Table C26. Natural gas expenditures by Census region, 2018

| | | | | 1 | Natural gas | expenditu | ıres (dollar | s) | | | | |
|-----------------------------------|----------------------------|--------------|-----------|---------|----------------|--------------|--------------|--------|----------------|--------------|--------|--------|
| | Total natur (million do | • | enditures | F | Per thousan | ıd cubic fe | et | | Per squar | e foot | | |
| | North- east | Mid- west | South | West | North- east | Mid- west | South | West | North- east | Mid- west | South | West |
| All buildings | \$3,129 | \$5,294 | \$4,818 | \$3,050 | \$7.65 | \$6.73 | \$8.12 | \$7.14 | \$0.28 | \$0.26 | \$0.22 | \$0.22 |
| Building floorspace (square feet) | | | | | | | | | | | | |
| 1,001 to 5,000 | \$231 | \$562 | \$594 | \$325 | \$10.93 | \$8.84 | \$10.87 | \$8.76 | \$0.66 | \$0.50 | \$0.59 | \$0.40 |
| 5,001 to 10,000 | \$249 | \$661 | \$477 | \$348 | \$10.25 | \$7.71 | \$10.00 | \$8.06 | \$0.40 | \$0.36 | \$0.31 | \$0.29 |
| 10,001 to 25,000 | \$440 | \$974 | \$668 | \$536 | \$9.33 | \$7.89 | \$9.26 | \$8.22 | \$0.34 | \$0.32 | \$0.23 | \$0.23 |
| 25,001 to 50,000 | \$485 | \$950 | \$644 | \$542 | \$8.13 | \$6.76 | \$8.33 | \$7.26 | \$0.31 | \$0.27 | \$0.22 | \$0.23 |
| 50,001 to 100,000 | \$467 | \$767 | \$923 | \$432 | \$7.09 | \$6.22 | \$7.58 | \$7.13 | \$0.28 | \$0.23 | \$0.20 | \$0.19 |
| 100,001 to 200,000 | \$521 | \$508 | \$645 | \$343 | \$6.52 | \$5.71 | \$7.34 | \$6.54 | \$0.24 | \$0.20 | \$0.17 | \$0.16 |
| 200,001 to 500,000 | \$474 | \$551 | \$611 | \$289 | \$6.77 | \$5.45 | \$6.60 | \$6.54 | \$0.24 | \$0.20 | \$0.19 | \$0.17 |
| Over 500,000 | \$260 | \$321 | \$257 | \$235 | \$6.37 | \$5.38 | \$6.51 | \$4.68 | \$0.16 | \$0.15 | \$0.13 | \$0.18 |
| Principal building activity | | | | | | | | | | | | |
| Education | \$549 | \$768 | \$601 | \$235 | \$6.99 | \$5.91 | \$8.11 | \$7.12 | \$0.29 | \$0.23 | \$0.17 | \$0.16 |
| Food sales | Q | \$147 | Q | Q | Q | \$7.13 | Q | Q | Q | \$0.54 | Q | Q |
| Food service | Q | \$310 | \$436 | \$281 | Q | \$6.69 | \$8.79 | \$7.45 | Q | \$1.42 | \$1.34 | \$0.79 |
| Health care | \$253 | \$339 | \$450 | \$263 | \$6.51 | \$5.66 | \$7.73 | \$6.21 | \$0.38 | \$0.34 | \$0.49 | \$0.34 |
| Inpatient | \$159 | \$265 | \$405 | \$192 | \$5.70 | \$5.40 | \$7.60 | \$5.67 | \$0.51 | \$0.38 | \$0.58 | \$0.48 |
| Outpatient | \$94 | \$74 | \$45 | \$71 | \$8.56 | \$6.87 | \$9.21 | \$8.37 | \$0.26 | \$0.23 | \$0.21 | \$0.19 |
| Lodging | \$228 | \$411 | \$412 | \$403 | \$6.48 | \$6.51 | \$7.73 | \$6.26 | \$0.30 | \$0.29 | \$0.21 | \$0.24 |
| Mercantile | \$309 | \$686 | \$715 | \$483 | \$6.54 | \$6.68 | \$7.22 | \$6.70 | \$0.27 | \$0.28 | \$0.21 | \$0.25 |
| Retail (other than mall) | \$74 | \$240 | \$220 | \$95 | \$8.75 | \$6.78 | \$8.58 | \$6.78 | \$0.22 | \$0.18 | \$0.17 | \$0.15 |
| Enclosed and strip malls | \$235 | \$446 | \$495 | \$389 | \$6.05 | \$6.62 | \$6.74 | \$6.68 | \$0.30 | \$0.39 | \$0.23 | \$0.29 |
| Office | \$425 | \$708 | \$498 | \$396 | \$8.88 | \$7.97 | \$8.98 | \$8.14 | \$0.18 | \$0.21 | \$0.17 | \$0.15 |
| Public assembly | \$327 | \$541 | \$330 | \$276 | \$7.46 | \$6.86 | \$7.29 | \$6.88 | \$0.39 | \$0.33 | \$0.21 | \$0.23 |
| Public order and safety | Q | Q | \$142 | \$75 | Q | Q | \$7.17 | \$7.66 | Q | Q | \$0.29 | \$0.27 |
| Religious worship | \$165 | \$247 | \$254 | \$122 | \$10.72 | \$7.33 | \$9.07 | \$9.03 | \$0.36 | \$0.21 | \$0.15 | \$0.16 |
| Service | \$214 | \$355 | \$428 | \$203 | \$9.56 | \$7.48 | \$9.39 | \$8.27 | \$0.36 | \$0.29 | \$0.48 | \$0.32 |
| Warehouse and storage | \$289 | \$643 | \$366 | \$163 | \$8.64 | \$6.78 | \$8.41 | \$8.08 | \$0.17 | \$0.19 | \$0.11 | \$0.08 |
| Other | \$143 | Q | \$102 | Q | \$8.25 | Q | \$8.14 | Q | \$0.32 | Q | \$0.17 | Q |
| Vacant | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q |
| Year constructed | | | | | | | | | | | | |
| Before 1920 | \$229 | \$232 | \$114 | \$61 | \$8.21 | \$8.04 | \$8.34 | \$7.48 | \$0.27 | \$0.27 | \$0.27 | \$0.19 |
| 1920 to 1945 | \$308 | \$303 | \$119 | \$135 | \$7.23 | \$6.91 | \$9.26 | \$6.67 | \$0.26 | \$0.21 | \$0.21 | \$0.21 |
| 1946 to 1959 | \$386 | \$357 | \$398 | \$157 | \$8.09 | \$6.63 | \$8.96 | \$7.73 | \$0.33 | \$0.27 | \$0.24 | \$0.18 |
| 1960 to 1969 | \$466 | \$679 | \$642 | \$281 | \$7.65 | \$6.56 | \$8.06 | \$8.24 | \$0.32 | \$0.27 | \$0.24 | \$0.25 |
| 1970 to 1979 | \$423 | \$773 | \$500 | \$409 | \$6.87 | \$6.95 | \$8.16 | \$7.13 | \$0.26 | \$0.25 | \$0.19 | \$0.23 |
| 1980 to 1989 | \$399 | \$636 | \$658 | \$542 | \$7.97 | \$6.87 | \$8.24 | \$6.91 | \$0.28 | \$0.28 | \$0.24 | \$0.23 |
| 1990 to 1999 | \$344 | \$745 | \$704 | \$423 | \$7.60 | \$6.76 | \$8.13 | \$7.30 | \$0.28 | \$0.24 | \$0.19 | \$0.18 |
| 2000 to 2009 | \$396 | \$1,095 | \$1,147 | \$676 | \$8.14 | \$6.56 | \$7.97 | \$6.86 | \$0.25 | \$0.29 | \$0.24 | \$0.25 |
| 2010 to 2018 | \$178 | \$474 | \$537 | \$366 | \$7.26 | \$6.31 | \$7.54 | \$6.99 | \$0.23 | \$0.23 | \$0.20 | \$0.18 |
| Climate zone ^a | | | | | | | | | | | | |
| Cold or very cold | \$76 | \$1,003 | N | \$317 | \$7.70 | \$6.81 | N | \$7.41 | \$0.38 | \$0.26 | N | \$0.36 |
| Cool | \$1,391 | \$3,181 | N | \$855 | \$7.73 | \$6.65 | N | \$6.42 | \$0.29 | \$0.26 | N | \$0.25 |
| Mixed mild | \$1,661 | \$1,110 | \$1,207 | \$610 | \$7.58 | \$6.90 | \$7.72 | \$6.49 | \$0.26 | \$0.26 | \$0.23 | \$0.21 |
| Warm | N | N | \$2,761 | \$1,042 | N | N | \$8.21 | \$8.35 | N | N | \$0.23 | \$0.19 |
| Hot or very hot | N | N | \$850 | \$227 | N | N | \$8.46 | \$6.90 | N | N | \$0.19 | \$0.18 |
| | | | | | | | | | | | | |

Table C26. Natural gas expenditures by Census region, 2018

| | Total natural gas expenditures | | | | Natural gas | expenditu | res (dollar | s) | | | | |
|--|---------------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| | Total natur (million do | | enditures | | Per thousan | nd cubic fe | et | | Per squar | e foot | | |
| | North- east | Mid- west | South | West | North- east | Mid- west | South | West | North- east | Mid- west | South | West |
| All buildings | \$3,129 | \$5,294 | \$4,818 | \$3,050 | \$7.65 | \$6.73 | \$8.12 | \$7.14 | \$0.28 | \$0.26 | \$0.22 | \$0.22 |
| Number of floors | | | | | | | | | | | | |
| 1 | \$932 | \$2,561 | \$2,482 | \$1,537 | \$8.17 | \$6.95 | \$8.65 | \$7.51 | \$0.31 | \$0.31 | \$0.25 | \$0.25 |
| 2 | \$765 | \$1,386 | \$1,016 | \$691 | \$7.89 | \$7.00 | \$8.23 | \$7.55 | \$0.29 | \$0.24 | \$0.20 | \$0.19 |
| 3 | \$556 | \$648 | \$498 | \$200 | \$8.12 | \$6.73 | \$7.27 | \$7.40 | \$0.32 | \$0.22 | \$0.21 | \$0.18 |
| 4 to 9 | \$604 | \$547 | \$663 | \$395 | \$6.51 | \$5.72 | \$7.24 | \$6.58 | \$0.23 | \$0.23 | \$0.21 | \$0.18 |
| 10 or more | \$272 | \$152 | \$159 | \$228 | \$7.37 | \$5.52 | \$6.98 | \$5.15 | \$0.21 | \$0.16 | \$0.13 | \$0.21 |
| Number of workers (main shift) | | | | | | | | | | | | |
| Fewer than 5 | \$494 | \$973 | \$676 | \$418 | \$9.75 | \$8.37 | \$9.71 | \$8.60 | \$0.34 | \$0.30 | \$0.22 | \$0.20 |
| 5 to 9 | \$258 | \$672 | \$565 | \$319 | \$8.83 | \$7.70 | \$9.45 | \$8.28 | \$0.31 | \$0.31 | \$0.25 | \$0.20 |
| 10 to 19 | \$330 | \$861 | \$676 | \$511 | \$8.59 | \$7.13 | \$9.15 | \$7.55 | \$0.33 | \$0.29 | \$0.29 | \$0.31 |
| 20 to 49 | \$468 | \$1,121 | \$888 | \$621 | \$7.55 | \$6.65 | \$8.33 | \$7.32 | \$0.32 | \$0.28 | \$0.20 | \$0.23 |
| 50 to 99 | \$551 | \$621 | \$813 | \$333 | \$7.41 | \$5.93 | \$7.57 | \$6.70 | \$0.29 | \$0.23 | \$0.23 | \$0.17 |
| 100 to 249 | \$566 | \$640 | \$641 | \$389 | \$6.56 | \$5.61 | \$6.67 | \$6.80 | \$0.24 | \$0.21 | \$0.18 | \$0.21 |
| 250 or more | \$462 | \$407 | \$561 | \$459 | \$6.77 | \$5.44 | \$7.00 | \$5.68 | \$0.20 | \$0.18 | \$0.20 | \$0.20 |
| Weekly operating hours | <u>.</u> | | | | | | | | | | | |
| Fewer than 40 | \$284 | \$477 | \$306 | \$274 | \$9.05 | \$8.01 | \$9.20 | \$8.63 | \$0.31 | \$0.24 | \$0.16 | \$0.23 |
| 40 to 48 | \$419 | \$926 | \$775 | \$417 | \$8.57 | \$7.20 | \$9.25 | \$7.74 | \$0.27 | \$0.23 | \$0.18 | \$0.16 |
| 49 to 60 | \$611 | \$1,149 | \$940 | \$556 | \$7.97 | \$6.96 | \$8.37 | \$7.91 | \$0.22 | \$0.26 | \$0.18 | \$0.16 |
| 61 to 84 | \$611 | \$938 | \$720 | \$580 | \$7.43 | \$6.57 | \$7.79 | \$7.35 | \$0.29 | \$0.26 | \$0.22 | \$0.26 |
| 85 to 167 Open continuously | \$472 \$731 | \$684 \$1,120 | \$750 \$1,326 | \$389 \$834 | \$7.24 \$6.98 | \$6.27 \$6.18 | \$8.30 \$7.33 | \$6.31 \$6.37 | \$0.32 \$0.29 | \$0.26 \$0.30 | \$0.38 \$0.25 | \$0.28 \$0.27 |
| Ownership and occupancy | - | | | - | <u>-</u> | · | | | <u>-</u> | <u>-</u> | <u>-</u> | · |
| Nongovernment owned | \$2,339 | \$4,298 | \$3,740 | \$2,439 | \$7.83 | \$6.91 | \$8.19 | \$7.14 | \$0.27 | \$0.27 | \$0.23 | \$0.22 |
| Owner occupied | \$1,373 | \$2,691 | \$2,471 | \$1,361 | \$8.03 | \$6.98 | \$8.36 | \$6.91 | \$0.27 | \$0.27 | \$0.23 | \$0.24 |
| Leased to tenant or tenants | \$950 | \$1,597 | \$1,263 | \$1,073 | \$7.55 | \$6.79 | \$7.85 | \$7.44 | \$0.27 | \$0.28 | \$0.23 | \$0.21 |
| Unoccupied | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q |
| Government owned | \$790 | \$996 | \$1,079 | \$611 | \$7.17 | \$6.05 | \$7.90 | \$7.11 | \$0.31 | \$0.22 | \$0.19 | \$0.20 |
| Federal | Q | \$76 | \$74 | \$26 | Q | \$6.15 | \$7.22 | Q | Q | \$0.24 | \$0.13 | \$0.12 |
| State | \$213 | \$194 | \$454 | \$187 | \$6.29 | \$6.13 | \$7.22 | \$7.04 | \$0.29 | \$0.18 | \$0.21 | \$0.20 |
| Local | \$514 | \$727 | \$550 | \$399 | \$7.61 | \$6.02 | \$8.70 | \$7.45 | \$0.32 | \$0.23 | \$0.18 | \$0.20 |
| Party responsible for operation of energy systems | | | | | | | | | | | | |
| Building owner | \$2,537 | \$4,242 | \$3,903 | \$2,418 | \$7.61 | \$6.70 | \$8.20 | \$7.00 | \$0.27 | \$0.25 | \$0.22 | \$0.22 |
| Business owner or tenant | \$480 | \$857 | \$753 | \$466 | \$7.78 | \$6.87 | \$8.04 | \$7.81 | \$0.31 | \$0.34 | \$0.27 | \$0.20 |
| Property management | \$54 | \$54 | \$74 | \$104 | \$9.79 | \$6.64 | \$6.74 | \$7.54 | \$0.25 | \$0.15 | \$0.17 | \$0.23 |
| Other | Q | \$141 | \$89 | \$61 | Q | \$7.07 | \$6.83 | \$7.38 | Q | \$0.20 | \$0.16 | \$0.24 |
| Provider of direct input on energy- related equipment purchases | | | | | | | | | | | | |
| Building owner | \$2,691 | \$4,503 | \$4,083 | \$2,527 | \$7.64 | \$6.73 | \$8.21 | \$7.06 | \$0.28 | \$0.26 | \$0.21 | \$0.22 |
| Business owner or tenant | \$260 | \$500 | \$481 | \$338 | \$8.06 | \$6.55 | \$7.80 | \$7.40 | \$0.27 | \$0.33 | \$0.28 | \$0.25 |
| Property management | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q |
| Other | \$156 | \$250 | \$210 | \$123 | \$7.12 | \$7.20 | \$7.55 | \$7.81 | \$0.34 | \$0.25 | \$0.24 | \$0.12 |
| Number of establishments | | | | | | | | | | | | |
| 1 2 to 5 | \$2,134 \$521 | \$3,689 \$875 | \$3,412 \$785 | \$1,849 \$722 | \$7.86 \$7.67 | \$6.73 \$6.85 | \$8.47 \$7.82 | \$7.53 \$6.67 | \$0.31 \$0.25 | \$0.25 \$0.27 | \$0.24 \$0.20 | \$0.22 \$0.23 |
| 6 to 10 | \$521 \$206 | \$875 | \$785 | \$722 | \$7.67 \$7.60 | \$6.79 | \$7.82 | \$6.81 | \$0.25 | \$0.27 | \$0.20 | \$0.23 |
| 11 to 20 | \$206 \$150 | \$339 | \$253 | \$255 | \$6.22 | \$6.79 | \$7.24 | \$6.81 | \$0.22 | \$0.31 | \$0.17 | \$0.26 |
| More than 20 | \$130 \$94 | \$137 | \$136 | \$154 | \$6.25 | \$5.70 | \$6.12 | \$5.91 | \$0.24 | \$0.34 | \$0.21 | \$0.13 |
| Currently unoccupied | , , , , , , , , , , , , , , , , , , , | Q Q | 7130 Q | Q | , Q | γ3.70 Q | Q Q | γ3.31 Q | 70.14 Q | Q Q | Q Q | ο.13 Q |
| ,: | | - | | - | - | · | | - | - | - | · - | · |

