Data release date: June 2023

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Table CE5.1a Detailed household site electricity end-use consumption, part 1—totals, 2020

Total site electricity consumption<sup>a</sup> (trillion Btu)

|  | Space<br>heating <sup>b</sup> | Air<br>handlers<br>for heating | Air<br>condit-<br>ioning <sup>c</sup> | Air<br>handlers<br>for cooling | Ceiling<br>fans | Dehum-<br>idifiers | Humid-<br>ifiers | Water<br>heating | Clothes<br>washers | Clothes<br>dryers | Lighting | Electric<br>vehicle<br>charging |
|--|-------------------------------|--------------------------------|---------------------------------------|--------------------------------|-----------------|--------------------|------------------|------------------|--------------------|-------------------|----------|---------------------------------|
| All homes                                      | 549.6                         | 80.2                           | 866.1                                 | 129.6                          | 69.0            | 69.9               | 13.8             | 532.9            | 24.2               | 190.6             | 275.7    | 10.9                            |
| Census region and division                     |                               |                                |                                       |                                |                 |                    |                  |                  |                    |                   |          |                                 |
| Northeast                                      | 67.2                          | 15.7                           | 92.8                                  | 9.6                            | 5.1             | 20.5               | 2.7              | 60.0             | 3.5                | 24.3              | 43.0     | 1.3                             |
| New England                                    | 13.8                          | 4.8                            | 19.3                                  | 1.6                            | 1.1             | 4.9                | 0.7              | 14.0             | 1.0                | 8.2               | 10.3     | 0.5                             |
| Middle Atlantic                                | 53.4                          | 10.9                           | 73.5                                  | 8.0                            | 4.0             | 15.6               | 2.0              | 46.0             | 2.5                | 16.1              | 32.7     | 0.8                             |
| Midwest  | 125.1                         | 36.2                           | 131.0                                 | 20.5                           | 10.9            | 26.2               | 5.4              | 91.0             | 5.5                | 39.6              | 58.8     | 1.6                             |
| East North Central                             | 77.0                          | 25.5                           | 83.6                                  | 12.9                           | 7.1             | 19.6               | 3.8              | 58.0             | 3.6                | 24.1              | 38.8     | 0.8                             |
| West North Central                             | 48.1                          | 10.6                           | 47.5                                  | 7.6                            | 3.8             | 6.6                | 1.6              | 33.0             | 1.8                | 15.5              | 20.0     | Q                               |
| South  | 278.6                         | 16.6                           | 497.3                                 | 78.7                           | 43.1            | 19.7               | 3.6              | 301.4            | 10.3               | 91.8              | 116.8    | 3.3                             |
| South Atlantic                                 | 138.6                         | 8.1                            | 248.0                                 | 40.0                           | 20.8            | 13.8               | 2.3              | 172.1            | 5.2                | 46.6              | 57.2     | 1.7                             |
| East South Central                             | 61.8                          | 3.3                            | 66.4                                  | 10.6                           | 6.4             | 2.9                | 0.5              | 52.9             | 1.8                | 16.5              | 18.8     | Q                               |
| West South Central                             | 78.2                          | 5.1                            | 182.9                                 | 28.1                           | 16.0            | 2.9                | 0.8              | 76.4             | 3.3                | 28.7              | 40.8     | Q                               |
| West   | 78.6                          | 11.7                           | 144.9                                 | 20.8                           | 10.0            | 3.6                | 2.1              | 80.4             | 5.0                | 34.9              | 57.2     | 4.6                             |
| Mountain                                       | 26.2                          | 6.2                            | 79.7                                  | 11.9                           | 4.8             | 1.0                | 1.3              | 28.1             | 1.9                | 16.2              | 20.7     | 1.4                             |
| Mountain North                                 | 15.3                          | 4.8                            | 18.0                                  | 2.8                            | 1.6             | 0.5                | 0.9              | 12.4             | 1.0                | 8.9               | 10.7     | 0.6                             |
| Mountain South                                 | 10.9                          | 1.4                            | 61.7                                  | 9.1                            | 3.2             | 0.5                | 0.4              | 15.7             | 0.9                | 7.3               | 9.9      | 0.8                             |
| Pacific  | 52.5                          | 5.5                            | 65.3                                  | 8.9                            | 5.2             | 2.6                | 0.8              | 52.4             | 3.1                | 18.7              | 36.6     | 3.2                             |
| Census urban/rural classification <sup>d</sup> |                               |                                |                                       |                                |                 |                    |                  |                  |                    |                   |          |                                 |
| Urban  | 354.6                         | 60.4                           | 702.7                                 | 105.6                          | 52.5            | 50.0               | 11.0             | 367.3            | 18.5               | 140.5             | 219.6    | 8.6                             |
| Urbanized area                                 | 287.1                         | 51.7                           | 635.1                                 | 96.2                           | 46.3            | 43.8               | 10.0             | 315.5            | 16.2               | 121.0             | 196.9    | 8.2                             |
| Urban cluster                                  | 67.5                          | 8.7                            | 67.6                                  | 9.4                            | 6.2             | 6.2                | 1.0              | 51.8             | 2.3                | 19.5              | 22.7     | 0.5                             |
| Rural  | 195.0                         | 19.8                           | 163.4                                 | 24.0                           | 16.5            | 19.9               | 2.8              | 165.6            | 5.7                | 50.1              | 56.1     | 2.3                             |
| Climate region <sup>e</sup>                    |                               |                                |                                       |                                |                 |                    |                  |                  |                    |                   |          |                                 |
| Very cold and Cold                             | 174.7                         | 50.3                           | 168.0                                 | 23.1                           | 14.3            | 38.8               | 7.3              | 134.6            | 8.2                | 61.3              | 88.2     | 3.1                             |
| Mixed-humid                                    | 219.8                         | 20.0                           | 269.5                                 | 41.6                           | 22.7            | 21.3               | 4.2              | 197.3            | 7.4                | 63.7              | 88.6     | 2.8                             |
| Mixed-dry and Hot-dry                          | 20.7                          | 3.6                            | 119.0                                 | 17.2                           | 7.2             | 1.4                | 0.9              | 28.8             | 2.7                | 15.1              | 29.3     | 2.4                             |
| Hot-humid                                      | 99.1                          | 3.8                            | 298.8                                 | 46.2                           | 23.7            | 7.0                | 1.1              | 139.7            | 4.7                | 41.5              | 54.3     | 1.2                             |
| Marine   | 35.2                          | 2.5                            | 10.8                                  | 1.5                            | 1.2             | 1.4                | 0.3              | 32.5             | 1.2                | 9.0               | 15.3     | 1.4                             |
|  |                               |                                |                                       |                                |                 |                    |                  |                  |                    |                   |          |                                 |

Table CE5.1a Detailed household site electricity end-use consumption, part 1—totals, 2020

Total site electricity consumption<sup>a</sup> (trillion Btu)

