Therefore, K is the number of replication groups in a Census region. After the columns for a Census region have been selected, the rows are randomly sorted again.

Without the random sortings, all of the 81 columns would be orthogonal with each other except possibly three other columns that would be identical to it. The three other columns would correspond to pairs in the three other Census regions. When two columns are identical, it means the groups corresponding to the +1's will always be in 16 half-samples together. (The groups corresponding to the -1's would follow a similar pattern.) Random sorting makes the possibility of two identical rows zero for all practical purposes.

Variance estimates for selected survey statistics were created by computing 32 half-sample estimates for each statistic. If a +1 falls in the i th row and j th column of the design matrix, the replication group corresponding to the +1 in the j th pair was used in the i th half-sample. The sampling weights in each half-sample were ratio-adjusted upward so that the total number of households in each Census region classified by SMSA status corresponded to the control total for that cell (see Table A1, Appendix A).

As a result of using control estimates, the total number of households in each of the 12 cells (Census region classified by SMSA status) is the same for all half-samples. The variance for these 12 totals, then, is zero. Any errors in these numbers are biases. In particular, they are affected by any undercount or overcount in the 1980 Census.

The half-sample variance estimate for the survey estimate Y' of characteristic Y is given by

$$S_{Y'}^2 = (Y'_i - Y')^2 / 32$$

where Y'_i is the i th half-sample estimate of Y , and Y' is the full sample estimate of Y . The half-sample procedure measures variability due to sampling error and random response variance.

References

1. National Center for Health Statistics: "Replication: An Approach to the Analysis of Data From Complex Surveys." Vital and Health Statistics. Public Health Service Publication No. 1000 - Series 2 - No. 14., Washington: U.S. Government Printing Office, April 1966.

2. National Center for Health Statistics: "Pseudoreplication: Further Evaluation and Application of the Balanced Half-Sample Technique," Vital and Health Statistics. Public Health Service Publication No. 1000 - Series 2 - No. 31., Washington: U.S. Government Printing Office, January 1969.
3. Plackett, R.L., and Burman, J.P.: "The Design of Optimum Multifactorial Experiments." Biometrika 33: pp. 305-325, 1946.

Table C3. Relative Standard Errors (RSE) for Averages by Census Region, Area Type, and SMSA/Non-SMSA (Percent)

Average Number of:	Total	Census Region				Area Type		SMSA/Non-SMSA	
		North		South	West	Urban	Rural	SMSA	Non-SMSA
		East	Central						
Windows.....	1.2	2.7	3.0	1.8	2.5	1.4	2.2	1.5	1.9
Large.....	4.1	9.1	6.7	8.7	6.2	3.7	7.0	4.7	6.9
Medium.....	1.7	2.9	3.1	3.0	4.0	1.7	3.2	2.2	2.5
Small.....	2.2	5.2	5.3	4.7	5.0	2.8	4.5	2.7	3.8
Storm.....	2.7	3.7	4.3	7.8	10.7	3.6	4.1	3.8	4.4
Large.....	5.8	13.1	7.3	10.4	13.7	6.7	6.7	6.4	8.0
Medium.....	2.9	3.9	4.7	8.5	12.0	3.6	4.6	4.3	4.6
Small.....	4.2	7.3	6.4	9.9	14.4	5.5	6.7	5.2	7.1
Added in 1979 or 1980.....	3.9	9.5	8.4	5.0	7.2	4.6	7.1	3.8	8.6
Doors.....	1.0	1.6	1.7	1.8	2.4	1.2	1.6	1.2	1.6
Standard.....	1.0	1.7	2.1	2.2	2.0	1.0	1.8	1.0	2.0
Sliding Glass.....	5.8	9.6	9.3	11.1	8.2	7.9	3.6	7.5	5.2
Storm.....	2.3	2.2	3.5	6.0	6.8	3.4	3.2	3.8	2.4
Standard.....	2.5	3.0	3.9	6.2	6.9	3.3	3.2	4.0	2.6
Sliding Glass.....	5.4	10.1	10.4	12.0	9.2	8.8	6.8	7.5	8.4
Added in 1979 or 1980.....	2.8	4.8	3.4	5.5	4.5	2.4	4.9	3.0	5.6
Roof or Ceiling Insulation (inches)									
Batts Only.....	2.0	3.1	5.0	3.1	4.2	2.8	2.8	3.0	2.7
Loose-Fill Only.....	2.2	12.9	3.1	3.7	5.7	2.1	3.7	2.3	4.3
Batts and Loose-Fill.....	2.7	5.9	3.6	6.6	7.3	3.4	4.4	3.1	3.8

Source: Residential and Commercial Branch, Energy End Use Division, Office of Energy Markets and End Use, Energy Information Administration, U.S. Department of Energy, The 1980 Residential Energy Consumption Survey.

Table C4. Relative Standard Errors (RSE) for Averages by Housing Structure (Percent)

Average Number of:	Single-Family Detached		Single-Family Attached		Building with 2 to 4 Units		Building with 5 or more Units		Mobile Home						
	Total	Rent	Total	Rent	Total	Rent	Total	Rent	Total	Rent					
	Own	Rent	Own	Rent	Own	Rent	Own	Rent	Own	Rent					
Windows.....	1.2	1.3	1.8	4.6	5.5	10.3	3.2	6.6	2.9	3.1	11.8	3.0	2.9	3.5	4.5
Large.....	4.1	5.3	4.9	14.3	21.1	29.5	10.4	20.7	10.7	8.7	20.3	11.3	10.9	11.1	18.0
Medium.....	1.7	1.6	1.8	2.5	7.1	8.3	14.9	4.1	9.6	3.9	6.6	22.5	7.2	4.7	9.0
Small.....	2.2	2.6	2.6	5.5	9.3	10.7	21.3	8.3	15.2	9.0	8.1	32.2	9.2	6.0	7.1
Storm.....	2.7	3.0	3.2	5.8	9.4	12.2	21.9	7.5	13.7	7.9	9.2	44.6	8.8	9.4	11.9
Large.....	5.8	6.6	6.5	15.5	24.9	30.7	29.6	15.4	24.3	15.5	14.3	40.7	12.9	21.5	21.8
Medium.....	2.9	3.0	3.4	6.0	11.2	14.1	27.1	8.0	15.8	7.2	12.5	66.1	12.9	11.2	14.7
Small.....	4.2	4.8	4.7	13.0	15.1	16.6	31.4	17.7	22.4	23.1	20.9	83.3	21.7	11.8	14.5
Added in 1979 or 1980.....	3.9	4.7	NA	17.6	NA	NA	23.5	NA	NA	NA	36.6	NA	NA	26.7	NA
Doors.....	1.0	1.1	1.2	1.9	4.2	4.9	5.9	3.1	5.7	3.5	6.1	17.4	5.7	1.4	1.9
Standard.....	1.0	1.1	1.2	2.1	3.7	4.3	8.3	2.9	5.1	3.3	5.6	29.9	5.1	1.9	2.7
Sliding Glass.....	5.8	6.6	6.7	16.7	14.8	19.3	28.8	18.9	37.0	20.9	13.8	16.5	15.5	20.4	22.4
Storm.....	2.3	2.3	2.5	5.1	13.7	17.1	15.5	7.1	16.2	11.6	15.6	31.8	16.8	8.5	12.2
Standard.....	2.5	2.5	2.6	5.1	14.0	17.0	17.1	7.2	16.5	11.3	19.1	60.7	20.6	8.6	12.2
Sliding Glass.....	5.4	5.2	5.5	24.5	32.5	37.8	42.2	24.7	46.1	30.6	21.8	35.6	28.0	20.4	20.8
Added in 1979 or 1980.....	2.8	2.9	NA	6.5	NA	NA	11.5	NA	NA	NA	8.1	NA	NA	15.4	NA
Roof or Ceiling Insulation (inches)	2.0	2.3	2.4	4.4	5.2	6.3	NA	NA	NA	NA	NA	NA	NA	NA	NA
Batts Only.....	2.2	2.2	2.3	8.2	13.9	13.3	NA	NA	NA	NA	NA	NA	NA	NA	NA
Loose-Fill Only.....	2.7	2.6	2.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Batts and Loose-Fill.....	2.7	2.6	2.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

NA = Not Available because data were not collected or not tabulated.

Source: Residential and Commercial Branch, Energy End Use Division, Office of Energy Markets and End Use, Energy Information Administration, U.S. Department of Energy, The 1980 Residential Energy Consumption Survey.

Table C5. Relative Standard Errors (RSE) for Averages by Size of Residence (Percent)

Average Number of:	Total	Measured Heated Square Footage of Residence													
		Less Than 600	1,000 to 999	1,500 to 1,999	2,000 to 2,399	2,400 to 2,999	3,000 or More								
		600	1,000	1,500	2,000	2,400	3,000								
Windows.....	1.2	3.9	1.8	1.6	1.8	2.1	2.1	2.1	2.1	2.1	4.0				
Large.....	4.1	10.8	7.1	7.7	5.2	7.3	8.3	8.3	8.3	8.3	10.0				
Medium.....	1.7	6.4	3.0	2.7	2.4	2.8	3.6	3.6	3.6	3.6	5.9				
Small.....	2.2	9.2	4.3	3.2	5.6	5.1	5.3	5.3	5.3	5.3	8.3				
Storm.....	2.7	12.0	5.1	3.8	3.6	5.1	3.8	3.8	3.8	3.8	5.1				
Large.....	5.8	27.3	12.1	7.9	5.7	11.3	11.3	11.3	11.3	11.3	11.0				
Medium.....	2.9	12.3	6.1	4.3	3.7	4.8	5.4	5.4	5.4	5.4	6.1				
Small.....	4.2	22.5	7.6	5.7	8.5	9.1	6.6	6.6	6.6	6.6	7.9				
Doors.....	1.0	3.3	1.8	.9	2.2	1.6	2.6	2.6	2.6	2.6	2.4				
Standard.....	1.0	3.6	1.9	.9	2.6	1.7	1.9	1.9	1.9	1.9	3.7				
Sliding Glass.....	5.8	21.0	11.1	6.6	7.4	8.3	13.2	13.2	13.2	13.2	10.4				
Storm.....	2.3	11.2	3.6	2.6	3.6	4.5	3.7	3.7	3.7	3.7	4.5				
Standard.....	2.5	12.3	4.0	2.8	3.9	5.0	4.1	4.1	4.1	4.1	4.9				
Sliding Glass.....	5.4	37.2	20.5	11.9	9.5	9.0	13.5	13.5	13.5	13.5	12.7				
Roof or Ceiling Insulation (inches)															
Batts Only.....	2.0	40.6	3.2	2.3	3.8	3.6	4.6	4.6	4.6	4.6	5.1				
Loose-Fill Only.....	2.2	NA	5.9	3.3	4.4	4.9	5.6	5.6	5.6	5.6	3.8				
Batts and Loose-Fill.....	2.7	NA	9.5	4.9	9.6	5.0	5.3	5.3	5.3	5.3	5.4				

NA = Not available because the sample did not contain a sufficient number of cases to compute the standard error.

Source: Residential and Commercial Branch, Energy End Use Division, Office of Energy Markets and End Use, Energy Information Administration, U.S. Department of Energy, The 1980 Residential Energy Consumption Survey.

Table C6. Relative Standard Errors (RSE) for Averages by Family Income (Percent)

Average Number of:	1979 Family Income												Poor (125 Per- cent Level)	
	\$5,000		\$10,000		\$15,000		\$20,000		\$25,000		\$35,000			Poor (100 Per- cent Level)
	Less Than \$5,000	To \$9,999	To \$14,999	To \$19,999	To \$24,999	To \$29,999	To \$34,999	To \$39,999	To \$44,999	To \$49,999	To \$54,999	To \$59,999		
Windows.....	1.2	3.9	2.3	1.9	2.1	2.5	2.0	2.9	3.4	2.9	3.4	2.9	2.9	
Large.....	4.1	8.1	7.9	9.2	8.0	7.4	5.7	8.4	8.1	7.2	7.2	7.2	7.2	
Medium.....	1.7	4.7	2.5	3.2	2.7	4.0	2.7	4.6	4.0	3.3	3.3	3.3	3.3	
Small.....	2.2	5.9	3.2	4.5	3.6	3.5	4.3	5.5	7.9	6.4	6.4	6.4	6.4	
Storm.....	2.7	8.3	4.3	4.3	4.2	4.7	4.0	7.3	8.6	6.0	6.0	6.0	6.0	
Large.....	5.8	11.3	10.0	13.8	13.6	9.8	6.6	7.7	14.6	9.9	9.9	9.9	9.9	
Medium.....	2.9	9.5	4.6	5.2	3.9	5.7	4.9	8.0	9.4	6.7	6.7	6.7	6.7	
Small.....	4.2	11.1	9.8	6.7	8.2	6.9	7.2	10.0	16.0	11.8	11.8	11.8	11.8	
Added in 1979 or 1980.....	3.9	15.1	9.4	11.7	11.8	11.1	8.0	10.3	12.3	12.9	12.9	12.9	12.9	
Doors.....	1.0	2.9	2.0	1.7	1.4	1.8	1.3	2.4	2.6	2.3	2.3	2.3	2.3	
Standard.....	1.0	3.0	2.1	1.6	1.5	2.0	1.3	2.4	2.8	2.3	2.3	2.3	2.3	
Sliding Glass.....	5.8	17.7	12.2	8.5	6.9	7.5	7.7	11.7	18.2	13.1	13.1	13.1	13.1	
Storm.....	2.3	7.1	4.7	3.8	4.6	4.5	2.9	6.0	7.4	5.7	5.7	5.7	5.7	
Standard.....	2.5	7.3	5.0	3.9	4.2	4.7	3.0	6.4	7.8	5.9	5.9	5.9	5.9	
Sliding Glass.....	5.4	17.7	12.2	8.5	6.9	7.5	7.7	11.7	18.2	13.1	13.1	13.1	13.1	
Added in 1979 or 1980.....	2.8	12.3	9.1	6.9	5.2	7.9	5.1	5.8	9.6	9.2	9.2	9.2	9.2	
Roof or Ceiling Insulation (inches)														
Batts Only.....	2.0	5.9	5.1	3.2	6.5	4.0	3.2	3.7	5.8	5.2	5.2	5.2	5.2	
Loose-Fill Only.....	2.2	6.2	4.8	5.6	6.4	3.8	6.0	3.3	8.9	5.3	5.3	5.3	5.3	
Batts and Loose-fill.....	2.7	10.0	8.0	15.5	5.4	5.3	5.3	4.8	13.0	6.3	6.3	6.3	6.3	

Source: Residential and Commercial Branch, Energy End Use Division, Office of Energy Markets and End Use, Energy Information Administration, U.S. Department of Energy, The 1980 Residential Energy Consumption Survey.

Table C7. Relative Standard Errors (RSE) For Averages by Main Heating Fuel (Percent)

Average Number of:	Total	Main Heating Fuel						Other/ None
		Natural Gas	Fuel Oil or Kerosene	Electricity	Liquid Petroleum Gas	Wood		
Windows.....	1.2	1.4	2.2	2.7	2.5	4.0	8.5	
Large.....	4.1	4.3	8.7	6.4	17.6	11.7	33.9	
Medium.....	1.7	1.8	2.2	4.5	4.3	6.2	7.6	
Small.....	2.2	2.2	4.6	7.6	8.3	9.5	22.2	
Storm.....	2.7	3.6	3.9	10.1	8.0	9.0	30.4	
Large.....	5.8	5.6	15.1	10.9	24.8	11.8	56.3	
Medium.....	2.9	3.9	4.1	11.6	9.2	9.9	26.8	
Small.....	4.2	4.6	6.7	12.7	10.7	14.0	41.5	
Doors.....	1.0	1.1	2.6	2.2	2.4	2.3	6.2	
Standard.....	1.0	1.1	2.5	3.1	2.2	2.9	3.1	
Sliding Glass.....	5.8	6.9	11.4	7.7	22.5	12.5	52.5	
Storm.....	2.3	2.6	3.9	10.3	8.2	5.5	24.0	
Standard.....	2.5	2.9	4.0	11.2	7.8	6.7	22.1	
Sliding Glass.....	5.4	7.8	12.9	12.5	33.2	17.0	66.2	
Roof or Ceiling Insulation (inches)								
Batts Only.....	2.0	3.5	2.5	3.5	7.1	4.6	13.2	
Loose-fill Only.....	2.2	2.2	8.0	3.9	6.2	14.5	NA	
Batts and Loose-fill.....	2.7	2.8	7.3	9.3	13.9	9.6	NA	

NA = Not available because the sample did not contain a sufficient number of cases to compute the standard error.

Source: Residential and Commercial Branch, Energy End Use Division, Office of Energy Markets and End Use, Energy Information Administration, U.S. Department of Energy, The 1980 Residential Energy Consumption Survey.

Table C8. Relative Standard Errors (RSE) for Averages by Heating and Cooling Degree-Days (Percent)

Average Number of:	Heating Degree-Days (HDD) and Cooling Degree-Days (CDD)					
	<2,000 CDD and >7,000 HDD	2,000 CDD and 7,000 HDD	2,000 CDD and 5,500 to 7,000 HDD	<2,000 CDD and 4,000 to 5,499 HDD	<2,000 CDD and >4,000 HDD	>2,000 CDD and <4,000 HDD
Windows.....	1.2	3.3	2.8	3.0	2.2	2.8
Large.....	4.1	8.3	5.0	8.0	7.1	13.4
Medium.....	1.7	4.3	3.1	3.2	3.7	4.8
Small.....	2.2	6.2	5.0	5.3	5.3	7.9
Storm.....	2.7	4.1	4.4	5.7	13.0	16.6
Large.....	5.8	9.1	6.8	13.4	20.0	16.0
Medium.....	2.9	4.6	4.7	5.7	14.3	20.1
Small.....	4.2	8.7	7.0	8.8	11.9	17.0
Doors.....	1.0	2.3	1.7	1.7	2.8	2.2
Standard.....	1.0	3.1	1.9	2.1	3.0	2.7
Sliding Glass.....	5.8	7.1	8.7	8.1	10.0	20.5
Storm.....	2.3	2.9	4.4	4.2	10.5	17.3
Standard.....	2.5	3.8	5.0	4.9	12.0	17.7
Sliding Glass.....	5.4	8.6	10.0	6.3	16.6	24.1
Roof or Ceiling Insulation (inches)						
Batts Only.....	2.0	3.7	4.9	3.5	4.2	3.3
Loose-fill only.....	2.2	4.3	4.3	4.1	4.3	6.8
Batts and Loose-fill.....	2.7	6.1	3.6	6.8	7.5	5.3

Source: Residential and Commercial Branch, Energy End Use Division, Office of Energy Markets and End Use, Energy Information Administration, U.S. Department of Energy, The 1980 Residential Energy Consumption Survey.

Table C9. Relative Standard Errors (RSE) for Averages by Year House Built (Percent)

Average Number of:	Year House Built									
	1975 or Later	1970 to 1974	1965 to 1969	1960 to 1964	1950 to 1959	1940 to 1949	1939 or Earlier			
Windows.....	1.2	3.1	3.9	3.1	1.7	3.3	2.1			
Large.....	4.1	5.9	13.3	8.6	4.7	8.3	7.7			
Medium.....	1.7	5.0	4.7	4.2	2.2	3.7	2.6			
Small.....	2.2	7.3	6.0	7.0	4.0	7.9	4.2			
Storm.....	2.7	6.3	6.8	6.0	4.2	7.8	4.1			
Large.....	5.8	10.9	14.0	9.7	8.7	12.5	13.1			
Medium.....	2.9	7.5	7.3	6.9	4.8	7.9	4.1			
Small.....	4.2	11.0	10.1	10.7	6.4	14.8	5.9			
Doors.....	1.0	2.1	3.4	3.4	1.9	3.6	1.8			
Standard.....	1.0	2.6	2.4	3.5	1.6	3.7	1.8			
Sliding Glass.....	5.8	6.0	10.1	11.7	12.5	13.2	14.3			
Storm.....	2.3	6.6	6.4	4.7	4.3	6.8	3.9			
Standard.....	2.5	7.9	6.4	5.5	4.1	7.0	4.0			
Sliding Glass.....	5.4	9.7	13.4	10.9	16.4	16.2	17.6			
Roof or Ceiling Insulation (inches)										
Batts Only.....	2.0	5.5	8.9	4.7	3.6	5.2	2.8			
Loose-fill Only.....	2.2	5.5	7.1	7.3	5.4	5.6	3.1			
Batts and Loose-fill.....	2.7	3.7	8.3	6.3	5.3	7.0	6.5			

Source: Residential and Commercial Branch, Energy End Use Division, Office of Energy Markets and End Use, Energy Information Administration, U.S. Department of Energy, The 1980 Residential Energy Consumption Survey.

Table C10. Relative Standard Errors (RSE) for Averages by Selected Demographic Characteristics (Percent)

Average Number of	Age of Household Head				Race		Number of Household Members				
	Total	35 or Less		60 to 59 and Over	Black		1	2	3	4	5 or More
		Less than 35	35 to 59	60 and Over	White Other	Black					
Windows.....	1.2	1.6	1.8	2.0	1.2	3.1	2.5	1.3	2.3	1.8	2.0
Large.....	4.1	4.2	5.8	6.0	4.2	8.4	7.4	5.6	8.5	5.9	6.6
Medium.....	1.7	2.4	2.2	2.7	1.7	4.1	3.7	2.3	2.5	2.5	2.2
Small.....	2.2	3.4	3.4	3.8	2.3	4.9	5.2	3.1	5.4	4.6	4.4
Storm.....	2.7	3.6	3.7	4.1	2.6	7.0	5.4	3.2	3.5	5.2	4.8
Large.....	5.8	6.4	7.2	8.0	6.1	17.2	10.7	8.1	9.2	8.1	10.6
Medium.....	2.9	4.0	4.1	4.3	2.7	9.0	6.6	4.3	3.3	5.2	4.7
Small.....	4.2	7.1	5.3	6.4	4.1	10.1	6.3	4.5	7.5	9.5	7.4
Doors.....	1.0	1.2	1.6	1.9	1.1	2.8	2.1	1.7	1.2	1.7	2.3
Standard.....	1.0	1.5	1.3	1.8	1.2	3.1	2.0	1.6	1.4	1.5	2.0
Sliding Glass.....	5.8	6.9	6.7	11.5	5.9	19.4	11.6	10.1	5.7	8.7	9.5
Storm.....	2.3	4.7	2.5	4.1	2.3	8.8	4.2	3.2	2.7	3.6	3.9
Standard.....	2.5	5.2	2.5	4.3	2.6	9.0	4.7	3.4	2.8	3.6	3.7
Sliding Glass.....	5.4	9.0	5.9	15.5	5.2	28.3	8.3	10.3	10.9	9.9	11.5
Roof or Ceiling Insulation (inches)											
Batts Only.....	2.0	3.5	3.1	2.8	1.8	24.0	4.2	2.2	3.4	4.2	6.5
Loose-fill Only.....	2.2	3.8	3.1	4.3	2.2	7.0	6.6	3.7	3.7	5.0	5.2
Batts and Loose-fill.....	2.7	5.8	3.5	3.2	2.7	NA	5.4	5.9	5.2	4.3	5.8

NA = Not available because the sample did not contain a sufficient number of cases to compute the standard error.

Source: Residential and Commercial Branch, Energy End Use Division, Office of Energy Markets and End Use, Energy Information Administration, U.S. Department of Energy, The 1980 Residential Energy Consumption Survey.

TABLE C11. RELATIVE STANDARD ERRORS (RSE) FOR ESTIMATES IN TABLE 9 (PERCENT)

HOUSEHOLD CHARACTERISTICS	HOUSEHOLDS (MILLIONS)	AVERAGE NUMBER OF SQUARE FEET PER HOUSEHOLD				AVERAGE NUMBER OF HEATED SQUARE FEET PER HOUSEHOLD				AVERAGE OF HEATED SQUARE FEET PER HOUSEHOLD MEMBER
		MEAN		MEDIAN	SINGLE-FAMILY UNIT		MULTI-FAMILY UNIT		MOBILE HOME	
		HEATED AND UNHEATED	HEATED		HEATED AND UNHEATED	HEATED				
TOTAL HOUSEHOLDS.....	-	1.4	1.7	1.5	1.2	1.8	2.4	1.3		
CENSUS REGION										
NORTHEAST.....	-	2.3	4.1	3.3	2.4	2.5	7.2	2.6		
NORTH CENTRAL.....	-	2.0	3.1	2.4	1.8	2.5	5.1	2.0		
SOUTH.....	-	2.4	2.6	2.1	1.9	3.1	3.3	2.1		
WEST.....	-	3.0	3.5	3.1	3.2	7.2	7.1	2.6		
ANNUAL HEATING DEGREE-DAYS AND COOLING DEGREE-DAYS										
<2,000 DD AND >7,000 HD.....	18.8	4.8	5.5	5.1	4.1	4.9	6.2	4.1		
<2,000 DD AND 5,500 TO 7,000 HD.....	7.6	1.9	3.8	2.7	1.5	2.6	5.9	2.0		
<2,000 DD AND 4,000 TO 5,499 HD.....	8.6	2.8	4.1	3.2	2.7	2.5	5.2	3.2		
<2,000 DD AND <4,000 HD.....	8.5	2.9	3.1	2.8	2.8	7.1	4.9	2.5		
>2,000 DD AND <4,000 HD.....	7.6	3.4	3.5	4.2	3.3	7.3	6.3	3.7		
MEASURED HEATED SPACE OF RESIDENCE (IN SQ. FT.)										
LESS THAN 500.....	5.7	3.4	1.4	1.2	6.1	1.7	5.5	4.3		
500 TO 999.....	3.1	1.2	.9	.7	.7	1.1	1.0	1.3		
1,000 TO 1,599.....	2.8	1.1	.9	.6	.5	.7	2.3	1.9		
1,600 TO 1,999.....	4.3	1.2	.6	.5	.2	.9	-17.9	1.9		
2,000 TO 2,399.....	4.5	1.0	.6	.3	.6	1.4	30.7	2.7		
2,400 TO 2,999.....	5.8	1.0	.7	.7	.3	2.2	NA	2.5		
3,000 OR MORE.....	7.1	1.8	1.1	1.7	2.2	3.0	NA	3.8		
TOTAL MEASURED SPACE OF RESIDENCE (IN SQ. FT.)										
LESS THAN 500.....	6.3	1.2	1.1	1.1	3.4	1.6	5.6	4.4		
500 TO 999.....	3.4	.7	.8	.9	1.7	1.2	1.0	1.7		
1,000 TO 1,599.....	3.4	.4	.7	.6	.8	1.0	2.2	1.9		
1,600 TO 1,999.....	4.4	.3	.5	.8	1.0	3.0	4.4	2.1		
2,000 TO 2,399.....	3.0	.3	.3	1.7	1.1	5.3	27.1	2.6		
2,400 TO 2,999.....	4.8	.2	.4	1.0	1.0	9.6	0	2.3		
3,000 OR MORE.....	5.2	1.2	1.3	2.1	1.9	5.3	NA	2.4		

SEE NOTES AT END OF TABLE

TABLE C11. RELATIVE STANDARD ERRORS (RSE) FOR ESTIMATES IN TABLE 9 (PERCENT)-CONTINUED

HOUSEHOLD CHARACTERISTICS	HOUSEHOLDS (MILLIONS)	AVERAGE NUMBER OF SQUARE FEET PER HOUSEHOLD				AVERAGE NUMBER OF HEATED SQUARE FEET PER HOUSEHOLD		AVERAGE NUMBER OF MOBILE HOME	AVERAGE OF HEATED SQUARE FEET PER HOUSEHOLD MEMBER
		MEAN		MEDIAN		SINGL-FAMILY UNIT	MULTI-FAMILY UNIT		
		HEATED AND UNHEATED	HEATED	HEATED AND UNHEATED	HEATED				
UTILITIES PAID BY HOUSEHOLD									
ALL PAID BY HOUSEHOLD.....	0.8	1.4	1.2	1.7	1.4	1.2	2.2	2.4	1.3
SOME PAID, SOME INCLUDED IN RENT.....	7.3	4.0	3.9	3.5	3.6	0	3.6	15.2	3.4
ALL INCLUDED IN RENT.....	9.9	5.0	5.1	4.5	4.3	23.0	5.1	19.5	6.0
OTHER.....	17.4	5.9	9.4	7.9	9.2	18.7	10.9	9.5	9.2
OWN/RENT									
OWN.....	1.6	1.4	1.3	1.6	1.5	1.2	5.0	3.0	1.5
RENT.....	3.2	1.5	1.5	1.7	1.5	2.4	2.0	4.7	1.6
TYPE OF HOUSING STRUCTURE									
SINGLE-FAMILY DETACHED.....	1.8	1.4	1.1	1.8	1.2	1.1	-	-	1.1
OWN.....	2.2	1.4	1.2	1.9	1.3	1.2	-	-	1.4
RENT.....	5.2	2.6	2.5	4.1	2.8	2.5	-	-	3.2
SINGLE-FAMILY ATTACHED.....	12.1	4.7	5.2	3.8	7.8	5.2	-	-	6.7
OWN.....	13.5	4.2	4.5	4.1	5.7	4.5	-	-	7.7
RENT.....	20.0	11.8	10.2	20.9	16.5	10.2	-	-	9.7
BUILDING WITH 2 TO 4 UNITS.....	6.4	2.2	1.9	2.2	1.8	-	1.9	-	3.7
OWN.....	10.0	4.2	4.0	4.2	4.7	-	4.0	-	5.4
RENT.....	7.5	2.4	1.9	1.7	1.7	-	1.9	-	3.3
BUILDING WITH 5 OR MORE UNITS.....	5.1	3.6	3.4	3.9	3.7	-	3.4	-	3.5
OWN.....	26.5	17.8	12.9	15.3	15.3	-	12.9	-	12.6
RENT.....	5.2	3.1	3.0	3.9	3.7	-	3.0	-	3.0
MOBILE HOME.....	10.5	2.5	2.4	2.3	2.3	-	-	2.4	3.2
OWN.....	12.1	3.1	3.0	2.9	2.9	-	-	3.0	3.7
RENT.....	16.6	5.5	4.7	3.4	3.2	-	-	4.7	6.1