Table C26. Natural gas expenditures by Census region, 2018

| | | | ••• | | Natural gas | expenditu | ıres (dollar | s) | | | | |
|---|----------------------------|--------------|-----------|---------|------------------|--------------|--------------|--------|----------------|--------------|--------|--------|
| | Total natur (million do | | enditures | | Per thousar | nd cubic fe | et | ! | Per squar | e foot | | |
| | North- east | Mid- west | South | West | North- east | Mid- west | South | West | North- east | Mid- west | South | West |
| All buildings | \$3,129 | \$5,294 | \$4,818 | \$3,050 | \$7.65 | \$6.73 | \$8.12 | \$7.14 | \$0.28 | \$0.26 | \$0.22 | \$0.22 |
| Predominant exterior wall material | | | | | | | | | | | | |
| Brick, stone, or stucco | \$1,775 | \$2,910 | \$2,856 | \$1,542 | \$7.55 | \$6.65 | \$8.16 | \$6.97 | \$0.28 | \$0.29 | \$0.23 | \$0.24 |
| Concrete (block or poured) | \$794 | \$979 | \$825 | \$703 | \$7.44 | \$6.50 | \$7.86 | \$7.03 | \$0.28 | \$0.24 | \$0.21 | \$0.21 |
| Concrete panels | \$123 | \$354 | \$451 | \$237 | \$7.54 | \$6.19 | \$7.30 | \$7.37 | \$0.19 | \$0.18 | \$0.21 | \$0.14 |
| Siding or shingles | \$138 | \$383 | \$164 | \$173 | \$9.27 | \$8.06 | \$9.76 | \$7.98 | \$0.38 | \$0.30 | \$0.42 | \$0.26 |
| Metal panels | \$159 | \$547 | \$415 | \$188 | \$8.82 | \$7.35 | \$8.67 | \$8.07 | \$0.28 | \$0.23 | \$0.18 | \$0.20 |
| Window glass | \$95 | \$55 | \$61 | \$88 | \$8.74 | \$5.72 | \$8.73 | \$7.16 | \$0.29 | \$0.15 | \$0.15 | \$0.16 |
| Other | Q | \$67 | \$44 | \$120 | Q | \$7.26 | \$9.58 | \$7.14 | Q | \$0.20 | \$0.13 | \$0.24 |
| Predominant roof material | | | | | | | | | | | | |
| Metal surfacing | \$237 | \$805 | \$1,015 | \$403 | \$9.07 | \$7.35 | \$8.82 | \$7.66 | \$0.30 | \$0.25 | \$0.21 | \$0.23 |
| Synthetic or rubber | \$1,577 | \$1,929 | \$1,642 | \$1,009 | \$7.27 | \$6.32 | \$7.87 | \$6.64 | \$0.28 | \$0.25 | \$0.23 | \$0.20 |
| Built-up | \$580 | \$1,147 | \$976 | \$747 | \$7.40 | \$6.43 | \$7.54 | \$7.02 | \$0.22 | \$0.25 | \$0.20 | \$0.22 |
| Slate or tile shingles | \$156 | \$258 | \$164 | \$191 | \$8.63 | \$7.31 | \$9.11 | \$8.31 | \$0.34 | \$0.39 | \$0.22 | \$0.24 |
| Wooden materials (including | | | | | | | | | | | | |
| shingles) | Q | Q | Q | \$113 | Q | Q | Q | \$8.49 | Q | Q | Q | \$0.34 |
| Asphalt, fiberglass, or | | | | | | | | | | | | |
| other shingles | \$376 | \$940 | \$723 | \$452 | \$8.66 | \$7.43 | \$8.54 | \$7.11 | \$0.34 | \$0.27 | \$0.25 | \$0.22 |
| Concrete | Q | Q | \$112 | \$37 | Q | Q | \$7.30 | \$7.94 | Q | Q | \$0.17 | \$0.14 |
| Other | \$99 | \$107 | \$105 | \$98 | \$7.35 | \$6.46 | \$7.28 | \$8.09 | \$0.28 | \$0.24 | \$0.14 | \$0.17 |
| | | | | | | | | | | | | |
| Roof tilt | | | | | | | | | | | | |
| Flat | \$2,159 | \$2,998 | \$2,837 | \$1,853 | \$7.26 | \$6.35 | \$7.65 | \$6.77 | \$0.26 | \$0.26 | \$0.22 | \$0.21 |
| Shallow pitch | \$536 | \$1,557 | \$1,233 | \$821 | \$8.32 | \$7.13 | \$8.76 | \$7.94 | \$0.32 | \$0.25 | \$0.20 | \$0.21 |
| Steeper pitch | \$434 | \$739 | \$748 | \$376 | \$9.18 | \$7.70 | \$9.17 | \$7.47 | \$0.36 | \$0.27 | \$0.23 | \$0.25 |
| Cool roof characteristics (more than o may apply) | one | | | | | | | | | | | |
| White or reflective coating or paint | \$877 | \$1,537 | \$1,863 | \$1,358 | \$7.22 | \$6.44 | \$7.78 | \$6.83 | \$0.28 | \$0.27 | \$0.21 | \$0.20 |
| White or reflective tiles or shingles | \$87 | \$130 | \$160 | \$78 | \$6.29 | \$7.42 | \$8.37 | \$8.08 | \$0.24 | \$0.27 | \$0.21 | \$0.20 |
| Aluminum coating | \$116 | \$234 | \$307 | \$132 | \$7.07 | \$7.77 | \$8.23 | \$7.00 | \$0.24 | \$0.31 | \$0.20 | \$0.25 |
| Ballasted roof system | \$305 | \$431 | \$240 | \$268 | \$7.64 | \$5.87 | \$7.10 | \$5.59 | \$0.27 | \$0.22 | \$0.20 | \$0.27 |
| Other cool roof property | Q | Q | \$95 | \$37 | Q | Q | \$7.45 | \$6.42 | Q | Q | \$0.15 | \$0.18 |
| Renovations since 2000 (more than one may apply) | | | | | | | | | | | | |
| Any type of renovation | \$1,754 | \$2,663 | \$2,481 | \$1,417 | \$7.44 | \$6.51 | \$8.11 | \$6.76 | \$0.29 | \$0.25 | \$0.23 | \$0.23 |
| Addition or annex | \$483 | \$863 | \$707 | \$319 | \$6.90 | \$6.12 | \$7.89 | \$6.32 | \$0.23 | \$0.24 | \$0.28 | \$0.25 |
| Reduction in floorspace | \$84 | \$87 | \$73 | Q | | \$5.69 | \$7.83 | Q Q | \$0.30 | \$0.18 | \$0.19 | Q Q |
| Roof replacement | \$898 | \$1,285 | \$1,025 | \$581 | \$6.98 | \$6.34 | \$8.00 | \$6.30 | \$0.29 | \$0.25 | \$0.22 | \$0.24 |
| Interior wall reconfiguration | \$777 | \$1,194 | \$1,023 | \$654 | \$0.98 \$7.29 | \$6.33 | \$7.66 | \$6.37 | \$0.25 | \$0.23 | \$0.22 | \$0.24 |
| | | \$651 | | | | \$6.54 | | \$6.06 | | \$0.22 | \$0.24 | |
| Window replacement | \$552 | | \$485 | \$436 | \$6.82 | | \$9.24 | | \$0.28 | | | \$0.25 |
| HVAC equipment upgrade | \$1,300 | \$1,512 | \$1,383 | \$864 | \$7.30 | \$6.22 | \$7.90 | \$6.63 | \$0.28 | \$0.24 | \$0.21 | \$0.23 |
| Lighting upgrade | \$1,225 | \$1,697 | \$1,440 | \$1,017 | \$7.40 | \$6.33 | \$7.90 | \$6.56 | \$0.28 | \$0.23 | \$0.21 | \$0.23 |
| Electrical upgrade | \$819 | \$944 | \$855 | \$489 | \$6.91 | \$6.22 | \$8.08 | \$6.22 | \$0.28 | \$0.23 | \$0.25 | \$0.24 |
| Plumbing system upgrade | \$802 | \$815 | \$805 | \$496 | \$7.23 | \$6.03 | \$7.97 | \$6.20 | \$0.28 | \$0.23 | \$0.24 | \$0.24 |
| Insulation upgrade | \$422 | \$406 | \$395 | \$299 | \$6.94 | \$6.10 | \$7.76 | \$5.74 | \$0.26 | \$0.22 | \$0.24 | \$0.28 |
| Fire, safety, or security upgrade | \$982 | \$1,170 | \$1,005 | \$600 | \$6.89 | \$6.02 | \$7.64 | \$6.42 | \$0.29 | \$0.23 | \$0.22 | \$0.23 |
| Structural upgrade | \$261 | \$185 | \$218 | \$233 | \$7.02 | \$5.57 | \$7.96 | \$5.63 | \$0.31 | \$0.18 | \$0.26 | \$0.33 |
| Other | Q | Q | \$106 | Q | | Q | \$7.12 | Q | Q | Q | \$0.21 | Q |
| No renovations | \$1,242 | \$2,309 | \$1,999 | \$1,343 | \$7.99 | \$7.11 | \$8.26 | \$7.65 | \$0.26 | \$0.28 | \$0.21 | \$0.21 |
| Buildings constructed 2013 or later | \$133 | \$323 | \$339 | \$291 | \$7.38 | \$6.17 | \$7.42 | \$6.87 | \$0.23 | \$0.22 | \$0.20 | \$0.18 |

Table C26. Natural gas expenditures by Census region, 2018

| | | | | | Natural gas | expenditu | res (dollar | s) | | | | |
|---|---------------------------------------|------------------|--------------------|------------------|------------------|---------------------------------------|------------------|------------------|----------------|------------------|------------|------------|
| | Total natur (million do | | enditures | | Per thousar | nd cubic fe | et | | Per squar | e foot | | |
| | North- east | Mid- west | South | West | North- east | Mid- west | South | West | North- east | Mid- west | South | West |
| All buildings | \$3,129 | \$5,294 | \$4,818 | \$3,050 | \$7.65 | \$6.73 | \$8.12 | \$7.14 | \$0.28 | \$0.26 | \$0.22 | \$0.22 |
| Energy sources (more than one may apply) | | | | | | | | | | | | |
| Electricity | \$3,129 | \$5,294 | \$4,818 | \$3,050 | \$7.65 | \$6.73 | \$8.12 | \$7.14 | \$0.28 | \$0.26 | \$0.22 | \$0.22 |
| Natural gas | \$3,129 | \$5,294 | \$4,818 | \$3,050 | \$7.65 | \$6.73 | \$8.12 | \$7.14 | \$0.28 | \$0.26 | \$0.22 | \$0.22 |
| Fuel oil | \$893 | \$839 | \$1,011 | \$750 | \$7.43 | \$6.10 | \$7.02 | \$6.24 | \$0.25 | \$0.23 | \$0.22 | \$0.24 |
| District heat | \$169 | \$93 | \$179 | \$134 | \$6.76 | \$5.67 | \$6.72 | \$6.72 | \$0.17 | \$0.08 | \$0.13 | \$0.17 |
| District chilled water | \$55 | \$56 | \$205 | \$68 | \$6.28 | \$5.47 | \$6.30 | \$6.72 | \$0.19 | \$0.09 | \$0.14 | \$0.11 |
| Propane | \$256 | \$250 | \$201 | \$254 | \$6.60 | \$6.54 | \$7.42 | \$5.60 | \$0.27 | \$0.21 | \$0.17 | \$0.20 |
| Solar | \$225 | \$96 | \$75 | \$232 | \$7.92 | \$5.44 | \$7.08 | \$6.34 | \$0.20 | \$0.16 | \$0.19 | \$0.19 |
| Wood, coal, and other | Q | \$123 | Q | Q | | \$6.56 | Q | Q | Q | \$0.26 | Q | Q |
| Space-heating energy sources | | | | | | | | | | | | |
| Natural gas | \$2,886 | \$5,018 | \$4,046 | \$2,693 | \$7.64 | \$6.73 | \$8.06 | \$7.00 | \$0.29 | \$0.27 | \$0.23 | \$0.23 |
| Natural gas main | \$2,677 | \$4,754 | \$3,453 | \$2,417 | \$7.63 | \$6.73 | \$8.03 | \$6.99 | \$0.30 | \$0.28 | \$0.24 | \$0.24 |
| Natural gas secondary | \$209 | \$264 | \$593 | \$276 | \$7.79 | \$6.68 | \$8.27 | \$7.14 | \$0.19 | \$0.15 | \$0.18 | \$0.15 |
| Other excluding natural gas | \$241 | \$276 | \$717 | \$286 | \$7.71 | \$6.80 | \$8.36 | \$8.05 | \$0.18 | \$0.17 | \$0.17 | \$0.14 |
| Buildings without heating | Q | Q | \$55 | \$72 | Q | Q | \$9.81 | \$9.58 | Q | Q | \$0.23 | \$0.21 |
| Primary space-heating | | | | | | | | | | | | |
| energy source | \$288 | ¢460 | Ć1 1E7 | ¢4F2 | ćo 22 | \$6.96 | ¢0 F0 | ¢7.67 | \$0.22 | ¢0.20 | \$0.19 | \$0.15 |
| Electricity Natural gas | \$2,677 | \$460 \$4,754 | \$1,157 \$3,453 | \$452 \$2,417 | \$8.22 \$7.63 | \$6.73 | \$8.59 \$8.03 | \$7.67 \$6.99 | \$0.22 | \$0.20 \$0.28 | \$0.19 | \$0.15 |
| Fuel oil | ۶۷,077 Q | ,4,734 N | 33,433 Q | ۶۷,417 Q | \$8.91 | 30.73 N | 38.03 Q | 30.99 Q | 30.30 Q | 30.28 N | ۶۵.24 Q | 30.24 Q |
| District heat | \$126 | \$77 | \$148 | \$101 | \$6.62 | \$5.65 | \$6.74 | \$7.41 | \$0.14 | \$0.08 | \$0.12 | \$0.15 |
| Propane | , , , , , , , , , , , , , , , , , , , | ۶/ <i>/</i> N | 9148 N | 7101 Q | | , , , , , , , , , , , , , , , , , , , | 30.74 N | ۶۲.41 Q | 70.14 N | 70.08 N | ου.12 Ν | λ0.13 Q |
| Other sources ^b | N | Q | N | Q | N | Q | N | Q | N | Q | N | Q |
| Cooling energy sources | | | | | | | | | | | | |
| Natural gas | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q |
| Other excluding natural gas | \$2,972 | \$5,014 | \$4,741 | \$2,842 | \$7.68 | \$6.71 | \$8.11 | \$7.09 | \$0.28 | \$0.26 | \$0.22 | \$0.22 |
| Buildings without cooling | \$90 | \$240 | Q | \$195 | \$8.53 | \$7.65 | Q | \$7.78 | \$0.22 | \$0.26 | Q | \$0.20 |
| Water-heating energy sources | | | | | | | | | | | | |
| Natural gas | \$2,156 | \$3,959 | \$3,496 | \$2,500 | \$7.34 | \$6.52 | \$7.78 | \$6.98 | \$0.31 | \$0.28 | \$0.24 | \$0.23 |
| Other excluding natural gas | \$920 | \$1,273 | \$1,228 | \$484 | \$8.44 | \$7.40 | \$9.13 | \$7.87 | \$0.22 | \$0.21 | \$0.19 | \$0.16 |
| Buildings without water heating | Q | \$63 | \$94 | \$67 | Q | \$8.41 | \$9.89 | \$8.61 | Q | \$0.25 | \$0.16 | \$0.16 |
| Cooking energy sources | | | | | | | | | | | | |
| Natural gas | \$1,626 | \$2,317 | \$2,421 | \$1,676 | \$6.80 | \$6.12 | \$7.57 | \$6.66 | \$0.31 | \$0.30 | \$0.26 | \$0.30 |
| Other excluding natural gas | \$344 | \$742 | \$509 | \$252 | \$9.37 | \$7.08 | \$8.10 | \$7.01 | \$0.27 | \$0.24 | \$0.18 | \$0.19 |
| Buildings without cooking | \$1,158 | \$2,236 | \$1,888 | \$1,123 | \$8.68 | \$7.39 | \$8.97 | \$8.01 | \$0.24 | \$0.23 | \$0.19 | \$0.16 |
| Energy end uses | | | | | | | | | | | | |
| (more than one may apply) | | | | | | | | | | | | |
| Buildings with space heating | \$3,127 | \$5,294 | \$4,763 | \$2,978 | \$7.65 | \$6.73 | \$8.11 | \$7.09 | \$0.28 | \$0.26 | \$0.22 | \$0.22 |
| Buildings with cooling | \$3,039 | \$5,054 | \$4,748 | \$2,855 | \$7.62 | \$6.70 | \$8.10 | \$7.09 | \$0.28 | \$0.26 | \$0.22 | \$0.22 |
| Buildings with water heating | \$3,075 | \$5,232 | \$4,725 | \$2,984 | \$7.63 | \$6.72 | \$8.09 | \$7.11 | \$0.28 | \$0.26 | \$0.22 | \$0.22 |
| Buildings with cooking | \$1,970 | \$3,059 | \$2,931 | \$1,928 | \$7.15 | \$6.32 | \$7.66 | \$6.71 | \$0.30 | \$0.28 | \$0.24 | \$0.28 |
| Buildings with manufacturing | \$226 | \$528 | \$214 | \$231 | \$7.79 | \$6.41 | \$7.79 | \$8.10 | \$0.27 | \$0.27 | \$0.16 | \$0.21 |
| Buildings with electricity | \$1,430 | \$1,561 | \$1,633 | ¢1 127 | \$7.12 | \$6.01 | \$7.43 | \$6.25 | \$0.27 | \$0.25 | \$0.22 | \$0.23 |
| generation Buildings with lighting | | | | \$1,137 | | | | | | | | |
| Buildings with lighting | \$3,123 | \$5,281 | \$4,796 | \$3,044 | \$7.64 | \$6.73 | \$8.12 | \$7.13 | \$0.28 | \$0.26 | \$0.22 | \$0.22 |