|  | Space<br>heating <sup>b</sup> | Air<br>handlers<br>for heating | Air<br>condit-<br>ioning <sup>c</sup> | Air<br>handlers<br>for cooling | Ceiling<br>fans | Dehum-<br>idifiers | Humid-<br>ifiers | Water<br>heating | Clothes<br>washers | Clothes<br>dryers | Lighting | Electric<br>vehicle<br>charging |
|--|-------------------------------|--------------------------------|---------------------------------------|--------------------------------|-----------------|--------------------|------------------|------------------|--------------------|-------------------|----------|---------------------------------|
| All homes                              | 549.6                         | 80.2                           | 866.1                                 | 129.6                          | 69.0            | 69.9               | 13.8             | 532.9            | 24.2               | 190.6             | 275.7    | 10.9                            |
| Housing unit type                      |                               |                                |                                       |                                |                 |                    |                  |                  |                    |                   |          |                                 |
| Single-family detached                 | 376.6                         | 70.9                           | 660.3                                 | 108.5                          | 54.0            | 60.7               | 10.7             | 326.5            | 18.3               | 143.7             | 200.1    | 10.4                            |
| Single-family attached                 | 27.2                          | 3.7                            | 40.3                                  | 5.6                            | 3.0             | 3.2                | 0.7              | 24.5             | 1.4                | 9.7               | 14.9     | 0.4                             |
| Apartments in buildings with 2–4 units | 30.2                          | 1.6                            | 37.3                                  | 3.5                            | 2.3             | 1.9                | 0.6              | 33.7             | 0.9                | 6.4               | 13.9     | N                               |
| Apartments in buildings with 5 or      |                               |                                |                                       |                                |                 |                    |                  |                  |                    |                   |          |                                 |
| more units                             | 60.8                          | 1.9                            | 78.4                                  | 8.1                            | 6.0             | 2.6                | 1.4              | 88.8             | 2.1                | 17.2              | 34.2     | N                               |
| Mobile homes                           | 54.7                          | 2.1                            | 49.7                                  | 4.0                            | 3.8             | 1.5                | 0.4              | 59.3             | 1.6                | 13.7              | 12.7     | Q                               |
| Ownership of housing unit              |                               |                                |                                       |                                |                 |                    |                  |                  |                    |                   |          |                                 |
| Owned                                  | 401.2                         | 70.9                           | 674.7                                 | 108.3                          | 55.2            | 62.3               | 11.3             | 350.3            | 19.0               | 148.5             | 206.7    | 10.5                            |
| Single-family                          | 347.0                         | 68.3                           | 616.5                                 | 103.1                          | 50.9            | 59.9               | 10.6             | 293.3            | 17.2               | 133.9             | 190.0    | 10.4                            |
| Apartments                             | 10.9                          | 0.8                            | 19.1                                  | 2.0                            | 1.3             | 1.2                | 0.3              | 12.0             | 0.5                | 3.5               | 6.8      | N                               |
| Mobile homes                           | 43.3                          | 1.8                            | 39.0                                  | 3.2                            | 3.0             | 1.3                | 0.3              | 45.1             | 1.3                | 11.0              | 9.8      | Q                               |
| Rented <sup>f</sup>                    | 148.4                         | 9.3                            | 191.4                                 | 21.3                           | 13.8            | 7.6                | 2.6              | 182.5            | 5.3                | 42.1              | 69.0     | Q                               |
| Single-family                          | 56.9                          | 6.3                            | 84.0                                  | 11.0                           | 6.1             | 4.0                | 0.8              | 57.7             | 2.5                | 19.4              | 24.9     | Q                               |
| Apartments                             | 80.1                          | 2.7                            | 96.6                                  | 9.6                            | 7.0             | 3.3                | 1.7              | 110.6            | 2.5                | 20.0              | 41.2     | N                               |
| Mobile homes                           | 11.4                          | 0.3                            | 10.7                                  | 0.7                            | 0.7             | Q                  | 0.1              | 14.2             | 0.3                | 2.7               | 2.9      | Q                               |
| Year of construction                   |                               |                                |                                       |                                |                 |                    |                  |                  |                    |                   |          |                                 |
| Before 1950                            | 77.8                          | 18.3                           | 113.4                                 | 13.4                           | 7.5             | 16.8               | 2.4              | 60.8             | 3.5                | 24.4              | 41.3     | 1.1                             |
| 1950 to 1959                           | 42.0                          | 11.7                           | 84.8                                  | 11.4                           | 5.2             | 8.4                | 1.5              | 39.7             | 2.3                | 16.2              | 23.8     | 0.6                             |
| 1960 to 1969                           | 46.4                          | 9.0                            | 84.5                                  | 11.9                           | 5.7             | 6.5                | 1.2              | 42.9             | 2.2                | 16.0              | 26.6     | 0.7                             |
| 1970 to 1979                           | 106.7                         | 12.5                           | 129.8                                 | 18.1                           | 8.5             | 9.5                | 1.8              | 84.7             | 3.4                | 26.4              | 37.6     | 1.0                             |
| 1980 to 1989                           | 89.4                          | 8.2                            | 119.8                                 | 18.2                           | 9.4             | 7.0                | 1.5              | 80.9             | 3.1                | 25.4              | 34.8     | 0.9                             |
| 1990 to 1999                           | 76.5                          | 9.2                            | 132.8                                 | 21.4                           | 12.1            | 10.3               | 2.3              | 87.6             | 3.9                | 31.4              | 42.8     | 2.1                             |
| 2000 to 2009                           | 69.2                          | 7.7                            | 132.9                                 | 22.8                           | 13.3            | 7.5                | 2.1              | 80.0             | 3.6                | 31.1              | 43.7     | 2.3                             |
| 2010 to 2015                           | 24.3                          | 2.2                            | 38.7                                  | 7.3                            | 4.2             | 2.1                | 0.5              | 31.7             | 1.3                | 11.2              | 14.7     | 0.6                             |
| 2016 to 2020                           | 17.1                          | 1.5                            | 29.5                                  | 5.0                            | 3.3             | 1.9                | 0.5              | 24.6             | 1.0                | 8.5               | 10.4     | 1.6                             |
| Total square footage <sup>g</sup>      |                               |                                |                                       |                                |                 |                    |                  |                  |                    |                   |          |                                 |
| Less than 1,000                        | 93.7                          | 4.3                            | 115.2                                 | 10.2                           | 8.5             | 4.2                | 1.7              | 119.8            | 3.3                | 25.4              | 45.6     | Q                               |

Table CE5.1a Detailed household site electricity end-use consumption, part 1—totals, 2020

Total site electricity consumption<sup>a</sup> (trillion Btu)

|                                   | Space<br>heating <sup>b</sup> | Air<br>handlers<br>for heating | Air<br>condit-<br>ioning <sup>c</sup> | Air<br>handlers<br>for cooling | Ceiling<br>fans | Dehum-<br>idifiers | Humid-<br>ifiers | Water<br>heating | Clothes<br>washers | Clothes<br>dryers | Lighting | Electric<br>vehicle<br>charging |
|-----------------------------------|-------------------------------|--------------------------------|---------------------------------------|--------------------------------|-----------------|--------------------|------------------|------------------|--------------------|-------------------|----------|---------------------------------|
| All homes                         | 549.6                         | 80.2                           | 866.1                                 | 129.6                          | 69.0            | 69.9               | 13.8             | 532.9            | 24.2               | 190.6             | 275.7    | 10.9                            |
| 1,000 to 1,499                    | 120.3                         | 10.2                           | 170.8                                 | 20.4                           | 14.7            | 9.0                | 2.4              | 136.4            | 5.3                | 40.7              | 52.4     | 1.3                             |
| 1,500 to 1,999                    | 102.7                         | 14.7                           | 169.7                                 | 23.5                           | 14.6            | 12.0               | 2.1              | 96.4             | 5.0                | 38.5              | 48.6     | 1.5                             |
| 2,000 to 2,499                    | 77.1                          | 13.7                           | 131.9                                 | 21.2                           | 10.5            | 12.4               | 2.0              | 68.2             | 3.8                | 30.2              | 39.6     | 1.9                             |
| 2,500 to 2,999                    | 51.4                          | 11.8                           | 93.9                                  | 16.4                           | 7.6             | 11.0               | 1.6              | 40.5             | 2.6                | 20.2              | 28.1     | 1.3                             |
| 3,000 or more                     | 104.5                         | 25.4                           | 184.5                                 | 37.8                           | 13.0            | 21.4               | 4.0              | 71.5             | 4.4                | 35.5              | 61.4     | 4.7                             |
| Number of household members       |                               |                                |                                       |                                |                 |                    |                  |                  |                    |                   |          |                                 |
| 1 member                          | 129.1                         | 16.3                           | 161.9                                 | 21.4                           | 12.3            | 11.8               | 2.6              | 83.4             | 3.8                | 26.9              | 49.8     | 0.7                             |
| 2 members                         | 209.2                         | 32.7                           | 319.9                                 | 49.1                           | 25.9            | 29.3               | 5.5              | 178.4            | 8.7                | 67.0              | 101.2    | 4.5                             |
| 3 members                         | 86.9                          | 12.7                           | 144.9                                 | 22.1                           | 12.0            | 11.3               | 2.4              | 96.3             | 4.2                | 34.2              | 46.2     | 2.0                             |
| 4 members                         | 69.9                          | 10.6                           | 135.2                                 | 20.9                           | 10.8            | 9.8                | 2.1              | 99.1             | 4.2                | 34.2              | 44.1     | 2.4                             |
| 5 members                         | 32.2                          | 4.8                            | 62.6                                  | 9.9                            | 5.2             | 4.7                | 0.7              | 43.6             | 1.9                | 16.3              | 19.8     | 1.0                             |
| 6 or more members                 | 22.3                          | 3.2                            | 41.6                                  | 6.2                            | 2.9             | 3.0                | 0.6              | 32.0             | 1.5                | 12.0              | 14.5     | Q                               |
| 2020 annual household income      |                               |                                |                                       |                                |                 |                    |                  |                  |                    |                   |          |                                 |
| Less than \$5,000                 | 22.0                          | 1.4                            | 22.4                                  | 2.2                            | 1.5             | 1.3                | 0.3              | 24.1             | 0.6                | 4.3               | 8.2      | Q                               |
| \$5,000 to \$9,999                | 15.7                          | 1.1                            | 19.1                                  | 1.7                            | 1.3             | 1.1                | 0.2              | 20.2             | 0.5                | 3.9               | 6.7      | Q                               |
| \$10,000 to \$19,999              | 49.4                          | 4.2                            | 53.0                                  | 5.5                            | 3.4             | 2.8                | 0.6              | 41.3             | 1.3                | 10.0              | 16.7     | Q                               |
| \$20,000 to \$39,999              | 109.5                         | 13.1                           | 146.7                                 | 18.3                           | 11.3            | 9.5                | 2.0              | 111.8            | 4.2                | 31.9              | 42.5     | Q                               |
| \$40,000 to \$59,999              | 85.2                          | 12.1                           | 130.6                                 | 18.4                           | 10.5            | 7.9                | 1.7              | 89.9             | 3.8                | 30.3              | 38.3     | Q                               |
| \$60,000 to \$99,999              | 123.0                         | 19.5                           | 196.3                                 | 30.2                           | 17.2            | 18.8               | 3.3              | 119.8            | 5.9                | 47.0              | 62.4     | 1.9                             |
| \$100,000 to \$149,999            | 75.2                          | 13.2                           | 133.7                                 | 22.1                           | 11.2            | 12.5               | 2.5              | 65.4             | 3.9                | 30.7              | 41.9     | 2.1                             |
| \$150,000 or more                 | 69.5                          | 15.5                           | 164.3                                 | 31.1                           | 12.5            | 15.9               | 3.3              | 60.3             | 4.1                | 32.6              | 58.9     | 5.4                             |
| Payment method for energy bills   |                               |                                |                                       |                                |                 |                    |                  |                  |                    |                   |          |                                 |
| All paid by household             | 520.6                         | 78.2                           | 829.6                                 | 126.8                          | 67.0            | 68.4               | 13.0             | 504.0            | 23.4               | 184.1             | 258.6    | 10.8                            |
| Some paid by household, some      |                               |                                |                                       |                                |                 |                    |                  |                  |                    |                   |          |                                 |
| included in rent or condo fee     | 14.2                          | 1.2                            | 20.6                                  | 1.5                            | 1.1             | 1.1                | 0.5              | 12.7             | 0.5                | 3.4               | 9.9      | Q                               |
| All included in rent or condo fee | 14.5                          | 0.8                            | 15.4                                  | 1.2                            | 0.8             | 0.3                | 0.3              | 15.8             | 0.4                | 3.0               | 7.0      | Q                               |
| Some other method                 | 0.3                           | 0.1                            | 0.5                                   | 0.1                            | 0.1             | Q                  | Q                | Q                | *                  | 0.1               | 0.3      | N                               |