SEE NOTES AT END OF TABLE

TABLE C11. RELATIVE STANDARD ERRORS (RSE) FOR ESTIMATES IN TABLE 9 (PERCENT)—CONTINUED

HOUSEHOLD CHARACTERISTICS	HOUSEHOLDS (MILLIONS)	AVERAGE NUMBER OF SQUARE FEET PER HOUSEHOLD				AVERAGE NUMBER OF HEATED SQUARE FEET PER HOUSEHOLD				AVERAGE OF HEATED SQUARE FEET PER HOUSEHOLD MEMBER
		MEAN		MEDIAN		SINGLE-FAMILY UNIT		MULTI-FAMILY UNIT		
		HEATED AND UNHEATED	HEATED	HEATED AND UNHEATED	HEATED	HEATED	HEATED	HEATED		
YEAR HOUSE BUILT										
1939 OR EARLIER.....	3.7	2.2	2.4	3.6	2.9	2.7	2.5	40.2	2.9	
1940 TO 1949.....	5.4	3.6	3.8	4.5	4.9	3.3	5.5	NA	2.6	
1950 TO 1959.....	6.0	2.0	2.0	2.8	2.6	2.3	6.9	18.5	2.9	
1960 TO 1964.....	5.4	3.2	2.6	5.9	5.0	2.6	9.0	9.6	3.4	
1965 TO 1969.....	5.8	3.9	3.4	6.7	5.5	2.6	4.8	4.5	3.9	
1970 TO 1974.....	6.2	4.3	3.9	6.8	4.1	4.2	4.2	4.0	3.0	
1975 OR LATER.....	7.5	3.0	2.7	4.7	4.0	2.2	5.5	5.2	2.8	
NUMBER OF ROOMS										
1.....	15.7	6.5	6.7	9.2	9.2	0	6.4	0	7.8	
2.....	10.7	5.3	5.4	4.7	5.4	18.1	5.3	18.1	8.6	
3.....	6.0	3.6	2.9	3.4	3.1	6.9	3.9	5.4	2.9	
4.....	3.6	1.9	1.7	1.7	1.1	2.6	2.2	2.9	2.8	
5.....	2.8	1.8	1.5	2.3	1.4	1.5	2.1	6.2	2.2	
6.....	3.7	1.3	1.4	1.3	1.4	1.6	2.5	4.9	2.4	
7.....	5.5	1.9	2.2	1.7	2.2	2.4	7.8	11.7	2.9	
8 OR MORE.....	5.2	2.1	2.5	1.7	1.9	2.6	7.2	0	3.4	
MAIN OUTSIDE WALL MATERIAL										
WOOD.....	3.8	2.0	1.9	3.4	2.5	2.1	3.8	28.7	2.0	
BRICK.....	4.4	2.8	2.8	4.2	3.2	2.4	4.3	NA	2.7	
ALUMINUM SIDING.....	4.3	2.5	2.3	4.7	4.1	2.3	6.3	2.5	3.0	
STUCCO.....	7.7	4.5	4.9	4.5	3.7	5.4	7.4	0	4.2	
COMPOSITION.....	8.1	3.2	2.7	5.5	3.1	2.8	10.3	0	2.7	
CONCRETE.....	16.2	6.6	6.9	11.6	11.7	8.2	15.1	NA	9.1	
STONE.....	16.2	7.8	7.4	8.7	12.4	7.4	31.6	NA	12.9	
COMBINATIONS/OTHER.....	7.3	3.2	3.3	4.3	4.5	3.1	5.7	6.6	3.4	

SEE NOTES AT END OF TABLE

TABLE C11. RELATIVE STANDARD ERRORS (RSE) FOR ESTIMATES IN TABLE 9 (PERCENT)-CONTINUED

HOUSEHOLD CHARACTERISTICS	HOUSEHOLDS (MILLIONS)	AVERAGE NUMBER OF SQUARE FEET. PER HOUSEHOLD				AVERAGE NUMBER OF HEATED SQUARE FEET PER HOUSEHOLD				AVERAGE OF HEATED SQUARE FEET PER HOUSEHOLD MEMBER
		MEAN		MEDIAN	SINGLE-FAMILY UNIT		MULTI-FAMILY UNIT		MOBILE HOME	
		HEATED AND UNHEATED	HEATED		HEATED AND UNHEATED	HEATED				
NUMBER OF COMPLETE AND HALF BATHROOMS										
1 COMPLETE.....	1.5	1.5	1.5	1.9	1.4	1.6	7.0	3.7	1.8	
1 COMPLETE AND 1 HALF.....	3.5	2.6	2.3	3.8	3.1	2.4	4.8	4.0	3.2	
2 COMPLETE.....	3.7	1.7	1.6	1.7	1.6	1.7	4.9	6.3	3.4	
2 COMPLETE AND 1 HALF.....	7.1	3.1	3.2	3.3	2.7	3.2	11.9	Q	3.6	
3 COMPLETE.....	12.3	4.6	5.5	5.5	4.8	5.2	Q	NA	6.0	
OTHER COMBINATIONS.....	8.7	6.1	6.7	9.4	14.0	7.2	36.7	40.8	7.8	
1979 FAMILY INCOME										
LESS THAN \$5,000.....	4.7	3.7	3.0	3.9	2.7	3.6	3.3	7.2	4.4	
\$5,000 TO \$9,999.....	4.2	2.0	1.9	2.3	2.2	2.1	3.9	5.6	2.9	
\$10,000 TO \$14,999.....	3.8	2.9	2.4	2.9	3.0	2.5	3.7	5.9	2.4	
\$15,000 TO \$19,999.....	3.3	2.2	2.0	2.4	2.1	1.9	3.9	11.8	2.6	
\$20,000 TO \$24,999.....	5.1	2.5	2.4	3.1	2.6	2.7	5.7	5.5	2.9	
\$25,000 TO \$34,999.....	4.1	1.9	1.8	2.5	2.1	1.8	5.2	8.3	2.3	
\$35,000 OR MORE.....	5.9	2.5	2.5	2.7	2.7	2.5	7.7	8.2	3.0	
TOTAL POOR (100 PERCENT LEVEL)...	4.4	3.8	3.3	3.7	3.6	3.8	3.3	7.9	4.1	
TOTAL POOR (125 PERCENT LEVEL)...	4.0	3.3	2.7	3.6	3.1	3.0	3.2	6.1	3.6	
AGE OF HOUSEHOLD HEAD										
UNDER 25 YEARS.....	5.2	3.1	2.6	2.2	1.9	3.6	3.3	4.6	3.0	
25 TO 34 YEARS.....	2.8	1.9	1.5	2.9	1.6	2.0	3.4	3.7	1.9	
35 TO 44 YEARS.....	4.2	3.0	2.7	4.3	3.5	2.3	5.5	6.5	2.5	
45 TO 59 YEARS.....	2.8	2.0	1.9	2.6	2.0	1.9	4.7	10.4	1.8	
60 YEARS AND OVER.....	3.5	2.2	2.3	3.1	2.5	2.2	3.5	8.0	2.0	
ORIGIN										
WHITE.....	1.1	1.4	1.2	1.9	1.8	1.2	2.1	2.5	1.3	
BLACK.....	9.0	4.8	4.3	4.1	3.4	4.8	4.9	8.9	4.3	
OTHER.....	9.3	6.4	7.5	10.5	9.5	9.0	9.4	31.8	8.8	

SEE NOTES AT END OF TABLE

TABLE C.11. RELATIVE STANDARD ERRORS (RSE) FOR ESTIMATES IN TABLE 9 (PERCENT)-CONTINUED

HOUSEHOLD CHARACTERISTICS	HOUSEHOLDS (MILLIONS)	AVERAGE NUMBER OF SQUARE FEET PER HOUSEHOLD				AVERAGE NUMBER OF HEATED SQUARE FEET PER HOUSEHOLD		AVERAGE NUMBER OF HEATED SQUARE FEET PER HOUSEHOLD MEMBER
		MEAN		MEDIAN		SINGLE-FAMILY UNIT	MULTI-FAMILY UNIT	
		HEATED AND UNHEATED	HEATED	HEATED AND UNHEATED	HEATED			
1	2.5	2.5	2.4	3.0	3.0	3.0	7.7	2.4
2	3.1	1.6	1.4	1.9	2.2	1.7	4.5	1.4
3	4.5	2.0	2.0	2.9	2.6	2.3	3.2	2.0
4	3.8	2.2	2.2	2.5	2.7	2.2	5.1	2.2
5	3.7	3.5	3.5	4.9	3.5	3.6	7.6	3.5
6 OR MORE	7.8	4.5	4.3	7.3	5.9	4.1	15.3	7.7

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS ZERO. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.

NA = NOT AVAILABLE BECAUSE THE SAMPLE DID NOT CONTAIN CASES IN THIS CELL.

0 = DATA WITHHELD BECAUSE THE RELATIVE STANDARD ERROR WAS 50 PERCENT OR GREATER.

SOURCE: RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE C12. RELATIVE STANDARD ERRORS (RSE) FOR ESTIMATES IN TABLE 10 (PERCENT)

HOUSEHOLD CHARACTERISTICS	TOTAL HOUSEHOLDS		TOTAL SQUARE FOOTAGE	
	(MILLIONS)	(PERCENT)	TOTAL HEATED AND UNHEATED	TOTAL HEATED
	(MILLIONS)	(PERCENT)	(MILLIONS)	(PERCENT)
TOTAL HOUSEHOLDS.....	-	-	1.4	1.2
CENSUS REGION				
NORTHEAST.....	-	-	2.3	2.2
NORTH CENTRAL.....	-	-	2.0	1.8
SOUTH.....	-	-	2.4	2.0
WEST.....	-	-	3.0	3.3
ANNUAL HEATING DEGREE-DAYS AND COOLING DEGREE-DAYS				
<2,000 HDD AND >7,000 HDD.....	18.8	18.8	20.4	19.6
<2,000 HDD AND 5,500 TO 7,000 HDD.....	7.6	7.6	8.1	7.8
<2,000 HDD AND 4,000 TO 5,499 HDD.....	8.6	8.6	9.5	9.6
<2,000 HDD AND <4,000 HDD.....	8.5	8.5	8.1	8.1
>2,000 HDD AND <4,000 HDD.....	7.6	7.6	8.0	8.4
MEASURED HEATED SPACE OF RESIDENCE (IN SQ. FT.)				
LESS THAN 600.....	5.7	5.7	5.8	6.3
600 TO 999.....	3.1	3.1	3.2	3.1
1,000 TO 1,599.....	2.8	2.8	2.6	2.7
1,600 TO 1,999.....	4.3	4.3	4.3	4.3
2,000 TO 2,399.....	4.9	4.9	5.2	5.0
2,400 TO 2,999.....	5.8	5.8	6.0	5.8
3,000 OR MORE.....	7.1	7.1	7.3	7.2
TOTAL MEASURED SPACE OF RESIDENCE (IN SQ. FT.)				
LESS THAN 600.....	6.3	6.3	6.4	6.5
600 TO 999.....	3.4	3.4	3.4	3.5
1,000 TO 1,599.....	3.4	3.4	4.0	3.8
1,600 TO 1,999.....	4.4	4.4	4.9	4.8
2,000 TO 2,399.....	3.0	3.0	3.0	3.1
2,400 TO 2,999.....	4.8	4.8	4.2	4.1
3,000 OR MORE.....	5.2	5.2	5.6	5.7

SEE NOTES AT END OF TABLE

TABLE C12. RELATIVE STANDARD ERRORS (RSE) FOR ESTIMATES IN TABLE 10 (PERCENT)-CONTINUED

HOUSEHOLD CHARACTERISTICS	TOTAL HOUSEHOLDS		TOTAL SQUARE FOOTAGE			
	(MILLIONS)	(PERCENT)	TOTAL HEATED AND UNHEATED		TOTAL HEATED	
			(BILLIONS)	(PERCENT)	(BILLIONS)	(PERCENT)
UTILITIES PAID BY HOUSEHOLD						
ALL PAID BY HOUSEHOLD.....	0.8	0.8	1.6	0.6	1.5	0.6
SOME PAID, SOME INCLUDED IN RENT.....	7.3	7.3	9.6	10.0	9.6	9.9
ALL INCLUDED IN RENT.....	9.9	9.9	8.6	8.7	8.8	8.8
OTHER.....	17.4	17.4	17.0	17.0	17.3	17.2
OWN/RENT						
OWN.....	1.6	1.6	2.3	1.1	2.2	1.2
RENT.....	3.2	3.2	3.6	4.3	3.6	4.2
TYPE OF HOUSING STRUCTURE						
SINGLE-FAMILY DETACHED.....	1.8	1.8	2.1	1.1	2.0	1.2
OWN.....	2.2	2.2	2.5	1.5	2.4	1.6
RENT.....	5.2	5.2	4.9	5.5	5.8	6.1
SINGLE-FAMILY ATTACHED.....	12.1	12.1	12.0	11.9	13.3	13.2
OWN.....	13.5	13.5	13.7	15.1	14.9	14.9
RENT.....	20.0	20.0	20.0	20.2	19.9	20.2
BUILDING WITH 2 TO 4 UNITS.....	6.4	6.4	6.0	6.3	5.7	6.1
OWN.....	10.0	10.0	9.7	9.5	9.5	9.4
RENT.....	7.5	7.5	8.1	8.5	7.7	8.2
BUILDING WITH 5 OR MORE UNITS.....	5.1	5.1	7.3	7.5	7.1	7.3
OWN.....	26.5	26.5	25.8	25.8	25.9	25.9
RENT.....	5.2	5.2	6.6	6.9	6.5	6.7
MORTGAGE HOME.....	10.5	10.5	10.1	10.6	10.1	10.6
OWN.....	12.1	12.1	17.1	12.5	12.0	12.4
RENT.....	16.6	16.6	17.2	17.6	16.5	16.9
YEAR HOUSE BUILT						
1939 OR EARLIER.....	3.7	3.7	4.4	3.7	4.4	3.7
1940 TO 1949.....	5.4	5.4	6.2	6.3	6.4	6.5
1950 TO 1959.....	6.0	6.0	6.1	6.5	6.1	6.4
1960 TO 1964.....	5.4	5.4	6.1	6.2	6.2	6.3
1965 TO 1969.....	5.8	5.8	3.9	4.2	4.2	4.5
1970 TO 1974.....	6.2	6.2	6.7	6.2	6.3	6.1

SEE NOTES AT END OF TABLE

TABLE C12. RELATIVE STANDARD ERRORS (RSE) FOR ESTIMATES IN TABLE 10 (PERCENT)-CONTINUED

HOUSEHOLD CHARACTERISTICS	TOTAL HOUSEHOLDS		TOTAL SQUARE FOOTAGE			
	(MILLIONS)	(PERCENT)	TOTAL HEATED AND UNHEATED		TOTAL HEATED	
			(BILLIONS)	(PERCENT)	(BILLIONS)	(PERCENT)
YEAR HOUSE BUILT	7.5	7.5	8.0	7.7	8.2	8.0
1975 OR LATER.....						
NUMBER OF ROOMS						
1.....	15.7	15.7	15.3	15.5	15.6	15.8
2.....	10.7	10.7	10.8	11.1	11.2	11.4
3.....	6.0	6.0	6.1	6.3	5.8	6.3
4.....	3.6	3.6	3.9	4.8	4.2	5.0
5.....	2.8	2.8	3.3	3.5	3.3	3.4
6.....	3.7	3.7	3.6	3.6	3.8	3.7
7.....	5.5	5.5	6.3	5.3	6.1	5.3
8 OR MORE.....	5.2	5.2	5.7	5.0	5.7	5.1
MAIN OUTSIDE WALL MATERIAL						
WOOD.....	3.8	3.8	4.1	4.1	3.9	4.0
BRICK.....	4.4	4.4	5.1	5.0	5.5	5.2
ALUMINUM SIDING.....	6.3	6.3	6.9	7.5	6.4	7.1
STUCCO.....	7.7	7.7	9.8	9.3	10.4	9.9
COMPOSITION.....	8.1	8.1	7.6	7.5	7.6	7.5
CONCRETE.....	16.2	16.2	18.6	18.5	20.0	19.7
STONE.....	16.2	16.2	17.5	17.1	17.9	17.6
COMBINATIONS/OTHER.....	7.3	7.3	7.5	6.8	7.0	6.5
NUMBER OF COMPLETE AND HALF BATHROOMS						
1 COMPLETE.....	1.5	1.5	2.0	2.3	2.0	2.4
1 COMPLETE AND 1 HALF.....	3.5	3.5	3.0	3.0	3.1	3.1
2 COMPLETE.....	3.7	3.7	4.3	3.8	4.3	3.8
2 COMPLETE AND 1 HALF.....	7.1	7.1	8.7	7.7	8.3	7.5
3 COMPLETE.....	12.3	12.3	11.7	11.8	11.4	11.5
OTHER COMBINATICS.....	8.7	8.7	10.2	9.9	10.7	10.4

SEE NOTES AT END OF TABLE

TABLE C12. RELATIVE STANDARD ERRORS (RSE) FOR ESTIMATES IN TABLE 10 (PERCENT)-CONTINUED

HOUSEHOLD CHARACTERISTICS	TOTAL HOUSEHOLDS		TOTAL SQUARE FOOTAGE			
	(MILLIONS)	(PERCENT)	TOTAL HEATED AND UNHEATED		TOTAL HEATED	
			(BILLIONS)	(PERCENT)	(BILLIONS)	(PERCENT)
1979 FAMILY INCOME						
LESS THAN \$5,000.....	4.7	4.7	5.7	5.5	4.8	4.9
\$5,000 TO \$9,999.....	4.2	4.2	4.9	4.8	4.9	4.8
\$10,000 TO \$14,999.....	3.9	3.8	4.8	4.6	4.5	4.4
\$15,000 TO \$19,999.....	3.3	3.3	3.7	3.8	3.6	3.9
\$20,000 TO \$24,999.....	5.1	5.1	6.0	5.9	5.6	5.4
\$25,000 TO \$34,999.....	4.1	4.1	4.1	4.7	4.5	4.9
\$35,000 OR MORE.....	5.9	5.9	7.5	6.6	7.4	6.6
TOTAL POOR (100 PERCENT LEVEL)...	4.4	4.4	5.4	5.2	4.9	4.9
TOTAL POOR (125 PERCENT LEVEL)...	4.0	4.0	5.0	4.8	4.4	4.4
AGE OF HOUSEHOLD HEAD						
UNDER 25 YEARS.....	5.2	5.2	6.2	6.6	6.1	6.4
25 TO 34 YEARS.....	2.8	2.8	2.8	3.2	3.1	3.4
35 TO 44 YEARS.....	4.2	4.2	4.8	4.3	4.6	4.2
45 TO 54 YEARS.....	2.8	2.8	3.5	3.1	3.4	3.1
55 YEARS AND OVER.....	3.5	3.5	3.9	3.4	3.9	3.5
ORIGIN						
WHITE.....	1.1	1.1	1.7	.9	1.5	1.0
BLACK.....	9.0	9.0	10.4	10.3	10.4	10.2
OTHER.....	8.3	8.3	10.6	10.8	11.1	11.2
HOUSEHOLD MEMBERS						
1.....	2.5	2.5	3.1	2.8	3.1	3.1
2.....	3.1	3.1	3.5	3.7	3.7	3.9
3.....	4.5	4.5	5.2	5.3	5.3	5.2
4.....	3.8	3.8	5.0	4.5	5.2	4.8
5.....	3.7	3.7	5.0	4.2	4.7	4.2
6 OR MORE.....	7.8	7.8	9.6	9.2	9.2	8.7

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS ZERO. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.
 NA = NOT AVAILABLE BECAUSE THE SAMPLE DID NOT CONTAIN CASES IN THIS CELL.
 0 = DATA WITHHELD BECAUSE THE RELATIVE STANDARD ERROR WAS 50 PERCENT OR GREATER.
 SOURCE: RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE C13. RELATIVE STANDARD ERRORS (RSE) FOR ESTIMATES IN TABLE 23 (PERCENT)

HOUSEHOLD CHARACTERISTICS	HOUSEHOLDS (MILLIONS)	AVERAGE NUMBER OF SQUARE FEET PER HOUSEHOLD				AVERAGE NUMBER OF HEATED SQUARE FEET PER HOUSEHOLD			AVERAGE OF HEATED SQUARE FEET PER HOUSEHOLD MEMBER
		MEAN		MEDIAN	SINGLE-FAMILY UNIT	MULTI-FAMILY UNIT	MOBILE HOME		
		HEATED AND UNHEATED	HEATED					HEATED AND UNHEATED	
TOTAL HOUSEHOLDS.....	-	1.4	1.2	1.7	1.5	1.2	1.8	2.4	1.3
MAIN HEATING EQUIPMENT									
CENTRAL WARM-AIR FURNACE.....	2.4	1.6	1.5	2.1	1.9	1.7	2.5	2.2	1.7
FORCED AIR.....	2.4	1.6	1.5	2.1	1.8	1.7	2.6	2.1	1.6
GRAVITY.....	8.7	6.2	8.6	7.1	8.7	9.1	9.8	49.3	8.5
STEAM OR HOT WATER SYSTEM.....	4.1	2.4	2.3	4.8	3.8	2.2	3.2	Q	3.2
HEAT PUMP.....	15.4	5.1	4.6	5.5	6.7	3.8	20.6	36.8	6.5
FLOOR, WALL OR PIPELESS FURNACE.....	6.9	3.0	2.4	3.7	3.6	2.5	5.7	9.6	3.3
OIL OR GAS ROOM HEATER.....	10.6	5.1	4.9	3.0	3.0	5.9	3.6	10.4	6.4
BUILT-IN ELECTRIC UNITS.....	8.2	6.0	5.0	6.9	4.9	4.9	4.7	33.7	4.6
WOOD OR COAL HEATING STOVE.....	28.5	3.3	3.3	4.1	3.7	3.5	25.1	7.0	2.9
PORTABLE HEATER.....	23.1	12.0	12.7	13.9	12.0	9.5	27.8	40.3	10.8
FIREPLACE.....	21.1	19.0	16.3	15.2	21.2	18.4	NA	Q	10.7
OTHER.....	18.8	16.0	17.6	27.8	15.3	20.5	13.1	36.1	13.9
NONE.....	19.5	11.8	-	11.7	-	-	-	-	-
MAIN HEATING FUEL									
NATURAL GAS.....	3.4	1.5	1.4	2.2	2.0	1.5	2.3	4.6	1.7
ELECTRICITY.....	7.3	3.2	2.4	4.2	3.4	2.3	3.2	9.1	2.9
FUEL OIL OR KEROSENE.....	5.1	3.1	3.0	5.5	4.4	2.7	4.0	7.6	3.5
WOOD.....	13.6	3.9	3.6	4.1	3.9	4.0	28.7	5.0	2.3
LIQUID PETROLEUM GAS.....	9.5	5.6	5.2	6.8	7.0	6.0	8.9	5.3	3.8
COAL.....	26.3	14.5	16.4	10.0	15.3	16.5	Q	NA	25.0
OTHER/NONE.....	19.0	15.8	45.8	10.9	NA	45.4	NA	Q	38.7
CENTRAL MAIN HEATING SYSTEM FOR BUILDING (2-OR-MORE UNIT BUILDINGS)									
YES.....	4.9	2.5	2.5	3.5	3.4	NA	2.5	NA	2.5
NO.....	6.5	2.4	2.0	1.7	1.7	NA	2.0	NA	3.7
NO MAIN HEATING SYSTEM.....	47.2	Q	-	Q	-	-	-	-	-

SEE NOTES AT END OF TABLE

TABLE C13. RELATIVE STANDARD ERRORS (RSE) FOR ESTIMATES IN TABLE 23 (PERCENT)-CONTINUED

HOUSEHOLD CHARACTERISTICS	HOUSEHOLDS (MILLIONS)	AVERAGE NUMBER OF SQUARE FEET PER HOUSEHOLD				AVERAGE NUMBER OF HEATED SQUARE FEET PER HOUSEHOLD			AVERAGE OF HEATED SQUARE FEET PER HOUSEHOLD MEMBER
		MEAN		MEDIAN	SINGLE-FAMILY UNIT	MULTI-FAMILY UNIT	MOBIL HOME		
		HEATED AND UNHEATED	HEATED					HEATED AND UNHEATED	
SECONDARY HEATING FUEL									
WOOD	4.7	2.0	2.0	1.8	2.4	2.0	6.8	24.4	1.7
ELECTRICITY	6.4	3.4	3.1	3.2	3.8	2.8	6.8	11.2	3.0
NATURAL GAS	11.3	5.2	5.6	6.7	7.3	5.1	14.1	22.8	5.7
FUEL OIL OR KEROSENE	14.5	5.5	5.7	5.4	9.8	6.5	6.7	5.1	6.4
LIQUID PETROLEUM GAS	15.2	8.0	7.6	7.4	9.0	7.8	0	0	9.6
COAL	33.5	22.0	19.8	33.5	27.7	21.4	NA	0	22.5
OTHER	24.5	30.3	28.2	45.1	39.2	15.5	0	0	16.6
NONE	2.0	1.5	1.4	1.8	1.7	1.4	1.4	2.5	1.8
WATER-HEATING FUEL									
NATURAL GAS	2.9	1.6	1.5	2.3	1.9	1.7	2.2	5.0	1.6
ELECTRICITY	4.4	2.4	2.0	3.3	2.4	1.8	3.8	3.2	1.9
FUEL OIL OR KEROSENE	6.9	5.3	4.3	10.5	6.5	2.9	4.2	42.0	5.6
LIQUID PETROLEUM GAS	9.7	5.2	5.4	7.5	8.4	5.2	29.5	6.4	4.4
WOOD	18.7	10.8	11.6	35.9	14.4	12.0	0	NA	18.8
SOLAR	38.2	13.7	0	37.0	0	0	NA	NA	0
OTHER	48.9	18.3	35.5	22.6	46.7	0	NA	NA	0
NONE	33.8	16.1	21.2	19.1	27.4	20.6	NA	0	47.2
CENTRAL WATER-HEATING SYSTEM (2-OR-MORE UNIT BUILDINGS)									
YES	5.7	2.6	2.4	3.8	3.6	-	2.4	-	2.8
NO/NO WATER-HEATING FULLY	9.1	7.6	2.3	1.5	1.5	-	2.3	-	4.0
MAIN COOKING FUEL									
ELECTRICITY	3.0	1.7	1.5	1.9	2.0	1.6	2.7	5.8	1.6
NATURAL GAS	3.5	2.0	1.8	3.1	2.2	2.0	2.2	4.7	2.3
LIQUID PETROLEUM GAS	11.0	5.3	4.6	6.5	6.0	5.3	17.9	3.4	4.9
WOOD	30.3	27.7	24.9	45.4	16.0	26.0	0	NA	15.5
NONE/OTHER	25.4	34.3	21.6	9.0	20.3	0	43.1	37.4	16.8

SEE NOTES AT END OF TABLE

TABLE C13. RELATIVE STANDARD ERRORS (RSE) FOR ESTIMATES IN TABLE 23 (PERCENT)-CONTINUED

HOUSEHOLD CHARACTERISTICS	HOUSEHOLDS (MILLIONS)	AVERAGE NUMBER OF SQUARE FEET PER HOUSEHOLD				AVERAGE NUMBER OF HEATED SQUARE FEET PER HOUSEHOLD			AVERAGE OF HEATED SQUARE FEET PER HOUSEHOLD MEMBER
		MEAN		MEDIAN	SINGLY-FAMILY UNIT		MULTI-FAMILY UNIT	MOBILE HOME	
		HEATED AND UNHEATED	HEATED		HEATED AND UNHEATED	HEATED			
AIR CONDITIONING (A/C)									
CENTRAL AIR CONDITIONING ONLY.....	4.1	1.9	1.7	2.1	2.1	1.6	4.6	6.2	1.8
INDIVIDUAL ROOM UNITS ONLY.....	2.9	2.3	2.0	3.1	2.9	1.9	2.2	4.7	2.1
CENTRAL A/C AND ROOM UNITS.....	23.6	13.7	13.8	27.6	29.4	12.9	0	0	14.9
NO AIR CONDITIONING.....	2.9	2.1	1.9	3.2	2.0	1.9	2.7	4.3	1.8
CENTRAL AIR CONDITIONING SYSTEM FOR THE BUILDING (2-OR-MORE UNIT BUILDINGS)									
YES.....	20.5	7.6	7.4	13.9	13.0	-	7.4	-	12.8
NO.....	11.6	4.3	4.3	5.9	6.2	-	4.3	-	4.3
NO AIR CONDITIONING SYSTEM.....	3.7	2.0	1.7	2.1	2.2	-	1.7	-	2.7
NUMBER OF ROOMS THAT CAN BE AIR CONDITIONED									
ALL.....	2.4	1.9	1.7	2.9	2.7	1.5	3.6	5.4	1.7
SOME.....	3.6	2.3	1.9	3.9	2.9	2.1	2.0	6.9	2.1
NONE.....	2.9	2.1	1.9	3.2	2.0	1.9	2.7	4.3	1.8
WOOD BURNED									
YES (1/3 CORD OR MORE).....	5.0	2.2	2.1	2.4	2.7	2.2	8.5	7.7	1.7
NO.....	1.5	1.5	1.4	1.9	1.8	1.3	1.9	2.5	1.8
AVAILABILITY OF NATURAL GAS IN THE NEIGHBORHOOD (SINGLE FAMILY OR MOBILE HOME)									
DO NOT USE ANY NATURAL GAS.....	3.7	1.7	1.6	1.8	2.0	1.5	-	4.5	1.8
DO NOT USE ANY NATURAL GAS.....	4.9	2.3	1.9	3.2	2.4	1.7	-	3.2	2.0
GAS IS AVAILABLE.....	8.7	4.1	4.6	4.9	3.1	4.5	-	10.5	6.0
GAS IS NOT AVAILABLE.....	6.6	2.6	1.9	3.7	3.2	1.9	-	4.2	1.9

SEE NOTES AT END OF TABLE

TABLE C13. RELATIVE STANDARD ERRORS (RSE) FOR ESTIMATES IN TABLE 23 (PERCENT)--CONTINUED

HOUSEHOLD CHARACTERISTICS	HOUSEHOLD HOLDS (MILLICNS)	AVERAGE NUMBER OF SQUARE FEET PER HOUSEHOLD				AVERAGE NUMBER OF HEATED SQUARE FEET PER HOUSEHOLD				AVERAGE OF HEATED SQUARE FEET PER HOUSEHOLD MEMBER
		MEAN		MEDIAN		SINGLF-FAMILY UNIT		MULTI-FAMILY UNIT		
		HEATED AND UNHEATED	HEATED	HEATED AND UNHEATED	HEATED	HEATED AND UNHEATED	HEATED	HEATED AND UNHEATED	HEATED	
TYPE OF MAIN HEATING FUEL USED										
LAST WINTER 1979 TO 1980										
SAME FUEL WINTER 1980 TO WINTER 1981.....	0.5	1.4	1.3	1.9	1.7	1.3	1.7	2.4	1.4	
DIFFERENT FUEL.....	9.8	5.5	5.5	8.7	6.5	3.7	23.3	27.7	4.4	
FUEL OIL OR KEROSENE.....	11.1	7.4	8.0	10.3	9.3	6.2	19.1	31.5	6.5	
NATURAL GAS.....	32.6	19.0	19.1	0	42.4	19.1	NA	NA	25.2	
LIQUID PETROLEUM GAS.....	24.4	21.3	21.1	17.3	17.3	20.3	NA	Q	16.1	
ELECTRICITY.....	29.7	18.1	12.5	37.6	20.0	13.1	0	0	12.9	
OTHER/NO FUEL USED.....	28.5	14.5	11.7	15.3	12.7	9.0	Q	NA	17.4	
NOT HEATED IN WINTER 1980										
TO WINTER 1981.....	19.5	11.8	-	11.7	-	-	-	-	-	
UNIT NOT BUILT IN WINTER 1979 TO 1980.....	22.3	18.7	16.8	26.8	16.6	18.2	14.8	20.3	9.8	