Table C26. Natural gas expenditures by Census region, 2018

| Not heated Q | | | | | | Natural gas | expenditu | res (dollar | s) | | | | |
|---|---------------------------------|---------|----------|-----------|------------|-------------|-------------|-------------|--------|-----------|--------|--------|------------------|
| Percentage of floorspace heated Say | | | | enditures | | Per thousan | nd cubic fe | et | | Per squar | e foot | | |
| Not-heated | | | | South | West | | | South | West | | | South | West |
| Not heated | All buildings | \$3,129 | \$5,294 | \$4,818 | \$3,050 | \$7.65 | \$6.73 | \$8.12 | \$7.14 | \$0.28 | \$0.26 | \$0.22 | \$0.22 |
| Not heated | Percentage of floorspace heated | | | | | | | | | | | | |
| 18k to 50% 5121 5210 5361 5223 57.63 57.28 50.23 50.21 50.15 50.28 50.20 50. | | Q | Q | \$55 | \$72 | Q | Q | \$9.81 | \$9.58 | Q | Q | \$0.23 | \$0.21 |
| Signatur | 1% to 50% | | | | | | | | | | | | \$0.11 |
| | 51% to 99% | | \$979 | | | | \$6.80 | | | \$0.26 | \$0.28 | \$0.20 | \$0.21 |
| Not cooled S90 S240 Q S195 S8.53 S7.65 Q S7.78 S0.22 S0.26 Q S196 S8.50 | 100% | \$2,378 | \$4,105 | \$3,132 | \$1,898 | \$7.76 | \$6.68 | \$8.22 | \$6.93 | \$0.29 | \$0.26 | \$0.24 | \$0.25 |
| Not cooled \$99 \$240 \$Q \$195 \$8.93 \$7.65 \$Q \$7.88 \$0.22 \$0.26 \$Q | Dercentage of flooreness spaled | | | | | | | | | | | | |
| 194 to 50% 5731 5937 5534 5456 58.15 56.91 58.76 57.03 50.29 50.29 50.20 50.26 51.56 | | ¢nn | \$240 | | ¢10E | Ç0 E2 | ¢7.65 | | ¢7 70 | ¢0.22 | ¢0.26 | | \$0.20 |
| S11400 S1,200 S1,565 S1,584 S765 S7,24 S6.57 S7.73 S6.78 S0.27 S0.26 S0.22 S0.26 S0.25 S | | | | | | | | | | | | | \$0.20 |
| 100% | | | | | | | | | | | | | \$0.17 |
| Heating equipment (more than one may apply) | | | | | | | | | | | | | \$0.20 |
| Packaged heating units S1,592 S3,004 S2,913 S1,829 S7,64 S6,46 S7,94 S6,95 S0,29 S0,26 S0,22 S0,26 Carriances S560 S1,121 S892 S642 S7,34 S7,67 S8,10 S7,17 S0,31 S0,29 S0,24 S0,24 S0,26 S0,24 S0,2 | 100% | \$1,207 | 32,332 | 32,030 | Ş1,054 | \$7.70 | Ş0.70 | \$0.ZZ | \$7.04 | ŞU.26 | ŞU.29 | ŞU.24 | ŞU.25 |
| Packaged heating units | | | | | | | | | | | | | |
| Furnaces | | Ć1 F02 | ¢2.004 | ¢2.012 | ¢1 920 | ¢7.64 | ¢c.46 | ¢7.04 | ¢c or | ¢0.20 | ¢0.26 | ¢0.22 | \$0.22 |
| Individual space heaters \$773 \$1,250 \$1,186 \$839 \$7.37 \$6.88 \$7.81 \$6.66 \$0.28 \$0.24 \$0.24 \$0.00000 \$0.00000 \$0.00000 \$0.00000 \$0.00000 \$0.00000 \$0.000000 \$0.0000000 \$0.0000000000 | | | | | | | | | | | | | |
| Bollers S1,749 S2,152 S1,675 S1,288 S7.26 S6.13 S7.61 S6.14 S0.30 S0.27 S0.25 S1.64 S0.40 S0.25 | | | | | | | | | | | | | \$0.24 |
| Heat pumps S526 S577 S827 S542 S7.02 S6.25 S7.65 S6.38 S0.26 S0.25 S0.20 District heat | | | | | | | | | | | | | \$0.24 \$0.25 |
| District heat | | | | | | | | | | | | | |
| Duct reheat \$183 \$307 \$437 \$142 \$6.83 \$6.16 \$7.01 \$5.73 \$0.25 \$0.25 \$0.18 \$0.00 \$0 | | | | | | | | | | | | | \$0.21 |
| Coling equipment (more than one may apply) Packaged air-conditioning units S2,205 S3,533 S3,309 S1,956 S7.66 S6.53 S7.99 S7.31 S0.29 S0.28 S0.22 Regisdential-type central air conditioners S713 S1,567 S998 S507 S7.62 S7.18 S8.00 S7.53 S0.33 S0.27 S0.25 Individual air conditioners S788 S895 S1,159 S720 S6.79 S7.65 S7.68 S6.42 S6.42 S6.42 S6.53 S7.99 S7.07 S0.31 S0.28 S0.22 S0.23 Individual air conditioners S768 S895 S1,159 S720 S6.77 S6.63 S7.64 S6.42 S6.42 S0.25 S0.25 S0.25 S0.25 S6.44 S6.40 S6.44 | | | | | | | | | | | | | \$0.16 |
| Cooling equipment (more than one may apply) Packaged air-conditioning units \$2,205 \$3,533 \$3,309 \$1,956 \$7.66 \$6.53 \$7.99 \$7.31 \$0.29 \$0.28 \$0.22 Residential-type central air conditioners \$713 \$1,567 \$998 \$507 \$7.62 \$7.18 \$8.00 \$7.55 \$0.33 \$0.27 \$0.25 Individual air conditioners \$809 \$860 \$627 \$428 \$6.90 \$6.59 \$7.95 \$7.07 \$0.31 \$0.28 \$0.22 \$1.00 | | | | | <u>-</u> | | | | | | | | \$0.19 Q |
| Packaged air-conditioning units S2,205 S3,533 S3,309 S1,956 S7.66 S6.53 S7.99 S7.31 S0.29 S0.28 S0.22 Residential-type central air conditioners S713 S1,567 S998 S507 S7.62 S7.18 S8.00 S7.53 S0.33 S0.27 S0.25 Individual air conditioners S809 S860 S627 S428 S6.90 S6.59 S7.95 S7.07 S0.31 S0.28 S0.21 Central chillers S768 S895 S1,159 S720 S6.77 S5.63 S7.64 S6.42 S0.25 S0.22 S0.23 Heat pumps S428 S306 S448 S523 S7.66 S6.09 S7.41 S6.33 S0.24 S0.21 S0.17 District chilled water S55 S56 S205 S68 S6.28 S5.47 S6.30 S6.72 S0.19 S0.09 S0.14 S6.33 S0.24 S0.21 S0.17 District chilled water S55 S56 S205 S68 S6.28 S5.47 S6.30 S6.72 S0.19 S0.09 S0.14 S6.30 S0.24 S0.21 S0.17 S0.21 S0.22 S0.2 | | | | | | | | | | | | | |
| Residential-type central air conditioners \$713 \$1,567 \$998 \$507 \$7.62 \$7.18 \$8.00 \$7.53 \$0.33 \$0.27 \$0.25 \$1.00 \$0 | | | | | | | | | | | | | |
| conditioners \$713 \$1,567 \$998 \$507 \$7.62 \$7.18 \$8.00 \$7.53 \$0.33 \$0.27 \$0.25 Individual air conditioners \$809 \$860 \$627 \$428 \$6.90 \$6.59 \$7.95 \$7.07 \$0.31 \$0.28 \$0.21 Central chillers \$768 \$895 \$1,159 \$720 \$6.77 \$5.63 \$7.44 \$6.42 \$0.25 \$0.22 \$0.23 Heat pumps \$428 \$306 \$448 \$523 \$7.46 \$6.90 \$7.41 \$6.33 \$0.24 \$0.21 \$0.14 District chilled water \$555 \$566 \$688 \$6.49 \$7.47 \$6.33 \$0.24 \$0.02 | Packaged air-conditioning units | \$2,205 | \$3,533 | \$3,309 | \$1,956 | \$7.66 | \$6.53 | \$7.99 | \$7.31 | \$0.29 | \$0.28 | \$0.22 | \$0.22 |
| Individual air conditioners \$809 \$860 \$627 \$428 \$6.90 \$6.59 \$7.95 \$7.07 \$0.31 \$0.28 \$0.21 \$0.21 \$0.22 \$0.23 \$0.22 \$0.23 \$0.24 \$0.25 \$0.22 \$0.23 \$0.24 \$0.25 \$0.22 \$0.23 \$0.24 \$0.25 \$0.25 \$0.22 \$0.23 \$0.24 \$0.25 \$0 | Residential-type central air | | | | | | | | | | | | |
| Central chillers \$768 \$895 \$1,159 \$720 \$6.77 \$5.63 \$7.64 \$6.42 \$0.25 \$0.22 \$0.23 Heat pumps \$428 \$306 \$448 \$523 \$7.46 \$6.09 \$7.41 \$6.33 \$0.24 \$0.21 \$0.17 District chilled water \$55 \$56 \$205 \$68 \$6.28 \$5.47 \$6.30 \$6.72 \$0.19 \$0.09 \$0.14 Swamp coolers Q Q Q \$290 Q Q \$6.96 \$7.10 Q Q \$0.22 Other N N Q Q N N Q Q N N Q Q N N Q Q N N Q Q \$0.22 X N Q Q Q N N Q Q Q Q N N Q Q Q Q Q Q Q Q Q | conditioners | \$713 | \$1,567 | \$998 | \$507 | \$7.62 | \$7.18 | \$8.00 | \$7.53 | \$0.33 | \$0.27 | \$0.25 | \$0.25 |
| Heat pumps \$428 \$306 \$448 \$523 \$7.46 \$6.09 \$7.41 \$6.33 \$0.24 \$0.21 \$0.17 District chilled water \$55 \$56 \$205 \$68 \$6.28 \$5.47 \$6.30 \$6.72 \$0.19 \$0.09 \$0.14 Swamp coolers Q Q Q \$290 Q Q \$6.96 \$7.10 Q Q \$0.22 Other N N N Q Q N N N Q Q N N N Q Q N N N Q Q N N N Q Q N N N Q Q N N N Q Q N N N Q Q N N N Q Q N N N Q Q N N N Q Q N N N Q Q N N N N Q Q N N N N Q N Q N N N Q Q N N N N Q N N N Q N Q N N N N Q N Q N N N N Q N Q N N N N Q N N N Q N N N Q N N N Q N N N Q N N N Q N N N Q N N N Q N N N Q N N N N Q N N N Q N N N N N Q N N N N N Q N N N N N Q N | Individual air conditioners | \$809 | \$860 | \$627 | \$428 | \$6.90 | \$6.59 | \$7.95 | \$7.07 | \$0.31 | \$0.28 | \$0.21 | \$0.26 |
| District chilled water \$55 \$56 \$205 \$68 \$6.28 \$5.47 \$6.30 \$6.72 \$0.19 \$0.09 \$0.14 \$0.00 \$0 | Central chillers | \$768 | \$895 | \$1,159 | \$720 | \$6.77 | \$5.63 | \$7.64 | \$6.42 | \$0.25 | \$0.22 | \$0.23 | \$0.26 |
| Swamp coolers Q Q Q \$290 Q \$6.96 \$7.10 Q Q \$0.22 Other N N Q Q N N Q Q N N Q Q N N Q S0.22 HVAC features (more than one may apply) Economizer cycle \$1,483 \$2,121 \$1,617 \$1,415 \$7.18 \$6.05 \$7.40 \$6.64 \$0.26 \$0.24 \$0.23 Variable air volume (VAV) system \$1,054 \$1,588 \$1,366 \$1,107 \$7.12 \$6.08 \$7.66 \$6.51 \$0.24 \$0.23 \$0.20 Dedicated outside air system (DOAS) \$420 \$482 \$534 \$361 \$6.50 \$6.13 \$7.08 \$6.24 \$0.31 \$0.26 \$0.20 Demand controlled ventilation (DCV) \$575 \$502 \$558 \$302 \$7.35 \$6.08 \$7.38 \$6.57 \$0.26 \$0.22 \$0.22 Regular HVAC maintenance <t< td=""><td>Heat pumps</td><td>\$428</td><td>\$306</td><td>\$448</td><td>\$523</td><td>\$7.46</td><td>\$6.09</td><td>\$7.41</td><td>\$6.33</td><td>\$0.24</td><td>\$0.21</td><td>\$0.17</td><td>\$0.24</td></t<> | Heat pumps | \$428 | \$306 | \$448 | \$523 | \$7.46 | \$6.09 | \$7.41 | \$6.33 | \$0.24 | \$0.21 | \$0.17 | \$0.24 |
| Other N N Q Q N N Q Q N N Q Q N N Q Q N N Q N N Q N N Q N N Q N N Q N N Q N N Q N N Q N N Q N N Q N N Q N N Q N N Q N N Q Q N N Q Q N N Q Q N N Q Q N N Q Q N N Q Q N Q Q N Q Q N Q Q N Q Q Q N Q Q Q N Q Q Q Q Q Q Q Q Q <td>District chilled water</td> <td>\$55</td> <td>\$56</td> <td>\$205</td> <td>\$68</td> <td>\$6.28</td> <td>\$5.47</td> <td>\$6.30</td> <td>\$6.72</td> <td>\$0.19</td> <td>\$0.09</td> <td>\$0.14</td> <td>\$0.11</td> | District chilled water | \$55 | \$56 | \$205 | \$68 | \$6.28 | \$5.47 | \$6.30 | \$6.72 | \$0.19 | \$0.09 | \$0.14 | \$0.11 |
| HVAC features (more than one may apply) Economizer cycle \$1,483 \$2,121 \$1,617 \$1,415 \$7.18 \$6.05 \$7.40 \$6.64 \$0.26 \$0.24 \$0.23 \$0.20 \$0.2 | Swamp coolers | Q | Q | Q | \$290 | Q | Q | \$6.96 | \$7.10 | Q | Q | \$0.22 | \$0.31 |
| Conomizer cycle \$1,483 \$2,121 \$1,617 \$1,415 \$7.18 \$6.05 \$7.40 \$6.64 \$0.26 \$0.24 \$0.23 \$0.20 | Other | N | N | Q | Q | N | N | Q | Q | N | N | Q | Q |
| Economizer cycle \$1,483 \$2,121 \$1,617 \$1,415 \$7.18 \$6.05 \$7.40 \$6.64 \$0.26 \$0.24 \$0.23 \$0.20 \$0. | | | | | | | | | | | | | |
| Variable air volume (VAV) system \$1,054 \$1,588 \$1,366 \$1,107 \$7.12 \$6.08 \$7.66 \$6.51 \$0.24 \$0.23 \$0.20 Dedicated outside air system (DOAS) \$420 \$482 \$534 \$361 \$6.50 \$6.13 \$7.08 \$6.24 \$0.31 \$0.26 \$0.20 Demand controlled ventilation (DCV) \$575 \$502 \$558 \$302 \$7.35 \$6.08 \$7.38 \$6.57 \$0.26 \$0.22 \$0.22 Regular HVAC maintenance \$2,730 \$4,389 \$4,279 \$2,725 \$7.46 \$6.52 \$7.98 \$7.00 \$0.27 \$0.26 \$0.22 Building automation system (BAS) controls heating or cooling \$1,510 \$2,116 \$2,082 \$1,501 \$7.04 \$5.95 \$7.34 \$6.58 \$0.25 \$0.24 \$0.21 Internet-connected or smart thermostat \$174 \$217 \$289 \$235 \$9.34 \$6.88 \$7.88 \$7.51 \$0.36 \$0.19 \$0.16 Programmable thermostat </td <td></td> | | | | | | | | | | | | | |
| Dedicated outside air system (DOAS) \$420 \$482 \$534 \$361 \$6.50 \$6.13 \$7.08 \$6.24 \$0.31 \$0.26 \$0.20 Demand controlled ventilation (DCV) \$575 \$502 \$558 \$302 \$7.35 \$6.08 \$7.38 \$6.57 \$0.26 \$0.22 \$0.22 Regular HVAC maintenance \$2,730 \$4,389 \$4,279 \$2,725 \$7.46 \$6.52 \$7.98 \$7.00 \$0.27 \$0.26 \$0.22 Building automation system (BAS) controls heating or cooling \$1,510 \$2,116 \$2,082 \$1,501 \$7.04 \$5.95 \$7.34 \$6.58 \$0.25 \$0.24 \$0.21 Internet-connected or smart thermostat \$174 \$217 \$289 \$235 \$9.34 \$6.88 \$7.88 \$7.51 \$0.36 \$0.19 \$0.16 Programmable thermostat \$866 \$1,349 \$1,061 \$731 \$8.25 \$7.14 \$9.09 \$7.95 \$0.32 \$0.22 \$0.22 \$0.20 | | | | | | | | | | | | | \$0.22 |
| Demand controlled ventilation (DCV) \$575 \$502 \$558 \$302 \$7.35 \$6.08 \$7.38 \$6.57 \$0.26 \$0.22 \$0.22 Regular HVAC maintenance \$2,730 \$4,389 \$4,279 \$2,725 \$7.46 \$6.52 \$7.98 \$7.00 \$0.27 \$0.26 \$0.22 Building automation system (BAS) controls heating or cooling \$1,510 \$2,116 \$2,082 \$1,501 \$7.04 \$5.95 \$7.34 \$6.58 \$0.25 \$0.24 \$0.21 Internet-connected or smart thermostat \$174 \$217 \$289 \$235 \$9.34 \$6.88 \$7.88 \$7.51 \$0.36 \$0.19 \$0.16 Programmable thermostat \$866 \$1,349 \$1,061 \$731 \$8.25 \$7.14 \$9.09 \$7.95 \$0.32 \$0.28 \$0.25 \$0.00 (more than one may apply) Heating \$1,454 \$2,071 \$1,657 \$948 \$7.66 \$6.74 \$8.27 \$7.42 \$0.31 \$0.25 \$0.22 | | \$1,054 | \$1,588 | | \$1,107 | \$7.12 | | \$7.66 | \$6.51 | \$0.24 | \$0.23 | \$0.20 | \$0.22 |
| Regular HVAC maintenance \$2,730 \$4,389 \$4,279 \$2,725 \$7.46 \$6.52 \$7.98 \$7.00 \$0.27 \$0.26 \$0.22 Building automation system (BAS) controls heating or cooling \$1,510 \$2,116 \$2,082 \$1,501 \$7.04 \$5.95 \$7.34 \$6.58 \$0.25 \$0.24 \$0.21 Internet-connected or smart thermostat \$174 \$217 \$289 \$235 \$9.34 \$6.88 \$7.88 \$7.51 \$0.36 \$0.19 \$0.16 Programmable thermostat \$866 \$1,349 \$1,061 \$731 \$8.25 \$7.14 \$9.09 \$7.95 \$0.32 \$0.28 \$0.25 Main equipment replaced since 2000 (more than one may apply) Heating \$1,454 \$2,071 \$1,657 \$948 \$7.66 \$6.74 \$8.27 \$7.42 \$0.31 \$0.25 \$0.22 | | | <u>-</u> | | | | | | | | | | \$0.26 |
| Building automation system (BAS) controls heating or cooling \$1,510 \$2,116 \$2,082 \$1,501 \$7.04 \$5.95 \$7.34 \$6.58 \$0.25 \$0.24 \$0.21 Internet-connected or smart thermostat \$174 \$217 \$289 \$235 \$9.34 \$6.88 \$7.88 \$7.51 \$0.36 \$0.19 \$0.16 Programmable thermostat \$866 \$1,349 \$1,061 \$731 \$8.25 \$7.14 \$9.09 \$7.95 \$0.32 \$0.28 \$0.25 Main equipment replaced since 2000 (more than one may apply) Heating \$1,454 \$2,071 \$1,657 \$948 \$7.66 \$6.74 \$8.27 \$7.42 \$0.31 \$0.25 \$0.22 | | | | | | | | | | | | \$0.22 | \$0.20 |
| controls heating or cooling \$1,510 \$2,116 \$2,082 \$1,501 \$7.04 \$5.95 \$7.34 \$6.58 \$0.25 \$0.24 \$0.21 Internet-connected or smart thermostat \$174 \$217 \$289 \$235 \$9.34 \$6.88 \$7.88 \$7.51 \$0.36 \$0.19 \$0.16 Programmable thermostat \$866 \$1,349 \$1,061 \$731 \$8.25 \$7.14 \$9.09 \$7.95 \$0.32 \$0.28 \$0.25 Main equipment replaced since 2000 (more than one may apply) Heating \$1,454 \$2,071 \$1,657 \$948 \$7.66 \$6.74 \$8.27 \$7.42 \$0.31 \$0.25 \$0.22 | | \$2,730 | \$4,389 | \$4,279 | \$2,725 | \$7.46 | \$6.52 | \$7.98 | \$7.00 | \$0.27 | \$0.26 | \$0.22 | \$0.22 |
| thermostat \$174 \$217 \$289 \$235 \$9.34 \$6.88 \$7.88 \$7.51 \$0.36 \$0.19 \$0.16 Programmable thermostat \$866 \$1,349 \$1,061 \$731 \$8.25 \$7.14 \$9.09 \$7.95 \$0.32 \$0.28 \$0.25 Main equipment replaced since 2000 (more than one may apply) Heating \$1,454 \$2,071 \$1,657 \$948 \$7.66 \$6.74 \$8.27 \$7.42 \$0.31 \$0.25 \$0.22 | | \$1,510 | \$2,116 | \$2,082 | \$1,501 | \$7.04 | \$5.95 | \$7.34 | \$6.58 | \$0.25 | \$0.24 | \$0.21 | \$0.21 |
| Main equipment replaced since 2000 (more than one may apply) \$1,454 \$2,071 \$1,657 \$948 \$7.66 \$6.74 \$8.27 \$7.42 \$0.31 \$0.25 \$0.25 | Internet-connected or smart | | | | | | | | | | | | |
| Main equipment replaced since 2000 (more than one may apply) Heating \$1,454 \$2,071 \$1,657 \$948 \$7.66 \$6.74 \$8.27 \$7.42 \$0.31 \$0.25 \$0.22 | thermostat | \$174 | \$217 | \$289 | \$235 | \$9.34 | \$6.88 | \$7.88 | \$7.51 | \$0.36 | \$0.19 | \$0.16 | \$0.24 |
| 2000 (more than one may apply) Heating \$1,454 \$2,071 \$1,657 \$948 \$7.66 \$6.74 \$8.27 \$7.42 \$0.31 \$0.25 \$0.22 | Programmable thermostat | \$866 | \$1,349 | \$1,061 | \$731 | \$8.25 | \$7.14 | \$9.09 | \$7.95 | \$0.32 | \$0.28 | \$0.25 | \$0.22 |
| Heating \$1,454 \$2,071 \$1,657 \$948 \$7.66 \$6.74 \$8.27 \$7.42 \$0.31 \$0.25 \$0.22 | | | | | | | | | | | | | |
| | 2000 (more than one may apply) | | | | | | | | | | | | |
| Cooling \$1,199 \$1,400 \$1,048 \$716 \$7.62 \$6.84 \$8.24 \$6.55 \$0.29 \$0.27 \$0.23 | Heating | \$1,454 | \$2,071 | \$1,657 | \$948 | \$7.66 | \$6.74 | \$8.27 | \$7.42 | \$0.31 | \$0.25 | \$0.22 | \$0.21 |
| | Cooling | \$1,199 | \$1,400 | \$1,048 | \$716 | \$7.62 | \$6.84 | \$8.24 | \$6.55 | \$0.29 | \$0.27 | \$0.23 | \$0.24 |

Table C26. Natural gas expenditures by Census region, 2018

| | Natural gas expenditures (dollars) | | | | | | | | | | | | |
|---|------------------------------------|--------------|-----------|---------|----------------|--------------|---------|---------|----------------|--------------|--------|--------|--|
| | Total natur (million do | | enditures | ı | Per thousa | nd cubic fe | et | | Per squar | e foot | | | |
| | North- east | Mid- west | South | West | North- east | Mid- west | South | West | North- east | Mid- west | South | West | |
| All buildings | \$3,129 | \$5,294 | \$4,818 | \$3,050 | \$7.65 | \$6.73 | \$8.12 | \$7.14 | \$0.28 | \$0.26 | \$0.22 | \$0.22 | |
| Water-heating equipment | | | | | | | | | | | | | |
| Centralized system | \$2,116 | \$3,773 | \$3,264 | \$2,081 | \$7.66 | \$6.91 | \$8.45 | \$7.13 | \$0.30 | \$0.26 | \$0.23 | \$0.24 | |
| Distributed system | \$526 | \$721 | \$691 | \$417 | \$7.74 | \$6.54 | \$7.85 | \$7.33 | \$0.24 | \$0.27 | \$0.23 | \$0.19 | |
| Combination of centralized and | | | | | | | | | | | | | |
| distributed systems | \$434 | \$738 | \$770 | \$486 | \$7.40 | \$6.03 | \$7.04 | \$6.83 | \$0.26 | \$0.23 | \$0.18 | \$0.19 | |
| Generation technologies (more than one may apply) | | | | | | | | | | | | | |
| Reciprocating engine generators | \$1,221 | \$1,389 | \$1,526 | \$877 | \$7.06 | \$6.01 | \$7.45 | \$6.22 | \$0.27 | \$0.25 | \$0.22 | \$0.25 | |
| Solar panels | \$225 | \$95 | \$72 | \$224 | \$7.92 | \$5.44 | \$7.17 | \$6.27 | \$0.20 | \$0.16 | \$0.19 | \$0.19 | |
| Other generation technology | \$103 | Q | \$66 | \$83 | \$5.80 | Q | \$7.04 | \$5.62 | \$0.29 | Q | \$0.19 | \$0.19 | |
| Food preparation or serving areas in non-food service buildings | | | | | | | | | | | | | |
| (more than one may apply) | | | | | | | | | | | | | |
| Snack bar, concession stand, or coffee | | | | | | | | | | | | | |
| shop | \$420 | \$700 | \$565 | \$542 | \$6.55 | \$6.04 | \$6.39 | \$5.83 | \$0.30 | \$0.26 | \$0.19 | \$0.25 | |
| Fast food or small restaurant | \$420 | \$692 | \$515 | \$552 | \$5.86 | \$6.35 | \$6.34 | \$5.98 | \$0.29 | \$0.29 | \$0.19 | \$0.26 | |
| Cafeteria or large restaurant | \$669 | \$815 | \$875 | \$541 | \$6.67 | \$5.54 | \$7.06 | \$5.82 | \$0.26 | \$0.21 | \$0.22 | \$0.26 | |
| Commercial kitchen or | | | | | | | | | | | | | |
| food preparation area | \$918 | \$1,249 | \$1,245 | \$774 | \$6.62 | \$5.89 | \$7.57 | \$6.16 | \$0.32 | \$0.27 | \$0.23 | \$0.26 | |
| Small kitchen area | \$820 | \$1,357 | \$966 | \$688 | \$7.25 | \$6.62 | \$7.52 | \$6.46 | \$0.28 | \$0.25 | \$0.19 | \$0.22 | |
| Annual consumption (hundred cubic feet) | | | | | | | | | | | | | |
| 1,000 or less | \$45 | \$152 | \$233 | \$175 | \$12.69 | \$10.33 | \$15.20 | \$12.31 | \$0.12 | \$0.15 | \$0.10 | \$0.08 | |
| 1,001 to 5,000 | \$451 | \$955 | \$797 | \$462 | \$10.44 | \$8.71 | \$9.87 | \$8.45 | \$0.29 | \$0.24 | \$0.19 | \$0.16 | |
| 5,001 to 10,000 | \$404 | \$830 | \$658 | \$509 | \$9.12 | \$7.50 | \$8.87 | \$7.87 | \$0.27 | \$0.26 | \$0.19 | \$0.25 | |
| 10,001 to 25,000 | \$597 | \$1,130 | \$1,154 | \$793 | \$9.29 | \$7.22 | \$8.78 | \$7.53 | \$0.29 | \$0.28 | \$0.24 | \$0.26 | |
| 25,001 to 50,000 | \$464 | \$882 | \$595 | \$311 | \$6.73 | \$5.85 | \$6.96 | \$6.43 | \$0.21 | \$0.29 | \$0.21 | \$0.23 | |
| 50,001 to 100,000 | \$502 | \$502 | \$528 | \$280 | \$6.38 | \$5.71 | \$6.41 | \$5.79 | \$0.31 | \$0.25 | \$0.26 | \$0.24 | |
| Over 100,000 | \$666 | \$843 | \$853 | \$521 | \$6.27 | \$5.40 | \$6.90 | \$5.67 | \$0.34 | \$0.27 | \$0.40 | \$0.37 | |
| | | | | | | | | | | | | | |

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

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

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

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

 $^{{\}it ^aClimate\ zones}\ \ are\ based\ on\ ASHRAE\ Standard\ 169-2021;\ see\ https://www.eia.gov/consumption/commercial/maps.php\#defined.$

^bOther sources includes wood, coal, solar, and all other energy sources.

