Table C35. Fuel oil consumption and conditional energy intensity by census region, 2018

|                                   | Total fue<br>(million g | sumption     |       | Total floors |                | ldings<br>quare feet) | Fuel oil energy intensity (gallons/thousand square feet) |       |                |              |       |      |
|-----------------------------------|-------------------------|--------------|-------|--------------|----------------|-----------------------|--|-------|----------------|--------------|-------|------|
|                                   | North-<br>east          | Mid-<br>west | South | West         | North-<br>east | Mid-<br>west          | South  | West  | North-<br>east | Mid-<br>west | South | West |
| All buildings                     | 500                     | 77           | 98    | Q            | 5,930          | 4,585                 | 6,794  | 3,875 | 84.4           | 16.7         | 14.4  | Q    |
| Building floorspace (square feet) |                         |              |       |              |                |                       |  |       |                |              |       |      |
| 1,001 to 10,000                   | 203                     | Q            | Q     | Q            | 695            | Q                     | 294  | Q     | 292.0          | Q            | 72.3  | Q    |
| 10,001 to 100,000                 | 144                     | 35           | 37    | Q            | 2,020          | 1,390                 | 2,155  | 929   | 71.5           | 24.9         | 17.1  | Q    |
| Over 100,000                      | 153                     | 36           | 40    | 10           | 3,214          | 2,912                 | 4,345  | 2,718 | 47.6           | 12.4         | 9.2   | 3.6  |
| Principal building activity       |                         |              |       |              |                |                       |  |       |                |              |       |      |
| Education                         | 155                     | 17           | 31    | Q            | 1,189          | 587                   | 725  | 209   | 130.5          | 28.8         | 43.2  | Q    |
| Health care                       | 22                      | 16           | 7     | Q            | 449            | 807                   | 732  | 510   | 48.0           | 20.1         | 9.9   | Q    |
| Office                            | 65                      | 5            | 12    | 2            | 1,466          | 919                   | 2,046  | 988   | 44.5           | 5.2          | 5.7   | 2.0  |
| All others                        | 258                     | 39           | 48    | Q            | 2,826          | 2,272                 | 3,291  | 2,168 | 91.5           | 17.0         | 14.5  | Q    |
| Year constructed                  |                         |              |       |              |                |                       |  |       |                |              |       |      |
| Before 1945                       | 163                     | 14           | 12    | Q            | 1,111          | 587                   | 398  | 245   | 146.9          | Q            | 31.1  | Q    |
| 1946 to 1979                      | 184                     | 24           | 39    | Q            | 1,944          | 1,470                 | 1,900  | 732   | 94.8           | 16.0         | 20.3  | Q    |
| 1980 to 1999                      | 99                      | 13           | 24    | Q            | 1,686          | 1,031                 | 2,197  | 1,317 | 58.4           | 13.1         | 11.1  | Q    |
| 2000 to 2018                      | 55                      | 26           | 23    | Q            | 1,189          | 1,498                 | 2,299  | 1,581 | 45.9           | 17.1         | 9.8   | Q    |
| Climate zone <sup>a</sup>         |                         |              |       |              |                |                       |  |       |                |              |       |      |
| Cold or very cold                 | 88                      | 27           | N     | Q            | 527            | 964                   | N  | Q     | 167.6          | 28.3         | N     | Q    |
| Cool                              | 263                     | 38           | N     | Q            | 2,283          | 2,452                 | N  | 1,048 | 115.1          | 15.6         | N     | Q    |
| Mixed mild                        | 149                     | 11           | 49    | 4            | 3,120          | 1,169                 | 2,444  | Q     | 47.9           | 9.4          | 20.1  | 3.4  |
| Warm                              | N                       | N            | 36    | 2            | N              | N                     | 2,391  | 1,135 | N              | N            | 14.9  | 2.1  |
| Hot or very hot                   | N                       | N            | 13    | Q            | N              | N                     | 1,960  | 459   | N              | N            | 6.8   | 2.2  |
| Number of floors                  |                         |              |       |              |                |                       |  |       |                |              |       |      |
| 1                                 | 157                     | 19           | 35    | Q            | 1,193          | 1,238                 | 1,643  | 836   | 131.6          | 15.4         | 21.3  | Q    |
| 2                                 | 187                     | 14           | 32    | Q            | 1,081          | 822                   | 1,223  | 617   | 173.4          | 17.1         | 25.8  | Q    |
| 3                                 | 42                      | 22           | Q     | Q            | 855            | 645                   | 691  | 205   | 49.3           | 34.4         | Q     | Q    |
| 4 to 9                            | 89                      | 10           | 17    | Q            | 1,736          | 1,105                 | 1,982  | 1,256 | 51.5           | 9.0          | 8.5   | Q    |
| 10 or more                        | Q                       | 11           | Q     | 2            | 1,064          | 775                   | 1,255  | 961   | Q              | 14.6         | Q     | 2.1  |
| Number of workers (main shift)    |                         |              |       |              |                |                       |  |       |                |              |       |      |
| Fewer than 10                     | 199                     | 26           | 36    | Q            | 1,086          | 610                   | 843  | 263   | 183.1          | 42.1         | 42.5  | Q    |
| 10 to 99                          | 207                     | 18           | 34    | Q            | 2,108          | 1,328                 | 2,151  | 1,091 | 98.1           | 13.5         | 15.9  | Q    |
| 100 or more                       | 95                      | 33           | 28    | 9            | 2,736          | 2,647                 | 3,800  | 2,520 | 34.6           | 12.5         | 7.3   | 3.5  |
| Weekly operating hours            |                         |              |       |              |                |                       |  |       |                |              |       |      |
| Fewer than 48                     | 162                     | 14           | 34    | Q            | 1,142          | 895                   | 1,316  | 558   | 141.8          | 15.2         | 25.5  | Q    |
| 49 to 84                          | 190                     | 13           | 37    | Q            | 2,213          | 1,317                 | 2,443  | 1,276 | 86.0           | 9.7          | 15.1  | Q    |
| 85 to 167                         | Q                       | 5            | 1     | Q            | 692            | 657                   | 508  | 473   | Q              | 7.5          | 2.1   | Q    |
| Open continuously                 | 96                      | 45           | 26    | Q            | 1,883          | 1,717                 | 2,527  | 1,569 | 51.1           | 26.3         | 10.5  | Q    |
| Ownership and occupancy           |                         |              |       |              |                |                       |  |       |                |              |       |      |
| Nongovernment owned               | 323                     | 53           | 37    | Q            | 4,398          | 3,359                 | 4,256  | 2,797 | 73.5           | 15.7         | 8.7   | Q    |
| Owner occupied                    | 221                     | 51           | 24    | 17           | 2,784          | 2,409                 | 2,901  | 1,499 | 79.4           | 21.1         | 8.4   | Q    |
| Leased to tenant or tenants       | 102                     | 2            | 12    | Q            | 1,596          | 950                   | 1,330  | 1,286 | 64.1           | 1.9          | 9.4   | Q    |
| Unoccupied                        | Q                       | N            | Q     | Q            | Q              | N                     | Q  | Q     | Q              | N            | Q     | Q    |
| Government owned                  | 177                     | 24           | 61    | Q            | 1,532          | 1,226                 | 2,539  | 1,078 | 115.6          | 19.6         | 24.0  | Q    |
| Federal                           | Q                       | Q            | 8     | Q            | Q              | Q                     | 471  | Q     | Q              | Q            | 16.4  | Q    |
| State                             | 19                      | Q            | Q     | Q            | 488            | Q                     | 663  | 352   | 38.9           | Q            | Q     | Q    |
| Local                             | 156                     | 19           | 44    | Q            | 931            | 915                   | 1,405  | 563   | 167.6          | 21.3         | 31.7  | Q    |
|                                   |                         |              |       |              |                |                       |  |       |                |              |       |      |

Table C35. Fuel oil consumption and conditional energy intensity by census region, 2018

**Total fuel oil consumption** Total floorspace of buildings Fuel oil energy intensity (million gallons) using fuel oil (million square feet) (gallons/thousand square feet) North-Mid-North-Mid-North-Mideast west South West east west South West east west South West All buildings 500 77 98 Q 5,930 4,585 3,875 84.4 16.7 14.4 6,794 Q Party responsible for operation of energy systems 3,701 **Building** owner 456 75 86 Q 5,062 5,924 3,122 90.1 20.3 14.6 Q Business owner or tenant 35 1 6 Q 598 497 417 507 58.6 1.3 Q Q Property management Q Q Q Q Q Q 297 Q Q Q Q Q Other Q Q Q Q Q Q Q Q Q Q Q Q Provider of direct input on energyrelated equipment purchases 468 5,185 3,937 6,080 3,203 90.3 19.2 14.3 Q **Building owner** 76 87 Q Business owner or tenant 25 Q 6 Q 427 278 Q 59.1 Q Q Q Q Property management Q Q Q Q Q Q Q Q Q Q Q Q Other Q Q Q Q 220 Q 223 362 18.2 Q Q Q **Number of establishments** 411 3,892 3,108 4,064 105.7 17.2 18.7 Q 53 76 Q 2,141 2 to 5 71 14 9 4 1,064 771 1,145 1,045 66.9 17.7 8.0 4.1 Q 1 Q 495 Q Q Q 6 to 10 1 314 Q 3.5 2.4 11 to 20 416 Q Q Q Q Q Q Q Q Q Q Q More than 20 7 0 400 347 644 40.6 Q 1.3 Q Q 328 10.6 Currently unoccupied Q Q Q Q Q Q Q Q Q Q Q Q Predominant exterior wall material 273 3.3 42 57 3,134 1,781 3,426 1,462 87.1 23.4 16.8 Brick, stone, or stucco 5 Concrete (block or poured) 51 21 Q Q 916 1,137 1,183 853 55.3 18.4 Q Q 2 1.4 Concrete panels 4 Q 1 375 691 1,020 598 6.5 5.4 7.0 Siding or shingles 128 Q Q 633 Q Q Q 202.8 Q Q Q Q Metal panels 36 Q 8 Q 489 535 565 Q 73.3 Q 15.0 Q Window glass 1 245 2.7 Q 1 1 Q 423 389 2.5 Q 2.1 Other Q Q Q Q Q Q Q 276 Q Q Q Q **Predominant roof material** Metal surfacing 57 Q 34 Q 689 686 1,065 337 82.7 Q 32.3 Q Q Synthetic or rubber 136 43 27 Q 2,438 1,965 2,724 1,755 55.8 21.7 9.7 110 20 3 1,249 1,028 87.8 8.5 3.1 Built-up 14 1,363 1,685 14.8 Slate or tile shingles Q Q Q Q Q Q 235 Q Q Q Q Q Wooden materials (including shingles) Q Q Q Q Q Q Q Q Q Q Q Q Asphalt, fiberglass, or other shingles 165 Q Q 1 1,018 222 418 384 162.3 Q Q 2.7 Concrete Q Q Q Q Q Q 286 Q Q Q Q Q Other Q Q Q Q Q Q Q Q Q Q Q 352 **Roof tilt** 186 2,823 47.0 11.7 Q Flat 67 56 Q 3,964 3,371 4,818 20.0 Shallow pitch Q 31 Q 935 1,265 764 151.0 Q 24.8 Q 133 878 Steeper pitch 182 Q 10 Q 1,088 280 712 288 166.9 Q 14.5 Q

Table C35. Fuel oil consumption and conditional energy intensity by census region, 2018