Table CE5.1a Detailed household site electricity end-use consumption, part 1—totals, 2020

# Total site electricity consumption<sup>a</sup> (trillion Btu)

|           | Space<br>heating <sup>b</sup> | Air<br>handlers<br>for heating | Air<br>condit-<br>ioning <sup>c</sup> | Air<br>handlers<br>for cooling | Ceiling<br>fans | Dehum-<br>idifiers | Humid-<br>ifiers | Water<br>heating | Clothes<br>washers | Clothes<br>dryers | Lighting | Electric<br>vehicle<br>charging |
|-----------|-------------------------------|--------------------------------|---------------------------------------|--------------------------------|-----------------|--------------------|------------------|------------------|--------------------|-------------------|----------|---------------------------------|
| All homes | 549.6                         | 80.2                           | 866.1                                 | 129.6                          | 69.0            | 69.9               | 13.8             | 532.9            | 24.2               | 190.6             | 275.7    | 10.9                            |

Data source: U.S. Energy Information Administration, Office of Energy Consumption and Efficiency Statistics, Forms EIA-457A, D, E, F, G of the 2020 Residential Energy Consumption Survey Notes: Because of rounding, data may not sum to totals. See RECS Terminology for definition of terms used in these tables.

Btu = British thermal units

Q = Data withheld because either the relative standard error (RSE) was greater than 50% or fewer than 10 households in reporting sample.

<sup>&</sup>lt;sup>a</sup> Electricity consumption from on-site solar photovoltaic generation (that is, solar panels) is included. Small amounts of standby power for devices that some households have but do not use (for example, dishwashers) are not included.

<sup>&</sup>lt;sup>b</sup> Includes main (primary) and secondary space heating.

<sup>&</sup>lt;sup>c</sup> Includes electricity used by evaporative coolers.

d Housing units are classified using criteria created by the U.S. Census Bureau based on 2010 Census data. Urbanized areas are densely settled groupings of blocks or tracts with 50,000 or more people. Urban clusters have at least 2,500 but less than 50,000 people. All other areas are rural.

<sup>&</sup>lt;sup>e</sup> The Building America program, sponsored by the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE), created these climate regions. We combined climate regions for this publication. The Subarctic region is included with data for *Very-cold and Cold*.

<sup>&</sup>lt;sup>f</sup> Rented includes households that occupy their primary housing units without paying rent.

<sup>&</sup>lt;sup>8</sup> Total square footage includes all basements, finished or conditioned (heated or cooled) areas of attics, and conditioned garage space that is attached to the home. Unconditioned and unfinished areas in attics and attached garages are excluded. The square footage of the home is based on respondent reports. Previous RECS cycles calculated square footage based on interviewer measurements. For households that did not report an exact square footage estimate, the square footage of the home was imputed based on a reported square footage range and/or characteristics of the home. See 2020 RECS Square Footage Methodology for full details about data collection and processing.

N = No households in reporting sample.

<sup>\* =</sup> Estimate is less than 0.05 and rounds to zero.

Data release date: June 2023

Revised data release date: March 2024

Table CE5.1a Detailed household site electricity end-use consumption, part 1—totals, 2020

Total site electricity consumption<sup>a</sup> (billion kWh)