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

N = No buildings in reporting sample.

| | RSEs for total natural gas expenditures | | | | Per thous | and cub | ic feet | | Per squar | e foot | | |
|-----------------------------------|---|------|-------|------|-----------|---------|---------|--------|-----------|--------|-------|------|
| | North- | Mid- | Cauth | Most | North- | Mid- | Counth | \4/a-+ | North- | Mid- | C | West |
| | east | west | South | West | east | west | South | West | east | west | South | West |
| All buildings | 7.2 | 8.2 | 6.6 | 10.3 | 2.1 | 1.7 | 2.0 | 4.1 | 5.1 | 2.7 | 4.2 | 4.3 |
| Building floorspace (square feet) | | | | | | | | | | | | |
| 1,001 to 5,000 | 21.1 | 19.8 | 15.8 | 16.3 | 5.1 | 4.7 | 5.0 | 5.0 | 12.9 | 6.3 | 11.8 | 8.1 |
| 5,001 to 10,000 | 18.3 | 14.9 | 19.8 | 17.9 | 5.5 | 2.6 | 3.7 | 4.2 | 10.3 | 12.9 | 13.8 | 10.7 |
| 10,001 to 25,000 | 16.6 | 15.4 | 17.7 | 16.3 | 5.0 | 2.0 | 2.4 | 4.6 | 7.3 | 5.8 | 8.3 | 8.0 |
| 25,001 to 50,000 | 13.5 | 12.6 | 12.8 | 12.5 | 5.8 | 2.3 | 4.4 | 4.3 | 7.7 | 6.4 | 8.8 | 8.6 |
| 50,001 to 100,000 | 10.9 | 15.0 | 14.4 | 15.3 | 3.5 | 2.9 | 2.7 | 4.9 | 5.4 | 9.8 | 13.1 | 9.3 |
| 100,001 to 200,000 | 15.2 | 13.7 | 14.2 | 16.0 | 2.6 | 2.4 | 5.2 | 5.3 | 7.6 | 6.8 | 9.0 | 11.4 |
| 200,001 to 500,000 | 15.2 | 11.5 | 10.0 | 23.1 | 9.9 | 1.4 | 6.1 | 3.3 | 10.9 | 5.6 | 9.3 | 14.0 |
| Over 500,000 | 16.8 | 12.9 | 14.0 | 47.6 | 10.1 | 3.2 | 6.7 | 10.6 | 14.1 | 10.1 | 13.5 | 24.9 |
| Principal building activity | | | | | | | | | | | | |
| Education | 12.9 | 15.5 | 16.4 | 15.0 | 3.6 | 4.0 | 4.4 | 4.3 | 5.9 | 8.7 | 9.4 | 5.4 |
| Food sales | 44.0 | 31.1 | 38.9 | 47.8 | 2.6 | 3.9 | 10.2 | 16.3 | 4.2 | 9.2 | 41.5 | 31.3 |
| Food service | 39.3 | 19.3 | 16.3 | 19.3 | 3.5 | 4.7 | 6.6 | 4.1 | 30.7 | 11.4 | 14.6 | 13.8 |
| Health care | 14.0 | 13.1 | 16.0 | 14.1 | 8.5 | 3.4 | 9.3 | 7.9 | 10.6 | 8.1 | 12.0 | 13.1 |
| Inpatient | 18.3 | 13.6 | 16.8 | 15.8 | 11.6 | 3.7 | 10.4 | 10.3 | 13.0 | 11.5 | 12.8 | 16.5 |
| Outpatient | 18.7 | 27.6 | 26.0 | 22.1 | 6.2 | 6.3 | 7.2 | 6.3 | 15.9 | 9.5 | 13.7 | 23.4 |
| Lodging | 15.3 | 13.4 | 14.1 | 26.6 | 5.7 | 2.7 | 5.9 | 18.0 | 10.4 | 7.8 | 9.0 | 9.2 |
| Mercantile | 24.1 | 16.8 | 13.5 | 14.2 | 5.8 | 2.9 | 3.1 | 3.4 | 11.3 | 9.7 | 5.4 | 7.9 |
| Retail (other than mall) | 20.3 | 21.4 | 18.8 | 37.5 | 9.2 | 5.8 | 5.9 | 12.9 | 14.3 | 10.6 | 5.8 | 20.8 |
| Enclosed and strip malls | 29.8 | 20.9 | 16.6 | 17.5 | 4.0 | 4.2 | 3.0 | 3.9 | 11.6 | 10.8 | 6.3 | 10.1 |
| Office | 16.6 | 15.9 | 16.1 | 14.1 | 5.9 | 3.3 | 5.2 | 3.7 | 11.9 | 9.9 | 11.5 | 8.6 |
| Public assembly | 15.2 | 15.6 | 14.9 | 19.1 | 6.0 | 2.6 | 9.5 | 4.2 | 11.8 | 7.9 | 10.0 | 14.0 |
| Public order and safety | 38.8 | 39.5 | 34.4 | 31.0 | 6.5 | 6.2 | 12.7 | 7.7 | 19.3 | 35.1 | 12.9 | 10.8 |
| Religious worship | 32.8 | 20.8 | 22.6 | 32.2 | 5.3 | 4.1 | 3.4 | 7.4 | 10.0 | 7.6 | 8.1 | 19.9 |
| Service | 20.8 | 21.0 | 30.4 | 28.1 | 4.9 | 5.9 | 5.0 | 9.9 | 14.2 | 10.7 | 30.8 | 7.8 |
| Warehouse and storage | 19.1 | 15.6 | 18.9 | 30.5 | 3.4 | 2.7 | 3.3 | 4.6 | 8.1 | 7.7 | 8.2 | 21.2 |
| Other | 33.2 | 43.6 | 48.3 | 55.7 | 13.1 | 4.6 | 14.6 | 7.9 | 18.2 | 13.1 | 39.9 | 35.2 |
| Vacant | 50.4 | 32.4 | 33.5 | 48.1 | 14.2 | 4.7 | 12.0 | 6.1 | 18.8 | 19.1 | 20.1 | 59.1 |
| Year constructed | | | | | | | | | | | | |
| Before 1920 | 22.1 | 23.4 | 19.6 | 37.4 | 6.4 | 6.1 | 7.8 | 8.1 | 10.9 | 18.0 | 16.3 | 31.8 |
| 1920 to 1945 | 18.0 | 20.6 | 24.5 | 24.2 | 6.3 | 7.2 | 4.8 | 11.5 | 16.1 | 17.2 | 13.4 | 14.4 |
| 1946 to 1959 | 20.3 | 19.9 | 19.2 | | 6.2 | 2.8 | 4.0 | 8.2 | 9.9 | 12.2 | 8.5 | 14.4 |
| | | | | 24.3 | | | | | | | | |
| 1960 to 1969 | 13.5 | 12.7 | 12.4 | 20.0 | 7.7 | 3.2 | 5.1 | 3.8 | 8.8 | 7.1 | 7.8 | 14.0 |
| 1970 to 1979 | 16.6 | 13.3 | 14.4 | 19.0 | 5.7 | 3.5 | 3.8 | 5.6 | 10.6 | 7.5 | 7.5 | 10.2 |
| 1980 to 1989 | 14.9 | 14.0 | 12.8 | 24.1 | 5.9 | 2.8 | 4.0 | 18.2 | 11.6 | 7.0 | 11.3 | 8.8 |
| 1990 to 1999 | 17.1 | 16.4 | 11.3 | 15.6 | 5.2 | 3.0 | 4.9 | 3.7 | 10.5 | 9.3 | 9.8 | 6.3 |
| 2000 to 2009 | 9.0 | 11.8 | 15.1 | 14.3 | 4.3 | 3.1 | 3.7 | 3.0 | 11.3 | 4.7 | 10.4 | 9.3 |
| 2010 to 2018 | 20.6 | 15.7 | 16.3 | 15.9 | 4.7 | 3.8 | 6.0 | 4.0 | 11.4 | 7.2 | 10.9 | 12.4 |
| Climate zone ^a | | | | | | | | | | | | |
| Cold or very cold | 48.3 | 25.8 | 0.0 | 45.6 | 15.3 | 5.3 | 0.0 | 10.3 | 13.8 | 5.7 | 0.0 | 18.1 |
| Cool | 17.3 | 13.1 | 0.0 | 18.0 | 4.2 | 2.2 | 0.0 | 3.8 | 8.2 | 4.2 | 0.0 | 4.6 |
| Mixed mild | 11.0 | 27.2 | 25.1 | 47.0 | 1.6 | 2.8 | 5.1 | 20.3 | 6.3 | 6.0 | 9.7 | 12.6 |
| Warm | 0.0 | 0.0 | 15.2 | 15.4 | 0.0 | 0.0 | 2.2 | 2.0 | 0.0 | 0.0 | 5.2 | 7.5 |
| Hot or very hot | 0.0 | 0.0 | 14.5 | 34.2 | 0.0 | 0.0 | 5.3 | 5.7 | 0.0 | 0.0 | 9.8 | 10.8 |

| | RSEs for total natural gas expenditures | | | | | | | | | | | |
|--|---|--------------|--------------|--------------|-------------|------------|-------------|-------------|--------------|-------------|-------------|-------------|
| | North- | Mid- | | | North- | Mid- | | | North- | Mid- | | |
| | east | west | South | West | east | west | South | West | east | west | South | West |
| All buildings | 7.2 | 8.2 | 6.6 | 10.3 | 2.1 | 1.7 | 2.0 | 4.1 | 5.1 | 2.7 | 4.2 | 4.3 |
| Number of floors | | | | | | | | | | | | |
| 1 | 10.1 | 8.9 | 10.5 | 10.6 | 3.0 | 1.8 | 2.0 | 3.4 | 9.6 | 5.1 | 6.3 | 5.4 |
| 2 | 11.9 | 15.0 | 10.0 | 14.3 | 4.9 | 2.9 | 3.3 | 4.1 | 5.2 | 6.0 | 6.6 | 9.0 |
| 3 | 15.2 | 17.0 | 15.4 | 26.5 | 3.4 | 3.2 | 7.7 | 7.9 | 9.1 | 8.5 | 9.9 | 13.9 |
| 4 to 9 | 13.9 | 11.9 | 9.7 | 19.7 | 3.9 | 2.2 | 5.5 | 3.4 | 6.9 | 5.3 | 11.0 | 16.3 |
| 10 or more | 20.3 | 11.1 | 26.2 | 47.1 | 11.1 | 5.2 | 6.2 | 20.2 | 18.8 | 28.6 | 25.0 | 17.3 |
| Number of workers (main shift) | 40.0 | 442 | 4.C.F. | 20.0 | | 24 | 4.0 | | | 10.0 | 10.6 | 10.5 |
| Fewer than 5 | 18.8 | 14.3 | 16.5 | 20.9 | 3.5 | 3.4 | 4.0 | 5.5 | 7.1 | 10.0 | 10.6 | 10.5 |
| 5 to 9 | 17.9 | 17.9 | 17.2 | 14.9 | 9.2 | 2.2 | 6.4 | 3.3 | 12.7 | 7.7 | 10.6 | 7.5 |
| 10 to 19 | 22.4 | 17.0 | 11.6 | 14.0 | 6.6 | 2.4 | 4.3 | 3.8 | 13.1 | 7.8 | 6.9 | 8.9 |
| 20 to 49 | 10.7 | 13.1 | 11.8 | 11.9 | 3.3 | 2.8 | 4.6 | 3.3 | 7.3 | 6.3 | 8.1 | 8.7 |
| 50 to 99 100 to 249 | 14.6 | 14.5 14.0 | 17.2 11.7 | 13.5 18.5 | 5.6 2.9 | 2.2 | 2.8 | 3.3 5.1 | 7.4 8.2 | 6.0 7.7 | 15.5 5.8 | 9.6 9.8 |
| 250 or more | 14.8 | 9.0 | 14.1 | 28.3 | 8.4 | 3.1 | 9.3 | 12.1 | 11.6 | 12.0 | 14.9 | 14.8 |
| | | | | 20.5 | 0.7 | 3.1 | 3.3 | | 11.0 | | 17.3 | |
| Weekly operating hours | 27.4 | 17.2 | 22.5 | 22.2 | г о | Г О | 2.1 | 2.7 | C 0 | 0.0 | 0.2 | 12.5 |
| Fewer than 40 | 27.1 | 17.3 | 23.5 | 22.3 | 5.8 | 5.0 | 3.1 | 3.7 | 6.0 | 8.6 | 9.2 | 13.5 |
| 40 to 48 | 17.8 | 11.5 | 12.7 | 13.9 | 8.0 | 2.7 | 2.5 | 4.7 | 8.5 | 7.6 | 7.8 | 10.0 |
| 49 to 60 | 10.2 | 16.8 | 9.5 | 15.5 | 3.0 | 2.9 | 2.9 | 3.5 | 5.2 | 7.6 | 5.5 | 7.6 |
| 61 to 84 | 14.5 | 12.7 | 12.4 | 13.3 | 3.4 | 3.9 | 4.0 | 4.3 | 9.3 | 7.1 | 10.3 | 6.4 |
| 85 to 167 Open continuously | 11.6 | 14.2 9.9 | 17.2 9.0 | 15.4 15.7 | 4.6 | 2.2 1.8 | 3.8 4.5 | 2.7 8.8 | 7.2 8.0 | 8.7 4.5 | 14.9 8.2 | 14.4 |
| | 0.0 | 5.5 | 3.0 | 13.7 | 4.2 | 1.0 | 4.3 | 0.0 | 6.0 | 4.3 | 0.2 | 0.4 |
| Ownership and occupancy | | 70 | 7.2 | 10.4 | | 1.5 | | | | | | |
| Nongovernment owned | 8.0 | 7.8 | 7.2 | 10.4 | 2.6 | 1.6 | 2.1 | 4.7 | 5.5 | 3.1 | 4.9 | 4.5 |
| Owner occupied | 10.8 | 7.8 | 7.9 | 12.8 | 2.8 | 1.5 | 2.9 | 7.2 | 6.4 | 4.1 | 6.7 | 5.7 |
| Leased to tenant or tenants | 10.4 | 11.6 60.6 | 10.4 51.2 | 11.2 | 4.3 | 2.5 | 3.0 | 3.2 | 7.3 | 4.2 23.8 | 5.4 | 5.9 |
| Unoccupied Covernment award | 70.5 | | | 54.9 | 41.3 | 4.1 | 3.6 | 5.3 | 15.1 | | 53.9 | 90.8 |
| Government owned | 10.3 | 14.0 41.8 | 13.7 | 15.9 | 4.6 | 4.5 | 3.3 | 3.8 | 5.7 | 7.1 | 7.6 | 8.5 27.6 |
| Federal | 39.5 20.6 | 29.0 | 33.1 21.5 | 36.4 | 13.9 | 3.5 7.8 | 16.8 5.5 | 65.2 4.9 | 12.5 12.7 | 25.1 | 30.8 | |
| State Local | 14.4 | 13.4 | 18.6 | 23.5 18.9 | 11.7 5.8 | 4.5 | 3.7 | 5.6 | 6.7 | 10.6 8.9 | 13.2 7.9 | 13.0 9.1 |
| Party responsible for operation | | | | | | | | | | | | |
| of energy systems | | | | | | | | | | | | |
| Building owner | 7.9 | 8.9 | 7.4 | 11.9 | 2.1 | 2.0 | 2.5 | 4.7 | 5.2 | 3.1 | 5.3 | 4.8 |
| Business owner or tenant | 19.3 | 18.4 | 13.0 | 11.6 | 7.3 | 2.3 | 4.3 | 4.5 | 8.1 | 7.5 | 7.6 | 11.1 |
| Property management | 35.7 | 38.2 | 33.7 | 26.4 | 7.1 | 6.4 | 6.6 | 6.2 | 16.6 | 27.8 | 18.6 | 20.1 |
| Other | 33.2 | 24.6 | 28.0 | 24.8 | 33.7 | 3.8 | 7.0 | 6.9 | 12.8 | 17.0 | 13.1 | 16.1 |
| Provider of direct input on energy- related equipment purchases | | | | | | | | | | | | |
| Building owner | 8.3 | 9.1 | 7.4 | 11.4 | 2.1 | 1.9 | 2.3 | 4.6 | 5.1 | 2.9 | 4.9 | 4.6 |
| Business owner or tenant | 22.0 | 17.2 | 15.2 | 11.9 | 9.6 | 2.9 | 3.4 | 4.0 | 16.6 | 10.8 | 13.4 | 12.1 |
| Property management | 45.1 | 48.5 | 45.1 | 36.9 | 9.2 | 6.5 | 10.8 | 15.2 | 23.8 | 25.0 | 23.2 | 27.6 |
| Other | 23.1 | 17.7 | 19.3 | 24.6 | 11.0 | 3.2 | 5.3 | 8.0 | 13.5 | 12.4 | 12.2 | 13.5 |
| Number of establishments | | | | | | | | | | | | |
| 1 | 7.0 | 8.6 | 8.4 | 10.5 | 2.1 | 2.2 | 2.5 | 3.1 | 5.2 | 4.4 | 5.1 | 5.5 |
| 2 to 5 | 18.7 | 13.3 | 11.6 | 20.4 | 7.2 | 2.3 | 5.8 | 10.4 | 10.7 | 7.4 | 7.8 | 11.0 |
| 6 to 10 | 18.7 | 23.6 | 14.8 | 18.3 | 6.9 | 3.3 | 6.1 | 5.4 | 15.0 | 11.0 | 9.1 | 8.5 |
| 11 to 20 | 28.4 | 34.7 | 20.4 | 15.2 | 4.6 | 10.5 | 8.1 | 5.4 | 13.9 | 13.2 | 12.8 | 8.9 |
| More than 20 | 18.7 | 39.4 | 20.5 | 22.4 | 3.8 | 3.7 | 2.7 | 6.1 | 17.0 | 25.7 | 22.3 | 15.9 |
| Currently unoccupied | 57.7 | 43.3 | 39.0 | 54.9 | 20.3 | 6.4 | 5.6 | 5.3 | 25.3 | 26.1 | 25.1 | 90.8 |

