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# Monthly Energy Review

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## April 2010

U.S. Energy Information Administration
Independent Statistics and Analysis

# Monthly Energy Review

The *Monthly Energy Review* (*MER*) is the U.S. Energy Information Administration's (EIA) primary report of recent and historical energy statistics. Included are statistics on total energy production, consumption, trade, and energy prices; overviews of petroleum, natural gas, coal, electricity, nuclear energy, renewable energy, and international petroleum; carbon dioxide emissions; and data unit conversions.

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## Important Notes About the Data

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- Graphs: PDF files

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# Monthly Energy Review

# April 2010

**U.S. Energy Information Administration**
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U.S. Department of Energy
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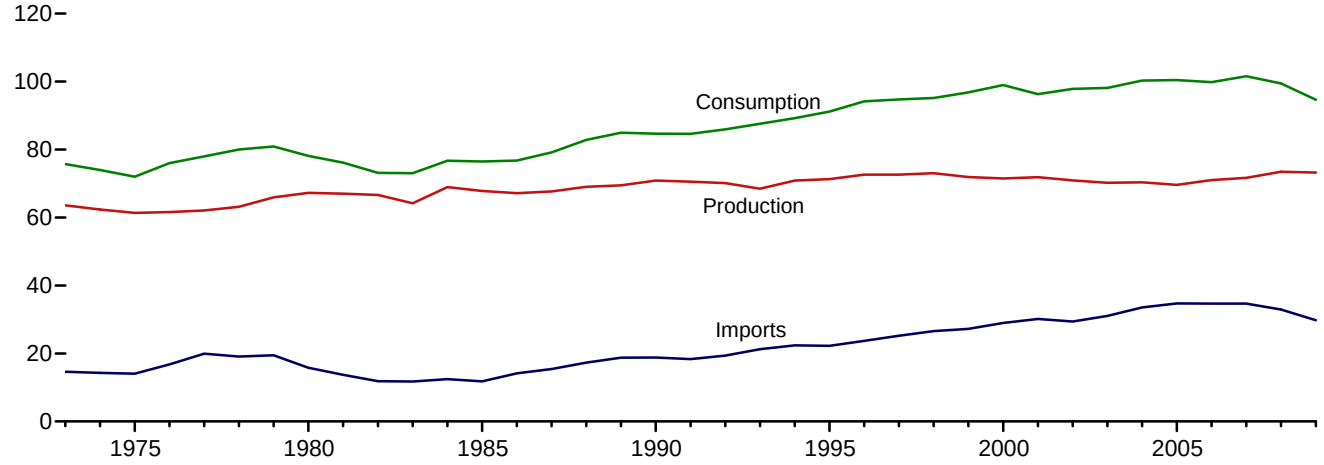
# 1 Energy Overview

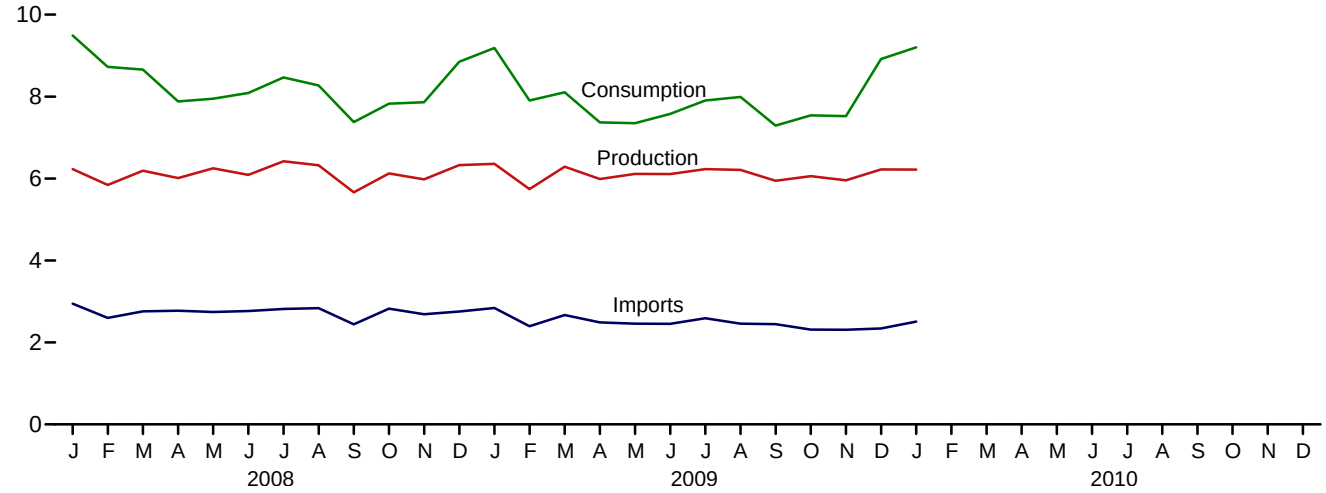
The continental United States at night from orbit. Source: National Oceanic and Atmospheric Administration satellite imagery; mosaic provided by U.S. Geological Survey.

## Figure 1.1 Primary Energy Overview
(Quadrillion Btu)

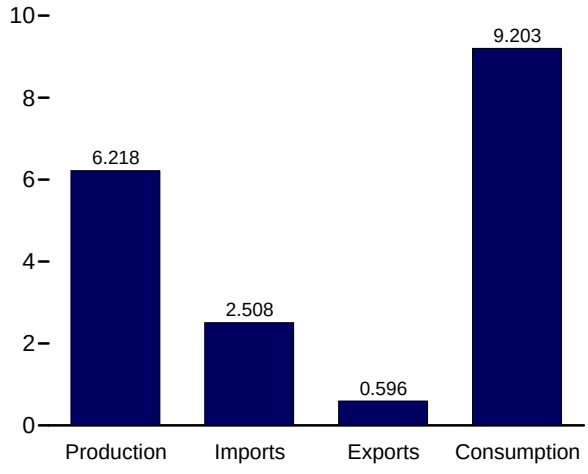
Consumption, Production, and Imports, 1973-2009



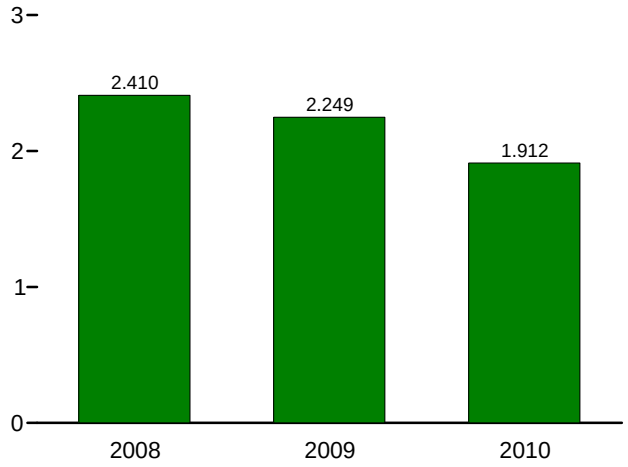

Consumption, Production, and Imports, Monthly




Overview, January 2010




Net Imports, January




Web Page: http://www.eia.doe.gov/emeu/mer/overview.html.
Source: Table 1.1.

# Table 1.1 Primary Energy Overview

(Quadrillion Btu)

| | Production | | | | Trade | | | Stock Change and Other[d] | Consumption | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fossil Fuels[a] | Nuclear Electric Power | Renewable Energy[b] | Total | Imports | Exports | Net Imports[c] | | Fossil Fuels[e] | Nuclear Electric Power | Renewable Energy[b] | Total[f] |
| **1973 Total** | **58.241** | **0.910** | **4.433** | **63.585** | **14.613** | **2.033** | **12.580** | **-0.456** | **70.316** | **0.910** | **4.433** | **75.708** |
| **1975 Total** | **54.733** | **1.900** | **4.723** | **61.357** | **14.032** | **2.323** | **11.709** | **-1.067** | **65.355** | **1.900** | **4.723** | **71.999** |
| **1980 Total** | **59.008** | **2.739** | **5.485** | **67.232** | **15.796** | **3.695** | **12.101** | **-1.212** | **69.826** | **2.739** | **5.485** | **78.122** |
| **1985 Total** | **57.539** | **4.076** | **6.185** | **67.799** | **11.781** | **4.196** | **7.584** | **1.107** | **66.091** | **4.076** | **6.185** | **76.491** |
| **1990 Total** | **58.560** | **6.104** | **6.206** | **70.870** | **18.817** | **4.752** | **14.065** | **-.283** | **72.333** | **6.104** | **6.206** | **84.651** |
| **1995 Total** | **57.540** | **7.075** | **6.701** | **71.316** | **22.260** | **4.511** | **17.750** | **2.103** | **77.257** | **7.075** | **6.703** | **91.169** |
| **1996 Total** | **58.387** | **7.087** | **7.165** | **72.639** | **23.702** | **4.633** | **19.069** | **2.465** | **79.782** | **7.087** | **7.166** | **94.172** |
| **1997 Total** | **58.857** | **6.597** | **7.177** | **72.631** | **25.215** | **4.514** | **20.701** | **1.429** | **80.874** | **6.597** | **7.175** | **94.761** |
| **1998 Total** | **59.314** | **7.068** | **6.655** | **73.037** | **26.581** | **4.299** | **22.281** | **-.140** | **81.369** | **7.068** | **6.654** | **95.178** |
| **1999 Total** | **57.614** | **7.610** | **6.678** | **71.903** | **27.252** | **3.715** | **23.537** | **1.372** | **82.427** | **7.610** | **6.677** | **96.812** |
| **2000 Total** | **57.366** | **7.862** | **6.257** | **71.485** | **28.973** | **4.006** | **24.967** | **2.517** | **84.732** | **7.862** | **6.260** | **98.970** |
| **2001 Total** | **58.541** | **8.029** | **5.312** | **71.883** | **30.157** | **3.770** | **26.386** | **-1.953** | **82.902** | **8.029** | **5.311** | **96.316** |
| **2002 Total** | **56.894** | **8.145** | **5.892** | **70.931** | **29.407** | **3.668** | **25.739** | **1.183** | **83.749** | **8.145** | **5.888** | **97.853** |
| **2003 Total** | R **56.099** | **7.959** | **6.139** | R **70.197** | **31.061** | **4.054** | **27.007** | R **.927** | R **84.010** | **7.959** | **6.141** | R **98.131** |
| **2004 Total** | R **55.895** | **8.222** | **6.235** | R **70.352** | **33.543** | **4.433** | **29.110** | R **.851** | R **85.805** | **8.222** | **6.247** | R **100.313** |
| **2005 Total** | R **55.038** | **8.161** | **6.393** | R **69.592** | **34.710** | **4.561** | **30.149** | R **.704** | R **85.793** | **8.161** | **6.406** | R **100.445** |
| **2006 Total** | **55.968** | **8.215** | **6.834** | **71.018** | **34.673** | **4.868** | **29.805** | **-.973** | **84.687** | **8.215** | **6.885** | **99.850** |
| **2007 Total** | R **56.447** | **8.455** | **6.767** | R **71.669** | **34.685** | **5.448** | **29.238** | R **.682** | R **86.246** | **8.455** | **6.780** | R **101.588** |
| **2008** January | R 4.872 | .739 | .618 | R 6.230 | 2.947 | .537 | 2.410 | R .851 | R 8.126 | .739 | .615 | R 9.491 |
| February | R 4.604 | .681 | .561 | R 5.845 | 2.600 | .528 | 2.071 | .808 | R 7.473 | .681 | .560 | R 8.724 |
| March | R 4.891 | .676 | .624 | R 6.192 | 2.759 | .608 | 2.151 | .316 | R 7.358 | .676 | .617 | R 8.658 |
| April | R 4.788 | .599 | .626 | R 6.013 | 2.774 | .591 | 2.183 | -.314 | R 6.649 | .599 | .625 | R 7.882 |
| May | R 4.883 | .678 | .688 | R 6.248 | 2.742 | .622 | 2.120 | R -.420 | R 6.578 | .678 | .684 | R 7.948 |
| June | R 4.661 | .735 | .694 | R 6.090 | 2.766 | .622 | 2.144 | -.147 | R 6.650 | .735 | .693 | R 8.087 |
| July | R 4.981 | .777 | .665 | R 6.423 | 2.816 | .606 | 2.210 | -.166 | R 7.010 | .777 | .665 | R 8.467 |
| August | R 4.948 | .759 | .618 | R 6.325 | 2.836 | .584 | 2.251 | -.303 | R 6.883 | .759 | .617 | R 8.274 |
| September | R 4.413 | .701 | .551 | R 5.665 | 2.443 | .516 | 1.927 | -.214 | R 6.115 | .701 | .552 | R 7.378 |
| October | R 4.897 | .657 | .572 | R 6.126 | 2.825 | .589 | 2.236 | R -.535 | R 6.590 | .657 | .574 | R 7.826 |
| November | R 4.745 | .663 | .572 | R 5.980 | 2.689 | .593 | 2.096 | -.213 | R 6.626 | .663 | .570 | R 7.862 |
| December | R 4.931 | .762 | .636 | R 6.329 | 2.756 | .619 | 2.137 | .382 | R 7.440 | .762 | .639 | R 8.848 |
| **Total** | R **57.613** | **8.427** | **7.425** | R **73.465** | **32.952** | **7.016** | **25.936** | R **.045** | R **83.496** | **8.427** | **7.410** | R **99.446** |
| **2009** January | R 4.929 | R .775 | .656 | R 6.360 | 2.842 | R .593 | R 2.249 | R .578 | R 7.752 | R .775 | .653 | R 9.186 |
| February | R 4.505 | .671 | .564 | R 5.741 | 2.396 | R .501 | R 1.895 | R .269 | R 6.670 | .671 | .554 | R 7.904 |
| March | R 4.941 | R .703 | .645 | R 6.290 | 2.669 | R .557 | R 2.112 | R -.297 | R 6.752 | R .703 | .646 | R 8.105 |
| April | R 4.698 | R .621 | .668 | R 5.987 | 2.490 | R .506 | R 1.984 | R -.602 | R 6.071 | R .621 | .671 | R 7.369 |
| May | R 4.718 | R .683 | .712 | R 6.114 | 2.458 | .534 | 1.924 | R -.688 | R 5.942 | R .683 | .715 | R 7.350 |
| June | R 4.679 | R .729 | .702 | R 6.109 | 2.452 | R .564 | R 1.889 | R -.420 | R 6.136 | R .729 | .703 | R 7.578 |
| July | R 4.808 | .763 | .659 | R 6.229 | 2.591 | R .617 | R 1.974 | R -.299 | R 6.469 | .763 | .659 | R 7.904 |
| August | R 4.821 | .755 | .633 | R 6.209 | 2.457 | R .594 | R 1.863 | R -.083 | R 6.586 | .755 | .632 | R 7.989 |
| September | R 4.675 | R .686 | .584 | R 5.946 | 2.448 | R .598 | R 1.850 | R -.503 | R 6.013 | R .686 | .583 | R 7.293 |
| October | R 4.811 | R .606 | .642 | R 6.060 | 2.312 | R .645 | R 1.667 | R -.185 | R 6.282 | R .606 | .643 | R 7.542 |
| November | R 4.682 | .617 | .658 | R 5.958 | 2.309 | R .596 | R 1.713 | R -.149 | R 6.242 | .617 | .654 | R 7.522 |
| December | R 4.773 | R .739 | .708 | R 6.221 | R 2.342 | R .626 | R 1.716 | R .980 | R 7.465 | R .739 | .702 | R 8.917 |
| **Total** | R **57.041** | R **8.349** | **7.833** | R **73.223** | R **29.767** | R **6.931** | R **22.836** | R **-1.399** | R **78.379** | R **8.349** | **7.815** | R **94.660** |
| **2010** January | 4.779 | .758 | .680 | 6.218 | 2.508 | .596 | 1.912 | 1.073 | 7.757 | .758 | .674 | 9.203 |

[a] Coal, natural gas (dry), crude oil, and natural gas plant liquids.

[b] Most data are estimates. See Tables 10.1-10.2c for notes on series components and estimation.

[c] Net imports equal imports minus exports.

[d] Includes petroleum stock change and adjustments; natural gas net storage withdrawals and balancing item; coal stock change, losses, and unaccounted for; fuel ethanol stock change; and biodiesel stock change and balancing item.

[e] Coal, coal coke net imports, natural gas, and petroleum.

[f] Also includes electricity net imports.

R=Revised.

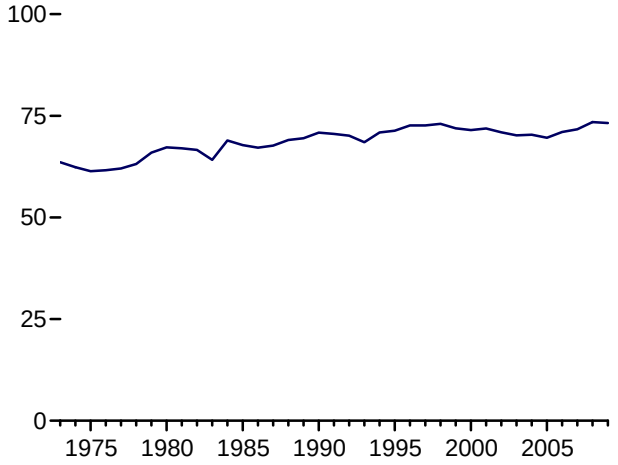
Notes: • See "Primary Energy," "Primary Energy Production," and "Primary Energy Consumption," in Glossary. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/overview.html for all available data beginning in 1973.

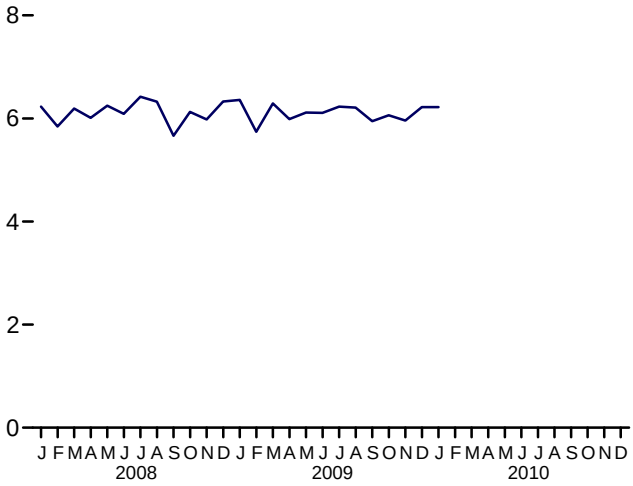
Sources: • **Production:** Table 1.2. • **Trade:** Tables 1.4a and 1.4b. • **Stock Change and Other:** Calculated as consumption minus production and net imports. • **Consumption:** Table 1.3.

## Figure 1.2 Primary Energy Production
(Quadrillion Btu)

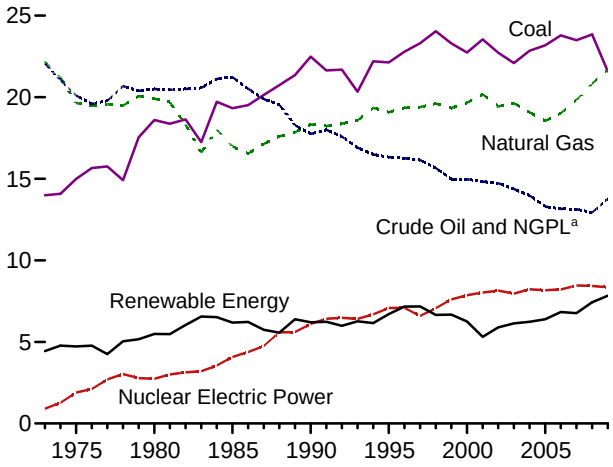
Total, 1973-2009



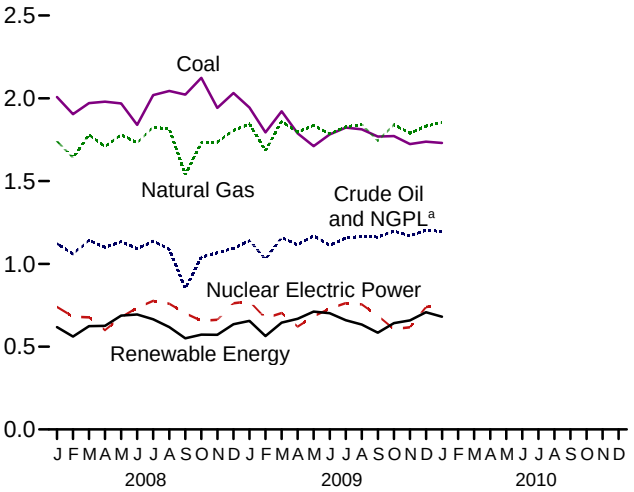

Total, Monthly



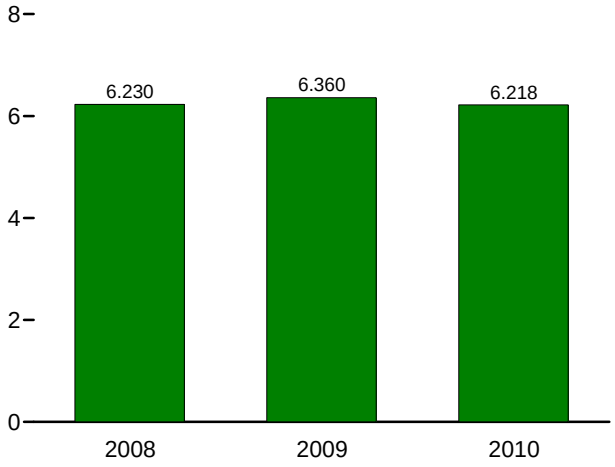

By Source, 1973-2009



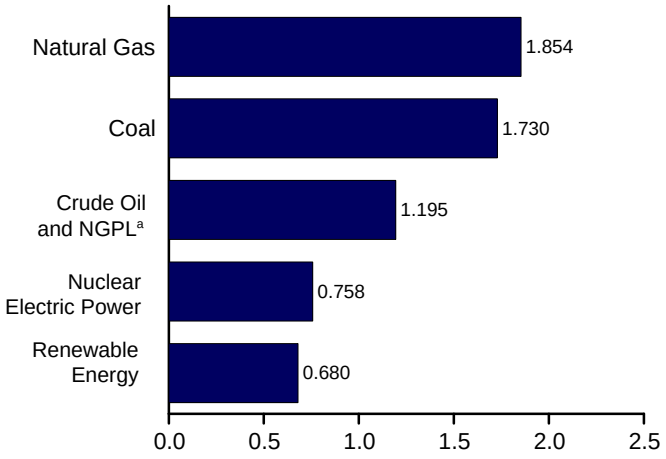

By Source, Monthly




Total, January




By Source, January 2010




[a] Natural gas plant liquids.
Web Page: http://www.eia.doe.gov/emeu/mer/overview.html
Source: Table 1.2.

# Table 1.2 Primary Energy Production by Source

(Quadrillion Btu)

| | Fossil Fuels | | | | | Nuclear Electric Power | Renewable Energy[a] | | | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Coal[b] | Natural Gas (Dry) | Crude Oil[c] | NGPL[d] | Total | | Hydro-electric Power[e] | Geo-thermal | Solar/ PV | Wind | Bio-mass | Total | |
| **1973 Total** | **13.992** | **22.187** | **19.493** | **2.569** | **58.241** | **0.910** | **2.861** | **0.043** | **NA** | **NA** | **1.529** | **4.433** | **63.585** |
| **1975 Total** | **14.989** | **19.640** | **17.729** | **2.374** | **54.733** | **1.900** | **3.155** | **.070** | **NA** | **NA** | **1.499** | **4.723** | **61.357** |
| **1980 Total** | **18.598** | **19.908** | **18.249** | **2.254** | **59.008** | **2.739** | **2.900** | **.110** | **NA** | **NA** | **2.475** | **5.485** | **67.232** |
| **1985 Total** | **19.325** | **16.980** | **18.992** | **2.241** | **57.539** | **4.076** | **2.970** | **.198** | **(s)** | **(s)** | **3.016** | **6.185** | **67.799** |
| **1990 Total** | **22.488** | **18.326** | **15.571** | **2.175** | **58.560** | **6.104** | **3.046** | **.336** | **.060** | **.029** | **2.735** | **6.206** | **70.870** |
| **1995 Total** | **22.130** | **19.082** | **13.887** | **2.442** | **57.540** | **7.075** | **3.205** | **.294** | **.070** | **.033** | **3.099** | **6.701** | **71.316** |
| **1996 Total** | **22.790** | **19.344** | **13.723** | **2.530** | **58.387** | **7.087** | **3.590** | **.316** | **.071** | **.033** | **3.155** | **7.165** | **72.639** |
| **1997 Total** | **23.310** | **19.394** | **13.658** | **2.495** | **58.857** | **6.597** | **3.640** | **.325** | **.070** | **.034** | **3.108** | **7.177** | **72.631** |
| **1998 Total** | **24.045** | **19.613** | **13.235** | **2.420** | **59.314** | **7.068** | **3.297** | **.328** | **.070** | **.031** | **2.929** | **6.655** | **73.037** |
| **1999 Total** | **23.295** | **19.341** | **12.451** | **2.528** | **57.614** | **7.610** | **3.268** | **.331** | **.069** | **.046** | **2.965** | **6.678** | **71.903** |
| **2000 Total** | **22.735** | **19.662** | **12.358** | **2.611** | **57.366** | **7.862** | **2.811** | **.317** | **.066** | **.057** | **3.006** | **6.257** | **71.485** |
| **2001 Total** | **23.547** | **20.166** | **12.282** | **2.547** | **58.541** | **8.029** | **2.242** | **.311** | **.065** | **.070** | **2.624** | **5.312** | **71.883** |
| **2002 Total** | **22.732** | **19.439** | **12.163** | **2.559** | **56.894** | **8.145** | **2.689** | **.328** | **.064** | **.105** | **2.705** | **5.892** | **70.931** |
| **2003 Total** | **22.094** | **R 19.633** | **12.026** | **2.346** | **R 56.099** | **7.959** | **2.825** | **.331** | **.064** | **.115** | **2.805** | **6.139** | **R 70.197** |
| **2004 Total** | **22.852** | **R 19.074** | **11.503** | **2.466** | **R 55.895** | **8.222** | **2.690** | **.341** | **.065** | **.142** | **2.998** | **6.235** | **R 70.352** |
| **2005 Total** | **23.185** | **R 18.556** | **10.963** | **2.334** | **R 55.038** | **8.161** | **2.703** | **.343** | **.066** | **.178** | **3.104** | **6.393** | **R 69.592** |
| **2006 Total** | **23.790** | **19.022** | **10.801** | **2.356** | **55.968** | **8.215** | **2.869** | **.343** | **.072** | **.264** | **3.286** | **6.834** | **71.018** |
| **2007 Total** | **23.493** | **R 19.825** | **10.721** | **2.409** | **R 56.447** | **8.455** | **2.446** | **.349** | **.081** | **.341** | **3.550** | **6.767** | **R 71.669** |
| **2008** January | R 2.008 | R 1.741 | .917 | .206 | R 4.872 | .739 | .205 | .029 | .007 | .042 | .335 | .618 | R 6.230 |
| February | R 1.904 | R 1.640 | .862 | .198 | R 4.604 | .681 | .185 | .027 | .007 | .038 | .304 | .561 | R 5.845 |
| March | R 1.970 | R 1.779 | .926 | .215 | R 4.891 | .676 | .214 | .030 | .008 | .047 | .325 | .624 | R 6.192 |
| April | R 1.979 | R 1.709 | .890 | .210 | R 4.788 | .599 | .219 | .030 | .008 | .051 | .318 | .626 | R 6.013 |
| May | R 1.969 | R 1.780 | .917 | .217 | R 4.883 | .678 | .268 | .031 | .008 | .053 | .328 | .688 | R 6.248 |
| June | R 1.839 | R 1.731 | .887 | .204 | R 4.661 | .735 | .288 | .030 | .008 | .051 | .317 | .694 | R 6.090 |
| July | R 2.019 | R 1.825 | .923 | .214 | R 4.981 | .777 | .252 | .031 | .008 | .039 | .335 | .665 | R 6.423 |
| August | R 2.044 | R 1.815 | .880 | .208 | R 4.948 | .759 | .209 | .031 | .008 | .032 | .338 | .618 | R 6.325 |
| September | R 2.022 | R 1.539 | .684 | .168 | R 4.413 | .701 | .159 | .030 | .008 | .031 | .323 | .551 | R 5.665 |
| October | R 2.123 | R 1.733 | .840 | .201 | R 4.897 | .657 | .152 | .031 | .008 | .047 | .334 | .572 | R 6.126 |
| November | R 1.942 | R 1.735 | .874 | .193 | R 4.745 | .663 | .154 | .030 | .007 | .049 | .331 | .572 | R 5.980 |
| December | R 2.032 | R 1.806 | .909 | .185 | R 4.931 | .762 | .206 | .031 | .007 | .065 | .327 | .636 | R 6.329 |
| **Total** | **R 23.851** | **R 20.834** | **10.509** | **2.419** | **R 57.613** | **8.427** | **2.511** | **.360** | **.091** | **.546** | **3.916** | **7.425** | **R 73.465** |
| **2009** January | R 1.944 | E 1.845 | E .943 | .197 | R 4.929 | R .775 | .235 | .032 | .007 | .059 | .323 | .656 | R 6.360 |
| February | R 1.794 | E 1.684 | E .843 | .185 | R 4.505 | .671 | .176 | .029 | .007 | .056 | .296 | .564 | R 5.741 |
| March | R 1.921 | E 1.861 | E .948 | .212 | R 4.941 | R .703 | .214 | .032 | .008 | .068 | .324 | .645 | R 6.290 |
| April | R 1.788 | E 1.796 | E .910 | .205 | R 4.698 | R .621 | .250 | .029 | .008 | .072 | .309 | .668 | R 5.987 |
| May | R 1.711 | E 1.837 | E .950 | .221 | R 4.718 | R .683 | .290 | .030 | .008 | .060 | .324 | .712 | R 6.114 |
| June | R 1.781 | E 1.785 | E .902 | .210 | R 4.679 | R .729 | .287 | .030 | .008 | .053 | .324 | .702 | R 6.109 |
| July | R 1.823 | E 1.828 | E .941 | .216 | R 4.808 | .763 | .226 | .031 | .008 | .046 | .348 | .659 | R 6.229 |
| August | R 1.812 | E 1.841 | E .950 | .217 | R 4.821 | .755 | .189 | .030 | .008 | .052 | .354 | .633 | R 6.209 |
| September | R 1.769 | E 1.744 | E .947 | .215 | R 4.675 | R .686 | .170 | .030 | .008 | .043 | .334 | .584 | R 5.946 |
| October | R 1.772 | RE 1.841 | E .975 | .223 | R 4.811 | R .606 | .194 | .031 | .008 | .062 | .348 | .642 | R 6.060 |
| November | R 1.724 | E 1.789 | E .951 | .218 | R 4.682 | .617 | .206 | .031 | .007 | .063 | .351 | .658 | R 5.958 |
| December | R 1.738 | RE 1.832 | E .982 | .222 | R 4.773 | R .739 | .244 | .032 | .007 | .062 | .363 | .708 | R 6.221 |
| **Total** | **R 21.578** | **RE 21.681** | **E 11.241** | **2.541** | **R 57.041** | **R 8.349** | **2.682** | **.366** | **.091** | **.697** | **3.997** | **7.833** | **R 73.223** |
| **2010** January | 1.730 | E 1.854 | E .977 | .219 | 4.779 | .758 | .217 | .032 | .007 | .063 | .361 | .680 | 6.218 |

[a] Most data are estimates. See Tables 10.1-10.2c for notes on series components and estimation.

