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Nonresidential Buildings Energy Consumption Survey:

Fuel Characteristics and Conservation Practices



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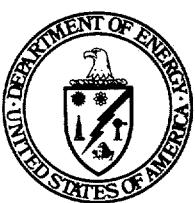
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June 1981

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Nonresidential Buildings Energy Consumption Survey:

Fuel Characteristics and Conservation Practices

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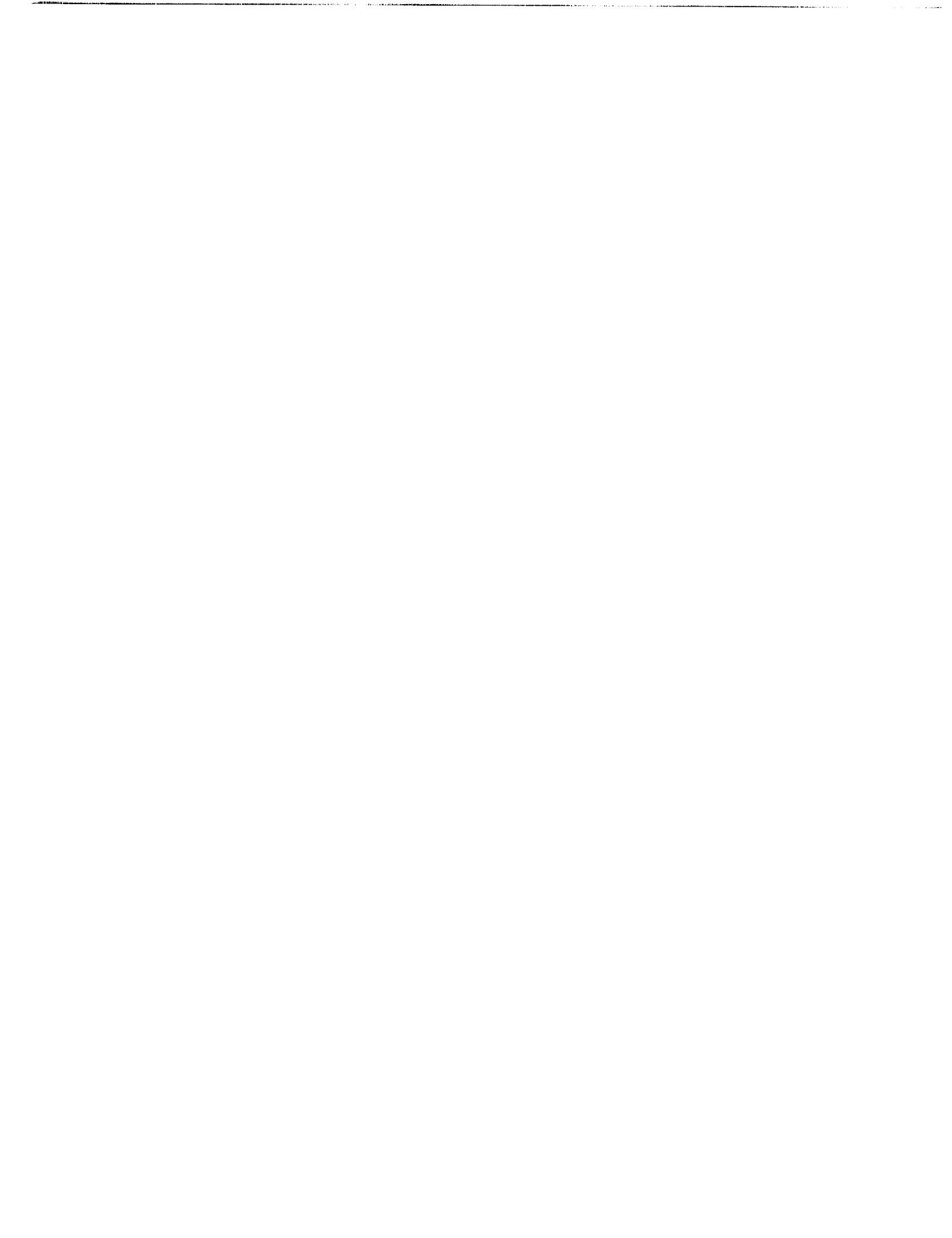
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PREFACE

This is the second in a series of reports from the Office of the Consumption Data System (CDS) presenting data from the Nonresidential Buildings Energy Consumption Survey (NBECS). It follows the report, Nonresidential Buildings Energy Consumption Survey: Building Characteristics, (DOE/EIA-0246). The NBECS has been designed and developed and is now being analyzed by CDS. This is the first time that either the public or private sector has developed a method of collecting data on a statistical sample of nonresidential buildings across the country. Subsequent reports will cover energy consumption and expenditures, fuel oil capacities and inventories, and methodological issues. Concurrently, this office is examining alternative methods of data collection for the sector as well as the problems in collecting and analyzing nonresidential consumption data.

This report presents data, collected between October 1979 and January 1980, on fuel end uses and conservation practices. The tables present data from the final interview file, which contains imputations for missing data. Included in this report are: a summary of findings, a description of how the survey was conducted, an explanation of the relative standard errors, a copy of the questionnaire, and a glossary.



INTRODUCTION

Authority for the Nonresidential Buildings Energy Consumption Survey (NBECS) is contained in Section 52 of the Federal Energy Administration Act of 1974, as amended, which charges the Energy Information Administration with creating and maintaining a National Energy Information System. The NBECS, a part of this System, represents the first attempt at collecting nonresidential buildings' characteristics and consumption data from a national, statistical sample. This NBECS publication is intended for use by representatives of Federal, State, and local governments as well as by representatives from the private sector (e.g., utility trade associations, public and private fuel suppliers, and energy management companies) who are concerned with buildings' energy consumption for forecasting, modeling, and analysis.

This report presents data on energy uses and on conservation practices employed in nonresidential buildings for the 48 contiguous States and the District of Columbia. Nonresidential buildings have been defined as roofed and walled structures which house some kind of commercial or industrial activity (see Glossary). Buildings which were primarily residential but showed evidence of commercial or industrial activities were also within the scope of the survey. The information was collected through personal interviews conducted with building representatives between October 1979 and January 1980. A summary of the survey design, data collection procedures, and techniques used to convert the sample data to national estimates is found in Appendix A (How the Survey was Conducted).¹

The data are presented in two basic sets of tables. The first set (Tables 1A-13C) presents estimated counts and percent distributions by fuel end uses, fuel oil conversions, number and types of fuels used, types of heating and cooling systems, and percentage of the building heated or cooled for selected building characteristics. These building characteristics include: location, structural features, use and occupancy characteristics, and types of heating and cooling systems. The second set (Tables 14A-29C) presents the same building characteristics by energy conservation features of the buildings (additions of insulation, weatherstripping and caulking, treated glass and outside shading) and conservation practices (reduction in heating and cooling and regular maintenance) undertaken by the building management.

¹ Because the data came from a sample of nonresidential buildings rather than the entire population, the estimates in this report are subject to sampling as well as nonsampling errors and biases. These issues are discussed in Appendix B (Limitations of the Data). Estimates of the sampling error component have been produced for statistics in this report. They are given in Appendix B for the detailed tables, and in parentheses after specific estimates quoted in the text. Sampling errors can be used to test statistical inferences made in the text. Testing procedures are also discussed in Appendix B.

Each set of variables is presented in three types of tables. In the A series of tables, each cell contains an estimated count of buildings in thousands. The series B tables express the buildings in each cell as a percentage of a row total, that is, each row sums to 100 percent. In the C series, the buildings in each cell represent a percent of a column total (each column sums to 100 percent). Thus in Table 1A, there are 904,000 buildings that use natural gas for heating in the North Central region. In Table 1B, these buildings represent 44 percent of all buildings that heat with natural gas. In Table 1C, these buildings represent 68 percent of all buildings in the North Central region.

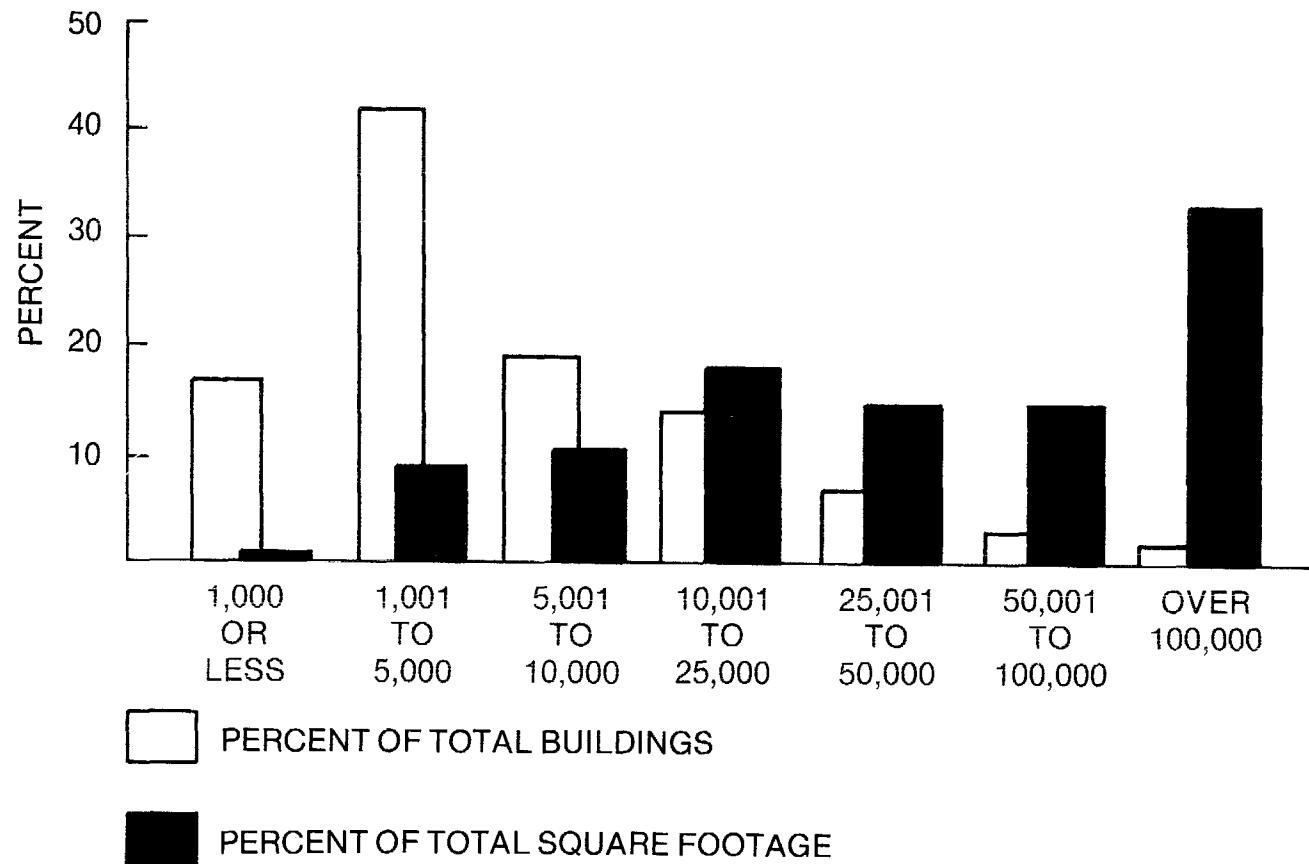
The sample size for this report is 6,203 buildings. A series of weights was applied to each of the sample units to allow estimates to be made of the universe. After weighting, the universe is estimated to be 4,238,000 nonresidential buildings in the contiguous United States. This figure appears in the upper left-hand corner of the A series of tables. The 100 percent figure which appears in the upper left-hand corner of the series B and series C tables represents this weighted number.

In the Building Characteristics report (DOE/EIA-0246), square footage was presented in terms of the number of buildings in each of 7 range categories. Since this report was published, many users have expressed a desire to see a table giving total square footage for the nonresidential sector. Table A gives the total square footage and the estimated number of buildings for each of the size categories as well as a total for the sector (and standard errors for each of these numbers). These square footage estimates are preliminary and subject to revision. The procedures and definitions used in this survey may make it difficult to compare these numbers to estimates of square footage from other sources. First, the question used to elicit square footage from the respondent was worded as follows: "What is the total square footage of all the space enclosed within the exterior walls of this building? Again, please include indoor parking facilities and basements, and all space such as hallways, lobbies, stairways and elevator shafts." This definition would not be comparable to one based on the concept of "rentable floor space," "usable floor space," or "commercial floor space." Second, as mentioned above, any building which showed evidence of commercial or industrial activity was eligible for inclusion in the survey, including buildings which were primarily residential. Square footage was obtained and reported for the entire building, not just for the nonresidential portion. Third, commercial and nonresidential are not synonymous. Included in the estimate for the nonresidential sector are buildings which are primarily or partially industrial.

Table A. Number and Percent Distribution of Nonresidential Buildings and Total Square Footage by Building Size Class (Preliminary Estimates)

Square Footage Category	Estimated Number of Buildings (Thousands)	Percent of Total Buildings	Standard Error of Number of Buildings (Thousands)	Estimated Total Square Footage (in Millions)	Percent of Total Square Footage	Standard Error of Total Square Footage (in Millions)
Total	4,238	100	199	54,581	100	1,999
1,000 or less	677	16	56	377	1	56
1,001 to 5,000	1,729	41	107	4,675	9	313
5,001 to 10,000	801	19	63	5,755	11	483
10,001 to 25,000	596	14	51	9,249	17	573
25,001 to 50,000	237	6	28	8,164	15	416
50,001 to 100,000	121	3	17	8,231	15	700
Over 100,000	77	2	13	18,130	33	1,050

FIGURE 1. SQUARE FOOTAGE OF NONRESIDENTIAL BUILDINGS



SUMMARY OF FINDINGS

End-Uses

A large proportion of nonresidential buildings are heated (89 percent ± 1.7).² Of the 3,788,000 ($\pm 371,000$) heated buildings, 55 percent (± 3.4) used natural gas, 27 percent (± 3.0) used electricity, and 21 percent (± 2.5) used fuel oil or kerosene for heating. Six percent (± 1.3) of the heated buildings used LPG, 3 percent (± 0.8) used wood and 1 percent or less used coal, steam, and other fuels for heating purposes.³ Almost all the air conditioning systems in nonresidential buildings used electricity. Of the 2,706,000 buildings ($\pm 292,000$) or 64 percent (± 3.4) that were air conditioned, 95 percent (± 2.0) used electricity and virtually all the rest used natural gas for cooling purposes. Sixty-seven percent (± 3.6) of all nonresidential buildings had heated water. The building stock was evenly divided between the use of natural gas (1,321,000 $\pm 177,000$) and electricity (1,306,000 $\pm 177,000$) for water heating.

Only 492,000 ($\pm 91,000$) or 12 percent (± 1.9) of all nonresidential buildings reported the use of energy for manufacturing. The vast majority of these buildings used electricity for this purpose (87 percent ± 4.8). Natural gas was used for manufacturing by 16 percent (± 4.2) of these buildings. Approximately a third of the buildings reported the use of energy for cooking. Of these buildings, 56 percent (± 5.1) used electricity, 46 percent (± 5.1) used natural gas, and 8 percent (± 2.1) used liquid petroleum gas (LPG) for cooking.

Virtually all nonresidential buildings used electricity as an energy source. The second most often-used fuel was natural gas which was used by 57 percent (± 3.4) of the total stock. Third-ranked was fuel oil/kerosene used by 21 percent (± 2.6) of the building stock. Eight percent (± 1.5) of the buildings were supplied with LPG and 3 percent (± 0.8) used wood. Three percent (± 0.8) of all nonresidential buildings did not use any fuels (see "Building Type"). Twenty percent (± 2.4) of the building stock was supplied with only one energy source, namely, electricity. The majority of the buildings (65 percent ± 3.7 or 2,775,000 $\pm 300,000$) used some combination of two fuels. The most prevalent two-fuel combination, found in 2,026,000 ($\pm 243,000$) buildings, was electricity with natural gas. A combination of three fuels was used by 11 percent (± 1.8) of the buildings. Four or more fuels were supplied to 1 percent (± 0.4) of the building stock.

² The \pm values given in parentheses after a statistic quoted in the text represent two standard errors of the statistic. Adding and subtracting the value in parentheses from the statistic will produce an approximate 95 percent confidence interval.

³ Note that data for end-uses sum to more than the total due to multiple energy sources within a single building for the same end-use.

One percent (± 0.4) or 52,000 ($\pm 19,000$) buildings reported converting from fuel oil to another energy source. Virtually all of these buildings converted their heating systems. Nearly 80 percent of all nonresidential buildings did not have any boilers; 16 percent (± 2.2) had one boiler and 5 percent (± 1.1) had two or more. Most of the buildings that had boilers used natural gas to fire them.

The majority of nonresidential buildings were entirely heated (62 percent ± 3.5); 27 percent (± 2.8) were partially heated and 11 percent (± 1.8) had no heat. About half of the unheated buildings were located in the South. Buildings in the South were also less likely to use any fuels for water heating, manufacturing or cooking than were buildings in other regions.

Only 26 percent (± 2.9) of the buildings were completely cooled; 38 percent (± 3.3) were partially cooled, and 36 percent (± 3.2) had no air conditioning. The building population was divided quite evenly between the use of self-contained heating units (1,753,000 $\pm 217,000$) and central systems (1,921,000 $\pm 231,000$). There were also no statistically significant differences among the number of buildings that were cooled by window units, package units, and central systems.

Building Location

The type of heating fuel used varied considerably across regions. In the North Central region, 68 percent (± 5.3) of the buildings used natural gas to heat and each of the other fuels was used by less than 15 percent of the buildings. In the Northeast, 46 percent (± 6.2) heated with natural gas and 42 percent (± 6.1) used fuel oil. Electricity and natural gas were the most prevalent heat sources used in the South (37 percent ± 4.4 and 33 percent ± 4.9 , respectively). Nearly half of the buildings in the Western region used natural gas for heat and approximately a third used electricity.

Building Type

The uses of fuel varied considerably by building type. Overall, 89 percent (± 1.7) of nonresidential buildings were heated. However, in two building categories, warehouses and vacant buildings, only 58 percent (± 7.1) and 42 percent (± 9.8), respectively, were heated. Among the occupied building types, the percentage of buildings that used energy for air conditioning ranged from 35 percent (± 6.6) for automotive sales and service buildings to 90 percent (± 4.1) for office buildings. Overall, 67 percent (± 3.6) of the buildings used energy to heat water. Nearly all of the food sales, health care, lodging, and residential buildings had heated water while fewer than half of the automotive buildings and warehouses had heated water. The use of cooking fuels ranged from 7 percent (± 2.9) for automotive sales and services buildings to 92 percent (± 4.6) for residential buildings.⁴ More than 80 percent of the assembly,

⁴ For more detailed information on the uses of energy in the residential sector, see the Residential Energy Consumption Survey reports referenced on the inside front cover of this report.

education, health care, and lodging buildings were completely heated while only 23 percent (± 5.3) of the warehouses were heated 100 percent. Nearly half of the health care and office buildings were 100 percent air conditioned while only 6 percent (± 2.5) of the automotive sales and service buildings and 2 percent (± 1.2) of the warehouses were fully air conditioned.

Building Size

The percentage of buildings that used some type of energy for heating generally increased with the size of the building. Twenty-five percent (± 4.9) of the buildings of 1,000 square feet or less had no heating fuel supplied as compared to 5 percent (± 1.4) of the buildings over 5,000 square feet. Similarly, the percentage of buildings supplied with energy for cooling purposes increased with building size, ranging from 48 percent (± 6.0) for buildings of 1,000 square feet or less to 84 percent (± 7.5) for buildings over 50,000 square feet. Similar patterns can be observed in the relationships between building size and the use of water heating, manufacturing, and cooking fuels.

The number of fuels used is also associated with the size of the building. Generally, the larger the building, the more fuels used. Thirty-seven percent (± 5.6) of the buildings 1,000 square feet or less used only one fuel as compared to 11 percent (± 4.8) of the buildings with over 50,000 square feet. On the other hand, a combination of three fuels was used by 3 percent (± 1.4) of the buildings of 1,000 square feet or less and by 31 percent (± 8.0) of the buildings with over 50,000 square feet.

Single story structures accounted for 58 percent (± 3.5) of all nonresidential buildings. Eighty percent (± 2.7) of the building stock was free-standing. Heating fuels were used by 84 percent (± 2.5) of the single story buildings as compared to 97 percent (± 2.2) of the multi-storied buildings. The use of energy for cooling purposes ranged from 58 percent (± 3.6) of the buildings with one floor to 77 percent (± 7.3) of the buildings with more than 3 floors. Water heating fuels were used by 57 percent (± 4.0) of the single floor structures as compared to 85 percent (± 4.8) of the buildings of 3 floors and over. Similarly, the use of cooking fuel ranged from 21 percent (± 3.0) for buildings with one floor to 60 percent (± 8.0) for buildings over 3 floors.

Twenty-eight percent (± 3.4) of the single story buildings used only one fuel compared to 5 percent (± 1.8) of the buildings with 3 or more floors. Conversely, a combination of 3 fuels was used by 5 percent (± 1.3) of the buildings with 1 floor and by 34 percent (± 7.3) of the buildings over 3 floors. Natural gas was supplied to 48 percent (± 4.0) of the single story buildings versus 76 percent (± 5.5) of the buildings with 3 or more floors.

The type of heating system used was strongly associated with the height of the structure. Nine percent (± 1.8) of the single story buildings had boilers as compared to 54 percent (± 8.0) of the buildings over 3 floors. The use of forced-air, self-contained units ranged from 35 percent (± 4.6) of the single story buildings to 8 percent (± 3.5) of the tallest buildings. Central radiant systems were used by 4 percent (± 1.2) of the buildings with 1 floor and by 44 percent (± 7.7) of the buildings with more than 3 floors.

Age of Building

The number and type of fuels used in nonresidential buildings were related to the age of the structure. The older the building, the more likely it was to be supplied with natural gas; 73 percent (± 5.4) of the buildings built in 1920 or earlier used natural gas versus 36 percent (± 6.1) of the buildings built after 1973. Fifty-nine percent (± 4.6) of the buildings constructed in 1945 or earlier used natural gas for heating as compared to 30 percent (± 5.6) of the buildings built after 1973. Similarly, older buildings were more likely to use fuel oil for heating than were newer buildings. On the other hand, the use of electricity for heating was more prevalent among the newer buildings. Thirteen percent (± 2.6) of the buildings constructed in 1945 or earlier used electricity for heating versus 48 percent (± 6.5) of the buildings built after 1973. Similar patterns can be observed in the usage of natural gas and electricity for water heating.

Generally, the older the building, the larger the number of different fuels used. The percentage of buildings using only one fuel ranged from 5 percent (± 1.9) for buildings built in 1920 or earlier to 41 percent (± 6.4) of buildings constructed after 1973. Some combination of two fuels was used by 75 percent (± 5.1) of the older buildings and 50 percent (± 8.1) of the newer buildings. Three fuels were used by 20 percent (± 5.5) of the buildings built in 1900 or earlier as compared to 6 percent (± 2.4) of the buildings constructed after 1973.

Number of Employees

The number of employees in a building was associated with fuel end-uses as well as with the number of fuels used. Seventy-two percent (± 2.9) of all nonresidential buildings had less than 10 employees. The percentage of buildings that used energy for cooling ranged from 55 percent (± 3.9) for buildings with less than 10 employees to 94 percent (± 6.4) for buildings with 100 or more workers. Water heating fuel was used by 59 percent (± 3.9) of the buildings in the smallest employment category and by 89 percent (± 4.6) of buildings with 20 or more employees. The use of fuel for manufacturing ranged from 9 percent (± 1.8) for buildings with fewer than 10 employees to 30 percent (± 8.6) for buildings with 100 or more workers.

Twenty-one percent (+ 2.8) of the buildings with less than 10 employees used only one fuel as compared to 7 percent (+ 4.1) of the buildings with 100 or more employees. Conversely, 9 percent (+ 1.7) of the buildings with less than 10 employees used a combination of three fuels as compared to 34 percent (+ 9.7) of the buildings in the 100-plus employee group. Boilers were used in 15 percent (+ 2.3) of the buildings that had less than 10 employees as compared to 53 percent (+ 11.1) of the buildings that had 100 or more employees.

Conservation Practices

The data indicate that retrofitting for conservation of nonresidential buildings is not yet widespread and that the potential for retrofitting in the future is quite high. Since 1974, weatherstripping and/or caulking has been added to a larger proportion of buildings than has insulation (36 percent ± 3.1 compared to 27 percent ± 2.8). Only 17 percent (± 2.3) of all nonresidential buildings added both weatherstripping or caulking and insulation. Currently, 29 percent (± 2.9) of the building stock is equipped with treated glass and 23 percent (± 2.6) has outside shading. Only about 7 percent (± 1.3) of all nonresidential buildings employed both methods of window shading.

There were 3,817,000 ($\pm 366,000$) buildings with heating and/or cooling systems, or about 90 percent (± 1.8) of the total building stock. In 86 percent (± 3.0) of these buildings, the respondents reported that the systems were turned down during off-hours, and 78 percent (± 3.1) reported that the systems were regularly maintained. In 67 percent (± 3.6) of the buildings with heating and/or cooling systems, the respondents reported both a system reduction during off-hours and a regular maintenance program.

Building Location

Buildings located in the North Central and North East regions and those in cooler climates were more likely to have added weatherstripping or caulking and/or insulation than were buildings in the South and West regions. Forty-three percent (± 6.5) of the buildings in the Northeast and 43 percent (± 5.8) of the buildings in the North Central regions added weatherstripping or caulking compared with 31 percent (± 4.7) of the buildings in the South and 26 percent (± 5.3) of the buildings in the West. Similarly, 33 percent (± 6.2) of the buildings in the coldest climate zone (more than 7,000 heating degree-days) have added insulation, as compared with only 17 percent (± 4.1) of the buildings in the mildest climate zone (less than 2,000 cooling degree-days and less than 4,000 heating degree-days).

Buildings in the North Central region were more likely to have treated glass (35 percent, ± 5.4) than were buildings in the South (23 percent, ± 4.2). Buildings in the West were more likely to have outside shading (28 percent ± 5.4) than buildings in the Northeast (14 percent ± 3.4).

Building Size

Buildings in the smallest size category (less than 1,000 square feet) were less likely to have added weatherstripping or caulking, installed treated glass, or had a regular maintenance program for the heating and/or cooling system, than the largest buildings. However, the prevalence of these conservation activities did not consistently increase as the building square footage increased.

Buildings with only one floor were less likely to have added either weatherstripping and/or caulking, or insulation (29 percent ± 3.5 and 22 percent ± 3.0 , respectively) than were buildings with two or more floors. A similar pattern can be observed for regular maintenance of the heating/cooling system, when

adjustments are made for buildings which lacked such systems. That is, buildings with only one floor were least likely to have such a program (73 percent \pm 4.0), but there were no statistical differences between buildings with two, three, or more than three floors.

Building Ownership And Occupancy

Generally, when the building owner was an occupant, conservation activities were more likely to have occurred. Multiple establishment buildings in which the owner was an occupant were more likely to have had weatherstripping or caulking added than were multiple establishment buildings in which the owner was not an occupant (49 percent \pm 7.3 and 32 percent \pm 7.3, respectively).

For both single and multiple establishment buildings, those that were owner-occupied were more likely to have had insulation added than were buildings which were not owner-occupied. For the conservation practices discussed above, buildings occupied by the government were similar to multiple establishment buildings which were not owner-occupied. The pattern for treated glass in exterior windows is similar to that for the addition of insulation.

Building Type

For several conservation practices, there were wide variations among the occupied building types. The percentage of buildings that had weatherstripping or caulking added ranged from 53 percent (\pm 14.7) for health care buildings, 53 percent (\pm 11.3) for lodging buildings, and 51 percent (\pm 7.2) for residential buildings down to 24 percent (\pm 5.5) for warehouse and storage buildings. The addition of insulation varied from 44 percent (\pm 7.3) for residential buildings to 17 percent (\pm 6.3) for education buildings. The presence of treated glass ranged from 52 percent (\pm 14.1) for health care buildings, 45 percent (\pm 6.3) for office buildings down to 20 percent (\pm 5.2) for automotive sales and service buildings, and 14 percent (\pm 4.3) for warehouse and storage buildings.

Before comparing building types on the basis of the frequency with which heat is reduced during off-hours, it is necessary to remove from consideration those buildings which do not have heating systems. Thus, while the heat was reduced in only 46 percent (\pm 6.9) of all warehouse and storage buildings, it was reduced in 80 percent (\pm 7.0) of those which had heating systems. With this adjustment, there were statistically significant differences only between assembly (93 percent \pm 3.7) and education buildings (93 percent \pm 5.2) on the one hand, and those devoted to residential use (70 percent \pm 6.8) and industry (77 percent \pm 7.2) on the other hand.

Vacant buildings were, in general, least likely to have any of the energy conservation features included in the study, with the exception of outside shading. Only 11 percent (\pm 5.1) of the vacant buildings added weatherstripping or caulking, compared to 37 percent (\pm 3.3) of all occupied buildings;

12 percent (+ 5.5) added insulation, compared to 27 percent (+ 2.9) for all occupied buildings. And 12 percent (+ 5.5) of the vacant buildings had treated glass compared to 29 percent (+ 2.9) of all occupied buildings.

Age of Building

In general, older buildings were more likely to have had a conservation feature added than were buildings of more recent construction. Thus, 52 percent (+ 7.8) of the buildings constructed before 1900 had weatherstripping or caulking added, compared to 35 percent (+ 4.9) of the buildings constructed between 1946 and 1960, and only 19 percent (+ 4.6) of those built since 1974. Similarly, 46 percent (+ 7.6) of the buildings constructed before 1900 have had insulation added, compared to 27 percent (+ 4.4) of those built between 1946 and 1960, and only 12 percent (+ 3.5) of the buildings constructed since 1974. The retrofitting of treated glass and outside shading follow similar patterns.

The distribution for the installation of treated glass at the time of construction is nearly the inverse of that for the retrofitting of treated glass. Five percent (+ 2.5) of the buildings constructed before 1900 were reported as having been constructed with treated glass. The rate rose to 21 percent (+ 1.7) for buildings constructed between 1961 and 1970 and then to 48 percent (+ 6.4) for buildings built since 1974.

The rates for the retrofitting of outside shading followed a pattern similar to that for the retrofitting of other types of conservation features: that is, the rates were higher for older buildings than they were for more recently constructed buildings. Approximately 19 percent (+ 5.5) of the oldest buildings were retrofitted with outside shading compared to 7 percent (+ 2.1) of the buildings constructed between 1946 and 1960, and only 1 percent (+ 0.9) of those built since 1974. As with treated glass, the oldest buildings had the lowest rates of installation of outside shading at the time of construction. Only 3 percent (+ 1.9) of the oldest buildings had outside shading installed at the time of construction compared to 16 percent (+ 3.4) of the buildings constructed between 1946 and 1960.

Heating and Cooling System Characteristics

The only conservation activity that displayed notable differences by heating system was the prevalence of a regular maintenance program. Only 54 percent (+ 12.4) of the buildings with electric baseboard heating and 63 percent (+ 6.8) of the buildings with self-contained "other" heating systems reported having a regular maintenance program, compared to 81 percent (+ 4.0) of those with central forced-air systems and 90 percent (+ 4.9) of the buildings with central radiant systems. Buildings without heating systems were considerably less likely than those with heating systems to have installed at construction, or retrofitted, any of the conservation features included in this survey, with the exception of outside shading.

There are no statistical differences between buildings with different sorts of air conditioning systems (including no air conditioning), in terms of the frequency of having weatherstripping or caulking and/or insulation added. Buildings with window units or without air conditioning were less likely to have treated glass than were buildings with other types of cooling systems. Buildings that lacked air conditioning systems were less likely to have outside shading (14 percent \pm 2.8), than were buildings with any type of air conditioning system.

Of the buildings with air conditioning systems, those with window units were the least likely to have a regular maintenance program: 71 percent (\pm 5.4), compared to 81 percent (\pm 4.6) of the buildings with package units, 85 percent (\pm 4.4) of the buildings with central systems, and 83 percent (\pm 7.0) of those with a combination or other types of systems.

Heating Fuels

The likelihood of a building having added weatherstripping or caulking did not vary significantly by the type of heating fuel used. However, buildings which used wood (49 percent \pm 10.9) or LPG (42 percent \pm 8.6) were more likely to have added insulation than were buildings which used electricity (27 percent \pm 4.4). In contrast, buildings which used electricity were more likely to have treated glass than were buildings which used wood or coal. Buildings which used natural gas or electricity were more likely to have outside shading installed than were buildings which used fuel oil, LPG, or purchased steam.

Buildings that used purchased steam were less likely to report heat reductions during off-hours than were buildings that used other fuels for heating. However, there were differences in the rates with which respondents reported having regular maintenance programs. The rates ranged from 95 percent (\pm 5.2) for purchased steam and 89 percent (\pm 3.9) for fuel oil to 69 percent (\pm 8.2) for LPG, 68 percent (\pm 10.9) for wood and 71 percent (\pm 5.0) for electricity.

Conservation Features and Practices

Buildings that have had weatherstripping or caulking added were more likely to have also retrofitted treated glass than were buildings which had not added weatherstripping or caulking (22 percent \pm 3.6 versus 9 percent \pm 1.9). Since there is no difference in the likelihood of having had treated glass installed at construction, buildings with added weatherstripping or caulking were also more likely to currently have treated glass. Similarly, buildings that had insulation added were more likely to have retrofitted treated glass than were buildings which did not have insulation added (25 percent \pm 4.2 versus 9 percent \pm 1.8).

Buildings that have had both weatherstripping or caulking and insulation added were also more likely to have retrofitted treated glass (29 percent \pm 5.0)

than were buildings which did not have both features added (10 percent \pm 1.9). Buildings that had both features added were also more likely to currently have treated glass (41 percent \pm 5.8 versus 27 percent \pm 3.1).

Buildings that have had weatherstripping or caulking or insulation added or both were more likely to have a regular maintenance program than were buildings without these additions. Buildings that had treated glass installed, either at the time of construction or since construction, were also more likely to have a regular maintenance program for the heating/cooling system than were buildings without treated glass.

TABLE 1A. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY CENSUS REGION
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS

USES OF FUEL	TOTAL	CENSUS REGIONS			
		NORTHEAST	NORTH CENTRAL	SOUTH	WEST
NONRESIDENTIAL BUILDINGS.....	4,238	735	1,326	1,566	612
END USE BY FUEL TYPE					
HEATING FUEL USED.....	3,788	692	1,234	1,335	527
NATURAL GAS.....	2,069	342	904	521	302
ELECTRICITY.....	1,033	93	160	579	202
FUEL OIL.....	808	310	182	251	65
LIQUID PETROLEUM GAS (LPG)	223	13	83	103	24
WOOD.....	102	8	22	39	32
COAL.....	50	4	19	16	12
STEAM.....	51	13	16	15	7
OTHER.....	10	3	2	2	3
NO HEATING FUEL.....	450	43	91	231	85
AIR CONDITIONING FUEL USED..	2,706	462	851	1,122	271
ELECTRICITY.....	2,567	427	807	1,090	243
NATURAL GAS.....	161	37	57	33	34
OTHER.....	28	6	6	15	2
NO AIR CONDITIONING FUEL....	1,532	273	475	443	340
WATER HEATING FUEL USED....	2,823	568	958	882	414
NATURAL GAS.....	1,321	276	576	265	204
ELECTRICITY.....	1,306	166	360	571	209
FUEL OIL.....	180	127	13	32	8
OTHER.....	118	25	38	43	13
NO WATER HEATING FUEL.....	1,415	167	367	684	197
MANUFACTURING FUEL USED....	492	82	136	170	104
ELECTRICITY.....	427	72	116	143	95
NATURAL GAS.....	81	14	21	31	17
OTHER.....	59	9	17	25	8
NO MANUFACTURING DONE.....	3,746	653	1,190	1,395	508
COOKING FUEL USED.....	1,358	324	420	432	182
ELECTRICITY.....	765	114	241	286	123
NATURAL GAS.....	619	212	215	121	70
LIQUID PETROLEUM GAS.....	108	24	23	55	7
OTHER.....	25	3	4	15	4
NO COOKING FUEL.....	2,880	412	905	1,134	429

SEE NOTES AT END OF TABLE

TABLE 1A. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY CENSUS REGION
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)

USES OF FUEL	TOTAL	CENSUS REGIONS			
		NORTHEAST	NORTH CENTRAL	SOUTH	WEST
CONVERTED FROM FUEL OIL FOR ANY END USE SINCE 1/1/79					
YES.....	52	14	23	7	7
FOR HEATING.....	45	12	21	4	7
OTHER.....	14	5	4	3	2
NO.....	4,097	705	1,279	1,512	600
NOT REPORTED.....	90	16	23	46	4
FUEL COMBINATIONS USED					
NO FUEL USED.....	115	13	20	69	12
ONE FUEL USED.....	831	55	130	499	147
ELECTRICITY.....	820	49	126	499	146
NATURAL GAS.....	6	3	3	-	-
FUEL OIL.....	4	3	-	-	1
TWO FUELS USED.....	2,775	479	1,028	875	393
ELECTRICITY, NATURAL GAS..	2,026	313	843	557	314
ELECTRICITY, FUEL OIL.....	461	141	97	181	42
ELECTRICITY, LPG.....	189	11	65	101	13
OTHER.....	98	14	23	36	24
THREE FUELS USED.....	469	179	134	104	53
ELEC., GAS, FUEL OIL.....	274	145	83	35	11
ELEC., FUEL OIL, LPG.....	76	19	15	32	9
ELEC., GAS, OTHER.....	76	10	28	21	16
ELEC., FUEL CIL, OTHER....	22	5	1	9	8
OTHER.....	22	-	6	8	8
FOUR OR MORE FUELS USED.....	49	9	14	18	7
ENERGY SOURCES SUPPLIED TO THE BUILDING					
ELECTRICITY.....	4,109	714	1,302	1,494	598
NATURAL GAS.....	2,416	481	967	624	344
FUEL OIL.....	872	323	205	269	75
LIQUID PETROLEUM GAS..	319	36	105	146	31
WOOD.....	124	12	22	52	38
COAL.....	62	4	20	24	15
STEAM.....	53	12	17	16	9
OTHER.....	27	5	5	9	8
NONE.....	115	13	20	69	12

SEE NOTES AT END OF TABLE

TABLE 1A. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY CENSUS REGION
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)

USES OF FUEL	TOTAL	CENSUS REGIONS			
		NORTHEAST	NORTH CENTRAL	SOUTH	WEST
NUMBER OF BOILERS					
NONE.....	3,348	412	1,010	1,408	518
ONE.....	686	249	247	114	77
TWO OR MORE.....	203	74	69	43	17
FUELS USED TO FIRE BOILERS					
NATURAL GAS.....	553	122	263	96	71
FUEL OIL.....	299	179	49	54	17
OTHER.....	93	29	24	27	13
HEATING SYSTEM					
SELF-CONTAINED UNITS					
FORCED AIR.....	1,201	125	361	499	216
RADIANT					
ELECTRIC BASEBOARDS.....	71	8	16	22	25
RADIATORS.....	51	24	11	11	5
OTHER.....	430	37	81	256	56
CENTRAL SYSTEM					
FORCED AIR.....	1,069	162	430	351	125
RADIANT.....	503	220	171	71	41
OTHER.....	349	100	143	55	51
OTHER.....	117	16	22	72	7
NONE.....	448	43	91	229	85
PERCENT OF BUILDING HEATED					
None.....	448	43	91	229	85
1 TO 25.....	266	27	45	128	67
26 TO 50.....	347	58	133	110	47
51 TO 75.....	313	64	92	105	52
76 TO 99.....	242	55	72	83	33
100.....	2,620	488	893	911	328

SEE NOTES AT END OF TABLE

TABLE 1A. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY CENSUS REGION
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)

USES OF FUEL	TOTAL	CENSUS REGIONS			
		NORTHEAST	NORTH CENTRAL	SOUTH	WEST
PERCENT OF BUILDING COOLED					
NONE.....	1,532	273	475	443	340
1 TO 25.....	609	160	182	189	79
26 TO 50.....	542	103	218	174	48
51 TO 75.....	283	58	86	112	28
76 TO 99.....	190	33	66	68	23
100.....	1,081	108	299	580	93
AIR CONDITIONING SYSTEM					
WINDOW UNITS.....	855	208	241	356	50
PACKAGE UNITS.....	799	121	257	315	107
CENTRAL SYSTEM.....	750	84	268	316	81
COMBINATION/OTHER.....	302	49	85	135	33
NO AIR CONDITIONING.....	1,532	273	475	443	340

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

SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 1B. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY CENSUS REGION
- PERCENTAGE OF ROW TOTALS

USES OF FUEL	TOTAL	CENSUS REGIONS			
		NORTHEAST	NORTH CENTRAL	SOUTH	WEST
NONRESIDENTIAL BUILDINGS.....	100%	17	31	37	14
END USE BY FUEL TYPE					
HEATING FUEL USED.....	100%	18	33	35	14
NATURAL GAS.....	100%	17	44	25	15
ELECTRICITY.....	100%	9	15	56	20
FUEL OIL.....	100%	38	23	31	8
LIQUID PETROLEUM GAS (LPG)	100%	6	37	46	11
WOOD.....	100%	8	22	39	32
COAL.....	100%	7	38	32	23
STEAM.....	100%	26	31	30	13
OTHER.....	100%	33	20	19	29
NO HEATING FUEL.....	100%	10	20	51	19
AIR CONDITIONING FUEL USED..	100%	17	31	41	10
ELECTRICITY.....	100%	17	31	42	9
NATURAL GAS.....	100%	23	35	21	21
OTHER.....	100%	21	22	52	6
NO AIR CONDITIONING FUEL....	100%	18	31	29	22
WATER HEATING FUEL USED....	100%	20	34	31	15
NATURAL GAS.....	100%	21	44	20	15
ELECTRICITY.....	100%	13	28	44	16
FUEL OIL.....	100%	70	7	18	5
OTHER.....	100%	21	32	36	11
NO WATER HEATING FUEL....	100%	12	26	48	14
MANUFACTURING FUEL USED....	100%	17	28	35	21
ELECTRICITY.....	100%	17	27	33	22
NATURAL GAS.....	100%	17	25	38	20
OTHER.....	100%	15	29	42	13
NO MANUFACTURING DONE....	100%	17	32	37	14
COOKING FUEL USED.....	100%	24	31	32	13
ELECTRICITY.....	100%	15	32	37	16
NATURAL GAS.....	100%	34	35	20	11
LIQUID PETROLEUM GAS.....	100%	22	21	51	6
OTHER.....	100%	10	17	58	15
NO COOKING FUEL.....	100%	14	31	39	15

SEE NOTES AT END OF TABLE

TABLE 1B. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY CENSUS REGION
- PERCENTAGE OF ROW TOTALS (CONTINUED)

USES OF FUEL	TOTAL	CENSUS REGIONS			
		NORTHEAST	NORTH CENTRAL	SOUTH	WEST
CONVERTED FROM FUEL OIL FOR ANY END USE SINCE 1/1/79					
YES.....	100%	28	45	14	14
FOR HEATING.....	100%	28	47	10	16
OTHER.....	100%	39	26	20	15
NO.....	100%	17	31	37	15
NOT REPORTED.....	100%	18	25	52	5
FUEL COMBINATIONS USED					
NO FUEL USED.....	100%	11	17	61	11
ONE FUEL USED.....	100%	7	16	60	18
ELECTRICITY.....	100%	6	15	61	18
NATURAL GAS.....	100%	50	50	-	-
FUEL OIL.....	100%	75	-	-	25
TWO FUELS USED.....	100%	17	37	32	14
ELECTRICITY, NATURAL GAS..	100%	15	42	27	15
ELECTRICITY, FUEL OIL....	100%	31	21	39	9
ELECTRICITY, LPG.....	100%	6	34	53	7
OTHER.....	100%	15	24	37	25
THREE FUELS USED.....	100%	38	28	22	11
ELEC., GAS, FUEL OIL....	100%	53	30	13	4
ELEC., FUEL OIL, LPG....	100%	25	20	42	12
ELEC., GAS, OTHER.....	100%	13	37	28	22
ELEC., FUEL OIL, OTHER....	100%	21	3	40	37
OTHER.....	100%	-	27	36	37
FOUR OR MORE FUELS USED....	100%	19	29	38	15
ENERGY SOURCES SUPPLIED TO THE BUILDING					
ELECTRICITY.....	100%	17	32	36	15
NATURAL GAS.....	100%	20	40	26	14
FUEL OIL.....	100%	37	24	31	9
LIQUID PETROLEUM GAS.....	100%	11	33	46	10
WOOD.....	100%	9	18	42	31
COAL.....	100%	6	32	38	24
STEAM.....	100%	22	31	31	16
OTHER.....	100%	19	18	33	30
NONE.....	100%	11	17	61	11

SEE NOTES AT END OF TABLE

**TABLE 18. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY CENSUS REGION
- PERCENTAGE OF ROW TOTALS (CONTINUED)**

USES OF FUEL	TOTAL	CENSUS REGIONS			
		NORTHEAST	NORTH CENTRAL	SOUTH	WEST
NUMBER OF BOILERS					
NONE.....	100%	12	30	42	15
ONE.....	100%	36	36	17	11
TWO OR MORE.....	100%	36	34	21	8
FUELS USED TO FIRE BOILERS					
NATURAL GAS.....	100%	22	48	17	13
FUEL OIL.....	100%	60	16	18	6
OTHER.....	100%	31	26	29	14
HEATING SYSTEM					
SELF-CONTAINED UNITS					
FORCED AIR.....	100%	10	30	42	18
RADIANT.....					
ELECTRIC BASEBOARDS.....	100%	11	22	31	36
RADIATORS.....	100%	47	21	21	10
OTHER.....	100%	9	19	59	13
CENTRAL SYSTEM					
FORCED AIR.....	100%	15	40	33	12
RADIANT.....	100%	44	34	14	8
OTHER.....	100%	29	41	16	14
OTHER.....	100%	14	19	62	6
NONE.....	100%	10	20	51	19
PERCENT OF BUILDING HEATED					
NONE.....	100%	10	20	51	19
1 TO 25.....	100%	10	17	48	25
26 TO 50.....	100%	17	38	32	13
51 TO 75.....	100%	20	29	33	17
76 TO 99.....	100%	23	30	34	14
100.....	100%	19	34	35	13

SEE NOTES AT END OF TABLE

TABLE 1B. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY CENSUS REGION
- PERCENTAGE OF ROW TOTALS (CONTINUED)

USES OF FUEL	TOTAL	CENSUS REGIONS			
		NORTHEAST	NORTH CENTRAL	SOUTH	WEST
PERCENT OF BUILDING COOLED					
NONE.....	100%	18	31	29	22
1 TO 25.....	100%	26	30	31	13
26 TO 50.....	100%	19	40	32	9
51 TO 75.....	100%	20	30	39	10
76 TO 99.....	100%	17	35	36	12
100.....	100%	10	28	54	9
AIR CONDITIONING SYSTEM					
WINDOW UNITS.....	100%	24	28	42	6
PACKAGE UNITS.....	100%	15	32	39	13
CENTRAL SYSTEM.....	100%	11	36	42	11
COMBINATION/OTHER.....	100%	16	28	45	11
NO AIR CONDITIONING.....	100%	18	31	29	22

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

SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 1C. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY CENSUS REGION
- PERCENTAGE OF COLUMN TOTALS

USES OF FUEL	TOTAL	CENSUS REGIONS			
		NORTHEAST	NORTH CENTRAL	SOUTH	WEST
NONRESIDENTIAL BUILDINGS.....	100%	100%	100%	100%	100%
END USE BY FUEL TYPE					
HEATING FUEL USED.....	89	94	93	85	86
NATURAL GAS.....	49	46	68	33	49
ELECTRICITY.....	24	13	12	37	33
FUEL OIL.....	19	42	14	16	11
LIQUID PETROLEUM GAS (LPG)	5	2	6	7	4
WOOD.....	2	1	2	3	5
COAL.....	1	-	1	1	2
STEAM.....	1	2	1	1	1
OTHER.....	-	-	-	-	-
NO HEATING FUEL.....	11	6	7	15	14
AIR CONDITIONING FUEL USED..	64	63	64	72	44
ELECTRICITY.....	61	58	61	70	40
NATURAL GAS.....	4	5	4	2	6
OTHER.....	1	1	-	1	-
NO AIR CONDITIONING FUEL....	36	37	36	28	56
WATER HEATING FUEL USED.....	67	77	72	56	68
NATURAL GAS.....	31	38	43	17	33
ELECTRICITY.....	31	23	27	36	34
FUEL OIL.....	4	17	1	2	1
OTHER.....	3	3	3	3	2
NO WATER HEATING FUEL.....	33	23	28	44	32
MANUFACTURING FUEL USED.....	12	11	10	11	17
ELECTRICITY.....	10	10	9	9	16
NATURAL GAS.....	2	2	2	2	3
OTHER.....	1	1	1	2	1
NO MANUFACTURING DONE.....	88	89	90	89	83
COOKING FUEL USED.....	32	44	32	28	30
ELECTRICITY.....	18	16	18	18	20
NATURAL GAS.....	15	29	16	8	12
LIQUID PETROLEUM GAS.....	3	3	2	4	1
OTHER.....	1	-	-	1	1
NO COOKING FUEL.....	68	56	68	72	70

SEE NOTES AT END OF TABLE

TABLE 1C. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY CENSUS REGION
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)

USES OF FUEL	TOTAL	CENSUS REGIONS			
		NORTHEAST	NORTH CENTRAL	SOUTH	WEST
CONVERTED FROM FUEL OIL FOR ANY END USE SINCE 1/1/79					
YES.....	1	2	2	-	1
FOR HEATING.....	1	2	2	-	1
OTHER.....	-	1	-	-	-
NO.....	97	96	97	97	98
NOT REPORTED.....	2	2	2	3	1
FUEL COMBINATIONS USED					
NO FUEL USED.....	3	2	2	4	2
ONE FUEL USED.....	20	8	10	32	24
ELECTRICITY.....	19	7	10	32	24
NATURAL GAS.....	-	-	-	-	-
FUEL OIL.....	-	-	-	-	-
TWO FUELS USED.....	65	65	78	56	64
ELECTRICITY, NATURAL GAS..	48	43	64	36	51
ELECTRICITY, FUEL OIL.....	11	19	7	12	7
ELECTRICITY, LPG.....	4	2	5	6	2
OTHER.....	2	2	2	2	4
THREE FUELS USED.....	11	24	10	7	9
ELEC., GAS, FUEL OIL.....	6	20	6	2	2
ELEC., FUEL OIL, LPG.....	2	3	1	2	2
ELEC., GAS, OTHER.....	2	1	2	1	3
ELEC., FUEL OIL, OTHER....	1	1	-	1	1
OTHER.....	1	-	-	1	1
FOUR OR MORE FUELS USED....	1	1	1	1	1
ENERGY SOURCES SUPPLIED TO THE BUILDING					
ELECTRICITY.....	97	57	98	95	98
NATURAL GAS.....	57	65	73	40	56
FUEL OIL.....	21	44	15	17	12
LIQUID PETROLEUM GAS.....	8	5	8	9	5
WOOD.....	3	2	2	3	6
COAL.....	1	-	2	2	2
STEAM.....	1	2	1	1	1
OTHER.....	1	1	-	1	1
NONE	3	2	2	4	2

SEE NOTES AT END OF TABLE

TABLE 1C. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY CENSUS REGION
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)

USES OF FUEL	TOTAL	CENSUS REGIONS			
		NORTHEAST	NORTH CENTRAL	SOUTH	WEST
NUMBER OF BOILERS					
NONE.....	79	56	76	90	85
ONE.....	16	34	19	7	13
TWO OR MORE.....	5	10	5	3	3
FUELS USED TO FIRE BOILERS					
NATURAL GAS.....	13	17	20	6	12
FUEL OIL.....	7	24	4	3	3
OTHER.....	2	4	2	2	2
HEATING SYSTEM					
SELF-CONTAINED UNITS					
FORCED AIR.....	28	17	27	32	35
RADIANT					
ELECTRIC BASEBOARDS.....	2	1	1	1	4
RADIATORS.....	1	3	1	1	1
OTHER.....	10	5	6	16	9
CENTRAL SYSTEM					
FORCED AIR.....	25	22	32	22	20
RADIANT.....	12	30	13	5	7
OTHER.....	8	14	11	4	8
OTHER.....	3	2	2	5	1
NONE.....	11	6	7	15	14
PERCENT OF BUILDING HEATED					
NONE.....	11	6	7	15	14
1 TO 25.....	6	4	3	8	11
26 TO 50.....	8	8	10	7	8
51 TO 75.....	7	9	7	7	9
76 TO 99.....	6	7	5	5	5
100.....	62	66	67	58	54

SEE NOTES AT END OF TABLE

TABLE 1C. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY CENSUS REGION
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)

USES OF FUEL	TOTAL	CENSUS REGIONS			
		NORTHEAST	NORTH CENTRAL	SOUTH	WEST
PERCENT OF BUILDING COOLED					
NONE.....	36	37	36	28	56
1 TO 25.....	14	22	14	12	13
26 TO 50.....	13	14	16	11	8
51 TO 75.....	7	8	7	7	5
76 TO 99.....	4	4	5	4	4
100.....	26	15	23	37	15
AIR CONDITIONING SYSTEM					
WINDOW UNITS.....	20	28	18	23	8
PACKAGE UNITS.....	19	16	19	20	17
CENTRAL SYSTEM.....	18	11	20	20	13
COMBINATION/OTHER.....	7	7	6	9	5
NO AIR CONDITIONING.....	36	37	36	28	56

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

SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 2A. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY HEATING AND COOLING DEGREE DAYS
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS

USES OF FUEL	TOTAL	HEATING DEGREE DAYS (HDD) AND COOLING DEGREE DAYS (CDD)				
		<2000 CDD AND >7000 HDD	<2000 CDD AND 5500 TO 7000 HDD	<2000 CDD AND 4000 TO 5499 HDD	<2000 CDD AND <4000 HDD	>2000 CDD AND <4000 HDD
NONRESIDENTIAL BUILDINGS.....	4,238	470	1,242	1,132	704	689
END USE BY FUEL TYPE						
HEATING FUEL USED.....	3,788	433	1,169	1,042	589	556
NATURAL GAS.....	2,069	236	800	535	348	150
ELECTRICITY.....	1,033	69	188	250	202	324
FUEL OIL.....	808	138	238	311	54	68
LIQUID PETROLEUM GAS (LPG)	223	27	64	49	29	53
WOOD.....	102	31	15	40	10	5
COAL.....	50	4	15	24	5	2
STEAM.....	51	15	17	8	5	5
OTHER.....	10	3	4	1	1	1
NO HEATING FUEL.....	450	37	73	90	116	133
AIR CONDITIONING FUEL USED..	2,706	243	731	746	450	536
ELECTRICITY.....	2,567	233	668	717	432	516
NATURAL GAS.....	161	10	76	29	24	22
OTHER.....	28	3	6	11	1	7
NO AIR CONDITIONING FUEL....	1,532	227	511	387	254	153
WATER HEATING FUEL USED....	2,823	351	935	759	397	381
NATURAL GAS.....	1,321	162	549	317	189	104
ELECTRICITY.....	1,306	163	323	353	209	259
FUEL OIL.....	180	21	66	77	8	9
OTHER.....	118	20	33	38	7	21
NO WATER HEATING FUEL....	1,415	119	307	374	307	308
MANUFACTURING FUEL USED....	492	66	141	96	89	99
ELECTRICITY.....	427	63	118	83	78	84
NATURAL GAS.....	81	8	23	13	20	17
OTHER.....	59	5	21	15	8	10
NO MANUFACTURING DONE....	3,746	403	1,101	1,036	615	590
COOKING FUEL USED.....	1,358	206	419	381	159	193
ELECTRICITY.....	765	129	224	176	100	135
NATURAL GAS.....	619	74	229	200	70	46
LIQUID PETROLEUM GAS.....	108	21	20	30	11	27
OTHER.....	25	4	5	12	3	1
NO COOKING FUEL.....	2,880	264	823	751	546	497

SEE NOTES AT END OF TABLE

TABLE 2A. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY HEATING AND COOLING DEGREE DAYS
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)

USES OF FUEL	TOTAL	HEATING DEGREE DAYS (HDD) AND COOLING DEGREE DAYS (CDD)				
		<2000 CDD AND >7000 HDD	<2000 CDD AND 5500 TO 7000 HDD	<2000 CDD AND 4000 TO 5499 HDD	<2000 CDD AND <4000 HDD	>2000 CDD AND <4000 HDD
CONVERTED FROM FUEL OIL FOR ANY END USE SINCE 1/1/79						
YES.....	52	6	22	18	4	2
FOR HEATING.....	45	6	21	15	3	-
OTHER.....	14	2	5	3	2	2
NO.....	4,057	453	1,204	1,086	601	663
NOT REPORTED.....	90	11	16	28	10	24
FUEL COMBINATIONS USED						
NO FUEL USED.....	115	7	22	27	31	29
ONE FUEL USED.....	831	55	106	187	179	303
ELECTRICITY.....	820	54	101	184	179	303
NATURAL GAS.....	6	-	3	3	-	-
FUEL OIL.....	4	1	3	-	-	-
TWO FUELS USED.....	2,775	319	926	730	474	327
ELECTRICITY, NATURAL GAS..	2,026	208	738	498	386	197
ELECTRICITY, FUEL OIL....	461	73	118	169	47	54
ELECTRICITY, LPG.....	189	12	54	31	28	64
OTHER.....	98	26	17	31	13	11
THREE FUELS USED.....	469	75	177	174	17	26
ELEC., GAS, FUEL OIL.....	274	32	117	114	5	6
ELEC., FUEL OIL, LPG....	76	25	17	22	2	11
ELEC., GAS, OTHER.....	76	9	33	21	5	8
ELEC., FUEL OIL, OTHER....	22	6	5	10	1	-
OTHER.....	22	4	6	8	4	1
FOUR OR MORE FUELS USED....	49	14	11	14	4	5
ENERGY SOURCES SUPPLIED TO THE BUILDING						
ELECTRICITY.....	4,109	462	1,214	1,098	574	661
NATURAL GAS.....	2,416	260	897	647	399	212
FUEL OIL.....	872	150	263	323	59	76
LIQUID PETROLEUM GAS.....	319	46	92	67	33	81
WOOD.....	124	34	21	48	13	8
COAL.....	62	4	19	30	6	3
STEAM.....	53	14	19	9	6	5
OTHER.....	27	6	8	4	3	6
NONE.....	115	7	22	27	31	29

SEE NOTES AT END OF TABLE

TABLE 2A. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY HEATING AND COOLING DEGREE DAYS
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)

USES OF FUEL	TOTAL	HEATING DEGREE DAYS (HDD) AND COOLING DEGREE DAYS (CDD)				
		<2000 CDD AND >7000 HDD	<2000 CDD AND >5500 TO 7000 HDD	<2000 CDD AND 5500 TO 7000 HDD	<2000 CDD AND 4000 TO 5499 HDD	<2000 CDD AND <4000 HDD
NUMBER OF BOILERS						
NONE.....	3,348	333	860	883	642	630
ONE.....	686	110	304	188	42	43
TWO OR MORE.....	203	27	77	62	20	16
FUELS USED TO FIRE BOILERS						
NATURAL GAS.....	553	85	258	122	51	36
FUEL OIL.....	299	50	103	118	12	15
OTHER.....	93	12	34	27	9	11
HEATING SYSTEM						
SELF-CONTAINED UNITS						
FORCED AIR.....	1,201	86	330	283	258	245
RADIANT						
ELECTRIC BASEBOARDS.....	71	17	11	24	13	6
RADIATORS.....	51	4	12	25	5	5
OTHER.....	430	35	53	132	119	91
CENTRAL SYSTEM						
FORCED AIR.....	1,069	94	398	302	134	140
RADIANT.....	503	106	215	148	15	18
OTHER.....	349	83	129	104	19	15
OTHER.....	117	8	21	25	26	37
NONE.....	448	37	73	89	115	133
PERCENT OF BUILDING HEATED						
NONE.....	448	37	73	89	115	133
1 TO 25.....	266	15	48	46	87	70
26 TO 50.....	347	34	133	86	56	38
51 TO 75.....	313	45	91	86	59	33
76 TO 99.....	242	38	72	64	45	23
100.....	2,620	301	825	761	342	392

SEE NOTES AT END OF TABLE

TABLE 2A. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY HEATING AND COOLING DEGREE DAYS
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)

USES OF FUEL	TOTAL	HEATING DEGREE DAYS (HDD) AND COOLING DEGREE DAYS (CDD)				
		<2000 CDD AND >7000 HDD	<2000 CDD AND 5500 TO 7000 HDD	<2000 CDD AND 4000 TO 5499 HDD	<2000 CDD AND <4000 HDD	>2000 CDD AND <4000 HDD
PERCENT OF BUILDING COOLED						
NONE.....	1,532	227	511	387	254	153
1 TO 25.....	609	71	188	159	95	96
26 TO 50.....	542	80	183	162	63	55
51 TO 75.....	283	28	83	74	57	41
76 TO 99.....	190	15	52	64	34	26
100.....	1,081	50	226	286	202	318
AIR CONDITIONING SYSTEM						
WINDOW UNITS.....	855	86	213	283	121	151
PACKAGE UNITS.....	799	77	207	221	127	166
CENTRAL SYSTEM.....	750	58	230	177	132	154
COMBINATION/OTHER.....	302	21	81	65	70	65
NO AIR CONDITIONING.....	1,532	227	511	387	254	153

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

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TABLE 2B. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY HEATING AND COOLING DEGREE DAYS
- PERCENTAGE OF ROW TOTALS

USES OF FUEL	TOTAL	HEATING DEGREE DAYS (HDD) AND COOLING DEGREE DAYS (CDD)				
		<2000 CDD AND >7000 HDD	<2000 CDD AND 5500 TO 7000 HDD	<2000 CDD AND 4000 TO 5499 HDD	<2000 CDD AND <4000 HDD	>2000 CDD AND <4000 HDD
NONRESIDENTIAL BUILDINGS.....	100%	11	29	27	17	16
END USE BY FUEL TYPE						
HEATING FUEL USED.....	100%	11	31	28	16	15
NATURAL GAS.....	100%	11	39	26	17	7
ELECTRICITY.....	100%	7	18	24	20	31
FUEL OIL.....	100%	17	29	38	7	8
LIQUID PETROLEUM GAS (LPG)	100%	12	29	22	13	24
WOOD.....	100%	31	15	40	10	5
COAL.....	100%	8	30	48	10	4
STEAM.....	100%	29	34	16	11	10
OTHER.....	100%	30	43	7	8	11
NO HEATING FUEL.....	100%	8	16	20	26	30
AIR CONDITIONING FUEL USED..	100%	9	27	28	17	20
ELECTRICITY.....	100%	9	26	28	17	20
NATURAL GAS.....	100%	6	47	18	15	13
OTHER.....	100%	10	21	38	5	26
NO AIR CONDITIONING FUEL....	100%	15	33	25	17	10
WATER HEATING FUEL USED.....	100%	12	33	27	14	13
NATURAL GAS.....	100%	12	42	24	14	8
ELECTRICITY.....	100%	13	25	27	16	20
FUEL OIL.....	100%	11	37	43	4	5
OTHER.....	100%	17	28	32	6	17
NO WATER HEATING FUEL.....	100%	8	22	26	22	22
MANUFACTURING FUEL USED.....	100%	13	29	20	18	20
ELECTRICITY.....	100%	15	28	20	18	20
NATURAL GAS.....	100%	10	28	16	25	21
OTHER.....	100%	9	36	25	14	16
NO MANUFACTURING DONE.....	100%	11	29	28	16	16
COOKING FUEL USED.....	100%	15	31	28	12	14
ELECTRICITY.....	100%	17	29	23	13	18
NATURAL GAS.....	100%	12	37	32	11	7
LIQUID PETROLEUM GAS.....	100%	19	19	27	10	25
OTHER.....	100%	16	19	48	13	4
NO COOKING FUEL.....	100%	9	29	26	19	17

SEE NOTES AT END OF TABLE

TABLE 2B. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY HEATING AND COOLING DEGREE DAYS
- PERCENTAGE OF ROW TOTALS (CONTINUED)

USES OF FUEL	TOTAL	HEATING DEGREE DAYS (HDD) AND COOLING DEGREE DAYS (CDD)				
		<2000 CDD AND >7000 HDD	<2000 CDD AND 5500 TO 7000 HDD	<2000 CDD AND 4000 TO 5499 HDD	<2000 CDD AND <4000 HDD	>2000 CDD AND <4001 HDD
CONVERTED FROM FUEL OIL FOR ANY END USE SINCE 1/1/79						
YES.....	100%	11	43	34	7	5
FOR HEATING.....	100%	13	46	34	8	-
OTHER.....	100%	13	34	21	14	17
NO.....	100%	11	29	27	17	16
NOT REPORTED.....	100%	13	17	32	11	27
FUEL COMBINATIONS USED						
NO FUEL USED.....	100%	6	19	23	27	25
ONE FUEL USED.....	100%	7	13	23	22	36
ELECTRICITY.....	100%	7	12	22	22	37
NATURAL GAS.....	100%	-	50	50	-	-
FUEL OIL.....	100%	32	65	2	-	-
TWO FUELS USED.....	100%	11	33	26	17	12
ELECTRICITY, NATURAL GAS..	100%	10	36	25	19	10
ELECTRICITY, FUEL OIL.....	100%	16	26	37	10	12
ELECTRICITY, LPG.....	100%	6	28	17	15	34
OTHER.....	100%	26	17	32	13	12
THREE FUELS USED.....	100%	16	38	37	4	6
ELEC., GAS, FUEL OIL.....	100%	12	43	42	?	2
ELEC., FUEL OIL, LPG.....	100%	33	22	29	3	14
ELEC., GAS, OTHER.....	100%	11	44	28	6	11
ELEC., FUEL OIL, OTHER....	100%	27	21	44	6	1
OTHER.....	100%	16	26	36	18	3
FOUR OR MORE FUELS USED....	100%	29	23	30	8	10
ENERGY SOURCES SUPPLIED TO THE BUILDING						
ELECTRICITY.....	100%	11	30	27	16	16
NATURAL GAS.....	100%	11	37	27	17	9
FUEL OIL.....	100%	17	30	37	7	9
LIQUID PETROLEUM GAS.....	100%	14	29	21	10	26
WOOD.....	100%	27	17	39	10	7
COAL.....	100%	6	31	48	10	5
STEAM.....	100%	25	36	17	12	10
OTHER.....	100%	23	28	16	10	22
NONE.....	100%	6	19	23	27	25

SEE NOTES AT END OF TABLE

TABLE 2B. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY HEATING AND COOLING DEGREE DAYS
- PERCENTAGE OF ROW TOTALS (CONTINUED)

USES OF FUEL	TOTAL	HEATING DEGREE DAYS (HDD) AND COOLING DEGREE DAYS (CDD)				
		<2000 CDD AND >7000 HDD	<2000 CDD AND 5500 TO 7000 HDD	<2000 CDD AND 4000 TO 5499 HDD	<2000 CDD AND <4000 HDD	>2000 CDD AND <4000 HDD
NUMBER OF BOILERS						
NONE.....	100%	10	26	26	19	19
ONE.....	100%	16	44	27	6	6
TWO OR MORE.....	100%	13	38	30	10	8
FUELS USED TO FIRE BOILERS						
NATURAL GAS.....	100%	15	47	22	9	6
FUEL OIL.....	100%	17	35	40	4	5
OTHER.....	100%	13	36	29	10	12
HEATING SYSTEM						
SELF-CONTAINED UNITS						
FORCED AIR.....	100%	7	28	24	21	20
RADIANT						
ELECTRIC BASEBOARDS.....	100%	24	15	34	18	9
RADIATORS.....	100%	8	24	49	10	9
OTHER.....	100%	8	12	31	28	21
CENTRAL SYSTEM						
FORCED AIR.....	100%	9	37	28	13	13
RADIANT.....	100%	21	43	29	3	4
OTHER.....	100%	24	37	30	5	4
OTHER.....	100%	7	18	22	22	32
NONE.....	100%	8	16	20	26	30
PERCENT OF BUILDING HEATED						
NONE.....	100%	8	16	20	26	30
1 TO 25.....	100%	6	18	17	33	26
26 TO 50.....	100%	10	38	25	16	11
51 TO 75.....	100%	14	29	28	19	10
76 TO 99.....	100%	16	30	26	19	10
100.....	100%	11	31	29	13	15

SEE NOTES AT END OF TABLE

TABLE 2B. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY HEATING AND COOLING DEGREE DAYS
- PERCENTAGE OF ROW TOTALS (CONTINUED)

USES OF FUEL	TOTAL	HEATING DEGREE DAYS (HDD) AND COOLING DEGREE DAYS (CDD)				
		<2000 CDD AND >7000 HDD	<2000 CDD AND 5500 TO 7000 HDD	<2000 CDD AND 4000 TO 5499 HDD	<2000 CDD AND <4000 HDD	>2000 CDD AND <4000 HDD
PERCENT OF BUILDING COOLED						
NONE.....	100%	15	33	25	17	10
1 TO 25.....	100%	12	31	26	16	16
26 TO 50.....	100%	15	34	30	12	10
51 TO 75.....	100%	10	29	26	20	15
76 TO 99.....	100%	8	27	34	18	14
100.....	100%	5	21	26	19	29
AIR CONDITIONING SYSTEM						
WINDOW UNITS.....	100%	10	25	33	14	18
PACKAGE UNITS.....	100%	10	26	28	16	21
CENTRAL SYSTEM.....	100%	8	31	24	18	20
COMBINATION/OTHER.....	100%	7	27	21	23	22
NO AIR CONDITIONING.....	100%	15	33	25	17	10

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

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TABLE 2C. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY HEATING AND COOLING DEGREE DAYS
- PERCENTAGE OF COLUMN TOTALS

USES OF FUEL	TOTAL	HEATING DEGREE DAYS (HDD) AND COOLING DEGREE DAYS (CDD)				
		<2000 CDD AND >7000 HDD	<2000 CDD AND 5500 TO 7000 HDD	<2000 CDD AND 4000 TO 5499 HDD	<2000 CDD AND <4000 HDD	>2000 CDD AND <4000 HDD
NONRESIDENTIAL BUILDINGS.....	100%	100%	100%	100%	100%	100%
END USE BY FUEL TYPE						
HEATING FUEL USED.....	89	92	94	92	84	81
NATURAL GAS.....	49	50	64	47	49	22
ELECTRICITY.....	24	15	15	22	29	47
FUEL OIL.....	19	29	19	27	4	10
LIQUID PETROLEUM GAS (LPG)	5	6	5	4	1	8
WOOD.....	2	7	1	2	1	-
COAL.....	1	1	1	1	1	1
STEAM.....	1	3	1	1	1	-
OTHER.....	-	1	-	-	16	19
NO HEATING FUEL.....	11	8	6	8	7	7
AIR CONDITIONING FUEL USED..	64	52	59	66	64	78
ELECTRICITY.....	61	50	54	63	61	75
NATURAL GAS.....	4	2	6	3	3	1
OTHER.....	1	1	-	1	-	22
NO AIR CONDITIONING FUEL....	36	48	41	34	36	36
WATER HEATING FUEL USED....	67	75	75	67	56	55
NATURAL GAS.....	31	34	44	28	27	15
ELECTRICITY.....	31	35	26	31	30	38
FUEL OIL.....	4	4	5	7	1	1
OTHER.....	3	4	3	3	1	3
NO WATER HEATING FUEL.....	33	25	25	33	44	45
MANUFACTURING FUEL USED....	12	14	11	8	13	14
ELECTRICITY.....	10	14	9	7	11	12
NATURAL GAS.....	2	2	2	1	3	3
OTHER.....	1	1	2	1	1	1
NO MANUFACTURING DONE.....	88	86	89	92	87	86
COOKING FUEL USED.....	32	44	34	34	23	28
ELECTRICITY.....	18	28	18	16	14	20
NATURAL GAS.....	15	16	18	18	10	7
LIQUID PETROLEUM GAS.....	3	4	2	3	1	4
OTHER.....	1	1	-	1	-	-
NO COOKING FUEL.....	68	56	66	66	77	72

SEE NOTES AT END OF TABLE

TABLE 2C. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY HEATING AND COOLING DEGREE DAYS
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)

USES OF FUEL	TOTAL	HEATING DEGREE DAYS (HDD) AND COOLING DEGREE DAYS (CDD)				
		<2000 CDD AND >7000 HDD	<2000 CDD AND 5500 TO 7000 HDD	<2000 CDD AND 4000 TO 5499 HDD	<2000 CDD AND <4000 HDD	>2000 CDD AND <4000 HDD
CONVERTED FROM FUEL OIL FOR ANY END USE SINCE 1/1/79						
YES.....	1	1	2	2	1	-
FOR HEATING.....	1	1	2	1	-	-
OTHER.....	-	-	-	-	-	-
NO.....	97	96	97	96	98	96
NOT REPORTED.....	2	2	1	3	1	3
FUEL COMBINATIONS USED						
NO FUEL USED.....	3	1	2	2	4	4
ONE FUEL USED.....	20	12	9	17	25	44
ELECTRICITY.....	19	11	8	16	25	44
NATURAL GAS.....	-	-	-	-	-	-
FUEL OIL.....	-	-	-	-	-	-
TWO FUELS USED.....	65	68	75	64	67	47
ELECTRICITY, NATURAL GAS..	48	44	59	44	55	29
ELECTRICITY, FUEL OIL....	11	15	9	15	7	8
ELECTRICITY, LPG.....	4	3	4	3	4	9
OTHER.....	2	5	1	3	2	2
THREE FUELS USED.....	11	16	14	15	2	4
ELEC., GAS, FUEL OIL....	6	7	9	10	1	1
ELEC., FUEL OIL, LPG....	2	5	1	2	-	2
ELEC., GAS, OTHER.....	2	2	3	2	1	1
ELEC., FUEL OIL, OTHER...	1	1	-	1	-	-
OTHER.....	1	1	-	1	1	-
FOUR OR MORE FUELS USED.....	1	3	1	1	1	1
ENERGY SOURCES SUPPLIED TO THE BUILDING						
ELECTRICITY.....	97	98	98	97	96	96
NATURAL GAS.....	57	55	72	57	57	31
FUEL OIL.....	21	32	21	29	8	11
LIQUID PETROLEUM GAS.....	8	10	7	6	5	12
WOOD.....	3	7	2	4	2	1
COAL	1	1	2	3	1	-
STEAM.....	1	3	2	1	1	1
OTHER.....	1	1	1	-	-	1
NONE	3	1	2	2	4	4

SEE NOTES AT END OF TABLE

TABLE 2C. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY HEATING AND COOLING DEGREE DAYS
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)

USES OF FUEL	TOTAL	HEATING DEGREE DAYS (HDD) AND COOLING DEGREE DAYS (CDD)				
		<2000 CDD AND >7000 HDD	<2000 CDD AND 5500 TO 7000 HDD	<2000 CDD AND 4000 TO 5499 HDD	<2000 CDD AND <4000 HDD	>2000 CDD AND <4000 HDD
NUMBER OF BOILERS						
NONE.....	79	71	69	78	91	91
ONE.....	16	23	25	17	6	6
TWO OR MORE.....	5	6	6	5	3	2
FUELS USED TO FIRE BOILERS						
NATURAL GAS.....	13	18	21	11	7	5
FUEL OIL.....	7	11	8	10	2	2
OTHER.....	2	3	3	2	1	2
HEATING SYSTEM						
SELF-CONTAINED UNITS						
FORCED AIR.....	28	18	27	25	37	35
RADIANT						
ELECTRIC BASEBOARDS.....	2	4	1	2	2	1
RADIATORS.....	1	1	1	2	1	1
OTHER.....	10	8	4	12	17	13
CENTRAL SYSTEM						
FORCED AIR.....	25	20	32	27	19	20
RADIANT.....	12	23	17	13	2	3
OTHER.....	8	18	10	9	3	2
OTHER.....	3	2	2	2	4	5
NONE.....	11	8	6	8	16	19
PERCENT OF BUILDING HEATED						
NONE.....	11	8	6	8	16	19
1 TO 25.....	6	3	4	4	12	10
26 TO 50.....	8	7	11	8	8	6
51 TO 75.....	7	10	7	9	8	5
76 TO 99.....	6	8	6	6	6	3
100.....	62	64	66	67	49	57

SEE NOTES AT END OF TABLE

TABLE 2C. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY HEATING AND COOLING DEGREE DAYS
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)

USES OF FUEL	TOTAL	HEATING DEGREE DAYS (HDD) AND COOLING DEGREE DAYS (CDD)				
		<2000 CDD AND >7000 HDD	<2000 CDD AND 5500 TO 7000 HDD	<2000 CDD AND 4000 TO 5499 HDD	<2000 CDD AND <4000 HDD	>2000 CDD AND <4000 HDD
PERCENT OF BUILDING COOLED						
NONE.....	36	48	41	34	36	22
1 TO 25.....	14	15	15	14	13	14
26 TO 50.....	13	17	15	14	9	8
51 TO 75.....	7	6	7	7	8	6
76 TO 99.....	4	3	4	6	5	4
100.....	26	11	18	25	29	46
AIR CONDITIONING SYSTEM						
WINDOW UNITS.....	20	18	17	25	17	22
PACKAGE UNITS.....	19	16	17	20	18	24
CENTRAL SYSTEM.....	18	12	18	16	19	22
COMBINATION/OTHER.....	7	5	6	6	10	9
NO AIR CONDITIONING.....	36	48	41	34	36	22

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING OR MULTIPLE ENERGY SOURCES. A DASH "—" REPRESENTS OR ROUNDS TO ZERO. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE. SEE APPENDIX B FOR DISCUSSION OF LIMITATIONS OF DATA.

SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 3A. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY BUILDING TYPE
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS

USES OF FUEL	TOTAL	BUILDING TYPE													
		ASSEMBLY	AUTOMOTIVE	EDUCATION	FOOD	HEALTH CARE	INDUSTRIAL	lodging	OFFICE	RESIDENTIAL	Retail	WAREHOUSE	OTHER	VACANT	
NONRESIDENTIAL BUILDINGS.....	4,238	448	401	161	366	44	243	101	600	347	714	430	237	146	
END USE BY FUEL TYPE															
HEATING FUEL USED.....	3,788	433	377	159	345	44	223	98	588	347	660	248	205	61	
NATURAL GAS.....	2,069	243	189	68	183	25	147	34	312	201	398	144	93	32	
ELECTRICITY.....	1,033	97	77	45	101	13	48	49	212	58	161	80	70	22	
FUEL OIL.....	808	126	131	43	45	7	46	16	86	106	101	56	38	7	
LIQUID PETROLEUM GAS (LPG)	223	23	30	4	34	1	15	5	23	12	45	12	15	4	
WOOD.....	102	6	19	-	13	-	5	1	8	17	18	6	9	1	
COAL.....	50	6	6	6	8	-	6	1	2	1	-	4	8	1	
STEAM.....	51	4	1	8	2	3	6	8	10	1	1	2	4	2	
OTHER.....	10	1	-	1	-	-	2	-	4	-	-	-	1	-	
NO HEATING FUEL.....	450	15	24	2	22	-	19	2	12	-	55	182	32	84	
AIR CONDITIONING FUEL USED..	2,706	273	141	109	302	39	163	66	543	229	497	157	146	41	
ELECTRICITY.....	2,567	253	139	104	280	36	153	64	512	218	480	152	141	35	
NATURAL GAS.....	161	15	6	4	19	4	14	3	37	13	24	8	8	6	
OTHER.....	28	9	-	2	5	1	2	-	4	-	3	-	2	-	
NO AIR CONDITIONING FUEL....	1,532	175	260	53	64	5	80	35	58	118	217	273	90	104	
WATER HEATING FUEL USED....	2,823	313	189	127	323	42	160	93	466	312	447	159	143	49	
NATURAL GAS.....	1,321	139	84	66	158	20	69	42	200	183	206	64	66	24	
ELECTRICITY.....	1,306	161	97	45	139	15	83	43	229	93	223	87	71	19	
FUEL OIL.....	180	14	5	19	10	4	11	8	34	38	20	10	4	5	
OTHER.....	118	11	6	6	28	4	9	9	13	11	10	1	7	3	
NO WATER HEATING FUEL.....	1,415	135	212	35	44	2	83	8	135	35	267	271	93	96	
MANUFACTURING FUEL USED....	492	5	64	6	11	-	175	1	24	16	79	63	40	8	
ELECTRICITY.....	427	3	54	5	9	-	159	1	18	16	65	56	31	8	
NATURAL GAS.....	81	2	7	1	2	-	32	-	6	3	12	6	10	-	
OTHER.....	59	-	3	-	-	-	20	-	4	2	10	9	10	-	
NO MANUFACTURING DONE.....	3,746	443	337	156	355	44	68	99	577	331	635	367	197	137	

SEE NOTES AT END OF TABLE

TABLE 3A. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY BUILDING TYPE
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)

USES OF FUEL	TOTAL	BUILDING TYPE												
		A S S E M B L Y	A U T O M T I V E	E D U C A T I O N	F O C S A L E S	H E A L T H E S	I N D U S T R I A L	L O D G I N G	O F F I C E	R E S I D E N T I A L	R E T A I L	W A P E R E H O U S E	O T H E R	V A C A N T
		SE	U	D	O	H	I	L	O	R	R	W	O	V
COOKING FUEL USED.....	1,358	237	27	81	252	19	34	55	127	318	100	37	61	10
ELECTRICITY.....	765	127	24	45	143	11	24	34	87	152	52	31	31	4
NATURAL GAS.....	619	98	3	41	132	10	9	22	40	178	47	5	28	6
LIQUID PETROLEUM GAS.....	108	25	2	7	34	-	1	5	3	17	8	1	5	2
OTHER.....	25	1	-	2	3	-	5	-	3	8	-	-	1	1
NO COOKING FUEL.....	2,880	211	375	80	114	25	209	46	473	29	614	392	176	135
CONVERTED FROM FUEL OIL FOR ANY END USE SINCE 1/1/79														
YES.....	52	6	4	2	3	-	4	-	6	10	5	4	2	5
FOR HEATING.....	45	5	4	2	3	-	4	-	6	10	5	2	2	3
OTHER.....	14	1	-	-	-	-	1	-	1	3	2	3	-	2
NO.....	4,097	436	396	156	359	44	238	99	588	334	705	384	228	129
NOT REPORTED.....	90	6	2	4	4	-	-	1	7	3	4	42	6	11
FUEL COMBINATIONS USED														
NO FUEL USED.....	115	3	2	-	-	-	-	-	1	-	-	64	7	37
ONE FUEL USED.....	821	53	50	27	65	9	30	22	152	24	134	154	70	41
ELECTRICITY.....	820	53	47	27	63	9	30	22	152	23	132	154	70	38
NATURAL GAS.....	6	-	-	-	-	-	-	-	-	1	2	-	-	3
FUEL OIL.....	4	-	3	1	-	-	-	-	-	-	-	-	-	-
TWO FUELS USED.....	2,775	325	316	104	259	26	163	65	393	233	528	180	122	61
ELECTRICITY, NATURAL GAS..	2,026	221	178	68	195	19	126	45	312	187	409	128	87	51
ELECTRICITY, FUEL OIL....	461	73	98	24	19	3	18	9	54	34	67	39	17	6
ELECTRICITY, LPG.....	189	22	23	6	34	1	10	4	19	8	42	5	14	2
OTHER.....	98	8	17	7	11	2	9	7	8	4	10	7	5	2
THREE FUELS USED.....	469	64	28	29	41	9	37	14	51	82	50	29	30	6
ELEC., GAS, FUEL OIL....	274	39	17	19	12	7	23	4	30	55	34	16	15	4
ELEC., FUEL OIL, LPG....	76	13	7	4	14	-	4	5	5	10	6	2	6	-
ELEC., GAS, OTHER.....	76	9	2	5	7	1	7	4	12	9	4	10	6	1
ELEC., FUEL OIL, OTHER...	22	1	1	-	3	-	2	-	2	6	4	2	2	1
OTHER.....	22	2	2	2	5	-	1	2	2	2	2	-	1	1
FOUR OR MORE FUELS USED....	49	3	6	1	2	-	12	-	4	8	2	2	7	-

SEE NOTES AT END OF TABLE

TABLE 3A. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY BUILDING TYPE
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)

USES OF FUEL	TOTAL	BUILDING TYPE													
		ASS	AUT	EDU	FOO	HEA	IND	LOD	OFF	RES	RET	WARE	OTHE	VAC	
S E M B L Y	O M I T I V E	O C T I O N	S A L E S	L T H	I S T R I A L	G I N G	O F F I C E	R E S I D E N T I A L	R E T A I L	W A R E H O U S E	OT H E R	VACANT			
ELECTRICITY.....	4,109	443	395	161	365	44	242	101	599	345	712	366	230	105	
NATURAL GAS.....	2,416	270	203	92	214	28	165	53	356	260	450	156	110	59	
FUEL OIL.....	872	129	132	47	50	10	60	18	94	107	113	60	41	10	
LIQUID PETROLEUM GAS.....	319	41	32	12	56	2	23	10	26	22	51	16	25	2	
WOOD.....	124	10	19	-	16	-	6	1	8	26	19	7	11	2	
COAL.....	62	9	6	6	9	-	7	1	5	6	1	4	8	1	
STEAM.....	53	4	1	7	1	3	7	8	10	1	1	2	5	3	
OTHER.....	27	1	2	2	2	1	7	2	6	-	2	1	3	-	
NONE.....	115	3	2	-	-	-	-	-	1	-	-	64	7	37	
NUMBER OF BOILERS															
NONE.....	3,348	335	364	90	322	32	170	66	461	225	581	375	197	130	
ONE.....	686	96	33	30	39	6	44	22	117	99	112	44	32	13	
TWO OR MORE.....	203	17	5	41	6	5	28	14	22	23	21	11	7	3	
FUELS USED TO FIRE BOILERS															
NATURAL GAS.....	553	78	19	41	34	8	47	26	80	71	86	27	23	11	
FUEL OIL.....	299	36	15	27	8	5	26	8	46	51	45	13	13	5	
OTHER.....	93	9	5	11	9	1	9	6	16	8	8	4	7	1	
HEATING SYSTEM															
SELF-CONTAINED UNITS															
FORCED AIR.....	1,201	88	155	37	144	8	81	22	199	38	253	107	52	19	
RADIANT															
ELECTRIC BASEBOARDS.....	71	6	-	1	3	-	5	4	20	5	18	4	5	-	
RADIATORS.....	51	3	2	2	1	1	1	-	9	18	11	3	-	-	
OTHER.....	430	37	64	9	45	-	34	19	28	35	78	33	43	5	
CENTRAL SYSTEM															
FORCED AIR.....	1,069	169	99	38	93	21	56	17	183	75	185	58	51	24	
RADIANT.....	503	66	14	45	27	7	14	23	92	118	47	20	23	7	
OTHER.....	349	59	20	26	19	6	27	10	43	48	54	16	18	4	
OTHER.....	117	7	24	2	14	-	6	3	15	11	14	6	14	2	
NONE.....	448	15	24	2	20	-	19	2	12	-	55	182	32	84	

SEE NOTES AT END OF TABLE

TABLE 3A. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY BUILDING TYPE
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)

USES OF FUEL	TOTAL	BUILDING TYPE												
		A S S E M B L Y	A U T O M B I L	E D U C A T I O N	F O O D S A L E S	H E A L T H I S	I N D U S T R I A L	L O D G I N G	O F F I C E	R E S I D E N T I A L	R E T A I L	W A R E H O U S E	OT H E R	V A C A N T
PERCENT OF BUILDING HEATED														
NONE.....	448	15	24	2	20	-	19	2	12	-	55	182	32	84
1 TO 25.....	266	13	32	-	9	-	41	1	9	2	35	86	30	8
26 TO 50.....	347	13	51	2	35	2	13	2	51	14	83	48	27	8
51 TO 75.....	313	25	26	7	37	3	12	5	55	38	78	7	17	4
76 TO 99.....	242	16	17	12	35	2	13	7	47	31	41	9	11	2
100.....	2,620	366	252	139	230	37	144	83	427	261	422	98	120	40
PERCENT OF BUILDING COOLED														
NONE.....	1,532	175	260	53	64	5	80	35	58	118	217	273	90	104
1 TO 25.....	609	35	76	37	22	7	98	6	38	68	65	107	42	9
26 TO 50.....	542	59	31	5	60	5	18	3	97	69	130	24	35	6
51 TO 75.....	283	22	10	6	51	2	11	4	67	24	65	6	13	2
76 TO 99.....	190	14	-	10	21	4	8	9	54	9	32	10	8	2
100.....	1,081	143	24	51	139	21	28	44	286	59	205	10	49	22
AIR CONDITIONING SYSTEM														
WINDOW UNITS.....	855	47	70	37	95	9	43	30	108	137	170	46	54	9
PACKAGE UNITS.....	799	85	27	28	106	7	56	10	188	33	162	40	50	9
CENTRAL SYSTEM.....	750	95	28	31	77	15	40	16	186	36	130	54	23	18
COMBINATION/OTHER.....	302	46	16	13	25	7	24	10	61	22	35	17	20	6
NO AIR CCNDITIONING.....	1,532	175	260	53	64	5	80	35	58	118	217	273	90	104

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

SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 38. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY BUILDING TYPE
- PERCENTAGE OF ROW TOTALS

USES OF FUEL	TOTAL	BUILDING TYPE													
		ASSEMBLY	AUTOMOTIVE	EDUCATION	FOOD SALES	HEALTH	INDUSTRIAL	LOADING	OFFICE	RESIDENTIAL	RETAIL	WAREHOUSE	OTHER	VACANT	
NONRESIDENTIAL BUILDINGS.....	100%	11	9	4	9	1	6	2	14	8	17	10	6	3	
END USE BY FUEL TYPE															
HEATING FUEL USED.....	100%	11	10	4	9	1	6	3	16	9	17	7	5	2	
NATURAL GAS.....	100%	12	9	3	9	1	7	2	15	10	19	7	4	2	
ELECTRICITY.....	100%	9	7	4	10	1	5	5	20	6	16	8	7	2	
FUEL OIL.....	100%	16	16	5	6	1	6	2	11	13	13	7	5	1	
LIQUID PETROLEUM GAS (LPG)	100%	10	13	2	15	1	7	2	10	5	20	5	7	2	
WOOD.....	100%	6	18	-	13	-	5	1	7	16	18	6	9	1	
COAL.....	100%	13	11	12	17	-	12	3	4	1	1	8	16	3	
STEAM.....	100%	8	1	16	3	6	12	16	20	1	3	3	7	4	
OTHER.....	100%	9	-	9	4	3	22	5	37	-	-	1	10	-	
NO HEATING FUEL.....	100%	3	5	-	5	-	4	1	3	-	12	40	7	19	
AIR CONDITIONING FUEL USED..															
ELECTRICITY.....	100%	10	5	4	11	1	6	2	20	8	18	6	5	2	
NATURAL GAS.....	100%	9	4	3	12	3	9	2	23	8	15	5	5	4	
OTHER.....	100%	31	-	6	19	4	7	1	13	-	12	-	6	-	
NO AIR CONDITIONING FUEL....	100%	11	17	3	4	-	5	2	4	8	14	18	6	7	
WATER HEATING FUEL USED.....															
NATURAL GAS.....	100%	11	6	5	12	2	5	3	15	14	16	5	5	2	
ELECTRICITY.....	100%	12	7	3	11	1	6	3	18	7	17	7	5	1	
FUEL OIL.....	100%	8	3	10	5	2	6	4	19	21	11	6	2	3	
OTHER.....	100%	9	5	5	24	3	7	8	11	9	8	1	6	3	
NO WATER HEATING FUEL.....	100%	10	15	2	3	-	6	1	10	2	19	10	7	7	
MANUFACTURING FUEL USED.....															
ELECTRICITY.....	100%	1	13	1	2	-	35	-	5	3	16	13	8	2	
NATURAL GAS.....	100%	3	9	1	2	-	37	-	4	4	15	13	7	2	
OTHER.....	100%	-	6	-	-	-	40	-	8	4	15	7	12	-	
NO MANUFACTURING DONE.....	100%	12	9	4	9	1	2	3	15	9	17	10	5	4	

SEE NOTES AT END OF TABLE

TABLE 3B. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY BUILDING TYPE
- PERCENTAGE OF ROW TOTALS (CONTINUED)

USES OF FUEL	TOTAL	BUILDING TYPE												
		ASSEMBLY	AUTOMOTIVE	EDUCATION	FOOD SALES	HEALTH	INDUSTRIAL	lodging	OFFICE	RESIDENTIAL	RETAIL	WAREHOUSE	OTHER	VACANT
COOKING FUEL USED.....	100%	17	2	6	19	1	3	4	9	23	7	3	5	1
ELECTRICITY.....	100%	17	3	6	19	1	3	4	11	20	7	4	4	-
NATURAL GAS.....	100%	16	-	7	21	2	1	4	7	29	8	1	5	1
LIQUID PETROLEUM GAS.....	100%	23	2	6	31	-	1	4	3	16	7	1	4	2
OTHER.....	100%	3	-	8	12	1	22	-	13	32	1	-	4	3
NO COOKING FUEL.....	100%	7	13	3	4	1	7	2	16	1	21	14	6	5
CONVERTED FROM FUEL OIL FOR ANY END USE SINCE 1/1/79														
YES.....	100%	11	7	4	5	-	8	-	11	19	10	8	5	11
FOR HEATING.....	100%	10	9	5	6	-	9	-	13	22	11	4	5	7
OTHER.....	100%	9	-	2	-	-	7	-	8	23	13	20	2	16
NO.....	100%	11	10	4	9	1	6	2	14	8	17	9	6	3
NOT REPORTED.....	100%	7	2	4	5	-	-	1	7	3	4	47	7	13
FUEL COMBINATIONS USED														
NO FUEL USED.....	100%	3	1	-	-	-	-	-	1	-	-	56	6	33
ONE FUEL USED.....	100%	6	6	3	8	1	4	3	18	3	16	19	8	5
ELECTRICITY.....	100%	6	6	3	8	1	4	3	18	3	16	19	9	5
NATURAL GAS.....	100%	-	-	-	-	-	-	-	-	21	29	-	-	50
FUEL OIL.....	100%	-	65	-	32	-	2	-	-	-	-	-	-	-
TWO FUELS USED.....	100%	12	11	4	9	1	6	2	14	8	19	6	4	2
ELECTRICITY, NATURAL GAS..	100%	11	9	3	10	1	6	2	15	9	20	6	4	3
ELECTRICITY, FUEL OIL....	100%	16	21	5	4	1	4	2	12	7	15	9	4	1
ELECTRICITY, LPG.....	100%	12	12	3	18	1	5	2	10	4	22	3	7	1
OTHER.....	100%	8	18	8	11	2	9	7	8	4	10	7	5	2
THREE FUELS USED.....	100%	14	6	6	9	2	8	3	11	17	11	6	6	1
ELEC., GAS, FUEL OIL.....	100%	14	6	7	4	3	8	2	11	20	12	6	6	1
ELEC., FUEL OIL, LPG....	100%	18	9	5	19	-	5	6	7	13	8	3	8	-
ELEC., GAS, OTHER.....	100%	12	3	6	9	1	9	5	16	12	6	13	7	1
ELEC., FUEL OIL, OTHER....	100%	2	3	-	12	1	11	-	7	28	16	9	8	2
OTHER.....	100%	11	8	9	23	1	3	7	8	11	8	-	6	6
FOUR OR MORE FUELS USED....	100%	6	12	3	3	1	25	-	8	16	5	5	14	-

SEE NOTES AT END OF TABLE

TABLE 3B. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY BUILDING TYPE
- PERCENTAGE OF ROW TOTALS (CONTINUED)

USES OF FUEL	TOTAL	BUILDING TYPE														
		ASSEMBLY	AUTOMOTIVE	EDUCATION	FOOD SALES	HEALTH	INDUSTRIAL	lodging	OFFICE	REIDENTIAL	Retail	WAREHOUSE	OTHER	VACANT		
ELECTRICITY.....	100%	11	10	4	9	1	6	2	15	8	17	9	6	3		
NATURAL GAS.....	100%	11	8	4	9	1	7	2	15	11	19	6	5	2		
FUEL OIL.....	100%	15	15	5	6	1	7	2	11	12	13	7	5	1		
LIQUID PETROLEUM GAS.....	100%	13	10	4	17	1	7	3	8	7	16	5	8	1		
WOOD.....	100%	8	15	-	13	-	5	1	6	21	15	6	9	2		
COAL.....	100%	14	9	10	14	-	11	2	8	9	1	7	13	2		
STEAM.....	100%	8	1	14	2	5	13	15	20	1	2	3	10	5		
OTHER.....	100%	5	8	6	7	3	25	6	22	-	6	2	10	-		
NONE.....	100%	3	1	-	-	-	-	-	1	-	-	56	6	33		
NUMBER OF BOILERS																
NONE.....	100%	10	11	3	10	1	5	2	14	7	17	11	6	4		
ONE.....	100%	14	5	4	6	1	6	3	17	14	16	6	5	2		
TWO OR MORE.....	100%	8	2	20	3	3	14	7	11	11	10	6	3	2		
FUELS USED TO FIRE BOILERS																
NATURAL GAS.....	100%	14	4	7	6	1	9	5	14	13	16	5	4	2		
FUEL OIL.....	100%	12	5	9	3	2	9	3	15	17	15	5	4	2		
OTHER.....	100%	10	5	11	10	1	10	7	17	8	9	4	8	1		
HEATING SYSTEM																
SELF-CONTAINED UNITS																
FORCED AIR.....	100%	7	13	3	12	1	7	2	17	3	21	9	4	2		
RADIANT																
ELECTRIC BASEBOARDS.....	100%	8	-	2	4	-	7	6	28	7	25	6	7	-		
RADIATORS.....	100%	5	3	3	2	3	2	-	17	36	22	7	-	-		
OTHER.....	100%	9	15	2	11	-	8	4	7	8	18	8	10	1		
CENTRAL SYSTEM																
FORCED AIR.....	100%	16	9	4	9	2	5	2	17	7	17	5	5	2		
RADIANT.....	100%	13	3	9	5	1	3	5	18	23	9	4	4	1		
OTHER.....	100%	17	6	7	5	2	8	3	12	14	15	5	5	1		
OTHER.....	100%	6	20	2	12	-	5	2	13	9	12	5	12	2		
NONE.....	100%	3	5	-	5	-	4	1	3	-	12	41	7	19		

SEE NOTES AT END OF TABLE

TABLE 3B. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY BUILDING TYPE
- PERCENTAGE OF ROW TOTALS (CONTINUED)

USES OF FUEL	TOTAL	BUILDING TYPE												VACANT
		ASSEMBLY	AUTOMOTIVE	EDUCATION	FOOD	HEALTH CARE	INDUSTRIAL	LOGGING	OFFICE	RESIDENTIAL	RETAIL	WAREHOUSE	OTHER	
PERCENT OF BUILDING HEATED														
NONE.....	100%	3	5	-	5	-	4	1	3	-	12	41	7	19
1 TO 25.....	100%	5	12	-	3	-	15	-	3	1	13	32	11	3
26 TO 50.....	100%	4	15	1	10	-	4	-	15	4	24	14	8	2
51 TO 75.....	100%	8	8	2	12	1	4	2	18	12	25	2	6	1
76 TO 99.....	100%	7	7	5	14	1	6	3	19	13	17	4	4	1
100.....	100%	14	10	5	9	1	6	3	16	10	16	4	5	2
PERCENT OF BUILDING COOLED														
NONE.....	100%	11	17	3	4	-	5	2	4	8	14	18	6	7
1 TO 25.....	100%	6	12	6	4	1	16	1	6	11	11	18	7	2
26 TO 50.....	100%	11	6	1	11	1	3	-	18	13	24	4	6	1
51 TO 75.....	100%	8	4	2	18	1	4	1	24	8	23	2	5	1
76 TO 99.....	100%	7	-	5	16	2	4	5	28	5	17	5	4	1
100.....	100%	13	2	5	13	2	3	4	26	5	19	1	5	2
AIR CONDITIONING SYSTEM														
WINDOW UNITS.....	100%	6	8	4	11	1	5	4	13	16	20	5	6	1
PACKAGE UNITS.....	100%	11	3	4	13	1	7	1	23	4	20	5	6	1
CENTRAL SYSTEM.....	100%	13	4	4	10	2	5	2	25	5	17	7	3	2
COMBINATION/OTHER.....	100%	15	5	4	8	2	8	3	20	7	12	5	7	2
NO AIR CONDITIONING.....	100%	11	17	3	4	-	5	2	4	8	14	18	6	7

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

SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 3C. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY BUILDING TYPE
- PERCENTAGE OF COLUMN TOTALS

USES OF FUEL	TOTAL	BUILDING TYPE													
		ASSEMBLY	AUTOMOTIVE	EDUCATION	FOOD	HEALTH CARE	INDUSTRIAL	lodging	OFFICE	RESIDENTIAL	RETAIL	WAREHOUSE	OTHER	VACANT	
NONRESIDENTIAL BUILDINGS.....	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
END USE BY FUEL TYPE															
HEATING FUEL USED.....	89	97	94	99	94	100	92	98	98	100	92	58	87	42	
NATURAL GAS.....	49	54	47	42	50	57	61	34	52	58	56	33	39	22	
ELECTRICITY.....	24	22	19	28	28	31	20	49	35	17	23	19	30	15	
FUEL OIL.....	19	28	33	27	12	16	19	15	14	31	14	13	16	5	
LIQUID PETROLEUM GAS (LPG)	5	5	7	2	9	3	6	5	4	3	6	3	7	2	
WOOD.....	2	1	5	-	4	-	2	1	1	5	3	1	4	-	
COAL.....	1	1	1	4	2	-	2	1	-	-	-	1	3	1	
STEAM.....	1	1	-	5	-	7	3	8	2	-	-	-	2	2	
OTHER.....	-	-	-	1	-	1	1	-	1	-	-	-	-	-	
NO HEATING FUEL.....	11	3	6	1	6	-	8	2	2	-	8	42	13	58	
AIR CONDITIONING FUEL USED..	64	61	35	67	82	88	67	65	90	66	70	36	62	28	
ELECTRICITY.....	61	57	35	65	77	81	63	63	85	63	67	35	59	24	
NATURAL GAS.....	4	3	1	3	5	10	6	3	6	4	3	2	3	4	
OTHER.....	1	2	-	1	1	3	1	-	1	-	-	-	1	-	
NO AIR CONDITIONING FUEL....	36	39	65	33	18	12	33	35	10	34	30	64	38	72	
WATER HEATING FUEL USED....	67	70	47	78	88	96	66	92	78	90	63	37	61	34	
NATURAL GAS.....	31	31	21	41	43	46	28	41	33	53	29	15	28	17	
ELECTRICITY.....	31	36	24	28	38	34	34	43	38	27	31	20	30	13	
FUEL OIL.....	4	3	1	12	3	9	5	8	6	11	3	2	2	4	
OTHER.....	3	2	1	4	8	9	4	9	2	3	1	-	3	2	
NO WATER HEATING FUEL.....	33	30	53	22	12	4	34	8	22	10	37	63	39	66	
MANUFACTURING FUEL USED....	12	1	16	4	3	-	72	1	4	5	11	15	17	6	
ELECTRICITY.....	10	1	14	3	3	-	66	1	3	5	9	13	13	6	
NATURAL GAS.....	2	1	2	-	-	-	13	-	1	1	2	1	4	-	
OTHER.....	1	-	1	-	-	-	8	-	1	1	1	2	4	-	
NO MANUFACTURING DONE.....	88	99	84	96	97	100	28	99	96	95	89	85	83	94	

SEE NOTES AT END OF TABLE

TABLE 3C. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY BUILDING TYPE
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)

USES OF FUEL	TOTAL	BUILDING TYPE													VACANT
		ASSISTED BY	AUTOMOTIVE	EDUCATION	FOOD SALES	HEALTH	INDUSTRIAL	lodging	OFFICE	RESIDENTIAL	RETAIL	WAREHOUSE	OTHER		
		ASSEMBLY	Automotive	Education	Food Sales	Health	Industrial	Lodging	Office	Residential	Retail	Warehouse	Other		
COOKING FUEL USED.....	32	53	7	50	69	44	14	54	21	92	14	9	26	7	7
ELECTRICITY.....	18	28	6	28	39	25	10	34	14	44	7	7	13	2	2
NATURAL GAS.....	15	22	1	25	36	23	4	22	7	51	7	1	12	4	4
LIQUID PETROLEUM GAS.....	3	5	1	4	9	1	-	5	-	5	1	-	2	1	1
OTHER.....	1	-	-	1	1	1	2	-	1	2	-	-	-	1	1
NO COOKING FUEL.....	68	47	93	50	31	56	86	46	79	8	86	91	74	93	88
CONVERTED FROM FUEL OIL FOR ANY END USE SINCE 1/1/79															
YES.....	1	1	1	1	1	-	2	-	1	3	1	1	1	1	4
FOR HEATING.....	1	1	1	1	1	-	2	-	1	3	1	-	1	1	2
OTHER.....	-	-	-	-	-	-	-	-	-	1	-	1	-	1	2
NO.....	97	97	99	96	98	100	98	99	98	96	99	89	96	96	88
NOT REPORTED.....	2	1	-	2	1	-	-	1	1	1	1	10	3	8	8
FUEL COMBINATIONS USED															
NO FUEL USED.....	3	1	-	-	-	-	-	-	-	-	-	15	3	26	26
ONE FUEL USED.....	20	12	12	17	18	21	13	21	25	7	19	36	30	28	28
ELECTRICITY.....	19	12	12	17	17	21	12	21	25	7	18	36	30	26	26
NATURAL GAS.....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
FUEL OIL.....	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
TWO FUELS USED.....	65	72	79	65	71	58	67	65	65	67	74	42	52	42	42
ELECTRICITY, NATURAL GAS..	48	49	44	42	53	44	52	45	52	54	57	30	37	35	35
ELECTRICITY, FUEL OIL....	11	16	24	15	5	6	7	9	9	10	9	9	7	7	4
ELECTRICITY, LPG.....	4	5	6	3	9	3	4	4	3	2	6	1	6	1	1
OTHER.....	2	2	4	5	3	5	4	7	1	1	1	2	2	2	2
THREE FUELS USED.....	11	14	7	18	11	20	15	14	8	24	7	7	13	4	4
ELEC., GAS, FUEL OIL.....	6	9	4	12	3	17	9	4	5	16	5	4	6	3	3
ELEC., FUEL OIL, LPG.....	2	3	2	2	4	-	2	5	1	3	1	-	3	-	-
ELEC., GAS, OTHER.....	2	2	1	3	2	3	3	3	2	3	1	2	2	2	-
ELEC., FUEL OIL, OTHER....	1	-	-	1	1	-	1	-	-	2	1	-	1	-	-
OTHER.....	1	1	1	1	1	-	1	5	2	1	2	-	1	1	1
FOUR OR MORE FUELS USED....	1	1	1	1	1	-	1	-	1	2	-	1	1	1	1

SEE NOTES AT END OF TABLE

TABLE 3C. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY BUILDING TYPE
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)

USES OF FUEL	TOTAL	BUILDING TYPE														
		ASSEMBLY	AUTOMOTIVE	EDUCATION	FOOD	HOTEL	INDUSTRIAL	LOGGING	OFFICE	RESIDENTIAL	RETAIL	WAREHOUSE	RESTAURANT	VACANT		
		SE	OM	DU	OD	HE	DU	LO	OF	RE	ET	RE	HO	OT		
ENERGY SOURCES SUPPLIED TO THE BUILDING																
ELECTRICITY.....	97	99	99	100	100	100	100	100	100	100	100	85	97	72		
NATURAL GAS.....	57	60	51	57	58	64	68	53	59	75	63	36	46	40		
FUEL OIL.....	21	29	33	29	14	24	25	18	16	31	16	14	17	7		
LIQUID PETROLEUM GAS.....	8	9	8	7	15	5	10	10	4	6	7	4	11	1		
WOOD.....	3	2	5	-	4	-	2	1	1	7	3	2	5	1		
COAL.....	1	2	1	4	2	-	3	1	1	2	-	1	3	1		
STEAM.....	1	1	-	5	-	6	3	8	2	-	-	-	2	2		
OTHER.....	1	-	1	1	1	2	3	1	1	-	-	-	1	-		
NONE.....	3	1	-	-	-	-	-	-	-	-	-	15	3	26		
NUMBER OF BOILERS																
NONE.....	79	75	91	56	88	74	70	65	77	65	81	87	83	89		
ONE.....	16	21	8	19	11	14	18	21	19	29	16	10	14	9		
TWO OR MORE.....	5	4	1	26	2	12	12	14	4	7	3	3	3	2		
FUELS USED TO FIRE BOILERS																
NATURAL GAS.....	13	17	5	25	9	19	20	26	13	21	12	6	10	8		
FUEL OIL.....	7	8	4	16	2	11	11	8	8	15	6	3	5	4		
OTHER.....	2	2	1	7	3	2	4	6	3	2	1	1	3	-		
HEATING SYSTEM																
SELF-CONTAINED UNITS																
FORCED AIR.....	28	20	39	23	39	19	33	22	33	11	35	25	22	13		
RADIANT																
ELECTRIC BASEBOARDS.....	2	1	-	1	1	-	2	4	3	1	2	1	2	-	-	
RADIATORS.....	1	1	-	1	-	3	1	-	1	5	2	1	-	-		
OTHER.....	10	8	16	5	12	-	14	19	5	10	11	8	18	4		
CENTRAL SYSTEM																
FORCED AIR.....	25	38	25	23	25	48	23	17	30	22	26	14	22	17		
RADIANT.....	12	15	3	28	7	16	6	23	15	34	7	5	10	5		
OTHER.....	8	13	5	16	5	13	11	10	7	14	8	4	8	3		
NONE.....	3	2	6	1	4	-	3	3	3	3	2	1	6	1		
SEE NOTES AT END OF TABLE	11	3	6	1	6	-	8	2	2	-	8	42	13	58		

TABLE 3C. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY BUILDING TYPE
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)

USES OF FUEL	TOTAL	BUILDING TYPE												
		ASSEMBLY	AUTOMOTIVE	EDUCATION	FOOD	HEALTH	INDUSTRIAL	lodging	OFFICE	RESIDENTIAL	RETAIL	WAREHOUSE	OTHER	VACANT
PERCENT OF BUILDING HEATED														
NONE.....	11	3	6	1	6	-	8	2	2	-	8	42	13	58
1 TO 25.....	6	3	8	-	2	1	17	1	1	1	5	20	13	6
26 TO 50.....	8	3	13	1	10	3	5	2	8	4	12	11	11	5
51 TO 75.....	7	6	6	4	10	7	5	5	9	11	11	2	7	2
76 TO 99.....	6	4	4	7	9	4	6	7	8	9	6	2	5	1
100.....	62	82	63	86	63	85	60	83	71	75	59	23	51	28
PERCENT OF BUILDING COOLED														
NONE.....	36	39	65	33	18	12	33	35	10	34	30	64	38	72
1 TO 25.....	14	8	19	23	6	15	40	6	6	20	9	25	18	6
26 TO 50.....	13	13	8	3	16	12	7	3	16	20	18	6	15	4
51 TO 75.....	7	5	3	4	14	6	5	4	11	7	9	1	5	2
76 TO 99.....	4	3	-	6	8	8	3	9	9	3	5	2	3	1
100.....	26	32	6	31	38	48	11	44	48	17	29	2	21	15
AIR CONDITIONING SYSTEM														
WINDOW UNITS.....	20	11	17	23	26	21	18	30	18	40	24	11	23	6
PACKAGE UNITS.....	19	19	7	17	29	17	23	10	31	10	23	9	21	6
CENTRAL SYSTEM.....	18	21	7	19	21	35	17	15	31	10	18	13	10	12
COMBINATION/OTHER.....	7	10	4	8	7	16	10	10	10	6	5	4	8	4
NO AIR CONDITIONING.....	36	39	65	33	18	12	33	35	10	34	30	64	38	72

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

SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 4A. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY TOTAL SQUARE FOOTAGE
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS

USES OF FUEL	TOTAL	TOTAL SQUARE FOOTAGE					
		1,000 OR LESS	1,001 TO 5,000	5,001 TO 10,000	10,001 TO 25,000	25,001 TO 50,000	OVER 50,000
NONRESIDENTIAL BUILDINGS.....	4,238	677	1,729	801	596	237	199
END USE BY FUEL TYPE							
HEATING FUEL USED.....	3,788	505	1,541	760	567	223	192
NATURAL GAS.....	2,069	182	838	455	354	128	111
ELECTRICITY.....	1,033	178	404	197	159	51	45
FUEL OIL.....	808	83	310	185	134	51	47
LIQUID PETROLEUM GAS (LPG)	223	69	89	41	15	6	2
WOOD.....	102	19	49	21	10	-	2
COAL.....	50	6	25	5	7	2	5
STEAM.....	51	-	5	6	10	12	18
OTHER.....	10	-	2	2	2	2	2
NO HEATING FUEL.....	450	171	189	41	29	14	7
AIR CONDITIONING FUEL USED..	2,706	324	1,046	529	461	181	166
ELECTRICITY.....	2,567	318	978	504	437	175	156
NATURAL GAS.....	161	7	68	25	39	9	13
OTHER.....	28	1	11	6	2	2	6
NO AIR CONDITIONING FUEL....	1,532	353	684	272	135	56	32
WATER HEATING FUEL USED....	2,823	275	1,116	576	483	198	174
NATURAL GAS.....	1,321	96	521	264	247	100	93
ELECTRICITY.....	1,306	156	524	270	208	83	65
FUEL OIL.....	180	7	52	37	39	24	21
OTHER.....	118	20	41	21	17	6	13
NO WATER HEATING FUEL....	1,415	402	613	224	113	39	24
MANUFACTURING FUEL USED....	492	50	165	98	85	47	48
ELECTRICITY.....	427	46	130	88	81	41	41
NATURAL GAS.....	81	2	28	11	16	8	16
OTHER.....	59	4	18	5	13	7	12
NO MANUFACTURING DONE.....	3,746	627	1,565	703	511	190	150
COOKING FUEL USED.....	1,358	113	530	271	244	102	99
ELECTRICITY.....	765	59	312	147	136	55	57
NATURAL GAS.....	619	42	230	122	115	55	55
LIQUID PETROLEUM GAS.....	108	20	41	24	14	5	5
OTHER.....	25	3	11	2	5	2	3
NO COOKING FUEL.....	2,880	564	1,199	529	352	135	100

SEE NOTES AT END OF TABLE

TABLE 4A. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY TOTAL SQUARE FOOTAGE
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)

USES OF FUEL	TOTAL	TOTAL SQUARE FOOTAGE					
		1,000 OR LESS	1,001 TO 5,000	5,001 TO 10,000	10,001 TO 25,000	25,001 TO 50,000	OVER 50,000
CONVERTED FROM FUEL OIL FOR ANY END USE SINCE 1/1/79							
YES.....	52	5	25	10	6	2	4
FOR HEATING.....	45	2	21	10	6	2	3
OTHER.....	14	2	5	2	2	1	2
NO.....	4,097	635	1,678	779	583	231	190
NOT REPORTED.....	90	37	26	12	8	3	4
FUEL COMBINATIONS USED							
NO FUEL USED.....	115	55	45	10	1	3	-
ONE FUEL USED.....	831	253	344	100	82	30	21
ELECTRICITY.....	820	252	338	98	81	30	21
NATURAL GAS.....	6	1	5	-	-	-	-
FUEL OIL.....	4	-	1	2	1	-	-
TWO FUELS USED.....	2,775	348	1,189	575	401	155	107
ELECTRICITY, NATURAL GAS..	2,026	190	869	434	324	122	86
ELECTRICITY, FUEL OIL....	461	74	209	95	53	19	11
ELECTRICITY, LPG.....	189	66	76	31	12	5	1
OTHER.....	98	18	35	16	12	8	9
THREE FUELS USED.....	469	20	136	109	96	46	62
ELEC., GAS, FUEL OIL....	274	6	69	66	62	34	37
ELEC., FUEL OIL, LPG....	76	6	27	23	11	4	4
ELEC., GAS, OTHER.....	76	3	18	12	19	7	17
ELEC., FUEL OIL, OTHER....	22	1	11	5	3	-	1
OTHER.....	22	3	10	3	1	2	3
FOUR OR MORE FUELS USED....	49	-	16	6	16	3	8
ENERGY SOURCES SUPPLIED TO THE BUILDING							
ELECTRICITY.....	4,109	620	1,675	789	594	234	198
NATURAL GAS.....	2,416	201	970	515	417	166	147
FUEL OIL.....	872	88	325	194	144	59	61
LIQUID PETROLEUM GAS.....	319	73	120	61	36	13	16
WOOD.....	124	21	62	23	15	-	2
COAL.....	62	6	32	7	10	2	6
STEAM.....	53	1	5	7	11	11	19
OTHER.....	27	-	4	6	7	4	5
NONE.....	115	55	45	10	1	3	-

SEE NOTES AT END OF TABLE

**TABLE 4A. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY TOTAL SQUARE FOOTAGE
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)**

USES OF FUEL	TOTAL	TOTAL SQUARE FOOTAGE					
		1,000 OR LESS	1,001 TO 5,000	5,001 TO 10,000	10,001 TO 25,000	25,001 TO 50,000	OVER 50,000
NUMBER OF BOILERS							
NONE.....	3,348	652	1,473	599	401	134	88
ONE.....	686	21	226	171	158	66	45
TWO OR MORE.....	203	3	30	30	37	37	66
FUELS USED TO FIRE BOILERS							
NATURAL GAS.....	553	18	167	111	122	61	74
FUEL OIL.....	299	6	68	75	74	38	38
OTHER.....	93	7	31	15	17	11	13
HEATING SYSTEM							
SELF-CONTAINED UNITS							
FORCED AIR.....	1,201	172	513	243	176	58	38
RADIANT							
ELECTRIC BASEBOARDS.....	71	28	21	9	9	3	3
RADIATORS.....	51	8	18	17	4	2	2
OTHER.....	430	110	201	43	46	21	8
CENTRAL SYSTEM							
FORCED AIR.....	1,069	116	482	230	140	49	50
RADIANT.....	503	24	165	110	106	54	44
OTHER.....	349	16	108	83	66	33	43
OTHER.....	117	32	33	26	20	3	4
NONE.....	448	171	187	41	29	13	7
PERCENT OF BUILDING HEATED							
NCNE.....	448	171	187	41	29	13	7
1 TO 25.....	266	22	74	73	57	22	19
26 TO 50.....	347	51	153	78	47	13	7
51 TO 75.....	313	32	130	78	45	17	12
76 TO 99.....	242	21	103	49	37	14	17
100.....	2,620	379	1,082	482	382	158	138

SEE NOTES AT END OF TABLE

**TABLE 4A. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY TOTAL SQUARE FOOTAGE
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)**

USES OF FUEL	TOTAL	TOTAL SQUARE FOOTAGE					
		1,000 OR LESS	1,001 TO 5,000	5,001 TO 10,000	10,001 TO 25,000	25,001 TO 50,000	OVER 50,000
PERCENT OF BUILDING COOLED							
NCNE.....	1,532	353	684	272	135	56	32
1 TO 25.....	609	23	145	136	160	79	66
26 TO 50.....	542	48	246	123	87	18	19
51 TO 75.....	283	33	122	57	41	17	13
76 TO 99.....	190	11	71	40	37	11	21
100.....	1,081	207	462	172	136	55	48
AIR CONDITIONING SYSTEM							
WINDOW UNITS.....	855	191	358	130	108	41	27
PACKAGE UNITS.....	799	52	293	181	163	65	46
CENTRAL SYSTEM.....	750	65	303	152	130	44	56
COMBINATION/OTHER.....	302	16	93	65	61	30	38
NO AIR CONDITIONING.....	1,532	353	684	272	135	56	32

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

SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 4B. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY TOTAL SQUARE FOOTAGE
- PERCENTAGE OF ROW TOTALS

USES OF FUEL	TOTAL	TOTAL SQUARE FOOTAGE					
		1,000 OR LESS	1,001 TO 5,000	5,001 TO 10,000	10,001 TO 25,000	25,001 TO 50,000	OVER 50,000
NONRESIDENTIAL BUILDINGS.....	100%	16	41	19	14	6	5
END USE BY FUEL TYPE							
HEATING FUEL USED.....	100%	13	41	20	15	6	5
NATURAL GAS.....	100%	9	41	22	17	6	5
ELECTRICITY.....	100%	17	39	19	15	5	4
FUEL OIL.....	100%	10	38	23	17	6	6
LIQUID PETROLEUM GAS (LPG)	100%	31	40	18	7	3	1
WOOD.....	100%	19	49	21	10	-	2
COAL.....	100%	11	50	10	13	5	10
STEAM.....	100%	-	9	11	21	23	36
OTHER.....	100%	-	16	19	25	21	20
NO HEATING FUEL.....	100%	38	42	9	6	3	1
AIR CONDITIONING FUEL USED..	100%	12	39	20	17	7	6
ELECTRICITY.....	100%	12	38	20	17	7	6
NATURAL GAS.....	100%	4	42	16	24	6	8
OTHER.....	100%	5	40	21	7	7	20
NO AIR CONDITIONING FUEL....	100%	23	45	18	9	4	2
WATER HEATING FUEL USED.....	100%	10	40	20	17	7	6
NATURAL GAS.....	100%	7	39	20	19	8	7
ELECTRICITY.....	100%	12	40	21	16	6	5
FUEL OIL.....	100%	4	29	21	21	13	12
OTHER.....	100%	17	35	18	14	5	11
NO WATER HEATING FUEL.....	100%	28	43	16	8	3	2
MANUFACTURING FUEL USED.....	100%	10	33	20	17	9	10
ELECTRICITY.....	100%	11	30	21	19	10	9
NATURAL GAS.....	100%	3	34	14	19	9	20
OTHER.....	100%	6	31	9	21	12	20
NO MANUFACTURING DONE.....	100%	17	42	19	14	5	4
COOKING FUEL USED.....	100%	8	39	20	18	7	7
ELECTRICITY.....	100%	8	41	19	18	7	7
NATURAL GAS.....	100%	7	37	20	19	9	9
LIQUID PETROLEUM GAS.....	100%	18	38	22	13	5	4
OTHER.....	100%	10	42	7	18	9	13
NO COOKING FUEL.....	100%	20	42	18	12	5	3

SEE NOTES AT END OF TABLE

TABLE 4B. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY TOTAL SQUARE FOOTAGE
- PERCENTAGE OF ROW TOTALS (CONTINUED)

USES OF FUEL	TOTAL	TOTAL SQUARE FOOTAGE					
		1,000 OR LESS	1,001 TO 5,000	5,001 TO 10,000	10,001 TO 25,000	25,001 TO 50,000	OVER 50,000
CONVERTED FROM FUEL OIL FOR ANY END USE SINCE 1/1/79							
YES.....	100%	9	48	19	11	5	8
FOR HEATING.....	100%	5	48	22	12	5	8
OTHER.....	100%	17	37	12	13	5	17
NO.....	100%	16	41	19	14	6	5
NCT REPORTED.....	100%	41	29	13	9	3	5
FUEL COMBINATIONS USED							
NO FUEL USED.....	100%	48	39	9	1	2	-
ONE FUEL USED.....	100%	30	41	12	10	4	3
ELECTRICITY.....	100%	31	41	12	10	4	3
NATURAL GAS.....	100%	21	76	3	-	-	-
FUEL OIL.....	100%	-	32	40	25	-	2
TWO FUELS USED.....	100%	13	43	21	14	6	4
ELECTRICITY, NATURAL GAS..	100%	9	43	21	16	6	4
ELECTRICITY, FUEL OIL.....	100%	16	45	21	11	4	2
ELECTRICITY, LPG.....	100%	35	40	16	6	2	-
OTHER.....	100%	18	36	16	12	9	9
THREE FUELS USED.....	100%	4	29	23	20	10	13
ELEC., GAS, FUEL OIL.....	100%	2	25	24	22	12	14
ELEC., FUEL OIL, LPG.....	100%	8	36	30	15	5	5
ELEC., GAS, OTHER.....	100%	4	24	15	25	9	22
ELEC., FUEL OIL, OTHER....	100%	6	50	24	16	-	5
OTHER.....	100%	15	47	16	3	7	13
FOUR OR MORE FUELS USED....	100%	-	32	13	32	6	17
ENERGY SOURCES SUPPLIED TO THE BUILDING							
ELECTRICITY.....	100%	15	41	19	14	6	5
NATURAL GAS.....	100%	8	40	21	17	7	6
FUEL OIL.....	100%	10	37	22	17	7	7
LIQUID PETROLEUM GAS.....	100%	23	38	19	11	4	5
WOOD.....	100%	17	50	19	12	-	2
CCAL.....	100%	9	51	11	16	4	9
STEAM.....	100%	1	9	13	21	21	35
OTHER.....	100%	-	14	24	26	16	21
NONE.....	100%	48	39	9	1	2	-

SEE NOTES AT END OF TABLE

TABLE 4B. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY TOTAL SQUARE FOOTAGE
- PERCENTAGE OF ROW TOTALS (CONTINUED)

USES OF FUEL	TOTAL	TOTAL SQUARE FOOTAGE					OVER 50,000
		1,000 OR LESS	1,001 TO 5,000	5,001 TO 10,000	10,001 TO 25,000	25,001 TO 50,000	
NUMBER OF BOILERS							
NCNE.....	100%	19	44	18	12	4	3
ONE.....	100%	3	33	25	23	10	6
TWO OR MORE.....	100%	2	15	15	18	18	32
FUELS USED TO FIRE BOILERS							
NATURAL GAS.....	100%	3	30	20	22	11	13
FUEL OIL.....	100%	2	23	25	25	13	13
OTHER.....	100%	7	33	16	18	11	14
HEATING SYSTEM							
SELF-CONTAINED UNITS							
FORCED AIR.....	100%	14	43	20	15	5	3
RADIANT.....							
ELECTRIC BASEBOARDS.....	100%	39	29	12	12	4	4
RADIATORS.....	100%	16	36	33	8	4	4
OTHER.....	100%	26	47	10	11	5	2
CENTRAL SYSTEM							
FORCED AIR.....	100%	11	45	22	13	5	5
RADIANT.....	100%	5	33	22	21	11	9
OTHER.....	100%	5	31	24	19	10	12
OTHER.....	100%	27	28	22	17	2	3
NONE.....	100%	38	42	9	6	3	1
PERCENT OF BUILDING HEATED							
NCNE.....	100%	38	42	9	6	3	1
1 TO 25.....	100%	8	28	27	21	8	7
26 TO 50.....	100%	15	44	22	13	4	2
51 TO 75.....	100%	10	41	25	14	6	4
76 TO 99.....	100%	9	43	20	15	6	7
100.....	100%	14	41	18	15	6	5

SEE NOTES AT END OF TABLE

TABLE 4B. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY TOTAL SQUARE FOOTAGE
- PERCENTAGE OF ROW TOTALS (CONTINUED)

USES OF FUEL	TOTAL	TOTAL SQUARE FOOTAGE					
		1,000 OR LESS	1,001 TO 5,000	5,001 TO 10,000	10,001 TO 25,000	25,001 TO 50,000	OVER 50,000
PERCENT OF BUILDING COOLED							
NCNE.....	100%	23	45	18	9	4	2
1 TO 25.....	100%	4	24	22	26	13	11
26 TO 50.....	100%	9	45	23	16	3	4
51 TO 75.....	100%	12	43	20	15	6	4
76 TO 99.....	100%	6	37	21	20	6	11
100.....	100%	19	43	16	13	5	4
AIR CONDITIONING SYSTEM							
WINDOW UNITS.....	100%	22	42	15	13	5	3
PACKAGE UNITS.....	100%	6	37	23	20	8	6
CENTRAL SYSTEM.....	100%	9	40	20	17	6	7
COMBINATION/OTHER.....	100%	5	31	22	20	10	13
NO AIR CONDITIONING.....	100%	23	45	18	9	4	2

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING OR MULTIPLE ENERGY SOURCES. A DASH "—" REPRESENTS OR ROUNDS TO ZERO. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE. SEE APPENDIX B FOR DISCUSSION OF LIMITATIONS OF DATA.

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TABLE 4C. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY TOTAL SQUARE FOOTAGE
- PERCENTAGE OF COLUMN TOTALS

USES OF FUEL	TOTAL	TOTAL : SQUARE FOOTAGE					
		1,000 OR LESS	1,001 TO 5,000	5,001 TO 10,000	10,001 TO 25,000	25,001 TO 50,000	OVER 50,000
NONRESIDENTIAL BUILDINGS.....	100%	100%	100%	100%	100%	100%	100%
END USE BY FUEL TYPE							
HEATING FUEL USED.....	89	75	89	95	95	94	97
NATURAL GAS.....	49	27	48	57	59	54	56
ELECTRICITY.....	24	26	23	25	27	22	23
FUEL OIL.....	19	12	18	23	22	21	23
LIQUID PETROLEUM GAS (LPG)	5	10	5	5	3	3	1
WOOD.....	2	3	3	3	2	-	1
COAL.....	1	1	1	1	1	1	3
STEAM.....	1	-	-	1	2	5	9
OTHER.....	-	-	-	-	-	1	1
NO HEATING FUEL.....	11	25	11	5	5	6	3
AIR CONDITIONING FUEL USED..	64	48	60	66	77	76	84
ELECTRICITY.....	61	47	57	63	73	74	79
NATURAL GAS.....	4	1	4	3	7	4	6
OTHER.....	1	-	1	1	-	1	3
NO AIR CONDITIONING FUEL....	36	52	40	34	23	24	16
WATER HEATING FUEL USED....	67	41	65	72	81	84	88
NATURAL GAS.....	31	14	30	33	41	42	47
ELECTRICITY.....	31	23	30	34	35	35	33
FUEL OIL.....	4	1	3	5	6	10	11
OTHER.....	3	3	2	3	3	3	7
NO WATER HEATING FUEL....	33	59	35	28	19	16	12
MANUFACTURING FUEL USED....	12	7	10	12	14	20	24
ELECTRICITY.....	10	7	8	11	14	17	20
NATURAL GAS.....	2	-	2	1	3	3	8
OTHER.....	1	1	1	1	2	3	6
NO MANUFACTURING DONE.....	88	93	90	88	86	80	76
COOKING FUEL USED.....	32	17	31	34	41	43	50
ELECTRICITY.....	18	9	18	18	23	23	28
NATURAL GAS.....	15	6	13	15	19	23	28
LIQUID PETROLEUM GAS.....	3	3	2	3	2	2	2
OTHER.....	1	-	1	-	1	1	2
NO COOKING FUEL.....	68	83	69	66	59	57	50

SEE NOTES AT END OF TABLE

TABLE 4C. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY TOTAL SQUARE FOOTAGE
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)

USES OF FUEL	TOTAL	TOTAL SQUARE FOOTAGE					
		1,000 OR LESS	1,001 TO 5,000	5,001 TO 10,000	10,001 TO 25,000	25,001 TO 50,000	OVER 50,000
CONVERTED FROM FUEL OIL FOR ANY END USE SINCE 1/1/79							
YES.....	1	1	1	1	1	1	2
FOR HEATING.....	1	-	1	1	1	1	2
OTHER.....	-	-	-	-	-	-	1
NO.....	97	94	97	97	98	98	96
NOT REPORTED.....	2	5	2	1	1	1	2
FUEL COMBINATIONS USED							
NO FUEL USED.....	3	8	3	1	-	1	-
ONE FUEL USED.....	20	37	20	12	14	13	11
ELECTRICITY.....	19	37	20	12	14	13	11
NATURAL GAS.....	-	-	-	-	-	-	-
FUEL OIL.....	-	-	-	-	-	-	-
TWO FUELS USED.....	65	51	69	72	67	65	54
ELECTRICITY, NATURAL GAS..	48	28	50	54	54	52	43
ELECTRICITY, FUEL OIL....	11	11	12	12	9	8	6
ELECTRICITY, LPG.....	4	10	4	4	2	2	-
OTHER.....	2	3	2	2	2	4	4
THREE FUELS USED.....	11	3	8	14	16	20	31
ELEC., GAS, FUEL OIL.....	6	1	4	8	10	14	19
ELEC., FUEL OIL, LPG....	2	1	2	3	2	2	2
ELEC., GAS, OTHER.....	2	-	1	1	3	3	9
ELEC., FUEL OIL, OTHER....	1	-	1	1	1	-	1
OTHER.....	1	-	1	-	-	1	1
FOUR OR MORE FUELS USED....	1	-	1	1	3	1	4
ENERGY SOURCES SUPPLIED TO THE BUILDING							
ELECTRICITY.....	97	92	97	98	100	99	100
NATURAL GAS.....	57	30	56	64	70	70	74
FUEL OIL.....	21	13	19	24	24	25	31
LIQUID PETROLEUM GAS.....	8	11	7	8	6	5	8
WOOD.....	3	3	4	3	3	-	1
COAL.....	1	1	2	1	2	1	3
STEAM.....	1	-	-	1	2	5	9
OTHER.....	1	-	-	1	1	2	3
NONE.....	3	8	3	1	-	1	-

SEE NOTES AT END OF TABLE

TABLE 4C. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY TOTAL SQUARE FOOTAGE
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)

USES OF FUEL	TOTAL	TOTAL SQUARE FOOTAGE					
		1,000 OR LESS	1,001 TO 5,000	5,001 TO 10,000	10,001 TO 25,000	25,001 TO 50,000	OVER 50,000
NUMBER OF BOILERS							
NCNE.....	79	96	85	75	67	57	44
ONE.....	16	3	13	21	27	28	22
TWO OR MORE.....	5	-	2	4	6	16	33
FUELS USED TO FIRE BOILERS							
NATURAL GAS.....	13	3	10	14	21	26	37
FUEL OIL.....	7	1	4	9	12	16	19
OTHER.....	2	1	2	2	3	4	6
HEATING SYSTEM							
SELF-CONTAINED UNITS							
FORCED AIR.....	28	25	30	30	30	25	19
RADIANT							
ELECTRIC BASEBOARDS.....	2	4	1	1	1	1	1
RADIATORS.....	1	1	1	2	1	1	1
OTHER.....	10	16	12	5	8	9	4
CENTRAL SYSTEM							
FORCED AIR.....	25	17	28	29	24	21	25
RADIANT.....	12	4	10	14	18	23	22
OTHER.....	8	2	6	10	11	14	22
OTHER.....	3	5	2	3	3	1	2
NCNE.....	11	25	11	5	5	6	3
PERCENT OF BUILDING HEATED							
NCNE.....	11	25	11	5	5	6	3
1 TO 25.....	6	3	4	9	9	9	9
26 TO 50.....	8	7	9	10	8	5	3
51 TO 75.....	7	5	8	10	8	7	6
76 TO 99.....	6	3	6	6	6	6	9
100.....	62	56	63	60	64	67	69

SEE NOTES AT END OF TABLE

TABLE 4C. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY TOTAL SQUARE FOOTAGE
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)

USES OF FUEL	TOTAL	TOTAL SQUARE FOOTAGE					
		1,000	1,001	5,001	10,001	25,001	OVER
		OR TO	TO	TO	TO	TO	50,000
		LESS	5,000	10,000	25,000	50,000	
PERCENT OF BUILDING COOLED							
NCNE.....	36	52	40	34	23	24	16
1 TO 25.....	14	3	8	17	27	33	33
26 TO 50.....	13	7	14	15	15	8	10
51 TO 75.....	7	5	7	7	7	7	6
76 TO 99.....	4	2	4	5	6	5	10
100.....	26	31	27	22	23	23	24
AIR CONDITIONING SYSTEM							
WINDOW UNITS.....	20	28	21	16	18	17	14
PACKAGE UNITS.....	19	8	17	23	27	28	23
CENTRAL SYSTEM.....	18	10	18	19	22	19	28
COMBINATION/OTHER.....	7	2	5	8	10	12	14
NO AIR CONDITIONING.....	36	52	40	34	23	24	16

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING OR MULTIPLE ENERGY SOURCES. A DASH "—" REPRESENTS OR ROUNDS TO ZERO. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE. SEE APPENDIX B FOR DISCUSSION OF LIMITATIONS OF DATA.

SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 5A. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY NUMBER OF FLOORS
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS

USES OF FUEL	TOTAL	NUMBER OF FLOORS				ATTACHED/FREE STANDING		
		ONE FLOOR	TWO FLOORS	THREE FLOORS	MORE THAN THREE	BUILDING FREE STANDING	BUILDING ATTACHED	NOT REPORTED
NONRESIDENTIAL BUILDINGS.....	4,238	2,467	980	501	290	3,402	834	2
END USE BY FUEL TYPE								
HEATING FUEL USED.....	3,788	2,073	944	490	281	3,027	759	2
NATURAL GAS.....	2,069	1,036	572	317	144	1,596	472	1
ELECTRICITY.....	1,033	700	225	79	30	883	149	1
FUEL OIL.....	808	339	223	138	108	646	161	1
LIQUID PETROLEUM GAS (LPG)	223	155	48	20	-	198	25	-
WOOD.....	102	64	28	7	3	92	10	-
COAL.....	50	35	8	6	2	38	12	-
STEAM.....	51	8	9	8	25	38	13	-
OTHER.....	10	4	3	2	1	9	1	-
NO HEATING FUEL.....	450	394	36	10	9	375	75	-
AIR CONDITIONING FUEL USED..	2,706	1,442	685	355	224	2,125	579	2
ELECTRICITY.....	2,567	1,379	640	333	215	2,010	555	2
NATURAL GAS.....	161	73	53	26	10	133	28	-
OTHER.....	28	13	5	4	5	24	3	1
NO AIR CONDITIONING FUEL...	1,532	1,025	296	146	65	1,277	255	-
WATER HEATING FUEL USED....	2,823	1,416	732	431	243	2,243	578	2
NATURAL GAS.....	1,321	584	356	245	136	1,008	313	-
ELECTRICITY.....	1,306	770	335	145	55	1,090	215	1
FUEL OIL.....	180	38	47	44	51	128	52	1
OTHER.....	118	61	19	22	16	99	19	-
NO WATER HEATING FUEL.....	1,415	1,050	248	70	47	1,159	256	1
MANUFACTURING FUEL USED....	492	298	123	48	22	407	85	-
ELECTRICITY.....	427	254	109	43	21	351	76	-
NATURAL GAS.....	81	43	19	15	5	64	17	-
OTHER.....	59	31	19	5	4	54	5	-
NO MANUFACTURING DONE.....	3,746	2,168	857	453	267	2,995	749	2
COOKING FUEL USED.....	1,358	517	375	292	174	1,075	282	1
ELECTRICITY.....	765	341	220	137	66	630	135	-
NATURAL GAS.....	619	177	152	161	129	460	158	1
LIQUID PETROLEUM GAS.....	108	53	28	25	3	90	18	-
OTHER.....	25	11	7	2	5	23	3	-
NO COOKING FUEL.....	2,880	1,950	606	209	116	2,327	551	2

SEE NOTES AT END OF TABLE

TABLE 5A. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY NUMBER OF FLOORS
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)

USES OF FUEL	TOTAL	NUMBER OF FLOORS				ATTACHED/FREE STANDING		
		ONE FLOOR	TWO FLOORS	THREE FLOORS	MORE THAN THREE	BUILDING FREE STANDING	BUILDING ATTACHED	NOT REPORTED
CONVERTED FROM FUEL OIL FOR ANY END USE SINCE 1/1/79								
YES.....	52	26	8	9	9	37	15	-
FOR HEATING.....	45	20	8	8	9	30	15	-
OTHER.....	14	6	2	1	4	10	4	-
NO.....	4,097	2,372	962	487	276	3,284	810	2
NOT REPORTED.....	90	69	10	6	5	81	9	-
FUEL COMBINATIONS USED								
NO FUEL USED.....	115	100	11	3	1	100	14	-
ONE FUEL USED.....	831	679	113	25	15	718	112	1
ELECTRICITY.....	820	673	111	23	13	713	107	1
NATURAL GAS.....	6	3	-	1	2	1	5	-
FUEL OIL.....	4	3	1	-	-	4	-	-
TWO FUELS USED.....	2,775	1,533	711	360	171	2,180	594	1
ELECTRICITY, NATURAL GAS..	2,026	1,075	533	293	125	1,550	475	1
ELECTRICITY, FUEL OIL....	461	258	124	48	32	388	73	-
ELECTRICITY, LPG.....	189	145	33	12	--	161	28	-
OTHER.....	98	55	22	7	14	80	18	-
THREE FUELS USED.....	469	129	137	104	99	363	105	1
ELEC., GAS, FUEL OIL....	274	55	73	67	78	192	81	1
ELEC., FUEL OIL, LPG....	76	22	29	22	3	71	5	-
ELEC., GAS, OTHER.....	76	27	23	11	15	63	13	-
ELEC., FUEL OIL, OTHER...	22	12	6	2	2	19	3	-
OTHER.....	22	12	5	2	1	19	3	-
FOUR OR MORE FUELS USED....	49	26	9	9	4	39	9	-
ENERGY SOURCES SUPPLIED TO THE BUILDING								
ELECTRICITY.....	4,109	2,357	968	496	287	3,294	813	2
NATURAL GAS.....	2,416	1,175	638	378	224	1,829	585	1
FUEL OIL.....	872	366	242	146	118	701	171	1
LIQUID PETROLEUM GAS.....	319	192	79	44	4	279	40	-
WOOD.....	124	79	30	11	4	111	13	-
COAL.....	62	42	12	6	3	49	13	-
STEAM.....	53	10	9	8	27	39	14	-
OTHER.....	27	14	4	5	3	24	2	-
NONE.....	115	100	11	3	1	100	14	-

SEE NOTES AT END OF TABLE

TABLE 5A. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY NUMBER OF FLOORS
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)

USES OF FUEL	TOTAL	NUMBER OF FLOORS				ATTACHED/FREE STANDING			NOT REPORTED
		ONE FLOOR	TWO FLOORS	THREE FLOORS	MORE THAN THREE	BUILDING FREE STANDING	BUILDING ATTACHED		
NUMBER OF BOILERS									
NONE.....	3,348	2,237	725	255	131	2,753	594		2
ONE.....	686	177	206	197	105	502	183		1
TWO OR MORE.....	203	52	49	48	53	147	56		-
FUELS USED TO FIRE BOILERS									
NATURAL GAS.....	553	177	145	147	84	409	144		-
FUEL OIL.....	299	58	86	82	72	213	86		-
OTHER.....	93	28	33	20	12	73	20		-
HEATING SYSTEM									
SELF-CONTAINED UNITS									
FORCED AIR.....	1,201	856	262	58	24	991	209		1
RADIANT									
ELECTRIC BASEBOARDS.....	71	48	15	4	4	63	9		-
RADIATORS.....	51	13	11	18	9	24	26		-
OTHER.....	430	327	64	30	8	360	70		-
CENTRAL SYSTEM									
FORCED AIR.....	1,069	551	326	138	54	868	200		-
RADIANT.....	503	87	127	160	128	346	156		1
OTHER.....	349	114	115	69	50	281	67		-
OTHER.....	117	78	24	13	2	94	24		-
NONE.....	448	393	36	10	9	375	74		-
PERCENT OF BUILDING HEATED									
NONE.....	448	393	36	10	9	375	74		-
1 TO 25.....	266	162	68	19	18	224	43		-
26 TO 50.....	347	138	128	50	31	249	98		-
51 TO 75.....	313	146	73	68	27	242	71		-
76 TO 99.....	242	117	52	50	24	197	46		-
100.....	2,620	1,512	624	304	181	2,115	503		2

SEE NOTES AT END OF TABLE

TABLE 5A. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY NUMBER OF FLOORS
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)

USES OF FUEL	TOTAL	NUMBER OF FLOORS				ATTACHED/FREE STANDING		
		ONE FLOOR	TWO FLOORS	THREE FLOORS	MORE THAN THREE	BUILDING FREE STANDING	BUILDING ATTACHED	NOT REPORTED
PERCENT OF BUILDING COOLED								
NONE.....	1,532	1,025	296	146	65	1,277	255	-
1 TO 25.....	609	276	138	90	105	499	109	1
26 TO 50.....	542	199	187	123	34	403	139	-
51 TO 75.....	283	139	65	55	24	208	75	-
76 TO 99.....	190	94	54	25	18	147	43	-
100.....	1,081	735	241	63	43	867	212	2
AIR CONDITIONING SYSTEM								
WINDOW UNITS.....	855	454	178	135	89	657	198	-
PACKAGE UNITS.....	799	436	225	87	51	625	173	2
CENTRAL SYSTEM.....	750	417	206	82	44	612	137	1
COMBINATION/OTHER.....	302	136	75	50	41	231	71	-
NO AIR CONDITIONING.....	1,532	1,025	296	146	65	1,277	255	-

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

SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 5B. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY NUMBER OF FLOORS
- PERCENTAGE OF ROW TOTALS

USES OF FUEL	TOTAL	NUMBER OF FLOORS				ATTACHED/FREE STANDING		
		ONE FLOOR	TWO FLOORS	THREE FLOORS	MORE THAN THREE	BUILDING FREE STANDING	BUILDING ATTACHED	NOT REPORTED
NONRESIDENTIAL BUILDINGS.....	100%	58	23	12	7	80	20	-
END USE BY FUEL TYPE								
HEATING FUEL USED.....	100%	55	25	13	7	80	20	-
NATURAL GAS.....	100%	50	28	15	7	77	23	-
ELECTRICITY.....	100%	68	22	8	3	85	14	-
FUEL OIL.....	100%	42	28	17	13	80	20	-
LIQUID PETROLEUM GAS (LPG)	100%	69	21	9	-	89	11	-
WOOD.....	100%	63	27	7	3	90	10	-
COAL.....	100%	69	16	11	3	76	24	-
STEAM.....	100%	16	18	16	50	74	26	-
OTHER.....	100%	41	32	21	6	86	14	-
NO HEATING FUEL.....	100%	88	8	2	2	83	17	-
AIR CONDITIONING FUEL USED..	100%	53	25	13	8	79	21	-
ELECTRICITY.....	100%	54	25	13	8	78	22	-
NATURAL GAS.....	100%	45	33	16	6	83	17	-
OTHER.....	100%	48	19	14	20	87	11	2
NO AIR CONDITIONING FUEL....	100%	67	19	10	4	83	17	-
WATER HEATING FUEL USED.....	100%	50	26	15	9	79	20	-
NATURAL GAS.....	100%	44	27	19	10	76	24	-
ELECTRICITY.....	100%	59	26	11	4	83	16	-
FUEL OIL.....	100%	21	26	25	28	71	29	-
OTHER.....	100%	52	16	19	13	84	16	-
NO WATER HEATING FUEL.....	100%	74	18	5	3	82	18	-
MANUFACTURING FUEL USED.....	100%	61	25	10	5	83	17	-
ELECTRICITY.....	100%	59	26	10	5	82	18	-
NATURAL GAS.....	100%	52	24	18	6	79	21	-
OTHER.....	100%	52	33	9	7	92	8	-
NO MANUFACTURING DONE.....	100%	58	23	12	7	80	20	-
COOKING FUEL USED.....	100%	38	28	22	13	79	21	-
ELECTRICITY.....	100%	45	29	18	9	82	18	-
NATURAL GAS.....	100%	29	25	26	21	74	26	-
LIQUID PETROLEUM GAS.....	100%	49	26	23	3	83	17	-
OTHER.....	100%	43	28	10	19	89	11	-
NO COOKING FUEL.....	100%	68	21	7	4	81	19	-

SEE NOTES AT END OF TABLE

TABLE 5B. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY NUMBER OF FLOORS
- PERCENTAGE OF ROW TOTALS (CONTINUED)

USES OF FUEL	TOTAL	NUMBER OF FLOORS				ATTACHED/FREE STANDING		
		ONE FLOOR	TWO FLOORS	THREE FLOORS	MORE THAN THREE	BUILDING FREE STANDING	BUILDING ATTACHED	NOT REPORTED
CONVERTED FROM FUEL OIL FOR ANY END USE SINCE 1/1/79								
YES.....	100%	50	16	17	18	71	29	-
FOR HEATING.....	100%	44	18	18	19	67	33	-
OTHER.....	100%	43	17	9	31	69	31	-
NO.....	100%	58	23	12	7	80	20	-
NOT REPORTED.....	100%	77	11	6	5	90	10	-
FUEL COMBINATIONS USED								
NO FUEL USED.....	100%	87	9	3	1	87	13	-
ONE FUEL USED.....	100%	82	14	3	2	86	13	-
ELECTRICITY.....	100%	82	14	3	2	87	13	-
NATURAL GAS.....	100%	50	-	21	29	21	79	-
FUEL OIL.....	100%	65	35	-	-	100	-	-
TWO FUELS USED.....	100%	55	26	13	6	79	21	-
ELECTRICITY, NATURAL GAS..	100%	53	26	14	6	77	23	-
ELECTRICITY, FUEL OIL.....	100%	56	27	10	7	84	16	-
ELECTRICITY, LPG.....	100%	76	17	6	-	85	15	-
OTHER.....	100%	57	22	7	14	82	18	-
THREE FUELS USED.....	100%	27	29	22	21	77	22	-
ELEC., GAS, FUEL OIL.....	100%	20	27	25	28	70	30	-
ELEC., FUEL OIL, LPG.....	100%	30	38	29	4	94	6	-
ELEC., GAS, OTHER.....	100%	35	30	15	20	83	17	-
ELEC., FUEL OIL, OTHER....	100%	56	26	8	11	86	14	-
OTHER.....	100%	57	29	11	4	86	14	-
FOUR OR MORE FUELS USED.....	100%	54	19	19	8	81	19	-
ENERGY SOURCES SUPPLIED TO THE BUILDING								
ELECTRICITY.....	100%	57	24	12	7	80	20	-
NATURAL GAS.....	100%	49	26	16	9	76	24	-
FUEL OIL.....	100%	42	28	17	14	80	20	-
LIQUID PETROLEUM GAS.....	100%	60	25	14	1	87	13	-
WOOD.....	100%	64	24	9	3	90	10	-
COAL.....	100%	67	19	9	4	79	21	-
STEAM.....	100%	19	16	15	50	74	26	-
OTHER.....	100%	53	17	18	13	91	9	-
NONE.....	100%	87	9	3	1	87	13	-

SEE NOTES AT END OF TABLE

TABLE 5B. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY NUMBER OF FLOORS
- PERCENTAGE OF ROW TOTALS (CONTINUED)

USES OF FUEL	TOTAL	NUMBER OF FLOORS				ATTACHED/FREE STANDING		
		ONE FLOOR	TWO FLOORS	THREE FLOORS	MORE THAN THREE	BUILDING FREE STANDING	BUILDING ATTACHED	NOT REPORTED
NUMBER OF BOILERS								
None.....	100%	67	22	8	4	82	18	-
One.....	100%	26	30	29	15	73	27	-
Two or more.....	100%	26	24	24	26	72	28	-
FUELS USED TO FIRE BOILERS								
Natural gas.....	100%	32	26	27	15	74	26	-
Fuel oil.....	100%	19	29	28	24	71	29	-
Other.....	100%	30	36	22	13	78	22	-
HEATING SYSTEM								
SELF-CONTAINED UNITS								
Forced air.....	100%	71	22	5	2	82	17	-
Radiant								
Electric baseboards.....	100%	67	21	6	6	88	12	-
Radiators.....	100%	26	21	35	18	48	52	-
Other.....	100%	76	15	7	2	84	16	-
CENTRAL SYSTEM								
Forced air.....	100%	52	30	13	5	81	19	-
Radiant.....	100%	17	25	32	26	69	31	-
Other.....	100%	33	33	20	14	81	19	-
Other.....	100%	66	21	11	2	80	20	-
None.....	100%	88	8	2	2	84	16	-
PERCENT OF BUILDING HEATED								
None.....	100%	88	8	2	2	84	16	-
1 to 25.....	100%	61	25	7	7	84	16	-
26 to 50.....	100%	40	37	14	9	72	28	-
51 to 75.....	100%	46	23	22	9	77	23	-
76 to 99.....	100%	48	21	21	10	81	19	-
100.....	100%	58	24	12	7	81	19	-

SEE NOTES AT END OF TABLE

TABLE 5B. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY NUMBER OF FLOORS
- PERCENTAGE OF ROW TOTALS (CONTINUED)

USES OF FUEL	TOTAL	NUMBER OF FLOORS				ATTACHED/FREE STANDING			NOT REPORTED
		ONE FLOOR	TWO FLOORS	THREE FLOORS	MORE THAN THREE	BUILDING FREE STANDING	BUILDING ATTACHED		
PERCENT OF BUILDING COOLED									
NONE.....	100%	67	19	10	4	83	17	-	
1 TO 25.....	100%	45	23	15	17	82	18	-	
26 TO 50.....	100%	37	35	23	6	74	26	-	
51 TO 75.....	100%	49	23	20	8	73	27	-	
76 TO 99.....	100%	49	28	13	10	77	23	-	
100.....	100%	68	22	6	4	80	20	-	
AIR CONDITIONING SYSTEM									
WINDOW UNITS.....	100%	53	21	16	10	77	23	-	
PACKAGE UNITS.....	100%	55	28	11	6	78	22	-	
CENTRAL SYSTEM.....	100%	56	27	11	6	82	18	-	
COMBINATION/OTHER.....	100%	45	25	17	14	76	24	-	
NO AIR CONDITIONING.....	100%	67	19	10	4	83	17	-	

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

SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 5C. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY NUMBER OF FLOORS
- PERCENTAGE OF COLUMN TOTALS

USES OF FUEL	TOTAL	NUMBER OF FLOORS				ATTACHED/FREE STANDING		
		ONE FLOOR	TWO FLOORS	THREE FLOORS	MORE THAN THREE	BUILDING FREE STANDING	BUILDING ATTACHED	NOT REPORTED
NONRESIDENTIAL BUILDINGS.....	100%	100%	100%	100%	100%	100%	100%	100%
END USE BY FUEL TYPE								
HEATING FUEL USED.....	89	84	96	98	97	89	91	100
NATURAL GAS.....	49	42	58	63	50	47	57	30
ELECTRICITY.....	24	28	23	16	10	26	18	42
FUEL OIL.....	19	14	23	28	37	19	19	26
LIQUID PETROLEUM GAS (LPG)	5	6	5	4	-	6	3	-
WOOD.....	2	3	3	1	1	3	1	-
COAL.....	1	1	1	1	1	1	1	-
STEAM.....	1	-	1	2	9	1	2	2
OTHER.....	-	-	-	-	-	-	-	-
NO HEATING FUEL.....	11	16	4	2	3	11	9	-
AIR CONDITIONING FUEL USED..	64	58	70	71	77	62	69	100
ELECTRICITY.....	61	56	65	66	74	59	67	80
NATURAL GAS.....	4	3	5	5	4	4	3	-
OTHER.....	1	1	1	1	2	1	-	20
NO AIR CONDITIONING FUEL....	36	42	30	29	23	38	31	-
WATER HEATING FUEL USED....	67	57	75	86	84	66	69	70
NATURAL GAS.....	31	24	36	49	47	30	38	-
ELECTRICITY.....	31	31	34	29	19	32	26	47
FUEL OIL.....	4	2	5	9	18	4	6	20
OTHER.....	3	2	2	4	5	3	2	2
NO WATER HEATING FUEL....	33	43	25	14	16	34	31	30
MANUFACTURING FUEL USED....	12	12	13	10	8	12	10	2
ELECTRICITY.....	10	10	11	9	7	10	9	-
NATURAL GAS.....	2	2	2	3	2	2	2	2
OTHER.....	1	1	2	1	1	2	1	-
NO MANUFACTURING DONE....	88	88	87	90	92	88	90	98
COOKING FUEL USED.....	32	21	38	58	60	32	34	37
ELECTRICITY.....	18	14	22	27	23	19	16	-
NATURAL GAS.....	15	7	15	32	45	14	19	37
LIQUID PETROLEUM GAS.....	3	2	3	5	1	3	2	-
OTHER.....	1	-	1	-	2	1	-	-
NO COOKING FUEL.....	68	79	62	42	40	68	66	63

SEE NOTES AT END OF TABLE

TABLE 5C. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY NUMBER OF FLOORS
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)

USES OF FUEL	TOTAL	NUMBER OF FLOORS				ATTACHED/FREE STANDING		
		ONE FLOOR	TWO FLOORS	THREE FLOORS	MORE THAN THREE	BUILDING FREE STANDING	BUILDING ATTACHED	NOT REPORTED
CONVERTED FROM FUEL OIL FOR ANY END USE SINCE 1/1/79								
YES.....	1	1	1	2	3	1	2	-
FOR HEATING.....	1	1	1	2	3	1	2	-
OTHER.....	-	-	-	-	1	-	1	-
NO.....	97	96	98	97	95	97	97	100
NOT REPORTED.....	2	3	1	1	2	2	1	-
FUEL COMBINATIONS USED								
NO FUEL USED.....	3	4	1	1	-	3	2	-
ONE FUEL USED.....	20	28	11	5	5	21	13	42
ELECTRICITY.....	19	27	11	5	5	21	13	42
NATURAL GAS.....	-	-	-	-	1	-	1	-
FUEL OIL.....	-	-	-	-	-	-	-	-
TWO FUELS USED.....	65	62	73	72	59	64	71	36
ELECTRICITY, NATURAL GAS..	48	44	54	59	43	46	57	30
ELECTRICITY, FUEL OIL....	11	10	13	10	11	11	9	6
ELECTRICITY, LPG.....	4	6	3	2	-	5	3	-
OTHER.....	2	2	2	1	5	2	2	-
THREE FUELS USED.....	11	5	14	21	34	11	13	23
ELEC., GAS, FUEL OIL....	6	2	7	13	27	6	10	20
ELEC., FUEL OIL, LPG....	2	1	3	4	1	2	1	-
ELEC., GAS, OTHER.....	2	1	2	2	5	2	2	2
ELEC., FUEL OIL, OTHER...	1	-	1	-	1	1	-	-
OTHER.....	1	-	1	-	-	1	-	-
FOUR OR MORE FUELS USED....	1	1	1	2	1	1	1	-
ENERGY SOURCES SUPPLIED TO THE BUILDING								
ELECTRICITY.....	97	96	99	99	99	97	97	100
NATURAL GAS.....	57	48	65	76	77	54	70	53
FUEL OIL.....	21	15	25	29	41	21	20	26
LIQUID PETROLEUM GAS.....	8	8	8	9	1	8	5	-
WOOD.....	3	3	3	2	1	3	2	-
COAL.....	1	2	1	1	1	1	2	-
STEAM.....	1	-	1	2	9	1	2	2
OTHER.....	1	1	-	1	1	1	-	-
NONE.....	3	4	1	1	-	3	2	-

SEE NOTES AT END OF TABLE

TABLE 5C. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY NUMBER OF FLOORS
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)

USES OF FUEL	TOTAL	NUMBER OF FLOORS				ATTACHED/FREE STANDING			NOT REPORTED
		ONE FLOOR	TWO FLOORS	THREE FLOORS	MORE THAN THREE	BUILDING FREE STANDING	BUILDING ATTACHED		
NUMBER OF BOILERS									
NONE.....	79	91	74	51	45	81	71		63
ONE.....	16	7	21	39	36	15	22		37
TWO OR MORE.....	5	2	5	10	18	4	7		-
FUELS USED TO FIRE BOILERS									
NATURAL GAS.....	13	7	15	29	29	12	17		-
FUEL OIL.....	7	2	9	16	25	6	10		-
OTHER.....	2	1	3	4	4	2	2		-
HEATING SYSTEM									
SELF-CONTAINED UNITS									
FORCED AIR.....	28	35	27	12	8	29	25		42
RADIANT									
ELECTRIC BASEBOARDS.....	2	2	2	1	1	2	1		-
RADIATORS.....	1	1	1	4	3	1	3		-
OTHER.....	10	13	7	6	3	11	8		-
CENTRAL SYSTEM									
FORCED AIR.....	25	22	33	27	19	26	24		13
RADIANT.....	12	4	13	32	44	10	19		39
OTHER.....	8	5	12	14	17	8	8		6
OTHER.....	3	3	2	3	1	3	3		-
NONE.....	11	16	4	2	3	11	9		-
PERCENT OF BUILDING HEATED									
NONE.....	11	16	4	2	3	11	9		-
1 TO 25.....	6	7	7	4	6	7	5		-
26 TO 50.....	8	6	13	10	11	7	12		-
51 TO 75.....	7	6	7	14	9	7	9		-
76 TO 99.....	6	5	5	10	8	6	5		-
100.....	62	61	64	61	62	62	60		100

SEE NOTES AT END OF TABLE

TABLE 5C. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY NUMBER OF FLOORS
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)

USES OF FUEL	TOTAL	NUMBER OF FLOORS				ATTACHED/FREE STANDING		
		ONE FLOOR	TWO FLOORS	THREE FLOORS	MORE THAN THREE	BUILDING FREE STANDING	BUILDING ATTACHED	NOT REPORTED
PERCENT OF BUILDING COOLED								
NONE.....	36	42	30	29	23	38	31	-
1 TO 25.....	14	11	14	18	36	15	13	22
26 TO 50.....	13	8	19	24	12	12	17	13
51 TO 75.....	7	6	7	11	8	6	9	-
76 TO 99.....	4	4	5	5	6	4	5	2
100.....	26	30	25	13	15	26	25	62
AIR CONDITIONING SYSTEM								
WINDOW UNITS.....	20	18	18	27	31	19	24	2
PACKAGE UNITS.....	19	18	23	17	18	18	21	72
CENTRAL SYSTEM.....	18	17	21	16	15	18	16	26
COMBINATION/OTHER.....	7	5	8	10	14	7	9	-
NO AIR CONDITIONING.....	36	42	30	29	23	38	31	-

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

SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 6A. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY YEAR CONSTRUCTED
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS

USES OF FUEL	TOTAL	YEAR CONSTRUCTED						
		1900 OR BEFORE	1901 TO 1920	1921 TO 1945	1946 TO 1960	1961 TO 1970	1971 TO 1973	1974 TO PRESENT
NONRESIDENTIAL BUILDINGS.....	4,238	329	432	829	1,064	789	235	561
END USE BY FUEL TYPE								
HEATING FUEL USED.....	3,788	308	413	728	929	698	219	494
NATURAL GAS.....	2,069	188	274	472	493	373	101	168
ELECTRICITY.....	1,033	23	55	128	238	238	84	268
FUEL OIL.....	808	98	94	192	214	115	34	60
LIQUID PETROLEUM GAS (LPG)	223	12	21	42	66	26	20	36
WOOD.....	102	16	9	23	27	9	2	17
COAL.....	50	6	7	11	15	4	4	3
STEAM.....	51	3	9	10	15	8	5	2
OTHER.....	10	-	-	1	1	4	-	3
NO HEATING FUEL.....	450	21	19	101	134	91	16	67
AIR CONDITIONING FUEL USED..	2,706	199	267	486	653	552	161	389
ELECTRICITY.....	2,567	190	253	459	629	520	151	367
NATURAL GAS.....	161	11	16	34	30	37	12	21
OTHER.....	28	2	1	7	8	6	1	4
NO AIR CONDITIONING FUEL....	1,522	130	164	343	411	237	74	172
WATER HEATING FUEL USED....	2,823	233	300	518	659	548	171	395
NATURAL GAS.....	1,321	125	167	296	301	265	59	108
ELECTRICITY.....	1,306	75	113	183	293	273	100	270
FUEL OIL.....	180	27	26	44	43	25	5	9
OTHER.....	118	15	10	18	40	10	10	17
NO WATER HEATING FUEL....	1,415	97	132	310	405	241	64	166
MANUFACTURING FUEL USED....	492	24	50	93	138	97	39	52
ELECTRICITY.....	427	23	36	83	121	82	34	47
NATURAL GAS.....	81	2	17	15	23	14	7	3
OTHER.....	59	1	7	15	14	9	5	8
NO MANUFACTURING DONE....	3,746	306	382	736	926	692	196	509
COOKING FUEL USED.....	1,358	145	177	277	307	226	65	162
ELECTRICITY.....	765	63	84	116	181	148	45	128
NATURAL GAS.....	619	91	102	160	121	84	18	43
LIQUID PETROLEUM GAS.....	108	14	13	17	26	9	10	18
OTHER.....	25	1	1	8	8	5	-	2
NO COOKING FUEL.....	2,880	184	255	552	757	563	170	399

SEE NOTES AT END OF TABLE

TABLE 6A. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY YEAR CONSTRUCTED
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)

USES OF FUEL	TOTAL	YEAR CONSTRUCTED						
		1900 OR BEFORE	1901 TO 1920	1921 TO 1945	1946 TO 1960	1961 TO 1970	1971 TO 1973	1974 TO PRESENT
CONVERTED FROM FUEL OIL FOR ANY END USE SINCE 1/1/79								
YES.....	52	3	5	19	11	11	-	3
FOR HEATING.....	45	3	5	16	10	8	-	3
OTHER.....	14	1	-	6	4	3	-	-
NO.....	4,057	326	424	788	1,040	751	232	538
NOT REPORTED.....	90	-	3	23	13	27	3	20
FUEL COMBINATIONS USED								
NO FUEL USED.....	115	4	5	28	32	24	2	19
ONE FUEL USED.....	831	15	25	104	195	203	61	227
ELECTRICITY.....	820	14	22	101	194	203	59	227
NATURAL GAS.....	6	2	3	1	-	-	-	-
FUEL OIL.....	4	-	-	1	1	-	2	-
TWO FUELS USED.....	2,775	239	331	552	727	497	148	281
ELECTRICITY, NATURAL GAS..	2,026	180	261	425	497	384	102	178
ELECTRICITY, FUEL OIL....	461	43	42	84	147	79	21	44
ELECTRICITY, LPG.....	189	8	19	22	59	24	20	37
OTHER.....	98	9	9	21	24	9	5	21
THREE FUELS USED.....	469	66	65	126	99	59	22	32
ELEC., GAS, FUEL OIL.....	274	38	44	85	53	30	11	14
ELEC., FUEL OIL, LPG....	76	15	8	14	22	6	4	6
ELEC., GAS, OTHER.....	76	8	10	13	15	16	5	8
ELEC., FUEL OIL, OTHER...	22	2	2	10	2	5	-	1
OTHER.....	22	3	1	5	6	2	2	3
FOUR OR MORE FUELS USED....	49	5	6	18	10	5	2	1
ENERGY SOURCES SUPPLIED TO THE BUILDING								
ELECTRICITY.....	4,109	324	422	796	1,031	764	231	541
NATURAL GAS.....	2,416	232	322	537	568	435	119	202
FUEL OIL.....	872	102	99	209	232	125	38	66
LIQUID PETROLEUM GAS.....	319	25	36	52	94	37	28	47
WOOD.....	124	16	9	32	29	13	4	20
COAL.....	62	8	8	20	15	4	4	3
STEAM.....	53	4	9	10	15	8	4	2
OTHER.....	27	1	1	3	4	8	2	8
NONE.....	115	4	5	28	32	24	2	19

SEE NOTES AT END OF TABLE

TABLE 6A. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY YEAR CONSTRUCTED
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)

USES OF FUEL	TOTAL	YEAR CONSTRUCTED						
		1900 OR BEFORE	1901 TO 1920	1921 TO 1945	1946 TO 1960	1961 TO 1970	1971 TO 1973	1974 TO PRESENT
NUMBER OF BOILERS								
NONE.....	3,348	216	301	601	876	645	211	498
ONE.....	686	92	106	182	144	101	14	47
TWO OR MORE.....	203	21	25	45	43	43	9	16
FUELS USED TO FIRE BOILERS								
NATURAL GAS.....	553	53	87	132	118	110	14	38
FUEL OIL.....	299	50	47	84	64	29	8	16
OTHER.....	93	10	11	20	18	11	4	19
HEATING SYSTEM								
SELF-CONTAINED UNITS								
FORCED AIR.....	1,201	42	105	178	277	264	98	237
RADIANT								
ELECTRIC BASEBOARDS	71	2	3	9	18	11	5	23
RADIATORS.....	51	6	8	14	11	7	4	1
OTHER.....	430	24	35	91	122	81	34	43
CENTRAL SYSTEM								
FORCED AIR.....	1,069	93	127	188	293	191	51	126
RADIANT.....	503	93	93	144	92	52	8	19
OTHER.....	349	39	38	80	78	73	13	28
OTHER.....	117	9	4	22	39	19	6	18
NONE.....	448	21	19	101	134	90	16	67
PERCENT OF BUILDING HEATED								
NONE.....	448	21	19	101	134	90	16	67
1 TO 25.....	266	16	26	48	75	43	25	33
26 TO 50.....	347	52	65	62	86	41	12	30
51 TO 75.....	313	46	47	86	56	40	10	30
76 TO 99.....	242	20	29	49	53	45	16	31
100.....	2,620	175	247	483	660	531	156	370

SEE NOTES AT END OF TABLE

TABLE 6A. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY YEAR CONSTRUCTED
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)