| Predominant exterior wall material Brick, stone, or stucco 10.0 8.9 8.0 11.7 12.9 13.8 12.1 13.0 13.8 13.0 | | RSEs for total | natural gas | expenditures | | Per thous | and cub | ic feet | Per square foot | | | | | |
|--|---------------------------------------|----------------|-------------|--------------|-------|-----------|---------|---------|-----------------|------|-------|--------|-------|--|
| Predominant exterior wall material | | | | South | West | | _ | South | West | | _ | South | West | |
| Predominant exterior wall material Brick, stone, or strucco 10.0 8.9 8.0 11.7 13.9 3.8 12.2 12.0 13.0 14.5 14.5 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15 | | | 11 031 | 304111 | 11000 | | 11000 | | 11000 | Cust | 11000 | 304111 | 11000 | |
| BRICK, SORD, O'STUCCO 10.0 89 8.0 12.2 3.0 2.1 2.6 6.0 5.5 3.3 4.1 0.4 CONCIPCE (DIDOK OF poured) 10.8 14.8 11.7 13.9 3.8 2.2 2.7 3.6 5.6 7.6 8.6 9.4 10.3 CONCIPCE (DIDOK OF poured) 10.8 14.8 11.7 13.9 3.8 2.2 2.7 6.3 4.5 8.0 7.0 12.1 7.1 12.5 12.1 13.5 3.3 13.9 10.0 CONCIPCE (DIDOK OF poured) 10.8 14.8 11.7 13.9 3.8 2.2 2.7 6.3 4.5 8.0 7.0 12.1 7.1 12.5 12.1 13.5 13.3 13.1 14.0 Kelola panels 2.3 20.3 22.2 23.0 10.9 4.6 6.0 4.0 16.1 17.8 13.3 10.1 Medial panels 2.0 5.1 15.9 14.7 27.4 9.0 3.0 6.0 4.0 4.3 14.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12 | All buildings | 7.2 | 8.2 | 6.6 | 10.3 | 2.1 | 1.7 | 2.0 | 4.1 | 5.1 | 2.7 | 4.2 | 4.3 | |
| Concrete placek or poured] 10.8 14.8 11.7 13.0 3.8 2.2 2.7 3.6 7.6 8.6 9.4 10.2 Concrete panels 26.4 22.7 25.7 25.7 22.7 6.3 4.5 8.0 7.0 12.1 7.1 25.2 19.3 Storing crainingles 23.3 20.3 22.2 25.0 10.9 4.6 6.0 6.4 16.1 7.8 13.5 19.3 10.1 Metal panels 20.5 15.9 14.7 27.4 9.0 3.0 6.4 6.0 6.1 17.8 13.5 10.1 14.6 Window glass 36.9 36.0 36.0 32.0 28.6 5.5 3.9 11.3 8.0 26.4 12.6 20.5 12.0 12.0 Other 55.1 41.5 31.6 25.5 21.9 10.4 14.1 8.0 27.4 10.9 20.9 17.3 Predominant cord material Metal Juriani 19.0 10.0 15.8 19.1 20.2 1.0 10.4 14.1 8.0 27.4 10.9 20.9 17.3 Predominant cord material Metal Juriani 19.0 7.2 11.3 11.3 3.4 1.5 4.4 2.2 7.6 4.8 9.7 3.9 18.1 19.1 19.1 19.1 19.1 19.1 19.1 19 | Predominant exterior wall material | | | | | | | | | | | | | |
| Concrete panels 264 227 257 227 63 43 80 7.0 121 7.1 252 193 | Brick, stone, or stucco | 10.0 | 8.9 | 8.0 | 12.2 | 3.0 | 2.1 | 2.6 | 6.0 | 6.5 | 3.3 | 4.1 | 6.4 | |
| Siding on shingles 233 23 222 230 109 4.6 6.0 6.4 16.1 17.8 13.3 10.1 Metal panels 20.5 15.9 14.7 27.4 20.0 30. 6.4 6.0 6.4 16.1 17.8 10.5 10.5 Other 55.1 4.15 31.6 25.5 21.9 10.4 14.1 8.4 27.4 10.9 20.9 17.3 Predominant roof material Metal surfacing 23.3 12.9 12.9 24.0 5.6 3.5 3.6 6.0 10.7 7.5 8.6 8.8 Syntheticor rubber 10.9 7.2 11.3 11.3 3.4 15. 4.1 3.2 7.6 4.8 9.7 3.9 Built-up 10.1 15.8 9.1 20.2 2.1 13.3 3.3 3.1 3.1 10.1 10.5 10.3 Side tor tile shingles 26.3 32.2 16.7 26.7 11.6 4.8 5.1 3.3 11.0 10.5 10.3 Built-up 10.1 15.8 9.1 20.2 2.1 10.4 3.6 4.7 11.8 27.4 27.7 Asphalt, Bherglass, or other shingles 51.1 55.5 37.8 25.0 16.5 21.0 10.4 3.6 4.7 11.8 27.4 27.7 Asphalt, Bherglass, or other shingles 11.7 13.6 13.8 12.5 12.9 4.8 8.9 18.2 20.2 17.3 16.8 Concrete 29.6 39.0 29.9 33.9 13.9 15.3 9.7 7.4 20.3 22.5 11.0 16.8 Cother 29.4 34.0 23.8 13.3 12.5 12.9 4.8 8.9 18.2 29.2 17.3 18.8 Cother 29.4 34.0 23.8 13.3 12.5 12.9 4.8 8.9 18.2 29.2 17.3 18.8 Cother 29.4 34.0 23.8 13.3 12.5 12.9 4.8 8.9 18.2 29.2 17.3 18.8 Cother 29.4 34.0 23.8 13.3 12.5 12.9 4.8 8.9 18.2 29.2 17.3 18.8 Cother 29.4 34.0 23.8 13.3 12.5 12.9 4.8 8.9 18.2 29.2 17.3 18.8 Cother 29.4 34.0 23.8 13.3 12.5 12.9 4.8 8.9 18.2 29.2 17.3 18.8 Cother 29.4 34.0 23.8 33.9 | Concrete (block or poured) | 10.8 | 14.8 | 11.7 | 13.9 | 3.8 | 2.2 | 2.7 | 3.6 | 7.6 | 8.6 | 9.4 | 10.3 | |
| Metal panels | Concrete panels | 26.4 | 22.7 | 25.7 | 22.7 | 6.3 | 4.5 | 8.0 | 7.0 | 12.1 | 7.1 | 25.2 | 19.3 | |
| Window glass 36.9 36.0 32.0 28.6 5.5 3.9 1.3 8.0 26.4 21.6 20.5 20.0 | Siding or shingles | 23.3 | 20.3 | 22.2 | 23.0 | 10.9 | 4.6 | 6.0 | 6.4 | 16.1 | 17.8 | 13.3 | 10.1 | |
| Predominant roof material | Metal panels | 20.5 | 15.9 | 14.7 | 27.4 | 9.0 | 3.0 | 6.4 | 6.3 | 14.4 | 9.0 | 9.1 | 14.6 | |
| Metal surfacing 23.3 12.9 12.9 24.0 5.6 3.5 3.6 6.0 10.7 7.5 8.6 8.8 | Window glass | 36.9 | 36.0 | 32.0 | 28.6 | 5.5 | 3.9 | 11.3 | 8.0 | 26.4 | 21.6 | 20.5 | 12.0 | |
| Metal surfacing 23.3 12.9 12.9 24.0 5.6 3.5 3.6 6.0 10.7 7.5 8.6 8.8 synthetic or rubber 10.9 7.2 11.3 11.3 11.3 3.4 1.5 4.1 3.2 7.6 4.8 9.7 3.9 Sulfi-tup 10.1 15.8 9.1 20.2 2.1 3.3 3.3 1.9 11.6 15.1 10.9 Wooden materials (including shingles 26.3 32.2 16.7 26.7 11.6 4.8 5.1 3.3 13.9 11.6 15.1 10.9 Wooden materials (including shingles) 11.7 13.6 13.8 21.0 4.9 2.9 4.6 5.2 11.4 5.3 8.8 11.5 Concrete 29.6 39.0 29.9 33.9 13.9 15.3 9.7 7.4 20.3 22.5 11.0 16.8 Concrete 29.6 39.0 29.9 33.9 13.9 15.3 9.7 7.4 20.3 22.5 11.0 16.8 Concrete 29.6 39.0 29.9 33.9 13.9 15.3 9.7 7.4 20.3 22.5 11.0 16.8 Concrete 29.6 39.0 29.9 33.9 13.9 15.3 9.7 7.4 20.3 22.5 11.0 16.8 Concrete 29.6 39.0 29.9 33.9 13.9 15.3 9.7 7.4 20.3 22.5 11.0 16.8 Concrete 29.6 39.0 29.9 33.9 13.9 15.3 9.7 7.4 20.3 22.5 11.0 16.8 Concrete 29.6 39.0 29.9 33.9 13.9 15.3 9.7 7.4 20.3 22.5 11.0 16.8 Concrete 29.6 39.0 29.9 33.9 13.9 15.3 9.7 7.4 20.3 22.5 11.0 16.8 Concrete 29.6 39.0 29.9 33.9 13.9 15.3 9.7 7.4 20.3 22.5 11.0 16.8 Concrete 29.6 39.0 29.9 33.9 12.1 2.8 12.9 2.8 2.2 2.2 17.3 16.8 Concrete 29.6 19.1 13.1 19.9 15.0 42.2 2.8 32.2 42 9.4 5.3 4.6 5.5 Shallow pitch 12.9 11.3 19.9 15.0 42.2 2.8 32.2 42 9.4 5.3 4.6 5.5 Shallow pitch 12.9 11.3 19.9 15.0 42.2 2.8 32.2 42 9.4 5.3 4.6 5.5 Shallow pitch 12.9 11.3 19.9 15.0 42.2 2.8 32.0 42 9.4 5.3 4.5 5.0 6.0 Concrete Concrete Container contain | Other | 55.1 | 41.5 | 31.6 | 25.5 | 21.9 | 10.4 | 14.1 | 8.4 | 27.4 | 10.9 | 20.9 | 17.3 | |
| Metal surfacing 23.3 12.9 12.9 24.0 5.6 3.5 3.6 6.0 10.7 7.5 8.6 8.8 synthetic or rubber 10.9 7.2 11.3 11.3 11.3 3.4 1.5 4.1 3.2 7.6 4.8 9.7 3.9 Sulfi-tup 10.1 15.8 9.1 20.2 2.1 3.3 3.3 1.9 11.6 15.1 10.9 Wooden materials (including shingles 26.3 32.2 16.7 26.7 11.6 4.8 5.1 3.3 13.9 11.6 15.1 10.9 Wooden materials (including shingles) 11.7 13.6 13.8 21.0 4.9 2.9 4.6 5.2 11.4 5.3 8.8 11.5 Concrete 29.6 39.0 29.9 33.9 13.9 15.3 9.7 7.4 20.3 22.5 11.0 16.8 Concrete 29.6 39.0 29.9 33.9 13.9 15.3 9.7 7.4 20.3 22.5 11.0 16.8 Concrete 29.6 39.0 29.9 33.9 13.9 15.3 9.7 7.4 20.3 22.5 11.0 16.8 Concrete 29.6 39.0 29.9 33.9 13.9 15.3 9.7 7.4 20.3 22.5 11.0 16.8 Concrete 29.6 39.0 29.9 33.9 13.9 15.3 9.7 7.4 20.3 22.5 11.0 16.8 Concrete 29.6 39.0 29.9 33.9 13.9 15.3 9.7 7.4 20.3 22.5 11.0 16.8 Concrete 29.6 39.0 29.9 33.9 13.9 15.3 9.7 7.4 20.3 22.5 11.0 16.8 Concrete 29.6 39.0 29.9 33.9 13.9 15.3 9.7 7.4 20.3 22.5 11.0 16.8 Concrete 29.6 39.0 29.9 33.9 13.9 15.3 9.7 7.4 20.3 22.5 11.0 16.8 Concrete 29.6 39.0 29.9 33.9 12.1 2.8 12.9 2.8 2.2 2.2 17.3 16.8 Concrete 29.6 19.1 13.1 19.9 15.0 42.2 2.8 32.2 42 9.4 5.3 4.6 5.5 Shallow pitch 12.9 11.3 19.9 15.0 42.2 2.8 32.2 42 9.4 5.3 4.6 5.5 Shallow pitch 12.9 11.3 19.9 15.0 42.2 2.8 32.2 42 9.4 5.3 4.6 5.5 Shallow pitch 12.9 11.3 19.9 15.0 42.2 2.8 32.0 42 9.4 5.3 4.5 5.0 6.0 Concrete Concrete Container contain | Predominant roof material | | | | | | | | | | | | | |
| Built-up 10.1 15.8 9.1 20.2 2.1 3.3 3.3 11.9 8.1 6.5 5.9 11.3 Slate or this shingles 26.3 3.2 16.7 26.7 11.6 4.8 5.1 3.3 13.9 11.6 15.1 10.9 Wooden materials (including shingles) 51.1 55.5 37.8 25.0 16.5 21.0 10.4 3.6 41.7 11.8 27.4 27.7 Asphalt, fiberglass, or other shingles 11.7 13.6 13.8 21.0 4.9 2.9 4.6 5.2 11.4 5.3 8.8 11.5 Concrete 29.6 39.0 29.9 33.9 13.9 15.3 9.7 7.4 20.3 22.5 11.0 16.8 Other 29.1 34.0 23.8 13.5 12.0 4.8 8.9 18.2 29.2 17.0 16.8 Other 29.1 34.0 23.8 13.5 12.0 4.8 8.9 18.2 29.2 17.0 16.8 Other 29.1 34.0 23.8 13.5 12.1 2.8 1.7 2.7 5.2 6.2 4.4 5.8 4.5 16.5 Shallow pitch 12.9 11.3 10.9 15.0 42.2 8 3.2 4.2 9.4 5.3 4.6 7.6 Steeper pitch 12.9 11.3 10.9 15.0 42.2 8 3.2 4.2 9.4 5.3 4.6 7.6 Steeper pitch 19.4 11.3 12.9 19.0 3.7 3.5 3.6 5.0 5.0 5.2 18.2 9.9 19.0 Vilticor reflective coating or paint 10.5 9.9 9.1 14.1 3.2 2.7 3.3 6.9 7.2 4.7 7.0 6.0 White or reflective coating or paint 10.5 9.9 9.1 14.1 3.2 2.7 3.3 6.9 7.2 4.7 7.0 5.0 White or reflective coating or paint 10.5 9.9 9.1 14.1 3.2 2.7 3.3 6.9 7.2 4.7 7.0 5.0 White or reflective coating or paint 10.5 9.9 9.1 14.1 3.2 2.7 3.3 6.9 7.2 4.7 7.0 5.0 White or reflective coating or paint 10.5 9.9 9.1 14.1 3.8 7.7 3.6 5.3 19.1 10.1 2.9 23.4 Ballisated root system 16.3 22.4 19.1 38.9 7.7 3.6 5.3 19.1 10.3 7.8 12.2 11.1 12.9 23.4 Ballisated root system 16.3 22.4 19.1 38.9 7.7 3.6 5.3 19.1 10.3 7.8 12.2 11.1 12.9 23.4 Ballisated root property 41.1 54.8 32.4 36.6 17.0 3.0 9.4 10.1 0.7 0.9 3 6.4 17.7 12.5 Renovations since 2000 Root endors and system 14.8 8.5 9.0 19.4 4.7 0.2 3.9 11.0 0.8 6.5 3 8.3 9.6 1.2 11.1 12.9 12.4 Ballisated root property 4.1 10.5 4.8 5.9 10.0 19.4 4.7 0.2 3.9 11.0 0.5 0.8 13.8 13.0 1.0 1.0 10.0 10.0 10.0 10.0 10.0 1 | Metal surfacing | 23.3 | 12.9 | 12.9 | 24.0 | 5.6 | 3.5 | 3.6 | 6.0 | 10.7 | 7.5 | 8.6 | 8.8 | |
| Built-up 10.1 15.8 9.1 20.2 2.1 3.3 3.3 11.9 8.1 6.5 5.9 11.3 Slate or this shingles 26.3 3.2 16.7 26.7 11.6 4.8 5.1 3.3 13.9 11.6 15.1 10.9 Wooden materials (including shingles) 51.1 55.5 37.8 25.0 16.5 21.0 10.4 3.6 41.7 11.8 27.4 27.7 Asphalt, fiberglass, or other shingles 11.7 13.6 13.8 21.0 4.9 2.9 4.6 5.2 11.4 5.3 8.8 11.5 Concrete 29.6 39.0 29.9 33.9 13.9 15.3 9.7 7.4 20.3 22.5 11.0 16.8 Other 29.1 34.0 23.8 13.5 12.0 4.8 8.9 18.2 29.2 17.0 16.8 Other 29.1 34.0 23.8 13.5 12.0 4.8 8.9 18.2 29.2 17.0 16.8 Other 29.1 34.0 23.8 13.5 12.1 2.8 1.7 2.7 5.2 6.2 4.4 5.8 4.5 16.5 Shallow pitch 12.9 11.3 10.9 15.0 42.2 8 3.2 4.2 9.4 5.3 4.6 7.6 Steeper pitch 12.9 11.3 10.9 15.0 42.2 8 3.2 4.2 9.4 5.3 4.6 7.6 Steeper pitch 19.4 11.3 12.9 19.0 3.7 3.5 3.6 5.0 5.0 5.2 18.2 9.9 19.0 Vilticor reflective coating or paint 10.5 9.9 9.1 14.1 3.2 2.7 3.3 6.9 7.2 4.7 7.0 6.0 White or reflective coating or paint 10.5 9.9 9.1 14.1 3.2 2.7 3.3 6.9 7.2 4.7 7.0 5.0 White or reflective coating or paint 10.5 9.9 9.1 14.1 3.2 2.7 3.3 6.9 7.2 4.7 7.0 5.0 White or reflective coating or paint 10.5 9.9 9.1 14.1 3.2 2.7 3.3 6.9 7.2 4.7 7.0 5.0 White or reflective coating or paint 10.5 9.9 9.1 14.1 3.8 7.7 3.6 5.3 19.1 10.1 2.9 23.4 Ballisated root system 16.3 22.4 19.1 38.9 7.7 3.6 5.3 19.1 10.3 7.8 12.2 11.1 12.9 23.4 Ballisated root system 16.3 22.4 19.1 38.9 7.7 3.6 5.3 19.1 10.3 7.8 12.2 11.1 12.9 23.4 Ballisated root property 41.1 54.8 32.4 36.6 17.0 3.0 9.4 10.1 0.7 0.9 3 6.4 17.7 12.5 Renovations since 2000 Root endors and system 14.8 8.5 9.0 19.4 4.7 0.2 3.9 11.0 0.8 6.5 3 8.3 9.6 1.2 11.1 12.9 12.4 Ballisated root property 4.1 10.5 4.8 5.9 10.0 19.4 4.7 0.2 3.9 11.0 0.5 0.8 13.8 13.0 1.0 1.0 10.0 10.0 10.0 10.0 10.0 1 | Synthetic or rubber | 10.9 | 7.2 | 11.3 | | 3.4 | 1.5 | 4.1 | 3.2 | 7.6 | 4.8 | 9.7 | 3.9 | |
| None of the part | Built-up | 10.1 | 15.8 | 9.1 | 20.2 | 2.1 | 3.3 | 3.3 | 11.9 | 8.1 | 6.5 | 5.9 | 11.3 | |
| shingles) 51.1 55.5 37.8 25.0 16.5 21.0 10.4 3.6 41.7 11.8 27.4 27.7 Asphalt, fiberglass, or other shingles 11.7 13.6 13.8 21.0 4.9 2.9 4.6 5.2 11.4 5.3 8.8 11.5 Concrete 29.6 39.0 29.9 33.9 13.9 15.3 9.7 7.4 20.3 22.5 11.0 16.8 Cother shingles 11.7 13.6 13.8 21.0 4.9 2.9 4.6 5.2 11.4 5.3 8.8 11.5 Concrete 29.6 39.0 29.9 33.9 13.9 15.3 9.7 7.4 20.3 22.5 11.0 16.8 Cother shingles 29.4 34.0 29.9 33.9 13.9 15.3 9.7 7.4 20.3 22.5 11.0 16.8 Cother Should be shiply as the shiply | Slate or tile shingles | 26.3 | 32.2 | 16.7 | 26.7 | 11.6 | 4.8 | 5.1 | 3.3 | 13.9 | 11.6 | 15.1 | 10.9 | |
| Asphalt, fiberglass, or other shingles | Wooden materials (including | | | | | | | | | | | | | |
| ther shingles 11.7 13.6 13.8 21.0 4.9 2.9 4.6 5.2 11.4 5.3 8.8 11.5 Concrete 25.5 39.0 29.9 33.9 13.5 15.3 9.7 7.4 20.3 22.5 11.0 16.8 Cher 29.4 34.0 23.8 18.3 12.6 12.9 4.8 8.9 18.2 29.2 17.3 16.8 Roof tit Flat | shingles) | 51.1 | 55.5 | 37.8 | 25.0 | 16.5 | 21.0 | 10.4 | 3.6 | 41.7 | 11.8 | 27.4 | 27.7 | |
| Concrete 29.6 39.0 29.9 33.9 13.9 15.3 9.7 7.4 20.3 22.5 11.0 16.8 Other 29.4 34.0 23.8 18.3 12.6 12.9 4.8 8.9 18.2 29.2 17.3 16.8 Roof tilk Roof tilk Flat 8.4 9.2 7.3 12.1 2.8 1.7 2.7 5.2 6.2 4.4 6.6 5.9 Shallow pitch 12.9 11.3 10.9 15.0 4.2 2.8 3.2 4.2 9.4 5.3 6.6 5.9 Shallow pitch 12.9 11.3 10.9 15.0 4.2 2.8 3.2 4.2 9.4 5.3 6.6 5.9 Steeper pitch 19.4 11.3 12.9 19.0 3.7 3.5 3.6 5.0 6.2 5.8 8.9 9.1 Cool roof characteristics (more than one may apply) White or reflective coating or paint 10.5 9.9 9.1 14.1 3.2 2.7 3.3 6.9 7.2 4.7 7.0 6.0 White or reflective tiles or shingles 30.0 33.5 21.9 21.1 8.3 10.1 7.9 8.2 19.9 19.0 16.5 14.4 Aluminum coating 25.7 23.0 18.0 23.1 5.3 5.5 8.8 7.5 18.2 11.1 12.9 23.4 Ballisated roof system 16.3 22.4 19.1 38.9 7.7 3.6 3.9 7.0 13.7 8.1 11.1 12.9 23.4 Ballisated roof property 41.1 54.8 32.4 36.6 17.0 3.0 9.4 10.1 24.9 20.6 21.7 21.5 Renovations since 2000 (more than one may apply) Renovations since 2000 (more than one may apply) Renovations since 2000 (more than one may apply) Reduction in floorspace 43.7 31.0 26.6 37.0 8.7 3.4 11.2 48.2 29.8 18.5 22.9 16.0 Roof replacement 14.8 8.5 9.0 19.4 4.7 2.2 3.9 11.0 16.8 6.5 3.8 3.9 6.0 11.0 10.0 10.0 12.5 3.8 2.5 3.0 1.9 7.0 7.5 4.5 8.9 2.1 11.1 11.0 11.0 11.0 11.0 11.0 11.0 | Asphalt, fiberglass, or | | | | | | | | | | | | | |
| Second Heat | other shingles | 11.7 | 13.6 | 13.8 | 21.0 | 4.9 | 2.9 | 4.6 | 5.2 | 11.4 | 5.3 | 8.8 | 11.5 | |
| Flat 8.4 9.2 7.3 12.1 2.8 1.7 2.7 5.2 6.2 4.4 6.6 5.9 | Concrete | 29.6 | 39.0 | 29.9 | 33.9 | 13.9 | 15.3 | 9.7 | 7.4 | 20.3 | 22.5 | 11.0 | 16.8 | |
| Flat 8.4 9.2 7.3 12.1 2.8 1.7 2.7 5.2 6.2 4.4 6.6 5.9 5.8 5.8 5.8 olim pitch 12.9 11.3 10.9 15.0 4.2 2.8 3.2 4.2 9.4 5.3 4.6 7.6 5.8 5.8 5.9 9.1 13.3 10.9 15.0 4.2 2.8 3.2 4.2 9.4 5.3 4.6 7.6 5.8 5.9 9.1 13.3 10.9 15.0 4.2 2.8 3.2 4.2 9.4 5.3 4.6 7.6 5.8 5.9 9.1 5.0 15.0 15.0 15.0 15.0 15.0 15.0 15. | Other | 29.4 | 34.0 | 23.8 | 18.3 | 12.6 | 12.9 | 4.8 | 8.9 | 18.2 | 29.2 | 17.3 | 16.8 | |
| Shallow pitch 12.9 11.3 10.9 15.0 4.2 2.8 3.2 4.2 9.4 5.3 4.6 7.6 Steeper pitch 19.4 11.3 12.9 19.0 3.7 3.5 3.6 5.0 6.2 5.8 8.9 9.1 Cool roof characteristics (more than one may apply) White or reflective coating or paint 10.5 9.9 9.1 14.1 3.2 2.7 3.3 6.9 7.2 4.7 7.0 6.0 White or reflective tiles or shingles 30.0 33.5 21.9 21.1 8.3 10.1 7.9 8.2 19.9 19.0 16.5 14.4 Aluminum coating 25.7 23.0 18.0 23.1 5.3 5.5 8.8 7.5 18.2 11.1 12.9 23.4 Ballasted roof system 16.3 22.4 19.1 38.9 7.7 3.6 5.3 19.7 10.3 7.8 13.9 18.4 Other cool roof property 11.1 54.8 32.4 36.6 17.0 3.0 9.4 10.1 24.9 20.6 21.7 21.5 Renovations since 2000 (more than one may apply) Any type of renovation 9.5 7.7 8.2 13.5 3.0 2.0 2.4 5.7 6.1 3.1 6.7 6.2 Addition or annex 14.0 12.6 18.8 17.6 6.7 3.6 4.0 7.0 9.3 6.4 17.5 16.6 Reduction in floorspace 43.7 31.0 26.6 37.0 8.7 3.4 11.2 48.2 29.8 18.5 22.9 16.6 Reduction in floorspace 43.7 31.0 26.6 37.0 8.7 3.4 11.2 48.2 29.8 18.5 22.9 16.6 Reduction in floorspace 12.8 11.3 16.0 25.2 4.7 3.9 4.7 13.2 7.8 9.2 11.4 11.9 HYAC equipment upgrade 12.7 7.1 9.5 17.0 4.0 1.9 3.8 8.5 7.9 4.5 8.9 Lighting upgrade 11.8 9.6 8.9 15.2 3.8 2.2 3.5 12.4 9.8 8.4 9.2 11.4 11.9 HYAC equipment upgrade 16.1 9.5 11.2 23.4 5.6 2.8 3.5 12.4 9.8 8.4 9.2 9.5 Insulation upgrade 14.4 13.5 13.7 37.4 8.8 3.7 5.1 18.6 16.0 13.3 14.6 15.1 Fire, safety, or security upgrade 16.1 10.0 10.0 21.5 3.9 2.3 4.1 11.3 8.3 6.9 7.9 11.4 15. Fire, safety, or security upgrade 11.6 11.0 10.0 21.5 3.9 2.3 5.5 5.5 2.7 18.3 28.2 10.4 14.5 Fire, safety, or security upgrade 13.4 2.9 11.9 25.0 5.0 5.0 2.7 9.9 10.5 16.7 34.0 23.6 29.2 No renovations 8.9 11.2 8.1 9.7 7.6 40.4 11.0 5.7 9.9 10.5 16.7 34.0 23.6 29.2 No renovations 8.9 11.2 8.1 9.7 7.6 40.4 11.0 5.7 9.9 10.5 16.7 34.0 23.6 29.2 No renovations 8.9 11.2 8.1 9.7 7.6 40.4 11.0 5.7 9.9 10.5 16.7 34.0 23.6 29.2 No renovations 8.9 11.2 8.1 9.7 7.6 40.4 11.0 5.7 9.9 10.5 16.7 34.0 23.6 29.2 No renovations 8.9 11.2 8.1 9.7 7.6 40.4 11.0 5.7 9.9 10.5 16.7 34.0 23. | Roof tilt | | | | | | | | | | | | | |
| Steeper pitch 19.4 11.3 12.9 19.0 3.7 3.5 3.6 5.0 6.2 5.8 8.9 9.1 Cool roof characteristics (more than one may apply) White or reflective coating or paint 10.5 9.9 9.1 14.1 3.2 2.7 3.3 6.9 7.2 4.7 7.0 6.0 Mile or reflective tiles or shingles 30.0 33.5 21.9 12.1 8.3 10.1 7.9 8.2 19.9 19.0 16.5 14.4 Aluminum coating 25.7 23.0 18.0 23.1 5.3 5.5 8.8 7.5 18.2 11.1 12.9 23.4 Ballasted roof system 16.3 22.4 19.1 38.9 7.7 3.6 5.3 19.7 10.3 7.8 13.9 18.4 Other cool roof property 41.1 54.8 32.4 36.6 17.0 3.0 9.4 10.1 24.9 20.6 21.7 21.5 Renovations since 2000 (more than one may apply) Any type of renovation 9.5 7.7 8.2 13.5 3.0 2.0 2.4 5.7 6.1 3.1 6.7 6.2 Addition or annex 14.0 12.6 18.8 17.6 6.7 3.6 4.0 7.0 9.3 6.4 17.5 16.6 Reduction in floorspace 43.7 31.0 26.6 37.0 8.7 3.4 11.2 48.2 29.8 18.5 22.9 16.0 Roof replacement 14.8 8.5 9.0 19.4 4.7 2.2 3.9 11.0 8.6 5.3 8.3 9.6 Roof replacement 17.0 9.7 10.4 22.8 5.8 3.1 4.1 11.6 9.4 5.0 8.3 8.3 Window replacement 12.8 11.3 16.0 25.2 4.7 3.9 4.7 13.2 7.8 9.2 11.4 11.9 HVAC equipment upgrade 12.7 7.1 9.5 17.0 4.0 1.9 3.8 8.5 7.9 4.5 8.0 8.9 Lighting upgrade 13.4 12.0 11.9 25.0 5.0 1.9 5.3 12.6 9.6 7.7 10.4 12.6 Plumbing system upgrade 16.1 9.5 11.2 23.4 5.6 2.8 3.5 12.4 9.8 8.4 9.2 9.5 Insulation upgrade 11.6 11.0 10.0 21.5 3.9 2.3 4.1 11.3 8.3 6.9 7.9 11.0 Structural upgrade 11.6 11.0 10.0 21.5 3.9 2.3 4.1 11.3 8.3 6.9 7.9 11.0 Structural upgrade 11.6 11.0 10.0 21.5 3.9 2.3 4.1 11.3 8.3 6.9 7.9 11.0 Structural upgrade 11.6 11.0 10.0 21.5 3.9 2.3 4.1 11.3 8.3 6.9 7.9 11.0 Structural upgrade 11.6 11.0 10.0 21.5 3.9 2.3 4.1 11.3 8.3 6.9 7.9 11.0 Structural upgrade 11.6 11.0 10.0 21.5 3.9 2.3 4.1 11.3 8.3 6.9 7.9 11.0 Structural upgrade 11.6 11.0 10.0 21.5 3.9 2.3 4.1 11.3 8.3 6.9 7.9 11.0 Structural upgrade 11.6 11.0 10.0 21.5 3.9 2.3 4.1 11.3 8.3 6.9 7.9 11.0 Structural upgrade 11.6 11.0 10.0 21.5 3.9 2.3 4.1 11.3 8.3 6.9 7.9 11.0 Structural upgrade 11.6 11.0 10.0 21.5 3.9 2.3 4.1 11.3 8.3 6.9 7.9 11.0 Structural upgrade 11.6 11.0 10.0 21.5 3.9 2.3 4.1 11.3 8.3 6.9 2.9 4.2 6. | Flat | 8.4 | 9.2 | 7.3 | 12.1 | 2.8 | 1.7 | 2.7 | 5.2 | 6.2 | 4.4 | 6.6 | 5.9 | |
| Col roof characteristics (more than one may apply) White or reflective coating or paint 10.5 9.9 9.1 14.1 3.2 2.7 3.3 6.9 7.2 4.7 7.0 6.0 White or reflective tiles or shingles 30.0 33.5 21.9 21.1 8.3 10.1 7.9 8.2 19.9 19.0 16.5 14.4 Aluminum coating 25.7 23.0 18.0 23.1 5.3 5.5 8.8 7.5 18.2 11.1 12.9 23.4 Aluminum coating 16.3 22.4 19.1 38.9 7.7 3.6 5.3 19.7 10.3 7.8 13.9 18.4 Other cool roof property 41.1 54.8 32.4 36.6 17.0 3.0 9.4 10.1 24.9 20.6 21.7 21.5 Renovations since 2000 (more than one may apply) Any type of renovation 9.5 7.7 8.2 13.5 3.0 2.0 2.4 5.7 6.1 3.1 6.7 6.2 Addition or annex 14.0 12.6 18.8 17.6 6.7 3.6 4.0 7.0 9.3 6.4 17.5 16.6 Reduction in floorspace 43.7 31.0 26.6 37.0 8.7 3.4 11.2 48.2 29.8 18.5 22.9 16.0 Roof replacement 14.8 8.5 9.0 19.4 4.7 2.2 3.9 11.0 8.6 5.3 8.3 9.6 Interior wall reconfiguration 17.0 9.7 10.4 22.8 5.8 3.1 4.1 11.6 9.4 5.0 8.1 8.8 Window replacement 12.8 11.3 16.0 25.2 4.7 3.9 4.7 13.2 7.8 9.2 11.4 11.9 HVAC equipment upgrade 11.8 9.6 8.9 15.2 3.8 2.2 3.2 7.0 7.5 4.3 6.5 7.0 Electrical upgrade 11.8 9.6 8.9 15.2 3.8 2.2 3.2 7.0 7.5 4.3 6.5 7.0 Electrical upgrade 11.8 9.6 8.9 15.2 3.8 2.2 3.2 7.0 7.5 4.3 6.5 7.0 Electrical upgrade 11.6 11.0 10.0 21.5 3.9 2.3 4.1 11.3 8.3 6.9 7.9 11.0 Fire, safety, or security upgrade 11.6 11.0 10.0 21.5 3.9 2.3 4.1 11.3 8.3 6.9 7.9 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11 | Shallow pitch | 12.9 | 11.3 | 10.9 | 15.0 | 4.2 | 2.8 | 3.2 | 4.2 | 9.4 | 5.3 | 4.6 | 7.6 | |
| White or reflective coating or paint 10.5 9.9 9.1 14.1 3.2 2.7 3.3 6.9 7.2 4.7 7.0 6.0 White or reflective totalies or shingles 30.0 33.5 21.9 21.1 8.3 10.1 7.9 8.2 19.9 19.0 16.5 14.4 Aluminum coating 25.7 23.0 18.0 23.1 5.3 5.5 8.8 7.5 18.2 11.1 12.9 23.4 Ballasted roof system 16.3 22.4 19.1 38.9 7.7 3.6 5.3 19.7 10.3 7.8 13.9 18.4 Other cool roof property 41.1 54.8 32.4 36.6 17.0 3.0 9.4 10.1 24.9 20.6 21.7 21.5 Renovations since 2000 (more than one may apply) Any type of renovation 9.5 7.7 8.2 13.5 3.0 2.0 2.4 5.7 6.1 3.1 6.7 6.2 Addition or annex 14.0 12.6 18.8 17.6 6.7 6.7 3.6 4.0 7.0 9.3 6.4 17.5 16.2 Reduction in floorspace 43.7 31.0 26.6 37.0 8.7 3.4 11.2 48.2 29.8 18.5 22.9 16.0 Roof replacement 14.8 8.5 9.0 19.4 4.7 22 3.9 11.0 8.6 5.3 8.3 9.6 Interior wall reconfiguration 17.0 9.7 10.4 22.8 5.8 3.1 4.1 11.6 9.4 5.0 8.1 8.8 Window replacement 12.8 11.3 16.0 25.2 4.7 3.9 4.7 13.2 7.8 9.2 11.4 11.9 HVAC equipment upgrade 12.7 7.1 9.5 17.0 4.0 1.9 3.8 8.5 7.9 4.5 8.0 8.1 8.8 Window replacement 13.8 9.6 8.9 15.2 3.8 2.2 2 3.2 7.0 7.5 4.3 6.5 7.0 Electrical upgrade 13.4 12.0 11.9 25.0 5.0 1.9 5.3 12.6 9.6 7.2 10.4 11.2 Plumbing system upgrade 16.1 9.5 11.2 23.4 5.6 2.8 3.5 12.4 9.8 8.4 9.2 9.5 Insulation upgrade 11.6 11.0 10.0 21.5 3.9 2.3 4.1 11.3 18. 8.6 15.0 13.3 14.6 15.1 Fire, safety, or security upgrade 13.4 11.0 10.0 21.5 3.9 3.0 2.1 3.0 3.4 5.9 4.2 6.1 4.9 9.0 No renovations 8.9 11.2 8.1 9.5 3.0 2.1 3.0 3.4 5.9 4.2 6.1 4.9 9.0 No renovations 8.9 11.2 8.1 9.5 3.0 2.1 3.0 3.4 5.9 4.2 6.1 4.9 9.0 No renovations 8.9 11.2 8.1 9.5 3.0 2.1 3.0 3.4 5.9 4.2 6.1 4.9 4.9 No renovations 8.9 11.2 8.1 9.5 3.0 2.1 3.0 3.4 5.9 4.2 6.1 4.9 4.9 No renovations 8.9 11.2 8.1 9.5 3.0 2.1 3.0 3.4 5.9 4.2 6.1 6.4 4.9 9.0 No renovations 8.9 11.2 8.1 9.5 3.0 2.1 3.0 3.4 5.9 4.2 6.1 6.4 9.9 No renovations 8.9 11.2 8.1 9.5 3.0 2.1 3.0 3.4 5.9 4.2 6.1 6.4 9.9 No renovations 8.9 11.2 8.1 9.5 3.0 3.0 2.1 3.0 3.4 5.9 4.2 6.1 6.1 4.9 9.0 No renovations 8.9 11.2 8.1 9.5 3.0 2.1 3.0 3.4 5.9 4.2 6.1 6.1 4.9 9.0 No renovations 8.9 1 | Steeper pitch | 19.4 | 11.3 | 12.9 | 19.0 | 3.7 | 3.5 | 3.6 | 5.0 | 6.2 | 5.8 | 8.9 | 9.1 | |
| White or reflective coating or paint 10.5 9.9 9.1 14.1 3.2 2.7 3.3 6.9 7.2 4.7 7.0 6.0 White or reflective tiles or shingles 30.0 33.5 21.9 21.1 8.3 10.1 7.9 8.2 19.9 19.0 16.5 14.4 Aluminum coating 25.7 23.0 18.0 23.1 5.3 5.5 8.8 7.5 18.2 11.1 12.9 23.4 Ballasted roof system 16.3 22.4 19.1 38.9 7.7 3.6 5.3 19.7 10.3 7.8 13.9 18.4 Other cool roof property 41.1 54.8 32.4 36.6 17.0 3.0 9.4 10.1 24.9 20.6 21.7 21.5 Renovations since 2000 (more than one may apply) Any type of renovation 9.5 7.7 8.2 13.5 3.0 2.0 2.4 5.7 6.1 3.1 6.7 6.2 Addition or annex 14.0 12.6 18.8 17.6 6.7 3.6 4.0 7.0 9.3 6.4 17.5 16.6 Reduction in floorspace 43.7 31.0 26.6 37.0 8.7 3.4 11.2 48.2 29.8 18.5 22.9 16.0 Roof replacement 14.8 8.5 9.0 19.4 4.7 2.2 3.9 11.0 8.6 5.3 8.3 9.6 Interior wall reconfiguration 17.0 9.7 10.4 22.8 5.8 3.1 4.1 11.6 9.4 5.0 8.1 8.8 Window replacement 12.8 11.3 16.0 25.2 4.7 3.9 4.7 13.2 7.8 9.2 11.4 11.9 HVAC equipment upgrade 11.8 9.6 8.9 15.2 3.8 2.2 3.2 7.0 7.5 4.3 6.5 7.0 Electrical upgrade 11.8 9.6 8.9 15.2 3.8 2.2 3.2 7.0 7.5 4.3 6.5 7.0 Electrical upgrade 11.8 9.6 8.9 15.2 3.8 2.2 3.2 7.0 7.5 4.3 6.5 7.0 Electrical upgrade 11.8 9.6 8.9 15.2 3.8 2.2 3.2 7.0 7.5 4.3 6.5 7.0 Electrical upgrade 11.8 9.6 8.9 15.2 3.8 2.2 3.2 7.0 7.5 4.3 6.5 7.0 Electrical upgrade 11.8 9.6 8.9 15.2 3.8 2.2 3.2 7.0 7.5 4.3 6.5 7.0 Electrical upgrade 11.8 9.6 8.9 15.2 3.8 2.2 3.2 7.0 7.5 4.3 6.5 7.0 Electrical upgrade 11.8 9.6 8.9 15.2 3.8 3.7 5.1 18.6 16.0 13.3 14.6 15.1 Electrical upgrade 11.8 9.6 8.9 15.2 3.8 3.7 5.1 18.6 16.0 13.3 14.6 15.1 Electrical upgrade 11.8 9.6 8.9 15.2 3.8 3.7 5.1 18.6 16.0 13.3 14.6 15.1 Electrical upgrade 11.6 11.0 9.5 11.2 23.4 5.6 2.8 3.5 12.4 9.8 8.4 9.2 9.5 Insulation upgrade 11.6 11.0 10.0 21.5 3.9 3.5 6.5 24.7 18.3 8.2 7.9 1.0 41.5 Electrical upgrade 13.4 12.0 11.9 25.0 5.0 1.9 5.3 12.6 9.6 7.2 10.4 11.2 Electrical upgrade 13.4 12.0 11.9 25.0 5.0 1.9 5.3 12.6 9.6 7.2 10.4 11.2 Electrical upgrade 13.4 12.0 11.0 10.0 11.2 11.2 11.2 11.2 11.2 | • | e | | | | | | | | | | | | |
| Aluminum coating 25.7 23.0 18.0 23.1 5.3 5.5 8.8 7.5 18.2 11.1 12.9 23.4 Ballasted roof system 16.3 22.4 19.1 38.9 7.7 3.6 5.3 19.7 10.3 7.8 13.9 18.4 Other cool roof property 41.1 54.8 32.4 36.6 17.0 3.0 9.4 10.1 24.9 20.6 21.7 21.5 Renovations since 2000 (more than one may apply) Any type of renovation 9.5 7.7 8.2 13.5 3.0 2.0 2.4 5.7 6.1 3.1 6.7 6.2 Addition or annex 14.0 12.6 18.8 17.6 6.7 3.6 4.0 7.0 9.3 6.4 17.5 16.6 Reduction in floorspace 43.7 31.0 26.6 37.0 8.7 3.4 11.2 48.2 29.8 18.5 22.9 16.0 Roof replacement 14.8 8.5 9.0 19.4 4.7 22. 3.9 11.0 8.6 5.3 8.3 9.6 Interior wall reconfiguration 17.0 9.7 10.4 22.8 5.8 3.1 4.1 11.6 9.4 5.0 8.1 8.8 Window replacement 12.8 11.3 16.0 25.2 4.7 3.9 4.7 13.2 7.8 9.2 11.4 11.9 HVAC equipment upgrade 12.7 7.1 9.5 17.0 4.0 1.9 3.8 8.5 7.9 4.5 8.0 8.9 15.1 12 19.9 19.0 19.9 15.3 12.6 9.6 7.2 10.4 11.2 Plumbing system upgrade 13.4 12.0 11.9 25.0 5.0 1.9 5.3 12.6 9.6 7.2 10.4 11.2 Plumbing system upgrade 11.6 1.0 10.0 21.5 3.9 2.3 4.1 11.3 8.3 6.9 7.9 11.0 Structural upgrade 23.3 12.9 18.0 43.5 9.3 3.5 6.5 24.7 18.3 28.2 10.4 14.5 Other 33.2 51.9 27.6 40.4 11.0 5.7 9.9 10.5 16.7 34.0 23.6 29.2 No renovations 8.9 11.2 8.1 9.5 3.0 2.1 3.0 3.4 5.9 4.2 6.1 4.9 | White or reflective coating or paint | 10.5 | 9.9 | 9.1 | 14.1 | 3.2 | 2.7 | 3.3 | 6.9 | 7.2 | 4.7 | 7.0 | 6.0 | |
| Ballasted roof system 16.3 22.4 19.1 38.9 7.7 3.6 5.3 19.7 10.3 7.8 13.9 18.4 Other cool roof property 41.1 54.8 32.4 36.6 17.0 3.0 9.4 10.1 24.9 20.6 21.7 21.5 Renovations since 2000 (more than one may apply) Any type of renovation 9.5 7.7 8.2 13.5 3.0 2.0 2.4 5.7 6.1 3.1 6.7 6.2 Addition or annex 14.0 12.6 18.8 17.6 6.7 3.6 4.0 7.0 9.3 6.4 17.5 16.6 Reduction in floorspace 43.7 31.0 26.6 37.0 8.7 3.4 11.2 48.2 29.8 18.5 22.9 16.0 Roof replacement 14.8 8.5 9.0 19.4 4.7 2.2 3.9 11.0 8.6 5.3 8.3 9.6 Interior wall reconfiguration 17.0 9.7 10.4 22.8 5.8 3.1 4.1 11.6 9.4 5.0 8.1 8.8 Window replacement 12.8 11.3 16.0 25.2 4.7 3.9 4.7 13.2 7.8 9.2 11.4 11.9 HVAC equipment upgrade 12.7 7.1 9.5 17.0 4.0 1.9 3.8 8.5 7.9 4.5 8.0 8.9 Lighting upgrade 11.8 9.6 8.9 15.2 3.8 2.2 3.2 7.0 7.5 4.3 6.5 7.0 Lighting upgrade 16.1 9.5 11.2 23.4 5.6 2.8 3.5 12.4 9.8 8.4 9.2 5.1 Insulation upgrade 16.1 9.5 11.2 23.4 5.6 2.8 3.5 12.4 9.8 8.4 9.2 5.5 Insulation upgrade 11.6 11.0 10.0 21.5 3.9 2.3 4.1 11.3 8.3 6.9 7.9 11.0 Structural upgrade 23.3 12.9 18.0 43.5 9.3 3.5 6.5 24.7 18.3 28.2 10.4 14.5 Other 33.2 51.9 27.6 40.4 11.0 5.7 9.9 10.5 16.7 34.0 23.6 29.2 No renovations 8.9 11.2 8.1 9.5 3.0 2.1 3.0 3.4 5.9 4.2 6.1 4.9 | White or reflective tiles or shingles | 30.0 | 33.5 | 21.9 | 21.1 | 8.3 | 10.1 | 7.9 | 8.2 | 19.9 | 19.0 | 16.5 | 14.4 | |
| Ballasted roof system 16.3 22.4 19.1 38.9 7.7 3.6 5.3 19.7 10.3 7.8 13.9 18.4 Other cool roof property 41.1 54.8 32.4 36.6 17.0 3.0 9.4 10.1 24.9 20.6 21.7 21.5 Renovations since 2000 (more than one may apply) Any type of renovation 9.5 7.7 8.2 13.5 3.0 2.0 2.4 5.7 6.1 3.1 6.7 6.2 Addition or annex 14.0 12.6 18.8 17.6 6.7 3.6 4.0 7.0 9.3 6.4 17.5 16.6 Reduction in floorspace 43.7 31.0 26.6 37.0 8.7 3.4 11.2 48.2 29.8 18.5 22.9 16.0 Roof replacement 14.8 8.5 9.0 19.4 4.7 2.2 3.9 11.0 8.6 5.3 8.3 9.6 Interior wall reconfiguration 17.0 9.7 10.4 22.8 5.8 3.1 4.1 11.6 9.4 5.0 8.1 8.8 Window replacement 12.8 11.3 16.0 25.2 4.7 3.9 4.7 13.2 7.8 9.2 11.4 11.9 HVAC equipment upgrade 12.7 7.1 9.5 17.0 4.0 1.9 3.8 8.5 7.9 4.5 8.0 8.9 Lighting upgrade 13.4 12.0 11.9 25.0 5.0 1.9 5.3 12.6 9.6 7.2 10.4 11.2 Plumbing system upgrade 16.1 9.5 11.2 23.4 5.6 2.8 3.5 12.4 9.8 8.4 9.2 9.5 Insulation upgrade 16.1 9.5 11.2 23.4 5.6 2.8 3.5 12.4 9.8 8.4 9.2 9.5 Insulation upgrade 21.4 13.5 13.7 37.4 8.8 3.7 5.1 18.6 16.0 13.3 14.6 15.1 Fire, safety, or security upgrade 11.6 11.0 10.0 21.5 3.9 2.3 4.1 11.3 8.3 6.9 7.9 11.0 Structural upgrade 23.3 12.9 18.0 43.5 9.3 3.5 6.5 24.7 18.3 28.2 10.4 14.5 Other 33.2 51.9 27.6 40.4 11.0 5.7 9.9 10.5 16.7 34.0 23.6 29.2 No renovations 8.9 11.2 8.1 9.5 3.0 2.1 3.0 3.4 5.9 4.2 6.1 4.9 | Aluminum coating | 25.7 | 23.0 | 18.0 | 23.1 | 5.3 | 5.5 | 8.8 | 7.5 | 18.2 | 11.1 | 12.9 | 23.4 | |
| Other cool roof property 41.1 54.8 32.4 36.6 17.0 3.0 9.4 10.1 24.9 20.6 21.7 21.5 Renovations since 2000 (more than one may apply) (more than one may apply) Any type of renovation 9.5 7.7 8.2 13.5 3.0 2.0 2.4 5.7 6.1 3.1 6.7 6.2 Addition or annex 14.0 12.6 18.8 17.6 6.7 3.6 4.0 7.0 9.3 6.4 17.5 16.6 Reduction in floorspace 43.7 31.0 26.6 37.0 8.7 3.4 11.2 48.2 29.8 18.5 22.9 16.0 Roof replacement 14.8 8.5 9.0 19.4 4.7 2.2 3.9 11.0 8.6 5.3 8.3 9.6 Interior wall reconfiguration 17.0 9.7 10.4 22.8 5.8 3.1 4.1 11.6 9.4 5.0 8.1 8.8 Window replacement 12.8 11.3 16.0 25.2 4.7 3.9 | | 16.3 | 22.4 | 19.1 | 38.9 | 7.7 | 3.6 | 5.3 | 19.7 | 10.3 | 7.8 | 13.9 | 18.4 | |
| (more than one may apply) Any type of renovation 9.5 7.7 8.2 13.5 3.0 2.0 2.4 5.7 6.1 3.1 6.7 6.2 Addition or annex 14.0 12.6 18.8 17.6 6.7 3.6 4.0 7.0 9.3 6.4 17.5 16.6 Reduction in floorspace 43.7 31.0 26.6 37.0 8.7 3.4 11.2 48.2 29.8 18.5 22.9 16.0 Roof replacement 14.8 8.5 9.0 19.4 4.7 2.2 3.9 11.0 8.6 5.3 8.3 9.6 Interior wall reconfiguration 17.0 9.7 10.4 22.8 5.8 3.1 4.1 11.6 9.4 5.0 8.1 8.8 Window replacement 12.8 11.3 16.0 25.2 4.7 3.9 4.7 13.2 7.8 9.2 11.4 11.9 HVAC equipment upgrade 12.7 7.1 9.5 17.0 4.0 1.9 3.8 8.5 7.9 4.5 8.0 8.9 Lighting upgrade 11.8 9.6 8.9 15.2 3.8 2.2 3.2 7.0 7.5 4.3 6.5 7.0 Electrical upgrade 13.4 12.0 11.9 25.0 5.0 1.9 5.3 12.6 9.6 7.2 10.4 11.2 Plumbing system upgrade 16.1 9.5 11.2 23.4 5.6 2.8 3.5 12.4 9.8 8.4 9.2 9.5 Insulation upgrade 11.6 11.0 10.0 21.5 3.9 2.3 4.1 11.3 8.3 6.9 7.9 11.0 Structural upgrade 23.3 12.9 18.0 43.5 9.3 3.5 6.5 24.7 18.3 28.2 10.4 14.5 Other 33.2 51.9 27.6 40.4 11.0 5.7 9.9 10.5 16.7 34.0 23.6 29.2 No renovations 8.9 11.2 8.1 9.5 3.0 2.1 3.0 3.4 5.9 4.2 6.1 4.9 | Other cool roof property | 41.1 | 54.8 | 32.4 | 36.6 | 17.0 | 3.0 | 9.4 | 10.1 | 24.9 | 20.6 | 21.7 | 21.5 | |
| Any type of renovation 9.5 7.7 8.2 13.5 3.0 2.0 2.4 5.7 6.1 3.1 6.7 6.2 Addition or annex 14.0 12.6 18.8 17.6 6.7 3.6 4.0 7.0 9.3 6.4 17.5 16.6 Reduction in floorspace 43.7 31.0 26.6 37.0 8.7 3.4 11.2 48.2 29.8 18.5 22.9 16.0 Roof replacement 14.8 8.5 9.0 19.4 4.7 2.2 3.9 11.0 8.6 5.3 8.3 9.6 Interior wall reconfiguration 17.0 9.7 10.4 22.8 5.8 3.1 4.1 11.6 9.4 5.0 8.1 8.8 Window replacement 12.8 11.3 16.0 25.2 4.7 3.9 4.7 13.2 7.8 9.2 11.4 11.9 HVAC equipment upgrade 12.7 7.1 9.5 17.0 4.0 1.9 3.8 8.5 7.9 4.5 8.0 8.9 Lighting upgrade 11.8 9.6 8.9 15.2 3.8 2.2 3.2 7.0 7.5 4.3 6.5 7.0 Electrical upgrade 13.4 12.0 11.9 25.0 5.0 1.9 5.3 12.6 9.6 7.2 10.4 11.2 Plumbing system upgrade 16.1 9.5 11.2 23.4 5.6 2.8 3.5 12.4 9.8 8.4 9.2 9.5 Insulation upgrade 21.4 13.5 13.7 37.4 8.8 3.7 5.1 18.6 16.0 13.3 14.6 15.1 Fire, safety, or security upgrade 11.6 11.0 10.0 21.5 3.9 2.3 4.1 11.3 8.3 6.9 7.9 11.0 Structural upgrade 23.3 12.9 18.0 43.5 9.3 3.5 6.5 24.7 18.3 28.2 10.4 14.5 Other 33.2 51.9 27.6 40.4 11.0 5.7 9.9 10.5 16.7 34.0 23.6 29.2 No renovations 8.9 11.2 8.1 9.5 3.0 2.1 3.0 3.4 5.9 4.2 6.1 4.9 | Renovations since 2000 | | | | | | | | | | | | | |
| Addition or annex 14.0 12.6 18.8 17.6 6.7 3.6 4.0 7.0 9.3 6.4 17.5 16.6 Reduction in floorspace 43.7 31.0 26.6 37.0 8.7 3.4 11.2 48.2 29.8 18.5 22.9 16.0 Roof replacement 14.8 8.5 9.0 19.4 4.7 2.2 3.9 11.0 8.6 5.3 8.3 9.6 Interior wall reconfiguration 17.0 9.7 10.4 22.8 5.8 3.1 4.1 11.6 9.4 5.0 8.1 8.8 Window replacement 12.8 11.3 16.0 25.2 4.7 3.9 4.7 13.2 7.8 9.2 11.4 11.9 HVAC equipment upgrade 12.7 7.1 9.5 17.0 4.0 1.9 3.8 8.5 7.9 4.5 8.0 8.9 Lighting upgrade 11.8 9.6 8.9 15.2 3.8 2.2 3.2 7.0 7.5 4.3 6.5 7.0 Electrical upgrade 13.4 12.0 11.9 25.0 5.0 1.9 5.3 12.6 9.6 7.2 10.4 11.2 Plumbing system upgrade 16.1 9.5 11.2 23.4 5.6 2.8 3.5 12.4 9.8 8.4 9.2 9.5 Insulation upgrade 21.4 13.5 13.7 37.4 8.8 3.7 5.1 18.6 16.0 13.3 14.6 15.1 Fire, safety, or security upgrade 11.6 11.0 10.0 21.5 3.9 2.3 4.1 11.3 8.3 6.9 7.9 11.0 Structural upgrade 23.3 12.9 18.0 43.5 9.3 3.5 6.5 24.7 18.3 28.2 10.4 14.5 Other 33.2 51.9 27.6 40.4 11.0 5.7 9.9 10.5 16.7 34.0 23.6 29.2 No renovations 8.9 11.2 8.1 9.5 3.0 2.1 3.0 3.4 5.9 4.2 6.1 4.9 | (more than one may apply) | | | | | | | | | | | | | |
| Reduction in floorspace 43.7 31.0 26.6 37.0 8.7 3.4 11.2 48.2 29.8 18.5 22.9 16.0 Roof replacement 14.8 8.5 9.0 19.4 4.7 2.2 3.9 11.0 8.6 5.3 8.3 9.6 Interior wall reconfiguration 17.0 9.7 10.4 22.8 5.8 3.1 4.1 11.6 9.4 5.0 8.1 8.8 Window replacement 12.8 11.3 16.0 25.2 4.7 3.9 4.7 13.2 7.8 9.2 11.4 11.9 HVAC equipment upgrade 12.7 7.1 9.5 17.0 4.0 1.9 3.8 8.5 7.9 4.5 8.0 8.9 Lighting upgrade 11.8 9.6 8.9 15.2 3.8 2.2 3.2 7.0 7.5 4.3 6.5 7.0 Electrical upgrade 13.4 12.0 11.9 25.0 5.0 | Any type of renovation | 9.5 | 7.7 | 8.2 | 13.5 | 3.0 | 2.0 | 2.4 | 5.7 | 6.1 | 3.1 | 6.7 | 6.2 | |
| Roof replacement 14.8 8.5 9.0 19.4 4.7 2.2 3.9 11.0 8.6 5.3 8.3 9.6 Interior wall reconfiguration 17.0 9.7 10.4 22.8 5.8 3.1 4.1 11.6 9.4 5.0 8.1 8.8 Window replacement 12.8 11.3 16.0 25.2 4.7 3.9 4.7 13.2 7.8 9.2 11.4 11.9 HVAC equipment upgrade 12.7 7.1 9.5 17.0 4.0 1.9 3.8 8.5 7.9 4.5 8.0 8.9 Lighting upgrade 11.8 9.6 8.9 15.2 3.8 2.2 3.2 7.0 7.5 4.3 6.5 7.0 Electrical upgrade 13.4 12.0 11.9 25.0 5.0 1.9 5.3 12.6 9.6 7.2 10.4 11.2 Plumbing system upgrade 16.1 9.5 11.2 23.4 5.6 | Addition or annex | 14.0 | 12.6 | 18.8 | 17.6 | 6.7 | 3.6 | 4.0 | 7.0 | 9.3 | 6.4 | 17.5 | 16.6 | |
| Interior wall reconfiguration 17.0 9.7 10.4 22.8 5.8 3.1 4.1 11.6 9.4 5.0 8.1 8.8 Window replacement 12.8 11.3 16.0 25.2 4.7 3.9 4.7 13.2 7.8 9.2 11.4 11.9 HVAC equipment upgrade 12.7 7.1 9.5 17.0 4.0 1.9 3.8 8.5 7.9 4.5 8.0 8.9 Lighting upgrade 11.8 9.6 8.9 15.2 3.8 2.2 3.2 7.0 7.5 4.3 6.5 7.0 Electrical upgrade 13.4 12.0 11.9 25.0 5.0 1.9 5.3 12.6 9.6 7.2 10.4 11.2 Plumbing system upgrade 16.1 9.5 11.2 23.4 5.6 2.8 3.5 12.4 9.8 8.4 9.2 9.5 Insulation upgrade 21.4 13.5 13.7 37.4 8.8 | Reduction in floorspace | 43.7 | 31.0 | 26.6 | 37.0 | 8.7 | 3.4 | 11.2 | 48.2 | 29.8 | 18.5 | 22.9 | 16.0 | |
| Window replacement 12.8 11.3 16.0 25.2 4.7 3.9 4.7 13.2 7.8 9.2 11.4 11.9 HVAC equipment upgrade 12.7 7.1 9.5 17.0 4.0 1.9 3.8 8.5 7.9 4.5 8.0 8.9 Lighting upgrade 11.8 9.6 8.9 15.2 3.8 2.2 3.2 7.0 7.5 4.3 6.5 7.0 Electrical upgrade 13.4 12.0 11.9 25.0 5.0 1.9 5.3 12.6 9.6 7.2 10.4 11.2 Plumbing system upgrade 16.1 9.5 11.2 23.4 5.6 2.8 3.5 12.4 9.8 8.4 9.2 9.5 Insulation upgrade 21.4 13.5 13.7 37.4 8.8 3.7 5.1 18.6 16.0 13.3 14.6 15.1 Fire, safety, or security upgrade 11.6 11.0 10.0 21.5 3.9< | Roof replacement | 14.8 | 8.5 | 9.0 | 19.4 | 4.7 | 2.2 | 3.9 | 11.0 | 8.6 | 5.3 | 8.3 | 9.6 | |
| HVAC equipment upgrade 12.7 7.1 9.5 17.0 4.0 1.9 3.8 8.5 7.9 4.5 8.0 8.9 Lighting upgrade 11.8 9.6 8.9 15.2 3.8 2.2 3.2 7.0 7.5 4.3 6.5 7.0 Electrical upgrade 13.4 12.0 11.9 25.0 5.0 1.9 5.3 12.6 9.6 7.2 10.4 11.2 Plumbing system upgrade 16.1 9.5 11.2 23.4 5.6 2.8 3.5 12.4 9.8 8.4 9.2 9.5 Insulation upgrade 21.4 13.5 13.7 37.4 8.8 3.7 5.1 18.6 16.0 13.3 14.6 15.1 Fire, safety, or security upgrade 11.6 11.0 10.0 21.5 3.9 2.3 4.1 11.3 8.3 6.9 7.9 11.0 Structural upgrade 23.3 12.9 18.0 43.5 9.3 3.5 6.5 24.7 18.3 28.2 10.4 14.5 <t< td=""><td>Interior wall reconfiguration</td><td>17.0</td><td>9.7</td><td>10.4</td><td>22.8</td><td>5.8</td><td>3.1</td><td>4.1</td><td>11.6</td><td>9.4</td><td>5.0</td><td>8.1</td><td>8.8</td></t<> | Interior wall reconfiguration | 17.0 | 9.7 | 10.4 | 22.8 | 5.8 | 3.1 | 4.1 | 11.6 | 9.4 | 5.0 | 8.1 | 8.8 | |
| Lighting upgrade 11.8 9.6 8.9 15.2 3.8 2.2 3.2 7.0 7.5 4.3 6.5 7.0 Electrical upgrade 13.4 12.0 11.9 25.0 5.0 1.9 5.3 12.6 9.6 7.2 10.4 11.2 Plumbing system upgrade 16.1 9.5 11.2 23.4 5.6 2.8 3.5 12.4 9.8 8.4 9.2 9.5 Insulation upgrade 21.4 13.5 13.7 37.4 8.8 3.7 5.1 18.6 16.0 13.3 14.6 15.1 Fire, safety, or security upgrade 11.6 11.0 10.0 21.5 3.9 2.3 4.1 11.3 8.3 6.9 7.9 11.0 Structural upgrade 23.3 12.9 18.0 43.5 9.3 3.5 6.5 24.7 18.3 28.2 10.4 14.5 Other 33.2 51.9 27.6 40.4 11.0 5.7 9.9 10.5 16.7 34.0 23.6 29.2 | Window replacement | 12.8 | 11.3 | 16.0 | 25.2 | 4.7 | 3.9 | 4.7 | 13.2 | 7.8 | 9.2 | 11.4 | 11.9 | |
| Electrical upgrade 13.4 12.0 11.9 25.0 5.0 1.9 5.3 12.6 9.6 7.2 10.4 11.2 Plumbing system upgrade 16.1 9.5 11.2 23.4 5.6 2.8 3.5 12.4 9.8 8.4 9.2 9.5 Insulation upgrade 21.4 13.5 13.7 37.4 8.8 3.7 5.1 18.6 16.0 13.3 14.6 15.1 Fire, safety, or security upgrade 11.6 11.0 10.0 21.5 3.9 2.3 4.1 11.3 8.3 6.9 7.9 11.0 Structural upgrade 23.3 12.9 18.0 43.5 9.3 3.5 6.5 24.7 18.3 28.2 10.4 14.5 Other 33.2 51.9 27.6 40.4 11.0 5.7 9.9 10.5 16.7 34.0 23.6 29.2 No renovations 8.9 11.2 8.1 9.5 3.0 2.1 3.0 3.4 5.9 4.2 6.1 4.9 | HVAC equipment upgrade | 12.7 | 7.1 | 9.5 | 17.0 | 4.0 | 1.9 | 3.8 | 8.5 | 7.9 | 4.5 | 8.0 | 8.9 | |
| Plumbing system upgrade 16.1 9.5 11.2 23.4 5.6 2.8 3.5 12.4 9.8 8.4 9.2 9.5 Insulation upgrade 21.4 13.5 13.7 37.4 8.8 3.7 5.1 18.6 16.0 13.3 14.6 15.1 Fire, safety, or security upgrade 11.6 11.0 10.0 21.5 3.9 2.3 4.1 11.3 8.3 6.9 7.9 11.0 Structural upgrade 23.3 12.9 18.0 43.5 9.3 3.5 6.5 24.7 18.3 28.2 10.4 14.5 Other 33.2 51.9 27.6 40.4 11.0 5.7 9.9 10.5 16.7 34.0 23.6 29.2 No renovations 8.9 11.2 8.1 9.5 3.0 2.1 3.0 3.4 5.9 4.2 6.1 4.9 | Lighting upgrade | 11.8 | 9.6 | 8.9 | 15.2 | 3.8 | 2.2 | 3.2 | 7.0 | 7.5 | 4.3 | 6.5 | 7.0 | |
| Insulation upgrade 21.4 13.5 13.7 37.4 8.8 3.7 5.1 18.6 16.0 13.3 14.6 15.1 Fire, safety, or security upgrade 11.6 11.0 10.0 21.5 3.9 2.3 4.1 11.3 8.3 6.9 7.9 11.0 Structural upgrade 23.3 12.9 18.0 43.5 9.3 3.5 6.5 24.7 18.3 28.2 10.4 14.5 Other 33.2 51.9 27.6 40.4 11.0 5.7 9.9 10.5 16.7 34.0 23.6 29.2 No renovations 8.9 11.2 8.1 9.5 3.0 2.1 3.0 3.4 5.9 4.2 6.1 4.9 | Electrical upgrade | 13.4 | 12.0 | 11.9 | 25.0 | 5.0 | 1.9 | 5.3 | 12.6 | 9.6 | 7.2 | 10.4 | 11.2 | |
| Fire, safety, or security upgrade 11.6 11.0 10.0 21.5 3.9 2.3 4.1 11.3 8.3 6.9 7.9 11.0 Structural upgrade 23.3 12.9 18.0 43.5 9.3 3.5 6.5 24.7 18.3 28.2 10.4 14.5 Other 33.2 51.9 27.6 40.4 11.0 5.7 9.9 10.5 16.7 34.0 23.6 29.2 No renovations 8.9 11.2 8.1 9.5 3.0 2.1 3.0 3.4 5.9 4.2 6.1 4.9 | Plumbing system upgrade | 16.1 | 9.5 | 11.2 | 23.4 | 5.6 | 2.8 | 3.5 | 12.4 | 9.8 | 8.4 | 9.2 | 9.5 | |
| Structural upgrade 23.3 12.9 18.0 43.5 9.3 3.5 6.5 24.7 18.3 28.2 10.4 14.5 Other 33.2 51.9 27.6 40.4 11.0 5.7 9.9 10.5 16.7 34.0 23.6 29.2 No renovations 8.9 11.2 8.1 9.5 3.0 2.1 3.0 3.4 5.9 4.2 6.1 4.9 | Insulation upgrade | 21.4 | 13.5 | 13.7 | 37.4 | 8.8 | 3.7 | 5.1 | 18.6 | 16.0 | 13.3 | 14.6 | 15.1 | |
| Other 33.2 51.9 27.6 40.4 11.0 5.7 9.9 10.5 16.7 34.0 23.6 29.2 No renovations 8.9 11.2 8.1 9.5 3.0 2.1 3.0 3.4 5.9 4.2 6.1 4.9 | Fire, safety, or security upgrade | 11.6 | 11.0 | 10.0 | 21.5 | 3.9 | 2.3 | 4.1 | 11.3 | 8.3 | 6.9 | 7.9 | 11.0 | |
| No renovations 8.9 11.2 8.1 9.5 3.0 2.1 3.0 3.4 5.9 4.2 6.1 4.9 | Structural upgrade | 23.3 | 12.9 | 18.0 | 43.5 | 9.3 | 3.5 | 6.5 | 24.7 | 18.3 | 28.2 | 10.4 | 14.5 | |
| | Other | 33.2 | 51.9 | 27.6 | 40.4 | 11.0 | 5.7 | 9.9 | 10.5 | 16.7 | 34.0 | 23.6 | 29.2 | |
| Buildings constructed 2013 or later 27.0 19.6 18.0 16.0 5.7 4.1 9.1 4.3 13.5 10.0 11.4 12.4 | No renovations | 8.9 | 11.2 | 8.1 | 9.5 | 3.0 | 2.1 | 3.0 | 3.4 | 5.9 | 4.2 | 6.1 | 4.9 | |
| | Buildings constructed 2013 or later | 27.0 | 19.6 | 18.0 | 16.0 | 5.7 | 4.1 | 9.1 | 4.3 | 13.5 | 10.0 | 11.4 | 12.4 | |