[b] Beginning in 1989, includes waste coal supplied. Beginning in 2001, also includes a small amount of refuse recovery. See Table 6.1.

[c] Includes lease condensate.

[d] Natural gas plant liquids.

[e] Conventional hydroelectric power.

R=Revised. E=Estimate. NA=Not available. (s)=Less than 0.5 trillion Btu.

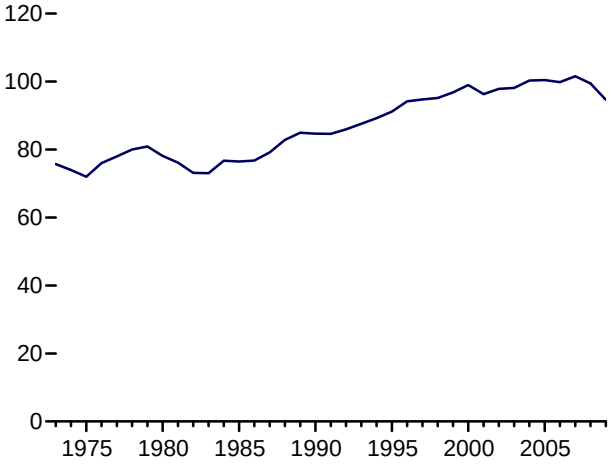
Notes: • See "Primary Energy Production" in Glossary. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/overview.html for all available data beginning in 1973.

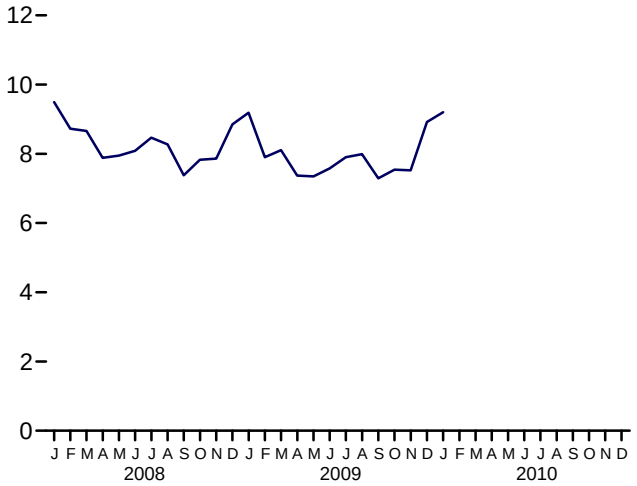
Sources: • **Coal:** Tables 6.1 and A5. • **Natural Gas (Dry):** Tables 4.1 and A4. • **Crude Oil** and **Natural Gas Plant Liquids:** Tables 3.1 and A2. • **Nuclear Electric Power:** Tables 7.2a and A6 ("Nuclear Plants" heat rate). • **Renewable Energy:** Table 10.1.

## Figure 1.3 Primary Energy Consumption
(Quadrillion Btu)

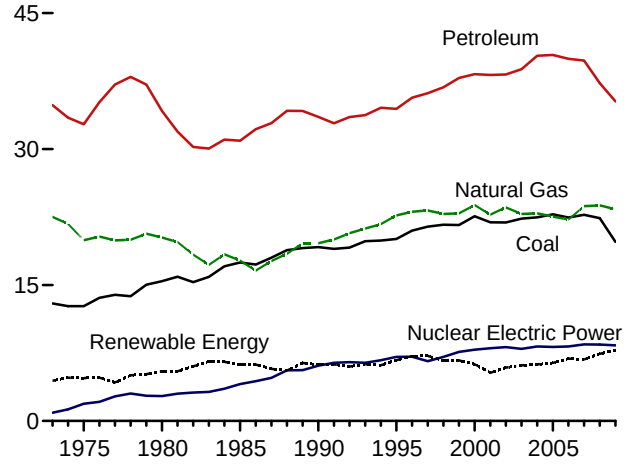
Total, 1973-2009



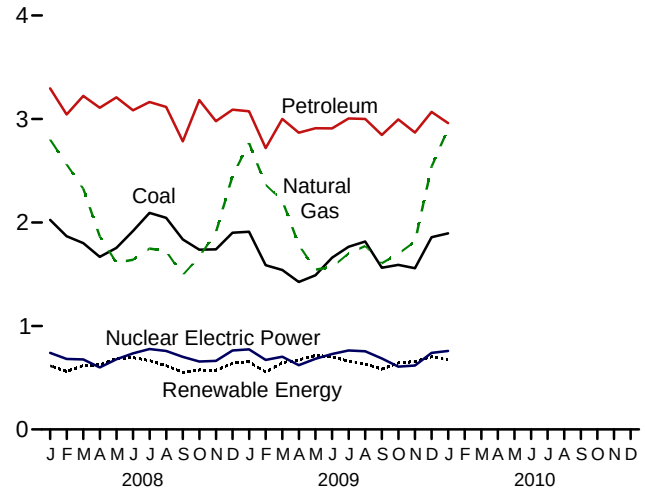

Total, Monthly



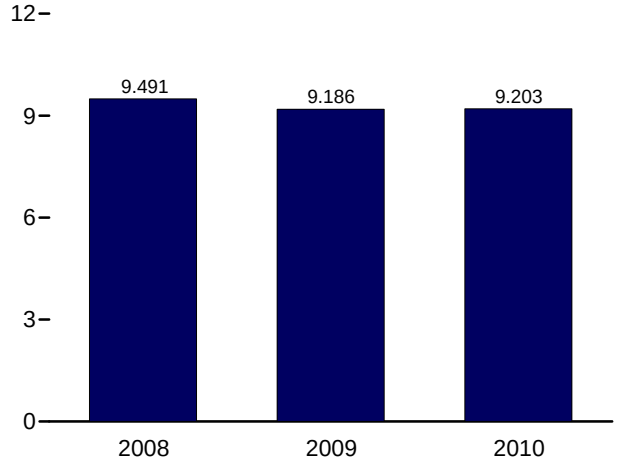

By Source,[a] 1973-2009



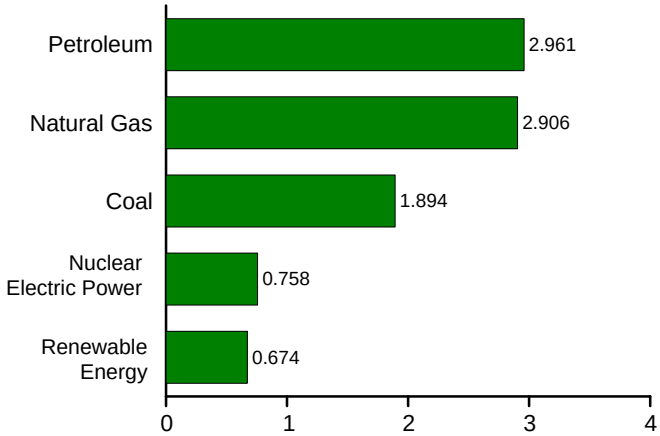

By Source,[a] Monthly




Total, January




By Source,[a] January 2010




[a] Small quantities of net imports of coal coke and electricity are not shown.
Web Page: http://www.eia.doe.gov/emeu/mer/overview.html.
Source: Table 1.3.

# Table 1.3 Primary Energy Consumption by Source

(Quadrillion Btu)

| | Fossil Fuels | | | | Nuclear Electric Power | Renewable Energy[a] | | | | | | Total[f] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Coal | Natural Gas[b] | Petroleum[c] | Total[d] | | Hydroelectric Power[e] | Geothermal | Solar/PV | Wind | Biomass | Total | |
| **1973 Total** | **12.971** | **22.512** | **34.840** | **70.316** | **0.910** | **2.861** | **0.043** | **NA** | **NA** | **1.529** | **4.433** | **75.708** |
| **1975 Total** | **12.663** | **19.948** | **32.731** | **65.355** | **1.900** | **3.155** | **.070** | **NA** | **NA** | **1.499** | **4.723** | **71.999** |
| **1980 Total** | **15.423** | **20.235** | **34.202** | **69.826** | **2.739** | **2.900** | **.110** | **NA** | **NA** | **2.475** | **5.485** | **78.122** |
| **1985 Total** | **17.478** | **17.703** | **30.922** | **66.091** | **4.076** | **2.970** | **.198** | **(s)** | **(s)** | **3.016** | **6.185** | **76.491** |
| **1990 Total** | **19.173** | **19.603** | **33.553** | **72.333** | **6.104** | **3.046** | **.336** | **.060** | **.029** | **2.735** | **6.206** | **84.651** |
| **1995 Total** | **20.089** | **22.671** | **34.436** | **77.257** | **7.075** | **3.205** | **.294** | **.070** | **.033** | **3.101** | **6.703** | **91.169** |
| **1996 Total** | **21.002** | **23.085** | **35.673** | **79.782** | **7.087** | **3.590** | **.316** | **.071** | **.033** | **3.157** | **7.166** | **94.172** |
| **1997 Total** | **21.445** | **23.223** | **36.159** | **80.874** | **6.597** | **3.640** | **.325** | **.070** | **.034** | **3.105** | **7.175** | **94.761** |
| **1998 Total** | **21.656** | **22.830** | **36.816** | **81.369** | **7.068** | **3.297** | **.328** | **.070** | **.031** | **2.928** | **6.654** | **95.178** |
| **1999 Total** | **21.623** | **22.909** | **37.837** | **82.427** | **7.610** | **3.268** | **.331** | **.069** | **.046** | **2.963** | **6.677** | **96.812** |
| **2000 Total** | **22.580** | **23.824** | **38.263** | **84.732** | **7.862** | **2.811** | **.317** | **.066** | **.057** | **3.008** | **6.260** | **98.970** |
| **2001 Total** | **21.914** | **22.773** | **38.185** | **82.902** | **8.029** | **2.242** | **.311** | **.065** | **.070** | **2.622** | **5.311** | **96.316** |
| **2002 Total** | **21.904** | **23.558** | **38.225** | **83.749** | **8.145** | **2.689** | **.328** | **.064** | **.105** | **2.701** | **5.888** | **97.853** |
| **2003 Total** | **22.321** | R **22.831** | **38.808** | R **84.010** | **7.959** | **2.825** | **.331** | **.064** | **.115** | **2.807** | **6.141** | R **98.131** |
| **2004 Total** | **22.466** | R **22.909** | **40.292** | R **85.805** | **8.222** | **2.690** | **.341** | **.065** | **.142** | **3.010** | **6.247** | R **100.313** |
| **2005 Total** | **22.797** | R **22.561** | **40.391** | R **85.793** | **8.161** | **2.703** | **.343** | **.066** | **.178** | **3.117** | **6.406** | R **100.445** |
| **2006 Total** | **22.447** | **22.224** | **39.955** | **84.687** | **8.215** | **2.869** | **.343** | **.072** | **.264** | **3.337** | **6.885** | **99.850** |
| **2007 Total** | **22.749** | R **23.702** | **39.769** | R **86.246** | **8.455** | **2.446** | **.349** | **.081** | **.341** | **3.564** | **6.780** | R **101.588** |
| **2008** January | R 2.025 | R 2.801 | 3.295 | R 8.126 | .739 | .205 | .029 | .007 | .042 | .331 | .615 | R 9.491 |
| February | R 1.867 | R 2.561 | 3.043 | R 7.473 | .681 | .185 | .027 | .007 | .038 | .304 | .560 | R 8.724 |
| March | R 1.801 | R 2.327 | 3.222 | R 7.358 | .676 | .214 | .030 | .008 | .047 | .318 | .617 | R 8.658 |
| April | R 1.667 | R 1.865 | 3.108 | R 6.649 | .599 | .219 | .030 | .008 | .051 | .317 | .625 | R 7.882 |
| May | R 1.754 | R 1.613 | 3.209 | R 6.578 | .678 | .268 | .031 | .008 | .053 | .325 | .684 | R 7.948 |
| June | R 1.919 | R 1.639 | 3.083 | R 6.650 | .735 | .288 | .030 | .008 | .051 | .316 | .693 | R 8.087 |
| July | R 2.092 | R 1.748 | 3.164 | R 7.010 | .777 | .252 | .031 | .008 | .039 | .335 | .665 | R 8.467 |
| August | R 2.045 | R 1.721 | 3.116 | R 6.883 | .759 | .209 | .031 | .008 | .032 | .336 | .617 | R 8.274 |
| September | R 1.836 | R 1.492 | 2.784 | R 6.115 | .701 | .159 | .030 | .008 | .031 | .324 | .552 | R 7.378 |
| October | 1.737 | R 1.669 | 3.183 | R 6.590 | .657 | .152 | .031 | .008 | .047 | .336 | .574 | R 7.826 |
| November | R 1.741 | R 1.904 | 2.979 | R 6.626 | .663 | .154 | .030 | .007 | .049 | .329 | .570 | R 7.862 |
| December | R 1.901 | R 2.451 | 3.090 | R 7.440 | .762 | .206 | .031 | .007 | .065 | .330 | .639 | R 8.848 |
| **Total** | R **22.385** | R **23.791** | **37.279** | R **83.496** | **8.427** | **2.511** | **.360** | **.091** | **.546** | **3.902** | **7.410** | R **99.446** |
| **2009** January | R 1.911 | R 2.768 | R 3.074 | R 7.752 | R .775 | .235 | .032 | .007 | .059 | .320 | .653 | R 9.186 |
| February | R 1.588 | R 2.364 | R 2.720 | R 6.670 | .671 | .176 | .029 | .007 | .056 | .287 | .554 | R 7.904 |
| March | R 1.541 | R 2.213 | R 3.000 | R 6.752 | R .703 | .214 | .032 | .008 | .068 | .324 | .646 | R 8.105 |
| April | R 1.424 | R 1.781 | R 2.868 | R 6.071 | R .621 | .250 | .029 | .008 | .072 | .312 | .671 | R 7.369 |
| May | R 1.489 | R 1.543 | R 2.911 | R 5.942 | R .683 | .290 | .030 | .008 | .060 | .327 | .715 | R 7.350 |
| June | R 1.659 | R 1.568 | R 2.910 | R 6.136 | R .729 | .287 | .030 | .008 | .053 | .326 | .703 | R 7.578 |
| July | R 1.766 | R 1.700 | R 3.005 | R 6.469 | .763 | .226 | .031 | .008 | .046 | .348 | .659 | R 7.904 |
| August | R 1.816 | R 1.773 | R 3.000 | R 6.586 | .755 | .189 | .030 | .008 | .052 | .353 | .632 | R 7.989 |
| September | R 1.562 | R 1.606 | R 2.846 | R 6.013 | R .686 | .170 | .030 | .008 | .043 | .332 | .583 | R 7.293 |
| October | R 1.591 | R 1.699 | R 2.995 | R 6.282 | R .606 | .194 | .031 | .008 | .062 | .348 | .643 | R 7.542 |
| November | R 1.557 | R 1.817 | R 2.869 | R 6.242 | .617 | .206 | .031 | .007 | .063 | .347 | .654 | R 7.522 |
| December | R 1.858 | R 2.540 | R 3.069 | R 7.465 | R .739 | .244 | .032 | .007 | .062 | .357 | .702 | R 8.917 |
| **Total** | R **19.761** | R **23.373** | R **35.268** | R **78.379** | R **8.349** | **2.682** | **.366** | **.091** | **.697** | **3.980** | **7.815** | R **94.660** |
| **2010** January | 1.894 | 2.906 | 2.961 | 7.757 | .758 | .217 | .032 | .007 | .063 | .354 | .674 | 9.203 |

[a] Most data are estimates. See Tables 10.1-10.2c for notes on series components and estimation.

[b] Natural gas only; excludes supplemental gaseous fuels. See Note 3, "Supplemental Gaseous Fuels," at end of Section 4.

[c] Petroleum products supplied, including natural gas plant liquids and crude oil burned as fuel. Does not include biofuels that have been blended with petroleum—biofuels are included in "Biomass."

[d] Includes coal coke net imports. See Tables 1.4a and 1.4b.

[e] Conventional hydroelectric power.

[f] Includes coal coke net imports and electricity net imports, which are not separately displayed. See Tables 1.4a and 1.4b.

R=Revised. NA=Not available. (s)=Less than 0.5 trillion Btu.

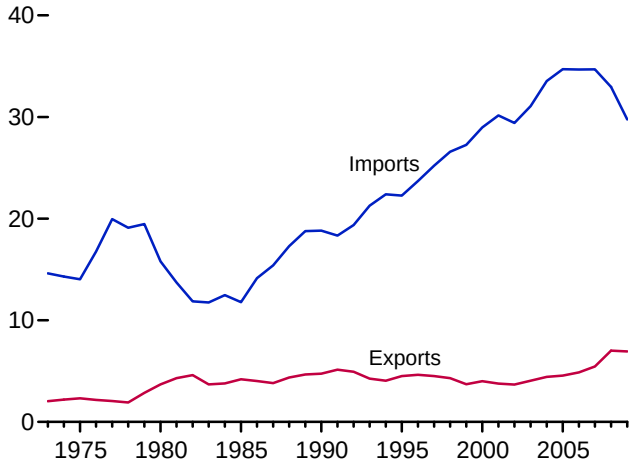
Notes: • See "Primary Energy Consumption" in Glossary. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/overview.html for all available data beginning in 1973.

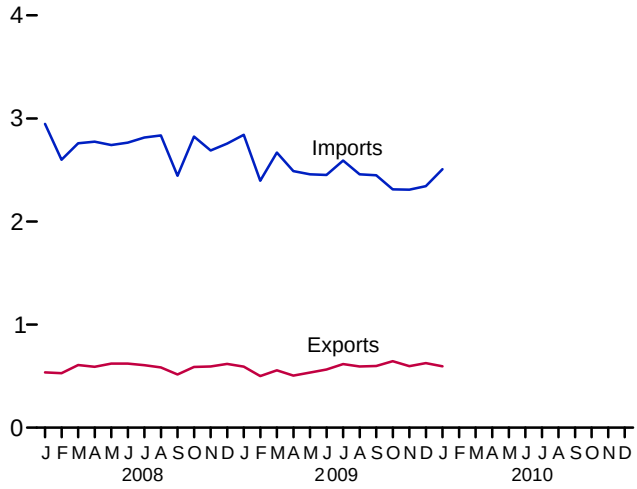
Sources: • **Coal:** Tables 6.1 and A5. • **Natural Gas:** Tables 4.1 and A4. • **Petroleum:** Table 3.6. • **Nuclear Electric Power:** Tables 7.2a and A6 ("Nuclear Plants" heat rate). • **Renewable Energy:** Table 10.1. • **Net Imports of Coal Coke and Electricity:** Tables 1.4a and 1.4b.

## Figure 1.4a Primary Energy Imports and Exports
(Quadrillion Btu)

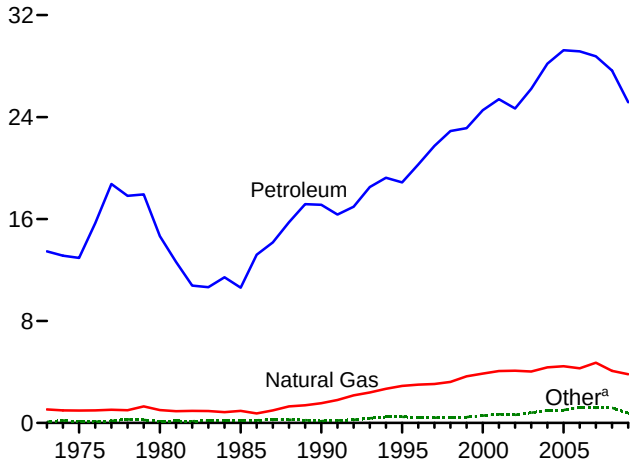
Total Imports and Exports, 1973-2009



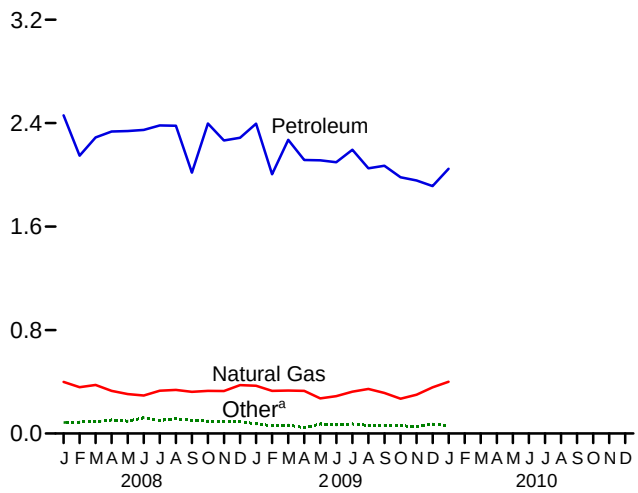

Total Imports and Exports, Monthly



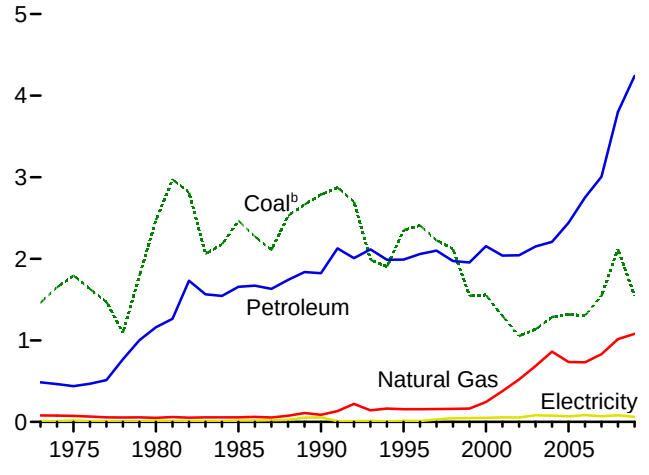

Imports by Source, 1973-2009



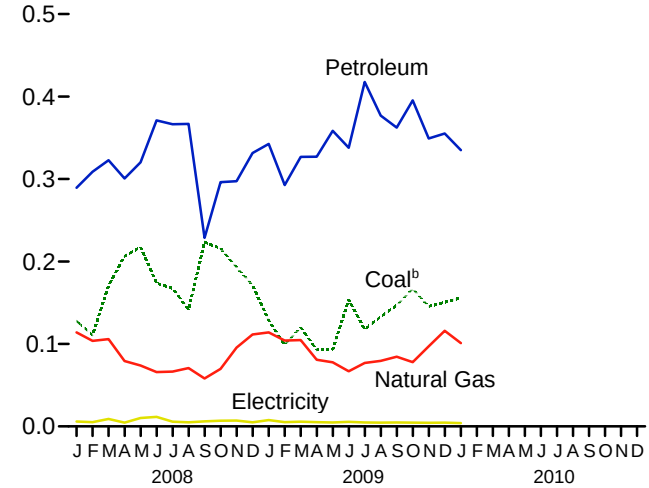

Imports by Source, Monthly




Exports by Source, 1973-2009




Exports by Major Source, Monthly



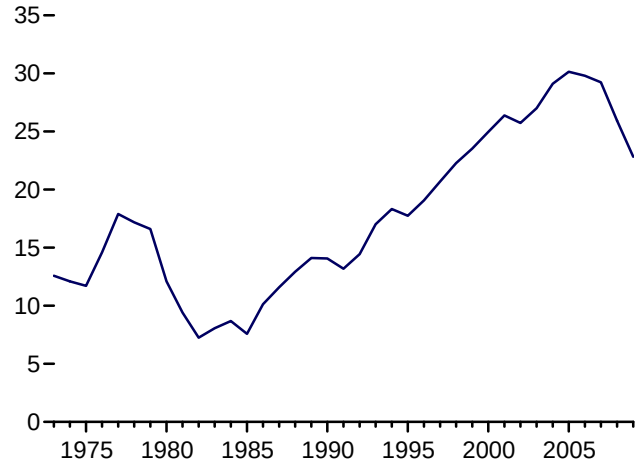

[a]Coal, coal coke, biofuels, and electricity.
[b]Includes coal coke.

Web Page: http://www.eia.doe.gov/emeu/mer/overview.html.
Sources: Tables 1.4a and 1.4b.

