Independent Statistics & Analysis
U.S. Energy Information Administration

# Commercial Buildings Energy Consumption Survey (CBECS)

## User's Guide to the 2012 CBECS Public Use Microdata File

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# Overview

EIA makes a public-use microdata file available for each CBECS survey cycle. The 2012 file, which contains over 400 survey variables (not including imputation flags and statistical weights, which bring the variable count over 1,000), is a valuable tool for users conducting detailed analysis of energy use in commercial buildings. This document provides some background on the CBECS design, as well as useful tips and examples that will guide users through the proper statistical use of the CBECS microdata.

### CBECS sample design

The CBECS uses a multi-stage, multi-frame area probability design to select a sample of buildings that estimate energy characteristics, consumption, and expenditures for the national stock of commercial buildings. For detailed information on how the sample was selected, see *How Were Buildings Selected for the 2012 CBECS* (http://www.eia.gov/consumption/commercial/2012-cbecs-building-sampling.cfm). To produce population estimates, the sample cases were properly weighted to represent all commercial buildings, including those not in the sample. *Base sampling weights*, which are the reciprocal of the probability of being selected for the CBECS sample, were first calculated for each sampled building. The base weights were then adjusted to account for survey nonresponse. The variable FINALWT in the data file represents the *final sampling weight*, accounting for different probabilities of selection and rates of participation in the survey. FINALWT is the number of buildings in the population that the observation represents. For example, if FINALWT for a building is 1,000, that building represents itself and 999 other non-sampled buildings.

### Sampling error

Estimates from a sample survey like CBECS are not exact but are statistical estimates with some associated sampling error—the result of generating estimates based on a sample rather than conducting a census of the entire population. Sampling error provides a measure of the accuracy of a particular estimate for a characteristic based on how common and variable it is in the population, given a particular sample size.

Standard errors are used in conjunction with survey estimates to measure sampling error, construct confidence intervals, or perform hypothesis tests. A relative standard error (RSE) is defined as the standard error (square root of the variance) of a survey estimate, divided by the survey estimate, and multiplied by 100. In other words, the RSE is the standard error relative to the survey estimate on a scale from zero to 100. The larger the RSE, the less precise the survey estimate is and the less likely the estimate, plus or minus an error range, includes the true population value. An RSE is shown for each estimate in the CBECS tables (on a separate tab in the Excel tables or in separate tables following the estimates tables in Appendix A of this documentation).

### Jackknife method of estimating standard error

CBECS uses the jackknife method for estimating standard errors. This method uses replicate weights to repeatedly estimate the statistic of interest and calculate the differences between these estimates and the full-sample estimate. See Wolter (1985), Rust (1985), and Shao and Tu (1995) for technical details.

If $\theta$ is a population parameter of interest, let $\hat{\theta}$ be the estimate from the full sample for $\theta$. Let $\hat{\theta}_r$ be the estimate from the r-th replicate subsample by using replicate weights and let $\propto_r$ be the jackknife coefficient for replicate r. The variance of $\hat{\theta}$ is estimated by:

$$\hat{V}(\hat{\theta}) = \sum_{r=1}^{R} \propto_r (\hat{\theta}r - \hat{\theta})^2$$

For the 2012 CBECS, R=197 (the number of replicate subsamples) and $\propto_r$ = 1 for each replicate. The formula for calculating the RSE is:

$$\left(\frac{\sqrt{\hat{V}(\hat{\theta})}}{\hat{\theta}}\right) \times 100$$

## CBECS Examples: Using Excel or SAS to calculate estimates and/or RSEs

The following instructions are examples for calculating any CBECS estimate using the final weights (FINALWT) and the associated RSE using the replicate weights (FINALWT1−FINALWT197). We have provided instructions for Excel users and users with access to statistical software. Software packages like SAS/STAT, R, Stata, SUDAAN, and WesVar can process replicate weights to calculate RSEs. Note that while **EXCEL can be used to calculate point estimates, it cannot process replicate weights to calculate RSEs** for CBECS or other complex sample designs with varying probabilities of selection. EIA recommends calculating standard errors or RSEs in conjunction with estimates to account for sampling error, which signal whether the results from the sample reflect the population value or are just due to chance of drawing this particular sample.

### For Excel Users (estimates only, no RSEs)

**Excel Example 1: Calculate the number of commercial buildings that are 5,000 square feet or smaller**

A simple count of buildings can be estimated using the sum of FINALWT for a specified subset of cases within the CBECS data file. For this example, filter the file for all cases where the square footage category is 1,001 to 5,000 square feet (SQFTC='02'). There are 1,738 such cases. By adding the FINALWT column for these cases, the result is that the estimated number of buildings that are 5,000 square feet or smaller is 2,777,320.64 (or 2,777 thousand as reported in Table B1). This is equal to 50% of all commercial buildings, or 2,777,321 ÷ 5,557,138 (the sum of FINALWT for all cases in CBECS).

**Excel Example 2: Calculate the total square footage of commercial buildings in the South Census region**

To calculate total square footage, create a new column for weighted square footage by multiplying SQFT by FINALWT for each case. Then filter the file for the South (REGION='3'). Sum the new weighted square footage column (for the South only) to get 34,362,772,328 (or 34,363 million square feet as reported in Table B1).

**Excel Example 3: Calculate the average size (mean square feet per building) of office buildings**

To calculate total square footage, create a new column for weighted square footage by multiplying SQFT by FINALWT for each case. Then filter the file for office buildings (PBA='02'). Sum the new weighted square footage column (for office buildings only) to get 16,114,979,919. Sum FINALWT for office buildings to get 1,012,373.22 (estimate for the number of office buildings). To calculate mean square feet for office buildings, divide the weighted square footage total by the estimated number of office buildings. The result is 15,918.02 (or 15.9 thousand as reported in Table B1).

**Excel Example 4: Calculate the total electricity consumption for office buildings in the Midwest**

Begin by filtering the file for all cases where the Census region is Midwest (REGION='02'). There are 1,459 such cases. Next, limit the cases further to only those that are office buildings (PBA='02'). There should be 269 cases left. Total electricity consumption is reported in the variable ELCNS. For each case, created the weighted electricity consumption by multiplying

consumption by the weight (ELCNS × FINALWT). Sum these weighted consumption numbers to find that office buildings in the Midwest consume a combined 51,110,492,663kWh of electricity annually, or 51 billion kWh as reported in Table C15.

**Excel Example 5: Calculate energy intensity for the sum of major fuels by building floorspace category**

To find the energy intensity for the sum of major fuels for buildings with a floorspace of 10,001 to 25,000 square feet, first filter the file to cases to the appropriate cases (SQFTC='04'). There should be 925 cases in this category. In a new column, calculate the weighted square footage (SQFT × FINALWT) for each case and sum the column to get 15,206,737,472 (the total square footage for all buildings in this size category combined). In a separate column, calculate the weighted major fuel consumption (MFBTU × FINALWT) for each case and sum the column to get 876,162,383,080 (the total major fuel consumption for all buildings in this size category). Divide the sum of the weighted major fuel consumption by the sum of the weighted square footage. You should obtain an energy use intensity of 57.61672 thousand Btu per square foot for all major fuels combined for buildings with a floorspace of 10,001 to 25,000 square feet, or 57.6 thousand Btu per square foot as reported in Table C4.

**Excel Example 6: Calculate total major fuel consumption used for refrigeration in food service buildings**

Start by filtering the file for cases where the primary building activity is food service (PBA='15'). There should be 261 cases in this category. In a new column, calculate the weighted consumption of all major fuels for refrigeration (MFRFBTU × FINALWT). Sum this new column to find that food service buildings consume 113,495,135,935 thousand Btu annually for refrigeration, or 113 trillion Btu as reported in Table E1.

## For SAS Users

### SAS Example 1: Calculate the number of commercial buildings that are 5,000 square feet or smaller and the associated RSE *(Table B1)*

To calculate the sampling error associated with the square footage categories (SQFTC), use PROC SURVEYFREQ to process the replicate weights (FINALWT1-FINALWT197).

```
proc surveyfreq data=cbecs varmethod=jackknife;
      repweights finalwt1-finalwt197 / jkcoefs=1;
      weight finalwt;
      tables sqftc;
run;
```

Based on the output shown below, the weighted estimate of number of buildings in the 1,001 to 5,000 square foot category is 2,777,321. The standard deviation of the frequency is 149,557 and the calculation for the RSE is: (149,557 ÷ 2,777,321) × 100 = 5.38. This means that the sampling error is about 5% of the estimate.

```
The SURVEYFREQ Procedure

        Data Summary

Number of Observations          6720
Sum of Weights            5557138.45


Variance Estimation

Method                    Jackknife
Replicate Weights             CBECS
Number of Replicates            197
```

Square footage category

| SQFTC | Frequency | Weighted Frequency | Std Dev of Wgt Freq | Percent | Std Err of Percent |
|---|---|---|---|---|---|
| 1,001 to 5,000 square feet | 1738 | 2777321 | 149557 | 49.9775 | 1.3105 |
| 5,001 to 10,000 square feet | 876 | 1229240 | 98520 | 22.1200 | 0.8873 |
| 10,001 to 25,000 square feet | 925 | 883630 | 61106 | 15.9008 | 0.5869 |
| 25,001 to 50,000 square feet | 651 | 332035 | 27043 | 5.9749 | 0.3594 |
| 50,001 to 100,000 square feet | 720 | 199166 | 15433 | 3.5840 | 0.2584 |
| 100,001 to 200,000 square feet | 681 | 90020 | 6295 | 1.6199 | 0.1175 |
| 200,001 to 500,000 square feet | 696 | 37733 | 2572 | 0.6790 | 0.0516 |
| 500,001 to 1 million square feet | 285 | 5996 | 628.12135 | 0.1079 | 0.0128 |
| Over 1 million square feet | 148 | 1997 | 287.08586 | 0.0359 | 0.0057 |
| Total | 6720 | 5557138 | 298691 | 100.000 | |

**SAS Example 2: Calculate the total square footage of commercial buildings in the Northeast Census region and the associated RSE** *(Table B1)*

To calculate the total square feet (SQFT) by Census region (REGION), use SQFT in the *var* statement and REGION in the *domain* statement within PROC SURVEYMEANS. PROC SURVEYMEANS is used to process the replicate weights (FINALWT1-FINALWT197).

```
proc surveymeans data=cbecs varmethod=jackknife sum cv;
  repweights finalwt1-finalwt197 / jkcoefs=1;
  weight finalwt;
  var sqft;
  domain region;
run;
```

From the output shown below, the total weighted square footage of commercial buildings in the South is 34,362,772,328. The standard deviation of the total is 2,699,293,926 and the calculation for the RSE is: (2,699,293,926 ÷ 34,362,772,328) × 100 = 7.86. This means that the sampling error is almost 8% of the estimate.

```
                    The SURVEYMEANS Procedure

                  Domain Statistics in REGION

Census
region       Variable    Label                       Sum         Std Dev
---------------------------------------------------------------------------
Northeast    SQFT        Square footage     16081192954      1119141928
Midwest      SQFT        Square footage     19380241034      1090595743
South        SQFT        Square footage     34362772328      2699293926
West         SQFT        Square footage     18350705946      2638410423
---------------------------------------------------------------------------
```

**SAS Example 3: Calculate the weighted average size (mean square feet per building) of office buildings and the associated RSE** *(Table B1)*

To calculate the average building size (SQFT) by building activity (PBA), use PBA in the *domain* statement and use *mean* as an option in the PROC SURVEYMEANS statement. PROC SURVEYMEANS is used to process the replicate weights (FINALWT1-FINALWT197).

```
proc surveymeans data=cbecs varmethod=jackknife mean stderr cv;
      repweights finalwt1-finalwt197 / jkcoefs=1;
      weight finalwt;
      var sqft;
      domain pba;
run;
```

From the output shown below, the weighted mean square feet per building for office buildings is 15,918. The standard deviation of the mean is 979.131 and the calculation for the RSE is: (979.131 ÷ 15,918) × 100 = 6.15. The RSE can also be calculated by multiplying the figure in the coefficient of variation column by 100: 0.0615 × 100 = 6.15. This means that the sampling error is about 6% of the estimate.

The SURVEYMEANS Procedure

Domain Statistics in PBA

| Principal building activity | Variable | Label | Mean | Std Error of Mean | Coeff of Variation |
|---|---|---|---|---|---|
| Vacant | SQFT | Square footage | 11003 | 992.142138 | 0.090168 |
| Office | SQFT | Square footage | 15918 | 979.130581 | 0.061511 |
| Laboratory | SQFT | Square footage | 47035 | 11605 | 0.246727 |
| Nonrefrigerated warehouse | SQFT | Square footage | 16120 | 1393.765050 | 0.086463 |
| Food sales | SQFT | Square footage | 7081.444775 | 926.454328 | 0.130828 |
| Public order and safety | SQFT | Square footage | 18308 | 3149.651788 | 0.172038 |
| Outpatient health care | SQFT | Square footage | 12098 | 1268.955431 | 0.104889 |
| Refrigerated warehouse | SQFT | Square footage | 51902 | 14366 | 0.276796 |
| Religious worship | SQFT | Square footage | 11558 | 822.402359 | 0.071155 |
| Public assembly | SQFT | Square footage | 15712 | 1340.007740 | 0.085286 |
| Education | SQFT | Square footage | 31923 | 2082.563656 | 0.065237 |
| Food service | SQFT | Square footage | 5075.440657 | 375.930316 | 0.074069 |
| Inpatient health care | SQFT | Square footage | 245580 | 34198 | 0.139253 |
| Nursing | SQFT | Square footage | 43169 | 6235.722544 | 0.144448 |
| Lodging | SQFT | Square footage | 34636 | 3355.188329 | 0.096870 |
| Strip shopping mall | SQFT | Square footage | 31257 | 2968.990618 | 0.094985 |
| Enclosed mall | SQFT | Square footage | 630050 | 159082 | 0.252491 |
| Retail other than mall | SQFT | Square footage | 12407 | 820.751400 | 0.066153 |
| Service | SQFT | Square footage | 7667.615433 | 545.686007 | 0.071168 |
| Other | SQFT | Square footage | 14126 | 2591.816013 | 0.183481 |

### SAS Example 4: Calculate the weighted median hours per week *(Table B2)*

To calculate a weighted median, use a *weight* statement within PROC MEANS. In this example, weekly operating hours (WKHRS) goes in the *var* statement. It is not possible to calculate RSEs for medians with jackknife replicate weights, so it is not necessary to use PROC SURVEYMEANS.

```
proc means median data=cbecs;
      var wkhrs;
      weight finalwt;
run;
```

The output provides the weighted median weekly operating hours, 50 hours per week.

The MEANS Procedure

Analysis Variable : WKHRS Total hours open per week

| Median |
|---|
| 50.0000000 |

**SAS Example 5: Calculate the total electricity consumption for office buildings in the Midwest and the associated RSE** *(Table C15)*

To calculate the total electricity consumption in kWh (ELCNS) by primary building activity (PBA) and Census region (REGION), use PBA and REGION in a *domain* statement within PROC SURVEYMEANS. In this example, ELCNS goes in the *var* statement. PROC SURVEYMEANS is used to process the replicate weights (FINALWT1-FINALWT197).

```
proc surveymeans data=cbecs varmethod=jackknife sum;
      repweights finalwt1-finalwt197 / jkcoefs=1;
      weight finalwt;
      var elcns;
      domain pba * region;
run;
```

From the output shown below, the total annual electricity consumption in kWh for all office buildings in the Midwest is 51,110,492,663. The standard error of the total is 6,435,202,845. The RSE is calculated as (6,435,202,845 ÷ 51,110,492,663) × 100 = 12.6.

The SURVEYMEANS Procedure

Domain Statistics in PBA*REGION

| Principal building activity | Census region | Variable | Label | Sum | Std Error of Sum |
|---|---|---|---|---|---|
| Vacant | Northeast | ELCNS | Annual electricity consumption (kWh) | 681838172 | 306208142 |
| | Midwest | ELCNS | Annual electricity consumption (kWh) | 1776982678 | 742239238 |
| | South | ELCNS | Annual electricity consumption (kWh) | 2742734087 | 642758454 |
| | West | ELCNS | Annual electricity consumption (kWh) | 2529122320 | 1128951559 |
| Office | Northeast | ELCNS | Annual electricity consumption (kWh) | 63386723545 | 11728940188 |
| | Midwest | ELCNS | Annual electricity consumption (kWh) | 51110492663 | 6435202845 |
| | South | ELCNS | Annual electricity consumption (kWh) | 88010356971 | 9797222317 |
| | West | ELCNS | Annual electricity consumption (kWh) | 50781721798 | 5054685364 |

(Output truncated to save space)

**SAS Example 6: Calculate energy intensity for the sum of major fuels by building floorspace category and the associated RSE** *(Table C4)*

The CBECS includes all buildings, including those that do not use any energy, in the calculation of energy intensity for all major fuels[1]. The SURVEYMEANS procedure excludes cases with missing variables when calculating ratios. Therefore, it is necessary to first create a new variable (MFTAB, below) where missing data are set to 0:

```
data cbecs;
     set cbecs;
     mftab=mfbtu;
      if mftab=. then mftab=0;
```

Next, use this new variable to compute the overall energy intensity for the sum of major fuels, defined here as total major fuel consumption in thousand Btu (MFTAB) per square foot (SQFT). Use MFTAB and SQFT in a *var* statement as well as a ratio statement within PROC SURVEYMEANS. Further divide the data into building floorspace categories by using SQFTC in a *domain* statement. PROC SURVEYMEANS is used to process the replicate weights (FINALWT1-FINALWT197).

```
proc surveymeans data=pubuse.pubuse_ce_final_20160406
varmethod=jackknife sum;
     repweights finalwt1-finalwt197 / jkcoefs=1;
     weight finalwt;
     var mftab sqft;
     domain SQFTC;
     ratio mftab/sqft;
run;
```

In the output shown below, the total energy intensity for all major fuels in thousand Btu for buildings 10,001 to 25,000 square feet is 57.616723. The standard error for the intensity is 3.227289. The RSE for the intensity—thousand Btu per square foot—is (3.227289 ÷ 57.616723) × 100 = 5.6.

[1] For energy source-specific intensities, CBECS does not include buildings that don't use the energy source in the calculation, so the extra step of creating a new variable is not necessary in the calculation of electricity, natural gas, fuel oil, or district heat intensities.

Ratio Analysis

| Numerator | Denominator | Ratio | Std Err |
|---|---|---|---|
| mftab | SQFT | 78.936020 | 2.050375 |

The SURVEYMEANS Procedure

Domain Ratio in SQFTC

| Square footage category | Numerator | Denominator | Ratio | Std Err |
|---|---|---|---|---|
| 1,001 to 5,000 square feet | mftab | SQFT | 89.887523 | 3.451706 |
| 5,001 to 10,000 square feet | mftab | SQFT | 72.560637 | 4.162814 |
| 10,001 to 25,000 square feet | mftab | SQFT | 57.616723 | 3.227289 |
| 25,001 to 50,000 square feet | mftab | SQFT | 69.012869 | 3.549956 |
| 50,001 to 100,000 square feet | mftab | SQFT | 76.619863 | 3.899248 |
| 100,001 to 200,000 square feet | mftab | SQFT | 83.229079 | 6.130370 |
| 200,001 to 500,000 square feet | mftab | SQFT | 95.748596 | 4.391670 |
| 500,001 to 1 million square feet | mftab | SQFT | 103.525619 | 5.364536 |
| Over 1 million square feet | mftab | SQFT | 116.137839 | 17.185040 |

### SAS Example 7: Calculate building-level energy intensities and find the median for different categories of operating hours *(Table C4)*

First, create a new variable equal to the building-level energy intensity for each case (BLEUI, below). Here we are looking at the intensity for the sum of all major fuels (MFBTU):

```
data cbecs;
     set cbecs;
     BLEUI=mfbtu/sqft;
     if mfbtu=. then mfbtu=0;
```

Then, use the newly-created variable in the *var* statement of a MEANS procedure to find the median value. It is not possible to calculate RSEs for medians with jackknife replicate weights, so it is not necessary to use the SURVEYMEANS procedure. Use a *class* statement to separate the output by weekly operating hours categories (WKHRSC).

```
proc means median data=cbecs;
           weight finalwt;
           var BLEUI;
           class WKHRSC;
run;
```

The output below shows that the median building-level intensity for the sum of all major fuels for buildings open 40-48 hours is 43.4016500 thousand Btu per square foot. For buildings open 49 to 60 hours, the median is slightly higher, 48.2499677.

The MEANS Procedure

Analysis Variable : BLEUI

| Weekly hours category | N Obs | Median |
|---|---|---|
| No hours | 257 | 6.1823810 |
| 1 to 39 | 564 | 28.2946667 |
| 40 to 48 | 1293 | 43.4016500 |
| 49 to 60 | 1525 | 48.2499677 |
| 61 to 84 | 1075 | 72.6490000 |
| 85 to 167 | 656 | 127.5474000 |
| 168 | 1350 | 66.6795588 |

**SAS Example 8: Calculate total major fuel consumption used for refrigeration in food service buildings** *(Table E1)*

To calculate energy consumed from all major fuel for the refrigeration end use (MFRFBTU) by primary building activity (PBA), use MFRFBTU in the *var* statement of PROC SURVEYMEANS. Put PBA in a *domain* statement. PROC SURVEYMEANS is used to process the replicate weights (FINALWT1-FINALWT197).

```
proc surveymeans data=cbecs varmethod=jackknife sum;
      repweights finalwt1-finalwt197 / jkcoefs=1;
      weight finalwt;
      var MFRFBTU;
      domain pba;
run;
```

From the output shown below, the total major fuel consumption used for the refrigeration end use is 113,495,135,935 thousand Btu. The data for end uses come from a model and therefore do not have RSEs.

The SURVEYMEANS Procedure

Domain Statistics in PBA

| Principal building activity | Variable | Label | Sum | Std Error of Sum |
|---|---|---|---|---|
| Vacant | MFRFBTU | Major fuel refrigeration use (thous Btu) | 853224486 | 279432346 |
| Office | MFRFBTU | Major fuel refrigeration use (thous Btu) | 27838329963 | 3684087416 |
| Laboratory | MFRFBTU | Major fuel refrigeration use (thous Btu) | 11086263365 | 3437702890 |
| Nonrefrigerated warehouse | MFRFBTU | Major fuel refrigeration use (thous Btu) | 14071477702 | 3885842070 |
| Food sales | MFRFBTU | Major fuel refrigeration use (thous Btu) | 146796826864 | 16823447266 |
| Public order and safety | MFRFBTU | Major fuel refrigeration use (thous Btu) | 2910091744 | 563691832 |
| Outpatient health care | MFRFBTU | Major fuel refrigeration use (thous Btu) | 4449950940 | 1320674008 |
| Refrigerated warehouse | MFRFBTU | Major fuel refrigeration use (thous Btu) | 32550709840 | 9740227270 |
| Religious worship | MFRFBTU | Major fuel refrigeration use (thous Btu) | 4039852729 | 530319757 |
| Public assembly | MFRFBTU | Major fuel refrigeration use (thous Btu) | 24656447914 | 4349725088 |
| Education | MFRFBTU | Major fuel refrigeration use (thous Btu) | 40405444735 | 3341618386 |
| Food service | MFRFBTU | Major fuel refrigeration use (thous Btu) | 113495135935 | 11773848093 |

(Output truncated to save space)

## Notes to consider when using the microdata file and replicate weights

### Publication standards

EIA does not publish CBECS estimates where the RSE is higher than 50 or the count of buildings used for the calculation is less than 20 (indicated by a *Q* in the data tables). These are also EIA's recommended guidelines for custom analysis using the public use microdata file.

### Imputation variables

Most variables were imputed for *Don't know* and *Refused* responses. The *Z variables*, also referred to as *imputation flags*, are included in the public use microdata file. Each variable that was imputed has a corresponding Z variable; the Z variable name is simply the name of the variable that was imputed with the letter Z in front of it (for example, the Z variable for the variable SQFT is ZSQFT). The imputation flags provide information on the source of the data for the corresponding non-Z variable.

The CBECS imputation flags for **characteristics variables** and their meanings are:

- **Reported** (Z variable='0'). Indicates that the variable was reported by the respondent.
- **Imputed** (Z variable='1'). Building characteristics data were imputed using hot-deck imputation methods.
- **Estimated** (Z variable='2'). This code applies to strip center buildings for which the value was estimated using data from establishment interviews within the building
- **Missing** (Z variable='8'). Indicates that the value is still *Don't Know* or *Refused* because the variable was not imputed.
- **Inapplicable** (Z variable='9'). Indicates that the variable was not on the questionnaire path for that particular building. In the CBECS, non-Z variables are displayed as missing when they are inapplicable.

The CBECS imputation flags for **energy consumption** variables and their meanings are:

- **Reported** (Z variable='0'). Indicates that the variable was reported by the respondent or by the energy supplier.
- **Estimated for strip center** (Z variable='1'). This code applies to strip center buildings for which the value was estimated using data from establishment interviews within the building
- **Imputed** (Z variable='2'). Energy consumption data were imputed using engineering-based statistical models.
- **Estimated using price** (Z variable='3'). Indicates that either the consumption or the expenditures was calculated using an average price for the energy source.
- **Inapplicable** (Z variable='9'). Indicates that the energy source was not used.

When there is a variable on the file without a corresponding Z variable, it means that there was no missing data or the variable was not imputed (in such cases, there will be *Don't know* or *Refused* values remaining in the data file). EIA recommends using the imputed data where available to avoid biased estimation.

## Confidentiality and masking procedures

The 2012 CBECS was collected under the authority of the Confidential Information Protection and Statistical Efficiency Act (CIPSEA). EIA, project staff and its contractors and agents are personally accountable for protecting the identity of individual respondents. The following steps were taken to avoid disclosure of information that would reveal the identity of a building on the public use microdata file.

- All **building identification information** such as building name, address, city, state, and ZIP code were removed.
- Variables indicating **unique building features** that might lead to building identification were left off the file. Examples include: wind turbines, indoor ice rinks, trading floors, and green building certification.
- **Climate region** (PUBCLIM): CBECS has adopted new climate zone designations—climate regions created by the Building America program, sponsored by the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE). To preclude disclosure risk on the public use file, the Hot-dry/Mixed-dry region and the Hot-humid region have been combined, and climate region has been withheld for buildings larger than a million square feet.
- **Square footage** (SQFT): For buildings over one million square feet, the numeric square footage was replaced with the weighted average square footage of all responding buildings over one million square feet. Separate weighted means were calculated for each of the four Census regions. For buildings one million square feet or less, the numeric square footage was rounded to within 5 percent of the upper limit of the buildings' square footage categories. If the rounded value fell below the lower limit of the category, the value was coded at the lower limit—for example, buildings in the range of 5,001 to 12,000 square feet were rounded to the nearest 500 square feet (except that buildings rounding to 5,000 were coded as 5,001.)
- **Number of floors** (NFLOOR): The upper values for number of floors were replaced with two categories: 15 to 25 floors (coded as 994 on the file) and more than 25 floors (coded as 995 on the file).
- **Floor-to-ceiling height** (FLCEILHT): The upper values were replaced with a category for more than 50 feet (coded as 995 on the file).
- **Number of elevators and escalators** (NELVTR, NESLTR): The upper values were replaced with a category for more than 50 elevators (coded as 995 on the file) and more than 20 elevators (coded as 995 on the file).
- **Year of construction** (YRCON): The oldest buildings were replaced with a category for before 1945 (coded as 995). In year of construction category, categories remain for *Before 1920* and *1920 to 1945*, but the exact year of construction is not being provided for any of these years.
- **Data centers:** Data centers are placed into the *Other* building activities.

- **Special measures of occupancy** (RWSEAT, PBSEAT, EDSEAT, FDSEAT, HCBED, NRSBED, LODGRM): Seven special measures of occupancy are included in the 2012 CBECS (seating capacity for religious buildings, public assembly buildings, education buildings, and food service buildings; licensed bed capacity for inpatient health care and skilled nursing buildings; and number of guest rooms for lodging buildings). These numbers were rounded to the following: fewer than 25 units (no rounding performed); 25-49 units (rounded to nearest 5); 50-99 units (rounded to nearest 12); 120-249 units (rounded to nearest 25); 250-499 (rounded to nearest 50); 500-999 units (rounded to nearest 120); 1,000-2,499 units (rounded to nearest 250); 2,500-4,999 (rounded to nearest 500); 5,000 or more units (rounded to nearest 1,000). In addition, for public assembly buildings, those with more than 15,000 seats have been collapsed into one category (coded as 999995); for religious worship buildings, those with more than 2,000 seats have been collapsed into one category (coded as 99995); for lodging buildings, those with more than 1,000 guest rooms have been collapsed into one category (coded as 99995); and for inpatient health care and skilled nursing buildings, buildings with over 250 beds have been collapsed into one category (coded as 9995).
- **Type of government ownership** (GOVTYP, OWNTYPE): For inpatient health care buildings that are government owned, the type of government ownership (Federal, State or local) variable has been withheld.
- **Number of businesses** (NOCC): For buildings where the numeric number of businesses was between 50 and 100, the reported number was rounded to the nearest 5. For buildings where the numeric number of businesses was between 101 and 200, the reported number was rounded to the nearest 10. For buildings with more than 200 businesses, the number of businesses has been collapsed into one category (coded as 995).
- **Number of workers** (NWKER): For buildings where the numeric number of workers was between 2,500 and 4,999, the reported number was rounded to the nearest 250. For buildings where the numeric number of workers was 5,000 or more, the reported numeric number of workers was replaced with the weighted average number of workers of all responding buildings with 5,000 or more workers.
- **Medical equipment** (XRAYN, CTSCAN, MRI, LINACC): For buildings with more than 20 X-ray machines, the number of X-rays has been collapsed into one category (coded as 995). For the number of CT scan machines, number of MRI machines, and the number of linear accelerators, instead of providing the number, an indicator variable has been provided to show the presence or absence of these equipment types within a building.
- **Number of compact refrigerators** (RFGCOMPN): This value has been rounded in the same manner as described for *Special measures of occupancy* above. In addition, buildings with more than 1,000 compact refrigerators have been collapsed into one category (coded as 99995).
- **Computers and servers** (PCTERMN, PCTRMC, LAPTPN, LAPTPC, SERVERN, SERVERC): For buildings where the number of computers was 2,500 or more, the reported numeric number of computers was replaced with the weighted average number of computers (calculated separately by regions) of all responding buildings with 2,500 or more computers. In addition, the highest two number of computers categories were combined. For

buildings where the number of laptop computers was 1,000 or more, the reported numeric number of laptops was replaced with the weighted average number of laptops of all responding buildings with 1,000 or more laptops. In addition, the highest three number of laptops categories were combined. For buildings with 500 or more servers, the number of servers has been collapsed into one category (coded as 9995). In addition, the top four number of servers categories were combined.

- **Data center square footage** (DCNTRSFC): Data center square footage within buildings has been collapsed into five categories: 500 square feet or less; 501 to 1,500 square feet; 1,501 to 3,000 square feet; 3,001 to 10,000 square feet; and Over 10,000 square feet.
- **TV or video displays** (TVVIDEON): For buildings with more than 200 TVs or video displays, the number of TVs or video displays has been collapsed into one category (coded as 995).
- **Heating degree-days and cooling degree-days** (HDD, CDD): For each building, the annual HDD and CDD were randomly perturbed by using a normal distribution, with the reported degree-days randomly higher or lower than the actual data. For a few buildings in areas with extreme weather, the total amount of perturbation was increased to further disguise the building's location. As a result, each case has degree-day data that could have plausibly come from more than one geographic area.
- **Energy usage variables** (e.g. MFBTU, ELCNS, NGCNS, FKHTBTU): The total consumption and expenditures for each fuel were randomly perturbed by a small percentage so that the reported annual totals would not exactly match the actual billing records, and the building would not be identifiable by anyone with access to those records. The end use consumption variables were rescaled to add to the new totals.

## Changes since the 2003 CBECS

Since the 2003 CBECS public use file, some variables have been dropped, modified, and added. Those changes are detailed here.

**Variables dropped from or modified in the 2012 CBECS**

| | | |
|---|---|---|
| CLIMATE8 | Climate zone | CBECS has adopted new climate zone designations, climate regions created by the Building America program, sponsored by the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE). A modified version of the new regions, PUBCLIM, is provided in the public use file. |
| HEB8 | Electronic ballasts | Dropped because they are now either obsolete or have become ubiquitous. |
| MNFRM8 | Mainframe computer room | |
| SREF8 | Specular reflectors | |
| FLAT8 | Flat screen monitors | Filter question was dropped assuming most buildings have flat screen monitors. Amount of computers with flat screen monitors was retained. |
| RDOFEQ8 | Equipment turned off during off hours | Because of the range of office equipment and ways to turn them off, this single variable was determined to not be providing quality data. |
| PORVAC8 | Space vacant 3 months in a row | Without knowing how much space was vacant, this question was not very useful. It was replaced with some questions about average percent occupancy. |
| FDRM8 | Commercial food preparation area | Instead of an overall food preparation area question, the 2012 CBECS asks about specific types of areas. |
| ADJWT | Final full sample building weight | Renamed to FINALWT. |
| PAIR8 | Variance unit | The 2012 CBECS provides replicate weights for variance calculation. |
| STRATUM8 | Variance stratum | |
| RENEXT8 | Exterior replacement | This was split into roof replacement and exterior wall replacement. |
| OWNER8 | Owner | Owner and type of government owner have been combined into OWNTYPE. |
| VAV8 | VAV system | Variable air volume (VAV) controls are now listed among the types of heating or cooling ventilation equipment. |
| OTPCRM8 | Other computer area | Based on review of the *other specifies* from the 2003 CBECS, most of these reported were not determined to be separate computer areas. |
| PCRMP8 | Computer area percent | The 2012 CBECS collected the square footage for data centers and trading floors. |

**Variables added to the 2012 CBECS**

| | |
|---|---|
| RFCOOL | Cool roof materials |
| RFTILT | Roof tilt |
| BASEMNT | Number of underground floors |
| FLCEILHT | Floor to ceiling height |
| ATTIC | Attic |
| RENRFF | Roof replacement |
| RENWLL | Exterior wall replacement |
| RENELC | Electrical upgrade |
| RENSAF | Fire, safety, or security upgrade |
| RENSTR | Structural upgrade |
| DRYCL | Dry cleaning onsite |
| CUBE | Open plan office space |
| CUBEC | Percent open plan |
| CUBELOC | Location of open plan |
| COURT | Food court |
| OWNOPR | Owner responsible for operation and maintenance of energy systems |
| OWNPPR | Owner has purchasing power for energy-related equipment |
| NWNPPR | Nonowner with purchasing power for energy-related equipment |
| NWNOPR | Nonowner responsible for operation and maintenance of energy systems |
| WHOPPR | Who has purchasing power |
| OCCUPYP | Percent occupancy |
| LODOCCP | Lodging room percent occupancy |
| BLRRAD | Boiler system: Radiators |
| BLRFNCL | Boiler system: Fan coil units in rooms |
| BLRINDC | Boiler system: Induction units |
| BLRWATR | Boiler system: Water loop heat pump |
| BLRAIR | Boiler system: Central air handler |
| BLRPKG | Boiler system: Packaged unit |
| BLRDUCT | Boiler system: Duct reheat |
| DHRAD | District heat system: Radiators |
| DHFNCL | District heat system: Fan coil units in rooms |
| DHINDC | District heat system: Induction units |
| DHWATR | District heat system: Water loop heat pump |
| DHAIR | District heat system: Central air handler |
| DHPKG | District heat system: Packaged unit |
| DHDUCT | District heat system: Duct reheat |
| OTSTRP | Other heat component: Heating coil or heat strip |
| OTDUCT | Other heat component: Duct or electric reheat |
| OTPIU | Other heat component: Powered induction units |
| PKGHTTYP | Type of packaged heating |
| PKGFURN | Packaged heating component: Furnace |

| | |
|---|---|
| PKGHTP | Packaged heating component: Heat pump |
| PKGCOIL | Packaged heating component: Heating coil |
| PKGPIU | Packaged heating component: Powered induction unit |
| PKGDUCT | Packaged heating component: Duct reheat |
| HPHMINI | Heat pump heating system: Ductless mini-split |
| HPHVRF | Heat pump heating system: Variable refrigerant flow |
| HPHDUAL | Heat pump heating type: Dual source |
| HPHBKUP | Heat pump backup |
| SHRDNT | Individual heater: Infrared radiant |
| SHBBRD | Individual heater: Baseboard |
| SHPORT | Individual heater: Portable space heater |
| SHWALL | Individual heater: Wall heater |
| SHFURN | Individual heater: Individual furnace |
| SHUNIT | Individual heater: Unit heater |
| SHPTAC | Individual heater: Heating element in PTAC |
| HTVCAV | Heating ventilation: Central air handling with CAV |
| HTVVAV | Heating ventilation: Central air handling with VAV |
| HTVFLR | Heating ventilation: Underfloor air distribution |
| HTVOAS | Heating ventilation: Dedicated outside air system |
| HTVDEM | Heating ventilation: Demand controlled ventilation |
| HTVNON | Heating ventilation: None of these |
| PKGCLTYP | Type of packaged cooling |
| CHLAIRCL | Chiller type: Air-cooled |
| CHLWTRCL | Chiller type: Water cooled |
| CHLABSRP | Chiller type: Absorption |
| HTRCHLR | Heater chiller |
| CHLAIR | Chiller system: Central air handler |
| CHLFNCL | Chiller system: Fan coil units in rooms |
| CHLINDC | Chiller system: Induction units |
| CHLWATR | Chiller system: Water loop heat pump |
| CHLBEAM | Chiller system: Chilled beam |
| CHLPKG | Chiller system: Packaged unit |
| CHLDUCT | Chiller system: Duct reheat |
| DCWAIR | District CW system: Central air handler |
| DCWFNCL | District CW system: Fan coil units in rooms |
| DCWINDC | District CW system: Induction units |
| DCWWATR | District CW system: Water loop heat pump |
| DCWBEAM | District CW system: Chilled beam |
| DCWPKG | District CW system: Packaged unit |
| DCWDUCT | District CW system: Duct reheat |
| HPCMINI | Heat pump cooling system: Ductless mini-split |
| HPCVRF | Heat pump cooling system: Variable refrigerant flow |

| | |
|---|---|
| HPCDUAL | Heat pump cooling type: Dual source |
| CLVCAV | Cooling ventilation: Central air-handling unit with CAV |
| CLVVAV | Cooling ventilation: Central air-handling unit with VAV |
| CLVFLR | Cooling ventilation: Underfloor air distribution |
| CLVOAS | Cooling ventilation: Dedicated outside air system |
| CLVDEM | Cooling ventilation: Demand controlled ventilation |
| CLVNON | Cooling ventilation: None of these types |
| ECNTYPE | Type of economizer |
| BOOSTWT | Booster water heaters |
| LRGTRB | Large turbines |
| ENGINE | Reciprocating engines |
| CWOTH | District chilled water for some other use |
| ELCPLT | Electricity from central plant |
| AMIMETER | AMI smart metering |
| ENRGYPLN | Energy management plan |
| BREAKRM | Employee lounge, breakroom, or pantry |
| CONFSP | Conference or event space |
| CONFSPP | Percent conference or event space |
| XRAYN | Number of X-ray machines |
| CTSCAN | CT scan machines |
| MRI | MRI machines |
| LINACC | Linear accelerators |
| OUTSURG | Operating rooms for outpatient surgery |
| STRLZR | Sterilizers or autoclaves |
| RFGCOMP | Half-size or compact refrigerators |
| RFGICE | Commercial ice makers |
| RFGSTO | Large cold storage areas |
| RFGCOMPN | Number of compact refrigerators |
| RFGICN | Number of ice makers |
| RFGSTP | Percent cold storage |
| WHRECOV | Waste heat recovery |
| WHHT2 | Waste heat used for secondary heating |
| WHWT | Waste heat used for water heating |
| WHOT | Waste heat used for some other use |
| MLTMON | Multiple monitors |
| MLTMNC | Multiple monitor category |
| LAPTPN | Number of laptops |
| LAPTPC | Number of laptops category |
| DCNTRSFC | Data center or server farm sqft category |
| WBOARDS | Interactive whiteboards |
| TVVIDEO | TV or video displays |
| TVVIDEON | Number of TV or video displays |

| | |
|---|---|
| RGSTR | Cash registers |
| LTNR24 | Lights off during 24 hours |
| LED | Light-emitting diode (LED) bulbs |
| LEDP | Percent lit by LED |
| SCHED | Light scheduling |
| DIM | Multi-level lighting or dimming |
| DAYHARV | Daylight harvesting |
| TRIM | High-end trimming or light-level tuning |
| PLGCTRL | Plug load control |
| DRLGHT | Demand responsive lighting |
| LTEXPC | Percent of exterior lighted |
| PKLT | Lighted parking area |

## References

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# Appendix

## Detailed Tables created with the public use data: B1, B2, B3, C1, C4, C15, C25, and E1

Results tabulated from the public use microdata file will not exactly match the published CBECS Detailed Tables, which use unmasked data. For public data users who wish to verify their tabulations, a few selected tables are available that use the masked, public use data. The tables of estimates start on the next page and are followed by the RSE tables. There is no RSE table for Table E1 because the end use estimates are modeled and therefore do not have RSEs. These tables are also available in Excel format on the CBECS Public Use Microdata File web page (http://www.eia.gov/consumption/commercial/data/2012/index.cfm?view=microdata).

Release date: June 2015
Revised date: May 2016

## Table B1. Summary table: total and means of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

| | Number of buildings (thousand) | Total floorspace (million square feet) | Total Workers (thousand) | Mean square feet per building (thousand) | Mean square feet per worker | Mean operating hours per week |
|---|---|---|---|---|---|---|
| **All buildings** | 5,557 | 88,175 | 88,187 | 15.9 | 1,000 | 62 |
| **Building floorspace (square feet)** | | | | | | |
| 1,001 to 5,000 | 2,777 | 8,042 | 10,232 | 2.9 | 786 | 56 |
| 5,001 to 10,000 | 1,229 | 8,902 | 9,225 | 7.2 | 965 | 62 |
| 10,001 to 25,000 | 884 | 15,207 | 14,189 | 17.2 | 1,072 | 65 |
| 25,001 to 50,000 | 332 | 11,915 | 11,327 | 35.9 | 1,052 | 72 |
| 50,001 to 100,000 | 199 | 13,914 | 12,345 | 69.9 | 1,127 | 80 |
| 100,001 to 200,000 | 90 | 12,425 | 11,310 | 138.0 | 1,099 | 89 |
| 200,001 to 500,000 | 38 | 10,718 | 10,356 | 284.1 | 1,035 | 99 |
| Over 500,000 | 8 | 7,053 | 9,202 | 882.4 | 766 | 117 |
| **Principal building activity** | | | | | | |
| Education | 389 | 12,407 | 10,885 | 31.9 | 1,140 | 53 |
| Food sales | 177 | 1,252 | 1,172 | 7.1 | 1,067 | 121 |
| Food service | 380 | 1,927 | 3,431 | 5.1 | 562 | 82 |
| Health care | 157 | 4,133 | 7,595 | 26.4 | 544 | 60 |
| Inpatient | 10 | 2,352 | 4,262 | 245.6 | 552 | 168 |
| Outpatient | 147 | 1,780 | 3,333 | 12.1 | 534 | 53 |
| Lodging | 158 | 5,722 | 3,066 | 36.2 | 1,866 | 165 |
| Mercantile | 602 | 11,391 | 9,117 | 18.9 | 1,250 | 64 |
| Retail (other than mall) | 438 | 5,437 | 4,023 | 12.4 | 1,352 | 62 |
| Enclosed and strip malls | 164 | 5,954 | 5,093 | 36.3 | 1,169 | 69 |
| Office | 1,012 | 16,115 | 33,785 | 15.9 | 477 | 55 |
| Public assembly | 352 | 5,531 | 3,103 | 15.7 | 1,783 | 56 |
| Public order and safety | 84 | 1,535 | 1,854 | 18.3 | 828 | 113 |
| Religious worship | 412 | 4,760 | 1,940 | 11.6 | 2,454 | 31 |
| Service | 619 | 4,743 | 4,031 | 7.7 | 1,177 | 56 |
| Warehouse and storage | 796 | 13,130 | 6,362 | 16.5 | 2,064 | 67 |
| Other | 125 | 2,273 | 1,611 | 18.2 | 1,411 | 61 |
| Vacant | 296 | 3,257 | 236 | 11.0 | 13,819 | 8 |
| **Year constructed** | | | | | | |
| Before 1920 | 362 | 4,086 | 3,310 | 11.3 | 1,234 | 48 |
| 1920 to 1945 | 488 | 6,153 | 6,013 | 12.6 | 1,023 | 52 |
| 1946 to 1959 | 599 | 7,352 | 6,569 | 12.3 | 1,119 | 51 |
| 1960 to 1969 | 639 | 10,458 | 9,865 | 16.4 | 1,060 | 61 |
| 1970 to 1979 | 684 | 10,873 | 12,524 | 15.9 | 868 | 61 |
| 1980 to 1989 | 915 | 15,573 | 17,469 | 17.0 | 891 | 65 |
| 1990 to 1999 | 845 | 14,101 | 13,420 | 16.7 | 1,051 | 68 |
| 2000 to 2003 | 375 | 7,229 | 7,491 | 19.3 | 965 | 66 |
| 2004 to 2007 | 347 | 6,639 | 5,997 | 19.1 | 1,107 | 69 |
| 2008 to 2012 | 303 | 5,712 | 5,529 | 18.9 | 1,033 | 76 |

## Table B1. Summary table: total and means of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

| | Number of buildings (thousand) | Total floorspace (million square feet) | Total Workers (thousand) | Mean square feet per building (thousand) | Mean square feet per worker | Mean operating hours per week |
|---|---|---|---|---|---|---|
| **All buildings** | 5,557 | 88,175 | 88,187 | 15.9 | 1,000 | 62 |
| **Census region and division** | | | | | | |
| Northeast | 805 | 16,081 | 17,752 | 20.0 | 906 | 64 |
| New England | 302 | 4,408 | 4,161 | 14.6 | 1,059 | 60 |
| Middle Atlantic | 504 | 11,673 | 13,592 | 23.2 | 859 | 67 |
| Midwest | 1,237 | 19,380 | 17,292 | 15.7 | 1,121 | 61 |
| East North Central | 735 | 12,963 | 11,951 | 17.6 | 1,085 | 62 |
| West North Central | 502 | 6,417 | 5,341 | 12.8 | 1,201 | 59 |
| South | 2,247 | 34,363 | 32,696 | 15.3 | 1,051 | 61 |
| South Atlantic | 1,091 | 17,957 | 18,131 | 16.5 | 990 | 65 |
| East South Central | 370 | 4,896 | 4,293 | 13.2 | 1,140 | 55 |
| West South Central | 786 | 11,510 | 10,272 | 14.6 | 1,120 | 59 |
| West | 1,267 | 18,351 | 20,446 | 14.5 | 898 | 61 |
| Mountain | 338 | 4,900 | 4,586 | 14.5 | 1,068 | 61 |
| Pacific | 929 | 13,451 | 15,860 | 14.5 | 848 | 61 |
| **Number of floors** | | | | | | |
| One | 3,836 | 40,641 | 35,019 | 10.6 | 1,161 | 60 |
| Two | 1,158 | 20,448 | 19,752 | 17.7 | 1,035 | 60 |
| Three | 374 | 8,264 | 7,826 | 22.1 | 1,056 | 69 |
| Four to nine | 177 | 13,514 | 16,292 | 76.5 | 830 | 84 |
| Ten or more | 13 | 5,307 | 9,298 | 421.5 | 571 | 108 |
| **Elevators and escalators (more than one may apply)** | | | | | | |
| Any elevators | 405 | 32,144 | 39,984 | 79.3 | 804 | 81 |
| Number of elevators | | | | | | |
| One | 272 | 11,257 | 11,347 | 41.4 | 992 | 75 |
| Two to five | 118 | 12,845 | 15,489 | 109.3 | 829 | 90 |
| Six or more | 16 | 8,042 | 13,148 | 500.4 | 612 | 114 |
| Any escalators | 10 | 3,482 | 4,812 | 359.7 | 724 | 97 |
| **Number of workers (main shift)** | | | | | | |
| Fewer than 5 | 2,892 | 18,113 | 5,064 | 6.3 | 3,577 | 55 |
| 5 to 9 | 1,085 | 9,144 | 7,017 | 8.4 | 1,303 | 63 |
| 10 to 19 | 731 | 9,833 | 9,472 | 13.4 | 1,038 | 69 |
| 20 to 49 | 513 | 14,884 | 14,881 | 29.0 | 1,000 | 72 |
| 50 to 99 | 206 | 13,507 | 13,424 | 65.7 | 1,006 | 77 |
| 100 to 249 | 93 | 10,943 | 13,368 | 117.1 | 819 | 87 |
| 250 or more | 37 | 11,750 | 24,962 | 316.6 | 471 | 98 |
| **Weekly operating hours** | | | | | | |
| Fewer than 40 | 1,149 | 8,322 | 3,291 | 7.2 | 2,529 | 12 |
| 40 to 48 | 1,346 | 15,970 | 17,559 | 11.9 | 910 | 42 |
| 49 to 60 | 1,244 | 20,977 | 24,855 | 16.9 | 844 | 54 |
| 61 to 84 | 764 | 16,314 | 16,679 | 21.3 | 978 | 74 |
| 85 to 167 | 479 | 9,434 | 8,087 | 19.7 | 1,167 | 105 |
| Open continuously | 575 | 17,157 | 17,718 | 29.8 | 968 | 168 |

## Table B1. Summary table: total and means of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

| | Number of buildings (thousand) | Total floorspace (million square feet) | Total Workers (thousand) | Mean square feet per building (thousand) | Mean square feet per worker | Mean operating hours per week |
|---|---|---|---|---|---|---|
| **All buildings** | 5,557 | 88,175 | 88,187 | 15.9 | 1,000 | 62 |
| **Party responsible for operation and maintenance of energy systems** | | | | | | |
| Building owner | 4,715 | 74,754 | 74,455 | 15.9 | 1,004 | 61 |
| Business owner or tenant | 724 | 11,346 | 11,127 | 15.7 | 1,020 | 66 |
| Property management | 54 | 1,244 | 1,736 | 22.9 | 716 | 66 |
| Other | 64 | 831 | 870 | 12.9 | 955 | 58 |
| **Provider of direct input on energy-related equipment purchases** | | | | | | |
| Building owner | 4,876 | 77,338 | 76,795 | 15.9 | 1,007 | 61 |
| Business owner or tenant | 540 | 8,304 | 8,616 | 15.4 | 964 | 68 |
| Property management | 35 | 889 | 954 | 25.8 | 932 | 74 |
| Other | 106 | 1,643 | 1,822 | 15.5 | 902 | 56 |
| **Number of establishments** | | | | | | |
| One | 4,205 | 55,725 | 52,122 | 13.3 | 1,069 | 64 |
| 2 to 5 | 862 | 18,066 | 18,902 | 20.9 | 956 | 65 |
| 6 to 10 | 147 | 4,380 | 5,897 | 29.8 | 743 | 77 |
| 11 to 20 | 68 | 3,710 | 5,258 | 54.9 | 705 | 70 |
| More than 20 | 27 | 3,899 | 6,008 | 143.8 | 649 | 84 |
| Currently unoccupied | 248 | 2,395 | 0 | 9.7 | | 0 |
| **Predominant exterior wall material** | | | | | | |
| Brick, stone, or stucco | 2,312 | 41,466 | 41,645 | 17.9 | 996 | 62 |
| Concrete (block or poured) | 1,121 | 20,622 | 20,223 | 18.4 | 1,020 | 62 |
| Concrete panels | 210 | 8,706 | 9,486 | 41.5 | 918 | 72 |
| Siding or shingles | 905 | 5,916 | 6,013 | 6.5 | 984 | 58 |
| Metal panels | 933 | 8,670 | 5,805 | 9.3 | 1,494 | 61 |
| Window glass | 17 | 1,344 | 2,631 | 78.8 | 511 | 77 |
| Other | 37 | 857 | 844 | 23.0 | 1,016 | 68 |
| No one major type | 21 | 595 | Q | 27.8 | Q | 68 |
| **Predominant roof material** | | | | | | |
| Metal surfacing | 1,672 | 16,296 | 12,024 | 9.7 | 1,355 | 62 |
| Synthetic or rubber | 911 | 26,135 | 27,560 | 28.7 | 948 | 68 |
| Built-up | 836 | 21,858 | 24,066 | 26.1 | 908 | 62 |
| Slate or tile shingles | 406 | 4,460 | 4,262 | 11.0 | 1,046 | 61 |
| Wooden materials (including shingles) | 157 | 1,140 | 999 | 7.3 | 1,141 | 63 |
| Asphalt, fiberglass, or other shingles | 1,483 | 15,115 | 16,289 | 10.2 | 928 | 58 |
| Concrete | 51 | 1,650 | 2,086 | 32.3 | 791 | 66 |
| Other | 24 | 681 | 567 | 28.7 | 1,200 | 66 |
| No one major type | 18 | 841 | 333 | 46.6 | 2,523 | 54 |

## Table B1. Summary table: total and means of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

| | Number of buildings (thousand) | Total floorspace (million square feet) | Total Workers (thousand) | Mean square feet per building (thousand) | Mean square feet per worker | Mean operating hours per week |
|---|---|---|---|---|---|---|
| **All buildings** | 5,557 | 88,175 | 88,187 | 15.9 | 1,000 | 62 |
| **Roof characteristics** | | | | | | |
| Roof tilt | | | | | | |
| Flat | 1,960 | 49,967 | 57,140 | 25.5 | 874 | 68 |
| Shallow pitch | 2,148 | 24,305 | 19,528 | 11.3 | 1,245 | 60 |
| Steeper pitch | 1,449 | 13,903 | 11,519 | 9.6 | 1,207 | 55 |
| Cool roof | 740 | 19,570 | 21,650 | 26.4 | 904 | 66 |
| **Renovations in buildings constructed before 2008 (more than one may apply)** | | | | | | |
| Any type of renovation | 2,094 | 42,624 | 46,433 | 20.4 | 918 | 63 |
| Addition or annex | 444 | 12,932 | 12,478 | 29.1 | 1,036 | 68 |
| Reduction in floorspace | 71 | 1,886 | 2,567 | 26.4 | 735 | 69 |
| Roof replacement | 987 | 21,064 | 22,854 | 21.3 | 922 | 62 |
| Exterior wall replacement | 194 | 4,212 | 4,532 | 21.7 | 929 | 66 |
| Interior wall reconfiguration | 889 | 21,426 | 27,682 | 24.1 | 774 | 63 |
| Window replacement | 560 | 12,220 | 14,125 | 21.8 | 865 | 65 |
| HVAC equipment upgrade | 1,101 | 26,859 | 30,172 | 24.4 | 890 | 63 |
| Lighting upgrade | 982 | 25,614 | 28,286 | 26.1 | 906 | 66 |
| Electrical upgrade | 747 | 16,223 | 17,758 | 21.7 | 914 | 63 |
| Plumbing system upgrade | 644 | 13,927 | 16,095 | 21.6 | 865 | 67 |
| Insulation upgrade | 382 | 7,500 | 8,365 | 19.6 | 897 | 62 |
| Fire, safety, or security upgrade | 616 | 17,330 | 20,081 | 28.1 | 863 | 68 |
| Structural upgrade | 152 | 3,821 | 3,759 | 25.2 | 1,016 | 64 |
| Other | 39 | 872 | 1,015 | 22.3 | 859 | 68 |
| No renovations | 3,160 | 39,839 | 36,225 | 12.6 | 1,100 | 59 |
| Buildings constructed 2008 or later | 303 | 5,712 | 5,529 | 18.9 | 1,033 | 76 |
| **Energy sources (more than one may apply)** | | | | | | |
| Electricity | 5,234 | 85,949 | 88,120 | 16.4 | 975 | 63 |
| Natural gas | 2,933 | 59,570 | 62,345 | 20.3 | 955 | 65 |
| Fuel oil | 467 | 20,488 | 25,663 | 43.9 | 798 | 76 |
| District heat | 48 | 5,817 | 8,222 | 121.8 | 707 | 87 |
| District chilled water | 54 | 4,476 | 5,767 | 83.0 | 776 | 87 |
| Propane | 510 | 7,709 | 5,909 | 15.1 | 1,305 | 64 |
| Wood | 69 | 500 | 476 | 7.2 | 1,051 | 65 |
| Coal | Q | Q | Q | Q | Q | Q |
| Solar | 40 | 1,908 | 1,713 | 48.2 | 1,114 | 84 |
| Other | 61 | 1,387 | 1,526 | 22.7 | 909 | 64 |

## Table B1. Summary table: total and means of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

| | Number of buildings (thousand) | Total floorspace (million square feet) | Total Workers (thousand) | Mean square feet per building (thousand) | Mean square feet per worker | Mean operating hours per week |
|---|---|---|---|---|---|---|
| **All buildings** | 5,557 | 88,175 | 88,187 | 15.9 | 1,000 | 62 |
| **Space-heating energy sources (more than one may apply)** | | | | | | |
| Electricity | 2,858 | 49,654 | 53,892 | 17.4 | 921 | 64 |
| Natural gas | 2,612 | 50,452 | 51,727 | 19.3 | 975 | 62 |
| Fuel oil | 270 | 4,360 | 4,160 | 16.1 | 1,048 | 60 |
| District heat | 48 | 5,776 | 8,149 | 121.1 | 709 | 87 |
| Propane | 342 | 3,066 | 2,510 | 9.0 | 1,222 | 55 |
| Wood | 63 | 393 | 212 | 6.3 | 1,853 | 63 |
| Coal | Q | Q | Q | Q | Q | Q |
| Solar | Q | Q | Q | Q | Q | Q |
| Other | 32 | 508 | 463 | 15.8 | 1,099 | 56 |
| **Primary space-heating energy source** | | | | | | |
| Electricity | 1,819 | 26,541 | 28,973 | 14.6 | 916 | 66 |
| Natural gas | 2,322 | 43,895 | 44,630 | 18.9 | 984 | 61 |
| Fuel oil | 205 | 2,545 | 2,000 | 12.4 | 1,272 | 59 |
| District heat | 47 | 5,644 | 8,041 | 119.6 | 702 | 87 |
| Propane | 261 | 1,948 | 1,471 | 7.5 | 1,324 | 52 |
| Wood | 38 | 177 | 101 | 4.6 | 1,757 | 55 |
| Coal | Q | Q | Q | Q | Q | Q |
| Other | 25 | 341 | Q | 13.5 | 959 | 54 |
| **Cooling energy sources (more than one may apply)** | | | | | | |
| Electricity | 4,413 | 77,178 | 82,300 | 17.5 | 938 | 64 |
| Natural gas | 12 | 725 | 1,041 | 60.9 | 696 | 67 |
| District chilled water | 54 | 4,476 | 5,767 | 83.0 | 776 | 87 |
| **Water-heating energy sources (more than one may apply)** | | | | | | |
| Electricity | 2,658 | 43,502 | 46,827 | 16.4 | 929 | 61 |
| Natural gas | 1,758 | 39,955 | 41,898 | 22.7 | 954 | 70 |
| Fuel oil | 77 | 1,918 | 1,623 | 24.8 | 1,182 | 80 |
| District heat | 25 | 4,424 | 6,363 | 174.7 | 695 | 101 |
| Propane | 142 | 1,580 | 1,258 | 11.2 | 1,256 | 75 |
| **Cooking energy sources (more than one may apply)** | | | | | | |
| Electricity | 1,010 | 25,296 | 27,330 | 25.0 | 926 | 72 |
| Natural gas | 740 | 25,050 | 25,879 | 33.9 | 968 | 81 |
| Propane | 144 | 2,006 | 1,971 | 13.9 | 1,018 | 85 |
| **Energy end uses (more than one may apply)** | | | | | | |
| Buildings with space heating | 4,722 | 81,171 | 85,625 | 17.2 | 948 | 63 |
| Buildings with cooling | 4,461 | 80,369 | 85,781 | 18.0 | 937 | 64 |
| Buildings with water heating | 4,423 | 80,097 | 85,454 | 18.1 | 937 | 65 |
| Buildings with cooking | 1,589 | 39,014 | 41,241 | 24.6 | 946 | 74 |
| Buildings with manufacturing | 259 | 5,214 | 5,043 | 20.2 | 1,034 | 57 |
| Buildings with electricity generation | 410 | 25,959 | 30,971 | 63.3 | 838 | 92 |

## Table B1. Summary table: total and means of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

| | Number of buildings (thousand) | Total floorspace (million square feet) | Total Workers (thousand) | Mean square feet per building (thousand) | Mean square feet per worker | Mean operating hours per week |
|---|---|---|---|---|---|---|
| **All buildings** | 5,557 | 88,175 | 88,187 | 15.9 | 1,000 | 62 |
| **Percent of floorspace heated** | | | | | | |
| Not heated | 835 | 7,004 | 2,562 | 8.4 | 2,734 | 56 |
| 1 to 50 | 697 | 10,152 | 6,413 | 14.6 | 1,583 | 54 |
| 51 to 99 | 727 | 14,678 | 15,548 | 20.2 | 944 | 67 |
| 100 | 3,298 | 56,342 | 63,664 | 17.1 | 885 | 64 |
| **Percent of floorspace cooled** | | | | | | |
| Not cooled | 1,096 | 7,806 | 2,407 | 7.1 | 3,243 | 51 |
| 1 to 50 | 1,173 | 19,384 | 12,646 | 16.5 | 1,533 | 58 |
| 51 to 99 | 897 | 22,861 | 25,331 | 25.5 | 902 | 70 |
| 100 | 2,391 | 38,125 | 47,804 | 15.9 | 798 | 65 |
| **Percent lit when open** | | | | | | |
| Zero | 70 | 322 | 58 | 4.6 | 5,512 | 113 |
| 1 to 50 | 1,099 | 12,923 | 6,713 | 11.8 | 1,925 | 64 |
| 51 to 99 | 1,666 | 35,167 | 36,389 | 21.1 | 966 | 64 |
| 100 | 2,222 | 36,159 | 44,893 | 16.3 | 805 | 65 |
| Building never open/electricity not used | 501 | 3,605 | 133 | 7.2 | 27,014 | 25 |
| **Percent lit during off hours** | | | | | | |
| Zero | 2,489 | 25,373 | 23,161 | 10.2 | 1,096 | 48 |
| 1 to 50 | 2,441 | 51,325 | 54,612 | 21.0 | 940 | 69 |
| 51 to 100 | 202 | 6,798 | 7,768 | 33.7 | 875 | 125 |
| Building always open with no "off hours" | 102 | 2,453 | 2,579 | 24.0 | 951 | 168 |
| Electricity not used | 323 | 2,226 | 67 | 6.9 | Q | 39 |
| **Heating equipment (more than one may apply)** | | | | | | |
| Heat pumps | 628 | 11,906 | 13,309 | 19.0 | 895 | 63 |
| Furnaces | 755 | 9,096 | 8,562 | 12.0 | 1,062 | 58 |
| Individual space heaters | 1,247 | 20,989 | 19,388 | 16.8 | 1,083 | 60 |
| District heat | 48 | 5,776 | 8,149 | 121.1 | 709 | 87 |
| Boilers | 544 | 22,817 | 25,159 | 41.9 | 907 | 70 |
| Packaged heating units | 2,802 | 49,621 | 51,091 | 17.7 | 971 | 64 |
| Other | 62 | 1,573 | 1,202 | 25.5 | 1,308 | 86 |
| **Cooling equipment (more than one may apply)** | | | | | | |
| Residential-type central air conditioners | 1,546 | 15,289 | 15,104 | 9.9 | 1,012 | 58 |
| Heat pumps | 692 | 12,617 | 14,272 | 18.2 | 884 | 63 |
| Individual air conditioners | 709 | 12,468 | 12,347 | 17.6 | 1,010 | 66 |
| District chilled water | 54 | 4,476 | 5,767 | 83.0 | 776 | 87 |
| Central chillers | 163 | 17,009 | 21,983 | 104.4 | 774 | 84 |
| Packaged air conditioning units | 1,909 | 45,717 | 46,978 | 23.9 | 973 | 70 |
| Swamp coolers | 109 | 1,923 | 1,752 | 17.6 | 1,097 | 66 |
| Other | Q | 331 | 474 | Q | 699 | 56 |

## Table B1. Summary table: total and means of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

| | Number of buildings (thousand) | Total floorspace (million square feet) | Total Workers (thousand) | Mean square feet per building (thousand) | Mean square feet per worker | Mean operating hours per week |
|---|---|---|---|---|---|---|
| **All buildings** | 5,557 | 88,175 | 88,187 | 15.9 | 1,000 | 62 |
| **Main equipment replaced since 1990 (more than one may apply)** | | | | | | |
| Heating | 1,874 | 27,986 | 28,658 | 14.9 | 977 | 62 |
| Cooling | 1,971 | 31,297 | 33,374 | 15.9 | 938 | 63 |
| **Water-heating equipment** | | | | | | |
| Centralized system | 3,348 | 48,519 | 50,191 | 14.5 | 967 | 65 |
| Distributed system | 690 | 12,847 | 14,223 | 18.6 | 903 | 60 |
| Combination of centralized and distributed system | 385 | 18,731 | 21,039 | 48.7 | 890 | 75 |
| **Lighting equipment types (more than one may apply)** | | | | | | |
| Incandescent | 1,826 | 38,551 | 41,620 | 21.1 | 926 | 63 |
| Standard fluorescent | 4,649 | 80,881 | 85,654 | 17.4 | 944 | 64 |
| Compact fluorescent | 2,302 | 54,402 | 59,934 | 23.6 | 908 | 71 |
| High-intensity discharge (HID) | 525 | 23,520 | 23,790 | 44.8 | 989 | 72 |
| Halogen | 905 | 28,175 | 30,493 | 31.1 | 924 | 69 |
| LED | 473 | 21,987 | 25,904 | 46.5 | 849 | 83 |
| Other | 10 | 426 | 564 | 43.1 | 754 | 82 |
| **Refrigeration equipment (more than one may apply)** | | | | | | |
| Any refrigeration | 3,984 | 74,722 | 78,944 | 18.8 | 947 | 65 |
| Walk-in units | 811 | 28,538 | 31,138 | 35.2 | 917 | 93 |
| Cases or cabinets | 915 | 28,676 | 31,535 | 31.3 | 909 | 86 |
| Large cold storage areas | 78 | 4,125 | 3,691 | 52.8 | 1,117 | 89 |
| Commercial ice makers | 846 | 32,680 | 36,521 | 38.6 | 895 | 90 |
| Residential-type or compact units | 3,388 | 63,443 | 67,690 | 18.7 | 937 | 61 |
| Vending machines | 960 | 44,283 | 49,689 | 46.1 | 891 | 80 |
| No refrigeration | 1,573 | 13,453 | 9,244 | 8.6 | 1,455 | 52 |
| **Office equipment (more than one may apply)** | | | | | | |
| Desktop computers | 3,977 | 78,139 | 84,343 | 19.6 | 926 | 66 |
| With flat screen monitors | 3,847 | 77,236 | 83,879 | 20.1 | 921 | 66 |
| With multiple monitors | 911 | 31,026 | 43,405 | 34.1 | 715 | 67 |
| Laptop computers | 2,730 | 64,033 | 73,342 | 23.5 | 873 | 66 |
| Dedicated servers | 1,748 | 53,544 | 63,436 | 30.6 | 844 | 69 |
| Laser printers | 2,339 | 54,839 | 63,501 | 23.4 | 864 | 66 |
| Inkjet printers | 2,187 | 36,889 | 37,773 | 16.9 | 977 | 65 |
| FAX machines | 3,185 | 67,451 | 73,798 | 21.2 | 914 | 66 |
| Photocopiers | 2,163 | 60,076 | 68,515 | 27.8 | 877 | 64 |

## Table B1. Summary table: total and means of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

| | Number of buildings (thousand) | Total floorspace (million square feet) | Total Workers (thousand) | Mean square feet per building (thousand) | Mean square feet per worker | Mean operating hours per week |
|---|---|---|---|---|---|---|
| **All buildings** | 5,557 | 88,175 | 88,187 | 15.9 | 1,000 | 62 |
| **Number of desktop computers** | | | | | | |
| None | 1,581 | 10,036 | 3,844 | 6.3 | 2,611 | 51 |
| 1 to 4 | 2,039 | 16,304 | 11,304 | 8.0 | 1,442 | 65 |
| 5 to 9 | 821 | 9,425 | 9,594 | 11.5 | 982 | 63 |
| 10 to 19 | 482 | 9,493 | 8,659 | 19.7 | 1,096 | 65 |
| 20 to 49 | 355 | 13,479 | 12,782 | 38.0 | 1,055 | 71 |
| 50 to 99 | 143 | 8,318 | 9,293 | 58.0 | 895 | 73 |
| 100 to 249 | 92 | 9,705 | 12,514 | 105.4 | 776 | 69 |
| 250 or more | 44 | 11,414 | 20,197 | 256.9 | 565 | 86 |
| **Number of laptop computers** | | | | | | |
| None | 2,827 | 24,142 | 14,845 | 8.5 | 1,626 | 58 |
| 1 to 4 | 1,944 | 21,650 | 17,749 | 11.1 | 1,220 | 63 |
| 5 to 9 | 350 | 8,383 | 8,868 | 24.0 | 945 | 67 |
| 10 to 19 | 181 | 8,446 | 9,267 | 46.6 | 911 | 70 |
| 20 to 49 | 144 | 9,586 | 11,646 | 66.8 | 823 | 73 |
| 50 to 99 | 58 | 5,244 | 8,235 | 91.1 | 637 | 75 |
| 100 to 249 | 35 | 5,244 | 6,614 | 151.7 | 793 | 87 |
| 250 or more | 20 | 5,481 | 10,963 | 277.7 | 500 | 95 |
| **Number of dedicated servers** | | | | | | |
| None | 3,809 | 34,631 | 24,752 | 9.1 | 1,399 | 58 |
| 1 to 4 | 1,562 | 34,273 | 34,314 | 21.9 | 999 | 68 |
| 5 to 9 | 97 | 6,294 | 7,841 | 64.9 | 803 | 74 |
| 10 to 19 | 50 | 5,659 | 7,569 | 112.6 | 748 | 82 |
| 20 to 49 | 25 | 3,781 | 6,712 | 148.3 | 563 | 82 |
| 50 or more | 13 | 3,536 | 6,999 | 269.3 | 505 | 100 |
| **Number of photocopiers** | | | | | | |
| None | 3,394 | 28,099 | 19,673 | 8.3 | 1,428 | 60 |
| One | 1,325 | 17,814 | 13,348 | 13.4 | 1,335 | 61 |
| 2 to 4 | 648 | 20,440 | 21,540 | 31.6 | 949 | 66 |
| 5 to 9 | 116 | 8,920 | 10,503 | 77.2 | 849 | 74 |
| 10 or more | 75 | 12,903 | 23,124 | 173.1 | 558 | 82 |
| **Number of TVs or video displays** | | | | | | |
| None | 2,718 | 24,984 | 17,802 | 9.2 | 1,403 | 53 |
| One | 1,145 | 10,105 | 10,015 | 8.8 | 1,009 | 58 |
| 2 to 4 | 1,035 | 16,846 | 17,695 | 16.3 | 952 | 68 |
| 5 to 9 | 314 | 8,150 | 10,104 | 25.9 | 807 | 82 |
| 10 to 19 | 154 | 8,133 | 10,344 | 52.9 | 786 | 90 |
| 20 to 49 | 106 | 8,132 | 8,926 | 76.8 | 911 | 102 |
| 50 to 99 | 48 | 4,439 | 4,387 | 92.2 | 1,012 | 129 |
| 100 or more | 37 | 7,386 | 8,911 | 197.2 | 829 | 156 |

## Table B1. Summary table: total and means of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

| | Number of buildings (thousand) | Total floorspace (million square feet) | Total Workers (thousand) | Mean square feet per building (thousand) | Mean square feet per worker | Mean operating hours per week |
|---|---|---|---|---|---|---|
| **All buildings** | 5,557 | 88,175 | 88,187 | 15.9 | 1,000 | 62 |
| **Food preparation or serving areas in non-food service buildings (more than one may apply)** | | | | | | |
| Snack bar or concession stand | 153 | 9,752 | 10,290 | 63.7 | 948 | 94 |
| Fast food or small restaurant | 173 | 9,838 | 10,917 | 56.8 | 901 | 92 |
| Cafeteria or large restaurant | 130 | 15,152 | 17,640 | 116.5 | 859 | 80 |
| Commercial kitchen/ food preparation area | 282 | 16,067 | 15,364 | 56.9 | 1,046 | 86 |
| Small kitchen area | 736 | 14,340 | 13,628 | 19.5 | 1,052 | 61 |
| **Separate computer areas (more than one may apply)** | | | | | | |
| Data center or server farm | 97 | 10,986 | 18,059 | 113.8 | 608 | 82 |
| Computer-based training room | 244 | 17,695 | 22,231 | 72.6 | 796 | 74 |
| Student or public computer center | 238 | 14,253 | 12,513 | 59.8 | 1,139 | 70 |
| **HVAC conservation features (more than one may apply)** | | | | | | |
| Economizer cycle | 601 | 30,636 | 35,408 | 51.0 | 865 | 74 |
| Regular HVAC maintenance | 3,178 | 70,219 | 77,874 | 22.1 | 902 | 68 |
| Building automation system (BAS)[2] | 781 | 37,513 | 42,363 | 48.1 | 886 | 73 |
| **Window and interior lighting features (more than one may apply)** | | | | | | |
| Multipaned windows | 3,012 | 61,120 | 62,249 | 20.3 | 982 | 63 |
| Tinted window glass | 1,875 | 45,313 | 50,837 | 24.2 | 891 | 65 |
| Reflective window glass | 549 | 15,810 | 18,972 | 28.8 | 833 | 66 |
| External overhangs or awnings | 1,867 | 32,430 | 33,762 | 17.4 | 961 | 66 |
| Skylights or atriums | 591 | 22,306 | 21,945 | 37.7 | 1,016 | 65 |
| Light scheduling | 918 | 30,516 | 34,986 | 33.3 | 872 | 75 |
| Occupancy sensors | 813 | 35,876 | 40,953 | 44.1 | 876 | 75 |
| Multi-level lighting or dimming | 349 | 14,522 | 16,133 | 41.6 | 900 | 76 |
| Daylight harvesting | 125 | 6,090 | 7,722 | 48.6 | 789 | 70 |
| Demand responsive lighting | 176 | 4,866 | 4,895 | 27.6 | 994 | 65 |
| Building automation system (BAS) for lighting[1] | 208 | 12,275 | 13,292 | 58.9 | 923 | 78 |

## Table B1. Summary table: total and means of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

| | Number of buildings (thousand) | Total floorspace (million square feet) | Total Workers (thousand) | Mean square feet per building (thousand) | Mean square feet per worker | Mean operating hours per week |
|---|---|---|---|---|---|---|
| **All buildings** | 5,557 | 88,175 | 88,187 | 15.9 | 1,000 | 62 |
| **Equipment usage reduced when building not in full use (more than one may apply)** | | | | | | |
| Heating | 3,699 | 64,126 | 68,464 | 17.3 | 937 | 58 |
| Cooling | 3,517 | 63,260 | 68,317 | 18.0 | 926 | 59 |
| Lighting | 4,757 | 79,657 | 83,816 | 16.7 | 950 | 61 |

[1]In earlier CBECS publications, BAS was referred to as *Energy Management and Control System (EMCS).*

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 20 buildings were sampled.

N = No cases in reporting sample.

Notes: ● Because of rounding, data may not sum to totals. ● See the *Guide to the 2012 CBECS Detailed Tables* or *CBECS Terminology* for definitions of terms used in these tables and/or comparison of differences with prior CBECS tables. Both references can be accessed from http://www.eia.gov/consumption/commercial/data/2012/

Source: U.S. Energy Information Administration, Office of Energy Consumption and Efficiency Statistics, Form EIA-871A of the 2012 Commercial Buildings Energy Consumption Survey.