| | RSEs for total natural gas expenditures | | | | | | | | | | | |
|--|---|--------------|-------|------|----------------|--------------|-------|------|----------------|--------------|-------|------|
| | North- east | Mid- west | South | West | North- east | Mid- west | South | West | North- east | Mid- west | South | West |
| All buildings | 7.2 | 8.2 | 6.6 | 10.3 | 2.1 | 1.7 | 2.0 | 4.1 | 5.1 | 2.7 | 4.2 | 4.3 |
| | | 0.2 | | 10.5 | | | | | | | | |
| Energy sources (more than one may apply) | | | | | | | | | | | | |
| Electricity | 7.2 | 8.2 | 6.6 | 10.3 | 2.1 | 1.7 | 2.0 | 4.1 | 5.1 | 2.7 | 4.2 | 4.3 |
| Natural gas | 7.2 | 8.2 | 6.6 | 10.3 | 2.1 | 1.7 | 2.0 | 4.1 | 5.1 | 2.7 | 4.2 | 4.3 |
| Fuel oil | 12.9 | 11.8 | 7.4 | 22.0 | 4.9 | 3.1 | 4.2 | 10.3 | 8.3 | 8.2 | 7.0 | 9.0 |
| District heat | 22.1 | 20.4 | 25.2 | 28.1 | 9.6 | 3.8 | 7.0 | 13.0 | 22.4 | 24.3 | 17.8 | 20.4 |
| District chilled water | 26.6 | 42.6 | 27.3 | 26.3 | 4.3 | 3.0 | 13.1 | 9.7 | 23.3 | 32.2 | 14.3 | 18.1 |
| Propane Propane | 23.9 | 24.9 | 15.8 | 39.9 | 13.3 | 7.6 | 6.2 | 20.5 | 15.9 | 8.0 | 11.5 | 22.5 |
| Solar | 28.4 | 25.9 | 22.9 | 18.2 | 5.3 | 4.3 | 13.0 | 6.4 | 12.0 | 17.0 | 30.3 | 9.4 |
| Wood, coal, and other | 44.1 | 35.8 | 37.5 | 30.1 | 19.4 | 5.6 | 27.9 | 8.6 | 50.8 | 23.8 | 28.5 | 24.0 |
| | | 33.0 | 37.3 | | 13.4 | 3.0 | | | | | | 24.0 |
| Space-heating energy sources | | 0.0 | 7. | 44 - | 2.1 | 4 - | 2.1 | | F 4 | 2.7 | 4.0 | |
| Natural gas | 7.4 | 8.3 | 7.1 | 11.5 | 2.1 | 1.7 | 2.1 | 4.4 | 5.1 | 2.7 | 4.6 | 4.3 |
| Natural gas main | 7.7 | 8.7 | 7.5 | 12.5 | 2.2 | 1.8 | 2.2 | 4.6 | 5.0 | 2.5 | 4.9 | 4.5 |
| Natural gas secondary | 15.5 | 20.4 | 13.9 | 16.3 | 5.7 | 4.4 | 5.8 | 4.8 | 9.6 | 16.9 | 10.5 | 13.2 |
| Other excluding natural gas | 19.0 | 22.6 | 11.3 | 16.3 | 5.4 | 5.4 | 4.2 | 5.8 | 18.3 | 16.0 | 11.1 | 18.5 |
| Buildings without heating | 51.2 | 70.5 | 41.8 | 36.7 | 0.0 | 0.0 | 12.0 | 10.2 | 0.0 | 0.0 | 35.8 | 44.0 |
| Primary space-heating | | | | | | | | | | | | |
| energy source | | | | | | | | | | | | |
| Electricity | 16.8 | 14.4 | 11.9 | 12.1 | 4.6 | 3.7 | 3.6 | 3.9 | 10.8 | 12.2 | 7.7 | 13.1 |
| Natural gas | 7.7 | 8.7 | 7.5 | 12.5 | 2.2 | 1.8 | 2.2 | 4.6 | 5.0 | 2.5 | 4.9 | 4.5 |
| Fuel oil | 66.4 | 0.0 | 66.6 | 99.7 | 19.4 | 0.0 | 26.7 | 0.0 | 52.5 | 0.0 | 141.3 | 0.0 |
| District heat | 27.3 | 21.5 | 24.5 | 28.7 | 9.7 | 4.0 | 8.0 | 12.0 | 23.8 | 28.9 | 19.8 | 26.0 |
| Propane | 0.0 | 0.0 | 0.0 | 48.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Other sources ^b | 0.0 | 42.2 | 0.0 | 49.5 | 0.0 | 11.2 | 0.0 | 0.0 | 0.0 | 9.7 | 0.0 | 0.0 |
| Cooling energy sources | | | | | | | | | | | | |
| Natural gas | 34.5 | 54.0 | 51.9 | 81.1 | 4.7 | 2.8 | 9.3 | 5.1 | 17.9 | 12.9 | 40.4 | 81.1 |
| Other excluding natural gas | 7.3 | 8.0 | 6.5 | 9.8 | 2.2 | 1.7 | 2.0 | 4.2 | 5.3 | 2.7 | 4.2 | 4.4 |
| Buildings without cooling | 25.2 | 22.9 | 37.5 | 30.7 | 5.1 | 6.1 | 7.5 | 9.8 | 13.4 | 10.5 | 17.0 | 12.8 |
| | | | | | | | | | | | | |
| Water-heating energy sources | 7.2 | 0.0 | | 40.5 | 2.4 | 4.7 | 2.2 | 4.2 | | 2.7 | 2.5 | |
| Natural gas | 7.3 | 9.8 | 6.0 | 10.5 | 2.1 | 1.7 | 2.2 | 4.3 | 6.3 | 3.7 | 3.5 | 5.3 |
| Other excluding natural gas | 11.5 | 10.3 | 13.0 | 20.6 | 4.5 | 2.4 | 2.7 | 5.9 | 6.1 | 6.4 | 9.7 | 10.5 |
| Buildings without water heating | 47.8 | 31.3 | 31.8 | 30.1 | 13.6 | 6.4 | 9.4 | 7.3 | 18.7 | 10.8 | 12.4 | 19.9 |
| Cooking energy sources | | | | | | | | | | | | |
| Natural gas | 9.3 | 8.6 | 5.6 | 11.1 | 2.7 | 1.9 | 2.8 | 4.9 | 5.7 | 4.1 | 4.4 | 4.1 |
| Other excluding natural gas | 16.0 | 14.5 | 13.5 | 20.8 | 7.7 | 3.9 | 4.6 | 6.0 | 13.4 | 8.9 | 8.9 | 11.9 |
| Buildings without cooking | 9.0 | 10.0 | 10.3 | 15.3 | 1.9 | 2.3 | 2.4 | 4.1 | 5.8 | 4.0 | 6.8 | 8.2 |
| Energy end uses | | | | | | | | | | | | |
| (more than one may apply) | | | | | | | | | | | | |
| Buildings with space heating | 7.2 | 8.2 | 6.7 | 10.6 | 2.1 | 1.7 | 2.0 | 4.2 | 5.0 | 2.7 | 4.2 | 4.6 |
| Buildings with cooling | 7.1 | 8.1 | 6.5 | 9.9 | 2.1 | 1.7 | 2.0 | 4.2 | 5.2 | 2.7 | 4.2 | 4.4 |
| Buildings with water heating | 6.9 | 8.2 | 6.5 | 10.3 | 2.1 | 1.7 | 2.1 | 4.2 | 5.3 | 2.8 | 4.3 | 4.3 |
| Buildings with cooking | 8.3 | 8.8 | 6.1 | 11.0 | 3.2 | 2.1 | 2.3 | 4.9 | 6.3 | 4.2 | 4.0 | 4.0 |
| Buildings with manufacturing | 20.1 | 17.3 | 18.0 | 26.6 | 7.0 | 3.6 | 5.3 | 3.9 | 16.8 | 9.6 | 11.9 | 15.6 |
| Buildings with electricity | | | | | | | | | | | | |
| generation | 8.1 | 8.5 | 7.5 | 16.1 | 3.7 | 1.9 | 4.0 | 6.6 | 7.2 | 5.5 | 6.3 | 7.9 |
| Buildings with lighting | 7.2 | 8.2 | 6.4 | 10.3 | 2.1 | 1.7 | 2.0 | 4.1 | 5.1 | 2.7 | 4.2 | 4.3 |
| | | | | | | | | | | | | |