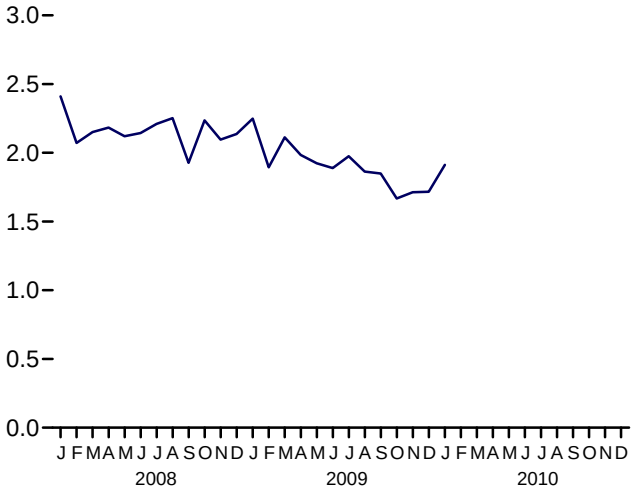
## Figure 1.4b Primary Energy Net Imports

(Quadrillion Btu, Except as noted)

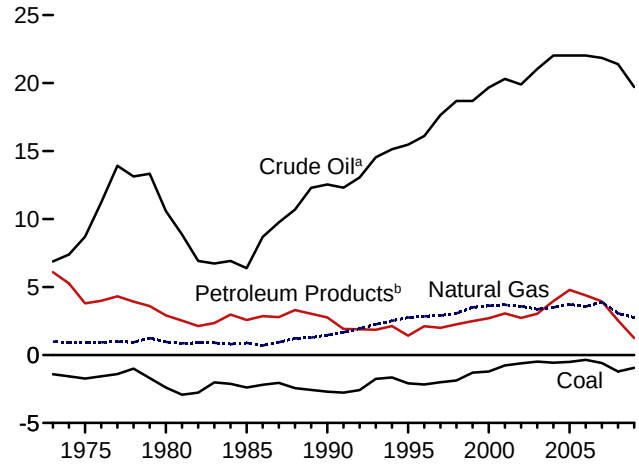
Total, 1973-2009



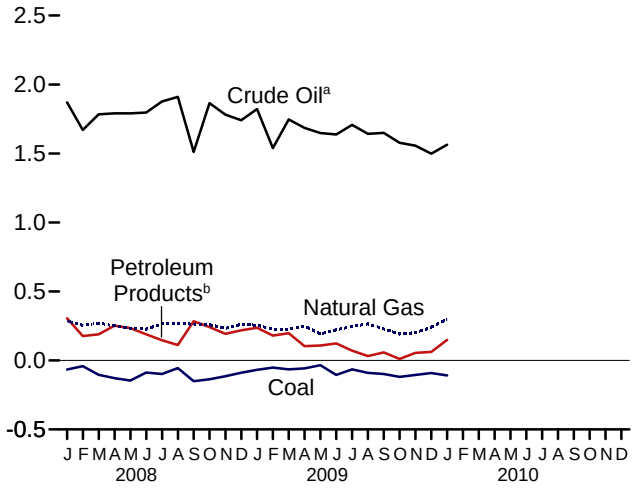

Total, Monthly



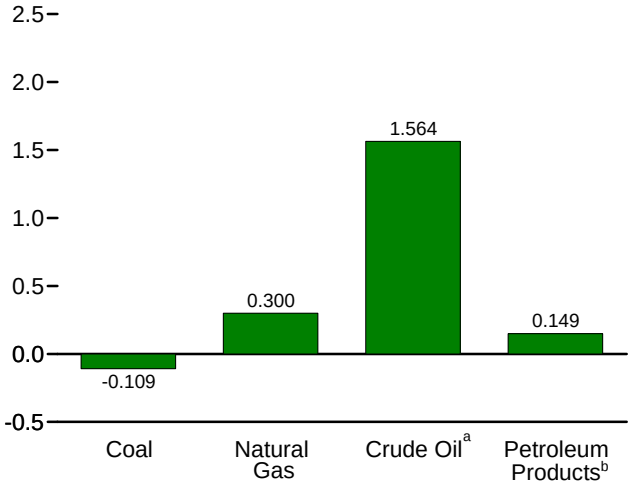

By Major Source, 1973-2009



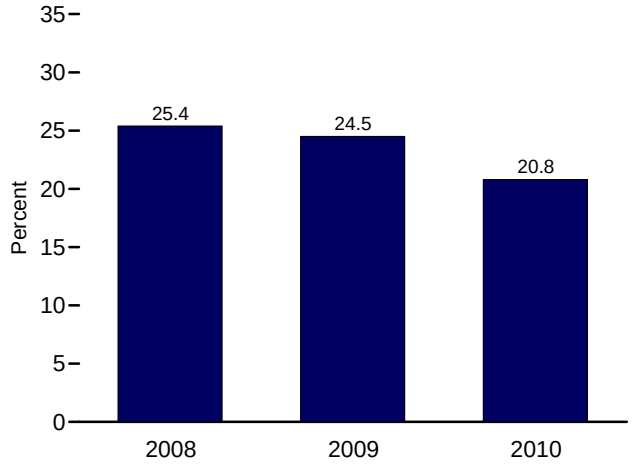

By Major Source, Monthly




By Major Source, January 2010




As Share of Consumption, January




[a]Crude oil and lease condensate. Includes imports into the Strategic Petroleum Reserve, which began in 1977.

[b]Petroleum products, unfinished oils, pentanes plus, and gasoline blending components. Does not include biofuels.

Web Page: http://www.eia.doe.gov/emeu/mer/overview.html.

Sources: Tables 1.3, 1.4a, and 1.4b.

# Table 1.4a Primary Energy Imports by Source

(Quadrillion Btu)

| | Imports | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Petroleum | | | | | |
| | Coal | Coal Coke | Natural Gas | Crude Oil[a] | Petroleum Products[b] | Total | Biofuels[c] | Electricity | Total |
| **1973 Total** | **0.003** | **0.027** | **1.060** | **6.887** | **6.578** | **13.466** | **NA** | **0.057** | **14.613** |
| **1975 Total** | **.024** | **.045** | **.978** | **8.721** | **4.227** | **12.948** | **NA** | **.038** | **14.032** |
| **1980 Total** | **.030** | **.016** | **1.006** | **11.195** | **3.463** | **14.658** | **NA** | **.085** | **15.796** |
| **1985 Total** | **.049** | **.014** | **.952** | **6.814** | **3.796** | **10.609** | **NA** | **.157** | **11.781** |
| **1990 Total** | **.067** | **.019** | **1.551** | **12.766** | **4.351** | **17.117** | **NA** | **.063** | **18.817** |
| **1995 Total** | **.237** | **.095** | **2.901** | **15.669** | **3.211** | **18.881** | **.001** | **.146** | **22.260** |
| **1996 Total** | **.203** | **.063** | **3.002** | **16.341** | **3.943** | **20.284** | **.001** | **.148** | **23.702** |
| **1997 Total** | **.187** | **.078** | **3.063** | **17.876** | **3.864** | **21.740** | **(s)** | **.147** | **25.215** |
| **1998 Total** | **.218** | **.095** | **3.225** | **18.916** | **3.992** | **22.908** | **(s)** | **.135** | **26.581** |
| **1999 Total** | **.227** | **.080** | **3.664** | **18.935** | **4.198** | **23.133** | **(s)** | **.147** | **27.252** |
| **2000 Total** | **.313** | **.094** | **3.869** | **19.783** | **4.749** | **24.531** | **(s)** | **.166** | **28.973** |
| **2001 Total** | **.495** | **.063** | **4.068** | **20.348** | **5.050** | **25.398** | **.002** | **.131** | **30.157** |
| **2002 Total** | **.422** | **.080** | **4.104** | **19.920** | **4.753** | **24.673** | **.002** | **.125** | **29.407** |
| **2003 Total** | **.626** | **.068** | **4.042** | **21.060** | **5.158** | **26.218** | **.002** | **.104** | **31.061** |
| **2004 Total** | **.682** | **.170** | **4.365** | **22.082** | **6.114** | **28.196** | **.013** | **.117** | **33.543** |
| **2005 Total** | **.762** | **.088** | **4.450** | **22.091** | **7.156** | **29.247** | **.013** | **.152** | **34.710** |
| **2006 Total** | **.906** | **.101** | **4.291** | **22.085** | **7.077** | **29.162** | **.068** | **.146** | **34.673** |
| **2007 Total** | **.909** | **.061** | **4.723** | **21.914** | **6.849** | **28.762** | **.055** | **.175** | **34.685** |
| **2008** January | .060 | .007 | .399 | 1.872 | .587 | 2.459 | .005 | .017 | 2.947 |
| February | .065 | .006 | .358 | 1.674 | .474 | 2.148 | .006 | .016 | 2.600 |
| March | .066 | .009 | .376 | 1.789 | .500 | 2.290 | .003 | .016 | 2.759 |
| April | .075 | .011 | .330 | 1.793 | .542 | 2.335 | .009 | .014 | 2.774 |
| May | .068 | .007 | .305 | 1.795 | .544 | 2.338 | .006 | .018 | 2.742 |
| June | .082 | .013 | .294 | 1.800 | .547 | 2.347 | .008 | .021 | 2.766 |
| July | .064 | .010 | .331 | 1.881 | .500 | 2.382 | .008 | .021 | 2.816 |
| August | .079 | .009 | .337 | 1.917 | .463 | 2.380 | .012 | .020 | 2.836 |
| September | .069 | .006 | .322 | 1.518 | .498 | 2.016 | .014 | .017 | 2.443 |
| October | .073 | .008 | .329 | 1.873 | .523 | 2.396 | .006 | .012 | 2.825 |
| November | .075 | .005 | .328 | 1.787 | .478 | 2.265 | .004 | .011 | 2.689 |
| December | .080 | (s) | .374 | 1.749 | .538 | 2.287 | .004 | .012 | 2.756 |
| **Total** | **.855** | **.089** | **4.084** | **21.448** | **6.195** | **27.644** | **.085** | **.195** | **32.952** |
| **2009** January | .058 | .001 | .369 | 1.829 | .567 | 2.396 | .003 | .015 | 2.842 |
| February | .046 | (s) | .330 | 1.544 | .461 | 2.005 | .001 | .013 | 2.396 |
| March | .054 | (s) | .333 | 1.753 | .518 | 2.270 | .002 | .010 | 2.669 |
| April | .033 | (s) | .330 | 1.690 | .425 | 2.115 | .001 | .011 | 2.490 |
| May | .057 | .001 | .271 | 1.658 | .454 | 2.113 | .002 | .014 | 2.458 |
| June | .046 | .001 | .289 | 1.648 | .450 | 2.098 | .003 | .016 | 2.452 |
| July | .050 | .001 | .324 | 1.713 | .481 | 2.194 | .004 | .019 | 2.591 |
| August | .039 | (s) | .344 | 1.649 | .401 | 2.050 | .004 | .020 | 2.457 |
| September | .046 | .001 | .314 | 1.657 | .413 | 2.070 | .002 | .015 | 2.448 |
| October | .044 | (s) | .269 | 1.590 | .391 | 1.981 | .002 | .016 | 2.312 |
| November | .038 | .001 | .300 | 1.565 | .392 | 1.956 | .002 | .012 | 2.309 |
| December | .054 | .002 | R .357 | 1.510 | .403 | 1.913 | .001 | .016 | R 2.342 |
| **Total** | **.566** | **.009** | **R 3.828** | **19.806** | **5.354** | **25.160** | **.026** | **.178** | **R 29.767** |
| **2010** January | .042 | .001 | E .401 | 1.570 | .476 | 2.046 | (s) | .018 | 2.508 |

[a] Crude oil and lease condensate. Includes imports into the Strategic Petroleum Reserve, which began in 1977.

[b] Petroleum products, unfinished oils, pentanes plus, and gasoline blending components. Does not include biofuels.

[c] Fuel ethanol (including denaturant) and biodiesel.

R=Revised. E=Estimate. NA=Not available. (s)=Less than 0.5 trillion Btu.

Notes: • See "Primary Energy" in Glossary. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/overview.html for all available data beginning in 1973.

Sources: • **Coal:** Tables 6.1 and A5. • **Coal Coke: 1973-1975**—U.S. Department of the Interior, Bureau of Mines, *Minerals Yearbook,* "Coke and Coal Chemicals" chapter. **1976-1980**—U.S. Energy Information Administration (EIA), *Energy Data Report,* "Coke and Coal Chemicals," annual reports. **1981 forward**—EIA, *Quarterly Coal Report,* quarterly reports. • **Natural Gas:** Tables 4.1 and A4. • **Crude Oil** and **Petroleum Products:** Tables 3.3b, 10.3, 10.4, and A2. • **Biofuels:** Tables 10.3 and 10.4. • **Electricity:** Tables 7.1 and A6.

# Table 1.4b Primary Energy Exports by Source and Total Net Imports

(Quadrillion Btu)

| | Exports | | | | | | | | | Net Imports[a] |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Petroleum | | | | | | |
| | Coal | Coal Coke | Natural Gas | Crude Oil[b] | Petroleum Products[c] | Total | Biofuels[d] | Electricity | Total | Total |
| **1973 Total** | **1.425** | **0.035** | **0.079** | **0.004** | **0.482** | **0.486** | **NA** | **0.009** | **2.033** | **12.580** |
| **1975 Total** | **1.761** | **.032** | **.074** | **.012** | **.427** | **.439** | **NA** | **.017** | **2.323** | **11.709** |
| **1980 Total** | **2.421** | **.051** | **.049** | **.609** | **.551** | **1.160** | **NA** | **.014** | **3.695** | **12.101** |
| **1985 Total** | **2.438** | **.028** | **.056** | **.432** | **1.225** | **1.657** | **NA** | **.017** | **4.196** | **7.584** |
| **1990 Total** | **2.772** | **.014** | **.087** | **.230** | **1.594** | **1.824** | **NA** | **.055** | **4.752** | **14.065** |
| **1995 Total** | **2.318** | **.034** | **.156** | **.200** | **1.791** | **1.991** | **NA** | **.012** | **4.511** | **17.750** |
| **1996 Total** | **2.368** | **.040** | **.155** | **.233** | **1.825** | **2.059** | **NA** | **.011** | **4.633** | **19.069** |
| **1997 Total** | **2.193** | **.031** | **.159** | **.228** | **1.872** | **2.100** | **NA** | **.031** | **4.514** | **20.701** |
| **1998 Total** | **2.092** | **.028** | **.161** | **.233** | **1.740** | **1.972** | **NA** | **.047** | **4.299** | **22.281** |
| **1999 Total** | **1.525** | **.022** | **.164** | **.250** | **1.705** | **1.955** | **NA** | **.049** | **3.715** | **23.537** |
| **2000 Total** | **1.528** | **.028** | **.245** | **.106** | **2.048** | **2.154** | **NA** | **.051** | **4.006** | **24.967** |
| **2001 Total** | **1.265** | **.033** | **.377** | **.043** | **1.996** | **2.038** | **(s)** | **.056** | **3.770** | **26.386** |
| **2002 Total** | **1.032** | **.020** | **.520** | **.019** | **2.023** | **2.042** | **(s)** | **.054** | **3.668** | **25.739** |
| **2003 Total** | **1.117** | **.018** | **.686** | **.026** | **2.124** | **2.150** | **.001** | **.082** | **4.054** | **27.007** |
| **2004 Total** | **1.253** | **.033** | **.862** | **.057** | **2.150** | **2.207** | **.001** | **.078** | **4.433** | **29.110** |
| **2005 Total** | **1.273** | **.043** | **.735** | **.067** | **2.373** | **2.441** | **.001** | **.068** | **4.561** | **30.149** |
| **2006 Total** | **1.264** | **.040** | **.730** | **.052** | **2.694** | **2.747** | **.004** | **.083** | **4.868** | **29.805** |
| **2007 Total** | **1.507** | **.036** | **.830** | **.058** | **2.914** | **2.972** | **.035** | **.069** | **5.448** | **29.238** |
| **2008** January | .125 | .003 | .114 | .002 | .281 | .283 | .006 | .006 | .537 | 2.410 |
| February | .107 | .004 | .104 | .003 | .298 | .301 | .007 | .005 | .528 | 2.071 |
| March | .170 | .001 | .106 | .005 | .311 | .317 | .006 | .009 | .608 | 2.151 |
| April | .203 | .004 | .079 | .002 | .290 | .292 | .009 | .005 | .591 | 2.183 |
| May | .213 | .004 | .074 | .003 | .310 | .313 | .007 | .010 | .622 | 2.120 |
| June | .170 | .004 | .066 | .004 | .358 | .362 | .009 | .011 | .622 | 2.144 |
| July | .163 | .005 | .066 | .005 | .354 | .359 | .008 | .006 | .606 | 2.210 |
| August | .134 | .008 | .071 | .007 | .351 | .358 | .009 | .005 | .584 | 2.251 |
| September | .220 | .004 | .058 | .007 | .214 | .221 | .008 | .006 | .516 | 1.927 |
| October | .209 | .007 | .070 | .008 | .281 | .289 | .007 | .007 | .589 | 2.236 |
| November | .189 | .004 | .096 | .005 | .286 | .291 | .006 | .007 | .593 | 2.096 |
| December | .169 | .003 | .111 | .008 | .319 | .327 | .004 | .005 | .619 | 2.137 |
| **Total** | **2.071** | **.049** | **1.015** | **.061** | **3.653** | **3.713** | **.086** | **.082** | **7.016** | **25.936** |
| **2009** January | R .126 | .003 | .114 | .007 | .330 | .336 | .006 | .008 | R .593 | R 2.249 |
| February | R .098 | .001 | .104 | .005 | .282 | .286 | .006 | .005 | R .501 | R 1.895 |
| March | R .118 | .002 | .105 | .005 | .320 | .326 | .001 | .006 | R .557 | R 2.112 |
| April | R .090 | .003 | .081 | .005 | .322 | .326 | .001 | .005 | R .506 | R 1.984 |
| May | R .091 | .002 | .078 | .009 | .347 | .356 | .002 | .005 | .534 | 1.924 |
| June | R .151 | .002 | .067 | .010 | .326 | .336 | .002 | .006 | R .564 | R 1.889 |
| July | R .115 | .003 | .077 | .006 | .409 | .414 | .003 | .005 | R .617 | R 1.974 |
| August | R .130 | .003 | .079 | .006 | .368 | .375 | .002 | .005 | R .594 | R 1.863 |
| September | R .144 | .003 | .085 | .007 | .354 | .361 | .001 | .005 | R .598 | R 1.850 |
| October | R .163 | .004 | .078 | .013 | .380 | .393 | .002 | .005 | R .645 | R 1.667 |
| November | R .143 | .002 | .097 | .008 | .337 | .345 | .004 | .004 | R .596 | R 1.713 |
| December | R .146 | .004 | R .116 | .012 | .341 | .353 | .002 | .005 | R .626 | R 1.716 |
| **Total** | **R 1.515** | **.032** | **R 1.080** | **.093** | **4.115** | **4.208** | **.034** | **.062** | **R 6.931** | **R 22.836** |
| **2010** January | .150 | .006 | E .101 | .006 | .327 | .333 | .002 | .004 | .596 | 1.912 |

[a] Net imports equal imports minus exports.
[b] Crude oil and lease condensate.
[c] Petroleum products, unfinished oils, pentanes plus, and gasoline blending components. Does not include biofuels.
[d] Biodiesel only.
R=Revised. E=Estimate. NA=Not available. (s)=Less than 0.5 trillion Btu.

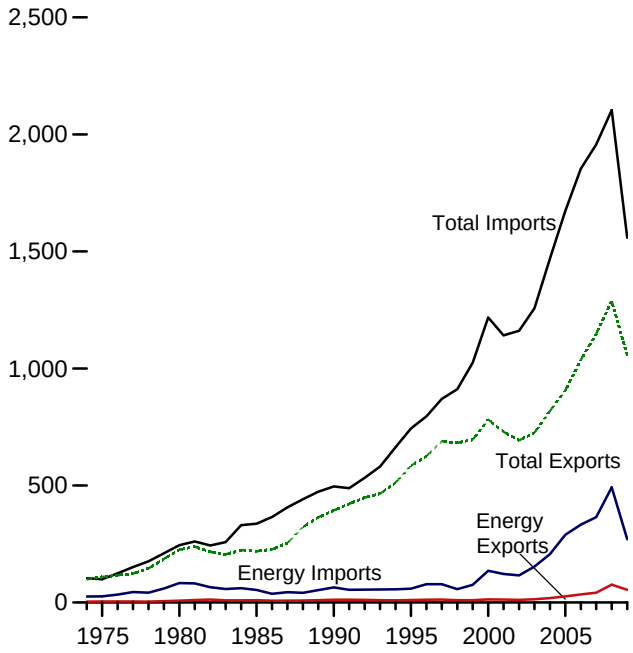
Notes: • See "Primary Energy" in Glossary. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/overview.html for all available data beginning in 1973.

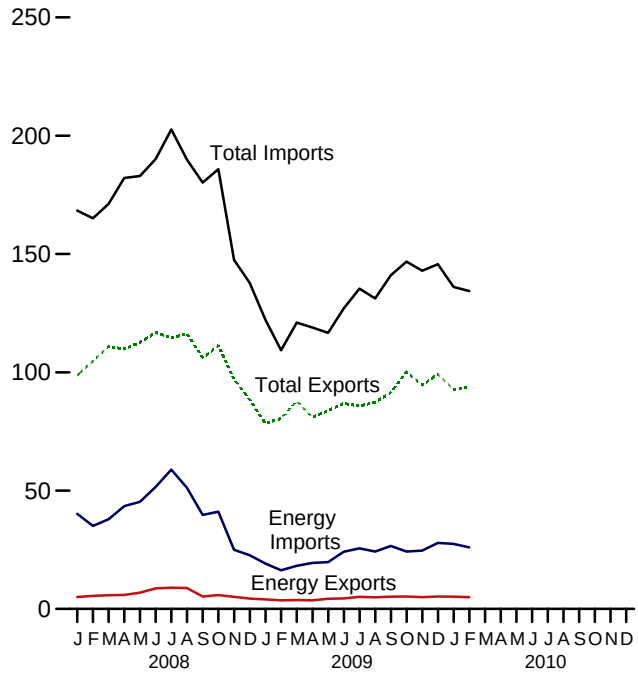
Sources: • **Coal:** Tables 6.1 and A5. • **Coal Coke: 1973-1975**—U.S. Department of the Interior, Bureau of Mines, *Minerals Yearbook,* "Coke and Coal Chemicals" chapter. **1976-1980**—U.S. Energy Information Administration (EIA), *Energy Data Report,* "Coke and Coal Chemicals," annual reports. **1981 forward**—EIA, *Quarterly Coal Report,* quarterly reports. • **Natural Gas:** Tables 4.1 and A4. • **Crude Oil** and **Petroleum Products:** Tables 3.3b, 10.4, and A2. • **Biofuels:** Tables 10.3 and 10.4. • **Electricity:** Tables 7.1 and A6.

## Figure 1.5 Merchandise Trade Value
(Billion Nominal Dollars[a])

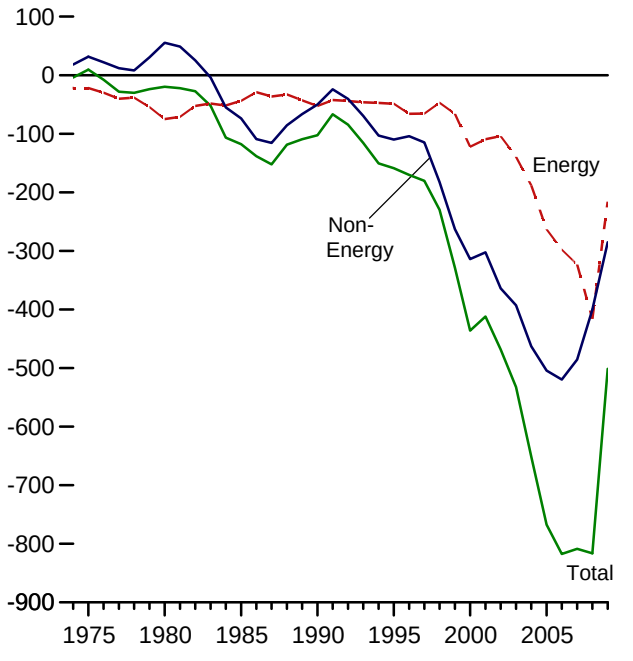
Imports and Exports, 1974-2009



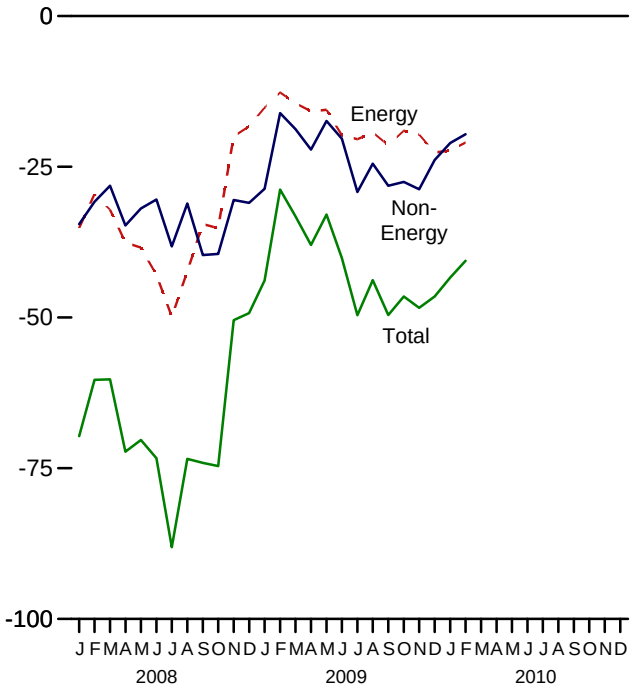

Imports and Exports, Monthly




Trade Balance, 1974-2009




Trade Balance, Monthly




[a]See "Nominal Dollars" in Glossary.
Web Page: http://www.eia.doe.gov/emeu/mer/overview.html.
Source: Table 1.5.