## Table B2. Summary table: total and medians of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

| | Number of buildings (thousand) | Total floorspace (million square feet) | Total workers (thousand) | Median square feet per building (thousand) | Median square feet per worker | Median operating hours per week | Median age of buildings (years) |
|---|---|---|---|---|---|---|---|
| **All buildings** | 5,557 | 88,175 | 88,187 | 5.0 | 1,033 | 50 | 32 |
| **Building floorspace (square feet)** | | | | | | | |
| 1,001 to 5,000 | 2,777 | 8,042 | 10,232 | 2.8 | 825 | 45 | 37 |
| 5,001 to 10,000 | 1,229 | 8,902 | 9,225 | 7.0 | 1,167 | 50 | 31 |
| 10,001 to 25,000 | 884 | 15,207 | 14,189 | 15.0 | 1,500 | 55 | 32 |
| 25,001 to 50,000 | 332 | 11,915 | 11,327 | 35.0 | 1,450 | 60 | 29 |
| 50,001 to 100,000 | 199 | 13,914 | 12,345 | 67.0 | 1,442 | 60 | 26 |
| 100,001 to 200,000 | 90 | 12,425 | 11,310 | 132.0 | 1,758 | 70 | 25 |
| 200,001 to 500,000 | 38 | 10,718 | 10,356 | 260.0 | 1,741 | 76 | 27 |
| Over 500,000 | 8 | 7,053 | 9,202 | 700.0 | 1,231 | 126 | 29 |
| **Principal building activity** | | | | | | | |
| Education | 389 | 12,407 | 10,885 | 10.3 | 1,033 | 50 | 30 |
| Food sales | 177 | 1,252 | 1,172 | 3.2 | 1,033 | 114 | 30 |
| Food service | 380 | 1,927 | 3,431 | 3.6 | 567 | 80 | 33 |
| Health care | 157 | 4,133 | 7,595 | 5.0 | 556 | 48 | 31 |
| Inpatient | 10 | 2,352 | 4,262 | 102.0 | 583 | 168 | 36 |
| Outpatient | 147 | 1,780 | 3,333 | 5.0 | 556 | 48 | 31 |
| Lodging | 158 | 5,722 | 3,066 | 14.8 | 2,531 | 168 | 37 |
| Mercantile | 602 | 11,391 | 9,117 | 6.6 | 1,200 | 60 | 33 |
| Retail (other than mall) | 438 | 5,437 | 4,023 | 5.0 | 1,450 | 56 | 37 |
| Enclosed and strip malls | 164 | 5,954 | 5,093 | 13.5 | 920 | 70 | 28 |
| Office | 1,012 | 16,115 | 33,785 | 5.0 | 600 | 47 | 33 |
| Public assembly | 352 | 5,531 | 3,103 | 5.4 | 1,800 | 50 | 41 |
| Public order and safety | 84 | 1,535 | 1,854 | 6.1 | 750 | 168 | 23 |
| Religious worship | 412 | 4,760 | 1,940 | 6.0 | 2,700 | 20 | 41 |
| Service | 619 | 4,743 | 4,031 | 4.0 | 1,200 | 50 | 35 |
| Warehouse and storage | 796 | 13,130 | 6,362 | 5.5 | 1,500 | 50 | 26 |
| Other | 125 | 2,273 | 1,611 | 6.0 | 1,500 | 50 | 28 |
| Vacant | 296 | 3,257 | 236 | 4.3 | 4,800 | 0 | 50 |
| **Year constructed** | | | | | | | |
| Before 1920 | 362 | 4,086 | 3,310 | 4.8 | 1,200 | 42 | 1017 |
| 1920 to 1945 | 488 | 6,153 | 6,013 | 4.0 | 1,200 | 45 | 1017 |
| 1946 to 1959 | 599 | 7,352 | 6,569 | 4.0 | 1,100 | 45 | 59 |
| 1960 to 1969 | 639 | 10,458 | 9,865 | 6.0 | 1,067 | 50 | 48 |
| 1970 to 1979 | 684 | 10,873 | 12,524 | 5.3 | 947 | 50 | 38 |
| 1980 to 1989 | 915 | 15,573 | 17,469 | 5.8 | 1,000 | 50 | 27 |
| 1990 to 1999 | 845 | 14,101 | 13,420 | 5.0 | 1,000 | 53 | 17 |
| 2000 to 2003 | 375 | 7,229 | 7,491 | 5.5 | 1,000 | 55 | 11 |
| 2004 to 2007 | 347 | 6,639 | 5,997 | 6.0 | 1,100 | 50 | 6 |
| 2008 to 2012 | 303 | 5,712 | 5,529 | 6.8 | 1,100 | 60 | 3 |

## Table B2. Summary table: total and medians of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

| | Number of buildings (thousand) | Total floorspace (million square feet) | Total workers (thousand) | Median square feet per building (thousand) | Median square feet per worker | Median operating hours per week | Median age of buildings (years) |
|---|---|---|---|---|---|---|---|
| **All buildings** | 5,557 | 88,175 | 88,187 | 5.0 | 1,033 | 50 | 32 |
| **Census region and division** | | | | | | | |
| Northeast | 805 | 16,081 | 17,752 | 6.0 | 1,100 | 54 | 46 |
| New England | 302 | 4,408 | 4,161 | 5.6 | 1,000 | 50 | 37 |
| Middle Atlantic | 504 | 11,673 | 13,592 | 6.0 | 1,143 | 55 | 48 |
| Midwest | 1,237 | 19,380 | 17,292 | 5.0 | 1,289 | 50 | 37 |
| East North Central | 735 | 12,963 | 11,951 | 5.0 | 1,200 | 50 | 37 |
| West North Central | 502 | 6,417 | 5,341 | 4.8 | 1,450 | 48 | 37 |
| South | 2,247 | 34,363 | 32,696 | 5.0 | 1,000 | 50 | 29 |
| South Atlantic | 1,091 | 17,957 | 18,131 | 5.3 | 987 | 54 | 28 |
| East South Central | 370 | 4,896 | 4,293 | 5.0 | 1,071 | 45 | 33 |
| West South Central | 786 | 11,510 | 10,272 | 5.0 | 1,000 | 48 | 29 |
| West | 1,267 | 18,351 | 20,446 | 5.3 | 963 | 50 | 32 |
| Mountain | 338 | 4,900 | 4,586 | 5.0 | 978 | 50 | 29 |
| Pacific | 929 | 13,451 | 15,860 | 5.5 | 963 | 50 | 34 |
| **Number of floors** | | | | | | | |
| One | 3,836 | 40,641 | 35,019 | 4.5 | 1,000 | 50 | 29 |
| Two | 1,158 | 20,448 | 19,752 | 7.0 | 1,100 | 50 | 42 |
| Three | 374 | 8,264 | 7,826 | 7.8 | 1,200 | 55 | 1017 |
| Four to nine | 177 | 13,514 | 16,292 | 40.0 | 1,040 | 60 | 60 |
| Ten or more | 13 | 5,307 | 9,298 | 290.0 | 653 | 72 | 37 |
| **Elevators and escalators (more than one may apply)** | | | | | | | |
| Any elevators | 405 | 32,144 | 39,984 | 40.0 | 1,036 | 60 | 31 |
| Number of elevators | | | | | | | |
| One | 272 | 11,257 | 11,347 | 25.0 | 1,200 | 60 | 37 |
| Two to five | 118 | 12,845 | 15,489 | 80.0 | 933 | 67 | 27 |
| Six or more | 16 | 8,042 | 13,148 | 390.0 | 693 | 122 | 30 |
| Any escalators | 10 | 3,482 | 4,812 | 100.0 | 750 | 100 | 62 |
| **Number of workers (main shift)** | | | | | | | |
| Fewer than 5 | 2,892 | 18,113 | 5,064 | 3.4 | 1,667 | 45 | 37 |
| 5 to 9 | 1,085 | 9,144 | 7,017 | 5.0 | 833 | 50 | 32 |
| 10 to 19 | 731 | 9,833 | 9,472 | 7.9 | 627 | 56 | 28 |
| 20 to 49 | 513 | 14,884 | 14,881 | 17.3 | 667 | 60 | 28 |
| 50 to 99 | 206 | 13,507 | 13,424 | 48.5 | 775 | 60 | 29 |
| 100 to 249 | 93 | 10,943 | 13,368 | 77.0 | 533 | 65 | 27 |
| 250 or more | 37 | 11,750 | 24,962 | 200.0 | 391 | 69 | 28 |
| **Weekly operating hours** | | | | | | | |
| Fewer than 40 | 1,149 | 8,322 | 3,291 | 3.6 | 1,500 | 8 | 42 |
| 40 to 48 | 1,346 | 15,970 | 17,559 | 4.8 | 900 | 40 | 34 |
| 49 to 60 | 1,244 | 20,977 | 24,855 | 6.6 | 1,000 | 55 | 31 |
| 61 to 84 | 764 | 16,314 | 16,679 | 7.0 | 964 | 72 | 32 |
| 85 to 167 | 479 | 9,434 | 8,087 | 5.0 | 967 | 104 | 27 |
| Open continuously | 575 | 17,157 | 17,718 | 7.0 | 1,250 | 168 | 26 |

## Table B2. Summary table: total and medians of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

| | Number of buildings (thousand) | Total floorspace (million square feet) | Total workers (thousand) | Median square feet per building (thousand) | Median square feet per worker | Median operating hours per week | Median age of buildings (years) |
|---|---|---|---|---|---|---|---|
| **All buildings** | 5,557 | 88,175 | 88,187 | 5.0 | 1,033 | 50 | 32 |
| **Party responsible for operation and maintenance of energy systems** | | | | | | | |
| Building owner | 4,715 | 74,754 | 74,455 | 5.0 | 1,078 | 50 | 33 |
| Business owner or tenant | 724 | 11,346 | 11,127 | 5.6 | 929 | 56 | 32 |
| Property management | 54 | 1,244 | 1,736 | 4.8 | 788 | 60 | 26 |
| Other | 64 | 831 | 870 | 5.2 | 1,050 | 48 | 26 |
| **Provider of direct input on energy-related equipment purchases** | | | | | | | |
| Building owner | 4,876 | 77,338 | 76,795 | 5.0 | 1,083 | 50 | 33 |
| Business owner or tenant | 540 | 8,304 | 8,616 | 5.5 | 855 | 59 | 33 |
| Property management | 35 | 889 | 954 | 4.5 | 450 | 60 | 30 |
| Other | 106 | 1,643 | 1,822 | 6.1 | 967 | 50 | 26 |
| **Number of establishments** | | | | | | | |
| One | 4,205 | 55,725 | 52,122 | 5.0 | 1,100 | 50 | 32 |
| 2 to 5 | 862 | 18,066 | 18,902 | 7.2 | 955 | 50 | 32 |
| 6 to 10 | 147 | 4,380 | 5,897 | 14.0 | 833 | 60 | 29 |
| 11 to 20 | 68 | 3,710 | 5,258 | 30.0 | 793 | 66 | 25 |
| More than 20 | 27 | 3,899 | 6,008 | 62.0 | 714 | 74 | 27 |
| Currently unoccupied | 248 | 2,395 | 0 | 3.2 | N | 0 | 52 |
| **Predominant exterior wall material** | | | | | | | |
| Brick, stone, or stucco | 2,312 | 41,466 | 41,645 | 5.7 | 1,000 | 50 | 40 |
| Concrete (block or poured) | 1,121 | 20,622 | 20,223 | 5.9 | 1,067 | 50 | 38 |
| Concrete panels | 210 | 8,706 | 9,486 | 12.0 | 1,050 | 60 | 26 |
| Siding or shingles | 905 | 5,916 | 6,013 | 3.6 | 933 | 48 | 34 |
| Metal panels | 933 | 8,670 | 5,805 | 5.0 | 1,440 | 50 | 21 |
| Window glass | 17 | 1,344 | 2,631 | 13.3 | 509 | 60 | 25 |
| Other | 37 | 857 | 844 | 4.9 | 1,250 | 50 | 31 |
| No one major type | 21 | 595 | Q | 11.0 | 1,083 | 58 | 25 |
| **Predominant roof material** | | | | | | | |
| Metal surfacing | 1,672 | 16,296 | 12,024 | 5.0 | 1,250 | 50 | 23 |
| Synthetic or rubber | 911 | 26,135 | 27,560 | 8.0 | 1,033 | 55 | 39 |
| Built-up | 836 | 21,858 | 24,066 | 7.2 | 1,000 | 50 | 40 |
| Slate or tile shingles | 406 | 4,460 | 4,262 | 4.4 | 1,000 | 49 | 38 |
| Wooden materials (including shingles) | 157 | 1,140 | 999 | 3.6 | 1,200 | 55 | 41 |
| Asphalt, fiberglass, or other shingles | 1,483 | 15,115 | 16,289 | 4.5 | 900 | 48 | 38 |
| Concrete | 51 | 1,650 | 2,086 | 8.8 | 818 | 55 | 33 |
| Other | 24 | 681 | 567 | 12.0 | 1,167 | 53 | 37 |
| No one major type | 18 | 841 | 333 | 12.0 | 1,950 | 49 | 38 |

## Table B2. Summary table: total and medians of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

| | Number of buildings (thousand) | Total floorspace (million square feet) | Total workers (thousand) | Median square feet per building (thousand) | Median square feet per worker | Median operating hours per week | Median age of buildings (years) |
|---|---|---|---|---|---|---|---|
| **All buildings** | 5,557 | 88,175 | 88,187 | 5.0 | 1,033 | 50 | 32 |
| **Roof characteristics** | | | | | | | |
| Roof tilt | | | | | | | |
| Flat | 1,960 | 49,967 | 57,140 | 7.5 | 986 | 55 | 37 |
| Shallow pitch | 2,148 | 24,305 | 19,528 | 4.5 | 1,100 | 50 | 31 |
| Steeper pitch | 1,449 | 13,903 | 11,519 | 4.9 | 1,160 | 45 | 32 |
| Cool roof | 740 | 19,570 | 21,650 | 6.6 | 1,000 | 55 | 29 |
| **Renovations in buildings constructed before 2008 (more than one may apply)** | | | | | | | |
| Any type of renovation | 2,094 | 42,624 | 46,433 | 5.7 | 1,000 | 50 | 44 |
| Addition or annex | 444 | 12,932 | 12,478 | 7.6 | 1,083 | 55 | 41 |
| Reduction in floorspace | 71 | 1,886 | 2,567 | 6.0 | 1,200 | 60 | 45 |
| Roof replacement | 987 | 21,064 | 22,854 | 5.8 | 1,050 | 50 | 48 |
| Exterior wall replacement | 194 | 4,212 | 4,532 | 5.0 | 1,000 | 55 | 52 |
| Interior wall reconfiguration | 889 | 21,426 | 27,682 | 6.0 | 888 | 50 | 44 |
| Window replacement | 560 | 12,220 | 14,125 | 6.0 | 1,000 | 50 | 53 |
| HVAC equipment upgrade | 1,101 | 26,859 | 30,172 | 6.5 | 1,000 | 50 | 46 |
| Lighting upgrade | 982 | 25,614 | 28,286 | 6.4 | 1,025 | 51 | 47 |
| Electrical upgrade | 747 | 16,223 | 17,758 | 5.2 | 1,000 | 50 | 52 |
| Plumbing system upgrade | 644 | 13,927 | 16,095 | 5.4 | 1,000 | 50 | 51 |
| Insulation upgrade | 382 | 7,500 | 8,365 | 5.6 | 1,000 | 50 | 50 |
| Fire, safety, or security upgrade | 616 | 17,330 | 20,081 | 6.5 | 1,000 | 55 | 48 |
| Structural upgrade | 152 | 3,821 | 3,759 | 7.0 | 908 | 51 | 47 |
| Other | 39 | 872 | 1,015 | 4.0 | 1,600 | 55 | 55 |
| No renovations | 3,160 | 39,839 | 36,225 | 5.0 | 1,050 | 50 | 29 |
| Buildings constructed 2008 or later | 303 | 5,712 | 5,529 | 6.8 | 1,100 | 60 | 3 |
| **Energy sources (more than one may apply)** | | | | | | | |
| Electricity | 5,234 | 85,949 | 88,120 | 5.2 | 1,029 | 50 | 32 |
| Natural gas | 2,933 | 59,570 | 62,345 | 6.3 | 1,000 | 50 | 37 |
| Fuel oil | 467 | 20,488 | 25,663 | 7.0 | 1,200 | 54 | 42 |
| District heat | 48 | 5,817 | 8,222 | 57.0 | 1,250 | 72 | 45 |
| District chilled water | 54 | 4,476 | 5,767 | 29.0 | 1,140 | 75 | 33 |
| Propane | 510 | 7,709 | 5,909 | 5.1 | 1,333 | 50 | 31 |
| Wood | 69 | 500 | 476 | 3.5 | 1,600 | 54 | 42 |
| Coal | Q | Q | Q | Q | Q | Q | Q |
| Solar | 40 | 1,908 | 1,713 | 13.8 | 1,267 | 60 | 30 |
| Other | 61 | 1,387 | 1,526 | 7.8 | 1,267 | 54 | 37 |

## Table B2. Summary table: total and medians of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

| | Number of buildings (thousand) | Total floorspace (million square feet) | Total workers (thousand) | Median square feet per building (thousand) | Median square feet per worker | Median operating hours per week | Median age of buildings (years) |
|---|---|---|---|---|---|---|---|
| **All buildings** | 5,557 | 88,175 | 88,187 | 5.0 | 1,033 | 50 | 32 |
| **Space-heating energy sources (more than one may apply)** | | | | | | | |
| Electricity | 2,858 | 49,654 | 53,892 | 5.3 | 1,000 | 50 | 32 |
| Natural gas | 2,612 | 50,452 | 51,727 | 6.3 | 1,015 | 50 | 38 |
| Fuel oil | 270 | 4,360 | 4,160 | 4.8 | 1,350 | 50 | 50 |
| District heat | 48 | 5,776 | 8,149 | 57.0 | 1,250 | 72 | 45 |
| Propane | 342 | 3,066 | 2,510 | 5.0 | 1,350 | 45 | 31 |
| Wood | 63 | 393 | 212 | 3.5 | 1,800 | 54 | 40 |
| Coal | Q | Q | Q | Q | Q | Q | Q |
| Solar | Q | Q | Q | Q | Q | Q | Q |
| Other | 32 | 508 | 463 | 11.0 | 1,267 | 50 | 37 |
| **Primary space-heating energy source** | | | | | | | |
| Electricity | 1,819 | 26,541 | 28,973 | 5.0 | 962 | 50 | 28 |
| Natural gas | 2,322 | 43,895 | 44,630 | 6.0 | 1,025 | 50 | 38 |
| Fuel oil | 205 | 2,545 | 2,000 | 4.5 | 1,333 | 48 | 52 |
| District heat | 47 | 5,644 | 8,041 | 57.0 | 1,227 | 72 | 45 |
| Propane | 261 | 1,948 | 1,471 | 4.8 | 1,500 | 45 | 27 |
| Wood | 38 | 177 | 101 | 3.2 | 1,600 | 54 | 40 |
| Coal | Q | Q | Q | Q | Q | Q | Q |
| Other | 25 | 341 | Q | 8.1 | 1,222 | 50 | 38 |
| **Cooling energy sources (more than one may apply)** | | | | | | | |
| Electricity | 4,413 | 77,178 | 82,300 | 5.6 | 1,000 | 50 | 32 |
| Natural gas | 12 | 725 | 1,041 | 9.9 | 1,275 | 48 | 52 |
| District chilled water | 54 | 4,476 | 5,767 | 29.0 | 1,140 | 75 | 33 |
| **Water-heating energy sources (more than one may apply)** | | | | | | | |
| Electricity | 2,658 | 43,502 | 46,827 | 5.2 | 1,000 | 50 | 31 |
| Natural gas | 1,758 | 39,955 | 41,898 | 7.0 | 1,000 | 56 | 37 |
| Fuel oil | 77 | 1,918 | 1,623 | 7.0 | 1,350 | 60 | 52 |
| District heat | 25 | 4,424 | 6,363 | 97.0 | 1,267 | 80 | 46 |
| Propane | 142 | 1,580 | 1,258 | 5.6 | 1,200 | 54 | 26 |
| **Cooking energy sources (more than one may apply)** | | | | | | | |
| Electricity | 1,010 | 25,296 | 27,330 | 6.0 | 1,071 | 60 | 33 |
| Natural gas | 740 | 25,050 | 25,879 | 8.0 | 967 | 70 | 37 |
| Propane | 144 | 2,006 | 1,971 | 4.8 | 1,100 | 75 | 28 |
| **Energy end uses (more than one may apply)** | | | | | | | |
| Buildings with space heating | 4,722 | 81,171 | 85,625 | 5.4 | 1,021 | 50 | 33 |
| Buildings with cooling | 4,461 | 80,369 | 85,781 | 5.7 | 1,000 | 50 | 32 |
| Buildings with water heating | 4,423 | 80,097 | 85,454 | 5.8 | 1,000 | 50 | 33 |
| Buildings with cooking | 1,589 | 39,014 | 41,241 | 6.2 | 1,040 | 60 | 35 |
| Buildings with manufacturing | 259 | 5,214 | 5,043 | 6.7 | 1,167 | 50 | 30 |
| Buildings with electricity generation | 410 | 25,959 | 30,971 | 17.0 | 1,029 | 66 | 27 |

## Table B2. Summary table: total and medians of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

| | Number of buildings (thousand) | Total floorspace (million square feet) | Total workers (thousand) | Median square feet per building (thousand) | Median square feet per worker | Median operating hours per week | Median age of buildings (years) |
|---|---|---|---|---|---|---|---|
| **All buildings** | 5,557 | 88,175 | 88,187 | 5.0 | 1,033 | 50 | 32 |
| **Percent of floorspace heated** | | | | | | | |
| Not heated | 835 | 7,004 | 2,562 | 3.5 | 1,281 | 45 | 30 |
| 1 to 50 | 697 | 10,152 | 6,413 | 6.0 | 1,400 | 48 | 34 |
| 51 to 99 | 727 | 14,678 | 15,548 | 6.5 | 1,150 | 55 | 37 |
| 100 | 3,298 | 56,342 | 63,664 | 5.0 | 960 | 50 | 33 |
| **Percent of floorspace cooled** | | | | | | | |
| Not cooled | 1,096 | 7,806 | 2,407 | 3.6 | 1,500 | 40 | 33 |
| 1 to 50 | 1,173 | 19,384 | 12,646 | 6.4 | 1,400 | 50 | 35 |
| 51 to 99 | 897 | 22,861 | 25,331 | 7.5 | 967 | 55 | 36 |
| 100 | 2,391 | 38,125 | 47,804 | 5.0 | 833 | 50 | 31 |
| **Percent lit when open** | | | | | | | |
| Zero | 70 | 322 | 58 | 3.5 | Q | 105 | 9 |
| 1 to 50 | 1,099 | 12,923 | 6,713 | 5.0 | 1,667 | 48 | 39 |
| 51 to 99 | 1,666 | 35,167 | 36,389 | 7.0 | 1,000 | 50 | 34 |
| 100 | 2,222 | 36,159 | 44,893 | 5.0 | 880 | 54 | 30 |
| Building never open/electricity not used | 501 | 3,605 | 133 | 3.0 | Q | 0 | 39 |
| **Percent lit during off hours** | | | | | | | |
| Zero | 2,489 | 25,373 | 23,161 | 4.8 | 1,133 | 45 | 33 |
| 1 to 50 | 2,441 | 51,325 | 54,612 | 6.5 | 1,000 | 58 | 33 |
| 51 to 100 | 202 | 6,798 | 7,768 | 6.7 | 933 | 168 | 32 |
| Building always open with no "off hours" | 102 | 2,453 | 2,579 | 5.2 | 1,000 | 168 | 20 |
| Electricity not used | 323 | 2,226 | 67 | 3.0 | Q | 0 | 33 |
| **Heating equipment (more than one may apply)** | | | | | | | |
| Heat pumps | 628 | 11,906 | 13,309 | 5.6 | 963 | 50 | 27 |
| Furnaces | 755 | 9,096 | 8,562 | 5.4 | 1,000 | 50 | 33 |
| Individual space heaters | 1,247 | 20,989 | 19,388 | 5.3 | 1,200 | 50 | 42 |
| District heat | 48 | 5,776 | 8,149 | 57.0 | 1,250 | 72 | 45 |
| Boilers | 544 | 22,817 | 25,159 | 14.0 | 1,200 | 55 | 46 |
| Packaged heating units | 2,802 | 49,621 | 51,091 | 6.0 | 1,000 | 51 | 32 |
| Other | 62 | 1,573 | 1,202 | 8.0 | 1,250 | 70 | 32 |
| **Cooling equipment (more than one may apply)** | | | | | | | |
| Residential-type central air conditioners | 1,546 | 15,289 | 15,104 | 5.0 | 1,000 | 50 | 35 |
| Heat pumps | 692 | 12,617 | 14,272 | 5.5 | 950 | 50 | 27 |
| Individual air conditioners | 709 | 12,468 | 12,347 | 5.0 | 1,200 | 50 | 47 |
| District chilled water | 54 | 4,476 | 5,767 | 29.0 | 1,140 | 75 | 33 |
| Central chillers | 163 | 17,009 | 21,983 | 51.0 | 1,270 | 60 | 32 |
| Packaged air conditioning units | 1,909 | 45,717 | 46,978 | 7.6 | 967 | 58 | 31 |
| Swamp coolers | 109 | 1,923 | 1,752 | 4.9 | 1,050 | 59 | 37 |
| Other | Q | 331 | 474 | 10.5 | 1,225 | 40 | 54 |

## Table B2. Summary table: total and medians of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

| | Number of buildings (thousand) | Total floorspace (million square feet) | Total workers (thousand) | Median square feet per building (thousand) | Median square feet per worker | Median operating hours per week | Median age of buildings (years) |
|---|---|---|---|---|---|---|---|
| **All buildings** | 5,557 | 88,175 | 88,187 | 5.0 | 1,033 | 50 | 32 |
| **Main equipment replaced since 1990 (more than one may apply)** | | | | | | | |
| Heating | 1,874 | 27,986 | 28,658 | 5.2 | 1,000 | 50 | 47 |
| Cooling | 1,971 | 31,297 | 33,374 | 5.3 | 1,000 | 50 | 47 |
| **Water-heating equipment** | | | | | | | |
| Centralized system | 3,348 | 48,519 | 50,191 | 5.2 | 1,000 | 50 | 34 |
| Distributed system | 690 | 12,847 | 14,223 | 6.0 | 1,050 | 50 | 32 |
| Combination of centralized and distributed system | 385 | 18,731 | 21,039 | 17.0 | 1,013 | 61 | 29 |
| **Lighting equipment types (more than one may apply)** | | | | | | | |
| Incandescent | 1,826 | 38,551 | 41,620 | 6.0 | 1,036 | 50 | 39 |
| Standard fluorescent | 4,649 | 80,881 | 85,654 | 5.5 | 1,000 | 50 | 32 |
| Compact fluorescent | 2,302 | 54,402 | 59,934 | 6.7 | 1,000 | 57 | 33 |
| High-intensity discharge (HID) | 525 | 23,520 | 23,790 | 14.0 | 1,250 | 60 | 30 |
| Halogen | 905 | 28,175 | 30,493 | 8.8 | 1,160 | 59 | 31 |
| LED | 473 | 21,987 | 25,904 | 14.8 | 1,000 | 70 | 29 |
| Other | 10 | 426 | 564 | 10.0 | 750 | 70 | 34 |
| **Refrigeration equipment (more than one may apply)** | | | | | | | |
| Any refrigeration | 3,984 | 74,722 | 78,944 | 5.8 | 1,000 | 52 | 33 |
| Walk-in units | 811 | 28,538 | 31,138 | 6.6 | 863 | 84 | 31 |
| Cases or cabinets | 915 | 28,676 | 31,535 | 6.6 | 967 | 76 | 31 |
| Large cold storage areas | 78 | 4,125 | 3,691 | 11.0 | 1,020 | 78 | 25 |
| Commercial ice makers | 846 | 32,680 | 36,521 | 9.3 | 932 | 78 | 28 |
| Residential-type or compact units | 3,388 | 63,443 | 67,690 | 5.9 | 1,000 | 50 | 34 |
| Vending machines | 960 | 44,283 | 49,689 | 17.5 | 1,000 | 65 | 29 |
| No refrigeration | 1,573 | 13,453 | 9,244 | 4.0 | 1,250 | 44 | 32 |
| **Office equipment (more than one may apply)** | | | | | | | |
| Desktop computers | 3,977 | 78,139 | 84,343 | 6.3 | 1,000 | 50 | 32 |
| With flat screen monitors | 3,847 | 77,236 | 83,879 | 6.4 | 966 | 50 | 32 |
| With multiple monitors | 911 | 31,026 | 43,405 | 10.0 | 750 | 55 | 29 |
| Laptop computers | 2,730 | 64,033 | 73,342 | 7.2 | 1,000 | 51 | 32 |
| Dedicated servers | 1,748 | 53,544 | 63,436 | 9.9 | 833 | 55 | 31 |
| Laser printers | 2,339 | 54,839 | 63,501 | 7.2 | 890 | 50 | 32 |
| Inkjet printers | 2,187 | 36,889 | 37,773 | 5.8 | 1,017 | 50 | 32 |
| FAX machines | 3,185 | 67,451 | 73,798 | 6.6 | 967 | 50 | 32 |
| Photocopiers | 2,163 | 60,076 | 68,515 | 9.0 | 908 | 50 | 32 |

## Table B2. Summary table: total and medians of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

| | Number of buildings (thousand) | Total floorspace (million square feet) | Total workers (thousand) | Median square feet per building (thousand) | Median square feet per worker | Median operating hours per week | Median age of buildings (years) |
|---|---|---|---|---|---|---|---|
| **All buildings** | 5,557 | 88,175 | 88,187 | 5.0 | 1,033 | 50 | 32 |
| **Number of desktop computers** | | | | | | | |
| None | 1,581 | 10,036 | 3,844 | 3.3 | 1,500 | 40 | 36 |
| 1 to 4 | 2,039 | 16,304 | 11,304 | 4.5 | 1,200 | 50 | 35 |
| 5 to 9 | 821 | 9,425 | 9,594 | 6.0 | 825 | 50 | 32 |
| 10 to 19 | 482 | 9,493 | 8,659 | 9.9 | 700 | 51 | 27 |
| 20 to 49 | 355 | 13,479 | 12,782 | 20.0 | 775 | 55 | 27 |
| 50 to 99 | 143 | 8,318 | 9,293 | 36.5 | 677 | 60 | 36 |
| 100 to 249 | 92 | 9,705 | 12,514 | 68.0 | 771 | 55 | 30 |
| 250 or more | 44 | 11,414 | 20,197 | 174.0 | 720 | 64 | 29 |
| **Number of laptop computers** | | | | | | | |
| None | 2,827 | 24,142 | 14,845 | 4.0 | 1,200 | 48 | 33 |
| 1 to 4 | 1,944 | 21,650 | 17,749 | 5.2 | 1,040 | 50 | 33 |
| 5 to 9 | 350 | 8,383 | 8,868 | 10.0 | 762 | 55 | 30 |
| 10 to 19 | 181 | 8,446 | 9,267 | 25.0 | 769 | 56 | 27 |
| 20 to 49 | 144 | 9,586 | 11,646 | 41.0 | 642 | 55 | 30 |
| 50 to 99 | 58 | 5,244 | 8,235 | 56.0 | 830 | 55 | 31 |
| 100 to 249 | 35 | 5,244 | 6,614 | 100.0 | 1,200 | 60 | 33 |
| 250 or more | 20 | 5,481 | 10,963 | 190.0 | 729 | 70 | 26 |
| **Number of dedicated servers** | | | | | | | |
| None | 3,809 | 34,631 | 24,752 | 4.3 | 1,200 | 48 | 33 |
| 1 to 4 | 1,562 | 34,273 | 34,314 | 8.3 | 867 | 55 | 32 |
| 5 to 9 | 97 | 6,294 | 7,841 | 34.0 | 600 | 55 | 27 |
| 10 to 19 | 50 | 5,659 | 7,569 | 68.0 | 750 | 60 | 27 |
| 20 to 49 | 25 | 3,781 | 6,712 | 72.0 | 500 | 60 | 26 |
| 50 or more | 13 | 3,536 | 6,999 | 156.0 | 545 | 72 | 27 |
| **Number of photocopiers** | | | | | | | |
| None | 3,394 | 28,099 | 19,673 | 4.0 | 1,200 | 50 | 33 |
| One | 1,325 | 17,814 | 13,348 | 6.0 | 1,029 | 50 | 33 |
| 2 to 4 | 648 | 20,440 | 21,540 | 14.8 | 800 | 54 | 28 |
| 5 to 9 | 116 | 8,920 | 10,503 | 44.5 | 793 | 60 | 28 |
| 10 or more | 75 | 12,903 | 23,124 | 78.0 | 510 | 60 | 30 |
| **Number of TVs or video displays** | | | | | | | |
| None | 2,718 | 24,984 | 17,802 | 4.0 | 1,125 | 45 | 33 |
| One | 1,145 | 10,105 | 10,015 | 4.6 | 1,000 | 50 | 33 |
| 2 to 4 | 1,035 | 16,846 | 17,695 | 7.2 | 976 | 57 | 30 |
| 5 to 9 | 314 | 8,150 | 10,104 | 9.6 | 900 | 70 | 31 |
| 10 to 19 | 154 | 8,133 | 10,344 | 26.5 | 933 | 70 | 32 |
| 20 to 49 | 106 | 8,132 | 8,926 | 40.0 | 1,275 | 78 | 27 |
| 50 to 99 | 48 | 4,439 | 4,387 | 50.0 | 1,720 | 168 | 26 |
| 100 or more | 37 | 7,386 | 8,911 | 91.0 | 2,500 | 168 | 28 |

## Table B2. Summary table: total and medians of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

| | Number of buildings (thousand) | Total floorspace (million square feet) | Total workers (thousand) | Median square feet per building (thousand) | Median square feet per worker | Median operating hours per week | Median age of buildings (years) |
|---|---|---|---|---|---|---|---|
| **All buildings** | 5,557 | 88,175 | 88,187 | 5.0 | 1,033 | 50 | 32 |
| **Food preparation or serving areas in non-food service buildings (more than one may apply)** | | | | | | | |
| Snack bar or concession stand | 153 | 9,752 | 10,290 | 11.0 | 1,257 | 81 | 32 |
| Fast food or small restaurant | 173 | 9,838 | 10,917 | 13.8 | 920 | 77 | 25 |
| Cafeteria or large restaurant | 130 | 15,152 | 17,640 | 67.0 | 1,250 | 60 | 34 |
| Commercial kitchen/ food preparation area | 282 | 16,067 | 15,364 | 20.0 | 1,412 | 70 | 31 |
| Small kitchen area | 736 | 14,340 | 13,628 | 6.0 | 1,400 | 48 | 40 |
| **Separate computer areas (more than one may apply)** | | | | | | | |
| Data center or server farm | 97 | 10,986 | 18,059 | 40.0 | 590 | 56 | 28 |
| Computer-based training room | 244 | 17,695 | 22,231 | 31.0 | 1,000 | 60 | 27 |
| Student or public computer center | 238 | 14,253 | 12,513 | 28.0 | 1,208 | 55 | 31 |
| **HVAC conservation features (more than one may apply)** | | | | | | | |
| Economizer cycle | 601 | 30,636 | 35,408 | 16.5 | 1,022 | 60 | 27 |
| Regular HVAC maintenance | 3,178 | 70,219 | 77,874 | 6.8 | 963 | 55 | 31 |
| Building automation system (BAS)[2] | 781 | 37,513 | 42,363 | 14.3 | 1,100 | 60 | 24 |
| **Window and interior lighting features (more than one may apply)** | | | | | | | |
| Multipaned windows | 3,012 | 61,120 | 62,249 | 6.3 | 1,000 | 50 | 28 |
| Tinted window glass | 1,875 | 45,313 | 50,837 | 7.2 | 963 | 54 | 28 |
| Reflective window glass | 549 | 15,810 | 18,972 | 8.8 | 967 | 58 | 26 |
| External overhangs or awnings | 1,867 | 32,430 | 33,762 | 5.6 | 1,000 | 55 | 33 |
| Skylights or atriums | 591 | 22,306 | 21,945 | 11.0 | 1,200 | 55 | 28 |
| Light scheduling | 918 | 30,516 | 34,986 | 9.5 | 1,000 | 61 | 27 |
| Occupancy sensors | 813 | 35,876 | 40,953 | 14.5 | 1,000 | 60 | 26 |
| Multi-level lighting or dimming | 349 | 14,522 | 16,133 | 13.3 | 1,000 | 70 | 28 |
| Daylight harvesting | 125 | 6,090 | 7,722 | 14.0 | 932 | 60 | 27 |
| Demand responsive lighting | 176 | 4,866 | 4,895 | 9.5 | 1,100 | 55 | 32 |
| Building automation system (BAS) for lighting[1] | 208 | 12,275 | 13,292 | 17.8 | 1,150 | 70 | 19 |

## Table B2. Summary table: total and medians of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

| | Number of buildings (thousand) | Total floorspace (million square feet) | Total workers (thousand) | Median square feet per building (thousand) | Median square feet per worker | Median operating hours per week | Median age of buildings (years) |
|---|---|---|---|---|---|---|---|
| **All buildings** | 5,557 | 88,175 | 88,187 | 5.0 | 1,033 | 50 | 32 |
| **Equipment usage reduced when building not in full use (more than one may apply)** | | | | | | | |
| Heating | 3,699 | 64,126 | 68,464 | 5.5 | 1,022 | 50 | 34 |
| Cooling | 3,517 | 63,260 | 68,317 | 5.8 | 1,000 | 50 | 33 |
| Lighting | 4,757 | 79,657 | 83,816 | 5.4 | 1,017 | 50 | 33 |

[1]In earlier CBECS publications, BAS was referred to as *Energy Management and Control System (EMCS)* .

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 20 buildings were sampled.

N = No cases in reporting sample.

Notes: ● Because of rounding, data may not sum to totals. ● See *Guide to the 2012 CBECS Detailed Tables* or *CBECS Terminology* for definition of terms used in these tables and/or comparison of differences with prior CBECS tables. Both references can be accessed from http://www.eia.gov/consumption/commercial/data/2012/

Source: U.S. Energy Information Administration, Office of Energy Consumption and Efficiency Statistics, Form EIA-871A of the 2012 Commercial Buildings Energy Consumption Survey.

## Table B3. Census region, number of buildings and floorspace, 2012 - PUBLIC USE DATA VERSION

| | Number of buildings (thousand) | | | | | Total floorspace (million square feet) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | All buildings | North-east | Mid-west | South | West | All buildings | North-east | Mid-west | South | West |
| **All buildings** | 5,557 | 805 | 1,237 | 2,247 | 1,267 | 88,175 | 16,081 | 19,380 | 34,363 | 18,351 |
| **Building floorspace (square feet)** | | | | | | | | | | |
| 1,001 to 5,000 | 2,777 | 372 | 645 | 1,159 | 601 | 8,042 | 1,057 | 1,858 | 3,383 | 1,744 |
| 5,001 to 10,000 | 1,229 | 171 | 257 | 491 | 310 | 8,902 | 1,249 | 1,872 | 3,536 | 2,246 |
| 10,001 to 25,000 | 884 | 152 | 183 | 327 | 221 | 15,207 | 2,941 | 3,354 | 5,312 | 3,600 |
| 25,001 to 50,000 | 332 | 47 | 83 | 127 | 75 | 11,915 | 1,644 | 3,029 | 4,526 | 2,716 |
| 50,001 to 100,000 | 199 | 36 | 40 | 88 | 34 | 13,914 | 2,675 | 2,730 | 6,137 | 2,373 |
| 100,001 to 200,000 | 90 | 18 | 18 | 37 | 17 | 12,425 | 2,545 | 2,402 | 5,154 | 2,324 |
| 200,001 to 500,000 | 38 | 8 | 10 | 13 | 7 | 10,718 | 2,230 | 2,728 | 3,676 | 2,084 |
| Over 500,000 | 8 | 2 | 2 | 3 | 1 | 7,053 | 1,741 | 1,408 | 2,639 | 1,265 |
| **Principal building activity** | | | | | | | | | | |
| Education | 389 | 45 | 67 | 159 | 118 | 12,407 | 2,226 | 3,176 | 5,157 | 1,848 |
| Food sales | 177 | 27 | 34 | 81 | 35 | 1,252 | 316 | 174 | 399 | 363 |
| Food service | 380 | 62 | 77 | 160 | 80 | 1,927 | 292 | 477 | 771 | 387 |
| Health care | 157 | 22 | 44 | 54 | 37 | 4,133 | 1,064 | 850 | 1,426 | 793 |
| Inpatient | 10 | 2 | 2 | 4 | 2 | 2,352 | 536 | 484 | 878 | 454 |
| Outpatient | 147 | 21 | 42 | 50 | 35 | 1,780 | 528 | 366 | 548 | 339 |
| Lodging | 158 | 27 | 23 | 69 | 38 | 5,722 | 1,001 | 1,048 | 2,281 | 1,391 |
| Mercantile | 602 | 98 | 131 | 251 | 122 | 11,391 | 1,658 | 2,139 | 4,753 | 2,841 |
| Retail (other than mall) | 438 | 75 | 103 | 177 | 83 | 5,437 | 834 | 1,144 | 2,123 | 1,337 |
| Enclosed and strip malls | 164 | 23 | 28 | 74 | 39 | 5,954 | 824 | 996 | 2,630 | 1,504 |
| Office | 1,012 | 148 | 230 | 390 | 245 | 16,115 | 3,861 | 3,317 | 5,496 | 3,441 |
| Public assembly | 352 | 65 | 100 | 110 | 77 | 5,531 | 948 | 1,598 | 1,975 | 1,010 |
| Public order and safety | 84 | 14 | 19 | 39 | Q | 1,535 | 341 | 333 | 676 | Q |
| Religious worship | 412 | 51 | 92 | 195 | 74 | 4,760 | 897 | 1,126 | 2,012 | 725 |
| Service | 619 | 108 | 177 | 230 | 103 | 4,743 | 778 | 1,628 | 1,642 | 695 |
| Warehouse and storage | 796 | 89 | 163 | 325 | 219 | 13,130 | 1,776 | 2,542 | 5,279 | 3,533 |
| Other | 125 | 18 | 30 | 34 | 43 | 2,273 | 536 | 436 | 834 | 468 |
| Vacant | 296 | 32 | 51 | 150 | 63 | 3,257 | 388 | 536 | 1,661 | 672 |
| **Year constructed** | | | | | | | | | | |
| Before 1920 | 362 | 112 | 106 | 104 | 40 | 4,086 | 1,635 | 1,145 | 977 | 329 |
| 1920 to 1945 | 488 | 125 | 140 | 128 | 94 | 6,153 | 2,106 | 1,767 | 1,484 | 796 |
| 1946 to 1959 | 599 | 96 | 110 | 229 | 164 | 7,352 | 1,574 | 1,672 | 2,601 | 1,506 |
| 1960 to 1969 | 639 | 100 | 159 | 232 | 148 | 10,458 | 2,251 | 2,758 | 3,512 | 1,937 |
| 1970 to 1979 | 684 | 75 | 160 | 274 | 176 | 10,873 | 1,963 | 2,621 | 3,702 | 2,587 |
| 1980 to 1989 | 915 | 86 | 172 | 427 | 231 | 15,573 | 1,844 | 2,728 | 7,054 | 3,947 |
| 1990 to 1999 | 845 | 90 | 203 | 385 | 168 | 14,101 | 2,324 | 2,791 | 6,187 | 2,799 |
| 2000 to 2003 | 375 | 46 | 80 | 159 | 90 | 7,229 | 976 | 1,508 | 3,320 | 1,425 |
| 2004 to 2007 | 347 | 37 | 50 | 163 | 97 | 6,639 | 503 | 1,392 | 2,843 | 1,901 |
| 2008 to 2012 | 303 | 38 | 57 | 147 | 61 | 5,712 | 907 | 998 | 2,683 | 1,124 |
| **Number of floors** | | | | | | | | | | |
| One | 3,836 | 360 | 785 | 1,737 | 954 | 40,641 | 4,304 | 7,920 | 18,645 | 9,772 |
| Two | 1,158 | 236 | 296 | 377 | 248 | 20,448 | 4,213 | 4,968 | 6,997 | 4,270 |
| Three | 374 | 147 | 121 | 63 | 43 | 8,264 | 2,420 | 2,720 | 2,041 | 1,084 |
| Four to nine | 177 | 60 | 33 | 64 | 21 | 13,514 | 3,419 | 2,914 | 4,953 | 2,229 |
| Ten or more | 13 | 4 | 2 | 5 | 2 | 5,307 | 1,727 | 858 | 1,726 | 996 |

## Table B3. Census region, number of buildings and floorspace, 2012 - PUBLIC USE DATA VERSION

| | Number of buildings (thousand) | | | | | Total floorspace (million square feet) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | All buildings | North-east | Mid-west | South | West | All buildings | North-east | Mid-west | South | West |
| **All buildings** | 5,557 | 805 | 1,237 | 2,247 | 1,267 | 88,175 | 16,081 | 19,380 | 34,363 | 18,351 |
| **Elevators and escalators (more than one may apply)** | | | | | | | | | | |
| Any elevators | 405 | 90 | 102 | 137 | 77 | 32,144 | 7,903 | 7,651 | 10,980 | 5,610 |
| Number of elevators | | | | | | | | | | |
| One | 272 | 58 | 74 | 89 | 50 | 11,257 | 2,577 | 3,327 | 3,659 | 1,694 |
| Two to five | 118 | 27 | 25 | 42 | 24 | 12,845 | 3,152 | 2,790 | 4,620 | 2,283 |
| Six or more | 16 | 5 | 3 | 6 | 3 | 8,042 | 2,174 | 1,534 | 2,701 | 1,633 |
| Any escalators | 10 | 3 | Q | 2 | 2 | 3,482 | 752 | 868 | 994 | 868 |
| **Number of workers (main shift)** | | | | | | | | | | |
| Fewer than 5 | 2,892 | 414 | 715 | 1,163 | 600 | 18,113 | 2,692 | 4,643 | 7,339 | 3,438 |
| 5 to 9 | 1,085 | 154 | 224 | 448 | 259 | 9,144 | 1,451 | 1,912 | 3,554 | 2,227 |
| 10 to 19 | 731 | 106 | 129 | 297 | 200 | 9,833 | 1,391 | 1,989 | 3,914 | 2,540 |
| 20 to 49 | 513 | 68 | 104 | 198 | 143 | 14,884 | 2,269 | 3,372 | 5,614 | 3,629 |
| 50 to 99 | 206 | 31 | 41 | 97 | 36 | 13,507 | 2,399 | 2,761 | 6,091 | 2,256 |
| 100 to 249 | 93 | 21 | 18 | 32 | 22 | 10,943 | 2,525 | 2,323 | 4,163 | 1,932 |
| 250 or more | 37 | 10 | 7 | 11 | 8 | 11,750 | 3,355 | 2,379 | 3,687 | 2,329 |
| **Weekly operating hours** | | | | | | | | | | |
| Fewer than 40 | 1,149 | 149 | 290 | 489 | 221 | 8,322 | 1,174 | 2,125 | 3,509 | 1,514 |
| 40 to 48 | 1,346 | 168 | 302 | 536 | 339 | 15,970 | 2,361 | 3,188 | 6,787 | 3,635 |
| 49 to 60 | 1,244 | 199 | 254 | 501 | 290 | 20,977 | 3,744 | 4,379 | 8,525 | 4,328 |
| 61 to 84 | 764 | 131 | 155 | 270 | 209 | 16,314 | 3,485 | 3,851 | 5,294 | 3,684 |
| 85 to 167 | 479 | 75 | 98 | 204 | 101 | 9,434 | 1,898 | 2,441 | 3,147 | 1,949 |
| Open continuously | 575 | 83 | 139 | 247 | 106 | 17,157 | 3,420 | 3,396 | 7,100 | 3,241 |
| **Party responsible for operation and maintenance of energy systems** | | | | | | | | | | |
| Building owner | 4,715 | 661 | 1,118 | 1,881 | 1,054 | 74,754 | 13,853 | 17,262 | 28,852 | 14,788 |
| Business owner or tenant | 724 | 124 | 102 | 308 | 190 | 11,346 | 1,820 | 1,736 | 4,563 | 3,228 |
| Property management | 54 | Q | Q | 24 | 16 | 1,244 | Q | Q | 636 | 244 |
| Other | 64 | Q | Q | 33 | Q | 831 | Q | Q | 313 | Q |
| **Provider of direct input on energy-related equipment purchases** | | | | | | | | | | |
| Building owner | 4,876 | 682 | 1,136 | 1,947 | 1,112 | 77,338 | 14,118 | 17,606 | 29,899 | 15,715 |
| Business owner or tenant | 540 | 94 | 77 | 230 | 139 | 8,304 | 1,395 | 1,285 | 3,348 | 2,276 |
| Property management | 35 | Q | Q | 15 | Q | 889 | Q | Q | 353 | Q |
| Other | 106 | 23 | 15 | 55 | 13 | 1,643 | 314 | 347 | 762 | 221 |
| **Number of establishments** | | | | | | | | | | |
| One | 4,205 | 602 | 974 | 1,690 | 939 | 55,725 | 9,712 | 12,983 | 21,868 | 11,161 |
| 2 to 5 | 862 | 150 | 192 | 328 | 193 | 18,066 | 3,626 | 4,207 | 6,489 | 3,744 |
| 6 to 10 | 147 | 19 | 21 | 63 | 44 | 4,380 | 767 | 782 | 1,727 | 1,104 |
| 11 to 20 | 68 | 8 | 8 | 27 | 25 | 3,710 | 844 | 493 | 1,555 | 818 |
| More than 20 | 27 | 3 | 2 | 8 | 14 | 3,899 | 869 | 529 | 1,417 | 1,084 |
| Currently unoccupied | 248 | 24 | 41 | 130 | 53 | 2,395 | 262 | 386 | 1,307 | 440 |

## Table B3. Census region, number of buildings and floorspace, 2012 - PUBLIC USE DATA VERSION

| | Number of buildings (thousand) | | | | | Total floorspace (million square feet) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | All buildings | North-east | Mid-west | South | West | All buildings | North-east | Mid-west | South | West |
| **All buildings** | 5,557 | 805 | 1,237 | 2,247 | 1,267 | 88,175 | 16,081 | 19,380 | 34,363 | 18,351 |
| **Predominant exterior wall material** | | | | | | | | | | |
| Brick, stone, or stucco | 2,312 | 317 | 528 | 934 | 534 | 41,466 | 8,215 | 9,364 | 16,760 | 7,126 |
| Concrete (block or poured) | 1,121 | 140 | 217 | 529 | 236 | 20,622 | 3,556 | 3,995 | 8,139 | 4,932 |
| Concrete panels | 210 | 16 | 21 | 68 | 105 | 8,706 | 832 | 1,707 | 3,181 | 2,986 |
| Siding or shingles | 905 | 239 | 218 | 238 | 210 | 5,916 | 1,589 | 1,551 | 1,388 | 1,389 |
| Metal panels | 933 | 82 | 231 | 458 | 162 | 8,670 | 1,020 | 2,146 | 4,245 | 1,259 |
| Window glass | 17 | 4 | Q | 2 | 10 | 1,344 | 437 | Q | 356 | 328 |
| Other | 37 | Q | Q | Q | Q | 857 | Q | Q | Q | Q |
| No one major type | 21 | Q | Q | Q | Q | 595 | Q | Q | Q | Q |
| **Predominant roof material** | | | | | | | | | | |
| Metal surfacing | 1,672 | 148 | 367 | 858 | 298 | 16,296 | 1,640 | 3,549 | 8,394 | 2,712 |
| Synthetic or rubber | 911 | 175 | 292 | 261 | 183 | 26,135 | 6,221 | 7,485 | 7,775 | 4,654 |
| Built-up | 836 | 90 | 117 | 373 | 256 | 21,858 | 3,784 | 3,979 | 8,885 | 5,210 |
| Slate or tile shingles | 406 | 66 | 47 | 162 | 130 | 4,460 | 1,009 | 391 | 1,847 | 1,213 |
| Wooden materials (including shingles) | 157 | 27 | Q | 58 | 45 | 1,140 | 162 | Q | 383 | 469 |
| Asphalt, fiberglass, or other shingles | 1,483 | 282 | 371 | 498 | 332 | 15,115 | 2,684 | 3,268 | 5,840 | 3,323 |
| Concrete | 51 | 10 | Q | 25 | 11 | 1,650 | 299 | Q | 858 | 404 |
| Other | 24 | Q | Q | Q | Q | 681 | Q | Q | Q | Q |
| No one major type | 18 | Q | Q | Q | Q | 841 | Q | Q | Q | Q |
| **Roof characteristics** | | | | | | | | | | |
| Roof tilt | | | | | | | | | | |
| Flat | 1,960 | 286 | 358 | 764 | 552 | 49,967 | 10,430 | 10,554 | 18,101 | 10,882 |
| Shallow pitch | 2,148 | 213 | 493 | 955 | 487 | 24,305 | 2,711 | 5,181 | 11,152 | 5,261 |
| Steeper pitch | 1,449 | 306 | 386 | 528 | 229 | 13,903 | 2,940 | 3,645 | 5,110 | 2,207 |
| Cool roof | 740 | 76 | 132 | 280 | 252 | 19,570 | 3,348 | 3,642 | 7,522 | 5,058 |
| **Renovations in buildings constructed before 2008 (more than one may apply)** | | | | | | | | | | |
| Any type of renovation | 2,094 | 352 | 521 | 789 | 432 | 42,624 | 9,537 | 10,282 | 15,368 | 7,437 |
| Addition or annex | 444 | 63 | 136 | 176 | 69 | 12,932 | 2,573 | 4,075 | 4,575 | 1,709 |
| Reduction in floorspace | 71 | 11 | 19 | 30 | 12 | 1,886 | Q | 265 | 598 | 277 |
| Roof replacement | 987 | 178 | 272 | 359 | 178 | 21,064 | 5,543 | 5,475 | 6,947 | 3,099 |
| Exterior wall replacement | 194 | 31 | 50 | 83 | 31 | 4,212 | 927 | 1,062 | 1,423 | 801 |
| Interior wall reconfiguration | 889 | 181 | 210 | 295 | 204 | 21,426 | 5,174 | 5,188 | 6,839 | 4,224 |
| Window replacement | 560 | 117 | 157 | 184 | 102 | 12,220 | 3,391 | 3,105 | 3,741 | 1,983 |
| HVAC equipment upgrade | 1,101 | 191 | 291 | 421 | 197 | 26,859 | 6,569 | 6,608 | 9,314 | 4,370 |
| Lighting upgrade | 982 | 187 | 232 | 352 | 211 | 25,614 | 6,106 | 6,193 | 8,801 | 4,514 |
| Electrical upgrade | 747 | 155 | 180 | 273 | 139 | 16,223 | 4,084 | 4,076 | 5,415 | 2,648 |
| Plumbing system upgrade | 644 | 124 | 173 | 231 | 116 | 13,927 | 3,393 | 3,623 | 4,584 | 2,327 |
| Insulation upgrade | 382 | 75 | 123 | 133 | 52 | 7,500 | 1,741 | 2,187 | 2,317 | 1,256 |
| Fire, safety, or security upgrade | 616 | 145 | 147 | 210 | 114 | 17,330 | 4,731 | 3,875 | 5,814 | 2,910 |
| Structural upgrade | 152 | 38 | 43 | 40 | 30 | 3,821 | 743 | 878 | 1,158 | 1,041 |
| Other | 39 | Q | Q | Q | Q | 872 | Q | Q | Q | Q |
| No renovations | 3,160 | 415 | 660 | 1,311 | 775 | 39,839 | 5,637 | 8,100 | 16,312 | 9,789 |
| Buildings constructed 2008 or later | 303 | 38 | 57 | 147 | 61 | 5,712 | 907 | 998 | 2,683 | 1,124 |

## Table B3. Census region, number of buildings and floorspace, 2012 - PUBLIC USE DATA VERSION

| | Number of buildings (thousand) | | | | | Total floorspace (million square feet) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | All buildings | North-east | Mid-west | South | West | All buildings | North-east | Mid-west | South | West |
| **All buildings** | 5,557 | 805 | 1,237 | 2,247 | 1,267 | 88,175 | 16,081 | 19,380 | 34,363 | 18,351 |
| **Energy sources (more than one may apply)** | | | | | | | | | | |
| Electricity | 5,234 | 770 | 1,171 | 2,086 | 1,207 | 85,949 | 15,838 | 19,021 | 33,108 | 17,982 |
| Natural gas | 2,933 | 433 | 843 | 950 | 707 | 59,570 | 11,394 | 15,490 | 19,983 | 12,702 |
| Fuel oil | 467 | 217 | 77 | 131 | 43 | 20,488 | 6,333 | 3,915 | 7,151 | 3,088 |
| District heat | 48 | 16 | 7 | 18 | 7 | 5,817 | 1,954 | 907 | 2,136 | 820 |
| District chilled water | 54 | 7 | 2 | 35 | 9 | 4,476 | 782 | 563 | 2,440 | 692 |
| Propane | 510 | 106 | 133 | 187 | 84 | 7,709 | 1,746 | 1,933 | 2,593 | 1,437 |
| Other | 172 | 51 | 50 | 34 | 37 | 3,825 | 1,089 | 797 | 906 | 1,034 |
| **Space-heating energy sources (more than one may apply)** | | | | | | | | | | |
| Electricity | 2,858 | 310 | 493 | 1,380 | 676 | 49,654 | 7,526 | 8,872 | 22,653 | 10,603 |
| Natural gas | 2,612 | 392 | 819 | 782 | 618 | 50,452 | 9,669 | 14,506 | 15,573 | 10,704 |
| Fuel oil | 270 | 170 | 39 | 53 | Q | 4,360 | 2,857 | 667 | 769 | Q |
| District heat | 48 | 16 | 7 | 18 | 7 | 5,776 | 1,954 | 907 | 2,114 | 801 |
| Propane | 342 | 59 | 105 | 124 | 54 | 3,066 | 654 | 1,003 | 928 | 482 |
| Other | 101 | Q | 32 | Q | Q | 1,008 | 206 | 301 | Q | Q |
| **Primary space-heating energy source** | | | | | | | | | | |
| Electricity | 1,819 | 138 | 193 | 1,043 | 445 | 26,541 | 2,449 | 2,969 | 15,152 | 5,971 |
| Natural gas | 2,322 | 361 | 768 | 647 | 547 | 43,895 | 8,675 | 13,560 | 12,441 | 9,220 |
| Fuel oil | 205 | 141 | Q | 32 | Q | 2,545 | 1,990 | Q | 299 | Q |
| District heat | 47 | 15 | 6 | 18 | 7 | 5,644 | 1,927 | 862 | 2,054 | 801 |
| Propane | 261 | 46 | 84 | 92 | 38 | 1,948 | 377 | 723 | 613 | 235 |
| Other | 67 | Q | Q | Q | Q | 598 | Q | Q | Q | Q |
| **Cooling energy sources (more than one may apply)** | | | | | | | | | | |
| Electricity | 4,413 | 583 | 967 | 1,861 | 1,001 | 77,178 | 13,854 | 17,295 | 30,027 | 16,002 |
| Natural gas | 12 | 6 | Q | Q | Q | 725 | 295 | Q | Q | Q |
| District chilled water | 54 | 7 | 2 | 35 | 9 | 4,476 | 782 | 563 | 2,440 | 692 |
| **Water-heating energy sources (more than one may apply)** | | | | | | | | | | |
| Electricity | 2,658 | 324 | 525 | 1,242 | 567 | 43,502 | 6,910 | 8,197 | 19,535 | 8,860 |
| Natural gas | 1,758 | 291 | 493 | 527 | 447 | 39,955 | 7,708 | 10,824 | 12,292 | 9,131 |
| Fuel oil | 77 | 69 | Q | Q | Q | 1,918 | 1,397 | Q | Q | Q |
| District heat | 25 | 9 | 5 | 7 | 4 | 4,424 | 1,619 | 768 | 1,516 | 520 |
| Propane | 142 | 37 | 31 | 42 | 32 | 1,580 | 390 | 392 | 534 | 264 |
| **Cooking energy sources (more than one may apply)** | | | | | | | | | | |
| Electricity | 1,010 | 120 | 260 | 439 | 191 | 25,296 | 4,656 | 6,249 | 9,874 | 4,518 |
| Natural gas | 740 | 123 | 163 | 286 | 168 | 25,050 | 5,530 | 5,835 | 8,531 | 5,153 |
| Propane | 144 | 48 | 28 | 53 | Q | 2,006 | 779 | 328 | 664 | 235 |

## Table B3. Census region, number of buildings and floorspace, 2012 - PUBLIC USE DATA VERSION

| | Number of buildings (thousand) | | | | | Total floorspace (million square feet) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | All buildings | North-east | Mid-west | South | West | All buildings | North-east | Mid-west | South | West |
| **All buildings** | 5,557 | 805 | 1,237 | 2,247 | 1,267 | 88,175 | 16,081 | 19,380 | 34,363 | 18,351 |
| **Energy end uses (more than one may apply)** | | | | | | | | | | |
| Buildings with space heating | 4,722 | 727 | 1,096 | 1,842 | 1,057 | 81,171 | 15,599 | 18,515 | 30,605 | 16,452 |
| Buildings with cooling | 4,461 | 592 | 970 | 1,891 | 1,007 | 80,369 | 14,496 | 17,603 | 31,815 | 16,455 |
| Buildings with water heating | 4,423 | 671 | 1,014 | 1,740 | 997 | 80,097 | 15,184 | 18,053 | 30,341 | 16,520 |
| Buildings with cooking | 1,589 | 249 | 370 | 664 | 306 | 39,014 | 8,327 | 9,017 | 14,440 | 7,230 |
| Buildings with manufacturing | 259 | 44 | 55 | 83 | 77 | 5,214 | 1,060 | 1,308 | 1,705 | 1,141 |
| Buildings with electricity generation | 410 | 107 | 84 | 141 | 78 | 25,959 | 6,489 | 5,333 | 9,484 | 4,653 |
| **Percent of floorspace heated** | | | | | | | | | | |
| Not heated | 835 | 79 | 141 | 405 | 210 | 7,004 | 483 | 865 | 3,758 | 1,898 |
| 1 to 50 | 697 | 86 | 103 | 297 | 211 | 10,152 | 1,134 | 1,311 | 3,988 | 3,718 |
| 51 to 99 | 727 | 137 | 137 | 267 | 185 | 14,678 | 2,868 | 2,249 | 6,229 | 3,331 |
| 100 | 3,298 | 503 | 856 | 1,278 | 661 | 56,342 | 11,596 | 14,955 | 20,387 | 9,404 |
| **Percent of floorspace cooled** | | | | | | | | | | |
| Not cooled | 1,096 | 213 | 267 | 355 | 260 | 7,806 | 1,585 | 1,777 | 2,548 | 1,895 |
| 1 to 50 | 1,173 | 196 | 281 | 422 | 273 | 19,384 | 3,745 | 5,025 | 6,206 | 4,407 |
| 51 to 99 | 897 | 156 | 177 | 330 | 234 | 22,861 | 5,090 | 4,679 | 8,582 | 4,510 |
| 100 | 2,391 | 240 | 512 | 1,139 | 500 | 38,125 | 5,661 | 7,899 | 17,027 | 7,538 |
| **Percent lit when open** | | | | | | | | | | |
| Zero | 70 | Q | Q | Q | Q | 322 | Q | Q | Q | Q |
| 1 to 50 | 1,099 | 170 | 292 | 379 | 258 | 12,923 | 2,268 | 2,977 | 4,766 | 2,911 |
| 51 to 99 | 1,666 | 259 | 382 | 614 | 411 | 35,167 | 6,315 | 8,135 | 13,376 | 7,341 |
| 100 | 2,222 | 308 | 427 | 1,011 | 476 | 36,159 | 7,018 | 7,416 | 14,387 | 7,338 |
| Building never open/electricity not used | 501 | 60 | 121 | 216 | 103 | 3,605 | 437 | 774 | 1,711 | 683 |
| **Percent lit during off hours** | | | | | | | | | | |
| Zero | 2,489 | 366 | 528 | 945 | 650 | 25,373 | 4,134 | 5,954 | 9,119 | 6,166 |
| 1 to 50 | 2,441 | 360 | 592 | 990 | 499 | 51,325 | 9,622 | 11,574 | 20,302 | 9,826 |
| 51 to 100 | 202 | 40 | 25 | 97 | 40 | 6,798 | 1,758 | 942 | 2,543 | 1,555 |
| Building always open with no "off hours" | 102 | 5 | 25 | 54 | 18 | 2,453 | 324 | 550 | 1,144 | 435 |
| Electricity not used | 323 | 36 | 66 | 161 | 61 | 2,226 | 243 | 360 | 1,255 | 368 |
| **Heating equipment (more than one may apply)** | | | | | | | | | | |
| Heat pumps | 628 | 48 | 53 | 392 | 134 | 11,906 | 1,393 | 1,133 | 6,894 | 2,485 |
| Furnaces | 755 | 85 | 252 | 282 | 137 | 9,096 | 1,524 | 2,670 | 3,366 | 1,536 |
| Individual space heaters | 1,247 | 239 | 340 | 381 | 287 | 20,989 | 4,883 | 5,868 | 6,635 | 3,603 |
| District heat | 48 | 16 | 7 | 18 | 7 | 5,776 | 1,954 | 907 | 2,114 | 801 |
| Boilers | 544 | 221 | 148 | 98 | 77 | 22,817 | 6,630 | 6,849 | 5,798 | 3,541 |
| Packaged heating units | 2,802 | 347 | 644 | 1,127 | 683 | 49,621 | 7,327 | 11,001 | 20,230 | 11,062 |
| Other | 62 | Q | 22 | 16 | 14 | 1,573 | Q | 370 | 549 | 339 |

## Table B3. Census region, number of buildings and floorspace, 2012 - PUBLIC USE DATA VERSION

| | Number of buildings (thousand) | | | | | Total floorspace (million square feet) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | All buildings | North-east | Mid-west | South | West | All buildings | North-east | Mid-west | South | West |
| **All buildings** | 5,557 | 805 | 1,237 | 2,247 | 1,267 | 88,175 | 16,081 | 19,380 | 34,363 | 18,351 |
| **Cooling equipment (more than one may apply)** | | | | | | | | | | |
| Residential-type central air conditioners | 1,546 | 178 | 480 | 633 | 255 | 15,289 | 2,125 | 4,445 | 5,893 | 2,827 |
| Heat pumps | 692 | 53 | 65 | 409 | 165 | 12,617 | 1,490 | 1,106 | 7,073 | 2,948 |
| Individual air conditioners | 709 | 190 | 147 | 257 | 114 | 12,468 | 3,846 | 2,670 | 4,225 | 1,727 |
| District chilled water | 54 | 7 | 2 | 35 | 9 | 4,476 | 782 | 563 | 2,440 | 692 |
| Central chillers | 163 | 26 | 37 | 70 | 29 | 17,009 | 3,486 | 4,462 | 6,430 | 2,632 |
| Packaged air conditioning units | 1,909 | 253 | 362 | 786 | 508 | 45,717 | 8,799 | 10,087 | 17,337 | 9,494 |
| Swamp coolers | 109 | Q | Q | Q | 89 | 1,923 | Q | Q | 473 | 1,344 |
| Other | Q | Q | Q | Q | Q | 331 | Q | Q | Q | Q |
| **Main equipment replaced since 1990 (more than one may apply)** | | | | | | | | | | |
| Heating | 1,874 | 315 | 448 | 744 | 367 | 27,986 | 5,636 | 6,976 | 10,065 | 5,310 |
| Cooling | 1,971 | 313 | 452 | 836 | 370 | 31,297 | 6,606 | 7,497 | 11,666 | 5,528 |
| **Water-heating equipment** | | | | | | | | | | |
| Centralized system | 3,348 | 493 | 806 | 1,322 | 728 | 48,519 | 9,685 | 11,706 | 17,565 | 9,563 |
| Distributed system | 690 | 123 | 133 | 264 | 170 | 12,847 | 2,389 | 2,447 | 4,954 | 3,058 |
| Combination of centralized and distributed system | 385 | 56 | 76 | 154 | 99 | 18,731 | 3,110 | 3,900 | 7,822 | 3,899 |
| **Lighting equipment types (more than one may apply)** | | | | | | | | | | |
| Incandescent | 1,826 | 293 | 460 | 721 | 353 | 38,551 | 7,604 | 9,224 | 14,528 | 7,196 |
| Standard fluorescent | 4,649 | 684 | 1,018 | 1,890 | 1,057 | 80,881 | 14,851 | 17,866 | 31,447 | 16,717 |
| Compact fluorescent | 2,302 | 354 | 542 | 840 | 566 | 54,402 | 11,207 | 11,913 | 20,134 | 11,148 |
| High-intensity discharge (HID) | 525 | 76 | 110 | 219 | 121 | 23,520 | 4,480 | 5,535 | 9,346 | 4,158 |
| Halogen | 905 | 148 | 203 | 377 | 177 | 28,175 | 5,358 | 6,261 | 10,935 | 5,621 |
| LED | 473 | 83 | 114 | 164 | 113 | 21,987 | 4,786 | 5,126 | 7,502 | 4,572 |
| Other | 10 | Q | Q | Q | Q | 426 | Q | Q | Q | Q |
| **Refrigeration equipment (more than one may apply)** | | | | | | | | | | |
| Any refrigeration | 3,984 | 593 | 898 | 1,630 | 864 | 74,722 | 14,159 | 17,030 | 28,834 | 14,699 |
| Walk-in units | 811 | 139 | 175 | 332 | 166 | 28,538 | 6,025 | 6,421 | 10,732 | 5,361 |
| Cases or cabinets | 915 | 165 | 203 | 357 | 190 | 28,676 | 6,055 | 6,804 | 10,364 | 5,452 |
| Large cold storage areas | 78 | 12 | 14 | 33 | 19 | 4,125 | 565 | 975 | 1,672 | 913 |
| Commercial ice makers | 846 | 101 | 167 | 412 | 166 | 32,680 | 5,561 | 6,582 | 14,497 | 6,039 |
| Residential-type or compact units | 3,388 | 511 | 795 | 1,342 | 740 | 63,443 | 12,023 | 14,612 | 24,270 | 12,538 |
| Vending machines | 960 | 135 | 194 | 436 | 195 | 44,283 | 8,820 | 9,668 | 17,625 | 8,170 |
| No refrigeration | 1,573 | 213 | 340 | 617 | 404 | 13,453 | 1,922 | 2,350 | 5,529 | 3,651 |

## Table B3. Census region, number of buildings and floorspace, 2012 - PUBLIC USE DATA VERSION

| | Number of buildings (thousand) | | | | | Total floorspace (million square feet) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | All buildings | North-east | Mid-west | South | West | All buildings | North-east | Mid-west | South | West |
| **All buildings** | 5,557 | 805 | 1,237 | 2,247 | 1,267 | 88,175 | 16,081 | 19,380 | 34,363 | 18,351 |
| **Office equipment (more than one may apply)** | | | | | | | | | | |
| Desktop computers | 3,977 | 593 | 876 | 1,550 | 957 | 78,139 | 14,663 | 17,321 | 29,765 | 16,390 |
| With flat screen monitors | 3,847 | 569 | 841 | 1,507 | 931 | 77,236 | 14,502 | 17,088 | 29,427 | 16,219 |
| With multiple monitors | 911 | 120 | 183 | 358 | 250 | 31,026 | 5,319 | 6,400 | 12,163 | 7,144 |
| Laptop computers | 2,730 | 412 | 598 | 1,074 | 646 | 64,033 | 11,894 | 14,249 | 25,003 | 12,886 |
| Dedicated servers | 1,748 | 254 | 358 | 693 | 442 | 53,544 | 10,205 | 11,263 | 20,640 | 11,435 |
| Laser printers | 2,339 | 355 | 524 | 857 | 603 | 54,839 | 10,687 | 12,307 | 20,541 | 11,304 |
| Inkjet printers | 2,187 | 311 | 468 | 916 | 493 | 36,889 | 6,761 | 8,035 | 14,393 | 7,701 |
| FAX machines | 3,185 | 486 | 684 | 1,258 | 756 | 67,451 | 13,169 | 14,685 | 25,898 | 13,699 |
| Photocopiers | 2,163 | 355 | 474 | 808 | 526 | 60,076 | 12,197 | 13,244 | 22,173 | 12,461 |
| **Number of desktop computers** | | | | | | | | | | |
| None | 1,581 | 212 | 361 | 697 | 310 | 10,036 | 1,418 | 2,059 | 4,598 | 1,961 |
| 1 to 4 | 2,039 | 320 | 484 | 780 | 454 | 16,304 | 2,626 | 4,048 | 6,273 | 3,356 |
| 5 to 9 | 821 | 91 | 186 | 334 | 210 | 9,425 | 1,392 | 2,122 | 3,529 | 2,382 |
| 10 to 19 | 482 | 86 | 81 | 188 | 127 | 9,493 | 1,646 | 1,826 | 3,632 | 2,389 |
| 20 to 49 | 355 | 48 | 62 | 140 | 105 | 13,479 | 2,706 | 2,598 | 5,344 | 2,831 |
| 50 to 99 | 143 | 20 | 33 | 58 | 33 | 8,318 | 1,363 | 1,984 | 3,266 | 1,705 |
| 100 to 249 | 92 | 20 | 20 | 31 | 21 | 9,705 | 2,268 | 2,235 | 3,421 | 1,781 |
| 250 or more | 44 | 8 | 10 | 18 | 8 | 11,414 | 2,662 | 2,509 | 4,299 | 1,945 |
| **Number of laptop computers** | | | | | | | | | | |
| None | 2,827 | 394 | 639 | 1,173 | 621 | 24,142 | 4,187 | 5,131 | 9,360 | 5,464 |
| 1 to 4 | 1,944 | 283 | 451 | 755 | 455 | 21,650 | 3,373 | 5,400 | 8,189 | 4,689 |
| 5 to 9 | 350 | 53 | 62 | 142 | 92 | 8,383 | 1,422 | 1,478 | 3,570 | 1,912 |
| 10 to 19 | 181 | 33 | 29 | 71 | 49 | 8,446 | 1,601 | 1,468 | 3,394 | 1,983 |
| 20 to 49 | 144 | 20 | 28 | 63 | 33 | 9,586 | 1,471 | 2,202 | 3,804 | 2,110 |
| 50 to 99 | 58 | 9 | 15 | 22 | 12 | 5,244 | 1,165 | 1,332 | 1,860 | 886 |
| 100 to 249 | 35 | 9 | 9 | 13 | 3 | 5,244 | 1,426 | 1,023 | 2,111 | 683 |
| 250 or more | 20 | 4 | 5 | 9 | 2 | 5,481 | 1,436 | 1,347 | 2,075 | 623 |
| **Number of dedicated servers** | | | | | | | | | | |
| None | 3,809 | 551 | 879 | 1,554 | 825 | 34,631 | 5,876 | 8,117 | 13,722 | 6,916 |
| 1 to 4 | 1,562 | 227 | 325 | 618 | 392 | 34,273 | 6,272 | 7,209 | 13,584 | 7,209 |
| 5 to 9 | 97 | 14 | 20 | 37 | 26 | 6,294 | 1,084 | 1,444 | 2,250 | 1,516 |
| 10 to 19 | 50 | 7 | 6 | 25 | 12 | 5,659 | 1,120 | 994 | 2,339 | 1,206 |
| 20 to 49 | 25 | 3 | 5 | 9 | 8 | 3,781 | 721 | 999 | 1,290 | 771 |
| 50 or more | 13 | 3 | 2 | 4 | 4 | 3,536 | 1,009 | 616 | 1,177 | 734 |
| **Number of photocopiers** | | | | | | | | | | |
| None | 3,394 | 451 | 763 | 1,438 | 742 | 28,099 | 3,884 | 6,136 | 12,189 | 5,889 |
| One | 1,325 | 216 | 299 | 485 | 325 | 17,814 | 3,032 | 4,146 | 6,231 | 4,405 |
| 2 to 4 | 648 | 104 | 139 | 246 | 158 | 20,440 | 3,697 | 4,579 | 8,078 | 4,086 |
| 5 to 9 | 116 | 18 | 23 | 47 | 27 | 8,920 | 1,939 | 2,188 | 3,221 | 1,572 |
| 10 or more | 75 | 16 | 13 | 30 | 15 | 12,903 | 3,529 | 2,331 | 4,644 | 2,399 |

## Table B3. Census region, number of buildings and floorspace, 2012 - PUBLIC USE DATA VERSION

| | Number of buildings (thousand) | | | | | Total floorspace (million square feet) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | All buildings | North-east | Mid-west | South | West | All buildings | North-east | Mid-west | South | West |
| **All buildings** | 5,557 | 805 | 1,237 | 2,247 | 1,267 | 88,175 | 16,081 | 19,380 | 34,363 | 18,351 |
| **Number of TVs or video displays** | | | | | | | | | | |
| None | 2,718 | 394 | 614 | 1,076 | 633 | 24,984 | 4,426 | 5,358 | 9,486 | 5,714 |
| One | 1,145 | 164 | 273 | 471 | 237 | 10,105 | 1,416 | 2,405 | 4,279 | 2,006 |
| 2 to 4 | 1,035 | 154 | 212 | 419 | 250 | 16,846 | 3,113 | 4,151 | 6,415 | 3,167 |
| 5 to 9 | 314 | 51 | 72 | 126 | 66 | 8,150 | 1,824 | 1,451 | 3,161 | 1,714 |
| 10 to 19 | 154 | 20 | 31 | 69 | 34 | 8,133 | 1,765 | 1,895 | 3,053 | 1,420 |
| 20 to 49 | 106 | 13 | 19 | 46 | 28 | 8,132 | 1,460 | 1,674 | 3,196 | 1,802 |
| 50 to 99 | 48 | 3 | 10 | 22 | 13 | 4,439 | 393 | 932 | 2,075 | 1,040 |
| 100 or more | 37 | 7 | 7 | 17 | 7 | 7,386 | 1,685 | 1,515 | 2,698 | 1,488 |
| **Food preparation or serving areas in non-food service buildings (more than one may apply)** | | | | | | | | | | |
| Snack bar or concession stand | 153 | 18 | 34 | 66 | 35 | 9,752 | 1,898 | 2,273 | 3,708 | 1,873 |
| Fast food or small restaurant | 173 | 29 | 31 | 77 | 37 | 9,838 | 1,928 | 1,761 | 3,729 | 2,421 |
| Cafeteria or large restaurant | 130 | 29 | 28 | 55 | 18 | 15,152 | 3,604 | 3,415 | 5,908 | 2,224 |
| Commercial kitchen/ food preparation area | 282 | 45 | 72 | 109 | 56 | 16,067 | 3,224 | 4,043 | 6,008 | 2,792 |
| Small kitchen area | 736 | 114 | 183 | 306 | 132 | 14,340 | 3,303 | 3,520 | 5,141 | 2,376 |
| **Separate computer areas (more than one may apply)** | | | | | | | | | | |
| Data center or server farm | 97 | 14 | 25 | 31 | 27 | 10,986 | 2,403 | 2,439 | 3,833 | 2,311 |
| Computer-based training room | 244 | 34 | 47 | 112 | 51 | 17,695 | 3,421 | 3,938 | 7,057 | 3,279 |
| Student or public computer center | 238 | 40 | 46 | 91 | 61 | 14,253 | 2,710 | 3,345 | 5,953 | 2,245 |
| **HVAC conservation features (more than one may apply)** | | | | | | | | | | |
| Economizer cycle | 601 | 107 | 141 | 147 | 206 | 30,636 | 6,923 | 7,879 | 8,999 | 6,835 |
| Regular HVAC maintenance | 3,178 | 480 | 674 | 1,279 | 744 | 70,219 | 13,528 | 15,633 | 26,552 | 14,506 |
| Building automation system (BAS)[1] | 781 | 117 | 160 | 291 | 212 | 37,513 | 7,362 | 8,090 | 14,544 | 7,517 |
| **Window and interior lighting features (more than one may apply)** | | | | | | | | | | |
| Multipaned windows | 3,012 | 483 | 842 | 1,072 | 614 | 61,120 | 11,813 | 15,612 | 22,707 | 10,987 |
| Tinted window glass | 1,875 | 155 | 373 | 820 | 527 | 45,313 | 6,651 | 9,040 | 19,010 | 10,611 |
| Reflective window glass | 549 | 61 | 114 | 205 | 169 | 15,810 | 2,296 | 3,809 | 5,461 | 4,244 |
| External overhangs or awnings | 1,867 | 204 | 393 | 820 | 450 | 32,430 | 4,461 | 6,575 | 13,910 | 7,485 |
| Skylights or atriums | 591 | 80 | 94 | 210 | 207 | 22,306 | 4,186 | 4,082 | 8,048 | 5,990 |
| Light scheduling | 918 | 131 | 204 | 359 | 224 | 30,516 | 6,141 | 6,627 | 10,720 | 7,028 |
| Occupancy sensors | 813 | 137 | 155 | 256 | 266 | 35,876 | 7,734 | 7,906 | 11,982 | 8,254 |
| Multi-level lighting or dimming | 349 | 53 | 69 | 134 | 93 | 14,522 | 2,449 | 3,162 | 5,374 | 3,537 |
| Daylight harvesting | 125 | 19 | 29 | 53 | 24 | 6,090 | 1,032 | 1,486 | 1,993 | 1,580 |
| Demand responsive lighting | 176 | Q | 35 | 63 | Q | 4,866 | 648 | 1,017 | 1,699 | 1,502 |
| Building automation system (BAS) for lighting[1] | 208 | 32 | 36 | 83 | 57 | 12,275 | 2,412 | 2,428 | 4,458 | 2,977 |

## Table B3. Census region, number of buildings and floorspace, 2012 - PUBLIC USE DATA VERSION

| | Number of buildings (thousand) | | | | | Total floorspace (million square feet) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | All buildings | North-east | Mid-west | South | West | All buildings | North-east | Mid-west | South | West |
| **All buildings** | 5,557 | 805 | 1,237 | 2,247 | 1,267 | 88,175 | 16,081 | 19,380 | 34,363 | 18,351 |
| **Equipment usage reduced when building not in full use (more than one may apply)** | | | | | | | | | | |
| Heating | 3,699 | 582 | 842 | 1,398 | 877 | 64,126 | 12,819 | 14,438 | 23,394 | 13,475 |
| Cooling | 3,517 | 473 | 764 | 1,438 | 841 | 63,260 | 11,826 | 13,665 | 24,554 | 13,215 |
| Lighting | 4,757 | 707 | 1,055 | 1,898 | 1,096 | 79,657 | 14,796 | 17,723 | 30,630 | 16,508 |

[1]In earlier CBECS publications, BAS was referred to as *Energy Management and Control System (EMCS)* .

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 20 buildings were sampled.

N = No cases in reporting sample.

Notes: ● Because of rounding, data may not sum to totals. ● See *Guide to the 2012 CBECS Detailed Tables* or *CBECS Terminology* for definition of terms used in these tables and/or comparison of differences with prior CBECS tables. Both references can be accessed from http://www.eia.gov/consumption/commercial/data/2012/

Source: U.S. Energy Information Administration, Office of Energy Consumption and Efficiency Statistics, Form EIA-871A of the 2012 Commercial Buildings Energy Consumption Survey.

## Table C1. Total energy consumption by major fuel, 2012 - PUBLIC USE DATA VERSION

| | All buildings | | Total energy consumption (trillion Btu) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Electricity | | | | |
| | Number of buildings (thousand) | Total floorspace (million square feet) | Sum of major fuels | Primary | Site | Natural gas | Fuel oil | District heat |
| **All buildings** | 5,557 | 88,175 | 6,960 | 12,931 | 4,240 | 2,247 | 134 | 340 |
| **Building floorspace (square feet)** | | | | | | | | |
| 1,001 to 5,000 | 2,777 | 8,042 | 723 | 1,357 | 445 | 256 | 21 | Q |
| 5,001 to 10,000 | 1,229 | 8,902 | 646 | 1,178 | 386 | 248 | 10 | Q |
| 10,001 to 25,000 | 884 | 15,207 | 876 | 1,655 | 543 | 304 | 20 | Q |
| 25,001 to 50,000 | 332 | 11,915 | 822 | 1,549 | 508 | 283 | 14 | 17 |
| 50,001 to 100,000 | 199 | 13,914 | 1,066 | 1,994 | 654 | 337 | 23 | 51 |
| 100,001 to 200,000 | 90 | 12,425 | 1,034 | 1,974 | 647 | 290 | 20 | 77 |
| 200,001 to 500,000 | 38 | 10,718 | 1,026 | 1,875 | 615 | 310 | 14 | 88 |
| Over 500,000 | 8 | 7,053 | 767 | 1,348 | 442 | 219 | 12 | 94 |
| **Principal building activity** | | | | | | | | |
| Education | 389 | 12,407 | 842 | 1,396 | 458 | 291 | 28 | 64 |
| Food sales | 177 | 1,252 | 262 | 634 | 208 | 53 | Q | N |
| Food service | 380 | 1,927 | 514 | 850 | 279 | 228 | Q | Q |
| Health care | 157 | 4,133 | 718 | 1,114 | 365 | 265 | 20 | 68 |
| Inpatient | 10 | 2,352 | 549 | 767 | 251 | 219 | 16 | 62 |
| Outpatient | 147 | 1,780 | 169 | 348 | 114 | 46 | Q | Q |
| Lodging | 158 | 5,722 | 564 | 928 | 304 | 220 | 8 | 31 |
| Mercantile | 602 | 11,391 | 1,007 | 2,149 | 704 | 292 | 9 | Q |
| Retail (other than mall) | 438 | 5,437 | 364 | 856 | 281 | 74 | 7 | Q |
| Enclosed and strip malls | 164 | 5,954 | 644 | 1,292 | 424 | 217 | Q | Q |
| Office | 1,012 | 16,115 | 1,240 | 2,636 | 864 | 282 | 18 | 75 |
| Public assembly | 352 | 5,531 | 480 | 837 | 274 | 135 | 7 | 64 |
| Public order and safety | 84 | 1,535 | 133 | 223 | 73 | 41 | 2 | Q |
| Religious worship | 412 | 4,760 | 173 | 248 | 81 | 87 | 5 | N |
| Service | 619 | 4,743 | 272 | 389 | 128 | 122 | 16 | Q |
| Warehouse and storage | 796 | 13,130 | 428 | 866 | 284 | 139 | 5 | Q |
| Other | 125 | 2,273 | 285 | 580 | 190 | 81 | 10 | Q |
| Vacant | 296 | 3,257 | 42 | 80 | 26 | 13 | Q | Q |
| **Year constructed** | | | | | | | | |
| Before 1920 | 362 | 4,086 | 238 | 332 | 109 | 87 | 16 | 25 |
| 1920 to 1945 | 488 | 6,153 | 418 | 667 | 219 | 145 | 14 | 40 |
| 1946 to 1959 | 599 | 7,352 | 537 | 884 | 290 | 199 | 18 | 29 |
| 1960 to 1969 | 639 | 10,458 | 902 | 1,531 | 502 | 314 | 20 | 66 |
| 1970 to 1979 | 684 | 10,873 | 1,011 | 1,776 | 582 | 340 | 16 | 73 |
| 1980 to 1989 | 915 | 15,573 | 1,164 | 2,430 | 797 | 335 | 16 | 17 |
| 1990 to 1999 | 845 | 14,101 | 1,102 | 2,217 | 727 | 338 | 14 | 23 |
| 2000 to 2003 | 375 | 7,229 | 578 | 1,159 | 380 | 158 | 10 | Q |
| 2004 to 2007 | 347 | 6,639 | 528 | 1,008 | 331 | 172 | 3 | 23 |
| 2008 to 2012 | 303 | 5,712 | 483 | 925 | 303 | 159 | 6 | Q |

## Table C1. Total energy consumption by major fuel, 2012 - PUBLIC USE DATA VERSION

| | All buildings | | Total energy consumption (trillion Btu) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Electricity | | | | |
| | Number of buildings (thousand) | Total floorspace (million square feet) | Sum of major fuels | Primary | Site | Natural gas | Fuel oil | District heat |
| **All buildings** | 5,557 | 88,175 | 6,960 | 12,931 | 4,240 | 2,247 | 134 | 340 |
| **Census region and division** | | | | | | | | |
| Northeast | 805 | 16,081 | 1,458 | 2,292 | 751 | 499 | 90 | 118 |
| New England | 302 | 4,408 | 367 | 525 | 172 | 111 | 47 | Q |
| Middle Atlantic | 504 | 11,673 | 1,091 | 1,767 | 579 | 388 | 42 | 81 |
| Midwest | 1,237 | 19,380 | 1,565 | 2,594 | 850 | 642 | 15 | 58 |
| East North Central | 735 | 12,963 | 1,130 | 1,814 | 595 | 493 | 10 | 32 |
| West North Central | 502 | 6,417 | 435 | 780 | 256 | 149 | 5 | Q |
| South | 2,247 | 34,363 | 2,565 | 5,517 | 1,809 | 615 | 23 | 118 |
| South Atlantic | 1,091 | 17,957 | 1,358 | 2,982 | 978 | 305 | 16 | 59 |
| East South Central | 370 | 4,896 | 369 | 736 | 241 | 103 | 3 | Q |
| West South Central | 786 | 11,510 | 838 | 1,800 | 590 | 206 | 4 | Q |
| West | 1,267 | 18,351 | 1,372 | 2,529 | 829 | 491 | 7 | 45 |
| Mountain | 338 | 4,900 | 418 | 698 | 229 | 163 | Q | 23 |
| Pacific | 929 | 13,451 | 955 | 1,831 | 600 | 328 | 5 | 22 |
| **Number of floors** | | | | | | | | |
| One | 3,836 | 40,641 | 2,831 | 5,675 | 1,861 | 918 | 42 | Q |
| Two | 1,158 | 20,448 | 1,459 | 2,697 | 884 | 510 | 32 | Q |
| Three | 374 | 8,264 | 667 | 1,137 | 373 | 224 | 23 | 47 |
| Four to nine | 177 | 13,514 | 1,432 | 2,402 | 788 | 443 | 28 | 173 |
| Ten or more | 13 | 5,307 | 571 | 1,020 | 335 | 151 | 8 | 77 |
| **Elevators and escalators (more than one may apply)** | | | | | | | | |
| Any elevators | 405 | 32,144 | 3,181 | 5,610 | 1,840 | 970 | 56 | 315 |
| Number of elevators | | | | | | | | |
| One | 272 | 11,257 | 882 | 1,527 | 501 | 295 | 16 | 71 |
| Two to five | 118 | 12,845 | 1,241 | 2,314 | 759 | 353 | 26 | 103 |
| Six or more | 16 | 8,042 | 1,057 | 1,769 | 580 | 322 | 15 | 141 |
| Any escalators | 10 | 3,482 | 377 | 688 | 226 | 98 | 5 | 48 |
| **Number of workers (main shift)** | | | | | | | | |
| Fewer than 5 | 2,892 | 18,113 | 756 | 1,390 | 456 | 264 | 31 | Q |
| 5 to 9 | 1,085 | 9,144 | 598 | 1,164 | 382 | 202 | 9 | Q |
| 10 to 19 | 731 | 9,833 | 772 | 1,376 | 451 | 298 | 11 | Q |
| 20 to 49 | 513 | 14,884 | 1,188 | 2,287 | 750 | 379 | 17 | 43 |
| 50 to 99 | 206 | 13,507 | 1,148 | 2,225 | 729 | 360 | 21 | Q |
| 100 to 249 | 93 | 10,943 | 1,058 | 1,928 | 632 | 337 | 22 | 67 |
| 250 or more | 37 | 11,750 | 1,441 | 2,562 | 840 | 408 | 22 | 171 |
| **Weekly operating hours** | | | | | | | | |
| Fewer than 40 | 1,149 | 8,322 | 228 | 364 | 119 | 97 | 10 | Q |
| 40 to 48 | 1,346 | 15,970 | 831 | 1,608 | 527 | 258 | 27 | 19 |
| 49 to 60 | 1,244 | 20,977 | 1,258 | 2,483 | 814 | 369 | 25 | 49 |
| 61 to 84 | 764 | 16,314 | 1,369 | 2,590 | 849 | 470 | 20 | 31 |
| 85 to 167 | 479 | 9,434 | 1,098 | 2,079 | 682 | 349 | 9 | 58 |
| Open continuously | 575 | 17,157 | 2,176 | 3,807 | 1,248 | 704 | 44 | 179 |

## Table C1. Total energy consumption by major fuel, 2012 - PUBLIC USE DATA VERSION

| | All buildings | | Total energy consumption (trillion Btu) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Electricity | | | | |
| | Number of buildings (thousand) | Total floorspace (million square feet) | Sum of major fuels | Primary | Site | Natural gas | Fuel oil | District heat |
| **All buildings** | 5,557 | 88,175 | 6,960 | 12,931 | 4,240 | 2,247 | 134 | 340 |
| **Party responsible for operation and maintenance of energy systems** | | | | | | | | |
| Building owner | 4,715 | 74,754 | 5,805 | 10,708 | 3,511 | 1,850 | 121 | 323 |
| Business owner or tenant | 724 | 11,346 | 983 | 1,892 | 620 | 343 | 10 | Q |
| Property management | 54 | 1,244 | 96 | 192 | 63 | 26 | 1 | Q |
| Other | 64 | 831 | 76 | 139 | 46 | 27 | Q | Q |
| **Provider of direct input on energy-related equipment purchases** | | | | | | | | |
| Building owner | 4,876 | 77,338 | 5,980 | 11,043 | 3,621 | 1,913 | 123 | 324 |
| Business owner or tenant | 540 | 8,304 | 767 | 1,479 | 485 | 265 | 6 | Q |
| Property management | 35 | 889 | 61 | 123 | 40 | 17 | 2 | Q |
| Other | 106 | 1,643 | 153 | 286 | 94 | 52 | 3 | Q |
| **Number of establishments** | | | | | | | | |
| One | 4,205 | 55,725 | 4,482 | 8,086 | 2,651 | 1,525 | 98 | 208 |
| 2 to 5 | 862 | 18,066 | 1,401 | 2,588 | 849 | 429 | 25 | 98 |
| 6 to 10 | 147 | 4,380 | 363 | 733 | 240 | 107 | 5 | 11 |
| 11 to 20 | 68 | 3,710 | 355 | 712 | 234 | 113 | 1 | Q |
| More than 20 | 27 | 3,899 | 346 | 792 | 260 | 67 | 4 | 15 |
| Currently unoccupied | 248 | 2,395 | 13 | 19 | 6 | 6 | Q | Q |
| **Predominant exterior wall material** | | | | | | | | |
| Brick, stone, or stucco | 2,312 | 41,466 | 3,456 | 6,205 | 2,035 | 1,160 | 59 | 203 |
| Concrete (block or poured) | 1,121 | 20,622 | 1,718 | 3,357 | 1,101 | 534 | 28 | 56 |
| Concrete panels | 210 | 8,706 | 664 | 1,253 | 411 | 208 | 7 | 38 |
| Siding or shingles | 905 | 5,916 | 400 | 743 | 244 | 134 | 21 | Q |
| Metal panels | 933 | 8,670 | 427 | 823 | 270 | 125 | 13 | Q |
| Window glass | 17 | 1,344 | 170 | 326 | 107 | 48 | 2 | 13 |
| Other | 37 | 857 | 80 | 143 | 47 | Q | Q | Q |
| No one major type | 21 | 595 | 45 | 81 | 26 | 14 | Q | Q |
| **Predominant roof material** | | | | | | | | |
| Metal surfacing | 1,672 | 16,296 | 864 | 1,757 | 576 | 241 | 23 | Q |
| Synthetic or rubber | 911 | 26,135 | 2,440 | 4,390 | 1,439 | 850 | 40 | 112 |
| Built-up | 836 | 21,858 | 1,862 | 3,509 | 1,151 | 582 | 31 | 98 |
| Slate or tile shingles | 406 | 4,460 | 371 | 610 | 200 | 114 | 4 | Q |
| Wooden materials (including shingles) | 157 | 1,140 | 93 | 144 | 47 | 41 | Q | Q |
| Asphalt, fiberglass, or other shingles | 1,483 | 15,115 | 1,105 | 2,043 | 670 | 368 | 27 | 40 |
| Concrete | 51 | 1,650 | 133 | 312 | 102 | 24 | 3 | Q |
| Other | 24 | 681 | 58 | 111 | 36 | 18 | Q | Q |
| No one major type | 18 | 841 | 35 | 55 | 18 | 10 | Q | Q |

## Table C1. Total energy consumption by major fuel, 2012 - PUBLIC USE DATA VERSION

| | All buildings | | Total energy consumption (trillion Btu) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Electricity | | | | |
| | Number of buildings (thousand) | Total floorspace (million square feet) | Sum of major fuels | Primary | Site | Natural gas | Fuel oil | District heat |
| **All buildings** | 5,557 | 88,175 | 6,960 | 12,931 | 4,240 | 2,247 | 134 | 340 |
| **Roof characteristics** | | | | | | | | |
| Roof tilt | | | | | | | | |
| Flat | 1,960 | 49,967 | 4,474 | 8,319 | 2,727 | 1,454 | 68 | 225 |
| Shallow pitch | 2,148 | 24,305 | 1,596 | 3,101 | 1,017 | 481 | 34 | 64 |
| Steeper pitch | 1,449 | 13,903 | 890 | 1,511 | 495 | 312 | 32 | Q |
| Cool roof | 740 | 19,570 | 1,836 | 3,380 | 1,108 | 602 | 33 | 93 |
| **Renovations in buildings constructed before 2008 (more than one may apply)** | | | | | | | | |
| Any type of renovation | 2,094 | 42,624 | 3,760 | 6,745 | 2,211 | 1,229 | 80 | 239 |
| Addition or annex | 444 | 12,932 | 1,291 | 2,128 | 698 | 467 | 34 | 91 |
| Reduction in floorspace | 71 | 1,886 | 225 | 371 | 122 | 69 | Q | Q |
| Roof replacement | 987 | 21,064 | 1,985 | 3,428 | 1,124 | 680 | 55 | 126 |
| Exterior wall replacement | 194 | 4,212 | 398 | 730 | 239 | 129 | 11 | 18 |
| Interior wall reconfiguration | 889 | 21,426 | 2,055 | 3,709 | 1,216 | 644 | 39 | 157 |
| Window replacement | 560 | 12,220 | 1,089 | 1,831 | 600 | 386 | 35 | 68 |
| HVAC equipment upgrade | 1,101 | 26,859 | 2,543 | 4,505 | 1,477 | 841 | 48 | 177 |
| Lighting upgrade | 982 | 25,614 | 2,438 | 4,261 | 1,397 | 809 | 52 | 179 |
| Electrical upgrade | 747 | 16,223 | 1,607 | 2,752 | 902 | 550 | 38 | 116 |
| Plumbing system upgrade | 644 | 13,927 | 1,396 | 2,311 | 758 | 514 | 33 | 90 |
| Insulation upgrade | 382 | 7,500 | 771 | 1,308 | 429 | 268 | 13 | 60 |
| Fire, safety, or security upgrade | 616 | 17,330 | 1,684 | 2,936 | 963 | 568 | 39 | 115 |
| Structural upgrade | 152 | 3,821 | 423 | 716 | 235 | 151 | 9 | 29 |
| Other | 39 | 872 | 69 | 135 | 44 | 14 | Q | Q |
| No renovations | 3,160 | 39,839 | 2,717 | 5,261 | 1,725 | 859 | 47 | 86 |
| Buildings constructed 2008 or later | 303 | 5,712 | 483 | 925 | 303 | 159 | 6 | Q |
| **Energy sources (more than one may apply)** | | | | | | | | |
| Electricity | 5,234 | 85,949 | 6,960 | 12,931 | 4,240 | 2,247 | 134 | 340 |
| Natural gas | 2,933 | 59,570 | 5,541 | 9,397 | 3,081 | 2,247 | 41 | 173 |
| Fuel oil | 467 | 20,488 | 2,231 | 3,973 | 1,302 | 623 | 134 | 171 |
| District heat | 48 | 5,817 | 807 | 1,077 | 353 | 108 | 6 | 340 |
| District chilled water | 54 | 4,476 | 664 | 891 | 292 | 133 | 4 | 235 |
| Propane | 510 | 7,709 | 583 | 1,148 | 377 | 146 | 43 | Q |
| Other | 172 | 3,825 | 301 | 518 | 170 | 108 | 8 | 15 |
| **Space-heating energy sources (more than one may apply)** | | | | | | | | |
| Electricity | 2,858 | 49,654 | 3,896 | 8,053 | 2,640 | 1,122 | 43 | 90 |
| Natural gas | 2,612 | 50,452 | 4,445 | 7,423 | 2,434 | 1,970 | 24 | 17 |
| Fuel oil | 270 | 4,360 | 360 | 541 | 177 | 78 | 104 | Q |
| District heat | 48 | 5,776 | 803 | 1,069 | 350 | 107 | 6 | 339 |
| Propane | 342 | 3,066 | 151 | 358 | 117 | 21 | 13 | Q |
| Other | 101 | 1,008 | 48 | 92 | 30 | 12 | 2 | Q |