| | | | | RSEs for total natural gas expenditures | | | | | | | | | | |
|---|--------|------|-------|---|--------|------|-------|------|--------|------|-------|------|--|--|
| | North- | Mid- | | | North- | Mid- | | | North- | Mid- | | | | |
| | east | west | South | West | east | west | South | West | east | west | South | West | | |
| All buildings | 7.2 | 8.2 | 6.6 | 10.3 | 2.1 | 1.7 | 2.0 | 4.1 | 5.1 | 2.7 | 4.2 | 4.3 | | |
| Percentage of floorspace heated | | | | | | | | | | | | | | |
| Not heated | 51.2 | 70.5 | 41.8 | 36.7 | 0.0 | 0.0 | 12.0 | 10.2 | 0.0 | 0.0 | 35.8 | 44.0 | | |
| 1% to 50% | 30.6 | 16.1 | 23.7 | 19.0 | 7.8 | 5.6 | 9.8 | 4.3 | 19.1 | 12.1 | 17.3 | 13.5 | | |
| 51% to 99% | 14.1 | 12.8 | 9.3 | 10.2 | 3.0 | 3.5 | 2.5 | 3.4 | 7.1 | 6.3 | 5.6 | 6.5 | | |
| 100% | 8.5 | 8.9 | 8.7 | 13.9 | 2.5 | 1.7 | 2.1 | 5.4 | 5.8 | 3.5 | 5.7 | 5.6 | | |
| Percentage of floorspace cooled | | | | | | | | | | | | | | |
| Not cooled | 25.2 | 22.9 | 37.5 | 30.7 | 5.1 | 6.1 | 7.5 | 9.8 | 13.4 | 10.5 | 17.0 | 12.8 | | |
| 1% to 50% | 13.7 | 13.6 | 15.2 | 22.0 | 3.4 | 2.9 | 7.2 | 6.5 | 10.4 | 5.9 | 7.4 | 12.9 | | |
| 51% to 99% | 8.1 | 12.9 | 11.5 | 14.9 | 3.3 | 2.9 | 2.6 | 3.2 | 5.3 | 5.7 | 7.6 | 7.9 | | |
| 100% | 9.9 | 8.5 | 7.7 | 11.5 | 3.4 | 2.0 | 2.4 | 6.1 | 6.8 | 4.9 | 4.6 | 6.0 | | |
| Heating equipment | | | | | | | | | | | | | | |
| (more than one may apply) | | | | | | | | | | | | | | |
| Packaged heating units | 8.8 | 8.6 | 8.4 | 10.8 | 2.9 | 1.5 | 2.0 | 5.1 | 6.2 | 4.5 | 4.9 | 6.0 | | |
| Furnaces | 17.3 | 10.3 | 11.5 | 14.5 | 5.2 | 3.2 | 3.4 | 4.3 | 6.8 | 6.6 | 7.4 | 7.2 | | |
| Individual space heaters | 12.0 | 13.1 | 13.8 | 19.0 | 2.1 | 2.0 | 3.6 | 8.4 | 7.3 | 5.9 | 10.9 | 7.8 | | |
| Boilers | 9.4 | 9.9 | 7.9 | 14.8 | 2.4 | 2.7 | 3.9 | 6.4 | 6.5 | 4.1 | 7.5 | 5.3 | | |
| Heat pumps | 10.6 | 13.2 | 9.1 | 22.3 | 4.0 | 2.8 | 3.5 | 12.1 | 8.7 | 11.7 | 5.0 | 9.7 | | |
| District heat | 25.1 | 20.3 | 25.3 | 27.9 | 10.5 | 4.0 | 7.0 | 11.3 | 23.9 | 26.4 | 17.9 | 21.9 | | |
| Duct reheat | 28.4 | 18.1 | 13.7 | 23.2 | 15.7 | 3.4 | 7.7 | 11.4 | 18.4 | 10.6 | 12.5 | 18.8 | | |
| Other | 68.0 | 45.2 | 35.0 | 40.0 | 3.0 | 1.4 | 5.7 | 14.3 | 7.8 | 22.8 | 5.6 | 29.8 | | |
| Cooling equipment (more than one may apply) | | | | | | | | | | | | | | |
| Packaged air-conditioning units | 7.0 | 8.2 | 7.8 | 8.4 | 3.0 | 1.8 | 2.3 | 2.6 | 6.0 | 3.3 | 4.2 | 4.9 | | |
| Residential-type central air | | | | | | | | | | | | | | |
| conditioners | 13.7 | 8.8 | 10.2 | 21.0 | 5.1 | 2.5 | 3.2 | 5.0 | 4.9 | 5.4 | 6.8 | 10.4 | | |
| Individual air conditioners | 14.2 | 13.9 | 11.3 | 20.4 | 3.0 | 3.3 | 3.8 | 3.2 | 6.2 | 6.2 | 6.5 | 9.9 | | |
| Central chillers | 10.1 | 11.7 | 9.6 | 12.0 | 5.7 | 3.2 | 4.3 | 3.5 | 8.3 | 8.1 | 9.3 | 7.3 | | |
| Heat pumps | 16.7 | 16.6 | 15.0 | 23.1 | 5.8 | 3.2 | 7.7 | 12.3 | 11.3 | 11.2 | 11.9 | 8.5 | | |
| District chilled water | 26.6 | 42.6 | 27.3 | 26.3 | 4.3 | 3.0 | 13.1 | 9.7 | 23.3 | 32.2 | 14.3 | 18.1 | | |
| Swamp coolers | 48.2 | 34.3 | 50.0 | 23.3 | 17.7 | 5.1 | 13.8 | 7.3 | 92.0 | 14.6 | 14.0 | 15.9 | | |
| Other | 0.0 | 0.0 | 80.0 | 63.5 | 0.0 | 0.0 | 38.3 | 3.9 | 0.0 | 0.0 | 73.7 | 42.5 | | |
| HVAC features | | | | | | | | | | | | | | |
| (more than one may apply) | | | | | | | | | | | | | | |
| Economizer cycle | 9.5 | 7.9 | 10.3 | 13.1 | 3.9 | 2.1 | 3.4 | 6.2 | 7.0 | 4.1 | 8.8 | 6.7 | | |
| Variable air volume (VAV) system | 9.2 | 8.8 | 12.4 | 16.3 | 3.8 | 2.7 | 5.0 | 7.7 | 8.7 | 6.3 | 9.7 | 7.6 | | |
| Dedicated outside air system (DOAS) | 13.0 | 17.2 | 14.5 | 32.2 | 4.4 | 3.5 | 4.7 | 19.7 | 9.2 | 7.5 | 11.2 | 10.8 | | |
| Demand controlled ventilation (DCV) | 13.9 | 12.8 | 11.2 | 18.8 | 6.1 | 3.9 | 6.9 | 5.6 | 7.9 | 8.6 | 11.7 | 13.9 | | |
| Regular HVAC maintenance | 6.9 | 8.5 | 7.4 | 10.7 | 2.3 | 1.8 | 2.2 | 4.3 | 5.6 | 3.6 | 4.5 | 4.6 | | |
| Building automation system (BAS) | _ | = - | | | | | | _ | = - | = | _ | - | | |
| controls heating or cooling | 7.4 | 7.0 | 8.0 | 13.1 | 4.3 | 2.2 | 2.9 | 6.4 | 7.3 | 4.1 | 5.5 | 6.7 | | |
| Internet-connected or smart | 22.5 | 24.6 | 46.0 | 20.0 | 0.2 | 4.3 | 4.0 | | 444 | 245 | 44.4 | 45.0 | | |
| thermostat | 23.5 | 31.6 | 16.0 | 28.9 | 9.2 | 4.3 | 4.8 | 4.7 | 14.4 | 24.5 | 11.1 | 15.9 | | |
| Programmable thermostat | 12.3 | 12.8 | 19.2 | 13.4 | 4.2 | 2.2 | 3.6 | 2.9 | 6.0 | 5.8 | 11.7 | 9.8 | | |
| Main equipment replaced since | | | | | | | | | | | | | | |
| 2000 (more than one may apply) | | | | | | | | | | | | | | |
| 2000 (more than one may apply) Heating | 11.6 | 8.2 | 10.6 | 11.8 | 3.3 | 1.9 | 2.2 | 3.7 | 8.2 | 4.5 | 6.9 | 7.4 | | |