|  | Space<br>heating <sup>b</sup> | Air<br>handlers<br>for heating | Air<br>condit-<br>ioning <sup>c</sup> | Air<br>handlers<br>for cooling | Ceiling<br>fans | Dehum-<br>idifiers | Humid-<br>ifiers | Water<br>heating | Clothes<br>washers | Clothes<br>dryers | Lighting | Electric<br>vehicle<br>charging |
|--|-------------------------------|--------------------------------|---------------------------------------|--------------------------------|-----------------|--------------------|------------------|------------------|--------------------|-------------------|----------|---------------------------------|
| All homes                                      | 161.1                         | 23.5                           | 253.8                                 | 38.0                           | 20.2            | 20.5               | 4.0              | 156.2            | 7.1                | 55.9              | 80.8     | 3.2                             |
| Census region and division                     |                               |                                |                                       |                                |                 |                    |                  |                  |                    |                   |          |                                 |
| Northeast                                      | 19.7                          | 4.6                            | 27.2                                  | 2.8                            | 1.5             | 6.0                | 0.8              | 17.6             | 1.0                | 7.1               | 12.6     | 0.4                             |
| New England                                    | 4.0                           | 1.4                            | 5.6                                   | 0.5                            | 0.3             | 1.4                | 0.2              | 4.1              | 0.3                | 2.4               | 3.0      | 0.1                             |
| Middle Atlantic                                | 15.7                          | 3.2                            | 21.5                                  | 2.3                            | 1.2             | 4.6                | 0.6              | 13.5             | 0.7                | 4.7               | 9.6      | 0.2                             |
| Midwest  | 36.7                          | 10.6                           | 38.4                                  | 6.0                            | 3.2             | 7.7                | 1.6              | 26.7             | 1.6                | 11.6              | 17.2     | 0.5                             |
| East North Central                             | 22.6                          | 7.5                            | 24.5                                  | 3.8                            | 2.1             | 5.7                | 1.1              | 17.0             | 1.1                | 7.1               | 11.4     | 0.2                             |
| West North Central                             | 14.1                          | 3.1                            | 13.9                                  | 2.2                            | 1.1             | 1.9                | 0.5              | 9.7              | 0.5                | 4.5               | 5.9      | Q                               |
| South  | 81.7                          | 4.9                            | 145.7                                 | 23.1                           | 12.6            | 5.8                | 1.1              | 88.3             | 3.0                | 26.9              | 34.2     | 1.0                             |
| South Atlantic                                 | 40.6                          | 2.4                            | 72.7                                  | 11.7                           | 6.1             | 4.0                | 0.7              | 50.4             | 1.5                | 13.7              | 16.8     | 0.5                             |
| East South Central                             | 18.1                          | 1.0                            | 19.5                                  | 3.1                            | 1.9             | 0.9                | 0.2              | 15.5             | 0.5                | 4.8               | 5.5      | Q                               |
| West South Central                             | 22.9                          | 1.5                            | 53.6                                  | 8.2                            | 4.7             | 0.9                | 0.2              | 22.4             | 1.0                | 8.4               | 11.9     | Q                               |
| West   | 23.1                          | 3.4                            | 42.5                                  | 6.1                            | 2.9             | 1.1                | 0.6              | 23.6             | 1.5                | 10.2              | 16.8     | 1.4                             |
| Mountain                                       | 7.7                           | 1.8                            | 23.3                                  | 3.5                            | 1.4             | 0.3                | 0.4              | 8.2              | 0.6                | 4.7               | 6.1      | 0.4                             |
| Mountain North                                 | 4.5                           | 1.4                            | 5.3                                   | 0.8                            | 0.5             | 0.1                | 0.3              | 3.6              | 0.3                | 2.6               | 3.1      | 0.2                             |
| Mountain South                                 | 3.2                           | 0.4                            | 18.1                                  | 2.7                            | 0.9             | 0.1                | 0.1              | 4.6              | 0.3                | 2.1               | 2.9      | 0.2                             |
| Pacific  | 15.4                          | 1.6                            | 19.1                                  | 2.6                            | 1.5             | 0.8                | 0.2              | 15.3             | 0.9                | 5.5               | 10.7     | 0.9                             |
| Census urban/rural classification <sup>d</sup> |                               |                                |                                       |                                |                 |                    |                  |                  |                    |                   |          |                                 |
| Urban  | 103.9                         | 17.7                           | 206.0                                 | 30.9                           | 15.4            | 14.7               | 3.2              | 107.6            | 5.4                | 41.2              | 64.4     | 2.5                             |
| Urbanized area                                 | 84.2                          | 15.2                           | 186.1                                 | 28.2                           | 13.6            | 12.8               | 2.9              | 92.5             | 4.7                | 35.5              | 57.7     | 2.4                             |
| Urban cluster                                  | 19.8                          | 2.6                            | 19.8                                  | 2.8                            | 1.8             | 1.8                | 0.3              | 15.2             | 0.7                | 5.7               | 6.7      | 0.1                             |
| Rural  | 57.1                          | 5.8                            | 47.9                                  | 7.0                            | 4.8             | 5.8                | 0.8              | 48.5             | 1.7                | 14.7              | 16.4     | 0.7                             |
| Climate region <sup>e</sup>                    |                               |                                |                                       |                                |                 |                    |                  |                  |                    |                   |          |                                 |
| Very cold and Cold                             | 51.2                          | 14.7                           | 49.2                                  | 6.8                            | 4.2             | 11.4               | 2.2              | 39.5             | 2.4                | 18.0              | 25.8     | 0.9                             |
| Mixed-humid                                    | 64.4                          | 5.9                            | 79.0                                  | 12.2                           | 6.6             | 6.2                | 1.2              | 57.8             | 2.2                | 18.7              | 26.0     | 0.8                             |
| Mixed-dry and Hot-dry                          | 6.1                           | 1.1                            | 34.9                                  | 5.0                            | 2.1             | 0.4                | 0.3              | 8.4              | 0.8                | 4.4               | 8.6      | 0.7                             |
| Hot-humid                                      | 29.0                          | 1.1                            | 87.6                                  | 13.5                           | 6.9             | 2.1                | 0.3              | 40.9             | 1.4                | 12.2              | 15.9     | 0.3                             |
| Marine   | 10.3                          | 0.7                            | 3.2                                   | 0.4                            | 0.3             | 0.4                | 0.1              | 9.5              | 0.3                | 2.6               | 4.5      | 0.4                             |

Table CE5.1a Detailed household site electricity end-use consumption, part 1—totals, 2020

Total site electricity consumption<sup>a</sup> (billion kWh)

|  | Space<br>heating <sup>b</sup> | Air<br>handlers<br>for heating | Air<br>condit-<br>ioning <sup>c</sup> | Air<br>handlers<br>for cooling | Ceiling<br>fans | Dehum-<br>idifiers | Humid-<br>ifiers | Water<br>heating | Clothes<br>washers | Clothes<br>dryers | Lighting | Electric<br>vehicle<br>charging |
|--|-------------------------------|--------------------------------|---------------------------------------|--------------------------------|-----------------|--------------------|------------------|------------------|--------------------|-------------------|----------|---------------------------------|
| All homes                              | 161.1                         | 23.5                           | 253.8                                 | 38.0                           | 20.2            | 20.5               | 4.0              | 156.2            | 7.1                | 55.9              | 80.8     | 3.2                             |
| Housing unit type                      |                               |                                |                                       |                                |                 |                    |                  |                  |                    |                   |          |                                 |
| Single-family detached                 | 110.4                         | 20.8                           | 193.5                                 | 31.8                           | 15.8            | 17.8               | 3.1              | 95.7             | 5.4                | 42.1              | 58.6     | 3.1                             |
| Single-family attached                 | 8.0                           | 1.1                            | 11.8                                  | 1.6                            | 0.9             | 0.9                | 0.2              | 7.2              | 0.4                | 2.8               | 4.4      | 0.1                             |
| Apartments in buildings with 2–4 units | 8.8                           | 0.5                            | 10.9                                  | 1.0                            | 0.7             | 0.6                | 0.2              | 9.9              | 0.3                | 1.9               | 4.1      | N                               |
| Apartments in buildings with 5 or      |                               |                                |                                       |                                |                 |                    |                  |                  |                    |                   |          |                                 |
| more units                             | 17.8                          | 0.6                            | 23.0                                  | 2.4                            | 1.8             | 0.8                | 0.4              | 26.0             | 0.6                | 5.0               | 10.0     | N                               |
| Mobile homes                           | 16.0                          | 0.6                            | 14.6                                  | 1.2                            | 1.1             | 0.4                | 0.1              | 17.4             | 0.5                | 4.0               | 3.7      | Q                               |
| Ownership of housing unit              |                               |                                |                                       |                                |                 |                    |                  |                  |                    |                   |          |                                 |
| Owned                                  | 117.6                         | 20.8                           | 197.7                                 | 31.7                           | 16.2            | 18.3               | 3.3              | 102.7            | 5.6                | 43.5              | 60.6     | 3.1                             |
| Single-family                          | 101.7                         | 20.0                           | 180.7                                 | 30.2                           | 14.9            | 17.5               | 3.1              | 86.0             | 5.0                | 39.3              | 55.7     | 3.0                             |
| Apartments                             | 3.2                           | 0.2                            | 5.6                                   | 0.6                            | 0.4             | 0.4                | 0.1              | 3.5              | 0.1                | 1.0               | 2.0      | N                               |
| Mobile homes                           | 12.7                          | 0.5                            | 11.4                                  | 0.9                            | 0.9             | 0.4                | 0.1              | 13.2             | 0.4                | 3.2               | 2.9      | Q                               |
| Rented <sup>f</sup>                    | 43.5                          | 2.7                            | 56.1                                  | 6.2                            | 4.0             | 2.2                | 0.7              | 53.5             | 1.6                | 12.4              | 20.2     | Q                               |
| Single-family                          | 16.7                          | 1.8                            | 24.6                                  | 3.2                            | 1.8             | 1.2                | 0.2              | 16.9             | 0.7                | 5.7               | 7.3      | Q                               |
| Apartments                             | 23.5                          | 0.8                            | 28.3                                  | 2.8                            | 2.0             | 1.0                | 0.5              | 32.4             | 0.7                | 5.9               | 12.1     | N                               |
| Mobile homes                           | 3.3                           | 0.1                            | 3.1                                   | 0.2                            | 0.2             | Q                  | *                | 4.2              | 0.1                | 0.8               | 0.9      | Q                               |
| Year of construction                   |                               |                                |                                       |                                |                 |                    |                  |                  |                    |                   |          |                                 |
| Before 1950                            | 22.8                          | 5.4                            | 33.2                                  | 3.9                            | 2.2             | 4.9                | 0.7              | 17.8             | 1.0                | 7.1               | 12.1     | 0.3                             |
| 1950 to 1959                           | 12.3                          | 3.4                            | 24.9                                  | 3.3                            | 1.5             | 2.5                | 0.4              | 11.6             | 0.7                | 4.7               | 7.0      | 0.2                             |
| 1960 to 1969                           | 13.6                          | 2.6                            | 24.8                                  | 3.5                            | 1.7             | 1.9                | 0.4              | 12.6             | 0.6                | 4.7               | 7.8      | 0.2                             |
| 1970 to 1979                           | 31.3                          | 3.7                            | 38.0                                  | 5.3                            | 2.5             | 2.8                | 0.5              | 24.8             | 1.0                | 7.7               | 11.0     | 0.3                             |
| 1980 to 1989                           | 26.2                          | 2.4                            | 35.1                                  | 5.3                            | 2.7             | 2.0                | 0.4              | 23.7             | 0.9                | 7.5               | 10.2     | 0.3                             |
| 1990 to 1999                           | 22.4                          | 2.7                            | 38.9                                  | 6.3                            | 3.6             | 3.0                | 0.7              | 25.7             | 1.1                | 9.2               | 12.5     | 0.6                             |
| 2000 to 2009                           | 20.3                          | 2.2                            | 38.9                                  | 6.7                            | 3.9             | 2.2                | 0.6              | 23.4             | 1.1                | 9.1               | 12.8     | 0.7                             |
| 2010 to 2015                           | 7.1                           | 0.7                            | 11.3                                  | 2.2                            | 1.2             | 0.6                | 0.1              | 9.3              | 0.4                | 3.3               | 4.3      | 0.2                             |
| 2016 to 2020                           | 5.0                           | 0.4                            | 8.6                                   | 1.5                            | 1.0             | 0.6                | 0.1              | 7.2              | 0.3                | 2.5               | 3.1      | 0.5                             |
| Total square footage <sup>g</sup>      |                               |                                |                                       |                                |                 |                    |                  |                  |                    |                   |          |                                 |
| Less than 1,000                        | 27.5                          | 1.3                            | 33.8                                  | 3.0                            | 2.5             | 1.2                | 0.5              | 35.1             | 1.0                | 7.5               | 13.4     | Q                               |