**Total fuel oil consumption** Total floorspace of buildings Fuel oil energy intensity (million gallons) using fuel oil (million square feet) (gallons/thousand square feet) North-Mid-North-Mid-North-Midwest South West east west South West east west South West east All buildings 500 77 98 5,930 4,585 84.4 Q 6,794 3,875 16.7 14.4 Q Cool roof characteristics (more than one may apply) White or reflective coating or paint 108 21 31 Q 1,500 1,359 2,860 2,211 71.9 15.3 10.8 Q Q White or reflective tiles or shingles Q Q 1 Q Q 211 Q Q Q 4.1 Q Aluminum coating Q Q Q Q 433 Q 456 Q Q Q Q Q Ballasted roof system Q 18 6 Q 530 662 745 Q Q 26.7 Q 2.0 Q Q Q Q Q Q Q Q Q Q Q Other cool roof property Q **Renovations since 2000** (more than one may apply) 321 32 47 3,785 2,605 3,706 2,201 84.7 12.4 12.7 Q Any type of renovation Q 4 54.1 14.5 Addition or annex 58 16 14 1,063 1,076 1,098 552 12.8 6.7 Reduction in floorspace Q Q Q Q Q Q Q Q Q Q Q Q Q 2,010 1,342 80.6 Q Roof replacement 162 23 16 1,742 1,156 17.4 9.2 Interior wall reconfiguration 105 22 21 Q 2,290 1,670 1,973 1,481 45.8 13.4 10.6 Q Window replacement 127 19 13 Q 1,330 1,012 775 706 95.4 18.4 17.4 Q HVAC equipment upgrade 196 26 32 Q 2,627 1,808 2,515 1,683 74.5 14.2 12.6 Q Lighting upgrade 212 26 23 Q 2,768 2,125 2,553 1,853 76.4 12.1 8.9 Q Electrical upgrade 110 19 22 Q 1,837 1,457 1,507 1,017 60.2 12.8 14.8 Q 96 Q Plumbing system upgrade 21 18 Q 1,698 1,385 1,536 1,111 56.7 15.2 11.4 Insulation upgrade 88 12 4 Q 1,132 689 803 658 77.5 Q 5.6 Q Fire, safety, or security upgrade 112 22 22 Q 2,052 1,612 1,978 1,197 54.3 13.6 11.1 Q Q Q Q Q Structural upgrade Q Q 451 473 291 Q Q Q Q Other Q Ν Q Q Q Ν Q Q Q Ν Q 49 Q 1,890 89.4 25.6 18.8 Q No renovations 169 41 1,592 2,619 1,049 2 Q Buildings constructed 2013 or later Q Q Q Q Q 469 625 Q Q 4.2 **Energy sources** (more than one may apply) 500 98 Q 77 Q 5,930 4,585 6,794 3,875 84.4 16.7 14.4 Electricity Natural gas 97 45 42 13 3,561 3,718 4,554 3,124 27.2 12.1 9.2 4.1 500 77 98 Q 5,930 3,875 14.4 Fuel oil 4,585 6,794 84.4 16.7 Q District heat 9 Q 3 2 918 797 725 550 9.6 3.8 2.7 3.6 2 Q Q 277 426 701 455 Q Q 2.7 District chilled water 1 3.2 Propane 156 11 Q Q 1,186 448 644 866 131.9 24.9 Q Q 3 Q 406 Q Q Q Solar Q Q Q Q 8.4 Q Wood, coal, and other Q Q Q Q Q Q Q Q Q Q Q Q Space-heating energy sources 483 45 74 2,515 710 728 180 192.1 101.2 279.1 Fuel oil Q 63.9 Fuel oil main 432 Q 64 Q 1,632 Q 408 Q 264.7 Q 157.0 Q Fuel oil secondary 51 36 10 Q 883 626 Q Q 57.8 57.0 29.9 Q Other excluding fuel oil 16 31 22 11 3,384 3,875 5,660 3,614 4.7 8.1 3.9 3.0 5.9 **Buildings** without heating Q Ν Q Q Q 406 Q Ν Q Ν Q **Primary space-heating** energy source 1,182 21.4 Electricity 8 25 14 2 832 2,639 1,126 9.1 5.5 2.1 10 2,404 2,085 Natural gas 46 40 15 2,584 2,607 19.1 15.4 5.6 4.8 Q Q 64 Q 1,632 408 Q 264.7 Q 157.0 Fuel oil 432 Q 9 3.1 District heat 2 2 1 871 717 690 460 9.9 2.3 3.4 Q Q Q Q Q Q Q Q Q **Propane** Q Q Q Other sources Q Q Q Q Q Q Q Q Q Q Q Q

Table C35. Fuel oil consumption and conditional energy intensity by census region, 2018

**Total fuel oil consumption** Total floorspace of buildings Fuel oil energy intensity (million gallons) using fuel oil (million square feet) (gallons/thousand square feet) North-Mid-North-Mid-North-Mideast west South West east west South West east west South West All buildings 500 77 98 Q 5,930 4,585 3,875 84.4 16.7 14.4 6,794 Q **Cooling energy sources** Fuel oil Q Ν Q Ν Q Ν Q Ν Q Ν Q Ν Other excluding fuel oil 445 71 95 Q 5,502 4,437 6,730 3,623 81.0 16.0 14.1 Q **Buildings** without cooling 55 Q Q Q 426 Q Q 128.5 Q Q Q Water-heating energy sources Fuel oil 259 13 322 224.5 69.3 Q Q 31 Q 1,154 194 Q Other excluding fuel oil 229 61 64 31 4,638 4,305 6,221 3,688 49.4 14.1 10.4 8.4 **Buildings without water heating** Q Q Q Q Q Q Q Q Q Q Q Q **Cooking energy sources** Fuel oil Q Ν Q Q Q Ν Q Q Q Ν Q Q Other excluding fuel oil 270 48 44 Q 3,623 2,959 4,034 2,177 74.4 16.2 10.9 Q **Buildings** without cooking 228 29 51 Q 2,295 1,626 2,715 1,602 99.2 17.7 18.8 Q **Energy end uses** (more than one may apply) 499 5,899 3,794 84.6 15.0 Q Buildings with space heating 77 96 Q 4,585 6,389 16.7 Q **Buildings with cooling** 446 71 96 Q 5,504 4,437 6,740 3,623 81.0 16.0 14.2 488 5,792 Q Buildings with water heating 74 96 Q 4,499 6,543 3,824 84.3 16.5 14.6 Buildings with cooking 273 48 47 Q 3,635 2,959 4,079 2,272 75.1 16.2 11.5 Q **Buildings** with manufacturing Q Q Q Q Q Q Q 397 Q Q Q Q **Buildings** with electricity 197 59 52 34 4,307 4,184 3,548 45.7 14.2 9.6 generation 6,259 8.3 77 **Buildings with lighting** 500 98 Q 5,930 4,585 6,794 3,875 84.4 16.7 14.4 Q Percent of floorspace heated Q Q 406 Q Q Ν Q Not heated Ν Q Q Ν 5.9 1% to 50% Q Q 8 Q Q Q 758 325 Q Q 10.1 Q 11.5 51% to 99% 156 10 21 4 1,522 910 1,774 1,097 102.6 12.0 3.4 328 100% 65 67 Q 4,184 3,428 3,856 2,372 78.5 18.9 17.3 Q **Heating equipment** (more than one may apply) 53 29 23 Q 2,153 2,390 2,797 2,166 24.8 12.0 8.3 Q Packaged heating units 102 Q 896 537 Q Q **Furnaces** 4 Q 532 289 113.3 6.7 Individual space heaters 91 26 33 Q 1,241 1,461 1,389 992 73.3 17.7 23.5 Q Q 3,404 2,055 20.9 Q **Boilers** 397 55 59 2,830 1,933 116.6 26.7 24.0 Q Heat pumps 14 15 Q Q 571 872 1,326 818 17.6 Q 9 2 2 1 916 723 2.3 3.4 2.9 District heat 718 519 9.5 **Duct reheat** 8 Q 536 635 399 Q Q Q 1,555 Q Q 5.3 Other Q Q Q Q Q Q Q Q Q Q Q Q

Table C35. Fuel oil consumption and conditional energy intensity by census region, 2018

**Total fuel oil consumption** Total floorspace of buildings Fuel oil energy intensity (million gallons) using fuel oil (million square feet) (gallons/thousand square feet) North-Mid-North-Mid-North-Mideast west South West east west South West east west South West All buildings 500 77 98 Q 5,930 4,585 3,875 84.4 16.7 14.4 6,794 Q **HVAC** features (more than one may apply) 143 2,835 10.2 Economizer cycle 55 36 Q 3,125 3,543 2,710 45.9 19.5 Q Variable air volume (VAV) system 74 56 40 Q 2,691 2,676 3,884 2,412 27.5 20.9 10.4 Q Dedicated outside air system (DOAS) Q 16 16 Q 874 893 1,493 733 Q 18.3 11.0 Q Demand controlled ventilation (DCV) 134 17 17 Q 1,186 771 1,111 554 112.8 22.4 15.0 Q Regular HVAC maintenance 447 Q 5,243 6,435 3,800 Q 69 80 4,266 85.3 16.2 12.4 Building automation system (BAS) controls heating or cooling 197 59 49 Q 3,383 2,952 4,816 3,068 58.3 20.1 10.2 Q Internet-connected or smart thermostat Q Q Q Q Q Q 353 Q Q Q Q Q 8 127.5 Programmable thermostat 133 18 Q 1,045 527 761 375 14.3 23.5 Q Water-heating equipment Centralized system 366 61 Q 3,842 3,069 3,993 2,251 95.4 19.9 14.4 Q 58 Distributed system Q 4 Q 1 886 398 858 466 Q 11.2 30.1 2.2 Combination of centralized and 35 4.9 distributed systems 9 12 5 1,064 1,032 1,692 1,107 32.4 8.4 7.2 **Generation technologies** (more than one may apply) Q 194 47 34 4,064 3,976 5,861 3,297 47.7 14.5 Reciprocating engine generators 58 8.0 Solar panels 3 Q Q 402 Q Q Q Q Q 8.5 Q Q 3.2 Other generation technology Q Q 1 0 Q 387 Q 1.5 Q 297 Q Food preparation or serving areas in non-food service buildings (more than one may apply) Snack bar, concession stand, or coffee shop 22 16 5 982 971 1,622 1,189 22.8 16.5 8.8 4.6 14 Fast food or small restaurant 28 9 Q Q 729 574 1,106 863 38.8 14.9 Q Q Cafeteria or large restaurant 144 29 27 4 3.8 1,642 1,548 2,119 1,171 87.5 19.0 13.0 Commercial kitchen or Q food preparation area 82 25 24 Q 1,543 1,705 2,054 1,247 53.3 14.6 11.8 1,267 Small kitchen area 127 24 19 Q 1,852 1,378 1,754 68.8 17.4 10.9 Q

Table C35. Fuel oil consumption and conditional energy intensity by census region, 2018

|                              |                | Total fuel oil consumption (million gallons) |       |      |                | pace of bui<br>il (million s | ildings<br>quare feet) | Fuel oil energy intensity (gallons/thousand square feet) |                |              |       |      |  |
|------------------------------|----------------|--|-------|------|----------------|------------------------------|------------------------|--|----------------|--------------|-------|------|--|
|                              | North-<br>east | Mid-<br>west                                 | South | West | North-<br>east | Mid-<br>west                 | South                  | West   | North-<br>east | Mid-<br>west | South | West |  |
| All buildings                | 500            | 77   | 98    | Q    | 5,930          | 4,585                        | 6,794                  | 3,875  | 84.4           | 16.7         | 14.4  | Q    |  |
| Annual consumption (gallons) |                |  |       |      |                |                              |                        |  |                |              |       |      |  |
| 1,000 or less                | 53             | 14   | 19    | 11   | 3,123          | 2,982                        | 5,038                  | 2,818  | 16.9           | 4.8          | 3.8   | 4.0  |  |
| 1,001 to 5,000               | 130            | 20   | 30    | Q    | 1,483          | 880                          | 1,024                  | 803  | 87.5           | 22.8         | 29.2  | Q    |  |
| 5,001 to 10,000              | 131            | Q  | Q     | Q    | 420            | Q                            | Q                      | Q  | 311.0          | Q            | Q     | Q    |  |
| 10,001 to 25,000             | 54             | Q  | Q     | Q    | 459            | Q                            | Q                      | Q  | 117.6          | Q            | Q     | Q    |  |
| Over 25,000                  | 133            | Q  | Q     | Q    | 444            | Q                            | Q                      | Q  | 299.7          | Q            | Q     | Q    |  |

## Data source: U.S. Energy Information Administration, Forms EIA-871A and F of the 2018 Commercial Buildings Energy Consumption Survey

Notes: Because of rounding, data may not sum to totals. The *Guide to the 2018 CBECS Tables* and *CBECS Terminology* contain definitions of terms used in these tables and comparisons between previous CBECS tables. You can access both references from http://www.eia.gov/consumption/commercial/data/2018/.

Data are sample survey estimates with relative standard errors published in a tab on the Excel worksheet for this table.

Estimates in the *energy end uses* category represent total consumption in buildings that have the end use but not the consumption specifically for that end use. HVAC = Heating, ventilation, and air conditioning.

<sup>&</sup>lt;sup>a</sup>Climate zones are based on ASHRAE Standard 169-2021; see https://www.eia.gov/consumption/commercial/maps.php#defined.

<sup>&</sup>lt;sup>b</sup>Other sources includes wood, coal, solar, and all other energy sources.

Q = Data withheld either because the relative standard error was greater than 50% or the reporting sample had fewer than 20 buildings.

N = No buildings in reporting sample.