RSEs for natural gas expenditures

| | RSEs for total | SEs for total natural gas expenditures | | | | and cub | ic feet | | Per squar | e foot | | |
|--|----------------|--|-------|------|----------------|--------------|---------|------|----------------|--------------|-------|------|
| | North- east | Mid- west | South | West | North- east | Mid- west | South | West | North- east | Mid- west | South | West |
| All buildings | 7.2 | 8.2 | 6.6 | 10.3 | 2.1 | 1.7 | 2.0 | 4.1 | 5.1 | 2.7 | 4.2 | 4.3 |
| Water-heating equipment | | | | | | | | | | | | |
| Centralized system | 7.6 | 10.0 | 7.0 | 11.5 | 2.0 | 1.8 | 2.3 | 5.8 | 5.2 | 3.4 | 5.2 | 4.4 |
| Distributed system | 13.0 | 16.0 | 12.5 | 14.8 | 4.1 | 2.8 | 3.4 | 3.4 | 13.1 | 8.0 | 7.5 | 11.7 |
| Combination of centralized and | | | | | | | | | | | | |
| distributed systems | 15.3 | 11.0 | 14.7 | 17.3 | 5.4 | 2.7 | 5.0 | 4.8 | 7.9 | 6.7 | 9.0 | 12.0 |
| Generation technologies | | | | | | | | | | | | |
| (more than one may apply) | | | | | | | | | | | | |
| Reciprocating engine generators | 7.3 | 10.9 | 7.6 | 20.2 | | 2.0 | 4.1 | 8.3 | 7.9 | 6.9 | 6.4 | 9.9 |
| Solar panels | 28.4 | 26.0 | 24.4 | 17.2 | 5.3 | 4.3 | 13.7 | 7.4 | 12.1 | 17.1 | 31.4 | 9.7 |
| Other generation technology | 30.7 | 41.2 | 27.6 | 28.8 | 19.1 | 7.1 | 8.5 | 18.9 | 15.0 | 22.2 | 15.0 | 12.0 |
| Food preparation or serving areas | | | | | | | | | | | | |
| in non-food service buildings (more than one may apply) | | | | | | | | | | | | |
| Snack bar, concession stand, or coffee | | | | | | | | | | | | |
| shop | 17.7 | 14.2 | 9.9 | 23.9 | 11.2 | 4.2 | 5.8 | 11.0 | 13.8 | 9.8 | 7.6 | 10.6 |
| Fast food or small restaurant | 16.0 | 10.6 | 9.7 | 23.0 | | 3.2 | 5.9 | 9.5 | 10.2 | 7.3 | 10.4 | 8.7 |
| Cafeteria or large restaurant | 10.6 | 8.7 | 10.6 | 23.7 | | 2.7 | 5.4 | 11.5 | 8.6 | 7.1 | 9.6 | 7.7 |
| Commercial kitchen or | | | | | | | | | | | | |
| food preparation area | 12.8 | 10.4 | 8.3 | 15.3 | 4.7 | 2.7 | 4.3 | 7.8 | 7.1 | 6.9 | 6.9 | 5.7 |
| Small kitchen area | 9.7 | 12.6 | 9.4 | 19.8 | 3.4 | 3.2 | 2.8 | 11.1 | 8.0 | 6.2 | 6.6 | 8.5 |
| Annual consumption | | | | | | | | | | | | |
| (hundred cubic feet) | | | | | | | | | | | | |
| 1,000 or less | 24.9 | 22.6 | 14.9 | 17.9 | 4.1 | 4.6 | 8.8 | 4.2 | 15.9 | 9.9 | 12.0 | 11.9 |
| 1,001 to 5,000 | 11.5 | 18.2 | 11.6 | 11.8 | _ | 2.9 | 2.0 | 2.7 | 9.1 | 11.6 | 6.2 | 6.4 |
| 5,001 to 10,000 | 19.0 | 15.9 | 17.7 | 19.3 | | 2.3 | 2.8 | 3.8 | 8.9 | 7.5 | 8.2 | 7.8 |
| 10,001 to 25,000 | 13.6 | 11.5 | 10.6 | 12.6 | | 2.3 | 2.4 | 3.9 | 7.5 | 6.2 | 8.0 | 6.9 |
| 25,001 to 50,000 | 11.9 | 14.5 | 14.7 | 13.4 | | 2.3 | 4.7 | 6.0 | 10.6 | 5.5 | 8.0 | 7.5 |
| 50,001 to 100,000 | 14.2 | 13.9 | 13.9 | 15.4 | | 4.0 | 2.4 | 4.2 | 7.2 | 9.0 | 8.4 | 9.3 |
| Over 100,000 | 13.6 | 10.1 | 16.0 | 26.1 | | 1.4 | 6.4 | 10.7 | 9.8 | 7.3 | 16.5 | 11.5 |
| 2.3. 23,000 | 23.0 | | | | | | | | | | 10.5 | |

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

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

^aClimate zones are based on ASHRAE Standard 169-2021; see https://www.eia.gov/consumption/commercial/maps.php#defined.

^bOther sources includes wood, coal, solar, and all other energy sources.