Table CE5.1a Detailed household site electricity end-use consumption, part 1—totals, 2020

Total site electricity consumption<sup>a</sup> (billion kWh)

|                                   | Space<br>heating <sup>b</sup> | Air<br>handlers<br>for heating | Air<br>condit-<br>ioning <sup>c</sup> | Air<br>handlers<br>for cooling | Ceiling<br>fans | Dehum-<br>idifiers | Humid-<br>ifiers | Water<br>heating | Clothes<br>washers | Clothes<br>dryers | Lighting | Electric<br>vehicle<br>charging |
|-----------------------------------|-------------------------------|--------------------------------|---------------------------------------|--------------------------------|-----------------|--------------------|------------------|------------------|--------------------|-------------------|----------|---------------------------------|
| All homes                         | 161.1                         | 23.5                           | 253.8                                 | 38.0                           | 20.2            | 20.5               | 4.0              | 156.2            | 7.1                | 55.9              | 80.8     | 3.2                             |
| 1,000 to 1,499                    | 35.2                          | 3.0                            | 50.1                                  | 6.0                            | 4.3             | 2.6                | 0.7              | 40.0             | 1.5                | 11.9              | 15.4     | 0.4                             |
| 1,500 to 1,999                    | 30.1                          | 4.3                            | 49.7                                  | 6.9                            | 4.3             | 3.5                | 0.6              | 28.2             | 1.5                | 11.3              | 14.3     | 0.4                             |
| 2,000 to 2,499                    | 22.6                          | 4.0                            | 38.7                                  | 6.2                            | 3.1             | 3.6                | 0.6              | 20.0             | 1.1                | 8.9               | 11.6     | 0.6                             |
| 2,500 to 2,999                    | 15.1                          | 3.5                            | 27.5                                  | 4.8                            | 2.2             | 3.2                | 0.5              | 11.9             | 0.7                | 5.9               | 8.2      | 0.4                             |
| 3,000 or more                     | 30.6                          | 7.4                            | 54.1                                  | 11.1                           | 3.8             | 6.3                | 1.2              | 21.0             | 1.3                | 10.4              | 18.0     | 1.4                             |
| Number of household members       |                               |                                |                                       |                                |                 |                    |                  |                  |                    |                   |          |                                 |
| 1 member                          | 37.8                          | 4.8                            | 47.4                                  | 6.3                            | 3.6             | 3.5                | 0.8              | 24.4             | 1.1                | 7.9               | 14.6     | 0.2                             |
| 2 members                         | 61.3                          | 9.6                            | 93.8                                  | 14.4                           | 7.6             | 8.6                | 1.6              | 52.3             | 2.5                | 19.6              | 29.7     | 1.3                             |
| 3 members                         | 25.5                          | 3.7                            | 42.5                                  | 6.5                            | 3.5             | 3.3                | 0.7              | 28.2             | 1.2                | 10.0              | 13.5     | 0.6                             |
| 4 members                         | 20.5                          | 3.1                            | 39.6                                  | 6.1                            | 3.2             | 2.9                | 0.6              | 29.0             | 1.2                | 10.0              | 12.9     | 0.7                             |
| 5 members                         | 9.4                           | 1.4                            | 18.3                                  | 2.9                            | 1.5             | 1.4                | 0.2              | 12.8             | 0.6                | 4.8               | 5.8      | 0.3                             |
| 6 or more members                 | 6.5                           | 0.9                            | 12.2                                  | 1.8                            | 0.8             | 0.9                | 0.2              | 9.4              | 0.4                | 3.5               | 4.3      | Q                               |
| 2020 annual household income      |                               |                                |                                       |                                |                 |                    |                  |                  |                    |                   |          |                                 |
| Less than \$5,000                 | 6.5                           | 0.4                            | 6.6                                   | 0.6                            | 0.5             | 0.4                | 0.1              | 7.1              | 0.2                | 1.3               | 2.4      | Q                               |
| \$5,000 to \$9,999                | 4.6                           | 0.3                            | 5.6                                   | 0.5                            | 0.4             | 0.3                | 0.1              | 5.9              | 0.1                | 1.1               | 1.9      | Q                               |
| \$10,000 to \$19,999              | 14.5                          | 1.2                            | 15.5                                  | 1.6                            | 1.0             | 0.8                | 0.2              | 12.1             | 0.4                | 2.9               | 4.9      | Q                               |
| \$20,000 to \$39,999              | 32.1                          | 3.9                            | 43.0                                  | 5.4                            | 3.3             | 2.8                | 0.6              | 32.8             | 1.2                | 9.4               | 12.5     | Q                               |
| \$40,000 to \$59,999              | 25.0                          | 3.6                            | 38.3                                  | 5.4                            | 3.1             | 2.3                | 0.5              | 26.4             | 1.1                | 8.9               | 11.2     | Q                               |
| \$60,000 to \$99,999              | 36.0                          | 5.7                            | 57.5                                  | 8.9                            | 5.0             | 5.5                | 1.0              | 35.1             | 1.7                | 13.8              | 18.3     | 0.6                             |
| \$100,000 to \$149,999            | 22.1                          | 3.9                            | 39.2                                  | 6.5                            | 3.3             | 3.7                | 0.7              | 19.2             | 1.1                | 9.0               | 12.3     | 0.6                             |
| \$150,000 or more                 | 20.4                          | 4.6                            | 48.2                                  | 9.1                            | 3.7             | 4.7                | 1.0              | 17.7             | 1.2                | 9.6               | 17.3     | 1.6                             |
| Payment method for energy bills   |                               |                                |                                       |                                |                 |                    |                  |                  |                    |                   |          |                                 |
| All paid by household             | 152.6                         | 22.9                           | 243.1                                 | 37.2                           | 19.6            | 20.0               | 3.8              | 147.7            | 6.9                | 54.0              | 75.8     | 3.2                             |
| Some paid by household, some      |                               |                                |                                       |                                |                 |                    |                  |                  |                    |                   |          |                                 |
| included in rent or condo fee     | 4.2                           | 0.4                            | 6.0                                   | 0.4                            | 0.3             | 0.3                | 0.2              | 3.7              | 0.1                | 1.0               | 2.9      | Q                               |
| All included in rent or condo fee | 4.2                           | 0.2                            | 4.5                                   | 0.3                            | 0.2             | 0.1                | 0.1              | 4.6              | 0.1                | 0.9               | 2.0      | Q                               |
| Some other method                 | 0.1                           | *                              | 0.1                                   | *                              | *               | Q                  | Q                | Q                | *                  | *                 | 0.1      | N                               |

Table CE5.1a Detailed household site electricity end-use consumption, part 1—totals, 2020

Total site electricity consumption<sup>a</sup> (billion kWh)

|           | Space<br>heating <sup>b</sup> f | Air<br>handlers<br>or heating | Air<br>condit-<br>ioning <sup>c</sup> | Air<br>handlers<br>for cooling | Ceiling<br>fans | Dehum-<br>idifiers | Humid-<br>ifiers | Water<br>heating | Clothes<br>washers | Clothes<br>dryers | Lighting | Electric<br>vehicle<br>charging |
|-----------|---------------------------------|-------------------------------|---------------------------------------|--------------------------------|-----------------|--------------------|------------------|------------------|--------------------|-------------------|----------|---------------------------------|
| All homes | 161.1                           | 23.5                          | 253.8                                 | 38.0                           | 20.2            | 20.5               | 4.0              | 156.2            | 7.1                | 55.9              | 80.8     | 3.2                             |

Data source: U.S. Energy Information Administration, Office of Energy Consumption and Efficiency Statistics, Forms EIA-457A, D, E, F, G of the 2020 Residential Energy Consumption Survey Notes: Because of rounding, data may not sum to totals. See RECS Terminology for definition of terms used in these tables.

kWh = kilowatthours

Q = Data withheld because either the relative standard error (RSE) was greater than 50% or fewer than 10 households in reporting sample.