SEE NOTES AT END OF TABLE

TABLE C13. RELATIVE STANDARD ERRORS (RSE) FOR ESTIMATES IN TABLE 23 (PERCENT)-CONTINUED

HOUSEHOLD CHARACTERISTICS	HOUSEHOLDS (MILLIONS)	AVERAGE NUMBER OF SQUARE FEET PER HOUSEHOLD				AVERAGE NUMBER OF HEATED SQUARE FEET PER HOUSEHOLD			AVERAGE NUMBER OF HEATED SQUARE FEET PER HOUSEHOLD MEMBER
		MEAN		MEDIAN	SINGLE-FAMILY UNIT	MULTI-FAMILY UNIT	MORILE HOME		
		HEATED AND UNHEATED	HEATED					HEATED AND UNHEATED	
FUEL COMBINATIONS									
USE NATURAL GAS FOR MAIN HEATING.....	3.4	1.5	1.4	2.2	2.0	1.5	2.3	4.6	1.7
NATURAL GAS AND COOK WITH WATER HEAT WITH NATURAL GAS.....	4.3	2.1	1.8	3.1	2.1	2.0	2.5	5.2	2.3
WATER HEAT WITH NATURAL GAS AND COOK WITH ELECTRICITY.....	6.1	2.3	2.6	2.1	2.6	2.6	5.0	13.3	3.1
WATER HEAT WITH ELECTRICITY AND COOK WITH NATURAL GAS.....	16.4	7.6	6.4	12.8	5.8	10.1	21.9	8.0	10.8
WATER HEAT AND COOK WITH ELECTRICITY.....	12.4	5.0	5.9	9.6	9.5	4.9	11.1	23.9	6.5
OTHER.....	27.0	20.5	8.8	13.7	8.1	14.1	15.4	9	31.5
USE ELECTRICITY FOR MAIN HEATING.....	7.3	3.2	2.4	4.2	3.4	2.3	3.2	9.1	2.9
WATER HEAT AND COOK WITH ELECTRICITY.....	7.1	3.2	2.4	4.7	3.1	2.4	3.5	7.3	2.7
OTHER.....	15.9	7.2	7.5	10.2	9.2	7.3	10.8	25.6	9.1
USE FUEL OIL FOR MAIN HEATING AND COOK WITH FUEL OIL AND WATER HEAT WITH ELECTRICITY.....	5.8	2.9	2.9	5.1	4.5	2.3	3.9	13.0	3.6
WATER HEAT WITH FUEL OIL AND COOK WITH ELECTRICITY.....	12.5	4.3	4.0	5.4	7.5	3.5	5.5	NA	6.0
WATER HEAT WITH FUEL OIL AND COOK WITH NATURAL GAS.....	9.8	4.7	5.2	8.9	9.7	7.8	5.0	NA	6.9
WATER HEAT AND COOK WITH ELECTRICITY.....	12.7	4.4	4.5	5.5	5.1	4.1	25.9	13.0	4.2
WATER HEAT AND COOK WITH NATURAL GAS.....	14.1	6.0	5.2	4.0	7.9	3.2	19.5	NA	9.2
OTHER.....	17.2	6.6	6.5	8.2	9.9	7.6	17.6	12.6	8.2
NONE/OTHER FUEL.....	8.0	3.5	3.5	3.9	3.4	3.8	14.7	4.0	2.5

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS ZERO. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.
 NA = NOT AVAILABLE BECAUSE THE SAMPLE DID NOT CONTAIN CASES IN THIS CELL.
 0 = DATA WITHHELD BECAUSE THE RELATIVE STANDARD ERROR WAS 50 PERCENT OR GREATER.
 SOURCE: RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE C14. RELATIVE STANDARD ERRORS (RSE) FOR ESTIMATES IN TABLE 24 (PERCENT)

HOUSEHOLD CHARACTERISTICS	TOTAL HOUSEHOLDS		TOTAL SQUARE FOOTAGE			
	(MILLIONS)	(PERCENT)	TOTAL HEATED AND UNHEATED		TOTAL HEATED	
			(BILLIONS)	(PERCENT)	(BILLIONS)	(PERCENT)
TOTAL HOUSEHOLDS.....	-	-	1.4	-	1.2	-
MAIN HEATING EQUIPMENT						
CENTRAL WARM-AIR FURNACE.....	2.4	2.4	2.4	2.3	2.5	2.3
FORCED AIR.....	2.4	2.4	2.5	2.4	2.5	2.3
GRAVITY.....	8.7	8.7	10.3	10.7	10.9	10.7
STEAM OR HOT WATER SYSTEM.....	4.1	4.1	5.2	4.6	4.8	4.4
HEAT PUMP.....	15.4	15.4	15.9	15.7	15.4	15.4
FLOOR, WALL OR PIPELESS FURNACE.....	6.9	6.9	7.7	8.0	7.5	7.7
OIL OR GAS ROOM HEATER.....	10.6	10.6	12.7	12.7	12.6	12.5
BUILT-IN ELECTRIC UNITS.....	8.2	8.2	11.3	11.3	10.5	10.3
WOOD OR COAL HEATING STOVE.....	12.6	12.6	14.0	13.6	14.2	14.1
PORTABLE HEATER.....	28.5	28.5	28.0	28.0	29.7	29.8
PIPEPLACE.....	23.1	23.1	34.9	34.7	34.5	34.0
OTHER.....	18.8	18.8	21.2	21.0	22.9	22.6
NONE.....	19.5	19.5	21.6	21.7	NA	NA
MAIN HEATING FUEL						
NATURAL GAS.....	3.4	3.4	3.6	3.6	3.5	3.5
ELECTRICITY.....	7.3	7.3	7.2	7.7	7.7	7.7
FUEL OIL OR KEROSENE.....	5.1	5.1	6.4	5.8	5.9	5.5
WOOD.....	13.6	13.6	15.9	15.6	15.9	15.8
LIQUID PETROLEUM GAS.....	9.5	9.5	10.6	10.4	10.4	10.1
COAL.....	26.3	26.3	32.1	32.0	33.3	33.0
OTHER/NONE.....	19.0	19.0	24.1	24.3	47.9	48.0
CENTRAL MAIN HEATING SYSTEM FOR BUILDING (2-OR-MORE UNIT BUILDINGS)						
YES.....	4.9	4.9	5.3	5.3	5.3	5.2
NO.....	6.5	6.5	7.4	7.9	7.2	7.7
NO MAIN HEATING SYSTEM.....	47.2	47.2	45.7	45.8	NA	NA

SEE NOTES AT END OF TABLE

TABLE C14. RELATIVE STANDARD ERRORS (RSE) FOR ESTIMATES IN TABLE 24 (PERCENT)—CONTINUED

HOUSEHOLD CHARACTERISTICS	TOTAL HOUSEHOLDS		TOTAL SQUARE FOOTAGE			
	(MILLIONS)	(PERCENT)	TOTAL HEATED AND UNHEATED		TOTAL HEATED	
			(BILLIONS)	(PERCENT)	(BILLIONS)	(PERCENT)
SECONDARY HEATING FUEL						
WOOD.....	4.7	4.7	4.7	4.2	4.7	4.4
ELECTRICITY.....	6.4	6.4	6.8	6.2	6.4	5.9
NATURAL GAS.....	11.3	11.3	11.6	11.6	12.0	12.0
FUEL OIL OR KEROSENE.....	14.5	14.5	17.5	17.1	17.0	16.8
LIQUID PETROLEUM GAS.....	15.2	15.2	15.0	15.0	16.1	16.0
COAL.....	33.5	33.5	34.2	33.8	30.9	30.5
OTHER.....	24.5	24.5	43.5	43.2	42.4	42.1
NONE.....	2.0	2.0	2.3	2.5	2.3	2.4
WATER-HEATING FUEL						
NATURAL GAS.....	2.9	2.9	3.6	3.5	3.4	3.2
ELECTRICITY.....	4.4	4.4	4.9	4.9	4.8	4.9
FUEL OIL OR KEROSENE.....	6.9	6.9	9.5	9.0	8.4	8.1
LIQUID PETROLEUM GAS.....	9.7	9.7	11.0	10.3	11.3	10.7
WOOD.....	18.7	18.7	23.7	23.3	23.8	23.3
SOLAR.....	38.2	38.2	36.0	36.0	78.1	77.9
OTHER.....	48.9	48.9	53.3	53.0	52.2	52.1
NONE.....	33.8	33.8	35.3	35.6	43.9	44.0
CENTRAL WATER-HEATING SYSTEM (2-OR-MORE UNIT BUILDINGS)						
YES.....	5.7	5.7	5.9	6.3	5.9	6.1
NO/NO WATER-HEATING FUEL / NO HOT RUNNING WATER.....	9.1	9.1	9.6	9.8	9.6	9.8
MAIN COOKING FUEL						
ELECTRICITY.....	3.0	3.0	2.8	2.5	2.6	2.4
NATURAL GAS.....	3.9	3.9	4.5	4.5	4.2	4.1
LIQUID PETROLEUM GAS.....	11.0	11.0	13.3	12.6	12.8	12.3
WOOD.....	30.3	30.3	39.4	38.6	39.5	38.9
NONE/OTHER.....	25.4	25.4	36.1	36.2	30.6	30.8

SEE NOTES AT END OF TABLE

TABLE C14. RELATIVE STANDARD ERRORS (RSE) FOR ESTIMATES IN TABLE 24 (PERCENT)-CONTINUED

HOUSEHOLD CHARACTERISTICS	TOTAL HOUSEHOLDS		TOTAL SQUARE FOOTAGE			
	(MILLIONS)	(PERCENT)	TOTAL HEATED AND UNHEATED		TOTAL HEATED	
	(MILLIONS)	(PERCENT)	(BILLIONS)	(PERCENT)	(BILLIONS)	(PERCENT)
AIR CONDITIONING (A/C)						
CENTRAL AIR CONDITIONING						
ONLY.....	4.1	4.1	4.7	4.4	4.8	4.4
INDIVIDUAL ROOM UNITS ONLY.....	2.9	2.9	3.9	3.9	3.8	3.8
CENTRAL A/C AND ROOM UNITS.....	23.6	23.6	71.1	21.3	21.2	21.4
NO AIR CONDITIONING.....	2.9	2.9	4.1	3.8	3.8	3.7
CENTRAL AIR CONDITIONING SYSTEM FOR THE BUILDING (2-OR-MORE UNIT BUILDINGS)						
YES.....	20.5	20.5	19.3	19.6	19.3	19.6
NO.....	11.6	11.6	12.9	13.1	12.8	12.9
NO AIR CONDITIONING SYSTEM.....	3.7	3.7	3.9	4.2	3.9	4.2
NUMBER OF ROOMS THAT CAN BE AIR CONDITIONED						
ALL.....	2.4	2.4	3.3	3.0	3.2	2.9
SOME.....	3.6	3.6	4.2	4.0	4.2	4.0
NONE.....	2.9	2.9	4.1	3.8	3.8	3.7
WOOD BURNED						
YES (1/3 CORD OR MORE).....	5.0	5.0	5.6	5.0	5.1	4.6
NO.....	1.5	1.5	2.1	2.2	2.1	2.2
AVAILABILITY OF NATURAL GAS IN THE NEIGHBORHOOD (SINGLE FAMILY OR MOBILE HOME)						
USE ANY NATURAL GAS.....	3.7	3.7	3.8	3.7	3.8	3.6
DO NOT USE ANY NATURAL GAS.....	4.9	4.9	5.9	5.4	5.5	5.2
GAS IS AVAILABLE.....	8.7	8.7	7.8	8.1	8.0	8.1
GAS IS NOT AVAILABLE.....	6.6	6.6	8.1	7.5	7.6	7.2

SEE NOTES AT END OF TABLE

TABLE C14. RELATIVE STANDARD ERRORS (RSE) FOR ESTIMATES IN TABLE 24 (PERCENT)-CONTINUED

HOUSEHOLD CHARACTERISTICS	TOTAL HOUSEHOLDS		TOTAL SQUARE FOOTAGE			
	(MILLIONS)	(PERCENT)	TOTAL HEATED AND UNHEATED		TOTAL HEATED	
	(BILLIONS)	(PERCENT)	(BILLIONS)	(PERCENT)	(BILLIONS)	(PERCENT)
TYPE OF MAIN HEATING FUEL USED LAST WINTER 1979 TO 1980						
SAFE FUEL WINTER 1980						
TO WINTER 1981.....	0.5	0.5	1.5	0.5	1.4	0.5
DIFFERENT FUEL.....	9.8	9.8	10.2	9.9	9.7	9.5
FUEL OIL OR KEROSENE.....	11.1	11.1	9.9	9.7	10.2	10.0
NATURAL GAS.....	32.6	32.6	39.2	39.2	39.1	39.1
LIQUID PETROLEUM GAS.....	24.4	24.4	32.9	33.0	32.8	32.9
ELECTRICITY.....	29.7	29.7	36.1	35.8	32.7	32.9
OTHER/NO FUEL USED.....	28.5	28.5	33.2	32.9	27.9	27.8
NOT HEATED IN WINTER 1980						
TO WINTER 1981.....	19.5	19.5	21.6	21.7	NA	NA
UNIT NOT BUILT IN WINTER 1979 TO 1980.....	22.3	22.3	27.7	28.2	27.5	27.9

SEE NOTES AT END OF TABLE

TABLE C14. RELATIVE STANDARD ERRORS (RSE) FOR ESTIMATES IN TABLE 24 (PERCENT)-CONTINUED

HOUSEHOLD CHARACTERISTICS	TOTAL HOUSEHOLDS		TOTAL SQUARE FOOTAGE			
	(MILLIONS)	(PERCENT)	TOTAL HEATED AND UNHEATED		TOTAL HEATED	(PERCENT)
			(MILLIONS)	(PERCENT)		
FUEL COMBINATIONS						
USE NATURAL GAS FOR MAIN HEATING.....	3.4	3.4	3.6	3.6	3.5	3.5
WATER HEAT AND COOK WITH NATURAL GAS.....	4.3	4.3	5.0	5.1	4.6	4.6
WATER HEAT WITH NATURAL GAS AND COOK WITH ELECTRICITY.....	6.1	6.1	6.3	6.0	6.2	6.0
WATER HEAT WITH ELECTRICITY AND COOK WITH NATURAL GAS.....	16.4	16.4	15.3	15.5	15.0	15.4
WATER HEAT AND COOK WITH ELECTRICITY.....	12.4	12.4	12.8	13.1	13.9	14.1
OTHER.....	27.0	27.0	30.1	30.3	25.1	25.1
USE ELECTRICITY FOR MAIN HEATING.....	7.3	7.3	7.2	7.2	7.7	7.7
WATER HEAT AND COOK WITH ELECTRICITY.....	7.1	7.1	7.1	7.1	7.5	7.5
OTHER.....	15.9	15.9	17.2	17.1	17.2	17.1
USE FUEL OIL FOR MAIN HEATING.....	5.8	5.8	6.7	6.1	6.4	6.0
WATER HEAT WITH FUEL OIL AND COOK WITH ELECTRICITY.....	12.5	12.5	14.0	13.6	12.9	12.7
WATER HEAT WITH FUEL OIL AND COOK WITH NATURAL GAS.....	5.8	9.8	10.0	10.0	9.9	9.8
WATER HEAT AND COOK WITH ELECTRICITY.....	12.7	12.7	12.6	12.7	12.5	12.5
WATER HEAT AND COOK WITH NATURAL GAS.....	14.1	14.1	15.5	15.3	14.9	14.6
OTHER.....	17.2	17.2	17.2	16.3	16.6	15.9
NONE/OTHER FUEL.....	8.0	8.0	9.1	8.8	9.3	9.1

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS ZERO. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.

NA = NOT AVAILABLE BECAUSE THE SAMPLE DID NOT CONTAIN CASES IN THIS CELL.

SOURCE: RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.

TABLE C15. RELATIVE STANDARD ERRORS (RSE) FOR ESTIMATES IN TABLE 67 (PERCENT)

HOUSEHOLD CHARACTERISTICS	NUMBER OF HOUSEHOLDS BURNING WOOD		TOTAL NUMBER OF CORDS BURNED	AVERAGE OF CORDS BURNED PER HOUSEHOLD		MOST RECENT PURCHASE (1990)
	(MILLIONS)	(PERCENT)	(MILLIONS)	(PERCENT)	(MILLIONS)	
TOTAL HOUSEHOLDS.....	5.0	-	18.2	-	14.4	12.5
CENSUS REGION						
NORTH EAST.....	15.4	12.9	Q	33.2	34.5	28.4
NORTH CENTRAL.....	11.0	9.9	27.1	24.8	20.5	19.1
SOUTH.....	9.9	8.8	12.0	20.4	5.5	27.1
WEST.....	8.2	9.1	17.6	19.7	12.1	12.5
URBAN/RURAL						
URBAN.....	7.0	6.9	11.9	14.9	8.7	12.3
RURAL.....	7.7	4.3	21.8	4.6	16.2	21.4
ANNUAL HEATING DEGREE-DAYS (HDD) AND COOLING DEGREE-DAYS (CDD)						
<2000 CDD AND >7000 HDD.....	29.0	26.0	48.7	31.7	22.3	36.8
<2000 CDD AND 5500 TO 7000 HDD.....	11.9	13.4	13.3	21.7	8.1	16.1
<2000 CDD AND 4000 TO 5499 HDD.....	16.9	16.6	21.4	29.1	7.4	20.4
<2000 CDD AND <4000 HDD.....	15.0	15.5	19.5	26.2	9.4	24.1
>2000 CDD AND <4000 HDD.....	17.3	17.2	20.9	26.2	13.8	47.0
YEAR HOUSE BUILT						
1939 OR EARLIER.....	8.8	6.0	28.6	11.2	21.9	24.6
1940 TO 1949.....	11.4	10.7	21.5	20.6	15.8	30.5
1950 TO 1959.....	7.3	9.5	14.4	19.1	12.6	26.7
1960 TO 1964.....	7.9	7.4	13.3	18.2	9.9	24.9
1965 TO 1969.....	7.7	7.8	20.3	17.7	20.7	27.6
1970 TO 1974.....	10.5	7.6	12.3	13.7	7.3	13.8
1975 OR LATER.....	9.6	6.3	21.5	11.8	15.8	23.5
						7.9
						14.5
						21.0
						7.5
						13.8
						13.9
						7.7

SEE NOTES AT END OF TABLE

TABLE C15. RELATIVE STANDARD ERRORS (RSE) FOR ESTIMATES IN TABLE 67 (PERCENT)-CONTINUED

HOUSEHOLD CHARACTERISTICS	NUMBER OF HOUSEHOLDS BURNING WOOD		TOTAL NUMBER OF CORDS BURNED		AVERAGE NUMBER OF CORDS BURNED PER HOUSEHOLD	MOST RECENT PURCHASE (1980)	
	(MILLIONS)	(PERCENT)	(MILLIONS)	(PERCENT)		NUMBER OF HOUSEHOLDS (REPORTING IN MILLIONS)	AVERAGE PRICE PER CORD PAID IN 1980 (DOLLARS)
MEASURED HEATED SPACE OF RESIDENCE (IN SQ FT)							
LESS THAN 1000.....	13.0	9.9	21.0	16.9	11.6	31.9	30.6
1,000 TO 1,999.....	6.6	5.2	12.5	13.1	8.0	16.3	9.7
1,500 TO 1,999.....	10.9	10.6	23.1	11.9	19.8	24.2	15.6
2,000 TO 2,999.....	9.1	6.7	17.8	5.1	13.2	19.1	9.6
2,400 TO 2,999.....	9.3	9.1	27.3	16.2	23.5	23.7	17.8
3,000 OR MORE.....	11.9	10.2	36.4	19.5	27.5	27.1	5.9
1979 FAMILY INCOME							
LESS THAN \$5,000.....	12.2	11.3	23.6	19.4	17.6	35.1	32.7
\$5,000 TO \$9,999.....	14.3	12.0	17.6	11.8	16.1	28.7	10.1
\$10,000 TO \$14,999.....	13.9	10.6	40.2	22.3	29.3	32.4	11.4
\$15,000 TO \$19,999.....	10.4	8.2	21.2	9.3	15.0	49.8	17.3
\$20,000 TO \$24,999.....	9.1	8.4	19.0	12.0	16.2	21.4	8.2
\$25,000 TO \$34,999.....	7.9	8.0	17.1	11.9	16.2	22.8	11.6
\$35,000 OR MORE.....	9.0	8.9	15.6	15.4	12.1	18.4	7.4
AMOUNT OF WOOD BURNED							
1/3-1 CORD.....	6.1	6.9	7.0	20.5	2.6	14.7	6.3
2 CORDS.....	9.8	9.8	9.7	20.8	1.0	23.7	7.7
3 CORDS.....	9.6	8.5	9.6	16.9	.6	25.7	9.1
4 CORDS.....	16.4	13.3	16.5	16.0	.7	38.7	5.8
5 CORDS OR MORE.....	21.1	17.6	31.2	13.2	11.1	37.2	9.0
WOOD IS MAIN HEATING FUEL							
YES.....	14.1	10.5	26.2	10.1	14.6	28.9	7.9
NO.....	5.0	5.0	12.7	11.7	11.8	12.5	4.9
WOOD BURNED IN							
FIREPLACE ONLY.....	6.4	7.4	8.1	19.1	5.1	12.5	5.0
FIREPLACE AND STOVE ONLY.....	10.3	7.6	21.1	6.5	13.4	23.5	10.8
NONFIREPLACE STOVE ONLY.....	11.6	9.1	18.0	10.8	10.5	32.8	29.8
FIREPLACE ONLY.....	25.5	22.6	42.2	29.5	23.2	0	0

SEE NOTES AT END OF TABLE

TABLE C15. RELATIVE STANDARD ERRORS (RSE) FOR ESTIMATES IN TABLE 67 (PERCENT)-CONTINUED

HOUSEHOLD CHARACTERISTICS	NUMBER OF HOUSEHOLDS BURNING WOOD		TOTAL NUMBER OF CORDS BURNED	AVERAGE OF CORDS BURNED PER HOUSEHOLD	MOST RECENT PURCHASE (1980)		
	(MILLIONS)	(PERCENT)			NUMBER OF HOUSEHOLDS REPORTING (MILLIONS)	AVERAGE PRICE PER CORD PAID IN 1980 (DOLLARS)	
COMBINATION OF ABOVE.....	11.8	9.3	31.1	15.9	24.5	49.5	4.0
TYPE OF WOOD BURNED							
HARDWOODS.....	6.0	1.7	19.3	2.3	14.6	13.8	5.7
SOFTWOODS.....	8.5	8.9	23.9	20.2	19.2	22.0	3.1
DON'T KNOW/ NOT REPORTED.....	21.2	22.3	22.1	31.1	17.1	48.1	12.3
AMOUNT OF WOOD BURNED THAT WAS PURCHASED							
ALL.....	7.9	6.7	20.3	6.8	17.2	13.3	5.8
SOME.....	11.3	8.9	20.6	12.2	14.3	19.3	6.9
NONE/NOT REPORTED.....	5.7	3.0	18.6	3.3	15.2	NA	NA
AVERAGE PRICE PER CORD PAID IN 1980							
LESS THAN \$50.....	31.5	27.8	0	48.3	40.2	31.5	12.1
\$50 TO \$75.....	15.6	14.4	21.6	14.1	15.7	15.6	2.0
OVER \$75.....	14.1	13.6	19.4	22.7	13.9	14.1	4.8
NONE PURCHASED/DON'T KNOW/NOT REPORTED.....	4.9	1.9	16.9	2.8	13.7	NA	NA
PRICE INCLUDES DELIVERY							
YES.....	7.3	5.1	17.7	6.3	13.4	11.7	4.7
NO.....	13.5	12.0	27.6	15.9	21.8	29.3	17.9
DON'T KNOW/NOT REPORTED/NONE PURCHASED.....	5.7	3.0	18.5	3.4	15.1	0	0

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING. A DASH "-" REPRESENTS ZERO. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE.

NA = NOT AVAILABLE BECAUSE THE SAMPLE DID NOT CONTAIN CASES IN THIS CELL.

Q = DATA WITHHELD BECAUSE THE RELATIVE STANDARD ERROR WAS 50 PERCENT OR GREATER.

SOURCE: RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1980 RESIDENTIAL ENERGY CONSUMPTION SURVEY.



Appendix D.



SURVEY FORMS

This appendix contains copies of the survey forms used in the 1980 Residential Energy Consumption Survey.

- EIA-457A Housing Unit Record Sheet (actual form was pink)
- EIA-457B Household Questionnaire (actual form had a beige cover)
- EIA-457C Rental Agent Questionnaire
- EIA-457E Electricity Utility Form (actual form was yellow)
- EIA-457F Natural Gas Utility Form (actual form was pink)
- EIA-457G Fuel Oil Supplier Form (actual form was green)
- EIA-457H Liquefied Petroleum Gas Supplier Form (actual form was blue)

HOUSING UNIT RECORD SHEET

Location # _____ Housing Unit # _____

Address (or description) _____

Post Office (city or town) _____

State _____ Zip Code _____

INTRODUCTION

Hello, I'm _____ from Response Analysis, a survey organization in Princeton, New Jersey. We are working on a national survey for the U.S. Department of Energy. May I speak to the head of the household?

CONTINUE WITH HEAD OF HOUSEHOLD, OR ONE OF HOUSEHOLD HEADS, OR SPOUSE

We would like to ask some questions about your home, about heating and air-conditioning, household vehicles, and related topics.

HAND PRIVACY ACT NOTICE TO RESPONDENT: This notice explains that information about your household is protected by The Privacy Act of 1974 and will remain confidential.

HAND PACKET OF TWO DOLLAR COINS TO RESPONDENT: As Response Analysis mentioned in the letter to your household, these coins are a token of appreciation for your participation in the survey.

CONTINUE WITH INTERVIEW

① INTERVIEWER OBSERVATION OF TYPE OF LIVING QUARTERS

MARK BOX BELOW

01 MOBILE HOME OR TRAILER

02 ONE-FAMILY HOUSE →

03 HOUSE OR BUILDING WITH
2-4 HOUSING UNITS →

04 BUILDING WITH 5 OR
MORE UNITS →

MARK TYPE OF STRUCTURE:

1 DETACHED

2 ATTACHED ON ONE SIDE
(SEMI-DETACHED)

3 ATTACHED ON TWO SIDES

MARK ANSWERS:

NUMBER OF UNITS: _____

NUMBER OF FLOORS (STORIES): _____

21 OTHER -- DESCRIBE IN DETAIL ANY STRUCTURE THAT DOES NOT FIT ONE OF ABOVE.

COMPLETE RECORD OF CONTACTS AND ADDITIONAL INFORMATION ON BACK OF THIS RECORD SHEET.

2 TYPE OF OCCUPANCY OF HOUSING UNIT

- 1 YEAR-ROUND UNIT
- 2 SEASONAL UNIT
- 3 MIGRATORY UNIT

MARK ANSWER WHETHER HOUSING UNIT IS OCCUPIED OR VACANT -- SEE P. 10 OF INSTRUCTION BOOKLET FOR INTERVIEWERS.

3 PRESENCE OF COMMERCIAL ACTIVITY

- 1 SIGN VISIBLE FROM THE STREET INDICATING PRESENCE OF COMMERCIAL ACTIVITY, SUCH AS A DOCTOR'S OFFICE OR BEAUTY SHOP
- 2 NO SIGN VISIBLE FROM THE OUTSIDE INDICATING PRESENCE OF COMMERCIAL ACTIVITY

4 RECORD OF VISITS TO HOUSING UNIT

Visit number	Time of day (include AM or PM)	Date	Day of Week	Result or comments

5 USE THIS SPACE FOR ADDITIONAL NOTES OR COMMENTS ABOUT VISITS TO THIS HOUSEHOLD. DESCRIBE FULLY IF REFUSAL OR OTHER NONINTERVIEW.

6 GIFT TO HOUSEHOLD

MARK TO SHOW WHETHER TWO DOLLAR COIN PACKET WAS ACCEPTED

- 1 TWO DOLLAR COIN PACKET ACCEPTED BY HOUSEHOLD
- 0 NOT ACCEPTED

7 NAME AND PHONE NUMBER OF HEAD OF HOUSEHOLD (OR ONE OF HOUSEHOLD HEADS)

Name

Phone number

Area code ()

8 INTERVIEWER'S NAME AND I.D. NUMBER

Interviewer

I.D. number

This survey is voluntary and authorized under the Federal Energy Administration Act of 1974 (Public Law 93-275). Information about specific households will be kept strictly confidential. The data will be summarized within large groupings for statistical purposes.

Residential Energy Consumption Survey

Fall-Winter • 1980-1981



U.S. Department of Energy

Energy Information Administration

Location # _____
Housing Unit # _____

111-116

117-118

TIME INTERVIEW STARTED

[]

1. In what year did your family move into this house (apartment)?

01 [] BEFORE 1940

02 [] 1940-1949

03 [] 1950-1959

04 [] 1960-1964

05 [] 1965-1969

121-122

06 [] 1970-1974

07 [] 1975-1979

08 [] 1980

-- ASK Q. 2

09 [] 1981

IF "1980" OR "1981," ASK:

2. In which month did you move in? (SPECIFY MONTH AND ENTER LAST TWO DIGITS OF YEAR.)

MONTH:

[]

123-124

YEAR:

19 []

3. In what year was this house (building) built? Just your estimate.

01 [] BEFORE 1940

02 [] 1940-1949

03 [] 1950-1959

04 [] 1960-1964

05 [] 1965-1969

125-126

06 [] 1970-1974

07 [] 1975

08 [] 1976

09 [] 1977 -- ASK Q. 4

10 [] 1978

11 [] 1979

12 [] 1980

13 [] 1981

IF "1977," ASK:

4. Do you happen to know if the (house/building) was completed in January through June or July through December of 1977?

1 [] JANUARY-JUNE 1977

2 [] JULY-DECEMBER 1977

127

6 [] DON'T KNOW

5. What material is mainly used on the outside walls of your (house/building)? (IF TWO MATERIALS ARE USED ABOUT THE SAME AMOUNT, MARK TWO BOXES.)

- BRICK 128
- WOOD 129
- CONCRETE 130
- STUCCO 131
- STONE 132
- ALUMINUM SIDING 133
- COMPOSITION (ASBESTOS SHINGLE, ETC.) 134
- GLASS 135
- OTHER (SPECIFY): _____ 136

6. How many floors do you use as year-round living space here in your house (apartment)?

- 1 ONE FLOOR
- 2 1-1/2 FLOORS
- 3 TWO FLOORS 137
- 4 2-1/2 FLOORS
- 5 THREE OR MORE FLOORS

AREAS USED AS REGULAR, YEAR-ROUND LIVING SPACE (FOR BEDROOM, KITCHEN, STUDY, ETC.) IN BASEMENT OR ATTIC SHOULD BE COUNTED.

DO NOT COUNT UNFINISHED AREAS USED FOR ROUGH WORKROOMS, UTILITY ROOM, LAUNDRY ROOM, ETC., OR AREAS USED EXCLUSIVELY FOR BUSINESS/PROFESSIONAL PURPOSES.