# Table 1.5 Merchandise Trade Value

(Million Nominal Dollars[a])

| | Petroleum[b] | | | Energy[c] | | | Non-Energy Balance | Total Merchandise | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Exports | Imports | Balance | Exports | Imports | Balance | | Exports | Imports | Balance |
| **1974 Total** | **792** | **24,668** | **-23,876** | **3,444** | **25,454** | **-22,010** | **18,126** | **99,437** | **103,321** | **-3,884** |
| **1975 Total** | **907** | **25,197** | **-24,289** | **4,470** | **26,476** | **-22,006** | **31,557** | **108,856** | **99,305** | **9,551** |
| **1980 Total** | **2,833** | **78,637** | **-75,803** | **7,982** | **82,924** | **-74,942** | **55,246** | **225,566** | **245,262** | **-19,696** |
| **1985 Total** | **4,707** | **50,475** | **-45,768** | **9,971** | **53,917** | **-43,946** | **-73,765** | **218,815** | **336,526** | **-117,712** |
| **1990 Total** | **6,901** | **61,583** | **-54,682** | **12,233** | **64,661** | **-52,428** | **-50,068** | **393,592** | **496,088** | **-102,496** |
| **1995 Total** | **6,321** | **54,368** | **-48,047** | **10,358** | **59,109** | **-48,751** | **-110,050** | **584,742** | **743,543** | **-158,801** |
| **1996 Total** | **7,984** | **72,022** | **-64,038** | **12,181** | **78,086** | **-65,905** | **-104,309** | **625,075** | **795,289** | **-170,214** |
| **1997 Total** | **8,592** | **71,152** | **-62,560** | **12,682** | **78,277** | **-65,595** | **-114,927** | **689,182** | **869,704** | **-180,522** |
| **1998 Total** | **6,574** | **50,264** | **-43,690** | **10,251** | **57,323** | **-47,072** | **-182,686** | **682,138** | **911,896** | **-229,758** |
| **1999 Total** | **7,118** | **67,173** | **-60,055** | **9,880** | **75,803** | **-65,923** | **-262,898** | **695,797** | **1,024,618** | **-328,821** |
| **2000 Total** | **10,192** | **119,251** | **-109,059** | **13,179** | **135,367** | **-122,188** | **-313,916** | **781,918** | **1,218,022** | **-436,104** |
| **2001 Total** | **8,868** | **102,747** | **-93,879** | **12,494** | **121,923** | **-109,429** | **-302,470** | **729,100** | **1,140,999** | **-411,899** |
| **2002 Total** | **8,569** | **102,663** | **-94,094** | **11,541** | **115,748** | **-104,207** | **-364,056** | **693,103** | **1,161,366** | **-468,263** |
| **2003 Total** | **10,209** | **132,433** | **-122,224** | **13,768** | **153,298** | **-139,530** | **-392,820** | **724,771** | **1,257,121** | **-532,350** |
| **2004 Total** | **13,130** | **179,266** | **-166,136** | **18,642** | **206,660** | **-188,018** | **-462,912** | **818,775** | **1,469,704** | **-650,930** |
| **2005 Total** | **19,155** | **250,068** | **-230,913** | **26,488** | **289,723** | **-263,235** | **-504,242** | **905,978** | **1,673,455** | **-767,477** |
| **2006 Total** | **28,171** | **299,714** | **-271,543** | **34,711** | **332,500** | **-297,789** | **-519,515** | **1,036,635** | **1,853,938** | **-817,304** |
| **2007 Total** | **33,293** | **327,620** | **-294,327** | **41,725** | **364,987** | **-323,262** | **-485,501** | **1,148,199** | **1,956,962** | **-808,763** |
| **2008** January | 4,061 | 36,617 | -32,556 | 5,049 | 40,206 | -35,157 | -34,516 | 98,677 | 168,350 | -69,673 |
| February | 4,683 | 31,609 | -26,926 | 5,508 | 35,033 | -29,525 | -30,805 | 104,740 | 165,070 | -60,330 |
| March | 4,477 | 33,769 | -29,292 | 5,755 | 37,875 | -32,120 | -28,142 | 110,932 | 171,194 | -60,262 |
| April | 4,473 | 39,481 | -35,008 | 5,899 | 43,440 | -37,541 | -34,717 | 109,857 | 182,115 | -72,258 |
| May | 5,420 | 41,344 | -35,924 | 6,861 | 45,266 | -38,405 | -31,924 | 112,627 | 182,956 | -70,329 |
| June | 7,365 | 47,392 | -40,027 | 8,694 | 51,594 | -42,900 | -30,430 | 116,787 | 190,117 | -73,330 |
| July | 7,760 | 53,966 | -46,206 | 8,948 | 58,841 | -49,893 | -38,199 | 114,522 | 202,614 | -88,092 |
| August | 7,650 | 47,473 | -39,823 | 8,791 | 51,150 | -42,359 | -31,098 | 116,418 | 189,875 | -73,457 |
| September | 3,916 | 36,768 | -32,852 | 5,217 | 39,701 | -34,484 | -39,633 | 106,072 | 180,189 | -74,117 |
| October | 4,597 | 38,270 | -33,673 | 5,876 | 41,064 | -35,188 | -39,456 | 111,239 | 185,882 | -74,644 |
| November | 3,858 | 22,661 | -18,803 | 5,084 | 25,019 | -19,935 | -30,495 | 97,085 | 147,515 | -50,430 |
| December | 3,439 | 20,494 | -17,055 | 4,394 | 22,697 | -18,303 | -30,974 | 88,486 | 137,763 | -49,277 |
| **Total** | **61,695** | **449,847** | **-388,152** | **76,075** | **491,885** | **-415,810** | **-400,389** | **1,287,442** | **2,103,641** | **-816,199** |
| **2009** January | 3,036 | 16,863 | -13,827 | 3,994 | 19,192 | -15,198 | -28,649 | 78,379 | 122,226 | -43,847 |
| February | 2,599 | 14,042 | -11,443 | 3,636 | 16,311 | -12,675 | -16,102 | 80,503 | 109,279 | -28,777 |
| March | 2,860 | 16,617 | -13,757 | 3,730 | 18,191 | -14,461 | -18,747 | 87,796 | 121,004 | -33,208 |
| April | 2,937 | 17,937 | -15,000 | 3,623 | 19,431 | -15,808 | -22,156 | 80,969 | 118,933 | -37,964 |
| May | 3,658 | 18,201 | -14,543 | 4,262 | 19,795 | -15,533 | -17,394 | 83,786 | 116,713 | -32,927 |
| June | 3,582 | 23,018 | -19,436 | 4,411 | 24,201 | -19,790 | -20,348 | 86,860 | 126,998 | -40,138 |
| July | 4,476 | 24,375 | -19,899 | 5,138 | 25,563 | -20,425 | -29,185 | 85,737 | 135,347 | -49,610 |
| August | 4,202 | 22,952 | -18,750 | 4,914 | 24,226 | -19,312 | -24,483 | 87,429 | 131,224 | -43,795 |
| September | 4,331 | 25,289 | -20,958 | 5,162 | 26,598 | -21,436 | -28,144 | 91,418 | 140,998 | -49,580 |
| October | 4,372 | 22,857 | -18,485 | 5,229 | 24,236 | -19,007 | -27,501 | 100,285 | 146,793 | -46,508 |
| November | 4,133 | 23,351 | -19,218 | 4,991 | 24,644 | -19,653 | -28,741 | 94,541 | 142,935 | -48,394 |
| December | 4,363 | 26,118 | -21,755 | 5,270 | 27,906 | -22,636 | -23,880 | 99,160 | 145,676 | -46,516 |
| **Total** | **44,546** | **251,620** | **-207,074** | **54,358** | **270,295** | **-215,937** | **-285,325** | **1,056,863** | **1,558,125** | **-501,262** |
| **2010** January | 4,093 | 25,255 | -21,162 | 5,185 | 27,504 | -22,319 | R -21,052 | R 92,716 | R 136,087 | R -43,371 |
| February | 3,953 | 23,685 | -19,732 | 4,995 | 25,984 | -20,989 | -19,606 | 93,711 | 134,305 | -40,595 |
| **2-Month Total** | **8,046** | **48,940** | **-40,894** | **10,180** | **53,488** | **-43,308** | **-40,658** | **186,426** | **270,392** | **-83,966** |
| **2009 2-Month Total** | **5,635** | **30,905** | **-25,270** | **7,629** | **35,503** | **-27,873** | **-44,751** | **158,882** | **231,505** | **-72,623** |
| **2008 2-Month Total** | **8,744** | **68,226** | **-59,482** | **10,557** | **75,239** | **-64,682** | **-65,321** | **203,417** | **333,420** | **-130,003** |

[a] See "Nominal Dollars" in Glossary.

[b] Crude oil, petroleum preparations, liquefied propane and butane, and other mineral fuels.

[c] Petroleum, coal, natural gas, and electricity.

R=Revised.

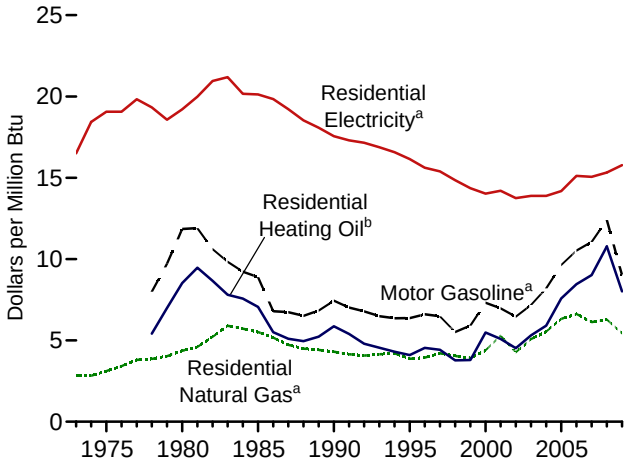
Notes: • Monthly data are not adjusted for seasonal variations. • See Note, "Merchandise Trade Value," at end of section. • Totals may not equal sum of components due to independent rounding. • The U.S. import statistics reflect both government and nongovernment imports of merchandise from foreign countries into the U.S. customs territory, which comprises the 50 States, the District of Columbia, Puerto Rico, and the Virgin Islands.

Web Page: See http://www.eia.doe.gov/emeu/mer/overview.html for all available data beginning in 1974.

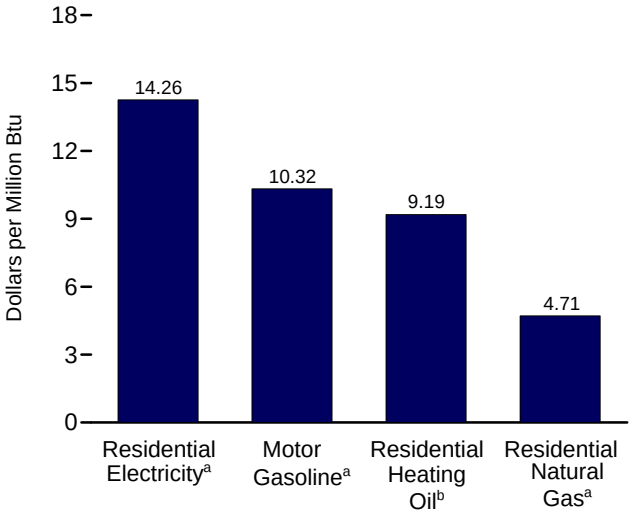
Sources: See end of section.

## Figure 1.6 Cost of Fuels to End Users in Real (1982-1984) Dollars

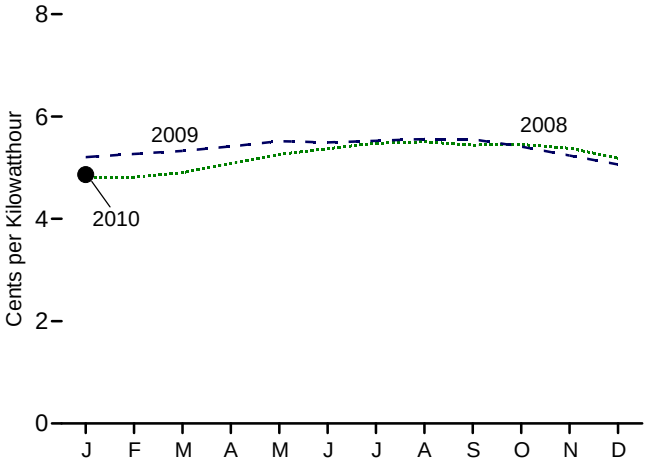
Costs, 1973-2009



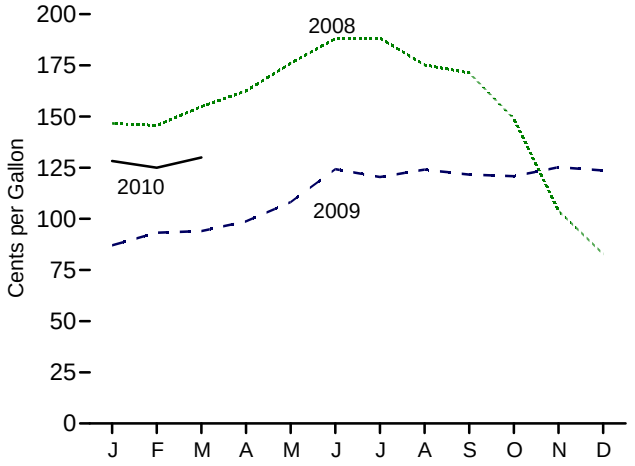

Costs, January 2010



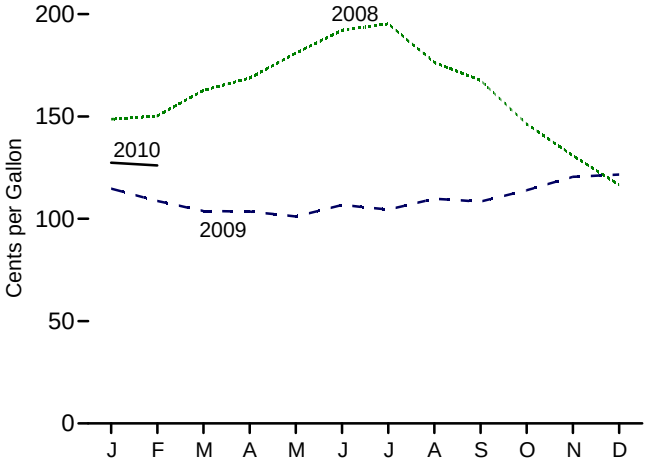

Residential Electricity,[a] Monthly



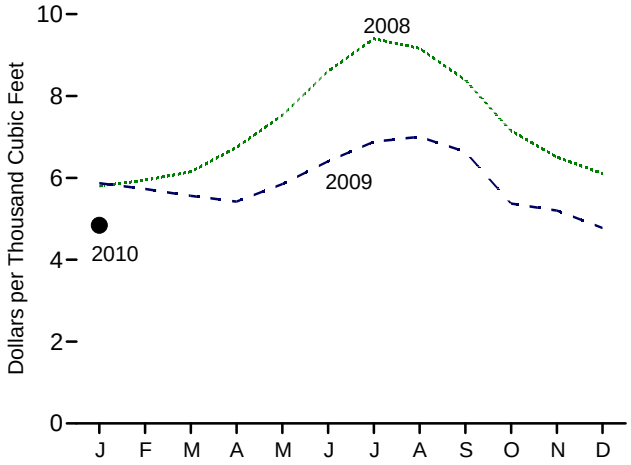

Motor Gasoline,[a] Monthly




Residential Heating Oil,[b] Monthly




Residential Natural Gas,[a] Monthly




[a]Includes taxes.
[b]Excludes taxes.
Note: See "Real Dollars" in Glossary.

Web Page: http://www.eia.doe.gov/emeu/mer/overview.html.
Source: Table 1.6.

# Table 1.6 Cost of Fuels to End Users in Real (1982-1984) Dollars

| | Consumer Price Index, All Urban Consumers[a] | Motor Gasoline[b] | | Residential Heating Oil[c] | | Residential Natural Gas[b] | | Residential Electricity[b] | |
|---|---|---|---|---|---|---|---|---|---|
| | Index 1982-1984=100 | Cents per Gallon | Dollars per Million Btu | Cents per Gallon | Dollars per Million Btu | Cents per Thousand Cubic Feet | Dollars per Million Btu | Cents per Kilowatthour | Dollars per Million Btu |
| **1973 Average** | **44.4** | **NA** | **NA** | **NA** | **NA** | **290.5** | **2.85** | **5.6** | **16.50** |
| **1975 Average** | **53.8** | **NA** | **NA** | **NA** | **NA** | **317.8** | **3.12** | **6.5** | **19.07** |
| **1980 Average** | **82.4** | **148.2** | **11.85** | **118.2** | **8.52** | **446.6** | **4.36** | **6.6** | **19.21** |
| **1985 Average** | **107.6** | **111.2** | **8.89** | **97.9** | **7.06** | **568.8** | **5.52** | **6.87** | **20.13** |
| **1990 Average** | **130.7** | **93.1** | **7.44** | **81.3** | **5.86** | **443.8** | **4.31** | **5.99** | **17.56** |
| **1995 Average** | **152.4** | **79.1** | **6.37** | **56.9** | **4.10** | **397.6** | **3.87** | **5.51** | **16.15** |
| **1996 Average** | **156.9** | **82.1** | **6.61** | **63.0** | **4.54** | **404.3** | **3.94** | **5.33** | **15.62** |
| **1997 Average** | **160.5** | **80.4** | **6.48** | **61.3** | **4.42** | **432.4** | **4.21** | **5.25** | **15.39** |
| **1998 Average** | **163.0** | **68.4** | **5.51** | **52.3** | **3.77** | **418.4** | **4.05** | **5.07** | **14.85** |
| **1999 Average** | **166.6** | **73.3** | **5.91** | **52.6** | **3.79** | **401.6** | **3.91** | **4.90** | **14.36** |
| **2000 Average** | **172.2** | **90.8** | **7.32** | **76.1** | **5.49** | **450.6** | **4.39** | **4.79** | **14.02** |
| **2001 Average** | **177.1** | **86.4** | **6.97** | **70.6** | **5.09** | **543.8** | **5.28** | **4.84** | **14.20** |
| **2002 Average** | **179.9** | **80.1** | **6.46** | **62.8** | **4.52** | **438.6** | **4.26** | **4.69** | **13.75** |
| **2003 Average** | **184.0** | **89.0** | **7.18** | **73.6** | **5.31** | **523.4** | **[R] 5.09** | **4.74** | **13.89** |
| **2004 Average** | **188.9** | **101.8** | **8.20** | **81.9** | **5.91** | **569.1** | **[R] 5.55** | **4.74** | **13.89** |
| **2005 Average** | **195.3** | **119.7** | **9.64** | **105.1** | **7.58** | **650.3** | **[R] 6.33** | **4.84** | **14.18** |
| **2006 Average** | **201.6** | **130.7** | **10.52** | **117.3** | **8.46** | **681.1** | **6.63** | **5.16** | **15.12** |
| **2007 Average** | **207.342** | **137.4** | **11.06** | **125.0** | **9.01** | **630.8** | **[R] 6.12** | **5.14** | **15.05** |
| **2008** January | 211.080 | 146.7 | 11.81 | 148.7 | 10.72 | 579.9 | [R] 5.65 | 4.81 | 14.09 |
| February | 211.693 | 145.6 | 11.72 | 150.3 | 10.83 | 594.3 | [R] 5.79 | 4.81 | 14.11 |
| March | 213.528 | 154.9 | 12.47 | 162.7 | 11.73 | 614.9 | [R] 5.99 | 4.90 | 14.37 |
| April | 214.823 | 162.5 | 13.08 | 168.8 | 12.17 | 674.5 | [R] 6.57 | 5.08 | 14.90 |
| May | 216.632 | 176.0 | 14.17 | 181.0 | 13.05 | 752.9 | [R] 7.33 | 5.26 | 15.41 |
| June | 218.815 | 188.1 | 15.14 | 192.1 | 13.85 | 860.1 | [R] 8.37 | 5.37 | 15.74 |
| July | 219.964 | 188.3 | 15.16 | 195.3 | 14.08 | 940.2 | [R] 9.15 | 5.48 | 16.06 |
| August | 219.086 | 175.2 | 14.10 | 176.5 | 12.72 | 916.5 | [R] 8.92 | 5.50 | 16.13 |
| September | 218.783 | 171.4 | 13.79 | 167.6 | 12.09 | 839.2 | [R] 8.17 | 5.44 | 15.94 |
| October | 216.573 | 148.9 | 11.99 | 146.3 | 10.55 | 715.2 | [R] 6.96 | 5.45 | 15.98 |
| November | 212.425 | 103.9 | 8.37 | 130.8 | 9.43 | 650.6 | [R] 6.33 | 5.38 | 15.77 |
| December | 210.228 | 82.9 | 6.67 | 116.5 | 8.40 | 610.8 | [R] 5.95 | 5.18 | 15.20 |
| **Average** | **215.303** | **154.1** | **12.40** | **149.5** | **10.78** | **645.1** | **[R] 6.28** | **5.23** | **15.33** |
| **2009** January | 211.143 | 87.1 | 7.01 | 114.7 | 8.27 | 586.8 | [R] 5.71 | 5.21 | 15.25 |
| February | 212.193 | 93.3 | 7.51 | 108.7 | 7.84 | 573.1 | [R] 5.58 | 5.27 | 15.44 |
| March | 212.709 | 94.0 | 7.57 | 103.8 | 7.48 | 556.2 | [R] 5.42 | 5.33 | 15.61 |
| April | 213.240 | 98.8 | 7.95 | 103.6 | 7.47 | 542.1 | [R] 5.28 | 5.42 | 15.87 |
| May | 213.856 | 108.2 | 8.71 | 101.1 | 7.29 | 584.5 | [R] 5.69 | 5.52 | 16.17 |
| June | 215.693 | 124.3 | 10.00 | 106.7 | 7.70 | 640.3 | [R] 6.23 | 5.49 | 16.10 |
| July | 215.351 | 120.5 | 9.70 | 104.5 | 7.53 | 688.2 | [R] 6.70 | 5.53 | 16.20 |
| August | 215.834 | 124.0 | 9.98 | 109.8 | 7.92 | 700.5 | [R] 6.82 | 5.56 | 16.29 |
| September | 215.969 | 121.6 | 9.79 | 108.4 | 7.82 | 664.0 | [R] 6.47 | 5.56 | 16.28 |
| October | 216.177 | 120.9 | 9.73 | 114.0 | 8.22 | 537.5 | [R] 5.23 | 5.41 | 15.86 |
| November | 216.330 | 125.2 | 10.08 | 120.5 | 8.69 | 520.0 | [R] 5.06 | 5.24 | 15.35 |
| December | 215.949 | 123.7 | 9.96 | [R] 121.6 | [R] 8.77 | 477.4 | [R] 4.65 | 5.06 | 14.83 |
| **Average** | **214.537** | **111.9** | **9.01** | **111.2** | **8.02** | **[R] 557.9** | **5.43** | **5.38** | **15.78** |
| **2010** January | 216.687 | 128.2 | 10.32 | [R] 127.4 | [R] 9.19 | [R] 484.1 | [R] 4.71 | [R] 4.86 | [R] 14.26 |
| February | 216.741 | 125.0 | 10.06 | [RE] 126.0 | [RE] 9.09 | NA | NA | NA | NA |
| March | 217.631 | 130.0 | 10.46 | NA | NA | NA | NA | NA | NA |

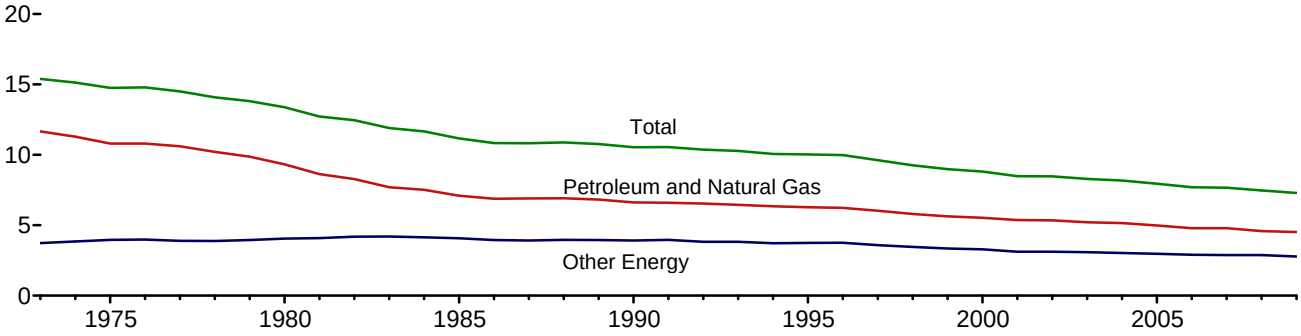
[a] Data are U.S. city averages for all items, and are not seasonally adjusted.
[b] Includes taxes.
[c] Excludes taxes.
R=Revised. E=Estimate. NA=Not available.

Notes: • See "Real Dollars" in Glossary. • Fuel costs are calculated by using the Urban Consumer Price Index (CPI) developed by the Bureau of Labor Statistics. • Annual averages may not equal average of months due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/overview.html for all available data beginning in 1973.

Sources: • **Fuel Prices:** Tables 9.4 (All Types), 9.8c, 9.9, and 9.11, adjusted by the CPI. • **Consumer Price Index, All Urban Consumers:** U.S. Department of Labor, Bureau of Labor Statistics, series ID CUUR0000SA0. • **Conversion Factors:** Tables A1, A3, A4, and A6.

## Figure 1.7 Primary Energy Consumption per Real Dollar of Gross Domestic Product, 1973-2009
(Thousand Btu per Chained (2005) Dollar)




Note: See "Real Dollars" in Glossary.
Web Page: http://www.eia.doe.gov/emeu/mer/overview.html.
Source: Table 1.7.

## Table 1.7 Primary Energy Consumption per Real Dollar of Gross Domestic Product

| | Energy Consumption | | | Gross Domestic Product (GDP) | Energy Consumption per Real Dollar of GDP | | |
|---|---|---|---|---|---|---|---|
| | Petroleum and Natural Gas | Other Energy[a] | Total | | Petroleum and Natural Gas | Other Energy[a] | Total |
| | Quadrillion Btu | | | Billion Chained (2005) Dollars | Thousand Btu per Chained (2005) Dollar | | |
| 1973 Year | 57.352 | 18.356 | 75.708 | 4,917.0 | 11.66 | 3.73 | 15.40 |
| 1974 Year | 55.187 | 18.804 | 73.991 | 4,889.9 | 11.29 | 3.85 | 15.13 |
| 1975 Year | 52.678 | 19.321 | 71.999 | 4,879.5 | 10.80 | 3.96 | 14.76 |
| 1976 Year | 55.520 | 20.492 | 76.012 | 5,141.3 | 10.80 | 3.99 | 14.78 |
| 1977 Year | 57.053 | 20.947 | 78.000 | 5,377.7 | 10.61 | 3.90 | 14.50 |
| 1978 Year | 57.966 | 22.021 | 79.986 | 5,677.6 | 10.21 | 3.88 | 14.09 |
| 1979 Year | 57.789 | 23.114 | 80.903 | 5,855.0 | 9.87 | 3.95 | 13.82 |
| 1980 Year | 54.438 | 23.684 | 78.122 | 5,839.0 | 9.32 | 4.06 | 13.38 |
| 1981 Year | 51.678 | 24.490 | 76.168 | 5,987.2 | 8.63 | 4.09 | 12.72 |
| 1982 Year | 48.588 | 24.565 | 73.153 | 5,870.9 | 8.28 | 4.18 | 12.46 |
| 1983 Year | 47.275 | 25.763 | 73.038 | 6,136.2 | 7.70 | 4.20 | 11.90 |
| 1984 Year | 49.445 | 27.269 | 76.714 | 6,577.1 | 7.52 | 4.15 | 11.66 |
| 1985 Year | 48.626 | 27.865 | 76.491 | 6,849.3 | 7.10 | 4.07 | 11.17 |
| 1986 Year | 48.787 | 27.969 | 76.756 | 7,086.5 | 6.88 | 3.95 | 10.83 |
| 1987 Year | 50.505 | 28.668 | 79.173 | 7,313.3 | 6.91 | 3.92 | 10.83 |
| 1988 Year | 52.670 | 30.149 | 82.819 | 7,613.9 | 6.92 | 3.96 | 10.88 |
| 1989 Year | 53.813 | 31.131 | 84.944 | 7,885.9 | 6.82 | 3.95 | 10.77 |
| 1990 Year | 53.156 | 31.496 | 84.651 | 8,033.9 | 6.62 | 3.92 | 10.54 |
| 1991 Year | 52.878 | 31.728 | 84.606 | 8,015.1 | 6.60 | 3.96 | 10.56 |
| 1992 Year | 54.240 | 31.715 | 85.955 | 8,287.1 | 6.55 | 3.83 | 10.37 |
| 1993 Year | 54.973 | 32.629 | 87.601 | 8,523.4 | 6.45 | 3.83 | 10.28 |
| 1994 Year | 56.289 | 32.968 | 89.257 | 8,870.7 | 6.35 | 3.72 | 10.06 |
| 1995 Year | 57.107 | 34.062 | 91.169 | 9,093.7 | 6.28 | 3.75 | 10.03 |
| 1996 Year | 58.757 | 35.415 | 94.172 | 9,433.9 | 6.23 | 3.75 | 9.98 |
| 1997 Year | 59.382 | 35.380 | 94.761 | 9,854.3 | 6.03 | 3.59 | 9.62 |
| 1998 Year | 59.646 | 35.532 | 95.178 | 10,283.5 | 5.80 | 3.46 | 9.26 |
| 1999 Year | 60.746 | 36.066 | 96.812 | 10,779.8 | 5.64 | 3.35 | 8.98 |
| 2000 Year | 62.088 | 36.882 | 98.970 | 11,226.0 | 5.53 | 3.29 | 8.82 |
| 2001 Year | 60.958 | 35.358 | 96.316 | 11,347.2 | 5.37 | 3.12 | 8.49 |
| 2002 Year | 61.784 | 36.070 | 97.853 | 11,553.0 | 5.35 | 3.12 | 8.47 |
| 2003 Year | R 61.638 | 36.493 | R 98.131 | 11,840.7 | 5.21 | 3.08 | 8.29 |
| 2004 Year | R 63.201 | 37.112 | R 100.313 | 12,263.8 | R 5.15 | 3.03 | 8.18 |
| 2005 Year | R 62.952 | 37.492 | R 100.445 | 12,638.4 | 4.98 | 2.97 | 7.95 |
| 2006 Year | 62.179 | 37.671 | 99.850 | 12,976.2 | 4.79 | 2.90 | 7.69 |
| 2007 Year | R 63.471 | 38.117 | R 101.588 | 13,254.1 | 4.79 | 2.88 | 7.66 |
| 2008 Year | R 61.070 | R 38.376 | R 99.446 | 13,312.2 | 4.59 | 2.88 | 7.47 |
| 2009 Year | R 58.641 | R 36.019 | R 94.660 | 12,987.4 | 4.52 | R 2.77 | R 7.29 |

[a] Coal, coal coke net imports, nuclear electric power, renewable energy, and electricity net imports.