N = No households in reporting sample.

<sup>&</sup>lt;sup>a</sup> Electricity consumption from on-site solar photovoltaic generation (that is, solar panels) is included. Small amounts of standby power for devices that some households have but do not use (for example, dishwashers) are not included.

<sup>&</sup>lt;sup>b</sup> Includes main (primary) and secondary space heating.

<sup>&</sup>lt;sup>c</sup> Includes electricity used by evaporative coolers.

d Housing units are classified using criteria created by the U.S. Census Bureau based on 2010 Census data. Urbanized areas are densely settled groupings of blocks or tracts with 50,000 or more people. Urban clusters have at least 2,500 but less than 50,000 people. All other areas are rural.

<sup>&</sup>lt;sup>e</sup> The Building America program, sponsored by the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE), created these climate regions. We combined climate regions for this publication. The Subarctic region is included with data for *Very-cold and Cold*.

f Rented includes households that occupy their primary housing units without paying rent.

<sup>&</sup>lt;sup>8</sup> Total square footage includes all basements, finished or conditioned (heated or cooled) areas of attics, and conditioned garage space that is attached to the home. Unconditioned and unfinished areas in attics and attached garages are excluded. The square footage of the home is based on respondent reports. Previous RECS cycles calculated square footage based on interviewer measurements. For households that did not report an exact square footage estimate, the square footage of the home was imputed based on a reported square footage range and/or characteristics of the home. See 2020 RECS Square Footage Methodology for full details about data collection and processing.

<sup>\* =</sup> Estimate is less than 0.05 and rounds to zero.

Data release date: June 2023

Revised data release date: March 2024

## Relative standard errors (RSEs) for Table CE5.1a Detailed household site electricity end-use consumption, part 1—totals, 2020

#### RSEs for total site electricity consumption<sup>a</sup>

|  | Space<br>heating <sup>b</sup> | Air<br>handlers<br>for heating | Air<br>condit-<br>ioning <sup>c</sup> | Air<br>handlers<br>for cooling Ce | iling fans | Dehum-<br>idifiers | Humid-<br>ifiers | Water<br>heating | Clothes<br>washers | Clothes<br>dryers | Lighting | Electric<br>vehicle<br>charging |
|--|-------------------------------|--------------------------------|---------------------------------------|-----------------------------------|------------|--------------------|------------------|------------------|--------------------|-------------------|----------|---------------------------------|
| All homes                                      | 1.43                          | 0.93                           | 0.66                                  | 0.89                              | 1.04       | 2.50               | 2.39             | 1.17             | 0.65               | 0.96              | 0.89     | 9.34                            |
| Census region and division                     |                               |                                |                                       |                                   |            |                    |                  |                  |                    |                   |          |                                 |
| Northeast                                      | 5.35                          | 2.11                           | 1.67                                  | 3.49                              | 3.11       | 3.93               | 5.25             | 3.14             | 1.63               | 2.54              | 2.33     | 23.07                           |
| New England                                    | 6.29                          | 2.94                           | 2.65                                  | 4.98                              | 4.56       | 5.72               | 7.02             | 5.10             | 1.82               | 2.39              | 3.32     | 27.89                           |
| Middle Atlantic                                | 6.80                          | 2.98                           | 2.03                                  | 4.09                              | 3.75       | 5.13               | 6.67             | 4.05             | 1.96               | 3.52              | 2.92     | 26.90                           |
| Midwest  | 4.60                          | 1.74                           | 1.50                                  | 2.01                              | 2.24       | 3.94               | 3.98             | 3.24             | 1.62               | 2.46              | 2.28     | 25.12                           |
| East North Central                             | 6.48                          | 2.07                           | 1.81                                  | 2.45                              | 3.14       | 4.86               | 5.21             | 4.37             | 2.08               | 3.35              | 3.15     | 33.26                           |
| West North Central                             | 5.45                          | 2.40                           | 2.17                                  | 2.81                              | 3.54       | 6.49               | 5.04             | 5.11             | 2.31               | 3.13              | 3.17     | 40.12                           |
| South  | 1.80                          | 1.69                           | 1.05                                  | 1.33                              | 1.44       | 6.32               | 5.18             | 1.54             | 1.31               | 1.56              | 1.67     | 23.44                           |
| South Atlantic                                 | 2.47                          | 2.69                           | 1.65                                  | 1.82                              | 2.41       | 6.50               | 5.23             | 1.82             | 1.55               | 1.97              | 2.50     | 30.69                           |
| East South Central                             | 3.33                          | 3.89                           | 1.93                                  | 2.41                              | 3.32       | 12.92              | 10.10            | 2.95             | 2.46               | 2.97              | 3.58     | 55.70                           |
| West South Central                             | 3.72                          | 2.46                           | 1.72                                  | 2.60                              | 2.09       | 18.02              | 11.28            | 3.29             | 2.06               | 2.70              | 3.12     | 41.15                           |
| West   | 3.38                          | 1.79                           | 1.62                                  | 2.12                              | 2.52       | 12.22              | 6.00             | 2.68             | 1.37               | 2.11              | 2.10     | 13.86                           |
| Mountain                                       | 5.57                          | 2.50                           | 2.28                                  | 2.92                              | 2.74       | 20.55              | 6.68             | 4.31             | 2.00               | 2.86              | 2.83     | 30.39                           |
| Mountain North                                 | 6.65                          | 2.73                           | 3.27                                  | 4.34                              | 4.25       | 26.52              | 7.91             | 6.42             | 2.50               | 3.15              | 3.76     | 42.64                           |
| Mountain South                                 | 6.83                          | 5.41                           | 2.49                                  | 3.22                              | 3.55       | 27.91              | 9.77             | 5.70             | 3.10               | 4.83              | 5.23     | 30.89                           |
| Pacific  | 4.39                          | 2.97                           | 2.77                                  | 3.43                              | 4.57       | 14.65              | 10.49            | 3.09             | 1.86               | 2.82              | 2.98     | 15.54                           |
| Census urban/rural classification <sup>d</sup> |                               |                                |                                       |                                   |            |                    |                  |                  |                    |                   |          |                                 |
| Urban  | 2.04                          | 1.19                           | 0.83                                  | 1.10                              | 1.33       | 3.34               | 2.59             | 1.54             | 0.84               | 1.16              | 1.17     | 11.04                           |
| Urbanized area                                 | 2.17                          | 1.41                           | 0.94                                  | 1.25                              | 1.51       | 3.70               | 2.72             | 1.80             | 0.88               | 1.32              | 1.29     | 11.19                           |
| Urban cluster                                  | 5.45                          | 4.39                           | 3.64                                  | 3.86                              | 3.80       | 9.40               | 8.14             | 3.94             | 3.04               | 3.46              | 4.44     | 38.77                           |
| Rural  | 2.91                          | 2.80                           | 2.00                                  | 2.34                              | 2.52       | 4.47               | 5.32             | 2.25             | 1.77               | 1.97              | 2.55     | 23.48                           |
| Climate region <sup>e</sup>                    |                               |                                |                                       |                                   |            |                    |                  |                  |                    |                   |          |                                 |
| Very cold and Cold                             | 3.48                          | 1.32                           | 1.22                                  | 1.86                              | 2.05       | 2.99               | 3.03             | 2.51             | 1.21               | 1.93              | 1.67     | 16.28                           |
| Mixed-humid                                    | 1.91                          | 2.31                           | 1.35                                  | 1.61                              | 2.13       | 5.03               | 4.14             | 1.84             | 1.68               | 1.86              | 2.18     | 25.43                           |
| Mixed-dry and Hot-dry                          | 7.33                          | 3.73                           | 1.75                                  | 2.50                              | 3.24       | 19.18              | 9.43             | 5.36             | 2.62               | 4.40              | 4.06     | 20.33                           |
| Hot-humid                                      | 3.29                          | 2.82                           | 1.69                                  | 2.22                              | 2.28       | 12.82              | 11.73            | 2.29             | 2.05               | 2.71              | 2.51     | 31.48                           |
| Marine   | 5.78                          | 4.64                           | 5.16                                  | 7.50                              | 7.91       | 18.97              | 18.03            | 4.19             | 3.55               | 4.22              | 5.21     | 20.69                           |