## Table C1. Total energy consumption by major fuel, 2012 - PUBLIC USE DATA VERSION

| | All buildings | | Total energy consumption (trillion Btu) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Electricity | | | | |
| | Number of buildings (thousand) | Total floorspace (million square feet) | Sum of major fuels | Primary | Site | Natural gas | Fuel oil | District heat |
| **All buildings** | 5,557 | 88,175 | 6,960 | 12,931 | 4,240 | 2,247 | 134 | 340 |
| **Primary space-heating energy source** | | | | | | | | |
| Electricity | 1,819 | 26,541 | 1,844 | 4,570 | 1,498 | 335 | 10 | Q |
| Natural gas | 2,322 | 43,895 | 3,870 | 6,358 | 2,085 | 1,768 | 16 | Q |
| Fuel oil | 205 | 2,545 | 187 | 247 | 81 | 8 | 98 | Q |
| District heat | 47 | 5,644 | 793 | 1,053 | 345 | 105 | 5 | 337 |
| Propane | 261 | 1,948 | 63 | 186 | 61 | Q | Q | N |
| Other | 67 | 598 | 21 | 48 | 16 | Q | Q | N |
| **Cooling energy sources (more than one may apply)** | | | | | | | | |
| Electricity | 4,413 | 77,178 | 6,319 | 12,057 | 3,953 | 2,079 | 110 | 177 |
| Natural gas | 12 | 725 | 98 | 115 | 38 | 58 | 1 | Q |
| District chilled water | 54 | 4,476 | 664 | 891 | 292 | 133 | 4 | 235 |
| **Water-heating energy sources (more than one may apply)** | | | | | | | | |
| Electricity | 2,658 | 43,502 | 3,100 | 6,752 | 2,214 | 742 | 57 | 87 |
| Natural gas | 1,758 | 39,955 | 4,027 | 6,663 | 2,185 | 1,770 | 24 | 48 |
| Fuel oil | 77 | 1,918 | 174 | 234 | 77 | 37 | 60 | Q |
| District heat | 25 | 4,424 | 652 | 859 | 282 | 87 | 4 | 278 |
| Propane | 142 | 1,580 | 87 | 241 | 79 | Q | 5 | Q |
| **Cooking energy sources (more than one may apply)** | | | | | | | | |
| Electricity | 1,010 | 25,296 | 2,511 | 4,719 | 1,547 | 810 | 43 | 111 |
| Natural gas | 740 | 25,050 | 3,014 | 5,032 | 1,650 | 1,237 | 24 | 102 |
| Propane | 144 | 2,006 | 167 | 365 | 120 | 19 | 27 | Q |
| **Energy end uses (more than one may apply)** | | | | | | | | |
| Buildings with space heating | 4,722 | 81,171 | 6,779 | 12,461 | 4,086 | 2,222 | 132 | 340 |
| Buildings with cooling | 4,461 | 80,369 | 6,771 | 12,646 | 4,146 | 2,177 | 112 | 336 |
| Buildings with water heating | 4,423 | 80,097 | 6,795 | 12,584 | 4,126 | 2,208 | 125 | 335 |
| Buildings with cooking | 1,589 | 39,014 | 4,078 | 7,288 | 2,390 | 1,442 | 76 | 171 |
| Buildings with manufacturing | 259 | 5,214 | 360 | 695 | 228 | 123 | 6 | Q |
| Buildings with electricity generation | 410 | 25,959 | 2,802 | 5,102 | 1,673 | 854 | 68 | 207 |
| **Percent of floorspace heated** | | | | | | | | |
| Not heated | 835 | 7,004 | 181 | 470 | 154 | 25 | 2 | Q |
| 1 to 50 | 697 | 10,152 | 467 | 1,018 | 334 | 123 | 10 | Q |
| 51 to 99 | 727 | 14,678 | 1,298 | 2,433 | 798 | 443 | 18 | 39 |
| 100 | 3,298 | 56,342 | 5,014 | 9,010 | 2,954 | 1,656 | 104 | 300 |
| **Percent of floorspace cooled** | | | | | | | | |
| Not cooled | 1,096 | 7,806 | 189 | 285 | 94 | 70 | 22 | Q |
| 1 to 50 | 1,173 | 19,384 | 988 | 1,591 | 522 | 417 | 34 | 15 |
| 51 to 99 | 897 | 22,861 | 2,143 | 3,966 | 1,300 | 667 | 37 | 137 |
| 100 | 2,391 | 38,125 | 3,641 | 7,088 | 2,324 | 1,092 | 41 | 184 |

## Table C1. Total energy consumption by major fuel, 2012 - PUBLIC USE DATA VERSION

| | All buildings | | Total energy consumption (trillion Btu) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Electricity | | | | |
| | Number of buildings (thousand) | Total floorspace (million square feet) | Sum of major fuels | Primary | Site | Natural gas | Fuel oil | District heat |
| **All buildings** | 5,557 | 88,175 | 6,960 | 12,931 | 4,240 | 2,247 | 134 | 340 |
| **Percent lit when open** | | | | | | | | |
| Zero | 70 | 322 | 4 | 11 | 3 | Q | Q | Q |
| 1 to 50 | 1,099 | 12,923 | 642 | 1,184 | 388 | 214 | 16 | 23 |
| 51 to 99 | 1,666 | 35,167 | 3,047 | 5,465 | 1,792 | 1,032 | 56 | 166 |
| 100 | 2,222 | 36,159 | 3,243 | 6,238 | 2,045 | 989 | 59 | 150 |
| Building never open/electricity not used | 501 | 3,605 | 24 | 33 | 11 | 10 | Q | Q |
| **Percent lit during off hours** | | | | | | | | |
| Zero | 2,489 | 25,373 | 1,293 | 2,412 | 791 | 438 | 42 | 23 |
| 1 to 50 | 2,441 | 51,325 | 4,345 | 8,158 | 2,675 | 1,394 | 72 | 203 |
| 51 to 100 | 202 | 6,798 | 1,016 | 1,713 | 562 | 341 | 15 | 99 |
| Building always open with no "off hours" | 102 | 2,453 | 306 | 648 | 212 | 73 | Q | 15 |
| Electricity not used | 323 | 2,226 | N | N | N | N | N | N |
| **Heating equipment (more than one may apply)** | | | | | | | | |
| Heat pumps | 628 | 11,906 | 899 | 1,869 | 613 | 247 | 12 | 27 |
| Furnaces | 755 | 9,096 | 616 | 1,108 | 363 | 244 | 7 | Q |
| Individual space heaters | 1,247 | 20,989 | 1,571 | 2,826 | 927 | 544 | 38 | 63 |
| District heat | 48 | 5,776 | 803 | 1,069 | 350 | 107 | 6 | 339 |
| Boilers | 544 | 22,817 | 2,262 | 3,640 | 1,194 | 984 | 80 | Q |
| Packaged heating units | 2,802 | 49,621 | 4,081 | 8,024 | 2,631 | 1,360 | 46 | 45 |
| Other | 62 | 1,573 | 191 | 399 | 131 | 54 | Q | Q |
| **Cooling equipment (more than one may apply)** | | | | | | | | |
| Residential-type central air conditioners | 1,546 | 15,289 | 1,086 | 1,941 | 637 | 416 | 15 | Q |
| Heat pumps | 692 | 12,617 | 939 | 1,965 | 644 | 257 | 12 | 26 |
| Individual air conditioners | 709 | 12,468 | 1,013 | 1,665 | 546 | 374 | 37 | 56 |
| District chilled water | 54 | 4,476 | 664 | 891 | 292 | 133 | 4 | 235 |
| Central chillers | 163 | 17,009 | 1,852 | 3,416 | 1,120 | 598 | 41 | 92 |
| Packaged air conditioning units | 1,909 | 45,717 | 3,970 | 7,558 | 2,478 | 1,317 | 62 | 112 |
| Swamp coolers | 109 | 1,923 | 175 | 299 | 98 | 71 | 1 | Q |
| Other | Q | 331 | 45 | 98 | 32 | 10 | Q | Q |
| **Main equipment replaced since 1990 (more than one may apply)** | | | | | | | | |
| Heating | 1,874 | 27,986 | 2,164 | 4,036 | 1,323 | 790 | 51 | Q |
| Cooling | 1,971 | 31,297 | 2,520 | 4,632 | 1,519 | 881 | 57 | 63 |
| **Water-heating equipment** | | | | | | | | |
| Centralized system | 3,348 | 48,519 | 4,208 | 7,578 | 2,485 | 1,413 | 85 | 226 |
| Distributed system | 690 | 12,847 | 832 | 1,642 | 538 | 257 | 13 | 23 |
| Combination of centralized and distributed system | 385 | 18,731 | 1,754 | 3,364 | 1,103 | 538 | 27 | 86 |

## Table C1. Total energy consumption by major fuel, 2012 - PUBLIC USE DATA VERSION

| | All buildings | | Total energy consumption (trillion Btu) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Electricity | | | | |
| | Number of buildings (thousand) | Total floorspace (million square feet) | Sum of major fuels | Primary | Site | Natural gas | Fuel oil | District heat |
| **All buildings** | 5,557 | 88,175 | 6,960 | 12,931 | 4,240 | 2,247 | 134 | 340 |
| **Lighting equipment types (more than one may apply)** | | | | | | | | |
| Incandescent | 1,826 | 38,551 | 3,539 | 6,366 | 2,087 | 1,198 | 71 | 183 |
| Standard fluorescent | 4,649 | 80,881 | 6,710 | 12,458 | 4,085 | 2,164 | 127 | 335 |
| Compact fluorescent | 2,302 | 54,402 | 5,093 | 9,254 | 3,034 | 1,671 | 89 | 299 |
| High-intensity discharge (HID) | 525 | 23,520 | 2,185 | 3,975 | 1,303 | 705 | 50 | 128 |
| Halogen | 905 | 28,175 | 2,694 | 4,976 | 1,632 | 884 | 42 | 136 |
| LED | 473 | 21,987 | 2,362 | 4,315 | 1,415 | 762 | 29 | 156 |
| Other | 10 | 426 | 58 | 99 | 32 | 15 | Q | Q |
| **Refrigeration equipment (more than one may apply)** | | | | | | | | |
| Any refrigeration | 3,984 | 74,722 | 6,468 | 11,962 | 3,922 | 2,104 | 118 | 324 |
| Walk-in units | 811 | 28,538 | 3,525 | 6,309 | 2,069 | 1,249 | 53 | 154 |
| Cases or cabinets | 915 | 28,676 | 3,315 | 6,060 | 1,987 | 1,117 | 48 | 163 |
| Large cold storage areas | 78 | 4,125 | 530 | 1,018 | 334 | 176 | 6 | 15 |
| Commercial ice makers | 846 | 32,680 | 3,730 | 6,796 | 2,228 | 1,239 | 51 | 213 |
| Residential-type or compact units | 3,388 | 63,443 | 5,180 | 9,480 | 3,108 | 1,687 | 106 | 279 |
| Vending machines | 960 | 44,283 | 4,176 | 7,722 | 2,532 | 1,294 | 71 | 280 |
| No refrigeration | 1,573 | 13,453 | 492 | 969 | 318 | 143 | 16 | 15 |
| **Office equipment (more than one may apply)** | | | | | | | | |
| Desktop computers | 3,977 | 78,139 | 6,583 | 12,250 | 4,016 | 2,111 | 121 | 336 |
| With flat screen monitors | 3,847 | 77,236 | 6,520 | 12,127 | 3,976 | 2,089 | 119 | 336 |
| With multiple monitors | 911 | 31,026 | 2,941 | 5,445 | 1,785 | 887 | 49 | 220 |
| Laptop computers | 2,730 | 64,033 | 5,464 | 10,071 | 3,302 | 1,754 | 100 | 308 |
| Dedicated servers | 1,748 | 53,544 | 4,782 | 9,040 | 2,964 | 1,485 | 92 | 242 |
| Laser printers | 2,339 | 54,839 | 4,792 | 8,906 | 2,920 | 1,508 | 86 | 277 |
| Inkjet printers | 2,187 | 36,889 | 2,903 | 5,448 | 1,786 | 955 | 59 | 103 |
| FAX machines | 3,185 | 67,451 | 5,703 | 10,710 | 3,511 | 1,821 | 104 | 267 |
| Photocopiers | 2,163 | 60,076 | 5,107 | 9,449 | 3,098 | 1,596 | 101 | 312 |
| **Number of desktop computers** | | | | | | | | |
| None | 1,581 | 10,036 | 377 | 681 | 223 | 136 | 13 | Q |
| 1 to 4 | 2,039 | 16,304 | 1,184 | 2,134 | 700 | 453 | 27 | Q |
| 5 to 9 | 821 | 9,425 | 738 | 1,391 | 456 | 266 | 11 | Q |
| 10 to 19 | 482 | 9,493 | 675 | 1,343 | 440 | 212 | 12 | Q |
| 20 to 49 | 355 | 13,479 | 1,120 | 2,184 | 716 | 346 | 16 | 42 |
| 50 to 99 | 143 | 8,318 | 646 | 1,244 | 408 | 204 | 13 | 21 |
| 100 to 249 | 92 | 9,705 | 960 | 1,663 | 545 | 274 | 16 | 125 |
| 250 or more | 44 | 11,414 | 1,261 | 2,291 | 751 | 356 | 26 | 128 |

## Table C1. Total energy consumption by major fuel, 2012 - PUBLIC USE DATA VERSION

| | All buildings | | Total energy consumption (trillion Btu) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Electricity | | | | |
| | Number of buildings (thousand) | Total floorspace (million square feet) | Sum of major fuels | Primary | Site | Natural gas | Fuel oil | District heat |
| **All buildings** | 5,557 | 88,175 | 6,960 | 12,931 | 4,240 | 2,247 | 134 | 340 |
| **Number of laptop computers** | | | | | | | | |
| None | 2,827 | 24,142 | 1,497 | 2,860 | 938 | 493 | 34 | 32 |
| 1 to 4 | 1,944 | 21,650 | 1,515 | 2,835 | 929 | 539 | 29 | 18 |
| 5 to 9 | 350 | 8,383 | 698 | 1,315 | 431 | 227 | 14 | Q |
| 10 to 19 | 181 | 8,446 | 719 | 1,358 | 445 | 242 | 8 | 24 |
| 20 to 49 | 144 | 9,586 | 906 | 1,603 | 526 | 287 | 16 | 78 |
| 50 to 99 | 58 | 5,244 | 506 | 889 | 291 | 161 | 14 | 40 |
| 100 to 249 | 35 | 5,244 | 525 | 938 | 308 | 141 | 12 | 64 |
| 250 or more | 20 | 5,481 | 595 | 1,134 | 372 | 156 | 8 | 59 |
| **Number of dedicated servers** | | | | | | | | |
| None | 3,809 | 34,631 | 2,178 | 3,891 | 1,276 | 762 | 42 | 98 |
| 1 to 4 | 1,562 | 34,273 | 2,717 | 5,169 | 1,695 | 896 | 59 | 68 |
| 5 to 9 | 97 | 6,294 | 565 | 1,048 | 344 | 191 | 5 | 26 |
| 10 to 19 | 50 | 5,659 | 593 | 1,137 | 373 | 152 | 13 | 55 |
| 20 to 49 | 25 | 3,781 | 396 | 730 | 239 | 122 | 7 | 28 |
| 50 or more | 13 | 3,536 | 512 | 956 | 314 | 125 | 9 | 65 |
| **Number of photocopiers** | | | | | | | | |
| None | 3,394 | 28,099 | 1,853 | 3,483 | 1,142 | 650 | 33 | 28 |
| One | 1,325 | 17,814 | 1,201 | 2,232 | 732 | 420 | 29 | Q |
| 2 to 4 | 648 | 20,440 | 1,596 | 3,043 | 998 | 515 | 30 | 52 |
| 5 to 9 | 116 | 8,920 | 783 | 1,501 | 492 | 238 | 10 | 43 |
| 10 or more | 75 | 12,903 | 1,527 | 2,672 | 876 | 423 | 32 | 196 |
| **Number of TVs or video displays** | | | | | | | | |
| None | 2,718 | 24,984 | 1,213 | 2,326 | 763 | 395 | 36 | 20 |
| One | 1,145 | 10,105 | 697 | 1,255 | 412 | 254 | 20 | Q |
| 2 to 4 | 1,035 | 16,846 | 1,310 | 2,455 | 805 | 464 | 19 | 22 |
| 5 to 9 | 314 | 8,150 | 777 | 1,564 | 513 | 223 | 10 | Q |
| 10 to 19 | 154 | 8,133 | 809 | 1,527 | 500 | 234 | 11 | 64 |
| 20 to 49 | 106 | 8,132 | 716 | 1,450 | 476 | 193 | 14 | 35 |
| 50 to 99 | 48 | 4,439 | 431 | 804 | 264 | 104 | 10 | 54 |
| 100 or more | 37 | 7,386 | 1,006 | 1,550 | 508 | 380 | 16 | 102 |
| **Food preparation or serving areas in non-food service buildings (more than one may apply)** | | | | | | | | |
| Snack bar or concession stand | 153 | 9,752 | 1,112 | 1,985 | 651 | 364 | 16 | 81 |
| Fast food or small restaurant | 173 | 9,838 | 1,206 | 2,333 | 765 | 372 | 8 | 61 |
| Cafeteria or large restaurant | 130 | 15,152 | 1,623 | 2,715 | 890 | 586 | 42 | 105 |
| Commercial kitchen/ food preparation area | 282 | 16,067 | 1,797 | 3,037 | 996 | 672 | 33 | 96 |
| Small kitchen area | 736 | 14,340 | 1,187 | 2,111 | 692 | 409 | 31 | 55 |

## Table C1. Total energy consumption by major fuel, 2012 - PUBLIC USE DATA VERSION

| | All buildings | | Total energy consumption (trillion Btu) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Electricity | | | | |
| | Number of buildings (thousand) | Total floorspace (million square feet) | Sum of major fuels | Primary | Site | Natural gas | Fuel oil | District heat |
| **All buildings** | 5,557 | 88,175 | 6,960 | 12,931 | 4,240 | 2,247 | 134 | 340 |
| **Separate computer areas (more than one may apply)** | | | | | | | | |
| Data center or server farm | 97 | 10,986 | 1,355 | 2,481 | 813 | 386 | 27 | 128 |
| Computer-based training room | 244 | 17,695 | 1,696 | 3,119 | 1,023 | 515 | 36 | 122 |
| Student or public computer center | 238 | 14,253 | 1,275 | 2,114 | 693 | 435 | 24 | 123 |
| **HVAC conservation features (more than one may apply)** | | | | | | | | |
| Economizer cycle | 601 | 30,636 | 3,140 | 5,606 | 1,838 | 1,014 | 43 | 245 |
| Regular HVAC maintenance | 3,178 | 70,219 | 6,201 | 11,533 | 3,781 | 1,990 | 111 | 318 |
| Building automation system (BAS)[1] | 781 | 37,513 | 3,708 | 6,967 | 2,284 | 1,100 | 58 | 265 |
| **Window and interior lighting features (more than one may apply)** | | | | | | | | |
| Multipaned windows | 3,012 | 61,120 | 5,248 | 9,680 | 3,174 | 1,751 | 95 | 228 |
| Tinted window glass | 1,875 | 45,313 | 3,971 | 7,477 | 2,451 | 1,289 | 48 | 183 |
| Reflective window glass | 549 | 15,810 | 1,652 | 3,125 | 1,025 | 541 | 21 | 66 |
| External overhangs or awnings | 1,867 | 32,430 | 3,087 | 5,715 | 1,874 | 1,030 | 41 | 143 |
| Skylights or atriums | 591 | 22,306 | 2,009 | 3,451 | 1,132 | 679 | 39 | 159 |
| Light scheduling | 918 | 30,516 | 2,930 | 5,631 | 1,846 | 927 | 37 | 119 |
| Occupancy sensors | 813 | 35,876 | 3,432 | 6,328 | 2,075 | 1,066 | 59 | 231 |
| Multi-level lighting or dimming | 349 | 14,522 | 1,618 | 2,833 | 929 | 573 | 16 | 100 |
| Daylight harvesting | 125 | 6,090 | 619 | 1,133 | 372 | 197 | 7 | 44 |
| Demand responsive lighting | 176 | 4,866 | 410 | 829 | 272 | 127 | Q | Q |
| Building automation system (BAS) for lighting[1] | 208 | 12,275 | 1,200 | 2,486 | 815 | 335 | 10 | 40 |
| **Equipment usage reduced when building not in full use (more than one may apply)** | | | | | | | | |
| Heating | 3,699 | 64,126 | 5,018 | 9,286 | 3,044 | 1,674 | 93 | 207 |
| Cooling | 3,517 | 63,260 | 5,005 | 9,383 | 3,076 | 1,643 | 78 | 208 |
| Lighting | 4,757 | 79,657 | 6,423 | 11,831 | 3,879 | 2,104 | 123 | 317 |

[1]In earlier CBECS publications, BAS was referred to as *Energy Management and Control System (EMCS).*

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 20 buildings were sampled.

N = No cases in reporting sample.

Notes: ● Because of rounding, data may not sum to totals. ● See the *Guide to the 2012 CBECS Detailed Tables* or *CBECS Terminology* for definitions of terms used in these tables and/or comparison of differences with prior CBECS tables. Both references can be accessed from http://www.eia.gov/consumption/commercial/data/2012/ ● Site electricity is the amount of electricity delivered to commercial buildings. Primary electricity, which is not included in the *Sum of major fuels* category, is site electricity plus the conversion losses in the generation, transmission, and distribution processes. ● Statistics for the *Energy end uses* category represent total consumption in buildings that have the end use, not consumption specifically for that particular end use. ● HVAC = Heating, ventilation, and air conditioning.

Source: U.S. Energy Information Administration, Office of Energy Consumption and Efficiency Statistics, Forma EIA-871A, C, D, E, and F of the 2012 Commercial Buildings Energy Consumption Survey.

## Table C4. Sum of major fuel consumption and expenditure gross energy intensities, 2012 - PUBLIC USE VERSION

| | Sum of major fuel consumption | | | | | | Sum of major fuel expenditures | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Distribution of building-level intensities (thousand Btu/square foot) | | | | | |
| | per building (million Btu) | per square foot (thousand Btu) | per worker (million Btu) | 25th per-centile | Median | 75th per-centile | per building (thousand dollars) | per square foot (dollars) | per million Btu (dollars) |
| **All buildings** | 1,252 | 78.9 | 78.9 | 22.9 | 49.9 | 93.6 | 26.8 | 1.7 | 21.4 |
| **Building floorspace (square feet)** | | | | | | | | | |
| 1,001 to 5,000 | 260 | 89.9 | 70.6 | 23.6 | 52.5 | 107.4 | 5.9 | 2.0 | 22.6 |
| 5,001 to 10,000 | 525 | 72.6 | 70.0 | 20.9 | 43.1 | 77.2 | 11.6 | 1.6 | 22.0 |
| 10,001 to 25,000 | 992 | 57.6 | 61.8 | 20.0 | 44.7 | 80.8 | 22.5 | 1.3 | 22.7 |
| 25,001 to 50,000 | 2,477 | 69.0 | 72.6 | 25.3 | 50.8 | 89.8 | 52.1 | 1.5 | 21.1 |
| 50,001 to 100,000 | 5,353 | 76.6 | 86.4 | 34.0 | 59.0 | 94.5 | 113.0 | 1.6 | 21.1 |
| 100,001 to 200,000 | 11,487 | 83.2 | 91.4 | 39.1 | 65.8 | 102.0 | 243.2 | 1.8 | 21.2 |
| 200,001 to 500,000 | 27,198 | 95.7 | 99.1 | 49.0 | 76.7 | 114.5 | 553.3 | 2.0 | 20.3 |
| Over 500,000 | 95,902 | 108.7 | 83.3 | 45.9 | 70.5 | 129.7 | 1,994.8 | 2.3 | 20.8 |
| **Principal building activity** | | | | | | | | | |
| Education | 2,165 | 67.8 | 77.3 | 30.6 | 50.8 | 81.3 | 43.2 | 1.4 | 20.0 |
| Food sales | 1,484 | 209.5 | 223.6 | 127.5 | 219.0 | 314.1 | 35.0 | 4.9 | 23.6 |
| Food service | 1,355 | 267.0 | 150.0 | 93.4 | 243.6 | 448.1 | 26.2 | 5.2 | 19.3 |
| Health care | 4,579 | 173.6 | 94.5 | 43.0 | 62.3 | 90.4 | 83.3 | 3.2 | 18.2 |
| Inpatient | 57,296 | 233.3 | 128.8 | 161.1 | 205.5 | 273.7 | 977.6 | 4.0 | 17.1 |
| Outpatient | 1,147 | 94.8 | 50.6 | 33.8 | 61.1 | 83.0 | 25.1 | 2.1 | 21.9 |
| Lodging | 3,573 | 98.6 | 184.0 | 48.8 | 70.1 | 118.7 | 69.7 | 1.9 | 19.5 |
| Mercantile | 1,673 | 88.4 | 110.5 | 33.0 | 63.6 | 108.6 | 37.7 | 2.0 | 22.6 |
| Retail (other than mall) | 830 | 66.9 | 90.4 | 26.3 | 51.6 | 86.9 | 20.5 | 1.7 | 24.7 |
| Enclosed and strip malls | 3,925 | 108.1 | 126.4 | 58.6 | 103.0 | 176.5 | 83.7 | 2.3 | 21.3 |
| Office | 1,225 | 76.9 | 36.7 | 32.7 | 52.6 | 81.3 | 30.4 | 1.9 | 24.8 |
| Public assembly | 1,362 | 86.7 | 154.6 | 21.9 | 49.2 | 82.9 | 29.0 | 1.9 | 21.3 |
| Public order and safety | 1,584 | 86.5 | 71.6 | 32.1 | 63.5 | 104.9 | 33.1 | 1.8 | 20.9 |
| Religious worship | 421 | 36.4 | 89.3 | 12.1 | 24.3 | 48.9 | 8.1 | 0.7 | 19.3 |
| Service | 439 | 57.3 | 67.4 | 20.5 | 43.2 | 83.9 | 9.1 | 1.2 | 20.7 |
| Warehouse and storage | 539 | 32.6 | 67.4 | 7.0 | 18.4 | 40.3 | 12.2 | 0.7 | 22.6 |
| Other | 2,288 | 125.6 | 177.1 | 16.4 | 40.1 | 136.8 | 47.8 | 2.6 | 20.9 |
| Vacant | 140 | 12.8 | 176.2 | 4.0 | 11.2 | 30.2 | 3.3 | 0.3 | 23.5 |
| **Year constructed** | | | | | | | | | |
| Before 1920 | 658 | 58.2 | 71.9 | 18.8 | 42.2 | 85.4 | 14.3 | 1.3 | 21.8 |
| 1920 to 1945 | 856 | 67.9 | 69.5 | 21.0 | 50.2 | 88.2 | 19.8 | 1.6 | 23.2 |
| 1946 to 1959 | 896 | 73.0 | 81.7 | 25.3 | 50.8 | 90.5 | 18.4 | 1.5 | 20.5 |
| 1960 to 1969 | 1,411 | 86.2 | 91.4 | 31.2 | 57.9 | 109.3 | 28.8 | 1.8 | 20.4 |
| 1970 to 1979 | 1,478 | 93.0 | 80.7 | 23.6 | 56.1 | 107.2 | 30.1 | 1.9 | 20.4 |
| 1980 to 1989 | 1,272 | 74.7 | 66.6 | 21.1 | 47.4 | 85.9 | 28.6 | 1.7 | 22.5 |
| 1990 to 1999 | 1,304 | 78.1 | 82.1 | 24.0 | 51.2 | 97.3 | 28.1 | 1.7 | 21.6 |
| 2000 to 2003 | 1,541 | 80.0 | 77.2 | 23.2 | 49.1 | 100.9 | 33.6 | 1.7 | 21.8 |
| 2004 to 2007 | 1,522 | 79.5 | 88.0 | 19.1 | 48.3 | 82.3 | 32.6 | 1.7 | 21.4 |
| 2008 to 2012 | 1,596 | 84.6 | 87.4 | 17.8 | 36.7 | 81.6 | 34.1 | 1.8 | 21.3 |

## Table C4. Sum of major fuel consumption and expenditure gross energy intensities, 2012 - PUBLIC USE VERSION

| | Sum of major fuel consumption | | | | | | Sum of major fuel expenditures | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Distribution of building-level intensities (thousand Btu/square foot) | | | | | |
| | per building (million Btu) | per square foot (thousand Btu) | per worker (million Btu) | 25th per-centile | Median | 75th per-centile | per building (thousand dollars) | per square foot (dollars) | per million Btu (dollars) |
| **All buildings** | 1,252 | 78.9 | 78.9 | 22.9 | 49.9 | 93.6 | 26.8 | 1.7 | 21.4 |
| **Census region and division** | | | | | | | | | |
| Northeast | 1,810 | 90.7 | 82.1 | 29.2 | 56.5 | 110.2 | 43.3 | 2.2 | 23.9 |
| New England | 1,218 | 83.3 | 88.3 | 21.9 | 46.5 | 96.0 | 30.8 | 2.1 | 25.3 |
| Middle Atlantic | 2,165 | 93.5 | 80.3 | 33.2 | 62.8 | 122.4 | 50.8 | 2.2 | 23.5 |
| Midwest | 1,264 | 80.7 | 90.5 | 27.6 | 53.5 | 98.4 | 22.1 | 1.4 | 17.5 |
| East North Central | 1,537 | 87.2 | 94.5 | 34.6 | 63.8 | 113.5 | 26.8 | 1.5 | 17.4 |
| West North Central | 866 | 67.8 | 81.4 | 19.5 | 36.5 | 73.4 | 15.3 | 1.2 | 17.6 |
| South | 1,142 | 74.6 | 78.4 | 22.1 | 47.9 | 90.0 | 24.4 | 1.6 | 21.4 |
| South Atlantic | 1,244 | 75.6 | 74.9 | 23.3 | 47.3 | 106.3 | 28.7 | 1.7 | 23.0 |
| East South Central | 998 | 75.3 | 85.9 | 24.7 | 53.8 | 82.3 | 20.2 | 1.5 | 20.3 |
| West South Central | 1,067 | 72.8 | 81.6 | 20.3 | 44.7 | 85.7 | 20.4 | 1.4 | 19.1 |
| West | 1,083 | 74.8 | 67.1 | 19.6 | 44.8 | 84.2 | 25.2 | 1.7 | 23.3 |
| Mountain | 1,234 | 85.2 | 91.1 | 26.7 | 59.3 | 101.2 | 22.8 | 1.6 | 18.5 |
| Pacific | 1,028 | 71.0 | 60.2 | 18.6 | 39.8 | 76.9 | 26.1 | 1.8 | 25.4 |
| **Number of floors** | | | | | | | | | |
| One | 738 | 69.7 | 80.8 | 21.1 | 47.2 | 95.3 | 16.3 | 1.5 | 22.1 |
| Two | 1,261 | 71.4 | 73.9 | 25.0 | 51.1 | 86.1 | 26.8 | 1.5 | 21.3 |
| Three | 1,784 | 80.7 | 85.2 | 33.5 | 57.0 | 100.1 | 37.5 | 1.7 | 21.0 |
| Four to nine | 8,101 | 105.9 | 87.9 | 42.2 | 66.8 | 103.9 | 160.0 | 2.1 | 19.8 |
| Ten or more | 45,362 | 107.6 | 61.4 | 58.4 | 84.0 | 116.6 | 1,047.4 | 2.5 | 23.1 |
| **Elevators and escalators (more than one may apply)** | | | | | | | | | |
| Any elevators | 7,849 | 99.0 | 79.6 | 44.5 | 69.6 | 106.3 | 162.8 | 2.1 | 20.8 |
| Number of elevators | | | | | | | | | |
| One | 3,248 | 78.4 | 77.8 | 41.0 | 65.9 | 99.7 | 65.7 | 1.6 | 20.2 |
| Two to five | 10,558 | 96.6 | 80.1 | 51.4 | 76.6 | 115.7 | 221.7 | 2.0 | 21.0 |
| Six or more | 65,796 | 131.5 | 80.4 | 67.6 | 97.1 | 168.6 | 1,375.2 | 2.8 | 20.9 |
| Any escalators | 38,907 | 108.2 | 78.3 | 66.8 | 67.3 | 116.1 | 838.0 | 2.3 | 21.5 |
| **Number of workers (main shift)** | | | | | | | | | |
| Fewer than 5 | 261 | 41.7 | 149.2 | 15.8 | 37.0 | 78.7 | 5.8 | 0.9 | 22.3 |
| 5 to 9 | 551 | 65.4 | 85.2 | 26.5 | 48.7 | 93.2 | 12.6 | 1.5 | 22.8 |
| 10 to 19 | 1,056 | 78.5 | 81.5 | 35.7 | 63.2 | 118.0 | 22.4 | 1.7 | 21.2 |
| 20 to 49 | 2,316 | 79.8 | 79.8 | 36.5 | 62.1 | 112.6 | 49.6 | 1.7 | 21.4 |
| 50 to 99 | 5,584 | 85.0 | 85.5 | 47.2 | 69.7 | 112.0 | 116.5 | 1.8 | 20.9 |
| 100 to 249 | 11,327 | 96.7 | 79.1 | 57.8 | 88.0 | 127.8 | 233.0 | 2.0 | 20.6 |
| 250 or more | 38,819 | 122.6 | 57.7 | 61.5 | 86.9 | 152.9 | 835.7 | 2.6 | 21.5 |

## Table C4. Sum of major fuel consumption and expenditure gross energy intensities, 2012 - PUBLIC USE VERSION

| | Sum of major fuel consumption | | | | | | Sum of major fuel expenditures | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Distribution of building-level intensities (thousand Btu/square foot) | | | | | |
| | per building (million Btu) | per square foot (thousand Btu) | per worker (million Btu) | 25th per-centile | Median | 75th per-centile | per building (thousand dollars) | per square foot (dollars) | per million Btu (dollars) |
| **All buildings** | 1,252 | 78.9 | 78.9 | 22.9 | 49.9 | 93.6 | 26.8 | 1.7 | 21.4 |
| **Weekly operating hours** | | | | | | | | | |
| Fewer than 40 | 199 | 27.5 | 69.4 | 8.4 | 24.2 | 50.5 | 4.2 | 0.6 | 21.0 |
| 40 to 48 | 617 | 52.0 | 47.3 | 23.2 | 43.4 | 69.5 | 14.2 | 1.2 | 23.1 |
| 49 to 60 | 1,011 | 59.9 | 50.6 | 25.5 | 48.2 | 82.4 | 23.2 | 1.4 | 23.0 |
| 61 to 84 | 1,792 | 83.9 | 82.1 | 37.2 | 72.6 | 149.6 | 39.3 | 1.8 | 22.0 |
| 85 to 167 | 2,293 | 116.3 | 135.7 | 62.2 | 127.5 | 271.3 | 47.8 | 2.4 | 20.8 |
| Open continuously | 3,782 | 126.8 | 122.8 | 33.7 | 66.7 | 143.1 | 75.1 | 2.5 | 19.9 |
| **Party responsible for operation and maintenance of energy systems** | | | | | | | | | |
| Building owner | 1,231 | 77.7 | 78.0 | 22.1 | 48.0 | 89.9 | 26.1 | 1.7 | 21.2 |
| Business owner or tenant | 1,359 | 86.7 | 88.4 | 28.0 | 62.5 | 126.8 | 30.3 | 1.9 | 22.3 |
| Property management | 1,772 | 77.4 | 55.4 | 16.9 | 41.7 | 90.0 | 41.1 | 1.8 | 23.2 |
| Other | 1,174 | 91.0 | 86.9 | 37.1 | 69.5 | 108.3 | 26.7 | 2.1 | 22.7 |
| **Provider of direct input on energy-related equipment purchases** | | | | | | | | | |
| Building owner | 1,226 | 77.3 | 77.9 | 22.2 | 48.2 | 90.2 | 26.1 | 1.7 | 21.3 |
| Business owner or tenant | 1,420 | 92.3 | 89.0 | 27.6 | 63.2 | 134.8 | 31.3 | 2.0 | 22.1 |
| Property management | 1,753 | 68.1 | 63.4 | 36.0 | 63.5 | 114.5 | 43.4 | 1.7 | 24.8 |
| Other | 1,436 | 92.9 | 83.8 | 33.6 | 68.4 | 108.3 | 31.5 | 2.0 | 22.0 |
| **Number of establishments** | | | | | | | | | |
| One | 1,066 | 80.4 | 86.0 | 22.3 | 50.5 | 95.8 | 22.2 | 1.7 | 20.8 |
| 2 to 5 | 1,624 | 77.5 | 74.1 | 26.5 | 48.9 | 89.9 | 35.4 | 1.7 | 21.8 |
| 6 to 10 | 2,474 | 82.9 | 61.6 | 33.8 | 53.4 | 96.2 | 56.0 | 1.9 | 22.7 |
| 11 to 20 | 5,252 | 95.7 | 67.5 | 36.7 | 69.5 | 107.4 | 119.5 | 2.2 | 22.8 |
| More than 20 | 12,775 | 88.8 | 57.7 | 46.1 | 69.5 | 104.4 | 312.7 | 2.2 | 24.5 |
| Currently unoccupied | Q | Q | N | 4.0 | 8.2 | 27.5 | Q | Q | 20.8 |
| **Predominant exterior wall material** | | | | | | | | | |
| Brick, stone, or stucco | 1,495 | 83.4 | 83.0 | 28.1 | 57.5 | 106.7 | 31.2 | 1.7 | 20.9 |
| Concrete (block or poured) | 1,532 | 83.3 | 85.0 | 26.5 | 51.8 | 105.7 | 33.7 | 1.8 | 22.0 |
| Concrete panels | 3,162 | 76.2 | 70.0 | 17.0 | 38.8 | 86.4 | 66.6 | 1.6 | 21.1 |
| Siding or shingles | 442 | 67.7 | 66.6 | 21.5 | 45.9 | 83.9 | 10.4 | 1.6 | 23.5 |
| Metal panels | 458 | 49.3 | 73.6 | 12.6 | 30.9 | 63.0 | 9.9 | 1.1 | 21.6 |
| Window glass | 9,987 | 126.7 | 64.7 | 54.2 | 148.2 | 674.6 | 213.2 | 2.7 | 21.4 |
| Other | 2,135 | 92.8 | 94.2 | 17.7 | 45.4 | 95.3 | 48.9 | 2.1 | 22.9 |
| No one major type | 2,100 | 75.7 | Q | 25.0 | 66.4 | 95.2 | 44.9 | 1.6 | 21.4 |

## Table C4. Sum of major fuel consumption and expenditure gross energy intensities, 2012 - PUBLIC USE VERSION

| | Sum of major fuel consumption | | | | | | Sum of major fuel expenditures | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Distribution of building-level intensities (thousand Btu/square foot) | | | | | |
| | per building (million Btu) | per square foot (thousand Btu) | per worker (million Btu) | 25th per-centile | Median | 75th per-centile | per building (thousand dollars) | per square foot (dollars) | per million Btu (dollars) |
| **All buildings** | 1,252 | 78.9 | 78.9 | 22.9 | 49.9 | 93.6 | 26.8 | 1.7 | 21.4 |
| **Predominant roof material** | | | | | | | | | |
| Metal surfacing | 517 | 53.0 | 71.9 | 14.3 | 35.5 | 73.3 | 11.6 | 1.2 | 22.4 |
| Synthetic or rubber | 2,680 | 93.4 | 88.5 | 31.8 | 65.3 | 120.8 | 54.9 | 1.9 | 20.5 |
| Built-up | 2,227 | 85.2 | 77.4 | 29.1 | 52.7 | 101.3 | 47.8 | 1.8 | 21.5 |
| Slate or tile shingles | 913 | 83.2 | 87.0 | 26.3 | 57.0 | 121.8 | 20.0 | 1.8 | 21.9 |
| Wooden materials (including shingles) | 591 | 81.3 | 92.7 | 21.2 | 61.0 | 127.4 | 12.0 | 1.7 | 20.3 |
| Asphalt, fiberglass, or other shingles | 745 | 73.1 | 67.8 | 25.5 | 49.2 | 91.2 | 16.4 | 1.6 | 22.1 |
| Concrete | 2,599 | 80.3 | 63.5 | 31.8 | 58.8 | 115.5 | 64.2 | 2.0 | 24.7 |
| Other | 2,449 | 85.3 | 102.4 | 20.9 | 45.7 | 88.2 | 53.3 | 1.9 | 21.8 |
| No one major type | 1,961 | 42.1 | 106.1 | 6.2 | 20.2 | 62.0 | 43.6 | 0.9 | 22.2 |
| **Roof characteristics** | | | | | | | | | |
| Roof tilt | | | | | | | | | |
| Flat | 2,282 | 89.5 | 78.3 | 29.9 | 60.5 | 120.5 | 48.3 | 1.9 | 21.1 |
| Shallow pitch | 743 | 65.7 | 81.7 | 18.7 | 43.2 | 82.6 | 16.4 | 1.5 | 22.1 |
| Steeper pitch | 615 | 64.1 | 77.3 | 22.0 | 45.4 | 80.2 | 13.2 | 1.4 | 21.5 |
| Cool roof | 2,480 | 93.8 | 84.8 | 27.2 | 61.6 | 116.8 | 52.1 | 2.0 | 21.0 |
| **Renovations in buildings constructed before 2008 (more than one may apply)** | | | | | | | | | |
| Any type of renovation | 1,795 | 88.2 | 81.0 | 29.4 | 56.5 | 101.9 | 37.8 | 1.9 | 21.1 |
| Addition or annex | 2,905 | 99.8 | 103.4 | 32.7 | 58.1 | 100.9 | 55.9 | 1.9 | 19.3 |
| Reduction in floorspace | 3,159 | 119.4 | 87.7 | 20.0 | 71.0 | 166.4 | 66.0 | 2.5 | 20.9 |
| Roof replacement | 2,012 | 94.2 | 86.9 | 31.2 | 56.0 | 98.5 | 41.3 | 1.9 | 20.6 |
| Exterior wall replacement | 2,050 | 94.6 | 87.9 | 23.5 | 54.5 | 98.5 | 41.9 | 1.9 | 20.4 |
| Interior wall reconfiguration | 2,311 | 95.9 | 74.2 | 30.6 | 57.3 | 98.7 | 48.7 | 2.0 | 21.1 |
| Window replacement | 1,945 | 89.1 | 77.1 | 28.9 | 56.1 | 100.4 | 40.4 | 1.9 | 20.8 |
| HVAC equipment upgrade | 2,311 | 94.7 | 84.3 | 32.4 | 57.6 | 104.9 | 48.4 | 2.0 | 21.0 |
| Lighting upgrade | 2,482 | 95.2 | 86.2 | 33.1 | 60.0 | 114.0 | 50.9 | 2.0 | 20.5 |
| Electrical upgrade | 2,151 | 99.0 | 90.5 | 29.2 | 55.9 | 108.8 | 44.3 | 2.0 | 20.6 |
| Plumbing system upgrade | 2,168 | 100.2 | 86.7 | 32.2 | 58.5 | 113.4 | 44.4 | 2.1 | 20.5 |
| Insulation upgrade | 2,017 | 102.7 | 92.1 | 28.9 | 56.2 | 98.7 | 40.0 | 2.0 | 19.8 |
| Fire, safety, or security upgrade | 2,736 | 97.2 | 83.9 | 32.0 | 59.2 | 110.5 | 56.9 | 2.0 | 20.8 |
| Structural upgrade | 2,795 | 110.8 | 112.6 | 31.3 | 56.2 | 96.0 | 54.6 | 2.2 | 19.5 |
| Other | 1,772 | 79.4 | 68.3 | 35.8 | 62.7 | 136.6 | 43.4 | 2.0 | 24.5 |
| No renovations | 860 | 68.2 | 75.0 | 20.2 | 44.8 | 86.5 | 18.9 | 1.5 | 21.9 |
| Buildings constructed 2008 or later | 1,596 | 84.6 | 87.4 | 17.8 | 36.7 | 81.6 | 34.1 | 1.8 | 21.3 |

## Table C4. Sum of major fuel consumption and expenditure gross energy intensities, 2012 - PUBLIC USE VERSION

| | Sum of major fuel consumption | | | | | | Sum of major fuel expenditures | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Distribution of building-level intensities (thousand Btu/square foot) | | | | | |
| | per building (million Btu) | per square foot (thousand Btu) | per worker (million Btu) | 25th per-centile | Median | 75th per-centile | per building (thousand dollars) | per square foot (dollars) | per million Btu (dollars) |
| **All buildings** | 1,252 | 78.9 | 78.9 | 22.9 | 49.9 | 93.6 | 26.8 | 1.7 | 21.4 |
| **Energy sources (more than one may apply)** | | | | | | | | | |
| Electricity | 1,330 | 81.0 | 79.0 | 22.9 | 49.9 | 93.6 | 28.5 | 1.7 | 21.4 |
| Natural gas | 1,889 | 93.0 | 88.9 | 37.3 | 65.5 | 121.8 | 37.4 | 1.8 | 19.8 |
| Fuel oil | 4,780 | 108.9 | 86.9 | 35.3 | 68.7 | 123.6 | 101.5 | 2.3 | 21.2 |
| District heat | 16,897 | 138.7 | 98.1 | 73.5 | 113.1 | 162.1 | 362.4 | 3.0 | 21.5 |
| District chilled water | 12,314 | 148.4 | 115.2 | 48.3 | 71.9 | 137.5 | 235.3 | 2.8 | 19.1 |
| Propane | 1,143 | 75.6 | 98.6 | 11.8 | 28.5 | 62.6 | 25.9 | 1.7 | 22.7 |
| Other | 1,749 | 78.7 | 79.5 | 20.9 | 39.0 | 76.2 | 37.5 | 1.7 | 21.4 |
| **Space-heating energy sources (more than one may apply)** | | | | | | | | | |
| Electricity | 1,363 | 78.5 | 72.3 | 24.8 | 49.6 | 93.6 | 30.2 | 1.7 | 22.2 |
| Natural gas | 1,702 | 88.1 | 85.9 | 36.3 | 63.9 | 112.6 | 32.9 | 1.7 | 19.3 |
| Fuel oil | 1,334 | 82.6 | 86.6 | 30.5 | 54.6 | 97.3 | 31.4 | 1.9 | 23.5 |
| District heat | 16,837 | 139.0 | 98.5 | 73.5 | 113.1 | 162.1 | 361.0 | 3.0 | 21.4 |
| Propane | 443 | 49.4 | 60.3 | 8.8 | 19.9 | 40.0 | 10.6 | 1.2 | 23.8 |
| Other | 481 | 48.0 | 64.7 | 18.6 | 32.7 | 52.7 | 11.5 | 1.2 | 23.9 |
| **Primary space-heating energy source** | | | | | | | | | |
| Electricity | 1,014 | 69.5 | 63.7 | 21.6 | 44.3 | 82.9 | 24.7 | 1.7 | 24.4 |
| Natural gas | 1,667 | 88.2 | 86.7 | 36.4 | 63.5 | 112.6 | 32.0 | 1.7 | 19.2 |
| Fuel oil | 912 | 73.6 | 93.7 | 33.6 | 59.1 | 115.5 | 24.5 | 2.0 | 26.9 |
| District heat | 16,812 | 140.5 | 98.7 | 73.6 | 113.9 | 164.1 | 361.0 | 3.0 | 21.5 |
| Propane | 241 | 32.3 | 42.8 | 8.0 | 16.0 | 32.7 | 6.4 | 0.9 | 26.5 |
| Other | 310 | 34.8 | 40.7 | 15.8 | 27.0 | 44.5 | 8.7 | 1.0 | 28.1 |
| **Cooling energy sources (more than one may apply)** | | | | | | | | | |
| Electricity | 1,432 | 81.9 | 76.8 | 28.0 | 55.0 | 100.9 | 30.9 | 1.8 | 21.6 |
| Natural gas | 8,195 | 134.6 | 93.7 | 51.0 | 66.4 | 73.0 | 136.8 | 2.3 | 16.7 |
| District chilled water | 12,314 | 148.4 | 115.2 | 48.3 | 71.9 | 137.5 | 235.3 | 2.8 | 19.1 |
| **Water-heating energy sources (more than one may apply)** | | | | | | | | | |
| Electricity | 1,166 | 71.3 | 66.2 | 23.8 | 47.5 | 86.8 | 27.3 | 1.7 | 23.4 |
| Natural gas | 2,291 | 100.8 | 96.1 | 42.9 | 73.0 | 148.0 | 44.1 | 1.9 | 19.2 |
| Fuel oil | 2,249 | 90.8 | 107.4 | 42.2 | 65.3 | 106.7 | 56.1 | 2.3 | 24.9 |
| District heat | 25,735 | 147.3 | 102.4 | 79.7 | 114.1 | 166.8 | 542.6 | 3.1 | 21.1 |
| Propane | 612 | 54.8 | 68.9 | 13.2 | 30.9 | 65.8 | 18.0 | 1.6 | 29.5 |
| **Cooking energy sources (more than one may apply)** | | | | | | | | | |
| Electricity | 2,485 | 99.3 | 91.9 | 31.0 | 64.3 | 147.4 | 51.8 | 2.1 | 20.8 |
| Natural gas | 4,073 | 120.3 | 116.5 | 56.2 | 122.0 | 274.9 | 78.4 | 2.3 | 19.3 |
| Propane | 1,158 | 83.1 | 84.6 | 19.7 | 49.2 | 106.7 | 31.3 | 2.3 | 27.0 |

## Table C4. Sum of major fuel consumption and expenditure gross energy intensities, 2012 - PUBLIC USE VERSION

| | Sum of major fuel consumption | | | | | | Sum of major fuel expenditures | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Distribution of building-level intensities (thousand Btu/square foot) | | | | | |
| | per building (million Btu) | per square foot (thousand Btu) | per worker (million Btu) | 25th per-centile | Median | 75th per-centile | per building (thousand dollars) | per square foot (dollars) | per million Btu (dollars) |
| **All buildings** | 1,252 | 78.9 | 78.9 | 22.9 | 49.9 | 93.6 | 26.8 | 1.7 | 21.4 |
| **Energy end uses (more than one may apply)** | | | | | | | | | |
| Buildings with space heating | 1,436 | 83.5 | 79.2 | 26.9 | 53.5 | 98.9 | 30.4 | 1.8 | 21.2 |
| Buildings with cooling | 1,518 | 84.2 | 78.9 | 28.1 | 55.1 | 101.2 | 32.4 | 1.8 | 21.4 |
| Buildings with water heating | 1,536 | 84.8 | 79.5 | 28.3 | 56.1 | 103.2 | 32.7 | 1.8 | 21.3 |
| Buildings with cooking | 2,567 | 104.5 | 98.9 | 35.1 | 75.3 | 172.4 | 52.5 | 2.1 | 20.5 |
| Buildings with manufacturing | 1,392 | 69.1 | 71.4 | 16.7 | 41.2 | 79.5 | 30.5 | 1.5 | 21.9 |
| Buildings with electricity generation | 6,831 | 107.9 | 90.5 | 44.3 | 73.3 | 137.6 | 141.1 | 2.2 | 20.7 |
| **Percent of floorspace heated** | | | | | | | | | |
| Not heated | 217 | 25.8 | 70.7 | 3.6 | 12.8 | 41.7 | 6.5 | 0.8 | 30.2 |
| 1 to 50 | 670 | 46.0 | 72.8 | 13.1 | 27.2 | 53.8 | 16.6 | 1.1 | 24.7 |
| 51 to 99 | 1,787 | 88.4 | 83.5 | 26.3 | 53.7 | 99.6 | 39.1 | 1.9 | 21.9 |
| 100 | 1,520 | 89.0 | 78.8 | 32.7 | 59.3 | 106.4 | 31.4 | 1.8 | 20.7 |
| **Percent of floorspace cooled** | | | | | | | | | |
| Not cooled | 173 | 24.3 | 78.7 | 5.1 | 17.2 | 48.2 | 3.9 | 0.6 | 22.7 |
| 1 to 50 | 842 | 50.9 | 78.1 | 19.3 | 37.0 | 74.7 | 17.4 | 1.1 | 20.7 |
| 51 to 99 | 2,388 | 93.7 | 84.6 | 34.0 | 61.6 | 116.4 | 51.9 | 2.0 | 21.7 |
| 100 | 1,523 | 95.5 | 76.2 | 33.1 | 61.2 | 114.1 | 32.5 | 2.0 | 21.4 |
| **Percent lit when open** | | | | | | | | | |
| Zero | 63 | 13.6 | Q | 2.0 | 8.2 | 12.8 | 1.9 | 0.4 | 31.0 |
| 1 to 50 | 584 | 49.7 | 95.6 | 16.8 | 35.0 | 66.6 | 12.6 | 1.1 | 21.6 |
| 51 to 99 | 1,829 | 86.6 | 83.7 | 30.2 | 56.7 | 103.1 | 38.2 | 1.8 | 20.9 |
| 100 | 1,460 | 89.7 | 72.2 | 28.3 | 57.0 | 113.9 | 31.9 | 2.0 | 21.8 |
| Building never open/electricity not used | Q | 6.6 | Q | 2.0 | 6.2 | 23.1 | Q | Q | 20.2 |
| **Percent lit during off hours** | | | | | | | | | |
| Zero | 520 | 51.0 | 55.8 | 16.0 | 34.1 | 69.1 | 12.2 | 1.2 | 23.5 |
| 1 to 50 | 1,780 | 84.6 | 79.6 | 33.9 | 61.2 | 114.4 | 37.7 | 1.8 | 21.2 |
| 51 to 100 | 5,036 | 149.5 | 130.8 | 52.4 | 101.9 | 209.5 | 98.7 | 2.9 | 19.6 |
| Building always open with no "off hours" | 2,995 | 124.8 | 118.7 | 12.9 | 108.8 | 245.4 | 65.7 | 2.7 | 21.9 |
| Electricity not used | N | N | N | N | N | N | N | N | N |
| **Heating equipment (more than one may apply)** | | | | | | | | | |
| Heat pumps | 1,431 | 75.5 | 67.5 | 25.3 | 44.3 | 77.4 | 32.4 | 1.7 | 22.7 |
| Furnaces | 815 | 67.7 | 71.9 | 29.0 | 52.7 | 90.5 | 16.7 | 1.4 | 20.5 |
| Individual space heaters | 1,259 | 74.8 | 81.0 | 23.1 | 45.3 | 81.9 | 26.5 | 1.6 | 21.0 |
| District heat | 16,837 | 139.0 | 98.5 | 73.5 | 113.1 | 162.1 | 361.0 | 3.0 | 21.4 |
| Boilers | 4,157 | 99.1 | 89.9 | 43.5 | 65.8 | 122.6 | 79.7 | 1.9 | 19.2 |
| Packaged heating units | 1,457 | 82.3 | 79.9 | 29.2 | 57.3 | 107.3 | 31.0 | 1.8 | 21.3 |
| Other | 3,099 | 121.7 | 159.1 | 29.7 | 76.3 | 165.3 | 63.5 | 2.5 | 20.5 |

## Table C4. Sum of major fuel consumption and expenditure gross energy intensities, 2012 - PUBLIC USE VERSION

| | Sum of major fuel consumption | | | | | | Sum of major fuel expenditures | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Distribution of building-level intensities (thousand Btu/square foot) | | | | | |
| | per building (million Btu) | per square foot (thousand Btu) | per worker (million Btu) | 25th per-centile | Median | 75th per-centile | per building (thousand dollars) | per square foot (dollars) | per million Btu (dollars) |
| **All buildings** | 1,252 | 78.9 | 78.9 | 22.9 | 49.9 | 93.6 | 26.8 | 1.7 | 21.4 |
| **Cooling equipment (more than one may apply)** | | | | | | | | | |
| Residential-type central air conditioners | 703 | 71.1 | 71.9 | 26.8 | 51.9 | 93.9 | 15.0 | 1.5 | 21.3 |
| Heat pumps | 1,357 | 74.4 | 65.8 | 25.5 | 44.6 | 83.3 | 30.8 | 1.7 | 22.7 |
| Individual air conditioners | 1,429 | 81.2 | 82.0 | 23.2 | 48.9 | 87.8 | 30.4 | 1.7 | 21.3 |
| District chilled water | 12,314 | 148.4 | 115.2 | 48.3 | 71.9 | 137.5 | 235.3 | 2.8 | 19.1 |
| Central chillers | 11,370 | 108.9 | 84.2 | 55.2 | 80.3 | 133.8 | 233.6 | 2.2 | 20.6 |
| Packaged air conditioning units | 2,079 | 86.8 | 84.5 | 34.4 | 63.8 | 121.3 | 44.4 | 1.9 | 21.4 |
| Swamp coolers | 1,604 | 91.3 | 100.2 | 30.1 | 64.5 | 147.4 | 33.1 | 1.9 | 20.6 |
| Other | Q | 135.8 | 94.9 | 17.0 | 55.3 | 100.2 | Q | 3.0 | 22.3 |
| **Main equipment replaced since 1990 (more than one may apply)** | | | | | | | | | |
| Heating | 1,155 | 77.3 | 75.5 | 28.5 | 55.4 | 100.0 | 24.3 | 1.6 | 21.1 |
| Cooling | 1,278 | 80.5 | 75.5 | 30.3 | 57.5 | 101.0 | 27.5 | 1.7 | 21.5 |
| **Water-heating equipment** | | | | | | | | | |
| Centralized system | 1,257 | 86.7 | 83.8 | 28.7 | 57.0 | 104.9 | 26.3 | 1.8 | 20.9 |
| Distributed system | 1,206 | 64.8 | 58.5 | 23.0 | 45.1 | 81.3 | 28.0 | 1.5 | 23.3 |
| Combination of centralized and distributed system | 4,560 | 93.7 | 83.4 | 38.1 | 66.1 | 122.2 | 96.5 | 2.0 | 21.2 |
| **Lighting equipment types (more than one may apply)** | | | | | | | | | |
| Incandescent | 1,938 | 91.8 | 85.0 | 28.3 | 57.0 | 103.7 | 39.9 | 1.9 | 20.6 |
| Standard fluorescent | 1,443 | 83.0 | 78.3 | 26.3 | 52.7 | 99.4 | 30.8 | 1.8 | 21.3 |
| Compact fluorescent | 2,212 | 93.6 | 85.0 | 30.9 | 59.2 | 113.9 | 46.3 | 2.0 | 20.9 |
| High-intensity discharge (HID) | 4,161 | 92.9 | 91.9 | 31.7 | 61.2 | 110.0 | 86.4 | 1.9 | 20.8 |
| Halogen | 2,978 | 95.6 | 88.4 | 33.4 | 61.7 | 110.9 | 62.3 | 2.0 | 20.9 |
| LED | 4,990 | 107.4 | 91.2 | 41.3 | 71.6 | 143.2 | 104.7 | 2.3 | 21.0 |
| Other | 5,908 | 137.0 | 103.4 | 84.1 | 160.7 | 163.3 | 130.2 | 3.0 | 22.0 |
| **Refrigeration equipment (more than one may apply)** | | | | | | | | | |
| Any refrigeration | 1,624 | 86.6 | 81.9 | 28.3 | 56.4 | 105.2 | 34.4 | 1.8 | 21.2 |
| Walk-in units | 4,344 | 123.5 | 113.2 | 72.1 | 160.7 | 311.2 | 87.9 | 2.5 | 20.2 |
| Cases or cabinets | 3,621 | 115.6 | 105.1 | 56.5 | 112.3 | 243.1 | 75.2 | 2.4 | 20.8 |
| Large cold storage areas | 6,777 | 128.4 | 143.5 | 73.8 | 153.4 | 244.8 | 137.4 | 2.6 | 20.3 |
| Commercial ice makers | 4,410 | 114.1 | 102.1 | 57.1 | 112.4 | 245.9 | 89.6 | 2.3 | 20.3 |
| Residential-type or compact units | 1,529 | 81.6 | 76.5 | 26.9 | 51.0 | 87.3 | 32.3 | 1.7 | 21.1 |
| Vending machines | 4,352 | 94.3 | 84.0 | 39.5 | 67.3 | 118.0 | 90.7 | 2.0 | 20.8 |
| No refrigeration | 313 | 36.6 | 53.2 | 9.9 | 29.2 | 62.0 | 7.6 | 0.9 | 24.4 |

## Table C4. Sum of major fuel consumption and expenditure gross energy intensities, 2012 - PUBLIC USE VERSION

| | Sum of major fuel consumption | | | | | | Sum of major fuel expenditures | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Distribution of building-level intensities (thousand Btu/square foot) | | | | | |
| | per building (million Btu) | per square foot (thousand Btu) | per worker (million Btu) | 25th per-centile | Median | 75th per-centile | per building (thousand dollars) | per square foot (dollars) | per million Btu (dollars) |
| **All buildings** | 1,252 | 78.9 | 78.9 | 22.9 | 49.9 | 93.6 | 26.8 | 1.7 | 21.4 |
| **Office equipment (more than one may apply)** | | | | | | | | | |
| Desktop computers | 1,656 | 84.3 | 78.1 | 29.0 | 55.9 | 101.2 | 35.4 | 1.8 | 21.4 |
| With flat screen monitors | 1,695 | 84.4 | 77.7 | 29.3 | 56.1 | 101.8 | 36.2 | 1.8 | 21.4 |
| With multiple monitors | 3,229 | 94.8 | 67.8 | 34.5 | 58.9 | 105.0 | 68.6 | 2.0 | 21.3 |
| Laptop computers | 2,001 | 85.3 | 74.5 | 29.7 | 54.7 | 94.7 | 42.5 | 1.8 | 21.2 |
| Dedicated servers | 2,736 | 89.3 | 75.4 | 34.2 | 60.3 | 103.9 | 58.6 | 1.9 | 21.4 |
| Laser printers | 2,048 | 87.4 | 75.5 | 32.5 | 57.7 | 101.9 | 43.6 | 1.9 | 21.3 |
| Inkjet printers | 1,327 | 78.7 | 76.9 | 27.0 | 52.7 | 95.8 | 28.9 | 1.7 | 21.8 |
| FAX machines | 1,791 | 84.6 | 77.3 | 29.7 | 56.5 | 100.2 | 38.4 | 1.8 | 21.4 |
| Photocopiers | 2,361 | 85.0 | 74.5 | 31.1 | 54.5 | 87.9 | 50.4 | 1.8 | 21.3 |
| **Number of desktop computers** | | | | | | | | | |
| None | 238 | 37.5 | 98.0 | 8.4 | 27.2 | 66.7 | 5.3 | 0.8 | 22.3 |
| 1 to 4 | 581 | 72.6 | 104.7 | 24.8 | 50.6 | 111.9 | 12.4 | 1.6 | 21.4 |
| 5 to 9 | 898 | 78.3 | 76.9 | 29.5 | 53.6 | 92.1 | 19.1 | 1.7 | 21.2 |
| 10 to 19 | 1,401 | 71.2 | 78.0 | 34.5 | 58.0 | 83.0 | 32.2 | 1.6 | 23.0 |
| 20 to 49 | 3,157 | 83.1 | 87.6 | 37.5 | 63.8 | 111.0 | 67.0 | 1.8 | 21.2 |
| 50 to 99 | 4,505 | 77.6 | 69.5 | 39.5 | 64.4 | 94.5 | 97.7 | 1.7 | 21.7 |
| 100 to 249 | 10,420 | 98.9 | 76.7 | 49.3 | 70.5 | 106.3 | 214.4 | 2.0 | 20.6 |
| 250 or more | 28,384 | 110.5 | 62.4 | 51.0 | 73.6 | 120.7 | 599.9 | 2.3 | 21.1 |
| **Number of laptop computers** | | | | | | | | | |
| None | 529 | 62.0 | 100.8 | 16.0 | 42.2 | 92.3 | 11.7 | 1.4 | 22.1 |
| 1 to 4 | 779 | 70.0 | 85.4 | 26.8 | 51.1 | 91.4 | 16.7 | 1.5 | 21.5 |
| 5 to 9 | 1,995 | 83.2 | 78.7 | 35.4 | 56.0 | 86.5 | 42.6 | 1.8 | 21.4 |
| 10 to 19 | 3,966 | 85.1 | 77.6 | 40.6 | 63.1 | 105.7 | 85.3 | 1.8 | 21.5 |
| 20 to 49 | 6,312 | 94.6 | 77.8 | 42.1 | 64.6 | 104.9 | 129.9 | 2.0 | 20.6 |
| 50 to 99 | 8,792 | 96.5 | 61.4 | 50.8 | 70.3 | 101.2 | 185.9 | 2.0 | 21.1 |
| 100 to 249 | 15,180 | 100.1 | 79.3 | 45.9 | 61.5 | 90.1 | 306.7 | 2.0 | 20.2 |
| 250 or more | 30,155 | 108.6 | 54.3 | 55.3 | 76.9 | 126.8 | 666.0 | 2.4 | 22.1 |
| **Number of dedicated servers** | | | | | | | | | |
| None | 572 | 62.9 | 88.0 | 18.6 | 43.1 | 86.9 | 12.2 | 1.4 | 21.4 |
| 1 to 4 | 1,739 | 79.3 | 79.2 | 33.8 | 59.3 | 100.9 | 37.5 | 1.7 | 21.6 |
| 5 to 9 | 5,824 | 89.8 | 72.1 | 40.0 | 62.7 | 110.9 | 120.7 | 1.9 | 20.7 |
| 10 to 19 | 11,788 | 104.7 | 78.3 | 47.0 | 75.9 | 118.5 | 260.4 | 2.3 | 22.1 |
| 20 to 49 | 15,539 | 104.8 | 59.0 | 50.9 | 88.0 | 173.7 | 316.4 | 2.1 | 20.4 |
| 50 or more | 38,993 | 144.8 | 73.1 | 62.6 | 103.7 | 208.5 | 835.6 | 3.1 | 21.4 |

## Table C4. Sum of major fuel consumption and expenditure gross energy intensities, 2012 - PUBLIC USE VERSION

| | Sum of major fuel consumption | | | | | | Sum of major fuel expenditures | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Distribution of building-level intensities (thousand Btu/square foot) | | | | | |
| | per building (million Btu) | per square foot (thousand Btu) | per worker (million Btu) | 25th per-centile | Median | 75th per-centile | per building (thousand dollars) | per square foot (dollars) | per million Btu (dollars) |
| **All buildings** | 1,252 | 78.9 | 78.9 | 22.9 | 49.9 | 93.6 | 26.8 | 1.7 | 21.4 |
| **Number of photocopiers** | | | | | | | | | |
| None | 546 | 66.0 | 94.2 | 18.1 | 45.1 | 100.5 | 11.8 | 1.4 | 21.6 |
| One | 907 | 67.4 | 90.0 | 26.9 | 48.9 | 80.8 | 19.3 | 1.4 | 21.3 |
| 2 to 4 | 2,464 | 78.1 | 74.1 | 36.1 | 60.5 | 97.3 | 52.8 | 1.7 | 21.4 |
| 5 to 9 | 6,774 | 87.8 | 74.6 | 44.3 | 62.9 | 97.6 | 143.2 | 1.9 | 21.1 |
| 10 or more | 20,483 | 118.3 | 66.0 | 60.4 | 79.7 | 113.9 | 436.9 | 2.5 | 21.3 |
| **Number of TVs or video displays** | | | | | | | | | |
| None | 446 | 48.6 | 68.2 | 15.0 | 34.7 | 73.7 | 10.2 | 1.1 | 22.8 |
| One | 609 | 69.0 | 69.6 | 27.2 | 54.0 | 100.5 | 12.8 | 1.5 | 21.1 |
| 2 to 4 | 1,266 | 77.8 | 74.0 | 32.2 | 57.2 | 108.8 | 27.6 | 1.7 | 21.8 |
| 5 to 9 | 2,472 | 95.4 | 76.9 | 44.3 | 74.8 | 170.3 | 54.2 | 2.1 | 21.9 |
| 10 to 19 | 5,260 | 99.5 | 78.2 | 48.2 | 79.4 | 139.1 | 110.5 | 2.1 | 21.0 |
| 20 to 49 | 6,769 | 88.1 | 80.3 | 52.3 | 72.6 | 128.7 | 151.3 | 2.0 | 22.4 |
| 50 to 99 | 8,948 | 97.1 | 98.2 | 56.8 | 86.5 | 145.0 | 185.9 | 2.0 | 20.8 |
| 100 or more | 26,870 | 136.2 | 112.9 | 62.4 | 93.1 | 143.3 | 508.3 | 2.6 | 18.9 |
| **Food preparation or serving areas in non-food service buildings (more than one may apply)** | | | | | | | | | |
| Snack bar or concession stand | 7,261 | 114.0 | 108.0 | 50.6 | 87.2 | 220.8 | 148.0 | 2.3 | 20.4 |
| Fast food or small restaurant | 6,957 | 122.6 | 110.5 | 82.8 | 139.1 | 224.5 | 146.7 | 2.6 | 21.1 |
| Cafeteria or large restaurant | 12,484 | 107.1 | 92.0 | 46.6 | 71.2 | 110.0 | 246.8 | 2.1 | 19.8 |
| Commercial kitchen/ food preparation area | 6,366 | 111.8 | 117.0 | 36.0 | 69.6 | 130.8 | 124.3 | 2.2 | 19.5 |
| Small kitchen area | 1,613 | 82.7 | 87.1 | 22.0 | 45.6 | 85.1 | 33.5 | 1.7 | 20.8 |
| **Separate computer areas (more than one may apply)** | | | | | | | | | |
| Data center or server farm | 14,041 | 123.3 | 75.0 | 51.0 | 86.9 | 130.0 | 294.4 | 2.6 | 21.0 |
| Computer-based training room | 6,954 | 95.8 | 76.3 | 42.1 | 67.9 | 111.9 | 143.8 | 2.0 | 20.7 |
| Student or public computer center | 5,346 | 89.5 | 101.9 | 39.5 | 59.8 | 86.8 | 103.4 | 1.7 | 19.3 |
| **HVAC conservation features (more than one may apply)** | | | | | | | | | |
| Economizer cycle | 5,224 | 102.5 | 88.7 | 38.7 | 66.7 | 123.6 | 108.0 | 2.1 | 20.7 |
| Regular HVAC maintenance | 1,951 | 88.3 | 79.6 | 32.6 | 59.7 | 109.9 | 41.4 | 1.9 | 21.2 |
| Building automation system (BAS)[1] | 4,749 | 98.8 | 87.5 | 36.5 | 64.6 | 110.9 | 100.3 | 2.1 | 21.1 |

## Table C4. Sum of major fuel consumption and expenditure gross energy intensities, 2012 - PUBLIC USE VERSION

| | Sum of major fuel consumption | | | | | | Sum of major fuel expenditures | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Distribution of building-level intensities (thousand Btu/square foot) | | | | | |
| | per building (million Btu) | per square foot (thousand Btu) | per worker (million Btu) | 25th per-centile | Median | 75th per-centile | per building (thousand dollars) | per square foot (dollars) | per million Btu (dollars) |
| **All buildings** | 1,252 | 78.9 | 78.9 | 22.9 | 49.9 | 93.6 | 26.8 | 1.7 | 21.4 |
| **Window and interior lighting features (more than one may apply)** | | | | | | | | | |
| Multipaned windows | 1,742 | 85.9 | 84.3 | 28.3 | 55.1 | 100.7 | 36.2 | 1.8 | 20.8 |
| Tinted window glass | 2,117 | 87.6 | 78.1 | 28.0 | 56.6 | 107.4 | 44.5 | 1.8 | 21.0 |
| Reflective window glass | 3,012 | 104.5 | 87.1 | 30.5 | 59.2 | 116.5 | 62.6 | 2.2 | 20.8 |
| External overhangs or awnings | 1,653 | 95.2 | 91.4 | 31.1 | 61.5 | 121.5 | 34.5 | 2.0 | 20.9 |
| Skylights or atriums | 3,397 | 90.1 | 91.5 | 25.1 | 49.7 | 85.4 | 69.4 | 1.8 | 20.4 |
| Light scheduling | 3,193 | 96.0 | 83.7 | 35.0 | 63.2 | 122.6 | 69.0 | 2.1 | 21.6 |
| Occupancy sensors | 4,222 | 95.7 | 83.8 | 37.9 | 68.5 | 117.7 | 89.4 | 2.0 | 21.2 |
| Multi-level lighting or dimming | 4,636 | 111.4 | 100.3 | 43.4 | 81.5 | 160.7 | 94.3 | 2.3 | 20.4 |
| Daylight harvesting | 4,943 | 101.7 | 80.2 | 24.4 | 63.1 | 121.8 | 104.1 | 2.1 | 21.1 |
| Demand responsive lighting | 2,324 | 84.2 | 83.7 | 28.3 | 55.4 | 107.5 | 54.7 | 2.0 | 23.5 |
| Building automation system (BAS) for lighting[1] | 5,759 | 97.8 | 90.3 | 44.5 | 76.6 | 127.8 | 127.4 | 2.2 | 22.1 |
| **Equipment usage reduced when building not in full use (more than one may apply)** | | | | | | | | | |
| Heating | 1,357 | 78.3 | 73.3 | 26.6 | 51.7 | 91.8 | 29.3 | 1.7 | 21.6 |
| Cooling | 1,423 | 79.1 | 73.3 | 27.2 | 52.7 | 93.9 | 30.9 | 1.7 | 21.7 |
| Lighting | 1,350 | 80.6 | 76.6 | 25.4 | 51.2 | 94.9 | 28.9 | 1.7 | 21.4 |

[1]In earlier CBECS publications, BAS was referred to as *Energy Management and Control System (EMCS).*

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 20 buildings were sampled.

N = No cases in reporting sample.

Notes: ● Because of rounding, data may not sum to totals. ● See the *Guide to the 2012 CBECS Detailed Tables* or *CBECS Terminology* for definitions of terms used in these tables and/or comparison of differences with prior CBECS tables. Both references can be accessed from http://www.eia.gov/consumption/commercial/data/2012/ ● Statistics for the *Energy end uses* category represent total consumption in buildings that have the end use, not consumption specifically for that particular end use. ● HVAC = Heating, ventilation, and air conditioning.

Source: U.S. Energy Information Administration, Office of Energy Consumption and Efficiency Statistics, Form EIA-871A, C, D, E, and F of the 2012 Commercial Buildings Energy Consumption Survey.