Relative standard errors (RSEs) for Table C35. Fuel oil consumption and conditional energy intensity by census region, 2018

|                                   | RSEs for t     |              | l oil |       | RSEs for tota<br>using fuel oil | -            | _     | RSEs for fuel oil energy intensity |                |              |       |       |  |
|-----------------------------------|----------------|--------------|-------|-------|---------------------------------|--------------|-------|------------------------------------|----------------|--------------|-------|-------|--|
|                                   | North-<br>east | Mid-<br>west | South | West  | North-<br>east                  | Mid-<br>west | South | West                               | North-<br>east | Mid-<br>west | South | West  |  |
| All buildings                     | 23.1           | 14.8         | 16.8  | 61.0  | 10.3                            | 10.3         | 7.9   | 17.2                               | 17.7           | 13.2         | 18.9  | 61.2  |  |
| Building floorspace (square feet) |                |              |       |       |                                 |              |       |                                    |                |              |       |       |  |
| 1,001 to 10,000                   | 27.5           | 63.5         | 58.6  | 97.9  | 17.7                            | 70.2         | 28.9  | 28.1                               | 21.7           | 153.6        | 43.0  | 96.8  |  |
| 10,001 to 100,000                 | 26.0           | 26.6         | 34.3  | 72.4  | 13.1                            | 17.8         | 11.5  | 21.3                               | 17.9           | 26.5         | 33.0  | 71.0  |  |
| Over 100,000                      | 38.8           | 19.7         | 19.8  | 23.4  | 11.7                            | 12.2         | 10.0  | 20.6                               | 34.8           | 20.8         | 20.5  | 20.1  |  |
| Principal building activity       |                |              |       |       |                                 |              |       |                                    |                |              |       |       |  |
| Education                         | 39.7           | 25.8         | 30.9  | 108.5 | 19.4                            | 22.2         | 23.0  | 35.2                               | 32.4           | 39.0         | 32.0  | 108.6 |  |
| Health care                       | 41.5           | 30.4         | 19.5  | 90.9  | 20.1                            | 15.0         | 10.4  | 19.4                               | 32.8           | 28.6         | 18.9  | 88.9  |  |
| Office                            | 41.3           | 36.7         | 25.4  | 22.4  | 16.1                            | 20.4         | 19.8  | 16.9                               | 35.5           | 42.8         | 21.0  | 14.4  |  |
| All others                        | 22.4           | 26.0         | 28.6  | 64.7  | 11.3                            | 13.1         | 10.4  | 23.2                               | 17.2           | 23.7         | 29.6  | 67.3  |  |
| Year constructed                  |                |              |       |       |                                 |              |       |                                    |                |              |       |       |  |
| Before 1945                       | 32.0           | 43.9         | 45.5  | 77.3  | 25.5                            | 41.4         | 40.1  | 37.7                               | 25.0           | 62.0         | 45.7  | 65.2  |  |
| 1946 to 1979                      | 27.7           | 32.2         | 35.3  | 56.4  | 14.1                            | 18.6         | 10.9  | 18.1                               | 23.9           | 26.4         | 33.1  | 58.0  |  |
| 1980 to 1999                      | 33.2           | 36.8         | 27.5  | 65.9  | 16.3                            | 16.8         | 11.2  | 29.8                               | 26.3           | 38.6         | 31.6  | 71.5  |  |
| 2000 to 2018                      | 40.0           | 27.6         | 38.3  | 69.1  | 17.1                            | 17.1         | 14.6  | 21.6                               | 32.1           | 24.2         | 35.5  | 69.2  |  |
| Climate zone <sup>a</sup>         |                |              |       |       |                                 |              |       |                                    |                |              |       |       |  |
| Cold or very cold                 | 21.5           | 25.4         | 0.0   | 66.4  | 19.3                            | 24.4         | 0.0   | 42.6                               | 14.8           | 14.4         | 0.0   | 50.0  |  |
| Cool                              | 39.7           | 31.2         | 0.0   | 71.4  | 16.6                            | 18.2         | 0.0   | 24.6                               | 30.0           | 26.5         | 0.0   | 72.0  |  |
| Mixed mild                        | 25.3           | 48.6         | 15.6  | 44.8  | 16.2                            | 26.1         | 20.6  | 54.3                               | 15.7           | 35.3         | 27.5  | 37.2  |  |
| Warm                              | 0.0            | 0.0          | 41.4  | 14.4  | 0.0                             | 0.0          | 14.4  | 16.4                               | 0.0            | 0.0          | 36.8  | 5.3   |  |
| Hot or very hot                   | 0.0            | 0.0          | 31.4  | 52.6  | 0.0                             | 0.0          | 15.6  | 26.9                               | 0.0            | 0.0          | 27.8  | 32.5  |  |
| Number of floors                  |                |              |       |       |                                 |              |       |                                    |                |              |       |       |  |
| 1                                 | 32.5           | 24.5         | 27.8  | 52.4  | 17.9                            | 22.8         | 14.3  | 21.5                               | 27.0           | 25.1         | 28.0  | 54.6  |  |
| 2                                 | 28.0           | 49.1         | 45.1  | 68.6  | 18.2                            | 19.5         | 15.7  | 24.8                               | 25.8           | 47.2         | 37.5  | 62.9  |  |
| 3                                 | 22.9           | 31.9         | 54.0  | 77.4  | 18.9                            | 21.8         | 16.1  | 26.8                               | 23.1           | 23.5         | 58.6  | 71.4  |  |
| 4 to 9                            | 28.2           | 31.9         | 39.7  | 73.8  | 15.6                            | 16.5         | 11.7  | 18.2                               | 21.1           | 25.4         | 39.6  | 74.2  |  |
| 10 or more                        | 66.5           | 35.8         | 70.1  | 38.4  | 17.0                            | 36.2         | 25.5  | 38.6                               | 61.7           | 36.2         | 59.5  | 20.7  |  |
| Number of workers (main shift)    |                |              |       |       |                                 |              |       |                                    |                |              |       |       |  |
| Fewer than 10                     | 28.1           | 37.7         | 37.7  | 96.1  | 20.1                            | 33.3         | 16.2  | 25.4                               | 22.5           | 35.5         | 29.5  | 96.4  |  |
| 10 to 99                          | 39.1           | 26.7         | 26.6  | 67.8  | 12.3                            | 14.1         | 8.8   | 15.4                               | 32.6           | 32.9         | 27.5  | 66.3  |  |
| 100 or more                       | 29.7           | 21.0         | 15.7  | 25.8  | 11.7                            | 12.6         | 10.5  | 21.1                               | 26.2           | 22.0         | 19.8  | 21.1  |  |
| Weekly operating hours            |                |              |       |       |                                 |              |       |                                    |                |              |       |       |  |
| Fewer than 48                     | 30.6           | 37.6         | 42.1  | 93.9  | 16.7                            | 22.9         | 14.0  | 18.5                               | 25.5           | 30.4         | 40.2  | 91.5  |  |
| 49 to 84                          | 27.1           | 28.8         | 18.5  | 59.5  | 14.0                            | 19.6         | 13.9  | 16.0                               | 21.4           | 39.9         | 22.8  | 60.3  |  |
| 85 to 167                         | 70.1           | 41.7         | 23.6  | 53.7  | 20.7                            | 32.1         | 23.4  | 35.6                               | 68.3           | 44.5         | 19.2  | 50.9  |  |
| Open continuously                 | 20.6           | 21.3         | 23.2  | 61.4  | 11.4                            | 11.1         | 11.3  | 27.6                               | 18.2           | 16.9         | 21.7  | 64.0  |  |
| Ownership and occupancy           |                |              |       |       |                                 |              |       |                                    |                |              |       |       |  |
| Nongovernment owned               | 23.9           | 23.9         | 16.2  | 54.7  | 11.4                            | 11.4         | 9.7   | 18.6                               | 17.9           | 21.0         | 18.0  | 55.0  |  |
| Owner occupied                    | 23.5           | 24.9         | 20.3  | 47.7  | 14.4                            | 13.8         | 9.7   | 27.4                               | 14.9           | 21.6         | 18.1  | 50.9  |  |
| Leased to tenant or tenants       | 34.1           | 28.6         | 33.2  | 81.0  | 14.0                            | 20.8         | 16.2  | 19.2                               | 34.1           | 29.0         | 42.1  | 80.8  |  |
| Unoccupied                        | 68.8           | 0.0          | 106.2 | 77.8  | 68.8                            | 0.0          | 82.6  | 77.8                               | 0.0            | 0.0          | 187.5 | 0.1   |  |
| Government owned                  | 29.7           | 25.0         | 28.1  | 68.9  | 16.5                            | 14.2         | 10.2  | 20.0                               | 28.1           | 28.1         | 27.4  | 68.4  |  |
| Federal                           | 78.1           | 38.4         | 33.1  | 105.3 | 44.3                            | 44.5         | 43.2  | 56.9                               | 72.7           | 22.2         | 30.9  | 93.3  |  |
| State                             | 36.0           | 96.6         | 81.2  | 64.4  | 27.3                            | 33.8         | 18.2  | 26.9                               | 31.5           | 98.9         | 88.9  | 63.6  |  |
| Local                             | 33.3           | 26.0         | 36.1  | 100.4 | 19.9                            | 13.2         | 15.0  | 24.2                               | 30.1           | 29.2         | 32.7  | 96.8  |  |

Relative standard errors (RSEs) for Table C35. Fuel oil consumption and conditional energy intensity by census region, 2018