USES OF FUEL	TOTAL	YEAR CONSTRUCTED						
		1900 OR BEFORE	1901 TO 1920	1921 TO 1945	1946 TO 1960	1961 TO 1970	1971 TO 1973	1974 TO PRESENT
PERCENT OF BUILDING COOLED								
NONE.....	1,532	130	164	343	411	237	74	172
1 TO 25.....	609	59	80	138	136	97	47	52
26 TO 50.....	542	67	81	120	129	83	16	46
51 TO 75.....	283	26	40	61	50	60	13	33
76 TO 99.....	190	7	14	30	46	46	15	33
100.....	1,081	40	53	137	293	264	70	224
AIR CONDITIONING SYSTEM								
WINDOW UNITS.....	855	84	106	219	254	113	25	53
PACKAGE UNITS.....	799	51	66	115	141	177	68	182
CENTRAL SYSTEM.....	750	40	63	93	172	198	59	125
COMBINATION/OTHER.....	302	24	32	59	86	64	9	28
NO AIR CONDITIONING.....	1,532	130	164	343	411	237	74	172

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

SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 6B. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY YEAR CONSTRUCTED
- PERCENTAGE OF ROW TOTALS

USES OF FUEL	TOTAL	YEAR CONSTRUCTED							
		1900 OR BEFORE		1901 TO 1920		1921 TO 1945		1946 TO 1960	
		1900	1901	1921	1946	1961	1971	1974	
NONRESIDENTIAL BUILDINGS.....	100%	8	10	20	25	19	6	13	
END USE BY FUEL TYPE									
HEATING FUEL USED.....	100%	8	11	19	25	18	6	13	
NATURAL GAS.....	100%	9	13	23	24	18	5	8	
ELECTRICITY.....	100%	2	5	12	23	23	8	26	
FUEL OIL.....	100%	12	12	24	26	14	4	7	
LIQUID PETROLEUM GAS (LPG)	100%	5	9	19	30	12	9	16	
WOOD.....	100%	15	9	22	27	8	2	16	
COAL.....	100%	13	14	23	29	8	7	6	
STEAM.....	100%	6	17	20	29	15	9	4	
OTHER.....	100%	3	3	11	12	38	2	31	
NO HEATING FUEL.....	100%	5	4	22	30	20	4	15	
AIR CONDITIONING FUEL USED..	100%	7	10	18	24	20	6	14	
ELECTRICITY.....	100%	7	10	18	24	20	6	14	
NATURAL GAS.....	100%	7	10	21	19	23	8	13	
OTHER.....	100%	7	3	24	28	21	3	15	
NO AIR CONDITIONING FUEL....	100%	8	11	22	27	15	5	11	
WATER HEATING FUEL USED....	100%	8	11	18	23	19	6	14	
NATURAL GAS.....	100%	9	13	22	23	20	4	8	
ELECTRICITY.....	100%	6	9	14	22	21	8	21	
FUEL OIL.....	100%	15	15	25	24	14	3	5	
OTHER.....	100%	13	8	15	34	8	8	14	
NO WATER HEATING FUEL.....	100%	7	9	22	29	17	5	12	
MANUFACTURING FUEL USED....	100%	5	10	19	28	20	8	11	
ELECTRICITY.....	100%	5	8	19	28	19	8	11	
NATURAL GAS.....	100%	2	21	19	29	17	9	4	
OTHER.....	100%	2	12	26	24	16	8	13	
NO MANUFACTURING DONE....	100%	8	10	20	25	18	5	14	
COOKING FUEL USED.....	100%	11	13	20	23	17	5	12	
ELECTRICITY.....	100%	8	11	15	24	19	6	17	
NATURAL GAS.....	100%	15	17	26	20	14	3	7	
LIQUID PETROLEUM GAS.....	100%	13	12	16	24	9	9	17	
OTHER.....	100%	5	4	33	31	21	-	6	
NO COOKING FUEL.....	100%	6	9	19	26	20	6	14	

SEE NOTES AT END OF TABLE

TABLE 6B. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY YEAR CONSTRUCTED
- PERCENTAGE OF ROW TOTALS (CONTINUED)

USES OF FUEL	TOTAL	YEAR CONSTRUCTED						
		1900 OR BEFORE	1901 TO 1920	1921 TO 1945	1946 TO 1960	1961 TO 1970	1971 TO 1973	1974 TO PRESENT
CONVERTED FROM FUEL OIL FOR ANY END USE SINCE 1/1/79								
YES.....	100%	6	9	36	21	22	-	6
FOR HEATING.....	100%	7	10	36	21	19	-	6
OTHER.....	100%	6	-	45	26	22	1	-
NO.....	100%	8	10	19	25	18	6	13
NOT REPORTED.....	100%	-	4	25	14	30	3	23
FUEL COMBINATIONS USED								
NO FUEL USED.....	100%	3	4	25	28	21	2	17
ONE FUEL USED.....	100%	2	3	13	23	24	7	27
ELECTRICITY.....	100%	2	3	12	24	25	7	28
NATURAL GAS.....	100%	26	52	21	-	-	-	-
FUEL OIL.....	100%	-	2	32	25	-	40	-
TWO FUELS USED.....	100%	9	12	20	26	18	5	10
ELECTRICITY, NATURAL GAS..	100%	9	13	21	25	19	5	9
ELECTRICITY, FUEL OIL....	100%	9	9	18	32	17	5	10
ELECTRICITY, LPG.....	100%	4	10	11	31	13	11	20
OTHER.....	100%	9	9	21	25	9	5	21
THREE FUELS USED.....	100%	14	14	27	21	13	5	7
ELEC., GAS, FUEL OIL.....	100%	14	16	31	19	11	4	5
ELEC., FUEL OIL, LPG....	100%	20	10	19	29	8	5	8
ELEC., GAS, OTHER.....	100%	10	13	17	20	21	7	11
ELEC., FUEL OIL, OTHER....	100%	9	8	45	9	24	1	5
OTHER.....	100%	12	6	21	29	10	9	13
FOUR OR MORE FUELS USED....	100%	11	12	38	21	11	4	2
ENERGY SOURCES SUPPLIED TO THE BUILDING								
ELECTRICITY.....	100%	8	10	19	25	19	6	13
NATURAL GAS.....	100%	10	13	22	24	18	5	8
FUEL OIL.....	100%	12	11	24	27	14	4	8
LIQUID PETROLEUM GAS.....	100%	8	11	16	29	12	9	15
WOOD.....	100%	13	7	26	24	11	4	16
COAL.....	100%	12	12	33	25	7	6	5
STEAM.....	100%	7	17	19	28	16	8	4
OTHER.....	100%	4	3	13	14	29	7	29
NONF.....	100%	3	4	25	28	21	2	17

SEE NOTES AT END OF TABLE

TABLE 6B. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY YEAR CONSTRUCTED
- PERCENTAGE OF ROW TOTALS (CONTINUED)

USES OF FUEL	TOTAL	YEAR CONSTRUCTED							
		1900 OR BEFORE	1901 TO 1920	1921 TO 1945	1946 TO 1960	1961 TO 1970	1971 TO 1973	1974 TO PRESENT	
NUMBER OF BOILERS									
NONE.....	100%	6	9	18	26	19	6	15	
ONE.....	100%	13	15	27	21	15	2	7	
TWO OR MORE.....	100%	10	12	22	21	21	4	8	
FUELS USED TO FIRE BOILERS									
NATURAL GAS.....	100%	10	16	24	21	20	3	7	
FUEL OIL.....	100%	17	16	28	21	10	3	5	
OTHER.....	100%	11	12	21	20	12	4	20	
HEATING SYSTEM									
SELF-CONTAINED UNITS									
FORCED AIR.....	100%	4	9	15	23	22	8	20	
RADIANT.....									
ELECTRIC BASEBOARDS.....	100%	3	5	12	25	16	8	32	
RADIATORS.....	100%	13	16	28	21	14	8	1	
OTHER.....	100%	6	8	21	28	19	8	10	
CENTRAL SYSTEM									
FORCED AIR.....	100%	9	12	18	27	18	5	12	
RADIANT.....	100%	18	19	29	18	10	2	4	
OTHER.....	100%	11	11	23	22	21	4	8	
OTHER.....	100%	8	3	19	33	17	5	15	
NONE.....	100%	5	4	23	30	20	4	15	
PERCENT OF BUILDING HEATED									
NONE.....	100%	5	4	23	30	20	4	15	
1 TO 25.....	100%	6	10	18	28	16	9	13	
26 TO 50.....	100%	15	19	18	25	12	3	9	
51 TO 75.....	100%	15	15	27	19	13	3	9	
76 TO 99.....	100%	8	12	20	22	18	7	13	
100.....	100%	7	9	18	25	20	6	14	

SEE NOTES AT END OF TABLE

TABLE 6B. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY YEAR CONSTRUCTED
- PERCENTAGE OF ROW TOTALS (CONTINUED)

USES OF FUEL	TOTAL	YEAR CONSTRUCTED						
		1900 OR BEFORE	1901 TO 1920	1921 TO 1945	1946 TO 1960	1961 TO 1970	1971 TO 1973	1974 TO PRESENT
PERCENT OF BUILDING COOLED								
NONE.....	100%		8	11	22	27	15	5
1 TO 25.....	100%		10	13	23	22	16	8
26 TO 50.....	100%		12	15	22	24	15	3
51 TO 75.....	100%		9	14	21	18	21	5
76 TO 99.....	100%		3	7	16	24	24	8
100.....	100%		4	5	13	27	24	6
								21
AIR CONDITIONING SYSTEM								
WINDOW UNITS.....	100%		10	12	26	30	13	3
PACKAGE UNITS.....	100%		6	8	14	18	22	8
CENTRAL SYSTEM.....	100%		5	8	12	23	26	8
COMBINATION/OTHER.....	100%		8	11	20	29	21	3
NO AIR CONDITIONING.....	100%		8	11	22	27	15	9
								11

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

SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 6C. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY YEAR CONSTRUCTED
- PERCENTAGE OF COLUMN TOTALS

USES OF FUEL	YEAR CONSTRUCTED							
	TOTAL	1900 OR BEFORE 1920	1901 TO 1945	1921 TO 1946	1946 TO 1960	1961 TO 1970	1971 TO 1973	1974 TO PRESENT
	100%	100%	100%	100%	100%	100%	100%	100%
NONRESIDENTIAL BUILDINGS.....	100%							
END USE BY FUEL TYPE								
HEATING FUEL USED.....	89	94	96	88	87	88	93	88
NATURAL GAS.....	49	57	63	57	46	47	43	30
ELECTRICITY.....	24	7	13	15	22	30	36	48
FUEL OIL.....	19	30	22	23	20	15	15	11
LIQUID PETROLEUM GAS (LPG)	5	4	5	5	6	3	9	6
WOOD.....	2	5	2	3	3	1	1	3
COAL.....	1	2	2	1	1	1	2	1
STEAM.....	1	1	2	1	1	1	2	-
OTHER.....	-	-	-	-	-	-	-	1
NO HEATING FUEL.....	11	6	4	12	13	12	7	12
AIR CONDITIONING FUEL USED..	64	61	62	59	61	70	68	69
ELECTRICITY.....	61	58	59	55	59	66	64	65
NATURAL GAS.....	4	3	4	4	3	5	5	4
OTHER.....	1	1	-	1	1	1	-	1
NO AIR CONDITIONING FUEL....	36	39	38	41	39	30	32	31
WATER HEATING FUEL USED....	67	71	70	63	62	69	73	70
NATURAL GAS.....	31	38	39	36	28	34	25	19
ELECTRICITY.....	31	23	26	22	28	35	43	48
FUEL OIL.....	4	8	6	5	4	3	2	2
OTHER.....	3	5	2	2	4	1	4	3
NO WATER HEATING FUEL....	33	29	30	37	38	31	27	30
MANUFACTURING FUEL USED....	12	7	12	11	13	12	16	9
ELECTRICITY.....	10	7	8	10	11	10	14	9
NATURAL GAS.....	2	1	4	2	2	2	3	1
OTHER.....	1	-	2	2	1	1	2	1
NO MANUFACTURING DONE....	88	93	88	89	87	88	84	91
COOKING FUEL USED.....	32	44	41	33	29	29	28	29
ELECTRICITY.....	18	19	19	14	17	19	19	23
NATURAL GAS.....	15	28	24	19	11	11	8	8
LIQUID PETROLEUM GAS.....	3	4	3	2	2	1	4	3
OTHER.....	1	-	-	1	1	1	-	-
NO COOKING FUEL.....	68	56	59	67	71	71	72	71

SEE NOTES AT END OF TABLE

TABLE 6C. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY YEAR CONSTRUCTED
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)

USES OF FUEL	TOTAL	YEAR CONSTRUCTED						
		1900 OR BEFORE	1901 TO 1920	1921 TO 1945	1946 TO 1960	1961 TO 1970	1971 TO 1973	1974 TO PRESENT
CONVERTED FROM FUEL OIL FOR ANY END USE SINCE 1/1/79								
YES.....	1	1	1	2	1	1	-	1
FOR HEATING.....	1	1	1	2	1	1	-	1
OTHER.....	-	-	-	1	-	-	-	-
NO.....	97	99	98	95	98	95	99	96
NOT REPORTED.....	2	-	1	3	1	3	1	4
FUEL COMBINATIONS USED								
NO FUEL USED.....	3	1	1	3	3	3	1	3
ONE FUEL USED.....	20	5	6	13	19	26	26	41
ELECTRICITY.....	19	4	5	12	18	26	25	41
NATURAL GAS.....	-	-	1	-	-	-	-	-
FUEL OIL.....	-	-	-	-	-	-	1	-
TWO FUELS USED.....	65	73	77	67	68	63	63	50
ELECTRICITY, NATURAL GAS..	48	55	60	51	47	49	44	32
ELECTRICITY, FUEL OIL....	11	13	10	10	14	10	9	8
ELECTRICITY, LPG.....	4	2	4	3	6	3	8	7
OTHER.....	2	3	2	3	2	1	2	4
THREE FUELS USED.....	11	20	15	15	9	8	9	6
ELEC., GAS, FUEL OIL.....	6	12	10	10	5	4	5	2
ELEC., FUEL OIL, LPG....	2	5	2	2	2	1	2	1
ELEC., GAS, OTHER.....	2	2	2	2	1	2	2	1
ELEC., FUEL OIL, OTHER....	1	1	-	1	-	1	-	-
OTHER.....	1	1	-	1	1	-	1	1
FOUR OR MORE FUELS USED....	1	2	1	2	1	1	1	-
ENERGY SOURCES SUPPLIED TO THE BUILDING								
ELECTRICITY.....	97	98	98	96	97	97	98	97
NATURAL GAS.....	57	71	75	65	53	55	51	36
FUEL OIL.....	21	31	23	25	22	16	16	12
LIQUID PETROLEUM GAS.....	8	8	8	6	9	5	12	8
WOOD.....	3	5	2	4	3	2	2	4
COAL.....	1	2	2	2	1	1	2	1
STEAM.....	1	1	2	1	1	1	2	-
OTHER.....	1	-	-	-	-	1	1	1
NONE.....	3	1	1	3	3	3	1	3

SEE NOTES AT END OF TABLE

TABLE 6C. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY YEAR CONSTRUCTED
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)

USES OF FUEL	TOTAL	YEAR CONSTRUCTED							
		1900 OR BEFORE	1901 TO 1920	1921 TO 1945	1946 TO 1960	1961 TO 1970	1971 TO 1973	1974 TO PRESENT	
NUMBER OF BOILERS									
NONE.....	79	66	70	73	82	82	90	89	
ONE.....	16	28	25	22	14	13	6	8	
TWO OR MORE.....	5	6	6	5	4	5	4	3	
FUELS USED TO FIRE BOILERS									
NATURAL GAS.....	13	16	20	16	11	14	6	7	
FUEL OIL.....	7	15	11	10	6	4	4	3	
OTHER.....	2	3	3	2	2	1	2	3	
HEATING SYSTEM									
SELF-CONTAINED UNITS									
FORCED AIR.....	28	13	24	22	26	33	42	42	
RADIANT.....									
ELECTRIC BASEBOARDS.....	2	1	1	1	2	1	2	4	
RADIATORS.....	1	2	2	2	1	1	2	-	
OTHER.....	10	7	8	11	12	10	14	8	
CENTRAL SYSTEM									
FORCED AIR.....	25	28	29	23	28	24	22	22	
RADIANT.....	12	28	22	17	9	7	3	3	
OTHER.....	8	12	9	10	7	9	6	5	
OTHER.....	3	3	1	3	4	2	2	3	
NONE.....	11	6	4	12	13	11	7	12	
PERCENT OF BUILDING HEATED									
NONE.....	11	6	4	12	13	11	7	12	
1 TO 25.....	6	5	6	7	5	5	11	6	
26 TO 50.....	8	16	15	8	8	5	5	5	
51 TO 75.....	7	14	11	10	5	5	4	5	
76 TO 99.....	6	6	7	6	5	6	7	6	
100.....	62	53	57	58	62	67	66	66	

SEE NOTES AT END OF TABLE

TABLE 6C. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY YEAR CONSTRUCTED
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)

USES OF FUEL	TOTAL	YEAR CONSTRUCTED						
		1900 OR BEFORE	1901 TO 1920	1921 TO 1945	1946 TO 1960	1961 TO 1970	1971 TO 1973	1974 TO PRESENT
PERCENT OF BUILDING COOLED								
NONE.....	36	39	38	41	39	30	32	31
1 TO 25.....	14	18	18	17	13	12	20	9
26 TO 50.....	13	20	19	14	12	11	7	8
51 TO 75.....	7	8	9	7	5	8	5	6
76 TO 99.....	4	2	3	4	4	6	6	6
100.....	26	12	12	16	28	34	30	40
AIR CONDITIONING SYSTEM								
WINDOW UNITS.....	20	25	24	26	24	14	11	10
PACKAGE UNITS.....	19	16	15	14	13	22	29	32
CENTRAL SYSTEM.....	18	12	15	11	16	25	25	22
COMBINATION/OTHER.....	7	7	7	7	8	8	4	5
NO AIR CONDITIONING.....	36	39	38	41	39	30	32	31

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

SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 7A. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY ENERGY SOURCES SUPPLIED TO THE BUILDING
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS

USES OF FUEL	TOTAL	ENERGY SOURCES SUPPLIED TO THE BUILDING								
		NATURAL ELECTRICITY	GAS	LIQUID			WOOD	COAL	STEAM	OTHER
				FUEL OIL	PETROLEUM	GAS				
NONRESIDENTIAL BUILDINGS.....	4,238	4,109	2,416	872	319	124	62	53	27	115
END USE BY FUEL TYPE										
HEATING FUEL USED.....	3,788	3,777	2,354	860	313	124	62	53	25	-
NATURAL GAS.....	2,069	2,064	2,069	142	23	26	13	6	5	-
ELECTRICITY.....	1,033	1,033	320	102	89	33	4	2	10	-
FUEL OIL.....	808	802	257	808	86	30	9	-	6	-
LIQUID PETROLEUM GAS (LPG)	223	223	23	29	208	10	6	-	1	-
WOOD.....	102	99	23	28	13	102	16	-	3	-
COAL.....	50	48	10	8	10	18	50	-	-	-
STEAM.....	51	51	18	1	-	1	-	49	4	-
OTHER.....	10	10	5	2	-	1	-	-	10	-
NO HEATING FUEL.....	450	332	61	13	6	-	-	1	2	115
AIR CONDITIONING FUEL USED..	2,706	2,704	1,711	502	194	47	21	40	19	-
ELECTRICITY.....	2,567	2,567	1,586	487	188	47	21	37	16	-
NATURAL GAS.....	161	159	161	9	1	1	-	-	1	-
OTHER.....	28	28	8	15	8	-	-	5	4	-
NO AIR CONDITIONING FUEL....	1,532	1,405	705	370	125	77	41	13	7	115
WATER HEATING FUEL USED....	2,823	2,821	1,863	623	218	71	33	41	18	-
NATURAL GAS.....	1,321	1,321	1,321	136	16	15	9	10	4	-
ELECTRICITY.....	1,306	1,306	527	326	123	40	20	15	11	-
FUEL OIL.....	180	179	76	180	14	7	1	-	1	-
OTHER.....	118	118	19	32	85	15	8	17	6	-
NO WATER HEATING FUEL....	1,415	1,288	552	249	101	53	30	12	8	115
MANUFACTURING FUEL USED....	492	492	314	127	52	24	9	8	9	-
ELECTRICITY.....	427	427	263	104	39	19	5	7	5	-
NATURAL GAS.....	81	81	81	15	4	-	2	2	1	-
OTHER.....	59	59	30	42	23	6	5	2	4	-
NO MANUFACTURING DONE....	3,746	3,617	2,102	745	267	99	53	45	18	115
COOKING FUEL USED.....	1,358	1,357	928	339	159	56	19	18	7	-
ELECTRICITY.....	765	765	411	184	84	40	9	11	5	-
NATURAL GAS.....	619	617	619	127	7	13	8	7	2	-
LIQUID PETROLEUM GAS....	108	108	8	50	103	7	2	-	2	-
OTHER.....	25	25	9	20	4	5	3	2	-	-
NO COOKING FUEL.....	2,880	2,752	1,488	534	160	67	43	35	20	115

SEE NOTES AT END OF TABLE

TABLE 7A. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY ENERGY SOURCES SUPPLIED TO THE BUILDING
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)

USES OF FUEL	TOTAL	ENERGY SOURCES SUPPLIED TO THE BUILDING								
		NATURAL		LIQUID	PETROLEUM	WOOD	COAL	STEAM	OTHER	NONE
		ELECTRICITY	GAS							
CONVERTED FROM FUEL OIL FOR ANY END USE SINCE 1/1/79										
YES.....	52	52	35	21	12	2	1	-	-	-
FOR HEATING.....	45	45	32	19	11	2	1	-	-	-
OTHER.....	14	14	9	3	1	-	-	-	-	-
NO.....	4,097	4,016	2,359	846	307	122	62	48	25	68
NOT REPORTED.....	90	42	21	5	-	-	-	6	1	47
FUEL COMBINATIONS USED										
NO FUEL USED.....	115	-	-	-	-	-	-	-	-	115
ONE FUEL USED.....	831	820	6	4	-	-	-	-	-	-
ELECTRICITY.....	820	820	-	-	-	-	-	-	-	-
NATURAL GAS.....	6	-	6	-	-	-	-	-	-	-
FUEL OIL.....	4	-	-	4	-	-	-	-	-	-
TWO FUELS USED.....	2,775	2,771	2,028	463	190	41	20	30	8	-
ELECTRICITY, NATURAL GAS..	2,026	2,026	2,026	-	-	-	-	-	-	-
ELECTRICITY, FUEL OIL....	461	461	-	461	-	-	-	-	-	-
ELECTRICITY, LPG.....	189	189	-	-	189	-	-	-	-	-
OTHER.....	98	94	2	2	-	41	20	30	8	-
THREE FUELS USED.....	469	469	350	372	108	56	22	21	9	-
ELEC., GAS, FUEL OIL....	274	274	274	274	-	-	-	-	-	-
ELEC., FUEL OIL, LPG....	76	76	-	76	76	-	-	-	-	-
ELEC., GAS, OTHER.....	76	76	76	-	19	23	10	19	5	-
ELEC., FUEL OIL, OTHER....	22	22	-	22	-	19	2	-	1	-
OTHER.....	22	22	-	-	13	15	10	2	3	-
FOUR OR MORE FUELS USED....	49	49	32	33	22	27	20	3	10	-
NUMBER OF BOILERS										
NONE.....	3,348	3,228	1,732	529	275	108	41	48	21	114
ONE.....	686	680	521	241	26	10	15	3	3	1
TWO OR MORE.....	203	201	162	102	18	5	6	2	2	-
FUELS USED TO FIRE BOILERS										
NATURAL GAS.....	553	548	553	62	5	3	5	5	3	-
FUEL OIL.....	299	295	146	299	30	9	1	-	1	-
OTHER.....	93	93	42	19	18	6	20	1	2	-

SEE NOTES AT END OF TABLE

TABLE 7A. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY ENERGY SOURCES SUPPLIED TO THE BUILDING
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)

USES OF FUEL	TOTAL	ENERGY SOURCES SUPPLIED TO THE BUILDING								
		ELECTRICITY	NATURAL GAS	FUEL OIL	LIQUID PETROLEUM	WOOD GAS	COAL	STEAM	OTHER	NONE
HEATING SYSTEM										
SELF-CONTAINED UNITS										
FORCED AIR.....	1,201	1,201	742	131	107	23	2	2	4	-
RADIANT										
ELECTRIC BASEBOARDS	71	71	10	3	3	1	-	-	-	-
RADIATORS.....	51	51	36	20	6	-	-	-	-	-
OTHER.....	430	426	198	47	58	55	26	-	2	-
CENTRAL SYSTEM										
FORCED AIR.....	1,069	1,066	699	287	82	19	4	12	5	-
RADIANT.....	503	498	372	213	26	6	14	22	4	-
OTHER.....	349	349	236	133	27	8	12	15	6	-
OTHER.....	117	117	63	26	4	11	3	1	3	-
NONE.....	448	330	60	13	6	-	-	1	2	115
PERCENT OF BUILDING HEATED										
NONE.....	448	330	60	13	6	-	-	1	2	115
1 TO 25.....	266	266	139	49	21	6	2	2	4	-
26 TO 50.....	347	346	213	69	44	15	5	4	1	-
51 TO 75.....	313	312	213	71	16	20	9	3	2	-
76 TO 99.....	242	239	161	55	16	13	8	3	1	-
100.....	2,620	2,616	1,631	615	217	69	39	41	16	-
PERCENT OF BUILDING COOLED										
NONE.....	1,532	1,405	705	370	125	77	41	13	7	115
1 TO 25.....	609	607	414	160	56	12	5	14	8	-
26 TO 50.....	542	542	396	99	43	11	5	8	3	-
51 TO 75.....	283	283	190	57	10	10	1	3	1	-
76 TO 99.....	190	190	120	31	14	5	5	4	1	-
100.....	1,081	1,081	591	156	72	8	5	11	6	-
AIR CONDITIONING SYSTEM										
WINDOW UNITS.....	855	855	492	217	83	26	12	8	3	-
PACKAGE UNITS.....	799	799	511	109	48	12	6	11	6	-
CENTRAL SYSTEM.....	750	748	498	111	41	3	-	13	7	-
COMBINATION/OTHER.....	302	302	209	65	23	6	3	8	3	-
NO AIR CONDITIONING.....	1,532	1,405	705	370	125	77	41	13	7	115

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

SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 7B. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY ENERGY SOURCES SUPPLIED TO THE BUILDING
- PERCENTAGE OF ROW TOTALS

USES OF FUEL	TOTAL	ENERGY SOURCES SUPPLIED TO THE BUILDING									
		ELECTRICITY	NATURAL GAS	FUEL OIL	LIQUID PETROLEUM GAS		WOOD	COAL	STEAM	OTHER	NONE
NONRESIDENTIAL BUILDINGS.....	100%	97	57	21	8	3	1	1	1	1	3
END USE BY FUEL TYPE											
HEATING FUEL USED.....	100%	100	62	23	8	3	2	1	1	1	-
NATURAL GAS.....	100%	100	100	7	1	1	1	-	-	-	-
ELECTRICITY.....	100%	100	31	10	9	3	-	-	-	1	-
FUEL OIL.....	100%	99	32	100	11	4	1	-	1	1	-
LIQUID PETROLEUM GAS (LPG)	100%	100	10	13	93	5	3	-	-	1	-
WOOD.....	100%	98	23	28	13	100	16	-	3	-	-
COAL.....	100%	95	20	16	19	35	100	-	-	-	-
STEAM.....	100%	100	35	3	-	1	-	96	9	-	-
OTHER.....	100%	100	53	21	1	10	-	-	100	-	-
NO HEATING FUEL.....	100%	74	14	3	1	-	-	-	-	-	25
AIR CONDITIONING FUEL USED..	100%	100	63	19	7	2	1	1	1	1	-
ELECTRICITY.....	100%	100	62	19	7	2	1	1	1	1	-
NATURAL GAS.....	100%	99	100	6	1	-	-	-	1	1	-
OTHER.....	100%	100	30	52	27	-	-	16	16	16	-
NO AIR CONDITIONING FUEL....	100%	92	46	24	8	5	3	1	-	-	7
WATER HEATING FUEL USED....	100%	100	66	22	8	3	1	1	1	1	-
NATURAL GAS.....	100%	100	100	10	1	1	1	1	1	1	-
ELECTRICITY.....	100%	100	40	25	9	3	2	1	1	1	-
FUEL OIL.....	100%	99	42	100	8	4	-	-	-	-	-
OTHER.....	100%	100	16	27	72	13	6	15	5	5	-
NO WATER HEATING FUEL.....	100%	91	39	18	7	4	2	1	1	1	8
MANUFACTURING FUEL USED....	100%	100	64	26	11	5	2	2	2	2	-
ELECTRICITY.....	100%	100	62	24	9	4	1	2	1	1	-
NATURAL GAS.....	100%	100	100	19	5	-	3	2	1	1	-
OTHER.....	100%	100	52	71	39	11	9	4	7	7	-
NO MANUFACTURING DONE....	100%	97	56	20	7	3	1	1	-	-	3
COOKING FUEL USED.....	100%	100	68	25	12	4	1	1	1	1	-
ELECTRICITY.....	100%	100	54	24	11	5	1	1	1	1	-
NATURAL GAS.....	100%	100	100	21	1	2	1	1	-	-	-
LIQUID PETROLEUM GAS....	100%	100	8	46	96	7	2	-	2	-	-
OTHER.....	100%	100	36	77	14	19	10	8	1	1	-
NO COOKING FUEL.....	100%	96	52	19	6	2	2	1	1	1	4

SEE NOTES AT END OF TABLE

TABLE 7B. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY ENERGY SOURCES SUPPLIED TO THE BUILDING
- PERCENTAGE OF ROW TOTALS (CONTINUED)

USES OF FUEL	TOTAL	ENERGY SOURCES SUPPLIED TO THE BUILDING								
		NATURAL ELECTRICITY	NATURAL GAS	FUEL OIL	Liquid PETROLEUM	WOOD	COAL	STEAM	OTHER	NONE
CONVERTED FROM FUEL OIL FOR ANY END USE SINCE 1/1/79										
YES.....	100%	100	67	41	22	3	1	-	1	-
FOR HEATING.....	100%	100	72	42	25	3	1	-	-	-
OTHER.....	100%	100	67	24	5	-	-	-	3	-
NO.....	100%	98	58	21	7	3	2	1	1	2
NOT REPORTED.....	100%	46	24	5	-	-	-	6	1	52
FUEL COMBINATIONS USED										
NO FUEL USED.....	100%	-	-	-	-	-	-	-	-	100
ONE FUEL USED.....	100%	99	1	-	-	-	-	-	-	-
ELECTRICITY.....	100%	100	-	-	-	-	-	-	-	-
NATURAL GAS.....	100%	-	100	-	-	-	-	-	-	-
FUEL OIL.....	100%	-	-	100	-	-	-	-	-	-
TWO FUELS USED.....	100%	100	73	17	7	1	1	1	-	-
ELECTRICITY, NATURAL GAS..	100%	100	100	-	-	-	-	-	-	-
ELECTRICITY, FUEL OIL.....	100%	100	-	100	-	-	-	-	-	-
ELECTRICITY, LPG.....	100%	100	-	-	100	-	-	-	-	-
OTHER.....	100%	96	2	2	-	42	20	31	8	-
THREE FUELS USED.....	100%	100	75	79	23	12	5	4	2	-
ELEC., GAS, FUEL OIL.....	100%	100	100	100	-	-	-	-	-	-
ELEC., FUEL OIL, LPG.....	100%	100	-	100	100	-	-	-	-	-
ELEC., GAS, OTHER.....	100%	100	100	-	26	30	14	25	6	-
ELEC., FUEL OIL, OTHER....	100%	100	-	100	-	84	10	1	4	-
OTHER.....	100%	100	-	-	58	68	45	9	16	-
FOUR OR MORE FUELS USED....	100%	100	65	69	45	55	42	5	20	-
NUMBER OF BOILERS										
NONE.....	100%	96	52	16	8	3	1	1	1	3
ONE.....	100%	99	76	35	4	2	2	-	-	-
TWO OR MORE.....	100%	99	80	50	9	2	3	1	1	-
FUELS USED TO FIRE BOILERS										
NATURAL GAS.....	100%	99	100	11	1	1	1	1	1	-
FUEL OIL.....	100%	99	49	100	10	3	-	-	-	-
OTHER.....	100%	100	45	21	20	7	22	2	3	-

SEE NOTES AT END OF TABLE

TABLE 7B. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY ENERGY SOURCES SUPPLIED TO THE BUILDING
- PERCENTAGE OF ROW TOTALS (CONTINUED)

USES OF FUEL	TOTAL	ENERGY SOURCES SUPPLIED TO THE BUILDING								
		NATURAL ELECTRICITY	GAS	LIQUID FUEL OIL			WOOD	COAL	STEAM	OTHER
				PETROLEUM	GAS					
HEATING SYSTEM										
SELF-CONTAINED UNITS										
FORCED AIR.....	100%	100	62	11	9	2	-	-	-	-
RADIANT										
ELECTRIC BASEBOARDS.....	100%	100	14	4	4	2	-	-	1	-
RADIATORS.....	100%	100	71	40	12	1	-	-	-	-
OTHER.....	100%	99	46	11	14	13	6	-	1	-
CENTRAL SYSTEM										
FORCED AIR.....	100%	100	65	27	8	2	-	1	1	-
RADIANT.....	100%	99	74	42	5	1	3	4	1	-
OTHER.....	100%	100	68	38	8	2	3	4	2	-
OTHER.....	100%	100	54	22	3	9	3	1	3	-
NONE.....	100%	74	13	3	1	-	-	-	-	26
PERCENT OF BUILDING HEATED										
NONE.....	100%	74	13	3	1	-	-	-	-	26
1 TO 25.....	100%	100	52	18	8	2	1	1	2	-
26 TO 50.....	100%	100	61	20	13	4	2	1	-	-
51 TO 75.....	100%	99	68	23	5	6	3	1	1	-
76 TO 99.....	100%	99	66	23	6	5	3	1	-	-
100.....	100%	100	62	23	8	3	1	2	1	-
PERCENT OF BUILDING COOLED										
NONE.....	100%	92	46	24	8	5	3	1	-	7
1 TO 25.....	100%	100	68	26	9	2	1	2	1	-
26 TO 50.....	100%	100	73	18	8	2	1	1	1	-
51 TO 75.....	100%	100	67	20	4	4	-	1	-	-
76 TO 99.....	100%	100	63	16	7	3	3	2	1	-
100.....	100%	100	55	14	7	1	-	1	1	-
AIR CONDITIONING SYSTEM										
WINDOW UNITS.....	100%	100	58	25	10	3	1	1	-	-
PACKAGE UNITS.....	100%	100	64	14	6	1	1	1	1	-
CENTRAL SYSTEM.....	100%	100	66	15	5	-	-	2	1	-
COMBINATION/OTHER.....	100%	100	69	21	8	2	1	3	1	-
NO AIR CONDITIONING.....	100%	92	46	24	8	5	3	1	-	7

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

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TABLE 7C. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY ENERGY SOURCES SUPPLIED TO THE BUILDING
- PERCENTAGE OF COLUMN TOTALS

USES OF FUEL	ENERGY SOURCES SUPPLIED TO THE BUILDING									
	TOTAL		NATURAL		LIQUID		GAS		NONE	
	ELECTRICITY	GAS	FUEL OIL	PETROLEUM	WOOD	COAL	STEAM	OTHER		
NONRESIDENTIAL BUILDINGS.....	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
END USE BY FUEL TYPE										
HEATING FUEL USED.....	89	92	97	99	98	100	99	99	94	-
NATURAL GAS.....	49	50	86	16	7	21	21	11	20	-
ELECTRICITY.....	24	25	13	12	28	27	6	5	37	-
FUEL OIL.....	19	20	11	93	27	25	15	1	22	-
LIQUID PETROLEUM GAS (LPG)	5	5	1	3	65	8	10	-	5	-
WOOD.....	2	2	1	3	4	82	26	-	10	-
COAL.....	1	1	-	1	3	14	81	-	-	-
STEAM.....	1	1	1	-	-	-	-	91	17	-
OTHER.....	-	-	-	-	-	1	-	-	37	-
NO HEATING FUEL.....	11	8	3	1	2	-	1	1	6	100
AIR CONDITIONING FUEL USED..	64	66	71	58	61	38	33	75	72	-
ELECTRICITY.....	61	62	66	56	59	38	33	69	59	-
NATURAL GAS.....	4	4	7	1	-	1	-	1	4	-
OTHER.....	1	1	-	2	2	-	-	8	16	-
NO AIR CONDITIONING FUEL....	36	34	29	42	39	62	67	25	28	100
WATER HEATING FUEL USED....	67	69	77	71	68	57	52	78	69	-
NATURAL GAS.....	31	32	55	16	5	12	15	19	15	-
ELECTRICITY.....	31	32	22	37	39	33	32	29	41	-
FUEL OIL.....	4	4	3	21	4	5	1	-	3	-
OTHER.....	3	3	1	4	27	12	12	33	21	-
NO WATER HEATING FUEL.....	33	31	23	29	32	43	48	22	31	100
MANUFACTURING FUEL USED....	12	12	13	15	16	19	15	15	33	-
ELECTRICITY.....	10	10	11	12	12	15	8	13	20	-
NATURAL GAS.....	2	2	3	2	1	-	4	3	5	-
OTHER.....	1	1	1	5	7	5	8	5	16	-
NO MANUFACTURING DONE....	88	88	87	85	84	81	85	85	67	100
COOKING FUEL USED.....	32	33	38	39	50	46	30	34	27	-
ELECTRICITY.....	18	19	17	21	26	32	15	21	19	-
NATURAL GAS.....	15	15	26	15	2	11	14	13	6	-
LIQUID PETROLEUM GAS.....	3	3	-	6	32	6	3	-	7	-
OTHER.....	1	1	-	2	1	4	4	4	1	-
NO COOKING FUEL.....	68	67	62	61	50	54	70	66	73	100

SEE NOTES AT END OF TABLE

TABLE 7C. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY ENERGY SOURCES SUPPLIED TO THE BUILDING
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)

USES OF FUEL	TOTAL	ENERGY SOURCES SUPPLIED TO THE BUILDING								
		ELECTRICITY	NATURAL GAS	LIQUID PETROLEUM GAS			WOOD	COAL	STEAM	OTHER
				FUEL OIL	PETROLEUM	GAS				
CONVERTED FROM FUEL OIL FOR ANY END USE SINCE 1/1/79										
YES.....	1	1	1	2	4	1	1	-	2	-
FOR HEATING.....	1	1	1	2	4	1	1	-	2	-
OTHER.....	-	-	-	-	-	-	-	-	2	-
NO.....	97	98	98	97	96	99	99	89	95	59
NOT REPORTED.....	2	1	1	1	-	-	-	11	4	41
FUEL COMBINATIONS USED										
NO FUEL USED.....	3	-	-	-	-	-	-	-	-	100
ONE FUEL USED.....	20	20	-	-	-	-	-	-	-	-
ELECTRICITY.....	19	20	-	-	-	-	-	-	-	-
NATURAL GAS.....	-	-	-	-	-	-	-	-	-	-
FUEL OIL.....	-	-	-	-	-	-	-	-	-	-
TWO FUELS USED.....	65	67	84	53	59	33	32	56	29	-
ELECTRICITY, NATURAL GAS..	48	49	84	-	-	-	-	-	-	-
ELECTRICITY, FUEL OIL....	11	11	-	53	-	-	-	-	-	-
ELECTRICITY, LPG.....	4	5	-	-	59	-	-	-	-	-
OTHER.....	2	2	-	-	-	33	32	56	29	-
THREE FUELS USED.....	11	11	14	43	34	45	36	39	34	-
ELEC., GAS, FUEL OIL.....	6	7	11	31	-	-	-	-	-	-
ELEC., FUEL OIL, LPG....	2	2	-	9	24	-	-	-	-	-
ELEC., GAS, OTHER.....	2	2	3	-	6	18	16	35	18	-
ELEC., FUEL OIL, OTHER....	1	1	-	3	-	15	4	1	4	-
OTHER.....	1	1	-	-	4	12	16	4	13	-
FOUR OR MORE FUELS USED....	1	1	1	4	7	22	33	5	36	-
NUMBER OF BOILERS										
NONE.....	79	79	72	61	86	88	65	91	80	99
ONE.....	16	17	22	28	8	8	25	5	12	1
TWO OR MORE.....	5	5	7	12	6	4	10	5	8	-
FUELS USED TO FIRE BOILERS										
NATURAL GAS.....	13	13	23	7	2	2	8	9	11	-
FUEL OIL.....	7	7	6	34	9	7	2	1	5	-
OTHER.....	2	2	2	2	6	5	32	3	9	-

SEE NOTES AT END OF TABLE

TABLE 7C. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY ENERGY SOURCES SUPPLIED TO THE BUILDING
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)

USES OF FUEL	TOTAL	ENERGY SOURCES SUPPLIED TO THE BUILDING									
		ELECTRICITY	NATURAL GAS	FUEL OIL	Liquid Petroleum Gas	WOOD	COAL	STEAM	OTHER	NONE	
HEATING SYSTEM											
SELF-CONTAINED UNITS											
FORCED AIR.....	28	29	31	15	34	18	3	5	14	-	
RADIANT											
ELECTRIC BASEBOARDS.....	2	2	-	-	1	1	-	-	2	-	
RADIATORS.....	1	1	1	2	2	-	-	-	-	-	
OTHER.....	10	10	8	5	18	45	43	-	8	-	
CENTRAL SYSTEM											
FORCED AIR.....	25	26	29	33	26	15	7	23	21	-	
RADIANT.....	12	12	15	24	8	5	23	42	15	-	
OTHER.....	8	8	10	15	9	7	19	27	22	-	
OTHER.....	3	3	3	3	1	9	5	1	13	-	
NONE.....	11	8	2	1	2	-	1	1	6	100	
PERCENT OF BUILDING HEATED											
NONE.....	11	8	2	1	2	-	1	1	6	100	
1 TO 25.....	6	6	6	6	7	5	3	5	17	-	
26 TO 50.....	8	8	9	8	14	12	8	8	5	-	
51 TO 75.....	7	8	9	8	5	16	14	5	8	-	
76 TO 99.....	6	6	7	6	5	11	12	5	3	-	
100.....	62	64	68	71	68	56	62	76	61	-	
PERCENT OF BUILDING COOLED											
NONE.....	36	34	29	42	39	62	67	25	28	100	
1 TO 25.....	14	15	17	18	18	10	8	26	30	-	
26 TO 50.....	13	13	16	11	13	9	8	15	13	-	
51 TO 75.....	7	7	8	7	3	8	1	5	3	-	
76 TO 99.....	4	5	5	4	4	4	8	8	4	-	
100.....	26	26	24	18	22	7	9	21	22	-	
AIR CONDITIONING SYSTEM											
WINDOW UNITS.....	20	21	20	25	26	21	19	15	12	-	
PACKAGE UNITS.....	19	19	21	13	15	9	9	21	23	-	
CENTRAL SYSTEM.....	18	18	21	13	13	3	1	25	25	-	
COMBINATION/OTHER.....	7	7	9	7	7	5	5	15	12	-	
NO AIR CONDITIONING.....	36	34	29	42	39	62	67	25	28	100	

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

SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 8A. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY TYPE OF HEATING SYSTEM
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS

USES OF FUEL	TOTAL	HEATING SYSTEM								
		SELF-CONTAINED UNITS				CENTRAL SYSTEM				OTHER
		RADIANT		OTHER		FORCED AIR		RADIANT		
		FORCED AIR	ELECTRIC BASEBOARDS	RADIATORS	OTHER	FORCED AIR	RADIANT	OTHER	OTHER	NONE
NONRESIDENTIAL BUILDINGS.....	4,238	1,201	71	51	430	1,069	503	349	117	448
END USE BY FUEL TYPE										
HEATING FUEL USED.....	3,788	1,201	71	51	430	1,069	503	349	116	-
NATURAL GAS.....	2,069	693	2	24	183	640	272	199	56	-
ELECTRICITY.....	1,033	406	71	4	180	208	27	88	49	-
FUEL OIL.....	808	122	3	20	44	268	205	122	24	-
LIQUID PETROLEUM GAS (LPG)	223	90	1	5	41	55	5	21	5	-
WOOD.....	102	23	1	-	43	14	6	7	7	-
COAL.....	50	-	-	-	21	4	12	10	3	-
STEAM.....	51	2	-	-	-	12	21	15	1	-
OTHER.....	10	1	-	-	1	2	2	4	-	-
NO HEATING FUEL.....	450	-	-	-	-	-	-	-	2	448
AIR CONDITIONING FUEL USED..	2,706	878	40	31	242	791	339	243	82	59
ELECTRICITY.....	2,567	831	40	31	240	734	325	226	82	58
NATURAL GAS.....	161	57	-	-	5	58	16	20	4	1
OTHER.....	28	4	-	-	2	12	2	8	-	-
NO AIR CONDITIONING FUEL....	1,532	323	31	19	188	277	164	106	35	389
WATER HEATING FUEL USED....	2,823	835	53	37	244	792	430	289	71	71
NATURAL GAS.....	1,321	373	7	24	105	368	235	145	32	32
ELECTRICITY.....	1,306	455	48	6	127	379	101	119	35	37
FUEL OIL.....	180	10	-	8	2	31	89	31	7	2
OTHER.....	118	18	1	1	18	35	27	12	4	3
NO WATER HEATING FUEL.....	1,415	366	18	14	186	276	73	59	46	377
MANUFACTURING FUEL USED....	492	153	3	6	62	114	31	51	12	60
ELECTRICITY.....	427	137	3	4	53	92	28	43	12	55
NATURAL GAS.....	81	23	-	2	7	19	6	14	1	10
OTHER.....	59	14	-	1	7	21	6	4	-	6
NO MANUFACTURING DONE....	3,746	1,048	68	45	368	954	472	298	106	388
COOKING FUEL USED.....	1,358	314	19	25	115	352	291	164	42	36
ELECTRICITY.....	765	202	17	9	59	204	124	93	29	27
NATURAL GAS.....	619	130	1	16	46	147	177	80	13	8
LIQUID PETROLEUM GAS.....	108	17	1	-	21	38	16	8	5	3
OTHER.....	25	4	-	-	-	10	4	5	-	2
NO COOKING FUEL.....	2,880	887	52	26	315	717	211	184	75	412

SEE NOTES AT END OF TABLE

TABLE 8A. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY TYPE OF HEATING SYSTEM
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)

USES OF FUEL	TOTAL	HEATING SYSTEM									
		SELF-CONTAINED UNITS				CENTRAL SYSTEM				OTHER	NONE
		FORCED AIR		RADIANT	OTHER	FORCED AIR		RADIANT	OTHER		
		ELECTRIC	RADIATORS	BASEBOARDS							
CONVERTED FROM FUEL OIL FOR ANY END USE SINCE 1/1/79											
YES.....	52	3	-	-	5	18	15	6	-	5	
FOR HEATING.....	45	3	-	-	5	18	13	6	-	-	
OTHER.....	14	2	-	-	-	1	6	-	-	5	
NO.....	4,097	1,188	69	51	423	1,047	481	334	116	388	
NOT REPORTED.....	90	9	2	-	2	4	6	9	2	56	
FUEL COMBINATIONS USED											
NO FUEL USED.....	115	-	-	-	-	-	-	-	-	-	115
ONE FUEL USED.....	831	262	55	2	113	89	8	14	29	260	
ELECTRICITY.....	820	261	55	2	113	86	4	14	29	256	
NATURAL GAS.....	6	-	-	-	-	-	3	-	-	3	
FUEL OIL.....	4	-	-	-	-	3	1	-	-	-	
TWO FUELS USED.....	2,775	872	14	35	265	858	345	244	71	71	
ELECTRICITY, NATURAL GAS..	2,026	696	10	23	176	611	243	164	50	54	
ELECTRICITY, FUEL OIL....	461	84	1	7	23	181	82	59	14	10	
ELECTRICITY, LPG.....	189	79	2	5	36	51	1	11	-	5	
OTHER.....	98	13	2	-	30	15	19	11	7	2	
THREE FUELS USED.....	469	63	2	14	38	117	139	81	13	3	
ELEC., GAS, FUEL OIL....	274	22	-	12	5	68	102	53	8	3	
ELEC., FUEL OIL, LPG....	76	15	1	1	8	24	15	10	1	-	
ELEC., GAS, OTHER.....	76	19	-	1	8	17	15	13	4	-	
ELEC., FUEL OIL, OTHER...	22	5	-	-	6	6	2	2	1	-	
OTHER.....	22	2	-	-	11	2	4	3	1	-	
FOUR OR MORE FUELS USED....	49	5	-	-	14	5	10	10	4	-	
ENERGY SOURCES SUPPLIED TO THE BUILDING											
ELECTRICITY.....	4,109	1,201	71	51	426	1,066	498	349	117	330	
NATURAL GAS.....	2,416	742	10	36	198	699	372	236	63	60	
FUEL OIL.....	872	131	3	20	47	297	213	133	26	13	
LIQUID PETROLEUM GAS.....	319	107	3	6	58	82	26	27	4	6	
WOOD.....	124	23	1	-	55	19	6	8	11	-	
COAL.....	62	2	-	-	26	4	14	12	3	-	
STEAM.....	53	2	-	-	-	12	22	15	1	1	
OTHER.....	27	4	-	-	2	5	4	6	3	2	
NONE.....	115	-	-	-	-	-	-	-	-	115	

SEE NOTES AT END OF TABLE

TABLE 8A. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY TYPE OF HEATING SYSTEM
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)

USES OF FUEL	TOTAL	HEATING SYSTEM									
		SELF-CONTAINED UNITS				CENTRAL SYSTEM				OTHER	NONE
		FORCED AIR		RADIANT		FORCED AIR	RADIANT	OTHER			
		ELECTRIC	RADIATORS								
NUMBER OF BOILERS											
NONE.....	3,348	1,131	69	24	400	905	137	168	96	419	
ONE.....	686	53	3	17	21	118	300	138	13	23	
TWO OR MORE.....	203	18	-	9	9	45	66	42	8	6	
FUELS USED TO FIRE BOILERS											
NATURAL GAS.....	553	56	2	16	22	114	202	109	10	22	
FUEL OIL.....	299	10	-	11	8	54	145	62	7	3	
OTHER.....	93	10	-	3	8	16	30	15	4	6	
PERCENT OF BUILDING HEATED											
NONE.....	448	-	-	-	-	-	-	-	-	448	
1 TO 25.....	266	107	8	3	55	54	17	2	19	-	
26 TO 50.....	347	123	3	6	37	115	29	14	21	-	
51 TO 75.....	313	105	2	1	44	76	51	28	7	-	
76 TO 99.....	242	82	3	1	26	58	34	31	8	-	
100.....	2,620	783	55	41	269	764	372	273	62	-	
PERCENT OF BUILDING COOLED											
NONE.....	1,532	323	31	19	188	277	164	106	35	389	
1 TO 25.....	609	169	6	11	50	133	122	74	18	28	
26 TO 50.....	542	145	6	5	33	184	94	48	20	7	
51 TO 75.....	283	91	2	2	41	72	41	23	6	6	
76 TO 99.....	190	73	1	3	17	49	13	28	5	2	
100.....	1,081	401	25	10	101	353	69	70	34	17	
AIR CONDITIONING SYSTEM											
WINDOW UNITS.....	855	175	24	20	152	177	172	73	28	33	
PACKAGE UNITS.....	799	388	9	4	42	186	77	58	20	15	
CENTRAL SYSTEM.....	750	236	4	6	18	356	53	62	11	3	
COMBINATION/OTHER.....	302	78	2	1	31	72	38	49	23	8	
NO AIR CONDITIONING.....	1,532	323	31	19	188	277	164	106	35	389	

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

SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 8B. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY TYPE OF HEATING SYSTEM
- PERCENTAGE OF ROW TOTALS

USES OF FUEL	TOTAL	HEATING SYSTEM									
		SELF-CONTAINED UNITS					CENTRAL SYSTEM				
		FORCED AIR		RADIANT			FORCED AIR		RADIANT		OTHER
		FORCED AIR	BASEBOARDS	ELECTRIC	RADIATORS	OTHER	FORCED AIR	BASEBOARDS	ELECTRIC	RADIATORS	
NONRESIDENTIAL BUILDINGS.....	100%	28	2	1	10	25	12	8	3	11	
END USE BY FUEL TYPE											
HEATING FUEL USED.....	100%	32	2	1	11	28	13	9	3	-	
NATURAL GAS.....	100%	33	-	1	9	31	13	10	3	-	
ELECTRICITY....	100%	39	7	-	17	20	3	9	5	-	
FUEL OIL.....	100%	15	-	3	5	33	25	15	3	-	
LIQUID PETROLEUM GAS (LPG)	100%	40	1	2	19	24	2	9	2	-	
WOOD.....	100%	22	1	-	42	13	6	7	7	-	
COAL.....	100%	-	-	-	43	7	23	20	6	-	
STEAM.....	100%	4	-	-	-	23	42	29	1	-	
OTHER.....	100%	11	-	-	8	24	17	39	2	-	
NO HEATING FUEL.....	100%	-	-	-	-	-	-	-	-	-	100
AIR CONDITIONING FUEL USED..	100%	32	1	1	9	29	13	9	3	2	
ELECTRICITY.....	100%	32	2	1	9	29	13	9	3	2	
NATURAL GAS.....	100%	35	-	-	3	36	10	13	2	1	
OTHER.....	100%	14	-	-	7	43	5	29	1	-	
NO AIR CONDITIONING FUEL....	100%	21	2	1	12	18	11	7	2	25	
WATER HEATING FUEL USED....	100%	30	2	1	9	28	15	10	3	3	
NATURAL GAS.....	100%	28	1	2	8	28	18	11	2	2	
ELECTRICITY.....	100%	35	3	-	10	29	8	9	3	3	
FUEL OIL.....	100%	6	-	4	1	17	49	17	4	1	
OTHER.....	100%	15	1	1	15	30	23	10	3	2	
NO WATER HEATING FUEL.....	100%	26	1	1	13	20	5	4	3	27	
MANUFACTURING FUEL USED.....	100%	31	1	1	13	23	6	10	2	12	
ELECTRICITY.....	100%	32	1	1	13	22	7	10	3	13	
NATURAL GAS.....	100%	28	-	2	9	24	7	17	1	12	
OTHER.....	100%	24	-	1	11	36	11	7	-	10	
NO MANUFACTURING DONE.....	100%	28	2	1	10	25	13	8	3	10	
COOKING FUEL USED.....	100%	23	1	2	8	26	21	12	3	3	
ELECTRICITY.....	100%	26	2	1	8	27	16	12	4	3	
NATURAL GAS.....	100%	21	-	3	7	24	29	13	2	1	
LIQUID PETROLEUM GAS.....	100%	15	1	-	19	35	15	8	4	2	
OTHER.....	100%	16	-	-	-	38	17	18	-	10	
NO COOKING FUEL.....	100%	31	2	1	11	25	7	6	3	14	

SEE NOTES AT END OF TABLE

TABLE 8B. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY TYPE OF HEATING SYSTEM
- PERCENTAGE OF ROW TOTALS (CONTINUED)

USES OF FUEL	TOTAL	HEATING SYSTEM								OTHER	NONE		
		SELF-CONTAINED UNITS				CENTRAL SYSTEM							
		RADIANT		OTHER		FORCED AIR		CENTRAL					
		FORCED AIR	ELECTRIC RADIATORS BASEBOARDS	OTHER	OTHER	FORCED AIR	RADIANT	OTHER	OTHER				
CONVERTED FROM FUEL OIL FOR ANY END USE SINCE 1/1/79													
YES.....	100%	7	-	-	9	35	29	12	-	9			
FOR HEATING.....	100%	7	-	-	10	40	29	14	-	-			
OTHER.....	100%	14	-	-	1	7	43	3	-	33			
NO.....	100%	29	2	1	10	26	12	8	3	9			
NOT REPORTED.....	100%	10	2	-	2	4	7	10	2	62			
FUEL COMBINATIONS USED													
NO FUEL USED.....	100%	-	-	-	-	-	-	-	-	100			
ONE FUEL USED.....	100%	31	7	-	14	11	1	2	3	31			
ELECTRICITY.....	100%	32	7	-	14	10	1	2	4	31			
NATURAL GAS.....	100%	3	-	-	-	-	47	-	-	50			
FUEL OIL.....	100%	-	-	-	-	72	28	-	-	-			
TWO FUELS USED.....	100%	31	1	1	10	31	12	9	3	3			
ELECTRICITY, NATURAL GAS..	100%	34	-	1	9	30	12	8	2	3			
ELECTRICITY, FUEL OIL.....	100%	18	-	2	5	39	18	13	3	2			
ELECTRICITY, LPG.....	100%	42	1	3	19	27	1	6	-	3			
OTHER.....	100%	13	2	-	30	15	20	11	7	2			
THREE FUELS USED.....	100%	13	-	3	8	25	30	17	3	1			
ELEC., GAS, FUEL OIL.....	100%	8	-	4	2	25	37	19	3	1			
ELEC., FUEL OIL, LPG.....	100%	20	1	1	10	32	20	13	2	-			
ELEC., GAS, OTHER.....	100%	25	-	1	10	22	19	18	5	-			
ELEC., FUEL OIL, OTHER....	100%	21	-	-	29	26	11	10	3	-			
OTHER.....	100%	8	-	-	49	9	20	12	2	-			
FOUR OR MORE FUELS USED....	100%	10	-	-	29	10	21	21	9	1			
ENERGY SOURCES SUPPLIED TO THE BUILDING													
ELECTRICITY.....	100%	29	2	1	10	26	12	8	3	8			
NATURAL GAS.....	100%	31	-	1	8	29	15	10	3	2			
FUEL OIL.....	100%	15	-	2	5	33	24	15	3	1			
LIQUID PETROLEUM GAS.....	100%	34	1	2	18	26	8	9	1	2			
WOOD.....	100%	18	1	-	45	15	5	7	9	-			
COAL.....	100%	3	-	-	43	7	23	19	5	1			
STEAM.....	100%	5	-	-	-	23	42	27	1	1			
OTHER.....	100%	14	2	-	8	21	15	22	13	6			
NONE.....	100%	-	-	-	-	-	-	-	-	100			

SEE NOTES AT END OF TABLE

TABLE 8B. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY TYPE OF HEATING SYSTEM
- PERCENTAGE OF ROW TOTALS (CONTINUED)

USES OF FUEL	TOTAL	HEATING SYSTEM									
		SELF-CONTAINED UNITS				CENTRAL SYSTEM				OTHER	NONE
		RADIANT		OTHER		FORCED AIR		RADIANT			
		FORCED AIR	ELECTRIC BASEBOARDS	RADIATORS	OTHER	FORCED AIR	RADIANT	OTHER	OTHER	None	None
NUMBER OF BOILERS											
NONE.....	100%	34	2	1	12	27	4	5	3	13	
ONE.....	100%	8	-	3	3	17	44	20	2	3	
TWO OR MORE.....	100%	9	-	5	4	22	33	21	4	3	
FUELS USED TO FIRE BOILERS											
NATURAL GAS.....	100%	10	-	3	4	21	36	20	2	4	
FUEL OIL.....	100%	3	-	4	3	18	49	21	2	1	
OTHER.....	100%	11	-	4	9	17	33	17	4	6	
PERCENT OF BUILDING HEATED											
NONE.....	100%	-	-	-	-	-	-	-	-	100	
1 TO 25.....	100%	40	3	1	21	20	6	1	7	-	
26 TO 50.....	100%	35	1	2	11	33	8	4	6	-	
51 TO 75.....	100%	33	1	-	14	24	16	9	2	-	
76 TO 99.....	100%	34	1	-	11	24	14	13	3	-	
100.....	100%	30	2	2	10	29	14	10	2	-	
PERCENT OF BUILDING COOLED											
NONE.....	100%	21	2	1	12	18	11	7	2	25	
1 TO 25.....	100%	28	1	2	8	22	20	12	3	5	
26 TO 50.....	100%	27	1	1	6	34	17	9	4	1	
51 TO 75.....	100%	32	1	1	14	25	15	9	2	2	
76 TO 99.....	100%	38	-	2	9	26	7	14	2	1	
100.....	100%	37	2	1	9	33	6	7	3	2	
AIR CONDITIONING SYSTEM											
WINDOW UNITS.....	100%	21	3	2	18	21	20	9	3	4	
PACKAGE UNITS.....	100%	49	1	-	5	23	10	7	3	2	
CENTRAL SYSTEM.....	100%	32	1	1	2	48	7	8	1	-	
COMBINATION/OTHER.....	100%	26	1	-	10	24	12	16	8	3	
NO AIR CONDITIONING.....	100%	21	2	1	12	18	11	7	2	25	

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

SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 8C. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY TYPE OF HEATING SYSTEM
- PERCENTAGE OF COLUMN TOTALS

USES OF FUEL	TOTAL	HEATING SYSTEM								
		SELF-CONTAINED UNITS				CENTRAL SYSTEM				OTHER
		RADIANT			OTHER	FORCED AIR		RADIANT		
		FORCED AIR	ELECTRIC	RADIATORS						
NONRESIDENTIAL BUILDINGS.....	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
END USE BY FUEL TYPE										
HEATING FUEL USED.....	89	100	100	100	100	100	100	100	99	-
NATURAL GAS.....	49	58	3	47	43	60	54	57	48	-
ELECTRICITY.....	24	34	99	7	42	19	5	25	42	-
FUEL OIL.....	19	10	4	40	10	25	41	35	21	-
LIQUID PETROLEUM GAS (LPG)	5	8	2	10	10	5	1	6	4	-
WOOD.....	2	2	2	1	10	1	1	2	6	-
COAL.....	1	-	-	-	5	-	2	3	3	-
STEAM.....	1	-	-	-	-	1	4	4	1	-
OTHER.....	-	-	-	-	-	-	-	1	-	-
NO HEATING FUEL.....	11	-	-	-	-	-	-	-	1	100
AIR CONDITIONING FUEL USED..	64	73	56	62	56	74	67	70	70	13
ELECTRICITY.....	61	69	56	62	56	69	65	65	70	13
NATURAL GAS.....	4	5	-	1	1	5	3	6	3	-
OTHER.....	1	-	-	-	-	1	-	2	-	-
NO AIR CONDITIONING FUEL....	36	27	44	38	44	26	33	30	30	87
WATER HEATING FUEL USED....	67	70	74	73	57	74	86	83	60	16
NATURAL GAS.....	31	31	9	47	24	34	47	42	28	7
ELECTRICITY.....	31	38	64	13	30	35	20	34	30	8
FUEL OIL.....	4	1	-	15	1	3	18	9	6	-
OTHER.....	3	1	1	2	4	3	5	4	3	1
NO WATER HEATING FUEL.....	33	30	26	27	43	26	14	17	40	84
MANUFACTURING FUEL USED....	12	13	5	11	15	11	6	15	10	13
ELECTRICITY.....	10	11	5	8	12	9	6	12	10	12
NATURAL GAS.....	2	2	-	3	2	2	1	4	1	2
OTHER.....	1	1	-	1	2	2	1	1	-	1
NO MANUFACTURING DONE....	88	87	95	89	85	89	94	85	90	87
COOKING FUEL USED.....	32	26	27	49	27	33	58	47	36	8
ELECTRICITY.....	18	17	24	18	14	19	25	27	25	6
NATURAL GAS.....	15	11	1	32	11	14	35	23	11	2
LIQUID PETROLEUM GAS.....	3	1	2	1	5	4	3	2	4	1
OTHER.....	1	-	-	-	-	1	1	1	-	1
NO COOKING FUEL.....	68	74	73	51	73	67	42	53	64	92

SEE NOTES AT END OF TABLE

TABLE 8C. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY TYPE OF HEATING SYSTEM
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)

USES OF FUEL	TOTAL	HEATING SYSTEM									
		SELF-CONTAINED UNITS					CENTRAL SYSTEM				
		FORCED AIR		RADIANT		OTHER	FORCED AIR		RADIANT		OTHER
		ELECTRIC	BASEBOARDS	RADIATORS							
CONVERTED FROM FUEL OIL FOR ANY END USE SINCE 1/1/79											
YES.....	1	-	-	-	1	2	3	2	-	-	1
FOR HEATING.....	1	-	-	-	1	2	3	2	-	-	-
OTHER.....	-	-	-	-	-	-	1	-	-	-	1
NO.....	97	99	97	100	98	98	96	96	98	98	87
NOT REPORTED.....	2	1	3	-	-	-	1	2	1	1	12
FUEL COMBINATIONS USED											
NO FUEL USED.....	3	-	-	-	-	-	-	-	-	-	26
ONE FUEL USED.....	20	22	78	3	26	8	2	4	24	58	58
ELECTRICITY.....	19	22	78	3	26	8	1	4	24	57	57
NATURAL GAS.....	-	-	-	-	-	-	1	-	-	-	1
FUEL OIL.....	-	-	-	-	-	-	-	-	-	-	-
TWO FUELS USED.....	65	73	20	69	62	80	69	70	60	16	16
ELECTRICITY, NATURAL GAS..	48	58	14	45	41	57	48	47	42	12	12
ELECTRICITY, FUEL OIL....	11	7	2	14	5	17	16	17	12	2	2
ELECTRICITY, LPG.....	4	7	2	10	8	5	-	3	-	1	-
OTHER.....	2	1	2	-	7	1	4	3	6	-	-
THREE FUELS USED.....	11	5	2	27	9	11	28	23	11	1	1
ELEC., GAS, FUEL OIL.....	6	2	1	24	1	6	20	15	6	1	1
ELEC., FUEL OIL, LPG....	2	1	2	1	2	2	3	3	1	-	-
ELEC., GAS, OTHER.....	2	2	-	2	2	2	3	4	3	-	-
ELEC., FUEL OIL, OTHER...	1	-	-	-	1	1	-	1	-	-	-
OTHER.....	1	-	-	-	2	-	1	1	-	-	-
FOUR OR MORE FUELS USED....	1	-	-	-	3	-	2	3	4	-	-
ENERGY SOURCES SUPPLIED TO THE BUILDING											
ELECTRICITY.....	97	100	100	100	99	100	99	100	100	74	74
NATURAL GAS.....	57	62	14	71	46	65	74	68	54	13	13
FUEL OIL.....	21	11	4	40	11	27	42	38	22	3	3
LIQUID PETROLEUM GAS....	8	9	4	12	14	8	5	8	3	1	-
WOOD.....	3	2	2	1	13	2	1	2	9	-	-
COAL.....	1	-	-	-	6	-	3	3	3	-	-
STEAM.....	1	-	-	-	-	1	4	4	1	-	-
OTHER.....	1	-	1	-	1	1	1	2	3	-	-
NONE.....	3	-	-	-	-	-	-	-	-	26	-

SEE NOTES AT END OF TABLE

TABLE 8C. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY TYPE OF HEATING SYSTEM
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)

USES OF FUEL	TOTAL	HEATING SYSTEM									
		SELF-CONTAINED UNITS					CENTRAL SYSTEM				
		RADIANT			OTHER	FORCED AIR	RADIANT			OTHER	OTHER
		FORCED AIR	ELECTRIC	RADIATORS			FORCED AIR	RADIANT	OTHER		
			BASEBOARDS								
NUMBER OF BOILERS											
NONE.....	79	94	96	47	93	85	27	48	82	94	
ONE.....	16	4	4	34	5	11	60	40	11	5	
TWO OR MORE.....	5	1	-	19	2	4	13	12	7	1	
FUELS USED TO FIRE BOILERS											
NATURAL GAS.....	13	5	3	31	5	11	40	31	8	5	
FUEL OIL.....	7	1	-	22	2	5	29	18	6	1	
OTHER.....	2	1	-	6	2	1	6	4	3	1	
PERCENT OF BUILDING HEATED											
NONE.....	11	-	-	-	-	-	-	-	-	100	
1 TO 25.....	6	9	12	5	13	5	3	1	17	-	
26 TO 50.....	8	10	4	11	9	11	6	4	18	-	
51 TO 75.....	7	9	3	1	10	7	10	8	6	-	
76 TO 99.....	6	7	4	1	6	5	7	9	7	-	
100.....	62	65	78	81	63	72	74	78	53	-	
PERCENT OF BUILDING COOLED											
NONE.....	36	27	44	38	44	26	33	30	30	87	
1 TO 25.....	14	14	8	22	12	12	24	21	15	6	
26 TO 50.....	13	12	9	10	8	17	19	14	17	2	
51 TO 75.....	7	8	3	3	10	7	8	7	5	1	
76 TO 99.....	4	6	1	7	4	5	3	8	4	-	
100.....	26	33	35	20	24	33	14	20	29	4	
AIR CONDITIONING SYSTEM											
WINDOW UNITS.....	20	15	34	40	35	17	34	21	24	7	
PACKAGE UNITS.....	19	32	13	8	10	17	15	17	17	3	
CENTRAL SYSTEM.....	18	20	6	12	4	33	10	18	9	1	
COMBINATION/OTHER.....	7	6	3	3	7	7	7	14	20	2	
NO AIR CONDITIONING.....	36	27	44	38	44	26	33	30	30	87	

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

SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 9A. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY HEATING FUELS
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS

USES OF FUEL	TOTAL	HEATING FUELS								
		NATURAL GAS	ELECTRICITY	FUEL OIL	Liquid Petroleum Gas	WOOD	COAL	STEAM	OTHER	NONE
NONRESIDENTIAL BUILDINGS.....	4,238	2,069	1,033	808	223	102	50	51	10	450
END USE BY FUEL TYPE										
AIR CONDITIONING FUEL USED..	2,706	1,477	825	466	130	41	18	40	6	61
ELECTRICITY.....	2,567	1,381	797	453	124	41	18	37	5	59
NATURAL GAS.....	161	133	42	5	1	1	-	-	-	1
OTHER.....	28	5	5	13	8	-	-	4	1	-
NO AIR CONDITIONING FUEL....	1,532	592	208	342	93	61	32	11	4	389
WATER HEATING FUEL USED.....	2,823	1,574	726	580	122	60	28	39	7	71
NATURAL GAS.....	1,321	1,141	152	113	13	8	7	8	1	32
ELECTRICITY.....	1,306	464	567	310	67	38	17	16	4	37
FUEL OIL.....	180	20	19	170	2	5	1	-	-	2
OTHER.....	118	10	20	30	51	12	8	16	3	3
NO WATER HEATING FUEL.....	1,415	494	307	229	101	41	22	12	3	379
MANUFACTURING FUEL USED.....	492	277	100	108	29	23	9	7	1	61
ELECTRICITY.....	427	235	95	93	26	18	4	6	1	55
NATURAL GAS.....	81	64	11	10	1	-	2	1	-	10
OTHER.....	59	24	10	28	4	6	5	2	-	6
NO MANUFACTURING DONE.....	3,746	1,792	933	700	194	79	41	44	9	389
COOKING FUEL USED.....	1,358	734	336	317	80	40	10	18	3	37
ELECTRICITY.....	765	343	274	173	50	32	6	12	2	28
NATURAL GAS.....	619	472	75	115	6	4	3	6	-	8
LIQUID PETROLEUM GAS.....	108	7	31	48	41	4	2	-	-	3
OTHER.....	25	5	3	15	-	5	1	1	-	2
NO COOKING FUEL.....	2,880	1,335	698	492	143	61	40	33	7	412
CONVERTED FROM FUEL OIL FOR ANY END USE SINCE 1/1/79										
YES.....	52	27	9	15	11	2	1	-	-	5
FOR HEATING.....	45	27	8	14	11	2	1	-	-	-
OTHER.....	14	5	2	3	-	-	-	-	-	5
NO.....	4,097	2,024	1,014	788	210	100	50	46	10	390
NOT REPORTED.....	90	18	10	4	2	-	-	5	-	56

SEE NOTES AT END OF TABLE

TABLE 9A. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY HEATING FUELS
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)

USES OF FUEL	TOTAL	HEATING FUELS								
		NATURAL GAS	ELECTRICITY	FUEL OIL	Liquid Petroleum Gas	WOOD	COAL	STEAM	OTHER	NONE
FUEL COMBINATIONS USED										
NO FUEL USED.....	115	-	-	-	-	-	-	-	-	115
ONE FUEL USED.....	831	3	564	4	-	-	-	-	-	260
ELECTRICITY.....	820	-	564	-	-	-	-	-	-	256
NATURAL GAS.....	6	3	-	-	-	-	-	-	-	3
FUEL OIL.....	4	-	-	4	-	-	-	-	-	-
TWO FUELS USED.....	2,775	1,870	384	446	173	38	20	31	3	73
ELECTRICITY, NATURAL GAS..	2,026	1,868	266	-	11	-	-	-	-	55
ELECTRICITY, FUEL OIL....	461	-	44	445	2	-	-	-	-	10
ELECTRICITY, LPG.....	189	-	54	-	160	-	-	-	-	5
OTHER.....	98	2	20	2	-	38	20	31	3	2
THREE FUELS USED.....	469	179	77	329	44	46	18	18	5	3
ELEC., GAS, FUEL OIL....	274	131	38	237	-	-	-	-	-	3
ELEC., FUEL OIL, LPG....	76	-	19	72	25	-	-	-	-	-
ELEC., GAS, OTHER.....	76	48	22	-	11	16	6	15	3	-
ELEC., FUEL OIL, OTHER...	22	-	2	20	-	17	2	-	-	-
OTHER.....	22	-	4	-	8	13	10	2	1	-
FOUR OR MORE FUELS USED....	49	17	8	29	6	18	13	2	2	-
ENERGY SOURCES SUPPLIED TO THE BUILDING										
ELECTRICITY.....	4,109	2,064	1,333	802	223	99	48	51	10	332
NATURAL GAS.....	2,416	2,069	320	257	23	23	10	18	5	61
FUEL OIL.....	872	142	102	808	29	28	8	1	2	13
LIQUID PETROLEUM GAS.....	319	23	89	86	208	13	10	-	-	6
WOOD.....	124	26	33	38	1	102	18	1	1	-
COAL.....	62	13	4	9	6	16	50	-	-	-
STEAM.....	53	6	2	-	-	-	-	49	-	1
OTHER.....	27	5	10	6	1	3	-	4	10	2
NONE.....	115	-	-	-	-	-	-	-	-	115
NUMBER OF BOILERS										
NONE.....	3,348	1,545	922	496	206	98	32	47	8	420
ONE.....	686	407	86	226	14	9	13	2	2	23
TWO OR MORE.....	203	116	25	87	3	2	5	2	-	7
FUELS USED TO FIRE BOILERS										
NATURAL GAS.....	553	499	58	42	3	3	2	3	1	22
FUEL OIL.....	299	48	23	285	3	7	1	-	-	5
OTHER.....	93	25	32	14	11	5	19	1	1	6

SEE NOTES AT END OF TABLE

TABLE 9A. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY HEATING FUELS
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)

USES OF FUEL	TOTAL	HEATING FUELS							
		NATURAL GAS	ELECTRICITY	FUEL OIL	Liquid Petroleum Gas	WOOD	COAL	STEAM	OTHER
HEATING SYSTEM									
SELF-CONTAINED UNITS									
FORCED AIR.....	1,194	689	402	122	93	22	-	2	-
RADIANT.....	168	41	106	23	6	2	-	-	-
COMBINATION/OTHER.....	376	165	144	43	38	43	21	-	1
CENTRAL SYSTEM									
FORCED AIR.....	988	584	183	248	51	11	4	11	2
RADIANT.....	521	280	31	207	8	4	10	21	2
COMBINATION/OTHER.....	220	118	41	79	9	2	8	15	4
COMBINATION/OTHER									
FORCED AIR.....	141	86	49	33	5	6	-	1	1
RADIANT.....	32	16	14	13	2	4	2	-	-
COMBINATION/OTHER.....	148	90	63	41	13	8	5	1	-
NONE.....	448	-	-	-	-	-	-	-	448
PERCENT OF BUILDING HEATED									
NONE.....	448	-	-	-	-	-	-	-	448
1 TO 25.....	266	126	123	45	11	6	2	2	-
26 TO 50.....	347	204	66	64	32	14	4	4	-
51 TO 75.....	313	187	73	67	10	13	3	3	-
76 TO 99.....	242	133	68	54	10	13	8	2	1
100.....	2,620	1,419	704	578	161	55	33	39	9
PERCENT OF BUILDING COOLED									
NONE.....	1,532	592	208	342	93	61	32	11	4
1 TO 25.....	609	351	140	149	30	12	4	14	2
26 TO 50.....	542	359	97	95	30	10	3	7	7
51 TO 75.....	283	159	84	54	5	6	-	3	6
76 TO 99.....	198	103	65	26	9	5	5	4	3
100.....	1,081	505	440	142	54	8	5	11	2
AIR CONDITIONING SYSTEM									
WINDOW UNITS.....	855	409	211	296	62	24	18	8	1
PACKAGE UNITS.....	799	446	277	102	29	9	6	11	1
CENTRAL SYSTEM.....	750	447	236	99	26	3	-	13	3
COMBINATION/OTHER.....	302	175	101	59	13	4	1	7	8
NO AIR CONDITIONING.....	1,532	592	208	342	93	61	32	11	4

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

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 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 9B. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY HEATING FUELS
- PERCENTAGE OF ROW TOTALS

USES OF FUEL	TOTAL	HEATING FUELS								
		NATURAL GAS	ELECTRICITY	FUEL OIL	Liquid Petroleum Gas	WOOD	COAL	STEAM	OTHER	NONE
NONRESIDENTIAL BUILDINGS.....	100%	49	24	19	5	2	1	1	-	11
END USE BY FUEL TYPE										
AIR CONDITIONING FUEL USED..	100%	55	30	17	5	2	1	1	-	2
ELECTRICITY.....	100%	54	31	18	5	2	1	1	-	2
NATURAL GAS.....	100%	82	26	3	1	-	-	-	-	1
OTHER.....	100%	19	17	45	28	-	-	15	4	-
NO AIR CONDITIONING FUEL....	100%	39	14	22	6	4	2	1	-	25
WATER HEATING FUEL USED.....	100%	56	26	21	4	2	1	1	-	3
NATURAL GAS.....	100%	86	12	9	1	1	1	1	-	2
ELECTRICITY.....	100%	36	43	24	5	3	1	1	-	3
FUEL OIL.....	100%	11	11	94	1	3	-	-	-	1
OTHER.....	100%	8	17	26	43	10	6	14	2	2
NO WATER HEATING FUEL....	100%	35	22	16	7	3	2	1	-	27
MANUFACTURING FUEL USED.....	100%	56	29	22	6	5	2	1	-	12
ELECTRICITY.....	100%	55	22	22	6	4	1	1	-	13
NATURAL GAS.....	100%	79	13	12	1	-	2	2	-	12
OTHER.....	100%	41	17	47	7	11	9	4	-	10
NO MANUFACTURING DONE....	100%	48	25	19	5	2	1	1	-	10
COOKING FUEL USED.....	100%	54	25	23	6	3	1	1	-	3
ELECTRICITY.....	100%	45	36	23	7	4	1	2	-	4
NATURAL GAS.....	100%	76	12	19	1	1	1	1	-	1
LIQUID PETROLEUM GAS.....	100%	6	29	44	38	4	2	-	-	2
OTHER.....	100%	19	13	59	-	19	5	6	-	10
NO COOKING FUEL.....	100%	46	24	17	5	2	1	1	-	14
CONVERTED FROM FUEL OIL FOR ANY END USE SINCE 1/1/79										
YES.....	100%	53	17	31	21	3	1	-	-	9
FOR HEATING.....	100%	61	19	31	24	3	1	-	-	-
OTHER.....	100%	39	16	22	1	-	-	-	1	33
NO.....	100%	49	25	19	5	2	1	1	-	10
NOT REPORTED.....	100%	20	12	5	3	-	-	6	-	62

SEE NOTES AT END OF TABLE

TABLE 9B. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY HEATING FUELS
- PERCENTAGE OF ROW TOTALS (CONTINUED)

USES OF FUEL	TOTAL	HEATING FUELS								
		NATURAL GAS	ELECTRICITY	FUEL OIL	Liquid Petroleum Gas	WOOD	COAL	STEAM	OTHER	NONE
FUEL COMBINATIONS USED										
NO FUEL USED.....	100%	-	-	-	-	-	-	-	-	100
ONE FUEL USED.....	100%	-	68	-	-	-	-	-	-	31
ELECTRICITY.....	100%	-	69	-	-	-	-	-	-	31
NATURAL GAS.....	100%	50	-	-	-	-	-	-	-	50
FUEL OIL.....	100%	-	-	100	-	-	-	-	-	-
TWO FUELS USED.....	100%	67	14	16	6	1	1	1	-	3
ELECTRICITY, NATURAL GAS..	100%	92	13	-	1	-	-	-	-	3
ELECTRICITY, FUEL OIL....	100%	-	10	96	-	-	-	-	-	2
ELECTRICITY, LPG.....	100%	-	28	-	85	-	-	-	-	3
OTHER.....	100%	2	21	2	-	39	20	31	3	2
THREE FUELS USED.....	100%	38	16	70	9	10	4	4	1	1
ELEC., GAS, FUEL OIL....	100%	48	11	87	-	-	-	-	-	1
ELEC., FUEL OIL, LPG....	100%	-	25	95	33	-	-	-	-	-
ELEC., GAS, OTHER....	100%	63	29	-	14	21	8	20	4	-
ELEC., FUEL OIL, OTHER....	100%	-	10	90	-	77	10	1	-	-
OTHER.....	100%	-	17	-	38	59	45	9	7	-
FOUR OR MORE FUELS USED....	100%	36	16	59	12	37	26	5	4	1
ENERGY SOURCES SUPPLIED TO THE BUILDING										
ELECTRICITY.....	100%	50	25	20	5	2	1	1	-	8
NATURAL GAS.....	100%	86	13	11	1	1	-	1	-	3
FUEL OIL.....	100%	16	12	93	3	3	1	-	-	1
LIQUID PETROLEUM GAS.....	100%	7	28	27	65	4	3	-	-	2
WOOD.....	100%	21	27	25	8	82	14	-	1	-
COAL.....	100%	21	6	15	10	26	81	-	-	1
STEAM.....	100%	11	5	1	-	-	-	91	-	1
OTHER.....	100%	20	37	22	5	10	-	17	37	6
NONE.....	100%	-	-	-	-	-	-	-	-	100
NUMBER OF BOILERS										
NONE.....	100%	46	28	15	6	3	1	1	-	13
ONE.....	100%	59	13	33	2	1	2	-	-	3
TWO OR MORE.....	100%	57	13	43	1	1	3	1	-	3
FUELS USED TO FIRE BOILERS										
NATURAL GAS.....	100%	90	11	8	1	1	-	-	-	4
FUEL OIL.....	100%	16	8	95	1	2	-	-	-	1
OTHER.....	100%	27	34	15	12	5	20	2	2	6

SEE NOTES AT END OF TABLE

TABLE 9B. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY HEATING FUELS
- PERCENTAGE OF ROW TOTALS (CONTINUED)

USES OF FUEL	TOTAL	HEATING FUELS							
		NATURAL GAS	ELECTRICITY	FUEL OIL	LIQUID PETROLEUM GAS	WOOD	COAL	STEAM	OTHER
HEATING SYSTEM									
SELF-CONTAINED UNITS									
FORCED AIR.....	100%	58	34	10	8	2	-	-	-
RADIANT.....	100%	24	63	14	4	1	-	-	-
COMBINATION/OTHER.....	100%	44	38	12	10	11	6	-	-
CENTRAL SYSTEM									
FORCED AIR.....	100%	59	18	25	5	1	-	1	-
RADIANT.....	100%	54	6	40	2	1	2	4	+
COMBINATION/OTHER.....	100%	54	19	36	4	1	4	7	2
COMBINATION/OTHER									
FORCED AIR.....	100%	61	35	23	3	4	-	-	1
RADIANT.....	100%	51	44	42	5	14	6	1	-
COMBINATION/OTHER.....	100%	60	43	28	8	6	3	1	1
NONE.....	100%	-	-	-	-	-	-	-	100
PERCENT OF BUILDING HEATED									
NONE.....	100%	-	-	-	-	-	-	-	100
1 TO 25.....	100%	47	46	17	4	2	1	1	-
26 TO 50.....	100%	59	19	18	9	4	1	1	-
51 TO 75.....	100%	60	23	21	3	4	1	1	-
76 TO 99.....	100%	55	28	22	4	5	3	1	1
100.....	100%	54	27	22	6	2	1	2	-
PERCENT OF BUILDING COOLED									
NONE.....	100%	39	14	22	6	4	2	1	-
1 TO 25.....	100%	53	23	24	5	2	1	2	5
26 TO 50.....	100%	66	18	18	6	2	1	1	1
51 TO 75.....	100%	56	30	19	2	2	-	1	2
76 TO 99.....	100%	54	34	14	5	3	3	2	2
100.....	100%	47	41	13	5	1	-	1	2
AIR CONDITIONING SYSTEM									
WINDOW UNITS.....	100%	48	25	24	7	3	1	1	-
PACKAGE UNITS.....	100%	56	35	13	4	1	1	1	2
CENTRAL SYSTEM.....	100%	60	31	13	3	-	-	2	-
COMBINATION/OTHER.....	100%	58	34	20	4	1	-	2	-
NO AIR CONDITIONING.....	100%	39	14	22	6	4	2	1	25