## Table C15. Electricity consumption and conditional energy intensity by Census region, 2012 - PUBLIC USE VERSION

| | Total electricity consumption (billion kWh) | | | | Total floorspace of buildings using electricity (million square feet) | | | | Electricity energy intensity (kwh/square foot) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | North-east | Mid-west | South | West | North-east | Mid-west | South | West | North-east | Mid-west | South | West |
| **All buildings** | 220 | 249 | 530 | 243 | 15,838 | 19,021 | 33,108 | 17,982 | 13.9 | 13.1 | 16.0 | 13.5 |
| **Building floorspace (square feet)** | | | | | | | | | | | | |
| 1,001 to 5,000 | 15 | 25 | 66 | 25 | 996 | 1,714 | 3,165 | 1,617 | 15.0 | 14.6 | 20.8 | 15.3 |
| 5,001 to 10,000 | 14 | 22 | 48 | 30 | 1,184 | 1,816 | 3,296 | 2,195 | 11.6 | 11.8 | 14.4 | 13.8 |
| 10,001 to 25,000 | 24 | 31 | 68 | 36 | 2,862 | 3,315 | 5,068 | 3,422 | 8.5 | 9.3 | 13.3 | 10.6 |
| 25,001 to 50,000 | 18 | 33 | 69 | 29 | 1,628 | 2,998 | 4,328 | 2,716 | 11.2 | 11.1 | 15.8 | 10.6 |
| 50,001 to 100,000 | 37 | 40 | 88 | 28 | 2,675 | 2,689 | 5,877 | 2,361 | 13.8 | 14.7 | 14.9 | 11.7 |
| 100,001 to 200,000 | 44 | 34 | 73 | 38 | 2,522 | 2,402 | 5,123 | 2,324 | 17.6 | 14.2 | 14.3 | 16.4 |
| 200,001 to 500,000 | 37 | 40 | 70 | 33 | 2,230 | 2,678 | 3,654 | 2,084 | 16.8 | 14.8 | 19.1 | 16.0 |
| Over 500,000 | 30 | 25 | 50 | 24 | 1,741 | 1,408 | 2,597 | 1,265 | 17.3 | 18.1 | 19.3 | 18.8 |
| **Principal building activity** | | | | | | | | | | | | |
| Education | 18 | 33 | 65 | 18 | 2,226 | 3,176 | 5,157 | 1,848 | 8.0 | 10.3 | 12.6 | 9.9 |
| Food sales | 14 | 9 | 22 | 16 | 316 | 174 | 399 | 363 | 44.9 | 50.2 | 56.4 | 42.8 |
| Food service | 12 | 16 | 38 | 16 | 292 | 477 | 771 | 387 | 39.6 | 33.3 | 49.7 | 41.1 |
| Health care | 23 | 22 | 43 | 19 | 1,064 | 850 | 1,426 | 793 | 22.0 | 25.5 | 29.8 | 24.5 |
| Inpatient | 14 | 14 | 31 | 15 | 536 | 484 | 878 | 454 | 26.3 | 29.6 | 34.9 | 32.1 |
| Outpatient | 9 | 7 | 12 | 5 | 528 | 366 | 548 | 339 | 17.6 | 20.2 | 21.7 | 14.3 |
| Lodging | 14 | 16 | 38 | 21 | 1,001 | 1,048 | 2,281 | 1,391 | 14.1 | 15.5 | 16.8 | 14.8 |
| Mercantile | 27 | 37 | 93 | 49 | 1,649 | 2,139 | 4,753 | 2,841 | 16.3 | 17.4 | 19.6 | 17.4 |
| Retail (other than mall) | 11 | 16 | 35 | 21 | 825 | 1,144 | 2,123 | 1,337 | 12.7 | 14.1 | 16.3 | 15.8 |
| Enclosed and strip malls | 16 | 21 | 58 | 28 | 824 | 996 | 2,630 | 1,504 | 19.8 | 21.2 | 22.2 | 18.9 |
| Office | 63 | 51 | 88 | 51 | 3,861 | 3,317 | 5,496 | 3,441 | 16.4 | 15.4 | 16.0 | 14.8 |
| Public assembly | 13 | 21 | 33 | 13 | 948 | 1,598 | 1,975 | 1,010 | 14.1 | 13.1 | 16.6 | 13.2 |
| Public order and safety | 5 | 3 | 11 | Q | 341 | 333 | 676 | Q | 15.4 | 10.3 | 15.6 | Q |
| Religious worship | 4 | 4 | 12 | 3 | 897 | 1,126 | 2,012 | 725 | 4.5 | 3.7 | 6.1 | 4.7 |
| Service | 5 | 11 | 15 | 6 | 768 | 1,604 | 1,557 | 695 | 7.0 | 6.6 | 9.8 | 8.9 |
| Warehouse and storage | 8 | 16 | 43 | 16 | 1,714 | 2,407 | 5,085 | 3,414 | 4.9 | 6.6 | 8.4 | 4.8 |
| Other | 12 | 9 | 26 | 9 | 536 | 434 | 834 | 439 | 22.0 | 20.1 | 31.5 | 20.2 |
| Vacant | Q | 2 | 3 | 3 | Q | 337 | 686 | 451 | Q | 5.3 | 4.0 | 5.6 |
| **Year constructed** | | | | | | | | | | | | |
| Before 1920 | 12 | 6 | 11 | 3 | 1,581 | 1,070 | 944 | 308 | 7.8 | 5.8 | 11.5 | 8.1 |
| 1920 to 1945 | 21 | 16 | 18 | 10 | 2,076 | 1,722 | 1,417 | 779 | 10.1 | 9.2 | 12.5 | 12.2 |
| 1946 to 1959 | 17 | 20 | 31 | 17 | 1,574 | 1,661 | 2,462 | 1,482 | 10.9 | 12.2 | 12.6 | 11.2 |
| 1960 to 1969 | 29 | 31 | 58 | 29 | 2,240 | 2,738 | 3,411 | 1,904 | 13.0 | 11.5 | 16.9 | 15.3 |
| 1970 to 1979 | 37 | 44 | 59 | 30 | 1,911 | 2,567 | 3,565 | 2,540 | 19.6 | 17.1 | 16.7 | 11.8 |
| 1980 to 1989 | 27 | 37 | 123 | 46 | 1,814 | 2,671 | 6,832 | 3,816 | 14.7 | 13.9 | 18.1 | 12.1 |
| 1990 to 1999 | 40 | 36 | 95 | 42 | 2,294 | 2,713 | 5,694 | 2,716 | 17.3 | 13.3 | 16.7 | 15.6 |
| 2000 to 2003 | 17 | 24 | 52 | 19 | 970 | 1,508 | 3,303 | 1,425 | 17.2 | 15.9 | 15.7 | 13.2 |
| 2004 to 2007 | 8 | 18 | 41 | 30 | 478 | 1,392 | 2,829 | 1,901 | 16.3 | 12.8 | 14.5 | 16.0 |
| 2008 to 2012 | 12 | 17 | 42 | Q | 902 | 978 | 2,651 | 1,112 | 13.5 | 17.1 | 16.0 | 15.9 |
| **Number of floors** | | | | | | | | | | | | |
| One | 58 | 99 | 269 | 119 | 4,132 | 7,720 | 17,608 | 9,426 | 13.9 | 12.8 | 15.3 | 12.6 |
| Two | 52 | 56 | 100 | 51 | 4,182 | 4,890 | 6,828 | 4,270 | 12.4 | 11.5 | 14.6 | 11.9 |
| Three | 30 | 31 | 35 | 13 | 2,408 | 2,703 | 2,041 | 1,075 | 12.6 | 11.5 | 17.0 | 12.3 |
| Four to nine | 50 | 46 | 95 | 40 | 3,389 | 2,850 | 4,942 | 2,216 | 14.6 | 16.1 | 19.2 | 18.2 |
| Ten or more | 31 | 17 | 31 | 19 | 1,727 | 858 | 1,690 | 996 | 17.9 | 19.4 | 18.4 | 19.4 |

## Table C15. Electricity consumption and conditional energy intensity by Census region, 2012 - PUBLIC USE VERSION

| | Total electricity consumption (billion kWh) | | | | Total floorspace of buildings using electricity (million square feet) | | | | Electricity energy intensity (kwh/square foot) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | North-east | Mid-west | South | West | North-east | Mid-west | South | West | North-east | Mid-west | South | West |
| **All buildings** | 220 | 249 | 530 | 243 | 15,838 | 19,021 | 33,108 | 17,982 | 13.9 | 13.1 | 16.0 | 13.5 |
| **Elevators and escalators (more than one may apply)** | | | | | | | | | | | | |
| Any elevators | 128 | 115 | 202 | 94 | 7,883 | 7,583 | 10,900 | 5,597 | 16.3 | 15.1 | 18.5 | 16.9 |
| Number of elevators | | | | | | | | | | | | |
| One | 34 | 39 | 55 | 19 | 2,557 | 3,309 | 3,659 | 1,694 | 13.1 | 11.8 | 15.0 | 11.2 |
| Two to five | 52 | 43 | 89 | 39 | 3,152 | 2,740 | 4,576 | 2,271 | 16.4 | 15.6 | 19.4 | 17.3 |
| Six or more | 43 | 33 | 58 | 36 | 2,174 | 1,534 | 2,665 | 1,633 | 19.9 | 21.4 | 21.7 | 22.0 |
| Any escalators | 15 | 15 | 21 | 16 | 752 | 868 | 980 | 868 | 19.3 | 17.3 | 21.4 | 18.1 |
| **Number of workers (main shift)** | | | | | | | | | | | | |
| Fewer than 5 | 16 | 30 | 62 | 25 | 2,449 | 4,284 | 6,088 | 3,070 | 6.7 | 7.1 | 10.1 | 8.2 |
| 5 to 9 | 13 | 23 | 51 | 25 | 1,451 | 1,912 | 3,551 | 2,227 | 9.3 | 11.9 | 14.3 | 11.1 |
| 10 to 19 | 14 | 26 | 63 | 30 | 1,391 | 1,989 | 3,914 | 2,540 | 9.8 | 12.8 | 16.1 | 11.8 |
| 20 to 49 | 32 | 45 | 94 | 49 | 2,269 | 3,372 | 5,614 | 3,629 | 14.0 | 13.2 | 16.8 | 13.5 |
| 50 to 99 | 34 | 42 | 106 | 31 | 2,399 | 2,761 | 6,091 | 2,256 | 14.3 | 15.4 | 17.4 | 13.8 |
| 100 to 249 | 40 | 37 | 74 | 34 | 2,525 | 2,323 | 4,163 | 1,932 | 15.8 | 16.0 | 17.7 | 17.8 |
| 250 or more | 71 | 46 | 81 | 49 | 3,355 | 2,379 | 3,687 | 2,329 | 21.1 | 19.4 | 21.8 | 20.9 |
| **Weekly operating hours** | | | | | | | | | | | | |
| Fewer than 40 | 4 | 11 | 13 | 7 | 976 | 1,870 | 2,509 | 1,293 | 4.4 | 5.8 | 5.2 | 5.3 |
| 40 to 48 | 21 | 26 | 71 | 36 | 2,342 | 3,167 | 6,735 | 3,635 | 9.0 | 8.2 | 10.6 | 10.0 |
| 49 to 60 | 42 | 50 | 103 | 44 | 3,731 | 4,364 | 8,512 | 4,266 | 11.2 | 11.4 | 12.1 | 10.4 |
| 61 to 84 | 45 | 53 | 98 | 52 | 3,485 | 3,851 | 5,267 | 3,644 | 13.0 | 13.8 | 18.7 | 14.3 |
| 85 to 167 | 36 | 47 | 80 | 37 | 1,898 | 2,424 | 3,142 | 1,939 | 18.8 | 19.4 | 25.5 | 19.0 |
| Open continuously | 72 | 63 | 165 | 66 | 3,406 | 3,344 | 6,944 | 3,204 | 21.2 | 18.8 | 23.7 | 20.7 |
| **Party responsible for operation and maintenance of energy systems** | | | | | | | | | | | | |
| Building owner | 180 | 219 | 435 | 195 | 13,615 | 16,914 | 27,759 | 14,427 | 13.2 | 12.9 | 15.7 | 13.5 |
| Business owner or tenant | 34 | 26 | 78 | 44 | 1,815 | 1,724 | 4,406 | 3,226 | 18.8 | 14.9 | 17.8 | 13.6 |
| Property management | Q | Q | 11 | Q | Q | Q | 636 | Q | Q | Q | 17.3 | Q |
| Other | Q | Q | 6 | Q | Q | Q | 307 | Q | Q | Q | 18.6 | Q |
| **Provider of direct input on energy-related equipment purchases** | | | | | | | | | | | | |
| Building owner | 183 | 222 | 449 | 207 | 13,874 | 17,246 | 28,743 | 15,349 | 13.2 | 12.9 | 15.6 | 13.5 |
| Business owner or tenant | 28 | 20 | 61 | 32 | 1,395 | 1,285 | 3,256 | 2,274 | 20.3 | 15.8 | 18.9 | 14.2 |
| Property management | Q | Q | 4 | Q | Q | Q | 353 | Q | Q | Q | 12.1 | Q |
| Other | 6 | 4 | 15 | 2 | 314 | 347 | 756 | 221 | 18.2 | 12.7 | 20.0 | 10.0 |
| **Number of establishments** | | | | | | | | | | | | |
| One | 131 | 156 | 339 | 151 | 9,628 | 12,841 | 21,677 | 11,069 | 13.6 | 12.2 | 15.6 | 13.6 |
| 2 to 5 | 47 | 62 | 95 | 45 | 3,626 | 4,207 | 6,489 | 3,744 | 12.8 | 14.7 | 14.7 | 12.1 |
| 6 to 10 | 12 | 12 | 31 | 16 | 767 | 758 | 1,639 | 1,104 | 15.0 | 16.1 | 18.9 | 14.3 |
| 11 to 20 | 14 | 9 | 32 | 13 | 844 | 493 | 1,555 | 789 | 16.6 | 18.4 | 20.8 | 16.5 |
| More than 20 | 17 | 10 | 32 | 18 | 869 | 529 | 1,417 | 1,058 | 19.5 | 18.3 | 22.6 | 16.5 |
| Currently unoccupied | Q | Q | 1 | Q | Q | Q | 332 | 218 | Q | Q | 1.7 | 3.5 |

## Table C15. Electricity consumption and conditional energy intensity by Census region, 2012 - PUBLIC USE VERSION

| | Total electricity consumption (billion kWh) | | | | Total floorspace of buildings using electricity (million square feet) | | | | Electricity energy intensity (kwh/square foot) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | North-east | Mid-west | South | West | North-east | Mid-west | South | West | North-east | Mid-west | South | West |
| **All buildings** | 220 | 249 | 530 | 243 | 15,838 | 19,021 | 33,108 | 17,982 | 13.9 | 13.1 | 16.0 | 13.5 |
| **Predominant exterior wall material** | | | | | | | | | | | | |
| Brick, stone, or stucco | 104 | 123 | 275 | 94 | 8,129 | 9,238 | 16,296 | 6,948 | 12.8 | 13.3 | 16.9 | 13.5 |
| Concrete (block or poured) | 57 | 54 | 140 | 72 | 3,522 | 3,921 | 7,960 | 4,897 | 16.1 | 13.8 | 17.6 | 14.6 |
| Concrete panels | 16 | 29 | 39 | 36 | 832 | 1,680 | 3,017 | 2,931 | 19.3 | 17.2 | 13.1 | 12.3 |
| Siding or shingles | 17 | 18 | 18 | 19 | 1,532 | 1,507 | 1,364 | 1,328 | 11.0 | 12.1 | 12.9 | 14.1 |
| Metal panels | 10 | 15 | 43 | 11 | 954 | 2,057 | 3,820 | 1,221 | 10.4 | 7.5 | 11.2 | 8.8 |
| Window glass | 12 | Q | 8 | 7 | 437 | Q | 356 | 328 | 27.1 | Q | 23.9 | 20.5 |
| Other | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q |
| No one major type | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q |
| **Predominant roof material** | | | | | | | | | | | | |
| Metal surfacing | 16 | 28 | 95 | 29 | 1,555 | 3,414 | 7,903 | 2,530 | 10.2 | 8.3 | 12.0 | 11.6 |
| Synthetic or rubber | 90 | 110 | 148 | 75 | 6,202 | 7,396 | 7,697 | 4,638 | 14.5 | 14.8 | 19.2 | 16.1 |
| Built-up | 64 | 56 | 148 | 69 | 3,713 | 3,904 | 8,569 | 5,142 | 17.2 | 14.4 | 17.3 | 13.5 |
| Slate or tile shingles | 8 | 4 | 29 | 18 | 994 | 391 | 1,806 | 1,186 | 7.6 | 10.8 | 15.9 | 15.3 |
| Wooden materials (including shingles) | 2 | Q | 6 | 5 | 149 | Q | 376 | 469 | 12.9 | Q | 15.4 | 9.7 |
| Asphalt, fiberglass, or other shingles | 34 | 44 | 82 | 37 | 2,645 | 3,222 | 5,577 | 3,247 | 12.7 | 13.6 | 14.7 | 11.4 |
| Concrete | 5 | Q | 16 | 6 | 299 | Q | 800 | 404 | 18.2 | Q | 20.3 | 15.8 |
| Other | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q |
| No one major type | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q |
| **Roof characteristics** | | | | | | | | | | | | |
| Roof tilt | | | | | | | | | | | | |
| Flat | 164 | 159 | 320 | 157 | 10,364 | 10,428 | 17,584 | 10,711 | 15.8 | 15.2 | 18.2 | 14.6 |
| Shallow pitch | 29 | 58 | 147 | 64 | 2,590 | 5,053 | 10,755 | 5,074 | 11.2 | 11.5 | 13.7 | 12.6 |
| Steeper pitch | 28 | 32 | 63 | 22 | 2,884 | 3,539 | 4,769 | 2,198 | 9.5 | 9.2 | 13.2 | 10.2 |
| Cool roof | 55 | 60 | 131 | 79 | 3,345 | 3,642 | 7,435 | 4,897 | 16.5 | 16.5 | 17.6 | 16.1 |
| **Renovations in buildings constructed before 2008 (more than one may apply)** | | | | | | | | | | | | |
| Any type of renovation | 142 | 142 | 257 | 107 | 9,534 | 10,241 | 15,118 | 7,426 | 14.9 | 13.9 | 17.0 | 14.4 |
| Addition or annex | 38 | 61 | 78 | 28 | 2,573 | 4,075 | 4,522 | 1,709 | 14.7 | 15.0 | 17.2 | 16.3 |
| Reduction in floorspace | Q | 5 | 13 | 4 | Q | 246 | 598 | 277 | 17.9 | 21.4 | 22.3 | 13.4 |
| Roof replacement | 83 | 80 | 125 | 42 | 5,540 | 5,453 | 6,823 | 3,099 | 14.9 | 14.6 | 18.4 | 13.5 |
| Exterior wall replacement | 11 | 17 | 30 | 12 | 927 | 1,061 | 1,415 | 801 | 11.6 | 16.3 | 21.4 | 14.9 |
| Interior wall reconfiguration | 80 | 78 | 133 | 66 | 5,174 | 5,168 | 6,778 | 4,213 | 15.4 | 15.1 | 19.6 | 15.6 |
| Window replacement | 41 | 37 | 71 | 27 | 3,391 | 3,103 | 3,730 | 1,983 | 12.2 | 11.8 | 19.0 | 13.7 |
| HVAC equipment upgrade | 107 | 93 | 164 | 69 | 6,569 | 6,606 | 9,183 | 4,370 | 16.2 | 14.1 | 17.9 | 15.7 |
| Lighting upgrade | 91 | 89 | 159 | 70 | 6,106 | 6,192 | 8,720 | 4,508 | 15.0 | 14.4 | 18.2 | 15.5 |
| Electrical upgrade | 62 | 58 | 101 | 44 | 4,084 | 4,074 | 5,344 | 2,648 | 15.1 | 14.2 | 18.9 | 16.6 |
| Plumbing system upgrade | 53 | 50 | 80 | 39 | 3,393 | 3,621 | 4,564 | 2,327 | 15.5 | 13.9 | 17.5 | 16.8 |
| Insulation upgrade | 26 | 31 | 46 | 23 | 1,741 | 2,185 | 2,264 | 1,256 | 14.9 | 14.4 | 20.1 | 18.2 |
| Fire, safety, or security upgrade | 71 | 63 | 105 | 43 | 4,731 | 3,873 | 5,788 | 2,904 | 15.0 | 16.2 | 18.2 | 14.9 |
| Structural upgrade | 9 | 14 | 27 | 19 | 743 | 876 | 1,158 | 1,041 | 12.0 | 16.3 | 23.3 | 17.8 |
| Other | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q |
| No renovations | 66 | 90 | 230 | 118 | 5,402 | 7,802 | 15,339 | 9,445 | 12.3 | 11.6 | 15.0 | 12.5 |
| Buildings constructed 2008 or later | 12 | 17 | 42 | Q | 902 | 978 | 2,651 | 1,112 | 13.5 | 17.1 | 16.0 | 15.9 |

## Table C15. Electricity consumption and conditional energy intensity by Census region, 2012 - PUBLIC USE VERSION

| | Total electricity consumption (billion kWh) | | | | Total floorspace of buildings using electricity (million square feet) | | | | Electricity energy intensity (kwh/square foot) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | North-east | Mid-west | South | West | North-east | Mid-west | South | West | North-east | Mid-west | South | West |
| **All buildings** | 220 | 249 | 530 | 243 | 15,838 | 19,021 | 33,108 | 17,982 | 13.9 | 13.1 | 16.0 | 13.5 |
| **Energy sources (more than one may apply)** | | | | | | | | | | | | |
| Electricity | 220 | 249 | 530 | 243 | 15,838 | 19,021 | 33,108 | 17,982 | 13.9 | 13.1 | 16.0 | 13.5 |
| Natural gas | 172 | 204 | 335 | 191 | 11,394 | 15,490 | 19,983 | 12,702 | 15.1 | 13.2 | 16.8 | 15.1 |
| Fuel oil | 95 | 73 | 153 | 60 | 6,333 | 3,915 | 7,151 | 3,088 | 15.0 | 18.8 | 21.4 | 19.6 |
| District heat | 37 | 15 | 35 | 16 | 1,954 | 907 | 2,136 | 820 | 18.9 | 16.3 | 16.6 | 19.9 |
| District chilled water | 22 | 10 | 39 | 14 | 782 | 563 | 2,440 | 692 | 27.9 | 18.3 | 16.1 | 20.4 |
| Propane | 24 | 26 | 42 | 19 | 1,742 | 1,917 | 2,593 | 1,437 | 13.6 | 13.5 | 16.2 | 13.1 |
| Other | 12 | 8 | 16 | 14 | 1,079 | 782 | 906 | 1,034 | 10.7 | 9.9 | 17.9 | 13.8 |
| **Space-heating energy sources** | | | | | | | | | | | | |
| Electricity | 114 | 130 | 383 | 146 | 7,526 | 8,872 | 22,653 | 10,603 | 15.2 | 14.6 | 16.9 | 13.8 |
| Electricity main | 40 | 49 | 269 | 81 | 2,449 | 2,969 | 15,152 | 5,971 | 16.5 | 16.4 | 17.8 | 13.5 |
| Electricity secondary | 74 | 81 | 114 | 65 | 5,077 | 5,903 | 7,500 | 4,632 | 14.6 | 13.7 | 15.2 | 14.1 |
| Other excluding electricity | 103 | 118 | 116 | 87 | 8,063 | 9,628 | 7,952 | 5,849 | 12.8 | 12.2 | 14.6 | 14.8 |
| Buildings without heating | Q | 2 | 31 | 10 | 248 | 521 | 2,503 | 1,530 | Q | 3.2 | 12.3 | 6.4 |
| **Primary space-heating energy source** | | | | | | | | | | | | |
| Electricity | 40 | 49 | 269 | 81 | 2,449 | 2,969 | 15,152 | 5,971 | 16.5 | 16.4 | 17.8 | 13.5 |
| Natural gas | 120 | 173 | 186 | 133 | 8,675 | 13,560 | 12,441 | 9,220 | 13.8 | 12.7 | 15.0 | 14.4 |
| Fuel oil | 17 | Q | 3 | Q | 1,990 | Q | 299 | Q | 8.4 | Q | 9.0 | Q |
| District heat | 37 | 14 | 35 | 16 | 1,927 | 862 | 2,054 | 801 | 19.0 | 16.4 | 16.8 | 20.0 |
| Propane | 3 | 7 | 7 | 2 | 377 | 723 | 613 | 235 | 7.6 | 9.1 | 11.1 | 6.8 |
| Other | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | 8.1 |
| **Cooling energy sources** | | | | | | | | | | | | |
| Electricity | 197 | 239 | 499 | 224 | 13,854 | 17,295 | 30,027 | 16,002 | 14.2 | 13.8 | 16.6 | 14.0 |
| Other excluding electricity | Q | 5 | 26 | Q | 642 | 308 | 1,787 | 454 | 26.5 | 15.0 | 14.3 | 20.8 |
| Buildings without cooling | 7 | 6 | 6 | 9 | 1,342 | 1,417 | 1,293 | 1,527 | 4.9 | 4.0 | 4.6 | 6.1 |
| **Water-heating energy sources** | | | | | | | | | | | | |
| Electricity | 97 | 111 | 320 | 121 | 6,910 | 8,197 | 19,535 | 8,860 | 14.0 | 13.5 | 16.4 | 13.7 |
| Other excluding electricity | 121 | 134 | 192 | 114 | 8,274 | 9,856 | 10,806 | 7,660 | 14.6 | 13.6 | 17.7 | 14.8 |
| Buildings without water heating | 2 | 4 | 18 | 8 | 654 | 968 | 2,767 | 1,463 | 3.7 | 4.6 | 6.5 | 5.8 |
| **Cooking energy sources** | | | | | | | | | | | | |
| Electricity | 80 | 99 | 189 | 86 | 4,656 | 6,249 | 9,874 | 4,518 | 17.1 | 15.8 | 19.1 | 19.1 |
| Other excluding electricity | 59 | 38 | 97 | 53 | 3,672 | 2,768 | 4,566 | 2,712 | 16.1 | 13.8 | 21.2 | 19.4 |
| Buildings without cooking | 81 | 112 | 244 | 104 | 7,511 | 10,004 | 18,668 | 10,752 | 10.8 | 11.2 | 13.1 | 9.7 |
| **Energy end uses (more than one may apply)** | | | | | | | | | | | | |
| Buildings with space heating | 217 | 248 | 499 | 233 | 15,589 | 18,500 | 30,605 | 16,452 | 13.9 | 13.4 | 16.3 | 14.2 |
| Buildings with cooling | 214 | 244 | 524 | 234 | 14,496 | 17,603 | 31,815 | 16,455 | 14.7 | 13.8 | 16.5 | 14.2 |
| Buildings with water heating | 218 | 245 | 512 | 235 | 15,184 | 18,053 | 30,341 | 16,520 | 14.3 | 13.6 | 16.9 | 14.2 |
| Buildings with cooking | 139 | 137 | 286 | 139 | 8,327 | 9,017 | 14,440 | 7,230 | 16.7 | 15.2 | 19.8 | 19.2 |
| Buildings with manufacturing | 15 | 11 | 29 | 11 | 1,060 | 1,308 | 1,705 | 1,141 | 14.1 | 8.6 | 17.1 | 10.0 |
| Buildings with electricity generation | 112 | 88 | 202 | 88 | 6,489 | 5,333 | 9,484 | 4,653 | 17.3 | 16.6 | 21.3 | 18.9 |

## Table C15. Electricity consumption and conditional energy intensity by Census region, 2012 - PUBLIC USE VERSION

| | Total electricity consumption (billion kWh) | | | | Total floorspace of buildings using electricity (million square feet) | | | | Electricity energy intensity (kwh/square foot) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | North-east | Mid-west | South | West | North-east | Mid-west | South | West | North-east | Mid-west | South | West |
| **All buildings** | 220 | 249 | 530 | 243 | 15,838 | 19,021 | 33,108 | 17,982 | 13.9 | 13.1 | 16.0 | 13.5 |
| **Percent of floorspace heated** | | | | | | | | | | | | |
| Not heated | Q | 2 | 31 | 10 | 248 | 521 | 2,503 | 1,530 | Q | 3.2 | 12.3 | 6.4 |
| 1 to 50 | 9 | 11 | 43 | 35 | 1,134 | 1,296 | 3,988 | 3,718 | 8.0 | 8.7 | 10.7 | 9.4 |
| 51 to 99 | 43 | 30 | 110 | 51 | 2,864 | 2,249 | 6,229 | 3,331 | 14.8 | 13.4 | 17.7 | 15.3 |
| 100 | 166 | 206 | 347 | 147 | 11,591 | 14,955 | 20,387 | 9,404 | 14.3 | 13.8 | 17.0 | 15.7 |
| **Percent of floorspace cooled** | | | | | | | | | | | | |
| Not cooled | 7 | 6 | 6 | 9 | 1,342 | 1,417 | 1,293 | 1,527 | 4.9 | 4.0 | 4.6 | 6.1 |
| 1 to 50 | 26 | 45 | 47 | 35 | 3,745 | 5,025 | 6,206 | 4,407 | 7.0 | 8.9 | 7.6 | 7.9 |
| 51 to 99 | 89 | 71 | 152 | 68 | 5,090 | 4,679 | 8,582 | 4,510 | 17.6 | 15.3 | 17.7 | 15.1 |
| 100 | 98 | 127 | 325 | 131 | 5,661 | 7,899 | 17,027 | 7,538 | 17.3 | 16.1 | 19.1 | 17.4 |
| **Percent lit when open** | | | | | | | | | | | | |
| Zero | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q |
| 1 to 50 | 14 | 30 | 50 | 20 | 2,268 | 2,977 | 4,766 | 2,911 | 6.0 | 10.1 | 10.5 | 6.9 |
| 51 to 99 | 90 | 114 | 217 | 104 | 6,315 | 8,135 | 13,376 | 7,341 | 14.3 | 14.0 | 16.2 | 14.2 |
| 100 | 116 | 104 | 262 | 118 | 7,018 | 7,416 | 14,387 | 7,338 | 16.5 | 14.0 | 18.2 | 16.0 |
| Building never open/electricity not used | Q | 1 | 1 | 1 | Q | 414 | 456 | 315 | Q | 3.2 | 1.5 | 3.0 |
| **Percent lit during off hours** | | | | | | | | | | | | |
| Zero | 37 | 46 | 89 | 60 | 4,134 | 5,954 | 9,119 | 6,166 | 8.8 | 7.8 | 9.8 | 9.7 |
| 1 to 50 | 130 | 170 | 347 | 138 | 9,622 | 11,574 | 20,302 | 9,826 | 13.5 | 14.7 | 17.1 | 14.0 |
| 51 to 100 | 45 | 19 | 65 | 36 | 1,758 | 942 | 2,543 | 1,555 | 25.4 | 20.1 | 25.4 | 23.4 |
| Building always open with no "off hours" | 9 | 14 | 30 | 9 | 324 | 550 | 1,144 | 435 | 28.7 | 26.2 | 25.8 | 20.7 |
| Electricity not used | N | N | N | N | N | N | N | N | N | N | N | N |
| **Heating equipment (more than one may apply)** | | | | | | | | | | | | |
| Heat pumps | 21 | 16 | 109 | 33 | 1,393 | 1,133 | 6,894 | 2,485 | 15.2 | 14.4 | 15.8 | 13.3 |
| Furnaces | 15 | 29 | 45 | 18 | 1,524 | 2,670 | 3,366 | 1,536 | 9.7 | 10.9 | 13.3 | 11.5 |
| Individual space heaters | 71 | 71 | 86 | 44 | 4,883 | 5,853 | 6,635 | 3,603 | 14.6 | 12.1 | 12.9 | 12.2 |
| District heat | 37 | 15 | 35 | 16 | 1,954 | 907 | 2,114 | 801 | 18.9 | 16.3 | 16.5 | 20.0 |
| Boilers | 87 | 96 | 107 | 60 | 6,625 | 6,849 | 5,798 | 3,541 | 13.2 | 14.0 | 18.4 | 16.8 |
| Packaged heating units | 110 | 156 | 344 | 161 | 7,327 | 11,001 | 20,230 | 11,062 | 15.0 | 14.2 | 17.0 | 14.5 |
| Other | Q | 7 | 15 | 8 | Q | 370 | 549 | 339 | Q | 19.2 | 27.4 | 22.7 |
| **Cooling equipment (more than one may apply)** | | | | | | | | | | | | |
| Residential-type central air conditioners | 23 | 45 | 81 | 38 | 2,125 | 4,445 | 5,893 | 2,827 | 10.9 | 10.1 | 13.7 | 13.4 |
| Heat pumps | 22 | 17 | 112 | 38 | 1,490 | 1,106 | 7,073 | 2,948 | 14.4 | 15.2 | 15.9 | 13.0 |
| Individual air conditioners | 47 | 37 | 56 | 20 | 3,846 | 2,670 | 4,225 | 1,727 | 12.1 | 14.0 | 13.3 | 11.5 |
| District chilled water | 22 | 10 | 39 | 14 | 782 | 563 | 2,440 | 692 | 27.9 | 18.3 | 16.1 | 20.4 |
| Central chillers | 63 | 78 | 137 | 49 | 3,486 | 4,462 | 6,430 | 2,632 | 18.2 | 17.6 | 21.3 | 18.7 |
| Packaged air conditioning units | 133 | 148 | 306 | 140 | 8,799 | 10,087 | 17,337 | 9,494 | 15.1 | 14.6 | 17.6 | 14.8 |
| Swamp coolers | Q | Q | 8 | 18 | Q | Q | 473 | 1,344 | Q | Q | 17.1 | 13.3 |
| Other | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q |

## Table C15. Electricity consumption and conditional energy intensity by Census region, 2012 - PUBLIC USE VERSION

| | Total electricity consumption (billion kWh) | | | | Total floorspace of buildings using electricity (million square feet) | | | | Electricity energy intensity (kwh/square foot) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | North-east | Mid-west | South | West | North-east | Mid-west | South | West | North-east | Mid-west | South | West |
| **All buildings** | 220 | 249 | 530 | 243 | 15,838 | 19,021 | 33,108 | 17,982 | 13.9 | 13.1 | 16.0 | 13.5 |
| **Main equipment replaced since 1990 (more than one may apply)** | | | | | | | | | | | | |
| Heating | 69 | 93 | 162 | 64 | 5,636 | 6,976 | 10,065 | 5,310 | 12.3 | 13.4 | 16.1 | 12.0 |
| Cooling | 87 | 97 | 191 | 70 | 6,606 | 7,497 | 11,666 | 5,528 | 13.2 | 13.0 | 16.3 | 12.7 |
| **Water-heating equipment** | | | | | | | | | | | | |
| Centralized system | 136 | 158 | 302 | 132 | 9,685 | 11,706 | 17,565 | 9,563 | 14.1 | 13.5 | 17.2 | 13.8 |
| Distributed system | 30 | 26 | 68 | 33 | 2,389 | 2,447 | 4,954 | 3,058 | 12.4 | 10.8 | 13.8 | 10.9 |
| Combination of centralized and distributed system | 52 | 61 | 142 | 69 | 3,110 | 3,900 | 7,822 | 3,899 | 16.6 | 15.5 | 18.2 | 17.7 |
| **Lighting equipment types (more than one may apply)** | | | | | | | | | | | | |
| Incandescent | 118 | 137 | 248 | 109 | 7,604 | 9,224 | 14,528 | 7,196 | 15.5 | 14.9 | 17.1 | 15.1 |
| Standard fluorescent | 214 | 242 | 509 | 232 | 14,851 | 17,866 | 31,447 | 16,717 | 14.4 | 13.6 | 16.2 | 13.9 |
| Compact fluorescent | 174 | 179 | 365 | 171 | 11,207 | 11,913 | 20,134 | 11,148 | 15.6 | 15.0 | 18.1 | 15.3 |
| High-intensity discharge (HID) | 76 | 86 | 158 | 61 | 4,480 | 5,535 | 9,346 | 4,158 | 17.0 | 15.6 | 16.9 | 14.8 |
| Halogen | 78 | 101 | 205 | 93 | 5,358 | 6,261 | 10,935 | 5,621 | 14.6 | 16.2 | 18.8 | 16.6 |
| LED | 90 | 89 | 159 | 77 | 4,786 | 5,126 | 7,502 | 4,572 | 18.8 | 17.3 | 21.2 | 16.8 |
| Other | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q |
| **Refrigeration equipment (more than one may apply)** | | | | | | | | | | | | |
| Any refrigeration | 207 | 233 | 491 | 219 | 14,159 | 17,030 | 28,834 | 14,699 | 14.6 | 13.7 | 17.0 | 14.9 |
| Walk-in units | 124 | 118 | 250 | 115 | 6,025 | 6,421 | 10,732 | 5,361 | 20.6 | 18.3 | 23.3 | 21.5 |
| Cases or cabinets | 120 | 122 | 222 | 118 | 6,055 | 6,804 | 10,364 | 5,452 | 19.9 | 17.9 | 21.4 | 21.7 |
| Large cold storage areas | 13 | 18 | 44 | 23 | 565 | 975 | 1,672 | 913 | 23.6 | 18.4 | 26.3 | 24.8 |
| Commercial ice makers | 115 | 126 | 290 | 122 | 5,561 | 6,582 | 14,497 | 6,039 | 20.8 | 19.2 | 20.0 | 20.1 |
| Residential-type or compact units | 169 | 193 | 377 | 172 | 12,023 | 14,612 | 24,270 | 12,538 | 14.1 | 13.2 | 15.5 | 13.7 |
| Vending machines | 144 | 149 | 315 | 134 | 8,820 | 9,668 | 17,625 | 8,170 | 16.4 | 15.4 | 17.9 | 16.4 |
| No refrigeration | 14 | 16 | 39 | 24 | 1,679 | 1,991 | 4,274 | 3,283 | 8.1 | 8.3 | 9.1 | 7.3 |
| **Office equipment (more than one may apply)** | | | | | | | | | | | | |
| Desktop computers | 210 | 238 | 500 | 230 | 14,663 | 17,321 | 29,765 | 16,390 | 14.3 | 13.7 | 16.8 | 14.0 |
| With flat screen monitors | 208 | 236 | 493 | 228 | 14,502 | 17,088 | 29,427 | 16,219 | 14.4 | 13.8 | 16.8 | 14.1 |
| With multiple monitors | 94 | 104 | 214 | 111 | 5,319 | 6,400 | 12,163 | 7,144 | 17.6 | 16.2 | 17.6 | 15.6 |
| Laptop computers | 179 | 196 | 412 | 181 | 11,894 | 14,249 | 25,003 | 12,886 | 15.1 | 13.8 | 16.5 | 14.0 |
| Dedicated servers | 162 | 173 | 359 | 175 | 10,205 | 11,263 | 20,640 | 11,435 | 15.9 | 15.3 | 17.4 | 15.3 |
| Laser printers | 162 | 174 | 357 | 162 | 10,687 | 12,307 | 20,541 | 11,304 | 15.2 | 14.2 | 17.4 | 14.4 |
| Inkjet printers | 88 | 104 | 226 | 106 | 6,761 | 8,035 | 14,393 | 7,701 | 13.0 | 12.9 | 15.7 | 13.7 |
| FAX machines | 189 | 206 | 443 | 191 | 13,169 | 14,685 | 25,898 | 13,699 | 14.3 | 14.1 | 17.1 | 14.0 |
| Photocopiers | 178 | 185 | 371 | 175 | 12,197 | 13,244 | 22,173 | 12,461 | 14.6 | 13.9 | 16.7 | 14.0 |
| **Number of desktop computers** | | | | | | | | | | | | |
| None | 11 | 11 | 30 | 13 | 1,175 | 1,700 | 3,343 | 1,592 | 9.0 | 6.7 | 9.0 | 8.5 |
| 1 to 4 | 26 | 41 | 98 | 41 | 2,626 | 4,048 | 6,273 | 3,356 | 9.7 | 10.0 | 15.7 | 12.1 |
| 5 to 9 | 20 | 28 | 60 | 26 | 1,392 | 2,122 | 3,529 | 2,382 | 14.1 | 13.1 | 16.9 | 11.1 |
| 10 to 19 | 23 | 24 | 51 | 31 | 1,646 | 1,826 | 3,632 | 2,389 | 13.7 | 13.0 | 14.2 | 13.1 |
| 20 to 49 | 31 | 41 | 97 | 40 | 2,706 | 2,598 | 5,344 | 2,831 | 11.6 | 15.8 | 18.2 | 14.3 |
| 50 to 99 | 20 | 28 | 48 | 23 | 1,363 | 1,984 | 3,266 | 1,705 | 14.9 | 14.4 | 14.7 | 13.4 |
| 100 to 249 | 39 | 31 | 60 | 30 | 2,268 | 2,235 | 3,421 | 1,781 | 17.3 | 13.8 | 17.4 | 16.9 |
| 250 or more | 51 | 45 | 86 | 38 | 2,662 | 2,509 | 4,299 | 1,945 | 19.1 | 18.0 | 20.1 | 19.4 |

## Table C15. Electricity consumption and conditional energy intensity by Census region, 2012 - PUBLIC USE VERSION

| | Total electricity consumption (billion kWh) | | | | Total floorspace of buildings using electricity (million square feet) | | | | Electricity energy intensity (kwh/square foot) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | North-east | Mid-west | South | West | North-east | Mid-west | South | West | North-east | Mid-west | South | West |
| **All buildings** | 220 | 249 | 530 | 243 | 15,838 | 19,021 | 33,108 | 17,982 | 13.9 | 13.1 | 16.0 | 13.5 |
| **Number of laptop computers** | | | | | | | | | | | | |
| None | 41 | 53 | 119 | 62 | 3,944 | 4,771 | 8,105 | 5,096 | 10.4 | 11.1 | 14.6 | 12.2 |
| 1 to 4 | 38 | 60 | 121 | 53 | 3,373 | 5,400 | 8,189 | 4,689 | 11.2 | 11.1 | 14.8 | 11.4 |
| 5 to 9 | 26 | 23 | 56 | 22 | 1,422 | 1,478 | 3,570 | 1,912 | 17.9 | 15.8 | 15.6 | 11.4 |
| 10 to 19 | 22 | 20 | 56 | 32 | 1,601 | 1,468 | 3,394 | 1,983 | 13.5 | 13.9 | 16.6 | 16.2 |
| 20 to 49 | 22 | 32 | 61 | 38 | 1,471 | 2,202 | 3,804 | 2,110 | 15.0 | 14.7 | 16.2 | 18.1 |
| 50 to 99 | 17 | 21 | 34 | 14 | 1,165 | 1,332 | 1,860 | 886 | 14.5 | 15.5 | 18.2 | 15.9 |
| 100 to 249 | 24 | 16 | 39 | 11 | 1,426 | 1,023 | 2,111 | 683 | 17.2 | 15.4 | 18.5 | 15.8 |
| 250 or more | 31 | 24 | 44 | 11 | 1,436 | 1,347 | 2,075 | 623 | 21.5 | 17.7 | 21.0 | 17.1 |
| **Number of dedicated servers** | | | | | | | | | | | | |
| None | 58 | 76 | 171 | 68 | 5,633 | 7,758 | 12,468 | 6,547 | 10.4 | 9.9 | 13.8 | 10.3 |
| 1 to 4 | 82 | 102 | 217 | 96 | 6,272 | 7,209 | 13,584 | 7,209 | 13.1 | 14.1 | 16.0 | 13.3 |
| 5 to 9 | 18 | 23 | 37 | 22 | 1,084 | 1,444 | 2,250 | 1,516 | 16.7 | 16.0 | 16.7 | 14.6 |
| 10 to 19 | 25 | 16 | 44 | 24 | 1,120 | 994 | 2,339 | 1,206 | 22.7 | 16.6 | 18.6 | 19.8 |
| 20 to 49 | 11 | 17 | 29 | 13 | 721 | 999 | 1,290 | 771 | 15.7 | 16.7 | 22.6 | 16.9 |
| 50 or more | 25 | 15 | 32 | 20 | 1,009 | 616 | 1,177 | 734 | 24.6 | 24.2 | 27.0 | 27.8 |
| **Number of photocopiers** | | | | | | | | | | | | |
| None | 43 | 65 | 159 | 68 | 3,641 | 5,776 | 10,935 | 5,521 | 11.7 | 11.2 | 14.6 | 12.4 |
| One | 31 | 47 | 88 | 48 | 3,032 | 4,146 | 6,231 | 4,405 | 10.3 | 11.5 | 14.1 | 10.9 |
| 2 to 4 | 43 | 61 | 132 | 56 | 3,697 | 4,579 | 8,078 | 4,086 | 11.8 | 13.3 | 16.3 | 13.7 |
| 5 to 9 | 35 | 30 | 56 | 23 | 1,939 | 2,188 | 3,221 | 1,572 | 18.0 | 13.9 | 17.3 | 14.8 |
| 10 or more | 68 | 46 | 96 | 47 | 3,529 | 2,331 | 4,644 | 2,399 | 19.3 | 19.6 | 20.6 | 19.8 |
| **Number of TVs or video displays** | | | | | | | | | | | | |
| None | 40 | 46 | 89 | 49 | 4,183 | 4,998 | 8,232 | 5,346 | 9.5 | 9.2 | 10.8 | 9.1 |
| One | 17 | 26 | 55 | 23 | 1,416 | 2,405 | 4,279 | 2,006 | 12.0 | 10.7 | 12.9 | 11.4 |
| 2 to 4 | 36 | 52 | 111 | 38 | 3,113 | 4,151 | 6,415 | 3,167 | 11.5 | 12.5 | 17.3 | 11.9 |
| 5 to 9 | 33 | 21 | 63 | 33 | 1,824 | 1,451 | 3,161 | 1,714 | 17.9 | 14.7 | 20.0 | 19.4 |
| 10 to 19 | 34 | 35 | 57 | 22 | 1,765 | 1,895 | 3,053 | 1,420 | 19.0 | 18.4 | 18.5 | 15.3 |
| 20 to 49 | 24 | 25 | 60 | 31 | 1,460 | 1,674 | 3,196 | 1,802 | 16.3 | 14.7 | 18.6 | 17.4 |
| 50 to 99 | 7 | 15 | 38 | 17 | 393 | 932 | 2,075 | 1,040 | 17.8 | 16.3 | 18.5 | 16.2 |
| 100 or more | 31 | 30 | 58 | 30 | 1,685 | 1,515 | 2,698 | 1,488 | 18.4 | 19.7 | 21.4 | 20.4 |
| **Food preparation or serving areas in non-food service buildings (more than one may apply)** | | | | | | | | | | | | |
| Snack bar or concession stand | 36 | 37 | 78 | 40 | 1,898 | 2,273 | 3,708 | 1,873 | 19.0 | 16.4 | 20.9 | 21.3 |
| Fast food or small restaurant | 37 | 39 | 97 | 51 | 1,928 | 1,761 | 3,729 | 2,421 | 19.0 | 22.0 | 26.1 | 21.3 |
| Cafeteria or large restaurant | 62 | 52 | 103 | 44 | 3,604 | 3,415 | 5,908 | 2,224 | 17.3 | 15.2 | 17.5 | 19.6 |
| Commercial kitchen/ food preparation area | 58 | 60 | 117 | 57 | 3,224 | 4,043 | 6,008 | 2,792 | 17.9 | 14.9 | 19.5 | 20.3 |
| Small kitchen area | 41 | 42 | 83 | 37 | 3,303 | 3,520 | 5,141 | 2,376 | 12.3 | 12.0 | 16.1 | 15.7 |
| **Separate computer areas (more than one may apply)** | | | | | | | | | | | | |
| Data center or server farm | 54 | 49 | 82 | 54 | 2,403 | 2,439 | 3,833 | 2,311 | 22.3 | 20.0 | 21.5 | 23.3 |
| Computer-based training room | 51 | 65 | 128 | 56 | 3,421 | 3,938 | 7,057 | 3,279 | 14.9 | 16.5 | 18.1 | 17.2 |
| Student or public computer center | 32 | 41 | 94 | 37 | 2,710 | 3,345 | 5,953 | 2,245 | 11.7 | 12.2 | 15.8 | 16.4 |

## Table C15. Electricity consumption and conditional energy intensity by Census region, 2012 - PUBLIC USE VERSION

| | Total electricity consumption (billion kWh) | | | | Total floorspace of buildings using electricity (million square feet) | | | | Electricity energy intensity (kwh/square foot) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | North-east | Mid-west | South | West | North-east | Mid-west | South | West | North-east | Mid-west | South | West |
| **All buildings** | 220 | 249 | 530 | 243 | 15,838 | 19,021 | 33,108 | 17,982 | 13.9 | 13.1 | 16.0 | 13.5 |
| **HVAC conservation features (more than one may apply)** | | | | | | | | | | | | |
| Economizer cycle | 125 | 128 | 173 | 112 | 6,923 | 7,879 | 8,999 | 6,835 | 18.1 | 16.3 | 19.2 | 16.4 |
| Regular HVAC maintenance | 203 | 223 | 470 | 212 | 13,528 | 15,633 | 26,552 | 14,506 | 15.0 | 14.2 | 17.7 | 14.6 |
| Building automation system (BAS)[1] | 126 | 133 | 279 | 132 | 7,362 | 8,090 | 14,544 | 7,517 | 17.1 | 16.5 | 19.2 | 17.5 |
| **Window and interior lighting features (more than one may apply)** | | | | | | | | | | | | |
| Multipaned windows | 170 | 213 | 387 | 161 | 11,745 | 15,473 | 22,388 | 10,881 | 14.5 | 13.8 | 17.3 | 14.8 |
| Tinted window glass | 109 | 140 | 320 | 150 | 6,647 | 8,973 | 18,561 | 10,507 | 16.4 | 15.6 | 17.2 | 14.3 |
| Reflective window glass | 44 | 65 | 122 | 70 | 2,296 | 3,767 | 5,431 | 4,244 | 19.0 | 17.2 | 22.4 | 16.5 |
| External overhangs or awnings | 81 | 102 | 250 | 117 | 4,461 | 6,556 | 13,815 | 7,472 | 18.1 | 15.6 | 18.1 | 15.6 |
| Skylights or atriums | 64 | 57 | 136 | 74 | 4,163 | 4,081 | 8,028 | 5,850 | 15.3 | 14.1 | 17.0 | 12.7 |
| Light scheduling | 107 | 107 | 207 | 121 | 6,141 | 6,627 | 10,720 | 7,028 | 17.4 | 16.1 | 19.3 | 17.2 |
| Occupancy sensors | 124 | 124 | 236 | 124 | 7,734 | 7,906 | 11,982 | 8,254 | 16.0 | 15.7 | 19.7 | 15.0 |
| Multi-level lighting or dimming | 44 | 55 | 109 | 64 | 2,449 | 3,162 | 5,374 | 3,537 | 18.0 | 17.4 | 20.3 | 18.1 |
| Daylight harvesting | 18 | 27 | 36 | 28 | 1,032 | 1,486 | 1,993 | 1,580 | 17.5 | 18.5 | 17.8 | 17.6 |
| Demand responsive lighting | 10 | 15 | 34 | 21 | 648 | 1,017 | 1,699 | 1,502 | 14.8 | 14.9 | 20.1 | 13.9 |
| Building automation system (BAS) for lighting[1] | 47 | 45 | 91 | 57 | 2,412 | 2,428 | 4,458 | 2,977 | 19.4 | 18.4 | 20.3 | 19.2 |
| **Equipment usage reduced when building not in full use (more than one may apply)** | | | | | | | | | | | | |
| Heating | 173 | 185 | 354 | 181 | 12,814 | 14,423 | 23,394 | 13,475 | 13.5 | 12.8 | 15.1 | 13.4 |
| Cooling | 167 | 180 | 375 | 180 | 11,826 | 13,665 | 24,554 | 13,215 | 14.1 | 13.2 | 15.3 | 13.6 |
| Lighting | 200 | 230 | 482 | 225 | 14,796 | 17,723 | 30,630 | 16,508 | 13.5 | 13.0 | 15.7 | 13.6 |
| **Annual consumption (kilowatthours)** | | | | | | | | | | | | |
| 10,000 or less | 1 | 1 | 1 | 1 | 572 | 864 | 987 | 662 | 1.2 | 1.4 | 1.3 | 1.3 |
| 10,001 to 50,000 | 7 | 11 | 18 | 13 | 1,809 | 2,737 | 3,530 | 2,609 | 4.0 | 4.2 | 5.1 | 5.1 |
| 50,001 to 100,000 | 8 | 13 | 26 | 14 | 1,041 | 1,675 | 3,098 | 1,896 | 7.5 | 7.8 | 8.5 | 7.6 |
| 100,001 to 500,000 | 40 | 53 | 126 | 65 | 3,795 | 4,504 | 8,616 | 5,214 | 10.5 | 11.7 | 14.6 | 12.5 |
| 500,001 to 1,000,000 | 23 | 36 | 79 | 27 | 1,791 | 2,197 | 4,256 | 1,838 | 12.8 | 16.6 | 18.5 | 14.6 |
| 1,000,001 to 5,000,000 | 69 | 85 | 158 | 68 | 4,105 | 4,865 | 8,037 | 3,707 | 16.7 | 17.4 | 19.6 | 18.4 |
| Over 5,000,000 | 73 | 50 | 122 | 54 | 2,725 | 2,178 | 4,584 | 2,056 | 26.8 | 22.8 | 26.7 | 26.4 |

[1]In earlier CBECS publications, BAS was referred to as *Energy Management and Control System (EMCS).*

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 20 buildings were sampled.

N = No cases in reporting sample.

Notes: ● Because of rounding, data may not sum to totals. ● See the *Guide to the 2012 CBECS Detailed Tables* or *CBECS Terminology* for definitions of terms used in these tables and/or comparison of differences with prior CBECS tables. Both references can be accessed from http://www.eia.gov/consumption/commercial/data/2012/ ● Site electricity is the amount of electricity delivered to commercial builidngs. Primary electricity, which is not included in the *Total of major fuels* category, is site electricity plus the conversion losses in the generation, transmission, and distribution processes. ● Statistics for the *Energy end uses* category represent total consumption in buildings that have the end use, not consumption specifically for that particular end use. ● HVAC = Heating, ventilation, and air conditioning.

Source: U.S. Energy Information Administration, Office of Energy Consumption and Efficiency Statistics, Forms EIA-871A and E of the 2012 Commercial Buildings Energy Consumption Survey.

## Table C25. Natural gas consumption and conditional energy intensity by Census region, 2012 - PUBLIC USE VERSION

| | Total natural gas consumption (billion cubic feet) | | | | Total floorspace of buildings using natural gas (million square feet) | | | | Natural gas energy intensity (cubic feet/square foot) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | North-east | Mid-west | South | West | North-east | Mid-west | South | West | North-east | Mid-west | South | West |
| **All buildings** | 487 | 626 | 600 | 479 | 11,394 | 15,490 | 19,983 | 12,702 | 42.7 | 40.4 | 30.0 | 37.7 |
| **Building floorspace (square feet)** | | | | | | | | | | | | |
| 1,001 to 5,000 | 40 | 65 | 91 | 54 | 478 | 1,126 | 1,266 | 888 | 82.9 | 57.5 | 71.7 | 61.2 |
| 5,001 to 10,000 | 32 | 71 | 83 | 55 | 630 | 1,378 | 1,536 | 1,274 | 51.2 | 51.4 | 54.2 | 43.4 |
| 10,001 to 25,000 | 59 | 81 | 82 | 74 | 1,884 | 2,649 | 2,733 | 2,398 | 31.1 | 30.6 | 30.1 | 31.0 |
| 25,001 to 50,000 | 46 | 100 | 74 | 57 | 1,134 | 2,628 | 2,638 | 1,747 | 40.8 | 37.9 | 27.9 | 32.6 |
| 50,001 to 100,000 | 85 | 99 | 97 | 48 | 2,118 | 2,182 | 4,003 | 1,631 | 40.2 | 45.5 | 24.1 | 29.4 |
| 100,001 to 200,000 | 101 | 69 | 56 | 57 | 2,158 | 1,870 | 3,481 | 1,917 | 46.7 | 36.9 | 16.0 | 29.9 |
| 200,001 to 500,000 | 75 | 92 | 56 | 79 | 1,716 | 2,393 | 2,374 | 1,807 | 43.8 | 38.3 | 23.6 | 43.9 |
| Over 500,000 | 49 | 50 | 61 | Q | 1,276 | 1,264 | 1,953 | 1,041 | 38.4 | 39.4 | 31.3 | Q |
| **Principal building activity** | | | | | | | | | | | | |
| Education | 77 | 106 | 61 | 40 | 1,815 | 2,738 | 3,711 | 1,426 | 42.2 | 38.7 | 16.6 | 27.9 |
| Food sales | Q | Q | 10 | Q | Q | Q | 169 | Q | Q | Q | 59.2 | Q |
| Food service | 25 | 49 | 103 | 45 | 196 | 408 | 577 | 321 | 130.3 | 119.6 | 178.0 | 140.0 |
| Health care | 62 | 62 | 78 | 57 | 895 | 717 | 994 | 669 | 68.9 | 86.3 | 78.1 | 85.4 |
| Inpatient | 46 | 48 | 73 | 46 | 429 | 422 | 814 | 431 | 107.9 | 113.1 | 89.9 | 107.5 |
| Outpatient | 15 | 14 | 4 | 11 | 465 | 295 | 180 | 238 | 32.9 | 48.0 | 24.7 | 45.3 |
| Lodging | 34 | 41 | 65 | 74 | 778 | 827 | 1,961 | 1,242 | 44.3 | 49.9 | 33.4 | 59.3 |
| Mercantile | 52 | 80 | 77 | 76 | 1,296 | 1,860 | 2,983 | 2,417 | 40.4 | 42.8 | 25.9 | 31.2 |
| Retail (other than mall) | 13 | 30 | 14 | 16 | 507 | 870 | 935 | 1,060 | 25.2 | 33.9 | 15.1 | 15.2 |
| Enclosed and strip malls | 40 | 50 | 63 | 59 | 790 | 990 | 2,048 | 1,357 | 50.1 | 50.7 | 30.7 | 43.8 |
| Office | 92 | 84 | 47 | 52 | 2,849 | 2,517 | 2,713 | 2,351 | 32.4 | 33.5 | 17.2 | 22.1 |
| Public assembly | 28 | 53 | 27 | 23 | 659 | 1,329 | 1,035 | 839 | 42.9 | 40.0 | 26.5 | 27.0 |
| Public order and safety | Q | Q | 10 | Q | Q | Q | 519 | Q | Q | Q | 18.9 | Q |
| Religious worship | 19 | 27 | 24 | 15 | 730 | 905 | 1,081 | 501 | 25.8 | 30.1 | 22.2 | 29.2 |
| Service | 19 | 46 | 42 | 12 | 285 | 1,379 | 934 | 348 | 64.9 | 33.6 | 44.4 | 35.2 |
| Warehouse and storage | 31 | 37 | 28 | 39 | 1,149 | 1,831 | 2,547 | 1,529 | 27.1 | 20.1 | 11.2 | 25.5 |
| Other | Q | Q | 24 | Q | Q | Q | 591 | 314 | Q | Q | 41.2 | 73.5 |
| Vacant | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q |
| **Year constructed** | | | | | | | | | | | | |
| Before 1920 | 34 | 27 | 20 | 4 | 991 | 848 | 375 | 210 | 33.9 | 32.3 | 53.6 | 19.0 |
| 1920 to 1945 | 49 | 53 | 20 | 19 | 1,424 | 1,279 | 774 | 500 | 34.2 | 41.6 | 25.8 | 38.6 |
| 1946 to 1959 | 56 | 61 | 40 | 37 | 1,017 | 1,457 | 1,787 | 1,107 | 55.0 | 41.9 | 22.4 | 33.7 |
| 1960 to 1969 | 65 | 92 | 79 | 71 | 1,752 | 2,308 | 2,120 | 1,465 | 37.3 | 39.8 | 37.1 | 48.3 |
| 1970 to 1979 | 87 | 94 | 89 | 62 | 1,563 | 2,119 | 2,318 | 2,005 | 55.3 | 44.2 | 38.5 | 31.0 |
| 1980 to 1989 | 43 | 99 | 113 | 72 | 1,246 | 2,252 | 4,157 | 2,567 | 34.2 | 44.0 | 27.2 | 27.9 |
| 1990 to 1999 | 75 | 80 | 95 | 80 | 1,572 | 2,245 | 3,276 | 2,075 | 47.8 | 35.4 | 29.1 | 38.6 |
| 2000 to 2003 | 36 | 42 | 43 | 32 | 837 | 1,181 | 1,815 | 903 | 43.4 | 35.9 | 23.6 | 35.6 |
| 2004 to 2007 | 20 | 36 | 53 | Q | 335 | 1,134 | 1,719 | 1,025 | 58.7 | 31.8 | 30.6 | 57.7 |
| 2008 to 2012 | 23 | 42 | 48 | Q | 656 | 667 | 1,642 | 846 | 34.6 | 62.6 | 29.2 | 50.8 |
| **Number of floors** | | | | | | | | | | | | |
| One | 120 | 262 | 299 | 214 | 2,751 | 6,296 | 9,851 | 6,170 | 43.7 | 41.6 | 30.4 | 34.7 |
| Two | 141 | 141 | 111 | 105 | 3,260 | 4,143 | 4,328 | 3,169 | 43.2 | 34.1 | 25.6 | 33.2 |
| Three | 56 | 92 | 46 | 25 | 1,609 | 2,225 | 1,582 | 792 | 34.7 | 41.4 | 28.8 | 31.4 |
| Four to nine | 132 | 102 | 110 | 89 | 2,670 | 2,132 | 3,243 | 1,726 | 49.4 | 47.6 | 34.0 | 51.4 |
| Ten or more | 38 | 29 | 34 | Q | 1,104 | 693 | 980 | 846 | 34.2 | 42.0 | 34.6 | Q |

## Table C25. Natural gas consumption and conditional energy intensity by Census region, 2012 - PUBLIC USE VERSION

| | Total natural gas consumption (billion cubic feet) | | | | Total floorspace of buildings using natural gas (million square feet) | | | | Natural gas energy intensity (cubic feet/square foot) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | North-east | Mid-west | South | West | North-east | Mid-west | South | West | North-east | Mid-west | South | West |
| **All buildings** | 487 | 626 | 600 | 479 | 11,394 | 15,490 | 19,983 | 12,702 | 42.7 | 40.4 | 30.0 | 37.7 |
| **Number of workers (main shift)** | | | | | | | | | | | | |
| Fewer than 5 | 49 | 87 | 72 | 49 | 1,238 | 2,889 | 2,514 | 1,573 | 39.9 | 30.0 | 28.8 | 31.1 |
| 5 to 9 | 34 | 54 | 64 | 44 | 1,027 | 1,476 | 1,783 | 1,238 | 33.3 | 36.9 | 35.8 | 35.8 |
| 10 to 19 | 37 | 89 | 101 | 64 | 1,063 | 1,730 | 2,355 | 1,860 | 34.6 | 51.2 | 42.7 | 34.6 |
| 20 to 49 | 59 | 117 | 107 | 87 | 1,545 | 2,898 | 3,567 | 2,714 | 38.2 | 40.2 | 30.0 | 32.0 |
| 50 to 99 | 92 | 105 | 100 | 54 | 1,796 | 2,411 | 4,364 | 1,785 | 51.0 | 43.4 | 23.0 | 30.3 |
| 100 to 249 | 100 | 83 | 67 | 79 | 2,192 | 2,137 | 3,000 | 1,552 | 45.6 | 38.9 | 22.2 | 51.1 |
| 250 or more | 116 | 92 | 89 | 101 | 2,532 | 1,948 | 2,399 | 1,981 | 45.7 | 47.2 | 37.0 | 51.2 |
| **Weekly operating hours** | | | | | | | | | | | | |
| Fewer than 40 | 14 | 36 | 25 | 19 | 485 | 1,307 | 1,241 | 770 | 29.9 | 27.5 | 20.3 | 24.5 |
| 40 to 48 | 44 | 83 | 63 | 62 | 1,454 | 2,687 | 3,762 | 2,202 | 30.3 | 30.8 | 16.9 | 28.0 |
| 49 to 60 | 72 | 121 | 95 | 72 | 2,611 | 3,587 | 4,880 | 3,092 | 27.6 | 33.7 | 19.5 | 23.4 |
| 61 to 84 | 114 | 144 | 115 | 85 | 2,775 | 3,366 | 3,199 | 2,599 | 41.2 | 42.8 | 35.8 | 32.8 |
| 85 to 167 | 96 | 87 | 101 | 55 | 1,564 | 1,812 | 2,058 | 1,341 | 61.4 | 48.3 | 49.2 | 41.2 |
| Open continuously | 146 | 155 | 200 | 186 | 2,505 | 2,732 | 4,842 | 2,698 | 58.1 | 56.8 | 41.4 | 68.9 |
| **Party responsible for operation and maintenance of energy systems** | | | | | | | | | | | | |
| Building owner | 397 | 549 | 472 | 387 | 9,676 | 13,523 | 16,446 | 10,271 | 41.0 | 40.6 | 28.7 | 37.7 |
| Business owner or tenant | 74 | 66 | 111 | 83 | 1,422 | 1,593 | 3,030 | 2,236 | 52.2 | 41.2 | 36.7 | 37.3 |
| Property management | Q | Q | 10 | Q | Q | Q | 326 | Q | Q | Q | 30.6 | Q |
| Other | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q |
| **Provider of direct input on energy-related equipment purchases** | | | | | | | | | | | | |
| Building owner | 405 | 563 | 486 | 412 | 9,825 | 13,889 | 17,066 | 10,979 | 41.2 | 40.5 | 28.5 | 37.5 |
| Business owner or tenant | 59 | 49 | 90 | 61 | 1,085 | 1,169 | 2,333 | 1,489 | 54.0 | 41.8 | 38.4 | 41.0 |
| Property management | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q |
| Other | Q | Q | 22 | Q | Q | 330 | 456 | Q | Q | 30.1 | 47.7 | Q |
| **Number of establishments** | | | | | | | | | | | | |
| One | 329 | 416 | 417 | 327 | 7,014 | 10,257 | 12,925 | 7,680 | 46.8 | 40.5 | 32.2 | 42.5 |
| 2 to 5 | 93 | 142 | 104 | 79 | 2,321 | 3,466 | 4,171 | 2,580 | 40.1 | 41.1 | 24.9 | 30.8 |
| 6 to 10 | 21 | 27 | 26 | 30 | 566 | 693 | 955 | 832 | 37.0 | 39.1 | 27.7 | 36.0 |
| 11 to 20 | 27 | 23 | 36 | 24 | 729 | 436 | 964 | 639 | 36.6 | 53.7 | 37.3 | 37.2 |
| More than 20 | 17 | 16 | 16 | 16 | 704 | 514 | 869 | 835 | 24.0 | 30.4 | 18.8 | 19.7 |
| Currently unoccupied | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q |
| **Predominant exterior wall material** | | | | | | | | | | | | |
| Brick, stone, or stucco | 258 | 343 | 328 | 202 | 6,340 | 7,809 | 10,565 | 5,017 | 40.6 | 44.0 | 31.1 | 40.3 |
| Concrete (block or poured) | 117 | 134 | 153 | 117 | 2,708 | 3,363 | 4,804 | 3,581 | 43.3 | 39.8 | 31.8 | 32.7 |
| Concrete panels | 35 | 62 | 41 | Q | 684 | 1,362 | 1,913 | 1,990 | 51.2 | 45.7 | 21.3 | 32.6 |
| Siding or shingles | 24 | 36 | 29 | 42 | 629 | 1,075 | 455 | 884 | 38.1 | 33.9 | 63.7 | 47.1 |
| Metal panels | Q | 38 | 41 | 21 | 443 | 1,319 | 1,869 | 749 | Q | 29.1 | 21.9 | 28.7 |
| Window glass | Q | Q | Q | 14 | Q | Q | Q | 256 | Q | Q | Q | 56.1 |
| Other | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q |
| No one major type | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q |

## Table C25. Natural gas consumption and conditional energy intensity by Census region, 2012 - PUBLIC USE VERSION

| | Total natural gas consumption (billion cubic feet) | | | | Total floorspace of buildings using natural gas (million square feet) | | | | Natural gas energy intensity (cubic feet/square foot) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | North-east | Mid-west | South | West | North-east | Mid-west | South | West | North-east | Mid-west | South | West |
| **All buildings** | 487 | 626 | 600 | 479 | 11,394 | 15,490 | 19,983 | 12,702 | 42.7 | 40.4 | 30.0 | 37.7 |
| **Predominant roof material** | | | | | | | | | | | | |
| Metal surfacing | 22 | 62 | 101 | 50 | 758 | 2,378 | 3,554 | 1,516 | 28.5 | 26.1 | 28.5 | 32.9 |
| Synthetic or rubber | 213 | 257 | 180 | 179 | 4,742 | 6,031 | 5,539 | 3,573 | 44.9 | 42.5 | 32.5 | 50.2 |
| Built-up | 137 | 150 | 164 | 116 | 2,943 | 3,424 | 5,896 | 3,758 | 46.6 | 44.0 | 27.8 | 30.9 |
| Slate or tile shingles | 30 | 13 | 29 | 40 | 795 | 330 | 1,047 | 795 | 37.2 | 39.4 | Q | 50.4 |
| Wooden materials (including shingles) | Q | Q | 16 | 11 | Q | Q | 195 | 246 | Q | Q | 80.8 | 44.8 |
| Asphalt, fiberglass, or other shingles | 64 | 130 | 95 | 69 | 1,714 | 2,676 | 3,239 | 2,281 | 37.4 | 48.6 | 29.5 | 30.3 |
| Concrete | 8 | Q | Q | 5 | 213 | Q | Q | 256 | 36.8 | Q | Q | 20.6 |
| Other | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q |
| No one major type | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q |
| **Roof characteristics** | | | | | | | | | | | | |
| Roof tilt | | | | | | | | | | | | |
| Flat | 356 | 387 | 371 | 304 | 8,049 | 8,818 | 11,457 | 7,628 | 44.3 | 43.9 | 32.3 | 39.9 |
| Shallow pitch | 74 | 133 | 139 | 123 | 1,625 | 4,020 | 5,717 | 3,564 | 45.7 | 33.0 | 24.3 | 34.7 |
| Steeper pitch | 56 | 106 | 90 | 52 | 1,721 | 2,652 | 2,810 | 1,510 | 32.5 | 40.1 | 32.2 | 34.1 |
| Cool roof | 127 | 143 | 155 | 162 | 2,407 | 3,172 | 5,097 | 3,651 | 52.6 | 45.2 | 30.4 | 44.4 |
| **Renovations in buildings constructed before 2008 (more than one may apply)** | | | | | | | | | | | | |
| Any type of renovation | 308 | 340 | 304 | 247 | 7,255 | 8,496 | 9,916 | 5,737 | 42.5 | 40.0 | 30.6 | 43.1 |
| Addition or annex | 97 | 141 | 126 | 91 | 1,942 | 3,340 | 3,267 | 1,472 | 50.1 | 42.3 | 38.7 | 61.7 |
| Reduction in floorspace | Q | 11 | 18 | Q | Q | 225 | 425 | Q | 47.9 | 47.7 | 42.7 | Q |
| Roof replacement | 191 | 196 | 160 | 117 | 4,189 | 4,580 | 5,010 | 2,549 | 45.7 | 42.7 | 32.0 | 45.8 |
| Exterior wall replacement | 23 | 34 | 37 | 33 | 738 | 870 | 1,043 | 718 | 31.1 | 38.5 | 35.1 | 45.9 |
| Interior wall reconfiguration | 156 | 176 | 147 | 150 | 4,131 | 4,271 | 4,362 | 3,398 | 37.8 | 41.1 | 33.6 | 44.0 |
| Window replacement | 93 | 101 | 97 | 85 | 2,382 | 2,631 | 2,533 | 1,733 | 39.1 | 38.4 | 38.5 | 49.3 |
| HVAC equipment upgrade | 216 | 217 | 207 | 181 | 5,128 | 5,548 | 6,224 | 3,669 | 42.1 | 39.1 | 33.3 | 49.2 |
| Lighting upgrade | 197 | 223 | 190 | 179 | 4,746 | 5,184 | 5,826 | 3,716 | 41.5 | 43.0 | 32.6 | 48.3 |
| Electrical upgrade | 139 | 142 | 123 | 133 | 3,260 | 3,234 | 3,687 | 2,269 | 42.5 | 43.8 | 33.5 | 58.6 |
| Plumbing system upgrade | 130 | 121 | 126 | 125 | 2,694 | 2,993 | 3,022 | 1,954 | 48.4 | 40.3 | 41.6 | 63.9 |
| Insulation upgrade | 61 | 67 | 67 | Q | 1,371 | 1,781 | 1,576 | 1,068 | 44.4 | 37.6 | 42.7 | 62.4 |
| Fire, safety, or security upgrade | 151 | 142 | 146 | 116 | 3,654 | 3,205 | 4,066 | 2,441 | 41.2 | 44.3 | 35.8 | 47.5 |
| Structural upgrade | 16 | 27 | 40 | Q | 483 | 724 | 713 | 832 | 33.2 | 37.7 | 56.3 | 76.6 |
| Other | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q |
| No renovations | 156 | 245 | 248 | 189 | 3,484 | 6,327 | 8,426 | 6,120 | 44.8 | 38.7 | 29.4 | 30.9 |
| Buildings constructed 2008 or later | 23 | 42 | 48 | Q | 656 | 667 | 1,642 | 846 | 34.6 | 62.6 | 29.2 | 50.8 |
| **Energy sources (more than one may apply)** | | | | | | | | | | | | |
| Electricity | 487 | 626 | 600 | 479 | 11,394 | 15,490 | 19,983 | 12,702 | 42.7 | 40.4 | 30.0 | 37.7 |
| Natural gas | 487 | 626 | 600 | 479 | 11,394 | 15,490 | 19,983 | 12,702 | 42.7 | 40.4 | 30.0 | 37.7 |
| Fuel oil | 154 | 151 | 156 | 148 | 3,541 | 3,057 | 4,554 | 2,567 | 43.4 | 49.3 | 34.2 | 57.5 |
| District heat | Q | 5 | 16 | Q | 1,056 | 374 | 846 | 482 | Q | 13.8 | Q | 99.3 |
| District chilled water | Q | 5 | 26 | Q | Q | 315 | 1,059 | 426 | 88.1 | 16.1 | 24.5 | 126.4 |
| Propane | 17 | 40 | 36 | Q | 533 | 969 | 997 | 892 | 32.4 | 41.0 | 36.3 | Q |
| Other | 40 | 19 | 13 | 33 | 806 | 630 | 471 | 730 | 49.6 | 30.4 | 28.6 | 45.5 |

## Table C25. Natural gas consumption and conditional energy intensity by Census region, 2012 - PUBLIC USE VERSION

| | Total natural gas consumption (billion cubic feet) | | | | Total floorspace of buildings using natural gas (million square feet) | | | | Natural gas energy intensity (cubic feet/square foot) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | North-east | Mid-west | South | West | North-east | Mid-west | South | West | North-east | Mid-west | South | West |
| **All buildings** | 487 | 626 | 600 | 479 | 11,394 | 15,490 | 19,983 | 12,702 | 42.7 | 40.4 | 30.0 | 37.7 |
| **Space-heating energy sources** | | | | | | | | | | | | |
| Natural gas | 440 | 613 | 483 | 387 | 9,669 | 14,506 | 15,573 | 10,704 | 45.5 | 42.3 | 31.0 | 36.1 |
| Natural gas main | 417 | 584 | 396 | 329 | 8,675 | 13,560 | 12,441 | 9,220 | 48.0 | 43.1 | 31.8 | 35.7 |
| Natural gas secondary | 23 | 29 | 87 | 58 | 995 | 946 | 3,132 | 1,484 | 23.1 | 31.1 | 27.8 | 38.8 |
| Other excluding natural gas | Q | 13 | 106 | 81 | 1,718 | 961 | 4,079 | 1,789 | 26.5 | 13.2 | 26.0 | 45.2 |
| Buildings without heating | Q | Q | 11 | Q | Q | Q | 332 | Q | Q | Q | 33.4 | Q |
| **Primary space-heating energy source** | | | | | | | | | | | | |
| Electricity | 28 | 35 | 176 | 89 | 1,239 | 1,369 | 6,309 | 2,698 | 22.3 | 25.9 | 27.8 | 32.8 |
| Natural gas | 417 | 584 | 396 | 329 | 8,675 | 13,560 | 12,441 | 9,220 | 48.0 | 43.1 | 31.8 | 35.7 |
| Fuel oil | 5 | N | Q | Q | 372 | N | Q | Q | 14.6 | N | Q | Q |
| District heat | Q | 4 | 16 | Q | 1,029 | 356 | 833 | 465 | Q | 12.1 | Q | 102.7 |
| Propane | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q |
| Other | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q |
| **Cooling energy sources** | | | | | | | | | | | | |
| Natural gas | 27 | Q | Q | Q | 295 | Q | Q | Q | 92.5 | Q | Q | Q |
| Other excluding natural gas | 442 | 588 | 589 | 447 | 10,631 | 14,698 | 19,652 | 12,037 | 41.5 | 40.0 | 30.0 | 37.1 |
| Buildings without cooling | 18 | 19 | 5 | 27 | 468 | 572 | 212 | 574 | 38.1 | 32.9 | 23.0 | 46.4 |
| **Water-heating energy sources** | | | | | | | | | | | | |
| Natural gas | 409 | 511 | 456 | 351 | 7,708 | 10,824 | 12,292 | 9,131 | 53.1 | 47.2 | 37.1 | 38.4 |
| Other excluding natural gas | 74 | 108 | 129 | 116 | 3,512 | 4,357 | 6,920 | 3,119 | 21.1 | 24.9 | 18.7 | 37.0 |
| Buildings without water heating | Q | 6 | 14 | 13 | Q | 309 | 771 | 452 | Q | 21.0 | 18.6 | 29.2 |
| **Cooking energy sources** | | | | | | | | | | | | |
| Natural gas | 281 | 295 | 357 | 274 | 5,530 | 5,835 | 8,531 | 5,153 | 50.8 | 50.5 | 41.9 | 53.1 |
| Other excluding natural gas | 32 | 77 | 50 | 40 | 1,132 | 2,020 | 2,176 | 1,159 | 28.6 | 38.3 | 23.2 | 34.3 |
| Buildings without cooking | 173 | 254 | 192 | 166 | 4,731 | 7,635 | 9,276 | 6,390 | 36.7 | 33.2 | 20.7 | 25.9 |
| **Energy end uses (more than one may apply)** | | | | | | | | | | | | |
| Buildings with space heating | 485 | 626 | 589 | 468 | 11,387 | 15,467 | 19,652 | 12,492 | 42.6 | 40.5 | 30.0 | 37.4 |
| Buildings with cooling | 469 | 607 | 595 | 453 | 10,926 | 14,918 | 19,771 | 12,128 | 42.9 | 40.7 | 30.1 | 37.3 |
| Buildings with water heating | 483 | 620 | 585 | 466 | 11,220 | 15,181 | 19,212 | 12,250 | 43.1 | 40.8 | 30.5 | 38.0 |
| Buildings with cooking | 313 | 372 | 408 | 314 | 6,663 | 7,855 | 10,707 | 6,312 | 47.0 | 47.4 | 38.1 | 49.7 |
| Buildings with manufacturing | 40 | 29 | 33 | 18 | 748 | 1,144 | 1,268 | 715 | 53.1 | 25.2 | 26.3 | 25.6 |
| Buildings with electricity generation | 240 | 203 | 196 | 194 | 4,902 | 4,738 | 6,727 | 3,989 | 49.0 | 42.8 | 29.2 | 48.7 |
| **Percent of floorspace heated** | | | | | | | | | | | | |
| Not heated | Q | Q | 11 | Q | Q | Q | 332 | Q | Q | Q | 33.4 | Q |
| 1 to 50 | 17 | 14 | 35 | 54 | 608 | 896 | 1,911 | 2,322 | 28.0 | 15.2 | 18.3 | 23.3 |
| 51 to 99 | 102 | 86 | 153 | 91 | 2,134 | 1,963 | 4,348 | 2,778 | 48.0 | 43.7 | 35.2 | 32.7 |
| 100 | 366 | 526 | 401 | 323 | 8,645 | 12,608 | 13,393 | 7,392 | 42.3 | 41.8 | 29.9 | 43.6 |
| **Percent of floorspace cooled** | | | | | | | | | | | | |
| Not cooled | 18 | 19 | 5 | 27 | 468 | 572 | 212 | 574 | 38.1 | 32.9 | 23.0 | 46.4 |
| 1 to 50 | 109 | 149 | 70 | 78 | 2,892 | 4,499 | 3,500 | 2,639 | 37.8 | 33.1 | 20.1 | 29.7 |
| 51 to 99 | 179 | 174 | 171 | 126 | 3,747 | 4,070 | 5,788 | 3,673 | 47.8 | 42.9 | 29.6 | 34.4 |
| 100 | 181 | 284 | 353 | 248 | 4,287 | 6,350 | 10,484 | 5,816 | 42.1 | 44.7 | 33.7 | 42.7 |

## Table C25. Natural gas consumption and conditional energy intensity by Census region, 2012 - PUBLIC USE VERSION

| | Total natural gas consumption (billion cubic feet) | | | | Total floorspace of buildings using natural gas (million square feet) | | | | Natural gas energy intensity (cubic feet/square foot) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | North-east | Mid-west | South | West | North-east | Mid-west | South | West | North-east | Mid-west | South | West |
| **All buildings** | 487 | 626 | 600 | 479 | 11,394 | 15,490 | 19,983 | 12,702 | 42.7 | 40.4 | 30.0 | 37.7 |
| **Heating equipment (more than one may apply)** | | | | | | | | | | | | |
| Heat pumps | 44 | 26 | 103 | 69 | 1,089 | 836 | 4,052 | 1,663 | 40.1 | 31.3 | 25.4 | 41.2 |
| Furnaces | 36 | 84 | 73 | 46 | 1,110 | 2,255 | 2,482 | 1,384 | 32.0 | 37.2 | 29.3 | 33.3 |
| Individual space heaters | 134 | 175 | 123 | 98 | 3,537 | 4,967 | 4,756 | 2,837 | 38.0 | 35.2 | 25.9 | 34.6 |
| District heat | Q | 5 | 16 | Q | 1,056 | 374 | 833 | 465 | Q | 13.8 | Q | 102.7 |
| Boilers | 283 | 306 | 198 | 173 | 5,369 | 6,367 | 5,324 | 3,334 | 52.8 | 48.1 | 37.2 | 51.7 |
| Packaged heating units | 241 | 391 | 400 | 295 | 6,219 | 9,502 | 13,672 | 8,574 | 38.8 | 41.1 | 29.3 | 34.4 |
| Other | Q | Q | 10 | 12 | Q | Q | 415 | 244 | Q | Q | 24.2 | 48.3 |
| **Cooling equipment (more than one may apply)** | | | | | | | | | | | | |
| Residential-type central air conditioners | 64 | 147 | 108 | 88 | 1,486 | 3,942 | 3,254 | 2,090 | 42.9 | 37.2 | 33.1 | 42.1 |
| Heat pumps | 44 | 28 | 116 | 62 | 1,192 | 791 | 4,285 | 1,849 | 37.2 | 35.6 | 27.0 | 33.6 |
| Individual air conditioners | 145 | 91 | 85 | 44 | 2,837 | 2,305 | 2,869 | 1,192 | 51.2 | 39.3 | 29.5 | 37.3 |
| District chilled water | Q | 5 | 26 | Q | Q | 315 | 1,059 | 426 | 88.1 | 16.1 | 24.5 | 126.4 |
| Central chillers | 128 | 185 | 169 | 102 | 2,771 | 3,771 | 4,914 | 2,301 | 46.1 | 49.1 | 34.4 | 44.2 |
| Packaged air conditioning units | 272 | 378 | 370 | 265 | 6,927 | 8,887 | 12,217 | 7,484 | 39.3 | 42.6 | 30.2 | 35.4 |
| Swamp coolers | Q | Q | Q | 52 | Q | Q | Q | 1,109 | Q | Q | Q | 46.5 |
| Other | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q |
| **Main equipment replaced since 1990 (more than one may apply)** | | | | | | | | | | | | |
| Heating | 175 | 231 | 233 | 132 | 4,341 | 5,934 | 7,000 | 4,215 | 40.2 | 38.9 | 33.3 | 31.4 |
| Cooling | 194 | 266 | 257 | 143 | 5,107 | 6,587 | 7,798 | 4,204 | 38.0 | 40.4 | 32.9 | 33.9 |
| **Water-heating equipment** | | | | | | | | | | | | |
| Centralized system | 314 | 426 | 369 | 269 | 7,050 | 9,876 | 10,849 | 6,916 | 44.5 | 43.2 | 34.0 | 38.9 |
| Distributed system | 61 | 67 | 53 | 69 | 1,678 | 2,165 | 2,590 | 1,930 | 36.3 | 31.1 | 20.6 | 35.8 |
| Combination of centralized and distributed system | 109 | 126 | 163 | 128 | 2,492 | 3,140 | 5,774 | 3,404 | 43.6 | 40.2 | 28.2 | 37.5 |
| **Food preparation or serving areas in non-food service buildings (more than one may apply)** | | | | | | | | | | | | |
| Snack bar or concession stand | 77 | 90 | 94 | 94 | 1,482 | 1,967 | 2,690 | 1,660 | 52.0 | 46.0 | 34.8 | 56.8 |
| Fast food or small restaurant | 69 | 79 | 112 | 103 | 1,703 | 1,541 | 2,909 | 2,251 | 40.4 | 51.3 | 38.4 | 45.8 |
| Cafeteria or large restaurant | 148 | 143 | 158 | 123 | 3,011 | 3,084 | 4,894 | 1,982 | 49.1 | 46.4 | 32.2 | 62.1 |
| Commercial kitchen/ food preparation area | 163 | 178 | 169 | 146 | 2,739 | 3,754 | 5,040 | 2,533 | 59.6 | 47.5 | 33.5 | 57.5 |
| Small kitchen area | 95 | 124 | 93 | 87 | 2,626 | 3,160 | 3,406 | 1,994 | 36.2 | 39.3 | 27.3 | 43.5 |
| **HVAC conservation features (more than one may apply)** | | | | | | | | | | | | |
| Economizer cycle | 262 | 289 | 197 | 241 | 5,697 | 6,799 | 6,334 | 5,778 | 45.9 | 42.6 | 31.2 | 41.7 |
| Regular HVAC maintenance | 441 | 561 | 514 | 426 | 10,173 | 13,383 | 16,817 | 11,062 | 43.4 | 41.9 | 30.5 | 38.5 |
| Building automation system (BAS)[1] | 245 | 285 | 275 | 268 | 5,687 | 6,665 | 9,634 | 6,065 | 43.1 | 42.7 | 28.5 | 44.2 |

## Table C25. Natural gas consumption and conditional energy intensity by Census region, 2012 - PUBLIC USE VERSION

| | Total natural gas consumption (billion cubic feet) | | | | Total floorspace of buildings using natural gas (million square feet) | | | | Natural gas energy intensity (cubic feet/square foot) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | North-east | Mid-west | South | West | North-east | Mid-west | South | West | North-east | Mid-west | South | West |
| **All buildings** | 487 | 626 | 600 | 479 | 11,394 | 15,490 | 19,983 | 12,702 | 42.7 | 40.4 | 30.0 | 37.7 |
| **Window and interior lighting features (more than one may apply)** | | | | | | | | | | | | |
| Multipaned windows | 379 | 536 | 445 | 347 | 8,600 | 12,899 | 14,634 | 8,151 | 44.1 | 41.6 | 30.4 | 42.6 |
| Tinted window glass | 252 | 331 | 374 | 301 | 5,309 | 7,510 | 12,059 | 7,800 | 47.4 | 44.0 | 31.0 | 38.5 |
| Reflective window glass | 95 | 147 | 123 | 163 | 1,810 | 3,373 | 3,543 | 3,264 | 52.6 | 43.4 | 34.7 | 49.9 |
| External overhangs or awnings | 190 | 260 | 292 | 262 | 3,599 | 5,658 | 8,451 | 5,753 | 52.9 | 46.0 | 34.5 | 45.6 |
| Skylights or atriums | 163 | 143 | 163 | 194 | 3,425 | 3,611 | 5,227 | 4,524 | 47.6 | 39.6 | 31.2 | 42.9 |
| Light scheduling | 212 | 251 | 214 | 227 | 4,825 | 5,748 | 6,858 | 5,653 | 44.0 | 43.6 | 31.2 | 40.2 |
| Occupancy sensors | 272 | 287 | 229 | 253 | 6,046 | 6,642 | 8,051 | 6,275 | 44.9 | 43.1 | 28.5 | 40.3 |
| Multi-level lighting or dimming | 98 | 133 | 149 | 179 | 2,070 | 2,591 | 3,879 | 3,140 | 47.2 | 51.4 | 38.5 | 57.0 |
| Daylight harvesting | 53 | 47 | 36 | 57 | 894 | 1,274 | 1,367 | 1,383 | 59.0 | 37.2 | 26.2 | 40.9 |
| Demand responsive lighting | 25 | 31 | 36 | 32 | 469 | 983 | 1,100 | 1,255 | 52.5 | 31.6 | 32.9 | 25.7 |
| Building automation system (BAS) for lighting[1] | 90 | 86 | 71 | 80 | 1,816 | 2,111 | 2,969 | 2,484 | 49.5 | 40.9 | 23.8 | 32.2 |
| **Equipment usage reduced when building not in full use (more than one may apply)** | | | | | | | | | | | | |
| Heating | 384 | 498 | 421 | 330 | 9,503 | 12,296 | 15,468 | 10,274 | 40.4 | 40.5 | 27.2 | 32.1 |
| Cooling | 378 | 474 | 430 | 321 | 9,010 | 11,615 | 15,739 | 9,864 | 41.9 | 40.8 | 27.3 | 32.5 |
| Lighting | 457 | 594 | 553 | 450 | 10,736 | 14,619 | 18,628 | 11,899 | 42.5 | 40.6 | 29.7 | 37.8 |
| **Annual consumption (hundred cubic feet)** | | | | | | | | | | | | |
| 1,000 or less | 5 | 16 | 17 | 12 | 683 | 1,253 | 3,068 | 1,930 | 7.7 | 12.8 | 5.4 | 6.4 |
| 1,001 to 5,000 | 48 | 83 | 84 | 61 | 2,379 | 3,495 | 5,036 | 3,050 | 20.2 | 23.8 | 16.7 | 19.9 |
| 5,001 to 10,000 | 44 | 61 | 80 | 46 | 1,514 | 1,958 | 3,358 | 1,420 | 28.9 | 31.3 | 23.9 | 32.7 |
| 10,001 to 25,000 | 65 | 127 | 145 | 113 | 1,845 | 3,147 | 3,691 | 2,446 | 35.1 | 40.3 | 39.3 | 46.2 |
| 25,001 to 50,000 | 72 | 96 | 79 | 56 | 1,675 | 1,910 | 2,092 | 1,505 | 43.1 | 50.0 | 37.9 | 37.5 |
| 50,001 to 100,000 | 86 | 83 | 69 | 50 | 1,496 | 1,639 | 1,351 | 925 | 57.4 | 50.7 | 51.4 | 54.3 |
| Over 100,000 | 167 | 160 | 125 | 140 | 1,802 | 2,088 | 1,389 | 1,427 | 92.5 | 76.7 | 90.1 | 98.1 |

[1]In earlier CBECS publications, BAS was referred to as *Energy Management and Control System (EMCS).*

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 20 buildings were sampled.

N = No cases in reporting sample.

Notes: ● Because of rounding, data may not sum to totals. ● See the *Guide to the 2012 CBECS Detailed Tables* or *CBECS Terminology* for definitions of terms used in these tables and/or comparison of differences with prior CBECS tables. Both references can be accessed from http://www.eia.gov/consumption/commercial/data/2012/ ● Statistics for the *Energy end uses* category represent total consumption in buildings that have the end use, not consumption specifically for that particular end use. ● HVAC = Heating, ventilation, and air conditioning.

Source: U.S. Energy Information Administration, Office of Energy Consumption and Efficiency Statistics, Forms EIA-871A and C of the 2012 Commercial Buildings Energy Consumption Survey.