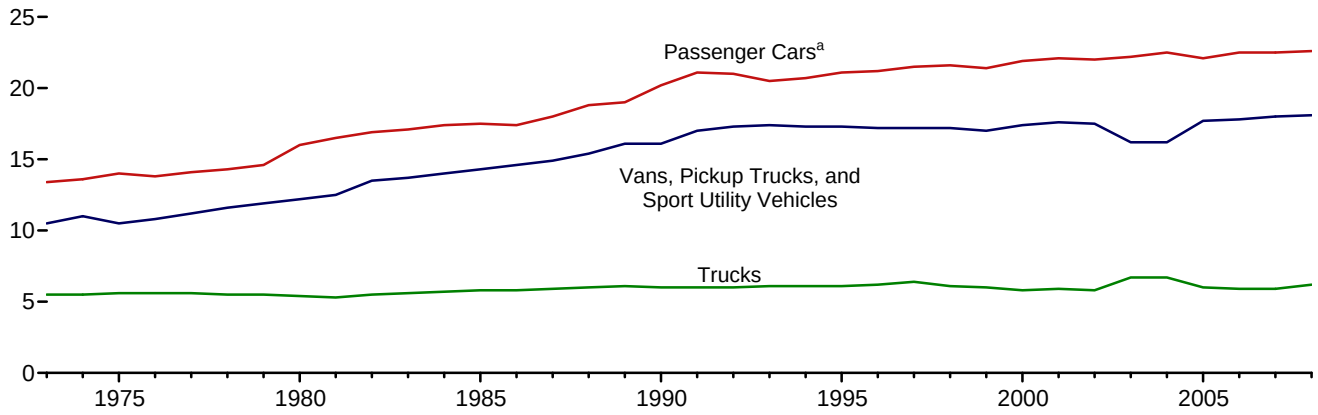
R=Revised.

Notes: • See "Primary Energy Consumption" and "Real Dollars" in Glossary. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: http://www.eia.doe.gov/emeu/mer/overview.html.

Sources: • **Energy Consumption:** Table 1.3. • **Gross Domestic Product: 1973-2006**—U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business,* August 2009, Table 2A. **2007 forward**—U.S. Department of Commerce, Bureau of Economic Analysis, *BEA News Release,* March 26, 2010, Table 3, which is available at website http://www.bea.gov/newsreleases/national/gdp/gdpnewsrelease.htm.

## Figure 1.8 Motor Vehicle Fuel Rates, 1973-2008
(Miles per Gallon)




[a]Motorcycles are included through 1989.
Web Page: http://www.eia.doe.gov/emeu/mer/overview.html.
Source: Table 1.8.

## Table 1.8 Motor Vehicle Mileage, Fuel Consumption, and Fuel Rates

| | Passenger Cars[a] | | | Vans, Pickup Trucks, and Sport Utility Vehicles[b] | | | Trucks[c] | | | All Motor Vehicles[d] | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Mileage (miles per vehicle) | Fuel Consumption (gallons per vehicle) | Fuel Rate (miles per gallon) | Mileage (miles per vehicle) | Fuel Consumption (gallons per vehicle) | Fuel Rate (miles per gallon) | Mileage (miles per vehicle) | Fuel Consumption (gallons per vehicle) | Fuel Rate (miles per gallon) | Mileage (miles per vehicle) | Fuel Consumption (gallons per vehicle) | Fuel Rate (miles per gallon) |
| 1973 | 9,884 | 737 | 13.4 | 9,779 | 931 | 10.5 | 15,370 | 2,775 | 5.5 | 10,099 | 850 | 11.9 |
| 1974 | 9,221 | 677 | 13.6 | 9,452 | 862 | 11.0 | 14,995 | 2,708 | 5.5 | 9,493 | 788 | 12.0 |
| 1975 | 9,309 | 665 | 14.0 | 9,829 | 934 | 10.5 | 15,167 | 2,722 | 5.6 | 9,627 | 790 | 12.2 |
| 1976 | 9,418 | 681 | 13.8 | 10,127 | 934 | 10.8 | 15,438 | 2,764 | 5.6 | 9,774 | 806 | 12.1 |
| 1977 | 9,517 | 676 | 14.1 | 10,607 | 947 | 11.2 | 16,700 | 3,002 | 5.6 | 9,978 | 814 | 12.3 |
| 1978 | 9,500 | 665 | 14.3 | 10,968 | 948 | 11.6 | 18,045 | 3,263 | 5.5 | 10,077 | 816 | 12.4 |
| 1979 | 9,062 | 620 | 14.6 | 10,802 | 905 | 11.9 | 18,502 | 3,380 | 5.5 | 9,722 | 776 | 12.5 |
| 1980 | 8,813 | 551 | 16.0 | 10,437 | 854 | 12.2 | 18,736 | 3,447 | 5.4 | 9,458 | 712 | 13.3 |
| 1981 | 8,873 | 538 | 16.5 | 10,244 | 819 | 12.5 | 19,016 | 3,565 | 5.3 | 9,477 | 697 | 13.6 |
| 1982 | 9,050 | 535 | 16.9 | 10,276 | 762 | 13.5 | 19,931 | 3,647 | 5.5 | 9,644 | 686 | 14.1 |
| 1983 | 9,118 | 534 | 17.1 | 10,497 | 767 | 13.7 | 21,083 | 3,769 | 5.6 | 9,760 | 686 | 14.2 |
| 1984 | 9,248 | 530 | 17.4 | 11,151 | 797 | 14.0 | 22,550 | 3,967 | 5.7 | 10,017 | 691 | 14.5 |
| 1985 | 9,419 | 538 | 17.5 | 10,506 | 735 | 14.3 | 20,597 | 3,570 | 5.8 | 10,020 | 685 | 14.6 |
| 1986 | 9,464 | 543 | 17.4 | 10,764 | 738 | 14.6 | 22,143 | 3,821 | 5.8 | 10,143 | 692 | 14.7 |
| 1987 | 9,720 | 539 | 18.0 | 11,114 | 744 | 14.9 | 23,349 | 3,937 | 5.9 | 10,453 | 694 | 15.1 |
| 1988 | 9,972 | 531 | 18.8 | 11,465 | 745 | 15.4 | 22,485 | 3,736 | 6.0 | 10,721 | 688 | 15.6 |
| 1989 | [a]10,157 | [a]533 | [a]19.0 | 11,676 | 724 | 16.1 | 22,926 | 3,776 | 6.1 | 10,932 | 688 | 15.9 |
| 1990 | 10,504 | 520 | 20.2 | 11,902 | 738 | 16.1 | 23,603 | 3,953 | 6.0 | 11,107 | 677 | 16.4 |
| 1991 | 10,571 | 501 | 21.1 | 12,245 | 721 | 17.0 | 24,229 | 4,047 | 6.0 | 11,294 | 669 | 16.9 |
| 1992 | 10,857 | 517 | 21.0 | 12,381 | 717 | 17.3 | 25,373 | 4,210 | 6.0 | 11,558 | 683 | 16.9 |
| 1993 | 10,804 | 527 | 20.5 | 12,430 | 714 | 17.4 | 26,262 | 4,309 | 6.1 | 11,595 | 693 | 16.7 |
| 1994 | 10,992 | 531 | 20.7 | 12,156 | 701 | 17.3 | 25,838 | 4,202 | 6.1 | 11,683 | 698 | 16.7 |
| 1995 | 11,203 | 530 | 21.1 | 12,018 | 694 | 17.3 | 26,514 | 4,315 | 6.1 | 11,793 | 700 | 16.8 |
| 1996 | 11,330 | 534 | 21.2 | 11,811 | 685 | 17.2 | 26,092 | 4,221 | 6.2 | 11,813 | 700 | 16.9 |
| 1997 | 11,581 | 539 | 21.5 | 12,115 | 703 | 17.2 | 27,032 | 4,218 | 6.4 | 12,107 | 711 | 17.0 |
| 1998 | 11,754 | 544 | 21.6 | 12,173 | 707 | 17.2 | 25,397 | 4,135 | 6.1 | 12,211 | 721 | 16.9 |
| 1999 | 11,848 | 553 | 21.4 | 11,957 | 701 | 17.0 | 26,014 | 4,352 | 6.0 | 12,206 | 732 | 16.7 |
| 2000 | 11,976 | 547 | 21.9 | 11,672 | 669 | 17.4 | 25,617 | 4,391 | 5.8 | 12,164 | 720 | 16.9 |
| 2001 | 11,831 | 534 | 22.1 | 11,204 | 636 | 17.6 | 26,602 | 4,477 | 5.9 | 11,887 | 695 | 17.1 |
| 2002 | 12,202 | 555 | 22.0 | 11,364 | 650 | 17.5 | 27,071 | 4,642 | 5.8 | 12,171 | 719 | 16.9 |
| 2003 | 12,325 | 556 | 22.2 | 11,287 | 697 | 16.2 | 28,093 | 4,215 | 6.7 | 12,208 | 718 | 17.0 |
| 2004 | 12,460 | 553 | 22.5 | 11,184 | 690 | 16.2 | 27,023 | 4,057 | 6.7 | 12,200 | 714 | 17.1 |
| 2005 | 12,510 | 567 | 22.1 | 10,920 | 617 | 17.7 | 26,235 | 4,385 | 6.0 | 12,082 | 706 | 17.1 |
| 2006 | 12,485 | 554 | 22.5 | 10,920 | 612 | 17.8 | 25,231 | 4,304 | 5.9 | 12,017 | 698 | 17.2 |
| 2007 | 12,304 | 547 | 22.5 | 10,962 | 609 | 18.0 | 25,152 | 4,275 | 5.9 | 11,920 | 693 | 17.2 |
| 2008[P] | 11,788 | 522 | 22.6 | 10,951 | 605 | 18.1 | 25,254 | 4,075 | 6.2 | 11,619 | 667 | 17.4 |

[a] Through 1989, includes motorcycles.
[b] Includes a small number of trucks with 2 axles and 4 tires, such as step vans.
[c] Single-unit trucks with 2 axles and 6 or more tires, and combination trucks.
[d] Includes buses and motorcycles, which are not shown separately.
R=Revised. P=Preliminary.
Note: Geographic coverage is the 50 States and the District of Columbia.

Web Page: http://www.eia.doe.gov/emeu/mer/overview.html.
Sources: • **Passenger Cars, 1990-1994:** U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics 1998,* Table 4-13. • **All Other Data:** • **1973-1994—**Federal Highway Administration (FHWA), *Highway Statistics Summary to 1995,* Table VM-201A. • **1995 forward—**FHWA, *Highway Statistics,* annual reports, Table VM-1.

# Table 1.9 Heating Degree-Days by Census Division

| Census Divisions | March | | | | | Cumulative July through March | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Percent Change | | | | | Percent Change | |
| | Normal[a] | 2009 | 2010 | Normal to 2010 | 2009 to 2010 | Normal[a] | 2009 | 2010 | Normal to 2010 | 2009 to 2010 |
| **New England** | | | | | | | | | | |
| Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont | 913 | 939 | 724 | -21 | -23 | 5,681 | 5,862 | 5,397 | -5 | -8 |
| **Middle Atlantic** | | | | | | | | | | |
| New Jersey, New York, Pennsylvania | 827 | 811 | 649 | -22 | -20 | 5,159 | 5,203 | 4,888 | -5 | -6 |
| **East North Central** | | | | | | | | | | |
| Illinois, Indiana, Michigan, Ohio, Wisconsin | 864 | 798 | 728 | -16 | -9 | 5,699 | 5,860 | 5,620 | -1 | -4 |
| **West North Central** | | | | | | | | | | |
| Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota | 858 | 857 | 755 | -12 | -12 | 6,021 | 6,102 | 6,158 | 2 | 1 |
| **South Atlantic** | | | | | | | | | | |
| Delaware, Florida, Georgia, Maryland and the District of Columbia, North Carolina, South Carolina, Virginia, West Virginia | 373 | 381 | 388 | 4 | 2 | 2,606 | 2,659 | 2,829 | 9 | 6 |
| **East South Central** | | | | | | | | | | |
| Alabama, Kentucky, Mississippi, Tennessee | 452 | 397 | 500 | 11 | 26 | 3,305 | 3,255 | 3,673 | 11 | 13 |
| **West South Central** | | | | | | | | | | |
| Arkansas, Louisiana, Oklahoma, Texas | 263 | 246 | 318 | 21 | 29 | 2,175 | 1,954 | 2,550 | 17 | 31 |
| **Mountain** | | | | | | | | | | |
| Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming | 633 | 611 | 644 | 2 | 5 | 4,468 | 4,075 | 4,492 | 1 | 10 |
| **Pacific**[b] | | | | | | | | | | |
| California, Oregon, Washington | 416 | 453 | 413 | -1 | -9 | 2,672 | 2,504 | 2,554 | -4 | 2 |
| **U.S. Average**[b] | **593** | **581** | **541** | **-9** | **-7** | **3,981** | **3,958** | **4,014** | **1** | **1** |

[a] "Normal" is based on calculations of data from 1971 through 2000.
[b] Excludes Alaska and Hawaii.
(s)=Less than 0.5 percent and greater than -0.5 percent.

Notes: Degree-days are relative measurements of outdoor air temperature used as an index for heating and cooling energy requirements. Heating degree-days are the number of degrees that the daily average temperature falls below 65° F. Cooling degree-days are the number of degrees that the daily average temperature rises above 65° F. The daily average temperature is the mean of the maximum and minimum temperatures in a 24-hour period. For example, a weather station recording an average daily temperature of 40° F would report 25 heating degree-days for that day (and 0 cooling degree-days). If a weather station recorded an average daily temperature of 78° F, cooling degree-days for that station would be 13 (and 0 heating degree days).

Web Pages: • See http://www.eia.doe.gov/emeu/mer/overview.html for current data. • See http://www.eia.doe.gov/emeu/aer/overview.html for historical data.

Sources: There are several degree-day databases maintained by the National Oceanic and Atmospheric Administration. The information published here is developed by the National Weather Service Climate Prediction Center, Camp Springs, MD. The data are available weekly with monthly summaries and are based on mean daily temperatures recorded at about 200 major weather stations around the country. The temperature information recorded at those weather stations is used to calculate statewide degree-day averages based on population. The State figures are then aggregated into Census Divisions and into the national average. The population weights currently used represent resident State population data estimated for the 2000 Census by the U.S. Department of Commerce, Bureau of the Census. The data provided here are available sooner than the Historical Climatology Series 5-1 (heating degree-days) developed by the National Climatic Data Center, Asheville, NC, which compiles data from some 8,000 weather stations.

# Table 1.10 Cooling Degree-Days by Census Division

| Census Divisions | March | | | | | Cumulative January through March | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Percent Change | | | | | Percent Change | |
| | Normal[a] | 2009 | 2010 | Normal to 2010 | 2009 to 2010 | Normal[a] | 2009 | 2010 | Normal to 2010 | 2009 to 2010 |
| **New England** | | | | | | | | | | |
| Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont | 0 | 0 | 0 | NM | NM | 0 | 0 | 0 | NM | NM |
| **Middle Atlantic** | | | | | | | | | | |
| New Jersey, New York, Pennsylvania | 0 | 0 | 0 | NM | NM | 0 | 0 | 0 | NM | NM |
| **East North Central** | | | | | | | | | | |
| Illinois, Indiana, Michigan, Ohio, Wisconsin | 1 | 0 | 0 | NM | NM | 1 | 0 | 0 | NM | NM |
| **West North Central** | | | | | | | | | | |
| Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota | 3 | 0 | 0 | NM | NM | 3 | 0 | 0 | NM | NM |
| **South Atlantic** | | | | | | | | | | |
| Delaware, Florida, Georgia, Maryland and the District of Columbia, North Carolina, South Carolina, Virginia, West Virginia | 49 | 47 | 19 | NM | NM | 113 | 83 | 42 | -63 | -49 |
| **East South Central** | | | | | | | | | | |
| Alabama, Kentucky, Mississippi, Tennessee | 19 | 6 | 0 | NM | NM | 31 | 6 | 0 | NM | NM |
| **West South Central** | | | | | | | | | | |
| Arkansas, Louisiana, Oklahoma, Texas | 51 | 69 | 13 | NM | NM | 80 | 103 | 18 | NM | NM |
| **Mountain** | | | | | | | | | | |
| Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming | 10 | 10 | 3 | NM | NM | 14 | 12 | 3 | NM | NM |
| **Pacific**[b] | | | | | | | | | | |
| California, Oregon, Washington | 4 | 0 | 0 | NM | NM | 7 | 0 | 0 | NM | NM |
| **U.S. Average**[b] | **18** | **17** | **5** | **NM** | **NM** | **35** | **28** | **10** | **NM** | **NM** |

[a] "Normal" is based on calculations of data from 1971 through 2000.

[b] Excludes Alaska and Hawaii.

NM=Not meaningful (because "Normal" is less than 100 or ratio is incalculable).

Notes: Degree-days are relative measurements of outdoor air temperature used as an index for heating and cooling energy requirements. Cooling degree-days are the number of degrees that the daily average temperature rises above 65° F. Heating degree-days are the number of degrees that the daily average temperature falls below 65° F. The daily average temperature is the mean of the maximum and minimum temperatures in a 24-hour period. For example, if a weather station recorded an average daily temperature of 78° F, cooling degree-days for that station would be 13 (and 0 heating degree-days). A weather station recording an average daily temperature of 40° F would report 25 heating degree-days for that day (and 0 cooling degree-days).

Web Pages: • See http://www.eia.doe.gov/emeu/mer/overview.html for current data. • See http://www.eia.doe.gov/emeu/aer/overview.html for historical data.

Sources: There are several degree-day databases maintained by the National Oceanic and Atmospheric Administration. The information published here is developed by the National Weather Service Climate Prediction Center, Camp Springs, MD. The data are available weekly with monthly summaries and are based on mean daily temperatures recorded at about 200 major weather stations around the country. The temperature information recorded at those weather stations is used to calculate statewide degree-day averages based on population. The State figures are then aggregated into Census Divisions and into the national average. The population weights currently used represent resident State population data estimated for the 2000 Census by the U.S. Department of Commerce, Bureau of the Census. The data provided here are available sooner than the Historical Climatology Series 5-2 (cooling degree-days) developed by the National Climatic Data Center, Asheville, NC, which compiles data from some 8,000 weather stations.

**Note. Merchandise Trade Value**. Imports data presented are based on the customs values. Those values do not include insurance and freight and are consequently lower than the cost, insurance, and freight (CIF) values, which are also reported by the Bureau of the Census. All exports data, and imports data prior to 1981, are on a free alongside ship (f.a.s.) basis.

"Balance" is exports minus imports; a positive balance indicates a surplus trade value and a negative balance indicates a deficit trade value. "Energy" includes mineral fuels, lubricants, and related material. "Non-Energy Balance" and "Total Merchandise" include foreign exports (i.e., re-exports) and nonmonetary gold and U.S. Department of Defense Grant-Aid shipments. The "Non-Energy Balance" is calculated by subtracting the "Energy" from the "Total Merchandise Balance."

"Imports" consist of government and nongovernment shipments of merchandise into the 50 States, the District of Columbia, Puerto Rico, the U.S. Virgin Islands, and the U.S. Foreign Trade Zones. They reflect the total arrival from foreign countries of merchandise that immediately entered consumption channels, warehouses, the Foreign Trade Zones, or the Strategic Petroleum Reserve. They exclude shipments between the United States, Puerto Rico, and U.S. possessions, shipments to U.S. Armed Forces and diplomatic missions abroad for their own use, U.S. goods returned to the United States by its Armed Forces, and in-transit shipments.

### Table 1.5 Sources

U.S. Department of Commerce, Bureau of the Census, Foreign Trade Division:

**Petroleum Exports**
1974-1987: "U.S. Exports," FT410, December issues.
1988 and 1989: "Report on U.S. Merchandise Trade," Final Revisions.
1990-1992: "U.S. Merchandise Trade," Final Report.
1993-2007: "U.S. International Trade in Goods and Services," Annual Revision.
2008 forward: "U.S. International Trade in Goods and Services," FT-900, monthly.

**Petroleum Imports**
1974-1987: "U.S. Merchandise Trade," FT900, December issues, 1975-1988.
1988 and 1989: "Report on U.S. Merchandise Trade," Final Revisions.
1990-1993: "U.S. Merchandise Trade," Final Report.
1994-2007: "U.S. International Trade in Goods and Services," Annual Revision.
2008 forward: "U.S. International Trade in Goods and Services," FT-900, monthly.

**Energy Exports and Imports**
1974-1987: U.S. merchandise trade press releases and database printouts for adjustments.
1988: January-July, monthly FT-900 supplement, 1989 issues. August-December, monthly FT-900, 1989 issues.
1989: Monthly FT-900, 1990 issues.
1990-1992: "U.S. Merchandise Trade," Final Report.
1993-2007: "U.S. International Trade in Goods and Services," Annual Revision.
2008 forward: "U.S. International Trade in Goods and Services," FT-900, monthly.

**Petroleum, Energy, and Non-Energy Balances**
Calculated by the U.S. Energy Information Administration.

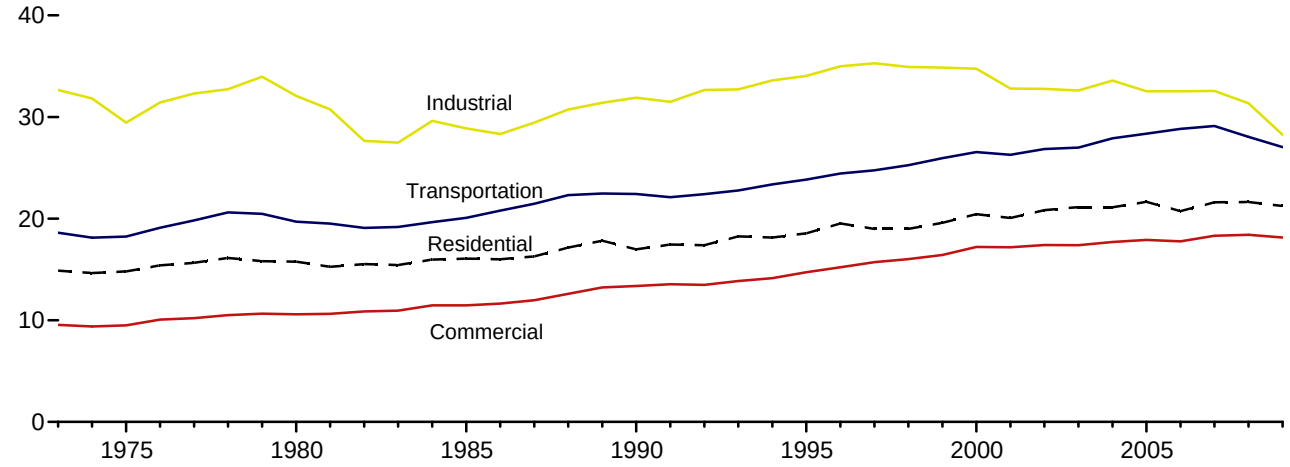
**Total Merchandise**
1974-1987: U.S. merchandise trade press releases and database printouts for adjustments.
1988: "Report on U.S. Merchandise Trade, 1988 Final Revisions," August 18, 1989.
1989: "Report on U.S. Merchandise Trade, 1989 Revisions," July 10, 1990.
1990: "U.S. Merchandise Trade, 1990 Final Report," May 10, 1991, and "U.S. Merchandise Trade, December 1992," February 18, 1993, page 3.
1991: "U.S. Merchandise Trade, 1992 Final Report," May 12, 1993.
1992-2007: "U.S. International Trade in Goods and Services," Annual Revision
2008 forward: "U.S. International Trade in Goods and Services," FT-900, monthly.

# 2 Energy Consumption by Sector

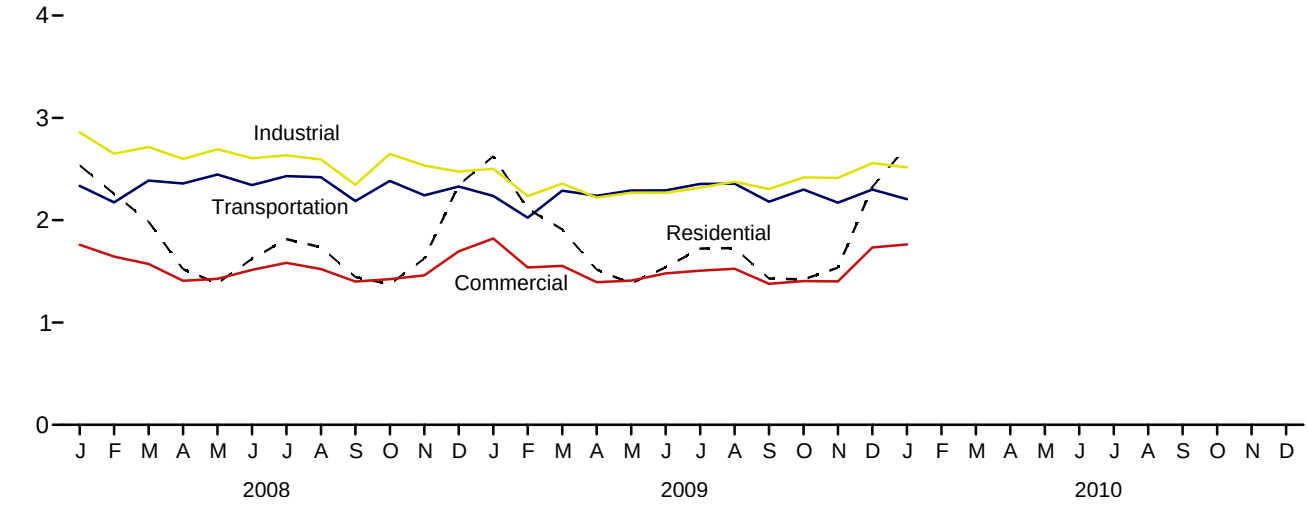
Office buildings, industries, residences, and transport systems, Baltimore, Maryland; east view from the inner harbor.
Source: U.S. Department of Energy.