|   | RSEs for consump |              | l oil |       | RSEs for tota<br>Ising fuel oil | =            | _     | RSEs for fuel oil energy intensity |                |              |       |       |
|---|------------------|--------------|-------|-------|---------------------------------|--------------|-------|------------------------------------|----------------|--------------|-------|-------|
|   | North-<br>east   | Mid-<br>west | South | West  | North-<br>east                  | Mid-<br>west | South | West                               | North-<br>east | Mid-<br>west | South | West  |
| All buildings                                     | 23.1             | 14.8         | 16.8  | 61.0  | 10.3                            | 10.3         | 7.9   | 17.2                               | 17.7           | 13.2         | 18.9  | 61.2  |
| Party responsible for operation of energy systems |                  |              |       |       |                                 |              |       |                                    |                |              |       |       |
| Building owner                                    | 24.1             | 15.1         | 18.3  | 55.3  | 9.9                             | 12.1         | 7.6   | 19.2                               | 19.1           | 14.0         | 20.7  | 56.7  |
| Business owner or tenant                          | 37.8             | 34.3         | 37.2  | 98.3  | 28.9                            | 30.9         | 34.7  | 37.5                               | 29.6           | 16.6         | 50.7  | 101.9 |
| Property management                               | 96.3             | 52.8         | 100.4 | 111.6 | 27.7                            | 31.0         | 28.3  | 56.9                               | 97.8           | 30.6         | 96.6  | 127.2 |
| Other   | 78.5             | 50.3         | 68.0  | 105.5 | 37.9                            | 55.1         | 35.6  | 32.7                               | 74.4           | 32.1         | 70.5  | 109.3 |
| Provider of direct input on energy-               |                  |              |       |       |                                 |              |       |                                    |                |              |       |       |
| related equipment purchases                       |                  |              |       |       |                                 |              |       |                                    |                |              |       |       |
| Building owner                                    | 23.4             | 15.0         | 18.2  | 55.0  | 10.0                            | 12.6         | 7.4   | 19.5                               | 18.6           | 14.6         | 20.6  | 56.4  |
| Business owner or tenant                          | 45.1             | 37.1         | 39.7  | 26.0  | 36.3                            | 38.4         | 30.1  | 32.8                               | 41.2           | 22.1         | 51.9  | 18.1  |
| Property management                               | 99.7             | 76.0         | 104.0 | 111.8 | 35.1                            | 63.0         | 35.0  | 72.3                               | 98.6           | 30.9         | 101.0 | 111.9 |
| Other   | 50.2             | 41.9         | 52.2  | 105.3 | 26.0                            | 43.6         | 34.2  | 41.6                               | 43.4           | 6.8          | 55.2  | 108.2 |
|   |                  |              |       |       |                                 |              |       |                                    |                |              |       |       |
| Number of establishments                          | 26.2             | 47.0         | 24.4  |       | 44.5                            | 42.2         | 0.0   | 45.7                               | 10.2           | 45.4         | 22.4  |       |
| 1   | 26.3             | 17.0         | 21.4  | 66.8  | 11.5                            | 13.3         | 8.0   | 15.7                               | 19.3           | 15.1         | 23.1  | 66.4  |
| 2 to 5  | 29.6             | 49.9         | 32.8  | 29.3  | 20.2                            | 16.9         | 19.8  | 36.9                               | 19.7           | 49.0         | 34.9  | 43.3  |
| 6 to 10   | 48.0             | 94.1         | 24.6  | 51.2  | 35.3                            | 58.1         | 21.4  | 29.8                               | 24.3           | 125.1        | 20.2  | 38.9  |
| 11 to 20  | 59.7             | 42.8         | 89.5  | 27.5  | 35.0                            | 20.8         | 24.2  | 27.5                               | 55.9           | 43.8         | 86.0  | 14.8  |
| More than 20                                      | 60.1             | 58.7         | 31.4  | 32.0  | 30.7                            | 25.4         | 23.5  | 25.2                               | 40.8           | 61.6         | 21.8  | 7.4   |
| Currently unoccupied                              | 68.8             | 50.8         | 103.3 | 77.8  | 68.8                            | 50.8         | 54.8  | 77.8                               | 0.0            | 0.0          | 112.4 | 0.1   |
| Predominant exterior wall material                |                  |              |       |       |                                 |              |       |                                    |                |              |       |       |
| Brick, stone, or stucco                           | 34.9             | 17.2         | 21.7  | 29.4  | 13.8                            | 9.6          | 8.3   | 31.0                               | 29.0           | 15.0         | 24.1  | 30.4  |
| Concrete (block or poured)                        | 36.6             | 33.8         | 66.1  | 81.4  | 22.4                            | 26.3         | 13.8  | 22.4                               | 23.5           | 35.6         | 64.4  | 81.0  |
| Concrete panels                                   | 34.8             | 47.5         | 61.0  | 22.0  | 20.5                            | 26.6         | 26.5  | 20.5                               | 35.0           | 48.3         | 49.2  | 6.5   |
| Siding or shingles                                | 22.2             | 86.6         | 110.2 | 101.9 | 24.5                            | 56.1         | 59.6  | 34.7                               | 13.5           | 70.1         | 129.2 | 95.9  |
| Metal panels                                      | 38.0             | 61.6         | 34.4  | 103.9 | 25.9                            | 24.8         | 16.3  | 19.8                               | 27.0           | 67.3         | 33.1  | 110.1 |
| Window glass                                      | 30.4             | 29.2         | 19.9  | 40.9  | 23.8                            | 24.2         | 22.6  | 33.4                               | 25.6           | 15.6         | 17.6  | 39.7  |
| Other   | 85.7             | 49.6         | 62.3  | 96.8  | 37.4                            | 46.7         | 38.8  | 32.3                               | 79.1           | 24.3         | 52.2  | 97.8  |
| Predominant roof material                         |                  |              |       |       |                                 |              |       |                                    |                |              |       |       |
| Metal surfacing                                   | 32.8             | 54.7         | 44.6  | 72.2  | 23.1                            | 22.2         | 14.9  | 23.1                               | 28.5           | 51.2         | 39.6  | 72.1  |
| Synthetic or rubber                               | 41.2             | 23.1         | 20.8  | 75.1  | 14.5                            | 14.8         | 11.0  | 19.0                               | 38.2           | 18.6         | 20.0  | 72.9  |
| Built-up  | 38.0             | 31.8         | 29.8  | 43.5  | 19.4                            | 20.5         | 13.4  | 32.0                               | 31.0           | 31.1         | 30.6  | 44.6  |
| Slate or tile shingles                            | 50.1             | 49.6         | 57.8  | 88.7  | 37.8                            | 47.7         | 32.9  | 92.1                               | 27.6           | 15.7         | 52.2  | 15.6  |
| Wooden materials (including shingles)             | 50.1             | 52.2         | 91.6  | 111.5 | 50.1                            | 52.2         | 91.4  | 60.8                               | 0.0            | 0.0          | 1.0   | 102.1 |
| Asphalt, fiberglass, or                           |                  |              |       |       |                                 |              |       |                                    |                |              |       |       |
| other shingles                                    | 24.0             | 59.4         | 53.2  | 33.1  | 20.4                            | 46.8         | 20.1  | 29.2                               | 13.5           | 58.4         | 54.5  | 29.8  |
| Concrete  | 51.3             | 99.6         | 54.5  | 58.7  | 35.0                            | 82.1         | 24.0  | 36.5                               | 24.2           | 31.4         | 50.9  | 51.5  |
| Other   | 48.8             | 101.6        | 72.6  | 45.3  | 32.7                            | 39.4         | 30.9  | 44.5                               | 51.8           | 99.4         | 65.1  | 10.8  |
| Roof tilt   |                  |              |       |       |                                 |              |       |                                    |                |              |       |       |
| Flat  | 34.8             | 15.2         | 13.1  | 56.0  | 12.3                            | 11.6         | 9.0   | 20.1                               | 30.3           | 15.4         | 19.2  | 57.8  |
| Shallow pitch                                     | 40.1             | 55.5         | 46.0  | 59.1  | 22.2                            | 22.4         | 17.1  | 24.7                               | 36.3           | 54.6         | 44.1  | 60.1  |
| Steeper pitch                                     | 24.3             | 83.4         | 37.2  | 109.5 | 21.4                            | 37.3         | 21.9  | 42.1                               | 13.9           | 70.7         | 32.1  | 101.3 |
|   |                  |              |       |       |                                 |              |       |                                    |                |              |       |       |

Relative standard errors (RSEs) for Table C35. Fuel oil consumption and conditional energy intensity by census region, 2018