7. Altogether (counting all areas that are used as year-round living space), how many rooms do you have in your living quarters? Do not count bathrooms, unheated porches, foyers, or hallways.

NUMBER OF ROOMS: 138-139

8. How about the largest room (living or family room) of your house (apartment) -- what is your estimate of the length and width in feet?

INTERVIEWER: PUT RESPONDENT'S ESTIMATE IN BOXES IN RECTANGULAR OR L-SHAPED SKETCH AT RIGHT, AS APPROPRIATE. IF RESPONDENT IS UNABLE TO MAKE ESTIMATE, PUT IN YOUR OWN BEST ESTIMATE.

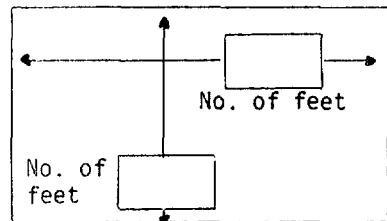
NOTE BELOW WHETHER LARGEST ROOM IS RECTANGULAR OR L-SHAPED, AND HOW ESTIMATE WAS MADE.

- 1 LARGEST ROOM IS RECTANGULAR: ENTER DIMENSIONS IN SKETCH #1
- 2 LARGEST ROOM IS L-SHAPED: ENTER DIMENSIONS IN SKETCH #2

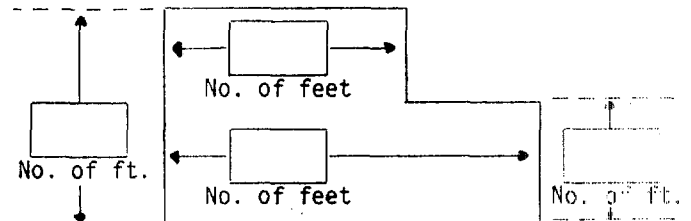
SOURCE OF ESTIMATE

- 1 ESTIMATE MADE BY RESPONDENT
- 2 ESTIMATE MADE BY INTERVIEWER
- 3 RESPONDENT/INTERVIEWER MEASURED

SKETCH #1



SKETCH #2



INTERVIEWER: DO NOT WRITE IN THIS SPACE. OFFICE USE ONLY.

--	--	--	--

142- 145- 148- 151-
144 147 150 153

9. Is any part of your (house/apartment) used exclusively for business or professional purposes, such as a real estate office, doctor's office, or beauty parlor? 1 [] YES
0 [] NO-- SKIP TO Q. 13 154

IF "YES," ASK:

10. Could you describe that business or professional activity? (IF MORE THAN ONE BUSINESS/PROFESSIONAL ACTIVITY, DESCRIBE THE MAIN ACTIVITY.) 155-
156
-
-
-

11. How many rooms are used exclusively for this purpose? NUMBER OF ROOMS USED EXCLUSIVELY FOR BUSINESS/PROFESSIONAL PURPOSES: 157-
158

12. Were these rooms included in your count of (# IN Q.7) rooms in your living quarters? 1 [] YES
0 [] NO 159

13. Do you have complete plumbing facilities in this house (building); that is, hot and cold running water, a flush toilet, and a bathtub or shower? 1 [] YES 160
2 [] NO, HAVE SOME BUT NOT ALL PLUMBING FACILITIES -- SKIP TO Q. 16
3 [] NO PLUMBING FACILITIES IN HOUSE OR BUILDING -- SKIP TO Q. 16

IF "YES," ASK:

14. Are they for this household only or are they also used by another household? 1 [] FOR THIS HOUSEHOLD ONLY 161
2 [] ALSO USED BY ANOTHER HOUSEHOLD

15. How many complete bathrooms and how many half-bathrooms do you have? (A complete bathroom is a room with a flush toilet, bathtub or shower, and a sink/washbasin with running water. A half-bath has at least a flush toilet or bathtub or shower, but does not have all the facilities for a complete bathroom.)

NUMBER OF COMPLETE BATHROOMS: 162
[] NONE

NUMBER OF HALF BATHROOMS: 163
[] NONE

HAND RESPONDENT EXHIBIT 16

16. What is the main heating equipment for your home?

- 01[] HOT WATER PIPES RUNNING THROUGH A SLAB FLOOR (RADIANT HEATING)
- 02[] STEAM OR HOT WATER SYSTEM WITH RADIATORS OR CONVECTORS
- 03[] CENTRAL WARM-AIR FURNACE WITH DUCTS TO INDIVIDUAL ROOMS (DO NOT COUNT HEAT PUMP HERE) -- ASK Q. 17
- 04[] HEAT PUMP
- 05[] BUILT-IN ELECTRIC UNITS (PERMANENTLY INSTALLED IN WALL, CEILING, OR BASEBOARD)
- 06[] FLOOR, WALL, OR PIPELESS FURNACE
- 07[] ROOM HEATER BURNING GAS, OIL, KEROSENE
- 08[] HEATING STOVE BURNING WOOD, COAL, COKE
- 09[] FIREPLACE(S)
- 10[] PORTABLE HEATER(S)
- 21[] OTHER (SPECIFY): _____
- 96[] DON'T KNOW
- 00[] NO HEATING EQUIPMENT USED -- SKIP TO Q. 29

164-
165

TAKE BACK EXHIBIT 16

IF "CENTRAL WARM AIR," ASK:

17. Is the warm air forced through the ducts by a fan?

- 1[] YES
- 0[] NO
- 6[] DON'T KNOW

166

18. Since September 1979, has your main heating equipment been serviced or cleaned?

- 1[] YES
- 0[] NO
- 6[] DON'T KNOW

167

IF "YES", ASK:

19. In what month and year was this work completed?

MONTH:

168-
169

YEAR: 19

170-
171

IF 2 OR MORE HOUSING UNITS IN BUILDING, ASK Q. 20. OTHERWISE, SKIP TO Q. 21.

20. Is your home heated by a central system for your building (or group of buildings) or is the main heating equipment for your living quarters only?

- 1[] CENTRAL SYSTEM FOR BUILDING(S)
- 2[] MAIN HEATING EQUIPMENT FOR THESE LIVING QUARTERS ONLY

172

HAND RESPONDENT EXHIBIT 21

21. What is the main fuel used for heating this house (apartment)?

- 01[] GAS FROM UNDERGROUND PIPES
SERVING THE NEIGHBORHOOD
- 02[] GAS, LPG (BOTTLED OR TANK GAS)
- 03[] FUEL OIL
- 04[] KEROSENE OR COAL OIL 173-
- 05[] ELECTRICITY 174
- 06[] COAL OR COKE
- 07[] WOOD
- 08[] SOLAR COLLECTORS
- 21[] OTHER (SPECIFY): _____
- 00[] NO FUEL USED

TAKE BACK EXHIBIT 21

22. Do you have a thermostat, radiator valve, or other control to adjust the temperature in your (house/apartment) during the heating season?

- 1[] YES
- 0[] NO 175

23. In the winter of 1979-80 was the main fuel used to heat this house (apartment) the same as it is now?

- 1[] YES -- SKIP TO Q. 25 176
- 2[] NO
- 9[] DID NOT LIVE IN THIS HOUSE (APARTMENT)
LAST WINTER -- SKIP TO Q. 25
- 0[] NO FUEL USED -- SKIP TO Q. 29

IF "NO," ASK:

HAND RESPONDENT EXHIBIT 24

24. What was the main fuel used to heat this house (apartment) in the winter of 1979-80?

- 01[] GAS FROM UNDERGROUND PIPES
SERVING THE NEIGHBORHOOD
- 02[] GAS, LPG (BOTTLED OR TANK GAS)
- 03[] FUEL OIL
- 04[] KEROSENE OR COAL OIL
- 05[] ELECTRICITY 177-
- 06[] COAL OR COKE 178
- 07[] WOOD
- 08[] SOLAR COLLECTORS
- 21[] OTHER (SPECIFY): _____
- 00[] NO FUEL USED

TAKE BACK EXHIBIT 24

HAND RESPONDENT EXHIBIT 25

207-208:02

25. You have already mentioned your main heating equipment. Are any of these types of equipment used in your home in addition to your main equipment?

- 1[] YES
- 0[] NO -- TAKE BACK EXHIBIT 25, SKIP TO Q. 29

211

IF "YES," ASK:

26. What type(s) do you use? (IF MORE THAN ONE TYPE IS MENTIONED, MARK ONLY THE ONE USED MOST.)

- 01[] HOT WATER PIPES RUNNING THROUGH A SLAB FLOOR (RADIANT HEATING)
- 02[] STEAM OR HOT WATER SYSTEM WITH RADIATORS OR CONVECTORS
- 03[] CENTRAL WARM-AIR FURNACE WITH DUCTS TO INDIVIDUAL ROOMS (DO NOT COUNT HEAT PUMP HERE) -- ASK Q. 27
- 04[] HEAT PUMP
- 05[] BUILT-IN ELECTRIC UNITS (PERMANENTLY INSTALLED IN WALL, CEILING, OR BASEBOARD)
- 06[] FLOOR, WALL, OR PIPELESS FURNACE
- 07[] ROOM HEATER BURNING GAS, OIL, KEROSENE
- 08[] HEATING STOVE BURNING WOOD, COAL, COKE
- 09[] FIREPLACE(S)
- 10[] PORTABLE HEATER(S)
- 21[] OTHER (SPECIFY): _____
- 96[] DON'T KNOW

212-
213

IF "CENTRAL WARM AIR," ASK:

27. Is the warm air forced through the ducts by a fan?

- 1[] YES
- 0[] NO

214

TURN TO EXHIBIT 28

28. What fuel is used by this additional equipment?

- 01[] GAS FROM UNDERGROUND PIPES SERVING THE NEIGHBORHOOD
- 02[] GAS, LPG (BOTTLED OR TANK GAS)
- 03[] FUEL OIL
- 04[] KEROSENE OR COAL OIL
- 05[] ELECTRICITY
- 06[] COAL OR COKE
- 07[] WOOD
- 08[] SOLAR COLLECTORS
- 21[] OTHER (SPECIFY): _____

215-
216

TAKE BACK EXHIBIT 28

29. Has any wood been burned in your home in the past 12 months?

- 1 YES
- 0 NO -- SKIP TO Q. 40 217

IF "YES," ASK:

HAND RESPONDENT EXHIBIT 30

30. Did your household burn less than a rack, or one rack or more? A rack is 16 in. x 4 ft. x 8 ft. or one third of a cord.

- 0 LESS THAN ONE RACK -- TAKE BACK EXHIBIT 30, SKIP TO Q. 40 218
- 1 ONE RACK OR MORE 219-221

IF "ONE RACK OR MORE," ASK:

31. About how many racks or cords of wood did you burn in the past 12 months? (PROBE FOR BEST ESTIMATE.)

NUMBER OF RACKS (16 in. x 4 ft. x 8 ft.):

OR

NUMBER OF CORDS (4 ft. x 4 ft. x 8 ft.):

DON'T KNOW

TAKE BACK EXHIBIT 30

32. Was the wood you burned in the past 12 months mostly hardwood or mostly softwood? Hardwood is from broad-leaf trees such as maple, or birch. Softwood is from evergreens such as pine, spruce, or fir.

- 1 HARDWOOD
- 2 SOFTWOOD 222
- 6 DON'T KNOW

HAND RESPONDENT EXHIBIT 33

33. About how much of the wood you burned in the past 12 months did you purchase?

- 0 NONE, VERY LITTLE (LESS THAN 5%) -- TAKE BACK EXHIBIT 33, SKIP TO Q. 38
- 1 1/4 (5 - 33%)
- 2 1/2 (34 - 66%) 223
- 3 3/4 (67 - 95%)
- 4 ALL (96 - 100%)

TAKE BACK EXHIBIT 33

IF 1/4 OR MORE PURCHASED, ASK:

34. About when was your household's most recent purchase of wood?

MONTH: 224-225

YEAR: 19 226-227

35. On your household's most recent purchase of wood, how was the wood measured: by the rack, cord, or some other measure? (IF "TRUCKLOAD," PROBE FOR SIZE OF TRUCK.)

- 1 RACK
- 2 CORD 228
- 5 OTHER (SPECIFY): _____

36. About what was the price per (rack/cord/other measure) on your household's most recent purchase of wood?

PRICE: \$ _____ 229-231

37. Did the purchase price include delivery of the wood to your home?

- 1 YES
- 0 NO 232

CONTINUE IF ONE RACK OR MORE OF WOOD WAS BURNED IN LAST 12 MONTHS. OTHERWISE, SKIP TO Q. 40.

HAND RESPONDENT EXHIBIT 38

38. We may have covered some of these before, but please look at this exhibit and tell me which of these you have in your house (apartment)?

233-240

	HAVE	DO NOT HAVE	AMOUNT BURNED				
			NONE (LESS THAN 5%)	1/4 (5 - 33%)	1/2 (34 - 66%)	3/4 (67 - 95%)	ALL (96 - 100%)
a. Fireplace	1[]	0[]	0[]	1[]	2[]	3[]	4[]
b. Airtight stove (with gasket)	1[]	0[]	0[]	1[]	2[]	3[]	4[]
c. Non-airtight stove (no gasket)	1[]	0[]	0[]	1[]	2[]	3[]	4[]
d. Wood-burning furnace	1[]	0[]	0[]	1[]	2[]	3[]	4[]

TURN TO EXHIBIT 39

39. About how much of the wood you burned in the past 12 months was burned in _____? (ASK FOR EACH TYPE OF EQUIPMENT HOUSEHOLD HAS.)

TAKE BACK EXHIBIT 39

HAND RESPONDENT EXHIBIT 40

40. Which fuel is used most for heating water?

- 01[] GAS FROM UNDERGROUND PIPES SERVING THE NEIGHBORHOOD
- 02[] GAS, LPG (BOTTLED OR TANK GAS)
- 03[] FUEL OIL
- 04[] KEROSENE OR COAL OIL
- 05[] ELECTRICITY
- 06[] COAL OR COKE
- 07[] WOOD
- 08[] SOLAR COLLECTORS
- 21[] OTHER (SPECIFY): _____
- 00[] NO FUEL USED -- SKIP TO Q. 43

241-
242

TAKE BACK EXHIBIT 40

41. Do you have hot running water in your home?

- 1[] YES
- 0[] NO -- SKIP TO Q. 43

243

IF 2 OR MORE HOUSING UNITS IN BUILDING, ASK Q. 42. OTHERWISE, SKIP TO Q. 43.	
42. Is your hot water supplied by a central system for your building (or group of buildings) or is the water heater for your living quarters only?	<ul style="list-style-type: none"> 1[] CENTRAL SYSTEM FOR BUILDING(S) 2[] FOR THESE LIVING QUARTERS ONLY

244

43. Do you have air-conditioning, either a central system or individual window or wall units? (MARK ALL THAT APPLY.)

- YES, CENTRAL SYSTEM
- YES, INDIVIDUAL (WINDOW/WALL) UNITS
- NO -- SKIP TO INSTRUCTION FOR Q. 48

245-
246

44. How many rooms in your house (apartment) are cooled by air-conditioning? Do not count bathrooms, hallways, foyers, or enclosed porches.

NUMBER OF ROOMS:

95[] ENTIRE HOUSE OR APARTMENT

247-
248

IF "INDIVIDUAL (WINDOW/WALL) UNITS" ON Q. 43 ASK:

45. How many window or wall units do you have in your house (apartment)?

NUMBER OF (WINDOW/WALL) UNITS:

249

IF "CENTRAL SYSTEM" ON Q. 43, ASK:

46. Does the central air-conditioning system use gas or electricity?

- 1[] GAS
- 2[] ELECTRICITY
- 6[] DON'T KNOW

250

IF 2 OR MORE HOUSING UNITS IN BUILDING, ASK Q. 47. OTHERWISE SKIP TO INSTRUCTION FOR Q. 48.	
47. Is it a central air-conditioning system for your building (or group of buildings) or is the main air-conditioning equipment for your living quarters only?	<ul style="list-style-type: none"> 1[] CENTRAL SYSTEM FOR BUILDING 2[] AIR-CONDITIONING IS FOR THESE LIVING QUARTERS ONLY

251

IF ONE-FAMILY HOUSE, ASK Q. 48 ff. OTHERWISE (TRAILER OR 2 OR MORE UNITS IN BUILDING) SKIP TO Q. 59.

48. Do you have insulation in all, or some, or none of the outside walls of your home? 1[] ALL
2[] SOME
0[] NONE #52
6[] DON'T KNOW
49. Do you have roof or ceiling insulation? 1[] YES
0[] NO -- SKIP TO Q. 54. #53
6[] DON'T KNOW -- SKIP TO Q. 54.

IF "YES," ASK:

50. Is all the roof or ceiling area insulated or just part of it? 1[] ALL #54
2[] PART

IF "PART," ASK:

HAND RESPONDENT EXHIBIT 51

51. About how much of the roof or ceiling area is insulated? 0[] NONE, VERY LITTLE (LESS THAN 5%)
1[] 1/4 (5 - 33%)
2[] 1/2 (34 - 66%) #55
3[] 3/4 (67 - 95%)
4[] ALL (96 - 100%)

TAKE BACK EXHIBIT 51

HAND RESPONDENT EXHIBIT 52

52. This exhibit shows different kinds of insulation. Please tell me whether or not you have each one in your roof or ceiling area.

a. BATT/BLANKET	1[] YES 0[] NO 6[] DON'T KNOW	_____ INCHES [] DON'T KNOW	#58- #58
b. LOOSE PARTICLES/ LOOSE FILL	1[] YES 0[] NO 6[] DON'T KNOW	_____ INCHES [] DON'T KNOW	#59- #61
c. FIRM FOAM/ FIRM PLASTIC	1[] YES 0[] NO 6[] DON'T KNOW	_____ INCHES [] DON'T KNOW	#62- #64
d. SPRAYED-IN URETHANE FOAM	1[] YES 0[] NO 6[] DON'T KNOW	_____ INCHES [] DON'T KNOW	#65- #67
e. OTHER (SPECIFY): _____ _____	1[] YES 0[] NO 6[] DON'T KNOW	_____ INCHES [] DON'T KNOW	#68- #70

FOR EACH "YES," ASK:

53. About how many inches of (INSULATION TYPE) do you have in your roof or ceiling area? _____

TAKE BACK EXHIBIT 52

CONTINUE IF ONE-FAMILY HOUSE. OTHERWISE SKIP TO Q. 59.

HAND RESPONDENT EXHIBIT 54

54. Does this house have a basement, an enclosed crawl space, a crawl space open to the outside, a concrete slab, or a combination of these? (MARK ALL THAT APPLY.)

- BASEMENT 311
- CRAWL SPACE -- ENCLOSED 312
- CRAWL SPACE OPEN TO OUTSIDE 313
- CONCRETE SLAB -- TAKE BACK EXHIBIT 54, SKIP TO Q. 59 314
- OTHER (SPECIFY): _____ 315

IF "BASEMENT," "CRAWL SPACE," OR "COMBINATION," ASK:

55. Is all, part, or none of the basement or crawl space heated?

- 1 ALL -- SKIP TO Q. 59
- 2 PART 316
- 0 NONE

IF "PART" OR "NONE" IS HEATED, ASK:

TURN TO EXHIBIT 56

56. Think of the floor area above the unheated basement or crawl space. About how much of that floor area is insulated?

- 0 NONE, VERY LITTLE (LESS THAN 5%) -- TAKE BACK EXHIBIT 56, SKIP TO Q. 59
- 1 1/4 (5 - 33%)
- 2 1/2 (34 - 66%) 317
- 3 3/4 (67 - 95%)
- 4 ALL (96 - 100%)
- 6 DON'T KNOW

TURN TO EXHIBIT 57

57. Please look at this exhibit and tell me whether or not you have each one in the floor above your unheated basement and/or crawl space.

a. BATT/BLANKET	1 <input type="checkbox"/> YES 0 <input type="checkbox"/> NO 6 <input type="checkbox"/> DON'T KNOW	_____ INCHES <input type="checkbox"/> DON'T KNOW	318- 320
b. LOOSE PARTICLES/LOOSE FILL	1 <input type="checkbox"/> YES 0 <input type="checkbox"/> NO 6 <input type="checkbox"/> DON'T KNOW	_____ INCHES <input type="checkbox"/> DON'T KNOW	321- 323
c. FIRM FOAM/FIRM PLASTIC	1 <input type="checkbox"/> YES 0 <input type="checkbox"/> NO 6 <input type="checkbox"/> DON'T KNOW	_____ INCHES <input type="checkbox"/> DON'T KNOW	324- 326
d. SPRAYED-IN URETHANE FOAM	1 <input type="checkbox"/> YES 0 <input type="checkbox"/> NO 6 <input type="checkbox"/> DON'T KNOW	_____ INCHES <input type="checkbox"/> DON'T KNOW	327- 329
e. OTHER (SPECIFY):	1 <input type="checkbox"/> YES 0 <input type="checkbox"/> NO 6 <input type="checkbox"/> DON'T KNOW	_____ INCHES <input type="checkbox"/> DON'T KNOW	330- 332

FOR EACH "YES," ASK:

58. About how many inches of (INSULATION TYPE) do you have in the floor area above your unheated basement and/or crawl space? _____

TAKE BACK EXHIBIT 57

HAND RESPONDENT EXHIBIT 59

59. Please look at this exhibit of different kinds of doors. How many of each of these types of doors do you have that go from a heated area to the outside or to an unheated area? (SEE INSTRUCTION BELOW.)

NUMBER OF DOORS	NUMBER WITH STORM DOOR OR INSULATING GLASS	NUMBER STORM/INSULATED DOORS PUT IN SINCE JANUARY 1, 1979			
a. Sliding glass doors 333 [] NONE	334 [] NONE	335 [] NONE	336-339 MONTH: _____ YEAR: 19____ [] IN PROCESS	1 [] DOORS AND HAVING THEM PUT IN 2 [] DOORS ONLY 5 [] OTHER (SPECIFY): _____	340 341-342 APPROXIMATE COST: \$ _____ [] DON'T KNOW
b. Doors with glass panels 344 [] NONE	345 [] NONE	346 [] NONE	347-350 MONTH: _____ YEAR: 19____ [] IN PROCESS	1 [] DOORS AND HAVING THEM PUT IN 2 [] DOORS ONLY 5 [] OTHER (SPECIFY): _____	351 352-354 APPROXIMATE COST: \$ _____ [] DON'T KNOW
c. Regular doors (doors without glass panels) 355 [] NONE	356 [] NONE	357 [] NONE	358-361 MONTH: _____ YEAR: 19____ [] IN PROCESS	1 [] DOORS AND HAVING THEM PUT IN 2 [] DOORS ONLY 5 [] OTHER (SPECIFY): _____	362 363-365 APPROXIMATE COST: \$ _____ [] DON'T KNOW

TAKE BACK EXHIBIT 59

FOR EACH TYPE OF DOOR FOR WHICH ANSWER IS "ONE OR MORE," ASK:

60. (Does/How many of) the door(s) have (a storm door/storm doors) or insulating glass? _____

FOR EACH TYPE OF STORM DOOR OR DOOR WITH INSULATING GLASS, ASK:

61. How many of the (storm/insulated glass) doors were put in your home since January 1, 1979? _____

IF ONE OR MORE, ASK:

62. In what month and year did you get (it/them)? _____

63. (Did you pay/Are you paying) both for the door(s) and having the door(s) put in, only for the door(s) themselves, or what? _____

64. Approximately what (did/will) the job cost? (SEE INSTRUCTION BELOW.) _____

INTERVIEWER INSTRUCTIONS:

Q. 59 -- Count each pair of sliding glass doors as one door. Include doors that go to an unheated porch or garage. Do not include doors to a heated hallway in an apartment building, doors that are permanently sealed shut, or doors to an unheated attic or basement.

Q. 64 -- If more than one type of door was part of the same job and if respondent is unable to break down the cost among the different types, note below and record the total cost.

65. How many windows do you have in your home? Please include basement, attic, garage, and porch windows only if these areas are heated. (SEE INSTRUCTIONS BELOW.)

NUMBER OF WINDOWS: 409-410

HAND RESPONDENT EXHIBIT 66

66. How many of your windows are these sizes?

NUMBER OF WINDOWS	NUMBER WITH STORM WINDOWS OR INSULATING GLASS	NUMBER STORM WINDOWS PUT IN SINCE JANUARY 1, 1979			
a. Large 411-412 <input type="checkbox"/> NONE	413-414 <input type="checkbox"/> NONE	415-416 <input type="checkbox"/> NONE	417-420 MONTH: _____ YEAR: 19____ <input type="checkbox"/> IN PROCESS	1 <input type="checkbox"/> WINDOWS AND HAVING THEM PUT IN 2 <input type="checkbox"/> WINDOWS ONLY 5 <input type="checkbox"/> OTHER (SPECIFY): _____	421 422-424 APPROXIMATE COST: \$ _____ .00 <input type="checkbox"/> DON'T KNOW
b. Medium 425-426 <input type="checkbox"/> NONE	427-428 <input type="checkbox"/> NONE	429-430 <input type="checkbox"/> NONE	431-434 MONTH: _____ YEAR: 19____ <input type="checkbox"/> IN PROCESS	1 <input type="checkbox"/> WINDOWS AND HAVING THEM PUT IN 2 <input type="checkbox"/> WINDOWS ONLY 5 <input type="checkbox"/> OTHER (SPECIFY): _____	435 436-438 APPROXIMATE COST: \$ _____ .00 <input type="checkbox"/> DON'T KNOW
c. Small 439-440 <input type="checkbox"/> NONE	441-442 <input type="checkbox"/> NONE	443-444 <input type="checkbox"/> NONE	445-448 MONTH: _____ YEAR: 19____ <input type="checkbox"/> IN PROCESS	1 <input type="checkbox"/> WINDOWS AND HAVING THEM PUT IN 2 <input type="checkbox"/> WINDOWS ONLY 5 <input type="checkbox"/> OTHER (SPECIFY): _____	449 450-452 APPROXIMATE COST: \$ _____ .00 <input type="checkbox"/> DON'T KNOW

TAKE BACK EXHIBIT 66

67. How many of the _____ windows have storm windows or insulating glass? (SEE INSTRUCTIONS BELOW.)

IF ONE OR MORE WINDOWS WITH STORM WINDOWS OR INSULATING GLASS, ASK:

68. How many of the storm windows or windows with insulating glass were put in your home since January 1, 1979? _____

IF ONE OR MORE, ASK:

69. In what month and year did you get them? _____

70. (Did you pay/are you paying) for having the windows put in, only for the windows themselves, or what? _____

71. Approximately what (did/will) the job cost? (SEE INSTRUCTION BELOW.) _____

INTERVIEWER INSTRUCTIONS:

- Q. 65 -- 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.
- Q. 67 -- Windows made of double glass and other types of insulating glass count the same as storm windows.
- Q. 71 -- If more than one type of window was part of the same job and if respondent is unable to break down the cost among the different types, note below and record the total cost.

HAND RESPONDENT EXHIBIT 72

72. Please look at this list and tell me which items, if any, have been added or installed in your home since January 1, 1979? (SEE INSTRUCTIONS BELOW.)

a. CLOSEABLE SHUTTERS, PLASTIC SHEETS, INSULATING DRAPES	1 <input type="checkbox"/> YES 0 <input type="checkbox"/> NO 2 <input type="checkbox"/> IN PROCESS	MONTH: _____ YEAR: 19_____ <input type="checkbox"/> IN PROCESS
b. CAULKING AROUND ANY WINDOWS OR DOORS TO THE OUTSIDE	1 <input type="checkbox"/> YES 0 <input type="checkbox"/> NO 2 <input type="checkbox"/> IN PROCESS	MONTH: _____ YEAR: 19_____ <input type="checkbox"/> IN PROCESS
c. WEATHER STRIPPING AROUND ANY WINDOWS OR DOORS TO THE OUTSIDE	1 <input type="checkbox"/> YES 0 <input type="checkbox"/> NO 2 <input type="checkbox"/> IN PROCESS	MONTH: _____ YEAR: 19_____ <input type="checkbox"/> IN PROCESS

463-
467

466-
468

463-
467

FOR EACH "YES," ASK:

73. In what month and year was it added or installed? _____
 (SEE INSTRUCTION BELOW.)



TAKE BACK EXHIBIT 72

INTERVIEWER INSTRUCTIONS:

Q. 72 -- Count as "In Process" any work started but not yet completed. Do not count any changes made before this household moved in.

Q. 73 -- If household has done item more than once, put down the most recent date.

74. In the past year, has any professional come to your home to advise you on how your household could save on its energy bills?

- 1[] YES
- 0[] NO -- SKIP TO Q. 77

511

IF "YES," ASK:

75. In what month and year did the visit occur?

MONTH:

512-
513

YEAR: 19

514-
515

HAND RESPONDENT EXHIBIT 76

76. Was the professional a private contractor, a representative from the electric or gas company, a representative from a fuel oil or LPG company, or someone else?

- 1[] ELECTRIC OR GAS COMPANY REPRESENTATIVE -- SKIP TO INSTRUCTION FOR Q. 81
- 2[] FUEL OIL OR LPG COMPANY REPRESENTATIVE -- SKIP TO INSTRUCTION FOR Q. 81
- 3[] PRIVATE CONTRACTOR
- 5[] SOMEONE ELSE (SPECIFY):

516

-- ASK Q. 77 IF BOX "1" OR "2" IS NOT MARKED

TAKE BACK EXHIBIT 76

IF ELECTRIC, GAS, FUEL OIL, OR LPG COMPANY REPRESENTATIVE NOT MENTIONED ON Q. 76 OR "NO" ON Q. 74, ASK:

77. If you request it, will your electric company or heating fuel supplier send a professional to inspect your house and advise you on ways to save energy?

- 1[] YES, THEY WILL
- 0[] NO, THEY WON'T
- 6[] DON'T KNOW

517
SKIP TO INSTRUCTION FOR Q. 81

IF "YES," ASK:

78. Do you now have any plans to request this service from your electric company or heating fuel supplier?

- 1[] YES -- SKIP TO INSTRUCTION FOR Q. 81
- 0[] NO

518

IF "NO," ASK:

79. Is there some reason you have for not requesting this service?

- 1[] YES
- 0[] NO -- SKIP TO INSTRUCTION FOR Q. 81

519

IF "YES," ASK:

80. What is your reason?

IF ONE-FAMILY HOUSE, ASK Q. 81 ff. IF TRAILER, SKIP TO Q. 86. IF 2 OR MORE UNITS IN BUILDING, SKIP TO Q. 98.

HAND RESPONDENT EXHIBIT 81

81. Please look at this list and tell me which items, if any, have been added or installed in your home since January 1, 1979. (SEE INSTRUCTION BELOW.)