## Figure 2.1 Energy Consumption by Sector
(Quadrillion Btu)

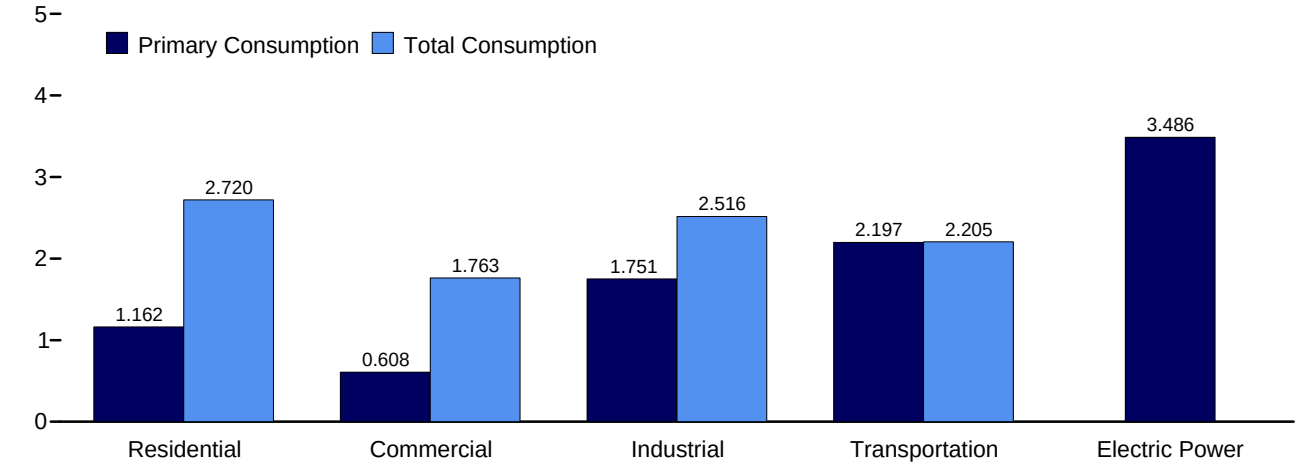
Total Consumption by End-Use Sector, 1973-2009




Total Consumption by End-Use Sector, Monthly




By Sector, January 2010




Web Page: http://www.eia.doe.gov/emeu/mer/consump.html.
Source: Table 2.1.

# Table 2.1 Energy Consumption by Sector

(Trillion Btu)

| | End-Use Sectors | | | | | | | | Electric Power Sector[c,d] | Balancing Item[g] | Total[h] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Residential | | Commercial[a] | | Industrial[b] | | Transportation | | | | |
| | Primary[e] | Total[f] | Primary[e] | Total[f] | Primary[e] | Total[f] | Primary[e] | Total[f] | Primary[e] | | |
| **1973 Total** | R **8,212** | R **14,891** | R **4,419** | R **9,545** | **24,741** | **32,653** | **18,576** | **18,612** | **19,753** | **7** | **75,708** |
| **1975 Total** | R **7,973** | R **14,810** | R **4,055** | R **9,498** | **21,454** | **29,447** | **18,209** | **18,244** | **20,307** | **1** | **71,999** |
| **1980 Total** | R **7,426** | R **15,760** | R **4,101** | R **10,590** | **22,610** | **32,077** | **19,658** | **19,696** | **24,327** | **-1** | **78,122** |
| **1985 Total** | R **7,129** | R **16,057** | R **3,726** | R **11,475** | **19,467** | **28,876** | **20,040** | **20,086** | **26,132** | **-4** | **76,491** |
| **1990 Total** | R **6,538** | R **16,982** | R **3,890** | R **13,365** | **21,207** | **31,894** | **22,365** | **22,419** | **30,660** | **-9** | **84,651** |
| **1995 Total** | R **6,915** | R **18,547** | R **4,094** | R **14,729** | **22,746** | **34,045** | **23,790** | **23,846** | **33,621** | **3** | **91,169** |
| **1996 Total** | R **7,440** | R **19,531** | R **4,266** | R **15,213** | **23,442** | **34,988** | **24,382** | **24,437** | **34,638** | **4** | **94,172** |
| **1997 Total** | R **7,007** | R **18,994** | R **4,289** | R **15,726** | **23,720** | **35,287** | **24,694** | **24,749** | **35,045** | **6** | **94,761** |
| **1998 Total** | R **6,390** | R **18,986** | R **3,998** | R **16,014** | **23,209** | **34,926** | **25,200** | **25,255** | **36,385** | **-3** | **95,178** |
| **1999 Total** | R **6,746** | R **19,583** | R **4,045** | R **16,422** | **22,989** | **34,854** | **25,891** | **25,948** | **37,136** | **6** | **96,812** |
| **2000 Total** | R **7,127** | R **20,446** | R **4,269** | R **17,218** | **22,869** | **34,756** | **26,488** | **26,548** | **38,214** | **2** | **98,970** |
| **2001 Total** | R **6,839** | R **20,065** | R **4,076** | R **17,180** | **21,833** | **32,803** | **26,212** | **26,275** | **37,362** | **-6** | **96,316** |
| **2002 Total** | R **6,901** | R **20,838** | R **4,136** | R **17,404** | **21,855** | **32,762** | **26,783** | **26,844** | **38,173** | **5** | **97,853** |
| **2003 Total** | R **7,183** | R **21,139** | R **4,275** | R **17,388** | R **21,538** | R **32,612** | R **26,919** | R **26,994** | **38,218** | R **-1** | R **98,131** |
| **2004 Total** | R **6,966** | R **21,125** | R **4,223** | R **17,707** | R **22,438** | R **33,592** | **27,816** | **27,895** | **38,876** | R **-6** | R **100,313** |
| **2005 Total** | R **6,883** | R **21,660** | R **4,043** | R **17,905** | R **21,448** | R **32,528** | R **28,270** | R **28,352** | **39,800** | R **(s)** | R **100,445** |
| **2006 Total** | R **6,155** | R **20,735** | R **3,739** | R **17,760** | **21,617** | **32,527** | **28,749** | **28,829** | **39,590** | **(s)** | **99,850** |
| **2007 Total** | R **6,607** | R **21,600** | R **3,923** | R **18,314** | R **21,492** | R **32,560** | R **29,030** | R **29,118** | **40,540** | R **-3** | R **101,588** |
| **2008** January | R 1,106 | R 2,536 | R 587 | R 1,760 | R 1,959 | R 2,858 | R 2,328 | R 2,336 | R 3,510 | R 1 | R 9,491 |
| February | R 1,027 | R 2,256 | R 562 | R 1,645 | R 1,803 | R 2,649 | R 2,167 | R 2,174 | R 3,165 | R (s) | R 8,724 |
| March | R 841 | R 1,986 | R 468 | R 1,572 | R 1,820 | R 2,715 | R 2,380 | R 2,387 | R 3,151 | R -2 | R 8,658 |
| April | R 540 | R 1,521 | R 325 | R 1,407 | R 1,702 | R 2,598 | R 2,352 | R 2,359 | R 2,966 | R -3 | R 7,882 |
| May | R 366 | R 1,383 | R 239 | R 1,426 | R 1,719 | R 2,694 | R 2,440 | R 2,447 | R 3,185 | R -2 | R 7,948 |
| June | R 279 | R 1,622 | R 195 | R 1,515 | R 1,638 | R 2,607 | R 2,336 | R 2,343 | R 3,639 | 1 | R 8,087 |
| July | R 254 | R 1,815 | R 188 | R 1,583 | R 1,672 | R 2,634 | 2,424 | 2,431 | R 3,925 | R 3 | R 8,467 |
| August | R 243 | R 1,735 | R 184 | R 1,523 | R 1,648 | R 2,594 | R 2,413 | R 2,420 | R 3,785 | 1 | R 8,274 |
| September | R 238 | R 1,444 | R 183 | R 1,400 | R 1,470 | R 2,347 | R 2,181 | R 2,188 | R 3,305 | (s) | R 7,378 |
| October | R 356 | R 1,374 | R 248 | R 1,424 | R 1,758 | R 2,648 | R 2,377 | R 2,384 | R 3,090 | -4 | R 7,826 |
| November | R 583 | R 1,625 | R 345 | R 1,461 | R 1,669 | R 2,534 | R 2,236 | R 2,242 | R 3,029 | R (s) | R 7,862 |
| December | R 969 | R 2,345 | R 519 | R 1,696 | R 1,641 | R 2,474 | R 2,321 | R 2,329 | R 3,394 | R 4 | R 8,848 |
| **Total** | R **6,800** | R **21,641** | R **4,043** | R **18,411** | R **20,500** | R **31,355** | R **27,956** | R **28,039** | R **40,147** | R **(s)** | R **99,446** |
| **2009** January | R 1,150 | R 2,625 | 616 | R 1,821 | R 1,721 | R 2,503 | R 2,229 | R 2,237 | R 3,470 | R (s) | R 9,186 |
| February | R 929 | R 2,110 | 508 | R 1,538 | R 1,534 | R 2,236 | R 2,018 | R 2,025 | R 2,919 | R -4 | R 7,904 |
| March | R 775 | R 1,910 | R 445 | R 1,553 | R 1,600 | R 2,358 | R 2,282 | R 2,289 | R 3,008 | R -5 | R 8,105 |
| April | R 542 | R 1,516 | R 315 | R 1,394 | R 1,468 | R 2,222 | R 2,233 | R 2,239 | R 2,813 | R -2 | R 7,369 |
| May | 335 | R 1,382 | R 225 | R 1,410 | R 1,464 | R 2,268 | R 2,283 | R 2,289 | R 3,044 | R (s) | R 7,350 |
| June | 265 | R 1,539 | R 185 | R 1,481 | R 1,458 | R 2,266 | R 2,284 | R 2,291 | R 3,385 | R 2 | R 7,578 |
| July | R 252 | R 1,722 | R 192 | R 1,507 | R 1,516 | R 2,318 | R 2,347 | R 2,354 | R 3,594 | R 3 | R 7,904 |
| August | 248 | R 1,727 | R 189 | R 1,526 | R 1,530 | R 2,375 | R 2,351 | R 2,358 | R 3,668 | R 3 | R 7,989 |
| September | R 258 | R 1,430 | R 194 | R 1,378 | R 1,522 | R 2,305 | R 2,174 | R 2,181 | R 3,145 | R -1 | R 7,293 |
| October | 397 | R 1,421 | R 262 | R 1,406 | R 1,621 | R 2,418 | R 2,294 | R 2,300 | R 2,971 | R -2 | R 7,542 |
| November | 534 | R 1,536 | R 322 | R 1,402 | R 1,624 | R 2,414 | R 2,165 | R 2,172 | R 2,878 | R -2 | R 7,522 |
| December | R 960 | R 2,327 | R 522 | R 1,733 | R 1,736 | R 2,558 | R 2,292 | R 2,300 | R 3,407 | R (s) | R 8,917 |
| **Total** | R **6,644** | R **21,244** | R **3,974** | R **18,147** | R **18,795** | R **28,243** | R **26,952** | R **27,035** | R **38,304** | R **-9** | R **94,660** |
| **2010** January | 1,162 | 2,720 | 608 | 1,763 | 1,751 | 2,516 | 2,197 | 2,205 | 3,486 | -1 | 9,203 |

[a] Commercial sector, including commercial combined-heat-and-power (CHP) and commercial electricity-only plants.

[b] Industrial sector, including industrial combined-heat-and-power (CHP) and industrial electricity-only plants.

[c] Electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public.

[d] Through 1988, data are for electric utilities only. Beginning in 1989, data are for electric utilities and independent power producers.

[e] See "Primary Energy Consumption" in Glossary.

[f] Total energy consumption in the end-use sectors consists of primary energy consumption, electricity retail sales, and electrical system energy losses. See Note 2, "Electrical System Energy Losses," at end of section.

[g] A balancing item. The sum of primary consumption in the five energy-use sectors equals the sum of total consumption in the four end-use sectors. However, total energy consumption does not equal the sum of the sectoral components due to the use of sector-specific conversion factors for coal and natural gas.

[h] Primary energy consumption total. See Table 1.3.

R=Revised. (s)=Less than +0.5 trillion Btu and greater than -0.5 trillion Btu.

Notes: • See Note, "Classification of Power Plants Into Energy-Use Sectors," at end of Section 7. • See Note 1, "Energy Consumption Data and Surveys," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

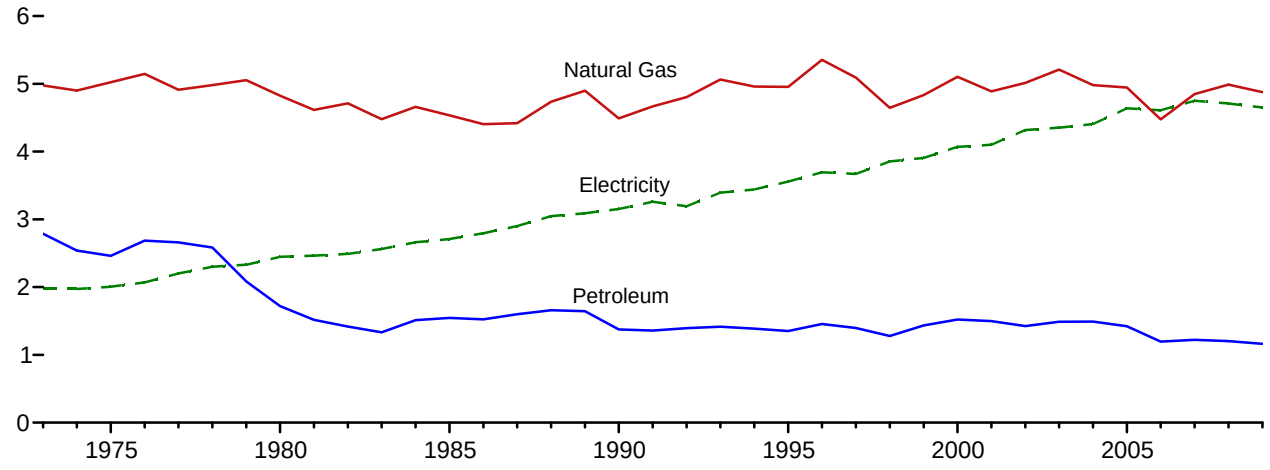
Web Page: See http://www.eia.doe.gov/emeu/mer/consump.html for all available data beginning in 1973.

Sources: Tables 1.3 and 2.2-2.6.

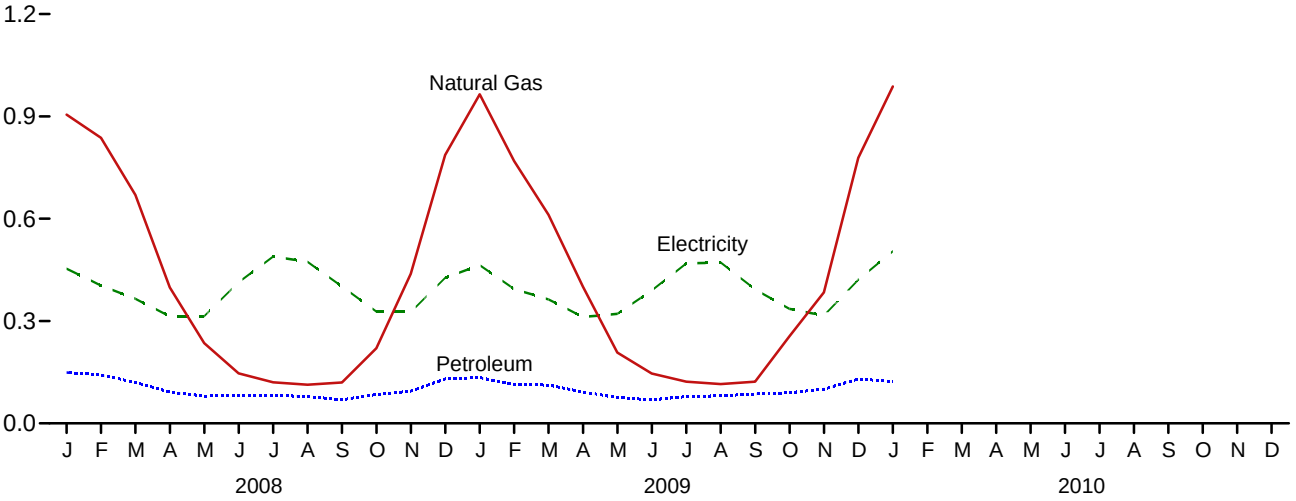
Residential and commercial data are revised beginning in 1973 due to a change in the estimation methodology for LPG data in Table 3.7a.

## Figure 2.2 Residential Sector Energy Consumption
(Quadrillion Btu)

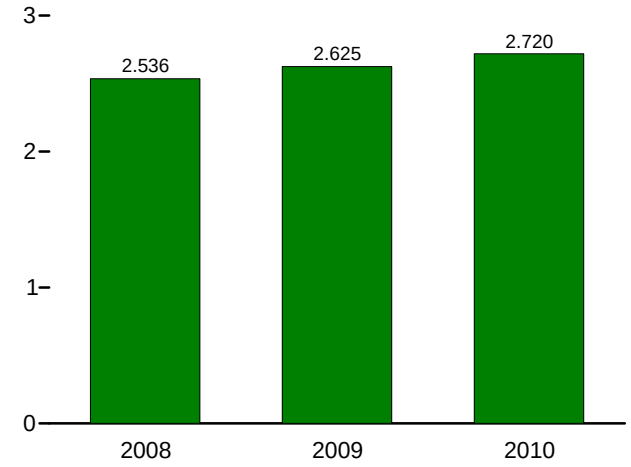
By Major Source, 1973-2009



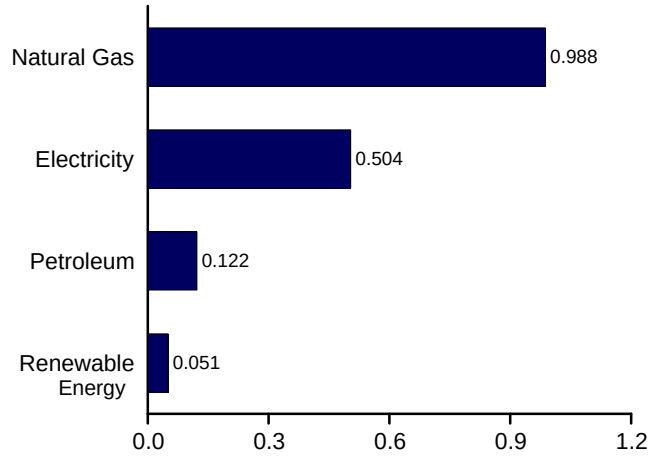

By Major Source, Monthly




Total, January




By Major Source, January 2010




Web Page: http://www.eia.doe.gov/emeu/mer/consump.html.
Source: Table 2.2.

# Table 2.2 Residential Sector Energy Consumption

(Trillion Btu)

| | Primary Consumption[a] | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fossil Fuels | | | | Renewable Energy[b] | | | | | | | |
| | Coal | Natural Gas[c] | Petro-leum | Total | Geo-thermal | Solar/ PV | Bio-mass | Total | Total Primary | Electricity Retail Sales[d] | Electrical System Energy Losses[e] | Total |
| **1973 Total** | **94** | **4,977** | **R 2,787** | **R 7,858** | **NA** | **NA** | **354** | **354** | **R 8,212** | **1,976** | **4,703** | **R 14,891** |
| **1975 Total** | **63** | **5,023** | **R 2,463** | **R 7,548** | **NA** | **NA** | **425** | **425** | **R 7,973** | **2,007** | **4,829** | **R 14,810** |
| **1980 Total** | **31** | **4,825** | **R 1,721** | **R 6,576** | **NA** | **NA** | **850** | **850** | **R 7,426** | **2,448** | **5,885** | **R 15,760** |
| **1985 Total** | **39** | **4,534** | **R 1,546** | **R 6,119** | **NA** | **NA** | **1,010** | **1,010** | **R 7,129** | **2,709** | **6,219** | **R 16,057** |
| **1990 Total** | **31** | **4,491** | **R 1,375** | **R 5,897** | **6** | **56** | **580** | **641** | **R 6,538** | **3,153** | **7,291** | **R 16,982** |
| **1995 Total** | **17** | **4,954** | **R 1,352** | **R 6,324** | **7** | **65** | **520** | **591** | **R 6,915** | **3,557** | **8,075** | **R 18,547** |
| **1996 Total** | **17** | **5,354** | **R 1,456** | **R 6,827** | **7** | **65** | **540** | **612** | **R 7,440** | **3,694** | **8,397** | **R 19,531** |
| **1997 Total** | **16** | **5,093** | **R 1,396** | **R 6,505** | **8** | **65** | **430** | **503** | **R 7,007** | **3,671** | **8,315** | **R 18,994** |
| **1998 Total** | **12** | **4,646** | **R 1,280** | **R 5,937** | **8** | **65** | **380** | **452** | **R 6,390** | **3,856** | **8,741** | **R 18,986** |
| **1999 Total** | **14** | **4,835** | **R 1,435** | **R 6,284** | **9** | **64** | **390** | **462** | **R 6,746** | **3,906** | **8,931** | **R 19,583** |
| **2000 Total** | **11** | **5,105** | **R 1,521** | **R 6,637** | **9** | **61** | **420** | **490** | **R 7,127** | **4,069** | **9,250** | **R 20,446** |
| **2001 Total** | **12** | **4,889** | **R 1,499** | **R 6,400** | **9** | **60** | **370** | **439** | **R 6,839** | **4,100** | **9,126** | **R 20,065** |
| **2002 Total** | **12** | **5,014** | **R 1,426** | **R 6,452** | **10** | **59** | **380** | **449** | **R 6,901** | **4,317** | **9,620** | **R 20,838** |
| **2003 Total** | **12** | **R 5,209** | **R 1,490** | **R 6,712** | **13** | **58** | **400** | **471** | **R 7,183** | **4,353** | **9,603** | **R 21,139** |
| **2004 Total** | **11** | **R 4,981** | **R 1,491** | **R 6,483** | **14** | **59** | **410** | **483** | **R 6,966** | **4,408** | **9,750** | **R 21,125** |
| **2005 Total** | **8** | **R 4,946** | **R 1,422** | **R 6,377** | **16** | **61** | **430** | **507** | **R 6,883** | **4,638** | **10,139** | **R 21,660** |
| **2006 Total** | **6** | **4,476** | **R 1,197** | **R 5,679** | **18** | **67** | **390** | **475** | **R 6,155** | **4,611** | **9,968** | **R 20,735** |
| **2007 Total** | **8** | **R 4,850** | **R 1,223** | **R 6,080** | **22** | **75** | **430** | **527** | **R 6,607** | **4,750** | **10,242** | **R 21,600** |
| **2008** January | 1 | R 905 | R 149 | R 1,055 | 2 | 7 | 42 | 51 | R 1,106 | 454 | 977 | R 2,536 |
| February | 1 | R 837 | R 142 | R 980 | 2 | 7 | 39 | 47 | R 1,027 | 404 | 825 | R 2,256 |
| March | 1 | R 670 | R 120 | R 790 | 2 | 7 | 42 | 51 | R 841 | 365 | 780 | R 1,986 |
| April | R 1 | R 398 | R 92 | R 491 | 2 | 7 | 40 | 49 | R 540 | 314 | R 667 | R 1,521 |
| May | R 1 | 235 | R 80 | R 315 | 2 | 7 | 42 | 51 | R 366 | 314 | R 703 | R 1,383 |
| June | 1 | 147 | R 82 | R 230 | 2 | 7 | 40 | 49 | R 279 | 413 | 930 | R 1,622 |
| July | 1 | 121 | R 82 | R 204 | 2 | 7 | 42 | 51 | R 254 | 489 | R 1,072 | R 1,815 |
| August | 1 | 113 | R 78 | R 192 | 2 | 7 | 42 | 51 | R 243 | 473 | 1,019 | R 1,735 |
| September | (s) | 120 | R 69 | R 189 | 2 | 7 | 40 | 49 | R 238 | 401 | 804 | R 1,444 |
| October | 1 | R 220 | R 85 | R 305 | 2 | 7 | 42 | 51 | R 356 | 328 | 690 | R 1,374 |
| November | 1 | R 438 | R 95 | R 534 | 2 | 7 | 40 | 49 | R 583 | 326 | 716 | R 1,625 |
| December | 1 | R 787 | R 130 | R 918 | 2 | 7 | 42 | 51 | R 969 | 427 | R 950 | R 2,345 |
| **Total** | **R 8** | **R 4,989** | **R 1,204** | **R 6,201** | **26** | **83** | **490** | **599** | **R 6,800** | **4,708** | **R 10,133** | **R 21,641** |
| **2009** January | 1 | R 965 | R 134 | R 1,099 | 2 | 7 | 42 | 51 | R 1,150 | 464 | R 1,011 | R 2,625 |
| February | 1 | R 769 | R 114 | R 883 | 2 | 6 | 38 | 46 | R 929 | 394 | R 786 | R 2,110 |
| March | 1 | R 611 | R 112 | R 725 | 2 | 7 | 42 | 51 | R 775 | 363 | R 771 | R 1,910 |
| April | (s) | R 401 | R 92 | R 493 | 2 | 7 | 40 | 49 | R 542 | 312 | R 662 | R 1,516 |
| May | (s) | 208 | 76 | 284 | 2 | 7 | 42 | 51 | 335 | 321 | R 727 | R 1,382 |
| June | (s) | 146 | 69 | 216 | 2 | 7 | 40 | 49 | 265 | 390 | R 884 | R 1,539 |
| July | (s) | R 122 | 79 | 202 | 2 | 7 | 42 | 51 | R 252 | 469 | R 1,001 | R 1,722 |
| August | (s) | R 115 | 81 | 197 | 2 | 7 | 42 | 51 | 248 | 472 | R 1,008 | R 1,727 |
| September | (s) | 122 | R 86 | R 208 | 2 | 7 | 40 | 49 | R 258 | 393 | R 779 | R 1,430 |
| October | 1 | R 255 | 90 | 346 | 2 | 7 | 42 | 51 | 397 | 336 | R 688 | R 1,421 |
| November | 1 | R 384 | 100 | R 484 | 2 | 7 | 40 | 49 | 534 | 316 | R 687 | R 1,536 |
| December | 1 | R 778 | R 130 | R 909 | 2 | 7 | 42 | 51 | R 960 | 421 | R 945 | R 2,327 |
| **Total** | **7** | **R 4,876** | **R 1,162** | **R 6,045** | **26** | **83** | **490** | **599** | **R 6,644** | **4,650** | **R 9,950** | **R 21,244** |
| **2010** January | 1 | 988 | 122 | 1,111 | 2 | 7 | 42 | 51 | 1,162 | 504 | 1,054 | 2,720 |

[a] See "Primary Energy Consumption" in Glossary.

[b] Data are estimates. See Table 10.2a for notes on series components.

[c] Natural gas only; excludes the estimated portion of supplemental gaseous fuels. See Note 3, "Supplemental Gaseous Fuels," at end of Section 4.

[d] Electricity retail sales to ultimate customers reported by electric utilities and, beginning in 1996, other energy service providers.

[e] Total losses are calculated as the primary energy consumed by the electric power sector minus the energy content of electricity retail sales. Total losses are allocated to the end-use sectors in proportion to each sector's share of total electricity retail sales. See Note 2, "Electrical System Energy Losses," at end of section.

R=Revised. NA=Not available. (s)=Less than 0.5 trillion Btu.

Notes: • See Note 1, "Energy Consumption Data and Surveys," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

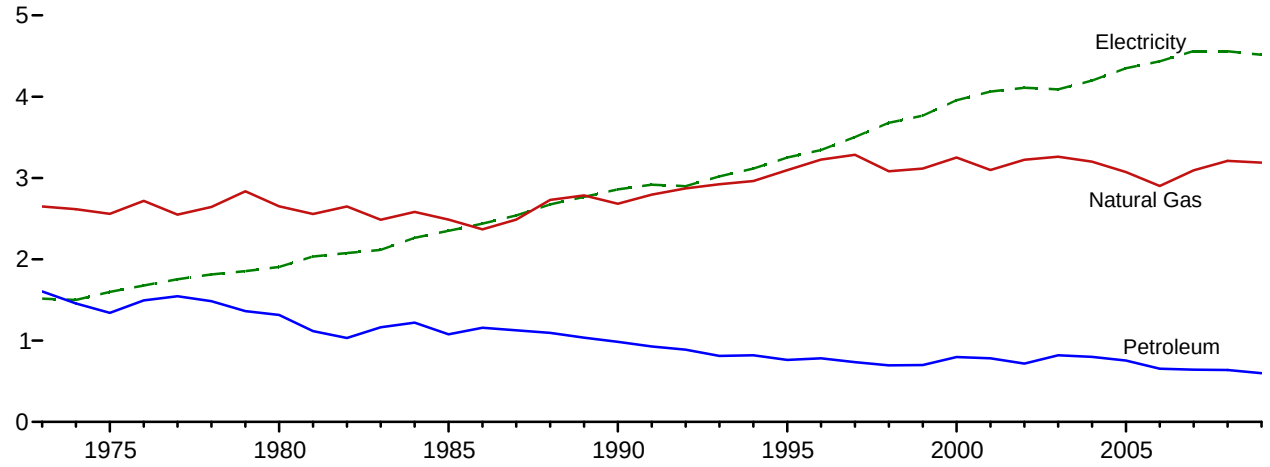
Web Page: See http://www.eia.doe.gov/emeu/mer/consump.html for all available data beginning in 1973.

