

Table 5.7 End Uses of Fuel Consumption, 2002;
Level: National and Regional Data;
Row: End Uses;
Column: Energy Sources, including Net Demand for Electricity;
Unit: Physical Units or Btu.

| End Use | Net Demand for Electricity(a) (million kWh) | Residual Fuel Oil (million bbl) | Distillate Fuel Oil and Diesel Fuel(b) (million bbl) | Natural Gas(c) (billion cu ft) | LPG and NGL(d) (million bbl) | Coal (excluding Coal Coke and Breeze) (million short tons) | RSE Row Factors |
|-------------------------------------|--|---------------------------------------|--|--------------------------------------|------------------------------------|---|-----------------------|
| Total United States | | | | | | | |
| RSE Column Factors: | 0.3 | 2.4 | 1.1 | 1.4 | 1 | 0 | |
| TOTAL FUEL CONSUMPTION | 966,231 | 33 | 24 | 5,641 | 26 | 53 | 3.4 |
| Indirect Uses-Boiler Fuel | 6,714 | 20 | 6 | 2,105 | 2 | 35 | 5.3 |
| Conventional Boiler Use | 3,199 | 12 | 4 | 1,271 | 2 | 11 | 5.6 |
| CHP and/or Cogeneration Process | 3,515 | 8 | 2 | 834 | * | 23 | 3.8 |
| Direct Uses-Total Process | 768,929 | 10 | 7 | 2,907 | 16 | 17 | 2.9 |
| Process Heating | 103,992 | 9 | 4 | 2,670 | 15 | 17 | 3.3 |
| Process Cooling and Refrigeration | 62,460 | * | * | 44 | * | * | 3.8 |
| Machine Drive | 511,864 | * | 3 | 106 | 1 | * | 4.8 |
| Electro-Chemical Processes | 86,360 | -- | -- | -- | -- | -- | 1 |
| Other Process Use | 4,253 | * | * | 87 | * | * | 5.3 |
| Direct Uses-Total Nonprocess | 161,383 | 1 | 9 | 500 | 6 | 1 | 4.6 |
| Facility HVAC (e) | 81,980 | 1 | 1 | 406 | 1 | * | 6.6 |
| Facility Lighting | 62,019 | -- | -- | -- | -- | -- | 1.1 |
| Other Facility Support | 14,872 | * | * | 29 | * | * | 9.7 |
| Onsite Transportation | 1,277 | -- | 6 | 2 | 5 | -- | 3.1 |
| Conventional Electricity Generation | -- | * | Q | 54 | * | 1 | 1.7 |
| Other Nonprocess Use | 1,235 | * | Q | 10 | * | 0 | 8.8 |
| End Use Not Reported | 29,205 | 3 | 2 | 129 | 2 | * | 8.3 |
| Northeast Census Region | | | | | | | |
| RSE Column Factors: | 0.2 | 2.7 | 1.2 | 1.8 | 0.6 | 0 | |
| TOTAL FUEL CONSUMPTION | 110,652 | 11 | 5 | 523 | 2 | 4 | 4.4 |
| Indirect Uses-Boiler Fuel | 534 | 7 | 2 | 183 | * | 2 | 5.6 |
| Conventional Boiler Use | 188 | 5 | 1 | 114 | * | * | 8.7 |
| CHP and/or Cogeneration Process | 346 | 2 | * | 70 | 0 | 1 | 2.6 |
| Direct Uses-Total Process | 80,787 | 2 | 2 | 236 | 1 | 2 | 6 |
| Process Heating | 12,745 | 2 | 2 | 220 | 1 | 2 | 7.1 |