## Table E1. Major fuel consumption (Btu) by end use, 2012 - PUBLIC USE VERSION

| | Total major fuel consumption (trillion Btu) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Space heat-ing | Cool-ing | Venti-lation | Water heat-ing | Light-ing | Cook-ing | Refrig-eration | Office equip-ment | Com-puters | Other |
| **All buildings** | 6,960 | 1,755 | 656 | 668 | 506 | 723 | 516 | 670 | 172 | 405 | 857 |
| **Building floorspace (square feet)** | | | | | | | | | | | |
| 1,001 to 5,000 | 723 | 155 | 50 | 45 | 57 | 59 | 105 | 131 | 21 | 33 | 56 |
| 5,001 to 10,000 | 646 | 157 | 45 | 48 | 42 | 58 | 82 | 93 | 17 | 33 | 62 |
| 10,001 to 25,000 | 876 | 243 | 67 | 79 | 56 | 92 | 60 | 92 | 28 | 50 | 103 |
| 25,001 to 50,000 | 822 | 223 | 79 | 84 | 60 | 97 | 33 | 68 | 21 | 46 | 108 |
| 50,001 to 100,000 | 1,066 | 288 | 103 | 108 | 83 | 110 | 42 | 103 | 27 | 60 | 141 |
| 100,001 to 200,000 | 1,034 | 243 | 95 | 116 | 77 | 119 | 54 | 92 | 21 | 73 | 144 |
| 200,001 to 500,000 | 1,026 | 267 | 125 | 106 | 74 | 109 | 59 | 68 | 19 | 62 | 136 |
| Over 500,000 | 767 | 178 | 92 | 82 | 57 | 80 | 81 | 23 | 19 | 48 | 106 |
| **Principal building activity** | | | | | | | | | | | |
| Education | 842 | 299 | 91 | 68 | 67 | 78 | 15 | 40 | 21 | 78 | 84 |
| Food sales | 262 | 32 | 6 | 12 | 3 | 16 | 29 | 147 | 2 | 2 | 14 |
| Food service | 514 | 46 | 30 | 31 | 43 | 19 | 199 | 113 | 7 | 4 | 21 |
| Health care | 718 | 210 | 79 | 83 | 82 | 61 | 52 | 19 | 17 | 34 | 82 |
| Inpatient | 549 | 164 | 67 | 46 | 78 | 40 | 47 | 14 | 12 | 21 | 59 |
| Outpatient | 169 | 46 | 12 | 37 | 4 | 21 | 4 | 4 | 5 | 13 | 23 |
| Lodging | 564 | 67 | 39 | 49 | 136 | 40 | 69 | 33 | 43 | 6 | 83 |
| Mercantile | 1,007 | 182 | 91 | 121 | 66 | 140 | 72 | 191 | 18 | 23 | 103 |
| Retail (other than mall) | 364 | 76 | 40 | 46 | 5 | 72 | 8 | 53 | 7 | 11 | 46 |
| Enclosed and strip malls | 644 | 106 | 52 | 75 | 61 | 68 | 64 | 139 | 11 | 12 | 57 |
| Office | 1,240 | 305 | 118 | 214 | 35 | 147 | Q | 28 | 37 | 167 | 153 |
| Public assembly | 480 | 188 | 86 | 24 | 7 | 35 | 14 | 25 | 7 | 16 | 72 |
| Public order and safety | 133 | 36 | 16 | 5 | 21 | 15 | 4 | 3 | 3 | 8 | 22 |
| Religious worship | 173 | 74 | 15 | 13 | Q | 9 | 11 | 4 | 4 | 3 | 26 |
| Service | 272 | 118 | 21 | 14 | 22 | 37 | 1 | 5 | 4 | 8 | 39 |
| Warehouse and storage | 428 | 116 | 35 | 13 | 11 | 85 | Q | 47 | 6 | 16 | 73 |
| Other | 285 | 69 | 26 | 16 | 2 | 37 | Q | 15 | 2 | 40 | 77 |
| Vacant | 42 | 13 | 2 | 4 | Q | 5 | Q | 1 | 0 | 1 | 8 |
| **Year constructed** | | | | | | | | | | | |
| Before 1920 | 238 | 102 | 10 | 19 | 9 | 20 | 19 | 15 | 4 | 10 | 27 |
| 1920 to 1945 | 418 | 143 | 33 | 35 | 34 | 38 | 23 | 33 | 9 | 23 | 45 |
| 1946 to 1959 | 537 | 177 | 44 | 48 | 40 | 50 | 35 | 40 | 12 | 25 | 63 |
| 1960 to 1969 | 902 | 280 | 74 | 73 | 71 | 90 | 44 | 70 | 23 | 56 | 118 |
| 1970 to 1979 | 1,011 | 251 | 87 | 100 | 97 | 98 | 89 | 90 | 25 | 58 | 113 |
| 1980 to 1989 | 1,164 | 219 | 142 | 129 | 78 | 132 | 84 | 115 | 31 | 77 | 150 |
| 1990 to 1999 | 1,102 | 227 | 113 | 108 | 70 | 121 | 101 | 129 | 27 | 65 | 135 |
| 2000 to 2003 | 578 | 139 | 57 | 61 | 30 | 67 | 33 | 57 | 14 | 40 | 78 |
| 2004 to 2007 | 528 | 104 | 50 | 47 | 41 | 57 | Q | 66 | 15 | 25 | 62 |
| 2008 to 2012 | 483 | 114 | 46 | 49 | 35 | 50 | 33 | 54 | 12 | 26 | 64 |

## Table E1. Major fuel consumption (Btu) by end use, 2012 - PUBLIC USE VERSION

| | Total major fuel consumption (trillion Btu) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Space heat-ing | Cool-ing | Venti-lation | Water heat-ing | Light-ing | Cook-ing | Refrig-eration | Office equip-ment | Com-puters | Other |
| **All buildings** | 6,960 | 1,755 | 656 | 668 | 506 | 723 | 516 | 670 | 172 | 405 | 857 |
| **Census region and division** | | | | | | | | | | | |
| Northeast | 1,458 | 503 | 89 | 134 | 100 | 134 | 91 | 120 | 27 | 81 | 176 |
| New England | 367 | 159 | 15 | 27 | 15 | 29 | 17 | 34 | 7 | 16 | 46 |
| Middle Atlantic | 1,091 | 344 | 73 | 107 | 85 | 105 | 73 | 87 | 20 | 65 | 130 |
| Midwest | 1,565 | 573 | 98 | 141 | 94 | 155 | 82 | 127 | 33 | 79 | 176 |
| East North Central | 1,130 | 431 | 67 | 100 | 67 | 109 | 58 | 91 | 22 | 55 | 126 |
| West North Central | 435 | 143 | 30 | 41 | 27 | 46 | 24 | 37 | 11 | 24 | 50 |
| South | 2,565 | 404 | 375 | 259 | 183 | 295 | 201 | 278 | 72 | 152 | 332 |
| South Atlantic | 1,358 | 203 | 199 | 140 | 92 | 154 | 104 | 154 | 42 | 89 | 174 |
| East South Central | 369 | 73 | 39 | 37 | 35 | 40 | 30 | 42 | 11 | 18 | 42 |
| West South Central | 838 | 128 | 138 | 82 | 56 | 101 | 67 | 82 | 19 | 45 | 116 |
| West | 1,372 | 275 | 94 | 134 | 130 | 139 | 143 | 144 | 40 | 93 | 173 |
| Mountain | 418 | 108 | 30 | 39 | 35 | 38 | Q | 35 | 13 | 22 | 44 |
| Pacific | 955 | 167 | 63 | 95 | 95 | 101 | 91 | 109 | 27 | 71 | 129 |
| **Number of floors** | | | | | | | | | | | |
| One | 2,831 | 621 | 260 | 243 | 170 | 324 | 249 | 433 | 61 | 127 | 317 |
| Two | 1,459 | 382 | 125 | 139 | 102 | 154 | 104 | 132 | 36 | 101 | 180 |
| Three | 667 | 223 | 59 | 64 | 47 | 63 | 28 | 38 | 18 | 43 | 83 |
| Four to nine | 1,432 | 411 | 145 | 154 | 136 | 127 | 76 | 50 | 38 | 94 | 199 |
| Ten or more | 571 | 118 | 66 | 68 | 52 | 55 | Q | 16 | 19 | 41 | 77 |
| **Elevators and escalators (more than one may apply)** | | | | | | | | | | | |
| Any elevators | 3,181 | 851 | 328 | 349 | 261 | 304 | 200 | 136 | 83 | 237 | 428 |
| Number of elevators | | | | | | | | | | | |
| One | 882 | 265 | 72 | 95 | 74 | 88 | 46 | 52 | 24 | 58 | 108 |
| Two to five | 1,241 | 327 | 124 | 140 | 86 | 122 | 52 | 51 | 32 | 120 | 185 |
| Six or more | 1,057 | 259 | 132 | 115 | 101 | 94 | 102 | 33 | 28 | 59 | 135 |
| Any escalators | 377 | 74 | 45 | 43 | 25 | 42 | Q | 17 | 12 | 17 | 52 |
| **Number of workers (main shift)** | | | | | | | | | | | |
| Fewer than 5 | 756 | 228 | 55 | 45 | 52 | 78 | 41 | 93 | 22 | 24 | 91 |
| 5 to 9 | 598 | 142 | 51 | 50 | 40 | 61 | 60 | 79 | 17 | 24 | 72 |
| 10 to 19 | 772 | 184 | 57 | 60 | 65 | 71 | 102 | 99 | 22 | 32 | 79 |
| 20 to 49 | 1,188 | 284 | 106 | 113 | 81 | 126 | 90 | 144 | 30 | 73 | 140 |
| 50 to 99 | 1,148 | 290 | 118 | 118 | 82 | 128 | 50 | 118 | 27 | 74 | 143 |
| 100 to 249 | 1,058 | 286 | 101 | 110 | 63 | 116 | 51 | 86 | 21 | 68 | 156 |
| 250 or more | 1,441 | 342 | 168 | 172 | 123 | 143 | 123 | 50 | 34 | 109 | 177 |
| **Weekly operating hours** | | | | | | | | | | | |
| Fewer than 40 | 228 | 95 | 20 | 8 | 10 | 17 | 11 | 15 | 6 | 12 | 25 |
| 40 to 48 | 831 | 256 | 87 | 74 | 36 | 99 | 19 | 40 | 27 | 82 | 107 |
| 49 to 60 | 1,258 | 371 | 127 | 138 | 48 | 150 | 33 | 64 | 33 | 121 | 168 |
| 61 to 84 | 1,369 | 330 | 128 | 148 | 88 | 143 | 123 | 173 | 25 | 65 | 143 |
| 85 to 167 | 1,098 | 252 | 89 | 92 | 59 | 106 | 130 | 212 | 13 | 27 | 112 |
| Open continuously | 2,176 | 450 | 204 | 209 | 265 | 209 | 200 | 167 | 67 | 97 | 302 |

## Table E1. Major fuel consumption (Btu) by end use, 2012 - PUBLIC USE VERSION

| | Total major fuel consumption (trillion Btu) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Space heat-ing | Cool-ing | Venti-lation | Water heat-ing | Light-ing | Cook-ing | Refrig-eration | Office equip-ment | Com-puters | Other |
| **All buildings** | 6,960 | 1,755 | 656 | 668 | 506 | 723 | 516 | 670 | 172 | 405 | 857 |
| **Party responsible for operation and maintenance of energy systems** | | | | | | | | | | | |
| Building owner | 5,805 | 1,516 | 557 | 561 | 414 | 606 | 402 | 476 | 149 | 357 | 738 |
| Business owner or tenant | 983 | 204 | 80 | 90 | 76 | 101 | 99 | 176 | 18 | 39 | 98 |
| Property management | 96 | 17 | 10 | 12 | 11 | 9 | 8 | 8 | 3 | 7 | 12 |
| Other | 76 | 19 | 8 | 5 | 6 | 7 | 8 | 10 | 2 | 2 | 9 |
| **Provider of direct input on energy-related equipment purchases** | | | | | | | | | | | |
| Building owner | 5,980 | 1,555 | 570 | 577 | 430 | 625 | 414 | 505 | 153 | 365 | 756 |
| Business owner or tenant | 767 | 156 | 65 | 70 | 58 | 78 | 81 | 133 | 14 | 32 | 78 |
| Property management | 61 | 12 | 6 | 8 | 5 | 7 | 4 | 5 | 2 | 3 | 8 |
| Other | 153 | 31 | 14 | 14 | 14 | 14 | 17 | 26 | 3 | 5 | 15 |
| **Number of establishments** | | | | | | | | | | | |
| One | 4,482 | 1,153 | 407 | 387 | 356 | 455 | 368 | 405 | 120 | 248 | 556 |
| 2 to 5 | 1,401 | 382 | 130 | 143 | 90 | 146 | 81 | 147 | 29 | 71 | 181 |
| 6 to 10 | 363 | 84 | 34 | 45 | 21 | 37 | 22 | 47 | 8 | 28 | 38 |
| 11 to 20 | 355 | 78 | 36 | 46 | 22 | 38 | 26 | 45 | 7 | 19 | 37 |
| More than 20 | 346 | 51 | 48 | 47 | 17 | 48 | 19 | 26 | 7 | 39 | 44 |
| Currently unoccupied | 13 | 6 | 0 | 0 | Q | 0 | Q | Q | Q | Q | Q |
| **Predominant exterior wall material** | | | | | | | | | | | |
| Brick, stone, or stucco | 3,456 | 917 | 319 | 335 | 284 | 330 | 262 | 292 | 92 | 207 | 408 |
| Concrete (block or poured) | 1,718 | 365 | 178 | 164 | 126 | 186 | 129 | 232 | 39 | 81 | 214 |
| Concrete panels | 664 | 157 | 57 | 69 | 42 | 77 | Q | 47 | 18 | 50 | 91 |
| Siding or shingles | 400 | 106 | 28 | 35 | 26 | 39 | 40 | 46 | 11 | 19 | 45 |
| Metal panels | 427 | 137 | 43 | 32 | 13 | 64 | 9 | 31 | 7 | 22 | 61 |
| Window glass | 170 | 46 | 17 | 22 | Q | 17 | 5 | 7 | 3 | 21 | 23 |
| Other | 80 | 13 | 11 | 7 | 3 | 7 | Q | Q | 1 | 3 | 9 |
| No one major type | 45 | 15 | 3 | 5 | 2 | 5 | Q | 4 | 1 | 2 | 6 |
| **Predominant roof material** | | | | | | | | | | | |
| Metal surfacing | 864 | 208 | 92 | 65 | 39 | 115 | 56 | 98 | 21 | 45 | 112 |
| Synthetic or rubber | 2,440 | 666 | 210 | 245 | 164 | 243 | 181 | 228 | 55 | 143 | 301 |
| Built-up | 1,862 | 436 | 194 | 199 | 145 | 198 | 131 | 163 | 42 | 119 | 232 |
| Slate or tile shingles | 371 | 101 | 26 | 30 | 36 | 30 | 38 | 33 | 12 | 19 | 42 |
| Wooden materials (including shingles) | 93 | 26 | 6 | 6 | 9 | 7 | 12 | 12 | 2 | 3 | 8 |
| Asphalt, fiberglass, or other shingles | 1,105 | 276 | 100 | 99 | 97 | 107 | 86 | 113 | 35 | 56 | 130 |
| Concrete | 133 | 16 | 20 | 16 | 10 | 16 | 4 | 11 | 4 | 16 | 20 |
| Other | 58 | 11 | 6 | 5 | 4 | 5 | 7 | 9 | 1 | 2 | 8 |
| No one major type | 35 | 13 | 3 | 3 | Q | 4 | Q | Q | 1 | 2 | 5 |
| **Roof characteristics** | | | | | | | | | | | |
| Roof tilt | | | | | | | | | | | |
| Flat | 4,474 | 1,102 | 446 | 464 | 348 | 472 | 314 | 382 | 102 | 276 | 560 |
| Shallow pitch | 1,596 | 382 | 138 | 136 | 85 | 177 | 131 | 212 | 41 | 87 | 193 |
| Steeper pitch | 890 | 271 | 71 | 69 | 74 | 75 | 72 | 75 | 29 | 42 | 104 |
| Cool roof | 1,836 | 433 | 180 | 183 | 139 | 186 | 142 | 179 | 40 | 113 | 236 |

## Table E1. Major fuel consumption (Btu) by end use, 2012 - PUBLIC USE VERSION

| | Total major fuel consumption (trillion Btu) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Space heat-ing | Cool-ing | Venti-lation | Water heat-ing | Light-ing | Cook-ing | Refrig-eration | Office equip-ment | Com-puters | Other |
| **All buildings** | 6,960 | 1,755 | 656 | 668 | 506 | 723 | 516 | 670 | 172 | 405 | 857 |
| **Renovations in buildings constructed before 2008 (more than one may apply)** | | | | | | | | | | | |
| Any type of renovation | 3,760 | 992 | 352 | 368 | 277 | 367 | 291 | 320 | 89 | 229 | 468 |
| Addition or annex | 1,291 | 364 | 131 | 112 | 109 | 118 | 123 | 84 | 32 | 59 | 158 |
| Reduction in floorspace | 225 | 49 | 20 | 23 | Q | 22 | Q | 19 | 4 | 9 | 23 |
| Roof replacement | 1,985 | 554 | 183 | 194 | 153 | 189 | 147 | 145 | 44 | 118 | 255 |
| Exterior wall replacement | 398 | 89 | 41 | 38 | 28 | 37 | 45 | 35 | 8 | 28 | 49 |
| Interior wall reconfiguration | 2,055 | 539 | 201 | 219 | 140 | 199 | 155 | 143 | 48 | 155 | 254 |
| Window replacement | 1,089 | 303 | 98 | 100 | 88 | 97 | 96 | 64 | 30 | 73 | 137 |
| HVAC equipment upgrade | 2,543 | 650 | 252 | 252 | 197 | 245 | 210 | 198 | 59 | 157 | 322 |
| Lighting upgrade | 2,438 | 661 | 221 | 235 | 183 | 226 | 194 | 208 | 56 | 147 | 304 |
| Electrical upgrade | 1,607 | 421 | 150 | 149 | 122 | 144 | 149 | 121 | 37 | 100 | 212 |
| Plumbing system upgrade | 1,396 | 364 | 120 | 129 | 119 | 116 | 143 | 99 | 35 | 86 | 182 |
| Insulation upgrade | 771 | 196 | 68 | 66 | 52 | 63 | 90 | 69 | 19 | 52 | 96 |
| Fire, safety, or security upgrade | 1,684 | 444 | 167 | 164 | 140 | 150 | 126 | 118 | 38 | 113 | 221 |
| Structural upgrade | 423 | 83 | 42 | 35 | 30 | 35 | 68 | 30 | 11 | 29 | 59 |
| Other | 69 | 19 | 9 | 9 | 3 | 8 | 1 | 3 | 2 | 6 | 9 |
| No renovations | 2,717 | 650 | 258 | 251 | 195 | 307 | 193 | 295 | 71 | 150 | 324 |
| Buildings constructed 2008 or later | 483 | 114 | 46 | 49 | 35 | 50 | 33 | 54 | 12 | 26 | 64 |
| **Energy sources (more than one may apply)** | | | | | | | | | | | |
| Electricity | 6,960 | 1,755 | 656 | 668 | 506 | 723 | 516 | 670 | 172 | 405 | 857 |
| Natural gas | 5,541 | 1,518 | 472 | 498 | 476 | 514 | 483 | 523 | 127 | 283 | 640 |
| Fuel oil | 2,231 | 587 | 243 | 226 | 161 | 222 | 151 | 116 | 51 | 157 | 313 |
| District heat | 807 | 256 | 39 | 83 | 81 | 68 | 89 | 23 | 19 | 40 | 108 |
| District chilled water | 664 | 206 | 18 | 68 | 68 | 58 | 78 | 18 | 16 | 40 | 94 |
| Propane | 583 | 122 | 49 | 48 | 35 | 64 | Q | 78 | 17 | 23 | 93 |
| Other | 301 | 85 | 27 | 31 | 15 | 30 | 15 | 26 | 5 | 16 | 51 |
| **Space-heating energy sources (more than one may apply)** | | | | | | | | | | | |
| Electricity | 3,896 | 778 | 430 | 408 | 270 | 432 | 287 | 435 | 106 | 246 | 497 |
| Natural gas | 4,445 | 1,395 | 361 | 393 | 336 | 414 | 312 | 419 | 95 | 226 | 487 |
| Fuel oil | 360 | 146 | 29 | 28 | 18 | 34 | 12 | 19 | 7 | 17 | 48 |
| District heat | 803 | 256 | 38 | 83 | 81 | 67 | 88 | 22 | 19 | 40 | 107 |
| Propane | 151 | 27 | 12 | 14 | 5 | 19 | 10 | 26 | 5 | 7 | 26 |
| Other | 48 | 13 | 2 | 5 | 2 | 7 | Q | 5 | 1 | 2 | 7 |
| **Primary space-heating energy source** | | | | | | | | | | | |
| Electricity | 1,844 | 106 | 257 | 216 | 138 | 237 | 166 | 236 | 64 | 148 | 271 |
| Natural gas | 3,870 | 1,296 | 309 | 339 | 268 | 360 | 242 | 361 | 78 | 197 | 414 |
| Fuel oil | 187 | 92 | 10 | 12 | 4 | 17 | 5 | 9 | 4 | 8 | 27 |
| District heat | 793 | 253 | 37 | 82 | 80 | 67 | 88 | 22 | 18 | 39 | 105 |
| Propane | 63 | 4 | 5 | 6 | 0 | 9 | Q | 17 | 2 | 3 | 11 |
| Other | 21 | 5 | 1 | 2 | Q | 4 | Q | 2 | Q | 1 | 4 |

## Table E1. Major fuel consumption (Btu) by end use, 2012 - PUBLIC USE VERSION

| | Total major fuel consumption (trillion Btu) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Space heat-ing | Cool-ing | Venti-lation | Water heat-ing | Light-ing | Cook-ing | Refrig-eration | Office equip-ment | Com-puters | Other |
| **All buildings** | 6,960 | 1,755 | 656 | 668 | 506 | 723 | 516 | 670 | 172 | 405 | 857 |
| **Cooling energy sources (more than one may apply)** | | | | | | | | | | | |
| Electricity | 6,319 | 1,532 | 649 | 619 | 449 | 659 | 451 | 636 | 157 | 372 | 783 |
| Natural gas | 98 | 37 | 15 | 9 | 9 | 7 | 3 | 2 | 2 | 4 | 11 |
| District chilled water | 664 | 206 | 18 | 68 | 68 | 58 | 78 | 18 | 16 | 40 | 94 |
| **Water-heating energy sources (more than one may apply)** | | | | | | | | | | | |
| Electricity | 3,100 | 649 | 347 | 339 | 95 | 380 | 207 | 378 | 74 | 221 | 405 |
| Natural gas | 4,027 | 1,092 | 341 | 348 | 431 | 350 | 347 | 407 | 93 | 184 | 429 |
| Fuel oil | 174 | 75 | 12 | 12 | 6 | 14 | 8 | 10 | 4 | 7 | 25 |
| District heat | 652 | 188 | 33 | 67 | 74 | 56 | 80 | 17 | 16 | 32 | 89 |
| Propane | 87 | 6 | 10 | 8 | 0 | 9 | 6 | 24 | 3 | 3 | 15 |
| **Cooking energy sources (more than one may apply)** | | | | | | | | | | | |
| Electricity | 2,511 | 574 | 253 | 231 | 200 | 219 | 280 | 312 | 56 | 121 | 263 |
| Natural gas | 3,014 | 635 | 274 | 258 | 296 | 232 | 466 | 398 | 65 | 100 | 290 |
| Propane | 167 | 34 | 16 | 14 | 8 | 14 | 10 | 33 | 5 | Q | 22 |
| **Energy end uses (more than one may apply)** | | | | | | | | | | | |
| Buildings with space heating | 6,779 | 1,755 | 619 | 657 | 491 | 693 | 505 | 646 | 168 | 397 | 831 |
| Buildings with cooling | 6,771 | 1,677 | 656 | 665 | 493 | 699 | 511 | 650 | 169 | 401 | 838 |
| Buildings with water heating | 6,795 | 1,706 | 641 | 658 | 506 | 695 | 516 | 664 | 168 | 396 | 832 |
| Buildings with cooking | 4,078 | 897 | 390 | 364 | 357 | 340 | 516 | 528 | 94 | 171 | 420 |
| Buildings with manufacturing | 360 | 89 | 34 | 28 | 14 | 49 | 14 | 32 | 5 | 15 | 79 |
| Buildings with electricity generation | 2,802 | 687 | 292 | 287 | 206 | 274 | 183 | 211 | 65 | 195 | 401 |
| **Percent of floorspace heated** | | | | | | | | | | | |
| Not heated | 181 | N | 36 | 11 | 15 | 31 | 11 | 23 | 4 | 8 | 25 |
| 1 to 50 | 467 | 70 | 38 | 37 | 25 | 63 | 40 | 63 | 11 | 39 | 78 |
| 51 to 99 | 1,298 | 304 | 129 | 129 | 91 | 131 | 114 | 158 | 29 | 60 | 152 |
| 100 | 5,014 | 1,380 | 453 | 491 | 376 | 499 | 351 | 426 | 127 | 298 | 602 |
| **Percent of floorspace cooled** | | | | | | | | | | | |
| Not cooled | 189 | 78 | N | 3 | 13 | 24 | 5 | 20 | 3 | 4 | 18 |
| 1 to 50 | 988 | 362 | 42 | 65 | 57 | 122 | 49 | 82 | 19 | 40 | 147 |
| 51 to 99 | 2,143 | 553 | 192 | 214 | 153 | 206 | 156 | 231 | 48 | 138 | 247 |
| 100 | 3,641 | 762 | 421 | 385 | 283 | 370 | 305 | 336 | 102 | 224 | 444 |
| **Percent lit when open** | | | | | | | | | | | |
| Zero | 4 | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q |
| 1 to 50 | 642 | 181 | 54 | 62 | 46 | 50 | 34 | 49 | 23 | 27 | 105 |
| 51 to 99 | 3,047 | 827 | 274 | 295 | 230 | 284 | 204 | 307 | 71 | 175 | 375 |
| 100 | 3,243 | 733 | 326 | 311 | 229 | 387 | 278 | 314 | 77 | 203 | 374 |
| Building never open/electricity not used | 24 | 13 | 1 | 0 | Q | Q | Q | Q | Q | Q | Q |

## Table E1. Major fuel consumption (Btu) by end use, 2012 - PUBLIC USE VERSION

| | Total major fuel consumption (trillion Btu) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Space heat-ing | Cool-ing | Venti-lation | Water heat-ing | Light-ing | Cook-ing | Refrig-eration | Office equip-ment | Com-puters | Other |
| **All buildings** | 6,960 | 1,755 | 656 | 668 | 506 | 723 | 516 | 670 | 172 | 405 | 857 |
| **Percent lit during off hours** | | | | | | | | | | | |
| Zero | 1,293 | 393 | 117 | 116 | 59 | 126 | 71 | 102 | 32 | 94 | 161 |
| 1 to 50 | 4,345 | 1,104 | 427 | 432 | 312 | 463 | 294 | 418 | 106 | 251 | 531 |
| 51 to 100 | 1,016 | 208 | 80 | 88 | 108 | 98 | 133 | 105 | 23 | 47 | 123 |
| Building always open with no "off hours" | 306 | 49 | 31 | 32 | 28 | 36 | 18 | 44 | 11 | 13 | 41 |
| Electricity not used | N | N | N | N | N | N | N | N | N | N | N |
| **Heating equipment (more than one may apply)** | | | | | | | | | | | |
| Heat pumps | 899 | 143 | 117 | 86 | 84 | 97 | 70 | 87 | 34 | 62 | 117 |
| Furnaces | 616 | 179 | 48 | 53 | 37 | 58 | 55 | 68 | 18 | 32 | 67 |
| Individual space heaters | 1,571 | 470 | 129 | 148 | 114 | 166 | 80 | 132 | 42 | 84 | 201 |
| District heat | 803 | 256 | 38 | 83 | 81 | 67 | 88 | 22 | 19 | 40 | 107 |
| Boilers | 2,262 | 740 | 217 | 210 | 198 | 197 | 106 | 123 | 52 | 137 | 279 |
| Packaged heating units | 4,081 | 925 | 411 | 419 | 260 | 431 | 345 | 492 | 91 | 222 | 478 |
| Other | 191 | 33 | 9 | 18 | 12 | 15 | 21 | 62 | 2 | 3 | 16 |
| **Cooling equipment (more than one may apply)** | | | | | | | | | | | |
| Residential-type central air conditioners | 1,086 | 281 | 93 | 75 | 81 | 108 | 98 | 144 | 29 | 48 | 128 |
| Heat pumps | 939 | 154 | 115 | 93 | 85 | 104 | 66 | 96 | 34 | 66 | 123 |
| Individual air conditioners | 1,013 | 298 | 97 | 81 | 106 | 89 | 64 | 70 | 34 | 47 | 125 |
| District chilled water | 664 | 206 | 18 | 68 | 68 | 58 | 78 | 18 | 16 | 40 | 94 |
| Central chillers | 1,852 | 480 | 234 | 210 | 143 | 179 | 85 | 80 | 43 | 147 | 249 |
| Packaged air conditioning units | 3,970 | 956 | 403 | 415 | 265 | 404 | 320 | 451 | 85 | 202 | 463 |
| Swamp coolers | 175 | 45 | 14 | 14 | 16 | 16 | 21 | 23 | 3 | 6 | 17 |
| Other | 45 | 9 | 4 | 5 | 2 | 5 | Q | 1 | 0 | Q | 7 |
| **Main equipment replaced since 1990 (more than one may apply)** | | | | | | | | | | | |
| Heating | 2,164 | 550 | 199 | 202 | 170 | 215 | 160 | 222 | 58 | 135 | 249 |
| Cooling | 2,520 | 650 | 252 | 235 | 204 | 243 | 182 | 232 | 68 | 158 | 292 |
| **Water-heating equipment** | | | | | | | | | | | |
| Centralized system | 4,208 | 1,108 | 377 | 391 | 334 | 415 | 346 | 387 | 111 | 231 | 499 |
| Distributed system | 832 | 192 | 82 | 83 | 43 | 105 | 46 | 75 | 19 | 55 | 130 |
| Combination of centralized and distributed system | 1,754 | 405 | 182 | 184 | 129 | 175 | 124 | 201 | 38 | 111 | 203 |
| **Lighting equipment types (more than one may apply)** | | | | | | | | | | | |
| Incandescent | 3,539 | 877 | 353 | 336 | 287 | 340 | 321 | 344 | 86 | 184 | 403 |
| Standard fluorescent | 6,710 | 1,696 | 632 | 650 | 490 | 693 | 491 | 649 | 166 | 394 | 830 |
| Compact fluorescent | 5,093 | 1,264 | 496 | 507 | 407 | 493 | 426 | 451 | 129 | 305 | 610 |
| High-intensity discharge (HID) | 2,185 | 557 | 227 | 215 | 159 | 229 | 172 | 190 | 49 | 112 | 272 |
| Halogen | 2,694 | 636 | 275 | 271 | 206 | 266 | 240 | 272 | 64 | 138 | 323 |
| LED | 2,362 | 561 | 242 | 248 | 173 | 220 | 206 | 251 | 52 | 117 | 291 |
| Other | 58 | 16 | 9 | 5 | 4 | 4 | 4 | 6 | 1 | 2 | 6 |

## Table E1. Major fuel consumption (Btu) by end use, 2012 - PUBLIC USE VERSION

| | Total major fuel consumption (trillion Btu) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Space heat-ing | Cool-ing | Venti-lation | Water heat-ing | Light-ing | Cook-ing | Refrig-eration | Office equip-ment | Com-puters | Other |
| **All buildings** | 6,960 | 1,755 | 656 | 668 | 506 | 723 | 516 | 670 | 172 | 405 | 857 |
| **Refrigeration equipment (more than one may apply)** | | | | | | | | | | | |
| Any refrigeration | 6,468 | 1,599 | 610 | 623 | 485 | 646 | 516 | 670 | 159 | 365 | 788 |
| Walk-in units | 3,525 | 733 | 329 | 309 | 307 | 283 | 451 | 547 | 73 | 131 | 361 |
| Cases or cabinets | 3,315 | 697 | 291 | 307 | 273 | 282 | 399 | 523 | 70 | 126 | 346 |
| Large cold storage areas | 530 | 102 | 40 | 37 | 32 | 42 | 61 | 145 | 7 | 13 | 53 |
| Commercial ice makers | 3,730 | 788 | 370 | 357 | 334 | 326 | 416 | 457 | 91 | 172 | 418 |
| Residential-type or compact units | 5,180 | 1,382 | 499 | 513 | 387 | 537 | 332 | 413 | 131 | 324 | 657 |
| Vending machines | 4,176 | 1,033 | 418 | 429 | 336 | 439 | 273 | 379 | 102 | 243 | 524 |
| No refrigeration | 492 | 156 | 45 | 45 | 21 | 77 | Q | N | 13 | 40 | 69 |
| **Office equipment (more than one may apply)** | | | | | | | | | | | |
| Desktop computers | 6,583 | 1,656 | 629 | 647 | 482 | 687 | 472 | 620 | 163 | 399 | 828 |
| With flat screen monitors | 6,520 | 1,643 | 624 | 641 | 477 | 678 | 465 | 614 | 162 | 398 | 817 |
| With multiple monitors | 2,941 | 744 | 296 | 321 | 195 | 298 | 215 | 212 | 69 | 233 | 358 |
| Laptop computers | 5,464 | 1,410 | 545 | 556 | 403 | 570 | 354 | 427 | 136 | 362 | 700 |
| Dedicated servers | 4,782 | 1,168 | 476 | 496 | 339 | 498 | 328 | 424 | 115 | 341 | 596 |
| Laser printers | 4,792 | 1,238 | 451 | 488 | 346 | 495 | 315 | 428 | 126 | 315 | 590 |
| Inkjet printers | 2,903 | 707 | 298 | 273 | 199 | 305 | 228 | 280 | 66 | 161 | 384 |
| FAX machines | 5,703 | 1,424 | 554 | 574 | 404 | 612 | 399 | 541 | 140 | 345 | 710 |
| Photocopiers | 5,107 | 1,341 | 509 | 528 | 357 | 540 | 305 | 387 | 132 | 344 | 665 |
| **Number of desktop computers** | | | | | | | | | | | |
| None | 377 | 99 | 27 | 22 | 24 | 36 | 44 | 50 | 9 | Q | 29 |
| 1 to 4 | 1,184 | 270 | 82 | 82 | 104 | 106 | 162 | 189 | 30 | 22 | 135 |
| 5 to 9 | 738 | 192 | 60 | 62 | 43 | 77 | 55 | 106 | 20 | 27 | 95 |
| 10 to 19 | 675 | 173 | 58 | 69 | 41 | 79 | 31 | 79 | 17 | 41 | 87 |
| 20 to 49 | 1,120 | 269 | 118 | 118 | 86 | 130 | 52 | 117 | 29 | 55 | 146 |
| 50 to 99 | 646 | 166 | 69 | 73 | 44 | 77 | 36 | 45 | 16 | 41 | 80 |
| 100 to 249 | 960 | 248 | 82 | 99 | 75 | 101 | Q | 48 | 25 | 81 | 132 |
| 250 or more | 1,261 | 339 | 160 | 144 | 89 | 116 | 67 | 35 | 27 | 132 | 152 |
| **Number of laptop computers** | | | | | | | | | | | |
| None | 1,497 | 345 | 111 | 112 | 103 | 154 | 162 | 243 | 36 | 43 | 157 |
| 1 to 4 | 1,515 | 393 | 137 | 125 | 101 | 165 | 120 | 181 | 40 | 60 | 192 |
| 5 to 9 | 698 | 157 | 65 | 73 | 59 | 81 | 58 | 70 | 16 | 32 | 85 |
| 10 to 19 | 719 | 169 | 82 | 79 | 66 | 75 | 42 | 63 | 16 | 38 | 88 |
| 20 to 49 | 906 | 244 | 73 | 96 | 68 | 91 | 70 | 56 | 26 | 74 | 111 |
| 50 to 99 | 506 | 149 | 55 | 53 | 31 | 51 | 14 | 22 | 11 | 37 | 83 |
| 100 to 249 | 525 | 152 | 51 | 58 | 38 | 50 | 21 | 17 | 12 | 61 | 66 |
| 250 or more | 595 | 147 | 83 | 72 | 40 | 57 | 29 | 18 | 15 | 60 | 74 |
| **Number of dedicated servers** | | | | | | | | | | | |
| None | 2,178 | 587 | 180 | 172 | 167 | 225 | 188 | 245 | 57 | 64 | 261 |
| 1 to 4 | 2,717 | 656 | 246 | 266 | 205 | 295 | 191 | 309 | 68 | 136 | 345 |
| 5 to 9 | 565 | 138 | 54 | 60 | 40 | 59 | 47 | 55 | 12 | 35 | 67 |
| 10 to 19 | 593 | 139 | 66 | 74 | 29 | 63 | Q | 34 | 16 | 51 | 77 |
| 20 to 49 | 396 | 113 | 51 | 45 | 26 | 39 | 16 | 13 | 9 | 36 | 48 |
| 50 or more | 512 | 122 | 59 | 52 | 39 | 42 | 32 | 14 | 10 | 83 | 60 |

## Table E1. Major fuel consumption (Btu) by end use, 2012 - PUBLIC USE VERSION

| | Total major fuel consumption (trillion Btu) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Space heat-ing | Cool-ing | Venti-lation | Water heat-ing | Light-ing | Cook-ing | Refrig-eration | Office equip-ment | Com-puters | Other |
| **All buildings** | 6,960 | 1,755 | 656 | 668 | 506 | 723 | 516 | 670 | 172 | 405 | 857 |
| **Number of photocopiers** | | | | | | | | | | | |
| None | 1,853 | 414 | 147 | 141 | 150 | 184 | 212 | 282 | 40 | 62 | 191 |
| One | 1,201 | 325 | 103 | 102 | 87 | 127 | 81 | 142 | 31 | 49 | 154 |
| 2 to 4 | 1,596 | 428 | 156 | 167 | 102 | 178 | 68 | 137 | 45 | 105 | 210 |
| 5 to 9 | 783 | 187 | 76 | 84 | 50 | 92 | 56 | 58 | 17 | 66 | 97 |
| 10 or more | 1,527 | 401 | 174 | 174 | 117 | 143 | 101 | 49 | 39 | 124 | 204 |
| **Number of TVs or video displays** | | | | | | | | | | | |
| None | 1,213 | 348 | 89 | 97 | 53 | 145 | 72 | 139 | 14 | 73 | 152 |
| One | 697 | 207 | 54 | 59 | 40 | 74 | 51 | 84 | 13 | 32 | 83 |
| 2 to 4 | 1,310 | 352 | 123 | 125 | 64 | 146 | 85 | 136 | 27 | 67 | 186 |
| 5 to 9 | 777 | 178 | 79 | 80 | 45 | 78 | 64 | 91 | 17 | 58 | 87 |
| 10 to 19 | 809 | 185 | 81 | 91 | 57 | 84 | 76 | 76 | 16 | 54 | 89 |
| 20 to 49 | 716 | 153 | 81 | 86 | 50 | 80 | 43 | 73 | 21 | 46 | 84 |
| 50 to 99 | 431 | 105 | 39 | 43 | 44 | 43 | 18 | 29 | 19 | 38 | 52 |
| 100 or more | 1,006 | 227 | 109 | 87 | 156 | 73 | 107 | 41 | 46 | 37 | 123 |
| **Food preparation or serving areas in non-food service buildings (more than one may apply)** | | | | | | | | | | | |
| Snack bar or concession stand | 1,112 | 266 | 124 | 99 | 79 | 93 | 121 | 131 | 25 | 51 | 123 |
| Fast food or small restaurant | 1,206 | 217 | 120 | 122 | 92 | 113 | 141 | 201 | 29 | 43 | 127 |
| Cafeteria or large restaurant | 1,623 | 400 | 185 | 156 | 163 | 138 | 166 | 105 | 41 | 87 | 181 |
| Commercial kitchen/ food preparation area | 1,797 | 421 | 184 | 157 | 196 | 142 | 190 | 200 | 47 | 64 | 196 |
| Small kitchen area | 1,187 | 314 | 129 | 106 | 90 | 103 | 104 | 108 | 33 | 54 | 145 |
| **Separate computer areas (more than one may apply)** | | | | | | | | | | | |
| Data center or server farm | 1,355 | 345 | 171 | 141 | 89 | 124 | 93 | 46 | 31 | 151 | 163 |
| Computer-based training room | 1,696 | 425 | 196 | 177 | 118 | 174 | 123 | 123 | 39 | 123 | 197 |
| Student or public computer center | 1,275 | 374 | 130 | 114 | 121 | 111 | 90 | 79 | 36 | 79 | 141 |
| **HVAC conservation features (more than one may apply)** | | | | | | | | | | | |
| Economizer cycle | 3,140 | 823 | 295 | 342 | 221 | 312 | 236 | 237 | 66 | 200 | 406 |
| Regular HVAC maintenance | 6,201 | 1,538 | 603 | 620 | 455 | 640 | 463 | 575 | 151 | 377 | 769 |
| Building automation system (BAS)[1] | 3,708 | 895 | 388 | 403 | 262 | 379 | 243 | 311 | 81 | 253 | 488 |

## Table E1. Major fuel consumption (Btu) by end use, 2012 - PUBLIC USE VERSION

| | Total major fuel consumption (trillion Btu) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Space heat-ing | Cool-ing | Venti-lation | Water heat-ing | Light-ing | Cook-ing | Refrig-eration | Office equip-ment | Com-puters | Other |
| **All buildings** | 6,960 | 1,755 | 656 | 668 | 506 | 723 | 516 | 670 | 172 | 405 | 857 |
| **Window and interior lighting features (more than one may apply)** | | | | | | | | | | | |
| Multipaned windows | 5,248 | 1,345 | 476 | 516 | 382 | 524 | 404 | 515 | 131 | 307 | 634 |
| Tinted window glass | 3,971 | 936 | 411 | 408 | 290 | 416 | 305 | 364 | 95 | 240 | 501 |
| Reflective window glass | 1,652 | 368 | 174 | 174 | 121 | 163 | 147 | 154 | 41 | 118 | 191 |
| External overhangs or awnings | 3,087 | 702 | 283 | 296 | 232 | 295 | 317 | 380 | 74 | 158 | 345 |
| Skylights or atriums | 2,009 | 533 | 187 | 205 | 146 | 197 | 177 | 142 | 45 | 105 | 268 |
| Light scheduling | 2,930 | 668 | 299 | 318 | 194 | 284 | 235 | 327 | 67 | 183 | 351 |
| Occupancy sensors | 3,432 | 879 | 343 | 362 | 225 | 330 | 224 | 310 | 77 | 224 | 452 |
| Multi-level lighting or dimming | 1,618 | 360 | 156 | 161 | 141 | 132 | 186 | 182 | 39 | 72 | 188 |
| Daylight harvesting | 619 | 160 | 61 | 68 | 31 | 61 | 44 | 64 | 12 | 29 | 89 |
| Demand responsive lighting | 410 | 77 | 42 | 45 | 32 | 45 | 33 | 65 | 9 | 16 | 44 |
| Building automation system (BAS) for lighting[1] | 1,200 | 246 | 131 | 144 | 65 | 130 | 80 | 165 | 21 | 71 | 147 |
| **Equipment usage reduced when building not in full use (more than one may apply)** | | | | | | | | | | | |
| Heating | 5,018 | 1,323 | 484 | 502 | 327 | 509 | 364 | 480 | 118 | 296 | 603 |
| Cooling | 5,005 | 1,267 | 516 | 507 | 336 | 510 | 367 | 475 | 119 | 297 | 602 |
| Lighting | 6,423 | 1,657 | 606 | 620 | 460 | 664 | 478 | 595 | 156 | 376 | 791 |

[1]In earlier CBECS publications, BAS was referred to as *Energy Management and Control System (EMCS).*

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 20 buildings were sampled.

N = No cases in reporting sample.

Notes: ● Because of rounding, data may not sum to totals. ● See the *Guide to the 2012 CBECS Detailed Tables* or *CBECS Terminology* for definitions of terms used in these tables and/or comparison of differences with prior CBECS tables. Both references can be accessed from http://www.eia.gov/consumption/commercial/data/2012/ ● Site electricity is the amount of electricity delivered to commercial builidngs. Primary electricity, which is not included in the *Total of major fuels* category, is site electricity plus the conversion losses in the generation, transmission, and distribution processes. ● Statistics for the *Energy end uses* category represent total consumption in buildings that have the end use, not consumption specifically for that particular end use. ● HVAC = Heating, ventilation, and air conditioning.

Source: U.S. Energy Information Administration, Office of Energy Consumption and Efficiency Statistics, Forms EIA-871A, C, D, E, and F of the 2012 Commercial Buildings Energy Consumption Survey.

## RSEs for Table B1. Summary table: total and means of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

| | RSEs for number of buildings | RSEs for total floorspace | RSEs for total workers | RSEs for mean square feet per building | RSEs for mean square feet per worker | RSEs for mean operating hours per week |
|---|---|---|---|---|---|---|
| **All buildings** | 5.4 | 4.6 | 5.1 | 3.3 | 2.6 | 1.9 |
| **Building floorspace (square feet)** | | | | | | |
| 1,001 to 5,000 | 5.4 | 5.2 | 5.6 | 1.1 | 3.4 | 2.8 |
| 5,001 to 10,000 | 8.0 | 8.2 | 10.4 | 0.8 | 4.3 | 3.0 |
| 10,001 to 25,000 | 6.9 | 7.0 | 11.2 | 2.8 | 9.0 | 3.0 |
| 25,001 to 50,000 | 8.1 | 8.0 | 9.8 | 1.1 | 6.5 | 3.0 |
| 50,001 to 100,000 | 7.8 | 7.7 | 8.4 | 1.2 | 4.5 | 3.0 |
| 100,001 to 200,000 | 7.0 | 7.2 | 11.5 | 1.4 | 8.5 | 3.5 |
| 200,001 to 500,000 | 6.8 | 6.5 | 7.3 | 1.4 | 4.6 | 3.0 |
| Over 500,000 | 9.2 | 9.2 | 10.7 | 2.9 | 6.4 | 2.7 |
| **Principal building activity** | | | | | | |
| Education | 7.6 | 6.0 | 11.5 | 6.5 | 10.0 | 2.9 |
| Food sales | 11.4 | 12.8 | 13.5 | 13.1 | 7.9 | 3.0 |
| Food service | 6.6 | 9.5 | 9.1 | 7.4 | 8.0 | 3.0 |
| Health care | 10.8 | 7.3 | 8.1 | 10.0 | 3.5 | 4.2 |
| Inpatient | 16.9 | 8.2 | 8.6 | 13.9 | 2.9 | 0.0 |
| Outpatient | 11.3 | 11.2 | 12.3 | 10.5 | 6.9 | 4.3 |
| Lodging | 9.8 | 8.2 | 13.6 | 8.3 | 10.4 | 0.8 |
| Mercantile | 6.0 | 8.4 | 7.7 | 7.1 | 3.1 | 2.1 |
| Retail (other than mall) | 6.9 | 8.3 | 8.5 | 6.6 | 5.6 | 2.6 |
| Enclosed and strip malls | 11.1 | 11.9 | 11.9 | 8.9 | 3.7 | 3.3 |
| Office | 6.7 | 6.1 | 6.6 | 6.2 | 2.7 | 1.9 |
| Public assembly | 9.1 | 9.5 | 10.7 | 8.5 | 6.9 | 4.9 |
| Public order and safety | 17.5 | 16.6 | 20.2 | 17.2 | 16.6 | 11.1 |
| Religious worship | 7.3 | 8.6 | 9.0 | 7.1 | 7.7 | 7.4 |
| Service | 7.4 | 9.0 | 9.9 | 7.1 | 6.5 | 3.3 |
| Warehouse and storage | 12.8 | 11.7 | 17.4 | 8.5 | 8.6 | 5.5 |
| Other | 14.5 | 16.3 | 16.9 | 16.9 | 12.4 | 12.8 |
| Vacant | 11.5 | 13.3 | 20.1 | 9.0 | 20.6 | 24.7 |
| **Year constructed** | | | | | | |
| Before 1920 | 10.5 | 11.3 | 11.0 | 9.2 | 10.1 | 6.2 |
| 1920 to 1945 | 6.7 | 7.8 | 9.6 | 6.6 | 8.1 | 5.2 |
| 1946 to 1959 | 7.7 | 8.1 | 9.1 | 5.8 | 5.1 | 3.4 |
| 1960 to 1969 | 7.9 | 6.6 | 8.0 | 5.8 | 6.7 | 3.8 |
| 1970 to 1979 | 7.5 | 7.0 | 9.1 | 5.5 | 7.0 | 3.5 |
| 1980 to 1989 | 8.3 | 6.5 | 7.7 | 5.4 | 4.2 | 3.3 |
| 1990 to 1999 | 6.2 | 5.4 | 9.4 | 5.6 | 9.6 | 3.5 |
| 2000 to 2003 | 9.3 | 7.8 | 8.4 | 9.4 | 6.4 | 5.0 |
| 2004 to 2007 | 13.3 | 15.4 | 15.8 | 8.0 | 6.4 | 5.5 |
| 2008 to 2012 | 15.4 | 17.3 | 17.4 | 10.7 | 6.5 | 4.5 |

## RSEs for Table B1. Summary table: total and means of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

| | RSEs for number of buildings | RSEs for total floorspace | RSEs for total workers | RSEs for mean square feet per building | RSEs for mean square feet per worker | RSEs for mean operating hours per week |
|---|---|---|---|---|---|---|
| **All buildings** | 5.4 | 4.6 | 5.1 | 3.3 | 2.6 | 1.9 |
| **Census region and division** | | | | | | |
| Northeast | 9.0 | 7.0 | 7.5 | 7.9 | 5.1 | 3.7 |
| New England | 22.7 | 14.3 | 8.8 | 15.5 | 12.2 | 6.2 |
| Middle Atlantic | 7.0 | 7.9 | 9.1 | 7.7 | 5.1 | 4.2 |
| Midwest | 9.3 | 5.6 | 7.7 | 6.6 | 5.4 | 3.8 |
| East North Central | 12.1 | 6.8 | 10.1 | 9.7 | 7.2 | 5.7 |
| West North Central | 14.2 | 10.0 | 10.9 | 7.1 | 6.8 | 4.6 |
| South | 7.7 | 7.9 | 8.5 | 5.0 | 4.4 | 3.1 |
| South Atlantic | 9.5 | 12.3 | 13.9 | 7.1 | 5.8 | 2.9 |
| East South Central | 9.3 | 12.2 | 6.0 | 15.4 | 9.1 | 6.5 |
| West South Central | 17.4 | 13.0 | 11.9 | 7.1 | 8.2 | 7.4 |
| West | 16.0 | 14.4 | 14.6 | 7.8 | 6.6 | 4.4 |
| Mountain | 12.4 | 14.0 | 11.5 | 13.3 | 5.0 | 10.6 |
| Pacific | 21.4 | 18.8 | 18.4 | 9.5 | 8.6 | 4.7 |
| **Number of floors** | | | | | | |
| One | 6.3 | 7.2 | 8.8 | 4.0 | 4.3 | 2.6 |
| Two | 5.6 | 5.6 | 7.1 | 4.0 | 4.6 | 2.6 |
| Three | 8.3 | 6.4 | 8.8 | 7.3 | 6.2 | 4.4 |
| Four to nine | 9.4 | 7.4 | 7.9 | 6.5 | 4.7 | 3.9 |
| Ten or more | 11.1 | 9.6 | 11.4 | 5.3 | 5.8 | 4.6 |
| **Elevators and escalators (more than one may apply)** | | | | | | |
| Any elevators | 5.7 | 4.5 | 5.5 | 4.0 | 3.4 | 2.1 |
| Number of elevators | | | | | | |
| One | 6.4 | 5.9 | 10.2 | 5.2 | 7.4 | 3.0 |
| Two to five | 8.4 | 7.0 | 7.8 | 4.7 | 5.3 | 3.2 |
| Six or more | 8.7 | 8.1 | 9.2 | 4.8 | 4.1 | 3.4 |
| Any escalators | 25.6 | 13.1 | 13.9 | 21.3 | 7.9 | 6.3 |
| **Number of workers (main shift)** | | | | | | |
| Fewer than 5 | 5.8 | 6.6 | 5.8 | 4.4 | 5.1 | 3.4 |
| 5 to 9 | 7.2 | 7.1 | 7.1 | 3.6 | 3.6 | 2.5 |
| 10 to 19 | 8.8 | 8.6 | 8.6 | 3.4 | 3.4 | 2.9 |
| 20 to 49 | 7.5 | 6.3 | 7.3 | 4.4 | 4.3 | 2.0 |
| 50 to 99 | 8.0 | 6.5 | 8.3 | 3.7 | 4.0 | 2.6 |
| 100 to 249 | 9.5 | 8.5 | 9.5 | 5.3 | 5.6 | 4.5 |
| 250 or more | 7.6 | 6.6 | 7.8 | 5.4 | 5.0 | 4.2 |
| **Weekly operating hours** | | | | | | |
| Fewer than 40 | 7.2 | 8.4 | 8.5 | 4.8 | 9.0 | 4.3 |
| 40 to 48 | 7.5 | 7.4 | 9.2 | 4.7 | 6.1 | 0.2 |
| 49 to 60 | 6.7 | 6.4 | 6.8 | 3.9 | 4.0 | 0.3 |
| 61 to 84 | 6.8 | 5.9 | 5.3 | 6.0 | 4.4 | 0.4 |
| 85 to 167 | 7.9 | 8.6 | 8.3 | 7.3 | 5.3 | 0.8 |
| Open continuously | 8.1 | 5.6 | 8.2 | 6.4 | 5.6 | 0.0 |

## RSEs for Table B1. Summary table: total and means of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

| | RSEs for number of buildings | RSEs for total floorspace | RSEs for total workers | RSEs for mean square feet per building | RSEs for mean square feet per worker | RSEs for mean operating hours per week |
|---|---|---|---|---|---|---|
| **All buildings** | 5.4 | 4.6 | 5.1 | 3.3 | 2.6 | 1.9 |
| **Party responsible for operation and maintenance of energy systems** | | | | | | |
| Building owner | 5.3 | 4.2 | 4.8 | 3.2 | 2.9 | 2.0 |
| Business owner or tenant | 9.2 | 11.0 | 11.4 | 6.8 | 3.9 | 3.3 |
| Property management | 16.8 | 14.2 | 19.6 | 16.1 | 13.5 | 6.9 |
| Other | 16.9 | 15.6 | 20.7 | 16.0 | 14.3 | 10.6 |
| **Provider of direct input on energy-related equipment purchases** | | | | | | |
| Building owner | 5.2 | 4.3 | 4.8 | 3.2 | 2.9 | 2.0 |
| Business owner or tenant | 10.1 | 10.7 | 11.0 | 7.5 | 4.5 | 3.6 |
| Property management | 22.3 | 19.0 | 24.8 | 22.9 | 20.5 | 9.0 |
| Other | 13.6 | 14.6 | 15.0 | 11.0 | 8.7 | 7.5 |
| **Number of establishments** | | | | | | |
| One | 5.5 | 5.0 | 5.8 | 3.2 | 3.4 | 1.9 |
| 2 to 5 | 7.1 | 6.0 | 6.9 | 4.9 | 3.7 | 2.9 |
| 6 to 10 | 13.9 | 10.9 | 10.7 | 7.8 | 5.0 | 7.1 |
| 11 to 20 | 14.1 | 13.4 | 13.0 | 12.0 | 6.5 | 4.8 |
| More than 20 | 26.0 | 8.8 | 10.4 | 26.2 | 6.5 | 6.1 |
| Currently unoccupied | 12.8 | 17.3 | 0.0 | 11.7 | 0.0 | 0.0 |
| **Predominant exterior wall material** | | | | | | |
| Brick, stone, or stucco | 5.1 | 4.8 | 5.1 | 3.3 | 3.4 | 2.3 |
| Concrete (block or poured) | 6.9 | 6.3 | 8.4 | 5.1 | 4.9 | 2.4 |
| Concrete panels | 25.2 | 11.9 | 10.8 | 14.7 | 6.6 | 7.4 |
| Siding or shingles | 9.0 | 10.5 | 11.1 | 6.3 | 8.0 | 4.4 |
| Metal panels | 10.8 | 9.0 | 9.6 | 5.8 | 7.0 | 4.7 |
| Window glass | 18.8 | 13.2 | 15.1 | 17.0 | 8.8 | 25.4 |
| Other | 23.7 | 25.9 | 18.4 | 23.7 | 18.4 | 18.0 |
| No one major type | 23.0 | 21.3 | 57.7 | 22.6 | 132.5 | 17.8 |
| **Predominant roof material** | | | | | | |
| Metal surfacing | 7.8 | 7.0 | 7.7 | 5.2 | 5.2 | 3.1 |
| Synthetic or rubber | 6.0 | 6.0 | 6.8 | 4.4 | 3.4 | 2.5 |
| Built-up | 8.7 | 5.4 | 6.2 | 5.8 | 4.0 | 3.1 |
| Slate or tile shingles | 8.8 | 13.9 | 12.6 | 11.5 | 9.7 | 5.0 |
| Wooden materials (including shingles) | 13.7 | 16.5 | 17.0 | 9.7 | 11.4 | 6.0 |
| Asphalt, fiberglass, or other shingles | 6.3 | 5.9 | 9.3 | 4.7 | 7.8 | 2.9 |
| Concrete | 18.2 | 13.6 | 14.8 | 16.4 | 13.2 | 7.6 |
| Other | 25.5 | 25.4 | 23.4 | 25.9 | 13.6 | 15.6 |
| No one major type | 29.8 | 26.9 | 32.0 | 24.6 | 31.8 | 10.0 |

## RSEs for Table B1. Summary table: total and means of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

| | RSEs for number of buildings | RSEs for total floorspace | RSEs for total workers | RSEs for mean square feet per building | RSEs for mean square feet per worker | RSEs for mean operating hours per week |
|---|---|---|---|---|---|---|
| **All buildings** | 5.4 | 4.6 | 5.1 | 3.3 | 2.6 | 1.9 |
| **Roof characteristics** | | | | | | |
| Roof tilt | | | | | | |
| Flat | 7.2 | 5.0 | 5.6 | 4.3 | 3.3 | 2.1 |
| Shallow pitch | 6.7 | 6.8 | 6.9 | 4.8 | 3.7 | 3.3 |
| Steeper pitch | 6.7 | 6.0 | 7.3 | 4.1 | 6.0 | 2.5 |
| Cool roof | 7.4 | 6.3 | 8.3 | 5.3 | 4.5 | 3.5 |
| **Renovations in buildings constructed before 2008 (more than one may apply)** | | | | | | |
| Any type of renovation | 4.7 | 3.9 | 4.6 | 3.6 | 2.9 | 2.0 |
| Addition or annex | 7.8 | 5.0 | 5.9 | 5.9 | 4.9 | 4.0 |
| Reduction in floorspace | 17.0 | 25.9 | 35.8 | 24.7 | 16.3 | 12.7 |
| Roof replacement | 5.5 | 4.4 | 6.3 | 4.7 | 4.4 | 3.3 |
| Exterior wall replacement | 9.0 | 7.8 | 8.3 | 8.0 | 5.4 | 5.4 |
| Interior wall reconfiguration | 6.1 | 4.5 | 5.3 | 4.7 | 3.2 | 2.8 |
| Window replacement | 5.9 | 5.0 | 6.0 | 5.2 | 5.1 | 4.1 |
| HVAC equipment upgrade | 4.9 | 3.7 | 5.4 | 4.1 | 3.8 | 2.3 |
| Lighting upgrade | 5.2 | 4.5 | 5.0 | 4.6 | 3.4 | 2.5 |
| Electrical upgrade | 6.0 | 5.4 | 6.3 | 5.4 | 4.1 | 3.0 |
| Plumbing system upgrade | 5.8 | 5.7 | 6.5 | 5.4 | 4.6 | 3.4 |
| Insulation upgrade | 8.0 | 6.7 | 7.0 | 6.6 | 5.1 | 4.0 |
| Fire, safety, or security upgrade | 6.3 | 4.9 | 5.5 | 5.3 | 3.9 | 3.1 |
| Structural upgrade | 10.0 | 8.9 | 11.3 | 9.7 | 7.1 | 6.7 |
| Other | 28.7 | 23.9 | 27.5 | 27.2 | 16.1 | 14.5 |
| No renovations | 6.2 | 5.8 | 6.7 | 3.9 | 4.0 | 2.9 |
| Buildings constructed 2008 or later | 15.4 | 17.3 | 17.4 | 10.7 | 6.5 | 4.5 |
| **Energy sources (more than one may apply)** | | | | | | |
| Electricity | 5.3 | 4.7 | 5.1 | 3.2 | 2.5 | 1.6 |
| Natural gas | 5.3 | 4.8 | 5.3 | 3.4 | 3.0 | 1.9 |
| Fuel oil | 11.5 | 5.4 | 6.2 | 9.9 | 4.1 | 6.1 |
| District heat | 18.2 | 12.9 | 15.2 | 13.0 | 9.7 | 7.4 |
| District chilled water | 17.3 | 16.2 | 20.0 | 15.3 | 14.4 | 6.7 |
| Propane | 10.9 | 8.6 | 9.3 | 7.7 | 5.8 | 5.4 |
| Wood | 26.0 | 22.4 | 34.5 | 16.1 | 29.6 | 9.5 |
| Coal | 51.4 | 48.7 | 42.5 | 56.4 | 19.6 | 47.6 |
| Solar | 19.5 | 15.0 | 13.3 | 16.7 | 12.9 | 9.3 |
| Other | 19.4 | 16.5 | 20.2 | 13.2 | 12.1 | 8.4 |

## RSEs for Table B1. Summary table: total and means of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

| | RSEs for number of buildings | RSEs for total floorspace | RSEs for total workers | RSEs for mean square feet per building | RSEs for mean square feet per worker | RSEs for mean operating hours per week |
|---|---|---|---|---|---|---|
| **All buildings** | 5.4 | 4.6 | 5.1 | 3.3 | 2.6 | 1.9 |
| **Space-heating energy sources (more than one may apply)** | | | | | | |
| Electricity | 5.8 | 5.2 | 6.1 | 3.8 | 3.5 | 1.4 |
| Natural gas | 5.7 | 5.2 | 5.7 | 3.5 | 3.3 | 2.0 |
| Fuel oil | 17.2 | 13.7 | 11.2 | 9.0 | 9.2 | 7.6 |
| District heat | 18.3 | 12.9 | 15.3 | 13.0 | 9.8 | 7.4 |
| Propane | 11.4 | 11.6 | 13.4 | 6.4 | 7.1 | 6.8 |
| Wood | 28.7 | 25.8 | 29.7 | 16.5 | 9.7 | 9.2 |
| Coal | 62.9 | 74.8 | 69.5 | 76.8 | 18.8 | 55.0 |
| Solar | 112.1 | 112.1 | 112.1 | 0.0 | 0.0 | 0.0 |
| Other | 35.0 | 36.0 | 46.1 | 15.5 | 22.8 | 4.5 |
| **Primary space-heating energy source** | | | | | | |
| Electricity | 7.6 | 6.6 | 8.3 | 4.3 | 5.5 | 2.1 |
| Natural gas | 5.7 | 5.0 | 5.5 | 3.8 | 3.0 | 2.2 |
| Fuel oil | 19.9 | 20.8 | 14.4 | 9.3 | 12.3 | 9.4 |
| District heat | 18.3 | 13.1 | 15.5 | 13.3 | 9.8 | 7.4 |
| Propane | 11.7 | 12.1 | 14.6 | 7.5 | 9.6 | 6.9 |
| Wood | 39.7 | 43.3 | 48.1 | 10.2 | 9.5 | 7.0 |
| Coal | 76.0 | 84.9 | 73.9 | 125.6 | 32.9 | 67.7 |
| Other | 40.5 | 45.1 | 55.2 | 20.6 | 27.6 | 5.8 |
| **Cooling energy sources (more than one may apply)** | | | | | | |
| Electricity | 5.5 | 4.7 | 5.1 | 3.1 | 2.6 | 1.5 |
| Natural gas | 30.6 | 21.5 | 26.2 | 31.8 | 14.8 | 20.8 |
| District chilled water | 17.3 | 16.2 | 20.0 | 15.3 | 14.4 | 6.7 |
| **Water-heating energy sources (more than one may apply)** | | | | | | |
| Electricity | 5.7 | 5.3 | 5.8 | 4.2 | 2.9 | 1.7 |
| Natural gas | 5.7 | 5.3 | 6.0 | 3.5 | 3.7 | 2.1 |
| Fuel oil | 25.4 | 15.8 | 12.5 | 18.0 | 7.1 | 9.3 |
| District heat | 21.5 | 15.6 | 18.4 | 13.1 | 11.6 | 6.4 |
| Propane | 12.3 | 11.6 | 12.2 | 11.8 | 9.6 | 6.9 |
| **Cooking energy sources (more than one may apply)** | | | | | | |
| Electricity | 5.2 | 4.5 | 5.2 | 4.6 | 3.0 | 2.7 |
| Natural gas | 5.7 | 5.0 | 6.5 | 4.3 | 3.3 | 3.1 |
| Propane | 19.0 | 11.9 | 16.4 | 13.5 | 12.0 | 7.5 |

## RSEs for Table B1. Summary table: total and means of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

| | RSEs for number of buildings | RSEs for total floorspace | RSEs for total workers | RSEs for mean square feet per building | RSEs for mean square feet per worker | RSEs for mean operating hours per week |
|---|---|---|---|---|---|---|
| **All buildings** | 5.4 | 4.6 | 5.1 | 3.3 | 2.6 | 1.9 |
| **Energy end uses (more than one may apply)** | | | | | | |
| Buildings with space heating | 5.0 | 4.5 | 5.0 | 3.1 | 2.6 | 1.5 |
| Buildings with cooling | 5.4 | 4.7 | 5.2 | 3.2 | 2.6 | 1.5 |
| Buildings with water heating | 5.1 | 4.6 | 5.1 | 3.1 | 2.5 | 1.4 |
| Buildings with cooking | 4.8 | 4.1 | 5.0 | 3.8 | 2.7 | 2.4 |
| Buildings with manufacturing | 13.8 | 11.5 | 13.6 | 9.9 | 8.4 | 3.2 |
| Buildings with electricity generation | 6.9 | 4.9 | 5.5 | 6.4 | 3.8 | 4.2 |
| **Percent of floorspace heated** | | | | | | |
| Not heated | 9.4 | 9.9 | 15.4 | 7.4 | 11.1 | 8.7 |
| 1 to 50 | 12.0 | 11.3 | 14.4 | 6.5 | 6.2 | 3.7 |
| 51 to 99 | 6.9 | 5.5 | 7.2 | 5.3 | 4.6 | 2.7 |
| 100 | 4.5 | 4.4 | 5.2 | 3.5 | 3.1 | 1.6 |
| **Percent of floorspace cooled** | | | | | | |
| Not cooled | 8.8 | 9.2 | 11.0 | 6.2 | 9.7 | 7.2 |
| 1 to 50 | 10.5 | 8.8 | 11.2 | 5.6 | 4.6 | 2.3 |
| 51 to 99 | 6.4 | 5.0 | 5.8 | 4.6 | 3.4 | 2.7 |
| 100 | 4.6 | 5.2 | 5.9 | 3.8 | 3.8 | 1.7 |
| **Percent lit when open** | | | | | | |
| Zero | 23.0 | 23.1 | 32.7 | 13.4 | 27.1 | 9.6 |
| 1 to 50 | 7.5 | 7.7 | 10.8 | 5.3 | 6.5 | 3.6 |
| 51 to 99 | 6.3 | 5.0 | 5.6 | 4.4 | 2.8 | 2.0 |
| 100 | 5.0 | 4.8 | 5.7 | 3.5 | 3.5 | 1.8 |
| Building never open/electricity not used | 10.0 | 10.5 | 40.6 | 8.3 | 47.9 | 23.2 |
| **Percent lit during off hours** | | | | | | |
| Zero | 6.6 | 6.7 | 8.2 | 3.6 | 5.2 | 2.5 |
| 1 to 50 | 5.0 | 4.6 | 5.0 | 3.4 | 2.8 | 1.4 |
| 51 to 100 | 10.0 | 8.3 | 13.5 | 10.4 | 9.5 | 3.8 |
| Building always open with no "off hours" | 16.8 | 11.2 | 16.0 | 14.2 | 13.9 | 0.0 |
| Electricity not used | 12.7 | 14.4 | 41.2 | 11.6 | 50.0 | 22.1 |
| **Heating equipment (more than one may apply)** | | | | | | |
| Heat pumps | 9.3 | 7.0 | 8.4 | 6.3 | 5.6 | 2.9 |
| Furnaces | 7.2 | 7.9 | 7.8 | 5.6 | 5.3 | 3.4 |
| Individual space heaters | 6.4 | 5.2 | 5.8 | 4.5 | 3.8 | 2.7 |
| District heat | 18.3 | 12.9 | 15.3 | 13.0 | 9.8 | 7.4 |
| Boilers | 6.5 | 4.3 | 5.8 | 5.4 | 4.0 | 3.2 |
| Packaged heating units | 5.4 | 5.5 | 6.2 | 3.3 | 3.2 | 1.8 |
| Other | 18.3 | 14.5 | 15.8 | 16.3 | 5.5 | 10.0 |

## RSEs for Table B1. Summary table: total and means of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

| | RSEs for number of buildings | RSEs for total floorspace | RSEs for total workers | RSEs for mean square feet per building | RSEs for mean square feet per worker | RSEs for mean operating hours per week |
|---|---|---|---|---|---|---|
| **All buildings** | 5.4 | 4.6 | 5.1 | 3.3 | 2.6 | 1.9 |
| **Cooling equipment (more than one may apply)** | | | | | | |
| Residential-type central air conditioners | 7.0 | 7.4 | 7.7 | 4.5 | 4.2 | 2.4 |
| Heat pumps | 8.8 | 6.9 | 8.3 | 5.6 | 5.2 | 2.3 |
| Individual air conditioners | 7.3 | 5.3 | 7.1 | 5.6 | 4.7 | 3.5 |
| District chilled water | 17.3 | 16.2 | 20.0 | 15.3 | 14.4 | 6.7 |
| Central chillers | 7.1 | 4.5 | 6.1 | 5.8 | 3.8 | 3.8 |
| Packaged air conditioning units | 6.3 | 5.0 | 5.6 | 3.6 | 3.4 | 2.0 |
| Swamp coolers | 16.6 | 15.0 | 13.5 | 15.9 | 7.3 | 6.6 |
| Other | 51.6 | 27.3 | 30.5 | 72.1 | 24.0 | 35.6 |
| **Main equipment replaced since 1990 (more than one may apply)** | | | | | | |
| Heating | 4.8 | 4.3 | 5.2 | 3.1 | 3.6 | 2.0 |
| Cooling | 4.9 | 4.1 | 4.8 | 3.1 | 2.9 | 1.9 |
| **Water-heating equipment** | | | | | | |
| Centralized system | 5.0 | 4.8 | 5.5 | 3.3 | 2.6 | 1.6 |
| Distributed system | 8.0 | 7.4 | 7.9 | 5.5 | 4.4 | 2.6 |
| Combination of centralized and distributed system | 7.4 | 5.3 | 6.8 | 4.9 | 5.7 | 3.0 |
| **Lighting equipment types (more than one may apply)** | | | | | | |
| Incandescent | 4.6 | 4.2 | 5.0 | 4.2 | 3.1 | 2.0 |
| Standard fluorescent | 5.4 | 4.6 | 5.1 | 3.1 | 2.6 | 1.5 |
| Compact fluorescent | 5.6 | 4.3 | 4.8 | 3.8 | 2.5 | 1.9 |
| High-intensity discharge (HID) | 7.4 | 5.0 | 6.1 | 5.5 | 4.2 | 3.0 |
| Halogen | 5.5 | 5.0 | 5.6 | 4.4 | 3.2 | 2.2 |
| LED | 7.4 | 5.2 | 5.9 | 5.2 | 3.5 | 3.6 |
| Other | 31.8 | 19.6 | 19.3 | 29.5 | 12.6 | 7.0 |
| **Refrigeration equipment (more than one may apply)** | | | | | | |
| Any refrigeration | 5.1 | 4.2 | 4.6 | 3.4 | 2.2 | 1.4 |
| Walk-in units | 4.8 | 4.4 | 5.4 | 4.2 | 3.0 | 1.7 |
| Cases or cabinets | 4.7 | 4.8 | 5.6 | 4.5 | 3.1 | 1.8 |
| Large cold storage areas | 10.9 | 10.3 | 10.7 | 12.6 | 7.2 | 5.4 |
| Commercial ice makers | 5.5 | 4.4 | 5.5 | 4.4 | 3.1 | 2.4 |
| Residential-type or compact units | 5.6 | 4.6 | 4.8 | 3.9 | 2.4 | 1.5 |
| Vending machines | 5.7 | 4.7 | 5.0 | 3.8 | 2.7 | 2.2 |
| No refrigeration | 7.2 | 8.8 | 15.1 | 5.3 | 13.7 | 5.5 |

## RSEs for Table B1. Summary table: total and means of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

| | RSEs for number of buildings | RSEs for total floorspace | RSEs for total workers | RSEs for mean square feet per building | RSEs for mean square feet per worker | RSEs for mean operating hours per week |
|---|---|---|---|---|---|---|
| **All buildings** | 5.4 | 4.6 | 5.1 | 3.3 | 2.6 | 1.9 |
| **Office equipment (more than one may apply)** | | | | | | |
| Desktop computers | 5.6 | 4.7 | 5.2 | 3.2 | 2.6 | 1.4 |
| With flat screen monitors | 5.8 | 4.7 | 5.2 | 3.3 | 2.6 | 1.4 |
| With multiple monitors | 7.4 | 5.3 | 5.8 | 4.9 | 2.8 | 2.2 |
| Laptop computers | 5.9 | 4.6 | 5.1 | 3.7 | 2.8 | 1.5 |
| Dedicated servers | 6.8 | 4.9 | 5.1 | 4.2 | 2.5 | 1.7 |
| Laser printers | 5.7 | 4.8 | 5.4 | 3.7 | 3.2 | 1.5 |
| Inkjet printers | 6.7 | 5.5 | 6.9 | 3.5 | 3.2 | 1.9 |
| FAX machines | 5.8 | 4.6 | 5.0 | 3.4 | 2.3 | 1.3 |
| Photocopiers | 6.4 | 4.7 | 5.1 | 4.0 | 2.8 | 1.5 |
| **Number of desktop computers** | | | | | | |
| None | 7.4 | 8.1 | 10.1 | 5.1 | 8.8 | 5.5 |
| 1 to 4 | 5.2 | 5.9 | 6.5 | 4.2 | 5.3 | 2.2 |
| 5 to 9 | 8.5 | 8.5 | 14.0 | 4.0 | 12.9 | 2.4 |
| 10 to 19 | 8.8 | 8.6 | 9.1 | 4.2 | 3.8 | 2.2 |
| 20 to 49 | 8.4 | 7.5 | 9.5 | 5.2 | 4.6 | 2.9 |
| 50 to 99 | 8.8 | 8.0 | 9.8 | 5.4 | 5.5 | 4.5 |
| 100 to 249 | 8.0 | 7.0 | 10.2 | 5.4 | 6.9 | 3.7 |
| 250 or more | 7.4 | 6.5 | 7.1 | 4.7 | 3.7 | 3.5 |
| **Number of laptop computers** | | | | | | |
| None | 5.8 | 5.9 | 7.2 | 4.0 | 3.7 | 3.2 |
| 1 to 4 | 6.2 | 6.1 | 6.8 | 3.0 | 3.7 | 1.9 |
| 5 to 9 | 8.9 | 8.6 | 12.6 | 7.3 | 8.5 | 3.0 |
| 10 to 19 | 8.8 | 8.8 | 10.0 | 5.5 | 4.7 | 3.7 |
| 20 to 49 | 8.9 | 7.5 | 8.9 | 6.0 | 6.0 | 3.7 |
| 50 to 99 | 10.5 | 8.4 | 13.8 | 7.9 | 13.4 | 7.0 |
| 100 to 249 | 10.8 | 8.7 | 8.4 | 8.3 | 6.7 | 8.7 |
| 250 or more | 12.6 | 9.0 | 9.8 | 8.5 | 4.5 | 5.7 |
| **Number of dedicated servers** | | | | | | |
| None | 5.6 | 5.6 | 7.8 | 3.3 | 5.5 | 2.6 |
| 1 to 4 | 7.0 | 5.9 | 6.8 | 4.1 | 3.2 | 1.7 |
| 5 to 9 | 9.8 | 8.5 | 9.0 | 7.4 | 5.3 | 5.7 |
| 10 to 19 | 14.1 | 9.3 | 9.0 | 12.4 | 7.3 | 8.4 |
| 20 to 49 | 15.5 | 8.9 | 10.8 | 14.3 | 6.7 | 7.2 |
| 50 or more | 15.0 | 12.3 | 11.4 | 11.7 | 6.7 | 7.3 |
| **Number of photocopiers** | | | | | | |
| None | 5.6 | 5.8 | 6.7 | 3.7 | 3.7 | 2.7 |
| One | 7.2 | 7.7 | 8.3 | 4.1 | 4.2 | 2.1 |
| 2 to 4 | 7.0 | 5.6 | 8.1 | 4.3 | 5.3 | 2.3 |
| 5 to 9 | 8.3 | 6.8 | 10.5 | 6.7 | 6.3 | 4.5 |
| 10 or more | 9.5 | 6.6 | 6.6 | 8.4 | 3.8 | 4.9 |

## RSEs for Table B1. Summary table: total and means of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

| | RSEs for number of buildings | RSEs for total floorspace | RSEs for total workers | RSEs for mean square feet per building | RSEs for mean square feet per worker | RSEs for mean operating hours per week |
|---|---|---|---|---|---|---|
| **All buildings** | 5.4 | 4.6 | 5.1 | 3.3 | 2.6 | 1.9 |
| **Number of TVs or video displays** | | | | | | |
| None | 6.1 | 6.6 | 9.6 | 3.8 | 7.0 | 3.6 |
| One | 6.5 | 6.4 | 7.5 | 4.9 | 5.5 | 2.5 |
| 2 to 4 | 6.5 | 5.9 | 6.8 | 4.5 | 4.0 | 2.5 |
| 5 to 9 | 7.9 | 7.6 | 8.8 | 5.7 | 5.0 | 3.6 |
| 10 to 19 | 10.0 | 8.2 | 12.1 | 7.3 | 8.3 | 5.0 |
| 20 to 49 | 9.8 | 7.8 | 9.1 | 7.0 | 5.4 | 5.1 |
| 50 to 99 | 13.7 | 13.9 | 14.2 | 9.1 | 7.9 | 4.3 |
| 100 or more | 11.3 | 8.0 | 10.0 | 8.7 | 6.8 | 1.8 |
| **Food preparation or serving areas in non-food service buildings (more than one may apply)** | | | | | | |
| Snack bar or concession stand | 8.9 | 6.6 | 8.3 | 8.7 | 5.5 | 4.6 |
| Fast food or small restaurant | 8.1 | 7.3 | 6.6 | 7.1 | 5.0 | 3.5 |
| Cafeteria or large restaurant | 6.6 | 5.2 | 7.7 | 4.9 | 5.1 | 3.2 |
| Commercial kitchen/ food preparation area | 7.1 | 5.3 | 8.2 | 5.3 | 5.2 | 3.8 |
| Small kitchen area | 6.4 | 5.6 | 6.2 | 5.6 | 4.8 | 4.7 |
| **Separate computer areas (more than one may apply)** | | | | | | |
| Data center or server farm | 9.6 | 6.5 | 6.4 | 8.4 | 4.1 | 6.5 |
| Computer-based training room | 6.8 | 5.7 | 5.8 | 5.2 | 3.8 | 3.3 |
| Student or public computer center | 7.2 | 5.9 | 7.0 | 5.9 | 4.1 | 2.9 |
| **HVAC conservation features (more than one may apply)** | | | | | | |
| Economizer cycle | 6.2 | 5.0 | 6.1 | 4.2 | 3.3 | 2.3 |
| Regular HVAC maintenance | 5.3 | 4.7 | 5.1 | 3.3 | 2.6 | 1.4 |
| Building automation system (BAS)[2] | 7.3 | 5.0 | 5.3 | 5.3 | 2.8 | 2.6 |
| **Window and interior lighting features (more than one may apply)** | | | | | | |
| Multipaned windows | 5.1 | 4.7 | 4.8 | 3.3 | 2.6 | 1.7 |
| Tinted window glass | 7.8 | 6.1 | 6.2 | 4.3 | 3.5 | 1.9 |
| Reflective window glass | 8.3 | 6.5 | 6.3 | 6.5 | 3.4 | 3.0 |
| External overhangs or awnings | 5.3 | 5.3 | 6.0 | 3.8 | 3.1 | 2.0 |
| Skylights or atriums | 10.1 | 6.2 | 7.2 | 6.5 | 4.7 | 3.0 |
| Light scheduling | 6.2 | 5.4 | 6.4 | 5.1 | 4.3 | 3.1 |
| Occupancy sensors | 8.5 | 5.0 | 5.2 | 5.4 | 3.2 | 2.5 |
| Multi-level lighting or dimming | 5.9 | 5.7 | 6.7 | 5.5 | 3.5 | 3.4 |
| Daylight harvesting | 11.3 | 8.2 | 10.6 | 12.1 | 7.8 | 6.4 |
| Demand responsive lighting | 19.9 | 15.8 | 15.5 | 11.9 | 7.2 | 6.2 |
| Building automation system (BAS) for lighting[1] | 9.9 | 7.6 | 7.6 | 7.9 | 4.7 | 3.8 |

## RSEs for Table B1. Summary table: total and means of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

| | RSEs for number of buildings | RSEs for total floorspace | RSEs for total workers | RSEs for mean square feet per building | RSEs for mean square feet per worker | RSEs for mean operating hours per week |
|---|---|---|---|---|---|---|
| **All buildings** | 5.4 | 4.6 | 5.1 | 3.3 | 2.6 | 1.9 |
| **Equipment usage reduced when building not in full use (more than one may apply)** | | | | | | |
| Heating | 5.4 | 4.8 | 5.2 | 3.5 | 2.6 | 1.7 |
| Cooling | 5.7 | 4.9 | 5.4 | 3.6 | 2.6 | 1.7 |
| Lighting | 5.4 | 4.7 | 5.1 | 3.1 | 2.6 | 1.4 |

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## RSEs for Table B2. Summary table: total and medians of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

| | RSEs for number of buildings | RSEs for total floorspace | RSEs for total workers | RSEs not available for medians | RSEs not available for medians | RSEs not available for medians | RSEs not available for medians |
|---|---|---|---|---|---|---|---|
| **All buildings** | 5.4 | 4.6 | 5.1 | P | P | P | P |
| **Building floorspace (square feet)** | | | | | | | |
| 1,001 to 5,000 | 5.4 | 5.2 | 5.6 | P | P | P | P |
| 5,001 to 10,000 | 8.0 | 8.2 | 10.4 | P | P | P | P |
| 10,001 to 25,000 | 6.9 | 7.0 | 11.2 | P | P | P | P |
| 25,001 to 50,000 | 8.1 | 8.0 | 9.8 | P | P | P | P |
| 50,001 to 100,000 | 7.8 | 7.7 | 8.4 | P | P | P | P |
| 100,001 to 200,000 | 7.0 | 7.2 | 11.5 | P | P | P | P |
| 200,001 to 500,000 | 6.8 | 6.5 | 7.3 | P | P | P | P |
| Over 500,000 | 9.2 | 9.2 | 10.7 | P | P | P | P |
| **Principal building activity** | | | | | | | |
| Education | 7.6 | 6.0 | 11.5 | P | P | P | P |
| Food sales | 11.4 | 12.8 | 13.5 | P | P | P | P |
| Food service | 6.6 | 9.5 | 9.1 | P | P | P | P |
| Health care | 10.8 | 7.3 | 8.1 | P | P | P | P |
| Inpatient | 16.9 | 8.2 | 8.6 | P | P | P | P |
| Outpatient | 11.3 | 11.2 | 12.3 | P | P | P | P |
| Lodging | 9.8 | 8.2 | 13.6 | P | P | P | P |
| Mercantile | 6.0 | 8.4 | 7.7 | P | P | P | P |
| Retail (other than mall) | 6.9 | 8.3 | 8.5 | P | P | P | P |
| Enclosed and strip malls | 11.1 | 11.9 | 11.9 | P | P | P | P |
| Office | 6.7 | 6.1 | 6.6 | P | P | P | P |
| Public assembly | 9.1 | 9.5 | 10.7 | P | P | P | P |
| Public order and safety | 17.5 | 16.6 | 20.2 | P | P | P | P |
| Religious worship | 7.3 | 8.6 | 9.0 | P | P | P | P |
| Service | 7.4 | 9.0 | 9.9 | P | P | P | P |
| Warehouse and storage | 12.8 | 11.7 | 17.4 | P | P | P | P |
| Other | 14.5 | 16.3 | 16.9 | P | P | P | P |
| Vacant | 11.5 | 13.3 | 20.1 | P | P | P | P |
| **Year constructed** | | | | | | | |
| Before 1920 | 10.5 | 11.3 | 11.0 | P | P | P | P |
| 1920 to 1945 | 6.7 | 7.8 | 9.6 | P | P | P | P |
| 1946 to 1959 | 7.7 | 8.1 | 9.1 | P | P | P | P |
| 1960 to 1969 | 7.9 | 6.6 | 8.0 | P | P | P | P |
| 1970 to 1979 | 7.5 | 7.0 | 9.1 | P | P | P | P |
| 1980 to 1989 | 8.3 | 6.5 | 7.7 | P | P | P | P |
| 1990 to 1999 | 6.2 | 5.4 | 9.4 | P | P | P | P |
| 2000 to 2003 | 9.3 | 7.8 | 8.4 | P | P | P | P |
| 2004 to 2007 | 13.3 | 15.4 | 15.8 | P | P | P | P |
| 2008 to 2012 | 15.4 | 17.3 | 17.4 | P | P | P | P |

## RSEs for Table B2. Summary table: total and medians of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

| | RSEs for number of buildings | RSEs for total floorspace | RSEs for total workers | RSEs not available for medians | RSEs not available for medians | RSEs not available for medians | RSEs not available for medians |
|---|---|---|---|---|---|---|---|
| **All buildings** | 5.4 | 4.6 | 5.1 | P | P | P | P |
| **Census region and division** | | | | | | | |
| Northeast | 9.0 | 7.0 | 7.5 | P | P | P | P |
| New England | 22.7 | 14.3 | 8.8 | P | P | P | P |
| Middle Atlantic | 7.0 | 7.9 | 9.1 | P | P | P | P |
| Midwest | 9.3 | 5.6 | 7.7 | P | P | P | P |
| East North Central | 12.1 | 6.8 | 10.1 | P | P | P | P |
| West North Central | 14.2 | 10.0 | 10.9 | P | P | P | P |
| South | 7.7 | 7.9 | 8.5 | P | P | P | P |
| South Atlantic | 9.5 | 12.3 | 13.9 | P | P | P | P |
| East South Central | 9.3 | 12.2 | 6.0 | P | P | P | P |
| West South Central | 17.4 | 13.0 | 11.9 | P | P | P | P |
| West | 16.0 | 14.4 | 14.6 | P | P | P | P |
| Mountain | 12.4 | 14.0 | 11.5 | P | P | P | P |
| Pacific | 21.4 | 18.8 | 18.4 | P | P | P | P |
| **Number of floors** | | | | | | | |
| One | 6.3 | 7.2 | 8.8 | P | P | P | P |
| Two | 5.6 | 5.6 | 7.1 | P | P | P | P |
| Three | 8.3 | 6.4 | 8.8 | P | P | P | P |
| Four to nine | 9.4 | 7.4 | 7.9 | P | P | P | P |
| Ten or more | 11.1 | 9.6 | 11.4 | P | P | P | P |
| **Elevators and escalators (more than one may apply)** | | | | | | | |
| Any elevators | 5.7 | 4.5 | 5.5 | P | P | P | P |
| Number of elevators | | | | | | | |
| One | 6.4 | 5.9 | 10.2 | P | P | P | P |
| Two to five | 8.4 | 7.0 | 7.8 | P | P | P | P |
| Six or more | 8.7 | 8.1 | 9.2 | P | P | P | P |
| Any escalators | 25.6 | 13.1 | 13.9 | P | P | P | P |
| **Number of workers (main shift)** | | | | | | | |
| Fewer than 5 | 5.8 | 6.6 | 5.8 | P | P | P | P |
| 5 to 9 | 7.2 | 7.1 | 7.1 | P | P | P | P |
| 10 to 19 | 8.8 | 8.6 | 8.6 | P | P | P | P |
| 20 to 49 | 7.5 | 6.3 | 7.3 | P | P | P | P |
| 50 to 99 | 8.0 | 6.5 | 8.3 | P | P | P | P |
| 100 to 249 | 9.5 | 8.5 | 9.5 | P | P | P | P |
| 250 or more | 7.6 | 6.6 | 7.8 | P | P | P | P |
| **Weekly operating hours** | | | | | | | |
| Fewer than 40 | 7.2 | 8.4 | 8.5 | P | P | P | P |
| 40 to 48 | 7.5 | 7.4 | 9.2 | P | P | P | P |
| 49 to 60 | 6.7 | 6.4 | 6.8 | P | P | P | P |
| 61 to 84 | 6.8 | 5.9 | 5.3 | P | P | P | P |
| 85 to 167 | 7.9 | 8.6 | 8.3 | P | P | P | P |
| Open continuously | 8.1 | 5.6 | 8.2 | P | P | P | P |

## RSEs for Table B2. Summary table: total and medians of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

| | RSEs for number of buildings | RSEs for total floorspace | RSEs for total workers | RSEs not available for medians | RSEs not available for medians | RSEs not available for medians | RSEs not available for medians |
|---|---|---|---|---|---|---|---|
| **All buildings** | 5.4 | 4.6 | 5.1 | P | P | P | P |
| **Party responsible for operation and maintenance of energy systems** | | | | | | | |
| Building owner | 5.3 | 4.2 | 4.8 | P | P | P | P |
| Business owner or tenant | 9.2 | 11.0 | 11.4 | P | P | P | P |
| Property management | 16.8 | 14.2 | 19.6 | P | P | P | P |
| Other | 16.9 | 15.6 | 20.7 | P | P | P | P |
| **Provider of direct input on energy-related equipment purchases** | | | | | | | |
| Building owner | 5.2 | 4.3 | 4.8 | P | P | P | P |
| Business owner or tenant | 10.1 | 10.7 | 11.0 | P | P | P | P |
| Property management | 22.3 | 19.0 | 24.8 | P | P | P | P |
| Other | 13.6 | 14.6 | 15.0 | P | P | P | P |
| **Number of establishments** | | | | | | | |
| One | 5.5 | 5.0 | 5.8 | P | P | P | P |
| 2 to 5 | 7.1 | 6.0 | 6.9 | P | P | P | P |
| 6 to 10 | 13.9 | 10.9 | 10.7 | P | P | P | P |
| 11 to 20 | 14.1 | 13.4 | 13.0 | P | P | P | P |
| More than 20 | 26.0 | 8.8 | 10.4 | P | P | P | P |
| Currently unoccupied | 12.8 | 17.3 | 0.0 | P | P | P | P |
| **Predominant exterior wall material** | | | | | | | |
| Brick, stone, or stucco | 5.1 | 4.8 | 5.1 | P | P | P | P |
| Concrete (block or poured) | 6.9 | 6.3 | 8.4 | P | P | P | P |
| Concrete panels | 25.2 | 11.9 | 10.8 | P | P | P | P |
| Siding or shingles | 9.0 | 10.5 | 11.1 | P | P | P | P |
| Metal panels | 10.8 | 9.0 | 9.6 | P | P | P | P |
| Window glass | 18.8 | 13.2 | 15.1 | P | P | P | P |
| Other | 23.7 | 25.9 | 18.4 | P | P | P | P |
| No one major type | 23.0 | 21.3 | 57.7 | P | P | P | P |
| **Predominant roof material** | | | | | | | |
| Metal surfacing | 7.8 | 7.0 | 7.7 | P | P | P | P |
| Synthetic or rubber | 6.0 | 6.0 | 6.8 | P | P | P | P |
| Built-up | 8.7 | 5.4 | 6.2 | P | P | P | P |
| Slate or tile shingles | 8.8 | 13.9 | 12.6 | P | P | P | P |
| Wooden materials (including shingles) | 13.7 | 16.5 | 17.0 | P | P | P | P |
| Asphalt, fiberglass, or other shingles | 6.3 | 5.9 | 9.3 | P | P | P | P |
| Concrete | 18.2 | 13.6 | 14.8 | P | P | P | P |
| Other | 25.5 | 25.4 | 23.4 | P | P | P | P |
| No one major type | 29.8 | 26.9 | 32.0 | P | P | P | P |

## RSEs for Table B2. Summary table: total and medians of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

| | RSEs for number of buildings | RSEs for total floorspace | RSEs for total workers | RSEs not available for medians | RSEs not available for medians | RSEs not available for medians | RSEs not available for medians |
|---|---|---|---|---|---|---|---|
| **All buildings** | 5.4 | 4.6 | 5.1 | P | P | P | P |
| **Roof characteristics** | | | | | | | |
| Roof tilt | | | | | | | |
| Flat | 7.2 | 5.0 | 5.6 | P | P | P | P |
| Shallow pitch | 6.7 | 6.8 | 6.9 | P | P | P | P |
| Steeper pitch | 6.7 | 6.0 | 7.3 | P | P | P | P |
| Cool roof | 7.4 | 6.3 | 8.3 | P | P | P | P |
| **Renovations in buildings constructed before 2008 (more than one may apply)** | | | | | | | |
| Any type of renovation | 4.7 | 3.9 | 4.6 | P | P | P | P |
| Addition or annex | 7.8 | 5.0 | 5.9 | P | P | P | P |
| Reduction in floorspace | 17.0 | 25.9 | 35.8 | P | P | P | P |
| Roof replacement | 5.5 | 4.4 | 6.3 | P | P | P | P |
| Exterior wall replacement | 9.0 | 7.8 | 8.3 | P | P | P | P |
| Interior wall reconfiguration | 6.1 | 4.5 | 5.3 | P | P | P | P |
| Window replacement | 5.9 | 5.0 | 6.0 | P | P | P | P |
| HVAC equipment upgrade | 4.9 | 3.7 | 5.4 | P | P | P | P |
| Lighting upgrade | 5.2 | 4.5 | 5.0 | P | P | P | P |
| Electrical upgrade | 6.0 | 5.4 | 6.3 | P | P | P | P |
| Plumbing system upgrade | 5.8 | 5.7 | 6.5 | P | P | P | P |
| Insulation upgrade | 8.0 | 6.7 | 7.0 | P | P | P | P |
| Fire, safety, or security upgrade | 6.3 | 4.9 | 5.5 | P | P | P | P |
| Structural upgrade | 10.0 | 8.9 | 11.3 | P | P | P | P |
| Other | 28.7 | 23.9 | 27.5 | P | P | P | P |
| No renovations | 6.2 | 5.8 | 6.7 | P | P | P | P |
| Buildings constructed 2008 or later | 15.4 | 17.3 | 17.4 | P | P | P | P |
| **Energy sources (more than one may apply)** | | | | | | | |
| Electricity | 5.3 | 4.7 | 5.1 | P | P | P | P |
| Natural gas | 5.3 | 4.8 | 5.3 | P | P | P | P |
| Fuel oil | 11.5 | 5.4 | 6.2 | P | P | P | P |
| District heat | 18.2 | 12.9 | 15.2 | P | P | P | P |
| District chilled water | 17.3 | 16.2 | 20.0 | P | P | P | P |
| Propane | 10.9 | 8.6 | 9.3 | P | P | P | P |
| Wood | 26.0 | 22.4 | 34.5 | P | P | P | P |
| Coal | 51.4 | 48.7 | 42.5 | P | P | P | P |
| Solar | 19.5 | 15.0 | 13.3 | P | P | P | P |
| Other | 19.4 | 16.5 | 20.2 | P | P | P | P |