Sources: Tables 2.6, 3.8a, 4.3, 6.2, 7.6, 10.2a, A4, A5, and A6.

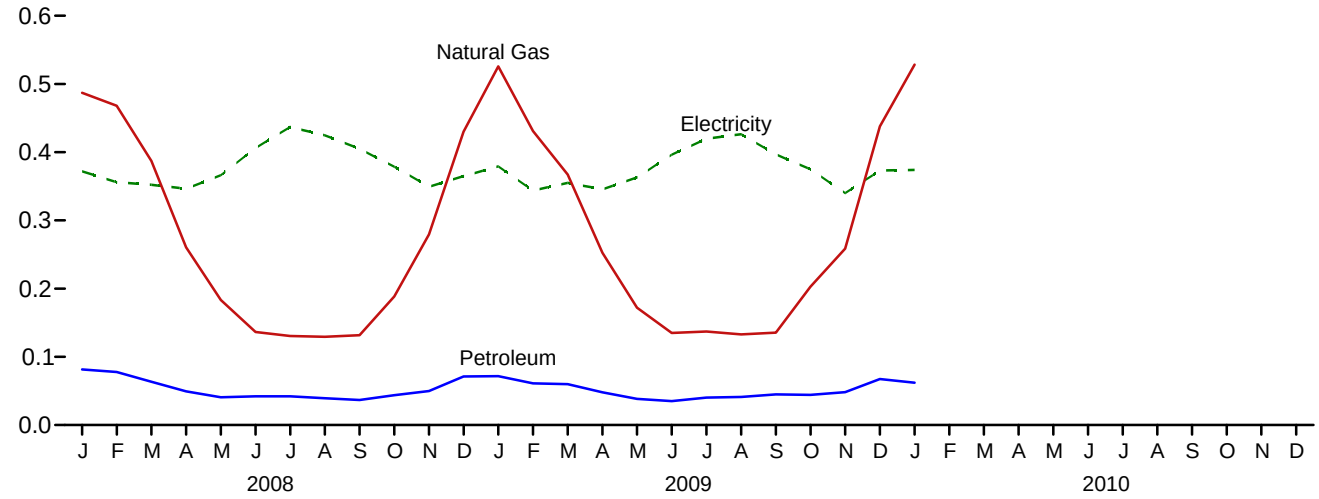
Petroleum data are revised beginning in 1973 due to a change in the estimation methodology for LPG data in Table 3.7a.

## Figure 2.3 Commercial Sector Energy Consumption
(Quadrillion Btu)

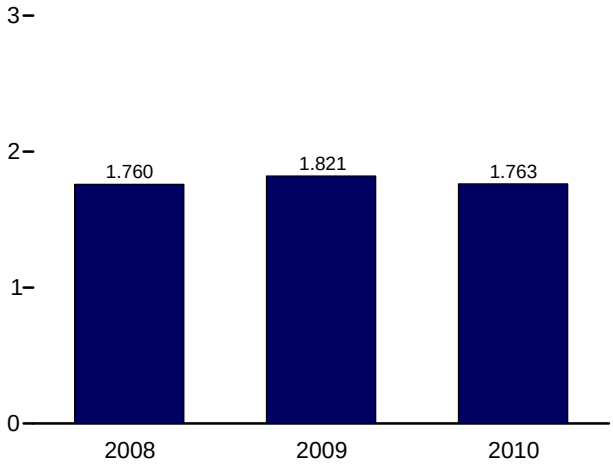
By Major Source, 1973-2009



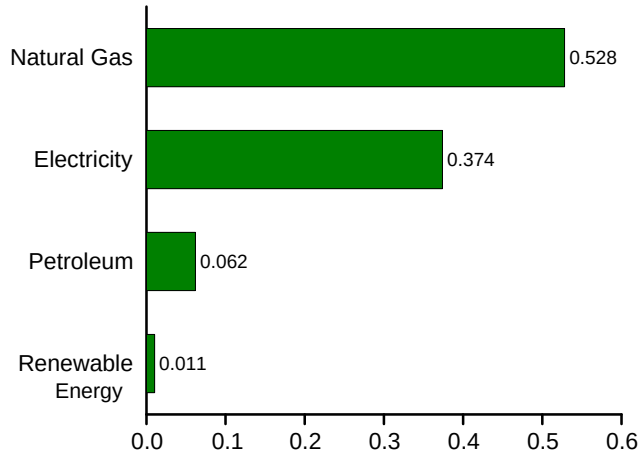

By Major Source, Monthly




Total, January




By Major Source, January 2010




Web Page: http://www.eia.doe.gov/emeu/mer/consump.html.
Source: Table 2.3.

# Table 2.3 Commercial Sector Energy Consumption

(Trillion Btu)

| | Primary Consumption[a] | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fossil Fuels | | | | Renewable Energy[b] | | | | | | | |
| | Coal | Natural Gas[c] | Petro-leum[d] | Total | Hydro-electric Power[e] | Geo-thermal | Bio-mass | Total | Total Primary | Electricity Retail Sales[f] | Electrical System Energy Losses[g] | Total |
| **1973 Total** | **160** | **2,649** | **R 1,604** | **R 4,413** | **NA** | **NA** | **7** | **7** | **R 4,419** | **1,517** | **3,609** | **R 9,545** |
| **1975 Total** | **147** | **2,558** | **R 1,342** | **R 4,047** | **NA** | **NA** | **8** | **8** | **R 4,055** | **1,598** | **3,845** | **R 9,498** |
| **1980 Total** | **115** | **2,651** | **R 1,314** | **R 4,080** | **NA** | **NA** | **21** | **21** | **R 4,101** | **1,906** | **4,582** | **R 10,590** |
| **1985 Total** | **137** | **2,488** | **R 1,077** | **R 3,702** | **NA** | **NA** | **24** | **24** | **R 3,726** | **2,351** | **5,398** | **R 11,475** |
| **1990 Total** | **124** | **2,682** | **R 985** | **R 3,792** | **1** | **3** | **94** | **98** | **R 3,890** | **2,860** | **6,615** | **R 13,365** |
| **1995 Total** | **117** | **3,096** | **R 763** | **R 3,976** | **1** | **5** | **113** | **118** | **R 4,094** | **3,252** | **7,382** | **R 14,729** |
| **1996 Total** | **122** | **3,226** | **R 783** | **R 4,131** | **1** | **5** | **129** | **135** | **R 4,266** | **3,344** | **7,603** | **R 15,213** |
| **1997 Total** | **129** | **3,285** | **R 736** | **R 4,150** | **1** | **6** | **131** | **138** | **R 4,289** | **3,503** | **7,935** | **R 15,726** |
| **1998 Total** | **93** | **3,083** | **R 695** | **R 3,871** | **1** | **7** | **118** | **127** | **R 3,998** | **3,678** | **8,338** | **R 16,014** |
| **1999 Total** | **103** | **3,115** | **R 699** | **R 3,917** | **1** | **7** | **121** | **129** | **R 4,045** | **3,766** | **8,610** | **R 16,422** |
| **2000 Total** | **92** | **3,252** | **R 798** | **R 4,141** | **1** | **8** | **119** | **128** | **R 4,269** | **3,956** | **8,993** | **R 17,218** |
| **2001 Total** | **97** | **3,097** | **R 781** | **R 3,975** | **1** | **8** | **92** | **101** | **R 4,076** | **4,062** | **9,042** | **R 17,180** |
| **2002 Total** | **90** | **3,225** | **R 717** | **R 4,032** | **(s)** | **9** | **95** | **104** | **R 4,136** | **4,110** | **9,159** | **R 17,404** |
| **2003 Total** | **82** | **R 3,261** | **R 819** | **R 4,162** | **1** | **11** | **101** | **113** | **R 4,275** | **4,090** | **9,023** | **R 17,388** |
| **2004 Total** | **103** | **R 3,201** | **R 801** | **R 4,105** | **1** | **12** | **105** | **118** | **R 4,223** | **4,198** | **9,286** | **R 17,707** |
| **2005 Total** | **97** | **R 3,073** | **R 754** | **R 3,924** | **1** | **14** | **105** | **119** | **R 4,043** | **4,351** | **9,511** | **R 17,905** |
| **2006 Total** | **65** | **2,902** | **R 655** | **R 3,622** | **1** | **14** | **102** | **117** | **R 3,739** | **4,435** | **9,587** | **R 17,760** |
| **2007 Total** | **70** | **R 3,094** | **R 642** | **R 3,806** | **1** | **14** | **102** | **118** | **R 3,923** | **4,560** | **9,831** | **R 18,314** |
| **2008** January | 8 | R 487 | R 81 | R 576 | (s) | 1 | 9 | 10 | R 587 | 372 | 801 | R 1,760 |
| February | 7 | R 468 | R 78 | R 553 | (s) | 1 | 8 | 10 | R 562 | 356 | R 726 | R 1,645 |
| March | 7 | R 387 | R 64 | R 458 | (s) | 1 | 9 | 10 | R 468 | 352 | 752 | R 1,572 |
| April | R 5 | R 260 | R 49 | R 314 | (s) | 1 | 9 | 10 | R 325 | 346 | R 736 | R 1,407 |
| May | R 5 | R 183 | R 41 | R 229 | (s) | 1 | 9 | 11 | R 239 | 366 | 821 | R 1,426 |
| June | R 6 | R 136 | R 42 | R 184 | (s) | 1 | 9 | 10 | R 195 | 406 | 914 | R 1,515 |
| July | 5 | 131 | R 42 | R 178 | (s) | 1 | 9 | 11 | R 188 | 437 | R 958 | R 1,583 |
| August | 5 | R 129 | R 39 | R 174 | (s) | 1 | 9 | 11 | R 184 | 425 | R 914 | R 1,523 |
| September | 4 | 132 | R 37 | R 173 | (s) | 1 | 9 | 10 | R 183 | 405 | R 811 | R 1,400 |
| October | 5 | R 188 | R 44 | R 238 | (s) | 1 | 9 | 10 | R 248 | 379 | 797 | R 1,424 |
| November | 6 | 280 | R 50 | R 335 | (s) | 1 | 9 | 10 | R 345 | 349 | 766 | R 1,461 |
| December | 7 | R 430 | R 71 | R 508 | (s) | 1 | 9 | 10 | R 519 | 365 | 813 | R 1,696 |
| **Total** | **R 69** | **R 3,211** | **R 638** | **R 3,918** | **1** | **15** | **109** | **124** | **R 4,043** | **4,558** | **R 9,810** | **R 18,411** |
| **2009** January | 8 | R 526 | R 72 | 605 | (s) | 1 | 9 | 11 | 616 | 379 | R 827 | R 1,821 |
| February | 7 | R 431 | R 61 | 499 | (s) | 1 | 8 | 9 | 508 | 344 | R 686 | R 1,538 |
| March | 6 | R 367 | R 60 | 433 | (s) | 1 | 10 | 11 | R 445 | 355 | R 754 | R 1,553 |
| April | 4 | 253 | R 48 | R 305 | (s) | 1 | 9 | 10 | R 315 | 346 | R 734 | R 1,394 |
| May | 4 | 172 | R 38 | R 214 | (s) | 1 | 9 | 10 | R 225 | 363 | R 822 | R 1,410 |
| June | 4 | 135 | R 35 | R 175 | (s) | 1 | 9 | 10 | R 185 | 396 | R 900 | R 1,481 |
| July | 4 | 137 | R 40 | R 181 | (s) | 1 | 9 | 10 | R 192 | 420 | R 896 | R 1,507 |
| August | 4 | 133 | R 41 | R 178 | (s) | 1 | 9 | 11 | R 189 | 426 | R 911 | R 1,526 |
| September | 4 | R 135 | R 45 | R 184 | (s) | 1 | 9 | 10 | R 194 | 397 | R 787 | R 1,378 |
| October | 5 | 203 | R 44 | R 252 | (s) | 1 | 9 | 10 | R 262 | 375 | R 769 | R 1,406 |
| November | 5 | 259 | R 48 | R 312 | (s) | 1 | 9 | 10 | R 322 | 340 | R 739 | R 1,402 |
| December | 6 | R 438 | R 67 | R 511 | (s) | 1 | 9 | 11 | R 522 | 373 | R 838 | R 1,733 |
| **Total** | **R 61** | **R 3,188** | **R 600** | **R 3,850** | **1** | **15** | **109** | **124** | **R 3,974** | **4,514** | **R 9,659** | **R 18,147** |
| **2010** January | 7 | 528 | 62 | 597 | (s) | 1 | 9 | 11 | 608 | 374 | 781 | 1,763 |

[a] See "Primary Energy Consumption" in Glossary.

[b] Most data are estimates. See Table 10.2a for notes on series components and estimation.

[c] Natural gas only; excludes the estimated portion of supplemental gaseous fuels. See Note 3, "Supplemental Gaseous Fuels," at end of Section 4.

[d] Does not include biofuels that have been blended with petroleum—biofuels are included in "Biomass."

[e] Conventional hydroelectric power.

[f] Electricity retail sales to ultimate customers reported by electric utilities and, beginning in 1996, other energy service providers.

[g] Total losses are calculated as the primary energy consumed by the electric power sector minus the energy content of electricity retail sales. Total losses are allocated to the end-use sectors in proportion to each sector's share of total electricity retail sales. See Note 2, "Electrical System Energy Losses," at end of section.

R=Revised. NA=Not available. (s)=Less than 0.5 trillion Btu and greater than -0.5 trillion Btu.

Notes: • The commercial sector includes commercial combined-heat-and-power (CHP) and commercial electricity-only plants. See Note, "Classification of Power Plants Into Energy-Use Sectors," at end of Section 7. • See Note 1, "Energy Consumption Data and Surveys," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

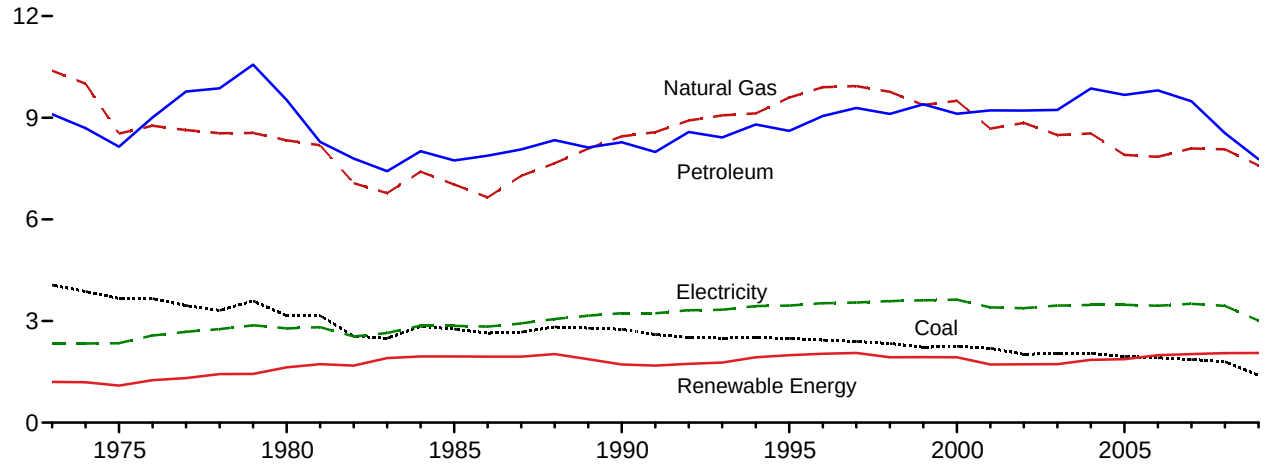
Web Page: See http://www.eia.doe.gov/emeu/mer/consump.html for all available data beginning in 1973.

Sources: Tables 2.6, 3.8a, 4.3, 6.2, 7.6, 10.2a, A4, A5, and A6.

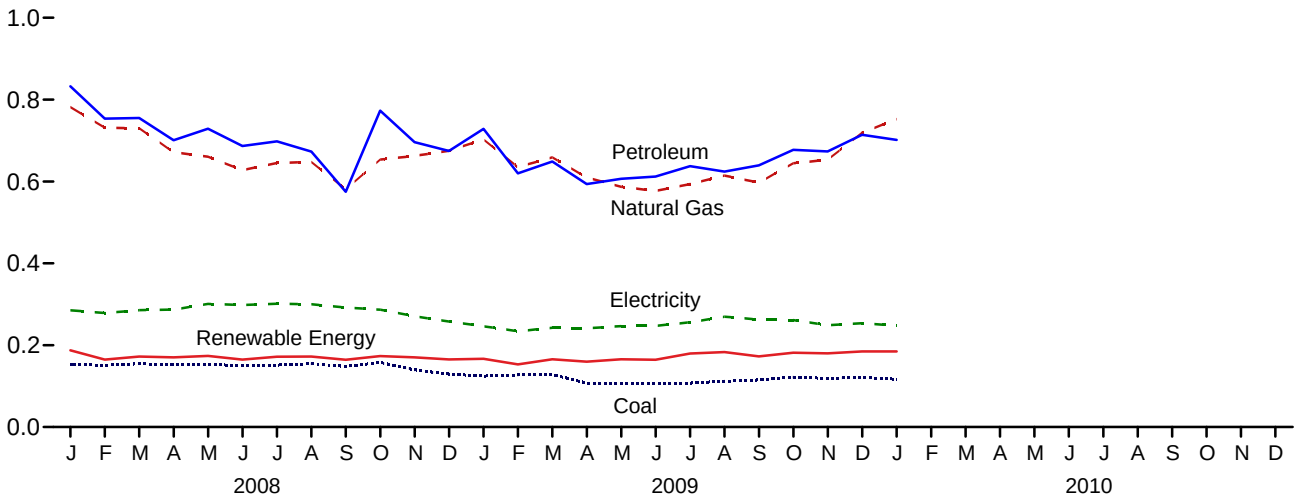
Petroleum data are revised beginning in 1973 due to a change in the estimation methodology for LPG data in Table 3.7a.

## Figure 2.4 Industrial Sector Energy Consumption
(Quadrillion Btu)

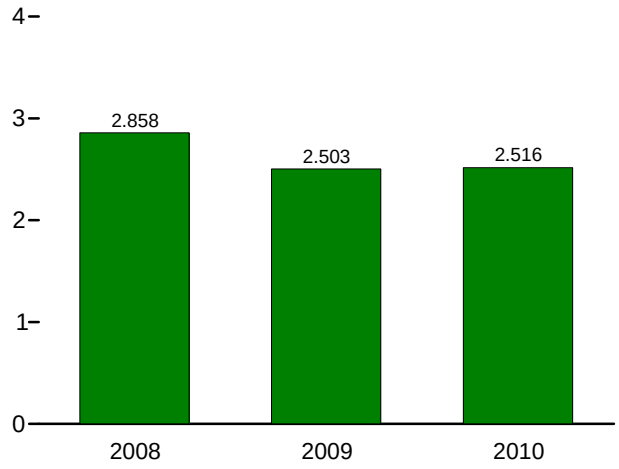
By Major Source, 1973-2009



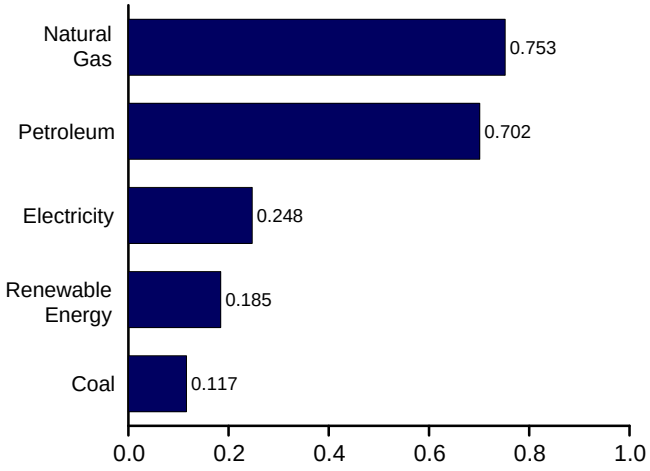

By Major Source, Monthly




Total, January




By Major Source, January 2010




Web Page: http://www.eia.doe.gov/emeu/mer/consump.html.
Source: Table 2.4.

# Table 2.4 Industrial Sector Energy Consumption

(Trillion Btu)

| | Primary Consumption[a] | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fossil Fuels | | | | Renewable Energy[b] | | | | | | | |
| | Coal | Natural Gas[c] | Petro-leum[d] | Total[e] | Hydro-electric Power[f] | Geo-thermal | Bio-mass | Total | Total Primary | Electricity Retail Sales[g] | Electrical System Energy Losses[h] | Total[e] |
| **1973 Total** | **4,057** | **10,388** | **9,104** | **23,541** | **35** | **NA** | **1,165** | **1,200** | **24,741** | **2,341** | **5,571** | **32,653** |
| **1975 Total** | **3,667** | **8,532** | **8,146** | **20,359** | **32** | **NA** | **1,063** | **1,096** | **21,454** | **2,346** | **5,647** | **29,447** |
| **1980 Total** | **3,155** | **8,333** | **9,525** | **20,977** | **33** | **NA** | **1,600** | **1,633** | **22,610** | **2,781** | **6,686** | **32,077** |
| **1985 Total** | **2,760** | **7,032** | **7,738** | **17,516** | **33** | **NA** | **1,918** | **1,951** | **19,467** | **2,855** | **6,554** | **28,876** |
| **1990 Total** | **2,756** | **8,451** | **8,278** | **19,490** | **31** | **2** | **1,684** | **1,717** | **21,207** | **3,226** | **7,461** | **31,894** |
| **1995 Total** | **2,488** | **9,592** | **8,613** | **20,754** | **55** | **3** | **1,934** | **1,992** | **22,746** | **3,455** | **7,844** | **34,045** |
| **1996 Total** | **2,434** | **9,901** | **9,052** | **21,410** | **61** | **3** | **1,969** | **2,033** | **23,442** | **3,527** | **8,018** | **34,988** |
| **1997 Total** | **2,395** | **9,933** | **9,289** | **21,663** | **58** | **3** | **1,996** | **2,057** | **23,720** | **3,542** | **8,024** | **35,287** |
| **1998 Total** | **2,335** | **9,763** | **9,114** | **21,280** | **55** | **3** | **1,872** | **1,929** | **23,209** | **3,587** | **8,131** | **34,926** |
| **1999 Total** | **2,227** | **9,375** | **9,395** | **21,054** | **49** | **4** | **1,882** | **1,934** | **22,989** | **3,611** | **8,254** | **34,854** |
| **2000 Total** | **2,256** | **9,500** | **9,119** | **20,941** | **42** | **4** | **1,881** | **1,928** | **22,869** | **3,631** | **8,256** | **34,756** |
| **2001 Total** | **2,192** | **8,676** | **9,217** | **20,115** | **33** | **5** | **1,681** | **1,719** | **21,833** | **3,400** | **7,569** | **32,803** |
| **2002 Total** | **2,019** | **8,845** | **9,209** | **20,135** | **39** | **5** | **1,676** | **1,720** | **21,855** | **3,379** | **7,529** | **32,762** |
| **2003 Total** | **2,041** | **R 8,488** | **9,232** | **R 19,812** | **43** | **3** | **1,679** | **1,726** | **R 21,538** | **3,454** | **7,620** | **R 32,612** |
| **2004 Total** | **2,047** | **R 8,536** | **9,864** | **R 20,585** | **33** | **4** | **1,817** | **1,853** | **R 22,438** | **3,473** | **7,682** | **R 33,592** |
| **2005 Total** | **1,954** | **R 7,903** | **9,673** | **R 19,575** | **32** | **4** | **1,837** | **1,873** | **R 21,448** | **3,477** | **7,602** | **R 32,528** |
| **2006 Total** | **1,914** | **7,846** | **9,805** | **19,627** | **29** | **4** | **1,957** | **1,990** | **21,617** | **3,451** | **7,459** | **32,527** |
| **2007 Total** | **1,865** | **R 8,090** | **9,486** | **R 19,466** | **16** | **5** | **2,005** | **2,026** | **R 21,492** | **3,507** | **7,562** | **R 32,560** |
| **2008** January | 153 | R 782 | R 833 | R 1,771 | 2 | (s) | 185 | 187 | R 1,959 | 285 | 614 | R 2,858 |
| February | 151 | R 731 | R 754 | R 1,638 | 2 | (s) | 163 | 165 | R 1,803 | 278 | R 568 | R 2,649 |
| March | 155 | R 730 | R 755 | R 1,648 | 2 | (s) | 170 | 172 | R 1,820 | 286 | 610 | R 2,715 |
| April | 152 | R 671 | R 701 | R 1,532 | 2 | (s) | 168 | 170 | R 1,702 | 287 | R 609 | R 2,598 |
| May | 153 | R 660 | R 729 | R 1,545 | 2 | (s) | 172 | 174 | R 1,719 | 301 | 674 | R 2,694 |
| June | 150 | R 627 | R 687 | R 1,473 | 1 | (s) | 163 | 165 | R 1,638 | 298 | 671 | R 2,607 |
| July | 152 | R 645 | R 698 | R 1,500 | 1 | (s) | 170 | 172 | R 1,672 | 301 | 661 | R 2,634 |
| August | 154 | R 648 | R 673 | R 1,476 | 1 | (s) | 170 | 172 | R 1,648 | 300 | 646 | R 2,594 |
| September | 148 | R 581 | R 575 | R 1,306 | 1 | (s) | 163 | 164 | R 1,470 | 292 | 585 | R 2,347 |
| October | 158 | R 654 | R 773 | R 1,585 | 1 | (s) | 172 | 173 | R 1,758 | 287 | R 603 | R 2,648 |
| November | 140 | R 662 | R 696 | R 1,499 | 1 | (s) | 169 | 170 | R 1,669 | 271 | 594 | R 2,534 |
| December | 129 | R 675 | R 674 | R 1,476 | 2 | (s) | 163 | 165 | R 1,641 | 258 | 575 | R 2,474 |
| **Total** | **1,796** | **R 8,067** | **R 8,547** | **R 18,450** | **17** | **5** | **2,029** | **2,050** | **R 20,500** | **3,444** | **R 7,411** | **R 31,355** |
| **2009** January | R 125 | R 703 | R 729 | R 1,554 | 2 | (s) | 164 | 167 | R 1,721 | 246 | R 536 | R 2,503 |
| February | R 127 | R 635 | R 620 | R 1,381 | 1 | (s) | 151 | 153 | R 1,534 | 234 | R 467 | R 2,236 |
| March | R 128 | R 659 | R 649 | R 1,435 | 2 | (s) | 163 | 166 | R 1,600 | 243 | R 515 | R 2,358 |
| April | R 107 | R 610 | R 594 | R 1,309 | 2 | (s) | 157 | 160 | R 1,468 | 241 | R 512 | R 2,222 |
| May | R 107 | R 587 | R 606 | R 1,298 | 2 | (s) | 163 | 166 | R 1,464 | 247 | R 558 | R 2,268 |
| June | R 107 | R 577 | R 612 | R 1,294 | 2 | (s) | 162 | 164 | R 1,458 | 247 | R 561 | R 2,266 |
| July | R 107 | R 593 | R 637 | R 1,336 | 1 | (s) | 178 | 179 | R 1,516 | 256 | R 546 | R 2,318 |
| August | R 112 | R 614 | R 624 | R 1,347 | 1 | (s) | 181 | 183 | R 1,530 | 270 | R 576 | R 2,375 |
| September | R 115 | R 597 | R 639 | R 1,350 | 1 | (s) | 171 | 172 | R 1,522 | 262 | R 520 | R 2,305 |
| October | R 122 | R 644 | R 677 | R 1,440 | 1 | (s) | 180 | 182 | R 1,621 | 261 | R 536 | R 2,418 |
| November | R 119 | R 653 | R 673 | R 1,444 | 1 | (s) | 178 | 180 | R 1,624 | 249 | R 541 | R 2,414 |
| December | R 121 | 719 | R 714 | R 1,552 | 2 | (s) | 182 | 185 | R 1,736 | 253 | R 569 | R 2,558 |
| **Total** | **R 1,396** | **R 7,592** | **R 7,775** | **R 16,739** | **18** | **5** | **2,032** | **2,056** | **R 18,795** | **3,009** | **R 6,439** | **R 28,243** |
| **2010** January | 117 | 753 | 702 | 1,567 | 2 | (s) | 183 | 185 | 1,751 | 248 | 517 | 2,516 |

[a] See "Primary Energy Consumption" in Glossary.