| North-   N | , ,                                 | RSEs for t |      | l oil |      | RSEs for tota | =    | ce of buildi | _    | RSEs for fuel oil energy intensity |      |       |       |  |
|--|-------------------------------------|------------|------|-------|------|---------------|------|--------------|------|------------------------------------|------|-------|-------|--|
| Color of characteristics (more than one may paphy)   |                                     |            | -    | South | West |               |      | South        | West |                                    | -    | South | West  |  |
| Withise or reflective coating or paint   | All buildings                       | 23.1       | 14.8 | 16.8  | 61.0 | 10.3          | 10.3 | 7.9          | 17.2 | 17.7                               | 13.2 | 18.9  | 61.2  |  |
| White or reflective tos or shingles  |                                     |            |      |       |      |               |      |              |      |                                    |      |       |       |  |
| White or reflective liles or shingles   58,3   67,1   48,9   46,1   28,3   39,7   23,8   33,8   69,9   51,1   31,1   41,2  |                                     | 41.7       | 27.3 | 42.0  | 78.5 | 15.5          | 20.3 | 12.6         | 24.4 | 36.3                               | 25.6 | 37.5  | 78.0  |  |
| Auminum cating   Si  |                                     |            |      |       |      |               |      |              |      |                                    |      |       |       |  |
| Ballasted roof system   54,2   39,0   37,5   57,9   20,5   21,3   19,9   51,5   52,7   28,8   54,9   13,1  |                                     |            |      |       |      |               |      |              |      |                                    |      |       |       |  |
| Number coal road property   So   |                                     |            |      |       |      |               |      |              |      |                                    |      |       |       |  |
| Renovations since 2000   Renovation one may apply  |                                     |            |      |       |      |               |      |              |      |                                    |      |       |       |  |
| Any type of renovation         295         139         176         658         12.0         9.8         9.6         18.4         24.9         13.3         22.1         63.1         65.1           Addition or annex         399         25.8         48.4         37.0         11.8         31.9         13.6         38.9         13.7         30.6         52.3         32.1         41.5         39.9           Roof replacement         28.6         18.0         30.1         86.1         13.2         10.5         14.2         22.2         25.0         24.9         36.4         72.7         89.9           Window replacement         37.9         27.0         45.1         83.4         15.4         22.9         21.3         41.9         34.2         22.0         25.9         82.3           Window replacement ugrade         43.8         16.9         25.4         83.7         14.0         13.3         11.8         22.4         23.5         25.9         82.3           Window replacement ugrade         36.8         19.4         61.7         65.0         12.1         11.0         13.9         40.0         23.2         22.0         29.2         22.4         13.9         41.2         21.9  | Renovations since 2000              |            |      |       |      |               |      |              |      |                                    |      |       |       |  |
| Addition or annex  |                                     | 29.5       | 13.9 | 17.6  | 65.8 | 12.0          | 9.8  | 9.6          | 18.4 | 24.9                               | 15.3 | 22.1  | 65.1  |  |
| Reduction in floorspace   67.1   31.8   53.9   10.67   35.9   31.7   30.6   52.3   64.5   14.2   51.4   99.9     Roof replacement   28.6   18.0   30.1   86.1   13.2   10.5   14.2   32.2   25.0   16.4   27.7   85.9     Interior wall reconfiguration   28.7   18.3   37.9   69.5   13.8   15.2   12.4   26.1   22.6   24.9   36.4   27.3     Window replacement   37.9   27.0   45.1   83.4   15.4   22.9   21.3   41.9   34.2   35.9   42.5   93.5     HYAC equipment upgrade   36.8   19.4   31.7   66.0   12.1   11.0   10.3   21.4   34.8   22.0   25.9   82.3     Lighting upgrade   36.8   19.4   31.7   66.0   12.1   11.0   10.3   21.4   34.8   22.0   25.9   82.3     Lighting upgrade   34.3   21.1   33.4   69.9   15.2   18.4   13.9   30.6   31.7   25.8   32.6   72.2     Plumbing system upgrade   27.8   20.0   42.6   75.7   41.9   19.5   11.6   29.4   23.2   28.2   41.3   75.6     Insulation upgrade   32.6   27.4   40.0   83.7   21.8   33.8   19.8   43.6   30.9   50.0   30.5   57.5     Fire, safety, or security upgrade   32.0   19.7   41.0   73.2   15.9   11.2   11.8   29.8   28.5   19.3   42.3   73.0     Structural upgrade   60.8   61.8   80.9   92.2   24.4   46.0   24.4   55.4   58.7   77.9   79.6   212.9     Other   81.0   20.8   33.8   89.0   49.2   20.0   24.0   55.7   27.0   00.6   63.8   15.5     Energy sources   27.8   27.0   31.8   59.0   42.6   17.1   12.3   20.0   26.9   20.9   27.5   60.2     Buildings constructed 2013 or later   63.5   61.6   43.8   50.0   31.0   30.3   7.9   17.2   17.7   13.2   18.9   61.2     District heat   45.9   51.2   27.8   47.9   13.9   34.0   26.7   31.0   47.6   61.5     Fuel oil   23.1   48.8   68.8   61.0   10.3   10.3   7.9   17.2   17.7   13.2   18.9   61.2     District heat   45.9   51.2   27.8   47.9   31.9   34.0   26.7   31.0   47.6   63.7   63.8     Fuel oil   23.7   19.2   23.8   74.9   16.6   18.5   23.4   41.6   13.6   33.7   25.6   38.4     Fuel oil   23.7   19.2   23.8   74.9   16.6   18.5   23.4   41.6   13.6   31.7   25.6   38.4     Fuel oil   23.7   19.2   23.7   18.2   |                                     |            |      |       |      |               |      |              |      |                                    |      |       |       |  |
| Roof replacement   |                                     |            |      |       |      |               |      |              |      |                                    |      |       |       |  |
| Interior wall reconfiguration   28.7   |                                     |            |      |       |      |               |      |              |      |                                    |      |       |       |  |
| Window replacement   37.9   27.0   45.1   83.4   15.4   22.9   21.3   41.9   34.2   35.9   42.5   93.5   HVAC equipment upgrade   43.8   16.9   25.4   83.7   14.0   13.3   11.8   22.4   38.7   22.0   25.9   62.3   12.9   12.9   12.9   12.1   12.0   13.9   13.5   13.5   22.5   82.3   63.1   14.0   13.3   11.8   22.4   38.7   22.0   25.5   62.3   12.9   12.9   12.1   12.0   13.3   13.8   22.4   38.7   22.0   25.5   62.4   12.9   12.9   12.1   12.0   30.6   31.7   25.8   32.6   72.2   12.5   12.4   13.9   30.6   31.7   25.8   32.6   72.2   12.5   12. |                                     |            |      |       |      |               |      |              |      |                                    |      |       |       |  |
| HVAC equipment upgrade   |                                     |            | 27.0 |       |      |               |      |              |      |                                    |      |       | 93.5  |  |
| Lighting upgrade   36.8   19.4   31.7   66.0   12.1   11.0   10.3   21.4   34.8   22.0   35.0   64.1   |                                     | 43.8       | 16.9 | 25.4  | 83.7 |               |      |              | 22.4 | 38.7                               |      |       | 82.3  |  |
| Electrical upgrade   |                                     | 36.8       | 19.4 | 31.7  | 66.0 |               |      |              | 21.4 |                                    |      |       |       |  |
| Plumbing system upgrade   27.8   20.0   42.6   75.7   14.9   19.5   11.6   29.4   23.2   28.2   41.3   75.6     Insulation upgrade   32.6   27.4   40.0   83.7   21.8   33.8   19.8   43.6   30.9   50.0   39.5   97.3     Fire, safety, or security upgrade   32.0   19.7   41.0   73.2   15.9   11.2   11.8   29.8   28.5   19.3   42.3   73.0     Structural upgrade   60.8   61.8   80.9   92.2   24.4   46.0   24.4   55.4   58.7   77.9   79.5   121.9     Other   81.0   0.0   43.8   89.0   49.2   0.0   42.0   87.2   71.0   0.0   6.8   15.2     No renovations   27.8   27.0   31.8   59.0   12.6   17.1   12.3   20.0   26.9   20.9   27.5   60.2     Buildings constructed 2013 or later   63.5   61.6   43.8   54.0   33.1   36.8   28.7   32.9   30.0   57.8   32.3   51.5     Energy sources (more than one may apply)     Electricity   23.1   14.8   16.8   61.0   10.3   10.3   7.9   17.2   17.7   13.2   18.9   61.2     Shatural gas   26.5   14.3   32.8   20.7   12.1   11.2   8.8   19.4   19.5   14.9   30.9   20.5     Fuel oil   23.1   14.8   16.8   61.0   10.3   10.3   7.9   17.2   17.7   13.2   18.9   61.2     District heat   45.9   51.2   27.8   47.9   31.9   34.0   26.7   31.0   47.6   45.1   26.6   38.4     Propane   32.7   40.5   61.5   93.6   19.5   23.8   21.1   39.9   23.5   35.1   54.0   10.2     For poane   32.7   40.5   61.5   93.6   19.5   23.8   21.1   39.9   23.5   35.1   54.0   10.2     Fuel oil   23.1   11.9   23.3   74.9   16.6   18.5   23.4   41.6   13.6   13.7   25.4   48.7     Fuel oil main   25.6   23.5   28.7   81.0   18.7   30.9   29.8   74.0   13.8   12.9   64.2     Fuel oil main   25.6   23.5   28.7   81.0   18.7   30.9   29.8   74.0   13.8   12.9   64.2     Fuel oil secondary   22.5   14.8   49.3   43.9   20.4   20.5   53.3   29.9   15.7   15.6   11.8   43.3     Primary space-heating energy source   13.1   81.9   36.9   22.9   12.6   12.8   11.7   21.1   20.5   31.6   32.4   41.5     Fuel oil   25.6   23.5   28.7   81.0   18.7   30.9   29.8   74.0   13.8   12.9   64.2     Primary space-heating energy sourc |                                     | 34.3       | 21.1 | 33.4  | 69.9 |               | 18.4 |              | 30.6 | 31.7                               |      |       | 72.2  |  |
| Insulation upgrade   32.6   27.4   40.0   83.7   21.8   33.8   19.8   43.6   30.9   50.0   39.5   97.3     Fire, safety, or security upgrade   60.8   61.8   80.9   92.2   24.4   46.0   24.4   55.4   55.4   58.7   77.9   79.6   121.9     Other   81.0   0.0   43.8   89.0   49.2   0.0   42.0   87.2   71.0   0.0   6.8   151.2     No renovations   27.8   27.0   31.8   59.0   12.6   17.1   12.3   20.0   26.9   20.9   27.5   60.2     Buldings constructed 2013 or later   63.5   61.6   43.8   54.0   33.1   36.8   28.7   32.9   30.0   57.8   32.3   51.5     Energy sources   |                                     |            |      |       |      |               |      |              |      |                                    |      |       |       |  |
| Fire, safety, or security upgrade  |                                     |            |      | 40.0  | 83.7 |               |      |              |      | 30.9                               |      |       | 97.3  |  |
| Structural upgrade   60.8   61.8   80.9   92.2   24.4   46.0   24.4   55.4   58.7   77.9   79.6   121.9     Other   81.0   0.0   43.8   89.0   49.2   0.0   42.0   87.2   71.0   0.0   6.8   15.2     No renovations   27.8   27.0   31.8   59.0   12.6   17.1   12.3   20.0   26.9   20.9   27.5   60.2     Sulidings constructed 2013 or later   63.5   61.6   43.8   54.0   33.1   36.8   28.7   32.9   30.0   57.8   32.3   51.5     Energy sources (more than one may apply)     Electricity   23.1   14.8   16.8   61.0   10.3   10.3   7.9   17.2   17.7   13.2   18.9   61.2     Sultrial gas   26.5   14.3   32.8   20.7   12.1   11.2   88   19.4   19.5   14.9   30.9   20.5     Fuel oil   23.1   14.8   16.8   61.0   10.3   10.3   7.9   17.2   17.7   13.2   18.9   61.2     District chalfed water   45.9   51.2   27.8   47.9   13.9   34.0   26.7   31.0   47.6   45.1   26.6   38.4     District chilled water   81.3   62.5   28.8   42.7   29.3   29.9   20.8   29.0   84.0   52.2   27.2   34.2     Solar   40.7   59.2   91.4   55.3   31.9   35.0   45.9   47.8   47.0   63.7   33.6   11.9     Wood, coal, and other   64.6   85.2   48.7   92.5   38.6   45.6   40.6   78.1   62.5   82.5   47.2   321.9      Space-heating energy sources   Fuel oil   23.7   11.9   23.3   74.9   16.6   18.5   23.4   41.6   13.6   13.7   25.4   48.7     Fuel oil   23.7   14.8   49.3   43.9   20.4   20.5   53.3   29.9   15.7   15.6   11.8   43.3    Other excluding fuel oil   33.2   29.7   18.2   21.7   10.5   10.5   8.5   18.6   31.1   28.1   18.0   18.5    Buildings without heating   52.8   0.0   54.3   78.3   51.0   0.0   36.0   44.7   66.6   0.0   38.3   38.4    Primary space-heating energy source   18.7   18.7   18.8   18.9   18.5    Electricity   27.3   37.5   26.8   35.5   18.7   26.8   11.7   21.1   20.5   31.6   32.4   18.5    Relectricity   27.3   37.5   26.8   35.5   18.7   26.8   11.7   21.1   20.5   31.6   32.4   18.5    Relectricity   27.3   37.5   26.8   35.5   18.7   26.8   11.7   21.1   20.5   31.6   32.4   31.5    Fuel oil   25.6   23.5   28.7   81 |                                     |            |      |       |      |               |      |              |      |                                    |      |       |       |  |
| Other         81.0         0.0         43.8         89.0         49.2         0.0         42.0         87.2         71.0         0.0         6.8         15.2           No renovations         27.8         27.0         31.8         59.0         12.6         17.1         12.3         20.0         26.9         20.9         27.5         60.2           Buildings constructed 2013 or later         63.5         61.6         43.8         54.0         33.1         36.8         28.7         32.9         30.0         57.8         32.3         51.5           Energy sources (more than one may apply)         30.0         30.0         57.8         32.3         51.5           Electricity         23.1         14.8         16.8         61.0         10.3         10.3         7.9         17.2         17.7         13.2         18.9         61.2           Natural gas         26.5         14.3         32.8         20.7         12.1         11.2         8.8         19.4         19.5         14.9         30.9         20.5           Fuel oil         23.1         14.8         16.8         61.0         10.3         10.3         7.9         17.2         17.7         13.2         18.9  |                                     |            | 61.8 |       |      |               |      |              | 55.4 | 58.7                               | 77.9 |       | 121.9 |  |
| No renovations   27.8   27.0   31.8   59.0   12.6   17.1   12.3   20.0   26.9   20.9   27.5   60.2     Buildings constructed 2013 or later   63.5   61.6   43.8   54.0   33.1   36.8   28.7   32.9   30.0   57.8   32.3   51.5     Energy sources (more than one may apply)   Electricity   23.1   14.8   16.8   61.0   10.3   10.3   7.9   17.2   17.7   13.2   18.9   61.2     Statural gas   26.5   14.3   32.8   20.7   12.1   11.2   8.8   19.4   19.5   14.9   30.9   20.5     Fuel oil   23.1   14.8   16.8   61.0   10.3   10.3   7.9   17.2   17.7   13.2   18.9   61.2     District heat   45.9   51.2   27.8   47.9   13.9   34.0   26.7   31.0   47.6   45.1   26.6   38.4     District chilled water   81.3   62.5   28.8   42.7   29.3   29.9   20.8   29.0   84.0   52.2   27.2   34.2     Propane   32.7   40.5   61.5   93.6   19.5   23.8   21.1   39.9   23.5   35.1   54.0   20.4     Wood, coal, and other   64.6   85.2   48.7   92.5   38.6   45.6   40.6   78.1   62.5   82.5   47.2   231.9      Space-heating energy sources   14.8   49.3   49.3   49.2   40.5   53.3   29.9   47.8   41.6   13.6   13.7   25.4   48.7     Fuel oil   23.7   11.9   23.3   74.9   16.6   18.5   23.4   41.6   13.6   13.7   25.4   48.7     Fuel oil   23.7   11.9   23.3   74.9   16.6   18.5   23.4   41.6   13.6   13.7   25.4   48.7      Fuel oil   23.7   11.9   23.3   74.9   16.6   18.5   23.4   41.6   13.6   13.7   25.4   48.7      Fuel oil   23.7   11.9   23.3   74.9   16.5   18.5   23.4   41.6   13.6   13.7   25.4   48.7      Fuel oil   23.7   11.9   23.3   74.9   16.5   18.5   23.4   41.6   13.6   13.7   25.4   48.7      Fuel oil   23.7   14.8   49.3   49.3   49.2   40.5   53.3   29.9   15.7   15.6   11.8   44.3      Other excluding fuel oil   33.2   27.7   18.2   21.7   10.5   10.5   8.5   8.5   8.5   8.6   0.0   38.3   38.3      Primary space-heating energy source   27.3   37.5   26.8   35.5   18.7   26.8   11.7   21.1   20.5   31.6   32.4   48.5      Fuel oil   25.6   23.5   23.5   23.5   23.5   23.5   23.5   23.5   23.5   23.5   23.5   23.5   23.5   23.5 |                                     | 81.0       | 0.0  | 43.8  | 89.0 | 49.2          | 0.0  | 42.0         | 87.2 | 71.0                               | 0.0  | 6.8   | 15.2  |  |
| Electricity   23.1   14.8   16.8   61.0   10.3   10.3   7.9   17.2   17.7   13.2   18.9   61.2   | No renovations                      | 27.8       | 27.0 | 31.8  | 59.0 | 12.6          | 17.1 | 12.3         |      | 26.9                               | 20.9 | 27.5  |       |  |
| Final Propage   Final Propag | Buildings constructed 2013 or later | 63.5       | 61.6 | 43.8  | 54.0 | 33.1          | 36.8 | 28.7         | 32.9 | 30.0                               | 57.8 | 32.3  | 51.5  |  |
| Natural gas         26.5         14.3         32.8         20.7         12.1         11.2         8.8         19.4         19.5         14.9         30.9         20.5           Fuel oil         23.1         14.8         16.8         61.0         10.3         10.3         7.9         17.2         17.7         13.2         18.9         61.2           District heat         45.9         51.2         27.8         47.9         13.9         34.0         26.7         31.0         47.6         45.1         26.6         38.4           District chilled water         81.3         62.5         28.8         42.7         29.3         29.9         20.8         29.0         84.0         52.2         27.2         34.2           Propane         32.7         40.5         61.5         93.6         19.5         23.8         21.1         39.9         23.5         35.1         54.0         102.4           Solar         40.7         59.2         91.4         55.3         31.9         35.0         45.9         47.8         47.0         63.7         83.6         11.9           Wood, coal, and other         64.6         85.2         48.7         92.5         38.6         45.  |                                     |            |      |       |      |               |      |              |      |                                    |      |       |       |  |