## RSEs for Table B2. Summary table: total and medians of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

| | RSEs for number of buildings | RSEs for total floorspace | RSEs for total workers | RSEs not available for medians | RSEs not available for medians | RSEs not available for medians | RSEs not available for medians |
|---|---|---|---|---|---|---|---|
| **All buildings** | 5.4 | 4.6 | 5.1 | P | P | P | P |
| **Space-heating energy sources (more than one may apply)** | | | | | | | |
| Electricity | 5.8 | 5.2 | 6.1 | P | P | P | P |
| Natural gas | 5.7 | 5.2 | 5.7 | P | P | P | P |
| Fuel oil | 17.2 | 13.7 | 11.2 | P | P | P | P |
| District heat | 18.3 | 12.9 | 15.3 | P | P | P | P |
| Propane | 11.4 | 11.6 | 13.4 | P | P | P | P |
| Wood | 28.7 | 25.8 | 29.7 | P | P | P | P |
| Coal | 62.9 | 74.8 | 69.5 | P | P | P | P |
| Solar | 112.1 | 112.1 | 112.1 | P | P | P | P |
| Other | 35.0 | 36.0 | 46.1 | P | P | P | P |
| **Primary space-heating energy source** | | | | | | | |
| Electricity | 7.6 | 6.6 | 8.3 | P | P | P | P |
| Natural gas | 5.7 | 5.0 | 5.5 | P | P | P | P |
| Fuel oil | 19.9 | 20.8 | 14.4 | P | P | P | P |
| District heat | 18.3 | 13.1 | 15.5 | P | P | P | P |
| Propane | 11.7 | 12.1 | 14.6 | P | P | P | P |
| Wood | 39.7 | 43.3 | 48.1 | P | P | P | P |
| Coal | 76.0 | 84.9 | 73.9 | P | P | P | P |
| Other | 40.5 | 45.1 | 55.2 | P | P | P | P |
| **Cooling energy sources (more than one may apply)** | | | | | | | |
| Electricity | 5.5 | 4.7 | 5.1 | P | P | P | P |
| Natural gas | 30.6 | 21.5 | 26.2 | P | P | P | P |
| District chilled water | 17.3 | 16.2 | 20.0 | P | P | P | P |
| **Water-heating energy sources (more than one may apply)** | | | | | | | |
| Electricity | 5.7 | 5.3 | 5.8 | P | P | P | P |
| Natural gas | 5.7 | 5.3 | 6.0 | P | P | P | P |
| Fuel oil | 25.4 | 15.8 | 12.5 | P | P | P | P |
| District heat | 21.5 | 15.6 | 18.4 | P | P | P | P |
| Propane | 12.3 | 11.6 | 12.2 | P | P | P | P |
| **Cooking energy sources (more than one may apply)** | | | | | | | |
| Electricity | 5.2 | 4.5 | 5.2 | P | P | P | P |
| Natural gas | 5.7 | 5.0 | 6.5 | P | P | P | P |
| Propane | 19.0 | 11.9 | 16.4 | P | P | P | P |
| **Energy end uses (more than one may apply)** | | | | | | | |
| Buildings with space heating | 5.0 | 4.5 | 5.0 | P | P | P | P |
| Buildings with cooling | 5.4 | 4.7 | 5.2 | P | P | P | P |
| Buildings with water heating | 5.1 | 4.6 | 5.1 | P | P | P | P |
| Buildings with cooking | 4.8 | 4.1 | 5.0 | P | P | P | P |
| Buildings with manufacturing | 13.8 | 11.5 | 13.6 | P | P | P | P |
| Buildings with electricity generation | 6.9 | 4.9 | 5.5 | P | P | P | P |

## RSEs for Table B2. Summary table: total and medians of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

| | RSEs for number of buildings | RSEs for total floorspace | RSEs for total workers | RSEs not available for medians | RSEs not available for medians | RSEs not available for medians | RSEs not available for medians |
|---|---|---|---|---|---|---|---|
| **All buildings** | 5.4 | 4.6 | 5.1 | P | P | P | P |
| **Percent of floorspace heated** | | | | | | | |
| Not heated | 9.4 | 9.9 | 15.4 | P | P | P | P |
| 1 to 50 | 12.0 | 11.3 | 14.4 | P | P | P | P |
| 51 to 99 | 6.9 | 5.5 | 7.2 | P | P | P | P |
| 100 | 4.5 | 4.4 | 5.2 | P | P | P | P |
| **Percent of floorspace cooled** | | | | | | | |
| Not cooled | 8.8 | 9.2 | 11.0 | P | P | P | P |
| 1 to 50 | 10.5 | 8.8 | 11.2 | P | P | P | P |
| 51 to 99 | 6.4 | 5.0 | 5.8 | P | P | P | P |
| 100 | 4.6 | 5.2 | 5.9 | P | P | P | P |
| **Percent lit when open** | | | | | | | |
| Zero | 23.0 | 23.1 | 32.7 | P | P | P | P |
| 1 to 50 | 7.5 | 7.7 | 10.8 | P | P | P | P |
| 51 to 99 | 6.3 | 5.0 | 5.6 | P | P | P | P |
| 100 | 5.0 | 4.8 | 5.7 | P | P | P | P |
| Building never open/electricity not used | 10.0 | 10.5 | 40.6 | P | P | P | P |
| **Percent lit during off hours** | | | | | | | |
| Zero | 6.6 | 6.7 | 8.2 | P | P | P | P |
| 1 to 50 | 5.0 | 4.6 | 5.0 | P | P | P | P |
| 51 to 100 | 10.0 | 8.3 | 13.5 | P | P | P | P |
| Building always open with no "off hours" | 16.8 | 11.2 | 16.0 | P | P | P | P |
| Electricity not used | 12.7 | 14.4 | 41.2 | P | P | P | P |
| **Heating equipment (more than one may apply)** | | | | | | | |
| Heat pumps | 9.3 | 7.0 | 8.4 | P | P | P | P |
| Furnaces | 7.2 | 7.9 | 7.8 | P | P | P | P |
| Individual space heaters | 6.4 | 5.2 | 5.8 | P | P | P | P |
| District heat | 18.3 | 12.9 | 15.3 | P | P | P | P |
| Boilers | 6.5 | 4.3 | 5.8 | P | P | P | P |
| Packaged heating units | 5.4 | 5.5 | 6.2 | P | P | P | P |
| Other | 18.3 | 14.5 | 15.8 | P | P | P | P |
| **Cooling equipment (more than one may apply)** | | | | | | | |
| Residential-type central air conditioners | 7.0 | 7.4 | 7.7 | P | P | P | P |
| Heat pumps | 8.8 | 6.9 | 8.3 | P | P | P | P |
| Individual air conditioners | 7.3 | 5.3 | 7.1 | P | P | P | P |
| District chilled water | 17.3 | 16.2 | 20.0 | P | P | P | P |
| Central chillers | 7.1 | 4.5 | 6.1 | P | P | P | P |
| Packaged air conditioning units | 6.3 | 5.0 | 5.6 | P | P | P | P |
| Swamp coolers | 16.6 | 15.0 | 13.5 | P | P | P | P |
| Other | 51.6 | 27.3 | 30.5 | P | P | P | P |

## RSEs for Table B2. Summary table: total and medians of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

| | RSEs for number of buildings | RSEs for total floorspace | RSEs for total workers | RSEs not available for medians | RSEs not available for medians | RSEs not available for medians | RSEs not available for medians |
|---|---|---|---|---|---|---|---|
| **All buildings** | 5.4 | 4.6 | 5.1 | P | P | P | P |
| **Main equipment replaced since 1990 (more than one may apply)** | | | | | | | |
| Heating | 4.8 | 4.3 | 5.2 | P | P | P | P |
| Cooling | 4.9 | 4.1 | 4.8 | P | P | P | P |
| **Water-heating equipment** | | | | | | | |
| Centralized system | 5.0 | 4.8 | 5.5 | P | P | P | P |
| Distributed system | 8.0 | 7.4 | 7.9 | P | P | P | P |
| Combination of centralized and distributed system | 7.4 | 5.3 | 6.8 | P | P | P | P |
| **Lighting equipment types (more than one may apply)** | | | | | | | |
| Incandescent | 4.6 | 4.2 | 5.0 | P | P | P | P |
| Standard fluorescent | 5.4 | 4.6 | 5.1 | P | P | P | P |
| Compact fluorescent | 5.6 | 4.3 | 4.8 | P | P | P | P |
| High-intensity discharge (HID) | 7.4 | 5.0 | 6.1 | P | P | P | P |
| Halogen | 5.5 | 5.0 | 5.6 | P | P | P | P |
| LED | 7.4 | 5.2 | 5.9 | P | P | P | P |
| Other | 31.8 | 19.6 | 19.3 | P | P | P | P |
| **Refrigeration equipment (more than one may apply)** | | | | | | | |
| Any refrigeration | 5.1 | 4.2 | 4.6 | P | P | P | P |
| Walk-in units | 4.8 | 4.4 | 5.4 | P | P | P | P |
| Cases or cabinets | 4.7 | 4.8 | 5.6 | P | P | P | P |
| Large cold storage areas | 10.9 | 10.3 | 10.7 | P | P | P | P |
| Commercial ice makers | 5.5 | 4.4 | 5.5 | P | P | P | P |
| Residential-type or compact units | 5.6 | 4.6 | 4.8 | P | P | P | P |
| Vending machines | 5.7 | 4.7 | 5.0 | P | P | P | P |
| No refrigeration | 7.2 | 8.8 | 15.1 | P | P | P | P |
| **Office equipment (more than one may apply)** | | | | | | | |
| Desktop computers | 5.6 | 4.7 | 5.2 | P | P | P | P |
| With flat screen monitors | 5.8 | 4.7 | 5.2 | P | P | P | P |
| With multiple monitors | 7.4 | 5.3 | 5.8 | P | P | P | P |
| Laptop computers | 5.9 | 4.6 | 5.1 | P | P | P | P |
| Dedicated servers | 6.8 | 4.9 | 5.1 | P | P | P | P |
| Laser printers | 5.7 | 4.8 | 5.4 | P | P | P | P |
| Inkjet printers | 6.7 | 5.5 | 6.9 | P | P | P | P |
| FAX machines | 5.8 | 4.6 | 5.0 | P | P | P | P |
| Photocopiers | 6.4 | 4.7 | 5.1 | P | P | P | P |

## RSEs for Table B2. Summary table: total and medians of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

| | RSEs for number of buildings | RSEs for total floorspace | RSEs for total workers | RSEs not available for medians | RSEs not available for medians | RSEs not available for medians | RSEs not available for medians |
|---|---|---|---|---|---|---|---|
| **All buildings** | 5.4 | 4.6 | 5.1 | P | P | P | P |
| **Number of desktop computers** | | | | | | | |
| None | 7.4 | 8.1 | 10.1 | P | P | P | P |
| 1 to 4 | 5.2 | 5.9 | 6.5 | P | P | P | P |
| 5 to 9 | 8.5 | 8.5 | 14.0 | P | P | P | P |
| 10 to 19 | 8.8 | 8.6 | 9.1 | P | P | P | P |
| 20 to 49 | 8.4 | 7.5 | 9.5 | P | P | P | P |
| 50 to 99 | 8.8 | 8.0 | 9.8 | P | P | P | P |
| 100 to 249 | 8.0 | 7.0 | 10.2 | P | P | P | P |
| 250 or more | 7.4 | 6.5 | 7.1 | P | P | P | P |
| **Number of laptop computers** | | | | | | | |
| None | 5.8 | 5.9 | 7.2 | P | P | P | P |
| 1 to 4 | 6.2 | 6.1 | 6.8 | P | P | P | P |
| 5 to 9 | 8.9 | 8.6 | 12.6 | P | P | P | P |
| 10 to 19 | 8.8 | 8.8 | 10.0 | P | P | P | P |
| 20 to 49 | 8.9 | 7.5 | 8.9 | P | P | P | P |
| 50 to 99 | 10.5 | 8.4 | 13.8 | P | P | P | P |
| 100 to 249 | 10.8 | 8.7 | 8.4 | P | P | P | P |
| 250 or more | 12.6 | 9.0 | 9.8 | P | P | P | P |
| **Number of dedicated servers** | | | | | | | |
| None | 5.6 | 5.6 | 7.8 | P | P | P | P |
| 1 to 4 | 7.0 | 5.9 | 6.8 | P | P | P | P |
| 5 to 9 | 9.8 | 8.5 | 9.0 | P | P | P | P |
| 10 to 19 | 14.1 | 9.3 | 9.0 | P | P | P | P |
| 20 to 49 | 15.5 | 8.9 | 10.8 | P | P | P | P |
| 50 or more | 15.0 | 12.3 | 11.4 | P | P | P | P |
| **Number of photocopiers** | | | | | | | |
| None | 5.6 | 5.8 | 6.7 | P | P | P | P |
| One | 7.2 | 7.7 | 8.3 | P | P | P | P |
| 2 to 4 | 7.0 | 5.6 | 8.1 | P | P | P | P |
| 5 to 9 | 8.3 | 6.8 | 10.5 | P | P | P | P |
| 10 or more | 9.5 | 6.6 | 6.6 | P | P | P | P |
| **Number of TVs or video displays** | | | | | | | |
| None | 6.1 | 6.6 | 9.6 | P | P | P | P |
| One | 6.5 | 6.4 | 7.5 | P | P | P | P |
| 2 to 4 | 6.5 | 5.9 | 6.8 | P | P | P | P |
| 5 to 9 | 7.9 | 7.6 | 8.8 | P | P | P | P |
| 10 to 19 | 10.0 | 8.2 | 12.1 | P | P | P | P |
| 20 to 49 | 9.8 | 7.8 | 9.1 | P | P | P | P |
| 50 to 99 | 13.7 | 13.9 | 14.2 | P | P | P | P |
| 100 or more | 11.3 | 8.0 | 10.0 | P | P | P | P |

## RSEs for Table B2. Summary table: total and medians of floorspace, number of workers, and hours of operation, 2012 - PUBLIC USE DATA VERSION

| | RSEs for number of buildings | RSEs for total floorspace | RSEs for total workers | RSEs not available for medians | RSEs not available for medians | RSEs not available for medians | RSEs not available for medians |
|---|---|---|---|---|---|---|---|
| **All buildings** | 5.4 | 4.6 | 5.1 | P | P | P | P |
| **Food preparation or serving areas in non-food service buildings (more than one may apply)** | | | | | | | |
| Snack bar or concession stand | 8.9 | 6.6 | 8.3 | P | P | P | P |
| Fast food or small restaurant | 8.1 | 7.3 | 6.6 | P | P | P | P |
| Cafeteria or large restaurant | 6.6 | 5.2 | 7.7 | P | P | P | P |
| Commercial kitchen/ food preparation area | 7.1 | 5.3 | 8.2 | P | P | P | P |
| Small kitchen area | 6.4 | 5.6 | 6.2 | P | P | P | P |
| **Separate computer areas (more than one may apply)** | | | | | | | |
| Data center or server farm | 9.6 | 6.5 | 6.4 | P | P | P | P |
| Computer-based training room | 6.8 | 5.7 | 5.8 | P | P | P | P |
| Student or public computer center | 7.2 | 5.9 | 7.0 | P | P | P | P |
| **HVAC conservation features (more than one may apply)** | | | | | | | |
| Economizer cycle | 6.2 | 5.0 | 6.1 | P | P | P | P |
| Regular HVAC maintenance | 5.3 | 4.7 | 5.1 | P | P | P | P |
| Building automation system (BAS)[2] | 7.3 | 5.0 | 5.3 | P | P | P | P |
| **Window and interior lighting features (more than one may apply)** | | | | | | | |
| Multipaned windows | 5.1 | 4.7 | 4.8 | P | P | P | P |
| Tinted window glass | 7.8 | 6.1 | 6.2 | P | P | P | P |
| Reflective window glass | 8.3 | 6.5 | 6.3 | P | P | P | P |
| External overhangs or awnings | 5.3 | 5.3 | 6.0 | P | P | P | P |
| Skylights or atriums | 10.1 | 6.2 | 7.2 | P | P | P | P |
| Light scheduling | 6.2 | 5.4 | 6.4 | P | P | P | P |
| Occupancy sensors | 8.5 | 5.0 | 5.2 | P | P | P | P |
| Multi-level lighting or dimming | 5.9 | 5.7 | 6.7 | P | P | P | P |
| Daylight harvesting | 11.3 | 8.2 | 10.6 | P | P | P | P |
| Demand responsive lighting | 19.9 | 15.8 | 15.5 | P | P | P | P |
| Building automation system (BAS) for lighting[1] | 9.9 | 7.6 | 7.6 | P | P | P | P |
| **Equipment usage reduced when building not in full use (more than one may apply)** | | | | | | | |
| Heating | 5.4 | 4.8 | 5.2 | P | P | P | P |
| Cooling | 5.7 | 4.9 | 5.4 | P | P | P | P |
| Lighting | 5.4 | 4.7 | 5.1 | P | P | P | P |

## RSEs for Table B3. Census region, number of buildings and floorspace, 2012 - PUBLIC USE DATA VERSION

| | RSEs for number of buildings | | | | | RSEs for total floorspace | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | All buildings | North-east | Mid-west | South | West | All buildings | North-east | Mid-west | South | West |
| **All buildings** | 5.4 | 9.0 | 9.3 | 7.7 | 16.0 | 4.6 | 7.0 | 5.6 | 7.9 | 14.4 |
| **Building floorspace (square feet)** | | | | | | | | | | |
| 1,001 to 5,000 | 5.4 | 13.9 | 11.0 | 8.2 | 12.7 | 5.2 | 13.0 | 11.6 | 7.9 | 11.8 |
| 5,001 to 10,000 | 8.0 | 7.5 | 12.0 | 9.5 | 25.7 | 8.2 | 7.9 | 11.4 | 9.8 | 26.4 |
| 10,001 to 25,000 | 6.9 | 9.5 | 11.9 | 11.1 | 19.0 | 7.0 | 13.4 | 12.7 | 10.9 | 19.0 |
| 25,001 to 50,000 | 8.1 | 14.0 | 9.4 | 15.3 | 21.0 | 8.0 | 14.9 | 9.6 | 15.6 | 18.8 |
| 50,001 to 100,000 | 7.8 | 12.2 | 13.1 | 13.8 | 16.2 | 7.7 | 13.1 | 13.2 | 13.7 | 15.6 |
| 100,001 to 200,000 | 7.0 | 15.8 | 13.2 | 11.4 | 16.9 | 7.2 | 17.1 | 11.6 | 11.7 | 18.0 |
| 200,001 to 500,000 | 6.8 | 13.4 | 13.4 | 11.7 | 18.2 | 6.5 | 12.8 | 12.4 | 11.4 | 17.2 |
| Over 500,000 | 9.2 | 11.6 | 15.5 | 20.3 | 15.5 | 9.2 | 9.4 | 19.5 | 19.0 | 18.7 |
| **Principal building activity** | | | | | | | | | | |
| Education | 7.6 | 15.3 | 9.1 | 10.3 | 19.9 | 6.0 | 14.0 | 7.6 | 11.2 | 18.4 |
| Food sales | 11.4 | 23.3 | 28.5 | 16.0 | 28.8 | 12.8 | 24.1 | 31.5 | 14.6 | 32.0 |
| Food service | 6.6 | 15.4 | 15.5 | 10.9 | 11.3 | 9.5 | 16.5 | 29.6 | 11.6 | 17.4 |
| Health care | 10.8 | 24.1 | 23.2 | 17.4 | 23.7 | 7.3 | 15.8 | 11.4 | 11.6 | 21.7 |
| Inpatient | 16.9 | 27.0 | 34.3 | 30.5 | 33.4 | 8.2 | 16.4 | 11.0 | 11.1 | 27.6 |
| Outpatient | 11.3 | 26.9 | 23.6 | 18.4 | 24.0 | 11.2 | 23.2 | 21.7 | 22.3 | 18.1 |
| Lodging | 9.8 | 23.7 | 23.9 | 14.7 | 21.9 | 8.2 | 14.2 | 18.0 | 15.1 | 17.8 |
| Mercantile | 6.0 | 12.9 | 14.7 | 8.2 | 16.5 | 8.4 | 14.2 | 12.3 | 16.1 | 16.6 |
| Retail (other than mall) | 6.9 | 15.0 | 15.8 | 10.0 | 18.2 | 8.3 | 16.9 | 14.0 | 14.4 | 19.2 |
| Enclosed and strip malls | 11.1 | 21.6 | 26.2 | 16.7 | 26.0 | 11.9 | 17.6 | 17.6 | 23.0 | 20.0 |
| Office | 6.7 | 12.6 | 8.6 | 10.6 | 19.1 | 6.1 | 11.0 | 12.9 | 11.7 | 12.7 |
| Public assembly | 9.1 | 25.5 | 16.9 | 14.2 | 18.4 | 9.5 | 15.1 | 18.5 | 17.9 | 18.2 |
| Public order and safety | 17.5 | 35.9 | 36.3 | 23.0 | 66.4 | 16.6 | 30.6 | 22.5 | 30.4 | 45.2 |
| Religious worship | 7.3 | 24.4 | 16.1 | 9.8 | 17.6 | 8.6 | 23.7 | 14.6 | 14.2 | 18.8 |
| Service | 7.4 | 14.8 | 12.3 | 11.6 | 25.4 | 9.0 | 21.1 | 14.4 | 14.5 | 31.3 |
| Warehouse and storage | 12.8 | 11.2 | 15.3 | 18.7 | 34.6 | 11.7 | 16.4 | 13.8 | 17.2 | 30.9 |
| Other | 14.5 | 37.6 | 23.3 | 24.8 | 29.7 | 16.3 | 40.4 | 29.4 | 29.1 | 27.3 |
| Vacant | 11.5 | 24.0 | 20.3 | 20.0 | 15.6 | 13.3 | 21.2 | 20.6 | 23.8 | 16.5 |
| **Year constructed** | | | | | | | | | | |
| Before 1920 | 10.5 | 23.1 | 19.8 | 15.6 | 25.2 | 11.3 | 21.6 | 15.7 | 23.3 | 25.9 |
| 1920 to 1945 | 6.7 | 14.6 | 9.3 | 11.9 | 20.5 | 7.8 | 12.5 | 14.4 | 17.1 | 20.3 |
| 1946 to 1959 | 7.7 | 11.4 | 12.4 | 16.8 | 10.6 | 8.1 | 14.3 | 12.5 | 18.2 | 11.8 |
| 1960 to 1969 | 7.9 | 13.2 | 16.6 | 10.9 | 22.0 | 6.6 | 13.6 | 11.2 | 12.0 | 16.9 |
| 1970 to 1979 | 7.5 | 17.9 | 12.5 | 10.2 | 20.6 | 7.0 | 14.0 | 9.0 | 9.4 | 22.2 |
| 1980 to 1989 | 8.3 | 16.6 | 12.8 | 8.8 | 26.2 | 6.5 | 12.7 | 12.8 | 7.9 | 18.6 |
| 1990 to 1999 | 6.2 | 13.9 | 14.8 | 9.2 | 13.2 | 5.4 | 15.8 | 13.0 | 7.8 | 11.7 |
| 2000 to 2003 | 9.3 | 28.5 | 21.7 | 9.1 | 26.3 | 7.8 | 17.6 | 14.9 | 12.9 | 16.2 |
| 2004 to 2007 | 13.3 | 24.4 | 21.0 | 19.4 | 32.2 | 15.4 | 18.4 | 22.2 | 21.5 | 39.1 |
| 2008 to 2012 | 15.4 | 36.2 | 25.3 | 26.4 | 26.3 | 17.3 | 21.5 | 22.5 | 32.2 | 33.9 |
| **Number of floors** | | | | | | | | | | |
| One | 6.3 | 12.0 | 10.2 | 9.2 | 16.7 | 7.2 | 12.6 | 9.2 | 10.5 | 19.6 |
| Two | 5.6 | 10.1 | 10.6 | 8.1 | 16.2 | 5.6 | 13.5 | 7.2 | 10.2 | 14.0 |
| Three | 8.3 | 12.8 | 17.6 | 12.9 | 23.0 | 6.4 | 10.4 | 12.0 | 13.7 | 16.6 |
| Four to nine | 9.4 | 13.6 | 13.1 | 20.3 | 22.8 | 7.4 | 10.7 | 9.2 | 16.4 | 18.6 |
| Ten or more | 11.1 | 18.2 | 26.0 | 21.2 | 23.1 | 9.6 | 10.9 | 19.1 | 21.9 | 23.8 |

## RSEs for Table B3. Census region, number of buildings and floorspace, 2012 - PUBLIC USE DATA VERSION

| | RSEs for number of buildings | | | | | RSEs for total floorspace | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | All buildings | North-east | Mid-west | South | West | All buildings | North-east | Mid-west | South | West |
| **All buildings** | 5.4 | 9.0 | 9.3 | 7.7 | 16.0 | 4.6 | 7.0 | 5.6 | 7.9 | 14.4 |
| **Elevators and escalators (more than one may apply)** | | | | | | | | | | |
| Any elevators | 5.7 | 9.4 | 10.9 | 10.1 | 16.1 | 4.5 | 8.2 | 7.3 | 9.4 | 11.3 |
| Number of elevators | | | | | | | | | | |
| One | 6.4 | 12.1 | 12.8 | 11.0 | 16.8 | 5.9 | 13.7 | 10.6 | 11.4 | 11.3 |
| Two to five | 8.4 | 15.9 | 14.2 | 14.0 | 24.0 | 7.0 | 14.2 | 11.5 | 13.0 | 17.4 |
| Six or more | 8.7 | 17.5 | 11.2 | 15.8 | 21.2 | 8.1 | 10.6 | 15.0 | 17.6 | 18.1 |
| Any escalators | 25.6 | 41.8 | 70.3 | 14.7 | 25.5 | 13.1 | 21.6 | 34.2 | 18.7 | 26.9 |
| **Number of workers (main shift)** | | | | | | | | | | |
| Fewer than 5 | 5.8 | 12.5 | 12.8 | 9.5 | 12.6 | 6.6 | 16.1 | 11.9 | 11.2 | 14.9 |
| 5 to 9 | 7.2 | 16.0 | 12.1 | 8.6 | 21.9 | 7.1 | 18.6 | 12.3 | 7.4 | 21.4 |
| 10 to 19 | 8.8 | 9.4 | 14.8 | 11.1 | 25.3 | 8.6 | 11.2 | 14.7 | 11.9 | 24.2 |
| 20 to 49 | 7.5 | 13.5 | 9.4 | 11.1 | 19.9 | 6.3 | 15.6 | 7.3 | 9.6 | 17.0 |
| 50 to 99 | 8.0 | 9.9 | 12.3 | 14.7 | 16.7 | 6.5 | 10.1 | 10.5 | 11.2 | 18.0 |
| 100 to 249 | 9.5 | 12.7 | 13.9 | 19.5 | 23.3 | 8.5 | 11.5 | 11.8 | 18.9 | 15.7 |
| 250 or more | 7.6 | 18.1 | 18.0 | 12.3 | 12.9 | 6.6 | 9.8 | 13.2 | 14.9 | 13.8 |
| **Weekly operating hours** | | | | | | | | | | |
| Fewer than 40 | 7.2 | 17.8 | 15.6 | 11.8 | 13.7 | 8.4 | 15.3 | 11.6 | 16.4 | 16.8 |
| 40 to 48 | 7.5 | 14.7 | 10.2 | 10.1 | 22.1 | 7.4 | 16.1 | 9.3 | 11.9 | 18.9 |
| 49 to 60 | 6.7 | 8.8 | 9.6 | 9.6 | 20.8 | 6.4 | 10.3 | 10.8 | 10.5 | 18.7 |
| 61 to 84 | 6.8 | 11.5 | 15.2 | 9.8 | 16.4 | 5.9 | 11.6 | 11.8 | 9.2 | 15.4 |
| 85 to 167 | 7.9 | 16.0 | 11.5 | 13.1 | 21.5 | 8.6 | 18.7 | 12.9 | 13.1 | 26.4 |
| Open continuously | 8.1 | 20.4 | 18.1 | 11.3 | 21.3 | 5.6 | 11.5 | 10.2 | 9.5 | 14.6 |
| **Party responsible for operation and maintenance of energy systems** | | | | | | | | | | |
| Building owner | 5.3 | 10.4 | 9.3 | 8.0 | 14.9 | 4.2 | 7.9 | 5.6 | 7.4 | 12.6 |
| Business owner or tenant | 9.2 | 14.0 | 18.9 | 11.8 | 25.9 | 11.0 | 11.1 | 13.1 | 19.0 | 25.8 |
| Property management | 16.8 | 40.5 | 47.1 | 23.7 | 34.7 | 14.2 | 31.8 | 37.3 | 20.6 | 34.0 |
| Other | 16.9 | 20.3 | 38.2 | 29.3 | 30.2 | 15.6 | 25.0 | 35.4 | 28.3 | 25.9 |
| **Provider of direct input on energy-related equipment purchases** | | | | | | | | | | |
| Building owner | 5.2 | 10.1 | 9.2 | 7.9 | 14.5 | 4.3 | 7.6 | 5.8 | 7.4 | 12.9 |
| Business owner or tenant | 10.1 | 18.6 | 19.9 | 11.2 | 30.3 | 10.7 | 11.6 | 14.2 | 17.7 | 26.5 |
| Property management | 22.3 | 44.5 | 46.6 | 34.1 | 56.5 | 19.0 | 45.1 | 41.7 | 24.3 | 49.1 |
| Other | 13.6 | 20.0 | 33.5 | 21.4 | 36.2 | 14.6 | 20.1 | 34.7 | 24.0 | 34.4 |
| **Number of establishments** | | | | | | | | | | |
| One | 5.5 | 11.4 | 9.5 | 8.1 | 15.9 | 5.0 | 9.9 | 6.9 | 8.2 | 16.0 |
| 2 to 5 | 7.1 | 12.9 | 13.6 | 10.5 | 20.2 | 6.0 | 9.3 | 10.4 | 11.3 | 14.8 |
| 6 to 10 | 13.9 | 24.7 | 24.8 | 20.3 | 32.7 | 10.9 | 16.7 | 21.1 | 19.6 | 24.5 |
| 11 to 20 | 14.1 | 23.4 | 28.8 | 23.8 | 25.1 | 13.4 | 21.9 | 20.6 | 27.1 | 20.0 |
| More than 20 | 26.0 | 23.3 | 37.3 | 21.0 | 46.7 | 8.8 | 16.4 | 23.7 | 16.5 | 14.9 |
| Currently unoccupied | 12.8 | 29.1 | 24.5 | 21.3 | 18.9 | 17.3 | 22.2 | 27.2 | 29.4 | 21.2 |

## RSEs for Table B3. Census region, number of buildings and floorspace, 2012 - PUBLIC USE DATA VERSION

| | RSEs for number of buildings | | | | | RSEs for total floorspace | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | All buildings | North-east | Mid-west | South | West | All buildings | North-east | Mid-west | South | West |
| **All buildings** | 5.4 | 9.0 | 9.3 | 7.7 | 16.0 | 4.6 | 7.0 | 5.6 | 7.9 | 14.4 |
| **Predominant exterior wall material** | | | | | | | | | | |
| Brick, stone, or stucco | 5.1 | 8.2 | 8.9 | 8.1 | 14.0 | 4.8 | 9.4 | 5.4 | 9.2 | 13.5 |
| Concrete (block or poured) | 6.9 | 10.8 | 12.4 | 7.1 | 25.4 | 6.3 | 11.7 | 9.7 | 9.8 | 17.3 |
| Concrete panels | 25.2 | 27.2 | 19.1 | 18.7 | 48.2 | 11.9 | 20.2 | 15.0 | 15.9 | 28.3 |
| Siding or shingles | 9.0 | 22.0 | 15.9 | 8.8 | 21.9 | 10.5 | 21.6 | 23.1 | 10.9 | 24.2 |
| Metal panels | 10.8 | 21.3 | 17.3 | 19.4 | 11.0 | 9.0 | 15.1 | 14.9 | 16.0 | 15.0 |
| Window glass | 18.8 | 42.0 | 75.2 | 41.8 | 24.4 | 13.2 | 24.5 | 29.7 | 24.7 | 28.2 |
| Other | 23.7 | 95.4 | 40.9 | 30.3 | 55.5 | 25.9 | 68.0 | 36.9 | 41.6 | 41.6 |
| No one major type | 23.0 | 50.8 | 38.3 | 38.4 | 54.0 | 21.3 | 32.8 | 43.8 | 39.0 | 51.2 |
| **Predominant roof material** | | | | | | | | | | |
| Metal surfacing | 7.8 | 24.7 | 13.2 | 12.4 | 16.6 | 7.0 | 17.3 | 10.9 | 10.9 | 18.0 |
| Synthetic or rubber | 6.0 | 8.2 | 9.2 | 13.4 | 16.3 | 6.0 | 9.8 | 8.6 | 14.3 | 14.9 |
| Built-up | 8.7 | 13.7 | 11.0 | 10.0 | 23.4 | 5.4 | 10.9 | 9.2 | 7.8 | 15.0 |
| Slate or tile shingles | 8.8 | 17.2 | 20.1 | 16.0 | 14.6 | 13.9 | 26.8 | 21.8 | 28.3 | 15.0 |
| Wooden materials (including shingles) | 13.7 | 18.7 | 26.5 | 20.4 | 34.6 | 16.5 | 37.0 | 34.4 | 20.1 | 32.8 |
| Asphalt, fiberglass, or other shingles | 6.3 | 11.2 | 15.0 | 5.6 | 19.1 | 5.9 | 9.1 | 12.7 | 8.2 | 17.3 |
| Concrete | 18.2 | 48.4 | 62.8 | 24.2 | 36.5 | 13.6 | 26.1 | 44.3 | 21.4 | 24.0 |
| Other | 25.5 | 49.9 | 47.7 | 38.8 | 59.9 | 25.4 | 41.5 | 40.7 | 33.2 | 65.1 |
| No one major type | 29.8 | 58.2 | 42.7 | 50.9 | 76.6 | 26.9 | 58.0 | 51.7 | 39.1 | 64.5 |
| **Roof characteristics** | | | | | | | | | | |
| Roof tilt | | | | | | | | | | |
| Flat | 7.2 | 7.3 | 8.8 | 7.7 | 22.3 | 5.0 | 7.1 | 7.0 | 7.6 | 16.8 |
| Shallow pitch | 6.7 | 12.9 | 12.5 | 10.6 | 15.8 | 6.8 | 16.9 | 8.6 | 11.3 | 15.8 |
| Steeper pitch | 6.7 | 18.8 | 13.8 | 9.4 | 11.0 | 6.0 | 14.5 | 12.7 | 9.6 | 10.4 |
| Cool roof | 7.4 | 16.3 | 11.4 | 11.1 | 16.1 | 6.3 | 14.2 | 11.3 | 10.4 | 14.8 |
| **Renovations in buildings constructed before 2008 (more than one may apply)** | | | | | | | | | | |
| Any type of renovation | 4.7 | 8.5 | 7.7 | 7.9 | 13.3 | 3.9 | 8.2 | 6.2 | 7.3 | 10.4 |
| Addition or annex | 7.8 | 15.6 | 11.1 | 14.8 | 21.8 | 5.0 | 7.7 | 8.7 | 9.6 | 17.4 |
| Reduction in floorspace | 17.0 | 41.6 | 39.4 | 21.2 | 48.5 | 25.9 | 61.9 | 24.2 | 18.4 | 32.4 |
| Roof replacement | 5.5 | 8.6 | 10.5 | 9.5 | 14.4 | 4.4 | 9.2 | 7.3 | 7.9 | 11.9 |
| Exterior wall replacement | 9.0 | 13.8 | 16.4 | 15.0 | 25.9 | 7.8 | 15.3 | 16.9 | 13.8 | 16.0 |
| Interior wall reconfiguration | 6.1 | 10.7 | 8.1 | 10.7 | 18.1 | 4.5 | 7.4 | 7.5 | 9.0 | 12.3 |
| Window replacement | 5.9 | 11.5 | 8.8 | 10.6 | 18.4 | 5.0 | 7.4 | 11.0 | 7.7 | 18.0 |
| HVAC equipment upgrade | 4.9 | 8.0 | 8.2 | 9.8 | 10.3 | 3.7 | 7.1 | 6.2 | 7.3 | 9.6 |
| Lighting upgrade | 5.2 | 8.2 | 9.4 | 10.0 | 12.4 | 4.5 | 6.8 | 7.8 | 9.7 | 10.8 |
| Electrical upgrade | 6.0 | 11.2 | 8.8 | 10.3 | 18.8 | 5.4 | 11.6 | 9.3 | 9.6 | 14.9 |
| Plumbing system upgrade | 5.8 | 14.4 | 8.0 | 10.0 | 16.2 | 5.7 | 13.0 | 9.7 | 10.6 | 13.3 |
| Insulation upgrade | 8.0 | 20.7 | 11.6 | 14.9 | 17.8 | 6.7 | 12.0 | 12.6 | 13.1 | 18.0 |
| Fire, safety, or security upgrade | 6.3 | 12.0 | 12.0 | 11.4 | 15.3 | 4.9 | 8.9 | 10.3 | 9.6 | 11.3 |
| Structural upgrade | 10.0 | 18.9 | 18.8 | 21.8 | 20.0 | 8.9 | 18.0 | 16.8 | 17.4 | 19.1 |
| Other | 28.7 | 40.2 | 67.0 | 73.7 | 57.3 | 23.9 | 38.2 | 51.0 | 49.6 | 48.4 |
| No renovations | 6.2 | 9.2 | 12.8 | 7.3 | 18.7 | 5.8 | 9.4 | 8.6 | 7.1 | 18.2 |
| Buildings constructed 2008 or later | 15.4 | 36.2 | 25.3 | 26.4 | 26.3 | 17.3 | 21.5 | 22.5 | 32.2 | 33.9 |

## RSEs for Table B3. Census region, number of buildings and floorspace, 2012 - PUBLIC USE DATA VERSION

| | RSEs for number of buildings | | | | | RSEs for total floorspace | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | All buildings | North-east | Mid-west | South | West | All buildings | North-east | Mid-west | South | West |
| **All buildings** | 5.4 | 9.0 | 9.3 | 7.7 | 16.0 | 4.6 | 7.0 | 5.6 | 7.9 | 14.4 |
| **Energy sources (more than one may apply)** | | | | | | | | | | |
| Electricity | 5.3 | 8.6 | 9.0 | 7.4 | 16.1 | 4.7 | 7.0 | 5.6 | 8.0 | 14.5 |
| Natural gas | 5.3 | 7.1 | 7.7 | 10.6 | 13.7 | 4.8 | 8.6 | 5.8 | 10.3 | 12.3 |
| Fuel oil | 11.5 | 22.1 | 18.9 | 14.0 | 18.8 | 5.4 | 9.6 | 9.6 | 10.3 | 13.6 |
| District heat | 18.2 | 40.6 | 29.0 | 28.4 | 33.4 | 12.9 | 19.2 | 20.6 | 27.8 | 25.2 |
| District chilled water | 17.3 | 47.3 | 28.5 | 23.3 | 33.9 | 16.2 | 38.8 | 25.6 | 25.5 | 27.0 |
| Propane | 10.9 | 31.9 | 20.8 | 13.0 | 28.6 | 8.6 | 17.0 | 19.0 | 12.6 | 23.5 |
| Other | 14.3 | 34.4 | 19.9 | 15.1 | 35.5 | 10.7 | 22.7 | 17.3 | 16.1 | 25.1 |
| **Space-heating energy sources (more than one may apply)** | | | | | | | | | | |
| Electricity | 5.8 | 9.2 | 10.1 | 6.9 | 18.3 | 5.2 | 9.5 | 7.1 | 8.4 | 13.2 |
| Natural gas | 5.7 | 7.6 | 7.7 | 12.8 | 13.9 | 5.2 | 8.2 | 5.8 | 12.6 | 12.8 |
| Fuel oil | 17.2 | 26.0 | 23.5 | 20.1 | 51.0 | 13.7 | 19.3 | 27.3 | 18.4 | 32.7 |
| District heat | 18.3 | 40.6 | 29.0 | 28.4 | 33.6 | 12.9 | 19.2 | 20.6 | 28.0 | 25.9 |
| Propane | 11.4 | 29.1 | 19.9 | 16.7 | 34.2 | 11.6 | 27.6 | 23.1 | 17.2 | 25.3 |
| Other | 22.1 | 53.8 | 25.0 | 23.6 | 55.1 | 22.9 | 39.8 | 30.8 | 31.7 | 67.2 |
| **Primary space-heating energy source** | | | | | | | | | | |
| Electricity | 7.6 | 14.3 | 16.7 | 7.9 | 23.5 | 6.6 | 14.3 | 12.4 | 8.3 | 18.0 |
| Natural gas | 5.7 | 7.8 | 8.4 | 13.4 | 13.0 | 5.0 | 8.0 | 5.6 | 12.9 | 12.5 |
| Fuel oil | 19.9 | 28.1 | 21.6 | 25.3 | 48.3 | 20.8 | 26.1 | 24.8 | 27.7 | 60.4 |
| District heat | 18.3 | 40.7 | 28.7 | 28.3 | 33.6 | 13.1 | 19.4 | 20.5 | 28.6 | 25.9 |
| Propane | 11.7 | 24.5 | 21.9 | 17.2 | 37.9 | 12.1 | 23.9 | 24.4 | 17.9 | 30.8 |
| Other | 29.6 | 59.8 | 28.8 | 45.5 | 83.3 | 32.8 | 44.1 | 46.5 | 59.8 | 78.9 |
| **Cooling energy sources (more than one may apply)** | | | | | | | | | | |
| Electricity | 5.5 | 6.7 | 9.7 | 6.6 | 18.2 | 4.7 | 6.7 | 5.8 | 7.7 | 15.2 |
| Natural gas | 30.6 | 42.6 | 64.0 | 49.0 | 74.1 | 21.5 | 25.8 | 53.4 | 55.7 | 32.1 |
| District chilled water | 17.3 | 47.3 | 28.5 | 23.3 | 33.9 | 16.2 | 38.8 | 25.6 | 25.5 | 27.0 |
| **Water-heating energy sources (more than one may apply)** | | | | | | | | | | |
| Electricity | 5.7 | 10.7 | 10.6 | 6.2 | 19.7 | 5.3 | 8.9 | 7.3 | 8.4 | 15.2 |
| Natural gas | 5.7 | 7.2 | 7.3 | 12.8 | 13.9 | 5.3 | 10.1 | 7.0 | 11.5 | 13.3 |
| Fuel oil | 25.4 | 28.1 | 78.8 | 50.1 | 84.0 | 15.8 | 18.3 | 64.7 | 35.2 | 56.0 |
| District heat | 21.5 | 43.5 | 39.8 | 38.8 | 41.2 | 15.6 | 20.8 | 24.7 | 36.2 | 35.0 |
| Propane | 12.3 | 25.8 | 23.5 | 15.4 | 34.5 | 11.6 | 18.9 | 27.2 | 21.0 | 23.9 |
| **Cooking energy sources (more than one may apply)** | | | | | | | | | | |
| Electricity | 5.2 | 11.3 | 12.1 | 7.1 | 13.5 | 4.5 | 8.3 | 6.6 | 8.0 | 13.6 |
| Natural gas | 5.7 | 13.6 | 11.2 | 8.4 | 14.0 | 5.0 | 14.6 | 5.6 | 7.9 | 12.9 |
| Propane | 19.0 | 44.9 | 39.5 | 20.3 | 50.7 | 11.9 | 23.2 | 26.5 | 15.1 | 35.3 |

## RSEs for Table B3. Census region, number of buildings and floorspace, 2012 - PUBLIC USE DATA VERSION

| | RSEs for number of buildings | | | | | RSEs for total floorspace | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | All buildings | North-east | Mid-west | South | West | All buildings | North-east | Mid-west | South | West |
| **All buildings** | 5.4 | 9.0 | 9.3 | 7.7 | 16.0 | 4.6 | 7.0 | 5.6 | 7.9 | 14.4 |
| **Energy end uses (more than one may apply)** | | | | | | | | | | |
| Buildings with space heating | 5.0 | 9.4 | 8.5 | 7.1 | 15.3 | 4.5 | 7.1 | 5.5 | 8.3 | 13.3 |
| Buildings with cooling | 5.4 | 6.8 | 9.6 | 6.5 | 18.1 | 4.7 | 7.3 | 5.9 | 7.9 | 15.0 |
| Buildings with water heating | 5.1 | 7.9 | 8.3 | 6.8 | 16.4 | 4.6 | 7.3 | 5.6 | 8.1 | 13.9 |
| Buildings with cooking | 4.8 | 12.2 | 11.5 | 6.1 | 12.8 | 4.1 | 9.9 | 5.7 | 6.9 | 11.8 |
| Buildings with manufacturing | 13.8 | 23.5 | 18.0 | 19.2 | 37.1 | 11.5 | 15.2 | 21.2 | 22.0 | 30.3 |
| Buildings with electricity generation | 6.9 | 11.5 | 15.3 | 11.0 | 19.3 | 4.9 | 7.9 | 8.4 | 9.7 | 13.2 |
| **Percent of floorspace heated** | | | | | | | | | | |
| Not heated | 9.4 | 16.6 | 19.0 | 13.9 | 22.0 | 9.9 | 16.9 | 17.3 | 11.4 | 26.0 |
| 1 to 50 | 12.0 | 18.9 | 14.1 | 11.5 | 34.9 | 11.3 | 25.8 | 20.2 | 12.8 | 25.0 |
| 51 to 99 | 6.9 | 11.2 | 11.8 | 9.5 | 20.1 | 5.5 | 10.1 | 11.1 | 8.2 | 14.7 |
| 100 | 4.5 | 11.2 | 8.9 | 7.2 | 10.8 | 4.4 | 8.4 | 6.0 | 9.3 | 11.3 |
| **Percent of floorspace cooled** | | | | | | | | | | |
| Not cooled | 8.8 | 21.2 | 11.4 | 18.8 | 17.2 | 9.2 | 26.0 | 13.7 | 16.9 | 16.6 |
| 1 to 50 | 10.5 | 8.8 | 10.4 | 12.7 | 38.5 | 8.8 | 10.6 | 9.8 | 14.5 | 28.8 |
| 51 to 99 | 6.4 | 10.6 | 16.2 | 8.5 | 15.9 | 5.0 | 8.3 | 13.4 | 8.4 | 11.2 |
| 100 | 4.6 | 12.9 | 10.2 | 6.5 | 12.2 | 5.2 | 12.9 | 6.7 | 8.7 | 13.4 |
| **Percent lit when open** | | | | | | | | | | |
| Zero | 23.0 | 68.7 | 44.4 | 34.5 | 51.2 | 23.1 | 79.7 | 44.7 | 35.1 | 46.0 |
| 1 to 50 | 7.5 | 13.4 | 13.1 | 9.4 | 23.4 | 7.7 | 16.4 | 11.7 | 10.2 | 23.8 |
| 51 to 99 | 6.3 | 10.6 | 11.1 | 8.2 | 19.0 | 5.0 | 7.4 | 7.5 | 9.5 | 13.5 |
| 100 | 5.0 | 9.6 | 7.6 | 7.8 | 13.0 | 4.8 | 8.5 | 7.1 | 7.7 | 14.8 |
| Building never open/electricity not used | 10.0 | 24.8 | 19.1 | 17.2 | 21.8 | 10.5 | 20.8 | 16.5 | 19.0 | 19.4 |
| **Percent lit during off hours** | | | | | | | | | | |
| Zero | 6.6 | 13.8 | 8.1 | 10.3 | 17.6 | 6.7 | 11.8 | 8.2 | 11.5 | 18.6 |
| 1 to 50 | 5.0 | 7.2 | 10.4 | 6.9 | 15.5 | 4.6 | 7.9 | 6.4 | 7.9 | 14.4 |
| 51 to 100 | 10.0 | 19.1 | 29.2 | 15.4 | 21.3 | 8.3 | 19.5 | 13.6 | 13.3 | 17.3 |
| Building always open with no "off hours" | 16.8 | 47.6 | 46.5 | 20.1 | 32.6 | 11.2 | 30.2 | 25.6 | 16.0 | 26.7 |
| Electricity not used | 12.7 | 30.6 | 25.0 | 18.6 | 37.7 | 14.4 | 26.4 | 24.7 | 22.6 | 28.5 |
| **Heating equipment (more than one may apply)** | | | | | | | | | | |
| Heat pumps | 9.3 | 17.1 | 25.1 | 12.1 | 22.7 | 7.0 | 10.7 | 18.8 | 10.3 | 13.4 |
| Furnaces | 7.2 | 14.5 | 14.3 | 12.1 | 13.9 | 7.9 | 17.6 | 14.3 | 14.9 | 15.9 |
| Individual space heaters | 6.4 | 13.9 | 10.6 | 11.8 | 15.8 | 5.2 | 10.4 | 9.9 | 9.7 | 12.9 |
| District heat | 18.3 | 40.6 | 29.0 | 28.4 | 33.6 | 12.9 | 19.2 | 20.6 | 28.0 | 25.9 |
| Boilers | 6.5 | 12.7 | 7.7 | 13.4 | 15.9 | 4.3 | 7.8 | 5.2 | 10.7 | 13.1 |
| Packaged heating units | 5.4 | 8.3 | 8.1 | 7.6 | 16.4 | 5.5 | 8.4 | 6.7 | 9.4 | 15.3 |
| Other | 18.3 | 34.9 | 37.9 | 24.8 | 40.2 | 14.5 | 32.6 | 31.7 | 26.6 | 24.6 |

## RSEs for Table B3. Census region, number of buildings and floorspace, 2012 - PUBLIC USE DATA VERSION

| | RSEs for number of buildings | | | | | RSEs for total floorspace | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | All buildings | North-east | Mid-west | South | West | All buildings | North-east | Mid-west | South | West |
| **All buildings** | 5.4 | 9.0 | 9.3 | 7.7 | 16.0 | 4.6 | 7.0 | 5.6 | 7.9 | 14.4 |
| **Cooling equipment (more than one may apply)** | | | | | | | | | | |
| Residential-type central air conditioners | 7.0 | 11.9 | 14.1 | 9.0 | 23.8 | 7.4 | 18.4 | 11.3 | 11.4 | 23.4 |
| Heat pumps | 8.8 | 17.1 | 19.8 | 11.5 | 21.7 | 6.9 | 14.5 | 16.8 | 10.4 | 12.9 |
| Individual air conditioners | 7.3 | 10.6 | 18.3 | 9.5 | 25.8 | 5.3 | 8.8 | 12.2 | 8.2 | 18.8 |
| District chilled water | 17.3 | 47.3 | 28.5 | 23.3 | 33.9 | 16.2 | 38.8 | 25.6 | 25.5 | 27.0 |
| Central chillers | 7.1 | 10.6 | 11.8 | 13.7 | 13.1 | 4.5 | 9.9 | 8.1 | 7.9 | 11.6 |
| Packaged air conditioning units | 6.3 | 8.8 | 10.2 | 9.1 | 16.9 | 5.0 | 6.2 | 7.8 | 8.6 | 15.2 |
| Swamp coolers | 16.6 | 102.5 | 77.1 | 54.9 | 17.1 | 15.0 | 73.0 | 39.2 | 32.5 | 17.8 |
| Other | 51.6 | 61.3 | 69.3 | 70.0 | 48.1 | 27.3 | 59.7 | 52.9 | 29.3 | 44.8 |
| **Main equipment replaced since 1990 (more than one may apply)** | | | | | | | | | | |
| Heating | 4.8 | 7.4 | 6.9 | 6.9 | 16.9 | 4.3 | 6.9 | 5.9 | 7.4 | 14.2 |
| Cooling | 4.9 | 8.2 | 8.7 | 5.8 | 18.3 | 4.1 | 7.8 | 7.0 | 6.0 | 14.4 |
| **Water-heating equipment** | | | | | | | | | | |
| Centralized system | 5.0 | 9.4 | 9.3 | 6.6 | 15.5 | 4.8 | 9.3 | 6.7 | 8.6 | 14.1 |
| Distributed system | 8.0 | 10.0 | 8.5 | 10.5 | 26.0 | 7.4 | 8.8 | 7.9 | 11.5 | 22.4 |
| Combination of centralized and distributed system | 7.4 | 11.8 | 14.2 | 12.8 | 16.0 | 5.3 | 8.6 | 8.9 | 9.4 | 12.4 |
| **Lighting equipment types (more than one may apply)** | | | | | | | | | | |
| Incandescent | 4.6 | 9.2 | 9.9 | 6.0 | 13.9 | 4.2 | 7.9 | 6.2 | 7.4 | 12.0 |
| Standard fluorescent | 5.4 | 7.6 | 8.8 | 7.5 | 17.1 | 4.6 | 6.3 | 5.4 | 8.0 | 14.3 |
| Compact fluorescent | 5.6 | 9.8 | 9.7 | 8.2 | 15.6 | 4.3 | 8.0 | 6.4 | 8.1 | 11.7 |
| High-intensity discharge (HID) | 7.4 | 13.1 | 10.0 | 9.5 | 23.7 | 5.0 | 9.9 | 9.5 | 8.2 | 14.1 |
| Halogen | 5.5 | 11.7 | 11.0 | 9.1 | 11.5 | 5.0 | 8.0 | 7.3 | 9.8 | 12.2 |
| LED | 7.4 | 16.6 | 8.5 | 14.2 | 18.0 | 5.2 | 9.7 | 7.4 | 9.8 | 14.1 |
| Other | 31.8 | 104.7 | 60.6 | 33.4 | 63.8 | 19.6 | 47.0 | 53.1 | 27.3 | 41.8 |
| **Refrigeration equipment (more than one may apply)** | | | | | | | | | | |
| Any refrigeration | 5.1 | 8.6 | 8.2 | 6.7 | 16.8 | 4.2 | 7.4 | 5.5 | 7.5 | 12.6 |
| Walk-in units | 4.8 | 9.9 | 11.6 | 7.1 | 11.3 | 4.4 | 12.0 | 5.6 | 7.6 | 11.2 |
| Cases or cabinets | 4.7 | 9.6 | 10.4 | 7.3 | 11.3 | 4.8 | 9.4 | 5.6 | 9.7 | 12.1 |
| Large cold storage areas | 10.9 | 25.8 | 31.3 | 17.6 | 16.7 | 10.3 | 14.6 | 19.9 | 19.2 | 19.2 |
| Commercial ice makers | 5.5 | 11.1 | 11.1 | 8.4 | 12.8 | 4.4 | 10.5 | 7.5 | 7.4 | 11.1 |
| Residential-type or compact units | 5.6 | 9.9 | 8.7 | 7.5 | 18.4 | 4.6 | 7.7 | 5.6 | 8.5 | 13.6 |
| Vending machines | 5.7 | 9.0 | 9.4 | 8.8 | 16.2 | 4.7 | 8.6 | 6.3 | 8.5 | 13.6 |
| No refrigeration | 7.2 | 14.0 | 14.3 | 12.1 | 15.5 | 8.8 | 14.5 | 16.8 | 12.5 | 22.3 |

## RSEs for Table B3. Census region, number of buildings and floorspace, 2012 - PUBLIC USE DATA VERSION

| | RSEs for number of buildings | | | | | RSEs for total floorspace | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | All buildings | North-east | Mid-west | South | West | All buildings | North-east | Mid-west | South | West |
| **All buildings** | 5.4 | 9.0 | 9.3 | 7.7 | 16.0 | 4.6 | 7.0 | 5.6 | 7.9 | 14.4 |
| **Office equipment (more than one may apply)** | | | | | | | | | | |
| Desktop computers | 5.6 | 7.4 | 8.2 | 7.0 | 18.6 | 4.7 | 7.0 | 5.6 | 8.0 | 14.8 |
| With flat screen monitors | 5.8 | 7.6 | 8.2 | 7.1 | 19.2 | 4.7 | 7.1 | 5.5 | 8.0 | 15.0 |
| With multiple monitors | 7.4 | 10.4 | 9.7 | 10.1 | 21.0 | 5.3 | 9.1 | 8.2 | 9.5 | 13.4 |
| Laptop computers | 5.9 | 8.5 | 8.6 | 7.4 | 19.3 | 4.6 | 6.0 | 6.0 | 8.6 | 13.2 |
| Dedicated servers | 6.8 | 7.4 | 8.2 | 9.3 | 21.2 | 4.9 | 5.9 | 6.1 | 8.6 | 14.8 |
| Laser printers | 5.7 | 8.0 | 8.6 | 8.0 | 16.8 | 4.8 | 8.0 | 5.9 | 8.8 | 14.1 |
| Inkjet printers | 6.7 | 9.2 | 10.2 | 7.3 | 23.7 | 5.5 | 8.8 | 8.8 | 8.3 | 17.6 |
| FAX machines | 5.8 | 7.3 | 8.2 | 7.0 | 19.7 | 4.6 | 7.0 | 6.4 | 7.9 | 14.7 |
| Photocopiers | 6.4 | 9.2 | 8.2 | 7.9 | 21.4 | 4.7 | 8.3 | 6.0 | 8.1 | 14.3 |
| **Number of desktop computers** | | | | | | | | | | |
| None | 7.4 | 18.5 | 13.9 | 12.7 | 13.9 | 8.1 | 20.4 | 11.3 | 13.6 | 18.4 |
| 1 to 4 | 5.2 | 9.6 | 9.7 | 7.1 | 15.4 | 5.9 | 12.5 | 12.1 | 8.7 | 16.0 |
| 5 to 9 | 8.5 | 13.0 | 12.9 | 9.5 | 27.1 | 8.5 | 14.5 | 15.1 | 11.8 | 23.9 |
| 10 to 19 | 8.8 | 13.0 | 12.4 | 13.7 | 23.8 | 8.6 | 14.1 | 11.5 | 12.8 | 24.3 |
| 20 to 49 | 8.4 | 13.0 | 12.7 | 13.3 | 19.9 | 7.5 | 13.8 | 10.4 | 13.9 | 17.4 |
| 50 to 99 | 8.8 | 14.6 | 20.7 | 13.6 | 20.2 | 8.0 | 11.8 | 15.5 | 13.1 | 22.1 |
| 100 to 249 | 8.0 | 18.6 | 15.7 | 15.1 | 14.5 | 7.0 | 15.6 | 11.4 | 14.4 | 11.8 |
| 250 or more | 7.4 | 10.2 | 15.2 | 15.0 | 11.8 | 6.5 | 9.0 | 9.7 | 14.9 | 11.8 |
| **Number of laptop computers** | | | | | | | | | | |
| None | 5.8 | 11.0 | 11.3 | 9.2 | 14.4 | 5.9 | 11.4 | 7.6 | 8.1 | 18.9 |
| 1 to 4 | 6.2 | 9.2 | 10.0 | 7.8 | 20.1 | 6.1 | 8.2 | 10.2 | 9.5 | 18.5 |
| 5 to 9 | 8.9 | 23.2 | 13.0 | 10.1 | 24.8 | 8.6 | 21.3 | 11.7 | 13.4 | 21.4 |
| 10 to 19 | 8.8 | 17.1 | 15.3 | 14.3 | 20.4 | 8.8 | 14.4 | 13.1 | 15.7 | 20.4 |
| 20 to 49 | 8.9 | 17.5 | 16.0 | 14.9 | 20.7 | 7.5 | 16.7 | 11.2 | 14.5 | 15.5 |
| 50 to 99 | 10.5 | 17.3 | 22.8 | 17.6 | 23.5 | 8.4 | 17.9 | 16.6 | 15.2 | 16.2 |
| 100 to 249 | 10.8 | 14.7 | 25.4 | 20.7 | 17.3 | 8.7 | 11.6 | 17.1 | 18.2 | 14.1 |
| 250 or more | 12.6 | 26.1 | 23.5 | 21.9 | 28.5 | 9.0 | 14.3 | 16.4 | 18.0 | 20.3 |
| **Number of dedicated servers** | | | | | | | | | | |
| None | 5.6 | 11.7 | 10.9 | 8.6 | 14.3 | 5.6 | 12.1 | 9.3 | 9.3 | 15.3 |
| 1 to 4 | 7.0 | 8.0 | 8.7 | 9.0 | 22.5 | 5.9 | 8.7 | 6.3 | 9.8 | 18.4 |
| 5 to 9 | 9.8 | 20.9 | 18.4 | 20.1 | 12.2 | 8.5 | 11.3 | 14.2 | 16.6 | 20.2 |
| 10 to 19 | 14.1 | 17.8 | 26.1 | 22.7 | 31.2 | 9.3 | 14.3 | 21.7 | 16.9 | 18.4 |
| 20 to 49 | 15.5 | 21.2 | 30.9 | 28.0 | 30.5 | 8.9 | 19.8 | 18.7 | 16.1 | 14.1 |
| 50 or more | 15.0 | 23.7 | 25.9 | 30.5 | 33.1 | 12.3 | 19.3 | 13.3 | 28.5 | 25.3 |
| **Number of photocopiers** | | | | | | | | | | |
| None | 5.6 | 11.2 | 10.9 | 8.9 | 13.9 | 5.8 | 10.0 | 8.4 | 9.0 | 16.5 |
| One | 7.2 | 10.0 | 10.2 | 8.5 | 23.9 | 7.7 | 14.4 | 12.2 | 11.1 | 22.2 |
| 2 to 4 | 7.0 | 12.9 | 9.9 | 9.9 | 20.8 | 5.6 | 10.7 | 8.0 | 9.9 | 14.6 |
| 5 to 9 | 8.3 | 12.2 | 14.0 | 15.2 | 17.8 | 6.8 | 18.5 | 10.6 | 12.2 | 13.1 |
| 10 or more | 9.5 | 14.3 | 19.5 | 19.3 | 14.4 | 6.6 | 8.6 | 13.4 | 14.4 | 13.8 |

## RSEs for Table B3. Census region, number of buildings and floorspace, 2012 - PUBLIC USE DATA VERSION

| | RSEs for number of buildings | | | | | RSEs for total floorspace | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | All buildings | North-east | Mid-west | South | West | All buildings | North-east | Mid-west | South | West |
| **All buildings** | 5.4 | 9.0 | 9.3 | 7.7 | 16.0 | 4.6 | 7.0 | 5.6 | 7.9 | 14.4 |
| **Number of TVs or video displays** | | | | | | | | | | |
| None | 6.1 | 13.8 | 10.2 | 9.2 | 16.6 | 6.6 | 12.4 | 9.2 | 10.1 | 19.3 |
| One | 6.5 | 11.0 | 13.0 | 8.8 | 20.3 | 6.4 | 11.0 | 12.8 | 9.9 | 17.5 |
| 2 to 4 | 6.5 | 12.2 | 10.7 | 8.9 | 19.0 | 5.9 | 12.3 | 10.0 | 9.5 | 17.0 |
| 5 to 9 | 7.9 | 14.8 | 17.1 | 11.6 | 22.2 | 7.6 | 14.0 | 13.3 | 12.3 | 21.6 |
| 10 to 19 | 10.0 | 17.4 | 11.3 | 18.6 | 19.6 | 8.2 | 22.8 | 11.5 | 14.7 | 13.4 |
| 20 to 49 | 9.8 | 26.8 | 21.0 | 15.9 | 18.4 | 7.8 | 16.0 | 12.9 | 15.1 | 14.7 |
| 50 to 99 | 13.7 | 24.3 | 20.1 | 17.8 | 38.2 | 13.9 | 14.2 | 17.3 | 24.2 | 32.0 |
| 100 or more | 11.3 | 18.9 | 22.4 | 20.7 | 21.3 | 8.0 | 17.6 | 13.9 | 14.3 | 19.7 |
| **Food preparation or serving areas in non-food service buildings (more than one may apply)** | | | | | | | | | | |
| Snack bar or concession stand | 8.9 | 18.1 | 18.2 | 15.9 | 14.5 | 6.6 | 12.9 | 11.2 | 11.5 | 17.5 |
| Fast food or small restaurant | 8.1 | 16.5 | 19.1 | 12.7 | 18.4 | 7.3 | 15.4 | 10.4 | 13.5 | 16.0 |
| Cafeteria or large restaurant | 6.6 | 13.2 | 10.6 | 11.6 | 18.0 | 5.2 | 12.8 | 7.5 | 8.7 | 15.3 |
| Commercial kitchen/ food preparation area | 7.1 | 15.4 | 13.3 | 11.5 | 18.5 | 5.3 | 11.7 | 6.8 | 8.8 | 18.4 |
| Small kitchen area | 6.4 | 14.9 | 15.1 | 8.7 | 16.5 | 5.6 | 12.5 | 9.3 | 8.9 | 17.1 |
| **Separate computer areas (more than one may apply)** | | | | | | | | | | |
| Data center or server farm | 9.6 | 19.2 | 15.0 | 21.3 | 17.2 | 6.5 | 10.3 | 9.7 | 14.9 | 12.7 |
| Computer-based training room | 6.8 | 15.5 | 12.6 | 9.2 | 20.5 | 5.7 | 8.0 | 8.3 | 10.5 | 17.7 |
| Student or public computer center | 7.2 | 16.0 | 12.5 | 11.4 | 18.3 | 5.9 | 9.4 | 9.0 | 11.4 | 16.7 |
| **HVAC conservation features (more than one may apply)** | | | | | | | | | | |
| Economizer cycle | 6.2 | 11.5 | 11.0 | 12.7 | 12.7 | 5.0 | 8.5 | 8.0 | 11.6 | 12.2 |
| Regular HVAC maintenance | 5.3 | 8.4 | 8.9 | 7.2 | 16.5 | 4.7 | 7.0 | 5.8 | 8.4 | 14.3 |
| Building automation system (BAS)[1] | 7.3 | 11.7 | 9.4 | 9.6 | 21.5 | 5.0 | 9.8 | 7.3 | 9.3 | 12.8 |
| **Window and interior lighting features (more than one may apply)** | | | | | | | | | | |
| Multipaned windows | 5.1 | 12.9 | 8.8 | 8.3 | 13.3 | 4.7 | 7.9 | 6.3 | 8.9 | 13.9 |
| Tinted window glass | 7.8 | 9.6 | 9.5 | 7.5 | 24.3 | 6.1 | 10.9 | 6.5 | 9.1 | 18.1 |
| Reflective window glass | 8.3 | 15.8 | 10.8 | 11.5 | 21.3 | 6.5 | 12.9 | 8.6 | 11.2 | 17.0 |
| External overhangs or awnings | 5.3 | 7.4 | 11.8 | 6.4 | 15.1 | 5.3 | 13.9 | 7.9 | 7.9 | 14.1 |
| Skylights or atriums | 10.1 | 13.5 | 12.3 | 10.3 | 25.8 | 6.2 | 8.9 | 9.3 | 10.6 | 16.0 |
| Light scheduling | 6.2 | 10.0 | 13.0 | 8.7 | 17.1 | 5.4 | 8.6 | 7.8 | 10.6 | 14.3 |
| Occupancy sensors | 8.5 | 10.6 | 10.7 | 14.8 | 20.3 | 5.0 | 7.6 | 6.1 | 10.3 | 13.7 |
| Multi-level lighting or dimming | 5.9 | 14.6 | 12.7 | 10.0 | 11.4 | 5.7 | 12.1 | 11.4 | 10.2 | 12.4 |
| Daylight harvesting | 11.3 | 28.3 | 20.9 | 20.5 | 15.7 | 8.2 | 16.2 | 13.8 | 13.8 | 20.6 |
| Demand responsive lighting | 19.9 | 57.5 | 29.6 | 15.7 | 50.6 | 15.8 | 25.7 | 20.1 | 25.3 | 38.8 |
| Building automation system (BAS) for lighting[1] | 9.9 | 20.5 | 18.2 | 13.8 | 25.6 | 7.6 | 15.5 | 11.0 | 14.4 | 17.2 |

## RSEs for Table B3. Census region, number of buildings and floorspace, 2012 - PUBLIC USE DATA VERSION

| | RSEs for number of buildings | | | | | RSEs for total floorspace | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | All buildings | North-east | Mid-west | South | West | All buildings | North-east | Mid-west | South | West |
| **All buildings** | 5.4 | 9.0 | 9.3 | 7.7 | 16.0 | 4.6 | 7.0 | 5.6 | 7.9 | 14.4 |
| **Equipment usage reduced when building not in full use (more than one may apply)** | | | | | | | | | | |
| Heating | 5.4 | 7.9 | 8.9 | 6.9 | 17.3 | 4.8 | 7.1 | 5.3 | 8.8 | 14.6 |
| Cooling | 5.7 | 7.2 | 9.8 | 6.7 | 18.9 | 4.9 | 7.6 | 5.6 | 8.3 | 15.7 |
| Lighting | 5.4 | 9.4 | 8.1 | 7.6 | 16.5 | 4.7 | 7.5 | 5.6 | 8.5 | 13.8 |

## RSEs for Table C1. Total energy consumption by major fuel, 2012 - PUBLIC USE DATA VERSION

| | RSEs for all buildings | | | RSEs for total energy consumption | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Electricity | | | | |
| | Number of buildings | Total floorspace | Sum of major fuels | Primary | Site | Natural gas | Fuel oil | District heat |
| **All buildings** | 5.4 | 4.6 | 4.4 | 4.5 | 4.5 | 5.3 | 11.1 | 16.1 |
| **Building floorspace (square feet)** | | | | | | | | |
| 1,001 to 5,000 | 5.4 | 5.2 | 5.0 | 5.3 | 5.3 | 6.6 | 23.8 | 84.2 |
| 5,001 to 10,000 | 8.0 | 8.2 | 7.4 | 8.1 | 8.1 | 9.2 | 27.7 | 58.0 |
| 10,001 to 25,000 | 6.9 | 7.0 | 6.9 | 6.9 | 6.9 | 8.7 | 25.5 | 38.9 |
| 25,001 to 50,000 | 8.1 | 8.0 | 7.1 | 7.8 | 7.8 | 8.9 | 22.2 | 40.6 |
| 50,001 to 100,000 | 7.8 | 7.7 | 8.6 | 8.7 | 8.7 | 10.3 | 20.0 | 45.5 |
| 100,001 to 200,000 | 7.0 | 7.2 | 11.6 | 9.7 | 9.7 | 14.7 | 18.1 | 38.2 |
| 200,001 to 500,000 | 6.8 | 6.5 | 8.5 | 8.9 | 8.9 | 11.1 | 19.2 | 24.7 |
| Over 500,000 | 9.2 | 9.2 | 11.3 | 9.7 | 9.7 | 17.8 | 16.3 | 19.2 |
| **Principal building activity** | | | | | | | | |
| Education | 7.6 | 6.0 | 7.0 | 7.1 | 7.1 | 8.9 | 26.2 | 32.2 |
| Food sales | 11.4 | 12.8 | 11.7 | 11.3 | 11.3 | 17.0 | 56.0 | 0.0 |
| Food service | 6.6 | 9.5 | 8.8 | 10.0 | 10.0 | 9.5 | 60.3 | 85.4 |
| Health care | 10.8 | 7.3 | 8.2 | 9.0 | 9.0 | 9.5 | 23.9 | 15.7 |
| Inpatient | 16.9 | 8.2 | 9.1 | 9.7 | 9.7 | 10.5 | 23.9 | 16.6 |
| Outpatient | 11.3 | 11.2 | 13.9 | 15.2 | 15.2 | 16.9 | 52.9 | 30.7 |
| Lodging | 9.8 | 8.2 | 12.6 | 9.7 | 9.7 | 16.3 | 30.1 | 36.8 |
| Mercantile | 6.0 | 8.4 | 9.7 | 10.1 | 10.1 | 11.1 | 24.5 | 62.7 |
| Retail (other than mall) | 6.9 | 8.3 | 9.2 | 10.1 | 10.1 | 14.2 | 29.5 | 75.5 |
| Enclosed and strip malls | 11.1 | 11.9 | 12.6 | 13.3 | 13.3 | 12.9 | 57.5 | 111.9 |
| Office | 6.7 | 6.1 | 8.6 | 6.8 | 6.8 | 12.7 | 20.3 | 36.5 |
| Public assembly | 9.1 | 9.5 | 10.6 | 9.9 | 9.9 | 12.3 | 31.8 | 29.2 |
| Public order and safety | 17.5 | 16.6 | 16.7 | 17.4 | 17.4 | 18.0 | 22.8 | 52.6 |
| Religious worship | 7.3 | 8.6 | 10.5 | 10.1 | 10.1 | 14.3 | 31.8 | 0.0 |
| Service | 7.4 | 9.0 | 8.3 | 8.9 | 8.9 | 11.0 | 20.0 | 78.3 |
| Warehouse and storage | 12.8 | 11.7 | 12.1 | 13.4 | 13.4 | 15.1 | 33.6 | 112.0 |
| Other | 14.5 | 16.3 | 18.7 | 19.4 | 19.4 | 27.2 | 44.6 | 49.5 |
| Vacant | 11.5 | 13.3 | 16.7 | 19.8 | 19.8 | 23.5 | 60.1 | 50.6 |
| **Year constructed** | | | | | | | | |
| Before 1920 | 10.5 | 11.3 | 11.5 | 11.8 | 11.8 | 13.5 | 30.9 | 35.2 |
| 1920 to 1945 | 6.7 | 7.8 | 8.7 | 9.3 | 9.3 | 8.5 | 24.2 | 46.7 |
| 1946 to 1959 | 7.7 | 8.1 | 8.5 | 8.3 | 8.3 | 11.3 | 18.4 | 30.6 |
| 1960 to 1969 | 7.9 | 6.6 | 7.8 | 8.2 | 8.2 | 9.0 | 23.8 | 30.3 |
| 1970 to 1979 | 7.5 | 7.0 | 9.0 | 7.2 | 7.2 | 10.2 | 25.9 | 31.8 |
| 1980 to 1989 | 8.3 | 6.5 | 7.2 | 8.0 | 8.0 | 9.3 | 21.2 | 18.3 |
| 1990 to 1999 | 6.2 | 5.4 | 5.2 | 5.4 | 5.4 | 7.9 | 19.0 | 21.9 |
| 2000 to 2003 | 9.3 | 7.8 | 9.3 | 8.5 | 8.5 | 10.6 | 42.3 | 59.0 |
| 2004 to 2007 | 13.3 | 15.4 | 16.6 | 15.2 | 15.2 | 22.0 | 32.4 | 47.8 |
| 2008 to 2012 | 15.4 | 17.3 | 20.6 | 22.6 | 22.6 | 20.3 | 34.2 | 41.6 |

## RSEs for Table C1. Total energy consumption by major fuel, 2012 - PUBLIC USE DATA VERSION

| | RSEs for all buildings | | | RSEs for total energy consumption | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Electricity | | | | |
| | Number of buildings | Total floorspace | Sum of major fuels | Primary | Site | Natural gas | Fuel oil | District heat |
| **All buildings** | 5.4 | 4.6 | 4.4 | 4.5 | 4.5 | 5.3 | 11.1 | 16.1 |
| **Census region and division** | | | | | | | | |
| Northeast | 9.0 | 7.0 | 9.0 | 8.3 | 8.3 | 11.6 | 15.4 | 32.4 |
| New England | 22.7 | 14.3 | 12.6 | 8.3 | 8.3 | 20.8 | 18.9 | 79.4 |
| Middle Atlantic | 7.0 | 7.9 | 10.9 | 10.2 | 10.2 | 13.5 | 24.9 | 29.2 |
| Midwest | 9.3 | 5.6 | 7.5 | 7.0 | 7.0 | 8.4 | 25.7 | 25.3 |
| East North Central | 12.1 | 6.8 | 9.1 | 8.6 | 8.6 | 10.4 | 36.7 | 21.7 |
| West North Central | 14.2 | 10.0 | 13.2 | 12.7 | 12.7 | 11.5 | 28.0 | 50.8 |
| South | 7.7 | 7.9 | 8.3 | 8.0 | 8.0 | 11.1 | 16.8 | 28.4 |
| South Atlantic | 9.5 | 12.3 | 14.0 | 13.8 | 13.8 | 19.1 | 21.5 | 38.4 |
| East South Central | 9.3 | 12.2 | 8.1 | 5.4 | 5.4 | 18.4 | 42.5 | 57.5 |
| West South Central | 17.4 | 13.0 | 11.6 | 9.5 | 9.5 | 15.4 | 27.0 | 56.8 |
| West | 16.0 | 14.4 | 11.4 | 11.8 | 11.8 | 12.6 | 19.3 | 33.2 |
| Mountain | 12.4 | 14.0 | 18.4 | 11.6 | 11.6 | 26.2 | 51.7 | 48.9 |
| Pacific | 21.4 | 18.8 | 14.1 | 15.6 | 15.6 | 13.3 | 17.2 | 44.9 |
| **Number of floors** | | | | | | | | |
| One | 6.3 | 7.2 | 6.7 | 7.0 | 7.0 | 7.6 | 19.8 | 36.0 |
| Two | 5.6 | 5.6 | 7.8 | 7.3 | 7.3 | 8.8 | 15.5 | 64.9 |
| Three | 8.3 | 6.4 | 8.8 | 8.8 | 8.8 | 12.4 | 21.5 | 41.0 |
| Four to nine | 9.4 | 7.4 | 7.3 | 7.3 | 7.3 | 8.9 | 23.1 | 20.4 |
| Ten or more | 11.1 | 9.6 | 13.6 | 10.6 | 10.6 | 23.6 | 20.1 | 18.9 |
| **Elevators and escalators (more than one may apply)** | | | | | | | | |
| Any elevators | 5.7 | 4.5 | 5.8 | 5.3 | 5.3 | 7.3 | 9.7 | 16.6 |
| Number of elevators | | | | | | | | |
| One | 6.4 | 5.9 | 11.1 | 9.4 | 9.4 | 11.5 | 19.0 | 40.3 |
| Two to five | 8.4 | 7.0 | 8.5 | 8.2 | 8.2 | 11.0 | 16.3 | 26.1 |
| Six or more | 8.7 | 8.1 | 9.5 | 8.1 | 8.1 | 13.6 | 14.3 | 16.9 |
| Any escalators | 25.6 | 13.1 | 18.9 | 14.1 | 14.1 | 35.1 | 28.1 | 25.1 |
| **Number of workers (main shift)** | | | | | | | | |
| Fewer than 5 | 5.8 | 6.6 | 5.9 | 6.2 | 6.2 | 7.3 | 25.2 | 51.0 |
| 5 to 9 | 7.2 | 7.1 | 6.7 | 6.8 | 6.8 | 9.7 | 29.8 | 45.1 |
| 10 to 19 | 8.8 | 8.6 | 8.4 | 7.8 | 7.8 | 11.3 | 26.1 | 39.5 |
| 20 to 49 | 7.5 | 6.3 | 6.5 | 7.4 | 7.4 | 7.5 | 26.8 | 30.0 |
| 50 to 99 | 8.0 | 6.5 | 8.1 | 8.4 | 8.4 | 9.7 | 16.4 | 50.0 |
| 100 to 249 | 9.5 | 8.5 | 9.5 | 9.3 | 9.3 | 10.7 | 25.0 | 41.0 |
| 250 or more | 7.6 | 6.6 | 9.0 | 7.1 | 7.1 | 13.4 | 12.5 | 17.7 |
| **Weekly operating hours** | | | | | | | | |
| Fewer than 40 | 7.2 | 8.4 | 7.8 | 7.9 | 7.9 | 10.8 | 43.0 | 64.4 |
| 40 to 48 | 7.5 | 7.4 | 7.8 | 8.0 | 8.0 | 10.3 | 20.9 | 44.4 |
| 49 to 60 | 6.7 | 6.4 | 5.8 | 6.3 | 6.3 | 6.2 | 18.8 | 39.6 |
| 61 to 84 | 6.8 | 5.9 | 5.9 | 6.2 | 6.2 | 7.7 | 22.1 | 23.8 |
| 85 to 167 | 7.9 | 8.6 | 8.6 | 8.2 | 8.2 | 11.3 | 25.3 | 42.5 |
| Open continuously | 8.1 | 5.6 | 7.1 | 6.3 | 6.3 | 9.3 | 16.1 | 17.5 |

## RSEs for Table C1. Total energy consumption by major fuel, 2012 - PUBLIC USE DATA VERSION

| | RSEs for all buildings | | | RSEs for total energy consumption | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Electricity | | | | |
| | Number of buildings | Total floorspace | Sum of major fuels | Primary | Site | Natural gas | Fuel oil | District heat |
| **All buildings** | 5.4 | 4.6 | 4.4 | 4.5 | 4.5 | 5.3 | 11.1 | 16.1 |
| **Party responsible for operation and maintenance of energy systems** | | | | | | | | |
| Building owner | 5.3 | 4.2 | 4.0 | 4.0 | 4.0 | 5.0 | 12.5 | 16.5 |
| Business owner or tenant | 9.2 | 11.0 | 11.4 | 11.6 | 11.6 | 12.4 | 29.5 | 53.2 |
| Property management | 16.8 | 14.2 | 16.8 | 17.0 | 17.0 | 26.4 | 30.6 | 48.9 |
| Other | 16.9 | 15.6 | 18.7 | 19.6 | 19.6 | 22.3 | 39.9 | 60.4 |
| **Provider of direct input on energy-related equipment purchases** | | | | | | | | |
| Building owner | 5.2 | 4.3 | 4.1 | 4.0 | 4.0 | 5.0 | 12.0 | 16.5 |
| Business owner or tenant | 10.1 | 10.7 | 10.9 | 10.9 | 10.9 | 12.6 | 33.5 | 53.5 |
| Property management | 22.3 | 19.0 | 22.0 | 21.8 | 21.8 | 31.0 | 39.3 | 69.9 |
| Other | 13.6 | 14.6 | 19.4 | 19.8 | 19.8 | 23.0 | 34.6 | 64.6 |
| **Number of establishments** | | | | | | | | |
| One | 5.5 | 5.0 | 5.0 | 4.8 | 4.8 | 5.7 | 13.4 | 20.6 |
| 2 to 5 | 7.1 | 6.0 | 5.8 | 6.1 | 6.1 | 7.9 | 18.9 | 22.6 |
| 6 to 10 | 13.9 | 10.9 | 9.9 | 10.0 | 10.0 | 12.7 | 45.9 | 30.9 |
| 11 to 20 | 14.1 | 13.4 | 15.0 | 16.3 | 16.3 | 16.1 | 24.8 | 32.3 |
| More than 20 | 26.0 | 8.8 | 10.7 | 11.5 | 11.5 | 16.5 | 40.1 | 26.1 |
| Currently unoccupied | 12.8 | 17.3 | 20.7 | 26.0 | 26.0 | 27.1 | 42.0 | 88.1 |
| **Predominant exterior wall material** | | | | | | | | |
| Brick, stone, or stucco | 5.1 | 4.8 | 5.0 | 5.3 | 5.3 | 5.2 | 14.1 | 21.7 |
| Concrete (block or poured) | 6.9 | 6.3 | 6.9 | 6.3 | 6.3 | 9.0 | 17.1 | 33.6 |
| Concrete panels | 25.2 | 11.9 | 12.8 | 10.1 | 10.1 | 20.4 | 22.0 | 32.6 |
| Siding or shingles | 9.0 | 10.5 | 13.7 | 12.9 | 12.9 | 17.9 | 25.6 | 92.3 |
| Metal panels | 10.8 | 9.0 | 10.6 | 12.5 | 12.5 | 16.9 | 27.4 | 50.9 |
| Window glass | 18.8 | 13.2 | 18.7 | 16.8 | 16.8 | 36.1 | 41.8 | 31.3 |
| Other | 23.7 | 25.9 | 30.5 | 23.7 | 23.7 | 55.8 | 65.7 | 80.3 |
| No one major type | 23.0 | 21.3 | 18.8 | 16.5 | 16.5 | 28.2 | 57.1 | 48.8 |
| **Predominant roof material** | | | | | | | | |
| Metal surfacing | 7.8 | 7.0 | 7.8 | 8.4 | 8.4 | 9.7 | 25.7 | 39.4 |
| Synthetic or rubber | 6.0 | 6.0 | 6.6 | 6.5 | 6.5 | 8.2 | 18.6 | 17.7 |
| Built-up | 8.7 | 5.4 | 5.9 | 5.2 | 5.2 | 7.9 | 16.2 | 22.2 |
| Slate or tile shingles | 8.8 | 13.9 | 15.1 | 14.0 | 14.0 | 10.2 | 36.9 | 54.8 |
| Wooden materials (including shingles) | 13.7 | 16.5 | 15.6 | 13.5 | 13.5 | 22.3 | 47.6 | 111.7 |
| Asphalt, fiberglass, or other shingles | 6.3 | 5.9 | 6.6 | 6.2 | 6.2 | 9.7 | 19.7 | 38.4 |
| Concrete | 18.2 | 13.6 | 13.7 | 13.8 | 13.8 | 22.3 | 45.9 | 39.2 |
| Other | 25.5 | 25.4 | 28.4 | 28.9 | 28.9 | 33.8 | 56.4 | 82.2 |
| No one major type | 29.8 | 26.9 | 27.5 | 27.9 | 27.9 | 30.9 | 74.1 | 54.7 |