<p>a. Roof or ceiling insulation</p> <p>1[] YES 520</p> <p>0[] NO</p> <p>2[] IN PROCESS</p>	<p>521-524</p> <p>MONTH: _____</p> <p>YEAR: 19 _____</p> <p>[] IN PROCESS</p>	<p>525</p> <p>1[] BATT/BLANKET</p> <p>2[] LOOSE PARTICLES/ LOOSE FILL</p> <p>3[] FIRM FOAM/FIRM PLASTIC</p> <p>4[] SPRAYED-IN URETHANE FOAM</p> <p>6[] DON'T KNOW</p>	<p>526</p> <p>1[] LABOR AND MATERIALS</p> <p>2[] MATERIALS ONLY</p> <p>5[] OTHER (SPECIFY): _____</p>	<p>527-528</p> <p>APPROXIMATE COST: \$ _____ .00</p> <p>[] DON'T KNOW</p>
<p>b. Insulation in the outside walls</p> <p>1[] YES 530</p> <p>0[] NO</p> <p>2[] IN PROCESS</p>	<p>531-534</p> <p>MONTH: _____</p> <p>YEAR: 19 _____</p> <p>[] IN PROCESS</p>	<p>535</p> <p>1[] BATT/BLANKET</p> <p>2[] LOOSE PARTICLES/ LOOSE FILL</p> <p>3[] FIRM FOAM/FIRM PLASTIC</p> <p>4[] SPRAYED-IN URETHANE FOAM</p> <p>6[] DON'T KNOW</p>	<p>536</p> <p>1[] LABOR AND MATERIALS</p> <p>2[] MATERIALS ONLY</p> <p>5[] OTHER (SPECIFY): _____</p>	<p>537-538</p> <p>APPROXIMATE COST: \$ _____ .00</p> <p>[] DON'T KNOW</p>
<p>c. Insulation in the basement or crawl space below floor of house</p> <p>1[] YES 540</p> <p>0[] NO</p> <p>2[] IN PROCESS</p>	<p>541-544</p> <p>MONTH: _____</p> <p>YEAR: 19 _____</p> <p>[] IN PROCESS</p>	<p>545</p> <p>1[] BATT/BLANKET</p> <p>2[] LOOSE PARTICLES/ LOOSE FILL</p> <p>3[] FIRM FOAM/FIRM PLASTIC</p> <p>4[] SPRAYED-IN URETHANE FOAM</p> <p>6[] DON'T KNOW</p>	<p>546</p> <p>1[] LABOR AND MATERIALS</p> <p>2[] MATERIALS ONLY</p> <p>5[] OTHER (SPECIFY): _____</p>	<p>547-548</p> <p>APPROXIMATE COST: \$ _____ .00</p> <p>[] DON'T KNOW</p>

TAKE BACK EXHIBIT 81

FOR EACH "YES" OR "IN PROCESS" ANSWER, ASK:

82. In what month and year was the work completed? (SEE INSTRUCTIONS BELOW.) _____

HAND RESPONDENT EXHIBIT 83

83. What type of insulation is it? (SEE INSTRUCTION BELOW.) _____

TAKE BACK EXHIBIT 83

84. (Did you pay/Are you paying) for labor and materials, only for materials, or what? _____

85. Approximately what (did/will) the job cost? _____

INTERVIEWER INSTRUCTIONS:

Q. 81 -- Mark "Yes," "No," or "In Process," for each item. Count as "In Process" any work started but not yet completed. Do not count changes made before this household moved in.

Q. 82 -- If household has done item more than once, write down the most recent date.

Q. 83 -- If more than one type of insulation, mark one used most.

IF ONE-FAMILY HOUSE OR TRAILER, ASK Q. 86 ff. OTHERWISE SKIP TO Q. 98.

86. Since January 1, 1979, has a heat pump or wood burning stove been installed in your home?
(SEE INSTRUCTION BELOW.)

a. Heat pump 550 1 <input type="checkbox"/> YES 0 <input type="checkbox"/> NO 2 <input type="checkbox"/> IN PROCESS	551-554 MONTH: _____ YEAR: 19_____ <input type="checkbox"/> IN PROCESS	1 <input type="checkbox"/> LABOR AND MATERIALS 555 2 <input type="checkbox"/> MATERIALS ONLY 5 <input type="checkbox"/> OTHER (SPECIFY): _____	556-559 APPROXIMATE COST: \$ _____ .00 <input type="checkbox"/> DON'T KNOW
b. Wood-burning stove 560 1 <input type="checkbox"/> YES 0 <input type="checkbox"/> NO 2 <input type="checkbox"/> IN PROCESS	561-564 MONTH: _____ YEAR: 19_____ <input type="checkbox"/> IN PROCESS	1 <input type="checkbox"/> LABOR AND MATERIALS 565 2 <input type="checkbox"/> MATERIALS ONLY 5 <input type="checkbox"/> OTHER (SPECIFY): _____	566-569 APPROXIMATE COST: \$ _____ .00 <input type="checkbox"/> DON'T KNOW

FOR EACH "YES" OR "IN PROCESS"
ANSWER, ASK:

87. In what month and year was
the work completed? (SEE
INSTRUCTION BELOW.)

88. (Did you pay/Are you paying) for labor and materials
or only for materials?

89. Approximately what (did/will) the job cost?

INTERVIEWER INSTRUCTIONS:

Q. 86 -- Mark "Yes," "No," or "In Process" for each item. Count as "In Process" any work started but not yet completed. Do not count any changes made before this household moved in.

Q. 87 -- If household has done item more than once, write down most recent date.

CONTINUE IF ONE-FAMILY HOUSE OR TRAILER. OTHERWISE SKIP TO Q. 98.

607-608:06

HAND RESPONDENT EXHIBIT 90

90. Please look at this list and tell me which items, if any, have been added or installed in your home since January 1, 1979. (SEE INSTRUCTION BELOW.)

	YES	NO	IN PROCESS	MONTH	YEAR	IN PROCESS	
a. An automatic or clock thermostat	1 <input type="checkbox"/>	0 <input type="checkbox"/>	2 <input type="checkbox"/>	_____	19 _____	<input type="checkbox"/>	611-615
b. Adjustments to thermostat control (recalibration)	1 <input type="checkbox"/>	0 <input type="checkbox"/>	2 <input type="checkbox"/>	_____	19 _____	<input type="checkbox"/>	616-620
c. An additional thermostat (zoned your home)	1 <input type="checkbox"/>	0 <input type="checkbox"/>	2 <input type="checkbox"/>	_____	19 _____	<input type="checkbox"/>	621-625
d. Smaller nozzle or burner or smaller line on furnace	1 <input type="checkbox"/>	0 <input type="checkbox"/>	2 <input type="checkbox"/>	_____	19 _____	<input type="checkbox"/>	626-630
e. Flame retention head burner for furnace (fuel oil)	1 <input type="checkbox"/>	0 <input type="checkbox"/>	2 <input type="checkbox"/>	_____	19 _____	<input type="checkbox"/>	631-635
f. Automatic flue door (vent damper)	1 <input type="checkbox"/>	0 <input type="checkbox"/>	2 <input type="checkbox"/>	_____	19 _____	<input type="checkbox"/>	636-640
g. Electrical or mechanical furnace ignition system (spark ignition)	1 <input type="checkbox"/>	0 <input type="checkbox"/>	2 <input type="checkbox"/>	_____	19 _____	<input type="checkbox"/>	641-645
h. Insulation around heating ducts	1 <input type="checkbox"/>	0 <input type="checkbox"/>	2 <input type="checkbox"/>	_____	19 _____	<input type="checkbox"/>	646-650
i. Insulation around the hot water pipes	1 <input type="checkbox"/>	0 <input type="checkbox"/>	2 <input type="checkbox"/>	_____	19 _____	<input type="checkbox"/>	651-655
j. Insulation around the hot water heater	1 <input type="checkbox"/>	0 <input type="checkbox"/>	2 <input type="checkbox"/>	_____	19 _____	<input type="checkbox"/>	656-660
k. Meter which displays the cost of energy	1 <input type="checkbox"/>	0 <input type="checkbox"/>	2 <input type="checkbox"/>	_____	19 _____	<input type="checkbox"/>	661-665
l. Other energy-saving devices (Specify): _____	1 <input type="checkbox"/>	0 <input type="checkbox"/>	2 <input type="checkbox"/>	_____	19 _____	<input type="checkbox"/>	666-670

FOR EACH "YES," ASK:

91. In what month and year was the work completed? _____
(SEE INSTRUCTIONS BELOW.)

TAKE BACK EXHIBIT 90

INTERVIEWER INSTRUCTIONS:

Q. 90 -- Mark "Yes," "No," or "In Process" for each item. Count as "In Process" any work started but not yet completed. Do not count any changes made before this household moved in.

Q. 91 -- If household has done item more than once, write down most recent date.

CONTINUE IF ONE-FAMILY HOUSE OR TRAILER, OTHERWISE SKIP TO Q. 98.

92. In some communities there are programs to help some people save energy by providing and installing such things as insulation, storm windows, or storm doors at no cost to the household. Do you know of such a program in your community?

1[] YES 711
 0[] NO -- SKIP TO Q. 95

IF "YES," ASK:

93. Have you made use of the program?

1[] YES 712
 0[] NO -- SKIP TO Q. 95

IF "YES," ASK:

HAND RESPONDENT EXHIBIT 94

94. Which of these things have you had done, at no cost to you, through the program?

[] ATTIC INSULATION 713
 [] INSULATION IN OUTSIDE WALLS 714
 [] INSULATION IN FLOOR AREA ABOVE UNHEATED BASEMENT OR CRAWL SPACE 715
 [] STORM DOORS ADDED 716
 [] STORM WINDOWS ADDED 717
 [] OTHER (SPECIFY): _____ 718

TAKE BACK EXHIBIT 94

95. Do you have your own swimming pool?

1[] YES 719
 0[] NO -- SKIP TO Q. 98

IF "YES," ASK:

96. Do you use a pool heater?

1[] YES 720
 0[] NO -- SKIP TO Q. 98

IF "YES," ASK:

97. What fuel is used with the heater?

01[] GAS FROM UNDERGROUND PIPES SERVING THE NEIGHBORHOOD
 02[] GAS, LPG (BOTTLED OR TANK GAS)
 03[] FUEL OIL
 04[] KEROSENE OR COAL OIL 721-
 05[] ELECTRICITY 722
 06[] COAL OR COKE
 07[] WOOD
 08[] SOLAR COLLECTORS
 21[] OTHER (SPECIFY): _____

98. Do you have a refrigerator in your home that is presently in use?

- 1[] YES
0[] NO -- SKIP TO Q. 102

723

IF "YES," ASK:

99. Do you have one refrigerator or more than one that is presently in use? (How many altogether?)

- 1[] ONE
2[] TWO
3[] THREE OR MORE

724

ASK ABOUT EACH REFRIGERATOR -- FIRST ASK ABOUT REFRIGERATOR USED MOST:

100. Is it electric or gas?

REFRIGERATOR #1		REFRIGERATOR #2	
1[] ELECTRIC		1[] ELECTRIC	
2[] GAS	725	2[] GAS	727
1[]	726	1[]	728
2[]		2[]	
3[]		3[]	
4[]		4[]	

HAND RESPONDENT EXHIBIT 101

101. Which of these best describes your refrigerator? (MARK ALL THAT APPLY.)

- Freezer section (or ice cube section) must be defrosted periodically
- Freezer section defrosts automatically after frost builds up (catch pan must be emptied). . . .
- Full frost-free (frost does not build up).
- No working freezer section

TAKE BACK EXHIBIT 101

102. Do you have a home freezer (that is separate from the refrigerator) that is presently in use?

- 1[] YES
0[] NO -- SKIP TO Q. 106

729

IF "YES," ASK:

103. Do you have one freezer or more than one that is presently in use? (How many altogether?)

- 1[] ONE
2[] TWO
3[] THREE OR MORE

730

ASK ABOUT EACH FREEZER -- ASK FIRST ABOUT FREEZER USED MOST:

104. Is it electric or gas?

FREEZER #1		FREEZER #2	
1[] ELECTRIC		1[] ELECTRIC	
2[] GAS	731	2[] GAS	733
	732		734
1[] FROST-FREE		1[] FROST-FREE	
2[] MUST DEFROST		2[] MUST DEFROST	

105. Is it a frost-free freezer or must it be defrosted?

HAND RESPONDENT EXHIBIT 106

106. Thinking of all the different kinds of cooking done here, including cooking in the oven, on a range, and with small appliances, which fuel is used most?

- 01[] GAS FROM UNDERGROUND PIPES SERVING THE NEIGHBORHOOD
- 02[] GAS, LPG (BOTTLED OR TANK GAS)
- 03[] FUEL OIL
- 04[] KEROSENE OR COAL OIL
- 05[] ELECTRICITY
- 06[] COAL OR COKE
- 07[] WOOD
- 21[] OTHER (SPECIFY): _____
- 00[] NO COOKING DONE -- SKIP TO Q. 112

735-
736

TAKE BACK EXHIBIT 106

107. Does your household use an oven of any type, including microwave ovens, for cooking at least occasionally?

- 1[] YES
- 0[] NO -- SKIP TO Q. 112

IF "YES," ASK:

108. Do you have one oven or more than one oven that you presently use? (How many altogether?)

- 1[] ONE
- 2[] TWO
- 3[] THREE OR MORE

ASK ABOUT EACH OVEN -- ASK FIRST ABOUT OVEN USED MOST:

109. Is it electric or gas?

- ELECTRIC
- GAS

IF "ELECTRIC," ASK:

110. Is it a microwave oven?

- YES
- NO

111. Does your oven have a self-cleaning or continuous cleaning feature?

- SELF-CLEANING
- CONTINUOUS CLEANING
- NEITHER OF THESE

	OVEN #1	OVEN #2
ELECTRIC	1[]	1[]
GAS	2[]	2[]
YES	1[]	1[]
NO	0[]	0[]
SELF-CLEANING	1[]	1[]
CONTINUOUS CLEANING	2[]	2[]
NEITHER OF THESE	0[]	0[]

739- 742-
741 744

HAND RESPONDENT EXHIBIT 112

112. Which of these do you use here in your (home/apartment)?

ELECTRIC RANGE (STOVE-TOP OR BURNERS)	1 <input type="checkbox"/>	YES	0 <input type="checkbox"/>	NO	745
GAS RANGE (STOVE-TOP OR BURNERS)	1 <input type="checkbox"/>	YES	0 <input type="checkbox"/>	NO	746
OUTDOOR GAS GRILL	1 <input type="checkbox"/>	YES	0 <input type="checkbox"/>	NO	747
AUTOMATIC CLOTHES WASHER	1 <input type="checkbox"/>	YES	0 <input type="checkbox"/>	NO	748
WRINGER WASHING MACHINE (ELECTRIC)	1 <input type="checkbox"/>	YES	0 <input type="checkbox"/>	NO	749
ELECTRIC DISHWASHER	1 <input type="checkbox"/>	YES	0 <input type="checkbox"/>	NO	750
ELECTRIC CLOTHES DRYER	1 <input type="checkbox"/>	YES	0 <input type="checkbox"/>	NO	751
GAS CLOTHES DRYER	1 <input type="checkbox"/>	YES	0 <input type="checkbox"/>	NO	752
OUTDOOR GAS LIGHT	1 <input type="checkbox"/>	YES	0 <input type="checkbox"/>	NO	753
ELECTRIC DEHUMIDIFIER	1 <input type="checkbox"/>	YES	0 <input type="checkbox"/>	NO	754
ELECTRIC HUMIDIFIER	1 <input type="checkbox"/>	YES	0 <input type="checkbox"/>	NO	755
EVAPORATIVE COOLER (SWAMP COOLER)	1 <input type="checkbox"/>	YES	0 <input type="checkbox"/>	NO	756
BLACK AND WHITE TELEVISION SET	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO	757
					NUMBER: <input type="text"/>
COLOR TELEVISION SET	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO	758
					NUMBER: <input type="text"/>

IF "YES" FOR BLACK AND WHITE TV SET, ASK:

113. How many black and white television sets do you use here in your home? _____

IF "YES" FOR COLOR TV SET, ASK:

114. How many color television sets do you use here in your home? _____

TAKE BACK EXHIBIT 112

115. Now I have some questions about the people who live here. Please tell me who they are, just in relation to you (if they are related to you), and their ages on their last birthdays. Please begin with yourself.

807-808:08

PERSON NUMBER	RELATIONSHIP TO RESPONDENT	SEX		AGE	Q. 120 - EMPLOYMENT (AGE 14+)		
		FEMALE	MALE		FULL TIME	PART TIME	NOT EMPLOYED
1	RESPONDENT	1[]	2[]		1[]	2[]	0[]
2		1[]	2[]		1[]	2[]	0[]
3		1[]	2[]		1[]	2[]	0[]
4		1[]	2[]		1[]	2[]	0[]
5		1[]	2[]		1[]	2[]	0[]
6		1[]	2[]		1[]	2[]	0[]
7		1[]	2[]		1[]	2[]	0[]
8		1[]	2[]		1[]	2[]	0[]
9		1[]	2[]		1[]	2[]	0[]
10		1[]	2[]		1[]	2[]	0[]
11		1[]	2[]		1[]	2[]	0[]
12		1[]	2[]		1[]	2[]	0[]

811-816

821

831

841

851

861

871

907-908:09

911

921

931

941

951

I have listed (READ RELATIONSHIPS FROM Q. 115 ABOVE). Have I missed.....

116. Any babies or small children? YES (ADD TO LISTING)
 NO
117. Any lodgers, boarders, or persons in your employ who live here? YES (ADD TO LISTING)
 NO
118. Anyone who usually lives here but is away traveling or in the hospital? (SEE INSTRUCTION BELOW.) YES (ADD TO LISTING)
 NO
119. Anyone else staying here who does not have a regular residence elsewhere? YES (ADD TO LISTING)
 NO

FOR EACH PERSON AGED 14 YEARS OR OLDER, ASK:

120. Is he/she employed full-time (30 hours or more per week), part-time, or not employed? YES -- SEE INSTRUCTION BELOW
 NO
121. Does another family share your home with you? YES -- SEE INSTRUCTION BELOW
 NO

961-962

963

INTERVIEWER INSTRUCTIONS:

Q. 118 -- 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.

Q. 121 -- If another family shares the same housing unit, members should be listed in household composition table above.

If another family has a separate apartment that is defined by our rules as a separate housing unit, the additional housing unit should be listed on your housing unit address list for this location. See sampling instructions to see whether an additional interview should be completed.

INTERVIEWER: MARK ANSWER. ASK, IF NECESSARY.

RESPONDENT'S
MARITAL STATUS

122. Are you now married, widowed, divorced, or separated, or have you never been married?

- 1 NOW MARRIED
- 2 WIDOWED
- 3 DIVORCED OR SEPARATED
- 4 NEVER MARRIED

964

HAND RESPONDENT EXHIBIT 123

123. Which of the groups on this exhibit best describes your origin?

- 1 WHITE
- 2 BLACK OR NEGRO
- 3 AMERICAN INDIAN, ALASKAN NATIVE
- 4 ASIAN, PACIFIC ISLANDER
- 5 OTHER (SPECIFY): _____

965

TAKE BACK EXHIBIT 123

124. Are you of Spanish origin; that is, from a Spanish-American family?

- 1 YES
- 0 NO

966

IF "YES," ASK:

HAND RESPONDENT EXHIBIT 125

125. Which of these types of Spanish-Americans best describes you?

- 1 MEXICAN, MEXICAN-AMERICAN, CHICANO
- 2 PUERTO RICAN
- 3 CUBAN
- 5 OTHER/SPANISH/HISPANIC

967

TAKE BACK EXHIBIT 125

126. How many members of your household can drive a car?

NUMBER OF DRIVERS:

NONE

968--
969

HAND RESPONDENT EXHIBIT 127

1007-1008:10

127. 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.)

1 [] YES
 0 [] NO -- TAKE BACK EXHIBIT 127, SKIP TO INSTRUCTION FOR Q. 137 1011

IF "YES," ASK:

128. How many do you have?

NUMBER OF VEHICLES:

1012-1013

129. Which type(s) do you have? (IF HOUSEHOLD HAS MORE THAN FOUR VEHICLES, MARK ANSWERS FOR THE FOUR VEHICLES USED MOST.)

STATION WAGON
 AUTOMOBILE
 JEEP OR SIMILAR VEHICLE
 PASSENGER VAN OR MINIBUS
 CARGO VAN
 PICKUP TRUCK
 OTHER TRUCK
 MOTOR HOME
 OTHER (SPECIFY):

VEHICLE NUMBER

	1	2	3	4
	1014-1015	1029-1030	1044-1045	1059-1060
01 []		01 []	01 []	01 []
02 []		02 []	02 []	02 []
03 []		03 []	03 []	03 []
04 []		04 []	04 []	04 []
05 []		05 []	05 []	05 []
06 []		06 []	06 []	06 []
07 []		07 []	07 []	07 []
08 []		08 []	08 []	08 []
21 []		21 []	21 []	21 []
	1016-1017	1031-1032	1046-1047	1061-1062
MAKE				
	1018-1019	1033-1034	1048-1049	1063-1064
MODEL NAME				
	1020-1021	1035-1036	1050-1051	1065-1066
MODEL YEAR	19 _____	19 _____	19 _____	19 _____
	1022	1037	1052	1067
YES	1 []	1 []	1 []	1 []
NO	0 []	0 []	0 []	0 []

130. Please tell me the make and model name (of each one).

131. What is the model year (of each one)? (ENTER LAST TWO DIGITS OF MODEL YEAR.)

TAKE BACK EXHIBIT 127

132. Is it used on the job by anyone in your household not counting going to or from work?

CONTINUE IF ONE OR MORE VEHICLES ON Q. 128. OTHERWISE SKIP TO INSTRUCTION FOR Q. 137.

HAND RESPONDENT EXHIBIT 133

133. What kind of fuel is used most frequently?

- UNLEADED REGULAR GASOLINE
- UNLEADED PREMIUM GASOLINE
- REGULAR GASOLINE
- PREMIUM OR HIGH TEST GASOLINE
- GASOHOL
- DIESEL
- ELECTRICITY
- OTHER (SPECIFY):

DON'T KNOW

TURN TO EXHIBIT 134

134. What type of engine does it have?

- 1-CYLINDER
- 2-CYLINDER
- 3-CYLINDER
- 4-CYLINDER
- 5-CYLINDER
- 6-CYLINDER
- 8-CYLINDER
- ROTARY
- ELECTRIC
- OTHER (SPECIFY):

DON'T KNOW

TAKE BACK EXHIBIT 134

135. Does it have air-conditioning?

- YES
- NO

136. Does it have an automatic transmission or a manual shift?

- AUTOMATIC
- MANUAL SHIFT

VEHICLE NUMBER			
1	2	3	4
1023- 1024	1038- 1039	1053- 1054	1068- 1069
01[]	01[]	01[]	01[]
02[]	02[]	02[]	02[]
03[]	03[]	03[]	03[]
04[]	04[]	04[]	04[]
05[]	05[]	05[]	05[]
06[]	06[]	06[]	06[]
07[]	07[]	07[]	07[]
21[]	21[]	21[]	21[]
96[]	96[]	96[]	96[]
1025- 1026	1040- 1041	1055- 1056	1070- 1071
01[]	01[]	01[]	01[]
02[]	02[]	02[]	02[]
03[]	03[]	03[]	03[]
04[]	04[]	04[]	04[]
05[]	05[]	05[]	05[]
06[]	06[]	06[]	06[]
08[]	08[]	08[]	08[]
09[]	09[]	09[]	09[]
10[]	10[]	10[]	10[]
21[]	21[]	21[]	21[]
96[]	96[]	96[]	96[]
1027	1042	1057	1073
1[]	1[]	1[]	1[]
0[]	0[]	0[]	0[]
1028	1043	1058	1073
1[]	1[]	1[]	1[]
2[]	2[]	2[]	2[]

CHECK BACK TO Q. 120 ON PAGE 23. MARK APPROPRIATE BOXES.

IF RESPONDENT AND/OR SPOUSE (IF IN HOUSEHOLD) IS EMPLOYED, ASK Q. 137 ff. OTHERWISE SKIP TO Q. 144.

ASK ABOUT RESPONDENT FIRST, THEN SPOUSE

EMPLOYED FULL/PART TIME
 NOT EMPLOYED
 NO SPOUSE IN HOUSEHOLD

RESPONDENT	SPOUSE
1 []	1 []
0 []	0 []
	9 []
1111	1126
1112-1113	1127-1128
01 []	01 []
02 []	02 []
03 []	03 []
04 []	04 []
05 []	05 []
06 []	06 []
07 []	07 []
11 []	11 []
00 []	00 []
1114-1115	1129-1130
01 []	01 []
02 []	02 []
03 []	03 []
04 []	04 []
05 []	05 []
06 []	06 []
07 []	07 []
08 []	08 []
00 []	00 []
1116	1131
1 []	1 []
2 []	2 []
1117	1132
1118-1120	1133-1135
995 []	995 []
1121-1123	1136-1138
1124-1125	1139-1140

137. How many miles is it from your home to the place where (you work/your husband or wife works)? (IF RESPONDENT OR SPOUSE HAS NO FIXED PLACE OF WORK, CHECK "NO FIXED PLACE.")

LESS THAN 1 MILE
 1-4 MILES
 5-9 MILES
 10-14 MILES
 15-19 MILES
 20-29 MILES
 30 OR MORE MILES
 NO FIXED PLACE OF WORK
 WORK AT HOME

38. How (do you/does your husband or wife) usually get to work? (IF MORE THAN ONE MODE OF TRAVEL, ASK ABOUT MODE USED FOR GREATEST DISTANCE.)

BUS OR STREETCAR
 SUBWAY, ELEVATED
 COMMUTER TRAIN
 TAXI
 AUTOMOBILE OTHER THAN TAXI
 TRUCK
 MOTORCYCLE OR MOPED
 WALK OR BICYCLE
 WORK AT HOME

IF "AUTOMOBILE OTHER THAN TAXI" OR "TRUCK," ASK:

139. (Do you/Does your husband or wife) usually ride alone or with other people?

ALONE
 WITH OTHERS

IF "WITH OTHERS":

140. How many other people?

NUMBER

141. About how long would it take (you/your husband or wife) one way to go to work if some form of public transportation were used -- from time leaving home until arriving at work?

MINUTES FOR TRIP, ONE WAY
 NOT POSSIBLE TO USE PUBLIC TRANSPORTATION

142. How much time is usually required for (you/your husband or wife) to get to work -- from time leaving home until arriving at work?

MINUTES FOR TRIP, ONE WAY

143. About how many round trips are made between home and work each week?

NUMBER OF ROUND TRIPS

I have just a few questions for background statistical purposes.

144. What is the highest grade (or year) you attended in school?
- 00[] NEVER ATTENDED SCHOOL -- SKIP TO Q. 146
 - 01[] FIRST 07[] SEVENTH
 - 02[] SECOND 08[] EIGHTH
 - 03[] THIRD 09[] NINTH 1141-
 - 04[] FOURTH 10[] TENTH 1142
 - 05[] FIFTH 11[] ELEVENTH
 - 06[] SIXTH 12[] TWELFTH

COLLEGE (ACADEMIC YEARS)

- 13[] C1 16[] C4
- 14[] C2 17[] C5
- 15[] C3 18[] C6 OR MORE

145. Did you finish that grade (or year)?
- 1[] YES
 - 0[] NO 1143
146. At any time in 1979, did you work for pay at a job or business?
- 1[] YES
 - 0[] NO -- SKIP TO Q. 148 1144

IF "YES," ASK:

147. During 1979, in how many weeks did you work even for a few hours? Include paid vacation and sick leave as work.
- NUMBER OF WEEKS: 1145-
1146

IF LESS THAN 50 WEEKS, OR "NO" ON Q. 146, ASK:

HAND RESPONDENT EXHIBIT 148/153

148. What was the main reason you did not work (the remaining weeks) in 1979? (READ EACH RESPONSE). Were you . . .
- 01[] LOOKING FOR WORK (OR ON LAY-OFF)
 - 02[] ILL OR DISABLED AND UNABLE TO WORK
 - 03[] TAKING CARE OF FAMILY
 - 04[] GOING TO SCHOOL
 - 05[] UNABLE TO FIND WORK 1147-
 - 06[] IN ARMED FORCES 1148
 - 07[] RETIRED
 - 08[] DOING SOMETHING ELSE

TAKE BACK EXHIBIT 148/153

IF RESPONDENT IS MARRIED, ASK Q. 149 ff. OTHERWISE SKIP TO Q. 154.

149. What is the highest grade (or year) that your (husband/wife) attended in school?
- 00[] NEVER ATTENDED SCHOOL -- SKIP TO Q. 151
- 01[] FIRST 07[] SEVENTH
- 02[] SECOND 08[] EIGHTH
- 03[] THIRD 09[] NINTH 1149-
- 04[] FOURTH 10[] TENTH 1150
- 05[] FIFTH 11[] ELEVENTH
- 06[] SIXTH 12[] TWELFTH

COLLEGE (ACADEMIC YEARS)

- 13[] C1 16[] C4
- 14[] C2 17[] C5
- 15[] C3 18[] C6 OR MORE
150. Did (he/she) finish that grade (or year)?
- 1[] YES
- 0[] NO 1151
151. At any time in 1979, did your (husband/wife) work for pay at a job or business?
- 1[] YES
- 0[] NO -- SKIP TO Q. 153 1152

IF "YES," ASK:

152. During 1979, in how many weeks did your (husband/wife) work even for a few hours? Include paid vacation and sick leave as work.
- NUMBER OF WEEKS: 1153-
1154

IF LESS THAN 50 WEEKS, OR "NO" ON Q. 151 ASK:

HAND RESPONDENT EXHIBIT 148/153

153. What was the main reason your (husband/wife) did not work (the remaining weeks) in 1979? (READ EACH RESPONSE). Was he/she . . .
- 01[] LOOKING FOR WORK (OR ON LAY-OFF)
- 02[] ILL OR DISABLED AND UNABLE TO WORK
- 03[] TAKING CARE OF FAMILY
- 04[] GOING TO SCHOOL
- 05[] UNABLE TO FIND WORK 1155-
1156
- 06[] IN ARMED SERVICES
- 07[] RETIRED
- 08[] DOING SOMETHING ELSE

TAKE BACK EXHIBIT 148/153

HAND RESPONDENT EXHIBIT 154

154. Now let's look at this list of income groups. Please tell me which group letter best describes the total combined income in 1979 of all members of your family living here, from all sources -- wages, dividends, Social Security, and so forth -- before taxes and deductions. (Family includes all related persons living in this household.)

CIRCLE LETTER FOR INCOME GROUP

- | | |
|--------------------------|--------------------------|
| 01 A LOSS | 14 N \$14,000 - \$14,999 |
| 02 B \$0 - \$2,999 | 15 O \$15,000 - \$16,999 |
| 03 C \$3,000 - \$3,999 | 16 P \$17,000 - \$19,999 |
| 04 D \$4,000 - \$4,999 | 17 Q \$20,000 - \$24,999 |
| 05 E \$5,000 - \$5,999 | 18 R \$25,000 - \$29,999 |
| 06 F \$6,000 - \$6,999 | 19 S \$30,000 - \$34,999 |
| 07 G \$7,000 - \$7,999 | 20 T \$35,000 - \$39,999 |
| 08 H \$8,000 - \$8,999 | 21 U \$40,000 - \$49,999 |
| 09 I \$9,000 - \$9,999 | 22 V \$50,000 - \$74,999 |
| 10 J \$10,000 - \$10,999 | 23 W \$75,000 OR OVER |
| 11 K \$11,000 - \$11,999 | 96 [] DON'T KNOW |
| 12 L \$12,000 - \$12,999 | 97 [] REFUSED |
| 13 M \$13,000 - \$13,999 | |

1157--
1158

TAKE BACK EXHIBIT 154

155. Do you or members of your household own your home or do you rent?
- 1 [] OWN (BUYING)
2 [] RENT -- SKIP TO Q. 157
3 [] OCCUPIED WITHOUT PAYMENT OF RENT -- SKIP TO Q. 157

1159

IF "OWN (BUYING)," ASK:

156. Is this house (apartment) part of a condominium or cooperative?
- 1 [] YES, CONDOMINIUM
2 [] YES, COOPERATIVE
0 [] NO

1160


HAND RESPONDENT EXHIBIT 157

157. We may have covered some of these points before, but just to be sure, please look at this exhibit and tell me whether these fuels are used here in your household.