## Relative standard errors (RSEs) for Table CE5.1a Detailed household site electricity end-use consumption, part 1—totals, 2020

RSEs for total site electricity consumption<sup>a</sup>

|  | Space<br>heating <sup>b</sup> | Air<br>handlers<br>for heating | Air<br>condit-<br>ioning <sup>c</sup> | Air<br>handlers<br>for cooling C | eiling fans | Dehum-<br>idifiers | Humid-<br>ifiers | Water<br>heating | Clothes<br>washers | Clothes<br>dryers | Lighting | Electric<br>vehicle<br>charging |
|--|-------------------------------|--------------------------------|---------------------------------------|----------------------------------|-------------|--------------------|------------------|------------------|--------------------|-------------------|----------|---------------------------------|
| All homes                              | 1.43                          | 0.93                           | 0.66                                  | 0.89                             | 1.04        | 2.50               | 2.39             | 1.17             | 0.65               | 0.96              | 0.89     | 9.34                            |
| Housing unit type                      |                               |                                |                                       |                                  |             |                    |                  |                  |                    |                   |          |                                 |
| Single-family detached                 | 1.60                          | 1.04                           | 0.68                                  | 0.96                             | 1.17        | 2.81               | 2.31             | 1.53             | 0.65               | 1.00              | 1.11     | 9.83                            |
| Single-family attached                 | 5.00                          | 3.87                           | 2.70                                  | 3.55                             | 4.06        | 7.98               | 7.92             | 5.01             | 1.82               | 3.15              | 3.31     | 30.49                           |
| Apartments in buildings with 2–4 units | 6.65                          | 6.32                           | 4.08                                  | 6.54                             | 6.49        | 18.68              | 13.87            | 4.97             | 4.49               | 5.72              | 4.71     | 0.00                            |
| Apartments in buildings with 5 or      |                               |                                |                                       |                                  |             |                    |                  |                  |                    |                   |          |                                 |
| more units                             | 4.16                          | 3.88                           | 2.24                                  | 3.25                             | 3.70        | 18.66              | 8.74             | 2.95             | 3.00               | 3.73              | 3.18     | 0.00                            |
| Mobile homes                           | 4.65                          | 4.24                           | 2.92                                  | 5.01                             | 5.64        | 20.68              | 12.59            | 3.70             | 3.83               | 5.33              | 4.28     | 67.63                           |
| Ownership of housing unit              |                               |                                |                                       |                                  |             |                    |                  |                  |                    |                   |          |                                 |
| Owned                                  | 1.80                          | 1.11                           | 0.92                                  | 1.19                             | 1.26        | 2.32               | 2.45             | 1.62             | 0.89               | 1.20              | 1.18     | 9.69                            |
| Single-family                          | 1.76                          | 1.12                           | 0.88                                  | 1.19                             | 1.20        | 2.46               | 2.44             | 1.57             | 0.80               | 1.17              | 1.23     | 9.78                            |
| Apartments                             | 14.02                         | 13.00                          | 6.83                                  | 10.28                            | 10.77       | 23.94              | 19.19            | 8.25             | 6.37               | 7.80              | 7.48     | 0.00                            |
| Mobile homes                           | 6.01                          | 5.05                           | 4.26                                  | 6.17                             | 7.37        | 24.32              | 14.32            | 4.69             | 5.02               | 6.08              | 5.00     | 76.31                           |
| Rented <sup>f</sup>                    | 2.59                          | 3.76                           | 2.05                                  | 2.79                             | 2.81        | 9.56               | 6.71             | 2.23             | 2.11               | 2.36              | 2.22     | 56.75                           |
| Single-family                          | 5.89                          | 5.18                           | 4.04                                  | 4.50                             | 5.05        | 13.65              | 10.23            | 4.23             | 3.54               | 3.68              | 4.19     | 58.46                           |
| Apartments                             | 3.43                          | 3.35                           | 2.07                                  | 3.22                             | 3.27        | 17.15              | 8.32             | 2.77             | 2.91               | 3.80              | 2.49     | 0.00                            |
| Mobile homes                           | 9.81                          | 12.34                          | 9.35                                  | 10.88                            | 11.68       | 40.48              | 32.49            | 10.25            | 9.36               | 11.70             | 11.78    | 20.14                           |
| Year of construction                   |                               |                                |                                       |                                  |             |                    |                  |                  |                    |                   |          |                                 |
| Before 1950                            | 4.83                          | 2.69                           | 1.94                                  | 4.15                             | 3.70        | 5.86               | 6.89             | 3.60             | 2.29               | 3.09              | 2.65     | 32.37                           |
| 1950 to 1959                           | 5.00                          | 3.28                           | 2.41                                  | 3.86                             | 4.34        | 7.81               | 8.39             | 5.47             | 2.38               | 3.41              | 2.77     | 25.43                           |
| 1960 to 1969                           | 5.23                          | 3.73                           | 3.35                                  | 4.18                             | 3.37        | 7.85               | 5.78             | 4.10             | 2.55               | 3.51              | 2.83     | 33.95                           |
| 1970 to 1979                           | 4.06                          | 3.15                           | 2.11                                  | 2.72                             | 3.45        | 6.23               | 6.67             | 2.97             | 2.04               | 2.46              | 2.59     | 25.71                           |
| 1980 to 1989                           | 3.74                          | 3.55                           | 2.04                                  | 2.69                             | 3.11        | 7.37               | 7.72             | 2.90             | 1.97               | 2.55              | 2.88     | 33.23                           |
| 1990 to 1999                           | 3.74                          | 2.51                           | 2.34                                  | 3.09                             | 2.80        | 8.00               | 5.06             | 3.17             | 1.70               | 2.19              | 2.29     | 27.70                           |
| 2000 to 2009                           | 3.15                          | 2.97                           | 2.07                                  | 2.64                             | 2.49        | 7.72               | 6.60             | 2.74             | 1.98               | 2.59              | 2.85     | 22.82                           |
| 2010 to 2015                           | 5.46                          | 5.68                           | 4.77                                  | 5.28                             | 5.27        | 12.45              | 9.42             | 5.80             | 4.27               | 5.25              | 5.85     | 33.92                           |
| 2016 to 2020                           | 6.93                          | 6.68                           | 5.16                                  | 5.72                             | 6.48        | 15.78              | 11.27            | 5.46             | 4.47               | 5.40              | 6.93     | 32.77                           |
| Total square footage <sup>g</sup>      |                               |                                |                                       |                                  |             |                    |                  |                  |                    |                   |          |                                 |
| Less than 1,000                        | 2.71                          | 2.90                           | 2.38                                  | 3.24                             | 3.91        | 11.84              | 8.42             | 3.09             | 3.05               | 3.74              | 2.96     | 47.29                           |

## Relative standard errors (RSEs) for Table CE5.1a Detailed household site electricity end-use consumption, part 1—totals, 2020