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

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 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 9C. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY HEATING FUELS
- PERCENTAGE OF COLUMN TOTALS

USES OF FUEL	TOTAL	HEATING FUELS								
		NATURAL GAS	ELECTRICITY	FUEL OIL	Liquid Petroleum Gas	WOOD	COAL	STEAM	OTHER	NONE
NONRESIDENTIAL BUILDINGS.....	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
END USE BY FUEL TYPE										
AIR CONDITIONING FUEL USED..	64	71	80	58	58	40	36	78	58	14
ELECTRICITY.....	61	67	77	56	56	40	35	73	51	13
NATURAL GAS.....	4	6	4	1	1	1	-	-	-	-
OTHER.....	1	-	-	2	4	-	-	8	11	-
NO AIR CONDITIONING FUEL....	36	29	20	42	42	60	64	22	42	86
WATER HEATING FUEL USED....	67	76	70	72	55	59	55	76	69	16
NATURAL GAS.....	31	55	15	14	6	8	14	17	13	7
ELECTRICITY.....	31	22	55	38	30	38	34	31	40	8
FUEL OIL.....	4	1	2	21	1	5	1	1	2	-
OTHER.....	3	-	2	4	23	11	15	32	28	1
NO WATER HEATING FUEL....	33	24	30	28	45	41	45	24	31	84
MANUFACTURING FUEL USED....	12	13	10	13	13	23	18	14	10	14
ELECTRICITY.....	10	11	9	12	12	17	9	12	10	12
NATURAL GAS.....	2	3	1	1	-	-	4	3	2	2
OTHER.....	1	1	1	3	2	6	10	4	3	1
NO MANUFACTURING DONE....	88	87	90	87	87	77	82	86	90	86
COOKING FUEL USED.....	32	35	32	39	36	40	20	35	26	8
ELECTRICITY.....	18	17	26	21	22	31	11	23	22	6
NATURAL GAS.....	15	23	7	14	3	4	6	13	4	2
LIQUID PETROLEUM GAS.....	3	-	3	6	18	4	4	-	1	1
OTHER.....	1	-	-	2	-	5	3	3	-	1
NO COOKING FUEL.....	68	65	68	61	64	60	80	65	74	92
CONVERTED FROM FUEL OIL FOR ANY END USE SINCE 1/1/79										
YES.....	1	1	1	2	5	2	1	-	1	1
FOR HEATING.....	1	1	1	2	5	2	1	-	1	-
OTHER.....	-	-	-	-	-	-	-	-	1	1
NO.....	97	98	98	97	94	98	99	90	98	87
NOT REPORTED.....	2	1	1	1	1	-	-	10	-	12

SEE NOTES AT END OF TABLE

TABLE 9C. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY HEATING FUELS
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)

USES OF FUEL	TOTAL	HEATING FUELS								
		NATURAL GAS	ELECTRICITY	FUEL OIL	LIQUID PETROLEUM GAS	WOOD	COAL	STEAM	OTHER	NONE
FUEL COMBINATIONS USED										
NO FUEL USED.....	3	-	-	-	-	-	-	-	-	25
ONE FUEL USED.....	20	-	55	1	-	-	-	-	-	58
ELECTRICITY.....	19	-	55	-	-	-	-	-	-	57
NATURAL GAS.....	-	-	-	-	-	-	-	-	-	1
FUEL OIL.....	-	-	-	1	-	-	-	-	-	-
TWO FUELS USED.....	65	90	37	55	78	37	39	60	31	16
ELECTRICITY, NATURAL GAS..	48	90	26	-	5	-	-	-	-	12
ELECTRICITY, FUEL OIL....	11	-	4	55	1	-	-	-	-	2
ELECTRICITY, LPG.....	4	-	5	-	72	-	-	-	-	1
OTHER.....	2	-	2	-	-	37	39	60	31	-
THREE FUELS USED.....	11	9	7	41	20	45	35	35	48	1
ELEC., GAS, FUEL OIL.....	6	6	3	29	-	-	-	-	-	1
ELEC., FUEL OIL, LPG....	2	-	2	9	11	-	-	-	-	-
ELEC., GAS, OTHER.....	2	2	2	-	5	16	12	30	33	-
ELEC., FUEL OIL, OTHER....	1	-	-	2	-	17	4	1	-	-
OTHER.....	1	-	-	-	4	13	19	4	15	-
FOUR OR MORE FUELS USED....	1	1	1	4	3	18	25	4	21	-
ENERGY SOURCES SUPPLIED TO THE BUILDING										
ELECTRICITY.....	97	100	100	99	100	98	95	100	100	74
NATURAL GAS.....	57	100	31	32	10	23	20	35	53	14
FUEL OIL.....	21	7	10	100	13	28	16	3	21	3
LIQUID PETROLEUM GAS.....	8	1	9	11	93	13	19	-	1	1
WOOD.....	3	1	3	4	5	100	35	1	10	-
COAL.....	1	1	-	1	3	16	100	-	-	-
STEAM.....	1	-	-	-	-	-	-	95	-	-
OTHER.....	1	-	1	1	1	3	-	9	100	-
NONE.....	3	-	-	-	-	-	-	-	-	25
NUMBER OF BOILERS										
NONE.....	79	75	89	61	92	89	63	92	81	93
ONE.....	16	20	8	28	6	9	26	4	17	5
TWO OR MORE.....	5	6	2	11	1	2	11	4	2	1
FUELS USED TO FIRE BOILERS										
NATURAL GAS.....	13	24	6	5	1	3	4	5	7	5
FUEL OIL.....	7	2	2	35	1	7	2	-	2	1
OTHER.....	2	1	3	2	5	5	37	3	15	1

SEE NOTES AT END OF TABLE

TABLE 9C. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY HEATING FUELS
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)

USES OF FUEL	TOTAL	HEATING FUELS								
		NATURAL GAS	ELECTRICITY	FUEL OIL	LIQUID PETROLEUM GAS	WOOD	COAL	STEAM	OTHER	NONE
HEATING SYSTEM										
SELF-CONTAINED UNITS										
FORCED AIR.....	28	33	39	15	40	21	-	4	-	-
RADIANT.....	4	2	10	3	3	2	-	-	-	-
COMBINATION/OTHER.....	9	8	14	5	17	42	43	-	8	-
CENTRAL SYSTEM										
FORCED AIR.....	23	28	18	31	23	11	7	22	24	-
RADIANT.....	12	14	3	26	4	4	19	42	17	-
COMBINATION/OTHER.....	5	6	4	10	4	2	17	29	38	-
COMBINATION/OTHER										
FORCED AIR.....	3	4	5	4	2	6	-	1	12	-
RADIANT.....	1	1	1	2	1	4	4	1	-	-
COMBINATION/OTHER.....	4	4	6	5	6	8	10	2	1	-
NONE.....	11	-	-	-	-	-	-	-	-	100
PERCENT OF BUILDING HEATED										
NONE.....	11	-	-	-	-	-	-	-	-	100
1 TO 25.....	6	6	12	6	5	6	4	5	-	-
26 TO 50.....	8	10	6	8	14	14	9	9	-	-
51 TO 75.....	7	9	7	8	4	13	7	5	3	-
76 TO 99.....	6	6	7	7	4	13	15	5	3	-
100.....	62	69	68	72	72	54	66	77	93	-
PERCENT OF BUILDING COOLED										
NONE.....	36	29	20	42	42	60	64	22	42	86
1 TO 25.....	14	17	14	18	14	12	9	27	24	6
26 TO 50.....	13	17	9	12	14	10	7	14	5	2
51 TO 75.....	7	8	8	7	2	5	1	6	4	1
76 TO 99.....	4	5	6	3	4	5	10	8	2	1
100.....	26	24	43	18	24	8	10	22	22	4
AIR CONDITIONING SYSTEM										
WINDOW UNITS.....	20	20	20	26	28	24	21	16	10	8
PACKAGE UNITS.....	19	22	27	13	13	9	11	22	12	3
CENTRAL SYSTEM.....	18	22	23	12	11	3	1	26	33	1
COMBINATION/OTHER.....	7	8	10	7	6	4	3	15	3	2
NO AIR CONDITIONING.....	36	29	20	42	42	60	64	22	42	86

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

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 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 10A. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY TYPE OF AIR CONDITIONING SYSTEM
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS

USES OF FUEL	TOTAL	AIR CONDITIONING SYSTEM				NO AIR CONDITIONING
		WINDOW UNITS	PACKAGE UNITS	CENTRAL SYSTEM	COMBINATION/ OTHER	
NONRESIDENTIAL BUILDINGS.....	4,238	855	799	750	302	1,532
END USE BY FUEL TYPE						
HEATING FUEL USED.....	3,788	821	784	747	294	1,143
NATURAL GAS.....	2,069	409	446	447	175	592
ELECTRICITY.....	1,033	211	277	236	101	208
FUEL OIL.....	808	206	102	99	59	342
LIQUID PETROLEUM GAS (LPG)	223	62	29	26	13	93
WOOD.....	102	24	9	3	4	61
COAL.....	50	10	6	-	1	32
STEAM.....	51	8	11	13	7	11
OTHER.....	10	1	1	3	-	4
NO HEATING FUEL.....	450	34	15	3	8	389
AIR CONDITIONING FUEL USED..	2,706	855	799	750	302	-
ELECTRICITY.....	2,567	847	754	677	290	-
NATURAL GAS.....	161	9	51	80	21	-
OTHER.....	28	5	6	14	3	-
NO AIR CONDITIONING FUEL....	1,532	-	-	-	-	1,532
WATER HEATING FUEL USED.....	2,823	592	642	607	241	740
NATURAL GAS.....	1,321	257	310	290	116	347
ELECTRICITY.....	1,306	270	309	297	109	322
FUEL OIL.....	180	59	23	25	25	48
OTHER.....	118	29	20	13	9	46
NO WATER HEATING FUEL.....	1,415	263	157	143	61	792
MANUFACTURING FUEL USED.....	492	89	100	67	37	199
ELECTRICITY.....	427	80	85	55	32	175
NATURAL GAS.....	81	12	21	16	12	21
OTHER.....	59	6	13	9	4	26
NO MANUFACTURING DONE.....	3,746	766	700	683	265	1,332
COOKING FUEL USED.....	1,358	319	294	259	131	355
ELECTRICITY.....	765	171	159	169	74	191
NATURAL GAS.....	619	156	149	106	62	146
LIQUID PETROLEUM GAS.....	108	32	18	12	13	34
OTHER.....	25	2	3	7	2	12
NO COOKING FUEL.....	2,880	536	505	491	171	1,177

SEE NOTES AT END OF TABLE

TABLE 10A. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY TYPE OF AIR CONDITIONING SYSTEM
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)

USES OF FUEL	TOTAL	AIR CONDITIONING SYSTEM					NO AIR CONDITIONING
		WINDOW UNITS	PACKAGE UNITS	CENTRAL SYSTEM	COMBINATION/ OTHER		
CONVERTED FROM FUEL OIL FOR ANY END USE SINCE 1/1/79							
YES.....	52	12	3	11	6	19	
FOR HEATING.....	45	12	2	11	5	15	
OTHER.....	14	4	1	3	2	5	
NO.....	4,097	839	785	731	294	1,449	
NOT REPORTED.....	90	4	12	8	2	64	
FUEL COMBINATIONS USED							
NO FUEL USED.....	115	-	-	-	-	115	
ONE FUEL USED.....	831	156	179	147	44	305	
ELECTRICITY.....	820	156	179	146	44	296	
NATURAL GAS.....	6	-	-	2	-	4	
FUEL OIL.....	4	-	-	-	-	4	
TWO FUELS USED.....	2,775	570	540	536	209	920	
ELECTRICITY, NATURAL GAS..	2,026	388	447	442	169	581	
ELECTRICITY, FUEL OIL....	461	105	53	62	25	215	
ELECTRICITY, LPG.....	189	59	26	24	11	69	
OTHER.....	98	19	14	7	4	54	
THREE FUELS USED.....	469	118	75	62	41	172	
ELEC., GAS, FUEL OIL....	274	86	43	36	28	81	
ELEC., FUEL OIL, LPG....	76	16	8	8	3	40	
ELEC., GAS, OTHER.....	76	11	17	16	8	23	
ELEC., FUEL OIL, OTHER...	22	2	1	1	1	17	
OTHER.....	22	4	6	1	1	9	
FOUR OR MORE FUELS USED....	49	11	4	4	9	21	
ENERGY SOURCES SUPPLIED TO THE BUILDING							
ELECTRICITY.....	4,109	855	799	748	302	1,405	
NATURAL GAS.....	2,416	492	511	498	209	705	
FUEL OIL.....	872	217	109	111	65	370	
LIQUID PETROLEUM GAS.....	319	83	48	41	23	125	
WOOD.....	124	26	12	3	6	77	
COAL.....	62	12	6	-	3	41	
STEAM.....	53	8	11	13	8	13	
OTHER.....	27	3	6	7	3	7	
NONE.....	115	-	-	-	-	115	

SEE NOTES AT END OF TABLE

TABLE 10A. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY TYPE OF AIR CONDITIONING SYSTEM
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)

USES OF FUEL	TOTAL	AIR CONDITIONING SYSTEM				
		WINDOW UNITS	PACKAGE UNITS	CENTRAL SYSTEM	COMBINATION/OTHER	NO AIR CONDITIONING
NUMBER OF BOILERS						
NONE.....	3,348	637	633	607	216	1,256
ONE.....	686	177	127	109	59	213
TWO OR MORE.....	203	41	39	33	28	62
FUELS USED TO FIRE BOILERS						
NATURAL GAS.....	553	117	108	106	54	168
FUEL OIL.....	299	92	46	33	21	98
OTHER.....	93	17	25	12	8	32
HEATING SYSTEM						
SELF-CONTAINED UNITS						
FORCED AIR.....	1,201	175	388	236	78	323
RADIANT.....						
ELECTRIC BASEBOARDS.....	71	24	9	4	2	31
RADIATORS.....	51	20	4	6	1	19
OTHER.....	430	152	42	18	31	188
CENTRAL SYSTEM						
FORCED AIR.....	1,069	177	186	356	72	277
RADIANT.....	503	172	77	53	28	164
OTHER.....	349	73	58	62	49	106
OTHER.....	117	28	20	11	23	35
NONE.....	448	33	15	3	8	389
PERCENT OF BUILDING HEATED						
NONE	448	33	15	3	8	389
1 TO 25.....	266	63	48	47	17	92
26 TO 50.....	347	79	74	53	20	122
51 TO 75.....	313	87	62	53	39	74
76 TO 99.....	242	53	67	46	20	57
100.....	2,620	541	533	548	199	799
PERCENT OF BUILDING COOLED						
NONE.....	1,532	-	-	-	-	1,532
1 TO 25.....	609	303	126	119	61	-
26 TO 50.....	542	210	173	121	39	-
51 TO 75.....	283	80	86	71	46	-
76 TO 99.....	190	42	74	45	29	-
100.....	1,081	220	341	393	127	-

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

SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY. THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 10B. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY TYPE OF AIR CONDITIONING SYSTEM
- PERCENTAGE OF ROW TOTALS

USES OF FUEL	TOTAL	AIR CONDITIONING SYSTEM					NO AIR CONDITIONING
		WINDOW UNITS	PACKAGE UNITS	CENTRAL SYSTEM	COMBINATION/ OTHER		
NONRESIDENTIAL BUILDINGS.....	100%	20	19	18	7		36
END USE BY FUEL TYPE							
HEATING FUEL USED.....	100%	22	21	20	8		30
NATURAL GAS.....	100%	20	22	22	8		29
ELECTRICITY.....	100%	20	27	23	10		20
FUEL OIL.....	100%	26	13	12	7		42
LIQUID PETROLEUM GAS (LPG)	100%	28	13	11	6		42
WOOD.....	100%	24	9	3	4		60
COAL.....	100%	21	11	1	3		64
STEAM.....	100%	16	22	26	15		22
OTHER.....	100%	10	12	33	3		42
NO HEATING FUEL.....	100%	8	3	1	2		86
AIR CONDITIONING FUEL USED..	100%	32	30	28	11		-
ELECTRICITY.....	100%	33	29	26	11		-
NATURAL GAS.....	100%	6	32	50	13		-
OTHER.....	100%	17	23	51	10		-
NO AIR CONDITIONING FUEL....	100%	-	-	-	-		100
WATER HEATING FUEL USED.....	100%	21	23	22	9		26
NATURAL GAS.....	100%	19	23	22	9		26
ELECTRICITY.....	100%	21	24	23	8		25
FUEL OIL.....	100%	33	13	14	14		27
OTHER.....	100%	24	17	11	8		39
NO WATER HEATING FUEL.....	100%	19	11	10	4		56
MANUFACTURING FUEL USED.....	100%	18	20	14	8		41
ELECTRICITY.....	100%	19	20	13	7		41
NATURAL GAS.....	100%	15	25	20	15		25
OTHER.....	100%	11	23	16	6		44
NO MANUFACTURING DONE.....	100%	20	19	18	7		36
COOKING FUEL USED.....	100%	24	22	19	10		26
ELECTRICITY.....	100%	22	21	22	10		25
NATURAL GAS.....	100%	25	24	17	10		24
LIQUID PETROLEUM GAS.....	100%	29	17	11	12		31
OTHER.....	100%	6	11	7	6		49
NO COOKING FUEL.....	100%	19	19	17	6		41

SEE NOTES AT END OF TABLE

TABLE 10B. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY TYPE OF AIR CONDITIONING SYSTEM
- PERCENTAGE OF ROW TOTALS (CONTINUED)

USES OF FUEL	TOTAL	AIR CONDITIONING SYSTEM					NO AIR CONDITIONING
		WINDOW UNITS	PACKAGE UNITS	CENTRAL SYSTEM	COMBINATION/ OTHER		
CONVERTED FROM FUEL OIL FOR ANY END USE SINCE 1/1/79							
YES.....	100%	24	5	21	12	38	
FOR HEATING.....	100%	27	5	24	10	33	
OTHER.....	100%	26	7	20	14	34	
NO.....	100%	20	19	18	7	35	
NOT REPORTED.....	100%	5	13	9	3	71	
FUEL COMBINATIONS USED							
NO FUEL USED.....	100%	-	-	-	-	100	
ONE FUEL USED.....	100%	19	22	18	5	37	
ELECTRICITY.....	100%	19	22	18	5	36	
NATURAL GAS.....	100%	-	-	29	-	71	
FUEL OIL.....	100%	-	-	-	2	98	
TWO FUELS USED.....	100%	21	19	19	8	33	
ELECTRICITY, NATURAL GAS..	100%	19	22	22	8	29	
ELECTRICITY, FUEL OIL.....	100%	23	12	14	5	47	
ELECTRICITY, LPG.....	100%	31	14	13	6	37	
OTHER.....	100%	19	14	7	4	55	
THREE FUELS USED.....	100%	25	16	13	9	37	
ELEC., GAS, FUEL OIL.....	100%	31	16	13	10	30	
ELEC., FUEL OIL, LPG.....	100%	21	11	10	4	53	
ELEC., GAS, OTHER.....	100%	15	23	21	10	31	
ELEC., FUEL OIL, OTHER....	100%	9	4	6	3	79	
OTHER.....	100%	18	28	6	6	42	
FOUR OR MORE FUELS USED.....	100%	23	9	8	18	43	
ENERGY SOURCES SUPPLIED TO THE BUILDING							
ELECTRICITY.....	100%	21	19	18	7	34	
NATURAL GAS.....	100%	20	21	21	9	29	
FUEL OIL.....	100%	25	13	13	7	42	
LIQUID PETROLEUM GAS.....	100%	26	15	13	7	39	
WOOD.....	100%	21	9	3	5	62	
COAL.....	100%	19	9	1	5	67	
STEAM.....	100%	15	21	25	15	25	
OTHER.....	100%	12	23	25	12	28	
NONE.....	100%	-	-	-	-	100	

SEE NOTES AT END OF TABLE

TABLE 10B. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY TYPE OF AIR CONDITIONING SYSTEM
- PERCENTAGE OF ROW TOTALS (CONTINUED)

USES OF FUEL	TOTAL	AIR CONDITIONING SYSTEM				
		WINDOW UNITS	PACKAGE UNITS	CENTRAL SYSTEM	COMBINATION/ OTHER	NO AIR CONDITIONING
NUMBER OF BOILERS						
NONE.....	100%	19	19	18	6	38
ONE.....	100%	26	19	16	9	31
TWO OR MORE.....	100%	20	19	16	14	31
FUELS USED TO FIRE BOILERS						
NATURAL GAS.....	100%	21	20	19	10	30
FUEL OIL.....	100%	31	15	11	10	33
OTHER.....	100%	18	26	13	8	35
HEATING SYSTEM						
SELF-CONTAINED UNITS						
FORCED AIR.....	100%	15	32	20	6	27
RADIANT.....	-	-	-	-	-	-
ELECTRIC BASEBOARDS.....	100%	34	13	6	3	44
RADIATORS.....	100%	40	8	12	3	38
OTHER.....	100%	35	10	4	7	44
CENTRAL SYSTEM						
FORCED AIR.....	100%	17	17	33	7	26
RADIANT.....	100%	34	15	10	7	33
OTHER.....	100%	21	17	18	14	30
OTHER.....	100%	24	17	9	20	30
NONE.....	100%	7	3	1	2	87
PERCENT OF BUILDING HEATED						
NONE.....	100%	7	3	1	2	87
1 TO 25.....	100%	24	18	18	6	34
26 TO 50.....	100%	23	21	15	6	35
51 TO 75.....	100%	28	20	17	12	23
76 TO 99.....	100%	22	28	19	8	23
100.....	100%	21	20	21	8	30
PERCENT OF BUILDING COOLED						
NONE.....	100%	-	-	-	-	100
1 TO 25.....	100%	50	21	20	10	-
26 TO 50.....	100%	39	32	22	7	-
51 TO 75.....	100%	28	30	25	16	-
76 TO 99.....	100%	22	39	23	15	-
100.....	100%	20	32	36	12	-

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

SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 10C. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY TYPE OF AIR CONDITIONING SYSTEM
- PERCENTAGE OF COLUMN TOTALS

USES OF FUEL	TOTAL	AIR CONDITIONING SYSTEM					NO AIR CONDITIONING
		WINDOW UNITS	PACKAGE UNITS	CENTRAL SYSTEM	COMBINATION/ OTHER		
NONRESIDENTIAL BUILDINGS.....	100%	100%	100%	100%	100%	100%	100%
END USE BY FUEL TYPE							
HEATING FUEL USED.....	89	96	98	100	97	75	
NATURAL GAS.....	49	48	56	60	58	39	
ELECTRICITY.....	24	25	35	31	34	14	
FUEL OIL.....	15	24	13	13	20	22	
LIQUID PETROLEUM GAS (LPG)	5	7	4	3	4	6	
WOOD.....	2	3	1	-	1	4	
COAL.....	1	1	1	-	-	2	
STEAM.....	1	1	1	2	2	1	
OTHER.....	-	-	-	-	-	-	
NO HEATING FUEL.....	11	4	2	-	3	25	
AIR CONDITIONING FUEL USED..	64	100	100	100	100	-	
ELECTRICITY.....	61	99	94	90	96	-	
NATURAL GAS.....	4	1	6	11	7	-	
OTHER.....	1	1	1	2	1	-	
NO AIR CONDITIONING FUEL.....	36	-	-	-	-	100	
WATER HEATING FUEL USED....	67	69	80	81	80	48	
NATURAL GAS.....	31	30	39	39	38	23	
ELECTRICITY.....	31	32	39	40	36	21	
FUEL OIL.....	4	7	3	3	8	3	
OTHER.....	3	3	3	2	3	3	
NO WATER HEATING FUEL.....	33	31	20	19	20	52	
MANUFACTURING FUEL USED....	12	10	12	9	12	13	
ELECTRICITY.....	10	9	11	7	11	11	
NATURAL GAS.....	2	1	3	2	4	1	
OTHER.....	1	1	2	1	1	2	
NO MANUFACTURING DONE.....	88	90	88	91	88	87	
COOKING FUEL USED.....	32	37	37	35	43	23	
ELECTRICITY.....	18	20	20	23	24	12	
NATURAL GAS.....	15	18	19	14	20	10	
LIQUID PETROLEUM GAS.....	3	4	2	2	4	2	
OTHER.....	1	-	-	1	1	1	
NO COOKING FUEL.....	68	63	63	65	57	77	

SEE NOTES AT END OF TABLE

TABLE 10C. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY TYPE OF AIR CONDITIONING SYSTEM
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)

USES OF FUEL	TOTAL	AIR CONDITIONING SYSTEM					NO AIR CONDITIONING
		WINDOW UNITS	PACKAGE UNITS	CENTRAL SYSTEM	COMBINATION/ OTHER		
CONVERTED FROM FUEL OIL FOR ANY END USE SINCE 1/1/79							
YES.....	1	1	-	1	2	1	
FOR HEATING.....	1	1	-	1	2	1	
OTHER.....	-	-	-	-	1	-	
NO.....	97	98	98	98	97	95	
NOT REPORTED.....	2	-	1	1	1	4	
FUEL COMBINATIONS USED							
NO FUEL USED.....	3	-	-	-	-	7	
ONE FUEL USED.....	20	18	22	20	14	20	
ELECTRICITY.....	19	18	22	19	14	19	
NATURAL GAS.....	-	-	-	-	-	-	
FUEL OIL.....	-	-	-	-	-	-	
TWO FUELS USED.....	65	67	68	72	69	60	
ELECTRICITY, NATURAL GAS..	48	45	56	59	56	38	
ELECTRICITY, FUEL OIL.....	11	12	7	8	8	14	
ELECTRICITY, LPG.....	4	7	3	3	3	5	
OTHER.....	2	2	2	1	1	4	
THREE FUELS USED.....	11	14	9	8	14	11	
ELEC., GAS, FUEL OIL.....	6	10	5	5	9	5	
ELEC., FUEL OIL, LPG.....	2	2	1	1	1	3	
ELEC., GAS, OTHER.....	2	1	2	2	3	2	
ELEC., FUEL OIL, OTHER....	1	-	-	-	-	1	
OTHER.....	1	-	1	1	1	1	
FOUR OR MORE FUELS USED.....	1	1	1	1	3	1	
ENERGY SOURCES SUPPLIED TO THE BUILDING							
ELECTRICITY.....	97	100	100	100	100	92	
NATURAL GAS.....	57	58	64	66	69	46	
FUEL OIL.....	21	25	14	15	21	24	
LIQUID PETROLEUM GAS.....	8	10	6	5	8	8	
WOOD.....	3	3	1	1	2	5	
COAL.....	1	1	1	1	1	3	
STEAM.....	1	1	1	2	3	1	
OTHER.....	1	-	1	1	1	-	
NONE.....	3	-	-	-	-	7	

SEE NOTES AT END OF TABLE

TABLE 10C. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY TYPE OF AIR CONDITIONING SYSTEM
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)

USES OF FUEL	TOTAL	AIR CONDITIONING SYSTEM					NO AIR CONDITIONING
		WINDOW UNITS	PACKAGE UNITS	CENTRAL SYSTEM	COMBINATION/ OTHER		
NUMBER OF BOILERS							
NONE.....	76	74	79	81	71		82
ONE.....	16	21	16	15	20		14
TWO OR MORE.....	5	5	5	4	9		4
FUELS USED TO FIRE BOILERS							
NATURAL GAS.....	13	14	13	14	18		11
FUEL OIL.....	7	11	6	4	10		6
OTHER.....	2	2	3	2	2		2
HEATING SYSTEM							
SELF-CONTAINED UNITS							
FORCED AIR.....	28	21	49	32	26		21
RADIANT							
ELECTRIC BASEBOARDS.....	2	3	1	1	1		2
RADIATORS.....	1	2	-	1	-		1
OTHER.....	10	18	5	2	10		12
CENTRAL SYSTEM							
FORCED AIR.....	25	21	23	48	24		18
RADIANT.....	12	20	10	7	12		11
OTHER.....	8	9	7	8	16		7
OTHER.....	3	3	3	1	8		2
NONE	11	4	2	-	3		25
PERCENT OF BUILDING HEATED							
NONE	11	4	2	-	3		25
1 TO 25.....	6	7	6	5	5		6
26 TO 50.....	8	9	9	7	7		8
51 TO 75.....	7	10	8	7	13		5
76 TO 99.....	6	6	8	6	7		4
100.....	62	63	67	73	66		52
PERCENT OF BUILDING COOLED							
NONE	36	-	-	-	-		100
1 TO 25.....	14	35	16	16	20		-
26 TO 50.....	13	25	22	16	13		-
51 TO 75.....	7	9	11	10	15		-
76 TO 99.....	4	5	9	6	10		-
100.....	26	26	43	52	42		-

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

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TABLE 11A. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY OCCUPANCY CHARACTERISTICS
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS

USES OF FUEL	TOTAL	OCCUPANCY CHARACTERISTICS					
		SINGLE ESTABLISHMENT BUILDING		MULTIPLE ESTABLISHMENT BUILDING		GOVERNMENT OWNED AND OCCUPIED	NOT REPORTED
		OWNER IS OCCUPANT	OWNER IS NOT OCCUPANT	OWNER IS OCCUPANT	OWNER IS NOT OCCUPANT		
NONRESIDENTIAL BUILDINGS.....	4,238	2,047	1,198	393	272	260	68
END USE BY FUEL TYPE							
HEATING FUEL USED.....	3,788	1,856	1,009	385	260	236	41
NATURAL GAS.....	2,069	981	583	226	158	108	13
ELECTRICITY.....	1,033	483	257	108	91	74	20
FUEL OIL.....	808	420	201	77	46	50	15
LIQUID PETROLEUM GAS (LPG)	223	128	65	15	7	6	1
WOOD.....	102	64	30	4	3	-	-
COAL.....	50	27	16	1	1	5	-
STEAM.....	51	22	6	4	2	16	1
OTHER.....	10	4	-	-	2	4	-
NO HEATING FUEL.....	450	191	189	8	12	24	27
AIR CONDITIONING FUEL USED..	2,706	1,331	666	324	211	143	31
ELECTRICITY.....	2,567	1,263	626	307	201	140	30
NATURAL GAS.....	161	81	41	25	9	3	2
OTHER.....	28	13	6	2	3	4	-
NO AIR CONDITIONING FUEL....	1,532	715	532	69	61	116	38
WATER HEATING FUEL USED....	2,823	1,410	688	311	208	175	30
NATURAL GAS.....	1,321	647	350	139	98	82	6
ELECTRICITY.....	1,306	665	289	149	102	78	22
FUEL OIL.....	180	83	42	24	17	13	-
OTHER.....	118	71	24	6	5	10	2
NO WATER HEATING FUEL....	1,415	637	510	82	64	84	39
MANUFACTURING FUEL USED....	492	265	131	42	42	13	-
ELECTRICITY.....	427	227	115	39	35	10	-
NATURAL GAS.....	81	44	23	7	4	4	-
OTHER.....	59	42	9	1	6	1	-
NO MANUFACTURING DONE....	3,746	1,782	1,068	351	230	247	68
COOKING FUEL USED.....	1,358	735	283	147	94	83	15
ELECTRICITY.....	765	436	133	84	47	59	6
NATURAL GAS.....	619	321	146	62	53	30	6
LIQUID PETROLEUM GAS.....	108	59	23	13	6	3	5
OTHER.....	25	16	4	2	1	3	-
NO COOKING FUEL.....	2,880	1,311	915	246	178	177	53

SEE NOTES AT END OF TABLE

TABLE 11A. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY OCCUPANCY CHARACTERISTICS
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)

USES OF FUEL	TOTAL	OCCUPANCY CHARACTERISTICS					
		SINGLE ESTABLISHMENT BUILDING		MULTIPLE ESTABLISHMENT BUILDING		GOVERNMENT OWNED AND OCCUPIED	NOT REPORTED
		OWNER IS OCCUPANT	OWNER IS NOT OCCUPANT	OWNER IS OCCUPANT	OWNER IS NOT OCCUPANT		
CONVERTED FROM FUEL OIL FOR ANY END USE SINCE 1/1/79							
YES.....	52	27	10	8	2	3	2
FOR HEATING.....	45	24	10	6	2	2	2
OTHER.....	14	6	-	5	-	1	2
NO.....	4,097	1,983	1,156	379	267	253	58
NOT REPORTED.....	90	36	32	5	3	4	8
FUEL COMBINATIONS USED							
NO FUEL USED.....	115	41	49	1	-	5	18
ONE FUEL USED.....	831	389	225	71	54	73	18
ELECTRICITY.....	820	384	220	71	54	73	18
NATURAL GAS.....	6	1	5	-	-	-	-
FUEL OIL.....	4	4	-	-	-	-	-
TWO FUELS USED.....	2,775	1,355	824	262	174	138	22
ELECTRICITY, NATURAL GAS..	2,026	942	617	214	152	88	14
ELECTRICITY, FUEL OIL....	461	245	136	32	13	29	6
ELECTRICITY, LPG.....	189	115	50	11	7	6	1
OTHER.....	98	54	22	5	3	15	-
THREE FUELS USED.....	469	229	91	56	42	41	10
ELEC., GAS, FUEL OIL....	274	128	48	40	28	25	4
ELEC., FUEL OIL, LPG....	76	37	18	10	5	2	5
ELEC., GAS, OTHER.....	76	36	14	7	7	11	1
ELEC., FUEL OIL, OTHER....	22	15	5	-	?	1	-
OTHER.....	22	13	6	-	1	2	-
FOUR OR MORE FUELS USED....	49	33	9	3	1	3	-
ENERGY SOURCES SUPPLIED TO THE BUILDING							
ELECTRICITY.....	4,109	2,000	1,140	392	272	254	50
NATURAL GAS.....	2,416	1,131	688	262	188	127	20
FUEL OIL.....	872	454	214	83	48	58	15
LIQUID PETROLEUM GAS....	319	185	79	24	15	9	6
WOOD.....	124	79	34	6	3	2	-
COAL.....	62	33	18	1	1	8	-
STEAM.....	53	23	7	4	2	16	1
OTHER.....	27	12	2	2	3	7	-
NONE.....	115	41	49	1	-	5	18

SEE NOTES AT END OF TABLE

TABLE 11A. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY OCCUPANCY CHARACTERISTICS
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)

USES OF FUEL	TOTAL	OCCUPANCY CHARACTERISTICS					
		SINGLE ESTABLISHMENT BUILDING		MULTIPLE ESTABLISHMENT BUILDING		GOVERNMENT OWNED AND OCCUPIED	NOT REPORTED
		OWNER IS OCCUPANT	OWNER IS NOT OCCUPANT	OWNER IS OCCUPANT	OWNER IS NOT OCCUPANT		
NUMBER OF BOILERS							
NONE.....	3,348	1,650	679	277	210	177	56
ONE.....	686	301	183	95	47	49	12
TWO OR MORE.....	203	96	37	21	15	34	1
FUELS USED TO FIRE BOILERS							
NATURAL GAS.....	553	245	150	65	40	48	4
FUEL OIL.....	299	137	56	38	27	34	6
OTHER.....	93	47	20	12	3	10	-
HEATING SYSTEM							
SELF-CONTAINED UNITS							
FORCED AIR.....	1,201	560	347	143	98	40	14
RADIANT							
ELECTRIC BASEBOARDS.....	71	36	14	5	8	6	2
RADIATORS.....	51	19	19	4	5	4	-
OTHER.....	430	231	118	28	26	25	2
CENTRAL SYSTEM							
FORCED AIR.....	1,069	558	282	89	60	67	13
RADIANT.....	503	234	105	67	34	56	7
OTHER.....	349	163	88	37	24	33	4
OTHER.....	117	55	37	12	5	6	1
NONE.....	448	191	188	8	12	24	27
PERCENT OF BUILDING HEATED							
NONE.....	448	191	188	8	12	24	27
1 TO 25.....	266	126	85	19	17	13	6
26 TO 50.....	347	166	106	29	27	14	6
51 TO 75.....	313	162	71	37	29	12	2
76 TO 99.....	242	120	56	34	13	16	3
100.....	2,620	1,282	692	266	175	182	24

SEE NOTES AT END OF TABLE

**TABLE 11A. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY OCCUPANCY CHARACTERISTICS
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)**

USES OF FUEL	TOTAL	OCCUPANCY CHARACTERISTICS					
		SINGLE ESTABLISHMENT BUILDING		MULTIPLE ESTABLISHMENT BUILDING		GOVERNMENT OWNED AND OCCUPIED	NOT REPORTED
		OWNER IS OCCUPANT	OWNER IS NOT OCCUPANT	OWNER IS OCCUPANT	OWNER IS NOT OCCUPANT		
PERCENT OF BUILDING COOLED							
NONE.....	1,532	715	532	69	61	116	38
1 TO 25.....	609	297	141	68	52	39	12
26 TO 50.....	542	280	135	58	39	21	9
51 TO 75.....	283	134	72	38	26	12	1
76 TO 99.....	190	83	47	29	16	13	3
100.....	1,081	538	271	130	78	58	6
AIR CONDITIONING SYSTEM							
WINDOW UNITS.....	855	430	221	85	64	43	12
PACKAGE UNITS.....	799	387	188	111	72	35	6
CENTRAL SYSTEM.....	750	386	195	73	43	45	7
COMBINATION/OTHER.....	302	129	62	54	32	20	5
NO AIR CONDITIONING.....	1,532	715	532	69	61	116	38

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

SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 11B. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY OCCUPANCY CHARACTERISTICS
- PERCENTAGE OF ROW TOTALS

USES OF FUEL	TOTAL	OCCUPANCY CHARACTERISTICS						NOT REPORTED	
		SINGLE ESTABLISHMENT BUILDING		MULTIPLE ESTABLISHMENT BUILDING		GOVERNMENT OWNED AND OCCUPIED			
		OWNER IS OCCUPANT	OWNER IS NOT OCCUPANT	OWNER IS OCCUPANT	OWNER IS NOT OCCUPANT				
NONRESIDENTIAL BUILDINGS.....	100%	48	28	9	6	6	6	2	
END USE BY FUEL TYPE									
HEATING FUEL USED.....	100%	49	27	10	7	6	1		
NATURAL GAS.....	100%	47	28	11	8	5	1		
ELECTRICITY.....	100%	47	25	10	9	7	2		
FUEL OIL.....	100%	52	25	10	6	6	2		
LIQUID PETROLEUM GAS (LPG)	100%	58	29	7	3	3	1		
WOOD.....	100%	63	30	4	3	-	-		
COAL.....	100%	54	33	3	1	10	1		
STEAM.....	100%	42	12	8	4	32	2		
OTHER.....	100%	39	1	-	19	41	-		
NO HEATING FUEL.....	100%	42	42	2	3	5	6		
AIR CONDITIONING FUEL USED..	100%	49	25	12	8	5	1		
ELECTRICITY.....	100%	49	24	12	8	5	1		
NATURAL GAS.....	100%	51	26	15	5	2	1		
OTHER.....	100%	47	20	8	11	13	1		
NO AIR CONDITIONING FUEL...	100%	47	35	5	4	8	2		
WATER HEATING FUEL USED.....	100%	50	24	11	7	6	1		
NATURAL GAS.....	100%	49	26	11	7	6	-		
ELECTRICITY.....	100%	51	22	11	8	6	2		
FUEL OIL.....	100%	46	23	13	10	7	-		
OTHER.....	100%	61	20	5	5	8	1		
NO WATER HEATING FUEL.....	100%	45	36	6	5	6	3		
MANUFACTURING FUEL USED.....	100%	54	27	9	9	3	-		
ELECTRICITY.....	100%	53	27	9	8	2	-		
NATURAL GAS.....	100%	54	28	8	5	4	-		
OTHER.....	100%	71	15	2	10	2	-		
NO MANUFACTURING DONE.....	100%	48	29	9	6	7	2		
COOKING FUEL USED.....	100%	54	21	11	7	6	1		
ELECTRICITY.....	100%	57	17	11	6	8	1		
NATURAL GAS.....	100%	52	24	10	9	5	1		
LIQUID PETROLEUM GAS.....	100%	54	22	12	6	3	4		
OTHER.....	100%	63	16	7	2	11	-		
NO COOKING FUEL.....	100%	46	32	9	6	6	2		

SEE NOTES AT END OF TABLE

TABLE 11B. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY OCCUPANCY CHARACTERISTICS
- PERCENTAGE OF ROW TOTALS (CONTINUED)

USES OF FUEL	TOTAL	OCCUPANCY CHARACTERISTICS					
		SINGLE ESTABLISHMENT BUILDING		MULTIPLE ESTABLISHMENT BUILDING		GOVERNMENT OWNED AND OCCUPIED	NOT REPORTED
		OWNER IS OCCUPANT	OWNER IS NOT OCCUPANT	OWNER IS OCCUPANT	OWNER IS NOT OCCUPANT		
CONVERTED FROM FUEL OIL FOR ANY END USE SINCE 1/1/79							
YES.....	100%	52	19	16	4	6	3
FOR HEATING.....	100%	53	22	13	4	3	4
OTHER.....	100%	44	-	33	2	10	12
NO.....	100%	48	28	9	7	6	1
NOT REPORTED.....	100%	41	36	6	4	4	9
FUEL COMBINATIONS USED							
NO FUEL USED.....	100%	35	43	1	-	5	16
ONE FUEL USED.....	100%	47	27	9	7	9	2
ELECTRICITY.....	100%	47	27	9	7	9	2
NATURAL GAS.....	100%	24	76	-	-	-	-
FUEL OIL.....	100%	100	-	-	-	-	-
TWO FUELS USED.....	100%	49	30	9	6	5	1
ELECTRICITY, NATURAL GAS..	100%	46	30	11	7	4	1
ELECTRICITY, FUEL OIL....	100%	53	29	7	3	6	1
ELECTRICITY, LPG.....	100%	61	27	6	4	3	1
OTHER.....	100%	55	22	5	3	15	-
THREE FUELS USED.....	100%	49	19	12	9	9	2
ELEC., GAS, FUEL OIL.....	100%	47	18	14	10	9	2
ELEC., FUEL OIL, LPG.....	100%	49	23	13	6	2	6
ELEC., GAS, OTHER.....	100%	47	19	9	9	14	2
ELEC., FUEL OIL, OTHER....	100%	66	22	-	8	4	-
OTHER.....	100%	58	27	-	3	11	-
FOUR OR MORE FUELS USED.....	100%	68	19	6	1	6	-
ENERGY SOURCES SUPPLIED TO THE BUILDING							
ELECTRICITY.....	100%	49	28	10	7	6	1
NATURAL GAS.....	100%	47	28	11	8	5	1
FUEL OIL.....	100%	52	25	10	6	7	2
LIQUID PETROLEUM GAS.....	100%	58	25	8	5	3	2
WOOD.....	100%	64	28	5	3	2	-
COAL.....	100%	54	29	2	1	13	1
STEAM.....	100%	43	13	8	5	30	2
OTHER.....	100%	45	7	9	11	27	-
NONE.....	100%	35	43	1	-	5	16

SEE NOTES AT END OF TABLE

TABLE 11B. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY OCCUPANCY CHARACTERISTICS
- PERCENTAGE OF ROW TOTALS (CONTINUED)

USES OF FUEL	TOTAL	OCCUPANCY CHARACTERISTICS						NOT REPORTED	
		SINGLE ESTABLISHMENT BUILDING		MULTIPLE ESTABLISHMENT BUILDING		GOVERNMENT OWNED AND OCCUPIED			
		OWNER IS OCCUPANT	OWNER IS NOT OCCUPANT	OWNER IS OCCUPANT	OWNER IS NOT OCCUPANT				
NUMBER OF BOILERS									
NONE.....	100%	49	29	8	6	5	2		
ONE.....	100%	44	27	14	7	7	2		
TWO OR MORE.....	100%	47	18	10	7	17	-		
FUELS USED TO FIRE BOILERS									
NATURAL GAS.....	100%	44	27	12	7	9	1		
FUEL OIL.....	100%	46	19	13	9	11	2		
OTHER.....	100%	51	22	13	3	11	-		
HEATING SYSTEM									
SELF-CONTAINED UNITS									
FORCED AIR.....	100%	47	29	12	8	3	1		
RADIANT									
ELECTRIC BASEBOARDS.....	100%	50	20	7	12	8	2		
RADIATORS.....	100%	38	37	8	9	7	-		
OTHER.....	100%	54	27	7	6	6	-		
CENTRAL SYSTEM									
FORCED AIR.....	100%	52	26	8	6	6	1		
RADIANT.....	100%	46	21	13	7	11	1		
OTHER.....	100%	47	25	11	7	9	1		
OTHER.....	100%	47	32	11	4	6	1		
NONE.....	100%	43	42	2	3	5	6		
PERCENT OF BUILDING HEATED									
NONE.....	100%	43	42	2	3	5	6		
1 TO 25.....	100%	47	32	7	6	5	2		
26 TO 50.....	100%	48	31	8	8	4	2		
51 TO 75.....	100%	52	23	12	9	4	1		
76 TO 99.....	100%	50	23	14	6	6	1		
100.....	100%	49	26	10	7	7	1		

SEE NOTES AT END OF TABLE

TABLE 11B. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY OCCUPANCY CHARACTERISTICS
- PERCENTAGE OF ROW TOTALS (CONTINUED)

USES OF FUEL	TOTAL	OCCUPANCY CHARACTERISTICS					
		SINGLE ESTABLISHMENT BUILDING		MULTIPLE ESTABLISHMENT BUILDING		GOVERNMENT OWNED AND OCCUPIED	NOT REPORTED
		OWNER IS OCCUPANT	OWNER IS NOT OCCUPANT	OWNER IS OCCUPANT	OWNER IS NOT OCCUPANT		
PERCENT OF BUILDING COOLED							
NONE.....	100%	47	35	5	4	8	2
1 TO 25.....	100%	49	23	11	9	6	2
26 TO 50.....	100%	52	25	11	7	4	2
51 TO 75.....	100%	47	26	14	9	4	1
76 TO 99.....	100%	43	25	15	8	7	1
100.....	100%	50	25	12	7	5	1
AIR CONDITIONING SYSTEM							
WINDOW UNITS.....	100%	50	26	10	7	5	1
PACKAGE UNITS.....	100%	48	23	14	9	4	1
CENTRAL SYSTEM.....	100%	51	26	10	6	6	1
COMBINATION/OTHER.....	100%	43	20	18	10	7	2
NO AIR CONDITIONING.....	100%	47	35	5	4	8	2

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

SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 11C. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY OCCUPANCY CHARACTERISTICS
- PERCENTAGE OF COLUMN TOTALS

USES OF FUEL	TOTAL	OCCUPANCY CHARACTERISTICS					
		SINGLE ESTABLISHMENT BUILDING		MULTIPLE ESTABLISHMENT BUILDING		GOVERNMENT OWNED AND OCCUPIED	NOT REPORTED
		OWNER IS OCCUPANT	OWNER IS NOT OCCUPANT	OWNER IS OCCUPANT	OWNER IS NOT OCCUPANT		
NONRESIDENTIAL BUILDINGS.....	100%	100%	100%	100%	100%	100%	100%
END USE BY FUEL TYPE							
HEATING FUEL USED.....	89	91	84	98	96	91	61
NATURAL GAS.....	49	48	49	58	58	42	19
ELECTRICITY.....	24	24	21	28	34	28	29
FUEL OIL.....	19	20	17	20	17	19	22
LIQUID PETROLEUM GAS (LPG)	5	6	5	4	3	2	2
WOOD.....	2	3	3	1	1	-	-
COAL.....	1	1	1	-	-	2	1
STEAM.....	1	1	1	1	1	6	1
OTHER.....	-	-	-	-	1	2	-
NO HEATING FUEL.....	11	9	16	2	4	9	39
AIR CONDITIONING FUEL USED..	64	65	56	82	78	55	45
ELECTRICITY.....	61	62	52	78	74	54	44
NATURAL GAS.....	4	4	3	6	3	1	4
OTHER.....	1	1	-	1	1	1	-
NO AIR CONDITIONING FUEL....	36	35	44	18	22	45	55
WATER HEATING FUEL USED.....	67	69	57	79	77	68	44
NATURAL GAS.....	31	32	29	35	36	32	8
ELECTRICITY.....	31	32	24	38	38	30	32
FUEL OIL.....	4	4	4	6	6	5	1
OTHER.....	3	3	2	2	2	4	3
NO WATER HEATING FUEL.....	33	31	43	21	23	32	56
MANUFACTURING FUEL USED.....	12	13	11	11	15	5	-
ELECTRICITY.....	10	11	10	10	13	4	-
NATURAL GAS.....	2	2	2	2	1	1	-
OTHER.....	1	2	1	-	2	-	-
NO MANUFACTURING DONE.....	88	87	89	89	85	95	100
COOKING FUEL USED.....	32	36	24	37	35	32	22
ELECTRICITY.....	18	21	11	21	17	23	9
NATURAL GAS.....	15	16	12	16	20	12	8
LIQUID PETROLEUM GAS.....	3	3	2	3	2	1	7
OTHER.....	1	1	-	-	-	1	-
NO COOKING FUEL.....	68	64	76	63	65	68	78

SEE NOTES AT END OF TABLE

TABLE IIC. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY OCCUPANCY CHARACTERISTICS
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)

USES OF FUEL	TOTAL	OCCUPANCY CHARACTERISTICS					
		SINGLE ESTABLISHMENT BUILDING		MULTIPLE ESTABLISHMENT BUILDING		GOVERNMENT OWNED AND OCCUPIED	NOT REPORTED
		OWNER IS OCCUPANT	OWNER IS NOT OCCUPANT	OWNER IS OCCUPANT	OWNER IS NOT OCCUPANT		
CONVERTED FROM FUEL OIL FOR ANY END USE SINCE 1/1/79							
YES.....	1	1	1	2	1	1	2
FOR HEATING.....	1	1	1	2	1	1	2
OTHER.....	-	-	-	1	-	1	2
NO.....	97	97	96	96	98	97	85
NOT REPORTED.....	2	2	3	1	1	1	12
FUEL COMBINATIONS USED							
NO FUEL USED.....	3	2	4	-	-	2	27
ONE FUEL USED.....	20	19	19	18	20	28	26
ELECTRICITY.....	19	19	18	18	20	28	26
NATURAL GAS.....	-	-	-	-	-	-	-
FUEL OIL.....	-	-	-	-	-	-	-
TWO FUELS USED.....	65	66	69	67	64	53	32
ELECTRICITY, NATURAL GAS..	48	46	51	54	56	34	21
ELECTRICITY, FUEL OIL....	11	12	11	8	5	11	9
ELECTRICITY, LPG.....	4	6	4	3	2	2	2
OTHER.....	2	3	2	1	1	6	-
THREE FUELS USED.....	11	11	8	14	16	16	15
ELEC., GAS, FUEL OIL.....	6	6	4	10	10	10	6
ELEC., FUEL OIL, LPG....	2	2	1	3	2	1	7
ELEC., GAS, OTHER.....	2	2	1	2	3	4	2
ELEC., FUEL OIL, OTHER....	1	1	-	-	1	-	-
OTHER.....	1	1	-	-	-	1	-
FOUR OR MORE FUELS USED....	1	2	1	1	-	1	-
ENERGY SOURCES SUPPLIED TO THE BUILDING							
ELECTRICITY.....	97	98	95	100	100	98	73
NATURAL GAS.....	57	55	57	67	69	49	29
FUEL OIL.....	21	22	18	21	18	22	22
LIQUID PETROLEUM GAS.....	8	9	7	6	6	4	9
WOOD.....	3	4	3	1	1	1	-
COAL.....	1	2	2	-	-	3	1
STEAM.....	1	1	1	1	1	6	1
OTHER.....	1	1	-	1	1	3	-
NONF.....	3	2	4	-	-	2	27

SEE NOTES AT END OF TABLE

TABLE 11C. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY OCCUPANCY CHARACTERISTICS
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)

USES OF FUEL	TOTAL	OCCUPANCY CHARACTERISTICS					
		SINGLE ESTABLISHMENT BUILDING		MULTIPLE ESTABLISHMENT BUILDING		GOVERNMENT OWNED AND OCCUPIED	NOT REPORTED
		OWNER IS OCCUPANT	OWNER IS NOT OCCUPANT	OWNER IS OCCUPANT	OWNER IS NOT OCCUPANT		
NUMBER OF BOILERS							
NONE.....	79	81	82	71	77	68	82
ONE.....	16	15	15	24	17	10	18
TWO OR MORE.....	5	5	3	5	6	13	1
FUELS USED TO FIRE BOILERS							
NATURAL GAS.....	13	12	13	17	15	18	6
FUEL OIL.....	7	7	5	10	10	13	9
OTHER.....	2	2	2	3	1	4	1
HEATING SYSTEM							
SELF-CONTAINED UNITS							
FORCED AIR.....	28	27	29	36	36	15	20
RADIANT							
ELECTRIC BASEBOARDS.....	2	2	1	1	3	2	2
RADIATORS.....	1	1	2	1	2	1	-
OTHER.....	10	11	10	7	10	9	3
CENTRAL SYSTEM							
FORCED AIR.....	25	27	24	23	22	26	18
RADIANT.....	12	11	9	17	13	22	10
OTHER.....	8	8	7	9	9	13	6
OTHER.....	3	3	3	3	2	2	2
NONE.....	11	9	16	2	4	9	39
PERCENT OF BUILDING HEATED							
NONE.....	11	9	16	2	4	9	39
1 TO 25.....	6	6	7	5	6	5	9
26 TO 50.....	8	8	9	7	10	5	9
51 TO 75.....	7	8	6	10	11	4	3
76 TO 99.....	6	6	5	9	5	6	5
100.....	62	63	58	68	64	70	34

SEE NOTES AT END OF TABLE

TABLE 11C. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY OCCUPANCY CHARACTERISTICS
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)

USES OF FUEL	TOTAL	OCCUPANCY CHARACTERISTICS					
		SINGLE ESTABLISHMENT BUILDING		MULTIPLE ESTABLISHMENT BUILDING		GOVERNMENT OWNED AND OCCUPIED	NOT REPORTED
		OWNER IS OCCUPANT	OWNER IS NOT OCCUPANT	OWNER IS OCCUPANT	OWNER IS NOT OCCUPANT		
PERCENT OF BUILDING COOLED							
NONE.....	36	35	44	18	22	45	55
1 TO 25.....	14	15	12	17	19	15	17
26 TO 50.....	13	14	11	15	14	9	13
51 TO 75.....	7	7	6	10	10	4	2
76 TO 99.....	4	4	4	7	6	5	4
100.....	26	26	23	33	29	23	8
AIR CONDITIONING SYSTEM							
WINDOW UNITS.....	20	21	18	22	23	16	18
PACKAGE UNITS.....	19	19	16	28	27	14	9
CENTRAL SYSTEM.....	18	19	16	19	16	17	11
COMBINATION/OTHER.....	7	6	5	14	12	8	8
NO AIR CONDITIONING.....	36	35	44	18	22	45	55

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

SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 12A. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY NUMBER OF PEOPLE WORKING IN THE BUILDING
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS

USES OF FUEL	TOTAL	NUMBER OF PEOPLE WORKING IN THE BUILDING				
		LESS THAN 10	10 TO 19	20 TO 49	50 TO 99	100 OR MORE
NONRESIDENTIAL BUILDINGS.....	4,238	3,035	516	427	142	119
END USE BY FUEL TYPE						
HEATING FUEL USED.....	3,788	2,623	487	421	140	116
NATURAL GAS.....	2,069	1,382	298	241	83	65
ELECTRICITY.....	1,033	664	156	145	38	30
FUEL OIL.....	808	598	85	70	26	30
LIQUID PETROLEUM GAS (LPG)	223	178	23	16	2	4
WOOD.....	102	91	8	1	-	2
COAL.....	50	39	1	6	1	3
STEAM.....	51	14	7	11	6	13
OTHER.....	10	3	-	5	1	1
NO HEATING FUEL.....	450	412	28	6	2	2
AIR CONDITIONING FUEL USED..	2,706	1,676	422	369	128	111
ELECTRICITY.....	2,567	1,603	396	346	119	103
NATURAL GAS.....	161	75	34	34	11	8
OTHER.....	28	18	1	1	3	5
NO AIR CONDITIONING FUEL....	1,532	1,359	94	58	14	7
WATER HEATING FUEL USED.....	2,823	1,797	417	377	128	104
NATURAL GAS.....	1,321	821	202	174	68	57
ELECTRICITY.....	1,306	835	197	183	50	42
FUEL OIL.....	180	107	24	25	11	15
OTHER.....	118	82	10	13	5	9
NO WATER HEATING FUEL.....	1,415	1,238	99	50	14	14
MANUFACTURING FUEL USED.....	492	273	81	73	30	35
ELECTRICITY.....	427	231	75	67	25	29
NATURAL GAS.....	81	31	11	16	7	16
OTHER.....	59	26	10	8	4	11
NO MANUFACTURING DONE.....	3,746	2,762	435	354	112	83
COOKING FUEL USED.....	1,358	900	159	184	62	53
ELECTRICITY.....	765	488	93	114	38	31
NATURAL GAS.....	619	389	79	88	32	30
LIQUID PETROLEUM GAS.....	108	83	6	12	6	1
OTHER.....	25	16	1	4	1	4
NO COOKING FUEL.....	2,880	2,135	357	243	79	66

SEE NOTES AT END OF TABLE

TABLE 12A. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY NUMBER OF PEOPLE WORKING IN THE BUILDING
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)

USES OF FUEL	TOTAL	NUMBER OF PEOPLE WORKING IN THE BUILDING				
		LESS THAN 10	10 TO 19	20 TO 49	50 TO 99	100 OR MORE
CONVERTED FROM FUEL OIL FOR ANY END USE SINCE 1/1/79						
YES.....	52	37	7	3	2	2
FOR HEATING.....	45	32	6	3	2	1
OTHER.....	14	10	1	-	1	1
NO.....	4,097	2,925	504	418	135	115
NOT REPORTED.....	90	73	5	6	5	2
FUEL COMBINATIONS USED						
NO FUEL USED.....	115	115	-	-	-	-
ONE FUEL USED.....	831	640	98	66	18	9
ELECTRICITY.....	820	630	98	65	18	9
NATURAL GAS.....	6	6	-	-	-	-
FUEL OIL.....	4	3	-	1	-	-
TWO FUELS USED.....	2,775	1,967	361	290	95	62
ELECTRICITY, NATURAL GAS..	2,026	1,369	295	233	83	48
ELECTRICITY, FUEL OIL.....	461	371	45	29	8	7
ELECTRICITY, LPG.....	189	156	13	18	1	1
OTHER.....	98	71	8	10	3	6
THREE FUELS USED.....	469	286	54	63	25	40
ELEC., GAS, FUEL OIL.....	274	157	32	45	14	26
ELEC., FUEL OIL, LPG.....	76	58	10	2	5	1
ELEC., GAS, OTHER.....	76	36	10	13	5	11
ELEC., FUEL OIL, OTHER....	22	20	2	-	-	1
OTHER.....	22	16	1	2	1	2
FOUR OR MORE FUELS USED....	49	27	2	8	4	8
ENERGY SOURCES SUPPLIED TO THE BUILDING						
ELECTRICITY.....	4,109	2,907	516	426	142	118
NATURAL GAS.....	2,416	1,585	338	297	104	92
FUEL OIL.....	872	625	91	86	29	41
LIQUID PETROLEUM GAS.....	319	237	29	33	10	10
WOOD.....	124	109	8	3	1	2
COAL.....	62	50	1	7	1	3
STEAM.....	53	17	7	10	6	14
OTHER.....	27	11	2	6	5	3
NONE.....	115	115	-	-	-	-

SEE NOTES AT END OF TABLE

TABLE 12A. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY NUMBER OF PEOPLE WORKING IN THE BUILDING
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)

USES OF FUEL	TOTAL	NUMBER OF PEOPLE WORKING IN THE BUILDING				
		LESS THAN 10	10 TO 19	20 TO 49	50 TO 99	100 OR MORE
NUMBER OF BOILERS						
NONE.....	3,348	2,565	381	268	79	56
ONE.....	686	403	114	110	37	22
TWO OR MORE.....	203	67	21	49	26	40
FUELS USED TO FIRE BOILERS						
NATURAL GAS.....	553	285	82	100	43	43
FUEL OIL.....	299	163	45	48	19	24
OTHER.....	93	46	15	20	4	9
HEATING SYSTEM						
SELF-CONTAINED UNITS						
FORCED AIR.....	1,201	786	190	150	47	29
RADIANT						
ELECTRIC BASEBOARDS.....	71	62	2	5	2	-
RADIATORS.....	51	39	4	6	1	1
OTHER.....	430	350	42	21	12	6
CENTRAL SYSTEM						
FORCED AIR.....	1,069	778	116	112	29	33
RADIANT.....	503	323	68	69	28	15
OTHER.....	349	202	53	43	21	29
OTHER.....	117	84	13	16	1	3
NONE.....	448	410	28	6	2	2
PERCENT OF BUILDING HEATED						
NONE.....	448	410	28	6	2	2
1 TO 25.....	266	171	52	33	5	5
26 TO 50.....	347	276	42	24	2	2
51 TO 75.....	313	218	53	30	7	7
76 TO 99.....	242	136	46	31	15	14
100.....	2,620	1,823	294	304	111	88

SEE NOTES AT END OF TABLE

**TABLE 12A. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY NUMBER OF PEOPLE WORKING IN THE BUILDING
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)**

USES OF FUEL	TOTAL	NUMBER OF PEOPLE WORKING IN THE BUILDING				
		LESS THAN 10	10 TO 19	20 TO 49	50 TO 99	100 OR MORE
PERCENT OF BUILDING COOLED						
NONE.....	1,532	1,359	94	58	14	7
1 TO 25.....	609	326	105	116	36	25
26 TO 50.....	542	384	85	52	13	7
51 TO 75.....	283	170	55	35	8	15
76 TO 99.....	190	94	31	31	16	19
100.....	1,081	702	145	135	55	45
AIR CONDITIONING SYSTEM						
WINDOW UNITS.....	855	695	83	56	16	4
PACKAGE UNITS.....	799	401	165	146	48	39
CENTRAL SYSTEM.....	750	421	136	111	43	39
COMBINATION/OTHER.....	302	159	38	56	21	28
NO AIR CONDITIONING.....	1,532	1,359	94	58	14	7

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

SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 12B. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY NUMBER OF PEOPLE WORKING IN THE BUILDING
- PERCENTAGE OF ROW TOTALS

USES OF FUEL	TOTAL	NUMBER OF PEOPLE WORKING IN THE BUILDING				
		LESS THAN 10	10 TO 19	20 TO 49	50 TO 99	100 OR MORE
NONRESIDENTIAL BUILDINGS.....	100%	72	12	10	3	3
END USE BY FUEL TYPE						
HEATING FUEL USED.....	100%	69	13	11	4	3
NATURAL GAS.....	100%	67	14	12	4	3
ELECTRICITY.....	100%	64	15	14	4	3
FUEL OIL.....	100%	74	10	9	3	4
LIQUID PETROLEUM GAS (LPG)	100%	80	10	7	1	2
WOOD.....	100%	89	8	1	-	2
COAL.....	100%	77	2	12	2	6
STEAM.....	100%	28	14	21	11	25
OTHER.....	100%	29	4	53	8	6
NO HEATING FUEL.....	100%	92	6	1	-	1
AIR CONDITIONING FUEL USED..	100%	62	16	14	5	4
ELECTRICITY.....	100%	62	15	13	5	4
NATURAL GAS.....	100%	46	21	21	7	5
OTHER.....	100%	63	4	5	9	19
NO AIR CONDITIONING FUEL....	100%	89	6	4	1	-
WATER HEATING FUEL USED....	100%	64	15	13	5	4
NATURAL GAS.....	100%	62	15	13	5	4
ELECTRICITY.....	100%	64	15	14	4	3
FUEL OIL.....	100%	59	13	14	6	8
OTHER.....	100%	69	8	11	4	7
NO WATER HEATING FUEL....	100%	87	7	4	1	1
MANUFACTURING FUEL USED....	100%	55	16	15	6	7
ELECTRICITY.....	100%	54	18	16	6	7
NATURAL GAS.....	100%	38	13	20	9	19
OTHER.....	100%	43	17	14	7	19
NO MANUFACTURING DONE....	100%	74	12	9	3	2
COOKING FUEL USED.....	100%	66	12	14	5	4
ELECTRICITY.....	100%	64	12	15	5	4
NATURAL GAS.....	100%	63	13	14	5	5
LIQUID PETROLEUM GAS.....	100%	77	5	11	5	1
OTHER.....	100%	62	4	14	4	16
NO COOKING FUEL.....	100%	74	12	8	3	2

SEE NOTES AT END OF TABLE

TABLE 12B. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY NUMBER OF PEOPLE WORKING IN THE BUILDING
- PERCENTAGE OF ROW TOTALS (CONTINUED)

USES OF FUEL	TOTAL	NUMBER OF PEOPLE WORKING IN THE BUILDING				
		LESS THAN 10	10 TO 19	20 TO 49	50 TO 99	100 OR MORE
CONVERTED FROM FUEL OIL FOR ANY END USE SINCE 1/1/79						
YES.....	100%	72	14	6	4	3
FOR HEATING.....	100%	72	13	7	4	3
OTHER.....	100%	70	9	3	9	9
NO.....	100%	71	12	10	3	3
NOT REPORTED.....	100%	81	5	6	5	2
FUEL COMBINATIONS USED						
NO FUEL USED.....	100%	100	-	-	-	-
ONE FUEL USED.....	100%	77	12	8	2	1
ELECTRICITY.....	100%	77	12	8	2	1
NATURAL GAS.....	100%	100	-	-	-	-
FUEL OIL.....	100%	72	-	28	-	-
TWO FUELS USED.....	100%	71	13	10	3	2
ELECTRICITY, NATURAL GAS..	100%	68	15	11	4	2
ELECTRICITY, FUEL OIL.....	100%	80	10	6	2	2
ELECTRICITY, LPG.....	100%	82	7	9	1	1
OTHER.....	100%	73	9	10	3	6
THREE FUELS USED.....	100%	61	12	14	5	9
ELEC., GAS, FUEL OIL.....	100%	57	12	17	5	9
ELEC., FUEL OIL, LPG.....	100%	76	13	3	6	1
ELEC., GAS, OTHER.....	100%	48	13	18	6	15
ELEC., FUEL OIL, OTHER....	100%	90	7	-	-	3
OTHER.....	100%	72	6	10	4	8
FOUR OR MORE FUELS USED.....	100%	56	4	16	9	16
ENERGY SOURCES SUPPLIED TO THE BUILDING						
ELECTRICITY.....	100%	71	13	10	3	3
NATURAL GAS.....	100%	66	14	12	4	4
FUEL OIL.....	100%	72	10	10	3	5
LIQUID PETROLEUM GAS.....	100%	74	9	10	3	3
WOOD.....	100%	88	7	2	1	1
COAL.....	100%	80	2	11	2	5
STEAM.....	100%	32	13	18	11	26
OTHER.....	100%	40	6	22	19	12
NONE.....	100%	100	-	-	-	-

SEE NOTES AT END OF TABLE

TABLE 12B. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY NUMBER OF PEOPLE WORKING IN THE BUILDING
- PERCENTAGE OF ROW TOTALS (CONTINUED)

USES OF FUEL	TOTAL	NUMBER OF PEOPLE WORKING IN THE BUILDING				
		LESS THAN 10	10 TO 19	20 TO 49	50 TO 99	100 OR MORE
NUMBER OF BOILERS						
NONE.....	100%	77	11	8	2	2
ONE.....	100%	59	17	16	5	3
TWO OR MORE.....	100%	33	10	24	13	20
FUELS USED TO FIRE BOILERS						
NATURAL GAS.....	100%	52	15	18	8	8
FUEL OIL.....	100%	55	15	16	6	8
OTHER.....	100%	49	16	21	4	9
HEATING SYSTEM						
SELF-CONTAINED UNITS						
FORCED AIR.....	100%	65	16	12	4	2
RADIANT.....						
ELECTRIC BASEBOARDS.....	100%	87	3	7	2	-
RADIATORS.....	100%	77	7	12	3	1
OTHER.....	100%	81	10	5	3	1
CENTRAL SYSTEM						
FORCED AIR.....	100%	73	11	10	3	3
RADIANT.....	100%	64	13	14	6	3
OTHER.....	100%	58	15	12	6	8
OTHER.....	100%	72	11	14	1	2
NONE.....	100%	92	6	1	-	1
PERCENT OF BUILDING HEATED						
NONE.....	100%	92	6	1	-	1
1 TO 25.....	100%	64	20	12	2	2
26 TO 50.....	100%	80	12	7	1	1
51 TO 75.....	100%	70	17	9	2	2
76 TO 99.....	100%	56	19	13	6	6
100.....	100%	70	11	12	4	3

SEE NOTES AT END OF TABLE

TABLE 12B. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY NUMBER OF PEOPLE WORKING IN THE BUILDING
- PERCENTAGE OF ROW TOTALS (CONTINUED)

USES OF FUEL	TOTAL	NUMBER OF PEOPLE WORKING IN THE BUILDING				
		LESS THAN 10	10 TO 19	20 TO 49	50 TO 99	100 OR MORE
PERCENT OF BUILDING COOLED						
NONE.....	100%	89	6	4	1	-
1 TO 25.....	100%	54	17	19	6	4
26 TO 50.....	100%	71	16	10	2	1
51 TO 75.....	100%	60	20	12	3	5
76 TO 99.....	100%	49	16	16	8	10
100.....	100%	65	13	12	5	4
AIR CONDITIONING SYSTEM						
WINDOW UNITS.....	100%	81	10	7	2	1
PACKAGE UNITS.....	100%	50	21	18	6	5
CENTRAL SYSTEM.....	100%	56	18	15	6	5
COMBINATION/OTHER.....	100%	53	13	19	7	9
NO AIR CONDITIONING.....	100%	89	6	4	1	-

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING OR MULTIPLE ENERGY SOURCES. A DASH "—" REPRESENTS OR ROUNDS TO ZERO. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE. SEE APPENDIX B FOR DISCUSSION OF LIMITATIONS OF DATA.

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TABLE 12C. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY NUMBER OF PEOPLE WORKING IN THE BUILDING
- PERCENTAGE OF COLUMN TOTALS

USES OF FUEL	TOTAL	NUMBER OF PEOPLE WORKING IN THE BUILDING				
		LESS THAN 10	10 TO 19	20 TO 49	50 TO 99	100 OR MORE
NONRESIDENTIAL BUILDINGS.....	100%	100%	100%	100%	100%	100%
END USE BY FUEL TYPE						
HEATING FUEL USED.....	89	86	94	99	99	98
NATURAL GAS.....	49	46	58	56	59	55
ELECTRICITY.....	24	22	30	34	27	25
FUEL OIL.....	19	20	16	16	18	26
LIQUID PETROLEUM GAS (LPG)	5	6	4	4	2	3
WOOD.....	2	3	2	-	-	1
COAL.....	1	1	-	1	1	3
STEAM.....	1	-	1	3	4	11
OTHER.....	-	-	-	1	1	1
NO HEATING FUEL.....	11	14	6	1	1	2
AIR CONDITIONING FUEL USED..	64	55	82	86	90	94
ELECTRICITY.....	61	53	77	81	84	87
NATURAL GAS.....	4	2	7	8	8	7
OTHER.....	1	1	-	-	2	5
NO AIR CONDITIONING FUEL....	36	45	18	14	10	6
WATER HEATING FUEL USED....	67	59	81	88	90	88
NATURAL GAS.....	31	27	39	41	48	48
ELECTRICITY.....	31	28	38	43	35	35
FUEL OIL.....	4	4	5	6	7	12
OTHER.....	3	3	2	3	3	7
NO WATER HEATING FUEL....	33	41	19	12	10	12
MANUFACTURING FUEL USED....	12	9	16	17	21	30
ELECTRICITY.....	10	8	14	16	18	24
NATURAL GAS.....	2	1	2	4	5	13
OTHER.....	1	1	2	2	3	9
NO MANUFACTURING DONE....	88	91	84	83	79	70
COOKING FUEL USED.....	32	30	31	43	44	44
ELECTRICITY.....	18	16	18	27	27	26
NATURAL GAS.....	15	13	15	21	22	26
LIQUID PETROLEUM GAS.....	3	3	1	3	4	1
OTHER.....	1	1	-	1	1	3
NO COOKING FUEL.....	68	70	69	57	56	56

SEE NOTES AT END OF TABLE

TABLE 12C. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY NUMBER OF PEOPLE WORKING IN THE BUILDING
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)

USES OF FUEL	TOTAL	NUMBER OF PEOPLE WORKING IN THE BUILDING				
		LESS THAN 10	10 TO 19	20 TO 49	50 TO 99	100 OR MORE
CONVERTED FROM FUEL OIL FOR ANY END USE SINCE 1/1/79						
YES.....	1	1	1	1	1	2
FOR HEATING.....	1	1	1	1	1	1
OTHER.....	-	-	-	-	1	1
NO.....	97	96	98	98	95	97
NOT REPORTED.....	2	2	1	1	3	2
FUEL COMBINATIONS USED						
NO FUEL USED.....	3	4	-	-	-	-
ONE FUEL USED.....	20	21	19	16	13	7
ELECTRICITY.....	19	21	19	15	13	7
NATURAL GAS.....	-	-	-	-	-	-
FUEL OIL.....	-	-	-	-	-	-
TWO FUELS USED.....	65	65	70	68	67	52
ELECTRICITY, NATURAL GAS..	48	45	57	54	58	40
ELECTRICITY, FUEL OIL.....	11	12	9	7	6	6
ELECTRICITY, LPG.....	4	5	3	4	1	1
OTHER.....	2	2	2	2	2	5
THREE FUELS USED.....	11	9	11	15	17	34
ELEC., GAS, FUEL OIL.....	6	5	6	11	10	22
ELEC., FUEL OIL, LPG.....	2	2	2	1	3	1
ELEC., GAS, OTHER.....	2	1	2	3	3	10
ELEC., FUEL OIL, OTHER....	1	1	-	-	-	1
OTHER.....	1	1	-	1	1	2
FOUR OR MORE FUELS USED....	1	1	-	2	3	6
ENERGY SOURCES SUPPLIED TO THE BUILDING						
ELECTRICITY.....	97	96	100	100	100	100
NATURAL GAS.....	57	52	66	69	73	77
FUEL OIL.....	21	21	18	20	21	35
LIQUID PETROLEUM GAS.....	8	8	6	8	7	8
WOOD.....	3	4	2	1	1	1
COAL.....	1	2	-	2	1	3
STEAM.....	1	1	1	2	4	12
OTHER.....	1	-	-	1	4	3
NONE.....	3	4	-	-	-	-

SEE NOTES AT END OF TABLE

TABLE 12C. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY NUMBER OF PEOPLE WORKING IN THE BUILDING
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)

USES OF FUEL	TOTAL	NUMBER OF PEOPLE WORKING IN THE BUILDING				
		LESS THAN 10	10 TO 19	20 TO 49	50 TO 99	100 OR MORE
NUMBER OF BOILERS						
NONE.....	79	85	74	63	55	48
ONE.....	16	13	22	26	26	19
TWO OR MORE.....	5	2	4	11	19	34
FUELS USED TO FIRE BOILERS						
NATURAL GAS.....	13	9	16	23	30	36
FUEL OIL.....	7	5	9	11	13	20
OTHER.....	2	2	3	5	3	7
HEATING SYSTEM						
SELF-CONTAINED UNITS						
FORCED AIR.....	28	26	37	35	33	24
RADIANT						
ELECTRIC BASEBOARDS.....	2	2	-	1	1	-
RADIATORS.....	1	1	1	1	1	1
OTHER.....	10	12	8	5	8	5
CENTRAL SYSTEM						
FORCED AIR.....	25	26	23	26	20	28
RADIANT.....	12	11	13	16	20	13
OTHER.....	8	7	10	10	15	25
OTHER.....	3	3	3	4	1	2
NONE.....	11	14	6	1	1	2
PERCENT OF BUILDING HEATED						
NONE.....	11	14	6	1	1	2
1 TO 25.....	6	6	10	8	4	4
26 TO 50.....	8	9	8	6	2	2
51 TO 75.....	7	7	10	7	5	6
76 TO 99.....	6	4	9	7	10	12
100.....	62	60	57	71	78	74

SEE NOTES AT END OF TABLE

TABLE 12C. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY NUMBER OF PEOPLE WORKING IN THE BUILDING
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)

USES OF FUEL	TOTAL	NUMBER OF PEOPLE WORKING IN THE BUILDING				
		LESS THAN 10	10 TO 19	20 TO 49	50 TO 99	100 OR MORE
PERCENT OF BUILDING COOLED						
NONE.....	36	45	18	14	10	6
1 TO 25.....	14	11	20	27	26	21
26 TO 50.....	13	13	17	12	9	6
51 TO 75.....	7	6	11	8	6	12
76 TO 99.....	4	3	6	7	11	16
100.....	26	23	28	32	39	38
AIR CONDITIONING SYSTEM						
WINDOW UNITS.....	20	23	16	13	11	4
PACKAGE UNITS.....	19	13	32	34	34	33
CENTRAL SYSTEM.....	18	14	26	26	30	33
COMBINATION/OTHER.....	7	5	7	13	15	24
NO AIR CONDITIONING.....	36	45	18	14	10	6

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

SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 13A. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY HOURS OF OPERATION FOR A TYPICAL WEEK
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS

USES OF FUEL	TOTAL	HOURS OF OPERATION FOR A TYPICAL WEEK				
		NONE	39 OR FEWER HOURS	40 TO 48 HOURS	49 TO 60 HOURS	61 TO 84 HOURS
NONRESIDENTIAL BUILDINGS.....	4,238	274	583	1,047	960	629
END USE BY FUEL TYPE						
HEATING FUEL USED.....	3,788	96	545	985	888	586
NATURAL GAS.....	2,069	40	292	556	488	341
ELECTRICITY.....	1,033	34	127	274	240	159
FUEL OIL.....	808	19	145	174	215	119
LIQUID PETROLEUM GAS (LPG)	223	4	35	52	55	34
WOOD.....	102	8	10	26	21	23
COAL.....	50	3	9	20	13	3
STEAM.....	51	1	2	9	9	6
OTHER.....	10	-	-	4	1	1
NO HEATING FUEL.....	450	178	38	62	71	43
AIR CONDITIONING FUEL USED..	2,706	49	317	735	653	424
ELECTRICITY.....	2,567	45	300	692	625	410
NATURAL GAS.....	161	5	11	52	32	24
OTHER.....	28	-	9	4	5	2
NO AIR CONDITIONING FUEL....	1,532	225	266	312	307	206
WATER HEATING FUEL USED....	2,823	69	377	673	631	471
NATURAL GAS.....	1,321	27	177	303	274	232
ELECTRICITY.....	1,306	35	177	332	305	215
FUEL OIL.....	180	6	20	36	52	22
OTHER.....	118	2	11	18	22	17
NO WATER HEATING FUEL....	1,415	205	206	374	328	159
MANUFACTURING FUEL USED....	492	12	34	162	155	59
ELECTRICITY.....	427	11	24	146	139	49
NATURAL GAS.....	81	-	6	20	23	12
OTHER.....	59	3	5	22	11	4
NO MANUFACTURING DONE....	3,746	262	549	885	805	570
COOKING FUEL USED.....	1,358	30	251	255	221	236
ELECTRICITY.....	765	16	124	151	132	126
NATURAL GAS.....	619	10	115	105	93	115
LIQUID PETROLEUM GAS.....	108	4	23	12	12	22
OTHER.....	25	4	1	5	3	5
NO COOKING FUEL	2,880	244	332	792	738	393

SEE NOTES AT END OF TABLE

TABLE 13A. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY HOURS OF OPERATION FOR A TYPICAL WEEK.
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)

USES OF FUEL	TOTAL	HOURS OF OPERATION FOR A TYPICAL WEEK					MORE THAN 84 HOURS
		NONE	39 OR FEWER HOURS	40 TO 48 HOURS	49 TO 60 HOURS	61 TO 84 HOURS	
CONVERTED FROM FUEL OIL FOR ANY END USE SINCE 1/1/79							
YES.....	52	8	11	13	15	2	3
FOR HEATING.....	45	3	11	13	13	2	3
OTHER.....	14	5	-	4	4	-	1
NO.....	4,097	235	561	1,017	936	620	727
NOT REPORTED.....	90	31	11	17	9	7	15
FUEL COMBINATIONS USED							
NO FUEL USED.....	115	80	6	13	3	5	8
ONE FUEL USED.....	831	94	107	223	169	103	135
ELECTRICITY.....	820	91	106	221	166	103	134
NATURAL GAS.....	6	3	1	-	2	-	-
FUEL OIL.....	4	-	-	2	1	-	1
TWO FUELS USED.....	2,775	89	392	696	669	445	484
ELECTRICITY, NATURAL GAS..	2,026	61	275	531	477	325	357
ELECTRICITY, FUEL OIL....	461	15	82	92	134	71	67
ELECTRICITY, LPG.....	189	6	29	46	38	35	36
OTHER.....	98	7	7	26	20	14	24
THREE FUELS USED.....	469	10	74	103	104	73	105
ELEC., GAS, FUEL OIL....	274	5	46	68	58	44	54
ELEC., FUEL OIL, LPG....	76	-	16	12	21	10	18
ELEC., GAS, OTHER.....	76	1	7	13	19	14	23
ELEC., FUEL OIL, OTHER....	22	3	3	5	5	1	5
OTHER.....	22	1	2	6	2	4	6
FOUR OR MORE FUELS USED....	49	1	4	12	15	3	14
ENERGY SOURCES SUPPLIED TO THE BUILDING							
ELECTRICITY.....	4,109	191	573	1,033	951	624	737
NATURAL GAS.....	2,416	70	329	621	566	386	443
FUEL OIL.....	872	24	147	186	229	129	157
LIQUID PETROLEUM GAS.....	319	7	53	66	69	50	74
WOOD.....	124	9	13	26	27	25	23
COAL.....	62	3	10	20	20	3	6
STEAM.....	53	1	2	10	10	5	25
OTHER.....	27	1	-	11	5	2	7
NONE.....	115	80	6	13	3	5	8

SEE NOTES AT END OF TABLE

TABLE 13A. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY HOURS OF OPERATION FOR A TYPICAL WEEK
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)

USES OF FUEL	TOTAL	HOURS OF OPERATION FOR A TYPICAL WEEK					
		NONE	39 OR FEWER HOURS	40 TO 48 HOURS	49 TO 60 HOURS	61 TO 84 HOURS	
NUMBER OF BOILERS							
NONE.....	3,348	254	491	810	745	491	557
ONE.....	686	15	76	193	175	108	119
TWO OR MORE.....	203	5	15	45	40	30	69
FUELS USED TO FIRE BOILERS							
NATURAL GAS.....	553	13	63	141	114	94	128
FUEL OIL.....	299	7	34	72	76	45	64
OTHER.....	93	2	4	23	28	12	24
HEATING SYSTEM							
SELF-CONTAINED UNITS							
FORCED AIR.....	1,201	31	129	319	271	225	226
RADIANT							
ELECTRIC BASEBOARDS.....	71	7	13	29	9	8	6
RADIATORS.....	51	-	8	18	16	6	2
OTHER.....	430	15	64	108	106	54	82
CENTRAL SYSTEM							
FORCED AIR.....	1,069	26	192	260	266	152	173
RADIANT.....	503	12	70	146	105	67	102
OTHER.....	349	3	56	74	88	57	69
OTHER.....	117	2	12	31	27	17	29
NONE.....	448	178	38	62	71	43	56
PERCENT OF BUILDING HEATED							
NONE.....	448	178	38	62	71	43	56
1 TO 25.....	266	7	20	91	76	33	39
26 TO 50.....	347	9	29	97	106	46	60
51 TO 75.....	313	4	45	83	79	56	47
76 TO 99.....	242	1	30	52	66	44	50
100.....	2,620	75	422	662	561	408	493

SEE NOTES AT END OF TABLE

TABLE 13A. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY HOURS OF OPERATION FOR A TYPICAL WEEK
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)