## RSEs for Table C1. Total energy consumption by major fuel, 2012 - PUBLIC USE DATA VERSION

| | RSEs for all buildings | | | RSEs for total energy consumption | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Electricity | | | | |
| | Number of buildings | Total floorspace | Sum of major fuels | Primary | Site | Natural gas | Fuel oil | District heat |
| **All buildings** | 5.4 | 4.6 | 4.4 | 4.5 | 4.5 | 5.3 | 11.1 | 16.1 |
| **Roof characteristics** | | | | | | | | |
| Roof tilt | | | | | | | | |
| Flat | 7.2 | 5.0 | 4.5 | 4.5 | 4.5 | 5.5 | 13.3 | 14.7 |
| Shallow pitch | 6.7 | 6.8 | 7.7 | 7.6 | 7.6 | 9.7 | 20.5 | 35.8 |
| Steeper pitch | 6.7 | 6.0 | 7.3 | 6.5 | 6.5 | 9.1 | 24.2 | 50.2 |
| Cool roof | 7.4 | 6.3 | 7.6 | 7.4 | 7.4 | 9.4 | 15.5 | 25.9 |
| **Renovations in buildings constructed before 2008 (more than one may apply)** | | | | | | | | |
| Any type of renovation | 4.7 | 3.9 | 4.9 | 4.2 | 4.2 | 6.7 | 13.2 | 18.0 |
| Addition or annex | 7.8 | 5.0 | 6.8 | 5.8 | 5.8 | 9.1 | 18.3 | 19.7 |
| Reduction in floorspace | 17.0 | 25.9 | 35.9 | 27.3 | 27.3 | 41.1 | 50.7 | 72.2 |
| Roof replacement | 5.5 | 4.4 | 6.9 | 6.2 | 6.2 | 8.7 | 17.3 | 21.3 |
| Exterior wall replacement | 9.0 | 7.8 | 10.6 | 11.4 | 11.4 | 14.5 | 31.9 | 23.4 |
| Interior wall reconfiguration | 6.1 | 4.5 | 5.8 | 5.2 | 5.2 | 8.0 | 14.3 | 17.8 |
| Window replacement | 5.9 | 5.0 | 7.8 | 6.8 | 6.8 | 10.7 | 19.6 | 21.0 |
| HVAC equipment upgrade | 4.9 | 3.7 | 5.8 | 4.9 | 4.9 | 7.8 | 15.0 | 17.5 |
| Lighting upgrade | 5.2 | 4.5 | 5.4 | 4.7 | 4.7 | 7.3 | 14.5 | 20.2 |
| Electrical upgrade | 6.0 | 5.4 | 6.8 | 6.1 | 6.1 | 9.6 | 17.6 | 19.0 |
| Plumbing system upgrade | 5.8 | 5.7 | 7.4 | 6.8 | 6.8 | 10.0 | 18.9 | 20.3 |
| Insulation upgrade | 8.0 | 6.7 | 10.7 | 9.5 | 9.5 | 14.7 | 20.0 | 23.1 |
| Fire, safety, or security upgrade | 6.3 | 4.9 | 5.4 | 5.5 | 5.5 | 6.9 | 16.9 | 15.8 |
| Structural upgrade | 10.0 | 8.9 | 17.0 | 14.3 | 14.3 | 23.7 | 32.8 | 37.2 |
| Other | 28.7 | 23.9 | 22.7 | 23.1 | 23.1 | 27.9 | 68.8 | 65.1 |
| No renovations | 6.2 | 5.8 | 5.2 | 5.6 | 5.6 | 6.3 | 18.1 | 26.6 |
| Buildings constructed 2008 or later | 15.4 | 17.3 | 20.6 | 22.6 | 22.6 | 20.3 | 34.2 | 41.6 |
| **Energy sources (more than one may apply)** | | | | | | | | |
| Electricity | 5.3 | 4.7 | 4.4 | 4.5 | 4.5 | 5.3 | 11.1 | 16.1 |
| Natural gas | 5.3 | 4.8 | 4.9 | 5.0 | 5.0 | 5.3 | 16.8 | 19.8 |
| Fuel oil | 11.5 | 5.4 | 6.0 | 5.7 | 5.7 | 8.6 | 11.1 | 16.1 |
| District heat | 18.2 | 12.9 | 16.2 | 14.4 | 14.4 | 40.9 | 22.1 | 16.1 |
| District chilled water | 17.3 | 16.2 | 19.0 | 17.1 | 17.1 | 35.5 | 24.1 | 18.9 |
| Propane | 10.9 | 8.6 | 13.2 | 10.8 | 10.8 | 24.2 | 16.0 | 52.7 |
| Other | 14.3 | 10.7 | 14.1 | 11.9 | 11.9 | 22.5 | 26.4 | 30.2 |
| **Space-heating energy sources (more than one may apply)** | | | | | | | | |
| Electricity | 5.8 | 5.2 | 4.9 | 5.3 | 5.3 | 5.4 | 11.8 | 16.4 |
| Natural gas | 5.7 | 5.2 | 5.2 | 5.5 | 5.5 | 5.2 | 17.6 | 22.5 |
| Fuel oil | 17.2 | 13.7 | 10.3 | 12.5 | 12.5 | 13.0 | 13.8 | 61.7 |
| District heat | 18.3 | 12.9 | 16.3 | 14.5 | 14.5 | 40.9 | 22.8 | 16.1 |
| Propane | 11.4 | 11.6 | 15.3 | 15.3 | 15.3 | 25.0 | 40.0 | 112.3 |
| Other | 22.1 | 22.9 | 24.1 | 25.7 | 25.7 | 28.1 | 45.7 | 73.3 |

## RSEs for Table C1. Total energy consumption by major fuel, 2012 - PUBLIC USE DATA VERSION

| | RSEs for all buildings | | | RSEs for total energy consumption | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Electricity | | | | |
| | Number of buildings | Total floorspace | Sum of major fuels | Primary | Site | Natural gas | Fuel oil | District heat |
| **All buildings** | 5.4 | 4.6 | 4.4 | 4.5 | 4.5 | 5.3 | 11.1 | 16.1 |
| **Primary space-heating energy source** | | | | | | | | |
| Electricity | 7.6 | 6.6 | 6.1 | 6.4 | 6.4 | 7.4 | 16.9 | 80.7 |
| Natural gas | 5.7 | 5.0 | 5.1 | 5.4 | 5.4 | 5.3 | 8.8 | 51.8 |
| Fuel oil | 19.9 | 20.8 | 15.1 | 18.5 | 18.5 | 29.5 | 15.0 | 112.3 |
| District heat | 18.3 | 13.1 | 16.4 | 14.6 | 14.6 | 41.7 | 20.8 | 16.2 |
| Propane | 11.7 | 12.1 | 17.8 | 18.0 | 18.0 | 47.7 | 70.6 | 0.0 |
| Other | 29.6 | 32.8 | 37.4 | 38.4 | 38.4 | 52.3 | 52.4 | 0.0 |
| **Cooling energy sources (more than one may apply)** | | | | | | | | |
| Electricity | 5.5 | 4.7 | 4.4 | 4.6 | 4.6 | 5.1 | 10.6 | 15.9 |
| Natural gas | 30.6 | 21.5 | 21.0 | 19.6 | 19.6 | 22.5 | 30.1 | 100.0 |
| District chilled water | 17.3 | 16.2 | 19.0 | 17.1 | 17.1 | 35.5 | 24.1 | 18.9 |
| **Water-heating energy sources (more than one may apply)** | | | | | | | | |
| Electricity | 5.7 | 5.3 | 5.1 | 5.5 | 5.5 | 6.2 | 13.1 | 19.1 |
| Natural gas | 5.7 | 5.3 | 5.6 | 5.8 | 5.8 | 5.6 | 10.3 | 43.8 |
| Fuel oil | 25.4 | 15.8 | 12.5 | 14.3 | 14.3 | 22.4 | 15.7 | 59.1 |
| District heat | 21.5 | 15.6 | 19.4 | 17.7 | 17.7 | 48.6 | 24.2 | 17.9 |
| Propane | 12.3 | 11.6 | 14.2 | 14.7 | 14.7 | 49.9 | 38.0 | 112.3 |
| **Cooking energy sources (more than one may apply)** | | | | | | | | |
| Electricity | 5.2 | 4.5 | 5.1 | 5.4 | 5.4 | 6.0 | 15.5 | 15.9 |
| Natural gas | 5.7 | 5.0 | 6.4 | 6.1 | 6.1 | 6.9 | 16.9 | 24.5 |
| Propane | 19.0 | 11.9 | 14.9 | 17.1 | 17.1 | 36.2 | 15.1 | 89.5 |
| **Energy end uses (more than one may apply)** | | | | | | | | |
| Buildings with space heating | 5.0 | 4.5 | 4.5 | 4.5 | 4.5 | 5.4 | 11.2 | 16.1 |
| Buildings with cooling | 5.4 | 4.7 | 4.6 | 4.6 | 4.6 | 5.5 | 10.5 | 16.2 |
| Buildings with water heating | 5.1 | 4.6 | 4.5 | 4.5 | 4.5 | 5.3 | 10.9 | 16.6 |
| Buildings with cooking | 4.8 | 4.1 | 5.3 | 5.2 | 5.2 | 6.2 | 11.4 | 17.9 |
| Buildings with manufacturing | 13.8 | 11.5 | 12.8 | 15.3 | 15.3 | 14.7 | 28.6 | 49.7 |
| Buildings with electricity generation | 6.9 | 4.9 | 5.6 | 5.4 | 5.4 | 7.8 | 10.2 | 15.9 |
| **Percent of floorspace heated** | | | | | | | | |
| Not heated | 9.4 | 9.9 | 13.6 | 14.1 | 14.1 | 30.3 | 43.2 | 100.0 |
| 1 to 50 | 12.0 | 11.3 | 9.9 | 10.4 | 10.4 | 12.5 | 26.8 | 60.9 |
| 51 to 99 | 6.9 | 5.5 | 6.9 | 7.4 | 7.4 | 9.3 | 15.1 | 19.8 |
| 100 | 4.5 | 4.4 | 4.8 | 4.6 | 4.6 | 5.6 | 12.5 | 17.8 |
| **Percent of floorspace cooled** | | | | | | | | |
| Not cooled | 8.8 | 9.2 | 10.8 | 11.8 | 11.8 | 12.0 | 35.7 | 62.1 |
| 1 to 50 | 10.5 | 8.8 | 6.4 | 7.6 | 7.6 | 7.5 | 18.4 | 23.7 |
| 51 to 99 | 6.4 | 5.0 | 6.2 | 6.1 | 6.1 | 9.0 | 12.6 | 18.4 |
| 100 | 4.6 | 5.2 | 5.6 | 5.1 | 5.1 | 6.9 | 16.9 | 23.1 |

## RSEs for Table C1. Total energy consumption by major fuel, 2012 - PUBLIC USE DATA VERSION

| | RSEs for all buildings | | | RSEs for total energy consumption | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Electricity | | | | |
| | Number of buildings | Total floorspace | Sum of major fuels | Primary | Site | Natural gas | Fuel oil | District heat |
| **All buildings** | 5.4 | 4.6 | 4.4 | 4.5 | 4.5 | 5.3 | 11.1 | 16.1 |
| **Percent lit when open** | | | | | | | | |
| Zero | 23.0 | 23.1 | 37.8 | 33.1 | 33.1 | 99.6 | 112.1 | 91.2 |
| 1 to 50 | 7.5 | 7.7 | 7.0 | 7.4 | 7.4 | 8.4 | 25.4 | 44.5 |
| 51 to 99 | 6.3 | 5.0 | 6.0 | 6.2 | 6.2 | 6.9 | 14.4 | 21.7 |
| 100 | 5.0 | 4.8 | 5.2 | 5.0 | 5.0 | 6.6 | 13.3 | 21.6 |
| Building never open/electricity not used | 10.0 | 10.5 | 20.4 | 24.6 | 24.6 | 25.4 | 99.7 | 88.1 |
| **Percent lit during off hours** | | | | | | | | |
| Zero | 6.6 | 6.7 | 5.7 | 6.3 | 6.3 | 6.3 | 24.1 | 38.9 |
| 1 to 50 | 5.0 | 4.6 | 4.8 | 5.0 | 5.0 | 5.8 | 13.6 | 20.0 |
| 51 to 100 | 10.0 | 8.3 | 11.8 | 9.7 | 9.7 | 14.3 | 25.4 | 30.3 |
| Building always open with no "off hours" | 16.8 | 11.2 | 11.3 | 12.2 | 12.2 | 14.1 | 60.8 | 49.6 |
| Electricity not used | 12.7 | 14.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| **Heating equipment (more than one may apply)** | | | | | | | | |
| Heat pumps | 9.3 | 7.0 | 6.8 | 7.6 | 7.6 | 8.2 | 19.3 | 23.7 |
| Furnaces | 7.2 | 7.9 | 8.4 | 7.8 | 7.8 | 10.9 | 39.2 | 43.6 |
| Individual space heaters | 6.4 | 5.2 | 5.2 | 5.6 | 5.6 | 6.0 | 19.4 | 20.1 |
| District heat | 18.3 | 12.9 | 16.3 | 14.5 | 14.5 | 40.9 | 22.8 | 16.1 |
| Boilers | 6.5 | 4.3 | 4.7 | 4.8 | 4.8 | 5.5 | 12.9 | 41.2 |
| Packaged heating units | 5.4 | 5.5 | 5.5 | 5.8 | 5.8 | 6.1 | 16.8 | 19.7 |
| Other | 18.3 | 14.5 | 16.0 | 16.7 | 16.7 | 18.8 | 70.9 | 62.2 |
| **Cooling equipment (more than one may apply)** | | | | | | | | |
| Residential-type central air conditioners | 7.0 | 7.4 | 6.3 | 6.4 | 6.4 | 8.4 | 22.8 | 71.0 |
| Heat pumps | 8.8 | 6.9 | 6.6 | 7.3 | 7.3 | 8.8 | 17.2 | 24.6 |
| Individual air conditioners | 7.3 | 5.3 | 5.6 | 5.9 | 5.9 | 6.3 | 21.2 | 26.1 |
| District chilled water | 17.3 | 16.2 | 19.0 | 17.1 | 17.1 | 35.5 | 24.1 | 18.9 |
| Central chillers | 7.1 | 4.5 | 5.2 | 5.3 | 5.3 | 6.9 | 13.7 | 17.9 |
| Packaged air conditioning units | 6.3 | 5.0 | 5.2 | 5.4 | 5.4 | 6.3 | 12.0 | 18.7 |
| Swamp coolers | 16.6 | 15.0 | 15.7 | 16.2 | 16.2 | 20.1 | 34.0 | 45.6 |
| Other | 51.6 | 27.3 | 27.4 | 33.2 | 33.2 | 33.3 | 45.8 | 57.2 |
| **Main equipment replaced since 1990 (more than one may apply)** | | | | | | | | |
| Heating | 4.8 | 4.3 | 4.5 | 4.9 | 4.9 | 5.4 | 13.6 | 100.2 |
| Cooling | 4.9 | 4.1 | 4.5 | 4.5 | 4.5 | 6.0 | 15.6 | 29.3 |
| **Water-heating equipment** | | | | | | | | |
| Centralized system | 5.0 | 4.8 | 5.2 | 4.9 | 4.9 | 6.1 | 13.6 | 22.0 |
| Distributed system | 8.0 | 7.4 | 7.1 | 7.4 | 7.4 | 10.0 | 26.3 | 35.6 |
| Combination of centralized and distributed system | 7.4 | 5.3 | 6.0 | 6.6 | 6.6 | 7.6 | 9.3 | 15.2 |

## RSEs for Table C1. Total energy consumption by major fuel, 2012 - PUBLIC USE DATA VERSION

| | RSEs for all buildings | | | RSEs for total energy consumption | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Electricity | | | | |
| | Number of buildings | Total floorspace | Sum of major fuels | Primary | Site | Natural gas | Fuel oil | District heat |
| **All buildings** | 5.4 | 4.6 | 4.4 | 4.5 | 4.5 | 5.3 | 11.1 | 16.1 |
| **Lighting equipment types (more than one may apply)** | | | | | | | | |
| Incandescent | 4.6 | 4.2 | 5.1 | 5.1 | 5.1 | 6.0 | 13.4 | 16.7 |
| Standard fluorescent | 5.4 | 4.6 | 4.5 | 4.4 | 4.4 | 5.5 | 9.9 | 16.3 |
| Compact fluorescent | 5.6 | 4.3 | 4.9 | 4.9 | 4.9 | 5.7 | 11.4 | 15.5 |
| High-intensity discharge (HID) | 7.4 | 5.0 | 6.5 | 6.1 | 6.1 | 8.3 | 14.0 | 17.7 |
| Halogen | 5.5 | 5.0 | 6.5 | 6.7 | 6.7 | 7.8 | 12.3 | 14.6 |
| LED | 7.4 | 5.2 | 6.2 | 6.2 | 6.2 | 7.7 | 15.5 | 14.8 |
| Other | 31.8 | 19.6 | 21.9 | 19.9 | 19.9 | 27.0 | 35.7 | 56.4 |
| **Refrigeration equipment (more than one may apply)** | | | | | | | | |
| Any refrigeration | 5.1 | 4.2 | 4.4 | 4.4 | 4.4 | 5.3 | 10.2 | 15.7 |
| Walk-in units | 4.8 | 4.4 | 5.6 | 5.2 | 5.2 | 6.9 | 12.5 | 18.4 |
| Cases or cabinets | 4.7 | 4.8 | 6.0 | 5.9 | 5.9 | 7.3 | 13.8 | 17.7 |
| Large cold storage areas | 10.9 | 10.3 | 10.1 | 10.5 | 10.5 | 13.4 | 29.1 | 28.7 |
| Commercial ice makers | 5.5 | 4.4 | 5.6 | 5.5 | 5.5 | 6.5 | 13.1 | 17.3 |
| Residential-type or compact units | 5.6 | 4.6 | 4.6 | 4.7 | 4.7 | 5.3 | 9.5 | 16.6 |
| Vending machines | 5.7 | 4.7 | 5.4 | 5.4 | 5.4 | 6.7 | 12.4 | 15.8 |
| No refrigeration | 7.2 | 8.8 | 10.3 | 11.5 | 11.5 | 12.5 | 34.7 | 47.2 |
| **Office equipment (more than one may apply)** | | | | | | | | |
| Desktop computers | 5.6 | 4.7 | 4.5 | 4.6 | 4.6 | 5.4 | 10.5 | 16.2 |
| With flat screen monitors | 5.8 | 4.7 | 4.5 | 4.6 | 4.6 | 5.4 | 10.5 | 16.3 |
| With multiple monitors | 7.4 | 5.3 | 5.8 | 5.2 | 5.2 | 7.7 | 9.8 | 17.4 |
| Laptop computers | 5.9 | 4.6 | 4.8 | 4.8 | 4.8 | 5.9 | 11.1 | 15.3 |
| Dedicated servers | 6.8 | 4.9 | 5.0 | 5.0 | 5.0 | 6.0 | 9.1 | 17.2 |
| Laser printers | 5.7 | 4.8 | 5.2 | 5.1 | 5.1 | 6.2 | 9.5 | 18.6 |
| Inkjet printers | 6.7 | 5.5 | 5.0 | 5.5 | 5.5 | 6.0 | 15.7 | 16.4 |
| FAX machines | 5.8 | 4.6 | 4.6 | 4.8 | 4.8 | 5.6 | 10.5 | 14.8 |
| Photocopiers | 6.4 | 4.7 | 5.0 | 5.1 | 5.1 | 6.0 | 10.5 | 16.5 |
| **Number of desktop computers** | | | | | | | | |
| None | 7.4 | 8.1 | 9.7 | 11.4 | 11.4 | 11.1 | 34.7 | 52.5 |
| 1 to 4 | 5.2 | 5.9 | 4.9 | 4.9 | 4.9 | 6.3 | 18.6 | 52.7 |
| 5 to 9 | 8.5 | 8.5 | 8.8 | 8.8 | 8.8 | 10.8 | 24.7 | 42.8 |
| 10 to 19 | 8.8 | 8.6 | 8.1 | 8.4 | 8.4 | 10.5 | 24.3 | 52.3 |
| 20 to 49 | 8.4 | 7.5 | 8.1 | 9.5 | 9.5 | 8.3 | 17.9 | 45.8 |
| 50 to 99 | 8.8 | 8.0 | 9.2 | 9.2 | 9.2 | 12.6 | 29.1 | 39.8 |
| 100 to 249 | 8.0 | 7.0 | 12.0 | 9.5 | 9.5 | 16.3 | 28.4 | 26.0 |
| 250 or more | 7.4 | 6.5 | 6.5 | 6.3 | 6.3 | 9.0 | 10.8 | 19.9 |

## RSEs for Table C1. Total energy consumption by major fuel, 2012 - PUBLIC USE DATA VERSION

| | RSEs for all buildings | | | RSEs for total energy consumption | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Electricity | | | | |
| | Number of buildings | Total floorspace | Sum of major fuels | Primary | Site | Natural gas | Fuel oil | District heat |
| **All buildings** | 5.4 | 4.6 | 4.4 | 4.5 | 4.5 | 5.3 | 11.1 | 16.1 |
| **Number of laptop computers** | | | | | | | | |
| None | 5.8 | 5.9 | 5.4 | 5.9 | 5.9 | 6.7 | 20.5 | 49.5 |
| 1 to 4 | 6.2 | 6.1 | 5.6 | 6.1 | 6.1 | 6.6 | 20.6 | 43.3 |
| 5 to 9 | 8.9 | 8.6 | 12.8 | 10.2 | 10.2 | 14.3 | 24.8 | 78.6 |
| 10 to 19 | 8.8 | 8.8 | 11.8 | 11.8 | 11.8 | 13.8 | 28.3 | 33.4 |
| 20 to 49 | 8.9 | 7.5 | 10.0 | 8.3 | 8.3 | 15.5 | 16.0 | 30.4 |
| 50 to 99 | 10.5 | 8.4 | 9.8 | 9.8 | 9.8 | 12.6 | 27.4 | 21.5 |
| 100 to 249 | 10.8 | 8.7 | 9.8 | 8.9 | 8.9 | 14.5 | 29.2 | 31.6 |
| 250 or more | 12.6 | 9.0 | 8.0 | 8.9 | 8.9 | 11.1 | 20.2 | 14.6 |
| **Number of dedicated servers** | | | | | | | | |
| None | 5.6 | 5.6 | 5.5 | 5.3 | 5.3 | 7.3 | 20.9 | 29.9 |
| 1 to 4 | 7.0 | 5.9 | 6.5 | 6.6 | 6.6 | 6.8 | 14.2 | 35.3 |
| 5 to 9 | 9.8 | 8.5 | 9.2 | 8.4 | 8.4 | 12.4 | 22.3 | 32.8 |
| 10 to 19 | 14.1 | 9.3 | 13.7 | 10.1 | 10.1 | 25.0 | 20.6 | 37.8 |
| 20 to 49 | 15.5 | 8.9 | 8.5 | 8.8 | 8.8 | 11.8 | 23.4 | 28.2 |
| 50 or more | 15.0 | 12.3 | 12.4 | 12.7 | 12.7 | 16.0 | 29.5 | 32.3 |
| **Number of photocopiers** | | | | | | | | |
| None | 5.6 | 5.8 | 4.9 | 5.1 | 5.1 | 6.3 | 20.4 | 27.8 |
| One | 7.2 | 7.7 | 7.4 | 8.0 | 8.0 | 8.4 | 16.6 | 53.1 |
| 2 to 4 | 7.0 | 5.6 | 7.1 | 7.5 | 7.5 | 8.3 | 17.4 | 39.0 |
| 5 to 9 | 8.3 | 6.8 | 12.3 | 10.7 | 10.7 | 13.7 | 18.3 | 48.4 |
| 10 or more | 9.5 | 6.6 | 7.9 | 6.9 | 6.9 | 11.7 | 19.2 | 17.7 |
| **Number of TVs or video displays** | | | | | | | | |
| None | 6.1 | 6.6 | 4.7 | 5.1 | 5.1 | 6.6 | 20.8 | 24.8 |
| One | 6.5 | 6.4 | 7.3 | 7.1 | 7.1 | 9.0 | 23.4 | 51.7 |
| 2 to 4 | 6.5 | 5.9 | 7.2 | 7.5 | 7.5 | 9.2 | 28.0 | 30.9 |
| 5 to 9 | 7.9 | 7.6 | 8.6 | 9.5 | 9.5 | 9.5 | 31.8 | 50.0 |
| 10 to 19 | 10.0 | 8.2 | 12.9 | 10.5 | 10.5 | 16.1 | 25.1 | 37.7 |
| 20 to 49 | 9.8 | 7.8 | 8.8 | 9.4 | 9.4 | 10.2 | 27.0 | 26.8 |
| 50 to 99 | 13.7 | 13.9 | 14.8 | 14.2 | 14.2 | 14.9 | 28.7 | 44.8 |
| 100 or more | 11.3 | 8.0 | 8.9 | 8.0 | 8.0 | 11.2 | 15.0 | 17.4 |
| **Food preparation or serving areas in non-food service buildings (more than one may apply)** | | | | | | | | |
| Snack bar or concession stand | 8.9 | 6.6 | 8.8 | 7.9 | 7.9 | 12.2 | 14.8 | 19.8 |
| Fast food or small restaurant | 8.1 | 7.3 | 8.0 | 7.1 | 7.1 | 11.8 | 23.9 | 21.7 |
| Cafeteria or large restaurant | 6.6 | 5.2 | 8.1 | 6.7 | 6.7 | 9.9 | 14.8 | 23.5 |
| Commercial kitchen/ food preparation area | 7.1 | 5.3 | 7.4 | 6.7 | 6.7 | 8.5 | 13.5 | 25.1 |
| Small kitchen area | 6.4 | 5.6 | 7.0 | 6.3 | 6.3 | 9.4 | 18.4 | 20.2 |

## RSEs for Table C1. Total energy consumption by major fuel, 2012 - PUBLIC USE DATA VERSION

| | RSEs for all buildings | | | RSEs for total energy consumption | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Electricity | | | | |
| | Number of buildings | Total floorspace | Sum of major fuels | Primary | Site | Natural gas | Fuel oil | District heat |
| **All buildings** | 5.4 | 4.6 | 4.4 | 4.5 | 4.5 | 5.3 | 11.1 | 16.1 |
| **Separate computer areas (more than one may apply)** | | | | | | | | |
| Data center or server farm | 9.6 | 6.5 | 8.0 | 7.1 | 7.1 | 11.5 | 16.6 | 23.5 |
| Computer-based training room | 6.8 | 5.7 | 6.3 | 6.2 | 6.2 | 8.4 | 17.1 | 20.9 |
| Student or public computer center | 7.2 | 5.9 | 8.6 | 7.7 | 7.7 | 11.0 | 21.0 | 24.6 |
| **HVAC conservation features (more than one may apply)** | | | | | | | | |
| Economizer cycle | 6.2 | 5.0 | 6.2 | 5.8 | 5.8 | 7.6 | 14.7 | 16.3 |
| Regular HVAC maintenance | 5.3 | 4.7 | 4.7 | 4.8 | 4.8 | 5.6 | 10.6 | 14.8 |
| Building automation system (BAS)[1] | 7.3 | 5.0 | 5.6 | 5.7 | 5.7 | 7.0 | 11.5 | 15.7 |
| **Window and interior lighting features (more than one may apply)** | | | | | | | | |
| Multipaned windows | 5.1 | 4.7 | 5.1 | 5.2 | 5.2 | 6.1 | 11.5 | 15.5 |
| Tinted window glass | 7.8 | 6.1 | 5.8 | 5.8 | 5.8 | 6.6 | 13.3 | 18.2 |
| Reflective window glass | 8.3 | 6.5 | 8.4 | 8.2 | 8.2 | 10.9 | 16.6 | 21.5 |
| External overhangs or awnings | 5.3 | 5.3 | 6.0 | 5.6 | 5.6 | 7.5 | 14.3 | 24.2 |
| Skylights or atriums | 10.1 | 6.2 | 7.7 | 6.7 | 6.7 | 9.4 | 15.5 | 23.7 |
| Light scheduling | 6.2 | 5.4 | 6.2 | 6.3 | 6.3 | 7.7 | 13.6 | 15.9 |
| Occupancy sensors | 8.5 | 5.0 | 5.2 | 5.0 | 5.0 | 7.0 | 10.6 | 17.6 |
| Multi-level lighting or dimming | 5.9 | 5.7 | 7.9 | 7.7 | 7.7 | 9.8 | 22.8 | 18.9 |
| Daylight harvesting | 11.3 | 8.2 | 8.8 | 9.0 | 9.0 | 12.4 | 35.8 | 23.0 |
| Demand responsive lighting | 19.9 | 15.8 | 15.2 | 16.6 | 16.6 | 14.4 | 51.2 | 32.7 |
| Building automation system (BAS) for lighting[1] | 9.9 | 7.6 | 8.3 | 8.6 | 8.6 | 10.5 | 19.2 | 18.5 |
| **Equipment usage reduced when building not in full use (more than one may apply)** | | | | | | | | |
| Heating | 5.4 | 4.8 | 4.6 | 4.9 | 4.9 | 5.3 | 11.6 | 16.2 |
| Cooling | 5.7 | 4.9 | 4.9 | 5.1 | 5.1 | 5.6 | 12.6 | 19.0 |
| Lighting | 5.4 | 4.7 | 4.7 | 4.8 | 4.8 | 5.5 | 11.0 | 16.6 |

## RSEs for Table C4. Sum of major fuel consumption and expenditure gross energy intensities, 2012 - PUBLIC USE VERSION

| | RSEs for sum of major fuel consumption | | | | | | RSEs for sum of major fuel expenditures | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | RSEs not available for percentiles | | | | | |
| | per building | per square foot | per worker | 25th per-centile | Median | 75th per-centile | per building | per square foot | per million Btu |
| **All buildings** | 4.7 | 2.6 | 2.9 | P | P | P | 4.8 | 2.4 | 1.6 |
| **Building floorspace (square feet)** | | | | | | | | | |
| 1,001 to 5,000 | 4.0 | 3.8 | 3.7 | P | P | P | 4.3 | 4.1 | 1.8 |
| 5,001 to 10,000 | 5.8 | 5.7 | 6.7 | P | P | P | 5.4 | 5.1 | 3.9 |
| 10,001 to 25,000 | 5.1 | 5.6 | 9.1 | P | P | P | 5.0 | 5.8 | 2.4 |
| 25,001 to 50,000 | 5.2 | 5.1 | 6.7 | P | P | P | 4.7 | 4.4 | 3.0 |
| 50,001 to 100,000 | 5.4 | 5.1 | 4.9 | P | P | P | 5.1 | 4.6 | 2.5 |
| 100,001 to 200,000 | 7.9 | 7.4 | 6.5 | P | P | P | 6.5 | 6.0 | 3.0 |
| 200,001 to 500,000 | 4.6 | 4.6 | 5.8 | P | P | P | 4.9 | 5.0 | 2.8 |
| Over 500,000 | 8.9 | 7.5 | 9.3 | P | P | P | 7.0 | 5.8 | 3.8 |
| **Principal building activity** | | | | | | | | | |
| Education | 8.6 | 4.4 | 11.4 | P | P | P | 7.9 | 4.0 | 2.3 |
| Food sales | 11.7 | 6.4 | 7.7 | P | P | P | 11.4 | 5.0 | 4.7 |
| Food service | 5.8 | 9.4 | 5.6 | P | P | P | 6.2 | 9.2 | 3.5 |
| Health care | 11.9 | 3.6 | 4.0 | P | P | P | 11.7 | 3.8 | 1.7 |
| Inpatient | 14.8 | 2.9 | 3.0 | P | P | P | 14.5 | 3.5 | 2.0 |
| Outpatient | 14.8 | 6.8 | 9.5 | P | P | P | 13.2 | 6.2 | 4.2 |
| Lodging | 13.3 | 9.2 | 12.3 | P | P | P | 11.7 | 7.3 | 4.4 |
| Mercantile | 9.0 | 3.5 | 4.0 | P | P | P | 10.0 | 4.1 | 2.7 |
| Retail (other than mall) | 8.7 | 4.4 | 6.2 | P | P | P | 9.4 | 4.7 | 3.9 |
| Enclosed and strip malls | 9.2 | 3.8 | 4.0 | P | P | P | 10.8 | 4.7 | 3.2 |
| Office | 9.8 | 5.8 | 5.4 | P | P | P | 8.5 | 4.4 | 2.7 |
| Public assembly | 10.9 | 5.5 | 7.4 | P | P | P | 10.7 | 6.4 | 4.0 |
| Public order and safety | 20.2 | 10.7 | 11.7 | P | P | P | 22.2 | 14.5 | 7.1 |
| Religious worship | 8.6 | 6.7 | 8.2 | P | P | P | 8.1 | 5.3 | 4.2 |
| Service | 8.5 | 7.7 | 8.2 | P | P | P | 8.3 | 5.9 | 4.2 |
| Warehouse and storage | 12.7 | 9.0 | 13.1 | P | P | P | 12.5 | 6.5 | 5.3 |
| Other | 20.3 | 16.5 | 15.6 | P | P | P | 19.9 | 16.6 | 6.3 |
| Vacant | 18.7 | 17.6 | 12.7 | P | P | P | 49.2 | 30.0 | 6.8 |
| **Year constructed** | | | | | | | | | |
| Before 1920 | 12.2 | 8.3 | 7.8 | P | P | P | 13.5 | 9.4 | 4.4 |
| 1920 to 1945 | 8.0 | 6.3 | 6.9 | P | P | P | 8.7 | 7.9 | 3.8 |
| 1946 to 1959 | 7.9 | 5.5 | 6.0 | P | P | P | 8.9 | 6.5 | 3.1 |
| 1960 to 1969 | 7.8 | 5.0 | 6.8 | P | P | P | 7.7 | 4.8 | 2.8 |
| 1970 to 1979 | 10.4 | 7.4 | 5.1 | P | P | P | 10.0 | 6.5 | 2.2 |
| 1980 to 1989 | 7.7 | 5.3 | 6.0 | P | P | P | 7.6 | 4.2 | 2.9 |
| 1990 to 1999 | 7.2 | 4.0 | 9.9 | P | P | P | 7.0 | 3.7 | 2.1 |
| 2000 to 2003 | 10.6 | 5.3 | 7.7 | P | P | P | 9.9 | 4.7 | 2.4 |
| 2004 to 2007 | 14.6 | 12.3 | 11.8 | P | P | P | 12.4 | 8.1 | 6.0 |
| 2008 to 2012 | 15.4 | 7.8 | 9.2 | P | P | P | 17.3 | 9.2 | 4.5 |

## RSEs for Table C4. Sum of major fuel consumption and expenditure gross energy intensities, 2012 - PUBLIC USE VERSION

| | RSEs for sum of major fuel consumption | | | | | | RSEs for sum of major fuel expenditures | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | RSEs not available for percentiles | | | | | |
| | per building | per square foot | per worker | 25th per-centile | Median | 75th per-centile | per building | per square foot | per million Btu |
| **All buildings** | 4.7 | 2.6 | 2.9 | P | P | P | 4.8 | 2.4 | 1.6 |
| **Census region and division** | | | | | | | | | |
| Northeast | 11.9 | 5.5 | 4.9 | P | P | P | 10.5 | 4.9 | 3.6 |
| New England | 28.0 | 13.3 | 10.2 | P | P | P | 26.6 | 12.7 | 3.3 |
| Middle Atlantic | 10.7 | 5.8 | 5.6 | P | P | P | 8.5 | 5.1 | 4.6 |
| Midwest | 7.7 | 4.5 | 4.8 | P | P | P | 8.7 | 4.6 | 2.0 |
| East North Central | 10.3 | 4.8 | 6.2 | P | P | P | 12.1 | 5.5 | 2.5 |
| West North Central | 10.5 | 9.6 | 7.3 | P | P | P | 9.1 | 8.4 | 3.5 |
| South | 6.6 | 3.7 | 2.7 | P | P | P | 7.6 | 4.2 | 2.3 |
| South Atlantic | 9.6 | 4.2 | 4.1 | P | P | P | 9.7 | 4.0 | 1.9 |
| East South Central | 11.1 | 8.4 | 7.8 | P | P | P | 9.1 | 10.6 | 4.4 |
| West South Central | 11.3 | 8.3 | 3.0 | P | P | P | 14.6 | 9.7 | 4.9 |
| West | 12.9 | 7.2 | 10.2 | P | P | P | 12.3 | 5.5 | 4.6 |
| Mountain | 21.2 | 10.7 | 11.6 | P | P | P | 19.4 | 7.9 | 5.1 |
| Pacific | 15.2 | 8.3 | 12.4 | P | P | P | 15.0 | 6.8 | 4.4 |
| **Number of floors** | | | | | | | | | |
| One | 5.7 | 4.0 | 5.0 | P | P | P | 6.3 | 3.8 | 2.4 |
| Two | 7.4 | 5.5 | 4.7 | P | P | P | 6.5 | 4.3 | 2.4 |
| Three | 9.9 | 5.5 | 5.3 | P | P | P | 9.2 | 5.4 | 3.2 |
| Four to nine | 8.4 | 4.1 | 5.9 | P | P | P | 8.3 | 4.0 | 2.1 |
| Ten or more | 11.6 | 8.8 | 11.3 | P | P | P | 8.6 | 6.1 | 5.1 |
| **Elevators and escalators (more than one may apply)** | | | | | | | | | |
| Any elevators | 5.2 | 3.1 | 3.8 | P | P | P | 5.0 | 2.6 | 1.6 |
| Number of elevators | | | | | | | | | |
| One | 9.5 | 7.6 | 5.1 | P | P | P | 8.5 | 6.3 | 2.3 |
| Two to five | 6.4 | 4.0 | 6.8 | P | P | P | 5.7 | 3.5 | 2.1 |
| Six or more | 6.6 | 5.3 | 6.8 | P | P | P | 5.6 | 4.7 | 3.2 |
| Any escalators | 26.1 | 13.1 | 16.1 | P | P | P | 23.5 | 9.0 | 6.3 |
| **Number of workers (main shift)** | | | | | | | | | |
| Fewer than 5 | 4.4 | 4.8 | 4.4 | P | P | P | 4.6 | 5.5 | 2.1 |
| 5 to 9 | 5.2 | 4.9 | 5.1 | P | P | P | 5.1 | 4.8 | 2.9 |
| 10 to 19 | 6.4 | 6.5 | 6.2 | P | P | P | 5.1 | 5.1 | 3.4 |
| 20 to 49 | 5.9 | 4.7 | 6.1 | P | P | P | 5.2 | 4.0 | 2.6 |
| 50 to 99 | 4.7 | 4.3 | 4.7 | P | P | P | 4.4 | 4.2 | 2.1 |
| 100 to 249 | 6.8 | 4.3 | 7.3 | P | P | P | 5.2 | 3.7 | 2.7 |
| 250 or more | 6.5 | 5.3 | 6.6 | P | P | P | 5.9 | 3.9 | 3.2 |

## RSEs for Table C4. Sum of major fuel consumption and expenditure gross energy intensities, 2012 - PUBLIC USE VERSION

| | RSEs for sum of major fuel consumption | | | | | | RSEs for sum of major fuel expenditures | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | RSEs not available for percentiles | | | | | |
| | per building | per square foot | per worker | 25th per-centile | Median | 75th per-centile | per building | per square foot | per million Btu |
| **All buildings** | 4.7 | 2.6 | 2.9 | P | P | P | 4.8 | 2.4 | 1.6 |
| **Weekly operating hours** | | | | | | | | | |
| Fewer than 40 | 6.9 | 6.9 | 6.2 | P | P | P | 9.1 | 8.5 | 3.9 |
| 40 to 48 | 6.5 | 5.3 | 5.5 | P | P | P | 5.4 | 4.1 | 3.2 |
| 49 to 60 | 6.4 | 4.0 | 4.7 | P | P | P | 5.9 | 3.6 | 2.0 |
| 61 to 84 | 6.4 | 3.7 | 4.9 | P | P | P | 6.4 | 3.8 | 2.3 |
| 85 to 167 | 7.2 | 6.1 | 4.9 | P | P | P | 6.7 | 5.5 | 2.1 |
| Open continuously | 7.9 | 3.9 | 4.8 | P | P | P | 8.0 | 3.6 | 2.1 |
| **Party responsible for operation and maintenance of energy systems** | | | | | | | | | |
| Building owner | 4.6 | 2.6 | 3.0 | P | P | P | 4.6 | 2.3 | 1.5 |
| Business owner or tenant | 9.7 | 6.6 | 7.0 | P | P | P | 10.0 | 6.5 | 2.4 |
| Property management | 17.8 | 11.3 | 14.6 | P | P | P | 21.3 | 12.2 | 9.8 |
| Other | 19.0 | 13.3 | 18.0 | P | P | P | 18.8 | 11.7 | 5.3 |
| **Provider of direct input on energy-related equipment purchases** | | | | | | | | | |
| Building owner | 4.6 | 2.7 | 3.1 | P | P | P | 4.6 | 2.3 | 1.6 |
| Business owner or tenant | 10.9 | 7.3 | 7.4 | P | P | P | 10.8 | 7.2 | 2.3 |
| Property management | 23.9 | 9.9 | 18.9 | P | P | P | 27.1 | 14.2 | 14.7 |
| Other | 15.8 | 10.8 | 14.2 | P | P | P | 15.3 | 9.8 | 3.8 |
| **Number of establishments** | | | | | | | | | |
| One | 5.1 | 3.3 | 3.9 | P | P | P | 4.9 | 2.9 | 1.8 |
| 2 to 5 | 6.4 | 4.2 | 5.1 | P | P | P | 6.3 | 3.9 | 2.3 |
| 6 to 10 | 10.9 | 5.9 | 7.3 | P | P | P | 10.1 | 4.7 | 2.7 |
| 11 to 20 | 13.8 | 5.3 | 8.6 | P | P | P | 14.9 | 6.1 | 4.4 |
| More than 20 | 27.3 | 6.7 | 8.5 | P | P | P | 21.0 | 5.7 | 4.4 |
| Currently unoccupied | 23.8 | 24.9 | 0.0 | P | P | P | 73.1 | 52.3 | 10.0 |
| **Predominant exterior wall material** | | | | | | | | | |
| Brick, stone, or stucco | 4.3 | 2.8 | 2.9 | P | P | P | 4.5 | 3.2 | 1.7 |
| Concrete (block or poured) | 7.9 | 5.2 | 4.7 | P | P | P | 7.4 | 3.8 | 2.6 |
| Concrete panels | 20.8 | 10.1 | 11.1 | P | P | P | 19.3 | 6.5 | 4.8 |
| Siding or shingles | 11.5 | 8.7 | 9.2 | P | P | P | 11.1 | 8.1 | 3.3 |
| Metal panels | 10.1 | 6.8 | 9.5 | P | P | P | 11.0 | 7.0 | 3.6 |
| Window glass | 26.1 | 15.1 | 18.1 | P | P | P | 23.1 | 11.0 | 5.7 |
| Other | 34.4 | 23.9 | 23.0 | P | P | P | 32.8 | 22.8 | 8.7 |
| No one major type | 24.8 | 12.1 | 131.1 | P | P | P | 24.8 | 12.9 | 5.9 |

## RSEs for Table C4. Sum of major fuel consumption and expenditure gross energy intensities, 2012 - PUBLIC USE VERSION

| | RSEs for sum of major fuel consumption | | | | | | RSEs for sum of major fuel expenditures | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | RSEs not available for percentiles | | | | | |
| | per building | per square foot | per worker | 25th per-centile | Median | 75th per-centile | per building | per square foot | per million Btu |
| **All buildings** | 4.7 | 2.6 | 2.9 | P | P | P | 4.8 | 2.4 | 1.6 |
| **Predominant roof material** | | | | | | | | | |
| Metal surfacing | 8.3 | 5.3 | 5.5 | P | P | P | 8.5 | 5.0 | 2.9 |
| Synthetic or rubber | 6.1 | 3.6 | 4.2 | P | P | P | 6.0 | 3.5 | 1.7 |
| Built-up | 8.0 | 4.5 | 3.9 | P | P | P | 7.5 | 3.5 | 2.2 |
| Slate or tile shingles | 13.7 | 7.2 | 10.3 | P | P | P | 12.1 | 8.0 | 6.2 |
| Wooden materials (including shingles) | 16.7 | 15.5 | 13.6 | P | P | P | 13.4 | 11.9 | 6.7 |
| Asphalt, fiberglass, or other shingles | 6.1 | 4.1 | 8.4 | P | P | P | 6.2 | 3.7 | 2.5 |
| Concrete | 16.9 | 10.9 | 10.4 | P | P | P | 16.6 | 11.1 | 4.4 |
| Other | 31.2 | 10.0 | 17.6 | P | P | P | 33.4 | 12.0 | 7.2 |
| No one major type | 28.0 | 25.1 | 16.2 | P | P | P | 27.4 | 25.8 | 7.8 |
| **Roof characteristics** | | | | | | | | | |
| Roof tilt | | | | | | | | | |
| Flat | 6.3 | 3.3 | 3.8 | P | P | P | 5.9 | 2.6 | 1.7 |
| Shallow pitch | 7.5 | 4.7 | 5.0 | P | P | P | 7.8 | 4.2 | 2.6 |
| Steeper pitch | 6.4 | 4.7 | 5.6 | P | P | P | 6.4 | 4.5 | 2.8 |
| Cool roof | 8.0 | 4.3 | 4.8 | P | P | P | 7.6 | 3.6 | 2.6 |
| **Renovations in buildings constructed before 2008 (more than one may apply)** | | | | | | | | | |
| Any type of renovation | 5.4 | 3.2 | 3.4 | P | P | P | 5.0 | 2.9 | 1.8 |
| Addition or annex | 8.9 | 4.9 | 6.4 | P | P | P | 8.1 | 4.3 | 2.2 |
| Reduction in floorspace | 35.4 | 15.1 | 8.1 | P | P | P | 31.5 | 9.2 | 8.8 |
| Roof replacement | 7.6 | 5.0 | 4.4 | P | P | P | 7.2 | 4.5 | 1.8 |
| Exterior wall replacement | 12.1 | 8.3 | 8.8 | P | P | P | 11.5 | 7.0 | 3.3 |
| Interior wall reconfiguration | 6.8 | 3.8 | 4.6 | P | P | P | 6.5 | 3.6 | 2.0 |
| Window replacement | 8.6 | 6.0 | 6.5 | P | P | P | 7.7 | 5.0 | 2.5 |
| HVAC equipment upgrade | 6.7 | 4.2 | 3.7 | P | P | P | 6.3 | 3.7 | 2.0 |
| Lighting upgrade | 6.1 | 3.4 | 4.5 | P | P | P | 5.6 | 3.2 | 1.9 |
| Electrical upgrade | 7.8 | 5.0 | 5.6 | P | P | P | 7.5 | 4.4 | 2.3 |
| Plumbing system upgrade | 8.2 | 5.6 | 6.4 | P | P | P | 7.9 | 5.0 | 2.7 |
| Insulation upgrade | 11.7 | 8.2 | 8.3 | P | P | P | 10.1 | 6.5 | 3.1 |
| Fire, safety, or security upgrade | 7.0 | 3.7 | 4.5 | P | P | P | 7.0 | 3.6 | 1.9 |
| Structural upgrade | 19.1 | 13.7 | 15.2 | P | P | P | 16.4 | 10.5 | 4.9 |
| Other | 30.3 | 11.8 | 16.6 | P | P | P | 30.1 | 13.8 | 9.5 |
| No renovations | 5.3 | 3.8 | 4.3 | P | P | P | 5.5 | 3.0 | 2.3 |
| Buildings constructed 2008 or later | 15.4 | 7.8 | 9.2 | P | P | P | 17.3 | 9.2 | 4.5 |

## RSEs for Table C4. Sum of major fuel consumption and expenditure gross energy intensities, 2012 - PUBLIC USE VERSION

| | RSEs for sum of major fuel consumption | | | | | | RSEs for sum of major fuel expenditures | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | RSEs not available for percentiles | | | | | |
| | per building | per square foot | per worker | 25th per-centile | Median | 75th per-centile | per building | per square foot | per million Btu |
| **All buildings** | 4.7 | 2.6 | 2.9 | P | P | P | 4.8 | 2.4 | 1.6 |
| **Energy sources (more than one may apply)** | | | | | | | | | |
| Electricity | 4.7 | 2.6 | 2.9 | P | P | P | 4.5 | 2.3 | 1.6 |
| Natural gas | 4.7 | 2.5 | 3.1 | P | P | P | 4.9 | 2.6 | 1.5 |
| Fuel oil | 11.8 | 3.8 | 4.6 | P | P | P | 11.4 | 3.6 | 2.0 |
| District heat | 15.1 | 8.7 | 8.9 | P | P | P | 14.3 | 7.0 | 4.6 |
| District chilled water | 20.4 | 11.7 | 11.3 | P | P | P | 19.3 | 10.5 | 3.7 |
| Propane | 14.9 | 10.7 | 10.0 | P | P | P | 12.4 | 8.2 | 4.7 |
| Other | 17.7 | 8.5 | 12.2 | P | P | P | 16.9 | 7.1 | 4.0 |
| **Space-heating energy sources (more than one may apply)** | | | | | | | | | |
| Electricity | 5.0 | 2.5 | 3.8 | P | P | P | 4.8 | 2.3 | 1.7 |
| Natural gas | 4.6 | 2.5 | 3.3 | P | P | P | 5.2 | 3.0 | 1.6 |
| Fuel oil | 15.1 | 9.7 | 6.3 | P | P | P | 14.0 | 9.2 | 3.1 |
| District heat | 15.2 | 8.8 | 8.9 | P | P | P | 14.4 | 7.0 | 4.6 |
| Propane | 12.6 | 10.1 | 12.0 | P | P | P | 11.4 | 8.9 | 4.0 |
| Other | 24.9 | 14.8 | 18.0 | P | P | P | 26.3 | 15.4 | 5.4 |
| **Primary space-heating energy source** | | | | | | | | | |
| Electricity | 6.2 | 4.0 | 5.7 | P | P | P | 5.5 | 3.1 | 2.3 |
| Natural gas | 4.7 | 2.6 | 2.7 | P | P | P | 5.4 | 3.1 | 1.6 |
| Fuel oil | 15.0 | 14.6 | 9.3 | P | P | P | 14.2 | 14.2 | 2.5 |
| District heat | 15.3 | 8.8 | 9.0 | P | P | P | 14.5 | 7.1 | 4.7 |
| Propane | 14.7 | 12.2 | 14.1 | P | P | P | 12.2 | 10.3 | 4.9 |
| Other | 36.3 | 22.4 | 13.3 | P | P | P | 38.7 | 25.0 | 4.7 |
| **Cooling energy sources (more than one may apply)** | | | | | | | | | |
| Electricity | 4.5 | 2.5 | 3.1 | P | P | P | 4.4 | 2.4 | 1.5 |
| Natural gas | 34.1 | 11.6 | 11.4 | P | P | P | 32.9 | 12.6 | 6.7 |
| District chilled water | 20.4 | 11.7 | 11.3 | P | P | P | 19.3 | 10.5 | 3.7 |
| **Water-heating energy sources (more than one may apply)** | | | | | | | | | |
| Electricity | 5.5 | 3.0 | 3.4 | P | P | P | 5.3 | 2.5 | 1.7 |
| Natural gas | 5.0 | 2.7 | 3.9 | P | P | P | 5.3 | 3.1 | 1.7 |
| Fuel oil | 23.4 | 10.0 | 6.3 | P | P | P | 23.4 | 10.4 | 5.6 |
| District heat | 14.1 | 10.2 | 10.1 | P | P | P | 13.9 | 8.5 | 4.8 |
| Propane | 16.1 | 10.8 | 11.9 | P | P | P | 15.7 | 9.3 | 6.2 |
| **Cooking energy sources (more than one may apply)** | | | | | | | | | |
| Electricity | 5.6 | 2.4 | 3.1 | P | P | P | 5.9 | 2.7 | 1.5 |
| Natural gas | 5.4 | 3.0 | 3.6 | P | P | P | 5.3 | 3.2 | 2.0 |
| Propane | 19.3 | 11.1 | 7.4 | P | P | P | 19.9 | 11.1 | 4.5 |

## RSEs for Table C4. Sum of major fuel consumption and expenditure gross energy intensities, 2012 - PUBLIC USE VERSION

| | RSEs for sum of major fuel consumption | | | | | | RSEs for sum of major fuel expenditures | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | RSEs not available for percentiles | | | | | |
| | per building | per square foot | per worker | 25th per-centile | Median | 75th per-centile | per building | per square foot | per million Btu |
| **All buildings** | 4.7 | 2.6 | 2.9 | P | P | P | 4.8 | 2.4 | 1.6 |
| **Energy end uses (more than one may apply)** | | | | | | | | | |
| Buildings with space heating | 4.5 | 2.4 | 2.9 | P | P | P | 4.4 | 2.3 | 1.6 |
| Buildings with cooling | 4.7 | 2.5 | 3.0 | P | P | P | 4.4 | 2.2 | 1.6 |
| Buildings with water heating | 4.6 | 2.5 | 3.0 | P | P | P | 4.4 | 2.2 | 1.5 |
| Buildings with cooking | 5.3 | 2.6 | 2.8 | P | P | P | 5.2 | 2.7 | 1.6 |
| Buildings with manufacturing | 16.0 | 11.9 | 12.0 | P | P | P | 13.8 | 9.7 | 5.0 |
| Buildings with electricity generation | 6.8 | 2.8 | 4.4 | P | P | P | 6.5 | 2.8 | 1.8 |
| **Percent of floorspace heated** | | | | | | | | | |
| Not heated | 13.7 | 12.5 | 12.6 | P | P | P | 20.2 | 15.1 | 6.4 |
| 1 to 50 | 12.3 | 9.0 | 12.0 | P | P | P | 11.1 | 7.3 | 3.5 |
| 51 to 99 | 6.9 | 4.5 | 6.0 | P | P | P | 6.3 | 4.1 | 2.4 |
| 100 | 4.4 | 2.4 | 3.1 | P | P | P | 4.2 | 2.3 | 1.5 |
| **Percent of floorspace cooled** | | | | | | | | | |
| Not cooled | 9.8 | 9.5 | 7.7 | P | P | P | 13.1 | 13.5 | 4.3 |
| 1 to 50 | 8.3 | 5.8 | 7.7 | P | P | P | 6.9 | 4.5 | 3.1 |
| 51 to 99 | 5.9 | 3.5 | 4.3 | P | P | P | 5.8 | 3.3 | 2.1 |
| 100 | 4.9 | 3.0 | 3.7 | P | P | P | 4.6 | 2.8 | 1.8 |
| **Percent lit when open** | | | | | | | | | |
| Zero | 38.4 | 33.8 | 25.7 | P | P | P | 35.4 | 30.2 | 12.3 |
| 1 to 50 | 6.5 | 5.9 | 8.6 | P | P | P | 5.9 | 4.9 | 2.8 |
| 51 to 99 | 6.4 | 3.6 | 3.6 | P | P | P | 6.4 | 3.6 | 1.8 |
| 100 | 5.3 | 3.5 | 4.2 | P | P | P | 4.8 | 3.0 | 2.0 |
| Building never open/electricity not used | 21.1 | 20.1 | 1.1 | P | P | P | 60.2 | 51.3 | 11.4 |
| **Percent lit during off hours** | | | | | | | | | |
| Zero | 5.3 | 4.3 | 5.4 | P | P | P | 5.4 | 4.2 | 2.4 |
| 1 to 50 | 4.3 | 2.3 | 2.9 | P | P | P | 4.3 | 2.3 | 1.4 |
| 51 to 100 | 13.8 | 6.8 | 7.3 | P | P | P | 12.7 | 5.8 | 3.1 |
| Building always open with no "off hours" | 14.3 | 7.3 | 13.6 | P | P | P | 14.7 | 7.2 | 4.0 |
| Electricity not used | 0.0 | 0.0 | 0.0 | P | P | P | 0.0 | 0.0 | 0.0 |
| **Heating equipment (more than one may apply)** | | | | | | | | | |
| Heat pumps | 8.0 | 3.7 | 5.7 | P | P | P | 7.3 | 3.3 | 2.0 |
| Furnaces | 7.2 | 5.4 | 6.1 | P | P | P | 6.9 | 5.3 | 2.5 |
| Individual space heaters | 5.9 | 3.4 | 3.0 | P | P | P | 6.2 | 3.9 | 1.8 |
| District heat | 15.2 | 8.8 | 8.9 | P | P | P | 14.4 | 7.0 | 4.6 |
| Boilers | 6.6 | 3.1 | 3.5 | P | P | P | 6.6 | 3.5 | 1.5 |
| Packaged heating units | 4.8 | 2.8 | 3.9 | P | P | P | 4.9 | 2.7 | 1.8 |
| Other | 19.9 | 8.5 | 10.4 | P | P | P | 20.1 | 8.7 | 4.2 |

## RSEs for Table C4. Sum of major fuel consumption and expenditure gross energy intensities, 2012 - PUBLIC USE VERSION

| | RSEs for sum of major fuel consumption | | | | | | RSEs for sum of major fuel expenditures | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | RSEs not available for percentiles | | | | | |
| | per building | per square foot | per worker | 25th per-centile | Median | 75th per-centile | per building | per square foot | per million Btu |
| **All buildings** | 4.7 | 2.6 | 2.9 | P | P | P | 4.8 | 2.4 | 1.6 |
| **Cooling equipment (more than one may apply)** | | | | | | | | | |
| Residential-type central air conditioners | 5.9 | 4.6 | 5.1 | P | P | P | 6.1 | 4.6 | 3.1 |
| Heat pumps | 6.5 | 3.7 | 4.7 | P | P | P | 6.1 | 3.3 | 2.3 |
| Individual air conditioners | 6.9 | 4.0 | 5.1 | P | P | P | 6.7 | 4.0 | 2.0 |
| District chilled water | 20.4 | 11.7 | 11.3 | P | P | P | 19.3 | 10.5 | 3.7 |
| Central chillers | 6.6 | 2.8 | 4.3 | P | P | P | 7.1 | 3.1 | 1.9 |
| Packaged air conditioning units | 4.9 | 2.9 | 4.0 | P | P | P | 4.9 | 2.8 | 1.6 |
| Swamp coolers | 17.7 | 10.9 | 9.4 | P | P | P | 18.0 | 11.0 | 4.0 |
| Other | 78.7 | 22.4 | 26.3 | P | P | P | 79.0 | 27.4 | 10.5 |
| **Main equipment replaced since 1990 (more than one may apply)** | | | | | | | | | |
| Heating | 4.4 | 3.3 | 3.7 | P | P | P | 4.3 | 3.4 | 1.9 |
| Cooling | 4.6 | 3.0 | 3.5 | P | P | P | 4.4 | 2.9 | 1.8 |
| **Water-heating equipment** | | | | | | | | | |
| Centralized system | 5.0 | 3.0 | 3.0 | P | P | P | 4.6 | 2.5 | 1.7 |
| Distributed system | 7.8 | 5.2 | 5.6 | P | P | P | 6.7 | 4.0 | 2.9 |
| Combination of centralized and distributed system | 5.5 | 3.4 | 6.8 | P | P | P | 5.7 | 3.7 | 2.0 |
| **Lighting equipment types (more than one may apply)** | | | | | | | | | |
| Incandescent | 5.7 | 3.1 | 3.1 | P | P | P | 5.6 | 2.9 | 1.8 |
| Standard fluorescent | 4.7 | 2.6 | 3.0 | P | P | P | 4.5 | 2.3 | 1.6 |
| Compact fluorescent | 5.3 | 2.5 | 2.9 | P | P | P | 5.1 | 2.4 | 1.5 |
| High-intensity discharge (HID) | 7.9 | 4.0 | 3.9 | P | P | P | 7.4 | 3.3 | 2.2 |
| Halogen | 6.2 | 3.2 | 4.0 | P | P | P | 6.4 | 3.3 | 1.8 |
| LED | 6.4 | 3.5 | 4.4 | P | P | P | 6.0 | 3.1 | 2.1 |
| Other | 30.4 | 12.8 | 13.6 | P | P | P | 32.6 | 18.8 | 10.7 |
| **Refrigeration equipment (more than one may apply)** | | | | | | | | | |
| Any refrigeration | 4.8 | 2.4 | 2.4 | P | P | P | 4.6 | 2.2 | 1.5 |
| Walk-in units | 4.9 | 2.7 | 3.4 | P | P | P | 4.7 | 2.6 | 1.6 |
| Cases or cabinets | 5.6 | 2.9 | 3.7 | P | P | P | 5.4 | 2.6 | 1.7 |
| Large cold storage areas | 11.6 | 6.0 | 7.2 | P | P | P | 11.6 | 5.3 | 3.4 |
| Commercial ice makers | 5.3 | 2.9 | 3.1 | P | P | P | 5.3 | 2.8 | 1.7 |
| Residential-type or compact units | 5.2 | 2.6 | 2.7 | P | P | P | 5.1 | 2.3 | 1.7 |
| Vending machines | 5.0 | 2.6 | 3.0 | P | P | P | 4.7 | 2.5 | 1.8 |
| No refrigeration | 8.4 | 6.3 | 13.0 | P | P | P | 10.7 | 6.9 | 3.8 |

## RSEs for Table C4. Sum of major fuel consumption and expenditure gross energy intensities, 2012 - PUBLIC USE VERSION

| | RSEs for sum of major fuel consumption | | | | | | RSEs for sum of major fuel expenditures | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | RSEs not available for percentiles | | | | | |
| | per building | per square foot | per worker | 25th per-centile | Median | 75th per-centile | per building | per square foot | per million Btu |
| **All buildings** | 4.7 | 2.6 | 2.9 | P | P | P | 4.8 | 2.4 | 1.6 |
| **Office equipment (more than one may apply)** | | | | | | | | | |
| Desktop computers | 4.7 | 2.6 | 3.1 | P | P | P | 4.3 | 2.2 | 1.6 |
| With flat screen monitors | 4.8 | 2.6 | 3.1 | P | P | P | 4.4 | 2.2 | 1.6 |
| With multiple monitors | 6.9 | 3.4 | 3.7 | P | P | P | 6.3 | 2.7 | 2.0 |
| Laptop computers | 5.4 | 2.8 | 3.2 | P | P | P | 5.0 | 2.4 | 1.6 |
| Dedicated servers | 5.9 | 2.7 | 3.0 | P | P | P | 5.4 | 2.3 | 1.7 |
| Laser printers | 5.3 | 3.0 | 3.2 | P | P | P | 4.9 | 2.6 | 1.6 |
| Inkjet printers | 5.1 | 3.0 | 3.9 | P | P | P | 4.8 | 2.7 | 2.1 |
| FAX machines | 5.2 | 2.7 | 2.8 | P | P | P | 4.7 | 2.2 | 1.6 |
| Photocopiers | 5.8 | 2.7 | 3.5 | P | P | P | 5.4 | 2.4 | 1.6 |
| **Number of desktop computers** | | | | | | | | | |
| None | 8.3 | 8.4 | 6.2 | P | P | P | 11.8 | 11.7 | 3.3 |
| 1 to 4 | 4.6 | 5.1 | 5.4 | P | P | P | 3.9 | 4.6 | 2.2 |
| 5 to 9 | 8.4 | 6.7 | 14.9 | P | P | P | 7.6 | 5.7 | 2.8 |
| 10 to 19 | 7.3 | 5.4 | 6.2 | P | P | P | 6.8 | 4.8 | 2.6 |
| 20 to 49 | 6.3 | 4.3 | 5.4 | P | P | P | 5.9 | 4.1 | 2.9 |
| 50 to 99 | 7.4 | 4.6 | 6.6 | P | P | P | 6.7 | 4.0 | 3.1 |
| 100 to 249 | 10.4 | 8.2 | 7.8 | P | P | P | 8.5 | 6.3 | 2.9 |
| 250 or more | 6.1 | 3.8 | 4.9 | P | P | P | 6.5 | 3.7 | 2.5 |
| **Number of laptop computers** | | | | | | | | | |
| None | 5.1 | 4.0 | 4.1 | P | P | P | 6.5 | 4.2 | 2.6 |
| 1 to 4 | 5.1 | 4.7 | 4.7 | P | P | P | 4.3 | 4.1 | 2.5 |
| 5 to 9 | 13.4 | 9.7 | 6.5 | P | P | P | 11.6 | 7.4 | 3.5 |
| 10 to 19 | 7.9 | 5.9 | 5.3 | P | P | P | 8.3 | 6.4 | 2.6 |
| 20 to 49 | 9.5 | 6.3 | 9.2 | P | P | P | 7.9 | 4.6 | 3.0 |
| 50 to 99 | 9.8 | 6.6 | 14.2 | P | P | P | 9.7 | 6.1 | 3.3 |
| 100 to 249 | 11.0 | 5.9 | 8.5 | P | P | P | 10.1 | 4.9 | 4.1 |
| 250 or more | 9.6 | 5.0 | 6.0 | P | P | P | 9.7 | 5.1 | 3.1 |
| **Number of dedicated servers** | | | | | | | | | |
| None | 5.1 | 4.3 | 6.2 | P | P | P | 5.1 | 3.9 | 2.1 |
| 1 to 4 | 6.5 | 3.9 | 3.8 | P | P | P | 5.8 | 3.1 | 2.1 |
| 5 to 9 | 9.5 | 4.8 | 6.0 | P | P | P | 9.1 | 4.7 | 2.6 |
| 10 to 19 | 16.2 | 8.7 | 11.6 | P | P | P | 14.4 | 6.2 | 5.0 |
| 20 to 49 | 14.5 | 5.4 | 7.7 | P | P | P | 14.5 | 4.7 | 3.7 |
| 50 or more | 10.9 | 6.2 | 9.2 | P | P | P | 10.9 | 6.3 | 4.4 |
| **Number of photocopiers** | | | | | | | | | |
| None | 4.7 | 3.7 | 3.8 | P | P | P | 5.4 | 3.8 | 2.1 |
| One | 6.5 | 5.2 | 6.5 | P | P | P | 5.8 | 4.2 | 2.9 |
| 2 to 4 | 6.0 | 3.9 | 6.2 | P | P | P | 5.6 | 3.7 | 2.2 |
| 5 to 9 | 12.6 | 8.1 | 5.8 | P | P | P | 11.1 | 6.6 | 2.9 |
| 10 or more | 10.2 | 4.2 | 6.3 | P | P | P | 10.0 | 3.8 | 2.7 |

## RSEs for Table C4. Sum of major fuel consumption and expenditure gross energy intensities, 2012 - PUBLIC USE VERSION

| | RSEs for sum of major fuel consumption | | | | | | RSEs for sum of major fuel expenditures | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | RSEs not available for percentiles | | | | | |
| | per building | per square foot | per worker | 25th per-centile | Median | 75th per-centile | per building | per square foot | per million Btu |
| **All buildings** | 4.7 | 2.6 | 2.9 | P | P | P | 4.8 | 2.4 | 1.6 |
| **Number of TVs or video displays** | | | | | | | | | |
| None | 5.1 | 4.6 | 7.8 | P | P | P | 5.4 | 4.3 | 2.2 |
| One | 5.7 | 5.5 | 6.5 | P | P | P | 5.1 | 4.7 | 2.3 |
| 2 to 4 | 6.3 | 4.8 | 5.5 | P | P | P | 5.7 | 4.7 | 2.5 |
| 5 to 9 | 8.3 | 6.1 | 6.6 | P | P | P | 7.6 | 5.9 | 3.4 |
| 10 to 19 | 12.3 | 7.8 | 6.7 | P | P | P | 11.1 | 6.5 | 3.1 |
| 20 to 49 | 7.3 | 3.4 | 5.8 | P | P | P | 7.7 | 4.1 | 2.0 |
| 50 to 99 | 10.4 | 4.8 | 9.5 | P | P | P | 8.4 | 5.7 | 5.4 |
| 100 or more | 11.5 | 5.7 | 8.3 | P | P | P | 11.8 | 5.1 | 3.5 |
| **Food preparation or serving areas in non-food service buildings (more than one may apply)** | | | | | | | | | |
| Snack bar or concession stand | 9.8 | 5.6 | 7.0 | P | P | P | 9.7 | 4.7 | 3.0 |
| Fast food or small restaurant | 8.3 | 4.8 | 5.9 | P | P | P | 7.6 | 4.0 | 2.7 |
| Cafeteria or large restaurant | 7.9 | 5.0 | 4.9 | P | P | P | 7.3 | 4.0 | 2.2 |
| Commercial kitchen/ food preparation area | 7.8 | 4.4 | 4.3 | P | P | P | 7.4 | 4.1 | 2.4 |
| Small kitchen area | 8.3 | 5.3 | 5.9 | P | P | P | 7.5 | 4.4 | 2.6 |
| **Separate computer areas (more than one may apply)** | | | | | | | | | |
| Data center or server farm | 9.9 | 4.6 | 6.3 | P | P | P | 9.8 | 4.4 | 3.1 |
| Computer-based training room | 6.8 | 3.8 | 5.0 | P | P | P | 6.3 | 3.3 | 2.7 |
| Student or public computer center | 8.0 | 5.0 | 5.7 | P | P | P | 7.3 | 4.9 | 2.4 |
| **HVAC conservation features (more than one may apply)** | | | | | | | | | |
| Economizer cycle | 5.5 | 3.1 | 3.4 | P | P | P | 5.1 | 2.8 | 1.8 |
| Regular HVAC maintenance | 4.5 | 2.4 | 3.0 | P | P | P | 4.3 | 2.2 | 1.6 |
| Building automation system (BAS)[1] | 6.2 | 2.6 | 3.5 | P | P | P | 5.9 | 2.7 | 1.7 |
| **Window and interior lighting features (more than one may apply)** | | | | | | | | | |
| Multipaned windows | 4.7 | 2.6 | 2.6 | P | P | P | 4.7 | 2.5 | 1.5 |
| Tinted window glass | 6.8 | 3.9 | 4.1 | P | P | P | 6.2 | 3.0 | 1.9 |
| Reflective window glass | 9.4 | 4.7 | 5.6 | P | P | P | 8.9 | 4.2 | 2.3 |
| External overhangs or awnings | 5.8 | 3.4 | 3.6 | P | P | P | 5.6 | 2.9 | 1.9 |
| Skylights or atriums | 10.4 | 5.5 | 5.2 | P | P | P | 9.8 | 4.5 | 2.1 |
| Light scheduling | 6.4 | 3.0 | 4.9 | P | P | P | 6.5 | 3.0 | 1.9 |
| Occupancy sensors | 7.0 | 2.8 | 3.7 | P | P | P | 6.3 | 2.2 | 1.6 |
| Multi-level lighting or dimming | 7.7 | 4.4 | 5.1 | P | P | P | 7.6 | 4.2 | 2.2 |
| Daylight harvesting | 12.8 | 5.1 | 8.8 | P | P | P | 13.1 | 4.4 | 3.0 |
| Demand responsive lighting | 17.4 | 8.5 | 8.6 | P | P | P | 17.4 | 8.0 | 4.0 |
| Building automation system (BAS) for lighting[1] | 9.0 | 3.6 | 5.8 | P | P | P | 9.3 | 3.9 | 2.4 |

## RSEs for Table C4. Sum of major fuel consumption and expenditure gross energy intensities, 2012 - PUBLIC USE VERSION

| | RSEs for sum of major fuel consumption | | | | | | RSEs for sum of major fuel expenditures | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | RSEs not available for percentiles | | | | | |
| | per building | per square foot | per worker | 25th per-centile | Median | 75th per-centile | per building | per square foot | per million Btu |
| **All buildings** | 4.7 | 2.6 | 2.9 | P | P | P | 4.8 | 2.4 | 1.6 |
| **Equipment usage reduced when building not in full use (more than one may apply)** | | | | | | | | | |
| Heating | 5.1 | 2.7 | 3.0 | P | P | P | 4.8 | 2.5 | 1.7 |
| Cooling | 5.3 | 2.8 | 3.0 | P | P | P | 5.1 | 2.5 | 1.8 |
| Lighting | 4.8 | 2.6 | 3.0 | P | P | P | 4.5 | 2.4 | 1.5 |

## RSEs for Table C15. Electricity consumption and conditional energy intensity by Census region, 2012 - PUBLIC USE VERSION

| | RSEs for total electricity consumption | | | | RSEs for total floorspace of buildings using electricity | | | | RSEs for electricity energy intensity | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | North-east | Mid-west | South | West | North-east | Mid-west | South | West | North-east | Mid-west | South | West |
| **All buildings** | 8.3 | 7.0 | 8.0 | 11.8 | 7.0 | 5.6 | 8.0 | 14.5 | 5.2 | 4.0 | 4.5 | 5.5 |
| **Building floorspace (square feet)** | | | | | | | | | | | | |
| 1,001 to 5,000 | 16.2 | 14.5 | 7.4 | 10.9 | 12.8 | 11.1 | 7.6 | 11.4 | 9.0 | 9.0 | 6.5 | 6.7 |
| 5,001 to 10,000 | 17.0 | 12.3 | 11.3 | 21.7 | 7.4 | 11.4 | 9.6 | 26.8 | 15.5 | 8.2 | 8.1 | 13.7 |
| 10,001 to 25,000 | 13.3 | 20.2 | 9.9 | 15.1 | 13.8 | 13.0 | 11.0 | 19.9 | 14.0 | 16.8 | 8.0 | 10.7 |
| 25,001 to 50,000 | 18.5 | 14.9 | 13.2 | 15.2 | 14.9 | 9.7 | 15.2 | 18.8 | 16.2 | 11.4 | 8.8 | 8.1 |
| 50,001 to 100,000 | 15.2 | 16.1 | 16.0 | 13.0 | 13.1 | 13.5 | 14.1 | 15.5 | 9.7 | 6.6 | 7.3 | 9.8 |
| 100,001 to 200,000 | 27.8 | 15.0 | 14.0 | 21.3 | 17.3 | 11.6 | 11.7 | 18.0 | 13.4 | 8.6 | 8.1 | 8.0 |
| 200,001 to 500,000 | 14.3 | 12.0 | 16.4 | 25.2 | 12.8 | 11.9 | 11.7 | 17.2 | 9.6 | 6.2 | 11.4 | 12.9 |
| Over 500,000 | 12.4 | 14.8 | 17.9 | 29.5 | 9.4 | 19.5 | 19.1 | 18.7 | 8.2 | 8.4 | 11.7 | 16.4 |
| **Principal building activity** | | | | | | | | | | | | |
| Education | 17.8 | 11.2 | 12.3 | 14.0 | 14.0 | 7.6 | 11.2 | 18.4 | 16.9 | 8.2 | 4.2 | 7.8 |
| Food sales | 25.7 | 30.0 | 16.5 | 24.3 | 24.1 | 31.5 | 14.6 | 32.0 | 7.9 | 9.8 | 7.5 | 14.9 |
| Food service | 24.9 | 22.8 | 15.3 | 21.2 | 16.5 | 29.6 | 11.6 | 17.4 | 18.7 | 36.4 | 10.3 | 15.0 |
| Health care | 17.9 | 15.7 | 13.0 | 29.9 | 15.8 | 11.4 | 11.6 | 21.7 | 5.3 | 8.0 | 6.6 | 12.1 |
| Inpatient | 16.1 | 13.4 | 12.1 | 36.3 | 16.4 | 11.0 | 11.1 | 27.6 | 5.6 | 5.0 | 4.8 | 13.0 |
| Outpatient | 28.5 | 33.4 | 29.3 | 17.2 | 23.2 | 21.7 | 22.3 | 18.1 | 10.5 | 18.8 | 17.4 | 7.1 |
| Lodging | 17.1 | 16.4 | 14.3 | 28.7 | 14.2 | 18.0 | 15.1 | 17.8 | 8.1 | 5.7 | 7.6 | 19.2 |
| Mercantile | 17.7 | 13.4 | 19.3 | 17.6 | 14.5 | 12.3 | 16.1 | 16.6 | 7.8 | 6.1 | 5.4 | 5.6 |
| Retail (other than mall) | 18.9 | 11.9 | 18.2 | 22.1 | 17.4 | 14.0 | 14.4 | 19.2 | 9.7 | 10.6 | 8.5 | 9.2 |
| Enclosed and strip malls | 23.1 | 19.9 | 24.8 | 21.2 | 17.6 | 17.6 | 23.0 | 20.0 | 10.7 | 6.5 | 5.2 | 5.8 |
| Office | 18.5 | 12.6 | 11.1 | 10.0 | 11.0 | 12.9 | 11.7 | 12.7 | 11.8 | 3.6 | 4.4 | 6.8 |
| Public assembly | 21.6 | 23.4 | 16.3 | 16.9 | 15.1 | 18.5 | 17.9 | 18.2 | 17.5 | 18.2 | 9.5 | 12.3 |
| Public order and safety | 44.5 | 19.8 | 25.8 | 39.1 | 30.6 | 22.5 | 30.4 | 45.2 | 21.6 | 15.6 | 17.0 | 20.6 |
| Religious worship | 35.1 | 15.9 | 14.2 | 20.0 | 23.7 | 14.6 | 14.2 | 18.8 | 22.3 | 12.8 | 10.1 | 12.1 |
| Service | 24.7 | 14.6 | 12.4 | 29.5 | 21.2 | 14.5 | 13.7 | 31.3 | 18.7 | 11.6 | 9.3 | 15.0 |
| Warehouse and storage | 19.0 | 20.6 | 20.4 | 32.9 | 16.5 | 15.2 | 17.4 | 31.9 | 15.3 | 11.9 | 19.6 | 15.5 |
| Other | 43.0 | 42.2 | 30.9 | 39.3 | 40.4 | 29.5 | 29.1 | 28.4 | 40.3 | 40.3 | 25.3 | 32.8 |
| Vacant | 44.9 | 41.8 | 23.4 | 44.6 | 28.2 | 25.8 | 24.6 | 19.1 | 40.0 | 38.1 | 31.1 | 27.2 |
| **Year constructed** | | | | | | | | | | | | |
| Before 1920 | 18.8 | 14.5 | 25.3 | 33.9 | 22.5 | 15.5 | 23.5 | 25.5 | 16.3 | 16.5 | 14.3 | 16.1 |
| 1920 to 1945 | 10.9 | 18.7 | 17.1 | 36.9 | 12.6 | 15.3 | 17.6 | 20.3 | 13.3 | 13.6 | 14.1 | 23.8 |
| 1946 to 1959 | 18.5 | 16.7 | 16.1 | 10.6 | 14.3 | 12.5 | 17.8 | 11.8 | 12.4 | 7.1 | 10.8 | 9.8 |
| 1960 to 1969 | 17.4 | 14.1 | 15.4 | 16.4 | 13.5 | 11.1 | 12.6 | 16.8 | 10.4 | 9.9 | 11.1 | 11.1 |
| 1970 to 1979 | 25.3 | 10.3 | 7.7 | 15.2 | 14.6 | 8.8 | 9.8 | 22.5 | 13.9 | 6.5 | 8.9 | 11.9 |
| 1980 to 1989 | 18.2 | 14.4 | 12.6 | 16.0 | 12.7 | 13.0 | 8.5 | 19.0 | 17.2 | 9.0 | 7.9 | 7.5 |
| 1990 to 1999 | 14.1 | 12.8 | 8.3 | 12.0 | 15.9 | 13.2 | 7.7 | 11.9 | 9.9 | 6.9 | 4.9 | 9.5 |
| 2000 to 2003 | 22.1 | 21.2 | 12.8 | 15.6 | 17.7 | 14.9 | 12.9 | 16.2 | 15.9 | 13.3 | 6.1 | 11.6 |
| 2004 to 2007 | 24.8 | 16.8 | 25.5 | 32.5 | 19.3 | 22.2 | 21.6 | 39.1 | 16.9 | 16.2 | 8.3 | 21.9 |
| 2008 to 2012 | 24.7 | 28.6 | 40.2 | 50.9 | 21.5 | 22.8 | 32.5 | 33.3 | 13.7 | 19.1 | 12.3 | 25.5 |
| **Number of floors** | | | | | | | | | | | | |
| One | 12.9 | 9.6 | 11.1 | 16.7 | 12.6 | 9.2 | 10.6 | 20.0 | 12.3 | 5.9 | 6.2 | 7.0 |
| Two | 21.2 | 9.1 | 13.3 | 12.7 | 13.6 | 7.4 | 10.5 | 14.0 | 13.9 | 6.4 | 7.5 | 8.7 |
| Three | 18.6 | 18.6 | 13.5 | 19.2 | 10.6 | 11.8 | 13.7 | 17.0 | 15.7 | 12.1 | 7.7 | 9.6 |
| Four to nine | 10.7 | 9.8 | 14.6 | 19.8 | 10.7 | 9.9 | 16.4 | 18.6 | 7.8 | 6.6 | 6.5 | 10.9 |
| Ten or more | 14.4 | 14.1 | 19.3 | 35.7 | 10.9 | 19.1 | 22.2 | 23.8 | 6.3 | 6.9 | 5.3 | 16.5 |

## RSEs for Table C15. Electricity consumption and conditional energy intensity by Census region, 2012 - PUBLIC USE VERSION

| | RSEs for total electricity consumption | | | | RSEs for total floorspace of buildings using electricity | | | | RSEs for electricity energy intensity | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | North-east | Mid-west | South | West | North-east | Mid-west | South | West | North-east | Mid-west | South | West |
| **All buildings** | 8.3 | 7.0 | 8.0 | 11.8 | 7.0 | 5.6 | 8.0 | 14.5 | 5.2 | 4.0 | 4.5 | 5.5 |
| **Elevators and escalators (more than one may apply)** | | | | | | | | | | | | |
| Any elevators | 11.5 | 9.3 | 9.7 | 12.9 | 8.3 | 7.2 | 9.5 | 11.3 | 5.8 | 4.4 | 4.2 | 6.6 |
| Number of elevators | | | | | | | | | | | | |
| One | 29.9 | 15.7 | 12.8 | 14.3 | 13.9 | 10.4 | 11.4 | 11.3 | 20.5 | 8.0 | 6.6 | 9.4 |
| Two to five | 17.8 | 14.3 | 14.7 | 17.6 | 14.2 | 11.9 | 13.1 | 17.5 | 8.4 | 8.5 | 6.6 | 9.6 |
| Six or more | 12.7 | 11.4 | 14.1 | 25.4 | 10.6 | 15.0 | 17.8 | 18.1 | 4.9 | 6.4 | 6.1 | 10.4 |
| Any escalators | 17.3 | 33.5 | 19.1 | 41.2 | 21.6 | 34.2 | 19.1 | 26.9 | 11.4 | 11.5 | 11.1 | 21.2 |
| **Number of workers (main shift)** | | | | | | | | | | | | |
| Fewer than 5 | 12.7 | 18.5 | 8.5 | 11.3 | 16.6 | 12.5 | 12.3 | 15.2 | 10.4 | 15.2 | 9.5 | 10.8 |
| 5 to 9 | 15.8 | 15.3 | 8.5 | 18.9 | 18.6 | 12.3 | 7.4 | 21.4 | 12.8 | 8.7 | 7.6 | 9.8 |
| 10 to 19 | 15.3 | 18.9 | 10.9 | 18.8 | 11.2 | 14.7 | 11.9 | 24.2 | 12.2 | 11.8 | 7.8 | 12.9 |
| 20 to 49 | 16.1 | 13.0 | 13.3 | 14.2 | 15.6 | 7.3 | 9.6 | 17.0 | 12.6 | 8.5 | 9.3 | 9.2 |
| 50 to 99 | 14.9 | 16.1 | 14.0 | 18.5 | 10.1 | 10.5 | 11.2 | 18.0 | 11.9 | 8.6 | 7.2 | 4.9 |
| 100 to 249 | 11.8 | 13.1 | 19.8 | 18.1 | 11.5 | 11.8 | 18.9 | 15.7 | 4.3 | 8.3 | 6.4 | 6.2 |
| 250 or more | 14.2 | 11.6 | 12.1 | 19.5 | 9.8 | 13.2 | 14.9 | 13.8 | 6.6 | 4.5 | 5.2 | 9.0 |
| **Weekly operating hours** | | | | | | | | | | | | |
| Fewer than 40 | 21.8 | 13.1 | 13.2 | 19.4 | 18.7 | 11.7 | 16.4 | 17.1 | 19.8 | 13.4 | 10.3 | 16.5 |
| 40 to 48 | 15.0 | 10.5 | 13.9 | 16.0 | 15.8 | 9.3 | 11.9 | 18.9 | 10.5 | 8.4 | 12.3 | 9.4 |
| 49 to 60 | 12.9 | 15.3 | 10.7 | 12.5 | 10.3 | 10.8 | 10.5 | 18.8 | 12.0 | 7.7 | 5.6 | 8.0 |
| 61 to 84 | 10.2 | 11.9 | 9.8 | 17.6 | 11.6 | 11.8 | 9.2 | 15.3 | 8.7 | 8.7 | 4.1 | 6.7 |
| 85 to 167 | 19.1 | 12.9 | 15.2 | 17.6 | 18.7 | 12.9 | 13.1 | 26.5 | 9.6 | 6.4 | 8.8 | 18.2 |
| Open continuously | 15.6 | 13.4 | 9.1 | 17.4 | 11.6 | 10.2 | 9.4 | 14.5 | 7.7 | 8.2 | 6.1 | 7.7 |
| **Party responsible for operation and maintenance of energy systems** | | | | | | | | | | | | |
| Building owner | 9.3 | 6.7 | 6.9 | 9.6 | 7.9 | 5.5 | 7.5 | 12.6 | 5.3 | 4.1 | 4.8 | 4.8 |
| Business owner or tenant | 16.6 | 18.0 | 19.9 | 27.8 | 11.2 | 13.1 | 19.7 | 25.8 | 13.2 | 11.6 | 7.6 | 17.3 |
| Property management | 39.4 | 38.9 | 24.5 | 35.1 | 31.8 | 37.3 | 20.6 | 34.6 | 17.9 | 22.3 | 16.2 | 12.8 |
| Other | 40.3 | 38.6 | 31.3 | 43.3 | 25.0 | 35.4 | 29.0 | 25.9 | 24.1 | 17.4 | 16.9 | 41.0 |
| **Provider of direct input on energy-related equipment purchases** | | | | | | | | | | | | |
| Building owner | 8.9 | 6.8 | 7.0 | 10.0 | 7.6 | 5.7 | 7.5 | 12.9 | 5.3 | 4.0 | 4.8 | 4.6 |
| Business owner or tenant | 19.7 | 14.6 | 17.0 | 29.4 | 11.6 | 14.2 | 18.1 | 26.5 | 13.5 | 12.3 | 7.4 | 20.3 |
| Property management | 51.9 | 48.6 | 28.3 | 51.0 | 45.1 | 41.7 | 24.3 | 49.1 | 15.9 | 20.3 | 17.9 | 22.9 |
| Other | 32.4 | 49.9 | 30.1 | 36.1 | 20.1 | 34.7 | 24.1 | 34.4 | 21.4 | 29.8 | 12.8 | 11.2 |
| **Number of establishments** | | | | | | | | | | | | |
| One | 12.9 | 8.5 | 7.2 | 13.4 | 9.9 | 6.9 | 8.1 | 16.1 | 7.4 | 5.9 | 5.4 | 5.8 |
| 2 to 5 | 7.4 | 14.9 | 10.2 | 14.4 | 9.3 | 10.4 | 11.3 | 14.8 | 7.9 | 7.2 | 6.8 | 9.0 |
| 6 to 10 | 19.2 | 24.7 | 16.4 | 20.3 | 16.7 | 21.7 | 19.5 | 24.5 | 10.6 | 9.8 | 9.0 | 13.0 |
| 11 to 20 | 25.5 | 22.0 | 30.8 | 22.3 | 21.9 | 20.6 | 27.1 | 19.0 | 8.8 | 6.3 | 7.8 | 14.3 |
| More than 20 | 22.2 | 22.8 | 22.2 | 19.2 | 16.4 | 23.7 | 16.5 | 15.1 | 14.3 | 7.6 | 16.2 | 10.4 |
| Currently unoccupied | 42.7 | 56.4 | 30.4 | 50.3 | 33.9 | 41.0 | 41.5 | 32.1 | 25.0 | 39.1 | 32.7 | 33.1 |