RSEs for total site electricity consumption<sup>a</sup>

|                                   | Space<br>heating <sup>b</sup> | Air<br>handlers<br>for heating | Air<br>condit-<br>ioning <sup>c</sup> | Air<br>handlers<br>for cooling Co | eiling fans | Dehum-<br>idifiers | Humid-<br>ifiers | Water<br>heating | Clothes<br>washers | Clothes<br>dryers | Lighting | Electric<br>vehicle<br>charging |
|-----------------------------------|-------------------------------|--------------------------------|---------------------------------------|-----------------------------------|-------------|--------------------|------------------|------------------|--------------------|-------------------|----------|---------------------------------|
| All homes                         | 1.43                          | 0.93                           | 0.66                                  | 0.89                              | 1.04        | 2.50               | 2.39             | 1.17             | 0.65               | 0.96              | 0.89     | 9.34                            |
| 1,000 to 1,499                    | 3.65                          | 3.01                           | 2.40                                  | 2.89                              | 3.00        | 7.32               | 7.62             | 2.79             | 2.02               | 2.26              | 2.41     | 27.75                           |
| 1,500 to 1,999                    | 4.04                          | 2.71                           | 2.43                                  | 2.69                              | 2.91        | 7.40               | 5.61             | 3.21             | 2.31               | 3.01              | 2.47     | 27.86                           |
| 2,000 to 2,499                    | 3.90                          | 2.77                           | 3.21                                  | 3.57                              | 3.15        | 5.64               | 6.99             | 4.32             | 2.64               | 3.45              | 3.36     | 18.98                           |
| 2,500 to 2,999                    | 5.60                          | 3.86                           | 3.42                                  | 3.85                              | 4.05        | 6.68               | 6.93             | 5.16             | 3.43               | 3.79              | 3.57     | 21.46                           |
| 3,000 or more                     | 4.43                          | 3.03                           | 2.66                                  | 2.82                              | 3.02        | 4.59               | 4.40             | 3.74             | 2.15               | 2.64              | 2.92     | 16.24                           |
| Number of household members       |                               |                                |                                       |                                   |             |                    |                  |                  |                    |                   |          |                                 |
| 1 member                          | 3.16                          | 3.27                           | 2.02                                  | 2.68                              | 2.77        | 6.36               | 6.37             | 1.96             | 1.76               | 2.17              | 2.06     | 28.68                           |
| 2 members                         | 2.70                          | 2.01                           | 1.74                                  | 1.91                              | 1.95        | 4.32               | 3.90             | 1.92             | 1.25               | 1.64              | 1.93     | 15.04                           |
| 3 members                         | 3.66                          | 3.55                           | 2.53                                  | 2.95                              | 3.86        | 6.42               | 5.53             | 3.73             | 2.55               | 3.33              | 2.81     | 23.35                           |
| 4 members                         | 4.02                          | 3.53                           | 3.04                                  | 3.44                              | 3.33        | 8.52               | 6.32             | 3.89             | 2.53               | 2.97              | 2.99     | 20.92                           |
| 5 members                         | 8.26                          | 6.56                           | 5.73                                  | 6.47                              | 6.69        | 12.49              | 10.02            | 6.24             | 4.60               | 4.99              | 5.73     | 38.92                           |
| 6 or more members                 | 10.63                         | 7.61                           | 5.94                                  | 7.32                              | 7.41        | 14.12              | 11.92            | 6.90             | 4.97               | 5.99              | 6.64     | 56.60                           |
| 2020 annual household income      |                               |                                |                                       |                                   |             |                    |                  |                  |                    |                   |          |                                 |
| Less than \$5,000                 | 9.00                          | 10.05                          | 6.84                                  | 10.64                             | 9.60        | 21.25              | 23.14            | 7.80             | 8.37               | 9.59              | 7.79     | 15.90                           |
| \$5,000 to \$9,999                | 8.69                          | 9.50                           | 8.47                                  | 10.47                             | 9.49        | 24.63              | 20.42            | 8.38             | 8.32               | 10.86             | 8.53     | 14.90                           |
| \$10,000 to \$19,999              | 6.40                          | 6.33                           | 4.87                                  | 6.02                              | 5.51        | 18.28              | 12.42            | 4.89             | 4.70               | 5.18              | 5.17     | 73.13                           |
| \$20,000 to \$39,999              | 3.45                          | 3.14                           | 2.65                                  | 3.11                              | 3.93        | 8.87               | 7.55             | 2.96             | 2.35               | 2.63              | 3.31     | 49.37                           |
| \$40,000 to \$59,999              | 4.60                          | 3.26                           | 2.89                                  | 3.65                              | 3.67        | 7.24               | 6.78             | 3.65             | 2.95               | 3.45              | 3.07     | 51.23                           |
| \$60,000 to \$99,999              | 3.83                          | 2.33                           | 2.41                                  | 2.74                              | 2.84        | 5.04               | 5.26             | 3.25             | 2.09               | 2.43              | 2.35     | 23.86                           |
| \$100,000 to \$149,999            | 5.51                          | 3.64                           | 3.10                                  | 3.17                              | 3.62        | 6.37               | 5.34             | 4.12             | 2.57               | 3.16              | 2.65     | 26.71                           |
| \$150,000 or more                 | 5.05                          | 3.27                           | 2.73                                  | 3.11                              | 3.06        | 5.77               | 5.07             | 4.07             | 2.29               | 2.53              | 3.05     | 13.59                           |
| Payment method for energy bills   |                               |                                |                                       |                                   |             |                    |                  |                  |                    |                   |          |                                 |
| All paid by household             | 1.48                          | 0.98                           | 0.70                                  | 0.91                              | 1.08        | 2.52               | 2.41             | 1.25             | 0.71               | 1.04              | 0.99     | 9.50                            |
| Some paid by household, some      |                               |                                |                                       |                                   |             |                    |                  |                  |                    |                   |          |                                 |
| included in rent or condo fee     | 11.67                         | 8.13                           | 5.61                                  | 8.62                              | 10.10       | 25.74              | 12.72            | 10.12            | 7.24               | 8.30              | 6.27     | 64.42                           |
| All included in rent or condo fee | 7.99                          | 9.63                           | 6.58                                  | 8.62                              | 11.21       | 25.03              | 15.62            | 7.76             | 7.71               | 9.03              | 8.52     | 19.13                           |
| Some other method                 | 42.57                         | 40.10                          | 37.36                                 | 48.28                             | 38.51       | 65.17              | 70.76            | 41.54            | 30.93              | 39.05             | 30.87    | 0.00                            |
|                                   |                               |                                |                                       |                                   |             |                    |                  |                  |                    |                   |          |                                 |

#### Relative standard errors (RSEs) for Table CE5.1a Detailed household site electricity end-use consumption, part 1—totals, 2020

#### RSEs for total site electricity consumption<sup>a</sup>

|           | Space<br>heating <sup>b</sup> | Air<br>handlers<br>for heating | Air<br>condit-<br>ioning <sup>c</sup> | Air<br>handlers<br>for cooling Co | eiling fans | Dehum-<br>idifiers | Humid-<br>ifiers | Water<br>heating | Clothes<br>washers | Clothes<br>dryers | Lighting | Electric<br>vehicle<br>charging |
|-----------|-------------------------------|--------------------------------|---------------------------------------|-----------------------------------|-------------|--------------------|------------------|------------------|--------------------|-------------------|----------|---------------------------------|
| All homes | 1.43                          | 0.93                           | 0.66                                  | 0.89                              | 1.04        | 2.50               | 2.39             | 1.17             | 0.65               | 0.96              | 0.89     | 9.34                            |

Data source: U.S. Energy Information Administration, Office of Energy Consumption and Efficiency Statistics, Forms EIA-457A, D, E, F, G of the 2020 Residential Energy Consumption Survey Notes: See RECS Terminology for definition of terms used in these tables.

<sup>&</sup>lt;sup>a</sup> Electricity consumption from on-site solar photovoltaic generation (that is, solar panels) is included. Small amounts of standby power for devices that some households have but do not use (for example, dishwashers) are not included.

<sup>&</sup>lt;sup>b</sup> Includes main (primary) and secondary space heating.

<sup>&</sup>lt;sup>c</sup> Includes electricity used by evaporative coolers.

<sup>&</sup>lt;sup>d</sup> Housing units are classified using criteria created by the U.S. Census Bureau based on 2010 Census data. Urbanized areas are densely settled groupings of blocks or tracts with 50,000 or more people. Urban clusters have at least 2,500 but less than 50,000 people. All other areas are rural.

<sup>&</sup>lt;sup>e</sup> The Building America program, sponsored by the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE), created these climate regions. We combined climate regions for this publication. The Subarctic region is included with data for *Very-cold and Cold*.

f Rented includes households that occupy their primary housing units without paying rent.

<sup>&</sup>lt;sup>8</sup> Total square footage includes all basements, finished or conditioned (heated or cooled) areas of attics, and conditioned garage space that is attached to the home. Unconditioned and unfinished areas in attics and attached garages are excluded. The square footage of the home is based on respondent reports. Previous RECS cycles calculated square footage based on interviewer measurements. For households that did not report an exact square footage estimate, the square footage of the home was imputed based on a reported square footage range and/or characteristics of the home. See 2020 RECS Square Footage

Methodology for full details about data collection and processing.