	USED	NOT USED	PAID BY HOUSEHOLD	INCLUDED IN RENT	OTHER (SPECIFY)	
<u>ELECTRICITY</u>						
a. FOR HOT WATER	1[]	0[]	1[]	2[]	5[]	1161-1162
b. FOR HEATING YOUR HOME	1[]	0[]	1[]	2[]	5[]	1163-1164
c. FOR AIR-CONDITIONING (CENTRAL OR WINDOW/WALL UNITS)	1[]	0[]	1[]	2[]	5[]	1165-1166
d. FOR COOKING	1[]	0[]	1[]	2[]	5[]	1167-1168
e. FOR LIGHTING AND OTHER APPLIANCES	1[]	0[]	1[]	2[]	5[]	1169-1170
<u>GAS FROM UNDERGROUND PIPES SERVING YOUR NEIGHBORHOOD</u>						
f. FOR HOT WATER	1[]	0[]	1[]	2[]	5[]	1171-1172
g. FOR HEATING YOUR HOME	1[]	0[]	1[]	2[]	5[]	1173-1174
h. FOR CENTRAL AIR-CONDITIONING	1[]	0[]	1[]	2[]	5[]	1175-1176
i. FOR COOKING	1[]	0[]	1[]	2[]	5[]	1177-1178
j. FOR OTHER APPLIANCES (INCLUDE OUTSIDE GAS LIGHT HERE)	1[]	0[]	1[]	2[]	5[]	1179-1180
<u>GAS, LPG (BOTTLED OR TANK GAS)</u>						
k. FOR HOT WATER	1[]	0[]	1[]	2[]	5[]	1211-1212
l. FOR HEATING YOUR HOME	1[]	0[]	1[]	2[]	5[]	1213-1214
m. FOR CENTRAL AIR-CONDITIONING	1[]	0[]	1[]	2[]	5[]	1215-1216
n. FOR COOKING INSIDE HOME	1[]	0[]	1[]	2[]	5[]	1217-1218
o. FOR COOKING ON OUTDOOR GRILL	1[]	0[]	1[]	2[]	5[]	1219-1220
p. FOR OTHER APPLIANCES	1[]	0[]	1[]	2[]	5[]	1221-1222
<u>FUEL OIL OR KEROSENE</u>						
q. FOR HOT WATER	1[]	0[]	1[]	2[]	5[]	1223-1224
r. FOR HEATING YOUR HOME	1[]	0[]	1[]	2[]	5[]	1225-1226

1207-1208:12

FOR EACH USE OF EACH FUEL, ASK:

158. Is that paid for by your household, included in your rent, or do you get it some other way? 

TAKE BACK EXHIBIT 157

IF ONE-FAMILY HOUSE OR TRAILER AND IF UNDERGROUND GAS IS NOT USED, ASK Q. 159. OTHERWISE SKIP TO INSTRUCTION FOR Q. 160.

159. Is gas from underground pipes available in this neighborhood? 1[] YES
0[] NO
6[] DON'T KNOW

1227

IF ALL FUEL BILLS ARE INCLUDED IN RENT, SKIP TO Q. 186.

IF HOUSEHOLD USES AND PAYS FOR GAS, LPG (SEE QUESTIONS 157-158, PARTS k-p), ASK Q. 160 ff. OTHERWISE, SKIP TO INSTRUCTION FOR Q. 163.

160. About how many deliveries of LPG does your household usually get in a year?

NUMBER OF DELIVERIES:

1228-1229

95 LIVED HERE LESS THAN ONE YEAR

00 NONE DELIVERED, CASH AND CARRY, PICK UP AT STORE

161. Did you buy LPG for this house (apartment) in the past 12 months from one company or from more than one company?

1 ONE COMPANY

1230

2 MORE THAN ONE COMPANY

IF "MORE THAN ONE COMPANY," ASK:

162. How many different companies?

2 TWO

3 THREE

1231

4 FOUR OR MORE

IF HOUSEHOLD USES AND PAYS FOR FUEL OIL OR KEROSENE (SEE QUESTIONS 157-158, PARTS q and r), ASK Q. 163 ff. OTHERWISE SKIP TO INSTRUCTION FOR Q. 176.

163. How many tanks do you have for fuel oil or kerosene?

1 ONE

2 TWO

1232

3 THREE OR MORE

164. What is the capacity of the tank (each tank) in total gallons?

TANK #1

TANK #2

275 GALLONS 1233-

275 GALLONS 1243-

550 GALLONS 1236

550 GALLONS 1249

1000 GALLONS

1000 GALLONS

OTHER - (SPECIFY):

OTHER - (SPECIFY):

165. Did you have this same tank in January 1979, or is it a replacement (or has it been added since January 1979)?

1 SAME TANK 1237

1 SAME TANK 1250

2 REPLACEMENT

2 REPLACEMENT

3 ADDITIONAL TANK

3 ADDITIONAL TANK

IF REPLACEMENT TANK, ASK:

166. What was the capacity of the tank that was replaced?

275 GALLONS

275 GALLONS

550 GALLONS 1238-

550 GALLONS 1251-

1000 GALLONS

1000 GALLONS

OTHER - (SPECIFY):

OTHER - (SPECIFY):

1242-1245

1255-1259

167. In what month and year was it replaced?

MONTH: _____

MONTH: _____

YEAR: 19 _____

YEAR: 19 _____

CONTINUE IF HOUSEHOLD USES AND PAYS FOR FUEL OIL OR KEROSENE. OTHERWISE, SKIP TO INSTRUCTION FOR Q. 176.

HAND RESPONDENT EXHIBIT 168

168. About how much fuel oil/kerosene does your household use in a year -- which of these groups would it be?
- 1[] LESS THAN 100 GALLONS PER YEAR
 - 2[] 100-499 GALLONS PER YEAR 1259
 - 3[] 500-999 GALLONS PER YEAR
 - 4[] 1000 GALLONS OR MORE

TAKE BACK EXHIBIT 168

169. About how many times a year does your household purchase fuel oil/kerosene?
- NUMBER OF DELIVERIES: 1260-1261
- 95[] LIVED HERE LESS THAN 1 YEAR

170. Did you buy fuel oil for this house (apartment) in the past 12 months from one company, or from more than one company?
- 1[] ONE COMPANY 1262
 - 2[] MORE THAN ONE COMPANY

IF "MORE THAN ONE," ASK:

171. How many different companies?
- 2[] TWO 1263
 - 3[] THREE
 - 4[] FOUR OR MORE

172. About what did your household pay per gallon on your last delivery/purchase of fuel oil/kerosene?
- PRICE PER GALLON: 1264-1266
- [] DON'T KNOW

173. In what month and year did you have your last delivery/purchase of fuel oil/kerosene?
- MONTH: 1267-1268

- YEAR: 1269-1270

174. Since the beginning of June, 1980, has your household had any problems getting fuel oil/kerosene when it was needed?
- 1[] YES 1271
 - 0[] NO
 - 5[] HAVEN'T NEEDED ANY

IF "YES," ASK:

175. Was the problem that no fuel oil/kerosene was available, or that the fuel oil/kerosene cost more than your household could afford, or was it something else? (MARK AS MANY AS APPLY.)
- 1[] NONE AVAILABLE 1272
 - 2[] COST MORE THAN HOUSEHOLD COULD AFFORD
 - 5[] OTHER (SPECIFY): _____

IF HOUSEHOLD USES AND PAYS FOR ELECTRICITY, GAS (FROM UNDERGROUND PIPES OR LPG) OR FUEL OIL/ KEROSENE IN Q. 158, ASK Q. 176 ff. OTHERWISE, SKIP TO INSTRUCTION FOR Q. 186.

HAND RESPONDENT EXHIBIT 176

176. Do any of your household electric, gas, fuel oil or kerosene bills include charges for fuel used for purposes other than for your own living quarters, such as farm buildings or machinery, the house or apartment of another household, a business or office, or anything else?
- 1 YES 1311
- 0 NO -- TAKE BACK EXHIBIT 176, SKIP TO Q. 182

IF "YES," ASK:

177. Which fuel bills include charges for fuel used for purposes other than your own living quarters? (CHECK AS MANY AS APPLY.)
- ELECTRICITY 1312
- GAS FROM UNDERGROUND PIPES 1313
- GAS, LPG (BOTTLED OR TANK GAS) 1314
- FUEL OIL OR KEROSENE 1315

TURN TO EXHIBIT 178-181

IF "ELECTRICITY" ON Q. 177, ASK:

178. About how much of your household's electricity bill is used for non-household uses such as farm buildings or machinery, the house or apartment of another household, a business or office, or anything else?
- 0 VERY LITTLE (LESS THAN 5%)
- 1 1/4 (5 - 33%)
- 2 1/2 (34 - 66%) 1316
- 3 3/4 (67 - 95%)

IF "GAS FROM UNDERGROUND PIPES" ON Q. 177, ASK:

179. About how much of your household's gas bill is used for non-household uses such as farm buildings or machinery, the house or apartment of another household, a business or office, or anything else?
- 0 VERY LITTLE (LESS THAN 5%)
- 1 1/4 (5 - 33%)
- 2 1/2 (34 - 66%) 1317
- 3 3/4 (67 - 95%)

IF "GAS, LPG" ON Q. 177, ASK:

180. About how much of your household's LPG bill is used for non-household uses such as farm buildings or machinery, the house or apartment of another household, a business or office, or anything else?
- 0 VERY LITTLE (LESS THAN 5%)
- 1 1/4 (5 - 33%)
- 2 1/2 (34 - 66%) 1318
- 3 3/4 (67 - 95%)

IF "FUEL OIL OR KEROSENE" ON Q. 177, ASK:

181. About how much of your household's fuel oil/kerosene bill is used for non-household uses such as farm buildings or machinery, the house or apartment of another household, a business or office, or anything else?
- 0 VERY LITTLE (LESS THAN 5%)
- 1 1/4 (5 - 33%)
- 2 1/2 (34 - 66%) 1319
- 3 3/4 (67 - 95%)

TAKE BACK EXHIBIT 178-181

CONTINUE IF ANY ELECTRIC, GAS (FROM UNDERGROUND PIPES OR LPG) OR FUEL OIL OR KEROSENE BILLS ARE PAID BY HOUSEHOLD. OTHERWISE, SKIP TO INSTRUCTION FOR Q. 186.

182. In addition to the types of fuel you use, we are interested in the quantities used and in the amount that people pay for electricity, gas, fuel oil or kerosene in different parts of the United States.

I have a form that would authorize the companies that supply your household to provide that information to Response Analysis Corporation.

Since this study is being done nationwide, it will give a good picture of the differences in fuel cost and usage all over the country. The information is needed to help establish important national energy policies.

INTERVIEWER: REMOVE THE AUTHORIZATION FORM FROM THE QUESTIONNAIRE AND HAND TO RESPONDENT. EITHER YOU OR RESPONDENT SHOULD FILL IN THE NAME(S) OF COMPANIES. IF MORE THAN ONE LPG OR FUEL OIL OR KEROSENE COMPANY HAS BEEN USED SINCE JANUARY 1, 1980, FILL IN ADDITIONAL COMPANY NAMES ON OTHER SIDE OF FORM. PLEASE PRINT.

1 AUTHORIZATION FORM SIGNED

1320

0 AUTHORIZATION FORM NOT SIGNED -- INTERVIEWER, EXPLAIN BELOW:

IF AUTHORIZATION FORM IS SIGNED, ASK Q. 183 ff. OTHERWISE, SKIP TO INSTRUCTION FOR Q. 186.

183. Do your fuel bills come addressed to (LAST NAME OF SIGNATURE ON AUTHORIZATION FORM), or are they in another name?
- 1 SAME AS LAST NAME -- SKIP TO INSTRUCTION FOR Q. 185
- 2 ANOTHER NAME

1321

IF BILL IS IN ANOTHER NAME, ASK:

184. What is that name and address?

BILLING NAME: _____

STREET ADDRESS: _____

CITY OR STATE: _____

ZIP CODE: _____

IF HOUSEHOLD'S ADDRESS IS A P.O. BOX OR RURAL ROUTE OR OTHER VAGUE ADDRESS AND IF HOUSEHOLD PAYS FOR ELECTRICITY OR GAS FROM UNDERGROUND PIPES AND IF HOUSEHOLD SIGNED THE AUTHORIZATION FORM, ASK Q. 185. OTHERWISE, SKIP TO INSTRUCTION FOR Q. 186.

185. Would it be possible for you to give me your customer number at your electric/gas company? This number is on your bills from the company.

ELECTRIC COMPANY -- CUSTOMER NUMBER: _____

1322

NOT AVAILABLE/REFUSED

GAS (FROM UNDERGROUND PIPES) -- CUSTOMER NUMBER: _____

1323

NOT AVAILABLE/REFUSED

--	--



U.S. DEPARTMENT OF ENERGY SURVEY

**Authorization Form for
Residential Energy Consumption Survey**

I hereby give permission to the company (companies) below to provide information to Response Analysis Corporation for confidential use in connection with their survey for the U.S. Department of Energy.

This authorization covers use of fuels (electricity, natural gas or LPG, fuel oil or kerosene) by my household from January 1, 1980 through April 30, 1982, including:

- 1) the total amount of fuels used by my household.
- 2) the total price charged for fuels used by my household.

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: _____		

**PLEASE COMPLETE ONE BLOCK BELOW FOR EACH FUEL USED BY YOUR 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: _____	

GAS →

from underground pipes
or LPG (bottled or tank 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: _____	

GAS →
LPG (bottled
or tank gas)

SECOND GAS COMPANY

PRINT FULL NAME OF GAS COMPANY
LOCATION OF COMPANY (IF KNOWN) -- CITY AND STATE
TELEPHONE AREA CODE: _____ NUMBER: _____

THIRD GAS COMPANY

PRINT FULL NAME OF GAS COMPANY
LOCATION OF COMPANY (IF KNOWN) -- CITY AND STATE
TELEPHONE AREA CODE: _____ NUMBER: _____

FUEL OIL →
or KEROSENE

SECOND FUEL OIL/KEROSENE COMPANY

PRINT FULL NAME OF OIL COMPANY
LOCATION OF COMPANY (IF KNOWN) -- CITY AND STATE
TELEPHONE AREA CODE: _____ NUMBER: _____

THIRD FUEL OIL/KEROSENE COMPANY

PRINT FULL NAME OF OIL COMPANY
LOCATION OF COMPANY (IF KNOWN) -- CITY AND STATE
TELEPHONE AREA CODE: _____ NUMBER: _____

IF HOUSEHOLD HAS ONE OR MORE FUELS INCLUDED IN RENT (SEE Q. 158), ASK Q. 186. OTHERWISE, SKIP TO Q. 187.

186. 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?

NAME: _____

1324

TELEPHONE NUMBER: (AREA CODE: _____) _____

STREET ADDRESS: _____

CITY OR TOWN/STATE/ZIP CODE: _____

ASK EVERYONE

187. For interview verification purposes, may I have your name, phone number, and mailing address please?

RESPONDENT'S NAME: _____

TELEPHONE NUMBER: (AREA CODE _____) _____

STREET ADDRESS: _____

CITY OR TOWN/STATE/ZIP CODE: _____

188. So far we've been talking about things in your household that affect your energy use. What we need also is a measure of your year-round living space.

With your permission, I would like to measure your home. I can do it from the inside or the outside. With your home, I think it would be most accurate to do it on the (inside/outside).

INCLUDE ONLY THE PART OF THE HOUSE THAT IS ENCLOSED FROM THE WEATHER. ASK THE RESPONDENT ABOUT ANY PECULIARITIES IN SHAPE THAT THE HOME MAY HAVE.

INDICATE WHETHER THE MEASUREMENT IS DONE INSIDE OR OUTSIDE THE HOME.

- 1[] INSIDE 1325
- 2[] OUTSIDE

189. Are any of the areas measured not heated during most of the heating season?

- 1[] YES -- INDICATE UNHEATED AREA(S) ON THE DIAGRAM WITH LINES LIKE THIS (//////). 1326
- 0[] NO

INTERVIEWER INSTRUCTIONS:

• MARK TYPE OF HOUSING UNIT

- 1[] MOBILE HOME OR TRAILER
- 2[] ONE-FAMILY HOUSE

- STYLE:
- 1[] ONE STORY
 - 2[] TWO STORY 1327-1328
 - 3[] THREE STORY
 - 4[] SPLIT LEVEL
 - 5[] OTHER (SPECIFY): _____

OFFICE USE ONLY		
B		
1		
2		
3		

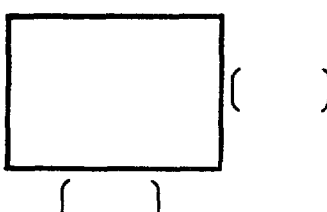
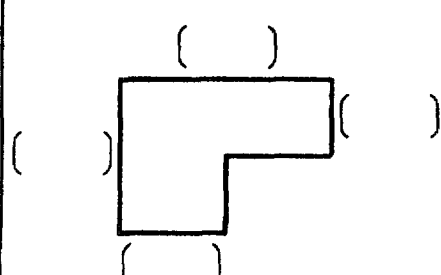
1329-1333
1334-1338
1339-1343
1344-1348

- 3[] APARTMENT BUILDING OR OTHER STRUCTURE WITH TWO OR MORE UNITS

• Note measurement problems, if any, on page 42. Use bottom of page 42 if additional space is needed for sketch or detailed measurements.

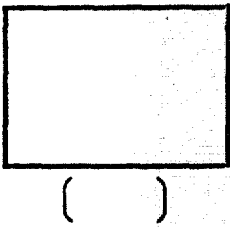
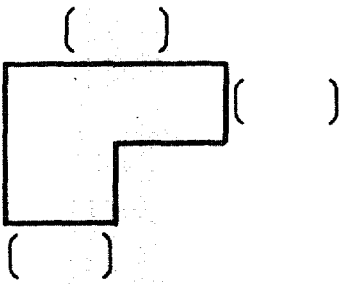
RECORD MEASUREMENTS ON DIAGRAM TO NEAREST FOOT

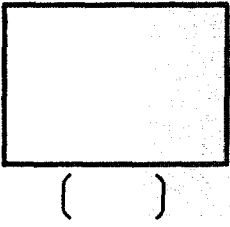
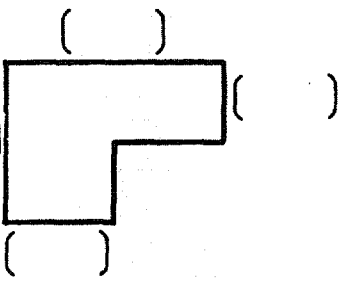
RECTANGULAR SHAPE OR L-SHAPE OR DIAGRAM OTHER SHAPES

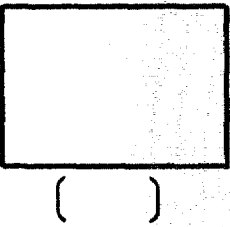
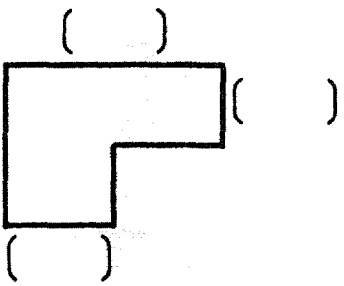
Basement		
1[] Full 2[] Half basement		
		

RECORD MEASUREMENTS ON DIAGRAM TO NEAREST FOOT

RECTANGULAR SHAPE OR L-SHAPE OR DIAGRAM OTHER SHAPES

First story		
1[] Full story 2[] Half story		
		

Second story		
1[] Full story 2[] Half story		
		

Third story		
1[] Full story 2[] Half story		
		

INTERVIEWER REPORT ON MEASUREMENT OF YEAR-ROUND LIVING SPACE

A. What problems, if any, did you have in measuring this house/apartment?

1349--
1350

B. What effect, if any, did these problems have on the accuracy of your measurement?

CONTINUE IF ONE OR MORE VEHICLES LISTED IN Q. 128. OTHERWISE, MAKE ENTRIES IN INTERVIEWER OBSERVATION BOX AND AT BOTTOM OF PAGE TO COMPLETE INTERVIEW.

1[] ONE OR MORE VEHICLES LISTED IN Q. 128 -- ASK Q. 190

1411

0[] NO VEHICLES LISTED IN Q. 128 -- MAKE ENTRIES AT BOTTOM OF PAGE TO COMPLETE INTERVIEW

190. Earlier you mentioned that your household has _____ vehicle(s). Could we look at the odometer(s) now to see how many miles the (vehicle has/vehicles have) been driven?

IF ONE OR MORE VEHICLES IS NOT AVAILABLE, ASK:

191. Just approximately, how many miles has (each one) been driven since it was manufactured?

VEHICLE MAKE (FROM Q. 130)

MODEL YEAR (FROM Q. 131)

ODOMETER READING

VEHICLE NOT AT HOME

ESTIMATED MILES DRIVEN

VEHICLE NUMBER			
1	2	3	4
19 _____	19 _____	19 _____	19 _____

1412-1417 1419-1424 1426-1431 1433-1438
1418 1425 1432 1439

INTERVIEWER OBSERVATION:

192. COLOR OF EXTERIOR OF HOME OR BUILDING: 1440
1[] LIGHT 2[] MEDIUM 3[] DARK 5[] OTHER (SPECIFY): _____

193. IS ROOF SLANTED (PITCHED) OR FLAT? 1441
1[] SLANTED (PITCHED) -- MARK COLOR 2[] FLAT
ROOF COLOR: 1[] LIGHT 2[] MEDIUM 3[] DARK 1442
5[] OTHER (SPECIFY): _____

194. FOR HOUSING UNITS IN BUILDINGS WITH 2 OR MORE UNITS -- SAMPLE UNIT IS LOCATED ON: 1443
1[] BASEMENT LEVEL 2[] FIRST FLOOR 3[] SECOND FLOOR OR HIGHER
5[] OTHER (SPECIFY): _____

Thank you very much for your help.

TIME INTERVIEW COMPLETED: _____ LENGTH OF INTERVIEW: _____ MINUTES 1444-1446

INTERVIEWER'S SIGNATURE: _____ DATE: _____ 1447-1450





U.S. DEPARTMENT OF ENERGY SURVEY

OMB No. 038-R0457
EIA-457E F2153-1

Conducted by
RESPONSE ANALYSIS CORPORATION
P.O. Box 158, Princeton, New Jersey 08540

Mandatory under Public Law 93-275 and 94-385

1980-81
FIRST YEAR DATA

HOUSEHOLD:

If the customer account number is not shown, please enter it. It will be helpful when we request next year's information about this household.

If you have any questions please call collect to Ms. Luci Raam at (609) 921-3333.

Customer Account Number for Household: _____

Information about specific households will be kept strictly confidential. The data will be summarized within large groupings for statistical purposes.

ELECTRICITY USAGE FROM MARCH 1, 1980 TO THE PRESENT							
Time Period	Consumption Period		Number of Kwhr Used	(Circle One) Kwhr are:			Total Dollar* Amount
	Beginning Date	Ending Date		A - Actual	E - Estimated	R - Read by Customer	
1				A	E	R	
2				A	E	R	
3				A	E	R	
4				A	E	R	
5				A	E	R	
6				A	E	R	
7				A	E	R	
8				A	E	R	
9				A	E	R	
10				A	E	R	
11				A	E	R	
12				A	E	R	
13				A	E	R	
14				A	E	R	
15				A	E	R	
16				A	E	R	
17				A	E	R	
18				A	E	R	

*Please include state and local taxes. Exclude merchandise, repair, and service charges. If the household is on the budget plan, do not provide the budgeted bill; provide instead the dollar amount that is the cost of the actual consumption in the period.

Form completed by: _____
(Name) (Telephone Number) (Date)





U.S. DEPARTMENT OF ENERGY SURVEY

OMB No. 038-R0457
EIA-457F F2154-1

Conducted by
RESPONSE ANALYSIS CORPORATION
P.O. Box 158, Princeton, New Jersey 08540
Mandatory under Public Law 93-275 and 94-385

1980-81
FIRST YEAR DATA

HOUSEHOLD:

If the customer account number is not shown, please enter it. It will be helpful when we request next year's information about this household.

If you have any questions please call collect to Ms. Luci Raam at (609) 921-3333.

Customer Account Number for Household: _____

Information about specific households will be kept strictly confidential. The data will be summarized within large groupings for statistical purposes.

UTILITY GAS USAGE FROM MARCH 1, 1980 TO THE PRESENT							
Time Period	Consumption Period		Quantity Used	(Circle One) Quantities are:			Total Dollar* Amount
	Beginning Date	Ending Date		A - Actual	E - Estimated	R - Read by Customer	
1				A	E	R	
2				A	E	R	
3				A	E	R	
4				A	E	R	
5				A	E	R	
6				A	E	R	
7				A	E	R	
8				A	E	R	
9				A	E	R	
10				A	E	R	
11				A	E	R	
12				A	E	R	
13				A	E	R	
14				A	E	R	
15				A	E	R	
16				A	E	R	
17				A	E	R	
18				A	E	R	

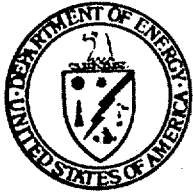
*The quantity used is expressed in terms of: (Mark one)

- Therms
- Cubic Feet
- Hundreds of Cubic Feet (CCF)
- Thousands of Cubic Feet (MCF)
- Other (Please specify): _____

**Please include state and local taxes. Exclude merchandise, repairs, and service charges. If the household is on the budget plan, do not provide the budgeted bill; provide instead the dollar amount that is the cost of the actual consumption in the period.

Form completed by _____ (Name) _____ (Telephone Number) _____ (Date)





OMB No. 038-R0457
EIA-457G F2151-1
FIRST YEAR DATA

U.S. DEPARTMENT OF ENERGY
1980-81 RESIDENTIAL ENERGY CONSUMPTION SURVEY

Conducted by
RESPONSE ANALYSIS CORPORATION
Research Park, Route 206
P. O. Box 158
Princeton, New Jersey 08540

FUEL OIL OR KEROSENE
HOUSEHOLD

This research is being conducted by Response Analysis Corporation under U.S. Department of Energy Contract Number DE-AC01-EI10085. This survey is mandatory as authorized by the Federal Energy Administration Act of 1974 (Public Law 93-275) as amended by the Energy Conservation and Production Act (Public Law 94-385).

Information about specific households will be kept strictly confidential. The data will be summarized within large groupings for statistical purposes.

HOUSEHOLD:

If you have any questions, please call collect to Luci Raam at (609) 921-3333.

FUEL OIL AND KEROSENE USAGE

Please provide information on all deliveries to this household from March 1, 1980 to the present. If information is available only for a shorter period, just report deliveries for that shorter period.

Del. #	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
	Date of Delivery	Fuel Sold Was: Fuel oil #1 (1) Fuel oil #2 (2) Kerosene (K) Other (0) (Circle one)	Gallons Delivered	Price per Gallon	Total Dollar Amount*	Was tank completely filled? Yes No Don't Know (DK) (Circle one)
1		1 2 K 0				YES NO DK
2		1 2 K 0				YES NO DK
3		1 2 K 0				YES NO DK
4		1 2 K 0				YES NO DK
5		1 2 K 0				YES NO DK
6		1 2 K 0				YES NO DK
7		1 2 K 0				YES NO DK
8		1 2 K 0				YES NO DK
9		1 2 K 0				YES NO DK
10		1 2 K 0				YES NO DK
11		1 2 K 0				YES NO DK
12		1 2 K 0				YES NO DK
13		1 2 K 0				YES NO DK
14		1 2 K 0				YES NO DK
15		1 2 K 0				YES NO DK
16		1 2 K 0				YES NO DK
17		1 2 K 0				YES NO DK
18		1 2 K 0				YES NO DK

PLEASE CONTINUE ON PAGE 4 IF NECESSARY.

*Please include state and local sales taxes, where applicable. Exclude merchandise, repairs, or service charges.

FUEL OIL AND KEROSENE

1. If "Other" has been circled for type of fuel in Column 2 (page 2 or page 4), please specify what fuel was sold:

_____ NOT APPLICABLE

2. What is the capacity of this household's storage tank?

CAPACITY: _____ GALLONS

3. Was this household your customer as of March 1, 1980?

YES

NO

IF "NO," approximately when did this household become a customer of your company?

APPROXIMATE DATE: _____

- DON'T KNOW
- NEVER A CUSTOMER

4. Is this household presently your customer?

YES

NO

IF "NO," approximately when did this household stop being a customer of your company?

APPROXIMATE DATE: _____

- DON'T KNOW
- NEVER A CUSTOMER

5. The information presented here is from:

- COMPANY RECORDS
- AN ESTIMATE MADE BY A COMPANY REPRESENTATIVE
- INFORMATION SECURED FROM THE CUSTOMER

6. This information has been supplied by:

(Name) (Company) (Telephone) (Date)

FUEL OIL AND KEROSENE

Del. #	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
	Date of Delivery	Fuel Sold Was: Fuel oil #1 (1) Fuel oil #2 (2) Kerosene (K) Other (0) (Circle one)	Gallons Delivered	Price per Gallon	Total Dollar Amount*	Was tank completely filled: Yes No Don't Know (DK) (Circle one)
19		1 2 K 0				YES NO DK
20		1 2 K 0				YES NO DK
21		1 2 K 0				YES NO DK
22		1 2 K 0				YES NO DK
23		1 2 K 0				YES NO DK
24		1 2 K 0				YES NO DK
25		1 2 K 0				YES NO DK
26		1 2 K 0				YES NO DK
27		1 2 K 0				YES NO DK
28		1 2 K 0				YES NO DK
29		1 2 K 0				YES NO DK
30		1 2 K 0				YES NO DK

*Please include state and local sales taxes, where applicable. Exclude merchandise, repairs, or service charges.

PLEASE USE THIS SPACE FOR ANY ADDITIONAL NOTES THAT YOU WISH TO MAKE TO EXPLAIN ENTRIES ON THIS FORM.

PLEASE CHECK THAT THE QUESTIONS ON PAGE THREE HAVE BEEN ANSWERED.