USES OF FUEL	TOTAL	HOURS OF OPERATION FOR A TYPICAL WEEK				
		NONE	39 OR FEWER HOURS	40 TO 48 HOURS	49 TO 60 HOURS	61 TO 84 HOURS
PERCENT OF BUILDING COOLED						
NONE.....	1,532	225	266	312	307	206
1 TO 25.....	605	13	41	182	176	86
26 TO 50.....	542	8	68	144	146	93
51 TO 75.....	283	4	33	77	59	53
76 TO 99.....	190	1	9	55	50	35
100.....	1,081	24	165	277	222	156
AIR CONDITIONING SYSTEM						
WINDOW UNITS.....	855	22	123	260	218	109
PACKAGE UNITS.....	799	5	58	208	183	153
CENTRAL SYSTEM.....	750	18	95	195	194	109
COMBINATION/OTHER.....	302	5	41	72	58	52
NO AIR CONDITIONING.....	1,532	225	266	312	307	206

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

SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 13B. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY HOURS OF OPERATION FOR A TYPICAL WEEK
- PERCENTAGE OF ROW TOTALS

USES OF FUEL	TOTAL	HOURS OF OPERATION FOR A TYPICAL WEEK				
		NONE	39 OR FEWER HOURS	40 TO 48 HOURS	49 TO 60 HOURS	61 TO 84 HOURS
NONRESIDENTIAL BUILDINGS.....	100%	6	14	25	23	15
END USE BY FUEL TYPE						
HEATING FUEL USED.....	100%	3	14	26	23	15
NATURAL GAS.....	100%	2	14	27	24	16
ELECTRICITY.....	100%	3	12	27	23	15
FUEL OIL.....	100%	2	18	21	27	15
LIQUID PETROLEUM GAS (LPG)	100%	2	16	23	25	17
WOOD.....	100%	8	10	25	21	20
COAL.....	100%	6	18	40	26	6
STEAM.....	100%	1	4	18	18	11
OTHER.....	100%	-	-	39	9	47
NO HEATING FUEL.....	100%	40	8	14	16	10
AIR CONDITIONING FUEL USED..	100%	2	12	27	24	16
ELECTRICITY.....	100%	2	12	27	24	16
NATURAL GAS.....	100%	3	7	32	20	15
OTHER.....	100%	-	32	14	18	8
NO AIR CONDITIONING FUEL....	100%	15	17	20	20	13
WATER HEATING FUEL USED....	100%	2	13	24	22	17
NATURAL GAS.....	100%	2	13	23	21	18
ELECTRICITY.....	100%	3	14	25	23	16
FUEL OIL.....	100%	3	11	20	29	12
OTHER.....	100%	2	10	15	19	14
NO WATER HEATING FUEL.....	100%	15	15	26	23	11
MANUFACTURING FUEL USED....	100%	2	7	33	31	12
ELECTRICITY.....	100%	2	6	34	33	12
NATURAL GAS.....	100%	-	7	25	28	15
OTHER.....	100%	6	9	38	19	6
NO MANUFACTURING DONE.....	100%	7	15	24	21	15
COOKING FUEL USED.....	100%	2	18	19	16	17
ELECTRICITY.....	100%	2	16	20	17	16
NATURAL GAS.....	100%	2	19	17	15	19
LIQUID PETROLEUM GAS.....	100%	4	21	11	11	21
OTHER.....	100%	16	5	19	13	19
NO COOKING FUEL.....	100%	8	12	27	26	14

SEE NOTES AT END OF TABLE

**TABLE 13B. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY HOURS OF OPERATION FOR A TYPICAL WEEK
- PERCENTAGE OF ROW TOTALS (CONTINUED)**

USES OF FUEL	TOTAL	HOURS OF OPERATION FOR A TYPICAL WEEK					
		NONE	39 OR FEWER HOURS	40 TO 48 HOURS	49 TO 60 HOURS	61 TO 84 HOURS	MORE THAN 84 HOURS
CONVERTED FROM FUEL OIL FOR ANY END USE SINCE 1/1/79							
YES.....	100%	15	21	25	28	4	7
FOR HEATING.....	100%	7	24	29	28	5	7
OTHER.....	100%	33	1	26	31	2	7
NO.....	100%	6	14	25	23	15	18
NOT REPORTED.....	100%	35	12	19	10	7	17
FUEL COMBINATIONS USED							
NO FUEL USED.....	100%	69	5	11	3	5	7
ONE FUEL USED.....	100%	11	13	27	20	12	16
ELECTRICITY.....	100%	11	13	27	20	13	16
NATURAL GAS.....	100%	50	21	-	29	-	-
FUEL OIL.....	100%	-	-	40	32	-	28
TWO FUELS USED.....	100%	3	14	25	24	16	17
ELECTRICITY, NATURAL GAS..	100%	3	14	26	24	16	18
ELECTRICITY, FUEL OIL....	100%	3	18	20	29	15	15
ELECTRICITY, LPG.....	100%	3	15	24	20	18	19
OTHER.....	100%	7	7	27	20	14	25
THREE FUELS USED.....	100%	2	16	22	22	16	22
ELEC., GAS, FUEL OIL....	100%	2	17	25	21	16	20
ELEC., FUEL OIL, LPG....	100%	-	21	16	27	13	23
ELEC., GAS, OTHER.....	100%	1	9	17	25	19	30
ELEC., FUEL OIL, OTHER....	100%	12	14	22	22	6	23
OTHER.....	100%	6	10	29	10	18	27
FOUR OR MORE FUELS USED....	100%	2	8	25	30	6	28
ENERGY SOURCES SUPPLIED TO THE BUILDING							
ELECTRICITY.....	100%	5	14	25	23	15	18
NATURAL GAS.....	100%	3	14	26	23	16	18
FUEL OIL.....	100%	3	17	21	26	15	18
LIQUID PETROLEUM GAS.....	100%	2	17	21	22	16	23
WOOD.....	100%	8	10	21	22	21	19
COAL.....	100%	4	16	33	32	5	9
STEAM.....	100%	2	4	19	18	9	48
OTHER.....	100%	4	-	42	17	8	29
NONE.....	100%	69	5	11	3	5	7

SEE NOTES AT END OF TABLE

TABLE 138. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY HOURS OF OPERATION FOR A TYPICAL WEEK
- PERCENTAGE OF ROW TOTALS (CONTINUED)

USES OF FUEL	TOTAL	HOURS OF OPERATION FOR A TYPICAL WEEK					
		NONE	39 OR FEWER HOURS	40 TO 48 HOURS	49 TO 60 HOURS	61 TO 84 HOURS	MORE THAN 84 HOURS
NUMBER OF BOILERS							
NONE.....	100%	8	15	24	22	15	17
ONE.....	100%	2	11	28	25	15	17
TWO OR MORE.....	100%	2	7	22	19	15	34
FUELS USED TO FIRE BOILERS							
NATURAL GAS.....	100%	2	11	26	21	17	23
FUEL OIL.....	100%	2	11	24	26	15	21
OTHER.....	100%	2	4	25	30	13	26
HEATING SYSTEM							
SELF-CONTAINED UNITS							
FORCED AIR.....	100%	3	11	27	23	19	19
RADIANT							
ELECTRIC BASEBOARDS.....	100%	9	18	40	12	11	9
RADIATORS.....	100%	-	17	35	32	12	4
OTHER.....	100%	3	15	25	25	13	19
CENTRAL SYSTEM							
FORCED AIR.....	100%	2	18	24	25	14	16
RADIANT.....	100%	2	14	29	21	13	20
OTHER.....	100%	1	16	21	25	16	20
OTHER.....	100%	1	10	26	23	14	25
NONE	100%	40	8	14	16	10	12
PERCENT OF BUILDING HEATED							
NONE.....	100%	40	8	14	16	10	12
1 TO 25.....	100%	3	7	34	28	13	15
26 TO 50.....	100%	3	8	28	31	13	17
51 TO 75.....	100%	1	14	27	25	18	15
76 TO 99.....	100%	-	12	21	27	18	21
100.....	100%	3	16	25	21	16	19

SEE NOTES AT END OF TABLE

**TABLE 13B. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY HOURS OF OPERATION FOR A TYPICAL WEEK
- PERCENTAGE OF ROW TOTALS (CONTINUED)**

USES OF FUEL	TOTAL	HOURS OF OPERATION FOR A TYPICAL WEEK					
		NONE	39 OR FEWER HOURS	40 TO 48 HOURS	49 TO 60 HOURS	61 TO 84 HOURS	MORE THAN 84 HOURS
PERCENT OF BUILDING COOLED							
NONE.....	100%	15	17	20	20	13	14
1 TO 25.....	100%	2	7	30	29	14	18
26 TO 50.....	100%	1	12	27	27	17	15
51 TO 75.....	100%	1	12	27	21	19	20
76 TO 99.....	100%	1	5	29	26	18	21
100.....	100%	2	15	26	20	14	22
AIR CONDITIONING SYSTEM							
WINDOW UNITS.....	100%	3	14	30	25	13	14
PACKAGE UNITS.....	100%	1	7	26	23	19	24
CENTRAL SYSTEM.....	100%	2	13	26	26	15	19
COMBINATION/OTHER.....	100%	2	14	24	19	17	24
NO AIR CONDITIONING.....	100%	15	17	20	20	13	14

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

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TABLE 13C. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY HOURS OF OPERATION FOR A TYPICAL WEEK
- PERCENTAGE OF COLUMN TOTALS

USES OF FUEL	TOTAL	HOURS OF OPERATION FOR A TYPICAL WEEK					
		NONE	39 OR FEWER HOURS	40 TO 48 HOURS	49 TO 60 HOURS	61 TO 84 HOURS	MORE THAN 84 HOURS
NONRESIDENTIAL BUILDINGS.....	100%	100%	100%	100%	100%	100%	100%
END USE BY FUEL TYPE							
HEATING FUEL USED.....	89	35	94	94	93	93	92
NATURAL GAS.....	49	14	50	53	51	54	47
ELECTRICITY.....	24	12	22	26	25	25	27
FUEL OIL.....	19	7	25	17	22	19	18
LIQUID PETROLEUM GAS (LPG)	5	1	6	5	6	5	6
WOOD.....	2	3	2	2	2	4	2
COAL.....	1	1	2	2	1	1	-
STEAM.....	1	-	-	1	1	1	3
OTHER.....	-	-	-	-	-	-	1
NO HEATING FUEL.....	11	65	6	6	7	7	8
AIR CONDITIONING FUEL USED..	64	18	54	70	68	67	71
ELECTRICITY.....	61	16	51	66	65	65	66
NATURAL GAS.....	4	2	2	5	3	4	5
OTHER.....	1	-	2	-	1	-	1
NO AIR CONDITIONING FUEL....	36	82	46	30	32	33	29
WATER HEATING FUEL USED....	67	25	65	64	66	75	81
NATURAL GAS.....	31	10	30	29	29	37	41
ELECTRICITY.....	31	13	30	32	32	34	32
FUEL OIL.....	4	2	3	3	5	4	6
OTHER.....	3	1	2	2	2	3	6
NO WATER HEATING FUEL....	33	75	35	36	34	25	19
MANUFACTURING FUEL USED....	12	4	6	15	16	9	10
ELECTRICITY.....	10	4	4	14	14	9	8
NATURAL GAS.....	2	-	1	2	2	2	3
OTHER.....	1	1	1	2	1	1	2
NO MANUFACTURING DONE....	88	96	94	85	84	91	90
COOKING FUEL USED.....	32	11	43	24	23	38	49
ELECTRICITY.....	18	6	21	14	14	20	29
NATURAL GAS.....	15	4	20	10	10	18	24
LIQUID PETROLEUM GAS.....	3	1	4	1	1	4	5
OTHER.....	1	2	-	-	-	1	1
NO COOKING FUEL.....	68	89	57	76	77	62	51

SEE NOTES AT END OF TABLE

TABLE 13C. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY HOURS OF OPERATION FOR A TYPICAL WEEK
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)

USES OF FUEL	TOTAL	HOURS OF OPERATION FOR A TYPICAL WEEK					
		NONE	39 OR FEWER HOURS	40 TO 48 HOURS	49 TO 60 HOURS	61 TO 84 HOURS	MORE THAN 84 HOURS
CONVERTED FROM FUEL OIL FOR ANY END USE SINCE 1/1/79							
YES.....	1	3	2	1	2	-	-
FOR HEATING.....	1	1	2	1	1	-	-
OTHER.....	-	2	-	-	-	-	-
NO.....	97	86	96	97	98	99	98
NOT REPORTED.....	2	11	2	2	1	1	2
FUEL COMBINATIONS USED							
NO FUEL USED.....	3	29	1	1	-	1	1
ONE FUEL USED.....	20	34	18	21	18	16	18
ELECTRICITY.....	19	33	18	21	17	16	18
NATURAL GAS.....	-	1	-	-	-	-	-
FUEL OIL.....	-	-	-	-	-	-	-
TWO FUELS USED.....	65	33	67	66	70	71	65
ELECTRICITY, NATURAL GAS..	48	22	47	51	50	52	48
ELECTRICITY, FUEL OIL....	11	5	14	9	14	11	9
ELECTRICITY, LPG.....	4	2	5	4	4	6	5
OTHER.....	2	3	1	3	2	2	3
THREE FUELS USED.....	11	4	13	10	11	12	14
ELEC., GAS, FUEL OIL.....	6	2	8	6	6	7	7
ELEC., FUEL OIL, LPG.....	2	-	3	1	2	2	2
ELEC., GAS, OTHER.....	2	-	1	1	2	2	3
ELEC., FUEL OIL, OTHER....	1	1	1	-	1	-	1
OTHER.....	1	-	-	1	-	1	1
FOUR OR MORE FUELS USED.....	1	-	1	1	2	-	2
ENERGY SOURCES SUPPLIED TO THE BUILDING							
ELECTRICITY.....	97	70	98	99	99	99	99
NATURAL GAS.....	57	25	56	59	59	61	59
FUEL OIL.....	21	9	25	18	24	20	21
LIQUID PETROLEUM GAS.....	8	3	9	6	7	8	10
WOOD.....	3	3	2	2	3	4	3
COAL.....	1	1	2	2	2	1	1
STEAM.....	1	-	-	1	1	1	3
OTHER.....	1	-	-	1	-	-	1
NONE.....	3	29	1	1	-	1	1

SEE NOTES AT END OF TABLE

TABLE 13C. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY HOURS OF OPERATION FOR A TYPICAL WEEK
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)

USES OF FUEL	TOTAL	HOURS OF OPERATION FOR A TYPICAL WEEK					MORE THAN 84 HOURS
		NONE	39 OR FEWER HOURS	40 TO 48 HOURS	49 TO 60 HOURS	61 TO 84 HOURS	
NUMBER OF BOILERS							
NONE.....	79	93	84	77	78	78	75
ONE.....	16	5	13	18	18	17	16
TWO OR MORE.....	5	2	3	4	4	5	9
FUELS USED TO FIRE BOILERS							
NATURAL GAS.....	13	5	11	14	12	15	17
FUEL OIL.....	7	3	6	7	8	7	9
OTHER.....	2	1	1	2	3	2	3
HEATING SYSTEM							
SELF-CONTAINED UNITS							
FORCED AIR.....	28	11	22	31	28	36	30
RADIANT.....	-	-	-	-	-	-	-
ELECTRIC BASEBOARDS.....	2	2	2	3	1	1	1
RADIATORS.....	1	-	1	2	2	1	-
OTHER.....	10	5	11	10	11	9	11
CENTRAL SYSTEM							
FORCED AIR.....	25	10	33	25	28	24	23
RADIANT.....	12	4	12	14	11	11	14
OTHER.....	8	1	10	7	9	9	9
OTHER.....	3	1	2	3	3	3	4
NONE.....	11	65	6	6	7	7	7
PERCENT OF BUILDING HEATED							
NONE.....	11	65	6	6	7	7	7
1 TO 25.....	6	3	3	9	8	5	5
26 TO 50.....	8	3	5	9	11	7	8
51 TO 75.....	7	1	8	8	8	9	6
76 TO 99.....	6	-	5	5	7	7	7
100.....	62	27	72	63	58	65	66

SEE NOTES AT END OF TABLE

**TABLE 13C. NONRESIDENTIAL BUILDINGS: USES OF FUEL BY HOURS OF OPERATION FOR A TYPICAL WEEK
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)**

USES OF FUEL	TOTAL	HOURS OF OPERATION FOR A TYPICAL WEEK				
		NONE	39 OR FEWER HOURS	40 TO 48 HOURS	49 TO 60 HOURS	61 TO 84 HOURS
PERCENT OF BUILDING COOLED						
NONE.....	36	82	46	30	32	33
1 TO 25.....	14	5	7	17	18	14
26 TO 50.....	13	3	12	14	15	15
51 TO 75.....	7	1	6	7	6	8
76 TO 99.....	4	-	2	5	5	5
100.....	26	9	28	26	23	25
AIR CONDITIONING SYSTEM						
WINDOW UNITS.....	20	8	21	25	23	17
PACKAGE UNITS.....	19	2	10	20	19	24
CENTRAL SYSTEM.....	18	6	16	19	20	17
COMBINATION/OTHER.....	7	2	7	7	6	8
NO AIR CONDITIONING.....	36	82	46	30	32	33

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

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TABLE 14A. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY CENSUS REGION
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS

CONSERVATION PRACTICES	TOTAL	CENSUS REGIONS			
		NORTHEAST	NORTH CENTRAL	SOUTH	WEST
NONRESIDENTIAL BUILDINGS.....	4,238	735	1,326	1,566	612
WEATHERSTRIPPING OR CAULKING ADDED SINCE 1974					
YES.....	1,519	314	565	483	158
NO.....	2,509	381	687	1,018	423
DONT KNOW.....	197	35	73	57	31
NOT REPORTED.....	14	5	1	7	-
INSULATION ADDED					
YES.....	1,139	246	416	363	114
NO.....	2,834	448	801	1,141	445
DONT KNOW.....	261	39	108	61	52
NOT REPORTED.....	4	3	1	-	-
WEATHERSTRIPPING OR CAULKING, AND INSULATION ADDED					
YES.....	719	157	268	229	64
NO.....	3,297	540	965	1,286	507
DONT KNOW.....	217	36	92	49	40
NOT REPORTED.....	4	3	1	-	-
TREATED GLASS					
YES.....	1,221	204	465	360	192
AT CONSTRUCTION.....	650	90	259	193	109
SINCE CONSTRUCTION.....	578	121	207	167	83
NO.....	2,917	517	820	1,167	413
DONT KNOW.....	84	9	40	28	6
NOT REPORTED.....	17	5	-	11	1
OUTSIDE SHADING					
YES.....	957	104	282	398	173
AT CONSTRUCTION.....	523	39	115	233	136
SINCE CONSTRUCTION.....	369	56	139	136	38
NO.....	3,267	628	1,043	1,160	436
DONT KNOW.....	1	-	1	-	-
NOT REPORTED.....	13	4	-	7	2
TREATED GLASS AND OUTSIDE SHADING					
YES.....	315	48	103	100	63
NO.....	3,879	680	1,209	1,446	544
DONT KNOW.....	31	4	13	11	3
NOT REPORTED.....	13	4	-	8	1

SEE NOTES AT END OF TABLE

TABLE 14A. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY CENSUS REGION
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)

CONSERVATION PRACTICES	TOTAL	CENSUS REGIONS			
		NORTHEAST	NORTH CENTRAL	SOUTH	WEST
REDUCED HEATING					
YES.....	3,139	548	1,015	1,143	433
NO.....	604	140	208	165	92
NOT REPORTED.....	47	4	12	29	2
NOT APPLICABLE.....	448	43	91	229	85
REDUCED COOLING					
YES.....	1,582	217	516	671	178
NO.....	244	34	86	81	43
NOT REPORTED.....	26	3	8	15	-
NOT APPLICABLE.....	2,387	482	716	799	390
REDUCED HEATING OR REDUCED COOLING					
YES.....	3,272	566	1,060	1,195	451
NO.....	500	121	161	133	84
NOT REPORTED.....	44	5	13	26	1
NOT APPLICABLE.....	421	43	91	212	75
REGULAR MAINTENANCE					
YES.....	2,978	607	1,005	970	396
NO.....	744	68	201	345	130
DONT KNOW.....	79	13	24	32	10
NOT REPORTED.....	15	4	4	7	-
NOT APPLICABLE.....	421	43	91	212	75
REDUCED HEATING OR COOLING, AND REGULAR MAINTENANCE					
YES.....	2,552	500	860	862	331
NO.....	1,159	179	343	441	196
DONT KNOW.....	63	9	18	27	10
NOT REPORTED.....	42	5	13	23	1
NOT APPLICABLE.....	421	43	91	212	75

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

SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 14B. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY CENSUS REGION
- PERCENTAGE OF ROW TOTALS

CONSERVATION PRACTICES	TOTAL	CENSUS REGIONS			
		NORTHEAST	NORTH CENTRAL	SOUTH	WEST
NONRESIDENTIAL BUILDINGS.....	100%	17	31	37	14
WEATHERSTRIPPING OR CAULKING ADDED SINCE 1974					
YES.....	100%	21	37	32	10
NO.....	100%	15	27	41	17
DONT KNOW.....	100%	18	37	29	16
NOT REPORTED.....	100%	39	5	52	3
INSULATION ADDED					
YES.....	100%	22	37	32	10
NO.....	100%	16	28	40	16
DONT KNOW.....	100%	15	41	24	20
NOT REPORTED.....	100%	74	14	12	-
WEATHERSTRIPPING OR CAULKING, AND INSULATION ADDED					
YES.....	100%	22	37	32	9
NO.....	100%	16	29	39	15
DONT KNOW.....	100%	16	42	23	19
NOT REPORTED.....	100%	79	15	6	-
TREATED GLASS					
YES.....	100%	17	38	29	16
AT CONSTRUCTION.....	100%	14	40	30	17
SINCE CONSTRUCTION.....	100%	21	36	29	14
NO.....	100%	18	28	40	14
DONT KNOW.....	100%	11	48	34	7
NOT REPORTED.....	100%	31	3	63	3
OUTSIDE SHADING					
YES.....	100%	11	29	42	18
AT CONSTRUCTION.....	100%	7	22	45	26
SINCE CONSTRUCTION.....	100%	15	38	37	10
NO.....	100%	19	32	36	13
DONT KNOW.....	100%	-	84	16	-
NOT REPORTED.....	100%	29	1	53	17
TREATED GLASS AND OUTSIDE SHADING					
YES.....	100%	15	33	32	20
NO.....	100%	18	31	37	14
DONT KNOW.....	100%	11	42	36	10
NOT REPORTED.....	100%	30	1	65	4

SEE NOTES AT END OF TABLE

TABLE 14B. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY CENSUS REGION
- PERCENTAGE OF ROW TOTALS (CONTINUED)

CONSERVATION PRACTICES	TOTAL	CENSUS REGIONS			
		NORTHEAST	NORTH CENTRAL	SOUTH	WEST
REDUCED HEATING					
YES.....	100%	17	32	36	14
NO.....	100%	23	34	27	15
NOT REPORTED.....	100%	9	25	61	4
NOT APPLICABLE.....	100%	10	20	51	19
REDUCED COOLING					
YES.....	100%	14	33	42	11
NO.....	100%	14	35	33	18
NOT REPORTED.....	100%	12	30	57	1
NOT APPLICABLE.....	100%	20	30	33	16
REDUCED HEATING OR REDUCED COOLING					
YES.....	100%	17	32	37	14
NO.....	100%	24	32	27	17
NOT REPORTED.....	100%	11	29	59	2
NOT APPLICABLE.....	100%	10	22	50	18
REGULAR MAINTENANCE					
YES.....	100%	20	34	33	13
NO.....	100%	9	27	46	18
DONT KNOW.....	100%	17	30	40	13
NOT REPORTED.....	100%	27	29	44	-
NOT APPLICABLE.....	100%	10	22	50	18
REDUCED HEATING OR COOLING, AND REGULAR MAINTENANCE					
YES.....	100%	20	34	34	13
NO.....	100%	15	30	38	17
DONT KNOW.....	100%	14	28	43	15
NOT REPORTED.....	100%	12	32	55	2
NOT APPLICABLE.....	100%	10	22	50	18

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TABLE 14C. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY CENSUS REGION
- PERCENTAGE OF COLUMN TOTALS

CONSERVATION PRACTICES	TOTAL	CENSUS REGIONS			
		NORTHEAST	NORTH CENTRAL	SOUTH	WEST
NONRESIDENTIAL BUILDINGS.....	100%	100%	100%	100%	100%
WEATHERSTRIPPING OR CAULKING ADDED SINCE 1974					
YES.....	36	43	43	31	26
NO.....	59	52	52	65	69
DONT KNOW.....	5	5	6	4	5
NOT REPORTED.....	-	1	-	-	-
INSULATION ADDED					
YES.....	27	33	31	23	19
NO.....	67	61	60	73	73
DONT KNOW.....	6	5	8	4	9
NOT REPORTED.....	-	-	-	-	-
WEATHERSTRIPPING OR CAULKING, AND INSULATION ADDED					
YES.....	17	21	20	15	10
NO.....	78	73	73	82	83
DONT KNOW.....	5	5	7	3	7
NOT REPORTED.....	-	-	-	-	-
TREATED GLASS					
YES.....	29	28	35	23	31
AT CONSTRUCTION.....	15	12	20	12	18
SINCE CONSTRUCTION.....	14	16	16	11	14
NO.....	69	70	62	75	68
DONT KNOW.....	2	1	3	2	1
NOT REPORTED.....	-	1	-	1	-
OUTSIDE SHADING					
YES.....	23	14	21	25	28
AT CONSTRUCTION.....	12	5	9	15	22
SINCE CONSTRUCTION.....	9	8	11	9	6
NO.....	77	85	79	74	71
DONT KNOW.....	-	-	-	-	-
NOT REPORTED.....	-	1	-	-	-
TREATED GLASS AND OUTSIDE SHADING					
YES.....	7	7	8	6	10
NO.....	92	92	91	92	89
DONT KNOW.....	1	-	1	1	1
NOT REPORTED.....	-	1	-	1	-

SEE NOTES AT END OF TABLE

TABLE 14C. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY CENSUS REGION
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)

CONSERVATION PRACTICES	TOTAL	CENSUS REGIONS			
		NORTHEAST	NORTH CENTRAL	SOUTH	WEST
REDUCED HEATING					
YES.....	74	74	77	73	71
NO.....	14	19	16	11	15
NOT REPORTED.....	1	1	1	2	-
NOT APPLICABLE.....	11	6	7	15	14
REDUCED COOLING					
YES.....	37	29	39	43	29
NO.....	6	5	6	5	7
NOT REPORTED.....	1	-	1	1	-
NOT APPLICABLE.....	56	66	54	51	64
REDUCED HEATING OR REDUCED COOLING					
YES.....	77	77	80	76	74
NO.....	12	17	12	8	14
NOT REPORTED.....	1	1	1	2	-
NOT APPLICABLE.....	10	6	7	14	12
REGULAR MAINTENANCE					
YES.....	70	83	76	62	65
NO.....	18	9	15	22	21
DONT KNOW.....	2	2	2	2	2
NOT REPORTED.....	-	1	-	-	-
NOT APPLICABLE.....	10	6	7	14	12
REDUCED HEATING OR COOLING, AND REGULAR MAINTENANCE					
YES.....	60	68	65	55	54
NO.....	27	24	26	28	32
DONT KNOW.....	1	1	1	2	2
NOT REPORTED.....	1	1	1	1	-
NOT APPLICABLE.....	10	6	7	14	12

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TABLE 15A. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY HEATING AND COOLING DEGREE DAYS
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS

CONSERVATION PRACTICES	TOTAL	HEATING DEGREE DAYS (HDD) AND COOLING DEGREE DAYS (CDD)				
		<2000 CDD AND >7000 HDD	<2000 CDD AND 5500 TO 7000 HDD	<2000 CDD AND 4000 TO 5499 HDD	<2000 CDD AND <4000 HDD	>2000 CDD AND <4000 HDD
NONRESIDENTIAL BUILDINGS.....	4,238	470	1,242	1,132	704	689
WEATHERSTRIPPING OR CAULKING ADDED SINCE 1974						
YES.....	1,519	202	554	416	153	194
NO.....	2,509	248	623	659	518	460
DONT KNOW.....	157	19	61	51	34	33
NOT REPORTED.....	14	1	4	6	-	2
INSULATION ADDED						
YES.....	1,139	154	406	299	119	162
NO.....	2,834	283	752	750	549	500
DONT KNOW.....	261	33	81	83	37	27
NOT REPORTED.....	4	-	3	-	-	-
WEATHERSTRIPPING OR CAULKING, AND INSULATION ADDED						
YES.....	719	103	265	189	60	102
NO.....	3,297	339	897	883	614	563
DONT KNOW.....	217	28	77	59	30	23
NOT REPORTED.....	4	-	3	-	-	-
TREATED GLASS						
YES.....	1,221	180	421	283	140	195
AT CONSTRUCTION.....	650	105	223	140	73	108
SINCE CONSTRUCTION.....	578	73	213	138	64	89
NO.....	2,917	272	793	818	551	482
DONT KNOW.....	84	16	25	25	9	7
NOT REPORTED.....	17	1	2	6	3	4
OUTSIDE SHADING						
YES.....	957	95	235	209	223	195
AT CONSTRUCTION.....	523	43	125	83	139	133
SINCE CONSTRUCTION.....	369	46	106	94	63	59
NO.....	3,267	373	1,006	918	478	492
DONT KNOW.....	1	-	-	-	-	-
NOT REPORTED.....	13	2	1	5	3	2
TREATED GLASS AND OUTSIDE SHADING						
YES.....	315	51	91	54	49	70
NO.....	3,879	411	1,143	1,063	646	615
DONT KNOW.....	31	8	7	9	5	2
NOT REPORTED.....	13	1	1	6	3	2

SEE NOTES AT END OF TABLE

TABLE 15A. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY HEATING AND COOLING DEGREE DAYS
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)

CONSERVATION PRACTICES	TOTAL	HEATING DEGREE DAYS (HDD) AND COOLING DEGREE DAYS (CDD)				
		<2000 CDD AND >7000 HDD	<2000 CDD AND 5500 TO 7000 HDD	<2000 CDD AND 4000 TO 5499 HDD	<2000 CDD AND <4000 HDD	>2000 CDD AND <4000 HDD
REDUCED HEATING						
YES.....	3,139	347	936	896	483	476
NO.....	604	80	227	134	100	64
NOT REPORTED.....	47	5	7	13	6	16
NOT APPLICABLE.....	448	37	73	89	115	133
REDUCED COOLING						
YES.....	1,582	131	432	398	280	341
NO.....	244	20	82	56	48	39
NOT REPORTED.....	26	6	4	9	2	5
NOT APPLICABLE.....	2,387	313	725	670	375	304
REDUCED HEATING OR REDUCED COOLING						
YES.....	3,272	363	974	923	507	505
NO.....	500	64	188	108	85	55
NOT REPORTED.....	44	6	7	15	6	11
NOT APPLICABLE.....	421	37	73	86	106	119
REGULAR MAINTENANCE						
YES.....	2,578	365	953	833	411	417
NO.....	744	56	188	182	174	144
DONT KNOW.....	79	10	25	24	13	8
NOT REPORTED.....	15	1	4	7	1	2
NOT APPLICABLE.....	421	37	73	86	106	119
REDUCED HEATING OR COOLING, AND REGULAR MAINTENANCE						
YES.....	2,552	306	788	731	363	364
NO.....	1,159	113	356	277	225	188
DONT KNOW.....	63	7	20	20	9	7
NOT REPORTED.....	42	6	6	17	2	11
NOT APPLICABLE.....	421	37	73	86	106	119

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TABLE 158. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY HEATING AND COOLING DEGREE DAYS
- PERCENTAGE OF ROW TOTALS

CONSERVATION PRACTICES	TOTAL	HEATING DEGREE DAYS (HDD) AND COOLING DEGREE DAYS (CDD)					
		<2000 CDD AND >7000 HDD		<2000 CDD AND 5500 TO 7000 HDD		<2000 CDD AND 4000 TO 5499 HDD	
		>2000 CDD AND <4000 HDD					
		11	29	27	17		16
NONRESIDENTIAL BUILDINGS.....	100%						
WEATHERSTRIPPING OR CAULKING ADDED SINCE 1974							
YES.....	100%	13	36	27	10		13
NO.....	100%	10	25	26	21		18
DONT KNOW.....	100%	9	31	26	17		17
NOT REPORTED.....	100%	5	29	47	3		16
INSULATION ADDED							
YES.....	100%	14	36	26	10		14
NO.....	100%	10	27	26	19		18
DONT KNOW.....	100%	12	31	32	14		10
NOT REPORTED.....	100%	3	82	12	3		-
WEATHERSTRIPPING OR CAULKING, AND INSULATION ADDED							
YES.....	100%	14	37	26	8		14
NO.....	100%	10	27	27	19		17
DONT KNOW.....	100%	13	35	27	14		11
NOT REPORTED.....	100%	3	87	10	-		-
TREATED GLASS							
YES.....	100%	15	35	23	11		16
AT CONSTRUCTION.....	100%	16	34	22	11		17
SINCE CONSTRUCTION.....	100%	13	37	24	11		15
NO.....	100%	9	27	28	19		17
DONT KNOW.....	100%	20	30	30	11		9
NOT REPORTED.....	100%	4	14	35	21		27
OUTSIDE SHADING							
YES.....	100%	10	25	22	23		20
AT CONSTRUCTION.....	100%	8	24	16	27		25
SINCE CONSTRUCTION.....	100%	13	29	26	17		16
NO.....	100%	11	31	28	15		15
DONT KNOW.....	100%	15	-	69	16		-
NOT REPORTED.....	100%	17	5	35	25		17
TREATED GLASS AND OUTSIDE SHADING							
YES.....	100%	16	29	17	16		22
NO.....	100%	11	29	27	17		16
DONT KNOW.....	100%	24	23	29	18		7
NOT REPORTED.....	100%	5	5	46	26		18

SEE NOTES AT END OF TABLE

TABLE 15B. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY HEATING AND COOLING DEGREE DAYS
- PERCENTAGE OF ROW TOTALS (CONTINUED)

CONSERVATION PRACTICES	TOTAL	HEATING DEGREE DAYS (HDD) AND COOLING DEGREE DAYS (CDD)				
		<2000 CDD AND >7000 HDD	<2000 CDD AND 5500 TO 7000 HDD	<2000 CDD AND 4000 TO 5499 HDD	<2000 CDD AND <4000 HDD	>2000 CDD AND <4000 HDD
REDUCED HEATING						
YES.....	100%	11	30	29	15	15
NO.....	100%	13	37	22	17	11
NOT REPORTED.....	100%	11	14	29	13	33
NOT APPLICABLE.....	100%	8	16	20	26	30
REDUCED COOLING						
YES.....	100%	8	27	25	18	22
NO.....	100%	8	34	23	20	16
NOT REPORTED.....	100%	24	14	36	7	19
NOT APPLICABLE.....	100%	13	30	28	16	13
REDUCED HEATING OR REDUCED COOLING						
YES.....	100%	11	30	28	16	15
NO.....	100%	13	38	22	17	11
NOT REPORTED.....	100%	13	16	33	13	24
NOT APPLICABLE.....	100%	9	17	20	25	28
REGULAR MAINTENANCE						
YES.....	100%	12	32	28	14	14
NO.....	100%	8	25	24	23	19
DONT KNOW.....	100%	13	31	30	16	10
NOT REPORTED.....	100%	9	24	45	5	17
NOT APPLICABLE.....	100%	9	17	20	25	28
REDUCED HEATING OR COOLING, AND REGULAR MAINTENANCE						
YES.....	100%	12	31	29	14	14
NO.....	100%	10	31	24	19	16
DONT KNOW.....	100%	11	32	32	14	11
NOT REPORTED.....	100%	14	14	40	5	27
NOT APPLICABLE.....	100%	9	17	20	25	28

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TABLE 15C. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY HEATING AND COOLING DEGREE DAYS
- PERCENTAGE OF COLUMN TOTALS

CONSERVATION PRACTICES	TOTAL	HEATING DEGREE DAYS (HDD) AND COOLING DEGREE DAYS (CDD)					
		<2000 CDD AND >7000 HDD	<2000 CDD AND 5500 TO 7000 HDD	<2000 CDD AND 4000 TO 5499 HDD	<2000 CDD AND <4000 HDD	>2000 CDD AND <4000 HDD	>2000 CDD AND >4000 HDD
NONRESIDENTIAL BUILDINGS.....	100%	100%	100%	100%	100%	100%	100%
WEATHERSTRIPPING OR CAULKING ADDED SINCE 1974							
YES.....	36	43	45	37	22	28	
NO.....	59	53	50	58	73	67	
DONT KNOW.....	5	4	5	5	5	5	
NOT REPORTED.....	-	-	-	1	-	-	
INSULATION ADDED							
YES.....	27	33	33	26	17	24	
NO.....	67	60	61	66	78	73	
DONT KNOW.....	6	7	7	7	5	4	
NOT REPORTED.....	-	-	-	-	-	-	
WEATHERSTRIPPING OR CAULKING, AND INSULATION ADDED							
YES.....	17	22	21	17	8	15	
NO.....	78	72	72	78	87	82	
DONT KNOW.....	5	6	6	5	4	3	
NOT REPORTED.....	-	-	-	-	-	-	
TREATED GLASS							
YES.....	29	38	34	25	20	28	
AT CONSTRUCTION.....	15	22	18	12	10	16	
SINCE CONSTRUCTION.....	14	16	17	12	9	13	
NO.....	69	58	64	72	78	70	
DONT KNOW.....	2	4	2	2	1	1	
NOT REPORTED.....	-	-	-	1	-	1	
OUTSIDE SHADING							
YES.....	23	20	19	18	32	28	
AT CONSTRUCTION.....	12	9	10	7	20	19	
SINCE CONSTRUCTION.....	5	10	9	8	9	9	
NO.....	77	79	81	81	68	71	
DONT KNOW.....	-	-	-	-	-	-	
NOT REPORTED.....	-	-	-	-	-	-	
TREATED GLASS AND OUTSIDE SHADING							
YES.....	7	11	7	5	7	10	
NO.....	92	87	92	94	92	89	
DONT KNOW.....	1	2	1	1	1	-	
NOT REPORTED.....	-	-	-	1	-	-	

SEE NOTES AT END OF TABLE

TABLE 15C. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY HEATING AND COOLING DEGREE DAYS
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)

CONSERVATION PRACTICES	TOTAL	HEATING DEGREE DAYS (HDD) AND COOLING DEGREE DAYS (CDD)				
		<2000 CDD AND >7000 HDD	<2000 CDD AND 5500 TO 7000 HDD	<2000 CDD AND 4000 TO 5499 HDD	<2000 CDD AND <4000 HDD	>2000 CDD AND <4000 HDD
REDUCED HEATING						
YES.....	74	74	75	79	69	69
NO.....	14	17	18	12	14	9
NOT REPORTED.....	1	1	1	1	1	2
NOT APPLICABLE.....	11	8	6	8	16	19
REDUCED COOLING						
YES.....	37	28	35	35	40	49
NO.....	6	4	7	5	7	6
NOT REPORTED.....	1	1	-	1	-	1
NOT APPLICABLE.....	56	67	58	59	53	44
REDUCED HEATING OR REDUCED COOLING						
YES.....	77	77	78	82	72	73
NO.....	12	14	15	10	12	8
NOT REPORTED.....	1	1	1	1	1	2
NOT APPLICABLE.....	10	8	6	8	15	17
REGULAR MAINTENANCE						
YES.....	70	78	77	74	58	60
NO.....	18	12	15	16	25	21
DONT KNOW.....	2	2	2	2	2	1
NOT REPORTED.....	-	-	-	1	-	-
NOT APPLICABLE.....	10	8	6	8	15	17
REDUCED HEATING OR COOLING, AND REGULAR MAINTENANCE						
YES.....	60	65	63	65	52	53
NO.....	27	24	29	24	32	27
DONT KNOW.....	1	2	2	2	1	1
NOT REPORTED.....	1	1	-	1	-	2
NOT APPLICABLE.....	10	8	6	8	15	17

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TABLE 16A. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY BUILDING TYPE
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS

CONSERVATION PRACTICES	TOTAL	BUILDING TYPE													
		ASS	AUTO	EDU	FOOD	HEALTH	INDUS	LODGING	OFFICE	RESIDENTIAL	RETAIL	HAR	OTH	VACANT	
		M	MOT	CAT	SAL	SALE	TRIAL	GTING	ICE	ENTIAL	AIL	EHO	HER		
		B	TIVE	TION	S	TH	RIAL	G	E	AL	L	HO	HER		
		LY	E	N	SALES	HEALTH	INDUSTRIAL	LODGING	OFFICE	RESIDENTIAL	RETAIL	HAR	OTHER	VACANT	
NONRESIDENTIAL BUILDINGS.....	4,238	448	401	161	366	44	243	101	600	347	714	430	237	146	
WEATHERSTRIPPING OR CAULKING ADDED SINCE 1974															
YES.....	1,519	202	135	59	130	23	75	54	229	176	244	102	74	16	
NO.....	2,509	236	245	94	210	17	160	42	357	149	426	307	156	108	
DONT KNOW.....	197	10	21	6	25	3	5	5	11	20	44	20	6	20	
NOT REPORTED.....	14	-	-	2	1	-	2	-	3	1	-	1	-	2	
INSULATION ADDED															
YES.....	1,139	136	95	28	110	10	57	31	182	153	190	86	45	17	
NO.....	2,834	286	281	122	227	26	179	61	397	167	475	328	179	107	
DONT KNOW.....	261	26	25	12	29	7	6	9	22	26	49	16	13	21	
NOT REPORTED.....	4	-	-	-	-	-	1	-	-	1	-	-	-	1	
WEATHERSTRIPPING OR CAULKING, AND INSULATION ADDED															
YES.....	719	79	58	19	71	9	33	26	111	109	127	45	28	5	
NO.....	3,297	346	320	134	269	28	208	70	473	214	543	370	202	120	
DONT KNOW.....	217	23	23	8	26	6	2	6	16	22	44	14	7	20	
NOT REPORTED.....	4	-	-	-	-	-	1	-	-	1	-	-	-	1	
TREATED GLASS															
YES.....	1,221	195	80	51	114	23	54	26	268	110	170	60	53	17	
AT CONSTRUCTION.....	650	116	35	37	60	17	32	14	155	33	74	37	28	11	
SINCE CONSTRUCTION.....	578	82	40	14	51	7	22	13	119	78	91	26	29	6	
NO.....	2,917	245	317	107	245	21	188	73	325	224	518	360	176	117	
DONT KNOW.....	84	6	5	3	7	-	-	2	8	11	25	3	2	12	
NOT REPORTED.....	17	2	-	-	-	-	-	-	-	1	1	6	5	1	

SEE NOTES AT END OF TABLE

TABLE 16A. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY BUILDING TYPE
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)

CONSERVATION PRACTICES	TOTAL	BUILDING TYPE													
		ASSEMBLY	AUTOMOTIVE	EDUCATION	FOOD	HEALTH	INDUSTRIAL	LOGGING	OFFICE	RESIDENTIAL	RETAIL	WAREHOUSE	OTHER	VACANT	
OUTSIDE SHADING															
YES.....	957	34	56	26	130	8	30	39	162	107	251	51	30	32	
AT CONSTRUCTION.....	523	19	36	23	72	7	19	31	93	30	132	27	16	17	
SINCE CONSTRUCTION.....	369	15	16	3	46	-	9	6	61	71	104	21	13	7	
NO.....	3,267	412	345	135	236	36	213	62	439	240	461	375	201	113	
DONT KNOW.....	1	-	-	-	-	-	-	-	-	-	1	-	-	-	
NOT REPORTED.....	13	2	-	-	-	-	-	-	-	-	1	3	6	1	
TREATED GLASS AND OUTSIDE SHADING															
YES.....	315	17	10	12	42	5	10	11	74	33	67	20	12	3	
NO.....	3,879	429	389	148	320	39	233	90	525	307	634	405	219	141	
DONT KNOW.....	31	-	2	1	4	-	-	-	2	7	12	2	-	1	
NOT REPORTED.....	13	2	-	-	-	-	-	-	-	-	1	3	5	1	
REDUCED HEATING															
YES.....	3,139	404	334	148	281	32	172	72	487	244	560	199	161	45	
NO.....	604	28	41	9	61	10	48	21	96	101	93	45	41	10	
NOT REPORTED.....	47	1	2	2	4	1	4	6	5	1	7	4	3	6	
NOT APPLICABLE.....	448	15	24	2	20	-	19	2	12	-	55	182	32	84	
REDUCED COOLING															
YES.....	1,582	207	58	68	170	19	99	26	374	81	295	89	72	23	
NO.....	244	19	10	4	31	8	20	9	58	7	31	21	20	5	
NOT REPORTED.....	26	1	3	-	7	2	1	1	2	3	2	-	-	4	
NOT APPLICABLE.....	2,387	222	330	89	159	14	122	65	166	255	387	319	144	113	

SEE NOTES AT END OF TABLE

TABLE 16A. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY BUILDING TYPE
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)

CONSERVATION PRACTICES	TOTAL	BUILDING TYPE												
		ASSEMBLY	AUTOMOTIVE	EDUCATION	FOOD SALES	HEALTH CARE	INDUSTRIAL	lodGING	OFFICE	RESIDENTIAL	RETAIL	WAREHOUSE	OTHER	VACANT
REDUCED HEATING OR REDUCED COOLING														
YES.....	3,272	408	347	149	300	33	189	74	512	253	590	205	167	46
NO.....	500	25	34	8	49	9	35	19	72	89	70	43	38	9
NOT REPORTED.....	44	1	-	2	5	2	3	5	4	5	4	3	2	6
NOT APPLICABLE.....	421	15	20	2	13	-	15	2	12	-	50	178	30	84
REGULAR MAINTENANCE														
YES.....	2,978	366	274	150	281	38	182	86	462	267	479	190	165	39
NO.....	744	55	100	8	69	5	35	12	115	68	168	54	39	16
DONT KNOW.....	79	13	4	1	4	-	8	-	11	9	16	6	3	4
NOT REPORTED.....	15	-	3	-	-	-	3	-	1	3	1	2	-	3
NOT APPLICABLE.....	421	15	20	2	13	-	15	2	12	-	50	178	30	84
REDUCED HEATING OR COOLING, AND REGULAR MAINTENANCE														
YES.....	2,552	341	250	141	233	28	152	64	402	195	420	158	136	29
NO.....	1,159	79	126	15	112	14	65	30	173	141	226	87	66	24
DONT KNOW.....	63	13	2	1	4	-	6	-	9	6	13	4	2	3
NOT REPORTED.....	42	1	3	2	4	2	5	4	4	5	4	2	2	5
NOT APPLICABLE.....	421	15	20	2	13	-	15	2	12	-	50	178	30	84

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. SEE APPENDIX B FOR DISCUSSION OF LIMITATIONS OF DATA.

SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 168. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY BUILDING TYPE
- PERCENTAGE OF ROW TOTALS

CONSERVATION PRACTICES	TOTAL	BUILDING TYPE												
		A S S E M B L Y	A U T O M B I L	E D U C A T I O N	F O C O D S A L E S	H E A L T H A L S	I N D U S T R I A L	L O D G I N G	O F F I C E	R E S I D E N T I A L	R E T A I L	W A P E H O U S E	OT H E R	V A C A N T
NONRESIDENTIAL BUILDINGS.....	100%	11	9	4	9	1	6	2	14	8	17	10	6	3
WEATHERSTRIPPING OR CAULKING ADDED SINCE 1974														
YES.....	100%	13	9	4	9	2	5	4	15	12	16	7	5	1
NO.....	100%	9	10	4	8	1	6	2	14	6	17	12	6	4
DONT KNOW.....	100%	5	11	3	13	2	2	2	6	10	22	10	3	10
NOT REPORTED.....	100%	-	-	14	10	1	17	-	25	10	-	9	3	13
INSULATION ADDED														
YES.....	100%	12	8	2	10	1	5	3	16	13	17	8	4	1
NO.....	100%	10	10	4	8	1	6	2	14	6	17	12	6	4
DONT KNOW.....	100%	10	10	5	11	3	2	3	8	10	19	6	5	8
NOT REPORTED.....	100%	-	-	-	-	3	23	-	3	35	11	3	3	19
WEATHERSTRIPPING OR CAULKING, AND INSULATION ADDED														
YES.....	100%	11	8	3	10	1	5	4	15	15	18	6	4	1
NO.....	100%	10	10	4	8	1	6	2	14	6	16	11	6	4
DONT KNOW.....	100%	11	11	4	12	3	1	3	7	10	20	6	3	9
NOT REPORTED.....	100%	-	-	-	-	3	18	-	3	37	12	3	3	20
TREATED GLASS														
YES.....	100%	16	7	4	9	2	4	2	22	9	14	5	4	1
AT CONSTRUCTION.....	100%	18	5	6	9	3	5	2	24	5	11	6	4	2
SINCE CONSTRUCTION.....	100%	14	7	2	9	1	4	2	21	13	16	4	5	1
NO.....	100%	8	11	4	8	1	6	3	11	8	18	12	6	4
DONT KNOW.....	100%	7	6	4	8	-	1	2	10	13	29	4	2	14
NOT REPORTED.....	100%	13	-	-	-	-	1	-	-	8	8	35	31	4

SEE NOTES AT END OF TABLE

TABLE 168. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY BUILDING TYPE
- PERCENTAGE OF ROW TOTALS (CONTINUED)

CONSERVATION PRACTICES	TOTAL	BUILDING TYPE													
		ASSEMBLY	AUTOMOTIVE	EDUCATION	FOOD SALES	HEALTH	INDUSTRIAL	LODGING	OFFICE	RESIDENTIAL	RETAIL	WAREHOUSE	OTHER	VACANT	
OUTSIDE SHADING															
YES.....	100%	4	6	3	14	1	3	4	17	11	26	5	3	3	
AT CONSTRUCTION.....	100%	4	7	4	14	1	4	6	18	6	25	5	3	3	
SINCE CONSTRUCTION.....	100%	4	4	1	12	-	3	2	16	19	28	6	3	2	
NO.....	100%	13	11	4	7	1	7	2	13	7	14	11	6	3	
DONT KNOW.....	100%	-	-	-	-	-	-	-	-	-	100	-	-	-	
NOT REPORTED.....	100%	17	-	-	-	-	-	-	-	-	10	25	42	5	
TREATED GLASS AND OUTSIDE SHADING															
YES.....	100%	5	3	4	13	2	3	3	23	10	21	6	4	1	
NO.....	100%	11	10	4	8	1	6	2	14	8	16	10	6	4	
DONT KNOW.....	100%	-	7	4	13	-	-	1	7	21	39	5	-	2	
NOT REPORTED.....	100%	18	-	-	-	-	-	-	-	-	10	25	41	6	
REDUCED HEATING															
YES.....	100%	13	11	5	9	1	5	2	16	8	18	6	5	1	
NO.....	100%	5	7	2	10	2	8	3	16	17	15	7	7	2	
NOT REPORTED.....	100%	2	4	5	9	3	7	13	10	3	15	7	7	13	
NOT APPLICABLE.....	100%	3	5	-	5	-	4	1	3	-	12	41	7	19	
REDUCED COOLING															
YES.....	100%	13	4	4	11	1	6	2	24	5	19	6	5	1	
NO.....	100%	8	4	2	13	3	8	4	24	3	13	9	8	2	
NOT REPORTED.....	100%	2	10	1	26	8	5	3	8	13	7	1	-	16	
NOT APPLICABLE.....	100%	9	14	4	7	1	5	3	7	11	16	13	6	5	

SEE NOTES AT END OF TABLE

TABLE 16B. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY BUILDING TYPE
- PERCENTAGE OF ROW TOTALS (CONTINUED)

CONSERVATION PRACTICES	TOTAL	BUILDING TYPE												
		ASSEMBLY	AUTOMOTIVE	EDUCATION	FOOD SALES	HEALTH	INDUSTRIAL	LOGGING	OFFICE	RESIDENTIAL	RETAIL	WAREHOUSE	OTHER	VACANT
REDUCED HEATING OR REDUCED COOLING														
YES.....	100%	12	11	5	9	1	6	2	16	8	18	6	5	1
NO.....	100%	5	7	2	10	2	7	4	14	18	14	9	8	2
NOT REPORTED.....	100%	2	1	4	12	5	7	12	10	11	9	8	5	14
NOT APPLICABLE.....	100%	3	5	1	3	-	3	1	3	-	12	42	7	20
REGULAR MAINTENANCE														
YES.....	100%	12	9	5	9	1	6	3	16	9	16	6	6	1
NO.....	100%	7	13	1	9	1	5	2	15	9	23	7	5	2
DONT KNOW.....	100%	16	5	2	5	-	10	1	13	11	20	8	4	5
NOT REPORTED.....	100%	-	18	-	-	-	21	-	6	20	4	14	-	17
NOT APPLICABLE.....	100%	3	5	1	3	-	3	1	3	-	12	42	7	20
REDUCED HEATING OR COOLING, AND REGULAR MAINTENANCE														
YES.....	100%	13	10	6	9	1	6	3	16	8	16	6	5	1
NO.....	100%	7	11	1	10	1	6	3	15	12	20	8	6	2
DONT KNOW.....	100%	20	3	2	7	-	9	-	14	9	21	6	3	5
NOT REPORTED.....	100%	2	7	5	10	5	11	10	9	11	9	6	5	12
NOT APPLICABLE.....	100%	3	5	1	3	-	3	1	3	-	12	42	7	20

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. SEE APPENDIX B FOR DISCUSSION OF LIMITATIONS OF DATA.

SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 16C. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY BUILDING TYPE
- PERCENTAGE OF COLUMN TOTALS

CONSERVATION PRACTICES	TOTAL	BUILDING TYPE													
		A S S E M B L Y	A U T O M O T I V E	E D U C A T I O N	F O O D S A L E S	H E A L T H	I N D U S T R I A L	L O D G I N G	O F F I C E	R E S I D E N T I A L	R E S I D E N T I A L	W A R E H O U S E	O T H E R	V A C A N T	
NONRESIDENTIAL BUILDINGS.....	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
WEATHERSTRIPPING OR CAULKING ADDED SINCE 1974															
YES.....	36	45	34	37	35	53	31	53	38	51	34	24	31	11	11
NO.....	59	53	61	58	57	40	66	42	60	43	60	71	66	74	74
DONT KNOW.....	5	2	5	4	7	7	2	5	2	6	6	5	3	3	14
NOT REPORTED.....	-	-	-	1	-	-	1	-	1	-	-	-	-	-	1
INSULATION ADDED															
YES.....	27	30	24	17	30	23	23	31	30	44	27	20	19	12	12
NO.....	67	64	70	76	62	60	74	60	66	48	67	76	76	73	73
DONT KNOW.....	6	6	6	7	8	17	2	9	4	7	7	4	5	5	14
NOT REPORTED.....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WEATHERSTRIPPING OR CAULKING, AND INSULATION ADDED															
YES.....	17	18	14	12	19	22	13	26	18	31	18	10	12	3	3
NO.....	78	77	80	83	73	64	86	69	79	62	76	86	85	83	83
DONT KNOW.....	5	5	6	5	7	14	1	6	3	6	6	3	3	3	13
NOT REPORTED.....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TREATED GLASS															
YES.....	29	44	20	31	31	52	22	26	45	32	24	14	23	12	12
AT CONSTRUCTION.....	15	26	9	23	16	39	13	14	26	9	10	9	12	8	8
SINCE CONSTRUCTION.....	14	18	10	9	14	17	9	13	20	22	13	6	12	4	4
NO.....	69	55	79	67	67	48	78	73	54	65	73	84	74	80	80
DONT KNOW.....	2	1	1	2	2	-	-	2	1	3	3	1	1	1	8
NOT REPORTED.....	-	1	-	-	-	-	-	-	-	-	-	1	2	-	-

SEE NOTES AT END OF TABLE

TABLE 16C. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY BUILDING TYPE
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)

CONSERVATION PRACTICES	TOTAL	BUILDING TYPE												
		ASSEMBLY	AUTOMOTIVE	EDUCATION	FOOD	HEALTH	INDUSTRIAL	LODGING	OFFICE	RESIDENTIAL	RETAIL	WAREHOUSE	OTHER	VACANT
OUTSIDE SHADING														
YES.....	23	8	14	16	36	19	12	39	27	31	35	12	13	22
AT CONSTRUCTION.....	12	4	9	15	20	15	8	31	15	9	18	6	7	11
SINCE CONSTRUCTION.....	9	3	4	2	12	1	4	6	10	20	15	5	5	4
NO.....	77	92	86	84	64	81	88	61	73	69	65	87	85	78
DONT KNOW.....	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NOT REPORTED.....	-	1	-	-	-	-	-	-	-	-	-	1	2	-
TREATED GLASS AND OUTSIDE SHADING														
YES.....	7	4	2	7	12	11	4	11	12	9	9	5	5	2
NO.....	92	96	97	92	87	89	96	89	87	89	89	94	93	97
DONT KNOW.....	1	-	1	1	1	-	-	-	-	2	2	-	-	-
NOT REPORTED.....	-	1	-	-	-	-	-	-	-	-	-	1	2	-
REDUCED HEATING														
YES.....	74	90	83	91	77	74	71	71	81	70	78	45	68	31
NO.....	14	6	10	6	17	23	20	21	16	29	13	11	17	7
NOT REPORTED.....	1	-	1	1	1	3	1	6	1	-	1	1	1	4
NOT APPLICABLE.....	11	3	6	1	6	-	8	2	2	-	8	42	13	58
REDUCED COOLING														
YES.....	37	46	15	42	46	44	41	25	62	23	41	21	31	16
NO.....	6	4	3	2	8	18	8	9	10	2	4	5	9	4
NOT REPORTED.....	1	-	1	-	2	5	1	1	-	1	-	-	-	3
NOT APPLICABLE.....	56	49	82	55	43	33	50	65	28	74	54	74	61	78

SEE NOTES AT END OF TABLE

TABLE 16C. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY BUILDING TYPE
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)

CONSERVATION PRACTICES	TOTAL	BUILDING TYPE												
		A S S M B L Y	A U T O M O T I V E	E D U C A T I O N	F O C U S A L E S	H E A L T H	I N D U S T R I A L	L O O G I N G	O F F I C E	R E S I D E N T I A L	R E T A I L	H A R E H O U S E	O T H E R	V A C A N T
		ASSEMBLY	AUTOMOTIVE	EDUCATION	FOCUS	HEALTH	INDUSTRIAL	LOGGING	OFFICE	RESIDENTIAL	RETAIL	WAREHOUSE	OTHER	VACANT
REDUCED HEATING OR REDUCED COOLING														
YES.....	77	91	86	93	82	75	78	73	85	73	83	48	70	31
NO.....	12	5	8	5	13	20	15	19	12	26	10	10	16	6
NOT REPORTED.....	1	-	-	1	1	5	1	5	1	1	1	1	1	4
NOT APPLICABLE.....	10	3	5	1	3	-	6	2	2	-	7	41	13	58
REGULAR MAINTENANCE														
YES.....	70	82	68	93	77	88	75	85	77	77	67	44	70	27
NO.....	18	12	25	5	19	12	14	12	19	20	24	13	16	11
DONT KNOW.....	2	3	1	1	1	-	3	-	2	3	2	1	1	3
NOT REPORTED.....	-	-	1	-	-	-	1	-	-	1	-	-	-	2
NOT APPLICABLE.....	10	3	5	1	3	-	6	2	2	-	7	41	13	58
REDUCED HEATING OR COOLING, AND REGULAR MAINTENANCE														
YES.....	60	76	62	87	64	64	63	64	67	56	59	37	58	20
NO.....	27	18	31	9	31	32	27	30	29	41	32	20	28	16
DONT KNOW.....	1	3	1	1	1	-	2	-	1	2	2	1	1	2
NOT REPORTED.....	1	-	1	1	1	5	2	4	1	1	1	1	1	3
NOT APPLICABLE.....	10	3	5	1	3	-	6	2	2	-	7	41	13	58

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SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 17A. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY TOTAL SQUARE FOOTAGE
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS

CONSERVATION PRACTICES	TOTAL	TOTAL SQUARE FOOTAGE					
		1,000 OR LESS	1,001 TO 5,000	5,001 TO 10,000	10,001 TO 25,000	25,001 TO 50,000	OVER 50,000
NONRESIDENTIAL BUILDINGS.....	4,238	677	1,729	801	596	237	199
WEATHERSTRIPPING OR CAULKING ADDED SINCE 1974							
YES.....	1,519	185	580	310	261	99	84
NO.....	2,509	454	1,065	462	300	124	105
DCNT KNOW.....	197	35	84	27	29	13	9
NOT REPORTED.....	14	3	1	2	7	-	-
INSULATION ADDED							
YES.....	1,139	140	487	243	157	64	48
NO.....	2,834	503	1,131	504	394	163	139
DONT KNOW.....	261	33	111	53	43	9	10
NOT REPORTED.....	4	-	-	1	2	-	1
WEATHERSTRIPPING OR CAULKING, AND INSULATION ADDED							
YES.....	719	91	289	158	101	47	34
NO.....	3,297	556	1,350	602	454	180	155
DCNT KNOW.....	217	30	90	41	38	10	9
NOT REPORTED.....	4	-	-	1	2	-	1
TREATED GLASS							
YES.....	1,221	96	460	303	194	82	86
AT CONSTRUCTION.....	650	51	242	154	104	44	55
SINCE CONSTRUCTION.....	578	46	218	146	96	40	33
NO.....	2,917	565	1,220	481	390	150	110
DCNT KNOW.....	84	9	44	14	10	5	2
NOT REPORTED.....	17	6	5	3	2	-	1
OUTSIDE SHADING							
YES.....	957	116	428	159	170	47	38
AT CONSTRUCTION.....	523	63	251	77	80	23	28
SINCE CONSTRUCTION.....	369	47	143	72	77	21	10
NO.....	3,267	558	1,296	636	426	190	161
DCNT KNOW.....	1	-	-	-	-	-	-
NOT REPORTED.....	13	3	5	4	1	-	-
TREATED GLASS AND OUTSIDE SHADING							
YES.....	315	27	126	60	66	16	21
NO.....	3,879	643	1,580	736	523	219	177
DONT KNOW.....	31	3	19	2	6	1	-
NOT REPORTED.....	13	4	5	3	1	-	-

SEE NOTES AT END OF TABLE

TABLE 17A. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY TOTAL SQUARE FOOTAGE
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)

CONSERVATION PRACTICES	TOTAL	TOTAL SQUARE FOOTAGE						OVER 50,000
		1,000 OR LESS	1,001 TO 5,000	5,001 TO 10,000	10,001 TO 25,000	25,001 TO 50,000		
REDUCED HEATING								
YES.....	3,139	428	1,308	620	451	178	153	
NO.....	604	69	223	133	105	39	36	
NOT REPORTED.....	47	9	11	7	11	7	3	
NOT APPLICABLE.....	448	171	187	41	29	13	7	
REDUCED COOLING								
YES.....	1,582	120	606	342	288	113	112	
NO.....	244	11	71	54	60	23	24	
NOT REPORTED.....	26	2	11	3	4	3	3	
NOT APPLICABLE.....	2,387	544	1,041	402	243	97	59	
REDUCED HEATING OR REDUCED COOLING								
YES.....	3,272	442	1,348	655	478	188	162	
NO.....	500	61	189	105	87	31	27	
NOT REPORTED.....	44	9	15	4	9	5	3	
NOT APPLICABLE.....	421	165	178	37	22	13	6	
REGULAR MAINTENANCE								
YES.....	2,978	321	1,182	641	458	195	182	
NO.....	744	180	341	110	85	21	8	
DCNT KNOW.....	79	9	27	8	27	6	2	
NOT REPORTED.....	15	3	1	5	4	2	1	
NOT APPLICABLE.....	421	165	178	37	22	13	6	
REDUCED HEATING OR COOLING, AND REGULAR MAINTENANCE								
YES.....	2,552	275	1,026	544	381	166	156	
NO.....	1,159	221	492	207	160	47	32	
DCNT KNOW.....	63	4	22	7	25	5	1	
NOT REPORTED.....	42	7	12	6	9	5	4	
NOT APPLICABLE.....	421	165	178	37	22	13	6	

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SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 17B. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY TOTAL SQUARE FOOTAGE
- PERCENTAGE OF ROW TOTALS

CONSERVATION PRACTICES	TOTAL	TOTAL SQUARE FOOTAGE						OVER 50,000
		1,000 OR LESS	1,001 TO 5,000	5,001 TO 10,000	10,001 TO 25,000	25,001 TO 50,000		
NONRESIDENTIAL BUILDINGS.....	100%	16	41	19	14	6	5	
WEATHERSTRIPPING OR CAULKING ADDED SINCE 1974								
YES	100%	12	38	20	17	7	6	
NO.....	100%	18	42	18	12	5	4	
DCNT KNOW.....	100%	18	43	14	15	7	5	
NOT REPORTED.....	100%	20	10	16	49	2	3	
INSULATION ADDED								
YES	100%	12	43	21	14	6	4	
NO.....	100%	18	40	18	14	6	5	
DCNT KNOW.....	100%	13	43	20	17	4	4	
NOT REPORTED.....	100%	-	-	17	53	3	27	
WEATHERSTRIPPING OR CAULKING, AND INSULATION ADDED								
YES	100%	13	40	22	14	6	5	
NO.....	100%	17	41	18	14	5	5	
DCNT KNOW.....	100%	14	42	19	17	5	4	
NOT REPORTED.....	100%	-	-	18	57	3	22	
TREATED GLASS								
YES	100%	8	38	25	16	7	7	
AT CONSTRUCTION.....	100%	8	37	24	16	7	8	
SINCE CONSTRUCTION.....	100%	8	38	25	17	7	6	
NO.....	100%	19	42	17	13	5	4	
DCNT KNOW.....	100%	11	53	17	12	6	2	
NOT REPORTED.....	100%	37	31	17	12	-	4	
OUTSIDE SHADING								
YES	100%	12	45	17	18	5	4	
AT CONSTRUCTION.....	100%	12	48	15	15	4	5	
SINCE CONSTRUCTION.....	100%	13	39	19	21	6	3	
NO.....	100%	17	40	19	13	6	5	
DCNT KNOW.....	100%	-	-	69	-	-	31	
NOT REPORTED.....	100%	20	39	34	5	1	1	
TREATED GLASS AND OUTSIDE SHADING								
YES	100%	8	40	19	21	5	7	
NO.....	100%	17	41	19	13	6	5	
DCNT KNOW.....	100%	10	59	5	20	4	1	
NOT REPORTED.....	100%	31	40	22	5	-	1	

SEE NOTES AT END OF TABLE

TABLE 178. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY TOTAL SQUARE FOOTAGE
- PERCENTAGE OF ROW TOTALS (CONTINUED)

CONSERVATION PRACTICES	TOTAL	TOTAL SQUARE FOOTAGE					
		1,000 OR LESS	1,001 TO 5,000	5,001 TO 10,000	10,001 TO 25,000	25,001 TO 50,000	OVER 50,000
REDUCED HEATING							
YES.....	100%	14	42	20	14	5	5
NO.....	100%	11	37	22	17	6	6
NOT REPORTED.....	100%	18	23	15	23	14	6
NOT APPLICABLE.....	100%	38	42	9	6	3	1
REDUCED COOLING							
YES.....	100%	8	38	22	18	7	7
NO.....	100%	5	29	22	25	10	10
NOT REPORTED.....	100%	7	44	11	17	10	11
NOT APPLICABLE.....	100%	23	44	17	10	4	2
REDUCED HEATING OR REDUCED COOLING							
YES.....	100%	14	41	20	15	6	5
NO.....	100%	12	38	21	17	6	5
NOT REPORTED.....	100%	19	34	9	20	11	7
NOT APPLICABLE.....	100%	39	42	9	5	3	1
REGULAR MAINTENANCE							
YES.....	100%	11	40	22	15	7	6
NO.....	100%	24	46	15	11	3	1
DONT KNOW.....	100%	11	34	10	35	8	2
NOT REPORTED.....	100%	18	5	31	25	14	7
NOT APPLICABLE.....	100%	39	42	9	5	3	1
REDUCED HEATING OR COOLING, AND REGULAR MAINTENANCE							
YES.....	100%	11	40	21	15	6	6
NO.....	100%	19	42	18	14	4	3
DONT KNOW.....	100%	6	34	11	39	9	1
NOT REPORTED.....	100%	17	27	14	21	13	9
NOT APPLICABLE.....	100%	39	42	9	5	3	1

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TABLE 17C. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY TOTAL SQUARE FOOTAGE
- PERCENTAGE OF COLUMN TOTALS

CONSERVATION PRACTICES	TOTAL	TOTAL SQUARE FOOTAGE					
		1,000 OR LESS	1,001 TO 5,000	5,001 TO 10,000	10,001 TO 25,000	25,001 TO 50,000	OVER 50,000
NONRESIDENTIAL BUILDINGS.....	100%	100%	100%	100%	100%	100%	100%
WEATHERSTRIPPING OR CAULKING ADDED SINCE 1974							
YES.....	36	27	34	39	44	42	43
NO.....	59	67	62	58	50	52	53
DCNT KNOW.....	5	5	5	3	5	6	5
NOT REPORTED.....	-	-	-	-	1	-	-
INSULATION ADDED							
YES.....	27	21	28	30	26	27	24
NO.....	67	74	65	63	66	69	70
DCNT KNOW.....	6	5	6	7	7	4	5
NOT REPORTED.....	-	-	-	-	-	-	1
WEATHERSTRIPPING OR CAULKING, AND INSULATION ADDED							
YES.....	17	13	17	20	17	20	17
NO.....	78	82	78	75	76	76	78
DCNT KNOW.....	5	4	5	5	6	4	4
NOT REPORTED.....	-	-	-	-	-	-	-
TREATED GLASS							
YES.....	29	14	27	38	33	35	43
AT CONSTRUCTION.....	15	8	14	19	17	19	28
SINCE CONSTRUCTION.....	14	7	13	18	16	17	16
NO.....	69	84	71	60	65	63	55
DCNT KNOW.....	2	1	3	2	2	2	1
NOT REPORTED.....	-	1	-	-	-	-	-
OUTSIDE SHADING							
YES.....	23	17	25	20	28	20	19
AT CONSTRUCTION.....	12	9	15	10	13	10	14
SINCE CONSTRUCTION.....	9	7	8	9	13	9	5
NO.....	77	83	75	79	71	80	81
DCNT KNOW.....	-	-	-	-	-	-	-
NOT REPORTED.....	-	-	-	1	-	-	-
TREATED GLASS AND OUTSIDE SHADING							
YES.....	7	4	7	7	11	7	10
NO.....	92	95	91	92	88	92	89
DCNT KNOW.....	1	-	1	-	1	1	-
NOT REPORTED.....	-	1	-	-	-	-	-

SEE NOTES AT END OF TABLE

TABLE 17C. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY TOTAL SQUARE FOOTAGE
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)

CONSERVATION PRACTICES	TOTAL	TOTAL SQUARE FOOTAGE					
		1,000 OR LESS	1,001 TO 5,000	5,001 TO 10,000	10,001 TO 25,000	25,001 TO 50,000	OVER 50,000
REDUCED HEATING							
YES.....	74	63	76	77	76	75	77
NO.....	14	10	13	17	18	16	18
NOT REPORTED.....	1	1	1	1	2	3	2
NOT APPLICABLE.....	11	25	11	5	5	6	3
REDUCED COOLING							
YES.....	37	18	35	43	48	48	56
NO.....	6	2	4	7	10	10	12
NOT REPORTED.....	1	-	1	-	1	1	1
NOT APPLICABLE.....	56	80	60	50	41	41	30
REDUCED HEATING OR REDUCED COOLING							
YES.....	77	65	78	82	80	79	82
NO.....	12	9	11	13	15	13	14
NOT REPORTED.....	1	1	1	-	1	2	2
NOT APPLICABLE.....	10	24	10	5	4	5	3
REGULAR MAINTENANCE							
YES.....	70	47	68	80	77	82	92
NO.....	18	27	20	14	14	9	4
DO NOT KNOW.....	2	1	2	1	5	3	1
NOT REPORTED.....	-	-	-	1	1	1	1
NOT APPLICABLE.....	10	24	10	5	4	5	3
REDUCED HEATING OR COOLING, AND REGULAR MAINTENANCE							
YES.....	60	41	59	68	64	70	78
NO.....	27	33	28	26	27	20	16
DO NOT KNOW.....	1	1	1	1	4	2	-
NOT REPORTED.....	1	1	1	1	1	2	2
NOT APPLICABLE.....	10	24	10	5	4	5	3

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TABLE 18A. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY NUMBER OF FLOORS
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS

CONSERVATION PRACTICES	TOTAL	NUMBER OF FLOORS				ATTACHED/FREE STANDING		
		ONE FLOOR	TWO FLOORS	THREE FLOORS	MORE THAN THREE	BUILDING FREE STANDING	BUILDING ATTACHED	NOT REPORTED
NONRESIDENTIAL BUILDINGS.....	4,238	2,467	980	501	290	3,402	834	2
WEATHERSTRIPPING OR CAULKING ADDED SINCE 1974								
YES.....	1,519	714	422	245	139	1,213	306	-
NO.....	2,509	1,628	510	233	137	2,027	480	2
DONT KNOW.....	197	119	44	22	12	151	45	1
NOT REPORTED.....	14	6	4	1	2	10	4	-
INSULATION ADDED								
YES.....	1,139	538	316	187	97	906	233	-
NO.....	2,834	1,800	590	274	170	2,302	531	2
DONT KNOW.....	261	126	72	40	22	192	68	1
NOT REPORTED.....	4	2	2	-	-	2	2	-
WEATHERSTRIPPING OR CAULKING, AND INSULATION ADDED								
YES.....	719	332	194	130	62	580	139	-
NO.....	3,297	2,028	721	336	211	2,654	641	2
DONT KNOW.....	217	103	63	34	16	166	51	1
NOT REPORTED.....	4	1	2	-	-	2	1	-
TREATED GLASS								
YES.....	1,221	604	359	168	90	1,028	191	1
AT CONSTRUCTION.....	650	351	206	59	34	588	61	1
SINCE CONSTRUCTION.....	578	254	161	108	55	453	125	-
NO.....	2,917	1,816	585	321	195	2,296	620	1
DONT KNOW.....	84	36	32	12	5	65	18	-
NOT REPORTED.....	17	12	4	-	-	12	5	-
OUTSIDE SHADING								
YES.....	957	583	211	108	55	702	254	1
AT CONSTRUCTION.....	523	374	113	24	12	419	103	1
SINCE CONSTRUCTION.....	369	169	82	82	36	244	126	-
NO.....	3,267	1,873	766	393	234	2,689	577	1
DONT KNOW.....	1	1	-	-	-	1	-	-
NOT REPORTED.....	13	10	3	-	-	10	3	-
TREATED GLASS AND OUTSIDE SHADING								
YES.....	315	177	76	42	21	251	63	1
NO.....	3,879	2,271	889	453	266	3,118	760	1
DONT KNOW.....	31	10	13	7	2	24	8	-
NOT REPORTED.....	13	10	3	-	-	10	3	-

SEE NOTES AT END OF TABLE

TABLE 18A. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY NUMBER OF FLOORS
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)

CONSERVATION PRACTICES	TOTAL	NUMBER OF FLOORS				ATTACHED/FREE STANDING		
		ONE FLOOR	TWO FLOORS	THREE FLOORS	MORE THAN THREE	BUILDING FREE STANDING	BUILDING ATTACHED	NOT REPORTED
REDUCED HEATING								
YES.....	3,139	1,752	781	387	219	2,527	611	2
NO.....	604	293	156	97	59	464	139	1
NOT REPORTED.....	47	30	8	6	3	36	10	-
NOT APPLICABLE.....	448	393	36	10	9	375	74	-
REDUCED COOLING								
YES.....	1,582	847	436	191	108	1,248	332	1
NO.....	244	128	67	25	23	200	43	1
NOT REPORTED.....	26	13	4	3	5	20	5	-
NOT APPLICABLE.....	2,387	1,478	473	281	154	1,934	453	-
REDUCED HEATING OR REDUCED COOLING								
YES.....	3,272	1,828	805	412	227	2,630	641	2
NO.....	500	244	132	75	49	381	119	1
NOT REPORTED.....	44	26	7	6	5	34	10	-
NOT APPLICABLE.....	421	369	36	8	9	358	64	-
REGULAR MAINTENANCE								
YES.....	2,978	1,537	772	420	250	2,357	620	2
NO.....	744	509	154	56	24	618	126	-
DONT KNOW.....	79	43	15	15	6	58	21	-
NOT REPORTED.....	15	9	4	2	1	11	4	1
NOT APPLICABLE.....	421	369	36	8	9	358	64	-
REDUCED HEATING OR COOLING, AND REGULAR MAINTENANCE								
YES.....	2,552	1,339	653	357	203	2,034	517	1
NO.....	1,159	699	274	118	67	931	228	1
DONT KNOW.....	63	36	11	12	5	48	15	-
NOT REPORTED.....	42	25	6	6	5	31	10	1
NOT APPLICABLE.....	421	369	36	8	9	358	64	-

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TABLE 18B. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY NUMBER OF FLOORS
- PERCENTAGE OF ROW TOTALS

CONSERVATION PRACTICES	TOTAL	NUMBER OF FLOORS				ATTACHED/FREE STANDING		
		ONE FLOOR	TWO FLOORS	THREE FLOORS	MORE THAN THREE	BUILDING FREE STANDING	BUILDING ATTACHED	NOT REPORTED
NONRESIDENTIAL BUILDINGS.....	100%	58	23	12	7	80	20	-
WEATHERSTRIPPING OR CAULKING ADDED SINCE 1974								
YES.....	100%	47	28	16	9	80	20	-
NO.....	100%	65	20	9	5	81	19	-
DONT KNOW.....	100%	60	22	11	6	77	23	-
NOT REPORTED.....	100%	46	33	9	12	72	28	-
INSULATION ADDED								
YES.....	100%	47	28	16	9	80	20	-
NO.....	100%	64	21	10	6	81	19	-
DONT KNOW.....	100%	48	28	15	8	74	26	-
NOT REPORTED.....	100%	42	49	-	9	59	41	-
WEATHERSTRIPPING OR CAULKING, AND INSULATION ADDED								
YES.....	100%	46	27	18	9	81	19	-
NO.....	100%	62	22	10	6	80	19	-
DONT KNOW.....	100%	48	29	16	7	76	23	-
NOT REPORTED.....	100%	42	48	-	10	60	40	-
TREATED GLASS								
YES.....	100%	49	29	14	7	84	16	-
AT CONSTRUCTION.....	100%	54	32	9	5	91	9	-
SINCE CONSTRUCTION.....	100%	44	28	19	10	78	22	-
NO.....	100%	62	20	11	7	79	21	-
DONT KNOW.....	100%	43	38	14	5	78	22	-
NOT REPORTED.....	100%	71	26	3	-	73	27	-
OUTSIDE SHADING								
YES.....	100%	61	22	11	6	73	27	-
AT CONSTRUCTION.....	100%	71	22	5	2	80	20	-
SINCE CONSTRUCTION.....	100%	46	22	22	10	66	34	-
NO.....	100%	57	23	12	7	82	18	-
DONT KNOW.....	100%	100	-	-	-	100	-	-
NOT REPORTED.....	100%	76	24	-	-	76	24	-
TREATED GLASS AND OUTSIDE SHADING								
YES.....	100%	56	24	13	7	80	20	-
NO.....	100%	59	23	12	7	80	20	-
DONT KNOW.....	100%	31	40	21	8	76	24	-
NOT REPORTED.....	100%	75	24	-	-	76	24	-

SEE NOTES AT END OF TABLE

TABLE 18B. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY NUMBER OF FLOORS
- PERCENTAGE OF ROW TOTALS (CONTINUED)

CONSERVATION PRACTICES	TOTAL	NUMBER OF FLOORS				ATTACHED/FREE STANDING		
		ONE FLOOR	TWO FLOORS	THREE FLOORS	MORE THAN THREE	BUILDING FREE STANDING	BUILDING ATTACHED	NOT REPORTED
REDUCED HEATING								
YES.....	100%	56	25	12	7	80	19	-
NO.....	100%	48	26	16	10	77	23	-
NOT REPORTED.....	100%	64	17	14	6	78	22	-
NOT APPLICABLE.....	100%	88	8	2	2	84	16	-
REDUCED COOLING								
YES.....	100%	54	28	12	7	79	21	-
NO.....	100%	53	28	10	9	82	18	-
NOT REPORTED.....	100%	52	15	13	20	78	21	2
NOT APPLICABLE.....	100%	62	20	12	6	81	19	-
REDUCED HEATING OR REDUCED COOLING								
YES.....	100%	56	25	13	7	80	20	-
NO.....	100%	49	26	15	10	76	24	-
NOT REPORTED.....	100%	59	16	14	11	76	23	1
NOT APPLICABLE.....	100%	88	9	2	2	85	15	-
REGULAR MAINTENANCE								
YES.....	100%	52	26	14	8	79	21	-
NO.....	100%	68	21	8	3	83	17	-
DONT KNOW.....	100%	55	19	19	7	74	26	-
NOT REPORTED.....	100%	57	25	14	4	70	26	4
NOT APPLICABLE.....	100%	88	9	2	2	85	15	-
REDUCED HEATING OR COOLING, AND REGULAR MAINTENANCE								
YES.....	100%	52	26	14	8	80	20	-
NO.....	100%	60	24	10	6	80	20	-
DONT KNOW.....	100%	56	17	19	8	76	24	-
NOT REPORTED.....	100%	58	14	15	13	74	24	1
NOT APPLICABLE.....	100%	88	9	2	2	85	15	-

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TABLE 18C. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY NUMBER OF FLOORS
- PERCENTAGE OF COLUMN TOTALS

CONSERVATION PRACTICES	TOTAL	NUMBER OF FLOORS				ATTACHED/FREE STANDING			NOT REPORTED
		ONE FLOOR	TWO FLOORS	THREE FLOORS	MORE THAN THREE	BUILDING FREE STANDING	BUILDING ATTACHED		
NONRESIDENTIAL BUILDINGS.....	100%	100%	100%	100%	100%	100%	100%	100%	100%
WEATHERSTRIPPING OR CAULKING ADDED SINCE 1974									
YES.....	36	29	43	49	48	36	37	-	-
NO.....	59	66	52	47	47	60	58	66	
DONT KNOW.....	5	5	4	4	4	4	5	34	
NOT REPORTED.....	-	-	-	-	1	-	-	-	-
INSULATION ADDED									
YES.....	27	22	32	37	34	27	28	-	-
NO.....	67	73	60	55	59	68	64	80	
DONT KNOW.....	6	5	7	8	8	6	8	20	
NOT REPORTED.....	-	-	-	-	-	-	-	-	-
WEATHERSTRIPPING OR CAULKING, AND INSULATION ADDED									
YES.....	17	13	20	26	21	17	17	-	-
NO.....	78	82	74	67	73	78	77	80	
DONT KNOW.....	5	4	6	7	5	5	6	20	
NOT REPORTED.....	-	-	-	-	-	-	-	-	-
TREATED GLASS									
YES.....	29	24	37	34	31	30	23	42	
AT CONSTRUCTION.....	15	14	21	12	12	17	7	42	
SINCE CONSTRUCTION.....	14	10	16	22	19	13	15	-	
NO.....	69	74	60	64	67	67	74	58	
DONT KNOW.....	2	1	3	2	2	2	2	-	-
NOT REPORTED.....	-	-	-	-	-	-	1	-	-
OUTSIDE SHADING									
YES.....	23	24	22	21	19	21	30	42	
AT CONSTRUCTION.....	12	15	12	5	4	12	12	42	
SINCE CONSTRUCTION.....	9	7	8	16	12	7	15	-	
NO.....	77	76	78	79	81	79	69	58	
DONT KNOW.....	-	-	-	-	-	-	-	-	-
NOT REPORTED.....	-	-	-	-	-	-	-	-	-
TREATED GLASS AND OUTSIDE SHADING									
YES.....	7	7	8	8	7	7	8	42	
NO.....	92	92	91	90	92	92	91	58	
DONT KNOW.....	1	-	1	1	1	1	1	-	-
NOT REPORTED.....	-	-	-	-	-	-	-	-	-

SEE NOTES AT END OF TABLE

TABLE 18C. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY NUMBER OF FLOORS
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)

CONSERVATION PRACTICES	TOTAL	NUMBER OF FLOORS				ATTACHED/FREE STANDING		
		ONE FLOOR	TWO FLOORS	THREE FLOORS	MORE THAN THREE	BUILDING FREE STANDING	BUILDING ATTACHED	NOT REPORTED
REDUCED HEATING								
YES.....	74	71	80	77	76	74	73	63
NO.....	14	12	16	19	20	14	17	37
NOT REPORTED.....	1	1	1	1	1	1	1	-
NOT APPLICABLE.....	11	16	4	2	3	11	9	-
REDUCED COOLING								
YES.....	37	34	44	38	37	37	40	61
NO.....	6	5	7	5	8	6	5	20
NOT REPORTED.....	1	1	-	1	2	1	1	17
NOT APPLICABLE.....	56	60	48	56	53	57	54	2
REDUCED HEATING OR REDUCED COOLING								
YES.....	77	74	82	82	78	77	77	63
NO.....	12	10	13	15	17	11	14	20
NOT REPORTED.....	1	1	1	1	2	1	1	17
NOT APPLICABLE.....	10	15	4	2	3	11	8	-
REGULAR MAINTENANCE								
YES.....	70	62	79	84	86	69	74	78
NO.....	18	21	16	11	8	18	15	-
DONT KNOW.....	2	2	2	3	2	2	2	-
NOT REPORTED.....	-	-	-	-	-	-	-	22
NOT APPLICABLE.....	10	15	4	2	3	11	8	-
REDUCED HEATING OR COOLING, AND REGULAR MAINTENANCE								
YES.....	60	54	67	71	70	60	62	57
NO.....	27	28	28	24	23	27	27	20
DONT KNOW.....	1	1	1	2	2	1	2	-
NOT REPORTED.....	1	1	1	1	2	1	1	22
NOT APPLICABLE.....	10	15	4	2	3	11	8	-

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. SEE APPENDIX B FOR DISCUSSION OF LIMITATIONS OF DATA.

SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 19A. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY YEAR CONSTRUCTED
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS

CONSERVATION PRACTICES	TOTAL	YEAR CONSTRUCTED						
		1900 OR BEFORE	1901 TO 1920	1921 TO 1945	1946 TO 1960	1961 TO 1970	1971 TO 1973	1974 TO PRESENT
NONRESIDENTIAL BUILDINGS.....	4,238	329	432	829	1,064	789	235	561
WEATHERSTRIPPING OR CAULKING ADDED SINCE 1974								
YES.....	1,519	173	195	336	375	256	77	107
NO.....	2,509	150	214	449	629	494	145	427
DONT KNOW.....	197	6	23	42	58	37	12	19
NOT REPORTED.....	14	1	-	1	1	1	-	8
INSULATION ADDED								
YES.....	1,139	151	150	268	289	176	40	66
NO.....	2,834	153	245	496	700	579	183	479
DONT KNOW.....	261	25	36	65	74	33	12	16
NOT REPORTED.....	4	1	-	-	-	1	-	1
WEATHERSTRIPPING OR CAULKING, AND INSULATION ADDED								
YES.....	719	99	90	171	176	112	24	47
NO.....	3,297	210	315	608	823	643	201	498
DONT KNOW.....	217	19	27	50	65	32	10	13
NOT REPORTED.....	4	1	-	-	-	1	-	1
TREATED GLASS								
YES.....	1,221	96	87	171	221	265	84	296
AT CONSTRUCTION.....	650	17	5	32	97	163	65	271
SINCE CONSTRUCTION.....	578	75	75	136	124	118	22	27
NO.....	2,917	230	331	647	813	502	143	250
DONT KNOW.....	84	2	13	11	26	16	6	10
NOT REPORTED.....	17	1	-	-	3	5	1	6
OUTSIDE SHADING								
YES.....	957	82	93	162	263	196	46	115
AT CONSTRUCTION.....	523	11	13	47	168	149	38	97
SINCE CONSTRUCTION.....	369	64	67	105	75	44	6	8
NO.....	3,267	248	339	667	798	586	189	442
DONT KNOW.....	1	-	-	-	-	-	-	1
NOT REPORTED.....	13	-	-	-	3	7	-	3
TREATED GLASS AND OUTSIDE SHADING								
YES.....	315	22	24	40	59	75	18	77
NO.....	3,879	306	401	784	994	703	214	477
DONT KNOW.....	31	2	7	4	8	6	1	3
NOT REPORTED.....	13	-	-	-	3	5	1	3

SEE NOTES AT END OF TABLE

TABLE 19A. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY YEAR CONSTRUCTED
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)

CONSERVATION PRACTICES	TOTAL	YEAR CONSTRUCTED							
		1900 OR BEFORE	1901 TO 1920	1921 TO 1945	1946 TO 1960	1961 TO 1970	1971 TO 1973	1974 TO PRESENT	
REDUCED HEATING									
YES.....	3,139	252	328	603	787	594	176	399	
NO.....	604	54	81	121	131	100	36	81	
NOT REPORTED.....	47	2	4	4	12	5	6	14	
NOT APPLICABLE.....	448	21	19	101	134	90	16	67	
REDUCED COOLING									
YES.....	1,582	102	142	236	351	369	104	278	
NO.....	244	12	16	30	45	62	29	51	
NOT REPORTED.....	26	2	4	1	3	7	3	6	
NOT APPLICABLE.....	2,387	214	270	562	665	351	100	226	
REDUCED HEATING OR REDUCED COOLING									
YES.....	3,272	259	346	623	810	623	189	421	
NO.....	500	46	61	108	117	79	26	63	
NOT REPORTED.....	44	3	6	4	10	7	5	10	
NOT APPLICABLE.....	421	21	19	94	126	80	15	67	
REGULAR MAINTENANCE									
YES.....	2,978	259	310	553	711	588	178	380	
NO.....	744	37	92	165	212	114	34	89	
DONT KNOW.....	79	10	11	14	13	5	8	19	
NOT REPORTED.....	15	3	1	2	2	1	-	6	
NOT APPLICABLE.....	421	21	19	94	126	80	15	67	
REDUCED HEATING OR COOLING, AND REGULAR MAINTENANCE									
YES.....	2,552	218	257	469	605	517	154	332	
NO.....	1,159	77	140	251	312	181	59	138	
DONT KNW.....	63	10	10	10	10	5	5	13	
NOT REPORTED.....	42	3	6	5	10	5	3	11	
NOT APPLICABLE.....	421	21	19	94	126	80	15	67	

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SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 19B. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY YEAR CONSTRUCTED
- PERCENTAGE OF ROW TOTALS

CONSERVATION PRACTICES	TOTAL	YEAR CONSTRUCTED						
		1900 OR BEFORE	1901 TO 1920	1921 TO 1945	1946 TO 1960	1961 TO 1970	1971 TO 1973	1974 TO PRESENT
NONRESIDENTIAL BUILDINGS.....	100%	8	10	20	25	19	6	13
WEATHERSTRIPPING OR CAULKING ADDED SINCE 1974								
YES.....	100%	11	13	22	25	17	5	7
NO.....	100%	6	9	18	25	20	6	17
DONT KNOW.....	100%	3	12	22	29	19	6	9
NOT REPORTED.....	100%	10	-	11	9	10	-	61
INSULATION ADDED								
YES.....	100%	13	13	24	25	15	4	6
NO.....	100%	5	9	17	25	20	6	17
DONT KNOW.....	100%	10	14	25	29	13	4	6
NOT REPORTED.....	100%	35	-	4	6	32	-	23
WEATHERSTRIPPING OR CAULKING, AND INSULATION ADDED								
YES.....	100%	14	13	24	24	16	3	7
NO.....	100%	6	10	18	25	19	6	15
DONT KNOW.....	100%	9	12	23	30	15	5	6
NOT REPORTED.....	100%	37	-	4	-	34	-	25
TREATED GLASS								
YES.....	100%	8	7	14	18	22	7	24
AT CONSTRUCTION.....	100%	3	1	5	15	25	10	42
SINCE CONSTRUCTION.....	100%	13	13	24	22	20	4	5
NO.....	100%	8	11	22	28	17	5	9
DONT KNOW.....	100%	2	15	13	31	20	7	12
NOT REPORTED.....	100%	8	2	-	18	31	8	33
OUTSIDE SHADING								
YES.....	100%	9	10	17	27	20	5	12
AT CONSTRUCTION.....	100%	2	2	9	32	28	7	19
SINCE CONSTRUCTION.....	100%	17	18	28	20	12	2	2
NO.....	100%	8	10	20	24	18	6	14
DONT KNOW.....	100%	-	-	-	16	-	-	84
NOT REPORTED.....	100%	-	-	-	22	52	-	26
TREATED GLASS AND OUTSIDE SHADING								
YES.....	100%	7	8	13	19	24	6	25
NO.....	100%	8	10	20	26	18	6	12
DONT KNOW.....	100%	5	22	14	26	19	3	11
NOT REPORTED.....	100%	-	-	-	23	40	10	26

SEE NOTES AT END OF TABLE

**TABLE 19B. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY YEAR CONSTRUCTED
- PERCENTAGE OF ROW TOTALS (CONTINUED)**

CONSERVATION PRACTICES	TOTAL	YEAR CONSTRUCTED						
		1900 OR BEFORE	1901 TO 1920	1921 TO 1945	1946 TO 1960	1961 TO 1970	1971 TO 1973	1974 TO PRESENT
REDUCED HEATING								
YES.....	100%	8	10	19	25	19	6	13
NO.....	100%	9	13	20	22	17	6	13
NOT REPORTED.....	100%	4	8	9	25	11	13	30
NOT APPLICABLE.....	100%	5	4	23	30	20	4	15
REDUCED COOLING								
YES.....	100%	6	9	15	22	23	7	18
NO.....	100%	5	6	12	19	25	12	21
NOT REPORTED.....	100%	8	14	5	12	26	11	24
NOT APPLICABLE.....	100%	9	11	24	28	15	4	9
REDUCED HEATING OR REDUCED COOLING								
YES.....	100%	8	11	19	25	19	6	13
NO.....	100%	9	12	22	23	16	5	13
NOT REPORTED.....	100%	7	13	9	24	15	11	23
NOT APPLICABLE.....	100%	5	4	22	30	19	3	16
REGULAR MAINTENANCE								
YES.....	100%	9	10	19	24	20	6	13
NO.....	100%	5	12	22	29	15	5	12
DONT KNOW.....	100%	12	14	17	16	7	10	24
NOT REPORTED.....	100%	18	4	17	15	7	1	40
NOT APPLICABLE.....	100%	5	4	22	30	19	3	16
REDUCED HEATING OR COOLING, AND REGULAR MAINTENANCE								
YES.....	100%	9	10	18	24	20	6	13
NO.....	100%	7	12	22	27	16	5	12
DONT KNOW.....	100%	15	16	16	16	8	8	20
NOT REPORTED.....	100%	7	13	11	24	11	6	27
NOT APPLICABLE.....	100%	5	4	22	30	19	3	16

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TABLE 19C. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY YEAR CONSTRUCTED
- PERCENTAGE OF COLUMN TOTALS

CONSERVATION PRACTICES	TOTAL	YEAR CONSTRUCTED						
		1900 OR BEFORE	1901 TO 1920	1921 TO 1945	1946 TO 1960	1961 TO 1970	1971 TO 1973	1974 TO PRESENT
NONRESIDENTIAL BUILDINGS.....	100%	100%	100%	100%	100%	100%	100%	100%
WEATHERSTRIPPING OR CAULKING ADDED SINCE 1974								
YES.....	36	52	45	41	35	32	33	19
NO.....	59	45	50	54	59	63	62	76
DONT KNOW.....	5	2	5	5	5	5	5	3
NOT REPORTED.....	-	-	-	-	-	-	-	1
INSULATION ADDED								
YES.....	27	46	35	32	27	22	17	12
NO.....	67	46	57	60	66	73	78	85
DONT KNOW.....	6	8	8	8	7	4	5	3
NOT REPORTED.....	-	-	-	-	-	-	-	-
WEATHERSTRIPPING OR CAULKING, AND INSULATION ADDED								
YES.....	17	30	21	21	17	14	10	8
NO.....	78	64	73	73	77	82	86	89
DONT KNOW.....	5	6	6	6	6	4	4	2
NOT REPORTED.....	-	-	-	-	-	-	-	-
TREATED GLASS								
YES.....	29	29	20	21	21	34	36	53
AT CONSTRUCTION.....	15	5	1	4	9	21	28	48
SINCE CONSTRUCTION.....	14	23	17	16	12	15	9	5
NO.....	69	70	77	78	76	64	61	45
DONT KNOW.....	2	1	3	1	2	2	3	2
NOT REPORTED.....	-	-	-	-	-	1	1	1
OUTSIDE SHADING								
YES.....	23	25	22	20	25	25	20	20
AT CONSTRUCTION.....	12	3	3	6	16	19	16	17
SINCE CONSTRUCTION.....	9	19	16	13	7	6	2	1
NO.....	77	75	78	80	75	74	80	79
DONT KNOW.....	-	-	-	-	-	-	-	-
NOT REPORTED.....	-	-	-	-	-	1	-	1
TREATED GLASS AND OUTSIDE SHADING								
YES.....	7	7	6	5	6	9	8	14
NO.....	92	93	93	95	93	89	91	85
DONT KNOW.....	1	1	2	1	1	1	-	1
NOT REPORTED.....	-	-	-	-	-	1	1	1

SEE NOTES AT END OF TABLE

TABLE 19C. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY YEAR CONSTRUCTED
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)

CONSERVATION PRACTICES	TOTAL	YEAR CONSTRUCTED						
		1900 OR BEFORE	1901 TO 1920	1921 TO 1945	1946 TO 1960	1961 TO 1970	1971 TO 1973	1974 TO PRESENT
REDUCED HEATING								
YES.....	74	76	76	73	74	75	75	71
NO.....	14	16	19	15	12	13	15	14
NOT REPORTED.....	1	1	1	1	1	1	3	2
NOT APPLICABLE.....	11	6	4	12	13	11	7	12
REDUCED COOLING								
YES.....	37	31	33	28	33	47	44	50
NO.....	6	4	4	4	4	8	12	9
NOT REPORTED.....	1	1	1	-	-	1	1	1
NOT APPLICABLE.....	56	65	63	68	62	44	42	40
REDUCED HEATING OR REDUCED COOLING								
YES.....	77	79	80	75	76	79	80	75
NO.....	12	14	14	13	11	10	11	11
NOT REPORTED.....	1	1	1	-	1	1	2	2
NOT APPLICABLE.....	10	6	4	11	12	10	6	12
REGULAR MAINTENANCE								
YES.....	70	79	72	67	67	75	76	68
NO.....	18	11	21	20	20	14	15	16
DONT KNOW.....	2	3	3	2	1	1	3	3
NOT REPORTED.....	-	1	-	-	-	-	-	1
NOT APPLICABLE.....	10	6	4	11	12	10	6	12
REDUCED HEATING OR COOLING, AND REGULAR MAINTENANCE								
YES.....	60	66	60	57	57	66	65	59
NO.....	27	23	32	30	29	23	25	25
DONT KNOW.....	1	3	2	1	1	1	2	2
NOT REPORTED.....	1	1	1	1	1	1	1	2
NOT APPLICABLE.....	10	6	4	11	12	10	6	12

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SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 20A. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY ENERGY SOURCES SUPPLIED TO THE BUILDING
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS

CONSERVATION PRACTICES	TOTAL	ENERGY SOURCES SUPPLIED TO THE BUILDING										
		ELECTRICITY		NATURAL GAS	FUEL OIL	LIQUID PETROLEUM GAS		WOOD	COAL	STEAM	OTHER	NONE
NONRESIDENTIAL BUILDINGS.....	4,238	4,109	2,416	872	319	124	62	53	27	115		
WEATHERSTRIPPING OR CAULKING ADDED SINCE 1974												
YES.....	1,519	1,500	965	401	140	60	26	23	10	9		
NO.....	2,509	2,408	1,318	436	170	64	35	30	15	97		
DONT KNOW.....	197	189	126	30	9	-	2	1	1	8		
NOT REPORTED.....	14	13	6	5	-	-	-	-	-	1		
INSULATION ADDED												
YES.....	1,139	1,134	685	295	133	58	20	13	7	5		
NO.....	2,834	2,717	1,553	517	166	62	35	39	18	103		
DONT KNOW.....	261	255	174	58	20	3	6	1	1	6		
NOT REPORTED.....	4	4	3	2	-	-	-	-	-	-		
WEATHERSTRIPPING OR CAULKING, AND INSULATION ADDED												
YES.....	719	716	428	196	80	38	13	10	6	3		
NO.....	3,297	3,175	1,835	631	222	86	44	43	19	108		
DONT KNOW.....	217	213	149	43	17	-	5	1	1	4		
NOT REPORTED.....	4	4	3	2	-	-	-	-	-	-		
TREATED GLASS												
YES.....	1,221	1,211	775	252	92	30	9	14	14	8		
AT CONSTRUCTION.....	650	641	378	114	50	20	7	8	11	7		
SINCE CONSTRUCTION.....	578	576	394	141	46	10	2	7	3	1		
NO.....	2,917	2,802	1,581	601	221	92	53	39	12	102		
DONT KNOW.....	84	80	55	15	3	1	-	-	-	4		
NOT REPORTED.....	17	17	4	3	2	-	-	-	-	-		
OUTSIDE SHADING												
YES.....	957	945	614	141	51	33	18	7	1	8		
AT CONSTRUCTION.....	523	520	313	71	22	15	4	5	1	3		
SINCE CONSTRUCTION.....	369	365	259	61	21	14	12	2	-	4		
NO.....	3,267	3,150	1,799	726	266	89	45	46	26	106		
DONT KNOW.....	1	1	1	-	-	-	-	-	-	-		
NOT REPORTED.....	13	13	2	5	2	2	-	-	-	-		
TREATED GLASS AND OUTSIDE SHADING												
YES	315	315	195	53	18	7	2	3	1	-		
NO.....	3,879	3,751	2,198	807	296	115	60	51	26	114		
DONT KNOW.....	31	31	20	9	3	1	-	-	-	1		
NOT REPORTED.....	13	13	2	3	2	-	-	-	-	-		

SEE NOTES AT END OF TABLE

TABLE 20A. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY ENERGY SOURCES SUPPLIED TO THE BUILDING
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)

CONSERVATION PRACTICES	TOTAL	ENERGY SOURCES SUPPLIED TO THE BUILDING								
		NATURAL ELECTRICITY		LIQUID GAS						
		ELECTRICITY	NATURAL GAS	FUEL OIL	PETROLEUM GAS	WOOD	COAL	STEAM	OTHER	NONE
REDUCED HEATING										
YES.....	3,135	3,132	1,948	711	276	105	52	32	19	-
NO.....	604	600	389	140	34	18	10	15	6	-
NOT REPORTED.....	47	47	19	8	4	-	-	6	-	-
NOT APPLICABLE.....	448	330	60	13	6	-	-	1	2	115
REDUCED COOLING										
YES.....	1,582	1,580	1,040	238	98	20	9	24	11	-
NO.....	244	244	165	41	14	1	-	8	5	-
NOT REPORTED.....	26	26	14	6	-	-	-	1	-	-
NOT APPLICABLE.....	2,387	2,260	1,197	587	207	102	53	21	11	115
REDUCED HEATING OR REDUCED COOLING										
YES.....	3,272	3,265	2,034	733	280	106	52	35	20	-
NO.....	500	496	311	120	31	18	10	13	4	-
NOT REPORTED.....	44	44	18	7	3	-	-	5	-	-
NOT APPLICABLE.....	421	304	52	13	4	-	-	1	2	115
REGULAR MAINTENANCE										
YES.....	2,978	2,967	1,895	770	233	81	46	50	19	-
NO.....	744	744	408	73	79	40	16	2	6	-
DONT KNOW.....	79	79	51	15	3	-	-	1	-	-
NOT REPORTED.....	15	15	10	2	-	2	-	-	-	-
NOT APPLICABLE.....	421	304	52	13	4	-	-	1	2	115
REDUCED HEATING OR COOLING, AND REGULAR MAINTENANCE										
YES.....	2,552	2,545	1,625	654	206	72	36	34	16	-
NO.....	1,159	1,155	676	188	106	51	26	14	9	-
DONT KNOW.....	63	63	42	10	3	-	-	-	-	-
NOT REPORTED.....	42	42	21	8	-	1	-	5	-	-
NOT APPLICABLE.....	421	304	52	13	4	-	-	1	2	115

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SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 20B. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY ENERGY SOURCES SUPPLIED TO THE BUILDING
- PERCENTAGE OF ROW TOTALS

CONSERVATION PRACTICES	TOTAL	ENERGY SOURCES SUPPLIED TO THE BUILDING								
		ELECTRICITY	NATURAL GAS	FUEL OIL	LIQUID PETROLEUM GAS		WOOD	COAL	STEAM	OTHER
NONRESIDENTIAL BUILDINGS.....	100%	97	57	21	8	3	1	1	1	3
WEATHERSTRIPPING OR CAULKING ADDED SINCE 1974										
YES.....	100%	99	64	26	9	4	2	2	1	1
NO.....	100%	96	53	17	7	3	1	1	1	4
DONT KNOW.....	100%	96	64	15	4	-	1	-	1	4
NOT REPORTED.....	100%	92	47	33	-	-	-	-	-	8
INSULATION ADDED										
YES.....	100%	100	60	26	12	5	2	1	1	-
NO.....	100%	96	55	18	6	2	1	1	1	4
DONT KNOW.....	100%	98	67	22	8	1	2	1	1	2
NOT REPORTED.....	100%	100	79	42	-	-	-	6	-	-
WEATHERSTRIPPING OR CAULKING, AND INSULATION ADDED										
YES.....	100%	100	60	27	11	5	2	1	1	-
NO.....	100%	96	56	19	7	3	1	1	1	3
DONT KNOW.....	100%	98	69	20	8	-	2	1	1	2
NOT REPORTED.....	100%	100	81	45	-	-	-	-	-	-
TREATED GLASS										
YES.....	100%	99	64	21	8	2	1	1	1	1
AT CONSTRUCTION.....	100%	99	58	18	8	3	1	1	2	1
SINCE CONSTRUCTION.....	100%	100	68	24	8	2	-	1	1	-
NO.....	100%	96	54	21	8	3	2	1	-	4
DONT KNOW.....	100%	95	66	18	4	2	-	-	-	5
NOT REPORTED.....	100%	100	23	20	14	-	-	1	-	-
OUTSIDE SHADING										
YES.....	100%	99	64	15	5	3	2	1	-	1
AT CONSTRUCTION.....	100%	99	60	14	4	3	1	1	-	1
SINCE CONSTRUCTION.....	100%	99	70	17	6	4	3	1	-	1
NO.....	100%	96	55	22	8	3	1	1	1	3
DONT KNOW.....	100%	100	100	-	-	-	-	-	-	-
NOT REPORTED.....	100%	100	16	38	17	13	-	-	-	-
TREATED GLASS AND OUTSIDE SHADING										
YES.....	100%	100	62	17	6	2	1	1	-	-
NO.....	100%	97	57	21	8	3	2	1	1	3
DONT KNOW.....	100%	98	64	30	8	4	-	-	-	2
NOT REPORTED.....	100%	100	16	27	18	-	-	-	-	-

SEE NOTES AT END OF TABLE

TABLE 20B. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY ENERGY SOURCES SUPPLIED TO THE BUILDING
- PERCENTAGE OF ROW TOTALS (CONTINUED)

CONSERVATION PRACTICES	TOTAL	ENERGY SOURCES SUPPLIED TO THE BUILDING							
		ELECTRICITY	NATURAL GAS	FUEL OIL	Liquid PETROLEUM	WOOD GAS	COAL	STEAM	OTHER
REDUCED HEATING									
YES.....	100%	100	62	23	9	3	2	1	1
NO.....	100%	99	64	23	6	3	2	3	1
NOT REPORTED.....	100%	100	41	17	8	1	-	12	-
NOT APPLICABLE.....	100%	74	13	3	1	-	-	-	26
REDUCED COOLING									
YES.....	100%	100	66	15	6	1	1	2	1
NO.....	100%	100	68	17	6	-	-	3	2
NOT REPORTED.....	100%	100	53	24	1	1	-	4	-
NOT APPLICABLE.....	100%	95	50	25	9	4	2	1	5
REDUCED HEATING OR REDUCED COOLING									
YES.....	100%	100	62	22	9	3	2	1	1
NO.....	100%	99	62	24	6	4	2	3	1
NOT REPORTED.....	100%	100	41	16	7	1	-	11	-
NOT APPLICABLE.....	100%	72	12	3	1	-	-	-	27
REGULAR MAINTENANCE									
YES.....	100%	100	64	26	8	3	2	2	1
NO.....	100%	100	55	10	11	5	2	-	1
DONT KNOW.....	100%	100	64	18	3	-	-	1	-
NOT REPORTED.....	100%	100	65	14	-	17	-	1	-
NOT APPLICABLE.....	100%	72	12	3	1	-	-	-	27
REDUCED HEATING OR COOLING, AND REGULAR MAINTENANCE									
YES.....	100%	100	64	26	8	3	1	1	1
NO.....	100%	100	58	16	9	4	2	1	1
DONT KNOW.....	100%	100	67	15	4	-	-	-	-
NOT REPORTED.....	100%	100	50	18	1	3	-	12	-
NOT APPLICABLE.....	100%	72	12	3	1	-	-	-	27

NOTE: DATA MAY NOT SUM TO TOTALS DUE TO ROUNDING OR MULTIPLE ENERGY SOURCES. A DASH "--" REPRESENTS OR POUNDS TO ZERO. SEE GLOSSARY FOR DEFINITIONS OF TERMS USED IN THIS TABLE. SEE APPENDIX B FOR DISCUSSION OF LIMITATIONS OF DATA.

SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 20C. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY ENERGY SOURCES SUPPLIED TO THE BUILDING
- PERCENTAGE OF COLUMN TOTALS

CONSERVATION PRACTICES	TOTAL	ENERGY SOURCES SUPPLIED TO THE BUILDING								
		NATURAL GAS		FUEL OIL	LIQUID PETROLEUM GAS		WOOD	COAL	STEAM	OTHER
		ELECTRICITY								
NONRESIDENTIAL BUILDINGS.....	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
WEATHERSTRIPPING OR CAULKING ADDED SINCE 1974										
YES.....	36	36	40	46	44	48	41	43	38	7
NO.....	59	59	55	50	53	52	56	56	57	85
DONT KNOW.....	5	5	5	3	3	-	3	1	5	7
NOT REPORTED.....	-	-	-	1	-	-	-	-	-	1
INSULATION ADDED										
YES.....	27	28	28	34	42	47	33	25	27	5
NO.....	67	66	64	59	52	50	57	72	68	90
DONT KNOW.....	6	6	7	7	6	3	10	2	5	5
NOT REPORTED.....	-	-	-	-	-	-	-	-	-	-
WEATHERSTRIPPING OR CAULKING, AND INSULATION ADDED										
YES.....	17	17	18	22	25	30	21	18	23	3
NO.....	78	77	76	72	70	70	71	80	71	94
DONT KNOW.....	5	5	6	5	5	-	8	2	5	3
NOT REPORTED.....	-	-	-	-	-	-	-	-	-	-
TREATED GLASS										
YES.....	29	29	32	29	29	24	14	27	54	7
AT CONSTRUCTION.....	15	16	16	13	16	16	11	14	41	6
SINCE CONSTRUCTION.....	14	14	16	16	15	8	4	14	12	1
NO.....	69	68	65	69	69	75	86	73	46	89
DONT KNOW.....	2	2	2	2	1	1	-	1	-	3
NOT REPORTED.....	-	-	-	-	1	-	-	-	-	-
OUTSIDE SHADING										
YES.....	23	23	25	16	16	27	29	13	4	7
AT CONSTRUCTION.....	12	13	13	8	7	12	6	8	4	3
SINCE CONSTRUCTION.....	9	9	11	7	7	12	19	4	-	3
NO.....	77	77	74	83	83	72	71	87	96	93
DONT KNOW.....	-	-	-	-	-	-	-	-	-	-
NOT REPORTED.....	-	-	-	1	1	1	-	-	-	-
TREATED GLASS AND OUTSIDE SHADING										
YES.....	7	8	8	6	6	6	3	5	3	-
NO.....	92	91	91	93	93	93	97	95	97	99
DONT KNOW.....	1	1	1	1	1	1	-	-	-	1
NOT REPORTED.....	-	-	-	-	-	1	-	-	-	-

SEE NOTES AT END OF TABLE

TABLE 20C. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY ENERGY SOURCES SUPPLIED TO THE BUILDING
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)

CONSERVATION PRACTICES	TOTAL	ENERGY SOURCES SUPPLIED TO THE BUILDING								
		NATURAL ELECTRICITY	NATURAL GAS	FUEL OIL	Liquid PETROLEUM	WOOD	COAL	STEAM	OTHER	NONE
REDUCED HEATING										
YES.....	74	76	81	82	87	85	83	59	72	-
NO.....	14	15	16	16	11	15	16	29	21	-
NOT REPORTED.....	1	1	1	1	1	-	-	11	-	-
NOT APPLICABLE.....	11	8	2	1	2	-	1	1	6	100
REDUCED COOLING										
YES.....	37	38	43	27	31	16	14	45	42	-
NO.....	6	6	7	5	4	1	1	14	18	-
NOT REPORTED.....	1	1	1	1	-	-	-	2	-	-
NOT APPLICABLE.....	56	55	50	67	65	83	85	40	40	100
REDUCED HEATING OR REDUCED COOLING										
YES.....	77	79	84	84	88	85	83	66	77	-
NO.....	12	12	13	14	10	14	16	24	16	-
NOT REPORTED.....	1	1	1	1	1	-	-	9	-	-
NOT APPLICABLE.....	10	7	2	1	1	-	1	1	6	100
REGULAR MAINTENANCE										
YES.....	70	72	78	88	73	66	74	94	72	-
NO.....	18	18	17	8	25	32	26	4	22	-
DONT KNOW.....	2	2	2	2	1	-	-	1	-	-
NOT REPORTED.....	-	-	-	-	-	2	-	-	-	-
NOT APPLICABLE.....	10	7	2	1	1	-	1	1	6	100
REDUCED HEATING OR COOLING, AND REGULAR MAINTENANCE										
YES.....	60	62	67	75	65	58	58	63	60	-
NO.....	27	28	28	22	33	41	41	26	34	-
DONT KNOW.....	1	2	2	1	1	-	-	-	-	-
NOT REPORTED.....	1	1	1	1	-	1	-	10	-	-
NOT APPLICABLE.....	10	7	2	1	1	-	1	1	6	100

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SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 21A. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY TYPE OF HEATING SYSTEM
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS

CONSERVATION PRACTICES	TOTAL	HEATING SYSTEM								
		SELF-CONTAINED UNITS				CENTRAL SYSTEM				OTHER
		FORCED AIR		RADIANT		OTHER	FORCED		RADIANT	
		ELECTRIC	BASEBOARDS	RADIATORS	AIR		OTHER			
NONRESIDENTIAL BUILDINGS.....	4,238	1,201	71	51	430	1,069	503	349	117	448
WEATHERSTRIPPING OR CAULKING ADDED SINCE 1974										
YES.....	1,519	403	25	25	125	464	235	165	38	39
NO.....	2,509	739	44	24	278	557	243	169	76	377
DONT KNOW.....	197	53	2	1	27	46	19	14	3	31
NOT REPORTED.....	14	6	-	-	-	1	5	-	-	1
INSULATION ADDED										
YES.....	1,139	294	20	14	110	341	163	129	29	39
NO.....	2,834	841	48	36	301	657	289	196	84	383
DONT KNOW.....	261	65	3	-	19	70	49	23	4	26
NOT REPORTED.....	4	1	-	-	-	1	2	-	-	-
WEATHERSTRIPPING OR CAULKING, AND INSULATION ADDED										
YES.....	719	186	15	12	66	225	101	82	16	16
NO.....	3,297	956	53	39	344	784	366	247	98	409
DONT KNOW.....	217	58	3	-	20	57	34	20	3	22
NOT REPORTED.....	4	1	-	-	-	1	2	-	-	-
TREATED GLASS										
YES.....	1,221	391	26	9	67	389	146	137	33	23
AT CONSTRUCTION.....	650	225	17	2	37	200	62	78	14	14
SINCE CONSTRUCTION.....	578	168	10	7	30	190	86	60	19	8
NO.....	2,917	780	45	42	349	661	339	205	82	414
DONT KNOW.....	84	27	-	-	12	18	15	4	-	7
NOT REPORTED.....	17	3	-	-	1	1	2	3	2	5

SEE NOTES AT END OF TABLE

TABLE 21A. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY TYPE OF HEATING SYSTEM
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)

CONSERVATION PRACTICES	TOTAL	HEATING SYSTEM											
		SELF-CONTAINED UNITS				CENTRAL SYSTEM				OTHER	NONE		
		FORCED AIR		RADIANT		FORCED AIR	RADIANT	OTHER					
		ELECTRIC BASEBOARDS	RADIATORS	OTHER	OTHER								
OUTSIDE SHADING													
YES.....	957	335	18	6	95	242	95	71	34	63			
AT CONSTRUCTION.....	523	214	12	4	52	117	31	36	18	38			
SINCE CONSTRUCTION.....	369	97	5	2	33	111	63	29	15	15			
NO.....	3,267	863	53	45	332	826	407	275	81	384			
DONT KNOW.....	1	1	-	-	-	-	-	-	-	-			
NOT REPORTED.....	13	2	-	-	3	1	1	3	2	1			
TREATED GLASS AND OUTSIDE SHADING													
YES.....	315	129	8	1	14	84	31	29	12	6			
NO.....	3,879	1,062	63	49	412	974	464	312	103	438			
DONT KNOW.....	31	8	-	-	3	10	7	4	-	1			
NOT REPORTED.....	13	2	-	-	1	1	1	3	2	3			
REDUCED HEATING													
YES.....	3,139	1,016	52	33	352	911	400	282	93	-			
NO.....	604	174	13	16	71	150	92	63	24	-			
NOT REPORTED.....	47	11	6	2	7	8	10	4	1	-			
NOT APPLICABLE.....	448	-	-	-	-	-	-	-	-	448			
REDUCED COOLING													
YES.....	1,582	593	12	10	80	527	150	139	49	20			
NO.....	244	99	3	1	9	83	13	26	5	5			
NOT REPORTED.....	26	11	-	-	2	4	4	4	-	1			
NOT APPLICABLE.....	2,387	498	56	40	339	454	336	179	63	421			

SEE NOTES AT END OF TABLE

TABLE 21A. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY TYPE OF HEATING SYSTEM
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)

CONSERVATION PRACTICES	TOTAL	HEATING SYSTEM									
		SELF-CONTAINED UNITS				CENTRAL SYSTEM				OTHER	NONE
		FORCED AIR		RADIANT		FORCED AIR		RADIANT			
		ELECTRIC	RADIATORS	BASEBOARDS	OTHER	FORCED AIR	RADIANT	OTHER	OTHER	None	None
REDUCED HEATING OR REDUCED COOLING											
YES.....	3,272	1,049	56	36	361	939	418	297	97	20	
NO.....	500	142	11	13	62	124	76	46	20	5	
NOT REPORTED.....	44	10	4	2	7	6	9	6	-	1	
NOT APPLICABLE.....	421	-	-	-	-	-	-	-	-	421	
REGULAR MAINTENANCE											
YES.....	2,978	908	38	41	272	868	455	302	76	18	
NO.....	744	265	29	8	151	169	35	41	41	6	
DONT KNOW.....	79	24	4	2	4	29	10	6	-	1	
NOT REPORTED.....	15	4	-	-	3	2	3	-	-	2	
NOT APPLICABLE.....	421	-	-	-	-	-	-	-	-	421	
REDUCED HEATING OR COOLING, AND REGULAR MAINTENANCE											
YES.....	2,552	790	31	30	232	758	380	256	64	12	
NO.....	1,159	384	33	21	189	278	106	85	53	11	
DONT KNOW.....	63	19	4	-	2	27	8	2	-	1	
NOT REPORTED.....	42	7	4	-	7	5	9	6	-	3	
NOT APPLICABLE.....	421	-	-	-	-	-	-	-	-	421	

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SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 21B. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY TYPE OF HEATING SYSTEM
- PERCENTAGE OF ROW TOTALS

CONSERVATION PRACTICES	TOTAL	HEATING SYSTEM									
		SELF-CONTAINED UNITS					CENTRAL SYSTEM				
		FORCED AIR		RADIANT			FORCED AIR		RADIANT		OTHER
		ELECTRIC	BASEBOARDS	RADIATORS	OTHER						NONE
NONRESIDENTIAL BUILDINGS.....	100%	28		2	1	10	25	12	8	3	11
WEATHERSTRIPPING OR CAULKING ADDED SINCE 1974											
YES.....	100%	27		2	2	8	31	15	11	3	3
NO.....	100%	29		2	1	11	22	10	7	3	15
DONT KNOW.....	100%	27		1	1	14	24	10	7	1	16
NOT REPORTED.....	100%	42		-	-	-	10	37	2	1	9
INSULATION ADDED											
YES.....	100%	26		2	1	10	30	14	11	3	3
NO.....	100%	30		2	1	11	23	10	7	3	14
DONT KNOW.....	100%	25		1	-	7	27	19	9	2	10
NOT REPORTED.....	100%	14		-	-	-	17	53	10	3	3
WEATHERSTRIPPING OR CAULKING, AND INSULATION ADDED											
YES.....	100%	26		2	2	9	31	14	11	2	2
NO.....	100%	29		2	1	10	24	11	7	3	12
DONT KNOW.....	100%	27		1	-	9	26	16	9	1	10
NOT REPORTED.....	100%	15		-	-	-	15	57	7	3	3
TREATED GLASS											
YES.....	100%	32		2	1	6	32	12	11	3	2
AT CONSTRUCTION.....	100%	35		3	-	6	31	10	12	2	2
SINCE CONSTRUCTION.....	100%	29		2	1	5	33	15	10	3	1
NO.....	100%	27		2	1	12	23	12	7	3	14
DONT KNOW.....	100%	33		-	-	15	22	18	5	-	8
NOT REPORTED.....	100%	16		-	-	8	4	12	19	12	29

SEE NOTES AT END OF TABLE

TABLE 21B. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY TYPE OF HEATING SYSTEM
- PERCENTAGE OF ROW TOTALS (CONTINUED)

CONSERVATION PRACTICES	TOTAL	HEATING SYSTEM											
		SELF-CONTAINED UNITS				CENTRAL SYSTEM				OTHER	NONE		
		RADIANT			OTHER	FORCED AIR		RADIANT					
		FORCED AIR	ELECTRIC	RADIATORS		FORCED	AIR	RADIANT	OTHER				
OUTSIDE SHADING													
YES.....	100%	35	2	1	10	25	10	7	4	7			
AT CONSTRUCTION.....	100%	41	2	1	10	22	6	7	3	7			
SINCE CONSTRUCTION.....	100%	26	1	-	9	30	17	8	4	4			
NO.....	100%	26	2	1	10	25	12	8	2	12			
DONT KNOW.....	100%	100	-	-	-	-	-	-	-	-			
NOT REPORTED.....	100%	18	-	-	22	4	5	24	15	11			
TREATED GLASS AND OUTSIDE SHADING													
YES.....	100%	41	3	-	4	27	10	9	4	2			
NO.....	100%	27	2	1	11	25	12	8	3	11			
DONT KNOW.....	100%	24	-	-	9	33	21	12	-	2			
NOT REPORTED.....	100%	19	-	-	10	4	5	24	16	21			
REDUCED HEATING													
YES.....	100%	32	2	1	11	29	13	9	3	-			
NO.....	100%	29	2	3	12	25	15	10	4	-			
NOT REPORTED.....	100%	23	12	4	14	17	21	8	2	-			
NOT APPLICABLE.....	100%	-	-	-	-	-	-	-	-	-	100		
REDUCED COOLING													
YES.....	100%	37	1	1	5	33	10	9	3	1			
NO.....	100%	41	1	-	4	34	5	11	2	2			
NOT REPORTED.....	100%	42	-	-	6	16	15	14	1	5			
NOT APPLICABLE.....	100%	21	2	2	14	19	14	8	3	18			

SEE NOTES AT END OF TABLE

**TABLE 21B. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY TYPE OF HEATING SYSTEM
- PERCENTAGE OF ROW TOTALS (CONTINUED)**

CONSERVATION PRACTICES	TOTAL	HEATING SYSTEM									
		SELF-CONTAINED UNITS				CENTRAL SYSTEM				OTHER	NONE
		RADIANT		OTHER		FORCED AIR		RADIANT			
		FORCED AIR	ELECTRIC BASEBOARDS	RADIATORS	OTHER	FORCED AIR	OTHER	RADIANT	OTHER	OTHER	NONE
REDUCED HEATING OR REDUCED COOLING											
YES.....	100%	32	2	1	11	29	13	9	3	1	
NO.....	100%	28	2	3	12	25	15	9	4	1	
NOT REPORTED.....	100%	23	9	4	15	13	20	13	1	3	
NOT APPLICABLE.....	100%	-	-	-	-	-	-	-	-	-	100
REGULAR MAINTENANCE											
YES.....	100%	30	1	1	9	29	15	10	3	1	
NO.....	100%	36	4	1	20	23	5	5	5	1	
DONT KNOW.....	100%	30	5	2	6	37	12	7	-	1	
NOT REPORTED.....	100%	28	-	-	19	12	20	3	2	15	
NOT APPLICABLE.....	100%	-	-	-	-	-	-	-	-	-	100
REDUCED HEATING OR COOLING, AND REGULAR MAINTENANCE											
YES.....	100%	31	1	1	9	30	15	10	2	-	
NO.....	100%	33	3	2	16	24	9	7	5	1	
DONT KNOW.....	100%	31	6	-	4	43	13	3	-	1	
NOT REPORTED.....	100%	17	9	-	16	12	21	15	1	8	
NOT APPLICABLE.....	100%	-	-	-	-	-	-	-	-	-	100

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SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 21C. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY TYPE OF HEATING SYSTEM
- PERCENTAGE OF COLUMN TOTALS

CONSERVATION PRACTICES	TOTAL	HEATING SYSTEM								
		SELF-CONTAINED UNITS				CENTRAL SYSTEM				OTHER
		FORCED AIR		RADIANT		FORCED AIR		RADIANT		
		ELECTRIC BASEBOARDS	RADIATORS	OTHER						
NONRESIDENTIAL BUILDINGS.....	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
WEATHERSTRIPPING OR CAULKING ADDED SINCE 1974										
YES.....	36	34	35	50	29	43	47	47	33	9
NO.....	59	62	62	48	65	52	48	49	65	84
DONT KNOW.....	5	4	3	3	6	4	4	4	2	7
NOT REPORTED.....	-	-	-	-	-	-	1	-	-	-
INSULATION ADDED										
YES.....	27	25	28	27	26	32	32	37	25	9
NO.....	67	70	67	72	70	61	57	56	72	85
DONT KNOW.....	6	5	5	1	4	7	10	7	4	6
NOT REPORTED.....	-	-	-	-	-	-	-	-	-	-
WEATHERSTRIPPING OR CAULKING, AND INSULATION ADDED										
YES.....	17	15	21	23	15	21	20	23	14	4
NO.....	78	80	74	77	80	73	73	71	84	91
DONT KNOW.....	5	5	5	-	5	5	7	6	2	5
NOT REPORTED.....	-	-	-	-	-	-	-	-	-	-
TREATED GLASS										
YES.....	29	33	37	17	16	36	29	39	28	5
AT CONSTRUCTION.....	15	19	24	4	9	19	12	22	12	3
SINCE CONSTRUCTION.....	14	14	13	13	7	18	17	17	16	2
NO.....	69	65	63	83	81	62	67	59	70	92
DONT KNOW.....	2	2	-	-	3	2	3	1	-	2
NOT REPORTED.....	-	-	-	-	-	-	-	1	2	1

SEE NOTES AT END OF TABLE

TABLE 21C. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY TYPE OF HEATING SYSTEM
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)

CONSERVATION PRACTICES	TOTAL	HEATING SYSTEM									
		SELF-CONTAINED UNITS				CENTRAL SYSTEM				OTHER	NONE
		RADIANT		OTHER		FORCED AIR		RADIANT			
		FORCED AIR	ELECTRIC RADIATORS BASEBOARDS	OTHER		AIR		RADIANT	OTHER		
OUTSIDE SHADING											
YES.....	23	28	25	11	22	23	19	20	29	14	
AT CONSTRUCTION.....	12	18	17	8	12	11	6	10	15	9	
SINCE CONSTRUCTION.....	9	8	7	3	8	10	12	8	13	3	
NO.....	77	72	75	89	77	77	81	79	69	86	
DONT KNOW.....	-	-	-	-	-	-	-	-	-	-	
NOT REPORTED.....	-	-	-	-	1	-	-	-	1	2	
TREATED GLASS AND OUTSIDE SHADING											
YES.....	7	11	11	2	3	8	6	8	10	1	
NO.....	92	88	89	98	96	91	92	90	88	98	
DONT KNOW.....	1	1	-	-	1	1	1	1	-	-	
NOT REPORTED.....	-	-	-	-	-	-	-	1	2	1	
REDUCED HEATING											
YES.....	74	85	73	65	82	85	80	81	79	-	
NO.....	14	15	19	32	16	14	18	18	20	-	
NOT REPORTED.....	1	1	8	3	2	1	2	1	1	-	
NOT APPLICABLE.....	11	-	-	-	-	-	-	-	-	-	100
REDUCED COOLING											
YES.....	37	49	17	20	19	49	30	40	42	5	
NO.....	6	8	5	1	2	8	3	8	4	1	
NOT REPORTED.....	1	1	-	-	-	-	1	1	-	-	
NOT APPLICABLE.....	56	41	78	78	79	43	67	51	54	94	

SEE NOTES AT END OF TABLE

TABLE 21C. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY TYPE OF HEATING SYSTEM
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)

CONSERVATION PRACTICES	TOTAL	HEATING SYSTEM									
		SELF-CONTAINED UNITS				CENTRAL SYSTEM					
		RADIANT			OTHER	FORCED AIR		RADIANT		OTHER	
		FORCED AIR	ELECTRIC BASEBOARDS	RADIATORS		OTHER	FORCED AIR	RADIANT	OTHER		
REDUCED HEATING OR REDUCED COOLING											
212	YES.....	77	87	79	70	84	88	83	85	83	5
	NO.....	12	12	15	26	15	12	15	13	17	1
	NOT REPORTED.....	1	1	6	3	2	1	2	2	-	-
	NOT APPLICABLE.....	10	-	-	-	-	-	-	-	-	94
REGULAR MAINTENANCE											
	YES.....	70	76	54	81	63	81	90	87	65	4
	NO.....	18	22	40	16	35	16	7	12	35	1
	DONT KNOW.....	2	2	6	3	1	3	2	2	-	-
	NOT REPORTED.....	-	-	-	-	1	-	1	-	-	-
	NOT APPLICABLE.....	10	-	-	-	-	-	-	-	-	94
REDUCED HEATING OR COOLING, AND REGULAR MAINTENANCE											
	YES.....	60	66	43	58	54	71	76	73	54	3
	NO.....	27	32	46	42	44	26	21	24	45	2
	DONT KNOW.....	1	2	5	-	1	3	2	1	-	-
	NOT REPORTED.....	1	1	6	-	2	-	2	2	-	1
	NOT APPLICABLE.....	10	-	-	-	-	-	-	-	-	94

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SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 22A. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY HEATING FUELS
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS

CONSERVATION PRACTICES	TOTAL	HEATING FUELS								
		NATURAL GAS	ELECTRICITY	FUEL OIL	LIQUID PETROLEUM GAS	WOOD GAS	COAL	STEAM	OTHER	NONE
NONRESIDENTIAL BUILDINGS.....	4,238	2,069	1,033	808	223	102	50	51	10	450
WEATHERSTRIPPING OR CAULKING										
ADDED SINCE 1974										
YES.....	1,519	839	360	372	96	50	23	22	3	39
NO.....	2,509	1,125	626	405	121	51	25	29	6	379
DONT KNOW.....	197	100	44	27	6	-	2	1	1	31
NOT REPORTED.....	14	5	4	4	-	-	-	-	-	1
INSULATION ADDED										
YES.....	1,139	591	283	275	94	50	16	13	1	39
NO.....	2,834	1,327	703	479	112	49	27	37	8	385
DONT KNOW.....	261	149	47	53	17	3	6	1	1	26
NOT REPORTED.....	4	3	-	1	-	-	-	-	-	-
WEATHERSTRIPPING OR CAULKING, AND INSULATION ADDED										
YES.....	719	371	182	182	61	32	11	9	1	16
NO.....	3,297	1,573	805	586	148	70	34	41	8	411
DONT KNOW.....	217	123	45	39	14	-	5	1	1	22
NOT REPORTED.....	4	3	-	1	-	-	-	-	-	-
TREATED GLASS										
YES.....	1,221	670	401	234	60	23	8	13	4	23
AT CONSTRUCTION.....	650	329	246	101	30	15	6	7	4	14
SINCE CONSTRUCTION.....	578	338	166	135	30	8	2	7	-	8
NO.....	2,917	1,349	603	556	161	77	42	38	6	415
DONT KNOW.....	84	47	21	15	2	1	-	-	-	7
NOT REPORTED.....	17	3	8	3	-	-	-	-	-	5
OUTSIDE SHADING										
YES.....	957	533	274	127	28	20	12	6	-	63
AT CONSTRUCTION.....	523	267	189	62	10	12	4	4	-	38
SINCE CONSTRUCTION.....	369	230	83	55	11	7	6	2	-	15
NO.....	3,267	1,535	752	676	195	80	38	45	10	386
DONT KNOW.....	1	1	-	-	-	-	-	-	-	-
NOT REPORTED.....	13	1	7	5	-	2	-	-	-	1
TREATED GLASS AND OUTSIDE SHADING										
YES.....	315	166	116	46	9	4	2	2	-	6
NO.....	3,879	1,883	906	750	213	96	48	49	10	440
DONT KNOW.....	31	19	4	9	2	1	-	-	-	1
NOT REPORTED.....	13	1	7	3	-	-	-	-	-	3

SEE NOTES AT END OF TABLE

TABLE 22A. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY HEATING FUELS
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)

CONSERVATION PRACTICES	TOTAL	HEATING FUELS								
		NATURAL GAS	ELECTRICITY	FUEL OIL	Liquid PETROLEUM GAS	WOOD	COAL	STEAM	OTHER	NONE
REDUCED HEATING										
YES.....	3,139	1,733	843	673	202	86	43	30	7	-
NO.....	604	322	170	128	18	15	8	15	3	1
NOT REPORTED.....	47	14	20	7	3	-	-	6	-	-
NOT APPLICABLE.....	448	-	-	-	-	-	-	-	-	448
REDUCED COOLING										
YES.....	1,582	916	518	221	60	15	7	23	3	20
NO.....	244	142	88	33	7	1	-	8	2	5
NOT REPORTED.....	26	11	8	6	-	-	-	1	-	1
NOT APPLICABLE.....	2,387	1,001	419	548	155	85	43	19	5	423
REDUCED HEATING OR REDUCED COOLING										
YES.....	3,272	1,799	878	691	202	87	43	34	8	20
NO.....	500	256	139	110	18	14	7	12	2	6
NOT REPORTED.....	44	14	16	6	3	-	-	5	-	2
NOT APPLICABLE.....	421	-	-	-	-	-	-	-	-	421
REGULAR MAINTENANCE										
YES.....	2,978	1,629	734	721	154	69	41	49	8	20
NO.....	744	390	271	71	66	30	9	2	2	6
DONT KNOW.....	75	44	25	15	2	-	-	1	-	1
NOT REPORTED.....	15	6	4	2	-	2	-	-	-	3
NOT APPLICABLE.....	421	-	-	-	-	-	-	-	-	421
REDUCED HEATING OR COOLING, AND REGULAR MAINTENANCE										
YES.....	2,552	1,410	635	616	139	60	34	33	6	12
NO.....	1,159	608	366	176	81	40	16	13	4	12
DONT KNOW.....	63	37	20	10	2	-	-	-	-	1
NOT REPORTED.....	42	14	12	7	-	1	-	5	-	4
NOT APPLICABLE.....	421	-	-	-	-	-	-	-	-	421

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SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 22B. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY HEATING FUELS
- PERCENTAGE OF ROW TOTALS

CONSERVATION PRACTICES	TOTAL	HEATING FUELS								
		NATURAL GAS	ELECTRICITY	FUEL OIL	LIQUID PETROLEUM GAS	WOOD	COAL	STEAM	OTHER	NONE
NONRESIDENTIAL BUILDINGS.....	100%	49	24	19	5	2	1	1	-	11
WEATHERSTRIPPING OR CAULKING ADDED SINCE 1974										
YES.....	100%	55	24	24	6	3	2	1	-	3
NO.....	100%	45	25	16	5	2	1	1	-	15
DONT KNOW.....	100%	51	22	14	3	-	1	-	-	16
NOT REPORTED.....	100%	37	29	33	-	-	-	-	-	9
INSULATION ADDED										
YES.....	100%	52	25	24	8	4	1	1	-	3
NO.....	100%	47	25	17	4	2	1	1	-	14
DONT KNOW.....	100%	57	18	20	7	1	2	-	-	10
NOT REPORTED.....	100%	76	3	39	-	-	-	3	-	3
WEATHERSTRIPPING OR CAULKING, AND INSULATION ADDED										
YES.....	100%	52	25	25	9	4	1	1	-	2
NO.....	100%	48	24	18	4	2	1	1	-	12
DONT KNOW.....	100%	56	21	18	6	-	2	-	-	10
NOT REPORTED.....	100%	78	4	42	-	-	-	-	-	3
TREATED GLASS										
YES.....	100%	55	33	19	5	2	1	1	-	2
AT CONSTRUCTION.....	100%	51	38	16	5	2	1	1	-	2
SINCE CONSTRUCTION.....	100%	59	29	23	5	1	-	1	-	1
NO.....	100%	46	21	19	6	3	1	1	-	14
DONT KNOW.....	100%	56	26	18	3	2	-	-	-	8
NOT REPORTED.....	100%	15	45	20	-	-	-	1	-	29
OUTSIDE SHADING										
YES.....	100%	56	29	13	3	2	1	1	-	7
AT CONSTRUCTION.....	100%	51	36	12	2	2	1	1	-	7
SINCE CONSTRUCTION.....	100%	62	22	15	3	2	1	1	-	4
NO.....	100%	47	23	21	6	2	1	1	-	12
DONT KNOW.....	100%	100	-	-	-	-	-	-	-	-
NOT REPORTED.....	100%	6	55	37	-	13	-	-	-	11
TREATED GLASS AND OUTSIDE SHADING										
YES.....	100%	53	37	15	3	1	1	1	-	2
NO.....	100%	49	23	19	5	2	1	1	-	11
DONT KNW.....	100%	62	12	30	5	4	-	-	-	2
NOT REPORTED.....	100%	6	57	26	-	-	-	-	-	21

SEE NOTES AT END OF TABLE

TABLE 22B. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY HEATING FUELS
- PERCENTAGE OF ROW TOTALS (CONTINUED)

CONSERVATION PRACTICES	TOTAL	HEATING FUELS								NONE
		NATURAL GAS	ELECTRICITY	FUEL OIL	Liquid PETROLEUM GAS	WOOD	COAL	STEAM	OTHER	
REDUCED HEATING										
YES.....	100%	55	27	21	6	3	1	1	-	-
NO.....	100%	53	28	21	3	2	1	2	-	-
NOT REPORTED.....	100%	30	43	16	7	1	-	12	-	1
NOT APPLICABLE.....	100%	-	-	-	-	-	-	-	-	100
REDUCED COOLING										
YES.....	100%	58	33	14	4	1	-	1	-	1
NO.....	100%	58	36	14	3	-	-	3	1	2
NOT REPORTED.....	100%	41	33	22	1	1	-	4	-	5
NOT APPLICABLE.....	100%	42	18	23	7	4	2	1	-	18
REDUCED HEATING OR REDUCED COOLING										
YES.....	100%	55	27	21	6	3	1	1	-	1
NO.....	100%	51	28	22	4	3	1	2	-	1
NOT REPORTED.....	100%	32	37	15	7	1	-	11	-	4
NOT APPLICABLE.....	100%	-	-	-	-	-	-	-	-	100
REGULAR MAINTENANCE										
YES.....	100%	55	25	24	5	2	1	2	-	1
NO.....	100%	52	36	10	9	4	1	-	-	1
DONT KNOW.....	100%	56	31	18	3	-	-	1	-	1
NOT REPORTED.....	100%	38	25	13	-	16	-	1	-	17
NOT APPLICABLE.....	100%	-	-	-	-	-	-	-	-	100
REDUCED HEATING OR COOLING, AND REGULAR MAINTENANCE										
YES.....	100%	55	25	24	5	2	1	1	-	-
NO.....	100%	52	32	15	7	3	1	1	-	1
DONT KNOW.....	100%	59	32	15	4	-	-	-	-	1
NOT REPORTED.....	100%	34	29	16	-	3	-	12	-	9
NOT APPLICABLE.....	100%	-	-	-	-	-	-	-	-	100

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TABLE 22C. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY HEATING FUELS
- PERCENTAGE OF COLUMN TOTALS

CONSERVATION PRACTICES	TOTAL	HEATING FUELS								
		NATURAL GAS	ELECTRICITY	FUEL OIL	LIQUID PETROLEUM GAS	WOOD	COAL	STEAM	OTHER	NONE
NONRESIDENTIAL BUILDINGS.....	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
WEATHERSTRIPPING OR CAULKING ADDED SINCE 1974										
YES.....	36	41	35	46	43	49	46	43	32	9
NO.....	59	54	61	50	54	51	51	56	58	84
DONT KNOW.....	5	5	4	3	3	-	4	1	10	7
NOT REPORTED.....	-	-	-	1	-	-	-	-	-	-
INSULATION ADDED										
YES.....	27	29	27	34	42	49	33	25	11	9
NO.....	67	64	68	59	50	48	54	73	79	86
DONT KNOW.....	6	7	5	7	8	3	13	2	10	6
NOT REPORTED.....	-	-	-	-	-	-	-	-	-	-
WEATHERSTRIPPING OR CAULKING, AND INSULATION ADDED										
YES.....	17	18	18	23	28	31	21	19	11	4
NO.....	78	76	78	72	66	69	69	80	79	91
DONT KNOW.....	5	6	4	5	6	-	10	1	10	5
NOT REPORTED.....	-	-	-	-	-	-	-	-	-	-
TREATED GLASS										
YES.....	29	32	39	29	27	23	17	25	43	5
AT CONSTRUCTION.....	15	16	24	12	14	15	12	13	38	3
SINCE CONSTRUCTION.....	14	16	16	17	14	8	5	14	5	2
NO.....	69	65	58	69	72	76	83	74	57	92
DONT KNOW.....	2	2	2	2	1	1	-	1	-	2
NOT REPORTED.....	-	-	1	-	-	-	-	-	-	1
OUTSIDE SHADING										
YES.....	23	26	27	16	13	20	24	12	2	14
AT CONSTRUCTION.....	12	13	18	8	5	11	7	8	2	9
SINCE CONSTRUCTION.....	9	11	8	7	5	6	13	4	-	3
NO.....	77	74	73	84	87	78	76	88	98	86
DONT KNOW.....	-	-	-	-	-	-	-	-	-	-
NOT REPORTED.....	-	-	1	1	-	2	-	-	-	-
TREATED GLASS AND OUTSIDE SHADING										
YES.....	7	8	11	6	4	4	4	4	2	1
NO.....	92	91	88	93	95	95	96	96	98	98
DONT KNOW.....	1	1	-	1	1	1	-	-	-	-
NOT REPORTED.....	-	-	1	-	-	-	-	-	-	1

SEE NOTES AT END OF TABLE

TABLE 22C. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY HEATING FUELS
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)

CONSERVATION PRACTICES	TOTAL	HEATING FUELS								OTHER	NONE
		NATURAL GAS	ELECTRICITY	FUEL OIL	Liquid Petroleum Gas	WOOD	COAL	STEAM			
REDUCED HEATING											
YES.....	74	84	82	83	90	85	85	60	73	-	
NO.....	14	16	16	16	8	14	15	29	27	-	
NOT REPORTED.....	1	1	2	1	1	-	-	11	-	-	
NOT APPLICABLE.....	11	-	-	-	-	-	-	-	-	-	100
REDUCED COOLING											
YES.....	37	44	50	27	27	15	14	45	32	5	
NO.....	6	7	9	4	3	1	1	15	17	1	
NOT REPORTED.....	1	1	1	1	-	-	-	2	-	-	
NOT APPLICABLE.....	56	48	41	68	70	84	85	38	51	94	
REDUCED HEATING OR REDUCED COOLING											
YES.....	77	87	85	86	91	86	85	66	83	5	
NO.....	12	12	13	14	8	14	15	24	17	1	
NOT REPORTED.....	1	1	2	1	1	-	-	9	-	-	
NOT APPLICABLE.....	10	-	-	-	-	-	-	-	-	-	94
REGULAR MAINTENANCE											
YES.....	70	79	71	89	69	68	82	95	76	4	
NO.....	18	19	26	9	30	29	18	3	24	1	
DONT KNOW.....	2	2	2	2	1	-	-	2	-	-	
NOT REPORTED.....	-	-	-	-	-	2	-	-	-	1	
NOT APPLICABLE.....	10	-	-	-	-	-	-	-	-	-	94
REDUCED HEATING OR COOLING, AND REGULAR MAINTENANCE											
YES.....	60	68	61	76	62	59	67	64	58	3	
NO.....	27	29	35	22	36	40	33	26	42	3	
DONT KNOW.....	1	2	2	1	1	-	-	-	-	-	
NOT REPORTED.....	1	1	1	1	-	1	-	10	-	1	
NOT APPLICABLE.....	10	-	-	-	-	-	-	-	-	-	94

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TABLE 23A. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY TYPE OF AIR CONDITIONING SYSTEM
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS

CONSERVATION PRACTICES	TOTAL	AIR CONDITIONING SYSTEM					NO AIR CONDITIONING
		WINDOW UNITS	PACKAGE UNITS	CENTRAL SYSTEM	COMBINATION/ OTHER		
NONRESIDENTIAL BUILDINGS.....	4,238	855	799	750	302		1,532
WEATHERSTRIPPING OR CAULKING ADDED SINCE 1974							
YES.....	1,519	326	291	291	114		496
NO.....	2,509	478	465	417	178		970
DONT KNOW.....	197	48	38	39	9		62
NOT REPORTED.....	14	3	5	2	-		4
INSULATION ADDED							
YES.....	1,139	242	225	228	89		356
NO.....	2,834	553	528	462	200		1,091
DONT KNOW.....	261	58	47	58	14		84
NOT REPORTED.....	4	1	-	1	-		1
WEATHERSTRIPPING OR CAULKING, AND INSULATION ADDED							
YES.....	719	153	136	145	54		231
NO.....	3,297	654	617	555	236		1,234
DONT KNOW.....	217	46	46	46	12		66
NOT REPORTED.....	4	1	-	1	-		1
TREATED GLASS							
YES.....	1,221	171	334	344	118		254
AT CONSTRUCTION.....	650	62	200	205	62		120
SINCE CONSTRUCTION.....	578	113	137	138	60		131
NO.....	2,917	658	446	389	181		1,243
DONT KNOW.....	84	22	19	16	1		26
NOT REPORTED.....	17	4	-	-	2		10
OUTSIDE SHADING							
YES.....	957	203	271	178	88		216
AT CONSTRUCTION.....	523	91	170	97	45		120
SINCE CONSTRUCTION.....	369	97	89	69	40		74
NO.....	3,267	649	527	572	211		1,308
DONT KNOW.....	1	-	1	-	-		-
NOT REPORTED.....	13	3	-	-	2		8
TREATED GLASS AND OUTSIDE SHADING							
YES.....	315	37	121	78	32		46
NO.....	3,879	799	671	667	267		1,476
DONT KNOW.....	31	16	8	5	-		3
NOT REPORTED.....	13	3	-	-	2		7

SEE NOTES AT END OF TABLE

**TABLE 23A. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY TYPE OF AIR CONDITIONING SYSTEM
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)**

CONSERVATION PRACTICES	TOTAL	AIR CONDITIONING SYSTEM					NO AIR CONDITIONING
		WINDOW UNITS	PACKAGE UNITS	CENTRAL SYSTEM	COMBINATION/ OTHER		
REDUCED HEATING							
YES.....	3,139	670	639	624	251	954	
NO.....	604	138	136	117	34	179	
NOT REPORTED.....	47	14	10	5	8	10	
NOT APPLICABLE.....	448	33	15	3	8	389	
REDUCED COOLING							
YES.....	1,582	-	674	638	269	-	
NO.....	244	-	109	106	29	-	
NOT REPORTED.....	26	-	16	6	4	-	
NOT APPLICABLE.....	2,387	855	-	-	-	1,532	
REDUCED HEATING OR REDUCED COOLING							
YES.....	3,272	670	701	668	280	954	
NO.....	500	138	87	77	19	179	
NOT REPORTED.....	44	14	11	5	3	10	
NOT APPLICABLE.....	421	33	-	-	-	389	
REGULAR MAINTENANCE							
YES.....	2,978	608	650	635	249	936	
NO.....	744	201	122	104	43	274	
DONT KNOW.....	79	12	21	9	7	29	
NOT REPORTED.....	15	1	6	1	2	4	
NOT APPLICABLE.....	421	33	-	-	-	389	
REDUCED HEATING OR COOLING, AND REGULAR MAINTENANCE							
YES.....	2,552	500	574	559	231	688	
NO.....	1,159	306	196	176	62	419	
DONT KNOW.....	63	7	16	9	5	26	
NOT REPORTED.....	42	9	13	6	4	10	
NOT APPLICABLE.....	421	33	-	-	-	389	

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. SEE APPENDIX B FOR DISCUSSION OF LIMITATIONS OF DATA.

SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 23B. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY TYPE OF AIR CONDITIONING SYSTEM
- PERCENTAGE OF ROW TOTALS

CONSERVATION PRACTICES	TOTAL	AIR CONDITIONING SYSTEM					NO AIR CONDITIONING
		WINDOW UNITS	PACKAGE UNITS	CENTRAL SYSTEM	COMBINATION/ OTHER		
NONRESIDENTIAL BUILDINGS.....	100%	20	19	18	7		36
WEATHERSTRIPPING OR CAULKING ADDED SINCE 1974							
YES.....	100%	21	19	19	8		33
NO.....	100%	19	19	17	7		39
DONT KNOW.....	100%	24	19	20	5		31
NOT REPORTED.....	100%	22	36	15	-		28
INSULATION ADDED							
YES.....	100%	21	20	20	8		31
NO.....	100%	20	19	16	7		39
DONT KNOW.....	100%	22	18	22	5		32
NOT REPORTED.....	100%	35	-	34	-		30
WEATHERSTRIPPING OR CAULKING, AND INSULATION ADDED							
YES.....	100%	21	19	20	7		32
NO.....	100%	20	19	17	7		37
DONT KNOW.....	100%	21	21	21	6		30
NOT REPORTED.....	100%	37	-	33	-		29
TREATED GLASS							
YES.....	100%	14	27	28	10		21
AT CONSTRUCTION.....	100%	10	31	32	10		18
SINCE CONSTRUCTION.....	100%	19	24	24	10		23
NO.....	100%	23	15	13	6		43
DONT KNOW.....	100%	26	22	20	1		31
NOT REPORTED.....	100%	26	2	1	13		57
OUTSIDE SHADING							
YES.....	100%	21	28	19	9		23
AT CONSTRUCTION.....	100%	17	33	19	9		23
SINCE CONSTRUCTION.....	100%	26	24	19	11		20
NO.....	100%	20	16	17	6		40
DONT KNOW.....	100%	-	100	-	-		-
NOT REPORTED.....	100%	24	-	1	17		58
TREATED GLASS AND OUTSIDE SHADING							
YES.....	100%	12	38	25	10		15
NO.....	100%	21	17	17	7		38
DONT KNOW.....	100%	50	25	15	-		10
NOT REPORTED.....	100%	24	-	1	18		57

SEE NOTES AT END OF TABLE

TABLE 23B. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY TYPE OF AIR CONDITIONING SYSTEM
- PERCENTAGE OF ROW TOTALS (CONTINUED)

CONSERVATION PRACTICES	TOTAL	AIR CONDITIONING SYSTEM					NO AIR CONDITIONING
		WINDOW UNITS	PACKAGE UNITS	CENTRAL SYSTEM	COMBINATION/ OTHER		
REDUCED HEATING							
YES.....	100%	21	20	20	8	30	
NO.....	100%	23	22	19	6	30	
NOT REPORTED.....	100%	30	20	10	17	22	
NOT APPLICABLE.....	100%	7	3	1	2	87	
REDUCED COOLING							
YES.....	100%	-	43	40	17	-	
NO.....	100%	-	45	43	12	-	
NOT REPORTED.....	100%	-	63	22	14	-	
NOT APPLICABLE.....	100%	36	-	-	-	64	
REDUCED HEATING OR REDUCED COOLING							
YES.....	100%	20	21	20	9	29	
NO.....	100%	28	17	15	4	36	
NOT REPORTED.....	100%	32	25	12	7	23	
NOT APPLICABLE.....	100%	8	-	-	-	92	
REGULAR MAINTENANCE							
YES.....	100%	20	22	21	8	28	
NO.....	100%	27	16	14	6	37	
DONT KNOW.....	100%	15	27	12	9	37	
NOT REPORTED.....	100%	9	42	6	15	28	
NOT APPLICABLE.....	100%	8	-	-	-	92	
REDUCED HEATING OR COOLING, AND REGULAR MAINTENANCE							
YES.....	100%	20	22	22	9	27	
NO.....	100%	26	17	15	5	36	
DONT KNOW.....	100%	12	26	14	8	41	
NOT REPORTED.....	100%	21	31	14	10	24	
NOT APPLICABLE.....	100%	8	-	-	-	92	

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SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 23C. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY TYPE OF AIR CONDITIONING SYSTEM
- PERCENTAGE OF COLUMN TOTALS

CONSERVATION PRACTICES	TOTAL	AIR CONDITIONING SYSTEM					
		WINDOW UNITS	PACKAGE UNITS	CENTRAL SYSTEM	COMBINATION/ OTHER	NO AIR CONDITIONING	100%
NONRESIDENTIAL BUILDINGS.....	100%	100%	100%	100%	100%	100%	100%
WEATHERSTRIPPING OR CAULKING ADDED SINCE 1974							
YES.....	36	38	36	39	38	32	
NO.....	55	56	58	56	59	63	
DONT KNOW.....	5	6	5	5	3	4	
NOT REPORTED.....	-	-	1	-	-	-	
INSULATION ADDED							
YES.....	27	28	28	30	29	23	
NO.....	67	65	66	62	66	71	
DONT KNOW.....	6	7	6	8	5	5	
NOT REPORTED.....	-	-	-	-	-	-	
WEATHERSTRIPPING OR CAULKING, AND INSULATION ADDED							
YES.....	17	18	17	19	18	15	
NO.....	78	77	77	74	78	81	
DONT KNOW.....	5	5	6	6	4	4	
NOT REPORTED.....	-	-	-	-	-	-	
TREATED GLASS							
YES.....	29	20	42	46	39	17	
AT CONSTRUCTION.....	15	7	25	27	21	8	
SINCE CONSTRUCTION.....	14	13	17	18	20	9	
NO.....	69	77	56	52	60	81	
DONT KNOW.....	2	3	2	2	-	2	
NOT REPORTED.....	-	1	-	-	1	1	
OUTSIDE SHADING							
YES.....	23	24	34	24	29	14	
AT CONSTRUCTION.....	12	11	21	13	15	8	
SINCE CONSTRUCTION.....	9	11	11	9	13	5	
NO.....	77	76	66	76	70	85	
DONT KNOW.....	-	-	-	-	-	-	
NOT REPORTED.....	-	-	-	-	1	1	
TREATED GLASS AND OUTSIDE SHADING							
YES.....	7	4	15	10	11	3	
NO.....	92	93	84	89	88	96	
DONT KNOW.....	1	2	1	1	-	-	
NOT REPORTED.....	-	-	-	-	1	-	

SEE NOTES AT END OF TABLE

TABLE 23C. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY TYPE OF AIR CONDITIONING SYSTEM
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)

CONSERVATION PRACTICES	TOTAL	AIR CONDITIONING SYSTEM					NO AIR CONDITIONING
		WINDOW UNITS	PACKAGE UNITS	CENTRAL SYSTEM	COMBINATION/ OTHER		
REDUCED HEATING							
YES.....	74	78	80	83	83	62	
NO.....	14	16	17	16	11	12	
NOT REPORTED.....	1	2	1	1	3	1	
NOT APPLICABLE.....	11	4	2	-	3	25	
REDUCED COOLING							
YES.....	37	-	84	85	89	-	
NO.....	6	-	14	14	10	-	
NOT REPORTED.....	1	-	2	1	1	-	
NOT APPLICABLE.....	56	100	-	-	-	100	
REDUCED HEATING OR REDUCED COOLING							
YES.....	77	78	88	89	93	62	
NO.....	12	16	11	10	6	12	
NOT REPORTED.....	1	2	1	1	1	1	
NOT APPLICABLE.....	10	4	-	-	-	25	
REGULAR MAINTENANCE							
YES.....	70	71	81	85	83	55	
NO.....	18	24	15	14	14	18	
DONT KNOW.....	2	1	3	1	2	2	
NOT REPORTED.....	-	-	1	-	1	-	
NOT APPLICABLE.....	10	4	-	-	-	25	
REDUCED HEATING OR COOLING, AND REGULAR MAINTENANCE							
YES.....	60	58	72	75	77	45	
NO.....	27	36	25	23	20	27	
DONT KNOW.....	1	1	2	1	2	2	
NOT REPORTED.....	1	1	2	1	1	1	
NOT APPLICABLE.....	10	4	-	-	-	25	

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SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 24A. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY OCCUPANCY CHARACTERISTICS
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS

CONSERVATION PRACTICES	TOTAL	OCCUPANCY CHARACTERISTICS					
		SINGLE ESTABLISHMENT BUILDING		MULTIPLE ESTABLISHMENT BUILDING		GOVERNMENT OWNED AND OCCUPIED	NOT REPORTED
		OWNER IS OCCUPANT	OWNER IS NOT OCCUPANT	OWNER IS OCCUPANT	OWNER IS NOT OCCUPANT		
NONRESIDENTIAL BUILDINGS.....	4,238	2,047	1,198	393	272	260	68
WEATHERSTRIPPING OR CAULKING ADDED SINCE 1974							
YES.....	1,519	767	377	194	86	77	18
NO.....	2,509	1,206	721	187	170	178	46
DONT KNOW.....	197	67	97	11	14	4	4
NOT REPORTED.....	14	7	3	-	2	1	1
INSULATION ADDED							
YES.....	1,139	608	244	151	64	56	16
NO.....	2,834	1,342	846	221	182	195	48
DONT KNOW.....	261	94	107	21	26	8	4
NOT REPORTED.....	4	2	1	-	-	-	-
WEATHERSTRIPPING OR CAULKING, AND INSULATION ADDED							
YES.....	719	379	153	105	40	31	11
NO.....	3,297	1,584	954	272	211	224	52
DONT KNOW.....	217	82	90	16	21	4	4
NOT REPORTED.....	4	2	1	-	-	-	-
TREATED GLASS							
YES.....	1,221	636	267	161	74	70	13
AT CONSTRUCTION.....	650	331	134	78	45	53	9
SINCE CONSTRUCTION.....	578	305	133	85	31	19	5
NO.....	2,917	1,368	896	228	188	186	49
DONT KNOW.....	84	33	27	4	10	4	6
NOT REPORTED.....	17	9	7	-	-	-	-
OUTSIDE SHADING							
YES.....	957	462	261	117	84	26	6
AT CONSTRUCTION.....	523	247	149	51	51	24	2
SINCE CONSTRUCTION.....	369	197	81	57	28	2	5
NO.....	3,267	1,577	933	276	186	233	62
DONT KNOW.....	1	-	-	-	-	-	-
NOT REPORTED.....	13	8	4	-	2	-	-
TREATED GLASS AND OUTSIDE SHADING							
YES.....	315	158	75	43	27	12	-
NO.....	3,879	1,862	1,112	349	240	248	67
DONT KNOW.....	31	19	6	1	5	-	1
NOT REPORTED.....	13	8	5	-	-	-	-

TABLE 24A. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY OCCUPANCY CHARACTERISTICS
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)

CONSERVATION PRACTICES	TOTAL	OCCUPANCY CHARACTERISTICS					
		SINGLE ESTABLISHMENT BUILDING		MULTIPLE ESTABLISHMENT BUILDING		GOVERNMENT OWNED AND OCCUPIED	NOT REPORTED
		OWNER IS OCCUPANT	OWNER IS NOT OCCUPANT	OWNER IS OCCUPANT	OWNER IS NOT OCCUPANT		
REDUCED HEATING							
YES.....	3,139	1,546	852	324	198	183	37
NO.....	604	287	154	60	53	49	1
NOT REPORTED.....	47	24	5	1	9	5	4
NOT APPLICABLE.....	448	191	188	8	12	24	27
REDUCED COOLING							
YES.....	1,582	782	385	202	120	78	14
NO.....	244	111	53	35	22	21	1
NOT REPORTED.....	26	9	6	1	6	1	3
NOT APPLICABLE.....	2,387	1,145	754	154	125	159	50
REDUCED HEATING OR REDUCED COOLING							
YES.....	3,272	1,606	890	339	211	188	37
NO.....	500	235	128	47	46	44	-
NOT REPORTED.....	44	23	6	-	7	5	4
NOT APPLICABLE.....	421	184	174	6	8	23	27
REGULAR MAINTENANCE							
YES.....	2,978	1,465	764	317	185	219	28
NO.....	744	368	224	62	63	18	8
DONT KNOW.....	79	22	32	7	16	-	2
NOT REPORTED.....	15	7	4	-	1	-	2
NOT APPLICABLE.....	421	184	174	6	8	23	27
REDUCED HEATING OR COOLING, AND REGULAR MAINTENANCE							
YES.....	2,552	1,260	663	280	149	173	28
NO.....	1,159	564	332	99	95	59	9
DONT KNOW.....	63	17	23	7	13	-	2
NOT REPORTED.....	42	22	6	1	7	5	3
NOT APPLICABLE.....	421	184	174	6	8	23	27

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SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 24B. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY OCCUPANCY CHARACTERISTICS
- PERCENTAGE OF ROW TOTALS

CONSERVATION PRACTICES	TOTAL	OCCUPANCY CHARACTERISTICS						NOT REPORTED	
		SINGLE ESTABLISHMENT BUILDING		MULTIPLE ESTABLISHMENT BUILDING		GOVERNMENT OWNED AND OCCUPIED			
		OWNER IS OCCUPANT	OWNER IS NOT OCCUPANT	OWNER IS OCCUPANT	OWNER IS NOT OCCUPANT				
NONRESIDENTIAL BUILDINGS.....	100%	48	28	9	6	6	2		
WEATHERSTRIPPING OR CAULKING ADDED SINCE 1974									
YES.....	100%	50	25	13	6	5	1		
NO.....	100%	48	29	7	7	7	2		
DONT KNOW.....	100%	34	49	6	7	2	2		
NOT REPORTED.....	100%	51	23	1	12	4	9		
INSULATION ADDED									
YES.....	100%	53	21	13	6	5	1		
NO.....	100%	47	30	8	6	7	2		
DONT KNOW.....	100%	36	41	8	10	3	2		
NOT REPORTED.....	100%	52	36	3	3	3	3		
WEATHERSTRIPPING OR CAULKING, AND INSULATION ADDED									
YES.....	100%	53	21	15	6	4	2		
NO.....	100%	48	29	8	6	7	2		
DONT KNOW.....	100%	38	42	7	10	2	2		
NOT REPORTED.....	100%	48	38	3	3	3	3		
TREATED GLASS									
YES.....	100%	52	22	13	6	6	1		
AT CONSTRUCTION.....	100%	51	21	12	7	8	1		
SINCE CONSTRUCTION.....	100%	53	23	15	5	3	1		
NO.....	100%	47	31	8	6	6	2		
DONT KNOW.....	100%	40	32	5	12	4	7		
NOT REPORTED.....	100%	56	44	-	-	-	-		
OUTSIDE SHADING									
YES.....	100%	48	27	12	9	3	1		
AT CONSTRUCTION.....	100%	47	29	10	10	5	-		
SINCE CONSTRUCTION.....	100%	53	22	15	8	1	1		
NO.....	100%	48	29	8	6	7	2		
DONT KNOW.....	100%	-	69	-	31	-	-		
NOT REPORTED.....	100%	58	29	-	13	1	-		
TREATED GLASS AND OUTSIDE SHADING									
YES.....	100%	50	24	14	9	4	-		
NO.....	100%	48	29	9	6	6	2		
DONT KNOW.....	100%	61	18	3	16	-	2		
NOT REPORTED.....	100%	59	41	-	-	-	-		

SEE NOTES AT END OF TABLE

TABLE 24B. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY OCCUPANCY CHARACTERISTICS
- PERCENTAGE OF ROW TOTALS (CONTINUED)

CONSERVATION PRACTICES	TOTAL	OCCUPANCY CHARACTERISTICS					
		SINGLE ESTABLISHMENT BUILDING		MULTIPLE ESTABLISHMENT BUILDING		GOVERNMENT OWNED AND OCCUPIED	NOT REPORTED
		OWNER IS OCCUPANT	OWNER IS NOT OCCUPANT	OWNER IS OCCUPANT	OWNER IS NOT OCCUPANT		
REDUCED HEATING							
YES.....	100%	49	27	10	6	6	1
NO.....	100%	47	26	10	9	8	-
NOT REPORTED.....	100%	51	10	2	20	10	8
NOT APPLICABLE.....	100%	43	42	2	3	5	6
REDUCED COOLING							
YES.....	100%	49	24	13	8	5	1
NO.....	100%	46	22	15	9	9	1
NOT REPORTED.....	100%	36	22	3	23	6	10
NOT APPLICABLE.....	100%	48	32	6	5	7	2
REDUCED HEATING OR REDUCED COOLING							
YES.....	100%	49	27	10	6	6	1
NO.....	100%	47	26	9	9	9	-
NOT REPORTED.....	100%	51	14	1	15	11	8
NOT APPLICABLE.....	100%	44	41	1	2	5	6
REGULAR MAINTENANCE							
YES.....	100%	49	26	11	6	7	1
NO.....	100%	50	30	8	8	2	1
DONT KNOW.....	100%	28	40	9	20	-	3
NOT REPORTED.....	100%	48	26	2	6	3	16
NOT APPLICABLE.....	100%	44	41	1	2	5	6
REDUCED HEATING OR COOLING, AND REGULAR MAINTENANCE							
YES.....	100%	49	26	11	6	7	1
NO.....	100%	49	29	9	8	5	1
DONT KNOW.....	100%	27	37	11	21	-	4
NOT REPORTED.....	100%	52	14	1	15	11	6
NOT APPLICABLE.....	100%	44	41	1	2	5	6

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TABLE 24C. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY OCCUPANCY CHARACTERISTICS
- PERCENTAGE OF COLUMN TOTALS

CONSERVATION PRACTICES	TOTAL	OCCUPANCY CHARACTERISTICS					
		SINGLE ESTABLISHMENT BUILDING		MULTIPLE ESTABLISHMENT BUILDING		GOVERNMENT OWNED AND OCCUPIED	NOT REPORTED
		OWNER IS OCCUPANT	OWNER IS NOT OCCUPANT	OWNER IS OCCUPANT	OWNER IS NOT OCCUPANT		
NONRESIDENTIAL BUILDINGS.....	100%	100%	100%	100%	100%	100%	100%
WEATHERSTRIPPING OR CAULKING ADDED SINCE 1974							
YES.....	36	37	31	49	32	30	26
NO.....	59	59	60	48	62	69	67
DONT KNOW.....	5	3	8	3	5	2	6
NOT REPORTED.....	-	-	-	-	1	-	2
INSULATION ADDED							
YES.....	27	30	20	38	24	22	24
NO.....	67	66	71	56	67	75	70
DONT KNOW.....	6	5	9	5	10	3	6
NOT REPORTED.....	-	-	-	-	-	-	-
WEATHERSTRIPPING OR CAULKING, AND INSULATION ADDED							
YES.....	17	19	13	27	15	12	16
NO.....	78	77	80	69	77	86	76
DONT KNOW.....	5	4	8	4	8	2	6
NOT REPORTED.....	-	-	-	-	-	-	-
TREATED GLASS							
YES.....	29	31	22	41	27	27	19
AT CONSTRUCTION.....	15	16	11	20	16	21	13
SINCE CONSTRUCTION.....	14	15	11	22	11	7	7
NO.....	69	67	75	58	69	72	72
DONT KNOW.....	2	2	2	1	4	1	9
NOT REPORTED.....	-	-	1	-	-	-	-
OUTSIDE SHADING							
YES.....	23	23	22	30	31	10	9
AT CONSTRUCTION.....	12	12	12	13	19	9	3
SINCE CONSTRUCTION.....	9	10	7	14	10	1	7
NO.....	77	77	78	70	68	90	91
DONT KNOW.....	-	-	-	-	-	-	-
NOT REPORTED.....	-	-	-	-	1	-	-
TREATED GLASS AND OUTSIDE SHADING							
YES.....	7	8	6	11	10	4	-
NO.....	92	91	93	89	88	96	98
DONT KNOW.....	1	1	-	-	2	-	1
NOT REPORTED.....	-	-	-	-	-	-	-