| Fuel oil         23.1         14.8         16.8         61.0         10.3         10.3         7.9         17.2         17.7         13.2         18.9         61.2           District heat         45.9         51.2         27.8         47.9         13.9         34.0         26.7         31.0         47.6         45.1         26.6         38.4           District chilled water         81.3         62.5         28.8         42.7         29.3         29.9         20.8         29.0         84.0         52.2         27.2         34.2           Propane         32.7         40.5         61.5         93.6         19.5         23.8         21.1         39.9         23.5         35.1         54.0         102.4           Solar         40.7         59.2         91.4         55.3         31.9         35.0         45.9         47.8         47.0         63.7         83.6         11.9           Wood, coal, and other         64.6         85.2         48.7         92.5         38.6         45.6         40.6         78.1         62.5         82.5         47.2         31.9           Space-heating energy sources           Fuel oil main         25.6 <td< td=""><td></td><td>23.1</td><td>14.8</td><td>16.8</td><td>61.0</td><td>10.3</td><td>10.3</td><td>7.9</td><td>17.2</td><td>17.7</td><td>13.2</td><td>18.9</td><td>61.2</td></td<>  |                                     | 23.1       | 14.8 | 16.8  | 61.0 | 10.3          | 10.3 | 7.9          | 17.2 | 17.7                               | 13.2 | 18.9  | 61.2  |  |
| District heat   45.9   51.2   27.8   47.9   13.9   34.0   26.7   31.0   47.6   45.1   26.6   38.4  | Natural gas                         | 26.5       | 14.3 | 32.8  | 20.7 | 12.1          | 11.2 | 8.8          | 19.4 | 19.5                               | 14.9 | 30.9  | 20.5  |  |
| District chilled water   81.3   62.5   28.8   42.7   29.3   29.9   20.8   29.0   84.0   52.2   27.2   34.2     Propane   32.7   40.5   61.5   93.6   19.5   23.8   21.1   39.9   23.5   35.1   54.0   102.4     Solar   40.7   59.2   91.4   55.3   31.9   35.0   45.9   47.8   47.0   63.7   83.6   11.9     Wood, coal, and other   64.6   85.2   48.7   92.5   38.6   45.6   40.6   78.1   62.5   82.5   47.2   321.9      Space-heating energy sources   | Fuel oil                            | 23.1       | 14.8 | 16.8  | 61.0 | 10.3          | 10.3 | 7.9          | 17.2 | 17.7                               | 13.2 | 18.9  | 61.2  |  |
| Propane         32.7         40.5         61.5         93.6         19.5         23.8         21.1         39.9         23.5         35.1         54.0         102.4           Solar         40.7         59.2         91.4         55.3         31.9         35.0         45.9         47.8         47.0         63.7         83.6         11.9           Wood, coal, and other         64.6         85.2         48.7         92.5         38.6         45.6         40.6         78.1         62.5         82.5         47.2         321.9           Space-heating energy sources           Fuel oil         23.7         11.9         23.3         74.9         16.6         18.5         23.4         41.6         13.6         13.7         25.4         48.7           Fuel oil main         25.6         23.5         28.7         81.0         18.7         30.9         29.8         74.0         13.8         12.9         6.4         20.7           Fuel oil secondary         22.5         14.8         49.3         43.9         20.4         20.5         53.3         29.9         15.7         15.6         11.8         44.3           Other excluding fuel oil         33.2         29.  | District heat                       | 45.9       | 51.2 | 27.8  | 47.9 | 13.9          | 34.0 | 26.7         | 31.0 | 47.6                               | 45.1 | 26.6  | 38.4  |  |
| Solar         40.7         59.2         91.4         55.3         31.9         35.0         45.9         47.8         47.0         63.7         83.6         11.9           Wood, coal, and other         64.6         85.2         48.7         92.5         38.6         45.6         40.6         78.1         62.5         82.5         47.2         321.9           Space-heating energy sources           Fuel oil         23.7         11.9         23.3         74.9         16.6         18.5         23.4         41.6         13.6         13.7         25.4         48.7           Fuel oil main         25.6         23.5         28.7         81.0         18.7         30.9         29.8         74.0         13.8         12.9         6.4         20.7           Fuel oil secondary         22.5         14.8         49.3         43.9         20.4         20.5         53.3         29.9         15.7         15.6         11.8         44.3           Other excluding fuel oil         33.2         29.7         18.2         21.7         10.5         10.5         8.5         18.6         31.1         28.1         18.0         18.5           Buildings without heating         22.8  | District chilled water              | 81.3       | 62.5 | 28.8  | 42.7 | 29.3          | 29.9 | 20.8         | 29.0 | 84.0                               | 52.2 | 27.2  | 34.2  |  |
| Wood, coal, and other         64.6         85.2         48.7         92.5         38.6         45.6         40.6         78.1         62.5         82.5         47.2         321.9           Space-heating energy sources           Fuel oil         23.7         11.9         23.3         74.9         16.6         18.5         23.4         41.6         13.6         13.7         25.4         48.7           Fuel oil main         25.6         23.5         28.7         81.0         18.7         30.9         29.8         74.0         13.8         12.9         6.4         20.7           Fuel oil secondary         22.5         14.8         49.3         43.9         20.4         20.5         53.3         29.9         15.7         15.6         11.8         44.3           Other excluding fuel oil         33.2         29.7         18.2         21.7         10.5         10.5         8.5         18.6         31.1         28.1         18.0         18.5           Buildings without heating         52.8         0.0         54.3         78.3         71.0         0.0         36.0         44.7         66.6         0.0         38.3         83.4           Primary space-heating  | Propane                             | 32.7       | 40.5 | 61.5  | 93.6 | 19.5          | 23.8 | 21.1         | 39.9 | 23.5                               | 35.1 | 54.0  | 102.4 |  |
| Space-heating energy sources           Fuel oil         23.7         11.9         23.3         74.9         16.6         18.5         23.4         41.6         13.6         13.7         25.4         48.7           Fuel oil main         25.6         23.5         28.7         81.0         18.7         30.9         29.8         74.0         13.8         12.9         6.4         20.7           Fuel oil secondary         22.5         14.8         49.3         43.9         20.4         20.5         53.3         29.9         15.7         15.6         11.8         44.3           Other excluding fuel oil         33.2         29.7         18.2         21.7         10.5         10.5         8.5         18.6         31.1         28.1         18.0         18.5           Buildings without heating         52.8         0.0         54.3         78.3         71.0         0.0         36.0         44.7         66.6         0.0         38.3         83.4           Primary space-heating energy source           Electricity         27.3         37.5         26.8         35.5         18.7         26.8         11.7         21.1         20.5         31.6         32.4         18.  | Solar                               | 40.7       | 59.2 | 91.4  | 55.3 | 31.9          | 35.0 | 45.9         | 47.8 | 47.0                               | 63.7 | 83.6  | 11.9  |  |
| Fuel oil         23.7         11.9         23.3         74.9         16.6         18.5         23.4         41.6         13.6         13.7         25.4         48.7           Fuel oil main         25.6         23.5         28.7         81.0         18.7         30.9         29.8         74.0         13.8         12.9         6.4         20.7           Fuel oil secondary         22.5         14.8         49.3         43.9         20.4         20.5         53.3         29.9         15.7         15.6         11.8         44.3           Other excluding fuel oil         33.2         29.7         18.2         21.7         10.5         10.5         8.5         18.6         31.1         28.1         18.0         18.5           Buildings without heating         52.8         0.0         54.3         78.3         71.0         0.0         36.0         44.7         66.6         0.0         38.3         83.4           Primary space-heating energy source           Electricity         27.3         37.5         26.8         35.5         18.7         26.8         11.7         21.1         20.5         31.6         32.4         18.5           Natural gas <t< td=""><td>Wood, coal, and other</td><td>64.6</td><td>85.2</td><td>48.7</td><td>92.5</td><td>38.6</td><td>45.6</td><td>40.6</td><td>78.1</td><td>62.5</td><td>82.5</td><td>47.2</td><td>321.9</td></t<>   | Wood, coal, and other               | 64.6       | 85.2 | 48.7  | 92.5 | 38.6          | 45.6 | 40.6         | 78.1 | 62.5                               | 82.5 | 47.2  | 321.9 |  |
| Fuel oil main         25.6         23.5         28.7         81.0         18.7         30.9         29.8         74.0         13.8         12.9         6.4         20.7           Fuel oil secondary         22.5         14.8         49.3         43.9         20.4         20.5         53.3         29.9         15.7         15.6         11.8         44.3           Other excluding fuel oil         33.2         29.7         18.2         21.7         10.5         10.5         8.5         18.6         31.1         28.1         18.0         18.5           Buildings without heating         52.8         0.0         54.3         78.3         71.0         0.0         36.0         44.7         66.6         0.0         38.3         83.4           Primary space-heating energy source           Electricity         27.3         37.5         26.8         35.5         18.7         26.8         11.7         21.1         20.5         31.6         32.4         18.5           Natural gas         24.8         13.9         36.9         22.9         12.6         12.8         11.9         25.2         21.7         14.6         31.9         30.6           Fuel oil         25.6   | Space-heating energy sources        |            |      |       |      |               |      |              |      |                                    |      |       |       |  |
| Fuel oil secondary         22.5         14.8         49.3         43.9         20.4         20.5         53.3         29.9         15.7         15.6         11.8         44.3           Other excluding fuel oil         33.2         29.7         18.2         21.7         10.5         10.5         8.5         18.6         31.1         28.1         18.0         18.5           Buildings without heating         52.8         0.0         54.3         78.3         71.0         0.0         36.0         44.7         66.6         0.0         38.3         83.4           Primary space-heating energy source         Electricity         27.3         37.5         26.8         35.5         18.7         26.8         11.7         21.1         20.5         31.6         32.4         18.5           Natural gas         24.8         13.9         36.9         22.9         12.6         12.8         11.9         25.2         21.7         14.6         31.9         30.6           Fuel oil         25.6         23.5         28.7         81.0         18.7         30.9         29.8         74.0         13.8         12.9         6.4         20.7           District heat         47.1         33.1         <  | Fuel oil                            | 23.7       | 11.9 | 23.3  | 74.9 | 16.6          | 18.5 | 23.4         | 41.6 | 13.6                               | 13.7 | 25.4  | 48.7  |  |
| Other excluding fuel oil         33.2         29.7         18.2         21.7         10.5         10.5         8.5         18.6         31.1         28.1         18.0         18.5           Buildings without heating         52.8         0.0         54.3         78.3         71.0         0.0         36.0         44.7         66.6         0.0         38.3         83.4           Primary space-heating energy source           Electricity         27.3         37.5         26.8         35.5         18.7         26.8         11.7         21.1         20.5         31.6         32.4         18.5           Natural gas         24.8         13.9         36.9         22.9         12.6         12.8         11.9         25.2         21.7         14.6         31.9         30.6           Fuel oil         25.6         23.5         28.7         81.0         18.7         30.9         29.8         74.0         13.8         12.9         6.4         20.7           District heat         47.1         33.1         30.2         49.2         16.3         35.7         26.9         30.4         49.4         18.3         28.6         40.7           Propane         96.1 <td< td=""><td>Fuel oil main</td><td>25.6</td><td>23.5</td><td>28.7</td><td>81.0</td><td>18.7</td><td>30.9</td><td>29.8</td><td>74.0</td><td>13.8</td><td>12.9</td><td>6.4</td><td>20.7</td></td<>   | Fuel oil main                       | 25.6       | 23.5 | 28.7  | 81.0 | 18.7          | 30.9 | 29.8         | 74.0 | 13.8                               | 12.9 | 6.4   | 20.7  |  |
| Buildings without heating         52.8         0.0         54.3         78.3         71.0         0.0         36.0         44.7         66.6         0.0         38.3         83.4           Primary space-heating energy source           Electricity         27.3         37.5         26.8         35.5         18.7         26.8         11.7         21.1         20.5         31.6         32.4         18.5           Natural gas         24.8         13.9         36.9         22.9         12.6         12.8         11.9         25.2         21.7         14.6         31.9         30.6           Fuel oil         25.6         23.5         28.7         81.0         18.7         30.9         29.8         74.0         13.8         12.9         6.4         20.7           District heat         47.1         33.1         30.2         49.2         16.3         35.7         26.9         30.4         49.4         18.3         28.6         40.7           Propane         96.1         70.6         61.4         50.2         72.5         70.6         61.4         50.2         86.3         0.0         0.1         0.0  | Fuel oil secondary                  | 22.5       | 14.8 | 49.3  | 43.9 | 20.4          | 20.5 | 53.3         | 29.9 | 15.7                               | 15.6 | 11.8  | 44.3  |  |
| Primary space-heating energy source  Electricity 27.3 37.5 26.8 35.5 18.7 26.8 11.7 21.1 20.5 31.6 32.4 18.5 Natural gas 24.8 13.9 36.9 22.9 12.6 12.8 11.9 25.2 21.7 14.6 31.9 30.6 Fuel oil 25.6 23.5 28.7 81.0 18.7 30.9 29.8 74.0 13.8 12.9 6.4 20.7 District heat 47.1 33.1 30.2 49.2 16.3 35.7 26.9 30.4 49.4 18.3 28.6 40.7 Propane 96.1 70.6 61.4 50.2 72.5 70.6 61.4 50.2 86.3 0.0 0.1 0.0  | Other excluding fuel oil            | 33.2       | 29.7 | 18.2  | 21.7 | 10.5          | 10.5 | 8.5          | 18.6 | 31.1                               | 28.1 | 18.0  | 18.5  |  |
| energy source           Electricity         27.3         37.5         26.8         35.5         18.7         26.8         11.7         21.1         20.5         31.6         32.4         18.5           Natural gas         24.8         13.9         36.9         22.9         12.6         12.8         11.9         25.2         21.7         14.6         31.9         30.6           Fuel oil         25.6         23.5         28.7         81.0         18.7         30.9         29.8         74.0         13.8         12.9         6.4         20.7           District heat         47.1         33.1         30.2         49.2         16.3         35.7         26.9         30.4         49.4         18.3         28.6         40.7           Propane         96.1         70.6         61.4         50.2         72.5         70.6         61.4         50.2         86.3         0.0         0.1         0.0   | Buildings without heating           | 52.8       | 0.0  | 54.3  | 78.3 | 71.0          | 0.0  | 36.0         | 44.7 | 66.6                               | 0.0  | 38.3  | 83.4  |  |
| Electricity       27.3       37.5       26.8       35.5       18.7       26.8       11.7       21.1       20.5       31.6       32.4       18.5         Natural gas       24.8       13.9       36.9       22.9       12.6       12.8       11.9       25.2       21.7       14.6       31.9       30.6         Fuel oil       25.6       23.5       28.7       81.0       18.7       30.9       29.8       74.0       13.8       12.9       6.4       20.7         District heat       47.1       33.1       30.2       49.2       16.3       35.7       26.9       30.4       49.4       18.3       28.6       40.7         Propane       96.1       70.6       61.4       50.2       72.5       70.6       61.4       50.2       86.3       0.0       0.1       0.0   |                                     |            |      |       |      |               |      |              |      |                                    |      |       |       |  |
| Natural gas       24.8       13.9       36.9       22.9       12.6       12.8       11.9       25.2       21.7       14.6       31.9       30.6         Fuel oil       25.6       23.5       28.7       81.0       18.7       30.9       29.8       74.0       13.8       12.9       6.4       20.7         District heat       47.1       33.1       30.2       49.2       16.3       35.7       26.9       30.4       49.4       18.3       28.6       40.7         Propane       96.1       70.6       61.4       50.2       72.5       70.6       61.4       50.2       86.3       0.0       0.1       0.0   |                                     | 27.3       | 37.5 | 26.8  | 35.5 | 18.7          | 26.8 | 11.7         | 21.1 | 20.5                               | 31.6 | 32.4  | 18.5  |  |
| Fuel oil     25.6     23.5     28.7     81.0     18.7     30.9     29.8     74.0     13.8     12.9     6.4     20.7       District heat     47.1     33.1     30.2     49.2     16.3     35.7     26.9     30.4     49.4     18.3     28.6     40.7       Propane     96.1     70.6     61.4     50.2     72.5     70.6     61.4     50.2     86.3     0.0     0.1     0.0   |                                     |            |      |       |      |               |      |              |      |                                    |      |       |       |  |
| District heat     47.1     33.1     30.2     49.2     16.3     35.7     26.9     30.4     49.4     18.3     28.6     40.7       Propane     96.1     70.6     61.4     50.2     72.5     70.6     61.4     50.2     86.3     0.0     0.1     0.0   |                                     |            |      |       |      |               |      |              |      |                                    |      |       |       |  |
| Propane 96.1 70.6 61.4 50.2 72.5 70.6 61.4 50.2 86.3 0.0 0.1 0.0   |                                     |            |      |       |      |               |      |              |      |                                    |      |       |       |  |
| ·  |                                     |            |      |       |      |               |      |              |      |                                    |      |       |       |  |
| Other sources <sup>b</sup> 76.4 92.5 60.4 109.3 59.7 98.1 60.4 43.9 22.1 517.4 0.0 109.0   |                                     |            |      |       |      |               |      |              |      |                                    |      |       |       |  |