OMB 038-R0457
EIA-457H F2152-1
FIRST YEAR DATA

U.S. DEPARTMENT OF ENERGY
1980-1981 RESIDENTIAL ENERGY CONSUMPTION SURVEY

Conducted by
RESPONSE ANALYSIS CORPORATION
Research Park, Route 206
P. O. Box 158
Princeton, New Jersey 08540

LIQUEFIED PETROLEUM GAS (LPG)
HOUSEHOLD

This research is being conducted by Response Analysis Corporation under U.S. Department of Energy Contract Number DE-AC01-EI10085. This survey is mandatory as authorized by the Federal Energy Administration Act of 1974 (Public Law 93-275), as amended by the Energy Conservation and Production Act (Public Law 94-385).

Information about specific households will be kept strictly confidential. The data will be summarized within large groupings for statistical purposes.

HOUSEHOLD:

If you have any questions, please
call collect to Luci Raaum at
(609) 921-3333.

LIQUEFIED PETROLEUM GAS USAGE

Please provide information on all deliveries to this building from March 1, 1980 to the present. If information is available only for a shorter period, just report deliveries for that shorter period.

Del. #	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
	Date of Delivery	Fuel Sold Was: Propane P Butane B Other O (Circle one)	Quantity Delivered	Price per Unit	Total Dollar Amount*	Was tank/cylinder completely filled? Yes No Don't Know (DK) (Circle one)
1		P B O				YES NO DK
2		P B O				YES NO DK
3		P B O				YES NO DK
4		P B O				YES NO DK
5		P B O				YES NO DK
6		P B O				YES NO DK
7		P B O				YES NO DK
8		P B O				YES NO DK
9		P B O				YES NO DK
10		P B O				YES NO DK
11		P B O				YES NO DK
12		P B O				YES NO DK
13		P B O				YES NO DK
14		P B O				YES NO DK
15		P B O				YES NO DK
16		P B O				YES NO DK
17		P B O				YES NO DK
18		P B O				YES NO DK

PLEASE CONTINUE ON PAGE 4 IF NECESSARY.

*Please include state and local taxes, where applicable. Exclude merchandise, repairs, or service charges.

LIQUEFIED PETROLEUM GAS (LPG)

1. If "Other" has been circled for type of fuel in Column 2 (page 2 or page 4), please specify what fuel was sold?

_____ NOT APPLICABLE

2. Please mark unit of measure for deliveries reported on page 2.

POUNDS CUBIC METERS
 GALLONS DECITHERMS
 CUBIC FEET OTHER (Please specify): _____

3. What is the capacity of this building's storage tank(s)?

Capacity is _____ and is measured in number of:

POUNDS
 GALLONS
 OTHER UNIT (Please specify): _____

4. Were you supplying this building on March 1, 1980?

YES NO

IF "NO," approximately when did you start supplying the building?

APPROXIMATE DATE: _____

DON'T KNOW
 NEVER A CUSTOMER

5. Do you supply this building now?

YES NO

IF "NO," approximately when did you stop supplying this building?

APPROXIMATE DATE: _____

DON'T KNOW
 NEVER A CUSTOMER

6. The information reported here is from:

COMPANY RECORDS
 AN ESTIMATE MADE BY A COMPANY REPRESENTATIVE
 INFORMATION SECURED FROM THE CUSTOMER

7. This information has been supplied by:

(Name) (Company) (Telephone) (Date)

LIQUEFIED PETROLEUM GAS (LPG)

Del. #	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
	Date of Delivery	Fuel Sold Was: Propane P Butane B Other O (Circle one)	Quantity Delivered	Price per Unit	Total Dollar Amount*	Was tank/cylinder completely filled? Yes No Don't Know (DK) (Circle one)
19		P B O				YES NO DK
20		P B O				YES NO DK
21		P B O				YES NO DK
22		P B O				YES NO DK
23		P B O				YES NO DK
24		P B O				YES NO DK
25		P B O				YES NO DK
26		P B O				YES NO DK
27		P B O				YES NO DK
28		P B O				YES NO DK
29		P B O				YES NO DK
30		P B O				YES NO DK

*Please include state and local sales taxes, where applicable. Exclude merchandise, repairs, or service charges.

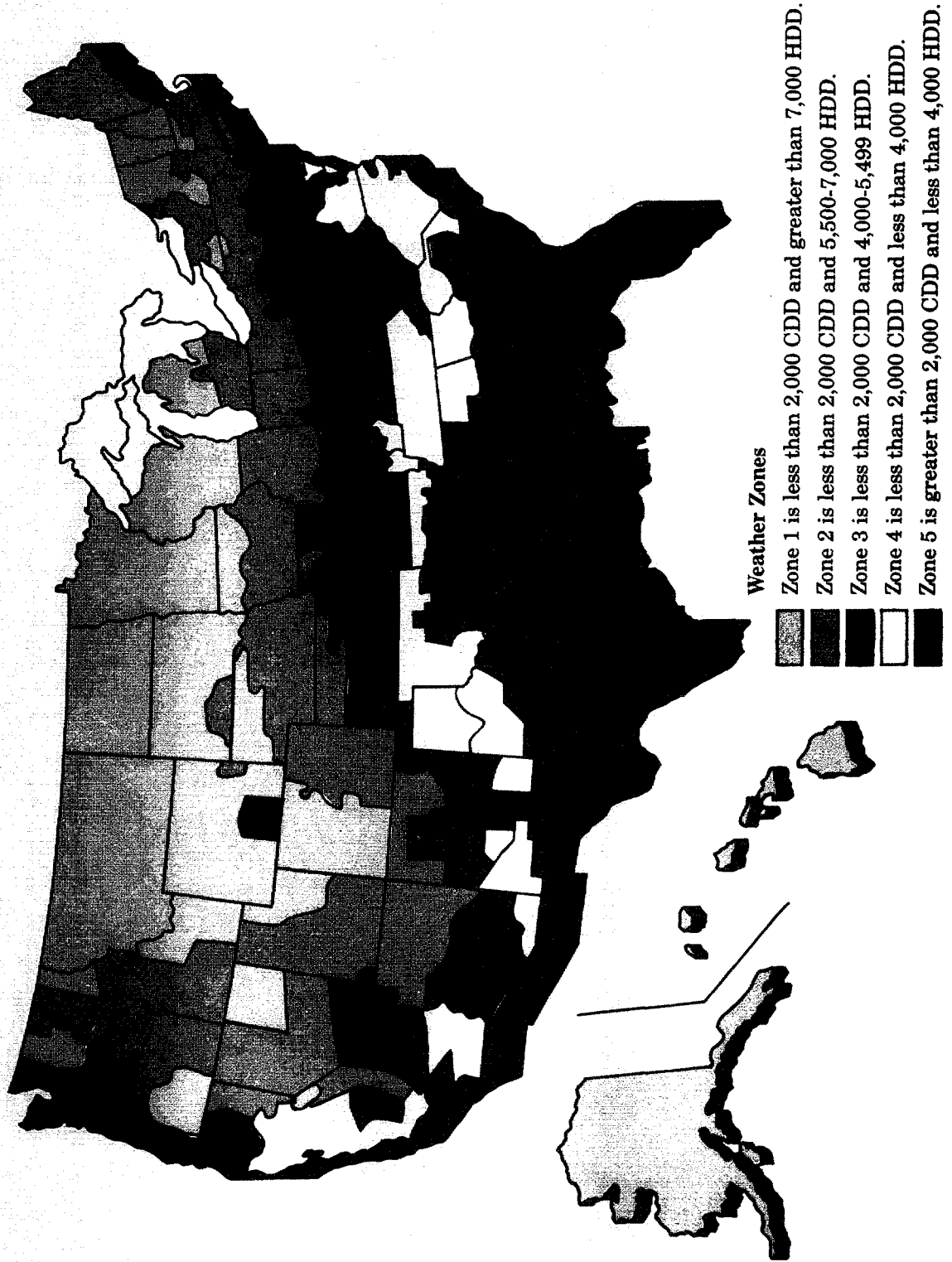
PLEASE USE THIS SPACE FOR ANY ADDITIONAL NOTES THAT YOU WISH TO MAKE TO EXPLAIN ENTRIES ON THIS FORM.

PLEASE CHECK THAT THE QUESTIONS ON PAGE THREE HAVE BEEN ANSWERED.

Appendix E



United States Weather Zone Map of Heating Degree - Days (HDD) and Cooling - Degree Days (CDD)

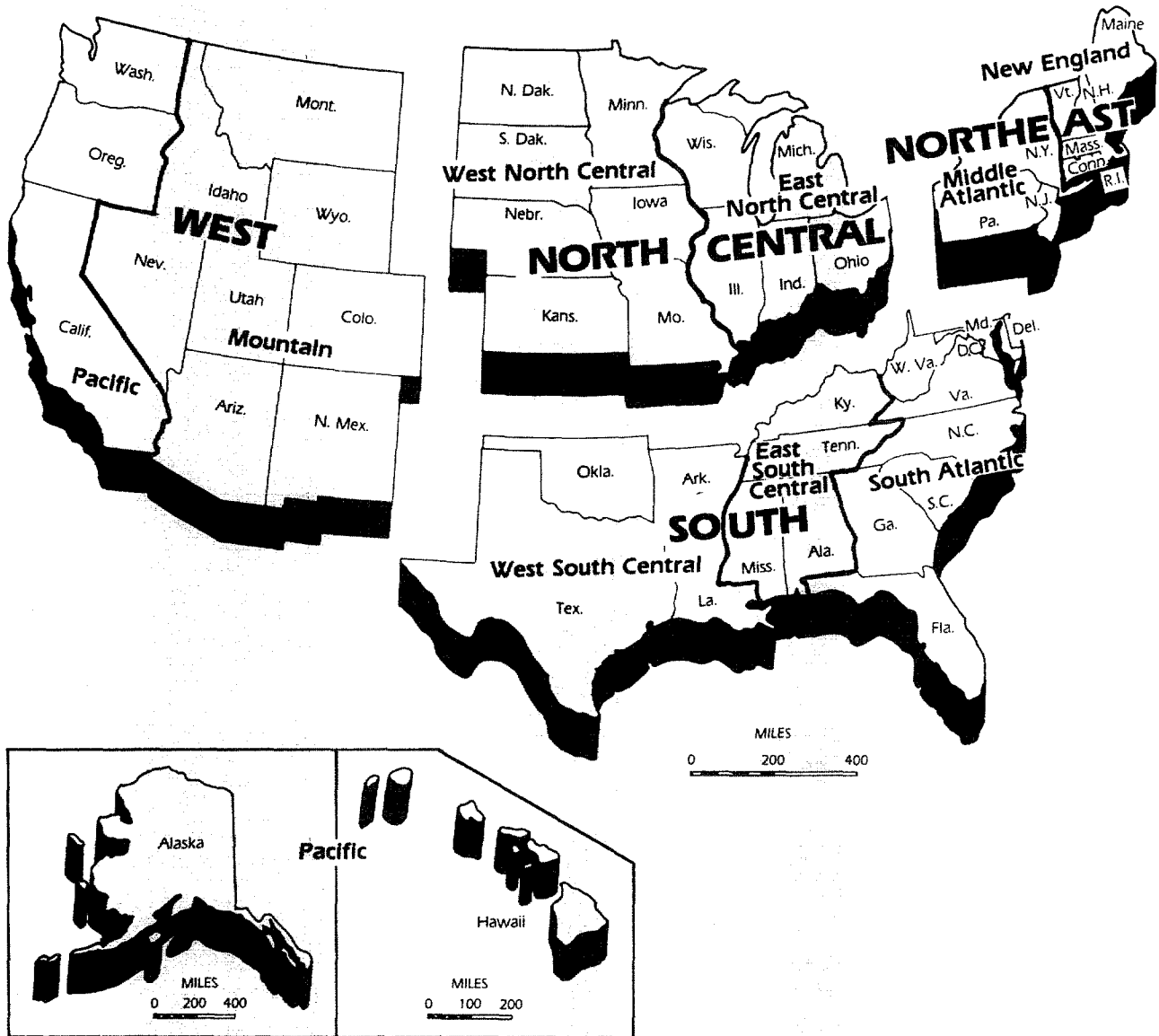




Appendix F



U.S. Census Regions and Divisions





Appendix G



Appendix G

RESIDENTIAL ENERGY CONSUMPTION DATA ITEMS

1978 to 1981

This section gives a thumbnail sketch of the first four Residential Energy Consumption Surveys (RECS)¹ and provides an index of data items included in each survey.

Residential Energy Consumption Surveys

<u>Survey</u>	<u>Survey Date</u>	<u>Number of Households in Sample</u>
National Interim Energy Consumption Survey (NIECS)	Nov. 1978	4,081
Household Screener Survey (Screener)	Nov. 1979	4,033
Residential Energy Consumption Survey (RECS-1)	Nov. 1980	6,051
Residential Energy Consumption Survey (RECS-2)	Nov. 1981	6,000 ^a

^aThis number is approximate.

Note: The RECS-2 includes a supplemental sample of low-income households at the request of the Social Security Administration.

¹Previous studies similar in design and scope conducted in 1973 and 1975 by the Washington Center for Metropolitan Studies (WCMS) and Response Analysis Corporation are available in microdata file in machine/readable form from the National Technical Information Service (NTIS), Order No. PB-272448, \$125; a codebook is also available (PB-272449).

Reports on the first two surveys contained "Residential Energy Consumption Survey" in their titles since both surveys included the major components of the RECS--a household interview and a follow-up survey of the household's fuel suppliers. The main distinction between the earlier and later surveys is in their sample designs.

The first two surveys sampled clusters of ten households (from the same block or buildings) scattered throughout 103 Primary Sampling Units (PSU's). The RECS 1 and RECS 2 sampled clusters of about four households in 131 PSU's. In addition, the RECS PSU's were selected for the Department of Energy according to a design that used the main heating fuel in the selection process. The survey was designed to produce estimates with a minimum sampling variation within each of the ten Federal regions and nine Census Divisions (See "Sample Design," Appendix A, for more information).

INDEX OF RECS DATA ITEMS

This index, showing what data items are included in each of the four RECS surveys, serves as a quick overview of what data are available from the RECS surveys. The index shows what data are available for a trend analysis and indicates which survey included a specific data item of interest. A review of the questionnaire for a particular study will give the reader more precise information on question wording and response categories used.

The index shows, for example, that: questions on temperature maintained in the house were first included with the 1981 RECS; that the value of the house was included in the 1978 NIECS, but not in later surveys; that questions on wood usage were first included in the 1980 RECS and were scaled down for the 1981 RECS; that the cost of energy retrofit measures were first included in the 1979 Screener; and that the square footage of the housing unit was self-reported in the 1978 NIECS and measured by the interviewer beginning with the 1980 RECS.

RESIDENTIAL ENERGY CONSUMPTION SURVEY
DATA ITEMS--1978 to 1981

Table G1. Energy Consumption From Fuel Supplier Records by Individual Survey

<u>Fuel Type</u>	<u>NIECS^a</u> <u>1978</u>	<u>Screeners^b</u> <u>1979</u>	<u>RECS^c</u> <u>1980</u>	<u>RECS^c</u> <u>1981</u>
Electricity				
Consumption per Billing Period (kilowatt-hours).....	X	dX	X	X
Expenditures per Billing Period (dollars).....	X	dX	X	X
Natural Gas				
Consumption per Billing Period (cubic feet/therms).....	X	dX	X	X
Expenditures per Billing Period (dollars).....	X	dX	X	X
Fuel Oil/Kerosene				
Gallons per Delivery.....	X	dX	X	X
Dollars Paid per Delivery.....	X	dX	X	X
Liquified Petroleum Gas (LPG)				
Gallons per Delivery.....	X	dX	X	X
Dollars Paid per Delivery.....	X	dX	X	X

^aNational Interim Energy Consumption Survey.

^bHousehold Screener Survey which was designed to "screen" households for participation in the Household Transportation Panel.

^cResidential Energy Consumption Surveys (RECS) which used a sampling frame of 131 Primary Sampling Units especially designed for surveys of residential energy consumption.

^dEIA is not planning to make these data available to the public. Annual consumption and expenditures estimated from these data, however, will be included on the public use data tape.

Note: An "X" in the column means the survey included the data item.

Note: These data constitute the basis for estimating annual consumption and expenditures, converting to Btu equivalents, and estimating marginal prices for electricity and natural gas.

Table G2. Weather Data (Cooling/Heating Degree-Days for NOAA Divisions Containing Households) by Individual Survey

	<u>NIECS</u> <u>1978</u>	<u>Screeners</u> <u>1979</u>	<u>RECS</u> <u>1980</u>	<u>RECS</u> <u>1981</u>
<u>Annual Degree-Days</u>				
40-Year Average Modified for Survey Consumption Period.....	X	--	--	--
Standard Year for Survey Consumption Period (April 1 through March 31 of following year).....	--	X	^a X	^a X
AIA Weather Zones (40-Year Average)....	X	X	X	X
Billing Period Degree-Days.....	X	--	X	X

^aWill include degree-days for bases other than 65.

Note: An "X" in the column means the survey included the data item.

Table G3. End Uses of Energy by Fuel Type

End Uses of Energy	Electricity		Natural Gas		Gas		Fuel Oil/		Coal/		Solar	
	Electricity	Gas	LPG	Unspec-ified	Fuel Oil	Kero-sene	Kero-sene	Coal/Coke	Wood	Collectors	Collectors	Collectors
Space-Heating												
Main Source.....	X	X	X	--	X	X	--	X	X	X	X	X
Secondary Source.....	X	X	X	--	X	X	--	X	X	X	X	X
Used at All.....	X	X	X	--	X	X	X	X	X	X	X	X
Space-Cooling												
Central System.....	X	ax	ax	X	--	--	--	--	--	--	--	--
Used at All.....	X	X	X	--	--	--	--	--	--	--	--	--
Water-Heating												
Most-Used Fuel.....	X	X	X	--	X	X	--	X	X	X	X	X
Secondary Source ^a	X	X	X	--	X	X	--	X	X	X	X	X
Used at All.....	X	X	X	--	X	X	X	X	X	X	X	X
Cooking												
Most-Used Fuel.....	X	X	X	--	X	X	--	X	X	X	X	X
Used at All.....	X	X	X	--	X	X	ax	X	X	X	X	X
Fuel for Ovens.....	X	--	--	X	--	--	--	--	--	--	--	--
Refrigeration.....	X	--	--	X	--	--	--	--	--	--	--	--
Freezing.....	X	--	--	X	--	--	--	--	--	--	--	--
Heating Swimming Pool ^b	X	X	X	--	X	X	--	X	X	X	X	X
Nonhousehold Uses of Fuel ^b	X	X	X	--	X	X	--	X	X	X	X	X
Appliances.....	X	--	--	X	--	--	--	--	--	--	--	--

^aNewly added in 1981.

^bNewly added in 1980.

Note: An "X" in the column means the survey included the data item.

Table G4. Equipment and Appliance Type by Individual Survey

<u>Equipment and Appliances</u>	<u>NIECS 1978</u>	<u> Screener 1979</u>	<u>RECS 1980</u>	<u>RECS 1981</u>
Type of Main Heating Equipment.....	X	--	X	X
Fuel Used.....	X	X	X	X
Presence of Heating Control.....	X	--	X	X
Type of Control.....	X	--	--	--
Temperature Settings.....	--	--	--	X
Type of Secondary Heating Equipment..	X	--	X	X
Fuel Used.....	X	X	X	X
Type of Air Conditioning Equipment...	X	X	X	X
Fuel Used.....	X	X	X	X
Number of Wall Units.....	X	--	X	--
Number of Rooms That Can Be Cooled.....	X	X	X	X
Use of Air Conditioning.....	--	--	--	X
Swimming Pool.....	--	--	X	X
Heater.....	--	--	X	X
Fuel Used.....	--	--	X	X
Number of Refrigerators.....	X	--	X	X
Fuel Used.....	X	--	X	X
Frost-Free.....	X	--	X	X
Other Features.....	X	--	--	--
Number of Separate Freezers.....	--	--	X	X
Fuel Used.....	--	--	X	X
Frost-Free.....	--	--	X	X
Number of Ovens.....	X	--	X	X
Fuel Used.....	X	--	X	X
Self-Cleaning Features.....	X	--	X	--
Other Appliances ^a	12	--	15	15
Water Heater is Part of Furnace.....	X	--	--	--

^aAppliances include microwave oven, electric range, gas range, outdoor gas grill, automatic clothes-washer, wringer clothes-washer, dishwasher, electric clothes-dryer, gas clothes-dryer, outdoor gas light, small electric appliances such as toaster/oven or fry pan (NIECS), separate freezer (NIECS), dehumidifier (RECS), humidifier (RECS), evaporative cooler (RECS), television--black/white, color (RECS).

Note: An "X" in the column means the survey included the data item.

Table G5. Structural Characteristics by Individual Survey

<u>Structural Characteristics</u>	<u>NIECS 1978</u>	<u> Screener 1979</u>	<u>RECS 1980</u>	<u>RECS 1981</u>
Housing Type (e.g., single-family)...	X	X	X	X
Year-Round or Seasonal.....	X	X	X	X
Year House Built.....	X	X	X	X
Material on Outside Walls.....	--	--	X	X
Number of Outside Doors.....	X	--	X	X
Basement/Crawl Space.....	--	--	X	X
Heated or Unheated.....	--	--	X	X
Number of Windows.....	X	--	X	X
Size.....	--	--	X	--
Type (e.g., double-hung).....	X	--	--	--
Number of Rooms.....	X	X	X	X
Number of Bathrooms.....	X	--	X	X
Number of Floors.....	X	--	X	--
Size of Largest Room.....	X	X	X	--
Square Footage				
As Reported by Respondent				
(living space).....	X	--	--	--
As Measured by Interviewer (areas				
enclosed from the weather).....	--	--	X	X
Single-family Housing Units				
Wall Insulation.....	abX	--	X	aX
Attic Insulation.....	abX	--	X	aX
Extent.....	--	--	X	aX
Type.....	abX	--	X	aX
Number of Inches.....	abX	--	X	aX
Floor insulation.....				
Extent.....	--	--	X	aX
Type.....	--	--	X	--
Number of Inches.....	--	--	X	--
Number of Storm Doors.....	X	--	X	X
Number of Storm Windows.....	X	--	X	X
Color of Outside Walls.....	--	--	X	--
Roof is Slanted or Pitched.....	--	--	X	--

^aMobile homes also included.

^bBuildings of 2-4 units also included. Insulation questions were not asked of respondents in buildings of 5 or more units.

Note: An "X" in the column means the survey included the data item.

Table G6. Conservation Activities (Two Years Prior to the Survey)
by Individual Survey

<u>Type of Activity</u>	<u>NIECS</u> <u>1978</u>	<u> Screener</u> <u>1979</u>	<u>RECS</u> <u>1980</u>	<u>RECS</u> <u>1981</u>
Attic Insulation Added.....	X	X	X	X
Type.....	--	--	X	X
Cost.....	--	X	X	X
Wall Insulation Added.....	X	X	X	X
Type.....	--	--	X	X
Cost.....	--	X	X	X
Floor Insulation Added.....	X	--	X	X
Type.....	--	--	X	X
Cost.....	--	--	X	X
Storm Doors Added.....	X	aX	X	X
Number Added.....	--	--	X	X
Cost.....	--	aX	X	X
Storm Windows Added.....	X	aX	X	X
Number Added.....	--	--	X	X
Size of Windows Added.....	--	--	X	--
Cost.....	--	aX	X	X
Closeable Shutters Added.....	X	--	bX	bX
Plastic Sheeting Added.....	X	--	bX	bX
Weatherstripping Added.....	X	--	X	X
Caulking Added.....	X	--	X	X
Clock Thermostat Installed.....	X	--	X	X
Insulation Added Around:				
Hot Water Pipes.....	X	--	X	X
Water Heater.....	X	--	X	X
Heating Ducts.....	--	--	X	X
Adjustment to Thermostat Control.....	--	--	X	X
Additional Thermostats.....	--	--	X	X
Smaller Nozzle on Burner.....	--	--	X	X
Flame-Retention Burner Installed.....	--	--	X	X
Automatic Flue Door Installed.....	--	--	X	X
Electrical/Mechanical Ignition.....	--	--	X	X
Meter Displaying Cost of Energy.....	--	--	X	X
Heat Pump Installed.....	X	--	X	X
Cost.....	--	--	X	--
New Water-Heating Equipment.....	X	--	--	--
New Furnace.....	X	--	--	--

Table G6. Conservation Activities (Two Years Prior to the Survey) by Individual Survey (Continued)

<u>Type of Activity</u>	<u>NIECS 1978</u>	<u>Screeners 1979</u>	<u>RECS 1980</u>	<u>RECS 1981</u>
Wood-Burning Stove Added.....	--	--	X	X
Cost.....	--	--	X	--
Visit by Professional Energy Adviser.....	--	--	X	--
Participation in Weatherization Program.....	--	--	X	--
Rooms Closed Off.....	X	--	--	--
Cleaning Main Heating Equipment.....	--	--	X	--

^aWindows and doors grouped together.

^bCloseable shutters and plastic sheeting grouped together.

Note: An "X" in the column means the survey included the data item.

Table G7. Data Items by Individual Survey and Year

Data Items	NIECS 1978	Screener 1979	RECS 1980	RECS 1981
Demographic Characteristics				
Community Size.....	X	X	X	X
Census Region (4).....	X	X	X	X
Census Division (9).....	--	--	X	X
Year Moved Into Housing Unit.....	X	X	X	X
Number, Relation, Sex, and Age of Household Members.....	X	X	X	X
Employment Status of Members Aged 14 and Over.....	X	X	X	--
Respondent's Marital Status.....	X	X	X	X
Race.....	X	X	--	--
Origin.....	--	--	X	X
Hispanic Descent.....	--	--	X	X
Respondent and Spouse Education.....	X	X	X	X
Previous Year's Employment History.....	--	--	X	X
Family Income for Calendar Year.....	X	X	X	X
Sources of Family Income.....	--	--	--	X
Housing Tenure (Own or Rent).....	X	X	X	X
Condominium.....	X	X	X	X
Monthly Rent Payment.....	X	--	--	X
Food Stamps/Heating Assistance.....	--	--	--	X
Value of Housing Unit.....	X	--	--	--
Wood Use Characteristics				
Total Cords Burned.....	--	--	X	X
Type of Wood (e.g., hardwood).....	--	--	X	--
Amount Purchased.....	--	--	X	--
Price Paid.....	--	--	X	X
Price Includes Delivery.....	--	--	X	--
Amount Burned in Type of Equipment.....	--	--	X	ax
Building Characteristics (buildings of 2 or more units)				
Floor Location of Sampling Unit.....	--	--	X	--
Central or Individual System(s) in Multi-Family Buildings for:				
Heating.....	X	--	X	X
Air Conditioning.....	X	--	X	X
Water Heating.....	X	--	X	X
General Characteristics				
Cars and Trucks Used by the Household ^b	X	X	X	X
Change in Space-Heating Fuel During Past Year.....	--	X	X	X
Households Served by Same Utility.....	--	--	X	X
Membership of Utility ^c	--	--	X	X
Commercial Activity in Housing Unit.....	--	--	X	--
Availability of Gas in Neighborhood.....	--	--	X	X

Table G7. Data Items by Individual Survey and Year (Continued)

Data Items	NIECS 1978	Screener 1979	RECS 1980	RECS 1981
Transportation Characteristics				
Number of Vehicles.....	X	X	X	X
Number of Drivers.....	X	X	X	X
Vehicle Characteristics				
Type (station wagon, etc.).....	X	X	X	X
Make.....	X	X	X	X
Model Year.....	X	X	X	X
Model Name.....	X	X	X	X
When Acquired.....	X	X	--	--
Total Annual Mileage.....	X	X	--	--
Annual Highway Mileage.....	X	--	--	--
Used On-The-Job.....	X	--	--	--
Total Mileage.....	X	--	--	--
Miles-Per-Gallon				
Highway.....	X	--	--	--
Local.....	X	--	--	--
Basis for Miles-Per-Gallon.....	X	--	--	--
Fuel Used Most Frequently.....	X	--	X	--
Number of Cylinders.....	X	--	X	--
Air Conditioning.....	--	--	X	--
Automatic Transmission.....	--	--	X	--
Number of Vehicles Disposed of in Past 12 Months.....	X	X	--	--
Commuting Characteristics (data for both respondent and spouse)				
Miles to Work.....	--	--	X	--
Mode of Travel to Work.....	--	--	X	--
Alone/Other.....	--	--	X	--
Number of Others.....	--	--	X	--
Amount of Time Spent Commuting.....	--	--	X	--
Number of Trips between Home and Work.....	--	--	X	--

^aAll wood burned by household must be assigned to either the main or secondary heating equipment in those cases where wood was burned in both kinds of equipment.

^bData reported separately as part of the RECS Household Transportation Panel.

^cFor households paying directly to the utility, this code will distinguish investor-owned utilities from municipal utilities as indicated by the utility's membership in Edison Electric Institute, American Public Power Association, National Rural Electric Cooperative Association, or American Gas Association.

Note: An "X" in the column means the survey included that data item. A "--" means the item was not included.



GLOSSARY



GLOSSARY

AIA Weather Zone. Seven distinct areas designated by the American Institute of Architects (AIA) for the U.S. Departments of Energy and Housing and Urban Development; they are used to classify housing units based on long-term weather conditions. The zones were determined according to the number of heating and cooling degree-days averaged over a number of years as follows:

<u>Zone</u>	<u>Cooling Degree-Days</u>	<u>Heating Degree-Days</u>	<u>Comments</u>
1	Less than 2,000	More than 7,000	
2	Less than 2,000	5,500 to 7,000	
3	Less than 2,000	4,000 to 5,499	
4	Less than 2,000	2,000 to 3,999	No RECS household is in Zone 4 based on the long-term weather data for the household's NOAA Division. Zones 4 and 5 are combined for RECS reports.
5	Less than 2,000	Less than 2,000	
6	More than 2,000	Less than 2,000	Zones 6 and 7 are combined for RECS reports.
7	More than 2,000	2,000 to 3,999	

Air-Conditioning: Cooling of air by a refrigeration unit. This does not include fans, blowers, or evaporative cooling systems which are not connected to a refrigeration unit. Air-conditioning units that are not currently in working condition or are not used, but are in place in the housing unit, are included in this survey.

"Number of rooms that can be air-conditioned" refers to the number of rooms the air-conditioning equipment is capable of cooling when the equipment is used. Question 44 "How many rooms in your house (apartment) are cooled by air-conditioning?" refers to rooms which could be cooled if the air-conditioning equipment were used. There are, therefore, no cases in the data set of a household with air-conditioning equipment which air-conditioned zero rooms.

"All rooms air-conditioned" means that 100 percent of the rooms are air-conditioned. "Some rooms air-conditioned" means that less than 100 percent are air-conditioned.

"Central air-conditioning system" refers to a system that air-conditions a number of rooms in a home. See also "Central system for the building". For a definition of rooms, see "Number of Rooms".

Appliances Used: Appliances possessed and used by the household. Appliances possessed by the household but not used are not counted. Air-conditioning units are an exception. Air-conditioning is counted if present whether or not it is used. See "Air-Conditioning". Appliances loaned to the household for their regular use are included. Appliances temporarily not in working condition but generally used by the household are included only if a repair person has been called. "Swimming pool heater" applies only to swimming pools that are for the exclusive use of the housing unit. Swimming pools in apartment buildings, condominiums, or cooperatives that are for the use of many resident households are not included. "An evaporative cooler (swamp cooler)" is an air-cooling unit that turns air into moist, cool air by saturating the air with water vapor. See also "Refrigerators".