SEE NOTES AT END OF TABLE

TABLE 24C. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY OCCUPANCY CHARACTERISTICS
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)

CONSERVATION PRACTICES	TOTAL	OCCUPANCY CHARACTERISTICS						NOT REPORTED	
		SINGLE ESTABLISHMENT BUILDING		MULTIPLE ESTABLISHMENT BUILDING		GOVERNMENT OWNED AND OCCUPIED			
		OWNER IS OCCUPANT	OWNER IS NOT OCCUPANT	OWNER IS OCCUPANT	OWNER IS NOT OCCUPANT				
REDUCED HEATING									
YES.....	74	76	71	82	73	70	54		
NO.....	14	14	13	15	19	19	1		
NOT REPORTED.....	1	1	-	-	3	2	5		
NOT APPLICABLE.....	11	9	16	2	4	9	39		
REDUCED COOLING									
YES.....	37	38	32	52	44	30	21		
NO.....	6	5	4	9	8	8	2		
NOT REPORTED.....	1	-	-	-	2	1	4		
NOT APPLICABLE.....	56	56	63	39	46	61	73		
REDUCED HEATING OR REDUCED COOLING									
YES.....	77	78	74	86	78	72	55		
NO.....	12	11	11	12	17	17	1		
NOT REPORTED.....	1	1	1	-	3	2	5		
NOT APPLICABLE.....	10	9	15	2	3	9	39		
REGULAR MAINTENANCE									
YES.....	70	72	64	81	68	84	41		
NO.....	18	18	19	16	23	7	12		
DONT KNOW.....	2	1	3	2	6	-	3		
NOT REPORTED.....	-	-	-	-	-	-	4		
NOT APPLICABLE.....	10	9	15	2	3	9	39		
REDUCED HEATING OR COOLING, AND REGULAR MAINTENANCE									
YES.....	60	62	55	71	55	67	41		
NO.....	27	28	28	25	35	23	13		
DONT KNOW.....	1	1	2	2	5	-	3		
NOT REPORTED.....	1	1	-	-	2	2	4		
NOT APPLICABLE.....	10	9	15	2	3	9	39		

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SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 25A. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY NUMBER OF PEOPLE WORKING IN THE BUILDING
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS

CONSERVATION PRACTICES	TOTAL	NUMBER OF PEOPLE WORKING IN THE BUILDING				
		LESS THAN 10	10 TO 19	20 TO 49	50 TO 99	100 OR MORE
NONRESIDENTIAL BUILDINGS.....	4,238	3,035	516	427	142	119
WEATHERSTRIPPING OR CAULKING ADDED SINCE 1974						
YES.....	1,519	1,041	203	175	45	54
NO.....	2,509	1,837	288	231	91	61
DONT KNOW.....	197	148	21	20	5	3
NOT REPORTED.....	14	8	3	1	1	1
INSULATION ADDED						
YES.....	1,139	822	143	116	26	33
NO.....	2,834	2,024	334	287	108	81
DONT KNW.....	261	187	38	24	8	4
NOT REPORTED.....	4	2	-	1	-	-
WEATHERSTRIPPING OR CAULKING, AND INSULATION ADDED						
YES.....	719	511	98	70	19	22
NO.....	3,297	2,365	387	334	118	93
DONT KNOW.....	217	155	30	23	5	4
NOT REPORTED.....	4	2	-	1	-	-
TREATED GLASS						
YES.....	1,221	703	208	172	72	65
AT CONSTRUCTION.....	650	348	107	104	48	43
SINCE CONSTRUCTION.....	578	353	102	73	26	24
NO.....	2,917	2,251	302	245	66	52
DONT KNOW.....	84	65	5	9	4	1
NOT REPORTED.....	17	16	-	1	-	-
OUTSIDE SHADING						
YES.....	957	627	170	105	32	23
AT CONSTRUCTION.....	523	325	93	65	24	16
SINCE CONSTRUCTION.....	369	259	62	36	5	7
NO.....	3,267	2,395	345	322	110	96
DONT KNOW.....	1	-	-	-	-	-
NOT REPORTED.....	13	13	-	1	-	-
TREATED GLASS AND OUTSIDE SHADING						
YES.....	315	161	72	52	17	13
NO.....	3,879	2,837	441	373	123	105
DONT KNOW.....	31	24	3	2	2	-
NOT REPORTED.....	13	12	-	1	-	-

SEE NOTES AT END OF TABLE

TABLE 25A. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY NUMBER OF PEOPLE WORKING IN THE BUILDING
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)

CONSERVATION PRACTICES	TOTAL	NUMBER OF PEOPLE WORKING IN THE BUILDING				
		LESS THAN 10	10 TO 19	20 TO 49	50 TO 99	100 OR MORE
REDUCED HEATING						
YES.....	3,139	2,190	420	337	104	89
NO.....	604	406	66	76	32	24
NOT REPORTED.....	47	29	2	9	4	3
NOT APPLICABLE.....	448	410	28	6	2	2
REDUCED COOLING						
YES.....	1,582	859	294	256	88	85
NO.....	244	110	42	50	22	19
NOT REPORTED.....	26	12	2	7	2	2
NOT APPLICABLE.....	2,387	2,054	177	114	30	12
REDUCED HEATING OR REDUCED COOLING						
YES.....	3,272	2,255	442	363	115	97
NO.....	500	357	48	56	22	16
NOT REPORTED.....	44	30	3	5	3	3
NOT APPLICABLE.....	421	393	23	3	1	2
REGULAR MAINTENANCE						
YES.....	2,978	1,948	418	375	127	110
NO.....	744	628	66	39	6	6
DONT KNOW.....	79	56	8	7	7	2
NOT REPORTED.....	15	10	-	3	1	1
NOT APPLICABLE.....	421	393	23	3	1	2
REDUCED HEATING OR COOLING, AND REGULAR MAINTENANCE						
YES.....	2,552	1,663	375	318	104	93
NO.....	1,159	912	107	92	27	20
DONT KNOW.....	63	42	8	7	6	1
NOT REPORTED.....	42	25	3	8	3	3
NOT APPLICABLE.....	421	393	23	3	1	2

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SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 25B. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY NUMBER OF PEOPLE WORKING IN THE BUILDING
- PERCENTAGE OF ROW TOTALS

CONSERVATION PRACTICES	TOTAL	NUMBER OF PEOPLE WORKING IN THE BUILDING				
		LESS THAN 10	10 TO 19	20 TO 49	50 TO 99	100 OR MORE
NONRESIDENTIAL BUILDINGS.....	100%	72	12	10	3	3
WEATHERSTRIPPING OR CAULKING ADDED SINCE 1974						
YES.....	100%	69	13	12	3	4
NO.....	100%	73	11	9	4	2
DONT KNOW.....	100%	75	11	10	2	2
NOT REPORTED.....	100%	61	25	6	4	4
INSULATION ADDED						
YES.....	100%	72	13	10	2	3
NO.....	100%	71	12	10	4	3
DONT KNOW.....	100%	72	15	9	3	2
NOT REPORTED.....	100%	56	6	25	3	10
WEATHERSTRIPPING OR CAULKING, AND INSULATION ADDED						
YES.....	100%	71	14	10	3	3
NO.....	100%	72	12	10	4	2
DONT KNOW.....	100%	72	14	10	2	2
NOT REPORTED.....	100%	60	6	27	-	7
TREATED GLASS						
YES.....	100%	58	17	14	6	5
AT CONSTRUCTION.....	100%	54	17	16	7	7
SINCE CONSTRUCTION.....	100%	61	18	13	4	4
NO.....	100%	77	10	8	2	2
DONT KNOW.....	100%	78	6	11	4	1
NOT REPORTED.....	100%	93	3	3	-	1
OUTSIDE SHADING						
YES.....	100%	66	18	11	3	2
AT CONSTRUCTION.....	100%	62	18	13	5	3
SINCE CONSTRUCTION.....	100%	70	17	10	1	2
NO.....	100%	73	11	10	3	3
DONT KNOW.....	100%	-	69	16	-	15
NOT REPORTED.....	100%	95	1	4	-	-
TREATED GLASS AND OUTSIDE SHADING						
YES.....	100%	51	23	17	5	4
NO.....	100%	73	11	10	3	3
DONT KNOW.....	100%	77	11	5	6	-
NOT REPORTED.....	100%	95	1	4	-	-

SEE NOTES AT END OF TABLE

TABLE 25B. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY NUMBER OF PEOPLE WORKING IN THE BUILDING
- PERCENTAGE OF ROW TOTALS (CONTINUED)

CONSERVATION PRACTICES	TOTAL	NUMBER OF PEOPLE WORKING IN THE BUILDING				
		LESS THAN 10	10 TO 19	20 TO 49	50 TO 99	100 OR MORE
REDUCED HEATING						
YES.....	100%	70	13	11	3	3
NO.....	100%	67	11	13	5	4
NOT REPORTED.....	100%	62	3	19	9	7
NOT APPLICABLE.....	100%	92	6	1	-	1
REDUCED COOLING						
YES.....	100%	54	19	16	6	5
NO.....	100%	45	17	21	9	8
NOT REPORTED.....	100%	48	8	27	8	9
NOT APPLICABLE.....	100%	86	7	5	1	-
REDUCED HEATING OR REDUCED COOLING						
YES.....	100%	69	13	11	4	3
NO.....	100%	71	10	11	4	3
NOT REPORTED.....	100%	69	7	12	6	6
NOT APPLICABLE.....	100%	93	5	1	-	-
REGULAR MAINTENANCE						
YES.....	100%	65	14	13	4	4
NO.....	100%	84	9	5	1	1
DONT KNOW.....	100%	70	10	9	8	2
NOT REPORTED.....	100%	69	2	21	5	3
NOT APPLICABLE.....	100%	93	5	1	-	-
REDUCED HEATING OR COOLING, AND REGULAR MAINTENANCE						
YES.....	100%	65	15	12	4	4
NO.....	100%	79	9	8	2	2
DONT KNOW.....	100%	66	13	11	9	1
NOT REPORTED.....	100%	60	7	18	7	7
NOT APPLICABLE.....	100%	93	5	1	-	-

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TABLE 25C. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY NUMBER OF PEOPLE WORKING IN THE BUILDING
- PERCENTAGE OF COLUMN TOTALS

CONSERVATION PRACTICES	TOTAL	NUMBER OF PEOPLE WORKING IN THE BUILDING				
		LESS THAN 10	10 TO 19	20 TO 49	50 TO 99	100 OR MORE
NONRESIDENTIAL BUILDINGS.....	100%	100%	100%	100%	100%	100%
WEATHERSTRIPPING OR CAULKING ADDED SINCE 1974						
YES.....	36	34	39	41	32	46
NO.....	59	61	56	54	64	51
DONT KNOW.....	5	5	4	5	3	3
NOT REPORTED.....	-	-	1	-	-	-
INSULATION ADDED						
YES.....	27	27	28	27	18	28
NO.....	67	67	65	67	76	68
DONT KNOW.....	6	6	7	6	5	4
NOT REPORTED.....	-	-	-	-	-	-
WEATHERSTRIPPING OR CAULKING, AND INSULATION ADDED						
YES.....	17	17	19	16	13	18
NO.....	78	78	75	78	83	78
DONT KNOW.....	5	5	6	5	4	3
NOT REPORTED.....	-	-	-	-	-	-
TREATED GLASS						
YES.....	29	23	40	40	51	55
AT CONSTRUCTION.....	15	11	21	24	34	36
SINCE CONSTRUCTION.....	14	12	20	17	18	20
NO.....	69	74	59	57	47	44
DONT KNOW.....	2	2	1	2	3	1
NOT REPORTED.....	-	1	-	-	-	-
OUTSIDE SHADING						
YES.....	23	21	33	24	23	19
AT CONSTRUCTION.....	12	11	18	15	17	13
SINCE CONSTRUCTION.....	9	9	12	8	4	6
NO.....	77	79	67	75	77	81
DONT KNOW.....	-	-	-	-	-	-
NOT REPORTED.....	-	-	-	-	-	-
TREATED GLASS AND OUTSIDE SHADING						
YES.....	7	5	14	12	12	11
NO.....	92	93	85	87	87	89
DONT KNOW.....	1	1	1	-	1	-
NOT REPORTED.....	-	-	-	-	-	-

SEE NOTES AT END OF TABLE

TABLE 25C. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY NUMBER OF PEOPLE WORKING IN THE BUILDING
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)

CONSERVATION PRACTICES	TOTAL	NUMBER OF PEOPLE WORKING IN THE BUILDING				
		LESS THAN 10	10 TO 19	20 TO 49	50 TO 99	100 OR MORE
REDUCED HEATING						
YES.....	74	72	81	79	73	75
NO.....	14	13	13	18	23	22
NOT REPORTED.....	1	1	-	2	3	3
NOT APPLICABLE.....	11	14	6	1	1	2
REDUCED COOLING						
YES.....	37	28	57	60	62	72
NO.....	6	4	8	12	16	16
NOT REPORTED.....	1	-	-	2	1	2
NOT APPLICABLE.....	56	68	34	27	21	10
REDUCED HEATING OR REDUCED COOLING						
YES.....	77	74	86	85	81	82
NO.....	12	12	9	13	16	14
NOT REPORTED.....	1	1	1	1	2	2
NOT APPLICABLE.....	10	13	4	1	1	2
REGULAR MAINTENANCE						
YES.....	70	64	81	88	90	93
NO.....	18	21	13	9	4	4
DONT KNOW.....	2	2	2	2	5	1
NOT REPORTED.....	-	-	-	1	1	-
NOT APPLICABLE.....	10	13	4	1	1	2
REDUCED HEATING OR COOLING, AND REGULAR MAINTENANCE						
YES.....	60	55	73	74	73	79
NO.....	27	30	21	22	19	17
DONT KNOW.....	1	1	2	2	4	-
NOT REPORTED.....	1	1	1	2	2	3
NOT APPLICABLE.....	10	13	4	1	1	2

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TABLE 26A. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY HOURS OF OPERATION FOR A TYPICAL WEEK
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS

CONSERVATION PRACTICES	TOTAL	HOURS OF OPERATION FOR A TYPICAL WEEK				
		NONE	39 OR FEWER HOURS	40 TO 48 HOURS	49 TO 60 HOURS	61 TO 84 HOURS
NONRESIDENTIAL BUILDINGS.....	4,238	274	583	1,047	960	629
WEATHERSTRIPPING OR CAULKING ADDED SINCE 1974						
YES.....	1,519	41	227	376	376	232
NO.....	2,509	211	334	630	522	374
DONT KNOW.....	197	21	19	35	61	21
NOT REPORTED.....	14	1	2	5	1	2
INSULATION ADDED						
YES.....	1,139	34	159	289	307	155
NO.....	2,834	219	384	699	584	450
DONT KNOW.....	261	20	40	59	69	22
NOT REPORTED.....	4	1	-	-	-	2
WEATHERSTRIPPING OR CAULKING, AND INSULATION ADDED						
YES.....	719	14	94	183	204	98
NO.....	3,297	240	458	822	689	507
DONT KNOW.....	217	19	31	40	67	22
NOT REPORTED.....	4	1	-	-	-	2
TREATED GLASS						
YES.....	1,221	20	193	277	290	188
AT CONSTRUCTION.....	650	12	103	140	131	111
SINCE CONSTRUCTION.....	578	8	88	140	150	93
NO.....	2,917	237	379	750	656	428
DONT KNOW.....	84	13	9	20	18	10
NOT REPORTED.....	17	3	2	-	5	4
OUTSIDE SHADING						
YES.....	957	56	70	226	251	183
AT CONSTRUCTION.....	523	26	40	132	119	107
SINCE CONSTRUCTION.....	369	19	27	82	118	64
NO.....	3,267	216	513	819	704	444
DONT KNOW.....	1	-	-	-	-	-
NOT REPORTED.....	13	2	-	2	5	2
TREATED GLASS AND OUTSIDE SHADING						
YES.....	315	4	22	78	84	63
NO.....	3,879	265	558	961	862	560
DONT KNOW.....	31	2	3	8	8	5
NOT REPORTED.....	13	3	-	-	5	2

SEE NOTES AT END OF TABLE

TABLE 26A. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY HOURS OF OPERATION FOR A TYPICAL WEEK
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)

CONSERVATION PRACTICES	TOTAL	HOURS OF OPERATION FOR A TYPICAL WEEK					MORE THAN 84 HOURS
		NONE	39 OR FEWER HOURS	40 TO 48 HOURS	49 TO 60 HOURS	61 TO 84 HOURS	
REDUCED HEATING							
YES.....	3,139	75	488	840	757	495	483
NO.....	604	15	56	137	126	85	186
NOT REPORTED.....	47	6	1	7	6	6	20
NOT APPLICABLE.....	448	178	38	62	71	43	56
REDUCED COOLING							
YES.....	1,582	23	178	415	390	273	303
NO.....	244	3	13	58	43	38	89
NOT REPORTED.....	26	2	4	1	2	4	14
NOT APPLICABLE.....	2,387	246	389	573	524	315	340
REDUCED HEATING OR REDUCED COOLING							
YES.....	3,272	78	490	868	790	526	520
NO.....	500	14	52	112	106	61	155
NOT REPORTED.....	44	6	3	7	4	3	22
NOT APPLICABLE.....	421	175	38	60	59	40	49
REGULAR MAINTENANCE							
YES.....	2,978	64	426	753	701	460	574
NO.....	744	28	103	210	185	111	107
DONT KNOW.....	79	5	15	24	11	13	12
NOT REPORTED.....	15	1	1	1	3	5	5
NOT APPLICABLE.....	421	175	38	60	59	40	49
REDUCED HEATING OR COOLING, AND REGULAR MAINTENANCE							
YES.....	2,552	51	379	663	617	409	434
NO.....	1,159	40	148	298	271	165	236
DONT KNOW.....	63	1	15	20	8	10	9
NOT REPORTED.....	42	6	3	6	4	5	18
NOT APPLICABLE.....	421	175	38	60	59	40	49

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TABLE 26B. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY HOURS OF OPERATION FOR A TYPICAL WEEK
- PERCENTAGE OF ROW TOTALS

CONSERVATION PRACTICES	TOTAL	NONE	HOURS OF OPERATION FOR A TYPICAL WEEK				
			39 OR FEWER HOURS	40 TO 48 HOURS	49 TO 60 HOURS	61 TO 84 HOURS	MORE THAN 84 HOURS
NONRESIDENTIAL BUILDINGS.....	100%	6	14	25	23	15	18
WEATHERSTRIPPING OR CAULKING ADDED SINCE 1974							
YES.....	100%	3	15	25	25	15	18
NO.....	100%	8	13	25	21	15	17
DONT KNOW.....	100%	11	10	18	31	11	20
NOT REPORTED.....	100%	5	17	39	8	15	16
INSULATION ADDED							
YES.....	100%	3	14	25	27	14	17
NO.....	100%	8	14	25	21	16	18
DONT KNOW.....	100%	8	15	23	26	9	19
NOT REPORTED.....	100%	19	-	3	1	49	29
WEATHERSTRIPPING OR CAULKING, AND INSULATION ADDED							
YES.....	100%	2	13	25	28	14	17
NO.....	100%	7	14	25	21	15	18
DONT KNOW.....	100%	9	14	19	31	10	18
NOT REPORTED.....	100%	20	-	3	1	52	24
TREATED GLASS							
YES.....	100%	2	16	23	23	15	22
AT CONSTRUCTION.....	100%	2	16	22	20	17	24
SINCE CONSTRUCTION.....	100%	1	15	24	26	14	19
NO.....	100%	8	13	26	22	15	16
DONT KNOW.....	100%	15	11	24	22	12	17
NOT REPORTED.....	100%	20	13	2	31	21	12
OUTSIDE SHADING							
YES.....	100%	6	7	24	26	19	18
AT CONSTRUCTION.....	100%	5	8	25	23	20	19
SINCE CONSTRUCTION.....	100%	5	7	22	32	17	16
NO.....	100%	7	16	25	22	14	17
DONT KNOW.....	100%	-	-	16	-	69	15
NOT REPORTED.....	100%	16	-	13	39	17	16
TREATED GLASS AND OUTSIDE SHADING							
YES.....	100%	1	7	25	27	20	21
NO.....	100%	7	14	25	22	14	17
DONT KNOW.....	100%	6	9	27	25	15	18
NOT REPORTED.....	100%	27	-	-	40	18	15

SEE NOTES AT END OF TABLE

TABLE 26B. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY HOURS OF OPERATION FOR A TYPICAL WEEK
- PERCENTAGE OF ROW TOTALS (CONTINUED)

CONSERVATION PRACTICES	TOTAL	HOURS OF OPERATION FOR A TYPICAL WEEK				
		NONE	39 OR FEWER HOURS	40 TO 48 HOURS	49 TO 60 HOURS	61 TO 84 HOURS
REDUCED HEATING						
YES.....	100%	2	16	27	24	16
NO.....	100%	2	9	23	21	14
NOT REPORTED.....	100%	13	2	16	12	13
NOT APPLICABLE.....	100%	40	8	14	16	10
REDUCED COOLING						
YES.....	100%	1	11	26	25	17
NO.....	100%	1	5	24	18	16
NOT REPORTED.....	100%	6	14	4	6	15
NOT APPLICABLE.....	100%	10	16	24	22	13
REDUCED HEATING OR REDUCED COOLING						
YES.....	100%	2	15	27	24	16
NO.....	100%	3	10	22	21	12
NOT REPORTED.....	100%	14	6	16	8	6
NOT APPLICABLE.....	100%	42	9	14	14	10
REGULAR MAINTENANCE						
YES.....	100%	2	14	25	24	15
NO.....	100%	4	14	28	25	15
DONT KNOW.....	100%	7	19	30	14	16
NOT REPORTED.....	100%	7	6	5	18	35
NOT APPLICABLE.....	100%	42	9	14	14	10
REDUCED HEATING OR COOLING, AND REGULAR MAINTENANCE						
YES.....	100%	2	15	26	24	16
NO.....	100%	3	13	26	23	14
DONT KNOW.....	100%	2	24	32	13	16
NOT REPORTED.....	100%	13	7	14	10	12
NOT APPLICABLE.....	100%	42	9	14	14	10

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

SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY; THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 26C. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY HOURS OF OPERATION FOR A TYPICAL WEEK
- PERCENTAGE OF COLUMN TOTALS

CONSERVATION PRACTICES	TOTAL	HOURS OF OPERATION FOR A TYPICAL WEEK					
		NONE	39 OR FEWER HOURS	40 TO 48 HOURS	49 TO 60 HOURS	61 TO 84 HOURS	MORE THAN 84 HOURS
NONRESIDENTIAL BUILDINGS.....	100%	100%	100%	100%	100%	100%	100%
WEATHERSTRIPPING OR CAULKING ADDED SINCE 1974							
YES.....	36	15	39	36	39	37	36
NO.....	59	77	57	60	54	60	59
DONT KNOW.....	5	8	3	3	6	3	5
NOT REPORTED.....	-	-	-	1	-	-	-
INSULATION ADDED							
YES.....	27	12	27	28	32	25	26
NO.....	67	80	66	67	61	72	67
DONT KNOW.....	6	7	7	6	7	4	7
NOT REPORTED.....	-	-	-	-	-	-	-
WEATHERSTRIPPING OR CAULKING, AND INSULATION ADDED							
YES.....	17	5	16	18	21	16	17
NO.....	78	88	79	78	72	81	78
DONT KNOW.....	5	7	5	4	7	3	5
NOT REPORTED.....	-	-	-	-	-	-	-
TREATED GLASS							
YES.....	29	7	33	26	29	30	35
AT CONSTRUCTION.....	15	5	18	13	14	18	21
SINCE CONSTRUCTION.....	14	3	15	13	16	13	15
NO.....	69	87	65	72	68	68	63
DONT KNOW.....	2	5	2	2	2	2	2
NOT REPORTED.....	-	1	-	-	1	1	-
OUTSIDE SHADING							
YES.....	23	20	12	22	26	29	23
AT CONSTRUCTION.....	12	9	7	13	12	17	13
SINCE CONSTRUCTION.....	9	7	5	8	12	10	8
NO.....	77	79	88	78	73	71	77
DONT KNOW.....	-	-	-	-	-	-	-
NOT REPORTED.....	-	1	-	-	1	-	-
TREATED GLASS AND OUTSIDE SHADING							
YES.....	7	1	4	7	9	10	9
NO.....	92	97	96	92	90	89	90
DONT KNOW.....	1	1	-	1	1	1	1
NOT REPORTED.....	-	1	-	-	1	-	-

SEE NOTES AT END OF TABLE

TABLE 26C. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY HOURS OF OPERATION FOR A TYPICAL WEEK
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)

CONSERVATION PRACTICES	TOTAL	HOURS OF OPERATION FOR A TYPICAL WEEK					MORE THAN 84 HOURS
		NONE	39 OR FEWER HOURS	40 TO 48 HOURS	49 TO 60 HOURS	61 TO 84 HOURS	
REDUCED HEATING							
YES.....	74	27	84	80	79	79	65
NO.....	14	5	10	13	13	13	25
NOT REPORTED.....	1	2	-	1	1	1	3
NOT APPLICABLE.....	11	65	6	6	7	7	7
REDUCED COOLING							
YES.....	37	8	30	40	41	43	41
NO.....	6	1	2	6	4	6	12
NOT REPORTED.....	1	1	1	-	-	1	2
NOT APPLICABLE.....	56	90	67	55	55	50	46
REDUCED HEATING OR REDUCED COOLING							
YES.....	77	28	84	83	82	84	70
NO.....	12	5	9	11	11	10	21
NOT REPORTED.....	1	2	-	1	-	-	3
NOT APPLICABLE.....	10	64	6	6	6	6	7
REGULAR MAINTENANCE							
YES.....	70	23	73	72	73	73	77
NO.....	18	10	18	20	19	18	14
DONT KNOW.....	2	2	3	2	1	2	2
NOT REPORTED.....	-	-	-	-	-	1	1
NOT APPLICABLE.....	10	64	6	6	6	6	7
REDUCED HEATING OR COOLING, AND REGULAR MAINTENANCE							
YES.....	60	19	65	63	64	65	58
NO.....	27	15	25	28	28	26	32
DONT KNOW.....	1	-	3	2	1	2	1
NOT REPORTED.....	1	2	-	1	-	1	2
NOT APPLICABLE.....	10	64	6	6	6	6	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. SEE APPENDIX B FOR DISCUSSION OF LIMITATIONS OF DATA.

SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 27A. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY GLASS AS PERCENTAGE OF EXTERIOR SURFACE
— ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS

CONSERVATION PRACTICES	TOTAL	GLASS AS PERCENTAGE OF EXTERIOR SURFACE		
		50% OR MORE	AT LEAST 25% BUT LESS THAN 50%	LESS THAN 25%
NONRESIDENTIAL BUILDINGS.....	4,238	313	1,036	2,889
TREATED GLASS				
YES.....	1,221	115	360	745
AT CONSTRUCTION.....	650	68	195	387
SINCE CONSTRUCTION.....	578	51	160	367
NO.....	2,917	193	639	2,085
DONT KNOW.....	84	4	37	43
NOT REPORTED.....	17	1	—	16
OUTSIDE SHADING				
YES.....	957	69	231	657
AT CONSTRUCTION.....	523	41	129	353
SINCE CONSTRUCTION.....	369	23	79	267
NO.....	3,267	244	805	2,218
DONT KNOW.....	1	—	—	1
NOT REPORTED.....	13	1	—	12
TREATED GLASS AND OUTSIDE SHADING				
YES.....	315	38	77	199
NO.....	3,879	273	947	2,659
DONT KNOW.....	31	1	12	18
NOT REPORTED.....	13	1	—	12

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. SEE APPENDIX B FOR DISCUSSION OF LIMITATIONS OF DATA.

SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 27B. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY GLASS AS PERCENTAGE OF EXTERIOR SURFACE
- PERCENTAGE OF ROW TOTALS

CONSERVATION PRACTICES	TOTAL	GLASS AS PERCENTAGE OF EXTERIOR SURFACE		
		50% OR MORE	AT LEAST 25% BUT LESS THAN 50%	LESS THAN 25%
NONRESIDENTIAL BUILDINGS.....	100%	7	24	68
TREATED GLASS				
YES.....	100%	9	30	61
AT CONSTRUCTION.....	100%	10	30	60
SINCE CONSTRUCTION.....	100%	9	28	64
NO.....	100%	7	22	71
DONT KNOW.....	100%	5	44	52
NOT REPORTED.....	100%	4	2	94
OUTSIDE SHADING				
YES.....	100%	7	24	69
AT CONSTRUCTION.....	100%	8	25	67
SINCE CONSTRUCTION.....	100%	6	21	72
NO.....	100%	7	25	68
DONT KNOW.....	100%	-	-	100
NOT REPORTED.....	100%	5	-	95
TREATED GLASS AND OUTSIDE SHADING				
YES.....	100%	12	25	63
NO.....	100%	7	24	69
DONT KNOW.....	100%	4	39	57
NOT REPORTED.....	100%	5	-	95

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. SEE APPENDIX B FOR DISCUSSION OF LIMITATIONS OF DATA.

SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

**TABLE 27C. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY GLASS AS PERCENTAGE OF EXTERIOR SURFACE
- PERCENTAGE OF COLUMN TOTALS**

CONSERVATION PRACTICES	TOTAL	GLASS AS PERCENTAGE OF EXTERIOR SURFACE		
		50% OR MORE	AT LEAST 25% BUT LESS THAN 50%	LESS THAN 25%
NONRESIDENTIAL BUILDINGS.....	100%	100%	100%	100%
TREATED GLASS				
YES.....	29	37	35	26
AT CONSTRUCTION.....	15	22	19	13
SINCE CONSTRUCTION.....	14	16	15	13
NO.....	69	62	62	72
DONT KNOW.....	2	1	4	1
NOT REPORTED.....	-	-	-	1
OUTSIDE SHADING				
YES.....	23	22	22	23
AT CONSTRUCTION.....	12	13	12	12
SINCE CONSTRUCTION.....	9	7	8	9
NO.....	77	78	78	77
DONT KNOW.....	-	-	-	-
NOT REPORTED.....	-	-	-	-
TREATED GLASS AND OUTSIDE SHADING				
YES.....	7	12	7	7
NO.....	92	87	91	92
DONT KNOW.....	1	-	1	1
NOT REPORTED.....	-	-	-	-

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. SEE APPENDIX B FOR DISCUSSION OF LIMITATIONS OF DATA.

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TABLE 28A. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY WEATHERSTRIPPING AND INSULATION ADDITIONS
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS

CONSERVATION PRACTICES	TOTAL	WEATHERSTRIPPING OR CAULKING, ADDED SINCE 1974				INSULATION ADDED				WEATHERSTRIPPING OR CAULKING ADDED SINCE 1974, AND INSULATION ADDED			
		YES	NO	DONT KNOW	NOT REPORTED	YES	NO	DONT KNOW	NOT REPORTED	YES	NO	DONT KNOW	NOT REPORTED
NONRESIDENTIAL BUILDINGS.....	4,238	1,519	2,509	197	14	1,139	2,834	261	4	719	3,297	217	4
TREATED GLASS													
YES.....	1,221	564	625	27	5	404	754	61	1	296	876	47	1
AT CONSTRUCTION.....	650	239	392	15	4	119	511	19	1	86	546	17	1
SINCE CONSTRUCTION.....	578	337	228	13	-	286	259	33	-	211	340	27	-
NO.....	2,917	925	1,838	147	6	710	2,028	177	1	411	2,359	145	1
DONT KNOW.....	84	30	32	22	-	18	44	22	-	12	47	25	-
NOT REPORTED.....	17	-	15	-	2	7	8	-	2	-	15	-	2
OUTSIDE SHADING													
YES.....	957	366	540	50	1	279	612	66	-	193	708	55	-
AT CONSTRUCTION.....	523	173	330	20	-	117	377	29	-	83	420	20	-
SINCE CONSTRUCTION.....	369	172	181	17	-	151	195	24	-	105	242	22	-
NO.....	3,267	1,151	1,957	147	12	852	2,218	195	3	524	2,577	162	3
DONT KNOW.....	1	-	1	-	-	-	1	-	-	-	1	-	-
NOT REPORTED.....	13	2	11	-	1	8	4	-	1	2	11	-	1
TREATED GLASS AND OUTSIDE SHADING													
YES.....	315	144	158	13	-	100	197	18	-	77	220	18	-
NO.....	3,879	1,361	2,325	180	13	1,025	2,615	236	3	635	3,048	192	3
DONT KNOW.....	31	14	13	5	-	8	17	7	-	7	17	7	-
NOT REPORTED.....	13	-	12	-	1	7	5	-	1	-	12	-	1
REDUCED HEATING													
YES.....	3,139	1,245	1,746	138	9	925	2,017	195	1	592	2,383	161	1
NO.....	604	218	360	25	2	166	399	38	1	105	469	30	1
NOT REPORTED.....	47	17	26	3	1	9	35	2	2	6	36	3	1
NOT APPLICABLE.....	448	39	377	31	1	39	383	26	-	16	409	22	-
REDUCED COOLING													
YES.....	1,582	604	897	75	6	470	1,011	99	1	287	1,202	90	1
NO.....	244	86	147	10	1	66	160	18	-	45	186	13	-
NOT REPORTED.....	26	7	17	2	-	6	18	2	-	4	21	2	-
NOT APPLICABLE.....	2,387	822	1,448	110	7	598	1,645	142	2	384	1,889	112	2
REDUCED HEATING OR REDUCED COOLING													
YES.....	3,272	1,284	1,835	144	10	957	2,112	201	2	608	2,493	168	2
NO.....	500	184	294	21	1	137	331	32	-	91	385	24	-
NOT REPORTED.....	44	16	23	3	1	9	32	2	1	5	35	3	1
NOT APPLICABLE.....	421	35	356	29	1	36	359	26	-	15	384	22	-

SEE FOOTNOTES AT END OF TABLE.

TABLE 28A. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY WEATHERSTRIPPING AND INSULATION ADDITIONS
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS (CONTINUED)

CONSERVATION PRACTICES	TOTAL	WEATHERSTRIPPING OR CAULKING, ADDED SINCE 1974				INSULATION ADDED				WEATHERSTRIPPING OR CAULKING ADDED SINCE 1974, AND INSULATION ADDED			
		YES	NO	DONT KNOW	NOT REPORTED	YES	NO	DONT KNOW	NOT REPORTED	YES	NO	DONT KNOW	NOT REPORTED
REGULAR MAINTENANCE													
YES.....	2,978	1,258	1,597	115	8	926	1,873	177	2	615	2,214	148	2
NO.....	744	197	503	43	1	160	539	46	-	81	628	35	-
DONT KNOW.....	79	26	42	9	2	14	53	12	-	8	58	12	-
NOT REPORTED.....	15	3	11	-	1	3	11	-	1	-	13	-	1
NOT APPLICABLE.....	421	35	356	29	1	36	359	26	-	15	384	22	-
REDUCED HEATING OR COOLING AND REGULAR MAINTENANCE													
YES.....	2,552	1,070	1,372	103	7	802	1,598	150	2	526	1,895	129	2
NO.....	1,159	372	726	59	2	281	802	75	-	166	935	58	-
DONT KNOW.....	63	24	33	5	2	11	43	9	-	6	48	7	-
NOT REPORTED.....	42	19	22	-	1	9	32	-	1	5	35	-	1
NOT APPLICABLE.....	421	35	356	29	1	36	359	26	-	15	384	22	-

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TABLE 288. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY WEATHERSTRIPPING AND INSULATION ADDITIONS
- PERCENTAGE OF ROW TOTALS

CONSERVATION PRACTICES	TOTAL	WEATHERSTRIPPING OR CAULKING, ADDED SINCE 1974				INSULATION ADDED				WEATHERSTRIPPING OR CAULKING ADDED SINCE 1974, AND INSULATION ADDED			
		YES	NO	DONT KNOW	NOT REPORTED	YES	NO	DONT KNOW	NOT REPORTED	YES	NO	DONT KNOW	NOT REPORTED
NONRESIDENTIAL BUILDINGS.....	100%	36	59	5	-	27	67	6	-	17	78	5	-
TREATED GLASS													
YES.....	100%	46	51	2	-	33	62	5	-	24	72	4	-
AT CONSTRUCTION.....	100%	37	60	2	1	18	79	3	-	13	84	3	-
SINCE CONSTRUCTION.....	100%	58	39	2	-	50	45	6	-	37	59	5	-
NO.....	100%	32	63	5	-	24	70	6	-	14	81	5	-
DONT KNOW.....	100%	36	38	27	-	21	52	27	-	14	56	30	-
NOT REPORTED.....	100%	-	88	-	12	40	48	-	12	-	88	-	12
OUTSIDE SHADING													
YES.....	100%	38	56	5	-	29	64	7	-	20	74	6	-
AT CONSTRUCTION.....	100%	33	63	4	-	22	72	6	-	16	80	4	-
SINCE CONSTRUCTION.....	100%	46	49	5	-	41	53	6	-	28	66	6	-
NO.....	100%	35	60	4	-	26	68	6	-	16	79	5	-
DONT KNOW.....	100%	16	84	-	-	16	84	-	-	16	84	-	-
NOT REPORTED.....	100%	13	81	-	6	63	31	-	6	13	81	-	6
TREATED GLASS AND OUTSIDE SHADING													
YES.....	100%	46	50	4	-	32	63	6	-	25	70	6	-
NO.....	100%	35	60	5	-	26	67	6	-	16	79	5	-
DONT KNOW.....	100%	44	41	14	-	24	53	22	-	21	56	23	-
NOT REPORTED.....	100%	-	94	-	6	52	42	-	6	-	94	-	6
REDUCED HEATING													
YES.....	100%	40	56	4	-	29	64	6	-	19	76	5	-
NO.....	100%	36	60	4	-	27	66	6	-	17	78	5	-
NOT REPORTED.....	100%	36	55	7	3	18	74	5	3	13	77	7	3
NOT APPLICABLE.....	100%	9	84	7	-	9	85	6	-	4	91	5	-
REDUCED COOLING													
YES.....	100%	38	57	5	-	30	64	6	-	18	76	6	-
NO.....	100%	35	60	4	-	27	66	7	-	18	76	5	-
NOT REPORTED.....	100%	27	67	6	-	23	71	6	-	14	80	6	-
NOT APPLICABLE.....	100%	34	61	5	-	25	69	6	-	16	79	5	-
REDUCED HEATING OR REDUCED COOLING													
YES.....	100%	39	56	4	-	29	65	6	-	19	76	5	-
NO.....	100%	37	59	4	-	27	66	6	-	18	77	5	-
NOT REPORTED.....	100%	37	53	6	3	21	72	4	3	12	78	7	3
NOT APPLICABLE.....	100%	8	85	7	-	9	85	6	-	4	91	5	-

SEE FOOTNOTES AT END OF TABLE.

TABLE 28B. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY WEATHERSTRIPPING AND INSULATION ADDITIONS
- PERCENTAGE OF ROW TOTALS (CONTINUED)

CONSERVATION PRACTICES	TOTAL	WEATHERSTRIPPING OR CAULKING, ADDED SINCE 1974				INSULATION ADDED				WEATHERSTRIPPING OR CAULKING ADDED SINCE 1974, AND INSULATION ADDED			
		YES	NO	DONT KNOW	NOT REPORTED	YES	NO	DONT KNOW	NOT REPORTED	YES	NO	DONT KNOW	NOT REPORTED
REGULAR MAINTENANCE													
YES.....	100%	42	54	4	-	31	63	6	-	21	74	5	-
NO.....	100%	26	68	6	-	21	72	6	-	11	84	5	-
DONT KNOW.....	100%	33	53	11	3	18	67	15	-	11	73	15	-
NOT REPORTED.....	100%	18	73	-	9	19	72	-	9	3	88	-	9
NOT APPLICABLE.....	100%	8	85	7	-	9	85	6	-	4	91	5	-
REDUCED HEATING OR COOLING AND REGULAR MAINTENANCE													
YES.....	100%	42	54	4	-	31	63	6	-	21	74	5	-
NO.....	100%	32	63	5	-	24	69	6	-	14	81	5	-
DONT KNOW.....	100%	38	52	7	4	17	68	14	-	10	77	12	-
NOT REPORTED.....	100%	45	51	-	3	21	75	1	3	13	83	1	3
NOT APPLICABLE.....	100%	8	85	7	-	9	85	6	-	4	91	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. SEE APPENDIX E FOR DISCUSSION OF LIMITATIONS OF DATA.

SOURCE: RESIDENTIAL AND COMMERCIAL DATA SYSTEMS DIVISION, OFFICE OF THE CONSUMPTION DATA SYSTEM, ASSISTANT ADMINISTRATOR FOR PROGRAM DEVELOPMENT, ENERGY INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF ENERGY, THE 1979 NONRESIDENTIAL BUILDINGS ENERGY CONSUMPTION SURVEY.

TABLE 28C. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY WEATHERSTRIPPING AND INSULATION ADDITIONS
- PERCENTAGE OF COLUMN TOTALS

CONSERVATION PRACTICES	TOTAL	WEATHERSTRIPPING OR CAULKING, ADDED SINCE 1974				INSULATION ADDED				WEATHERSTRIPPING OR CAULKING ADDED SINCE 1974, AND INSULATION ADDED			
		YES	NO	DONT KNOW	NOT REPORTED	YES	NO	DONT KNOW	NOT REPORTED	YES	NO	DONT KNOW	NOT REPORTED
NONRESIDENTIAL BUILDINGS.....	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
TREATED GLASS													
YES.....	29	37	25	14	37	35	27	23	27	41	27	22	25
AT CONSTRUCTION.....	15	16	16	7	27	10	18	7	27	12	17	8	25
SINCE CONSTRUCTION.....	14	22	9	7	2	25	9	13	-	29	10	12	-
NO.....	69	61	73	75	47	62	72	68	17	57	72	67	15
DONT KNOW.....	2	2	1	11	1	2	2	9	3	2	1	12	3
NOT REPORTED.....	-	-	1	-	15	1	-	-	54	-	-	-	57
OUTSIDE SHADING													
YES.....	23	24	22	25	5	24	22	25	3	27	21	25	3
AT CONSTRUCTION.....	12	11	13	10	1	10	13	11	3	12	13	9	3
SINCE CONSTRUCTION.....	9	11	7	8	-	13	7	9	-	15	7	10	-
NO.....	77	76	78	75	89	75	78	75	75	73	78	75	74
DONT KNOW.....	-	-	-	-	-	-	-	-	-	-	-	-	-
NOT REPORTED.....	-	-	-	-	6	1	-	-	22	-	-	-	23
TREATED GLASS AND OUTSIDE SHADING													
YES.....	7	9	6	6	-	9	7	7	-	11	7	8	-
NO.....	92	90	93	91	94	90	92	90	78	88	92	89	77
DONT KNOW.....	1	1	1	2	1	1	1	3	3	1	1	3	3
NOT REPORTED.....	-	-	-	-	5	1	-	-	19	-	-	-	20
REDUCED HEATING													
YES.....	74	82	70	70	69	81	71	75	39	82	72	74	41
NO.....	14	14	14	13	13	15	14	15	17	15	14	14	18
NOT REPORTED.....	1	1	1	2	10	1	1	1	41	1	1	2	37
NOT APPLICABLE.....	11	3	15	16	9	3	14	10	3	2	12	10	3
REDUCED COOLING													
YES.....	37	40	36	38	43	41	36	38	35	40	36	42	34
NO.....	6	6	6	5	8	6	6	7	-	6	6	6	-
NOT REPORTED.....	1	-	1	1	-	1	1	1	-	1	1	1	-
NOT APPLICABLE.....	56	54	58	56	50	52	58	55	65	53	57	52	66
REDUCED HEATING OR REDUCED COOLING													
YES.....	77	85	73	73	73	84	75	77	56	85	76	77	57
NO.....	12	12	12	10	9	12	12	12	3	13	12	11	3
NOT REPORTED.....	1	1	1	1	10	1	1	1	38	1	1	1	37
NOT APPLICABLE.....	10	2	14	15	9	3	13	10	3	2	12	10	3

SEE FOOTNOTES AT END OF TABLE.

**TABLE 28C. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY WEATHERSTRIPPING AND INSULATION ADDITIONS
- PERCENTAGE OF COLUMN TOTALS (CONTINUED)**

CONSERVATION PRACTICES	TOTAL	WEATHERSTRIPPING OR CAULKING, ADDED SINCE 1974				INSULATION ADDED				WEATHERSTRIPPING OR CAULKING ADDED SINCE 1974, AND INSULATION ADDED			
		YES	NO	DONT KNOW	NOT REPORTED	YES	NO	DONT KNOW	NOT REPORTED	YES	NO	DONT KNOW	NOT REPORTED
REGULAR MAINTENANCE													
YES.....	70	83	64	59	57	81	66	68	62	85	67	68	60
NO.....	18	13	20	22	7	14	19	18	-	11	19	16	-
DONT KNOW.....	2	2	2	5	17	1	2	5	-	1	2	5	-
NOT REPORTED.....	-	-	-	-	10	-	-	-	35	-	-	-	37
NOT APPLICABLE.....	10	2	14	15	9	3	13	10	3	2	12	10	3
REDUCED HEATING OR COOLING AND REGULAR MAINTENANCE													
YES.....	60	70	55	53	48	70	56	58	56	73	57	60	57
NO.....	27	24	29	30	16	25	28	29	3	23	28	27	3
DONT KNOW.....	1	2	1	2	17	1	2	4	-	1	1	3	-
NOT REPORTED.....	1	1	1	-	10	1	1	-	38	1	1	-	37
NOT APPLICABLE.....	10	2	14	15	9	3	13	10	3	2	12	10	3

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TABLE 29A. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY TREATED GLASS AND OUTSIDE SHADING
- ESTIMATED NUMBER OF BUILDINGS IN THOUSANDS

CONSERVATION PRACTICES	TOTAL	TREATED GLASS						OUTSIDE SHADING					
		YES TIME OF CONSTRUCTION			NO	DONT KNOW	NOT REPORTED	YES TIME OF CONSTRUCTION			NO	DONT KNOW	NOT REPORTED
		AT	SINCE	EITHER OR BOTH				AT	SINCE	EITHER OR BOTH			
NONRESIDENTIAL BUILDINGS.....	4,238	650	578	1,221	2,917	84	17	523	369	957	3,267	1	13
REDUCED HEATING													
YES.....	3,139	520	476	986	2,082	63	8	416	293	756	2,373	1	9
NO.....	604	103	90	196	396	9	3	62	57	125	476	-	3
NOT REPORTED.....	47	12	4	16	25	5	1	7	4	12	34	-	-
NOT APPLICABLE.....	448	14	8	23	414	7	5	38	15	63	384	-	1
REDUCED COOLING													
YES.....	1,582	388	285	667	880	32	3	268	177	470	1,109	1	2
NO.....	244	74	47	120	121	2	-	42	17	62	182	-	-
NOT REPORTED.....	26	6	3	9	15	2	-	2	4	6	20	-	-
NOT APPLICABLE.....	2,387	182	243	424	1,901	48	14	211	171	419	1,957	-	11
252 REDUCED HEATING OR REDUCED COOLING													
YES.....	3,272	545	493	1,029	2,171	64	8	429	310	788	2,475	1	9
NO.....	500	83	75	160	329	8	3	57	42	104	394	-	3
NOT REPORTED.....	44	9	4	12	26	5	1	4	4	9	35	-	-
NOT APPLICABLE.....	421	13	6	19	390	7	5	33	13	56	364	-	1
REGULAR MAINTENANCE													
YES.....	2,978	549	487	1,028	1,888	57	5	376	280	694	2,278	1	6
NO.....	744	72	82	154	571	13	6	98	70	182	556	-	6
DONT KNOW.....	79	9	1	11	62	7	-	14	6	23	56	-	-
NOT REPORTED.....	15	7	2	8	5	-	1	2	-	2	13	-	-
NOT APPLICABLE.....	421	13	6	19	390	7	5	33	13	56	364	-	1
REDUCED HEATING OR COOLING AND REGULAR MAINTENANCE													
YES.....	2,552	473	421	885	1,615	48	4	325	246	606	1,940	1	6
NO.....	1,159	145	146	293	839	21	6	148	101	267	886	-	6
DONT KNOW.....	63	7	1	8	52	3	-	11	5	17	46	-	-
NOT REPORTED.....	42	11	4	15	21	5	1	6	4	10	32	-	-
NOT APPLICABLE.....	421	13	6	19	390	7	5	33	13	56	364	-	1

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TABLE 29B. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY TREATED GLASS AND OUTSIDE SHADING
- PERCENTAGE OF ROW TOTALS

CONSERVATION PRACTICES	TOTAL	TREATED GLASS						OUTSIDE SHADING					
		YES			NO	DONT KNOW	NOT REPORTED	YES			NO	DONT KNOW	NOT REPORTED
		AT	SINCE	EITHER OR BOTH				AT	SINCE	EITHER OR BOTH			
NONRESIDENTIAL BUILDINGS.....	100%	15	14	29	69	2	-	12	9	23	77	-	-
REDUCED HEATING													
YES.....	100%	17	15	31	66	2	-	13	9	24	76	-	-
NO.....	100%	17	15	32	66	2	-	10	9	21	79	-	-
NOT REPORTED.....	100%	26	9	34	53	11	3	15	9	26	74	-	-
NOT APPLICABLE.....	100%	3	2	5	92	2	1	9	3	14	86	-	-
REDUCED COOLING													
YES.....	100%	25	18	42	56	2	-	17	11	30	70	-	-
NO.....	100%	30	19	49	50	1	-	17	7	25	75	-	-
NOT REPORTED.....	100%	23	11	34	59	8	-	7	14	23	77	-	-
NOT APPLICABLE.....	100%	8	10	18	80	2	1	9	7	18	82	-	-
REDUCED HEATING OR REDUCED COOLING													
YES.....	100%	17	15	31	66	2	-	13	9	24	76	-	-
NO.....	100%	17	15	32	66	2	1	11	8	21	79	-	1
NOT REPORTED.....	100%	19	9	28	58	11	3	9	9	21	79	-	-
NOT APPLICABLE.....	100%	3	1	5	93	2	1	8	3	13	86	-	-
REGULAR MAINTENANCE													
YES.....	100%	18	16	35	63	2	-	13	9	23	76	-	-
NO.....	100%	10	11	21	77	2	1	13	9	24	75	-	1
DONT KNOW.....	100%	12	2	13	78	9	-	18	8	29	71	-	-
NOT REPORTED.....	100%	45	10	55	36	-	9	15	1	16	84	-	-
NOT APPLICABLE.....	100%	3	1	5	93	2	1	8	3	13	86	-	-
REDUCED HEATING OR COOLING AND REGULAR MAINTENANCE													
YES.....	100%	19	16	35	63	2	-	13	10	24	76	-	-
NO.....	100%	13	13	25	72	2	1	13	9	23	76	-	1
DONT KNOW.....	100%	11	2	13	82	5	-	17	8	28	72	-	-
NOT REPORTED.....	100%	27	9	36	49	11	3	15	9	24	76	-	-
NOT APPLICABLE.....	100%	3	1	5	93	2	1	8	3	13	86	-	-

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TABLE 29C. NONRESIDENTIAL BUILDINGS: CONSERVATION PRACTICES BY TREATED GLASS AND OUTSIDE SHADING
- PERCENTAGE OF COLUMN TOTALS

CONSERVATION PRACTICES	TOTAL	TREATED GLASS						OUTSIDE SHADING					
		YES TIME OF CONSTRUCTION			NO	DONT KNOW	NOT REPORTED	YES TIME OF CONSTRUCTION			NO	DONT KNOW	NOT REPORTED
		AT	SINCE	EITHER OR BOTH				AT	SINCE	EITHER OR BOTH			
NONRESIDENTIAL BUILDINGS.....	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
REDUCED HEATING													
YES.....	74	80	82	81	71	75	47	79	79	79	73	100	69
NO.....	14	16	16	16	14	11	16	12	16	13	15	-	20
NOT REPORTED.....	1	2	1	1	1	6	8	1	1	1	1	-	-
NOT APPLICABLE.....	11	2	1	2	14	8	29	7	4	7	12	-	11
REDUCED COOLING													
YES.....	37	60	49	55	30	38	17	51	48	49	34	100	18
NO.....	6	11	8	10	4	3	-	8	5	6	6	-	-
NOT REPORTED.....	1	1	-	1	1	2	-	-	1	1	1	-	-
NOT APPLICABLE.....	56	28	42	35	65	57	83	40	46	44	60	-	82
REDUCED HEATING OR REDUCED COOLING													
YES.....	77	84	85	84	74	77	47	82	84	82	76	100	69
NO.....	12	13	13	13	11	9	15	11	11	11	12	-	20
NOT REPORTED.....	1	1	1	1	1	6	8	1	1	1	1	-	-
NOT APPLICABLE.....	10	2	1	2	13	8	29	6	4	6	11	-	11
REGULAR MAINTENANCE													
YES.....	70	84	84	84	65	68	30	72	76	73	70	85	47
NO.....	18	11	14	13	20	16	33	19	19	19	17	-	42
DONT KNOW.....	2	1	-	1	2	9	-	3	2	2	2	-	15
NOT REPORTED.....	-	1	-	1	-	8	-	-	-	-	-	-	-
NOT APPLICABLE.....	10	2	1	2	13	8	29	6	4	6	11	-	11
REDUCED HEATING OR COOLING AND REGULAR MAINTENANCE													
YES.....	60	73	73	72	55	57	26	62	67	63	59	85	42
NO.....	27	22	25	24	29	25	37	28	27	28	27	-	47
DONT KNOW.....	1	1	-	1	2	4	-	2	1	2	1	15	-
NOT REPORTED.....	1	2	1	1	1	6	8	1	1	1	1	-	-
NOT APPLICABLE.....	10	2	1	2	13	8	29	6	4	6	11	-	11

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A. HOW THE SURVEY WAS CONDUCTED

Introduction

The Nonresidential Buildings Energy Consumption Survey was designed by the Energy Information Administration (EIA) to provide information related to energy consumption in nonresidential buildings, primarily those in the commercial sector. This survey, along with analogous studies for the residential and industrial sectors, will enable the analysis of comprehensive consumption patterns for the United States.

Information on energy use in the commercial sector was collected at the building level. A representative sample of buildings was selected in the 48 contiguous States plus the District of Columbia. The data on actual energy consumption is currently being collected from fuel records maintained by the buildings' fuel suppliers. Energy consumption data will also be obtained for establishments within surveyed buildings when they are separately metered, but their totals will be aggregated to the building total. The results of this phase of the survey will be available in winter 1981.

Sample Design

The building sample is a multi-stage, representative area probability sample consisting of 79 primary sampling units (PSU's). The approximately 3,100 counties and independent cities of the contiguous United States were grouped into about 1,900 PSU's by the Census Bureau for its Current Population Survey. These PSU's, with some modifications, were used to construct the first-stage area-sampling frame. The 25 PSU's that had a 1970 population of over 1.85 million were designated as self-representing; that is, they were chosen with certainty. The remaining nonself-representing PSU's were placed in strata on the basis of metropolitan status, region, rate of growth from 1960 to 1970, percent of black population, and a measure of socio-economic status. The 79 sample PSU's were selected with probabilities proportionate to their 1970 population.

The sample PSU's were then divided into secondary sampling units corresponding to zip codes or groups of zip codes. Procedures were designed to handle zip codes that overlapped county boundaries and/or special zip codes that were assigned to large commercial establishments or Government agencies.

Each zip code was assigned a measure of size based jointly on summary data from the 1975 County Business Patterns (CBP) and on proprietary commercial data related to office machines. The CBP data were weighted counts of establishments by 2-digit Standard Industrial Classification (SIC)

code and employment size according to zip code. The measure of size assigned to a zip code was an integer equal to the number of segments into which a zip code would be divided if drawn into the sample. The sizes were assigned in such a way that segments would contain an average of 120 establishments based on the CBP tabulations. After assignments of the measures of size were made, a sample of about five zip code groups was selected in each PSU with probabilities proportionate to the number of segments in each zip code group, giving a total second-stage sample of about 400 zip code groups.

The sample of third-stage units consisted of approximately 400 segments, one selected from each of the sampled zip code areas. The selection of the segments was done in such a way that one percent of all segments in the contiguous United States was included in the sample, each having an equal chance of being selected. In zip code groups with measures of size of 6 or more, the segments were compact areas. It was feasible to define area segments within these selected zip code groups on the basis of preliminary field work done in the selected zip code areas. In the zip code groups with smaller measures of size, the segments were, in effect, selected from listings made for the complete zip code group.

Nonresidential buildings were selected from the area segments at the fourth-stage of sampling. With a few exceptions, a nonresidential building was defined as a structure that (1) was totally enclosed by walls that extend from the foundation to the roof line, and (2) housed some type of nonresidential activity. The first step in the selection process was to do a field canvass to identify and list the addresses of all in-scope buildings within each sampled segment. As part of the listing procedure, the lister made rough estimates based on observation of descriptive information related to energy usage, including square footage and general use. This information was used to categorize buildings for subsampling. About 75,000 buildings were listed (this includes the extra listings in zip code groups with measures of less than 6) from which approximately 5,800 buildings were selected for interview. Subsampling fractions from the one percent sample of segments varied from 1 in 1 for buildings having measures of size of 50,000 or more square feet as assigned by the lister, to 1 in 20 for small buildings (less than 10,000 square feet) of certain types.

Another part of the sampling procedure entailed the advance preparation of a list of "large" buildings within the sampled PSU's and placing them on a Special Building List. "Large" buildings were defined as those with 250,000 or more square feet of enclosed floor space in PSU's that are Standard Metropolitan Statistical Areas (SMSA). In the remaining one-third of the PSU's, buildings of 100,000 square feet or more were listed. The list of large buildings was compiled from existing lists of schools, hospitals and government owned buildings and also through inquiries with chambers of commerce and other local sources. Some of the large buildings listed were clusters of buildings such as a university campus. About 3,200 buildings (or building clusters) were included on the Special Building List and approximately 1,200 of them were included in the sample with varying probabilities depending on their size. In

those cases where the selected unit consisted of a cluster of buildings, the individual buildings were listed and subsampled at rates designed to yield the desired overall selection probabilities. Large buildings sampled from the area sample list were checked against the Special Building List to identify duplicates and assign them appropriate selection probabilities.

A total of 547 sampled buildings were ineligible for interview. Buildings were designated as being ineligible for interview for a number of reasons including: (1) duplication; (2) incorrect or multiple listings; (3) sampled structure failed to meet the building definition; and (4) the sampled structure was demolished after the list was prepared. Duplication resulted from duplicate sample selections from the area sample and the sample selections from the list of large buildings.

Buildings were listed incorrectly or as multiple listings for several reasons. First, the area-sampling technique required that most buildings be listed by observation. Therefore, it was not always possible to determine the exact scope of a building until the interviewing phase, when contact was made with a building owner/manager. Secondly, since the list of large buildings was obtained through telephone contacts, what was reported over the telephone to be one building frequently turned out to be a group of buildings. Buildings that did not meet the study definition (e.g., totally residential buildings) were also considered out of scope.

Weights were calculated for each sample building to: (1) reflect the reciprocals of the probabilities of selection, and (2) adjust for differences in the interview completion rate for different classes of buildings. The overall response rate in the survey was 92 percent, but this varied somewhat for various types of sizes of buildings.

Data Collection

The sample consisted of a total of 7,322 buildings. Of these, 6,773 were eligible to be interviewed; 5,677 were from the area sample and 1,096 were from the list sample. Westat, Inc., of Rockville, Maryland conducted the interviews. Extensive follow-up efforts were used in field data collection, and as a result, interviews were initially completed for 91 percent of the eligible buildings. Of those interviewed, 88 percent signed waivers authorizing utility companies to release their buildings' consumption records (see Table A1).

Since the field response was so high, only limited additional follow-up procedures were initiated. In January 1980, an overall refusal-conversion effort was undertaken. An attempt was made to conduct telephone interviews with building owners or managers who had originally refused to be interviewed in person. Calls were made to 197 buildings, and of these, 83 interviews were completed. As a result of this effort, 42 percent of the refusals were converted, and the overall response rate was raised by 1 percentage point, to 92 percent.

Table A1. Number and Percent Distribution of Sample Buildings by Building Disposition

<u>Building Disposition</u>	<u>Number</u>	<u>Percent of All Buildings</u>	<u>Percent of Eligible Buildings</u>	<u>Percent of Interviewed Buildings</u>
Total Buildings	7,322	100.0	--*	--
Not Eligible for Interview	549	7.5	--	--
Eligible for Interview	6,773	92.5	100.0	--
Interviewed	6,222	--	91.8	100.0
With Waiver	5,536	--	--	89.0
Without Waiver	686	--	--	11.0
Not Interviewed	551	--	8.2	--

*-- Indicates data not applicable.

During December 1979, 727 letters were sent to respondents who had completed the interview but did not sign an authorization form to ask them to reconsider their decision. From the waiver-conversion effort, an additional 108 signed waivers were received, 46 refused, and 573 failed to reply. This effort resulted in an overall conversion rate of 17 percent and boosted the waiver response rate by 1 percentage point, to 89 percent.

In addition to these supplemental follow-up efforts, some additional follow-up was done for a few selected data items that were missing or inconsistent in completed questionnaires. Certain items in the building questionnaire, such as size, building activity, and the names and addresses of fuel suppliers, were designated as being crucial. If any of the crucial items were missing, a telephone call was made to the respondent to try to obtain this information as well as any other missing data.

Initial contacts with the building owners and managers were made through a letter signed by the EIA Administrator. The letter introduced the data collection contractor, stressed the importance of cooperation, and assured the confidentiality of responses.

The building interviews were conducted between October 1979 and January 1980. Respondents were asked about the building as a whole, rather than individual establishments located within the building. Professionals in the areas of architecture, building operations, engineering, statistics, and survey research were consulted during the development of the interview questionnaire. The interviews averaged 50 minutes and covered: structural and operational building features; types of heating, cooling, and ventilation systems; fuel used in these systems and patterns of usage; and a description of the activities found in the building. At the conclusion of the interview, respondents were asked to sign waivers authorizing Westat, Inc., to obtain fuel consumption records from the buildings' fuel suppliers.

Nearly 90 percent of the respondents signed waivers to permit fuel suppliers to give Westat, Inc., monthly records of their fuel purchases for the past 14 months. Information was requested on the amount sold, the price of the fuel, and the billing dates. The suppliers of electricity and natural gas were contacted by mail beginning in August 1979. Two letters were sent to each company. The first, signed by the EIA Administrator, explained the legal authority and need for the data collection. The second letter introduced Westat, Inc., the data collection contractor, and discussed the data collection procedures and the kind of information that would be requested. Follow-up telephone calls were initiated in October 1979 to insure the receipt of the letters and to establish a personal contact with the appropriate utility company representative.

After the building interviews were completed and the signed waivers were received, approximately 230 electric and natural gas companies and about 1,300 fuel oil and other energy suppliers were identified for participation.

At the end of February 1980, each supplier was sent a packet containing instructions and explanations, signed waivers, and data-retrieval forms. Follow-up telephone calls were made to the suppliers of electricity and natural gas in March 1980 to make sure the utility companies received the forms, to answer any of their questions, and to obtain an estimated completion date. A letter was then sent to confirm the completion date. If the data were not received within a week of the completion date, a second telephone call was made to deal with any problems that might have arisen and to arrange a second date. A telephone follow-up of suppliers of energy other than electricity and natural gas was implemented in August 1980. The goal of the follow-up was to retrieve the consumption data via the telephone. During this operation, calls were placed to 429 suppliers, almost 300 of which supplied the requested data.

Some buildings had many tenants who were metered and billed separately. Interviewers were instructed to obtain lists of tenants in buildings where establishments were separately metered. If there were three or fewer establishments within a building, the interviewer attempted to get a signed waiver for each establishment. In buildings with four or more establishments, the building owner or manager was asked to sign a waiver releasing the aggregate utility records for the occupants of the building.

Companies were asked to supply limited consumption data for those buildings where an interview was completed but a signed waiver was not obtained. While energy suppliers will not provide individual building data without a waiver, some will provide aggregate data for groups of nonrespondent buildings. This information will be used to analyze the potential bias introduced by nonresponse and to improve the accuracy of consumption estimates in the commercial sector. The results of the utility survey should be available in late 1981.

Adjusting for Nonresponse

The amount of data collected from this survey was reduced by two types of nonresponse: unit nonresponse (e.g., noninterview) and nonresponse to particular items in an otherwise completed interview. As mentioned in the section, "Sample Design", unit nonresponse was handled by adjusting the sampling weights of responding buildings. Item nonresponse for selected building characteristics was treated by imputing data from responding cases, using a separate hot deck procedure for each item. The only data element for which a hot deck procedure was not used was square footage. For this variable, the lister's guess was used, unless that guess was less than 10,000 or greater than 100,000 square feet. When the lister's square footage estimate was in either of these categories, an average unweighted square foot per floor was computed for all responding buildings of the same type in the same size class. This value was then multiplied by the number of floors in the building of interest to produce an estimate of square footage for the building. Most of the imputed building characteristics items had less than two percent nonresponse; two of them (year constructed and square footage) had about three percent nonresponse, and one item (hours of operation) had about seven percent nonresponse.

Table A2 shows the effect of unit nonresponse adjustment and item imputations on estimates of numbers of buildings by square footage category and year built. The left column of the table contains the estimated numbers using the basic inflation weight without nonresponse adjustment, and eliminating those buildings whose value for the stub variable was imputed. In the center column the nonresponse adjustment has been incorporated into the building weight, but the buildings with imputed values are still eliminated. The entries in the right column match those in the detailed tables because nonresponse adjustments and imputed cases are both included in the estimation procedure.

Table A2. Effects of Nonresponse Adjustment and Item Imputation on Estimated Numbers of Buildings by Square Footage and Year Built

Population Subgroup	Estimated Number of Buildings (Thousands)			
	Without Nonresponse Adjustment or Imputations	With Nonresponse Adjustment; Without Imputations	With Nonresponse Adjustment and Imputations	With Nonresponse Adjustment and Imputations
All Buildings (Square Feet)	3,681	4,081	4,238	
Less Than or Equal to 1,000	604	677	677	
1,001-5,000	1,510	1,697	1,729	
5,001-10,000	667	749	801	
10,001-25,000	498	537	596	
25,001-50,000	217	226	237	
Over 50,000	185	195	199	
All Buildings (Year Built)	3,638	4,029	4,238	
1900 or before	281	314	329	
1901-1920	373	419	432	
1921-1945	716	793	829	
1946-1960	912	1,010	1,064	
1961-1970	663	732	789	
1971-1973	206	225	235	
1974-Present	487	536	561	

Field Procedures

Once the sampled zip code groups and segments had been selected, the initial field step was to prepare a listing of building addresses located within the sampled segments (see Sample Design). The sample consisted of approximately 400 segments which were listed by a team of 85 listers. Supervisors attended a 3-day training session during the first week of June 1979. During this session a combination of slides, exercises, lectures, and an actual listing were used as training devices. Supervisors were also given an annotated manual which described the session. This manual was used as a guidebook to supervisors in order to conduct identical training sessions for the listers.

Prior to their training, each lyster received a copy of a Listing Manual and a home study package with assignments to be turned in before training began. The supervisors trained 85 listers in 2-day sessions conducted in 9 cities. As soon as possible after the listing procedure began, the supervisors relisted at least one segment for each lyster. This verification provided immediate feedback for the lyster and corrected any misunderstandings. The check also served to identify any definitional problems or procedural weaknesses.

Once all the segments had been listed, the field supervisors relisted a subsample of 53, not including the segments that had already been checked. The relisting showed that less than one percent of the buildings had been missed. Buildings were usually missed because of questions concerning segment boundaries.

Training for the interview phase began with a 3-day session for supervisors and their assistants in September 1979. Approximately 170 interviewers were trained in 3-day sessions held during October and November 1979. Westat, Inc., conducted the training of both the supervisors and the interviewers utilizing a variety of techniques. The training materials used included: an annotated manual, interactive lectures, role-playing exercises, audio-visual presentations of the interview techniques, and slides relating specific building types to the questionnaire. The supervisors and their assistants functioned as small-group leaders during the interview training.

The completed questionnaires were initially screened by the field supervisors. They were reviewed for completeness, correct identifying information, and ambiguities requiring clarification. The supervisors mailed the completed questionnaires to Westat, Inc., where they were subjected to a similar check. Also at this time, certain data were categorized and some of the more complex data items such as open-ended questions, were put into special processing. After the manual editing, the questionnaires were coded, keypunched, verified, and computerized. A machine edit check was made for reasonable values, proper skip patterns, and logical inconsistencies.

Weather Data

Two types of weather data will be used in conjunction with the building interview and consumption data. The first type is the 54-year annual average heating degree days (HDD) and cooling degree days (CDD) for the National Oceanic and Atmospheric Administration (NOAA) weather division in which the building is located. These data will be used in analyzing the effects of weather on trends in basic building structure and equipment.

The second type of data will be the HDD and CDD totals for each building by billing period. These totals will be calculated for the appropriate billing period. For example, one building may be billed on the 1st of the month, while another may be billed on the 5th. Thus, there will be different 30-day averages of HDD and CDD for each billing period. These data will allow more complete analysis of fuel consumption. Analyses of usage patterns and operation characteristics can be undertaken only if the confounding effects of the weather are controlled.

B. LIMITATIONS OF THE DATA

Data from the Nonresidential Buildings 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 subset of buildings was surveyed rather than the entire population. Nonsampling error and bias are measures of variability in survey data due to the conduct of the survey. They can include respondent bias and response variance, interviewer error, coding and/or punching error, and nonresponse bias. The wording and format of the survey questionnaires, the procedures used to select and train interviewers, and the quality control built into the data collection, data receipt, and data processing operations were all designed to minimize these sources of error (for discussion of these procedures, see Appendix A--How the Survey Was Conducted).

One way to judge the validity of survey estimates is to compare them with similar types of estimates from other sources. However, since no national counts of the nonresidential building stock exist, and since no national probability sample surveys of this population are known to have been previously undertaken, such comparisons cannot be made. The lack of prior information also made it impossible to use techniques such as ratio estimation or post-stratification in the estimator. These techniques, which can help to increase the precision of survey estimates, could not be used because there were no benchmark values of buildings, or variables correlated with buildings, that were available to make such adjustments.

Variance Estimation Using Balanced Half-Sample Replication

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-sample replication (see References 1 and 2). In order to apply the half-sample technique to this survey, the 79 sample primary sampling units (PSU's) were grouped into 37 strata. Eighteen 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 19 strata consisted of two or more sample PSU's belonging to the same Census region. The two replication groups in these strata consisted of one or more PSU's each.

Variance estimates for selected survey statistics were created by computing 40 half-sample estimates for each statistic. Each half-sample estimate was formed by selecting one of the two replication groups from each stratum using an orthogonal matrix technique adapted from an article by Plackett and Burman (Reference 3). Then the sampling weights were adjusted so that the half-sample estimates would be essentially unbiased estimates of the corresponding population parameter, as was the estimate based on the entire national sample.

The balanced half-sample variance estimate for the survey estimate X' of characteristic X is given by:

$$S_{X'}^2 = \frac{1}{40} \sum_{i=1}^{40} (X'_i - \bar{X}')^2$$

where X'_i is the i^{th} half-sample estimate of X . The half-sample procedure reflects variability due to sampling error and uncorrelated response variance.

Summary and Display of Error Estimates

Instead of displaying a computed error estimate for every statistic in this report, the variances are summarized in the error curves shown in Figures 1 and 2.

There are two reasons why the summary curves are used:

- (1) Showing an error estimate for every statistic in the detailed tables would mean producing an error table for each detailed table, thus doubling 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 curves were constructed from variance estimates computed for selected aggregate statistics by a least squares fit of the log-linear model

$$\log [RSE (X')] = A + B [\log (X')]$$

where A and B are the parameters whose least squares estimates determine the shape of the curve, and $RSE (X')$, the relative standard error of X' , is given by

$$RSE (X') = \frac{S_{X'}}{X'}.$$

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

$$S_{X'} = RSE (X') \cdot X'. \quad (\text{A})$$

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Figure 2 was omitted from the report. Page 265, on which it should have appeared, is correctly reproduced below.

FIGURE 2. RELATIVE STANDARD ERRORS FOR NATIONAL ESTIMATES OF NUMBER OF BUILDINGS

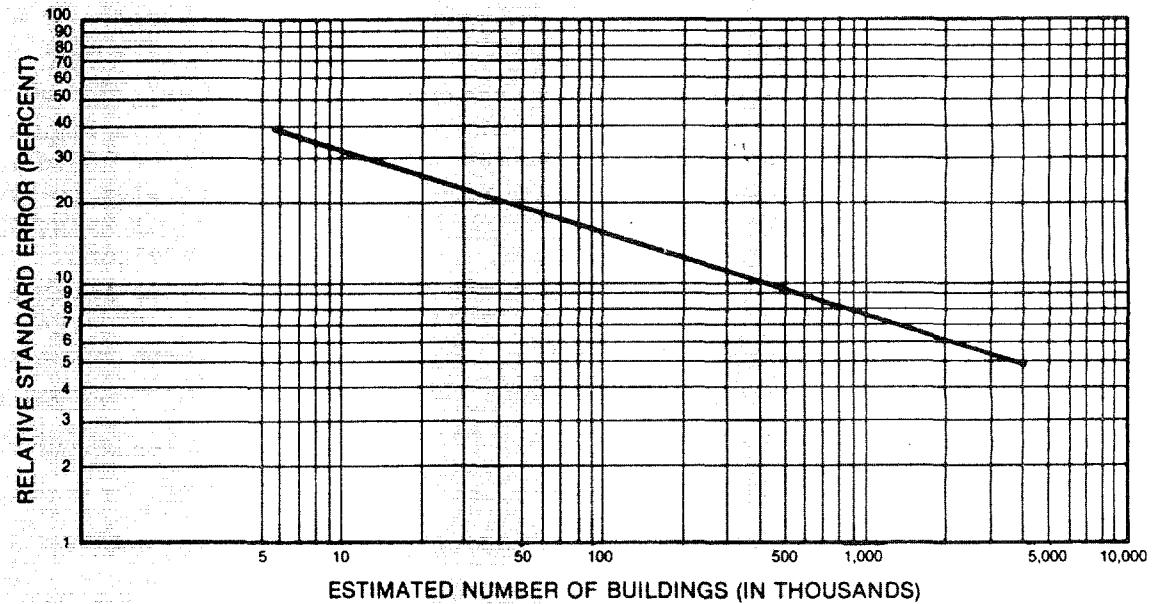
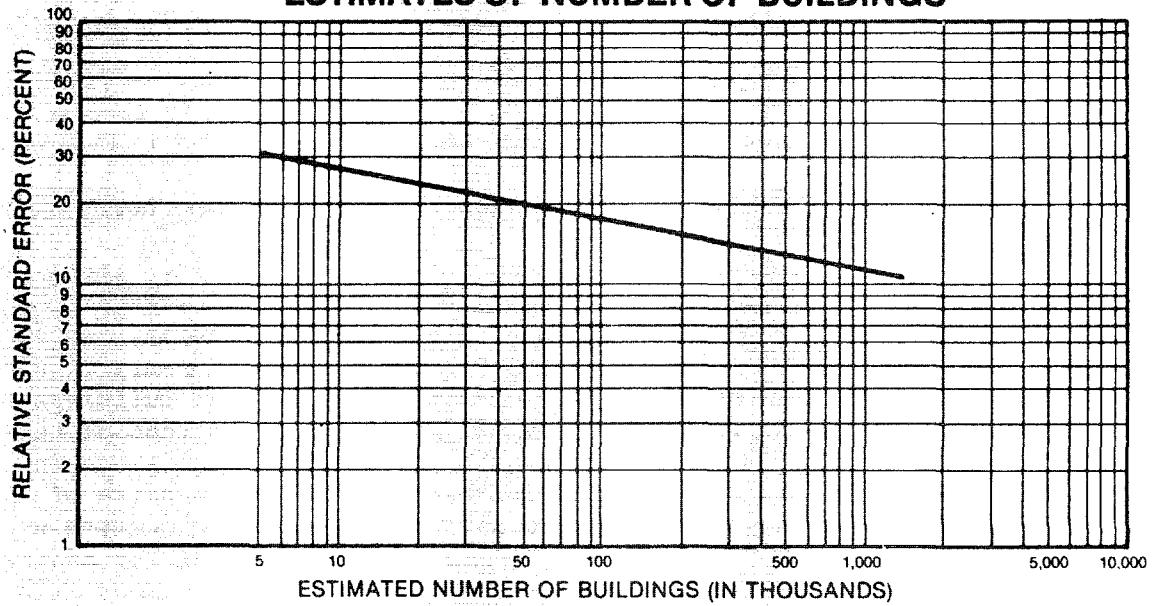


FIGURE 3. RELATIVE STANDARD ERRORS FOR REGIONAL ESTIMATES OF NUMBER OF BUILDINGS



Separate curves are shown for estimates within a region and estimates over all regions since the clustered design of the sample tends to make regional estimates more variable than national estimates of the same magnitude.

Use of Error Curves

Standard error estimates for any aggregate statistic (number of buildings) in this report can be produced directly from the error curves in Figures 1 and 2. For example, Table 3A shows that an estimated 212,000 office buildings use electricity for heating. By reading up from the 212,000 value on the horizontal axis of Figure 1 and then to the left to the vertical axis, the RSE is 13 percent, or the standard error is $(.13)(212,000) = 27,600$. In Table 1A, there are an estimated 93,000 completely cooled buildings in the West region. By reading up from the 93,000 value on the horizontal axis of Figure 2 and then to the left to the vertical axis, the RSE is 18 percent, or the standard error is $(.18)(93,000) = 16,700$.

Standard error estimates for percentage statistics can be produced indirectly from the error curves using the approximation

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

For example, Table 16C shows that 53 percent of all "lodging" buildings had weatherstripping or caulking added since 1974. This 53 percent statistic is based upon a numerator of 54,000 buildings and a denominator of 101,000 buildings, from Table 17A. Using the curve in Figure 1 in the manner previously described, the RSE of 54,000 is 19 percent while the RSE of 101,000 is 15 percent. Therefore, the estimated RSE of the 53 percent statistic is

$$RSE(.53) = \sqrt{(.19)^2 - (.15)^2} = 0.117$$

and the standard error is $(.117)(53) = 6.2$ percent.

Using Standard Errors to Test Statistical Hypotheses

The analytical statements in this report can be divided into three types. The first type is the expository statement, which presents a statistic for its own sake, without reference or comparison to any other statistic. An example of such a statement is found in the sixth sentence under "Summary of Findings: End Uses" "Sixty-Six percent (+3.5) of all nonresidential buildings had heated water." No statistical tests of hypothesis are needed or were performed for such statements; twice the standard error is given in parentheses after the estimate. This value serves as a measure of the level of variability in the statistic, and allows the reader to compute an approximate 95 percent confidence interval for the estimate by adding and subtracting the value in parentheses.

The second type of statement is the descriptive statement, which is intended as a summary statement of a data relationship or relationships that exist in a table. An example of this type of statement is found in the first sentence of the text section entitled, "Age of Building" under Conservation Practices: In general, older buildings were more likely to have had a conservation feature added than were buildings of more recent construction." Such statements are meant to give general impressions and are not subject to statistical justification.

The third, and most commonly occurring type of statement, is the stated or implied comparision between two or more statistics. Such comparisons are meant to point out specific similarities and differences between population subgroups, sometimes in support of the summary statements discussed above. Since these statements imply specific relationships among population subgroups based on sample data, they are inferential, and subject to statistical testing. Examples of such comparisons are

- (1) Sentence 2 in paragraph 2 under "Summary of Findings: End Uses" "The second most often-used fuel was natural gas, which was used by 57 percent (+ 3.5) of the total stock".
- (2) The fourth sentence of the section "Age of Building" under Conservation Practices: "The retrofitting of treated glass and outside shading follow similar patterns." This statement refers to the preceding two sentences, which specifically compare percentages of buildings that added weatherstripping, caulking, and insulation for the year of construction categories "Before 1900," "1946-1960," and "Since 1974."

Example 1 implies that the number of buildings supplied with natural gas was compared to the number supplied with all other fuels. The number supplied with natural gas was found to be smaller than the number supplied with electricity and larger than the number supplied with each other fuel. Example 2 implies that the percentage of buildings adding treated glass, and the percent adding outside shading, decreased from the "before 1900" category to the "1946-1960" category, and further decreased from the "1946-1960" category to the "Since 1974" category.

The test used to check this kind of statement is the standard normal deviate test. In order to test the significance of the difference between estimates X' and Y' , X' and Y' are assumed to be normally distributed by appeal to the Central Limit Theorem. Then the test statistic

$$Z_{X', Y'} = \frac{X' - Y'}{\sqrt{s_{X'}^2 + s_{Y'}^2}} \quad (C)$$

is computed, with Z having approximately a standard normal distribution. The null hypothesis, that there is no difference between X' and Y' , is rejected if $|Z_{X', Y'}|$ is greater than some critical value G . In this report, G is set so that the level of significance of the test (the probability of incorrectly detecting a significant difference) is .05. Ordinarily, this level of significance corresponds to a critical value of 1.96, and when a comparison is the only possible one of its type, 1.96 is the correct value. However, most of the statements in this report involve comparisons that were selected from a larger set of C possible comparisons, each of which had an opportunity to be tested and falsely yield a significant difference. In order to attain a true level of significance no greater than .05 for a particular test from such a set, the critical value G was adjusted so that the probability of falsely detecting any significant difference was $.05/C$. The rationale for this adjustment is based on the Bonferroni inequality, and is discussed elsewhere (see References 4 and 5).

The normal test of an hypothesis with adjusted critical value can be applied to the examples as follows:

- (1) The statement that natural gas is the second most-often-used fuel implies significant differences in comparisons between it and all other fuel types shown in Table 7B.

The following data can be collected from Figure 1 and Table 7B:

Type of Fuel	Estimated Percent of Buildings Supplied	RSE of Estimate (Percent)	Standard Error of Estimate (Percent)
Electricity	97	1.0	0.9
Natural gas	57	3.0	1.7
Fuel oil/kerosene	21	6.1	1.3
Liquid petroleum gas	8	9.4	0.8
Wood	3	13.5	0.4
Coal	1	16.9	0.2
Steam	1	18.9	0.2
Other fuels	1	23.5	0.2

The number of possible comparisons among the 8 fuel categories in Table 7B is the combinatorial $\binom{8}{2} = 28$, so the critical value for all tests is the normal two-tailed $.05/28 = .0018$ critical value which, from the standard normal tables, is 3.12.

The test statistic for the comparison between electricity and natural gas is

$$Z = \frac{97 - 57}{\sqrt{(0.9)^2 + (1.7)^2}} = \frac{40}{1.9} = 20.8$$

The Z value exceeds the critical value of 3.12, so the difference is significant. Similarly, the comparisons between natural gas and the remaining fuel sources can be shown to have Z values exceeding 3.12. Therefore, the statement is justified.

(2) Example 2 comes from Table 19C. The number of possible comparisons between specific ranges of year of construction is the combinatorial $\binom{7}{2} = 21$ for each conservation practice. Since comparisons are made for two practices, the total number of possible comparisons underlying this statement is $2 \times 21 = 42$. Thus the critical value for all comparisons is the two-tailed $.05/42 = .0012$ critical value, which is 3.24.

The pertinent data needed to perform the tests are summarized in the following table (error data are derived from Table 20A and Figure 1.)