Relative standard errors (RSEs) for Table C35. Fuel oil consumption and conditional energy intensity by census region, 2018

|                                 |                | RSEs for total fuel oil consumption |       |       | RSEs for tota<br>Ising fuel oil | =            | ce of buildi | RSEs for fuel oil energy intensity |                |              |       |       |  |
|---------------------------------|----------------|-------------------------------------|-------|-------|---------------------------------|--------------|--------------|------------------------------------|----------------|--------------|-------|-------|--|
|                                 | North-<br>east | Mid-<br>west                        | South | West  | North-<br>east                  | Mid-<br>west | South        | West                               | North-<br>east | Mid-<br>west | South | West  |  |
| All buildings                   | 23.1           | 14.8                                | 16.8  | 61.0  | 10.3                            | 10.3         | 7.9          | 17.2                               | 17.7           | 13.2         | 18.9  | 61.2  |  |
| Cooling energy sources          |                |                                     |       |       |                                 |              |              |                                    |                |              |       |       |  |
| Fuel oil                        | 49.7           | 0.0                                 | 72.4  | 0.0   | 49.7                            | 0.0          | 72.4         | 0.0                                | 0.0            | 0.0          | 0.0   | 0.0   |  |
| Other excluding fuel oil        | 25.1           | 14.2                                | 17.5  | 59.7  | 10.8                            | 9.8          | 7.9          | 17.7                               | 19.8           | 13.7         | 19.5  | 60.6  |  |
| Buildings without cooling       | 29.8           | 78.8                                | 78.7  | 109.8 | 30.5                            | 63.0         | 64.1         | 33.5                               | 20.2           | 35.5         | 144.6 | 104.8 |  |
| Water-heating energy sources    |                |                                     |       |       |                                 |              |              |                                    |                |              |       |       |  |
| Fuel oil                        | 27.5           | 39.6                                | 28.4  | 77.2  | 20.3                            | 28.2         | 40.6         | 39.2                               | 15.2           | 26.8         | 54.7  | 66.2  |  |
| Other excluding fuel oil        | 31.5           | 16.4                                | 20.6  | 46.7  | 10.2                            | 10.3         | 7.5          | 17.7                               | 28.5           | 16.4         | 21.2  | 48.0  |  |
| Buildings without water heating | 62.4           | 106.8                               | 70.2  | 95.0  | 59.7                            | 74.0         | 35.6         | 44.8                               | 39.1           | 192.7        | 78.4  | 90.3  |  |
| Cooking energy sources          |                |                                     |       |       |                                 |              |              |                                    |                |              |       |       |  |
| Fuel oil                        | 58.8           | 0.0                                 | 62.4  | 94.6  | 54.5                            | 0.0          | 77.4         | 67.0                               | 57.9           | 0.0          | 200.6 | 184.5 |  |
| Other excluding fuel oil        | 24.0           | 15.4                                | 21.2  | 75.3  | 12.2                            | 12.6         | 9.2          | 20.7                               | 20.1           | 14.7         | 22.3  | 73.6  |  |
| Buildings without cooking       | 28.4           | 33.0                                | 33.7  | 66.6  | 12.1                            | 17.7         | 12.0         | 18.9                               | 23.6           | 30.6         | 30.7  | 67.7  |  |
| Energy end uses                 |                |                                     |       |       |                                 |              |              |                                    |                |              |       |       |  |
| (more than one may apply)       |                |                                     |       |       |                                 |              |              |                                    |                |              |       |       |  |
| Buildings with space heating    | 23.2           | 14.8                                | 17.2  | 61.4  | 10.3                            | 10.3         | 8.3          | 17.7                               | 17.8           | 13.2         | 19.4  | 61.7  |  |
| Buildings with cooling          | 25.1           | 14.2                                | 17.3  | 59.7  | 10.8                            | 9.8          | 7.9          | 17.7                               | 19.8           | 13.7         | 19.3  | 60.6  |  |
| Buildings with water heating    | 23.8           | 14.9                                | 17.3  | 60.3  | 10.8                            | 10.2         | 7.9          | 17.5                               | 18.1           | 13.2         | 19.4  | 60.9  |  |
| Buildings with cooking          | 23.7           | 15.4                                | 19.2  | 73.7  | 12.2                            | 12.6         | 9.2          | 19.8                               | 19.8           | 14.7         | 20.5  | 72.0  |  |
| Buildings with manufacturing    | 43.5           | 82.4                                | 50.2  | 49.9  | 37.0                            | 38.0         | 28.7         | 37.5                               | 56.7           | 77.9         | 50.3  | 30.6  |  |
| Buildings with electricity      |                |                                     |       |       |                                 |              |              |                                    |                |              |       |       |  |
| generation                      | 27.2           | 21.6                                | 24.8  | 47.9  | 10.0                            | 11.2         | 8.7          | 18.7                               | 25.1           | 18.8         | 23.9  | 49.6  |  |
| Buildings with lighting         | 23.1           | 14.8                                | 16.8  | 61.0  | 10.3                            | 10.3         | 7.9          | 17.2                               | 17.7           | 13.2         | 18.9  | 61.2  |  |
| Percent of floorspace heated    |                |                                     |       |       |                                 |              |              |                                    |                |              |       |       |  |
| Not heated                      | 52.8           | 0.0                                 | 54.3  | 78.3  | 71.0                            | 0.0          | 36.0         | 44.7                               | 66.6           | 0.0          | 38.3  | 83.4  |  |
| 1% to 50%                       | 43.0           | 38.9                                | 32.7  | 98.2  | 38.3                            | 29.8         | 18.8         | 39.0                               | 13.0           | 41.5         | 32.9  | 109.6 |  |
| 51% to 99%                      | 35.7           | 41.1                                | 28.4  | 44.7  | 16.9                            | 28.3         | 17.0         | 16.5                               | 27.3           | 30.3         | 20.5  | 43.6  |  |
| 100%                            | 27.1           | 20.2                                | 23.7  | 61.7  | 10.0                            | 12.5         | 8.2          | 23.6                               | 23.3           | 16.3         | 24.2  | 63.6  |  |
| Heating equipment               |                |                                     |       |       |                                 |              |              |                                    |                |              |       |       |  |
| (more than one may apply)       |                |                                     |       |       |                                 |              |              |                                    |                |              |       |       |  |
| Packaged heating units          | 24.0           | 24.6                                | 30.8  | 65.1  | 11.0                            | 13.4         | 12.2         | 22.3                               | 19.6           | 23.2         | 31.0  | 66.4  |  |
| Furnaces                        | 32.5           | 30.3                                | 58.8  | 85.2  | 16.9                            | 27.7         | 28.7         | 26.5                               | 26.2           | 39.2         | 55.3  | 84.9  |  |
| Individual space heaters        | 33.0           | 32.2                                | 40.0  | 65.8  | 15.4                            | 19.3         | 9.4          | 31.7                               | 31.6           | 27.9         | 37.1  | 70.9  |  |
| Boilers                         | 24.3           | 15.6                                | 18.1  | 64.0  | 12.8                            | 11.4         | 9.7          | 23.6                               | 19.7           | 10.2         | 18.1  | 65.4  |  |
| Heat pumps                      | 35.2           | 39.1                                | 64.3  | 94.9  | 19.2                            | 30.2         | 12.3         | 35.2                               | 26.9           | 43.0         | 64.3  | 101.6 |  |
| District heat                   | 46.6           | 33.1                                | 29.4  | 48.6  | 14.0                            | 35.6         | 26.8         | 30.4                               | 48.3           | 18.2         | 27.1  | 40.0  |  |
| Duct reheat                     | 74.5           | 53.0                                | 30.4  | 104.7 | 21.5                            | 17.2         | 16.4         | 25.6                               | 71.8           | 54.1         | 36.7  | 104.9 |  |
| Other                           | 115.2          | 112.1                               | 89.6  | 81.9  | 111.9                           | 86.4         | 89.6         | 81.9                               | 96.1           | 101.8        | 0.0   | 0.0   |  |

Relative standard errors (RSEs) for Table C35. Fuel oil consumption and conditional energy intensity by census region, 2018