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|-------------------------------------|--|--|---|---|---|---|--------------------------------|
| Process Cooling and Refrigeration | 7,516 | * | * | 5 | * | 0 | 4.3 |
| Machine Drive | 53,477 | * | * | 7 | * | 0 | 8.8 |
| Electro-Chemical Processes | 6,295 | -- | -- | -- | -- | -- | 1 |
| Other Process Use | Q | * | * | 4 | * | 0 | 9.1 |
| Direct Uses-Total Nonprocess | 24,491 | * | 1 | 79 | 1 | * | 4.7 |
| Facility HVAC (e) | 12,126 | * | 1 | 66 | * | * | 6.4 |
| Facility Lighting | 9,668 | -- | -- | -- | -- | -- | 1.3 |
| Other Facility Support | 2,239 | * | * | 9 | * | 0 | 12.2 |
| Onsite Transportation | 150 | -- | * | * | 1 | -- | 3.5 |
| Conventional Electricity Generation | -- | * | * | 2 | * | * | 2.1 |
| Other Nonprocess Use | 307 | 0 | * | 1 | * | 0 | 10.9 |
| End Use Not Reported | 4,840 | 1 | 1 | 26 | * | * | 7.6 |
| Midwest Census Region | | | | | | | |
| RSE Column Factors: | 0.2 | 2.3 | 1.3 | 1.8 | 0.8 | 0 | |
| TOTAL FUEL CONSUMPTION | 267,535 | 3 | 5 | 1,455 | 5 | 20 | 5.8 |
| Indirect Uses-Boiler Fuel | 1,903 | 3 | 1 | 405 | * | 14 | 8.1 |
| Conventional Boiler Use | 958 | 1 | 1 | 348 | * | 6 | 10.7 |
| CHP and/or Cogeneration Process | 945 | 1 | * | 57 | * | 8 | 4.9 |
| Direct Uses-Total Process | 210,960 | 1 | 2 | 792 | 2 | 5 | 5.2 |
| Process Heating | 35,871 | 1 | 1 | 750 | 2 | 5 | 5.9 |
| Process Cooling and Refrigeration | 16,191 | 0 | * | 3 | * | 0 | 5.3 |
| Machine Drive | 139,193 | 0 | * | 20 | * | * | 8.1 |
| Electro-Chemical Processes | 18,371 | -- | -- | -- | -- | -- | 1 |
| Other Process Use | 1,334 | * | * | 19 | * | * | 5.1 |
| Direct Uses-Total Nonprocess | 47,235 | * | 2 | 213 | 2 | * | 7.6 |
| Facility HVAC (e) | 22,201 | * | * | 193 | * | * | 5.9 |
| Facility Lighting | 19,713 | -- | -- | -- | -- | -- | 1.2 |
| Other Facility Support | 4,338 | * | * | 8 | * | * | 4.6 |
| Onsite Transportation | 517 | -- | 2 | * | 2 | -- | 5 |
| Conventional Electricity Generation | -- | * | * | 6 | * | * | 4.4 |

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|-------------------------------------|--|---------------------------------------|--|--------------------------------------|------------------------------------|---|-----------------------|
| Other Nonprocess Use | 466 | * | Q | 5 | * | 0 | 12.4 |
| End Use Not Reported | 7,436 | * | * | 46 | Q | * | 13.8 |
| South Census Region | | | | | | | |
| RSE Column Factors: | 0.3 | 3.2 | 1.2 | 1.5 | 1.1 | 0 | |
| TOTAL FUEL CONSUMPTION | 473,138 | 17 | 9 | 3,005 | 15 | 24 | 4.5 |
| Indirect Uses-Boiler Fuel | 3,993 | 9 | 3 | 1,273 | 1 | 17 | 6.9 |
| Conventional Boiler Use | 1,822 | 5 | 2 | 643 | 1 | 4 | 6.8 |
| CHP and/or Cogeneration Process | 2,170 | 4 | 1 | 630 | * | 13 | 2.4 |
| Direct Uses-Total Process | 389,107 | 6 | 2 | 1,542 | 11 | 6 | 3.5 |
| Process Heating | 46,030 | 6 | 1 | 1,375 | 10 | 6 | 3.8 |
| Process Cooling and Refrigeration | 31,316 | * | * | 35 | * | * | 3.4 |
| Machine Drive | 257,968 | * | 1 | 71 | * | * | 3.9 |
| Electro-Chemical Processes | 52,240 | -- | -- | -- | -- | -- | 1 |
| Other Process Use | 1,552 | * | * | 60 | * | * | 4.2 |
| Direct Uses-Total Nonprocess | 68,696 | * | 3 | 153 | 2 | * | 4.7 |
| Facility HVAC (e) | 36,880 | * | * | 106 | * | * | 8.1 |
| Facility Lighting | 25,101 | -- | -- | -- | -- | -- | 1.2 |
| Other Facility Support | 5,814 | * | * | 8 | * | * | 3.8 |
| Onsite Transportation | 525 | -- | 3 | 1 | 2 | -- | 3.5 |
| Conventional Electricity Generation | -- | 0 | * | 34 | * | * | 1.3 |
| Other Nonprocess Use | 374 | * | * | 3 | * | 0 | 8.1 |
| End Use Not Reported | 11,343 | 2 | 1 | 37 | 1 | * | 10.3 |
| West Census Region | | | | | | | |
| RSE Column Factors: | 0.3 | 3.4 | 1.9 | 1.6 | 0.4 | 0 | |
| TOTAL FUEL CONSUMPTION | 114,906 | 2 | 5 | 658 | 4 | 5 | 3.7 |
| Indirect Uses-Boiler Fuel | 284 | 1 | * | 244 | 1 | 2 | 3.5 |
| Conventional Boiler Use | 231 | 1 | * | 166 | 1 | * | 3.5 |