Year of Construction	Percent with Treated Glass Installed			Percent with Outside Shading		
	Estimate	RSE	Standard Error (Percent)	Estimate	RSE	Standard Error (Percent)
Before 1900	23	12.9	3.0	19	14.1	2.7
1946-1960	12	12.1	1.5	7	15.0	1.0
1974 or Later	5	21.2	1.1	1	32.8	0.4

These estimates and error values can be used to perform the required tests. The test statistics for the four differences implied by the statement as being significant are

$$Z_1 = \frac{23 - 12}{\sqrt{(3.0)^2 + (1.5)^2}} = \frac{11}{3.35} = 3.28 \quad Z_3 = \frac{19 - 7}{\sqrt{(2.7)^2 + (1.0)^2}} = \frac{12}{2.88} = 4.17$$

$$Z_2 = \frac{12 - 5}{\sqrt{(1.5)^2 + (1.1)^2}} = \frac{7}{1.86} = 3.76 \quad Z_4 = \frac{7 - 1}{\sqrt{(1.0)^2 + (0.4)^2}} = \frac{6}{1.08} = 5.57$$

Since both Z values are greater than 3.24, both differences are significant and the statement is justified.

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, D.C.: 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, D.C.: 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.
4. Miller, R. G.: Simultaneous Statistical Inference. New York: McGraw-Hill Book Co., 1966.
5. National Center for Health Statistics: Manual on Standards and Procedures for Reviewing Statistical Reports. 1974. (Internal Document.)

C. BUILDING QUESTIONNAIRE

OMB NO. 038-878042
Expires: June 31, 1980
Collected for the
Department of Energy
by Westat, Inc.
0255

NONRESIDENTIAL BUILDING ENERGY CONSUMPTION STUDY

Hello, I'm _____ from Westat, Inc., a private research firm. We are conducting a study for the Department of Energy about energy consumption in non-residential buildings. May I speak with the building manager or a person knowledgeable about the types of energy coming into the building. May I have his or her name, title and where I might locate that person.

NAME: _____

TITLE: _____

LOCATION: _____ Phone (____)

Hello, I'm _____ from Westat, Inc. a social science research organization. We are conducting a study for the Department of Energy about energy consumption in non-residential buildings. [HAND LETTER.] Although your participation in this survey is voluntary, we do hope you will cooperate and participate in this important study of energy use.

IF ASKED ABOUT CONFIDENTIALITY, READ:

Any information we collect which will permit identification of respondents or their buildings will be confidential and used only for statistical purposes. Data that can be identified with individual respondents will not be disclosed or released to anyone (including the Department of Energy) for any other purpose, except as required by law.

Interviewer Name _____ ID No. _____

0	1	0	0	+					
12	13	14	15	16	17	18	19	20	21

BOX 1

BASED UPON YOUR OBSERVATION, CHECK ONE BOX AND FOLLOW INSTRUCTION:

- IF BUILDING IS FREE-STANDING, IS A SHOPPING CENTER/MALL, OR IS SAMPLED FROM SPECIAL BUILDING LIST, SKIP TO THE TOP OF PAGE 2.
- IF BUILDING IS ATTACHED ON ANY SIDE TO ANOTHER BUILDING, CONTINUE.

2.1
2.2

First of all I need to be able to distinguish, or separate, one building from another.

1. Is the building at [MENTION ADDRESS(ES)], and the building at [MENTION ADDRESS(ES)] owned by the same person or persons?

YES.....1

NO.....2

or

DON'T KNOW.....8

- DEFINITION: CONSIDER EACH SEPARATELY OWNED BUILDING AS A SEPARATE BUILDING.
- IF THE BUILDING IDENTIFIED ON THE LABEL TURNS OUT TO BE TWO OR MORE SEPARATE BUILDINGS AS DEFINED ABOVE, OBTAIN AN INTERVIEW FOR EACH BUILDING.

GO TO BOX 2

2.3
2.4

2. Are there permanent walls that extend from the ground level to the top story of the building, at [MENTION ADDRESS(ES)] which totally separate it from the building at [MENTION ADDRESS(ES)]?

YES.....1

NO.....2

- DEFINITION: CONSIDER EACH BUILDING SEPARATED BY A PERMANENT WALL AS A SEPARATE BUILDING.
- IF THE BUILDING IDENTIFIED ON THE LABEL TURNS OUT TO BE TWO OR MORE SEPARATE BUILDINGS AS DEFINED ABOVE, OBTAIN AN INTERVIEW FOR EACH BUILDING.

GO TO BOX 2

- CONSIDER CONNECTED BUILDINGS AS ONE BUILDING.
- OBTAIN INTERVIEW AND INCLUDE ALL PARTS THAT ARE TO BE CONSIDERED AS "ONE" BUILDING.

GO TO BOX 2

2.5
2.6

BOX 2

ORIGINAL LISTING IS:

CORRECT

INCORRECT

2.7
2.8

The questions I will be asking you will all be about this building. By this building, I am referring to (the structure(s) at [USE NUMBER(S) OR NAME]/the entire shopping center or mall at [USE NUMBER(S) OR NAME]).

3. (IF NAME OF BUILDING IS NOT KNOWN, ASK): What is the correct name and address of this building? (IF KNOWN, SAY): Is the correct name and address of the building: (MENTION NAME AND ADDRESS)? (IF BUILDING HAS NO NAME, ASK, OR VERIFY, NAME OF MAJOR ESTABLISHMENT THAT OCCUPIES BUILDING)

(CHECK ONE)

NAME: _____

Name of Building

ADDRESS: _____

Name of Major Establish-
ment in Building

4. What is the phone number of the building (establishment)?

Area Code

26	27	28	29	30	31	32	33	34	35
----	----	----	----	----	----	----	----	----	----

5. What is the building's Zip Code?

Zip Code

BOX 3 • IF AREA LISTING: CHECK TO SEE IF YOUR ASSIGNED ZIP CODE AGREES WITH THE BUILDING'S ZIP (CHECK ONE BOX)

AGREES - CONTINUE WITH INTERVIEW

36

DOES NOT AGREE - CHECK THAT YOU ARE AT THE CORRECT ADDRESS AND WITHIN THE SEGMENT BOUNDARIES. IF SO, CONTINUE WITH INTERVIEW.

• IF SPECIAL BUILDING LIST, CHECK THAT YOU ARE AT CORRECT ADDRESS AND CONTINUE WITH INTERVIEW.

6. Is the building occupied by one, or more than one, organization, company or agency?

One.....1 (Q11) ..
More than one.....2 (Q7) ..

7. Is there any establishment in this building that receives its mail through any other ZIP code?

Yes.....1 (Q8)
No.....2 (Q11) ..
Don't know.....8 (Q11)

8. Does the establishment that has a different ZIP code occupy 75% or more of the space in this building?

Yes.....1 (Q9) 19
No.....2 (Q11)
Don't Know.....8 (Q11)

9. What is the name of that establishment?

(Name)

10. What is the ZIP Code for (MENTION NAME OF ESTABLISHMENT)?

(Zip Code)

11. Is (any part of) the building occupied by: (READ CATEGORIES)

	YES	NO	DK	
A Federal Government Agency.....	1	2	8	40
A State Government Agency.....	1	2	8	41
A Local Government Agency.....	1	2	5	42

- IF YES IS ANSWERED TO ANY PART OF Q11, ASK Q12.
- OTHERWISE, SKIP TO Q13.

12. Is the building owned by an agency of the Federal, State or local government?

Yes.....1 (BOX 4) 43
No.....2 (Q13)
Don't know.....8 (Q13)

13. Is the building owner, or his agent, an occupant of this building?

Yes.....1
No.....2 44

BOX 4

IF YOU KNOW THE NAME, ADDRESS, TELEPHONE NUMBER, AND ZIP CODE OF THE MANAGEMENT OFFICE RECORD THE INFORMATION IN Q14 AND 15, AND THEN SKIP TO Q16, OTHERWISE CONTINUE.

14. Is there a management office that supervises the building?

Yes.....1 (Q15)
No.....2 (Q16)
Don't know.....8 (Q16) 45

15. (What is/let me verify) the name, address, ZIP code, and phone number of the management office?

Name: _____

46

Address: _____

ZIP Code: _____ Telephone: ()

16. I would now like to ask you some questions about the physical characteristics of the building. When was the major or largest portion of the building constructed?

_____ (Q18)
Year

Don't know..... 998 (Q17) 47 48 49

17. Here is a card which has several categories of years. Which category in your estimation best applies to the year the largest portion of the building was constructed?

HAND
CARD
1

Before 1900.....	01
1901-1920.....	02
1921-1945.....	03
1946-1960.....	04
1961-1970.....	05
1971-1973.....	06
1974 to present.....	07
Don't know.....	98

18. (IF BUILDING BUILT BEFORE 1974, ASK): In the last five years has any weather stripping or caulking been added to the building shell?
(IF BUILDING BUILT 1974 TO PRESENT, ASK): Since the building was constructed, has any weather stripping or caulking been added to the building shell?

Yes..... 1 (Q19)
No..... 2 (Q20) 52
Don't know..... 8 (Q20)

19. In what year was it last added?

_____ Year
Don't know..... 998

53 54 55

20. Has any additional insulation been installed in the roof or walls since the building was constructed?

Yes..... 1 (Q21)
No..... 2 (Q22) 56
Don't know..... 8 (Q22)

21. In what year was the insulation last added?

_____ Year
Don't know..... 998

57 58 59

60-80 blank

22. Thinking of the amount of glass on the exterior surface of the building, would you estimate that glass covers 50% or more of the exterior surface of this building?

Yes.....1

No.....2

Is it 75% or more?

Is it 25% or more?

Yes.....1
No.....2Yes.....3
No.....4

18

23. Is any of the exterior glass considered to be tinted, reflective, insulated, or the thermal pane type of glass?

Yes.....1 (Q24)
No.....2 (Q26)
Don't know.....8 (Q26)

19

24. Was the tinted, reflective, insulated or thermal pane type of glass installed at the time of construction or added since the building was constructed?

Time of construction.....1 (Q26)
Since construction.....2 (Q25)
Both.....3 (Q25)
Don't know.....8 (Q26)

20

25. In approximately what year was the tinted, reflective, insulated, or the thermal pane glass most recently installed?

Year
Don't know.....998

21 22 23

26. Are there any window awnings or other window-shadings on the outside of the building?

Yes.....1 (Q27a)
No.....2 (Q28)
Don't know.....8 (Q28)

24

- 27a. Were these window awnings or other shadings installed at the time of construction or added since that time?

Time of construction.....1 (Q28)
Since construction.....2 (Q27b)
Both.....3 (Q27b)
Don't know.....8 (Q28)

25

- 27b. In approximately what year were these window awnings or shadings most recently installed?

Year
Don't know.....998

26 27 28

28. Are there any window shadings on the inside of the building such as shades, drapes, or venetian blinds?

Yes.....1
No.....2
Don't know.....8

29

29. How many floors are in the tallest section of the building?
Please include any floors that may be used as a parking garage, basements, or any other floors below ground level.

of floors

30	31	32
----	----	----

30. What is the total square footage of all the space enclosed within the exterior walls of this building? Again, please include indoor parking facilities and basements, and all space such as hallways, lobbies, stairways and elevator shafts.

of Sq. Feet

(INTRO-
DUCTION
ABOVE
Q32)

Don't know..... 99999998 (Q31)

--	--	--	--	--	--	--	--

31. Here is a card that has several broad categories of total square feet. Which category in your estimation best applies to the total square feet in this building?



1,000 or less.....	01
1,001 to 5,000 sq. ft.....	02
5,001 to 10,000 sq. ft.....	03
10,001 to 25,000 sq. ft.....	04
25,001 to 50,000 sq. ft.....	05
50,001 to 100,000 sq. ft.....	06
100,001 to 200,000 sq. ft.....	07
200,001 to 500,000 sq. ft.....	08
500,001 to 1 million sq. ft.....	09
Over 1 million sq. ft.....	10
Don't know.....	98

*1-42

The purpose of the next few questions is to find out about the kinds of activities that occur within this building.

By "activities" we mean the building's purpose. What is it used for? For example, space in a building may be used for office work, retail sales, as residential living quarters, for manufacturing, warehousing, laundering, classroom activities, or any number of other purposes.

32. First of all, is any part of the building used for residential purposes?
By residential we mean individual housekeeping units with kitchen facilities.

Yes..... 1 (Q33)
No..... 2 (BOX 6)

33. Approximately what percentage of the (MENTION SQUARE FEET FROM Q30 or 31) square feet in the building is used for residential purposes?

Yes (BOX 5)
Don't Know..... 998 (Q34)

44	45	46
----	----	----

BOX 5

CIRCLE CODE AND FOLLOW SKIP INSTRUCTION:

25% OR OVER..... 1 (Q39)
NONE OR LESS THAN 25% RESIDENTIAL..... 2 (BOX 6)

47

34. Would you estimate that 50% or more of the (MENTION SQUARE FEET FROM Q30 or 31) square feet is used for residential purposes?

Yes.....1

No.....2

48

Is it 75% or more?

Is it 25% or more?

Yes.....1 (Q39)
No.....2 (Q39)

Yes.....3 (Q39)
No.....4 (BOX 6)

49

BOX 6

IF BUILDING APPEARS TO BE: (CIRCLE CODE AND FOLLOW SKIP INSTRUCTION.)

OFFICE OR PROFESSIONAL BUILDING..... 1 (Q35)
SHOPPING CENTER/MALL..... 2 (Q36)
ANYTHING ELSE..... 3 (Q37)

50

35. Considering all of the (MENTION SQUARE FEET FROM Q30 or 31) square feet in this building, would you estimate that over 75% of this space is used as offices for establishments or professionals?

Yes.....1 (Q41)
No.....2 (Q37) 51

36. Would you classify this (building/complex of stores) as being a shopping center or mall?

Yes.....1 (Q41) 52
No.....2 (Q37)

37. Considering all of the (MENTION SQUARE FEET FROM Q30 or 31) square feet in this building is there one main activity that occupies over 75% of the space?

Yes.....1 (Q38) 53
No.....2 (Q39)

38. Could you describe that activity? A general description such as office work, laundry, restaurant, manufacturing, etc., is what I need.

54-60 blank

SKIP TO Q41

Begin Card 03

39.

Could you describe all the activities that occur within this building (other than residential)? A general description such as office work, laundry, restaurant, manufacturing, etc., is what I need.

17 18

ACTIVITIES

40.

You have named the following activities (READ ACTIVITIES MENTIONED IN Q39.)

A. Which of these activities occupies most space in this building?

ACTIVITY: _____
19 20 21 22

B. About what percentage of the (MENTION SQUARE FEET FROM Q30 or 31) square feet in this building is used for (ACTIVITY MENTIONED IN "A")?

23 24 25

C. Which activity occupies the next most space in this building?

ACTIVITY: _____
26 27 28 29

D. About what percentage of the (MENTION SQUARE FEET FROM Q30 or 31) square feet in this building is used for (ACTIVITY MENTIONED IN "C")?

30 31 32

41.

My next few questions are about the establishments in this building. Approximately, how many people work in (all of the establishments that occupy/the establishment that occupies) this building? (IF NUMBER VARIES THROUGHOUT THE YEAR, ASK FOR WHAT OCCURS MOST OF THE YEAR.)

33 34 35 36

(Q43)

Number or range

Don't know or won't estimate.... 99998 (Q42)

37 38 39 40 41

42.

Here is a card which shows categories. Which category in your estimation best applies to the number of people who work in the building?

HAND
CARD
3

Less than 10.....	01
10-19.....	02
20-49.....	03
50-99.....	04
100-249.....	05
250-499.....	06
500-999.....	07
1,000-2,499.....	08
2,500-4,999.....	09
5,000 or more.....	10
Don't know.....	98

42-43

I would now like to ask you about the hours the building is "in operation". By "in operation" we mean the total hours people normally work in the building. For this building, what are the total number of hours each day that (the establishment is/most of the establishments are) "in operation"? Lets start with:
 (READ EACH DAY)

SCHEDULE

DAY	HOURS FOR MOST ESTABLISHMENT(s)		
	In oper- ation	24 Hrs. (✓)	Not open (✓)
MONDAY			
TUESDAY			
WEDNESDAY			
THURSDAY			
FRIDAY			
SATURDAY			
SUNDAY			

--	--

44 45

--	--

46 47

--	--

48 49

--	--

50 51

--	--

52 53

--	--

54 55

--	--

56 57

44. Are the hours you just mentioned the same throughout the year?

Yes..... 1 (Q46a)
 No..... 2 (Q45)
 Don't know..... 8 (Q46a)

--	--

59 60

61-80 blank

45. During what months are the hours of operation changed, and what are the hours at those times?

Months _____

Months _____

DAY	HOURS FOR MOST ESTABLISHMENT(s)		
	In oper- ation	24 Hrs. (/)	Not open (/)
MONDAY			
TUESDAY			
WEDNESDAY			
THURSDAY			
FRIDAY			
SATURDAY			
SUNDAY			

DAY	HOURS FOR MOST ESTABLISHMENT(s)		
	In oper- ation	24 Hrs. (/)	Not open (/)
MONDAY			
TUESDAY			
WEDNESDAY			
THURSDAY			
FRIDAY			
SATURDAY			
SUNDAY			

46a. My next few questions are about the heating and cooling system or systems that serve the building. Approximately, what percentage of the (MENTION SQUARE FEET FROM Q30 OR Q31) square feet in this building is heated?

% heated

IF ZERO PERCENT IS HEATED,
SKIP TO Q53; OTHERWISE CONTINUE.

46b. The process of heating a building may be thought of in two parts: one, the system used to convert energy into heat, and two, the system that is used to distribute the heat throughout the building. First of all, just think of the system, or systems, that convert energy into heat; then look at this card, and pick the ONE choice that most nearly describes the energy conversion system for this building.

HAND
CARD
4

- a. Self-contained unit(s) that may be installed either in the building or on the roof. These units both generate and deliver the heat to the area each unit serves..... 1
- b. A central system [furnace or boiler(s)] which is located within the building. This system generates the heat, but depends on an additional system for distribution of the heat..... 2
- c. A central system located outside of the building. This system converts energy to a heated substance (water or steam) which is then delivered to the building. The heated substance (water or steam) is then distributed through another system to specific areas within the building..... 3
- d. Something else or a combination of the above. (PLEASE SPECIFY)

20 21

.... 4

46c. Here is a second card. This card shows various heat distribution systems. Which distribution system on this card most nearly describes the heat distribution system in use in this building?

HAND
CARD
5

- I. Forced hot air (with fans) using:
 - a. Air handling unit(s) with self-contained fan(s) which distribute heat to only part of the building.....01
 - b. Single central air handling unit separate from the energy conversion system, which distributes air throughout the building through ducts.... 02
- II. Radiant or naturally circulated air using:
 - c. Electric baseboards..... 11
 - d. Baseboard heating using hot water..... 12
 - e. Baseboard heating using steam..... 13
 - f. Radiators or convectors..... 14
 - g. Heating panels in the walls or floor..... 15
 - h. Something else (PLEASE SPECIFY)

22 23

.... 16

IF BUILDING: (CIRCLE CODE AND FOLLOW INSTRUCTION)

- HAS ANY RESIDENTIAL UNITS..... 1 (Q47)
- IS TOTALLY NON-RESIDENTIAL..... 2 (Q50) 24

47. Do the residential occupants have control over the heating system; that is, are they able to turn the heat on or off or to set the temperature in their area?

Yes..... 1 (Q50) 25
No..... 2 (Q48a)

48a. During normal daytime hours, what interior temperature will you try to maintain in the residential part of this building when the heating system is operating this (coming) winter?

_____ °F
(Interior Temperature) 26 27 28

Don't know..... 998

48b. As far as you know, what interior temperature was maintained in the residential part of the building last winter?

_____ °F
(Interior Temperature) 29 30 31

Don't know..... 998

49. As part of the building's standard operating procedure for the residential portion of this building, is there a manual or an automatic reduction in the heat produced by the heating system at night?

Yes..... 1 32
No..... 2

50. Do employees of (the establishment/the establishments) in the building have control over the heating system; that is, are they able to turn the heat on or off or to set the temperature in their area?

Yes..... 1 (Q52) 33
No..... 2 (Q51a)

51a. During normal working hours for this building, what interior temperature will you try to maintain when the heating system is operating this (coming) winter?

_____ °F
(Interior Temperature) 34 35 36

Don't know..... 998

51b. As far as you know, what interior temperature was maintained last winter?

_____ °F
(Interior Temperature) 37 38 39

Don't know..... 998

52. As part of the building's standard operating procedure, is there a manual or an automatic reduction in the heat produced by the heating system during the hours when the building is not in full use?

Yes.....1 40
No.....2

53. Now thinking of the cooling system or systems that serve the building. Approximately, what percentage of the (MENTION SQUARE FEET FROM Q30 or 31) square feet in this building is air conditioned for cooling purposes?

_____ % Air Conditioned

41	42	43
----	----	----

IF "ZERO" PERCENT IS AIR CONDITIONED SKIP TO Q61,
OTHERWISE CONTINUE.

54. What kind of cooling system or systems supply the air conditioning for this building? Please look at this card and pick the ONE choice that most nearly describes the air conditioning system here.

HAND CARD 6

- a. Window units only.....1 (Q61)
- b. One or more packaged units (i.e. built and assembled at a factory and installed as a unit at the building) which cool all, or portions, of this building.....2 (BOX 7)
- c. A single central system which serves all areas of the building that are air-conditioned and which was specially constructed for this building.....3 (BOX 7)
- d. Something else or any combination of the above (SPECIFY)

_____ 4 (BOX 7)

BOX 7

IF BUILDING: (CIRCLE CODE AND FOLLOW INSTRUCTION)

- HAS ANY RESIDENTIAL UNITS.....1 (Q55)
- IS TOTALLY NON-RESIDENTIAL2 (Q58)

55. Do the residential occupants have control over the central or packaged unit air conditioning system; that is, are they able to turn the air conditioning on or off or to set the temperature in their area?

Yes.....1 (Q58)
No.....2 (Q56a)

56a. During normal daytime hours, what interior temperature did you try to maintain in the residential part of this building this past summer?

°F

(Interior Temperature)

Don't know..... 998

47	48	49
----	----	----

56b. As far as you know, what interior temperature did you try to maintain in the residential part of the building the summer before; that is, the summer of 1978?

°F

(Interior Temperature)

Don't know..... 998

50	51	52
----	----	----

57. As part of the building's standard operating procedure for the residential portion of this building, is there a manual or an automatic reduction in the cooling produced by the air conditioning system at night?

Yes..... 1

No..... 2

53

58. Do employees of (the establishment/the establishments) in the building have control over the central or package unit air conditioning system; that is, are they able to turn the air conditioning on or off or to set the temperature in their area?

Yes..... 1 (Q60) 54

No..... 2 (Q59a)

59a. During normal working hours for this building, what interior temperature did you try to maintain this past summer?

°F

(Interior Temperature)

Don't know..... 998

55	56	57
----	----	----

59b. As far as you know, what interior temperature did you try to maintain the summer before; that is, the summer of 1978?

°F

(Interior Temperature)

Don't know..... 998

58	59	60
----	----	----

60. As part of the building's standard operating procedure, is there a manual or an automatic reduction in the cooling produced by the air conditioning system during the hours when the building is not in full use?

Yes..... 1

No..... 2

61

61. Has any of the space in the building which is normally in use been vacant or unoccupied for at least 3 months in the past 12 months?

Yes..... 1 (Q62) 62

No..... 2 (Q64)

62. Approximately, what percentage of the (MENTION SQUARE FEET FROM Q30 and Q31) square feet in the building would you estimate has been vacant or unoccupied for at least 3 months during the past 12 months?

%

Unoccupied

Don't know..... 998

63. During that time, was there a reduction in the amount of heat and/or cooling supplied to the vacant or unoccupied area?

Yes..... 1
No..... 2

64. The next few questions concern the actual equipment that supplies heating (and air conditioning) to the building. Is there a regular maintenance program for the heating (and air conditioning) system; that is, is the equipment checked at least once a year even if there are no apparent problems?

Yes..... 1
 NO..... 2
 Don't know..... 8 67

65. Are there any features that are part of the building's heating or cooling system which are specifically designed to help conserve energy?

Yes..... 1 (Q66)
 No..... 2 (Q67) 68
 Don't know..... 8 (Q67)

66. Could you describe those features?

COLUMN A	COLUMN B	COLUMN C
SPECIFY FEATURE(S) BELOW	READ: In what year was it installed?	IF "1977" READ: What month in 1977 was it installed?

69 70 71

67. Are there any features that are part of the building's lighting system which are specifically designed to help conserve energy?

Yes..... 1 (Q68) 72
No..... 2 (Q69)
Don't know..... 3 (Q69)

68. Could you describe those features?

COLUMN A	COLUMN B	COLUMN C
SPECIFY FEATURE(S) BELOW	READ: In what year was it installed?	IF "1977" READ: What month in 1977 was it installed?

73 74 75

76-80 blank

69. Here is a card which lists various types of fuels or energy sources. Which of these fuels or energy sources are brought into this building?

HAND
CARD
7

RECORD ENERGY SOURCES IN COLUMN HEADINGS ON TOP OF FACING PAGE.
IF ADDITIONAL COLUMNS ARE NEEDED TO RECORD ENERGY SOURCES, USE
CONTINUATION BOOKLET.

IF FUEL OIL MENTIONED, ASK Q69a; OTHERWISE SKIP TO Q70.

- 69a. In how many tanks is the fuel oil stored?

(Q69b)

Don't know..... 98 (Q70)

ASK QUESTIONS 69b-69c IN SEQUENCE FOR EACH TANK.
IF MORE THAN 4 TANKS, USE CONTINUATION BOOKLET.

	69b. How many gallons of fuel oil does (the/each) tank hold? Tank #1 gal. Don't know..999998	69c. At the present time, approximately how many gallons of fuel oil are in (the/each) tank? gal. (Tank 2 or Q70) Don't know...999998 (Q69d) FROM YOUR OBSERVATION Actual.... 1 Estimated.. 2	69d. Would you estimate the tank is: (READ CATEGORIES) Completely full..... 1 3/4 full..... 2 1/2 full..... 3 1/4 full..... 4 Empty..... 5 Don't know..... 8
Tank #2	gal. Don't know..999998	gal. (Tank 3 or Q70) Don't know..999998 (Q69d) FROM YOUR OBSERVATION Actual.... 1 Estimated.. 2	Completely full..... 1 3/4 full..... 2 1/2 full..... 3 1/4 full..... 4 Empty..... 5 Don't know..... 8
Tank #3	gal. Don't know..999998	gal. (Tank 4 or Q70) Don't know..999998 (Q69d) FROM YOUR OBSERVATION Actual.... 1 Estimated.. 2	Completely full..... 1 3/4 full..... 2 1/2 full..... 3 1/4 full..... 4 Empty..... 5 Don't know..... 8
Tank #4	gal. Don't know...999998	gal. (Tank 5 or Q70) Don't know..999998 (Q69d) FROM YOUR OBSERVATION Actual.... 1 Estimated.. 2	Completely full..... 1 3/4 full..... 2 1/2 full..... 3 1/4 full..... 4 Empty..... 5 Don't know..... 8

70. Which fuels or energy sources are used to supply the building's need for: (RECORD RESPONSES BY CHECKING APPROPRIATE COLUMN(S) ON FACING PAGE.)

NOT PERFORMED
IN BUILDING

- a. Heating.....
- b. Air conditioning for cooling purposes.....
- c. Water heating other than for heating the building.....
- d. Electricity generation.....
- e. Manufacturing or any other type of industrial activity.....
- f. Cooking.....

70a. Have you converted from fuel oil to some other energy source since January 1, 1979 for: (READ CATEGORIES)

- | | YES | NO |
|--|-----|----|
| a. Heating..... | 1 | 2 |
| b. Air conditioning for cooling purposes..... | 1 | 2 |
| c. Water heating other than for heating the building..... | 1 | 2 |
| d. Electricity generation..... | 1 | 2 |
| e. Manufacturing or any other type of industrial activity. | 1 | 2 |
| f. Cooking..... | 1 | 2 |

71. Are there any boilers in the building?

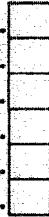
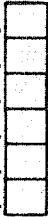
- | | |
|-----------------|---------|
| Yes..... | 1 (Q72) |
| No..... | 2 (Q74) |
| Don't know..... | 8 (Q74) |

72. How many boilers are there?

(NUMBER OF BOILERS)
Don't know.....8

73. Which fuels or energy sources are used to fire the boiler(s)?

ENERGY SOURCES

Type of Energy	Type of Energy	Type of Energy	Type of Energy	
70.				
73.				

ASK Q74-84 CONSECUTIVELY FOR EACH ENERGY SOURCE.

The following questions deal with specific companies that supply fuel to this building. The Department of Energy would like specific information on energy consumption that can only be collected by going directly to energy companies and suppliers. For this reason, I would like to find out who supplies the building's fuels or other types of energy.

74. In the past year, who has supplied the building's (MENTION ENERGY SOURCE)? IF MORE THAN ONE SUPPLIER IS MENTIONED, RECORD ADDITIONAL SUPPLIERS IN CONTINUATION BOOKLET.

Name.....

Address.....

Zip Code.....

**FOR ELECTRICITY AND NATURAL GAS ENERGY SOURCES,
SKIP TO BOX 8. FOR OTHER SOURCES CONTINUE.**

75. Has the same supplier been used for the past year?

Yes.....

No.....

DK.....

76. How many suppliers have been used in the past year?

77. What (is/are) the name(s) and address(es) of the other company(ies) that supplied (MENTION ENERGY SOURCE) in the past year? RECORD INFORMATION IN CONTINUATION BOOKLET.

**BOX 8
IF MULTI-TENANT BUILDING, CONTINUE WITH Q78; OTHERWISE SKIP TO Q81.**

78. How is the (MENTION ENERGY SOURCE) from (NAME OF SUPPLIER FROM Q74) billed; that is, are any of the tenants billed separately by the (NAME OF SUPPLIER) or is there just one bill for the entire building?

One bill.....
More than one bill.....

ENERGY SOURCES

Type of Energy	Type of Energy	Type of Energy	Type of Energy
74.			
75.			
..... 1 (BOX 8)			
..... 2 (Q76) 2 (Q76) 2 (Q76) 2 (Q76)
..... 8 (BOX 8)			
76.	# of suppliers	# of suppliers	# of suppliers
78.			
..... 1 (Q81) 1 (Q81) 1 (Q81) 1 (Q81)
..... 2 (Q79) 2 (Q79) 2 (Q79) 2 (Q79)

79. How many separate bills are there?
80. We would like to contact each tenant who receives a bill from (NAME OF SUPPLIER) to obtain information about their energy consumption. Could you tell me the name of each tenant who is billed separately?
- IF LIST IS NOT PROVIDED, RECORD NAME AND ADDRESS OF EACH TENANT WHO RECEIVES A SEPARATE BILL ON PAGES 28-31.
81. What is the name and address of the person or company who receives the bill for this building's use of (MENTION ENERGY SOURCE) from the (NAME OF SUPPLIER)?
Name:.....
Address:.....
Zip Code:.....
82. Does the bill you receive from (NAME OF SUPPLIER) cover just the square footage in this building or does it cover more than this building?
Just this building.....
More than building.....
Don't know.....
83. What is the name and address of the other building or facility that the bill covers?
Name:.....
Address:.....
Zip Code:.....
- IF BILLING ARRANGEMENT INCLUDES OTHER BUILDING, OBTAIN AS MUCH INFORMATION AS POSSIBLE. RECORD THIS INFORMATION ON THE PAGES 28-31 AND CONTACT SUPERVISOR
84. Could you tell me how many meters you have for the (ENERGY SOURCE) coming into the building?

RETURN TO QUESTION 74 FOR OTHER ENERGY SOURCES; IF NO OTHER ENERGY SOURCES, CONTINUE.

ENERGY SOURCES

Type of Energy	Type of Energy	Type of Energy	Type of Energy
79.	# of bills	# of bills	# of bills
81.			
82.			
..... 1 (Q84) 1 (Q84) 1 (Q84) 1 (Q84)
..... 2 (Q83) 2 (Q83) 2 (Q83) 2 (Q83)
..... 8 (Q84) 8 (Q84) 8 (Q84) 8 (Q84)
83.			
84.	# of meters	# of meters	# of meters

IF NEEDED, GO TO CONTINUATION BOOKLET

The President has issued a set of new Federal regulations which are designed to reduce the temperature in buildings. I have a few questions to find out if information about this program has been received by buildings across the country.

85. Informational booklets which look like this and contain information about the President's program are being sent to building managers nationwide. Have you, or has anyone else in this building received such a packet?

SHOW
INFORMA-
TIONAL
BOOKLET

Yes..... 1 (Q86)
No..... 2 (BOX 9)
Don't know..... 8 (BOX 9)

86. The informational booklet contains a certificate which is to be displayed in the building. Has a certificate, which looks like this, been posted in this building?

SHOW
CERTIFI-
CATE

Yes..... 1 (Q87)
No..... 2 (BOX 9)
Don't know..... 8 (BOX 9)

87. Which of these three boxes on this certificate has been checked?

POINT
OUT
BOXES ON
CERTIFI-
CATE

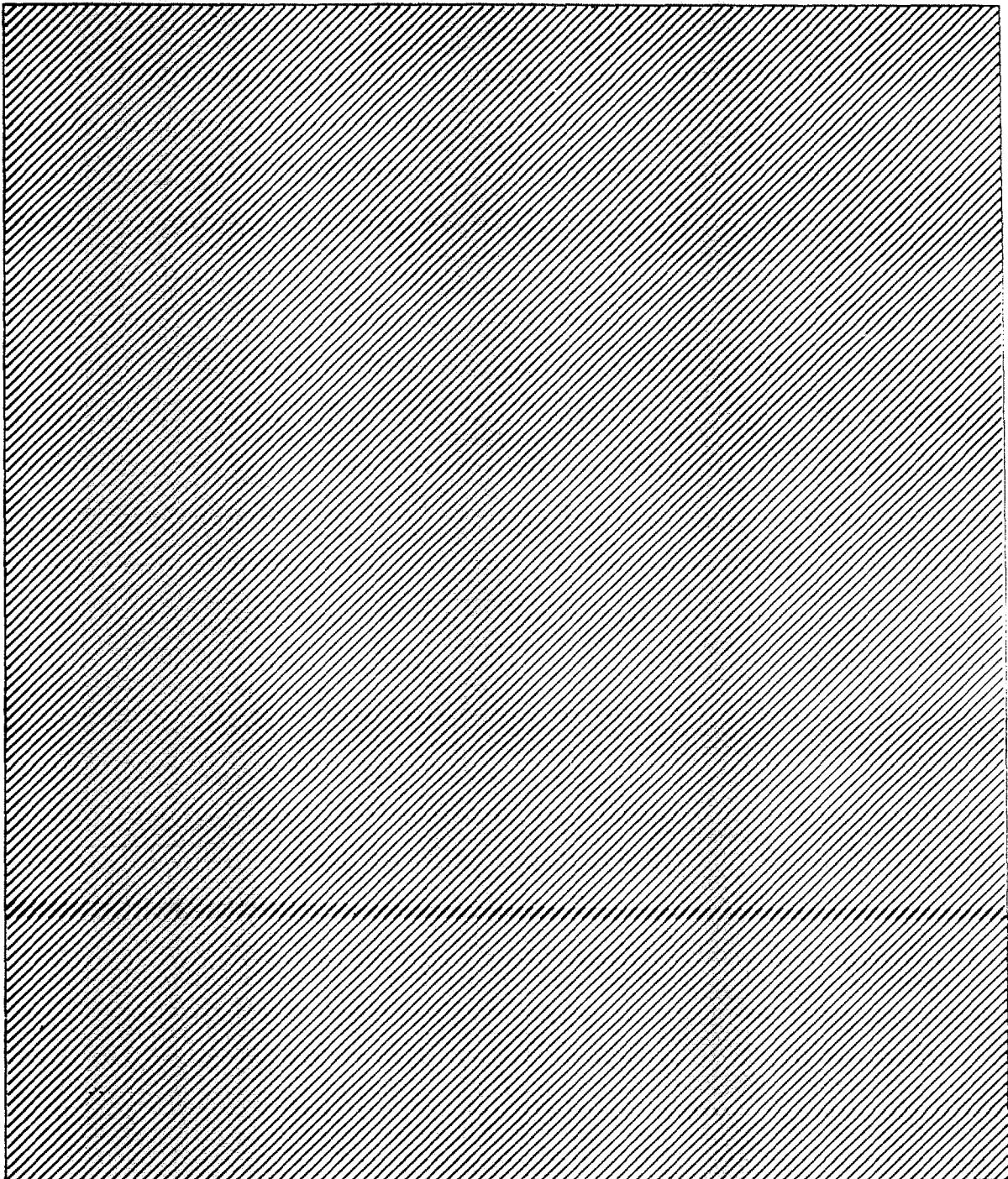
READ CATEGORIES

Full compliance..... 1 (BOX 9)
Exempted compliance..... 2 (BOX 9)
Excepted from compliance..... 3 (BOX 9)
Don't know..... 8 (BOX 9)

IF ASKED ABOUT COMPLIANCE WITH THE TEMPERATURE SETBACK PROGRAM, READ CONFIDENTIALITY STATEMENT ON COVER PLUS STATEMENT BELOW:

The purpose of this survey is to collect information which is necessary to evaluate the effectiveness of energy conservation programs. Information on participation in any of these programs by individuals will not be released to anyone for any purpose.

TIME ENDED



BOX 9

WAIVER INSTRUCTIONS FOR EACH SUPPLIER

--

- One bill for entire building, obtain one waiver.

Obtained.....

Not obtained.....

- Three bills or less, obtain waiver for each.

Obtained.....

Not obtained.....

- Four bills or more, obtain waiver from
building owner/manager only.

Obtained.....

Not obtained.....

ENERGY SOURCES

Type of Energy	Type of Energy	Type of Energy	Type of Energy
RECORD BELOW WAIVER RESULTS			
..... 01 01 01 01
(Reason)	(Reason)	(Reason)	(Reason)
..... 11 11 11 11
(Explain)	(Explain)	(Explain)	(Explain)
(# not obtained)	(# not obtained)	(# not obtained)	(# not obtained)
..... 21 21 21 21
(Reason)	(Reason)	(Reason)	(Reason)

ENERGY SOURCE: _____

SUPPLIER'S NAME: _____

Q. 80 LIST OF TENANTS RECEIVING SEPARATE BILLS	WAIVERS OBTAINED			ADDITIONAL INFORMATION TO EXPLAIN BILLING
	YES	NO	NOT NECESSARY	
1) Name _____ Address _____				
2) Name _____ Address _____				
3) Name _____ Address _____				
4) Name _____ Address _____				
5) Name _____ Address _____				
6) Name _____ Address _____				
7) Name _____ Address _____				
8) Name _____ Address _____				

Use additional pages as needed to list separately billed tenants.

ENERGY SOURCE: _____

SUPPLIER'S NAME: _____

Q. 80 LIST OF TENANTS RECEIVING SEPARATE BILLS	WAIVERS OBTAINED			ADDITIONAL INFORMATION TO EXPLAIN BILLING
	YES	NO	NOT NECESSARY	
1) Name _____ Address _____				
2) Name _____ Address _____				
3) Name _____ Address _____				
4) Name _____ Address _____				
5) Name _____ Address _____				
6) Name _____ Address _____				
7) Name _____ Address _____				
8) Name _____ Address _____				

Use additional pages as needed to list separately billed tenants.

INTERVIEWER OBSERVATIONS

IF LISTING DISAGREES WITH INTERVIEW DEFINITION OF BUILDING (I.E., IF BOX 2 IS CHECKED "INCORRECT" ON PAGE 1 OF QUESTIONNAIRE), COMPLETE QUESTION 1; OTHERWISE, SKIP TO QUESTION 2.

1. A. Please indicate the name and address(es) of the building from the listing sheet.

Name _____

Address _____

- B. Please indicate the name and address of the building as defined for the interview.

Name _____

Address _____

- C. Please explain the circumstances of the disagreement between listing and interview definition of the building.

2. Did you contact any other respondent than the person recorded on the front cover of the questionnaire?

YES..... 1 (Q3)

NO..... 2 (Q4)

3. Please list all respondents.

Name: _____

18 19

Title: _____

Location: _____ Phone No. (_____) _____

18 19

Name: _____

Title: _____

20 21

Location: _____ Phone No. (_____) _____

4. What is your observation of the type of building or kind of business that occurs within the building? Please be thorough in your description.

5. Is this building free standing or attached to another building?

Free standing..... 1 22
Attached..... 2

6. Please describe any unusual circumstances you may have encountered in obtaining the waiver.

23 24

7. IF SHOPPING CENTER/MALL:

A. Is this a strip shopping center or enclosed mall?

Strip shopping center..... 1 25
Enclosed mall..... 2

B. Approximately how many establishments are in this shopping center/mall?

Less than 10..... 1
10-24..... 2 26
25-49..... 3
50-74..... 4
75-100..... 5
Over 100..... 6

NON-INTERVIEW REPORT

1. Please explain in detail the reason you were unable to complete the interview.

2. What is your observation of the type of building or kind of business that occurs within the building?

27 28 29 30

3. Approximately how many square feet would you estimate to be in this building?

1,000 or less.....	01
1001 to 5,000.....	02
5,001 to 10,000.....	03
10,001 to 25,000.....	04
25,001 to 50,000.....	05
50,001 to 100,000.....	06
100,001 to 200,000.....	07
200,001 to 500,000.....	08
500,001 to 1 million.....	09
Over 1 million.....	10
Don't know.....	98

31-32

Date

83 84 85 86

Contacts
Int.

87 88 89

Contacts
Waiver

90 91 92

Time

93 94 95

Disp.

96 97

Batch#

98 99 100

52-80 blank

RECORD OF CONTACTS

FINAL STATUS ON INTERVIEW AND WAIVER
(Circle one code)

Interview Complete with all waivers 1

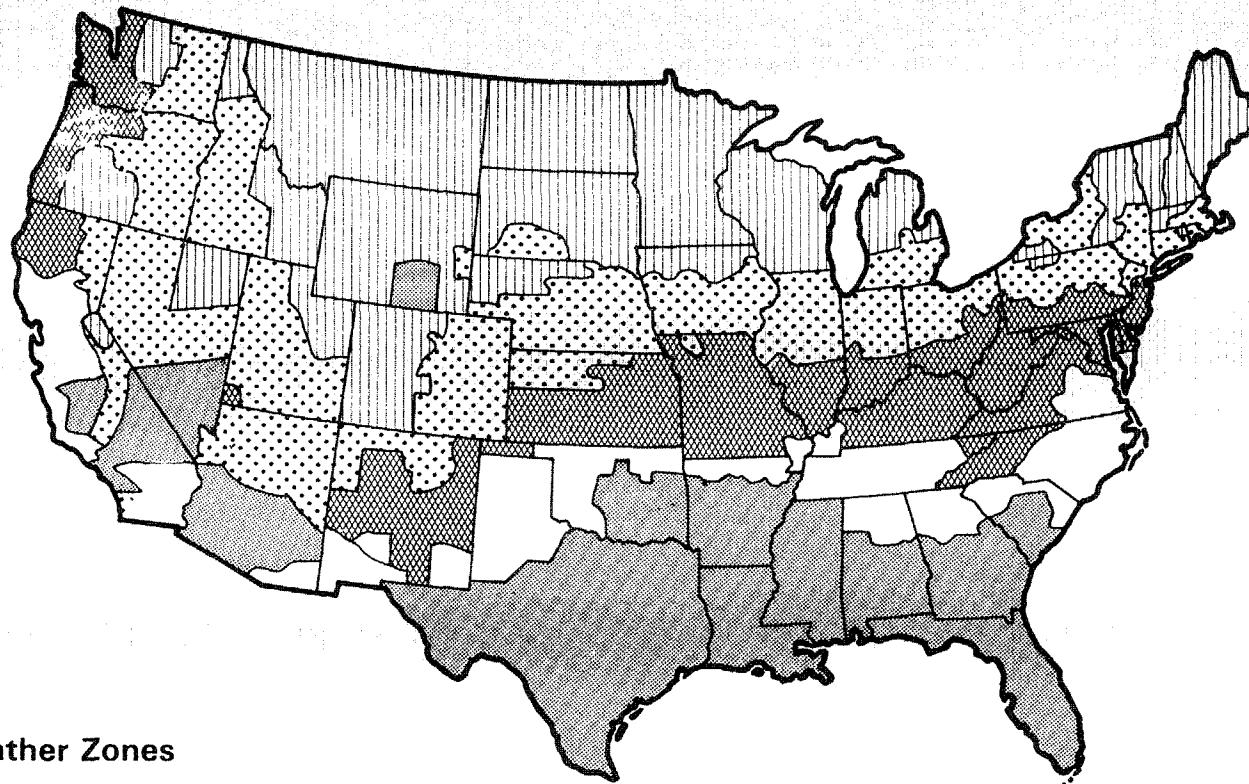
Interview Complete without all waivers . . . 2

Non-Response (e.g., unable to enter

Non-Response (e.g., unable to enter structure; refusal; breakoff; unable to contact respondent; other) 3

United States Weather Zone Map of Heating Degree Days (HDD) and Cooling Degree Days (CDD)

305

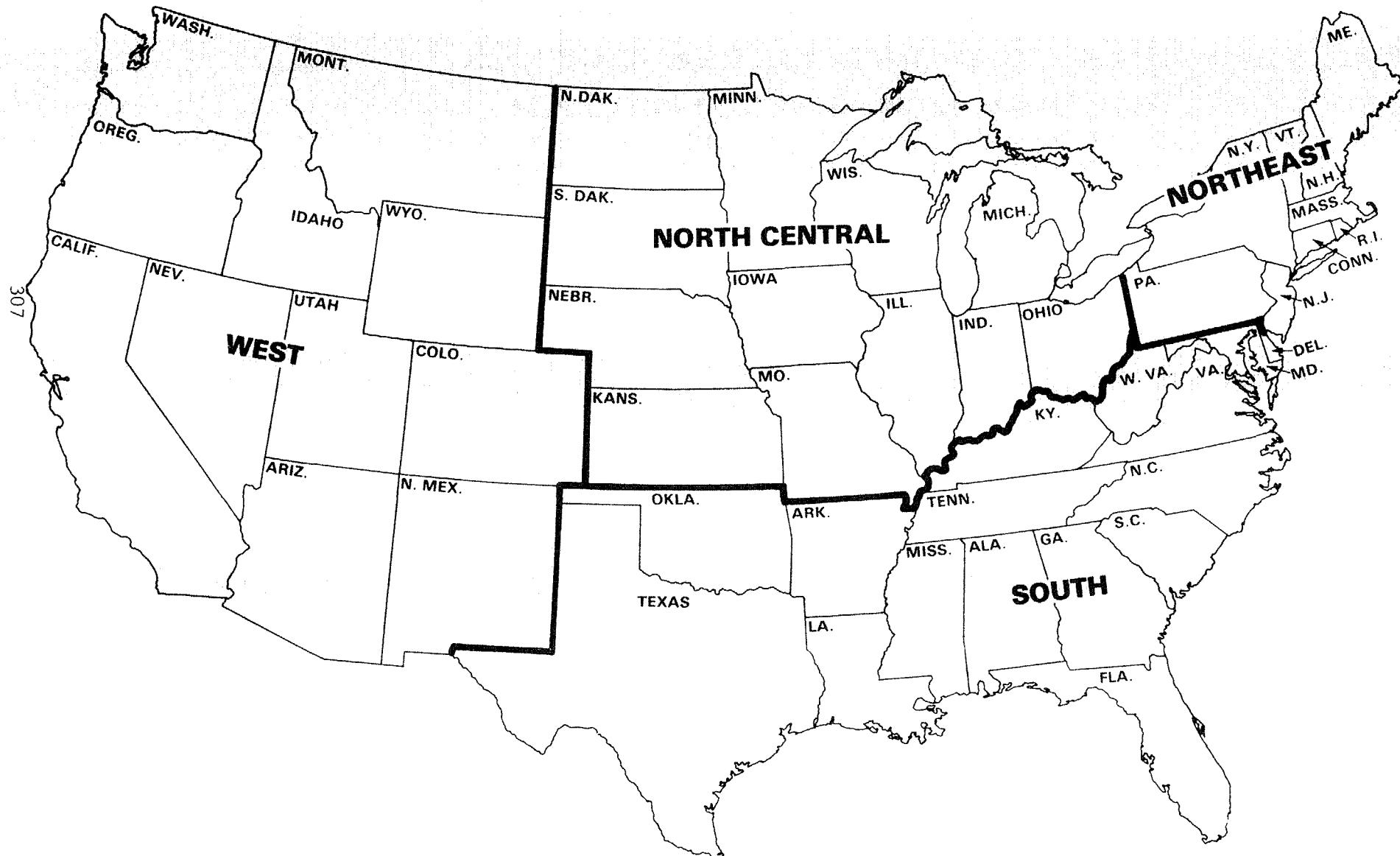


Weather Zones



- Zone 1 Is Less Than 2,000 CDD and Greater Than 7,000 HDD.
- Zone 2 Is Less Than 2,000 CDD and 5,500–7,000 HDD.
- Zone 3 Is Less Than 2,000 CDD and 4,000–5,499 HDD.
- Zone 4 Is Less Than 2,000 CDD and Less Than 4,000 HDD.
- Zone 5 Is Greater Than 2,000 CDD and Less Than 4,000 HDD.

CENSUS REGIONS



F. Utility Forms

This appendix contains samples of the survey forms used to obtain consumption data from the actual buildings' energy suppliers. The forms were grouped into four color-coded categories: electricity usage (yellow); fuel oil usage (pink); utility gas usage (blue); and individual (green). Each category contained a set of four surveys forms and instructions. (Because the content of the forms in each category are virtually identical, only the electricity forms are included here.)





U.S. DEPARTMENT OF ENERGY

NON-RESIDENTIAL BUILDING ENERGY CONSUMPTION STUDY

Conducted by:

WESTAT

An Employee-Owned Research Corporation

11600 Nebel Street • Rockville, Maryland 20852 • 301 881-5310

Consumption data is to be provided for the building described above.

Data may be submitted directly on the reporting form inside this folder, or in any other format, such as a computer print-out, which provides the same information and is convenient for your company.

IF YOU HAVE ANY QUESTIONS, PLEASE CALL
COLLECT TO: DONNA MORRIS (301) 881-5310

Participation is mandatory as authorized by Section 13B of the Federal Energy Administrative Act of 1974 (PL 93-275, as amended), Emergency Petroleum Allocation Act (PL 93-159), and the Energy Emergency Conservation Act (PL 96-202).

Any information we collect which will permit identification of respondents or their buildings will be confidential and used only for statistical purposes. Data that can be identified with individual respondents will not be disclosed or released to anyone (including the Department of Energy) for any other purpose except as required by law.

ELECTRICITY USAGE

From December 1, 1978 through January 31, 1980

IMPORTANT: Indicate in the box below the code name of the rate structure applicable to this customer.

CODE NAME OF RATE SCHEDULE:

Time Period	Consumption Period		Billing A - Actual E - Estimated (Circle One)	Number of Kw hr. used	KW Demand	TOTAL DOLLAR AMOUNT*
	Beginning Date	Ending Date				
1			A E			
2			A E			
3			A E			
4			A E			
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*TOTAL DOLLAR AMOUNT should include:

- State and Local taxes,
- Fuel adjustment charges,
- System charges, and
- Demand charges.

*TOTAL DOLLAR AMOUNT should exclude:

- Merchandise,
- Repair charges,
- Service charges, and
- Any other charges not specifically requested.

IF THIS CUSTOMER IS ON A BUDGETED BILL, DO NOT PROVIDE THE BUDGETED BILL, PROVIDE INSTEAD THE DOLLAR AMOUNT THAT IS THE COST OF THE ACTUAL CONSUMPTION IN THE PERIOD.

According to your records, how many customers do you supply in this building?

Form completed by: _____ (_____) _____ (Telephone) _____ (Date)
(Name)



U.S. DEPARTMENT OF ENERGY SURVEY
Authorization Form For
Non-Residential Building Energy Consumption Survey

--

I hereby give permission to Westat, Inc. to obtain energy consumption information for confidential use in connection with their survey for the U.S. Department of Energy.

This authorization covers the total amount of fuels and the total price charged for fuels consumed during the 14 month period of December 1, 1978 to January 30, 1980 by the building in the box below.

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.

BUILDING NAME		
ADDRESS		
CITY	STATE	ZIP CODE
SIGNATURE OF PERSON AUTHORIZING		
EMPLOYED BY	ADDRESS OF PERSON AUTHORIZING IF DIFFERENT FROM ABOVE:	
TITLE () TELEPHONE #	ADDRESS CITY STATE ZIP CODE	

PLEASE COMPLETE ONE BLOCK BELOW FOR EACH COMPANY THAT SUPPLIES FUEL USED BY YOUR NON-RESIDENTIAL BUILDING SINCE DECEMBER, 1978.

ENERGY SOURCE	PRINT FULL NAME OF COMPANY
	ADDRESS (IF KNOWN) - CITY AND STATE - ZIP CODE
	TELEPHONE: () ACCOUNT NUMBER

ENERGY SOURCE	PRINT FULL NAME OF COMPANY
	ADDRESS (IF KNOWN) - CITY AND STATE - ZIP CODE
	TELEPHONE: () ACCOUNT NUMBER

ENERGY SOURCE	PRINT FULL NAME OF COMPANY
	ADDRESS (IF KNOWN) - CITY AND STATE - ZIP CODE
	TELEPHONE: () ACCOUNT NUMBER



U.S. DEPARTMENT OF ENERGY

NON-RESIDENTIAL BUILDING ENERGY CONSUMPTION STUDY

Conducted by:

WESTAT

An Employee-Owned Research Corporation

11600 Nebel Street • Rockville, Maryland 20852 • 301 881-5310

A list of the customers in this building is stapled inside this folder along with a copy of an authorization form from an agent of, or the building owner/manager.

Please aggregate the consumption data for these customers.

Data may be submitted directly on the reporting form inside this folder, or in any other format, such as a computer print-out, which provides the same information and is convenient for your company.

IF YOU HAVE ANY QUESTIONS, PLEASE CALL
COLLECT TO: DONNA MORRIS (301) 881-5310

Participation is mandatory as authorized by Section 13B of the Federal Energy Administrative Act of 1974 (PL 93-275, as amended), Emergency Petroleum Allocation Act (PL 93-159), and the Energy Emergency Conservation Act (PL 96-202).

Any information we collect which will permit identification of respondents or their buildings will be confidential and used only for statistical purposes. Data that can be identified with individual respondents will not be disclosed or released to anyone (including the Department of Energy) for any other purpose except as required by law.

AGGREGATE ELECTRICITY USAGE

From December 1, 1978 through January 31, 1980

IMPORTANT: Total number of customers reported on this form?

Number of customers at this address for less than the period of December 1, 1978 to Jan. 31, 1980?

According to your records, how many customers do you serve at this address?

CODE NAME(S) OF RATE SCHEDULE(S) APPLICABLE TO YOUR CUSTOMERS IN THIS BUILDING.

1. _____ 2. _____ 3. _____

TIME PERIOD	CONSUMPTION PERIOD			CONSUMPTION DATA		TOTAL DOLLAR AMOUNT*
	IF CUSTOMERS ARE ON THE SAME BILLING CYCLE		IF CUSTOMERS ARE ON DIFFERENT BILLING CYCLES, RECORD MONTH	AGGREGATE KW HOUR USED	KW HOUR AGGREGATE	
	Beginning Date	Ending Date			A - All Actual E - Some or All Estimated (Circle One)	
1					A E	
2					A E	
3					A E	
4					A E	
5					A E	
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11					A E	
12					A E	
13					A E	
14					A E	

*TOTAL DOLLAR AMOUNT should include:

- State and Local taxes,
- Fuel adjustment charges,
- System charges, and
- Demand charges.

*TOTAL DOLLAR AMOUNT should exclude:

- Merchandise,
- Repair charges,
- Service charges, and
- Any other charges not specifically requested.

IF ANY OF YOUR CUSTOMERS IN THIS BUILDING ARE ON A BUDGETED BILLING CYCLE, 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) (Date)

CUSTOMER LISTING SHEET

Supplier Information

Building Information

Address _____
City _____
State _____ Zip Code _____

To supplier:

This list of customers was provided to us by the building owner/manager identified on the attached waiver. The information we need asks you to aggregate the consumption data for all of these customers (plus the building, as needed) and to report the total.

No. Name of Customer Billing Address (if different)



U. S. DEPARTMENT OF ENERGY SURVEY
Authorization Form For
Non-Residential Building Energy Consumption Survey

--

I hereby give permission to Westat, Inc. to obtain energy consumption information for confidential use in connection with their survey for the U.S. Department of Energy.

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A photocopy of this authorization may be accepted with the same authority as the original.

BUILDING NAME		
ADDRESS		
CITY	STATE	ZIP CODE
SIGNATURE OF PERSON AUTHORIZING		
EMPLOYED BY	ADDRESS OF PERSON AUTHORIZING IF DIFFERENT FROM ABOVE:	
TITLE	ADDRESS	
() TELEPHONE #	CITY	STATE ZIP CODE

PLEASE COMPLETE ONE BLOCK BELOW FOR EACH COMPANY THAT SUPPLIES FUEL USED BY YOUR NON-RESIDENTIAL BUILDING SINCE DECEMBER, 1978.

PRINT FULL NAME OF COMPANY		
ENERGY SOURCE	ADDRESS (IF KNOWN) - CITY AND STATE - ZIP CODE	
TELEPHONE: () ACCOUNT NUMBER		
PRINT FULL NAME OF COMPANY		
ENERGY SOURCE	ADDRESS (IF KNOWN) - CITY AND STATE - ZIP CODE	
TELEPHONE: () ACCOUNT NUMBER		
PRINT FULL NAME OF COMPANY		
ENERGY SOURCE	ADDRESS (IF KNOWN) - CITY AND STATE - ZIP CODE	
TELEPHONE: () ACCOUNT NUMBER		



EIA NO.: 143
OMB NO.: 038-S78042
FORM: 03 Y

U.S. DEPARTMENT OF ENERGY

NON-RESIDENTIAL BUILDING ENERGY CONSUMPTION STUDY

Conducted by:

WESTAT

An Employee-Owned Research Corporation

11600 Neel Street • Rockville, Maryland 20852 • 301/881-5310

A list of the customers in this building is stapled inside this folder along with copies of the authorization forms signed by each of these customers.

Since a waiver from each customer is included, you may provide the data for this building in either aggregate or individual form, whichever method is best suited to your needs.

Data may be submitted directly on the reporting form inside this folder, or in any other format, such as a computer print-out, which provides the same information and is convenient for your company.

IF YOU HAVE ANY QUESTIONS, PLEASE CALL
COLLECT TO: DONNA MORRIS (301) 881-5310

Participation is mandatory as authorized by Section 13B of the Federal Energy Administrative Act of 1974 (PL 93-275, as amended), Emergency Petroleum Allocation Act (PL 93-159), and the Energy Emergency Conservation Act (PL 96-202).

Any information we collect which will permit identification of respondents or their buildings will be confidential and used only for statistical purposes. Data that can be identified with individual respondents will not be disclosed or released to anyone (including the Department of Energy) for any other purpose except as required by law.

AGGREGATE ELECTRICITY USAGE

From December 1, 1978 through January 31, 1980

IMPORTANT: Total number of customers reported on this form?

Number of customers at this address for less than the period of December 1, 1978 to Jan. 31, 1980?

According to your records, how many customers do you serve at this address?

CODE NAME(S) OF RATE SCHEDULE(S) APPLICABLE TO YOUR CUSTOMERS IN THIS BUILDING.

1. _____ 2. _____ 3. _____

TIME PERIOD	CONSUMPTION PERIOD			CONSUMPTION DATA		TOTAL DOLLAR AMOUNT*
	IF CUSTOMERS ARE ON THE SAME BILLING CYCLE		IF CUSTOMERS ARE ON DIFFERENT BILLING CYCLES, RECORD MONTH	AGGREGATE KW HOUR USED	KW HOUR AGGREGATE	
	Beginning Date	Ending Date			A - All Actual E - Some or All Estimated (Circle One)	
1					A E	
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4					A E	
5					A E	
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7					A E	
8					A E	
9					A E	
10					A E	
11					A E	
12					A E	
13					A E	
14					A E	

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- State and Local taxes,
- Fuel adjustment charges,
- System charges, and
- Demand charges.

*TOTAL DOLLAR AMOUNT should exclude:

- Merchandise,
- Repair charges,
- Service charges, and
- Any other charges not specifically requested.

IF ANY OF YOUR CUSTOMERS IN THIS BUILDING ARE ON A BUDGETED BILLING CYCLE, 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) _____ (Date)

CUSTOMER LISTING SHEET

Supplier Information

Building Information

Address _____
City _____
State _____ Zip Code _____

To supplier:

This list of customers was provided to us by the building owner/manager identified on the attached waiver. The information we need asks you to aggregate the consumption data for all of these customers (plus the building, as needed) and to report the total.

No. Name of Customer Billing Address (if different)



U.S. DEPARTMENT OF ENERGY SURVEY
Authorization Form For
Non-Residential Building Energy Consumption Survey

I hereby give permission to Westat, Inc. to obtain energy consumption information for confidential use in connection with their survey for the U.S. Department of Energy.

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A photocopy of this authorization may be accepted with the same authority as the original.

BUILDING NAME		
ADDRESS		
CITY	STATE	ZIP CODE
SIGNATURE OF PERSON AUTHORIZING		
EMPLOYED BY	ADDRESS OF PERSON AUTHORIZING IF DIFFERENT FROM ABOVE:	
TITLE	ADDRESS	
() TELEPHONE #	CITY	STATE ZIP CODE

PLEASE COMPLETE ONE BLOCK BELOW FOR EACH COMPANY THAT SUPPLIES FUEL USED BY YOUR NON-RESIDENTIAL BUILDING SINCE DECEMBER, 1978.

PRINT FULL NAME OF COMPANY		
ENERGY SOURCE	ADDRESS (IF KNOWN) - CITY AND STATE - ZIP CODE	
TELEPHONE: ()	ACCOUNT NUMBER	

PRINT FULL NAME OF COMPANY		
ENERGY SOURCE	ADDRESS (IF KNOWN) - CITY AND STATE - ZIP CODE	
TELEPHONE: ()	ACCOUNT NUMBER	

PRINT FULL NAME OF COMPANY		
ENERGY SOURCE	ADDRESS (IF KNOWN) - CITY AND STATE - ZIP CODE	
TELEPHONE: ()	ACCOUNT NUMBER	



U.S. DEPARTMENT OF ENERGY

NON-RESIDENTIAL BUILDING ENERGY CONSUMPTION STUDY

Conducted by:

WESTAT

An Employee-Owned Research Corporation

11600 Neber Street • Rockville, Maryland 20852 • 301/881-5310

Each of your customers in this building is identified on the "Customer Listing Form" which, along with the waiver(s), is stapled inside this folder.

If you feel the confidentiality of the customer(s) who did not sign the waiver(s) can be maintained by supplying us aggregate data for all customers, please do so. If, however, this is not the case, just supply us data for the customer(s) who did sign the waiver.

Data may be submitted directly on the reporting form inside this folder, or in any other format, such as a computer print-out, which provides the same information and is convenient for your company.

IF YOU HAVE ANY QUESTIONS, PLEASE CALL
COLLECT TO: DONNA MORRIS (301) 881-5310

Participation is mandatory as authorized by Section 13B of the Federal Energy Administrative Act of 1974 (PL 93-275, as amended), Emergency Petroleum Allocation Act (PL 93-159), and the Energy Emergency Conservation Act (PL 96-202).

Any information we collect which will permit identification of respondents or their buildings will be confidential and used only for statistical purposes. Data that can be identified with individual respondents will not be disclosed or released to anyone (including the Department of Energy) for any other purpose except as required by law.

AGGREGATE ELECTRICITY USAGE

Y

From December 1, 1978 through January 31, 1980

IMPORTANT: Total number of customers reported on this form?

Number of customers at this address for less than
the period of December 1, 1978 to Jan. 31, 1980?

According to your records, how many customers
do you serve at this address?

**CODE NAME(S) OF RATE SCHEDULE(S) APPLICABLE TO YOUR CUSTOMERS
IN THIS BUILDING.**

1. _____ 2. _____ 3. _____

TIME PERIOD	CONSUMPTION PERIOD		CONSUMPTION DATA		TOTAL DOLLAR AMOUNT*
	IF CUSTOMERS ARE ON THE SAME BILLING CYCLE		AGGREGATE KW HOUR USED	KW HOUR AGGREGATE	
	Beginning Date	Ending Date		A - All Actual E - Some or All Estimated (Circle One)	
1				A E	
2				A E	
3				A E	
4				A E	
5				A E	
6				A E	
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10				A E	
11				A E	
12				A E	
13				A E	
14				A E	

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- Fuel adjustment charges,
- System charges, and
- Demand charges.

*TOTAL DOLLAR AMOUNT should exclude:

- Merchandise,
- Repair charges,
- Service charges, and
- Any other charges not specifically requested.

IF ANY OF YOUR CUSTOMERS IN THIS BUILDING ARE ON A BUDGETED BILLING CYCLE, 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) _____ (Date)

CUSTOMER LISTING SHEET

Supplier Information

Building Information

Address _____
City _____
State _____ Zip Code _____

To supplier:

This list of customers was provided to us by the building owner/manager identified on the attached waiver. The information we need asks you to aggregate the consumption data for all of these customers (plus the building, as needed) and to report the total.

No. **Name of Customer** **Billing Address (if different)**



U.S. DEPARTMENT OF ENERGY SURVEY
Authorization Form For
Non-Residential Building Energy Consumption Survey

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BUILDING NAME		
ADDRESS		
CITY	STATE	ZIP CODE
SIGNATURE OF PERSON AUTHORIZING		
EMPLOYED BY	ADDRESS OF PERSON AUTHORIZING IF DIFFERENT FROM ABOVE:	
TITLE	ADDRESS	
() TELEPHONE #	CITY	STATE ZIP CODE

PLEASE COMPLETE ONE BLOCK BELOW FOR EACH COMPANY THAT SUPPLIES FUEL USED BY YOUR NON-RESIDENTIAL BUILDING SINCE DECEMBER, 1978.

ENERGY SOURCE	PRINT FULL NAME OF COMPANY
	ADDRESS (IF KNOWN) - CITY AND STATE - ZIP CODE
	TELEPHONE: () ACCOUNT NUMBER

ENERGY SOURCE	PRINT FULL NAME OF COMPANY
	ADDRESS (IF KNOWN) - CITY AND STATE - ZIP CODE
	TELEPHONE: () ACCOUNT NUMBER

ENERGY SOURCE	PRINT FULL NAME OF COMPANY
	ADDRESS (IF KNOWN) - CITY AND STATE - ZIP CODE
	TELEPHONE: () ACCOUNT NUMBER

G. GLOSSARY

Air Conditioning refers to air cooled by a refrigeration unit. It does not include fans, blowers, or evaporative cooling systems which are not connected to a refrigeration unit. Air conditioning units which are not currently in working condition or are not used, but are in place in the building, are included in this survey.

Building Activity. The primary business, commerce, or function carried out by the occupants of a building. The activity categories were designed to group buildings having similar patterns of energy consumption after controlling for weather and size.

Building Conservation Features refers to the four types of materials or fixtures included in this survey, which may be installed in, or added to, a building for the purposes of reducing the amount of energy consumed through the heating and/or cooling of the building.

Building Type is derived from the predominant activity in which the occupants of a building are engaged. For this report, mixed-use buildings (those buildings where 75 percent or more of the floor space was not devoted to a single activity) have been categorized according to the predominant building activity. Each category is described below. (Note: These categories are preliminary; they will be tested and revised after the actual consumption data are available.)

Assembly refers to large buildings used for the gathering of 50 or more people for purposes such as social, recreational, or religious. Included in this category are the following building types:

Social/Public/Civic Assembly (fixed seating): (meeting hall/lodge hall, convention hall/assembly hall, town hall, auditorium, lecture hall, student union, etc.)

Religious Assembly: (Church, chapel, synagogue, mosque, etc.)

Recreational Facility:

- Gymnasium/YMCA or YWCA/indoor racket sports, recreation center/athletic facility
- Pool room
- Amusement arcade
- Skating rink
- Bowling alley
- Indoor pool
- Other

(Building Type Continued, "Assembly")

Entertainment Building:

- Archive/library, museum/art gallery/exhibit hall
- Observatory/planetarium
- Concert hall
- Coliseum/arena (enclosed)
- Theater/movie/cinema
- Radio/TV studio or station
- Nightclub
- Other

Other Enclosed Assembly Building:

- Passenger terminal
- Armory
- Other

Non-enclosed or Partial Structure:

- Stadium
- Grandstand
- Other

Automotive Sales and Service Buildings include:

Gas Stations
Automobile Dealers
Motor Vehicle Repair/Service

Education buildings house academic or technical instruction. This category includes:

Preschool
Elementary
Junior High
Senior High
College or University
Vocational School
Specific Building Types (on school campuses)

- Administration (see Office)
- Auditorium (see Assembly)
- Dormitory (see Lodging)
- Gymnasium (see Assembly)
- Infirmary (see Health Care)
- Library (see Assembly)
- Museum (see Assembly)
- Student union (see Assembly)

(Building Type Continued, "Assembly")

- School for mentally retarded (see Health Care)
- Stadium (see Assembly)
- Heating plant/utility (see Industrial)

Food Sales and Service buildings include:

Cafeteria

Full Service Restaurant: (Diner - limited menu, bar and grill - limited menu, coffee shop - limited menu, full menu service, bar, etc.)

Carry-Out Service: (Caterer, pizza parlor, sandwich shop, fast food, etc.)

Retail Food Sales:

- Supermarket
- Specialty food store
- Meat/seafood market
- Retail bakery
- Farmer's market, fruit/vegetable market
- Other

Food-Related Activities/Other Activity Except Office or Residential (Mixed-Use):

- Food Sales or Service/Other Retail Sales
- Food Sales or Service/Other Service Activity
- Food Sales or Services/Storage (except supermarket)
- Other

Health Care buildings house diagnostic and treatment facilities for both in- and out-patient care. In-patient facilities treat the mentally or physically ill. Buildings for overnight care are also included. This type includes:

Medical Care Hospital: (General medical and surgical; chronic disease; medical infirmary (connected with institution); tuberculosis/other respiratory disease; orthopedic; maternity; ear, eye, nose, and throat; etc.)

Mental Facility: (Psychiatric, mental retardation)

Rehabilitation: (Narcotic/drug addiction, physical therapy, alcoholism, etc.)

(Building Type Continued, "Industrial")

Veterinary: (Hospital, kennel)

(Out-patient care may be medical, dental or psychiatric. A building housing out-patient veterinary practices also falls into this category.) Buildings of this type include:

- Medical Clinic: (Abortion; ear, eye, nose and throat; general)
- Mental Health Clinic
- Dental Clinic
- Veterinary Clinic

Industrial buildings house manufacturing and the processing or procurement of goods, merchandise, raw materials or food. Buildings of this type include:

Food Processing Plant: (Meat-packing plant, poultry-dressing plant, dairy, cannery, grain mill, bakery, confectionery, beverage, etc.)

Leather/Textile Mill

Light Assembly - Factory: (Leather goods, apparel and other goods made from purchased material, furniture and other wood products, electrical or electronic instruments and other fabricated metal tools, measuring devices and light equipment)

Heavy Assembly - Factory: (Machinery - including farm, construction, mining, metal-working and other heavy equipment; transportation vehicles)

Paper, Chemical, Rubber or Petroleum Processing Factory: (Pulp and paper, rubber/plastic, chemical/pharmaceutical, petroleum refinery)

Metalworks, Glassworks, Other Similar Manufacturing Plants: (Foundry, steel works, rolling or finishing mill, buildings for smelting, refining, drawing, rolling, or extruding of nonferrous metals, stone, clay, glass and concrete products)

Printing, Publishing

Generation, Transmission, or Distribution of Electricity, Natural Gas, Steam or Other Utility or Sanitary Services: (Hydroelectric generation; nuclear generation of electricity; coal generation of electricity; other generation, transmission, or distribution of electricity; natural gas; storage, transmission or distribution; steam supply; collection or disposal of refuse; sewage disposal; treatment; water supply; pumping stations; irrigation)

(Building Type Continued, "Lodging")

Construction/Natural Resource Procurement: (Mining, construction site building, etc.)

Lodging facilities refer to buildings offering multiple accommodations for long or short-term residents. Included are:

Short-Term Residence:

- Shelter home
- Motel
- Tourist home
- Hotel
- Convention hotel
- Inn
- Other

Long-Term Residence:

- Boarding house
- Orphanage
- Home for aged, nursing home
- Convent/monastery
- Dormitory/sorority/fraternity
- Other

Office buildings are used for general office space, professional offices, and administrative offices. Included are:

Professional Office Building: (Management consulting, engineering, medical, law, corporate, administration of an institution, mixed professional)

Financial Office Building: (Bank, insurance, securities, brokerage firm, real estate, etc.)

Data Processing:

- Computer center
- Other data processing

Offices/Other Activity (Except Residential): Mixed Use

- Office with retail (except food)
- Office with food sales or service
- Offices/services activity (other than food)
- Office/warehouse or storage
- Real estate/other commercial
- State or Federal capitol

(Building Type Continued, "Lodging")

Residential buildings serve as living quarters and have individual kitchen facilities.

Multi-Family:

- High-rise apartments
- Low-rise apartments

Single Family:

- Detached
- Duplex
- Triplex
- Quadraplex
- Townhouse/rowhouse

Mobile Homes

Residential/Other Building Type (Mixed Use):

- Residential/food-related
- Residential/sales (non-food)
- Residential/office space
- Residential/service activity
- Residential/other use than above-mentioned

Retail Sales and Personal Services are buildings housing sales and displays of goods or services (excluding food). Included are:

Shopping Mall

Strip Shopping Center

Retail Sales (single establishment):

- Building materials, hardware, garden supply
- Department store, apparel stores
- Furniture, home furnishings, and equipment
- Drugstore
- Multi-retail establishment
- Other retail stores

Wholesale Goods (except food)

Services (except food):

- Laundry/dry cleaner/car wash
- Post office

(Building Type Continued, "Retail Sales and Personal Services")

- Personal service
- Multi-service establishment
- Other service

Building Housing Two or More Services, Retail or Wholesale Establishments Not Previously Mentioned:

- Service/retail
- Retail/wholesale
- Service/wholesale
- Retail/wholesale/service

Warehouse and Storage buildings are used for the storage of goods, merchandise, raw materials, or manufactured products. Included are:

Agricultural

Warehouse - nonrefrigerated

Refrigerated storage

Other

Storage/Retail, Wholesale or Manufacturing:

- Storage/food processing
- Storage/retail sales (nonfood)
- Storage/wholesale (nonfood)
- Storage/manufacturing (nonfood)

Other buildings are those that do not fit into any of the previous categories. Included are:

Crematorium

Parking garage

Hangar

Telephone exchange

(Also included in the Other category are the building types Laboratory and Public Order and Safety)

Laboratory buildings house equipment for experimental testing or for analysis. Included are:

(Building Type Continued, "Other")

Mechanical/Electrical

Medical/Dental

Agricultural

Other

Public Order and Safety buildings house establishments engaged in the preservation of law and order or in public safety.

Fire station

Police station

Jail

Reformatory

Penitentiary

Courthouse

Sheriff's office

Other

Campus or complex refers to a well-defined geographic area containing a group of separate buildings that are operated as a unit (such as a college or university campus).

Census Region. An area consisting of various States selected according to population size and physical location. In this survey, the States were grouped into four regions:

Northeast - Maine, Vermont, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, and Pennsylvania.

North Central - Ohio, Michigan, Indiana, Illinois, Wisconsin, Minnesota, Iowa, Missouri, Kansas, Nebraska, North Dakota, and South Dakota.

South - Maryland, Delaware, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Kentucky, Tennessee, Alabama, Mississippi, Louisiana, Arkansas, Oklahoma, and Texas.

West - Montana, Wyoming, Washington, Oregon, Nevada, Colorado, California, Idaho, Utah, New Mexico, and Arizona.

(Note: Alaska and Hawaii are normally considered parts of the western region but were not included in the sample for this survey.)

Central Air Conditioning serves all areas of the building that are air conditioned. Such systems are specially designed for each building.

Central Heating Systems. This heating equipment category represents two types of systems depending upon the location of the system. A central system located within the building, (such as a furnace or boiler), generates the heat but depends upon an additional system for distribution of the heat. A central system located outside of the building converts energy to a heated substance such as steam or hot water which is then distributed to the heated parts of the building by a separate system wholly contained within the building.

Combination Air Conditioning Systems. Air cooling systems composed of various types of equipment which are either combinations of window units, package units, or central systems.

Commercial Buildings. All nonresidential buildings with the exception of those where industrial activities occupy more of the total square footage than any other type of activity (see Nonresidential Buildings).

Conservation Practices refers to the three types of actions included in this report which building owners or occupants may initiate, manually or automatically, for the purposes of reducing the amount of energy consumed to heat or cool the building. The actions include reducing the heat or the cooling produced when the building is not in full use, and having a regular maintenance program for the heating and/or air conditioning systems.

Cooling Degree-Days refers to the number of degrees the average daily 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 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.

Electricity. Electric power supplied to a building by a central utility via underground or above-ground power lines. It does not refer to electric power generated onsite for the exclusive use of the building. In this case, the fuel used for the generator would be indicated.

Energy Suppliers. The companies that provide electricity, natural gas, fuel oil, coal, or other forms of energy to the buildings and to the individual customers within the buildings.

Establishment. As defined by the Standard Industrial Classification Manual, "an economic unit, generally at a single physical location where business is conducted or where services or industrial operations are performed."

Forced Hot Air. A heat distribution system consisting of two types of units that distribute heat via fans: (1) a self-contained air handling unit serving only a part of the building; and (2) a single central air handling unit separate from the energy conversion system which distributes air throughout the building through ducts.

Fuel Oil refers to No. 1, No. 2, or No. 4 grade fuel oil, residual fuel oil, or kerosene that might be burned for space- or water-heating purposes.

Glass as Percentage of Exterior Surface refers to the proportion of glass to the exterior wall structure of the surface.

Heating Degree-Days refers to the number of degrees 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 degrees ($65-50=15$), while one with an average temperature of 65 or higher has none.

Hours of Operation During a Typical Week refers to the number of hours per week that the building is occupied by regular employees (employees responsible for carrying out the primary activity or activities of the building), and excludes hours when the building is occupied only by maintenance, security, or other supportive personnel. Many buildings do not maintain the same hours of operation during the year. Alternate schedules were reported for these buildings, but for this report "hours of operation" refers to the schedule followed most often. Other buildings do not have any regular schedule of hours, are open intermittently or by appointment only, or are open without being staffed (this last category includes automatic bank tellers and roadside rest stops). These buildings were recorded as having 0 operating hours, according to the definition given by the questionnaire, even though they were not vacant.

Imputation. A statistical method used to estimate the response to specific unanswered questions which should have been answered or were unknown at the time of the interview.

Insulation is any material (such as fiberglass, foam, loose fill, etc.) which, when placed between the interior of the building and the outdoor environment, reduces the amount of heat or cold lost to the environment.

Kerosene refers to a distilled product of oil or coal with the generic name "kerosene" and used for space-heating, water-heating, cooking, or lighting.

LPG or Liquid Petroleum Gas. Any gas fuel supplied to a building in liquid form. It is usually delivered by tank truck and stored near the building in a tank or cylinder until used. Propane and butane are liquefied petroleum gases.

Master-Metered. The method used by utility companies (i.e., electricity and natural gas), to measure the total volume of energy used by several individual customers collectively.

Metropolitan refers to buildings located within Standard Metropolitan Statistical Areas (SMSA's) as defined in the 1970 Census. Except in New England, an SMSA is a county or a group of contiguous counties which contains 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. "Nonmetropolitan" refers to buildings not located within SMSA's as defined in the 1970 Census.

Multiple Building Unit. A single building address which at the time of the interview was discovered to be two or more separate buildings.

Natural Gas is utility gas supplied by pipeline to individual buildings by a central utility company. It does not refer to privately-owned gas wells operated by the building owner.

Nonresidential Building. A roofed and walled structure that is used for some purpose other than just a residence. The scope of this definition is quite broad and includes some buildings that are primarily residential (as well as commercial and industrial buildings). The term "residential" applies to structures where the primary activity is that of a residence for one or more households. Residential buildings were within the scope of the survey if they showed evidence of some kind of commercial or industrial activity. For example, a residential building, such as an apartment building, which also contained some obvious nonresidential activity such as a store or office was within the scope of the survey. A private residence which contained an office or business, such as a doctor's office in a home, was considered a nonresidential building for the purposes of this survey. In order for a private residence to have been selected for this survey, it had to have a sign (large enough to be visible from the street) advertising the presence of some commercial or industrial activity.

Number of People Working in the Building. The normal number of people working in the building during a typical workday or that which occurs during most of the year.

Number of Floors is the count of building levels in the tallest section of the building including parking, basements, or other floors below ground level.

Outside Shading includes window awnings or other features of the building which serve to shade the exterior windows and thereby reduce the rate of solar penetration into the building. The outside shading may have been installed at the time of construction or have been installed since construction (retrofitted). In some cases, outside shading may have been installed both at the time of construction

and since construction. These buildings are reported in both categories. As a result, the total number of buildings for which outside shading is currently present is not a simple sum of these two categories.

Package Units refers to air conditioning units which are built and assembled at a factory and installed as a unit to cool all, or portions of, a building.

Reduced Cooling refers to the manual or automatic reduction in the cooling produced by the air conditioning system during the hours the building is not in full use. Buildings without air conditioning systems and buildings with only window air conditioning units are reported as "Not Applicable".

Reduced Heating refers to the manual or automatic reduction in the heat produced by the heating system during the hours when the building is not in full use. Buildings that do not have heating systems are reported as "Not Applicable".

Regular Maintenance refers to a systematic program for checking the heating and/or air conditioning equipment on a regular basis (at least once a year), even if there are no apparent problems. Buildings that lack both heating and air conditioning systems are reported as "Not Applicable". Buildings with only window air conditioning units and no heating system are also "Not Applicable".

Self-Contained Heating Units are units installed either in the building or on the roof and which generate and deliver heat to the area served.

Separately Metered. This refers to the method in which utility companies, (i.e., electricity and natural gas) measure the volume of energy consumed by individual customers in a building.

SIC. Standard Industrial Classification codes developed by the U.S. Bureau of the Census which categorizes businesses into groups with similar economic activities.

Special Building List. Part of the sampling procedure entailed locating "large" buildings within the sampled PSU's. "Large" buildings were defined as those with 250,000 or more square feet of enclosed floor space in PSU's that are Standard Metropolitan Statistical Areas. In the remaining one-third of the PSU's, buildings of 100,000 square feet or more were listed.

Special Zip Codes. Postal ZIP codes which are allocated by the Postal Service to business establishments, government agencies, or buildings which have a high mail volume.

Steam Energy Source refers to buildings which purchase steam from steam generation and distribution companies serving municipal areas such as natural gas distributors. This does not refer to buildings which use purchased fuels to generate their own steam for use in the building or other buildings in a campus/complex situation.

Structure Type refers to whether the building is detached (stands alone), attached to other buildings on one or more sides, or is part of a shopping mall.

Total Square Footage refers to all the space enclosed within the exterior walls of the building. This includes indoor parking facilities and basements, and all space such as hallways, lobbies, stairways, and elevator shafts.

Treated Glass includes tinted, reflective, insulated or thermal pane types of glass which, when installed in the exterior windows of a building, serve to reduce the rate of solar penetration into the building or to reduce the rate of heat or cold loss to the environment. Such forms of glass may have been installed at the time of construction or installed since construction (retrofitted). In some cases, treated glass may have been installed both at the time of construction and since construction. These buildings are reported in both categories. As a result, the total number of buildings for which treated glass is currently present is not a simple sum of these two categories.

Waiver. An authorization form instructing the energy-supplying company serving the buildings to release the volumes and costs of energy the building consumed over a specified period.

Weatherstripping or Caulking refers to any material which is placed between the door or window and the door- or window-frame in order to reduce the rate of heat or cold loss.

Window Unit. Air conditioners are self-contained units which are installed in a window or through the wall.

Year Constructed. The year in which the major or largest portion of the building was constructed.

Other Reports Produced by the Office of the Consumption Data System

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 1979 Through March 1979, July 1980, DOE/EIA-0207/5, GPO Stock No.
061-003-00131-9, \$6.50.

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.

Nonresidential Buildings Energy Consumption Survey: Building Characteristics,
March 1981, DOE/EIA-0246, GPO Stock No. 061-003-00171-8, \$5.50.

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, \$5.00.

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,
\$5.00.

Copies of reports listed above are available from:

Superintendent of Documents
U.S. Government Printing Office
Washington, DC 20402

National Interim Energy Consumption Survey: Household Interview File,
DOE/DF-81/001 (Magnetic Tape), \$125.00 available from the National Technical
Information Service - Computer Products Division, 5285 Port Royal Road,
Springfield, Virginia, Accession No. PB-81-108714, \$125.00.

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