| RSEs for total fuel oil consumption |  |  |   |   | =  | lings RSEs for fuel oil energy intensity   |   |   |  |   |  |
|-------------------------------------|--|--|---|---|--|--|---|---|--|---|--|
| North-<br>east                      | Mid-<br>west   | South  | West  | North-<br>east  | Mid-<br>west   | South  | West  | North-<br>east  | Mid-<br>west   | South   | West   |
| 23.1                                | 14.8   | 16.8   | 61.0  | 10.3  | 10.3   | 7.9  | 17.2  | 17.7  | 13.2   | 18.9  | 61.2   |
|                                     |  |  |   |   |  |  |   |   |  |   |  |
| 31.2                                | 20.6   | 16.8   | 63.1  | 12.0  | 11.9   | 11.9   | 20.1  | 27.5  | 16.7   | 20.8  | 64.1   |
| 27.3                                | 17.3   | 15.4   | 61.0  | 10.5  | 10.9   | 12.1   | 19.7  | 24.8  | 16.7   | 22.7  | 62.4   |
| 58.0                                | 33.5   | 16.3   | 89.6  | 17.2  | 19.8   | 18.8   | 48.9  | 55.9  | 25.2   | 28.2  | 111.4  |
| 50.0                                | 39.5   | 34.7   | 83.4  | 14.2  | 26.3   | 17.9   | 26.4  | 43.8  | 42.7   | 30.2  | 81.5   |
| 26.2                                | 14.9   | 15.1   | 61.7  | 11.0  | 9.8  |  | 17.6  | 20.8  |  |   | 62.1   |
|                                     |  |  |   |   |  |  |   |   |  |   |  |
| 32.4                                | 22.0   | 22.3   | 62.5  | 11.0  | 11.8   | 10.6   | 19.7  | 29.1  | 16.4   | 25.8  | 62.4   |
|                                     |  |  |   |   |  |  |   |   |  |   |  |
| 42.5                                | 59.5   | 62.9   | 45.5  | 25.8  | 59.8   | 27.7   | 45.9  | 30.8  | 0.7  | 56.4  | 42.2   |
| 37.0                                | 37.8   | 38.2   | 102.6   | 18.6  | 16.4   | 25.1   | 23.5  | 30.4  | 38.5   | 34.9  | 99.8   |
|                                     |  |  |   |   |  |  |   |   |  |   |  |
| 18.5                                | 18.8   | 16.6   | 67.3  | 12.2  | 14.3   | 10.1   | 23.2  | 12.7  | 17.8   | 20.0  | 70.6   |
| 56.1                                | 45.6   | 51.2   | 42.7  |   |  | 19.7   |   | 52.9  |  | 46.9  | 35.5   |
|                                     |  |  |   |   |  |  |   |   |  |   |  |
| 44.5                                | 44.8   | 35.2   | 33.8  | 16.7  | 16.4   | 14.1   | 20.8  | 38.2  | 43.8   | 36.8  | 31.9   |
|                                     |  |  |   |   |  |  |   |   |  |   |  |
|                                     |  |  |   |   |  |  |   |   |  |   |  |
| 27.6                                | 22.0   | 26.5   | 48.2  | 10.3  | 12.0   | 8.9  | 19.7  | 25.2  | 19.6   | 25.6  | 51.2   |
|                                     |  |  |   |   |  |  |   |   |  |   | 11.5   |
|                                     |  |  |   |   |  |  |   |   |  |   | 9.4  |
|                                     |  |  |   |   |  |  |   |   |  |   |  |
|                                     |  |  |   |   |  |  |   |   |  |   |  |
|                                     |  |  |   |   |  |  |   |   |  |   |  |
|                                     |  |  |   |   |  |  |   |   |  |   |  |
| 31.2                                | 18.1   | 27.2   | 34.3  | 16.3  | 22.9   | 19.8   | 30.5  | 28.8  | 15.4   | 22.1  | 36.0   |
|                                     |  |  |   |   |  |  |   |   |  |   | 87.6   |
|                                     |  |  |   |   |  |  |   |   |  |   | 31.7   |
| 33.3                                |  |  |   |   | _,   |  |   |   |  |   |  |
| 34.3                                | 15.9   | 32.7   | 72.6  | 13.8  | 16.9   | 11.8   | 26.9  | 28.9  | 15.7   | 31.8  | 73.9   |
| 24.5                                | 22.3   | 33.2   |   |   |  |  |   |   |  |   | 55.7   |
|                                     | North-east  23.1  31.2  27.3  58.0  50.0  26.2  32.4  42.5  37.0  18.5  56.1  44.5  27.6  40.8  71.1  31.2  42.7  39.0  34.3 | Consumption           North-east         Midensity           23.1         14.8           31.2         20.6           27.3         17.3           58.0         33.5           50.0         39.5           26.2         14.9           32.4         22.0           42.5         59.5           37.0         37.8           18.5         18.8           56.1         45.6           44.5         44.8           27.6         22.0           40.8         59.5           71.1         57.6           31.2         18.1           42.7         40.5           39.0         18.4           34.3         15.9 | North-east         Midest           23.1         14.8         16.8           27.3         17.3         15.4           58.0         33.5         16.3           50.0         39.5         34.7           26.2         14.9         15.1           32.4         22.0         22.3           42.5         59.5         62.9           37.0         37.8         38.2           18.5         18.8         16.6           56.1         45.6         51.2           44.5         44.8         35.2           27.6         22.0         26.5           40.8         59.5         94.7           71.1         57.6         39.8           31.2         18.1         27.2           42.7         40.5         62.3           39.0         18.4         34.6           34.3         15.9         32.7 | North-east         Midexest         South         West           23.1         14.8         16.8         61.0           31.2         20.6         16.8         63.1           27.3         17.3         15.4         61.0           58.0         33.5         16.3         89.6           50.0         39.5         34.7         83.4           26.2         14.9         15.1         61.7           32.4         22.0         22.3         62.5           42.5         59.5         62.9         45.5           37.0         37.8         38.2         102.6           18.5         18.8         16.6         67.3           56.1         45.6         51.2         42.7           44.5         44.8         35.2         33.8           27.6         22.0         26.5         48.2           40.8         59.5         94.7         54.3           71.1         57.6         39.8         29.4           31.2         18.1         27.2         34.3           42.7         40.5         62.3         77.9           39.0         18.4         34.6         35.9 | North-east         Mid-west         South         West east           23.1         14.8         16.8         61.0         10.3           31.2         20.6         16.8         63.1         12.0           27.3         17.3         15.4         61.0         10.5           58.0         33.5         16.3         89.6         17.2           50.0         39.5         34.7         83.4         14.2           26.2         14.9         15.1         61.7         11.0           32.4         22.0         22.3         62.5         11.0           42.5         59.5         62.9         45.5         25.8           37.0         37.8         38.2         102.6         18.6           18.5         18.8         16.6         67.3         12.2           56.1         45.6         51.2         42.7         20.6           44.5         44.8         35.2         33.8         16.7           27.6         22.0         26.5         48.2         10.3           40.8         59.5         94.7         54.3         32.1           71.1         57.6         39.8         29.4         33.1< | North-east         Mid-west         South         West         North-east         Mid-west           23.1         14.8         16.8         61.0         10.3         10.3           31.2         20.6         16.8         63.1         12.0         11.9           27.3         17.3         15.4         61.0         10.5         10.9           58.0         33.5         16.3         89.6         17.2         19.8           50.0         39.5         34.7         83.4         14.2         26.3           26.2         14.9         15.1         61.7         11.0         9.8           32.4         22.0         22.3         62.5         11.0         11.8           42.5         59.5         62.9         45.5         25.8         59.8           37.0         37.8         38.2         102.6         18.6         16.4           18.5         18.8         16.6         67.3         12.2         14.3           56.1         45.6         51.2         42.7         20.6         26.5           44.5         44.8         35.2         33.8         16.7         16.4           27.6         22.0 | North-east         Mideast         South         West east         North-east west         Mideast west         South           23.1         14.8         16.8         61.0         10.3         10.3         7.9           31.2         20.6         16.8         63.1         12.0         11.9         11.9           27.3         17.3         15.4         61.0         10.5         10.9         12.1           58.0         33.5         16.3         89.6         17.2         19.8         18.8           50.0         39.5         34.7         83.4         14.2         26.3         17.9           26.2         14.9         15.1         61.7         11.0         9.8         8.0           32.4         22.0         22.3         62.5         11.0         11.8         10.6           42.5         59.5         62.9         45.5         25.8         59.8         27.7           37.0         37.8         38.2         102.6         18.6         16.4         25.1           18.5         18.8         16.6         67.3         12.2         14.3         10.1           56.1         45.6         51.2         42.7 <td< td=""><td>North-east         Mid-east         South west         West east         Morth-west west         Mid-west South west         South west South west         Morth-west         Morth-west         Morth-west         Morth</td><td>North-east         Mid-east         South         West east         North-east west west         South west South         North-east west east           23.1         14.8         16.8         61.0         10.3         10.3         7.9         17.2         17.7           31.2         20.6         16.8         63.1         12.0         11.9         11.9         20.1         27.5           27.3         17.3         15.4         61.0         10.5         10.9         12.1         19.7         24.8           58.0         33.5         16.3         89.6         17.2         19.8         18.8         48.9         55.9           50.0         39.5         34.7         83.4         14.2         26.3         17.9         26.4         43.8           26.2         14.9         15.1         61.7         11.0         9.8         8.0         17.6         20.8           32.4         22.0         22.3         62.5         11.0         11.8         10.6         19.7         29.1           42.5         59.5         62.9         45.5         25.8         59.8         27.7         45.9         30.8           37.0         37.8         38.2</td><td>Northeast         Mideast         South west         Vortheast         Mideast         South west         South west west west west west west west west</td><td>North-east         Mid-east west         South South         West east         North-east west         Mid-east west west         South west east         North-east west west west south         North-east west west west west west west west south           33.2         20.6         16.8         63.1         12.0         11.9         11.9         20.1         27.5         16.7         20.8           27.3         17.3         15.4         61.0         10.5         10.9         12.1         19.7         24.8         16.7         22.7           58.0         33.5         16.3         89.6         17.2         19.8         18.8         48.9         55.9         25.2         28.2           50.0         39.5         34.7         83.4         14.2         26.3         17.9         26.4         43.8         42.7         30.2           26.2         14.9         15.1         61.7         11.0         9.8         8.0         17.6         20.8         14.1         18.3           32.4         22.0         22.3         62.5         11.0         11.8         10.6         19.7         29.1         16.4         25.8           42.5         59.5         62.9         45.5         25.8</td></td<> | North-east         Mid-east         South west         West east         Morth-west west         Mid-west South west         South west South west         Morth-west         Morth-west         Morth-west         Morth | North-east         Mid-east         South         West east         North-east west west         South west South         North-east west east           23.1         14.8         16.8         61.0         10.3         10.3         7.9         17.2         17.7           31.2         20.6         16.8         63.1         12.0         11.9         11.9         20.1         27.5           27.3         17.3         15.4         61.0         10.5         10.9         12.1         19.7         24.8           58.0         33.5         16.3         89.6         17.2         19.8         18.8         48.9         55.9           50.0         39.5         34.7         83.4         14.2         26.3         17.9         26.4         43.8           26.2         14.9         15.1         61.7         11.0         9.8         8.0         17.6         20.8           32.4         22.0         22.3         62.5         11.0         11.8         10.6         19.7         29.1           42.5         59.5         62.9         45.5         25.8         59.8         27.7         45.9         30.8           37.0         37.8         38.2 | Northeast         Mideast         South west         Vortheast         Mideast         South west         South west west west west west west west west | North-east         Mid-east west         South South         West east         North-east west         Mid-east west west         South west east         North-east west west west south         North-east west west west west west west west south           33.2         20.6         16.8         63.1         12.0         11.9         11.9         20.1         27.5         16.7         20.8           27.3         17.3         15.4         61.0         10.5         10.9         12.1         19.7         24.8         16.7         22.7           58.0         33.5         16.3         89.6         17.2         19.8         18.8         48.9         55.9         25.2         28.2           50.0         39.5         34.7         83.4         14.2         26.3         17.9         26.4         43.8         42.7         30.2           26.2         14.9         15.1         61.7         11.0         9.8         8.0         17.6         20.8         14.1         18.3           32.4         22.0         22.3         62.5         11.0         11.8         10.6         19.7         29.1         16.4         25.8           42.5         59.5         62.9         45.5         25.8 |

## Relative standard errors (RSEs) for Table C35. Fuel oil consumption and conditional energy intensity by census region, 2018

|                              |                | RSEs for total fuel oil consumption |       |      | RSEs for tota<br>Ising fuel oi | ngs<br>RSEs for fuel oil energy intensity |       |      |                |              |       |       |
|------------------------------|----------------|-------------------------------------|-------|------|--------------------------------|---|-------|------|----------------|--------------|-------|-------|
|                              | North-<br>east | Mid-<br>west                        | South | West | North-<br>east                 | Mid-<br>west                              | South | West | North-<br>east | Mid-<br>west | South | West  |
| All buildings                | 23.1           | 14.8                                | 16.8  | 61.0 | 10.3                           | 10.3                                      | 7.9   | 17.2 | 17.7           | 13.2         | 18.9  | 61.2  |
| Annual consumption (gallons) |                |                                     |       |      |                                |   |       |      |                |              |       |       |
| 1,000 or less                | 16.3           | 39.0                                | 20.4  | 42.2 | 11.1                           | 13.0                                      | 8.9   | 14.6 | 14.4           | 33.2         | 16.0  | 42.3  |
| 1,001 to 5,000               | 27.6           | 43.1                                | 44.3  | 65.6 | 15.0                           | 19.6                                      | 16.9  | 40.6 | 18.4           | 34.2         | 41.1  | 78.3  |
| 5,001 to 10,000              | 38.5           | 41.5                                | 41.6  | 91.7 | 30.6                           | 59.4                                      | 23.6  | 64.7 | 34.6           | 92.3         | 33.6  | 172.1 |
| 10,001 to 25,000             | 35.6           | 41.1                                | 55.1  | 77.4 | 35.4                           | 33.4                                      | 41.8  | 64.5 | 18.7           | 16.9         | 56.6  | 72.5  |
| Over 25,000                  | 42.5           | 27.3                                | 29.6  | 55.8 | 27.7                           | 23.8                                      | 40.3  | 55.6 | 25.4           | 13.4         | 69.5  | 47.5  |

Data source: U.S. Energy Information Administration, Forms EIA-871A and F of the 2018 Commercial Buildings Energy Consumption Survey

Note: RSE is a measure of the reliability or precision of a survey statistic. Variability occurs in survey statistics because the different samples that could be drawn would each produce different values for the survey statistics. Estimation of Standard Errors and What is a Relative Standard Error (RSE)? contain more information on how RSEs are estimated and used. Both references can be accessed from https://www.eia.gov/consumption/commercial/survey-background-technical-information.php.

<sup>&</sup>lt;sup>a</sup>Climate zones are based on ASHRAE Standard 169-2021; see https://www.eia.gov/consumption/commercial/maps.php#defined.

<sup>&</sup>lt;sup>b</sup>Other sources includes wood, coal, solar, and all other energy sources.