Availability of Natural Gas in the Neighborhood: Respondents living in single-family units or mobile homes who did not use natural gas answered "yes", "no", or "don't know" to the question, "Is gas from underground pipes available in this neighborhood?" Respondents were not provided with a definition of "available" or "neighborhood", so some variation is expected in what these concepts mean to each respondent.

Basement: is an enclosed space in which a person can walk upright under all or part of the building. A "crawl space" is the space between the ground and the floor of a house. An "enclosed" crawl space is one not accessible from the outside of the house because the walls of the space protect it from the weather. A crawl space "open to the outside" is accessible from outside the house even though it may be covered by a trellis or lathwork, or some kind of brick work that leaves space for circulation of air.

Bathroom: A "complete" bathroom has a flush toilet, a bathtub or shower, and a sink or washbasin with running water. A "half-bath" has a flush toilet or a bathtub or shower but does not have all the facilities for a complete bathroom.

Billing Period: The time between meter-readings. It does not refer to the time the bill was sent nor when the payment was to have been received. In some cases, the billing period is the same as the billing cycle which corresponds closely (within several days) to meter reading dates. For fuel oil and LPG, the billing period is the number of days between fuel deliveries.

Built-in Electric Units: Individual resistance electric heating units are permanently installed in the floors, walls, ceilings, or baseboards, and are part of the electrical installation of the building. Electric heating devices that are plugged into an electric socket or outlet are not considered built-in.

Central System for the Building: A central system serving one or more buildings of two or more housing units each that is used for main heating, water-heating, or air-conditioning. A system that is for the respondent's living quarters only is not a central system for the building.

Central Warm-Air Furnace: A central furnace providing warm air 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. The warm air rises through ducts and the cold air falls through cold air ducts bringing the cold air back to the furnace to be reheated. This completes the circulation cycle.

Condominium Ownership: A type of ownership that enables a person to own an apartment or house in a project of similar units. The owner has his or her own deed and, very likely, has a mortgage on the unit. The owner also holds common or joint ownership in all common areas such as hallways, entrances, and elevators. Condominium ownership may apply to single-family houses, row houses, town houses, or apartments.

Conservation Items Added during 1979 or 1980: Energy-saving items added to the housing unit the household now occupies. Items added to a previous place of residence and changes made by previous occupants of the housing unit are not counted. Changes made by a landlord are counted. For respondents interviewed before December 31, 1980, the year 1980 represents an incomplete year. About 37 percent of the interviews were completed between September 1980 and the end of the year.

"Automatic or clock thermostat" is a thermostat that can be set to turn the heating system off and on at certain preset times of day.

"Adjustments to thermostat control (recalibration)" assures that the temperature the thermostat is set for is the actual temperature maintained in your house.

"An additional thermostat (zoning the home)". Adding an additional thermostat regulates the temperature in different parts of the home. For example, the sleeping areas of the home can be kept at a lower temperature than the living areas.

"Smaller nozzle or burner or smaller line on furnace". Adding one of these smaller lines to the oil furnace will cut down on the amount of fuel the furnace burns.

"Flame-retention head burner for furnace (fuel oil)" is a device that controls the pattern of flame in the combustion chamber of a boiler or furnace.

"Automatic flue door (vent damper)" automatically closes the flue when the furnace goes off, preventing heat loss up the chimney.

"Electrical or mechanical furnace ignition system (spark ignition)". This type of ignition added to the furnace means that fuel will ignite from an electrically or mechanically produced spark rather than from a pilot light that burns continuously.

"Insulation around heating ducts" is extra insulation around the heating ducts to reduce heat loss as the hot air travels to different parts of the residence.

"Insulation around hot water pipes" is blanket insulation wrapped around the hot water heater to reduce heat loss. This is in addition to any insulation provided by the manufacturer.

"Meter which displays the cost of energy" is a device to show the homeowner how much energy is being used in his home at a given time and/or to add up the cost of energy usage over a specific period of time.

"Closeable shutters, plastic sheets, insulating drapes" are counted if any one of these has been added to any door or window in the housing unit. Shutters that close to provide an insulating effect are counted. Decorative shutters that do not close are not counted.

"Caulking around any windows or doors to the outside" is available in these types: oil or resin base, latex, butyl-or polyvinyl-based, elastomeric or a filler such as oakum, caulking cotton, sponge rubber, or glass fiber types. Caulking is counted whether done on the inside or outside of the home.

"Weather-stripping around any windows or doors to the outside" can be applied on the inside or outside of the home. Weatherstripping is available in these basic types: thin spring metal, rolled vinyl, or foam rubber with adhesive backing.

Cooling Degree-Days: refers to the number of degrees per day the daily average temperature is above 65 degrees Fahrenheit. Normally, cooling is not required in a building when the outdoor average daily temperature is below 65 degrees. Cooling degree-days are determined by subtracting the base of 65 from the daily average temperature. For example, a day with an average temperature of 85 degrees has 20 cooling degree-days ($85-65 = 20$), while one with an average temperature of 65 degrees or lower has none. The average daily temperature is the mean of the maximum and minimum temperatures for a 24-hour period.

The cooling degree-days for RECS households in the 48 States and the District of Columbia were assigned according to the NOAA division in which each household was located (See "NOAA Division"). Cooling degree-day totals for Alaskan and Hawaiian households were assigned by appropriate nearby weather stations.

Doors: (outside doors) go from a heated area to the outside or to an unheated area, such as an unheated porch or garage. Doors to a heated hallway in an apartment building, doors that were permanently sealed shut, and doors to an unheated attic or basement were not counted because these doors are not usually fitted with storm doors. The NIECS survey counted doors to an unheated attic or basement, but this rule was not followed in the RECS survey. Double doors were counted as one door. A pair of sliding glass doors was counted as one door in this survey. A pair of sliding glass doors was counted as two doors in the NIECS survey. "Standard" doors include doors with and without glass panels.

Family Income: is the total combined income in 1979 from all sources of the family members before taxes and deductions. It includes wages, salaries, tips, commissions, and income from social security, pensions, interest, dividends, rent, public assistance, and unemployment insurance. This includes the total income for all family members who lived in the household in 1979, 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.

Federal Regions: The States are divided into ten groups as follows:

<u>Region</u>	<u>States</u>
1	Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut
2	New York, New Jersey
3	Delaware, Pennsylvania, Maryland, Virginia, West Virginia, District of Columbia
4	Kentucky, Tennessee, North Carolina, South Carolina, Georgia, Alabama, Mississippi, Florida
5	Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota
6	Louisiana, Arkansas, Texas, Oklahoma, New Mexico
7	Missouri, Iowa, Nebraska, Kansas
8	Colorado, Utah, North Dakota, South Dakota, Wyoming, Montana
9	Hawaii, Arizona, California, Nevada
10	Alaska, Idaho, Oregon, Washington.

Fireplace: is any masonry or pre-built installed fireplace. Fireplaces in mobile homes are included. A fireplace must have a permanent chimney built into the wall of the house. A free-standing fireplace that can be detached from its chimney is a heating stove.

Floor, Wall, or Pipeless Furnace: A floor furnace is located below the floor and delivers heated air to the room immediately above or, 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.

Fuels: refers to the primary fuel delivered to the residential site. It may be converted at the site to some other energy form. "Electricity" is included in this report as a fuel.

"Coal" includes coke.

"Electricity" refers to electric power supplied by a central utility to a residence via underground or above-ground power lines. It does not refer to electricity generated onsite for the exclusive use of the residence. In this case, the fuel used for the generator will be indicated.

"Fuel oil" is No. 1, No. 2, or No. 4 grade fuel oil or residual fuel oil which might be burned for space- or water-heating purposes.

"Kerosene" refers to a distilled product of oil or coal with the generic name "kerosene," mainly used for space- and water-heating.

"LPG or liquified petroleum gas" refers to any fuel gas supplied to a residence in liquid form. It is usually delivered by tank truck and stored near the residence in a tank or cylinder until used. Propane and butane are liquified petroleum gases. Household use of LPG solely for outdoor gas grills is not considered sufficient use to mark the household as an LPG user.

"Natural gas" is utility gas supplied by underground pipeline to individual housing units by a central utility company. It does not refer to privately owned gas wells operated by the household.

"Solar Collector" refers to active, thermal, concentrating collectors using either air or liquid as the working fluid. It does not refer to passive collection of solar thermal energy.

Head of Household: If the respondent was married and living with his or her spouse, the male was considered to be the head of the household. Otherwise, the respondent was the head of the household.

Heating Degree-Days: The number of degrees per day the daily average temperature is below 65 degrees Fahrenheit. Normally, heating is not required in a building when the outdoor average daily temperature is above 65 degrees. Heating degree-days are determined by subtracting the average daily temperature below 65 degrees from the base 65. For example, a day with an average temperature of 50 degrees has 15 heating degree-days ($65-50 = 15$), while one with an average temperature of 65 or higher has none. The average daily temperature is the mean of the maximum and minimum temperature for a 24-hour period.

The heating degree-days for RECS households in the 48 States and the District of Columbia were assigned according to the NOAA division in which each household is located (See "NOAA Division"). Heating degree-days for Alaskan and Hawaiian households were assigned by appropriate nearby weather stations.

Heating Stove Burning Wood, Coal, and Coke: Any free-standing box or controlled draft stove or built-in fireplace stove. 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. "Airtight" stoves have a gasket around the doors to close off air leakage and control the amount of air intake. "Nonairtight" stoves do not have gaskets around their door openings.

Heat Pump (Reverse Cycle System): A year-round heating-air-conditioning system in which refrigeration equipment supplies both heating and cooling through ducts leading to individual rooms. It generally consists of a compressor, both in- and outdoor coils, and a thermostat.

When the heat pump is attached to a central furnace, the heat pump is either the main or secondary heating equipment depending on how often the heat pump operates. If it operates for a short time and then 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.

Home Energy Audit: A visit to each housing unit by a professional energy auditor to advise the household on how it could save money on its energy bills. Advice received over the telephone (such as from an energy hotline) or from literature received in the mail is not counted. The "Energy audit provider" was a professional who represented an electric or gas company, a fuel oil or LPG company, or someone else such as a private contractor.

Hot-Deck Imputation: A procedure by which the household file is sorted by variables related to the missing item. A household is then selected which has the same value on the matching variables and this "donor" household supplies the value for the missing item. (See "Imputation").

Household: A group of up to 12 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. The household includes 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, the count of households is the same as the count of occupied housing units.

Housing Structure: One of four structure types used to categorize the building the housing unit was located in.

A "single-family housing unit" refers to a structure that provides living space for one household or family. The structure may be detached, attached on one side (semi-detached), or attached on two sides. 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 to the roof.

A "house or building with two to four housing units" is divided into living quarters for two, three, or four families or households. This category also includes houses originally intended for occupancy by one family or for some other use, but have since been converted to a separate dwelling 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.

A "building with five or more housing units" refers to a building containing living quarters for five or more separate households or families.

A "mobile home or trailer" refers to a structure which has all the facilities of a dwelling unit, but is built on a movable chassis. It may be placed on a permanent or temporary foundation and contain one or more rooms. If additional rooms are added to the structure, it is still considered a mobile home.

Housing Unit: A structure or part of a structure where a household (family or individual) lives or could live. It has direct access from the outside of the building or through a common hall. Housing units do not include group quarters such as prisons, hospitals, dormitories, nursing homes, fraternity houses, or convents where ten or more unrelated persons live. Hotel rooms, motel rooms, mobile homes, or trailers are considered housing units if occupied.

Imputation: is a statistical method used to estimate the response to specific questions for which answers are missing.

Insulation: refers to any material which, when placed between the interior of the dwelling and the outdoor environment, reduces the rate of heat loss to the environment or heat gain from the environment. The four forms of insulation, illustrated in a drawing shown to respondents, are listed below:

"Blankets or batts"; rolls or pieces of insulation which are nailed or stapled between the rafters or wall joists (beams). It is usually made of fiberglass or rock wool.

"Loose particles or loose fill"; loose insulation comes in a bag and is poured between joists (beams). Loose insulation can also be blown into open spaces. Loose fill can be glass fiber, rock wool fibers, cellulosic fiber, or vermiculite.

"Firm foam or firm plastic"; rigid boards (such as styrofoam) that can be cut to size and either edged, nailed, or glued into place.

"Sprayed-in urethane foam" is not shown separately as a category because the description used in the survey was inaccurate. Urethane foam is not sprayed in because it expands so much that confined areas may be broken apart by the force of the expanding substance. The more general category of "sprayed foam" will be used in the future to include all types of foam insulation.

"Floor insulation" is insulation between the bottom floor and the unheated basement or crawl space. Carpeting or carpeting pads are not insulation.

Main Cooking Fuel: is the answer to the question: "Thinking of all the different kinds of cooking done here, including cooking in the oven, on a range, and with small appliances, which fuel is used most?"

Main Heating Equipment: (See description of specific heating equipment.) Main heating equipment, if temporarily out of order, is reported as the main heating equipment. If two types of heating equipment are used, the main equipment is the one used more. If both are used equally, the main equipment is the one that appears first on the list in the question.

Main Heating Fuel: The fuel mentioned by the respondent in response to Question 21, "What is the main fuel used for heating this house (apartment)?" Question 24 asked about the main heating fuel used to heat the house (apartment) in the winter of 1979-80. This question does not apply to housing units not yet built in the winter of 1979-1980 or to housing units not heated in the winter of 1980-1981 (and assumed not to have been heated in the winter of 1979-1980).

Main Outside Wall Material: The predominant type of wall material. Houses built with two materials used in approximately the same amount are classified as having a "combination" of materials.

NIECS: The National Interim Energy Consumption Survey, the first developmental survey in the planned series of Residential Energy Consumption Surveys. The NIECS contacted 4,081 households in October and November 1978. Fuel suppliers provided data on consumption and expenditures for the period April 1978 through March 1979.

NOAA Division: One of the 344 weather divisions designated by the National Oceanic and Atmospheric Administration (NOAA) encompassing the 48 contiguous States. These divisions usually follow county borders to encompass counties with similar weather conditions. The NOAA division does not follow county borders when weather conditions vary considerably within a county such as is likely to happen when the county borders the ocean or contains high mountains. A State contains an average of seven NOAA divisions; a NOAA division contains an average of nine counties.

Number of Rooms: Whole rooms are rooms such as living rooms, dining rooms, bedrooms, kitchens, lodger's rooms, finished basements or attic rooms, recreation rooms, and permanently enclosed sun porches which are used year-round. Rooms used for offices by a person living in the unit are included in this survey.

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 are not included.

A partially divided room, such as a dinette next to a kitchen or living room, is 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.

Rooms are counted as year-round living space if they are completely enclosed with permanently installed walls, windows, and roof, and can be heated.

Occupied Housing Unit: A unit someone was living in as his/her usual or permanent place of residence at the time of the first field contact.

Origin: Each respondent was asked, "Which of the groups on this exhibit best describes your origin"? The groups included--white, black or negro, American Indian, Alaska native, Asian, Pacific Islander. The word "race" was not used in either the questionnaire or the instructions.

Owner/Renter: Own/rent refers to the structure itself, not the land on which it is located. The household is classified "renter" 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 rent is paid nor contracted for. 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. "Rent-free" also includes occupants who pay only for utilities. Unless shown separately, "rent-free" households are grouped together with "renters".

Poor: Definitions of the poor were developed for 100 percent and for 125 percent of the level of poverty. The definition was based on the number of family members in the household and family income. Because income data were collected by using categories of income (for example, \$3,000 to \$3,999), an exact match of Census thresholds could not be made. In addition, the RECS survey did not ask about the farm-nonfarm distinction, thus further limiting a closer match to Census thresholds which are lower for farm households.

Table H. Definition of Poor

Number of Persons per Family	100 Percent Level of Poverty		125 Percent Level of Poverty	
	1979 RECS Income Range Less than:	Census Threshold*	1979 RECS Income Range Less than:	125 Percent of 100 Percent Threshold
1	\$4,000	\$3,683	\$5,000	\$4,604
2	\$5,000	\$4,702	\$6,000	\$5,878
3	\$6,000	\$5,763	\$7,000	\$7,204
4	\$7,000	\$7,386	\$9,000	\$9,233
5	\$9,000	\$8,736	\$11,000	\$10,920
6	\$10,000	\$9,849	\$12,000	\$12,311
7 or more	\$12,000	\$12,212	\$15,000	\$15,265

*Figures from the Bureau of the Census, Money Income and Poverty Status of Families and Persons in the United States: 1979 (Advance Report), (Series P-60, No. 125), October 1980. See Table 17, page 28.

The definitions above produced an estimate of 10.897 million poor households (100 percent level of poverty) and 14.774, million poor households at the higher level. The Bureau of the Census estimate for March 1980 is 9.521 million poor households (100 percent of poverty) and 13.670 million poor households (125 percent level of poverty). The Census estimates have not been adjusted for the 1980 Census which counted several million households more than were anticipated. The RECS estimates are based on the 1980 Census results and thus would be expected to be larger than estimates not based on the larger number of households found in the 1980 Census.

Portable Heater(s): Heaters that can be picked up and moved including electric heaters that get current through a cord plugged into an electrical wall outlet. Portable space-heaters are included in this category.

Race: See "Origin".

Refrigerators: with no freezer sections are included in the nonfrost-free category. "Frost-free" means that frost does not buildup on the sides of the freezer section or ice cube section.

Room Heaters Burning Gas, Oil, Kerosene: are circulating heaters, convectors, radiant gas heaters, space-heaters or other nonportable room heaters which may or may not be connected to a flue, vent, or chimney.

Rural: refers to places which had a population of less than 2,500 in the 1970 Census.

Screener Survey: The Residential Energy Consumption Survey which contacted 4,033 households in October and November 1979. Fuel suppliers provided data on consumption and expenditures for the period April 1979 through March 1980. This survey was named the Household Screener Survey because it was used to screen households for participation in the household Transportation Panel.

Secondary Heating Equipment: Equipment used in addition to the main equipment. Description of the secondary heating equipment is the same as for the main heating equipment.

SMSA: A group of households located within Standard Metropolitan Statistical Areas (SMSA's) as defined in the 1970 Census. Except in New England, an SMSA is a county or group of contiguous counties which contain at least one city of 50,000 inhabitants or more, or "twin cities" with a combined population of at least 50,000. The contiguous counties are included in an SMSA if, according to certain criteria, they are essentially metropolitan in character and are socially and economically integrated with the central city. In New England, SMSA's consist of towns and cities, rather than counties. "Non-SMSA" refers to households not located within SMSA's as defined in the 1970 Census.

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. Garages are included if they are attached to the house. Attics that have finished space and attics that have some heated space are

included. 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. "Measured" square feet means the measurement of the dimensions of the home did not rely on the respondent's reports but was an actual measurement by the interviewer using a metallic, retractable, 50-foot tape measure. All "measurements" are standardized to outside estimates, if not already outside measurements. For details on how the measurement was made and how the data were treated, see Appendix B.

"Heated square feet" is that portion of the measured square feet that is heated during most of the season. Rooms that are shut off during the heating season to save on fuel use 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.

Steam or Hot Water System with Radiators or Convector: A central heating system supplying steam or hot water to conventional radiators, baseboard radiators, heating pipes embedded in the walls or ceilings, or heating coils or equipment which are part of a combined heating-ventilating or heating-air-conditioning system. This category also includes hot water pipes under the floor which provides central radiant heating through hot water pipes inlaid in a concrete, slab floor.

Storm Doors and Windows: Storm doors made of double or insulating glass such as thermopane. Glass or plexiglass placed over a sliding glass door on either the exterior or interior is counted as a storm door. A plastic sheet covering the door is not counted as a storm door.

Storm windows are added to the exterior of existing windows. Windows made of double or insulating glass, such as thermopane, are storm windows. Glass or plexiglass placed over windows on either the interior or exterior side are included. Plastic sheets covering windows are not included.

Note: Responses of "don't know" for storm doors, windows, and/or attic insulation were treated the same as "do not have". For example, a respondent who indicated his/her house had storm windows (some or all) and storm doors (some or all) but who did not know if it had attic insulation, was counted in the "have one or two of these" category.

Urban: Includes housing in places of 2,500 inhabitants or more as defined in the 1970 Census.

Utilities Paid by Household: Fuel suppliers or utility companies paid directly for all electricity, natural gas, fuel oil, kerosene, or liquified petroleum gas used by the household. Households paying directly to the utility were classified in this survey as "all paid." Households that paid directly for at least one but not all of their fuels used and had at least one fuel charge included in their rent were classified as "some paid, some included in rent". Households in which all fuels used were included in their rent were classified as "all included in rent". Some households were classified as "other" if they did not fall into any of the above three categories. Included are households for which fuel bills were paid by a department of social services or a relative, and households that paid for some of their fuels used but paid for other fuels through some other arrangement.

Windows: All windows in the year-round living space. Windows in the basement, attic, garage, and porch are included only if these areas are heated. Windows in doors are not included. Each window that opens separately is counted as one window. Windows fixed in place are also counted. Respondents were shown an exhibit which presented the picture of a door of standard size and a large, medium, and small-sized window beside the door for comparison. In addition, each size of window was defined in square feet to enable the interviewer or respondent to classify windows by multiplying the width times the height.

Vacant Housing Unit: A housing unit not occupied at the time of the first field contact. An occupied seasonal or migratory housing unit is classified as vacant at the time of the first field contact when all persons had a usual place of residence elsewhere.

Water-Heating Fuel: The answer to the question "Which fuel is used most for heating water"? This included households that did not have running water in their home. This fuel is used for heating water for bathing and washing. The hot water may have been available anywhere in the same building as the respondent's living quarters. This may have been in a hallway, in a room used by several units in the building, in the basement, or on an enclosed porch provided the respondent's household had access to it.

Weatherization Program: A community program to help some people save energy by providing and installing such materials as insulation, storm windows, or storm doors at no cost to the household.

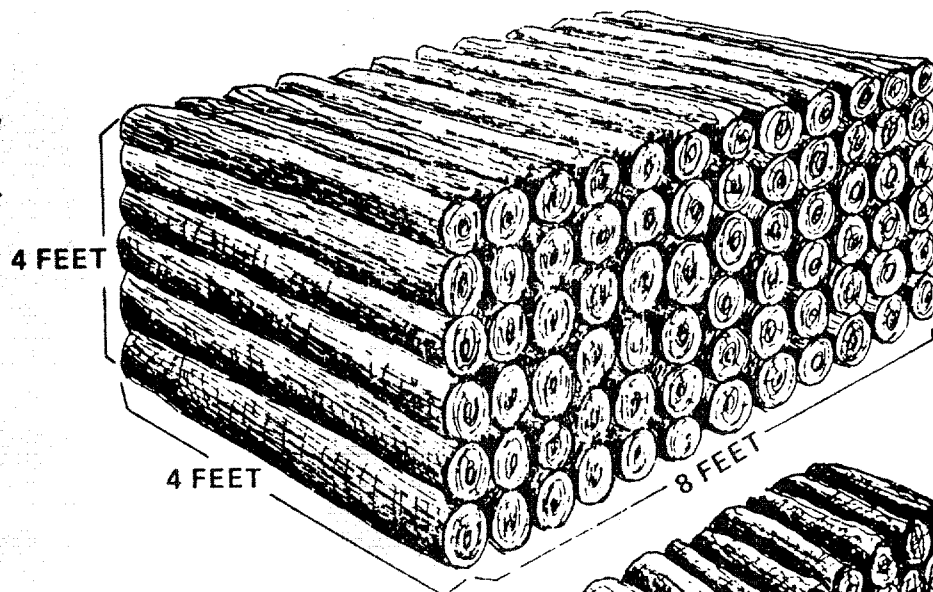
Wood Burned: Amount of wood burned in the home at any time in the past 12 months in either a fireplace, stove, or furnace. Households burning less than 1/3 of cord of wood are not shown separately in this report, nor is their consumption of wood included in figures on wood consumption. January 1981 represents the midpoint of interviewing; therefore, the consumption period for wood burned in the prior 12 months is calendar year 1980 for the typical respondent. This means the figures for wood burned cover part of the 1979-1980 heating season and part of the 1980-1981 heating season.

A "cord" measures 4 feet by 4 feet by 8 feet and is approximately 128 cubic feet. A third of a cord measures 16 inches by 4 feet by 8 feet. The following picture of a cord and a rack (1/3 of a cord) was shown to respondents.

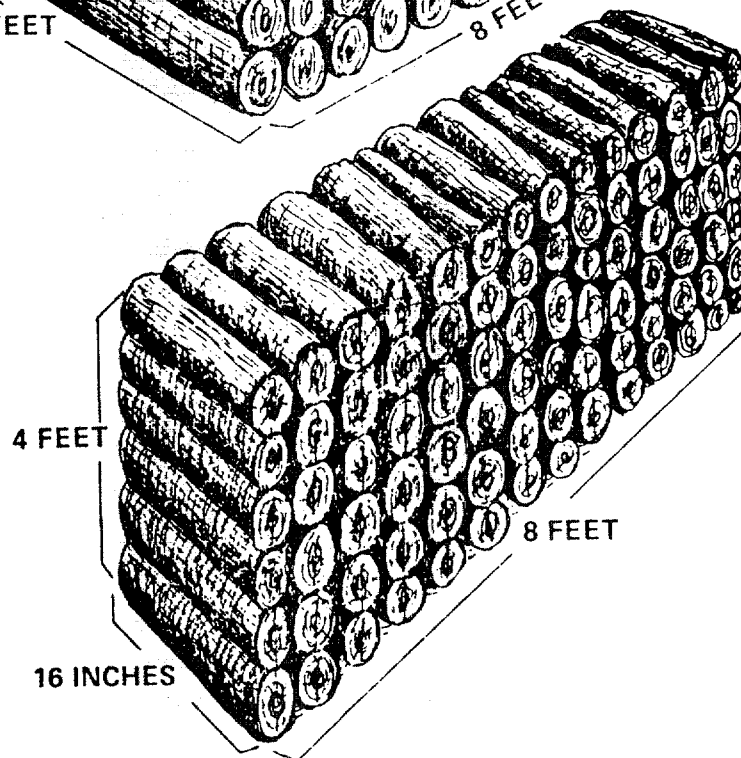
"Average price per cord from most recent purchase (1980 purchases)". Households which purchased 1/4th or more of the wood burned were asked about their most recent purchase of wood. Only prices for the most recent purchase in 1980 are reported. Purchases of less than one cord were converted to a cord base. Purchases in "other" units are not included in the average price.

SIZE AND VOLUME CONTAINED IN
A CORD AND A RACK OF FIREWOOD

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RACK →
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43 CUBIC FEET





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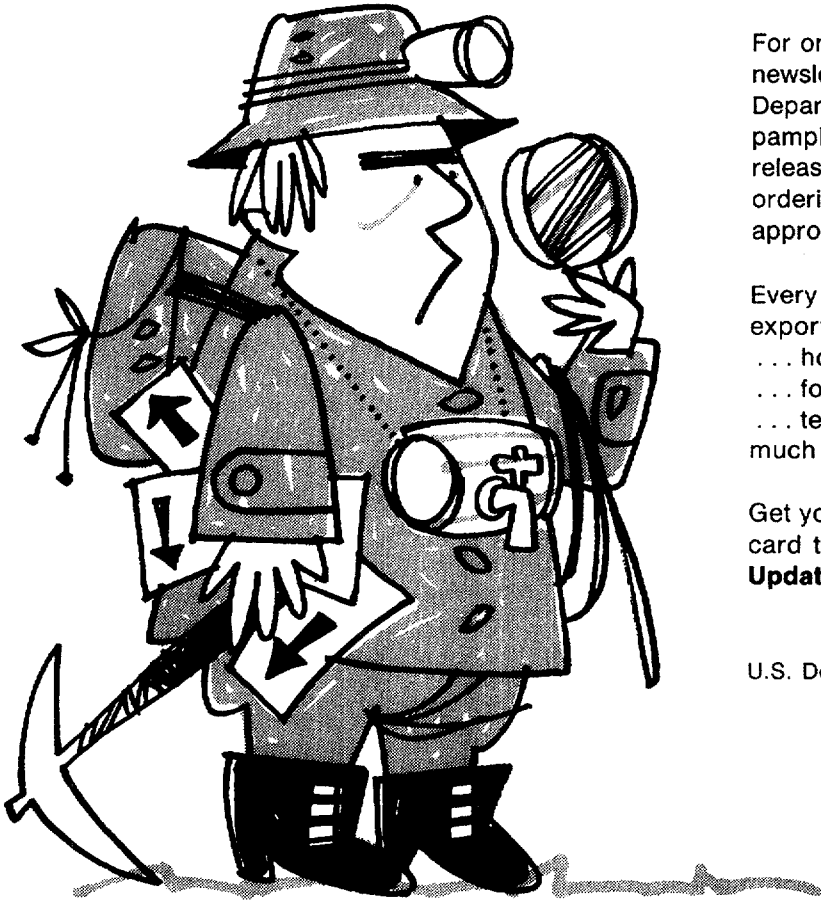
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Materials on the Residential Energy Consumption Survey

Residential Energy Consumption Survey: Conservation, February 1980,
DOE/EIA-0207/3, GPO Stock No. 061-003-00087-8, \$6.00

Single-Family Households: Fuel Inventories and Expenditures: National
Interim Energy Consumption Survey, December 1979, DOE/EIA-0207/1, GPO
Stock No. 061-003-00075-4, \$1.75.

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: Consumption and Expenditures,
April 1978 Through March 1979, July 1980, DOE/EIA-0207/5, GPO Stock No.
061-003-00131-9, \$6.50.

Residential Energy Consumption Survey: 1979-1980 Consumption and
Expenditures (Part I: National Data Including Conservation), April, 1981,
DOE/EIA-0262/1, GPO Stock No. 061-003-00191-2, \$5.50.

Residential Energy Consumption Survey: 1978-1980 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 Patterns of Household
Vehicles, June to August 1979, June 1980, DOE/EIA-0207/4, GPO Stock No.
061-003-00156-4, \$3.75.

Copies of the above reports are available from Superintendent of Documents,
U.S. Government Printing Office, Washington, DC 20402.

Residential Energy Consumption Survey: Consumption Patterns of Household
Vehicles, June 1979 to December 1980, April 1982, DOE/EIA-0319. Copies
are available from the National Energy Information Center, 1F-048, Forrestal
Building, U.S. Department of Energy, Washington, DC 20585. Telephone:
(202) 252-8800.

Copies of the following household data files on magnetic tape with name,
address, and other potentially identifying data removed, are available
from the National Technical Information Service, Computer Products Division,
5285 Port Royal Road, Springfield, Virginia 22161. Telephone:
(703) 487-4808.

National Interim Energy Consumption Survey: Household Interview File,
Accession No. PB-81-108714, \$125.00.

National Interim Energy Consumption Survey: Household Monthly Energy
Consumption and Expenditures, Accession No. PB-82-114901, \$125.00.

Household Screener Survey: Household Characteristics and Annualized
Consumption, Accession No. PB-82-114877, \$125.00.

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