## RSEs for Table C15. Electricity consumption and conditional energy intensity by Census region, 2012 - PUBLIC USE VERSION

| | RSEs for total electricity consumption | | | | RSEs for total floorspace of buildings using electricity | | | | RSEs for electricity energy intensity | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | North-east | Mid-west | South | West | North-east | Mid-west | South | West | North-east | Mid-west | South | West |
| **All buildings** | 8.3 | 7.0 | 8.0 | 11.8 | 7.0 | 5.6 | 8.0 | 14.5 | 5.2 | 4.0 | 4.5 | 5.5 |
| **Predominant exterior wall material** | | | | | | | | | | | | |
| Brick, stone, or stucco | 11.1 | 8.1 | 9.5 | 11.8 | 9.5 | 5.4 | 9.1 | 13.5 | 6.5 | 6.0 | 5.5 | 5.7 |
| Concrete (block or poured) | 19.4 | 9.2 | 9.8 | 12.9 | 11.8 | 9.8 | 10.0 | 17.3 | 12.6 | 7.2 | 5.6 | 8.4 |
| Concrete panels | 25.5 | 14.6 | 15.2 | 24.3 | 20.2 | 15.0 | 15.5 | 28.7 | 15.3 | 10.4 | 10.8 | 11.0 |
| Siding or shingles | 24.5 | 26.0 | 10.6 | 34.2 | 22.1 | 23.5 | 11.2 | 23.8 | 13.3 | 20.5 | 10.6 | 15.4 |
| Metal panels | 28.5 | 16.5 | 20.8 | 17.5 | 14.4 | 15.3 | 15.1 | 15.7 | 22.0 | 9.6 | 17.5 | 11.2 |
| Window glass | 34.0 | 23.4 | 27.9 | 33.5 | 24.5 | 29.7 | 24.7 | 28.2 | 20.0 | 27.9 | 10.2 | 28.0 |
| Other | 47.1 | 50.0 | 33.5 | 53.3 | 68.0 | 36.9 | 41.6 | 41.6 | 86.8 | 24.6 | 24.1 | 13.5 |
| No one major type | 19.0 | 33.0 | 34.1 | 60.3 | 32.8 | 43.8 | 39.0 | 51.2 | 30.6 | 28.7 | 37.2 | 23.6 |
| **Predominant roof material** | | | | | | | | | | | | |
| Metal surfacing | 29.4 | 16.8 | 11.8 | 18.0 | 16.8 | 11.1 | 10.9 | 18.5 | 25.8 | 12.4 | 9.3 | 9.6 |
| Synthetic or rubber | 12.4 | 11.0 | 12.6 | 16.2 | 9.9 | 8.5 | 14.4 | 15.0 | 7.7 | 4.6 | 7.3 | 8.0 |
| Built-up | 15.8 | 10.2 | 7.5 | 11.9 | 11.2 | 9.4 | 7.3 | 14.9 | 9.9 | 5.5 | 4.4 | 9.3 |
| Slate or tile shingles | 25.6 | 25.8 | 24.2 | 20.8 | 27.0 | 21.8 | 28.6 | 15.0 | 19.9 | 17.9 | 8.9 | 10.6 |
| Wooden materials (including shingles) | 42.5 | 30.1 | 21.6 | 22.0 | 34.2 | 37.0 | 19.9 | 32.8 | 32.4 | 20.0 | 17.6 | 18.2 |
| Asphalt, fiberglass, or other shingles | 11.7 | 13.9 | 10.2 | 14.6 | 9.0 | 12.7 | 8.1 | 17.7 | 8.1 | 5.3 | 6.6 | 7.1 |
| Concrete | 26.6 | 67.6 | 21.3 | 20.5 | 26.1 | 44.3 | 22.6 | 24.0 | 11.6 | 58.9 | 17.9 | 12.2 |
| Other | 48.0 | 53.4 | 37.9 | 70.3 | 41.5 | 40.7 | 33.2 | 65.1 | 14.6 | 37.8 | 12.7 | 18.7 |
| No one major type | 43.3 | 63.8 | 45.3 | 53.6 | 58.0 | 51.7 | 39.1 | 64.5 | 74.6 | 82.5 | 17.0 | 17.2 |
| **Roof characteristics** | | | | | | | | | | | | |
| Roof tilt | | | | | | | | | | | | |
| Flat | 9.5 | 7.5 | 7.8 | 12.3 | 7.2 | 7.0 | 7.7 | 16.9 | 5.5 | 3.6 | 4.9 | 7.9 |
| Shallow pitch | 12.9 | 11.9 | 13.0 | 14.8 | 16.5 | 8.6 | 11.5 | 16.0 | 12.0 | 8.6 | 7.2 | 6.9 |
| Steeper pitch | 14.8 | 15.8 | 9.7 | 14.5 | 14.8 | 12.5 | 9.4 | 10.7 | 9.3 | 8.7 | 7.0 | 7.1 |
| Cool roof | 20.7 | 10.1 | 11.5 | 17.5 | 14.2 | 11.3 | 10.4 | 15.2 | 11.3 | 5.1 | 5.3 | 6.7 |
| **Renovations in buildings constructed before 2008 (more than one may apply)** | | | | | | | | | | | | |
| Any type of renovation | 11.7 | 8.5 | 6.7 | 8.7 | 8.2 | 6.2 | 7.2 | 10.4 | 7.5 | 4.9 | 5.0 | 6.0 |
| Addition or annex | 8.8 | 10.9 | 8.5 | 25.5 | 7.7 | 8.7 | 9.2 | 17.4 | 6.5 | 5.2 | 6.8 | 12.1 |
| Reduction in floorspace | 69.0 | 31.9 | 21.5 | 27.7 | 61.9 | 25.7 | 18.4 | 32.4 | 17.4 | 22.3 | 18.0 | 21.6 |
| Roof replacement | 17.6 | 10.9 | 9.0 | 11.4 | 9.2 | 7.3 | 7.9 | 11.9 | 11.1 | 6.8 | 7.3 | 7.1 |
| Exterior wall replacement | 15.1 | 22.2 | 20.7 | 26.5 | 15.3 | 17.0 | 13.8 | 16.0 | 6.8 | 11.6 | 17.7 | 18.7 |
| Interior wall reconfiguration | 11.3 | 10.1 | 9.4 | 12.2 | 7.4 | 7.6 | 8.9 | 12.3 | 7.6 | 6.0 | 6.5 | 8.7 |
| Window replacement | 7.2 | 12.9 | 11.6 | 26.4 | 7.4 | 11.0 | 7.7 | 18.0 | 6.9 | 11.2 | 10.0 | 15.8 |
| HVAC equipment upgrade | 13.8 | 8.4 | 7.3 | 11.3 | 7.1 | 6.2 | 7.4 | 9.6 | 9.0 | 6.3 | 6.4 | 6.5 |
| Lighting upgrade | 8.0 | 10.3 | 8.9 | 10.5 | 6.8 | 7.8 | 9.8 | 10.8 | 5.9 | 6.5 | 6.7 | 7.2 |
| Electrical upgrade | 12.2 | 11.5 | 10.3 | 18.1 | 11.6 | 9.3 | 9.7 | 14.9 | 6.4 | 7.9 | 9.0 | 12.3 |
| Plumbing system upgrade | 14.0 | 13.1 | 12.1 | 17.3 | 13.0 | 9.7 | 10.7 | 13.3 | 7.8 | 10.7 | 10.0 | 10.6 |
| Insulation upgrade | 15.0 | 15.1 | 18.2 | 28.3 | 12.0 | 12.6 | 13.2 | 18.0 | 10.2 | 11.1 | 15.4 | 14.5 |
| Fire, safety, or security upgrade | 10.3 | 13.1 | 10.3 | 12.1 | 8.9 | 10.3 | 9.7 | 11.4 | 6.6 | 7.9 | 8.0 | 8.6 |
| Structural upgrade | 15.4 | 22.6 | 26.9 | 31.8 | 18.0 | 16.8 | 17.4 | 19.1 | 14.5 | 13.3 | 22.9 | 21.6 |
| Other | 42.3 | 61.7 | 37.4 | 52.8 | 38.2 | 51.0 | 49.6 | 48.4 | 16.5 | 21.2 | 41.3 | 28.9 |
| No renovations | 11.6 | 10.1 | 8.4 | 14.0 | 9.7 | 8.7 | 7.2 | 18.6 | 6.0 | 5.9 | 6.1 | 7.1 |
| Buildings constructed 2008 or later | 24.7 | 28.6 | 40.2 | 50.9 | 21.5 | 22.8 | 32.5 | 33.3 | 13.7 | 19.1 | 12.3 | 25.5 |

## RSEs for Table C15. Electricity consumption and conditional energy intensity by Census region, 2012 - PUBLIC USE VERSION

| | RSEs for total electricity consumption | | | | RSEs for total floorspace of buildings using electricity | | | | RSEs for electricity energy intensity | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | North-east | Mid-west | South | West | North-east | Mid-west | South | West | North-east | Mid-west | South | West |
| **All buildings** | 8.3 | 7.0 | 8.0 | 11.8 | 7.0 | 5.6 | 8.0 | 14.5 | 5.2 | 4.0 | 4.5 | 5.5 |
| **Energy sources (more than one may apply)** | | | | | | | | | | | | |
| Electricity | 8.3 | 7.0 | 8.0 | 11.8 | 7.0 | 5.6 | 8.0 | 14.5 | 5.2 | 4.0 | 4.5 | 5.5 |
| Natural gas | 11.3 | 7.1 | 9.7 | 11.6 | 8.6 | 5.8 | 10.3 | 12.3 | 5.2 | 4.5 | 5.0 | 5.5 |
| Fuel oil | 8.5 | 11.8 | 9.8 | 18.4 | 9.6 | 9.6 | 10.3 | 13.6 | 8.9 | 6.4 | 6.1 | 8.5 |
| District heat | 27.2 | 25.2 | 24.6 | 35.9 | 19.2 | 20.6 | 27.8 | 25.2 | 13.5 | 11.5 | 9.5 | 18.6 |
| District chilled water | 47.5 | 24.2 | 21.2 | 40.5 | 38.8 | 25.6 | 25.5 | 27.0 | 17.2 | 13.6 | 11.4 | 20.9 |
| Propane | 21.4 | 23.3 | 16.0 | 32.7 | 16.8 | 19.1 | 12.6 | 23.5 | 20.4 | 12.4 | 14.1 | 18.8 |
| Other | 25.5 | 30.4 | 19.3 | 23.9 | 22.7 | 17.7 | 16.1 | 25.1 | 13.1 | 18.4 | 10.0 | 12.8 |
| **Space-heating energy sources** | | | | | | | | | | | | |
| Electricity | 11.4 | 7.3 | 8.9 | 12.0 | 9.5 | 7.1 | 8.4 | 13.2 | 5.7 | 4.6 | 3.9 | 6.3 |
| Electricity main | 17.8 | 11.2 | 8.8 | 15.1 | 14.3 | 12.4 | 8.3 | 18.0 | 13.2 | 4.1 | 5.3 | 8.5 |
| Electricity secondary | 11.9 | 8.4 | 15.0 | 11.7 | 9.7 | 7.7 | 13.0 | 11.4 | 5.5 | 6.5 | 5.5 | 6.5 |
| Other excluding electricity | 12.1 | 9.2 | 11.5 | 15.3 | 10.8 | 6.8 | 14.3 | 16.0 | 8.0 | 5.8 | 8.5 | 7.5 |
| Buildings without heating | 52.0 | 42.6 | 17.9 | 27.1 | 31.8 | 22.2 | 12.9 | 30.8 | 54.5 | 41.6 | 14.4 | 11.8 |
| **Primary space-heating energy source** | | | | | | | | | | | | |
| Electricity | 17.8 | 11.2 | 8.8 | 15.1 | 14.3 | 12.4 | 8.3 | 18.0 | 13.2 | 4.1 | 5.3 | 8.5 |
| Natural gas | 9.1 | 7.0 | 13.2 | 12.1 | 8.0 | 5.6 | 12.9 | 12.5 | 5.0 | 4.9 | 6.7 | 5.7 |
| Fuel oil | 19.0 | 76.9 | 22.6 | 61.6 | 26.1 | 24.8 | 27.7 | 60.4 | 16.8 | 75.6 | 28.2 | 68.6 |
| District heat | 27.4 | 25.9 | 25.1 | 36.6 | 19.4 | 20.5 | 28.6 | 25.9 | 13.7 | 11.8 | 9.8 | 19.0 |
| Propane | 26.7 | 34.6 | 31.0 | 30.0 | 23.9 | 24.4 | 17.9 | 30.8 | 19.6 | 17.8 | 26.5 | 15.0 |
| Other | 22.5 | 76.1 | 72.7 | 78.9 | 43.4 | 53.0 | 59.8 | 78.9 | 31.3 | 45.2 | 29.0 | 15.1 |
| **Cooling energy sources** | | | | | | | | | | | | |
| Electricity | 8.2 | 6.9 | 8.2 | 12.5 | 6.7 | 5.8 | 7.7 | 15.2 | 5.6 | 4.0 | 4.1 | 6.6 |
| Other excluding electricity | 57.0 | 33.8 | 27.8 | 57.5 | 42.6 | 32.5 | 31.7 | 35.8 | 26.6 | 10.4 | 14.4 | 33.5 |
| Buildings without cooling | 25.3 | 20.7 | 21.4 | 23.3 | 28.6 | 15.6 | 23.0 | 17.4 | 23.8 | 16.9 | 18.6 | 23.4 |
| **Water-heating energy sources** | | | | | | | | | | | | |
| Electricity | 9.6 | 8.4 | 9.2 | 12.5 | 8.9 | 7.3 | 8.4 | 15.2 | 7.6 | 5.2 | 4.6 | 7.4 |
| Other excluding electricity | 11.7 | 9.5 | 10.2 | 12.5 | 9.1 | 7.9 | 12.1 | 13.5 | 6.0 | 5.6 | 5.9 | 6.6 |
| Buildings without water heating | 41.4 | 28.4 | 16.5 | 28.4 | 22.1 | 17.7 | 17.5 | 27.4 | 31.4 | 24.4 | 12.3 | 10.9 |
| **Cooking energy sources** | | | | | | | | | | | | |
| Electricity | 10.6 | 7.9 | 9.4 | 15.8 | 8.3 | 6.6 | 8.0 | 13.6 | 5.9 | 5.5 | 3.9 | 6.8 |
| Other excluding electricity | 22.6 | 14.4 | 11.4 | 16.3 | 18.3 | 11.3 | 8.7 | 13.4 | 8.2 | 11.4 | 6.2 | 6.3 |
| Buildings without cooking | 9.2 | 9.7 | 9.1 | 14.9 | 8.9 | 7.2 | 10.6 | 19.2 | 7.3 | 5.7 | 6.6 | 5.8 |
| **Energy end uses (more than one may apply)** | | | | | | | | | | | | |
| Buildings with space heating | 8.4 | 7.0 | 8.3 | 11.5 | 7.1 | 5.5 | 8.3 | 13.3 | 5.2 | 3.9 | 4.3 | 5.5 |
| Buildings with cooling | 8.7 | 7.1 | 8.0 | 12.3 | 7.3 | 5.9 | 7.9 | 15.0 | 4.4 | 3.9 | 4.1 | 6.4 |
| Buildings with water heating | 8.7 | 7.1 | 8.2 | 11.5 | 7.3 | 5.6 | 8.1 | 13.9 | 5.0 | 3.9 | 4.1 | 6.1 |
| Buildings with cooking | 12.6 | 6.8 | 8.9 | 13.2 | 9.9 | 5.7 | 6.9 | 11.8 | 5.0 | 4.8 | 4.3 | 5.0 |
| Buildings with manufacturing | 21.2 | 28.4 | 30.8 | 19.6 | 15.2 | 21.2 | 22.0 | 30.3 | 18.3 | 22.1 | 26.4 | 19.9 |
| Buildings with electricity generation | 8.0 | 10.3 | 9.9 | 15.3 | 7.9 | 8.4 | 9.7 | 13.2 | 4.3 | 5.5 | 5.4 | 5.0 |

## RSEs for Table C15. Electricity consumption and conditional energy intensity by Census region, 2012 - PUBLIC USE VERSION

| | RSEs for total electricity consumption | | | | RSEs for total floorspace of buildings using electricity | | | | RSEs for electricity energy intensity | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | North-east | Mid-west | South | West | North-east | Mid-west | South | West | North-east | Mid-west | South | West |
| **All buildings** | 8.3 | 7.0 | 8.0 | 11.8 | 7.0 | 5.6 | 8.0 | 14.5 | 5.2 | 4.0 | 4.5 | 5.5 |
| **Percent of floorspace heated** | | | | | | | | | | | | |
| Not heated | 52.0 | 42.6 | 17.9 | 27.1 | 31.8 | 22.2 | 12.9 | 30.8 | 54.5 | 41.6 | 14.4 | 11.8 |
| 1 to 50 | 27.3 | 28.8 | 14.0 | 20.4 | 25.8 | 20.6 | 12.8 | 25.0 | 33.0 | 16.0 | 10.0 | 17.3 |
| 51 to 99 | 11.2 | 11.8 | 12.7 | 15.7 | 10.1 | 11.1 | 8.2 | 14.7 | 6.6 | 7.9 | 8.8 | 7.7 |
| 100 | 10.1 | 7.9 | 8.6 | 11.4 | 8.4 | 6.0 | 9.3 | 11.3 | 4.9 | 4.8 | 4.0 | 4.8 |
| **Percent of floorspace cooled** | | | | | | | | | | | | |
| Not cooled | 25.3 | 20.7 | 21.4 | 23.3 | 28.6 | 15.6 | 23.0 | 17.4 | 23.8 | 16.9 | 18.6 | 23.4 |
| 1 to 50 | 12.6 | 11.3 | 12.7 | 22.6 | 10.6 | 9.8 | 14.5 | 28.8 | 11.3 | 9.5 | 8.2 | 13.7 |
| 51 to 99 | 8.4 | 15.0 | 11.8 | 11.2 | 8.3 | 13.4 | 8.4 | 11.2 | 4.8 | 4.5 | 8.7 | 6.4 |
| 100 | 15.2 | 7.2 | 7.8 | 13.9 | 12.9 | 6.7 | 8.7 | 13.4 | 8.0 | 4.6 | 3.7 | 5.8 |
| **Percent lit when open** | | | | | | | | | | | | |
| Zero | 71.4 | 50.3 | 49.2 | 63.0 | 79.7 | 44.7 | 35.1 | 46.0 | 196.3 | 31.9 | 38.7 | 40.0 |
| 1 to 50 | 13.2 | 17.4 | 9.8 | 21.0 | 16.4 | 11.7 | 10.2 | 23.8 | 13.1 | 10.4 | 9.6 | 9.4 |
| 51 to 99 | 9.0 | 10.7 | 12.5 | 12.3 | 7.4 | 7.5 | 9.5 | 13.5 | 6.3 | 6.0 | 6.5 | 8.9 |
| 100 | 13.0 | 6.5 | 7.3 | 14.4 | 8.5 | 7.1 | 7.7 | 14.8 | 9.2 | 4.1 | 5.6 | 4.6 |
| Building never open/electricity not used | 28.3 | 48.7 | 26.9 | 41.7 | 29.2 | 22.2 | 33.8 | 26.0 | 24.3 | 46.1 | 24.8 | 28.8 |
| **Percent lit during off hours** | | | | | | | | | | | | |
| Zero | 17.7 | 11.2 | 9.6 | 14.4 | 11.8 | 8.2 | 11.5 | 18.6 | 16.1 | 10.7 | 6.7 | 6.3 |
| 1 to 50 | 7.2 | 6.8 | 9.0 | 13.6 | 7.9 | 6.4 | 7.9 | 14.4 | 4.5 | 3.2 | 4.3 | 5.3 |
| 51 to 100 | 24.9 | 16.9 | 13.9 | 18.5 | 19.5 | 13.6 | 13.3 | 17.3 | 8.9 | 9.3 | 10.1 | 9.8 |
| Building always open with no "off hours" | 34.8 | 27.7 | 17.3 | 27.9 | 30.2 | 25.6 | 16.0 | 26.7 | 24.6 | 9.7 | 10.0 | 13.3 |
| Electricity not used | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| **Heating equipment (more than one may apply)** | | | | | | | | | | | | |
| Heat pumps | 12.5 | 16.2 | 11.6 | 13.3 | 10.7 | 18.8 | 10.3 | 13.4 | 5.3 | 14.2 | 5.3 | 5.5 |
| Furnaces | 17.3 | 15.1 | 11.6 | 22.6 | 17.6 | 14.3 | 14.9 | 15.9 | 15.1 | 7.5 | 7.8 | 12.9 |
| Individual space heaters | 14.1 | 11.6 | 8.1 | 11.1 | 10.4 | 10.0 | 9.7 | 12.9 | 10.8 | 5.8 | 6.2 | 7.6 |
| District heat | 27.2 | 25.2 | 24.8 | 36.6 | 19.2 | 20.6 | 28.0 | 25.9 | 13.5 | 11.5 | 9.6 | 19.0 |
| Boilers | 8.3 | 6.9 | 9.2 | 16.6 | 7.8 | 5.2 | 10.7 | 13.1 | 6.7 | 5.2 | 5.7 | 8.9 |
| Packaged heating units | 11.6 | 7.9 | 9.8 | 14.4 | 8.4 | 6.7 | 9.4 | 15.3 | 7.5 | 3.9 | 5.1 | 6.5 |
| Other | 36.3 | 38.7 | 30.7 | 23.1 | 33.1 | 31.7 | 26.6 | 24.6 | 12.9 | 16.5 | 14.8 | 23.0 |
| **Cooling equipment (more than one may apply)** | | | | | | | | | | | | |
| Residential-type central air conditioners | 20.1 | 10.6 | 9.4 | 17.1 | 18.4 | 11.3 | 11.4 | 23.4 | 18.2 | 7.9 | 6.1 | 11.8 |
| Heat pumps | 14.2 | 14.5 | 11.3 | 11.3 | 14.5 | 16.8 | 10.4 | 12.9 | 6.7 | 13.5 | 5.3 | 5.1 |
| Individual air conditioners | 11.5 | 13.0 | 9.5 | 16.6 | 8.8 | 12.2 | 8.2 | 18.8 | 6.6 | 7.1 | 7.6 | 8.4 |
| District chilled water | 47.5 | 24.2 | 21.2 | 40.5 | 38.8 | 25.6 | 25.5 | 27.0 | 17.2 | 13.6 | 11.4 | 20.9 |
| Central chillers | 12.5 | 8.7 | 9.3 | 14.6 | 9.9 | 8.1 | 7.9 | 11.6 | 5.3 | 4.0 | 5.5 | 9.4 |
| Packaged air conditioning units | 7.7 | 8.8 | 9.7 | 14.9 | 6.2 | 7.8 | 8.6 | 15.2 | 5.1 | 4.9 | 5.3 | 7.3 |
| Swamp coolers | 87.5 | 37.3 | 34.9 | 19.4 | 73.0 | 39.2 | 32.5 | 17.8 | 53.5 | 19.6 | 31.8 | 12.6 |
| Other | 77.7 | 57.3 | 41.9 | 72.8 | 59.7 | 52.9 | 29.3 | 44.8 | 78.0 | 35.7 | 22.4 | 66.1 |

## RSEs for Table C15. Electricity consumption and conditional energy intensity by Census region, 2012 - PUBLIC USE VERSION

| | RSEs for total electricity consumption | | | | RSEs for total floorspace of buildings using electricity | | | | RSEs for electricity energy intensity | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | North-east | Mid-west | South | West | North-east | Mid-west | South | West | North-east | Mid-west | South | West |
| **All buildings** | 8.3 | 7.0 | 8.0 | 11.8 | 7.0 | 5.6 | 8.0 | 14.5 | 5.2 | 4.0 | 4.5 | 5.5 |
| **Main equipment replaced since 1990 (more than one may apply)** | | | | | | | | | | | | |
| Heating | 12.8 | 6.9 | 8.6 | 12.0 | 6.9 | 5.9 | 7.4 | 14.2 | 11.6 | 4.2 | 5.9 | 6.0 |
| Cooling | 11.7 | 10.2 | 6.5 | 11.1 | 7.8 | 7.0 | 6.0 | 14.4 | 7.9 | 6.1 | 4.5 | 5.6 |
| **Water-heating equipment** | | | | | | | | | | | | |
| Centralized system | 11.6 | 8.5 | 8.4 | 12.3 | 9.3 | 6.7 | 8.6 | 14.1 | 5.8 | 5.1 | 4.9 | 6.1 |
| Distributed system | 13.2 | 12.7 | 12.4 | 18.6 | 8.8 | 7.9 | 11.5 | 22.4 | 9.6 | 8.2 | 7.8 | 9.5 |
| Combination of centralized and distributed system | 9.6 | 9.8 | 12.4 | 14.5 | 8.6 | 8.9 | 9.4 | 12.4 | 7.8 | 7.0 | 6.7 | 6.7 |
| **Lighting equipment types (more than one may apply)** | | | | | | | | | | | | |
| Incandescent | 12.1 | 7.7 | 9.0 | 11.8 | 7.9 | 6.2 | 7.4 | 12.0 | 7.5 | 4.5 | 5.4 | 6.4 |
| Standard fluorescent | 8.4 | 7.1 | 7.7 | 12.1 | 6.3 | 5.4 | 8.0 | 14.3 | 5.2 | 3.8 | 4.3 | 5.9 |
| Compact fluorescent | 9.3 | 8.3 | 9.2 | 11.3 | 8.0 | 6.4 | 8.1 | 11.7 | 4.8 | 3.6 | 4.6 | 6.2 |
| High-intensity discharge (HID) | 13.1 | 11.0 | 10.4 | 16.3 | 9.9 | 9.5 | 8.2 | 14.1 | 8.4 | 6.7 | 5.4 | 8.7 |
| Halogen | 8.0 | 11.0 | 12.6 | 16.1 | 8.0 | 7.3 | 9.8 | 12.2 | 5.5 | 6.3 | 5.4 | 7.5 |
| LED | 9.0 | 9.5 | 12.9 | 15.0 | 9.7 | 7.4 | 9.8 | 14.1 | 5.6 | 4.7 | 6.1 | 5.9 |
| Other | 44.1 | 53.3 | 28.4 | 47.4 | 47.0 | 53.1 | 27.3 | 41.8 | 20.5 | 27.8 | 12.7 | 15.6 |
| **Refrigeration equipment (more than one may apply)** | | | | | | | | | | | | |
| Any refrigeration | 8.7 | 7.4 | 7.7 | 11.2 | 7.4 | 5.5 | 7.5 | 12.6 | 4.4 | 4.2 | 4.2 | 5.9 |
| Walk-in units | 11.5 | 7.6 | 9.6 | 12.5 | 12.0 | 5.6 | 7.6 | 11.2 | 3.6 | 5.3 | 4.4 | 4.2 |
| Cases or cabinets | 11.1 | 6.7 | 11.6 | 14.3 | 9.4 | 5.6 | 9.7 | 12.1 | 4.5 | 3.7 | 4.3 | 4.9 |
| Large cold storage areas | 16.5 | 21.9 | 18.9 | 17.7 | 14.6 | 19.9 | 19.2 | 19.2 | 13.3 | 12.5 | 8.5 | 8.6 |
| Commercial ice makers | 13.5 | 8.6 | 9.2 | 13.1 | 10.5 | 7.5 | 7.4 | 11.1 | 5.2 | 4.8 | 5.2 | 4.6 |
| Residential-type or compact units | 8.8 | 7.9 | 8.9 | 11.1 | 7.7 | 5.6 | 8.5 | 13.6 | 4.3 | 4.6 | 4.7 | 6.3 |
| Vending machines | 11.6 | 7.2 | 9.5 | 13.9 | 8.6 | 6.3 | 8.5 | 13.6 | 5.4 | 3.3 | 5.0 | 5.4 |
| No refrigeration | 26.1 | 29.5 | 17.0 | 24.1 | 15.2 | 19.7 | 13.6 | 24.1 | 21.9 | 15.0 | 10.3 | 5.9 |
| **Office equipment (more than one may apply)** | | | | | | | | | | | | |
| Desktop computers | 8.2 | 7.1 | 8.0 | 12.4 | 7.0 | 5.6 | 8.0 | 14.8 | 4.2 | 4.0 | 4.1 | 6.5 |
| With flat screen monitors | 8.3 | 7.0 | 8.2 | 12.5 | 7.1 | 5.5 | 8.0 | 15.0 | 4.3 | 4.0 | 4.0 | 6.5 |
| With multiple monitors | 12.9 | 8.6 | 8.9 | 12.5 | 9.1 | 8.2 | 9.5 | 13.4 | 6.6 | 4.3 | 4.7 | 6.5 |
| Laptop computers | 9.1 | 7.6 | 9.0 | 11.2 | 6.0 | 6.0 | 8.6 | 13.2 | 6.1 | 4.6 | 4.4 | 6.3 |
| Dedicated servers | 9.3 | 6.5 | 9.4 | 12.5 | 5.9 | 6.1 | 8.6 | 14.8 | 5.4 | 2.8 | 3.8 | 6.5 |
| Laser printers | 11.2 | 9.0 | 8.7 | 12.9 | 8.0 | 5.9 | 8.8 | 14.1 | 6.2 | 4.9 | 4.3 | 7.3 |
| Inkjet printers | 7.9 | 8.6 | 9.5 | 14.5 | 8.8 | 8.8 | 8.3 | 17.6 | 5.9 | 6.8 | 4.9 | 6.6 |
| FAX machines | 9.0 | 7.2 | 8.9 | 11.1 | 7.0 | 6.4 | 7.9 | 14.7 | 4.7 | 4.0 | 3.9 | 6.0 |
| Photocopiers | 9.5 | 8.1 | 9.4 | 12.7 | 8.3 | 6.0 | 8.1 | 14.3 | 5.1 | 3.5 | 4.5 | 6.9 |
| **Number of desktop computers** | | | | | | | | | | | | |
| None | 45.6 | 20.4 | 15.1 | 19.3 | 22.7 | 11.3 | 14.6 | 21.0 | 43.8 | 20.6 | 11.3 | 17.9 |
| 1 to 4 | 8.8 | 14.4 | 7.4 | 10.4 | 12.5 | 12.1 | 8.7 | 16.0 | 8.9 | 13.4 | 8.2 | 9.3 |
| 5 to 9 | 23.8 | 16.9 | 14.7 | 17.1 | 14.5 | 15.1 | 11.8 | 23.9 | 14.4 | 10.8 | 7.4 | 14.1 |
| 10 to 19 | 20.9 | 14.0 | 11.8 | 21.7 | 14.1 | 11.5 | 12.8 | 24.3 | 12.0 | 7.6 | 7.8 | 11.7 |
| 20 to 49 | 13.4 | 12.9 | 17.6 | 18.4 | 13.8 | 10.4 | 13.9 | 17.4 | 12.0 | 6.7 | 9.2 | 6.1 |
| 50 to 99 | 14.4 | 21.2 | 13.7 | 24.3 | 11.8 | 15.5 | 13.1 | 22.1 | 11.9 | 9.4 | 6.6 | 8.3 |
| 100 to 249 | 25.5 | 13.4 | 15.3 | 19.5 | 15.6 | 11.4 | 14.4 | 11.8 | 14.9 | 9.5 | 8.7 | 11.1 |
| 250 or more | 10.0 | 11.7 | 12.2 | 17.2 | 9.0 | 9.7 | 14.9 | 11.8 | 6.4 | 6.2 | 6.2 | 9.7 |

## RSEs for Table C15. Electricity consumption and conditional energy intensity by Census region, 2012 - PUBLIC USE VERSION

| | RSEs for total electricity consumption | | | | RSEs for total floorspace of buildings using electricity | | | | RSEs for electricity energy intensity | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | North-east | Mid-west | South | West | North-east | Mid-west | South | West | North-east | Mid-west | South | West |
| **All buildings** | 8.3 | 7.0 | 8.0 | 11.8 | 7.0 | 5.6 | 8.0 | 14.5 | 5.2 | 4.0 | 4.5 | 5.5 |
| **Number of laptop computers** | | | | | | | | | | | | |
| None | 12.9 | 11.1 | 8.0 | 17.0 | 11.3 | 7.7 | 8.4 | 19.5 | 9.6 | 7.7 | 8.3 | 6.3 |
| 1 to 4 | 12.4 | 11.5 | 10.4 | 14.7 | 8.2 | 10.2 | 9.5 | 18.5 | 10.5 | 10.4 | 8.3 | 8.6 |
| 5 to 9 | 36.4 | 17.4 | 12.3 | 21.2 | 21.3 | 11.7 | 13.4 | 21.4 | 21.8 | 10.0 | 8.2 | 10.0 |
| 10 to 19 | 18.1 | 13.9 | 19.6 | 30.2 | 14.4 | 13.1 | 15.7 | 20.4 | 13.5 | 7.2 | 7.4 | 15.5 |
| 20 to 49 | 14.8 | 12.9 | 14.2 | 20.9 | 16.7 | 11.2 | 14.5 | 15.5 | 7.7 | 6.3 | 5.9 | 12.0 |
| 50 to 99 | 19.3 | 20.6 | 17.7 | 17.6 | 17.9 | 16.6 | 15.2 | 16.2 | 10.8 | 11.8 | 13.1 | 8.7 |
| 100 to 249 | 10.1 | 18.4 | 17.9 | 12.4 | 11.6 | 17.1 | 18.2 | 14.1 | 7.8 | 10.4 | 12.9 | 9.0 |
| 250 or more | 18.1 | 13.6 | 16.1 | 21.0 | 14.3 | 16.4 | 18.0 | 20.3 | 11.3 | 7.6 | 8.6 | 9.6 |
| **Number of dedicated servers** | | | | | | | | | | | | |
| None | 14.1 | 13.2 | 6.9 | 14.0 | 12.4 | 9.3 | 9.3 | 15.7 | 8.8 | 9.3 | 7.6 | 4.2 |
| 1 to 4 | 15.2 | 6.9 | 12.1 | 14.5 | 8.7 | 6.3 | 9.8 | 18.4 | 9.1 | 4.0 | 4.8 | 7.2 |
| 5 to 9 | 17.8 | 16.0 | 14.3 | 20.5 | 11.3 | 14.2 | 16.6 | 20.2 | 13.7 | 6.1 | 7.1 | 9.8 |
| 10 to 19 | 15.3 | 20.7 | 17.3 | 25.9 | 14.3 | 21.7 | 16.9 | 18.4 | 6.9 | 8.2 | 7.8 | 15.0 |
| 20 to 49 | 21.9 | 18.3 | 14.4 | 17.1 | 19.8 | 18.7 | 16.1 | 14.1 | 10.9 | 14.1 | 6.6 | 10.4 |
| 50 or more | 19.0 | 14.0 | 25.4 | 34.7 | 19.3 | 13.3 | 28.5 | 25.3 | 15.3 | 7.2 | 18.7 | 16.7 |
| **Number of photocopiers** | | | | | | | | | | | | |
| None | 11.7 | 10.4 | 7.1 | 14.2 | 10.2 | 8.6 | 9.2 | 16.9 | 9.6 | 8.2 | 6.5 | 7.3 |
| One | 18.9 | 19.3 | 11.7 | 17.9 | 14.4 | 12.2 | 11.1 | 22.2 | 15.5 | 11.2 | 6.1 | 9.4 |
| 2 to 4 | 11.1 | 12.6 | 13.6 | 14.8 | 10.7 | 8.0 | 9.9 | 14.6 | 7.4 | 6.2 | 8.4 | 7.6 |
| 5 to 9 | 32.4 | 14.3 | 15.8 | 18.4 | 18.5 | 10.6 | 12.2 | 13.1 | 17.8 | 7.2 | 9.9 | 9.9 |
| 10 or more | 10.2 | 13.1 | 12.9 | 19.6 | 8.6 | 13.4 | 14.4 | 13.8 | 5.4 | 5.2 | 4.4 | 8.4 |
| **Number of TVs or video displays** | | | | | | | | | | | | |
| None | 10.9 | 10.7 | 8.1 | 12.4 | 12.6 | 9.6 | 10.7 | 20.0 | 9.6 | 9.1 | 8.3 | 9.4 |
| One | 13.9 | 22.4 | 8.6 | 16.8 | 11.0 | 12.8 | 9.9 | 17.5 | 10.0 | 15.1 | 7.9 | 10.9 |
| 2 to 4 | 13.1 | 15.1 | 12.8 | 15.2 | 12.3 | 10.0 | 9.5 | 17.0 | 10.2 | 9.7 | 7.7 | 7.9 |
| 5 to 9 | 25.2 | 16.6 | 14.4 | 19.3 | 14.0 | 13.3 | 12.3 | 21.6 | 18.5 | 6.8 | 11.8 | 14.3 |
| 10 to 19 | 32.4 | 14.6 | 16.1 | 14.0 | 22.8 | 11.5 | 14.7 | 13.4 | 16.2 | 9.6 | 7.6 | 6.7 |
| 20 to 49 | 16.4 | 13.3 | 18.5 | 15.9 | 16.0 | 12.9 | 15.1 | 14.7 | 8.4 | 5.0 | 8.0 | 7.8 |
| 50 to 99 | 17.6 | 18.1 | 23.1 | 36.2 | 14.2 | 17.3 | 24.2 | 32.0 | 11.5 | 8.7 | 13.6 | 8.8 |
| 100 or more | 15.6 | 14.1 | 10.7 | 28.0 | 17.6 | 13.9 | 14.3 | 19.7 | 6.8 | 5.4 | 7.8 | 12.6 |
| **Food preparation or serving areas in non-food service buildings (more than one may apply)** | | | | | | | | | | | | |
| Snack bar or concession stand | 18.1 | 10.1 | 13.4 | 21.0 | 12.9 | 11.2 | 11.5 | 17.5 | 7.8 | 7.2 | 6.9 | 10.2 |
| Fast food or small restaurant | 14.7 | 10.4 | 12.6 | 16.4 | 15.4 | 10.4 | 13.5 | 16.0 | 12.5 | 5.3 | 4.7 | 7.4 |
| Cafeteria or large restaurant | 18.7 | 7.7 | 9.1 | 21.1 | 12.8 | 7.5 | 8.7 | 15.3 | 8.5 | 5.1 | 4.7 | 9.9 |
| Commercial kitchen/ food preparation area | 17.5 | 9.1 | 8.9 | 22.8 | 11.7 | 6.8 | 8.8 | 18.4 | 8.9 | 6.1 | 5.1 | 8.3 |
| Small kitchen area | 12.3 | 12.7 | 9.7 | 19.2 | 12.5 | 9.3 | 8.9 | 17.1 | 8.6 | 8.0 | 6.1 | 13.1 |
| **Separate computer areas (more than one may apply)** | | | | | | | | | | | | |
| Data center or server farm | 13.7 | 10.7 | 13.9 | 17.4 | 10.3 | 9.7 | 14.9 | 12.7 | 8.3 | 6.2 | 8.1 | 9.1 |
| Computer-based training room | 9.2 | 8.4 | 11.0 | 18.5 | 8.0 | 8.3 | 10.5 | 17.7 | 6.6 | 6.1 | 4.1 | 7.4 |
| Student or public computer center | 11.7 | 11.0 | 11.6 | 27.8 | 9.4 | 9.0 | 11.4 | 16.7 | 7.8 | 5.9 | 5.1 | 14.7 |

## RSEs for Table C15. Electricity consumption and conditional energy intensity by Census region, 2012 - PUBLIC USE VERSION

| | RSEs for total electricity consumption | | | | RSEs for total floorspace of buildings using electricity | | | | RSEs for electricity energy intensity | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | North-east | Mid-west | South | West | North-east | Mid-west | South | West | North-east | Mid-west | South | West |
| **All buildings** | 8.3 | 7.0 | 8.0 | 11.8 | 7.0 | 5.6 | 8.0 | 14.5 | 5.2 | 4.0 | 4.5 | 5.5 |
| **HVAC conservation features (more than one may apply)** | | | | | | | | | | | | |
| Economizer cycle | 12.2 | 8.4 | 12.0 | 14.1 | 8.5 | 8.0 | 11.6 | 12.2 | 5.7 | 3.5 | 4.9 | 5.6 |
| Regular HVAC maintenance | 8.6 | 7.1 | 8.7 | 12.2 | 7.0 | 5.8 | 8.4 | 14.3 | 5.0 | 4.2 | 3.8 | 6.0 |
| Building automation system (BAS)[1] | 9.9 | 8.2 | 10.6 | 14.1 | 9.8 | 7.3 | 9.3 | 12.8 | 5.6 | 3.3 | 4.2 | 5.8 |
| **Window and interior lighting features (more than one may apply)** | | | | | | | | | | | | |
| Multipaned windows | 8.7 | 7.3 | 10.0 | 13.5 | 7.9 | 6.4 | 8.9 | 14.0 | 5.7 | 4.1 | 4.7 | 5.6 |
| Tinted window glass | 13.3 | 8.3 | 9.9 | 13.8 | 10.9 | 6.6 | 9.0 | 18.2 | 6.9 | 4.7 | 5.0 | 7.0 |
| Reflective window glass | 19.6 | 10.9 | 14.0 | 20.0 | 12.9 | 8.8 | 11.3 | 17.0 | 12.9 | 6.5 | 7.6 | 8.5 |
| External overhangs or awnings | 15.5 | 8.0 | 9.2 | 12.8 | 13.9 | 7.8 | 8.0 | 14.1 | 5.6 | 5.4 | 5.4 | 5.7 |
| Skylights or atriums | 16.4 | 9.9 | 12.4 | 13.2 | 8.9 | 9.3 | 10.7 | 16.4 | 10.4 | 5.2 | 5.5 | 9.8 |
| Light scheduling | 10.7 | 8.3 | 12.4 | 15.2 | 8.6 | 7.8 | 10.6 | 14.3 | 6.9 | 3.8 | 4.6 | 5.9 |
| Occupancy sensors | 7.2 | 7.6 | 10.7 | 11.2 | 7.6 | 6.1 | 10.3 | 13.7 | 4.4 | 3.6 | 4.4 | 5.6 |
| Multi-level lighting or dimming | 16.4 | 12.2 | 14.2 | 16.3 | 12.1 | 11.4 | 10.2 | 12.4 | 10.4 | 5.9 | 6.0 | 7.1 |
| Daylight harvesting | 16.0 | 17.8 | 16.0 | 19.6 | 16.2 | 13.8 | 13.8 | 20.6 | 7.9 | 8.1 | 9.4 | 5.3 |
| Demand responsive lighting | 21.4 | 21.8 | 32.0 | 30.3 | 25.7 | 20.1 | 25.3 | 38.8 | 21.0 | 12.6 | 10.7 | 11.7 |
| Building automation system (BAS) for lighting[1] | 14.5 | 12.1 | 17.4 | 18.1 | 15.5 | 11.0 | 14.4 | 17.2 | 8.8 | 6.9 | 5.9 | 7.5 |
| **Equipment usage reduced when building not in full use (more than one may apply)** | | | | | | | | | | | | |
| Heating | 9.5 | 5.9 | 9.8 | 11.2 | 7.1 | 5.3 | 8.8 | 14.6 | 6.5 | 4.1 | 4.7 | 5.6 |
| Cooling | 10.5 | 6.0 | 9.5 | 12.1 | 7.6 | 5.6 | 8.3 | 15.7 | 6.0 | 3.3 | 4.4 | 6.1 |
| Lighting | 9.1 | 6.9 | 8.9 | 11.1 | 7.5 | 5.6 | 8.5 | 13.8 | 5.1 | 4.0 | 4.3 | 6.0 |
| **Annual consumption (kilowatthours)** | | | | | | | | | | | | |
| 10,000 or less | 24.4 | 18.7 | 17.5 | 14.6 | 27.4 | 14.7 | 23.4 | 19.8 | 12.6 | 10.1 | 9.7 | 11.8 |
| 10,001 to 50,000 | 10.0 | 10.6 | 9.8 | 20.9 | 12.5 | 11.8 | 11.8 | 22.2 | 7.2 | 6.0 | 5.5 | 4.9 |
| 50,001 to 100,000 | 9.2 | 9.6 | 9.9 | 24.0 | 13.9 | 11.4 | 13.8 | 30.4 | 12.6 | 8.5 | 6.5 | 11.5 |
| 100,001 to 500,000 | 7.7 | 11.9 | 7.7 | 12.7 | 10.0 | 10.1 | 10.6 | 15.8 | 7.8 | 7.8 | 5.5 | 6.0 |
| 500,001 to 1,000,000 | 19.9 | 12.7 | 9.4 | 12.0 | 15.4 | 10.3 | 10.0 | 11.4 | 11.3 | 7.9 | 7.1 | 6.5 |
| 1,000,001 to 5,000,000 | 12.3 | 12.3 | 11.9 | 15.6 | 11.1 | 10.3 | 11.0 | 16.7 | 4.8 | 5.9 | 4.9 | 6.0 |
| Over 5,000,000 | 13.7 | 12.2 | 14.1 | 17.8 | 11.6 | 12.5 | 13.4 | 15.5 | 5.7 | 6.3 | 9.0 | 8.4 |

## RSEs for Table C25. Natural gas consumption and conditional energy intensity by Census region, 2012 - PUBLIC USE VERSION

| | RSEs for total natural gas consumption | | | | RSEs for total floorspace of buildings using natural gas | | | | RSEs for natural gas energy intensity | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | North-east | Mid-west | South | West | North-east | Mid-west | South | West | North-east | Mid-west | South | West |
| **All buildings** | 11.6 | 8.4 | 11.1 | 12.6 | 8.6 | 5.8 | 10.3 | 12.3 | 5.6 | 5.6 | 6.0 | 8.8 |
| **Building floorspace (square feet)** | | | | | | | | | | | | |
| 1,001 to 5,000 | 16.9 | 11.1 | 12.2 | 13.9 | 11.6 | 9.8 | 10.3 | 12.2 | 16.5 | 8.3 | 9.7 | 8.7 |
| 5,001 to 10,000 | 16.6 | 17.8 | 19.0 | 14.5 | 13.4 | 11.5 | 14.8 | 22.0 | 14.3 | 12.0 | 13.5 | 16.5 |
| 10,001 to 25,000 | 20.5 | 16.6 | 18.7 | 13.3 | 15.1 | 15.2 | 15.6 | 17.1 | 20.4 | 16.0 | 11.1 | 11.4 |
| 25,001 to 50,000 | 20.5 | 15.2 | 20.0 | 13.0 | 15.3 | 10.0 | 18.4 | 15.2 | 14.3 | 11.8 | 12.2 | 15.1 |
| 50,001 to 100,000 | 19.0 | 24.4 | 16.7 | 16.1 | 13.6 | 14.2 | 15.7 | 12.9 | 14.1 | 14.4 | 10.6 | 7.1 |
| 100,001 to 200,000 | 35.8 | 14.9 | 19.6 | 26.7 | 19.9 | 10.5 | 14.4 | 20.6 | 22.8 | 10.7 | 17.6 | 27.9 |
| 200,001 to 500,000 | 20.6 | 15.4 | 10.0 | 32.7 | 15.5 | 12.6 | 12.3 | 18.3 | 11.4 | 8.9 | 9.4 | 19.4 |
| Over 500,000 | 16.6 | 22.0 | 16.1 | 62.2 | 16.9 | 22.7 | 17.0 | 22.1 | 17.7 | 10.1 | 16.3 | 52.0 |
| **Principal building activity** | | | | | | | | | | | | |
| Education | 19.5 | 15.3 | 17.1 | 19.0 | 16.9 | 8.6 | 13.6 | 19.7 | 20.8 | 11.7 | 18.0 | 9.8 |
| Food sales | 32.0 | 35.2 | 36.2 | 23.0 | 29.0 | 35.7 | 24.2 | 37.2 | 14.5 | 23.0 | 25.5 | 38.6 |
| Food service | 18.6 | 18.6 | 16.4 | 17.1 | 17.0 | 32.3 | 12.3 | 19.2 | 15.2 | 48.6 | 10.6 | 16.3 |
| Health care | 17.1 | 13.3 | 9.8 | 33.1 | 18.9 | 12.1 | 11.9 | 23.1 | 9.6 | 7.2 | 9.8 | 14.9 |
| Inpatient | 17.5 | 13.3 | 10.8 | 38.3 | 18.3 | 12.6 | 11.8 | 28.8 | 12.3 | 4.1 | 9.1 | 14.0 |
| Outpatient | 33.5 | 33.0 | 46.5 | 19.8 | 27.5 | 22.1 | 37.3 | 21.5 | 9.7 | 19.1 | 32.1 | 12.0 |
| Lodging | 22.9 | 22.1 | 18.1 | 42.1 | 17.0 | 20.7 | 17.4 | 18.8 | 17.1 | 8.7 | 8.9 | 35.2 |
| Mercantile | 21.3 | 22.7 | 24.7 | 19.0 | 16.0 | 13.4 | 22.5 | 16.3 | 14.4 | 13.4 | 12.8 | 9.8 |
| Retail (other than mall) | 24.8 | 30.0 | 22.0 | 16.7 | 23.2 | 13.9 | 22.5 | 20.7 | 16.0 | 23.5 | 12.6 | 13.3 |
| Enclosed and strip malls | 26.3 | 23.7 | 28.0 | 23.6 | 17.6 | 17.8 | 29.2 | 20.5 | 17.4 | 12.3 | 14.0 | 6.8 |
| Office | 32.8 | 17.3 | 16.0 | 14.1 | 14.1 | 14.7 | 15.8 | 11.1 | 24.0 | 9.5 | 9.1 | 10.4 |
| Public assembly | 24.2 | 20.7 | 27.2 | 23.0 | 20.3 | 24.0 | 17.9 | 20.8 | 16.2 | 10.1 | 24.9 | 12.4 |
| Public order and safety | 45.4 | 28.3 | 30.5 | 45.2 | 35.6 | 25.9 | 38.0 | 36.0 | 24.3 | 21.1 | 32.5 | 28.5 |
| Religious worship | 20.1 | 15.1 | 34.8 | 46.5 | 25.3 | 15.4 | 21.9 | 24.1 | 10.8 | 14.7 | 24.5 | 41.8 |
| Service | 33.2 | 15.0 | 20.2 | 31.3 | 24.1 | 17.3 | 15.0 | 37.3 | 32.4 | 18.2 | 20.8 | 32.1 |
| Warehouse and storage | 28.0 | 22.7 | 26.7 | 36.8 | 15.9 | 17.0 | 22.3 | 34.7 | 25.0 | 11.0 | 14.5 | 33.1 |
| Other | 51.5 | 62.1 | 39.7 | 62.5 | 35.6 | 37.9 | 38.9 | 34.0 | 47.2 | 50.1 | 31.5 | 45.2 |
| Vacant | 29.1 | 29.1 | 73.3 | 34.4 | 35.2 | 25.1 | 54.9 | 22.0 | 18.6 | 22.3 | 87.7 | 44.4 |
| **Year constructed** | | | | | | | | | | | | |
| Before 1920 | 29.5 | 16.7 | 16.5 | 31.0 | 18.6 | 17.4 | 25.8 | 29.2 | 20.1 | 9.6 | 16.9 | 15.3 |
| 1920 to 1945 | 15.4 | 12.3 | 26.6 | 19.2 | 17.4 | 15.2 | 17.4 | 26.8 | 21.6 | 12.4 | 24.1 | 23.1 |
| 1946 to 1959 | 29.6 | 18.1 | 18.6 | 16.2 | 21.9 | 14.0 | 20.6 | 14.2 | 22.5 | 13.0 | 15.5 | 9.1 |
| 1960 to 1969 | 18.8 | 15.8 | 15.7 | 22.7 | 17.7 | 11.4 | 13.4 | 15.9 | 9.8 | 11.5 | 12.4 | 18.8 |
| 1970 to 1979 | 30.3 | 12.7 | 16.5 | 15.7 | 17.4 | 10.6 | 15.3 | 19.9 | 18.0 | 7.6 | 16.8 | 11.1 |
| 1980 to 1989 | 11.3 | 23.7 | 14.9 | 13.3 | 16.9 | 15.8 | 11.0 | 15.7 | 14.3 | 18.6 | 11.3 | 11.8 |
| 1990 to 1999 | 23.5 | 14.6 | 12.4 | 12.6 | 13.9 | 13.5 | 11.6 | 11.8 | 18.5 | 6.0 | 11.0 | 13.3 |
| 2000 to 2003 | 30.6 | 13.8 | 17.5 | 21.7 | 20.8 | 14.5 | 22.4 | 18.2 | 23.2 | 12.7 | 25.1 | 12.8 |
| 2004 to 2007 | 31.1 | 21.4 | 30.8 | 53.3 | 21.8 | 23.9 | 28.0 | 29.8 | 22.5 | 21.2 | 13.2 | 47.6 |
| 2008 to 2012 | 26.6 | 28.6 | 38.9 | 50.2 | 25.2 | 27.1 | 29.2 | 36.1 | 16.6 | 23.2 | 17.6 | 26.4 |
| **Number of floors** | | | | | | | | | | | | |
| One | 13.0 | 13.5 | 17.0 | 11.9 | 13.9 | 9.0 | 15.5 | 17.6 | 13.2 | 8.9 | 8.0 | 9.1 |
| Two | 25.1 | 11.4 | 12.8 | 14.9 | 16.2 | 8.2 | 11.4 | 13.7 | 14.9 | 7.5 | 9.4 | 11.7 |
| Three | 14.9 | 25.7 | 19.8 | 19.1 | 12.3 | 14.9 | 16.2 | 21.9 | 9.8 | 16.8 | 10.5 | 13.5 |
| Four to nine | 18.0 | 10.4 | 11.9 | 28.5 | 11.1 | 11.4 | 16.8 | 19.5 | 14.8 | 8.3 | 15.0 | 19.2 |
| Ten or more | 21.0 | 24.1 | 19.0 | 70.4 | 20.6 | 22.1 | 18.4 | 26.1 | 25.0 | 13.3 | 13.0 | 58.1 |

## RSEs for Table C25. Natural gas consumption and conditional energy intensity by Census region, 2012 - PUBLIC USE VERSION

| | RSEs for total natural gas consumption | | | | RSEs for total floorspace of buildings using natural gas | | | | RSEs for natural gas energy intensity | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | North-east | Mid-west | South | West | North-east | Mid-west | South | West | North-east | Mid-west | South | West |
| **All buildings** | 11.6 | 8.4 | 11.1 | 12.6 | 8.6 | 5.8 | 10.3 | 12.3 | 5.6 | 5.6 | 6.0 | 8.8 |
| **Number of workers (main shift)** | | | | | | | | | | | | |
| Fewer than 5 | 11.9 | 11.7 | 17.7 | 15.6 | 14.1 | 13.5 | 19.7 | 11.1 | 14.4 | 12.2 | 9.8 | 8.0 |
| 5 to 9 | 20.3 | 19.1 | 16.4 | 20.6 | 23.4 | 11.6 | 11.3 | 23.4 | 21.5 | 13.5 | 16.3 | 12.3 |
| 10 to 19 | 15.1 | 26.1 | 19.9 | 17.1 | 12.7 | 14.7 | 15.2 | 20.4 | 15.2 | 22.2 | 16.0 | 15.9 |
| 20 to 49 | 20.7 | 14.1 | 15.4 | 11.6 | 18.0 | 7.5 | 13.2 | 15.0 | 15.8 | 8.7 | 12.7 | 14.0 |
| 50 to 99 | 20.9 | 15.6 | 20.9 | 18.9 | 12.2 | 11.0 | 14.8 | 19.0 | 13.8 | 11.0 | 11.7 | 16.1 |
| 100 to 249 | 19.1 | 13.5 | 18.5 | 31.1 | 14.0 | 11.2 | 18.5 | 15.6 | 16.7 | 6.8 | 17.2 | 22.4 |
| 250 or more | 27.7 | 16.5 | 11.9 | 37.9 | 15.3 | 15.8 | 10.8 | 15.5 | 18.1 | 9.9 | 12.3 | 27.2 |
| **Weekly operating hours** | | | | | | | | | | | | |
| Fewer than 40 | 19.1 | 13.6 | 23.6 | 33.1 | 20.4 | 13.5 | 20.0 | 23.3 | 14.7 | 13.6 | 16.3 | 14.1 |
| 40 to 48 | 20.3 | 12.0 | 26.5 | 22.8 | 17.5 | 11.1 | 18.2 | 14.9 | 7.6 | 11.1 | 13.1 | 17.4 |
| 49 to 60 | 10.8 | 12.6 | 11.2 | 14.2 | 9.7 | 10.7 | 14.0 | 16.4 | 8.7 | 7.1 | 17.1 | 13.5 |
| 61 to 84 | 16.6 | 15.2 | 13.8 | 16.0 | 14.6 | 12.0 | 14.5 | 16.8 | 16.9 | 11.7 | 11.7 | 10.0 |
| 85 to 167 | 29.8 | 13.9 | 20.7 | 17.3 | 19.5 | 15.4 | 18.8 | 21.5 | 16.3 | 12.3 | 14.4 | 21.3 |
| Open continuously | 24.8 | 14.7 | 10.8 | 23.9 | 16.9 | 10.5 | 10.4 | 15.1 | 12.9 | 10.3 | 8.3 | 15.0 |
| **Party responsible for operation and maintenance of energy systems** | | | | | | | | | | | | |
| Building owner | 13.4 | 7.8 | 9.1 | 11.4 | 9.6 | 5.6 | 9.0 | 10.9 | 6.7 | 5.5 | 6.4 | 9.6 |
| Business owner or tenant | 17.0 | 18.7 | 26.1 | 29.2 | 11.0 | 13.7 | 26.4 | 25.3 | 13.9 | 11.2 | 15.7 | 15.3 |
| Property management | 49.9 | 43.6 | 49.5 | 59.5 | 35.2 | 38.7 | 26.1 | 46.5 | 25.1 | 22.1 | 41.7 | 59.5 |
| Other | 46.0 | 37.8 | 27.6 | 38.0 | 33.6 | 35.4 | 34.7 | 25.7 | 25.8 | 26.0 | 39.5 | 26.3 |
| **Provider of direct input on energy-related equipment purchases** | | | | | | | | | | | | |
| Building owner | 12.9 | 8.0 | 9.7 | 11.6 | 9.3 | 5.8 | 9.1 | 10.9 | 6.8 | 5.4 | 6.4 | 9.9 |
| Business owner or tenant | 19.8 | 16.6 | 21.2 | 36.8 | 12.0 | 16.1 | 24.4 | 27.2 | 12.9 | 11.1 | 18.7 | 21.3 |
| Property management | 59.9 | 44.7 | 43.5 | 74.4 | 50.1 | 38.3 | 40.1 | 60.9 | 20.3 | 29.8 | 46.3 | 37.6 |
| Other | 33.6 | 53.3 | 40.7 | 36.5 | 23.6 | 36.2 | 31.4 | 30.8 | 21.2 | 37.7 | 20.8 | 19.1 |
| **Number of establishments** | | | | | | | | | | | | |
| One | 14.2 | 7.8 | 10.5 | 14.7 | 11.4 | 6.5 | 10.7 | 14.2 | 6.7 | 6.7 | 8.4 | 12.0 |
| 2 to 5 | 18.9 | 15.4 | 14.7 | 12.2 | 10.9 | 10.1 | 15.1 | 13.9 | 15.6 | 8.7 | 9.5 | 11.4 |
| 6 to 10 | 26.2 | 25.9 | 28.5 | 21.6 | 22.2 | 20.3 | 25.3 | 21.5 | 26.3 | 19.6 | 16.6 | 11.3 |
| 11 to 20 | 23.1 | 29.3 | 35.7 | 33.7 | 20.9 | 22.4 | 35.6 | 22.8 | 19.0 | 11.1 | 20.4 | 25.0 |
| More than 20 | 28.3 | 38.1 | 25.8 | 38.7 | 14.3 | 23.2 | 18.2 | 17.7 | 24.1 | 25.2 | 21.7 | 33.6 |
| Currently unoccupied | 58.7 | 35.1 | 61.6 | 46.7 | 46.8 | 43.9 | 84.5 | 45.2 | 42.9 | 28.3 | 111.4 | 39.0 |
| **Predominant exterior wall material** | | | | | | | | | | | | |
| Brick, stone, or stucco | 10.6 | 7.8 | 12.7 | 10.1 | 9.3 | 6.7 | 11.0 | 11.7 | 7.5 | 5.7 | 9.1 | 5.7 |
| Concrete (block or poured) | 28.6 | 16.0 | 11.7 | 15.7 | 15.8 | 10.3 | 13.0 | 15.5 | 17.2 | 12.1 | 12.1 | 14.2 |
| Concrete panels | 31.6 | 18.8 | 29.6 | 55.5 | 23.0 | 17.9 | 22.3 | 27.5 | 21.7 | 15.5 | 24.9 | 46.4 |
| Siding or shingles | 29.4 | 26.7 | 26.6 | 44.6 | 20.6 | 27.8 | 20.2 | 27.4 | 17.1 | 24.1 | 29.8 | 25.2 |
| Metal panels | 76.9 | 16.6 | 21.5 | 27.1 | 38.6 | 15.4 | 21.3 | 23.5 | 56.0 | 10.2 | 12.7 | 9.1 |
| Window glass | 58.7 | 39.8 | 44.0 | 35.9 | 30.0 | 29.7 | 30.5 | 31.5 | 55.1 | 34.3 | 32.7 | 38.1 |
| Other | 51.8 | 61.6 | 58.8 | 82.4 | 62.7 | 40.9 | 64.7 | 52.0 | 67.4 | 35.4 | 158.9 | 21.1 |
| No one major type | 56.0 | 50.9 | 58.3 | 58.3 | 18.5 | 49.2 | 52.8 | 56.5 | 54.9 | 37.2 | 10.1 | 35.6 |

## RSEs for Table C25. Natural gas consumption and conditional energy intensity by Census region, 2012 - PUBLIC USE VERSION

| | RSEs for total natural gas consumption | | | | RSEs for total floorspace of buildings using natural gas | | | | RSEs for natural gas energy intensity | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | North-east | Mid-west | South | West | North-east | Mid-west | South | West | North-east | Mid-west | South | West |
| **All buildings** | 11.6 | 8.4 | 11.1 | 12.6 | 8.6 | 5.8 | 10.3 | 12.3 | 5.6 | 5.6 | 6.0 | 8.8 |
| **Predominant roof material** | | | | | | | | | | | | |
| Metal surfacing | 21.0 | 20.8 | 16.3 | 15.1 | 19.8 | 15.7 | 16.2 | 20.0 | 21.8 | 14.9 | 12.3 | 16.9 |
| Synthetic or rubber | 15.5 | 11.6 | 16.8 | 24.0 | 10.3 | 8.7 | 17.1 | 15.6 | 8.5 | 7.2 | 8.6 | 14.7 |
| Built-up | 23.2 | 12.0 | 12.1 | 14.5 | 13.5 | 10.1 | 9.0 | 12.5 | 15.9 | 6.0 | 7.1 | 11.4 |
| Slate or tile shingles | 24.1 | 24.7 | 20.3 | 14.4 | 29.2 | 24.7 | 32.1 | 16.8 | 37.5 | 9.6 | 57.6 | 18.7 |
| Wooden materials (including shingles) | 62.3 | 45.9 | 43.6 | 14.0 | 55.8 | 38.6 | 21.0 | 28.8 | 34.3 | 18.0 | 31.9 | 26.6 |
| Asphalt, fiberglass, or other shingles | 13.1 | 22.0 | 16.5 | 15.4 | 11.0 | 12.8 | 12.2 | 17.9 | 8.5 | 12.2 | 10.5 | 8.8 |
| Concrete | 46.1 | 60.6 | 38.0 | 32.0 | 34.8 | 44.3 | 33.1 | 17.4 | 42.3 | 41.1 | 28.4 | 26.5 |
| Other | 76.2 | 64.4 | 48.3 | 67.1 | 65.1 | 48.0 | 40.7 | 62.3 | 39.4 | 58.6 | 22.9 | 23.3 |
| No one major type | 62.7 | 37.4 | 75.6 | 67.6 | 76.0 | 51.7 | 69.0 | 88.7 | 80.4 | 39.2 | 81.7 | 25.1 |
| **Roof characteristics** | | | | | | | | | | | | |
| Roof tilt | | | | | | | | | | | | |
| Flat | 13.6 | 8.6 | 10.5 | 12.5 | 9.0 | 8.0 | 10.0 | 13.5 | 7.9 | 4.7 | 5.8 | 9.3 |
| Shallow pitch | 16.7 | 14.2 | 17.5 | 25.6 | 20.4 | 7.6 | 15.6 | 14.5 | 18.3 | 12.1 | 12.0 | 20.8 |
| Steeper pitch | 14.6 | 20.4 | 14.9 | 13.7 | 11.6 | 13.8 | 11.9 | 13.8 | 11.8 | 13.6 | 11.4 | 7.9 |
| Cool roof | 31.0 | 14.2 | 11.5 | 17.8 | 20.1 | 11.7 | 12.8 | 15.7 | 15.5 | 8.5 | 9.9 | 9.9 |
| **Renovations in buildings constructed before 2008 (more than one may apply)** | | | | | | | | | | | | |
| Any type of renovation | 17.0 | 10.3 | 10.0 | 17.3 | 11.4 | 6.6 | 8.3 | 9.7 | 8.5 | 7.6 | 7.1 | 12.6 |
| Addition or annex | 13.5 | 9.9 | 12.5 | 37.4 | 11.3 | 8.8 | 11.1 | 17.1 | 8.3 | 7.6 | 10.8 | 27.1 |
| Reduction in floorspace | 80.0 | 31.8 | 29.0 | 41.8 | 65.5 | 24.9 | 23.5 | 38.2 | 36.9 | 27.9 | 24.3 | 29.1 |
| Roof replacement | 23.5 | 12.0 | 12.6 | 18.6 | 13.1 | 7.2 | 10.0 | 12.3 | 14.1 | 10.0 | 10.3 | 15.3 |
| Exterior wall replacement | 21.2 | 14.3 | 24.3 | 43.5 | 20.5 | 17.1 | 15.6 | 18.4 | 18.4 | 10.9 | 25.4 | 31.3 |
| Interior wall reconfiguration | 14.9 | 10.2 | 11.1 | 25.6 | 9.3 | 8.4 | 9.4 | 12.0 | 10.5 | 7.4 | 10.0 | 19.0 |
| Window replacement | 13.6 | 12.2 | 14.6 | 39.4 | 10.1 | 11.5 | 9.6 | 18.5 | 11.0 | 9.8 | 13.6 | 28.9 |
| HVAC equipment upgrade | 19.4 | 8.9 | 10.7 | 21.9 | 10.5 | 7.9 | 9.7 | 10.7 | 12.6 | 6.9 | 9.1 | 15.9 |
| Lighting upgrade | 15.6 | 11.4 | 11.8 | 21.2 | 10.2 | 8.2 | 9.6 | 10.2 | 10.5 | 9.3 | 9.5 | 16.9 |
| Electrical upgrade | 20.6 | 11.6 | 12.8 | 27.9 | 13.5 | 11.4 | 11.4 | 14.9 | 14.0 | 8.2 | 11.2 | 21.7 |
| Plumbing system upgrade | 21.3 | 11.7 | 14.4 | 28.5 | 14.2 | 10.5 | 13.2 | 14.9 | 15.6 | 9.9 | 12.2 | 22.7 |
| Insulation upgrade | 13.8 | 11.6 | 21.8 | 51.0 | 12.1 | 11.0 | 14.3 | 22.2 | 14.1 | 9.0 | 18.7 | 36.5 |
| Fire, safety, or security upgrade | 16.9 | 11.4 | 11.5 | 15.7 | 11.1 | 11.4 | 10.2 | 11.1 | 11.3 | 6.5 | 9.2 | 14.0 |
| Structural upgrade | 17.9 | 20.9 | 27.4 | 51.1 | 18.4 | 19.6 | 15.4 | 24.4 | 19.5 | 14.8 | 21.9 | 37.6 |
| Other | 47.1 | 35.8 | 44.3 | 63.0 | 37.2 | 51.0 | 40.5 | 67.1 | 55.0 | 40.9 | 53.9 | 31.5 |
| No renovations | 13.6 | 13.3 | 11.4 | 11.1 | 9.7 | 8.6 | 11.0 | 16.3 | 9.1 | 7.8 | 8.6 | 10.2 |
| Buildings constructed 2008 or later | 26.6 | 28.6 | 38.9 | 50.2 | 25.2 | 27.1 | 29.2 | 36.1 | 16.6 | 23.2 | 17.6 | 26.4 |
| **Energy sources (more than one may apply)** | | | | | | | | | | | | |
| Electricity | 11.6 | 8.4 | 11.1 | 12.6 | 8.6 | 5.8 | 10.3 | 12.3 | 5.6 | 5.6 | 6.0 | 8.8 |
| Natural gas | 11.6 | 8.4 | 11.1 | 12.6 | 8.6 | 5.8 | 10.3 | 12.3 | 5.6 | 5.6 | 6.0 | 8.8 |
| Fuel oil | 11.0 | 11.5 | 10.5 | 29.9 | 9.5 | 11.2 | 11.0 | 15.8 | 7.4 | 6.6 | 9.5 | 17.3 |
| District heat | 73.7 | 41.8 | 40.3 | 68.9 | 33.1 | 19.0 | 39.8 | 36.1 | 63.3 | 40.2 | 70.4 | 48.3 |
| District chilled water | 68.0 | 42.7 | 30.6 | 62.1 | 53.6 | 26.0 | 36.5 | 38.8 | 30.5 | 43.0 | 49.4 | 38.1 |
| Propane | 24.6 | 23.4 | 28.0 | 63.7 | 22.5 | 21.3 | 21.5 | 31.5 | 14.3 | 19.2 | 28.0 | 55.0 |
| Other | 46.8 | 20.7 | 43.7 | 38.5 | 29.0 | 15.7 | 19.1 | 21.9 | 23.8 | 17.8 | 36.9 | 30.9 |

## RSEs for Table C25. Natural gas consumption and conditional energy intensity by Census region, 2012 - PUBLIC USE VERSION

| | RSEs for total natural gas consumption | | | | RSEs for total floorspace of buildings using natural gas | | | | RSEs for natural gas energy intensity | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | North-east | Mid-west | South | West | North-east | Mid-west | South | West | North-east | Mid-west | South | West |
| **All buildings** | 11.6 | 8.4 | 11.1 | 12.6 | 8.6 | 5.8 | 10.3 | 12.3 | 5.6 | 5.6 | 6.0 | 8.8 |
| **Space-heating energy sources** | | | | | | | | | | | | |
| Natural gas | 10.5 | 8.2 | 13.2 | 11.0 | 8.2 | 5.8 | 12.6 | 12.8 | 5.2 | 5.3 | 5.9 | 6.5 |
| Natural gas main | 10.5 | 8.1 | 14.0 | 12.0 | 8.0 | 5.6 | 12.9 | 12.5 | 5.6 | 5.5 | 7.0 | 6.7 |
| Natural gas secondary | 19.8 | 21.8 | 18.3 | 10.8 | 19.3 | 17.6 | 15.5 | 20.5 | 14.9 | 13.6 | 16.6 | 14.4 |
| Other excluding natural gas | 59.3 | 29.5 | 11.5 | 39.7 | 22.4 | 15.1 | 10.8 | 17.8 | 49.3 | 28.8 | 14.1 | 35.4 |
| Buildings without heating | 96.3 | 100.0 | 46.4 | 44.0 | 90.2 | 100.0 | 26.5 | 31.5 | 284.4 | 0.0 | 36.0 | 52.2 |
| **Primary space-heating energy source** | | | | | | | | | | | | |
| Electricity | 19.1 | 22.6 | 11.4 | 11.6 | 14.7 | 13.4 | 9.6 | 13.8 | 12.8 | 15.8 | 10.9 | 8.8 |
| Natural gas | 10.5 | 8.1 | 14.0 | 12.0 | 8.0 | 5.6 | 12.9 | 12.5 | 5.6 | 5.5 | 7.0 | 6.7 |
| Fuel oil | 33.2 | 0.0 | 60.3 | 112.6 | 38.0 | 0.0 | 62.1 | 112.6 | 44.2 | 0.0 | 76.9 | 0.0 |
| District heat | 76.2 | 47.9 | 40.5 | 69.0 | 33.9 | 19.9 | 40.2 | 37.4 | 66.0 | 46.3 | 71.8 | 47.8 |
| Propane | 101.8 | 60.1 | 112.6 | 97.6 | 107.0 | 64.3 | 112.6 | 97.6 | 109.7 | 19.5 | 0.0 | 0.0 |
| Other | 86.5 | 85.6 | 85.1 | 79.9 | 74.9 | 62.9 | 78.5 | 79.3 | 40.7 | 56.7 | 164.8 | 34.8 |
| **Cooling energy sources** | | | | | | | | | | | | |
| Natural gas | 26.8 | 53.3 | 49.2 | 37.1 | 25.8 | 53.4 | 55.7 | 32.1 | 22.0 | 17.5 | 47.3 | 24.6 |
| Other excluding natural gas | 13.4 | 8.4 | 11.1 | 13.4 | 9.7 | 5.7 | 10.2 | 13.1 | 6.2 | 6.0 | 6.1 | 9.4 |
| Buildings without cooling | 31.6 | 23.5 | 33.2 | 12.9 | 22.8 | 18.9 | 33.7 | 21.8 | 14.8 | 10.3 | 19.2 | 19.7 |
| **Water-heating energy sources** | | | | | | | | | | | | |
| Natural gas | 12.8 | 9.1 | 12.2 | 12.1 | 10.1 | 7.0 | 11.5 | 13.3 | 6.5 | 5.6 | 5.7 | 7.0 |
| Other excluding natural gas | 10.1 | 8.5 | 11.2 | 31.8 | 12.3 | 8.0 | 11.4 | 13.8 | 10.9 | 7.9 | 9.6 | 26.0 |
| Buildings without water heating | 41.2 | 23.2 | 43.8 | 26.3 | 34.0 | 22.7 | 30.8 | 27.4 | 33.9 | 21.4 | 41.6 | 13.6 |
| **Cooking energy sources** | | | | | | | | | | | | |
| Natural gas | 17.9 | 8.0 | 10.9 | 18.5 | 14.6 | 5.6 | 7.9 | 12.9 | 7.2 | 7.1 | 6.7 | 11.9 |
| Other excluding natural gas | 17.6 | 12.4 | 18.1 | 19.3 | 17.8 | 11.3 | 14.1 | 18.5 | 13.5 | 10.3 | 15.9 | 14.5 |
| Buildings without cooking | 15.5 | 12.1 | 15.2 | 13.1 | 9.5 | 8.1 | 15.0 | 16.4 | 10.3 | 6.8 | 9.8 | 12.8 |
| **Energy end uses (more than one may apply)** | | | | | | | | | | | | |
| Buildings with space heating | 11.8 | 8.4 | 11.3 | 12.8 | 8.6 | 5.7 | 10.5 | 12.4 | 5.7 | 5.6 | 6.1 | 8.9 |
| Buildings with cooling | 12.7 | 8.7 | 11.1 | 13.3 | 9.4 | 5.9 | 10.2 | 13.0 | 5.9 | 5.8 | 6.0 | 9.3 |
| Buildings with water heating | 11.7 | 8.4 | 11.2 | 12.6 | 8.8 | 5.9 | 10.4 | 12.0 | 5.6 | 5.6 | 5.5 | 8.8 |
| Buildings with cooking | 15.9 | 7.7 | 10.7 | 16.3 | 12.6 | 5.7 | 8.2 | 11.5 | 6.4 | 6.4 | 6.2 | 11.2 |
| Buildings with manufacturing | 27.4 | 25.3 | 32.5 | 31.7 | 17.6 | 24.9 | 23.1 | 23.1 | 19.8 | 20.3 | 30.8 | 34.3 |
| Buildings with electricity generation | 13.0 | 9.8 | 11.4 | 25.3 | 9.2 | 8.4 | 11.9 | 13.7 | 9.2 | 5.4 | 9.3 | 14.8 |
| **Percent of floorspace heated** | | | | | | | | | | | | |
| Not heated | 96.3 | 100.0 | 46.4 | 44.0 | 90.2 | 100.0 | 26.5 | 31.5 | 284.4 | 0.0 | 36.0 | 52.2 |
| 1 to 50 | 21.4 | 32.5 | 16.4 | 23.2 | 17.6 | 20.6 | 17.1 | 23.6 | 15.2 | 25.6 | 16.8 | 26.4 |
| 51 to 99 | 23.7 | 15.6 | 17.4 | 12.9 | 15.1 | 11.8 | 10.8 | 13.9 | 16.2 | 15.6 | 13.4 | 7.3 |
| 100 | 12.0 | 8.1 | 10.7 | 17.1 | 9.6 | 6.4 | 11.7 | 12.4 | 5.6 | 5.6 | 6.0 | 10.1 |
| **Percent of floorspace cooled** | | | | | | | | | | | | |
| Not cooled | 31.6 | 23.5 | 33.2 | 12.9 | 22.8 | 18.9 | 33.7 | 21.8 | 14.8 | 10.3 | 19.2 | 19.7 |
| 1 to 50 | 13.5 | 10.5 | 18.9 | 21.4 | 12.5 | 9.7 | 19.8 | 24.9 | 10.2 | 7.8 | 16.2 | 22.3 |
| 51 to 99 | 19.7 | 21.0 | 16.9 | 8.9 | 9.8 | 13.6 | 10.5 | 9.9 | 13.8 | 10.4 | 10.8 | 6.0 |
| 100 | 20.3 | 9.5 | 10.5 | 18.6 | 13.2 | 8.2 | 11.2 | 14.0 | 12.2 | 7.2 | 7.1 | 12.8 |

## RSEs for Table C25. Natural gas consumption and conditional energy intensity by Census region, 2012 - PUBLIC USE VERSION

| | RSEs for total natural gas consumption | | | | RSEs for total floorspace of buildings using natural gas | | | | RSEs for natural gas energy intensity | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | North-east | Mid-west | South | West | North-east | Mid-west | South | West | North-east | Mid-west | South | West |
| **All buildings** | 11.6 | 8.4 | 11.1 | 12.6 | 8.6 | 5.8 | 10.3 | 12.3 | 5.6 | 5.6 | 6.0 | 8.8 |
| **Heating equipment (more than one may apply)** | | | | | | | | | | | | |
| Heat pumps | 17.2 | 17.4 | 14.0 | 15.2 | 11.5 | 20.2 | 13.2 | 13.6 | 13.5 | 20.5 | 9.8 | 9.4 |
| Furnaces | 14.1 | 18.7 | 17.9 | 33.4 | 12.1 | 15.3 | 19.0 | 17.6 | 11.3 | 12.8 | 12.9 | 21.4 |
| Individual space heaters | 14.4 | 10.0 | 12.2 | 12.4 | 11.7 | 9.6 | 11.6 | 11.9 | 7.7 | 6.9 | 9.2 | 6.6 |
| District heat | 73.7 | 41.8 | 40.5 | 69.0 | 33.1 | 19.0 | 40.2 | 37.4 | 63.3 | 40.2 | 71.8 | 47.8 |
| Boilers | 10.8 | 8.5 | 9.4 | 17.7 | 8.7 | 5.8 | 11.2 | 13.5 | 7.2 | 6.3 | 7.5 | 8.4 |
| Packaged heating units | 13.4 | 9.3 | 13.4 | 12.5 | 10.1 | 7.0 | 11.5 | 13.9 | 6.7 | 6.7 | 6.9 | 9.0 |
| Other | 33.6 | 45.8 | 38.5 | 29.5 | 34.5 | 31.5 | 34.1 | 18.6 | 16.1 | 22.8 | 21.3 | 15.5 |
| **Cooling equipment (more than one may apply)** | | | | | | | | | | | | |
| Residential-type central air conditioners | 20.0 | 12.7 | 14.6 | 24.0 | 20.7 | 11.7 | 14.9 | 20.4 | 20.4 | 8.0 | 9.2 | 22.1 |
| Heat pumps | 16.9 | 19.2 | 14.9 | 15.4 | 16.4 | 19.1 | 13.9 | 12.3 | 13.7 | 22.0 | 11.3 | 12.1 |
| Individual air conditioners | 10.9 | 11.7 | 13.8 | 16.2 | 9.1 | 11.5 | 10.1 | 16.5 | 8.0 | 9.6 | 10.7 | 8.0 |
| District chilled water | 68.0 | 42.7 | 30.6 | 62.1 | 53.6 | 26.0 | 36.5 | 38.8 | 30.5 | 43.0 | 49.4 | 38.1 |
| Central chillers | 18.3 | 12.5 | 9.4 | 19.2 | 13.6 | 9.4 | 8.9 | 11.9 | 12.7 | 8.1 | 7.2 | 13.1 |
| Packaged air conditioning units | 11.9 | 10.7 | 13.6 | 14.3 | 9.1 | 7.9 | 11.4 | 13.5 | 6.0 | 6.1 | 8.2 | 7.1 |
| Swamp coolers | 98.7 | 36.2 | 53.7 | 24.3 | 84.4 | 39.2 | 42.0 | 22.0 | 260.8 | 19.4 | 40.3 | 18.9 |
| Other | 67.7 | 64.9 | 46.4 | 60.2 | 59.7 | 56.8 | 28.9 | 44.8 | 10.2 | 52.9 | 37.8 | 34.1 |
| **Main equipment replaced since 1990 (more than one may apply)** | | | | | | | | | | | | |
| Heating | 11.7 | 10.0 | 11.0 | 11.0 | 8.7 | 7.0 | 10.0 | 12.0 | 9.0 | 6.0 | 8.6 | 8.3 |
| Cooling | 13.9 | 12.2 | 10.5 | 11.2 | 10.4 | 7.7 | 8.8 | 12.0 | 9.6 | 8.4 | 7.3 | 7.9 |
| **Water-heating equipment** | | | | | | | | | | | | |
| Centralized system | 15.3 | 9.0 | 10.8 | 16.1 | 11.1 | 6.4 | 11.6 | 14.3 | 7.5 | 6.3 | 6.8 | 12.0 |
| Distributed system | 21.0 | 15.5 | 19.8 | 22.9 | 11.8 | 9.0 | 14.2 | 17.1 | 16.2 | 11.7 | 12.0 | 19.1 |
| Combination of centralized and distributed system | 16.5 | 14.5 | 16.0 | 14.1 | 10.9 | 10.5 | 11.7 | 12.0 | 14.7 | 8.6 | 10.0 | 10.0 |
| **Food preparation or serving areas in non-food service buildings (more than one may apply)** | | | | | | | | | | | | |
| Snack bar or concession stand | 15.9 | 15.7 | 13.9 | 39.4 | 15.7 | 14.6 | 13.2 | 18.3 | 10.7 | 9.4 | 9.0 | 33.8 |
| Fast food or small restaurant | 17.5 | 12.2 | 15.6 | 35.4 | 17.5 | 11.0 | 15.9 | 17.3 | 18.3 | 9.1 | 11.1 | 27.5 |
| Cafeteria or large restaurant | 24.8 | 10.4 | 9.8 | 31.7 | 15.7 | 8.6 | 9.1 | 15.3 | 12.9 | 6.0 | 8.1 | 20.6 |
| Commercial kitchen/ food preparation area | 18.9 | 9.0 | 8.8 | 28.9 | 13.5 | 7.3 | 8.9 | 19.4 | 9.9 | 6.6 | 6.4 | 18.4 |
| Small kitchen area | 12.0 | 10.5 | 12.4 | 36.6 | 14.4 | 10.0 | 10.7 | 17.1 | 9.8 | 6.8 | 8.6 | 32.2 |
| **HVAC conservation features (more than one may apply)** | | | | | | | | | | | | |
| Economizer cycle | 17.9 | 9.7 | 11.1 | 20.3 | 11.7 | 8.9 | 12.9 | 12.1 | 10.2 | 4.7 | 7.0 | 12.9 |
| Regular HVAC maintenance | 12.0 | 8.8 | 11.7 | 13.8 | 9.0 | 6.1 | 10.4 | 13.3 | 6.2 | 5.6 | 6.6 | 9.3 |
| Building automation system (BAS)[2] | 15.7 | 9.7 | 12.1 | 18.6 | 11.5 | 8.9 | 11.3 | 12.8 | 9.9 | 5.7 | 7.2 | 12.7 |

## RSEs for Table C25. Natural gas consumption and conditional energy intensity by Census region, 2012 - PUBLIC USE VERSION

| | RSEs for total natural gas consumption | | | | RSEs for total floorspace of buildings using natural gas | | | | RSEs for natural gas energy intensity | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | North-east | Mid-west | South | West | North-east | Mid-west | South | West | North-east | Mid-west | South | West |
| **All buildings** | 11.6 | 8.4 | 11.1 | 12.6 | 8.6 | 5.8 | 10.3 | 12.3 | 5.6 | 5.6 | 6.0 | 8.8 |
| **Window and interior lighting features (more than one may apply)** | | | | | | | | | | | | |
| Multipaned windows | 12.2 | 9.8 | 12.8 | 15.9 | 8.4 | 6.8 | 11.2 | 13.3 | 6.0 | 5.8 | 6.7 | 8.7 |
| Tinted window glass | 17.9 | 8.3 | 11.8 | 16.1 | 11.9 | 7.0 | 11.3 | 14.9 | 9.5 | 4.6 | 5.9 | 12.6 |
| Reflective window glass | 28.2 | 9.0 | 13.1 | 28.7 | 15.8 | 9.0 | 12.6 | 19.0 | 20.1 | 5.9 | 9.0 | 16.7 |
| External overhangs or awnings | 21.3 | 9.7 | 12.3 | 17.6 | 17.5 | 7.4 | 11.4 | 13.9 | 10.9 | 5.5 | 8.2 | 12.5 |
| Skylights or atriums | 20.8 | 9.8 | 14.8 | 23.3 | 11.2 | 9.8 | 14.0 | 15.0 | 14.0 | 6.4 | 12.3 | 18.5 |
| Light scheduling | 16.0 | 12.6 | 13.4 | 20.1 | 10.1 | 8.3 | 13.4 | 14.1 | 10.3 | 8.2 | 6.9 | 13.8 |
| Occupancy sensors | 13.6 | 8.5 | 14.4 | 19.2 | 9.9 | 7.0 | 11.8 | 12.4 | 7.8 | 3.9 | 8.5 | 15.0 |
| Multi-level lighting or dimming | 17.5 | 11.2 | 17.4 | 24.1 | 13.8 | 11.5 | 13.0 | 12.5 | 12.8 | 7.3 | 8.6 | 17.3 |
| Daylight harvesting | 27.2 | 18.6 | 18.0 | 27.1 | 17.3 | 17.6 | 16.8 | 22.1 | 18.5 | 12.0 | 16.6 | 22.6 |
| Demand responsive lighting | 23.8 | 18.0 | 39.3 | 22.9 | 21.0 | 20.3 | 35.0 | 36.2 | 18.9 | 14.9 | 9.6 | 21.6 |
| Building automation system (BAS) for lighting[2] | 23.6 | 17.3 | 23.2 | 19.0 | 15.6 | 13.2 | 20.0 | 19.6 | 15.0 | 9.0 | 11.1 | 8.4 |
| **Equipment usage reduced when building not in full use (more than one may apply)** | | | | | | | | | | | | |
| Heating | 12.3 | 7.4 | 13.1 | 10.0 | 8.6 | 5.7 | 12.0 | 13.4 | 6.7 | 5.6 | 7.4 | 9.5 |
| Cooling | 13.5 | 8.1 | 12.9 | 10.5 | 8.9 | 6.0 | 11.6 | 14.2 | 7.7 | 5.8 | 7.2 | 9.5 |
| Lighting | 12.2 | 8.3 | 11.9 | 12.9 | 9.0 | 5.8 | 10.9 | 11.9 | 6.0 | 5.7 | 6.1 | 9.5 |
| **Annual consumption (hundred cubic feet)** | | | | | | | | | | | | |
| 1,000 or less | 15.6 | 11.5 | 11.5 | 18.9 | 20.8 | 9.3 | 16.3 | 31.1 | 19.8 | 6.9 | 15.0 | 13.9 |
| 1,001 to 5,000 | 8.5 | 10.4 | 13.2 | 14.1 | 11.5 | 9.1 | 13.3 | 16.3 | 9.5 | 9.6 | 6.1 | 7.2 |
| 5,001 to 10,000 | 10.9 | 14.5 | 13.3 | 16.8 | 14.0 | 16.0 | 14.7 | 17.0 | 10.1 | 11.6 | 8.6 | 11.2 |
| 10,001 to 25,000 | 17.9 | 10.8 | 15.3 | 14.3 | 14.7 | 10.1 | 11.5 | 15.6 | 12.5 | 7.4 | 9.5 | 9.9 |
| 25,001 to 50,000 | 17.9 | 18.0 | 23.7 | 10.7 | 13.2 | 11.9 | 20.9 | 10.5 | 12.0 | 11.5 | 14.7 | 9.8 |
| 50,001 to 100,000 | 20.6 | 21.7 | 21.3 | 21.3 | 16.1 | 13.5 | 18.2 | 21.3 | 10.9 | 13.2 | 16.2 | 16.2 |
| Over 100,000 | 22.7 | 11.6 | 12.4 | 32.1 | 20.2 | 14.0 | 11.2 | 25.2 | 8.7 | 9.7 | 8.3 | 12.6 |