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|-------------------------------------|--|--|---|---|---|---|--------------------------------|
| CHP and/or Cogeneration Process | 53 | * | * | 78 | * | 1 | 1.1 |
| Direct Uses-Total Process | 88,075 | 1 | 2 | 338 | 2 | 3 | 3.8 |
| Process Heating | 9,344 | 1 | * | 325 | 2 | 3 | 3.7 |
| Process Cooling and Refrigeration | 7,437 | 0 | * | 1 | * | 0 | 4 |
| Machine Drive | 61,226 | 0 | 1 | 9 | * | 0 | 5 |
| Electro-Chemical Processes | 9,454 | -- | -- | -- | -- | -- | 1.1 |
| Other Process Use | 613 | 0 | * | 4 | * | 0 | 6 |
| Direct Uses-Total Nonprocess | 20,961 | * | 2 | 56 | 1 | * | 3.7 |
| Facility HVAC (e) | 10,772 | 0 | * | 41 | * | * | 5.5 |
| Facility Lighting | 7,536 | -- | -- | -- | -- | -- | 1.2 |
| Other Facility Support | 2,480 | * | * | 3 | * | 0 | 4.1 |
| Onsite Transportation | 85 | -- | 1 | * | 1 | -- | 5.1 |
| Conventional Electricity Generation | -- | 0 | Q | 10 | * | * | 1.5 |
| Other Nonprocess Use | 87 | 0 | * | 1 | * | 0 | 6.8 |
| End Use Not Reported | 5,586 | * | * | 20 | * | * | 9.8 |

(a) 'Net Demand for Electricity' is the sum of purchases, transfers in, and total onsite electricity generation, minus sales and transfers offsite. It is the total amount of electricity used by establishments. 'Net Demand for Electricity' is not directly comparable with 'Net Electricity,' which specifically excludes electricity generated onsite by combustible energy sources.

(b) 'Distillate Fuel Oil' includes Nos. 1, 2, and 4 fuel oils and Nos. 1, 2, and 4 diesel fuels.

(c) 'Natural Gas' includes natural gas obtained from utilities, local distribution companies, and any other supplier(s), such as independent gas producers, gas brokers, marketers, and any marketing subsidiaries of utilities.

(d) Examples of Liquefied Petroleum Gases '(LPG)' are ethane, ethylene, propane, propylene, normal butane, butylene, ethane-propane mixtures, propane-butane mixtures, and isobutane produced at refineries or natural gas processing plants, including plants that fractionate raw Natural Gas Liquids '(NGL).'

(e) Facility Heating, Ventilation, and Air Conditioning '(Facility HVAC)' excludes steam and hot water.

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|----------------|--|--|---|---|---|---|--------------------------------|
|----------------|--|--|---|---|---|---|--------------------------------|

NF=No applicable RSE row/column factor.

* Estimate less than 0.5.

W=Withheld to avoid disclosing data for individual establishments.

Q=Withheld because Relative Standard Error is greater than 50 percent.

NA=Not available.

-- Estimation is not applicable.

S=Negative value.

Notes: To obtain the RSE percentage for any table cell, multiply the cell's corresponding RSE column and RSE row factors. Totals may not equal sum of components because of independent rounding. The estimates presented in this table are for the total consumption of energy (formerly total inputs of energy) for the production of heat, power, and electricity generation, regardless of where the energy was produced. Specifically, the estimates include the quantities of energy that were originally produced offsite and purchased by or transferred to the establishment, plus those that were produced onsite from other energy or input materials not classified as energy, or were extracted from captive (onsite) mines or wells.

Allocations to specific end uses are made on the basis of reasonable approximations by respondents.

Source: Energy Information Administration, Office of Energy Markets and End Use, Energy Consumption Division, Form EIA-846, '2002 Manufacturing Energy Consumption Survey.'