[b] Most data are estimates. See Table 10.2b for notes on series components and estimation.

[c] Natural gas only; excludes the estimated portion of supplemental gaseous fuels. See Note 3, "Supplemental Gaseous Fuels," at end of Section 4.

[d] Does not include biofuels that have been blended with petroleum—biofuels are included in "Biomass."

[e] Includes coal coke net imports, which are not separately displayed. See Tables 1.4a and 1.4b.

[f] Conventional hydroelectric power.

[g] Electricity retail sales to ultimate customers reported by electric utilities and, beginning in 1996, other energy service providers.

[h] Total losses are calculated as the primary energy consumed by the electric power sector minus the energy content of electricity retail sales. Total losses are allocated to the end-use sectors in proportion to each sector's share of total electricity retail sales. See Note 2, "Electrical System Energy Losses," at end of section.

R=Revised. NA=Not available. (s)=Less than 0.5 trillion Btu.

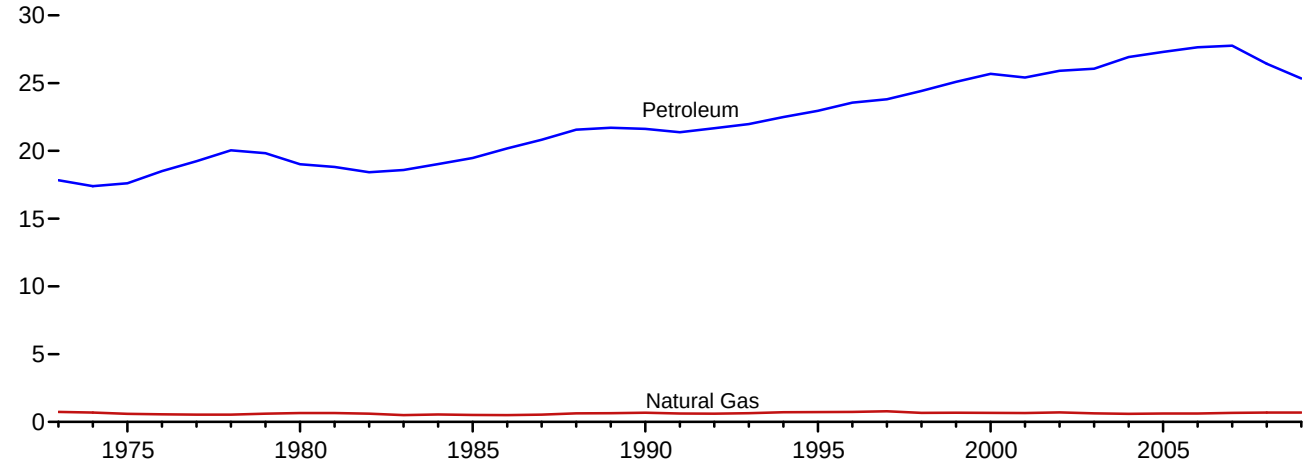
Notes: • The industrial sector includes industrial combined-heat-and-power (CHP) and industrial electricity-only plants. See Note, "Classification of Power Plants Into Energy-Use Sectors," at end of Section 7. • See Note 1, "Energy Consumption Data and Surveys," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/consump.html for all available data beginning in 1973.

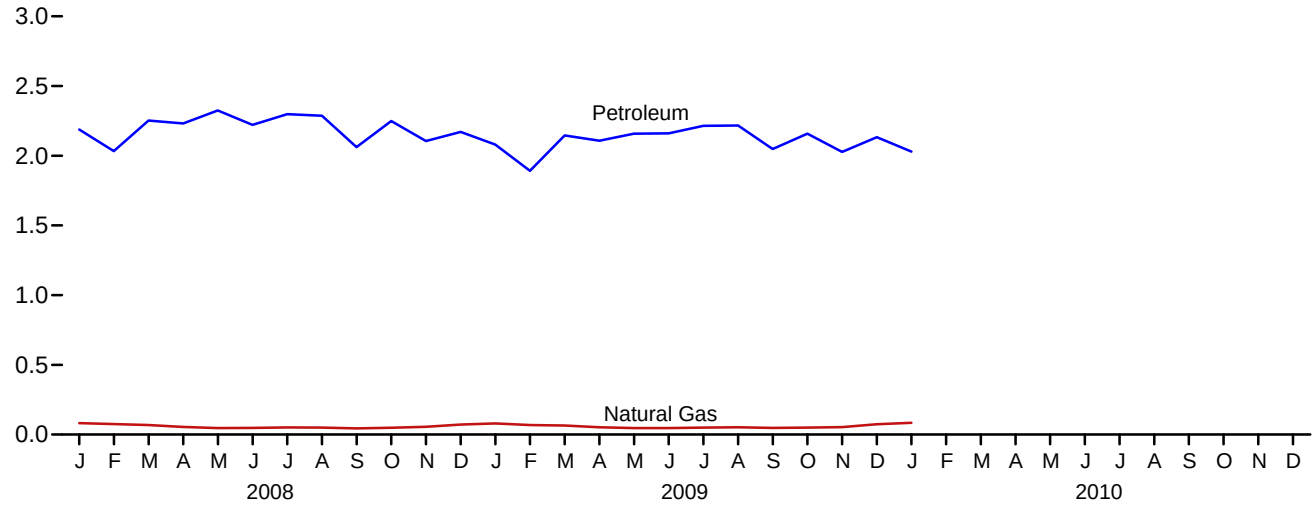
Sources: Tables 1.4a, 1.4b, 2.6, 3.8b, 4.3, 6.2, 7.6, 10.2b, A4, A5, and A6.

## Figure 2.5 Transportation Sector Energy Consumption
(Quadrillion Btu)

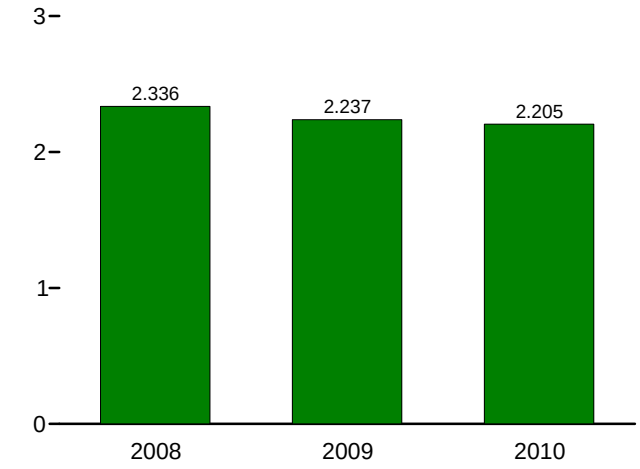
By Major Source, 1973-2009



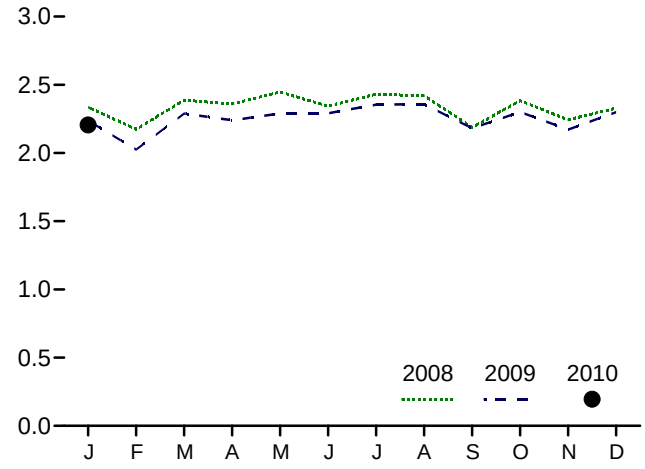

By Major Source, Monthly




Total, January




Total, Monthly




Web Page: http://www.eia.doe.gov/emeu/mer/consump.html.
Source: Table 2.5.

# Table 2.5 Transportation Sector Energy Consumption

(Trillion Btu)

| | Primary Consumption[a] | | | | | | Electricity Retail Sales[e] | Electrical System Energy Losses[f] | Total |
|---|---|---|---|---|---|---|---|---|---|
| | Fossil Fuels | | | | Renewable Energy[b] | Total Primary | | | |
| | Coal | Natural Gas[c] | Petroleum[d] | Total | Biomass | | | | |
| **1973 Total** | **3** | **743** | **17,831** | **18,576** | **NA** | **18,576** | **11** | **25** | **18,612** |
| **1975 Total** | **1** | **595** | **17,614** | **18,209** | **NA** | **18,209** | **10** | **24** | **18,244** |
| **1980 Total** | **(g)** | **650** | **19,009** | **19,658** | **NA** | **19,658** | **11** | **27** | **19,696** |
| **1985 Total** | **(g)** | **519** | **19,471** | **19,990** | **50** | **20,040** | **14** | **32** | **20,086** |
| **1990 Total** | **(g)** | **680** | **21,625** | **22,305** | **60** | **22,365** | **16** | **37** | **22,419** |
| **1995 Total** | **(g)** | **724** | **22,954** | **23,678** | **113** | **23,790** | **17** | **39** | **23,846** |
| **1996 Total** | **(g)** | **737** | **23,564** | **24,301** | **81** | **24,382** | **17** | **38** | **24,437** |
| **1997 Total** | **(g)** | **780** | **23,812** | **24,592** | **102** | **24,694** | **17** | **38** | **24,749** |
| **1998 Total** | **(g)** | **666** | **24,421** | **25,087** | **113** | **25,200** | **17** | **38** | **25,255** |
| **1999 Total** | **(g)** | **675** | **25,097** | **25,773** | **118** | **25,891** | **17** | **40** | **25,948** |
| **2000 Total** | **(g)** | **672** | **25,681** | **26,353** | **135** | **26,488** | **18** | **42** | **26,548** |
| **2001 Total** | **(g)** | **658** | **25,412** | **26,070** | **142** | **26,212** | **20** | **43** | **26,275** |
| **2002 Total** | **(g)** | **702** | **25,912** | **26,614** | **170** | **26,783** | **19** | **42** | **26,844** |
| **2003 Total** | **(g)** | **R 627** | **26,062** | **R 26,689** | **230** | **R 26,919** | **23** | **51** | **R 26,994** |
| **2004 Total** | **(g)** | **R 602** | **26,924** | **27,526** | **290** | **27,816** | **25** | **55** | **27,895** |
| **2005 Total** | **(g)** | **R 624** | **27,307** | **R 27,931** | **339** | **R 28,270** | **26** | **56** | **R 28,352** |
| **2006 Total** | **(g)** | **625** | **27,649** | **28,274** | **475** | **28,749** | **25** | **54** | **28,829** |
| **2007 Total** | **(g)** | **665** | **27,762** | **28,427** | **603** | **R 29,030** | **28** | **60** | **R 29,118** |
| **2008** January | (g) | 82 | R 2,188 | R 2,270 | 58 | R 2,328 | 2 | 5 | R 2,336 |
| February | (g) | 75 | R 2,033 | R 2,108 | 59 | R 2,167 | 2 | 5 | R 2,174 |
| March | (g) | 68 | R 2,253 | R 2,321 | 60 | R 2,380 | 2 | 5 | R 2,387 |
| April | (g) | R 54 | R 2,232 | R 2,286 | 66 | R 2,352 | 2 | 4 | R 2,359 |
| May | (g) | 47 | R 2,325 | R 2,372 | 68 | R 2,440 | 2 | 5 | R 2,447 |
| June | (g) | 48 | R 2,221 | 2,269 | 68 | R 2,336 | 2 | 5 | R 2,343 |
| July | (g) | 51 | R 2,299 | R 2,350 | 75 | 2,424 | 2 | 5 | 2,431 |
| August | (g) | 50 | R 2,286 | R 2,337 | 77 | R 2,413 | 2 | 5 | R 2,420 |
| September | (g) | 44 | R 2,061 | R 2,105 | 76 | R 2,181 | 2 | 4 | R 2,188 |
| October | (g) | 49 | R 2,249 | R 2,298 | 79 | R 2,377 | 2 | 5 | R 2,384 |
| November | (g) | 56 | R 2,105 | R 2,161 | 75 | R 2,236 | 2 | 5 | R 2,242 |
| December | (g) | 72 | R 2,171 | R 2,242 | 79 | R 2,321 | 2 | 5 | R 2,329 |
| **Total** | **(g)** | **R 694** | **R 26,423** | **R 27,117** | **839** | **R 27,956** | **26** | **57** | **R 28,039** |
| **2009** January | (g) | 80 | R 2,081 | R 2,161 | 68 | R 2,229 | 3 | 6 | R 2,237 |
| February | (g) | 69 | R 1,892 | R 1,961 | 57 | R 2,018 | 2 | 4 | R 2,025 |
| March | (g) | 65 | R 2,145 | R 2,210 | 72 | R 2,282 | 2 | 5 | R 2,289 |
| April | (g) | 53 | R 2,107 | R 2,160 | 73 | R 2,233 | 2 | 4 | R 2,239 |
| May | (g) | 46 | R 2,158 | R 2,204 | 79 | R 2,283 | 2 | 5 | R 2,289 |
| June | (g) | 47 | R 2,160 | R 2,207 | 77 | R 2,284 | 2 | 5 | R 2,291 |
| July | (g) | R 50 | R 2,215 | R 2,265 | 82 | R 2,347 | 2 | 5 | R 2,354 |
| August | (g) | R 52 | R 2,216 | R 2,269 | 82 | R 2,351 | 2 | 5 | R 2,358 |
| September | (g) | 48 | R 2,048 | R 2,095 | 79 | R 2,174 | 2 | 4 | R 2,181 |
| October | (g) | 50 | R 2,158 | R 2,208 | 85 | R 2,294 | 2 | 4 | R 2,300 |
| November | (g) | 54 | R 2,028 | R 2,081 | 84 | R 2,165 | 2 | 4 | R 2,172 |
| December | (g) | 74 | R 2,133 | R 2,207 | 85 | R 2,292 | 2 | 5 | R 2,300 |
| **Total** | **(g)** | **R 687** | **R 25,342** | **R 26,029** | **923** | **R 26,952** | **26** | **R 56** | **R 27,035** |
| **2010** January | (g) | 84 | 2,029 | 2,114 | 84 | 2,197 | 2 | 5 | 2,205 |

[a] See "Primary Energy Consumption" in Glossary.

[b] Data are estimates. See Table 10.2b for notes on series components.

[c] Natural gas only; does not include supplemental gaseous fuels. See Note 3, "Supplemental Gaseous Fuels," at end of Section 4.

[d] Does not include biofuels that have been blended with petroleum—biofuels are included in "Biomass."

[e] Electricity retail sales to ultimate customers reported by electric utilities and, beginning in 1996, other energy service providers.

[f] Total losses are calculated as the primary energy consumed by the electric power sector minus the energy content of electricity retail sales. Total losses are allocated to the end-use sectors in proportion to each sector's share of total electricity retail sales. See Note 2, "Electrical System Energy Losses," at end of section.

[g] Beginning in 1978, the small amounts of coal consumed for transportation are reported as industrial sector consumption.

R=Revised. NA=Not available.

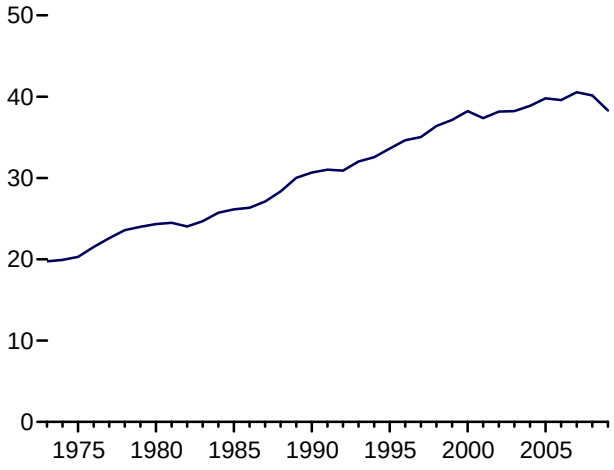
Notes: • See Note 1, "Energy Consumption Data and Surveys," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/consump.html for all available data beginning in 1973.

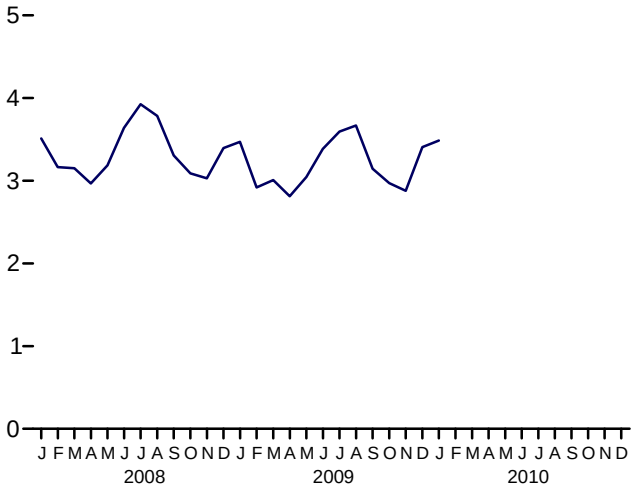
Sources: Tables 2.6, 3.8c, 4.3, 6.2, 7.6, 10.2b, A4, A5, and A6.

## Figure 2.6 Electric Power Sector Energy Consumption
(Quadrillion Btu)

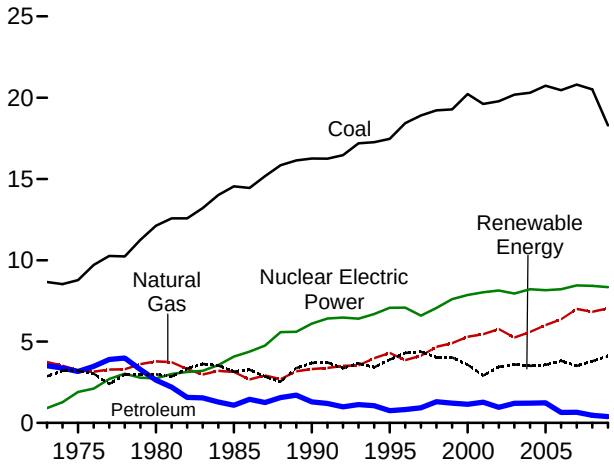
Total, 1973-2009



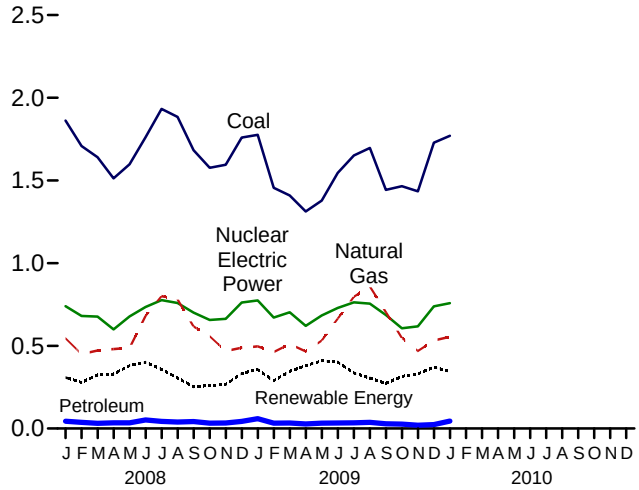

Total, Monthly



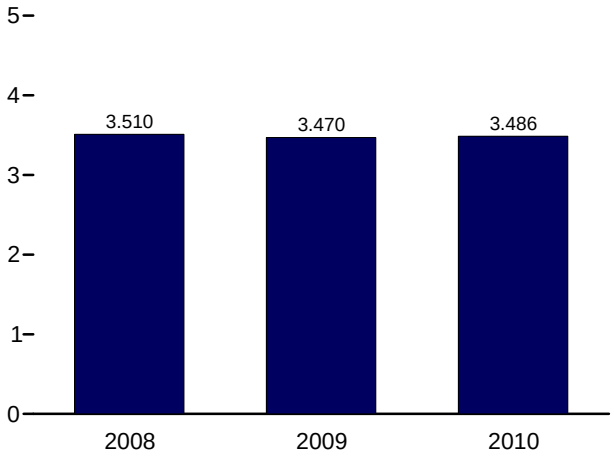

By Major Source, 1973-2009



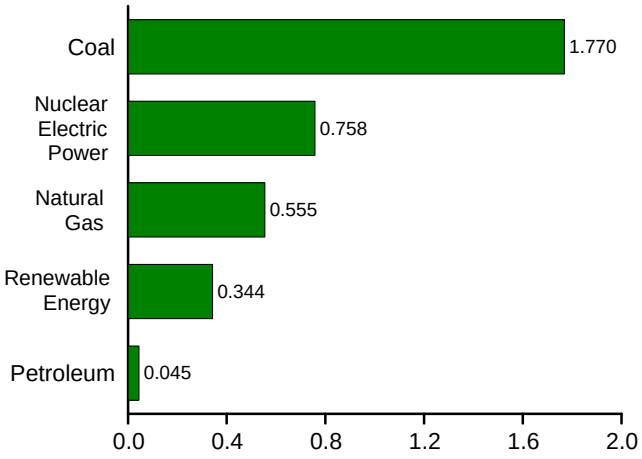

By Major Source, Monthly




Total, January




By Major Source, January 2010




Web Page: http://www.eia.doe.gov/emeu/mer/consump.html.
Source: Table 2.6.

# Table 2.6 Electric Power Sector Energy Consumption

(Trillion Btu)

| | Primary Consumption[a] | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fossil Fuels | | | | | Renewable Energy[b] | | | | | | | |
| | Coal | Natural Gas[c] | Petro-leum | Total | Nuclear Electric Power | Hydro-electric Power[d] | Geo-thermal | Solar/ PV | Wind | Bio-mass | Total | Elec-tricity Net Imports | Total Primary |
| **1973 Total** | **8,658** | **3,748** | **3,515** | **15,921** | **910** | **2,827** | **43** | **NA** | **NA** | **3** | **2,873** | **49** | **19,753** |
| **1975 Total** | **8,786** | **3,240** | **3,166** | **15,191** | **1,900** | **3,122** | **70** | **NA** | **NA** | **2** | **3,194** | **21** | **20,307** |
| **1980 Total** | **12,123** | **3,778** | **2,634** | **18,534** | **2,739** | **2,867** | **110** | **NA** | **NA** | **4** | **2,982** | **71** | **24,327** |
| **1985 Total** | **14,542** | **3,135** | **1,090** | **18,767** | **4,076** | **2,937** | **198** | **(s)** | **(s)** | **14** | **3,150** | **140** | **26,132** |
| **1990 Total**[e] | **16,261** | **3,309** | **1,289** | **20,859** | **6,104** | **3,014** | **326** | **4** | **29** | **317** | **3,689** | **8** | **30,660** |
| **1995 Total** | **17,466** | **4,302** | **755** | **22,523** | **7,075** | **3,149** | **280** | **5** | **33** | **422** | **3,889** | **134** | **33,621** |
| **1996 Total** | **18,429** | **3,862** | **817** | **23,109** | **7,087** | **3,528** | **300** | **5** | **33** | **438** | **4,305** | **137** | **34,638** |
| **1997 Total** | **18,905** | **4,126** | **927** | **23,957** | **6,597** | **3,581** | **309** | **5** | **34** | **446** | **4,375** | **116** | **35,045** |
| **1998 Total** | **19,216** | **4,675** | **1,306** | **25,197** | **7,068** | **3,241** | **311** | **5** | **31** | **444** | **4,032** | **88** | **36,385** |
| **1999 Total** | **19,279** | **4,902** | **1,211** | **25,393** | **7,610** | **3,218** | **312** | **5** | **46** | **453** | **4,034** | **99** | **37,136** |
| **2000 Total** | **20,220** | **5,293** | **1,144** | **26,658** | **7,862** | **2,768** | **296** | **5** | **57** | **453** | **3,579** | **115** | **38,214** |
| **2001 Total** | **19,614** | **5,458** | **1,277** | **26,348** | **8,029** | **2,209** | **289** | **6** | **70** | **337** | **2,910** | **75** | **37,362** |
| **2002 Total** | **19,783** | **5,767** | **961** | **26,511** | **8,145** | **2,650** | **305** | **6** | **105** | **380** | **3,445** | **72** | **38,173** |
| **2003 Total** | **20,185** | **5,246** | **1,205** | **26,636** | **7,959** | **2,781** | **303** | **5** | **115** | **397** | **3,601** | **22** | **38,218** |
| **2004 Total** | **20,305** | **5,595** | **1,212** | **27,112** | **8,222** | **2,656** | **311** | **6** | **142** | **388** | **3,503** | **39** | **38,876** |
| **2005 Total** | **20,737** | **6,015** | **1,235** | **27,986** | **8,161** | **2,670** | **309** | **6** | **178** | **406** | **3,568** | **84** | **39,800** |
| **2006 Total** | **20,462** | **6,375** | **648** | **27,485** | **8,215** | **2,839** | **306** | **5** | **264** | **412** | **3,827** | **63** | **39,590** |
| **2007 Total** | **20,808** | **7,005** | **657** | **28,470** | **8,455** | **2,430** | **308** | **6** | **341** | **423** | **3,508** | **107** | **40,540** |
| **2008** January | R 1,862 | 546 | 44 | R 2,452 | 739 | 203 | 26 | (s) | 42 | 37 | 308 | 11 | R 3,510 |
| February | R 1,708 | 450 | 37 | R 2,194 | 681 | 184 | 23 | (s) | 38 | 35 | 279 | 10 | R 3,165 |
| March | R 1,640 | 472 | 31 | R 2,144 | 676 | 212 | 26 | 1 | 47 | 38 | 324 | 7 | R 3,151 |
| April | R 1,513 | 481 | 34 | R 2,028 | 599 | 217 | 26 | 1 | 51 | 34 | 330 | 9 | R 2,966 |
| May | R 1,598 | 487 | 35 | R 2,119 | 678 | 267 | 27 | 1 | 53 | 34 | 381 | 8 | R 3,185 |
| June | R 1,761 | 681 | 52 | R 2,494 | 735 | 286 | 27 | 1 | 51 | 36 | 401 | 9 | R 3,639 |
| July | R 1,933 | 801 | 43 | R 2,776 | 777 | 251 | 27 | 1 | 39 | 39 | 357 | 15 | R 3,925 |
| August | R 1,884 | 781 | 39 | R 2,704 | 759 | 208 | 27 | 1 | 32 | 38 | 307 | 15 | R 3,785 |
| September | R 1,683 | 616 | 42 | R 2,342 | 701 | 158 | 26 | 1 | 31 | 36 | 252 | 10 | R 3,305 |
| October | R 1,577 | 558 | 33 | R 2,167 | 657 | 151 | 27 | 1 | 47 | 35 | 261 | 6 | R 3,090 |
| November | R 1,594 | 468 | 34 | R 2,096 | 663 | 153 | 26 | (s) | 49 | 36 | 265 | 4 | R 3,029 |
| December | R 1,760 | 488 | 44 | R 2,291 | 762 | 204 | 27 | (s) | 65 | 38 | 334 | 7 | R 3,394 |
| **Total** | **R 20,513** | **6,829** | **468** | **R 27,810** | **8,427** | **2,494** | **314** | **9** | **546** | **435** | **3,798** | **112** | **R 40,147** |
| **2009** January | R 1,776 | R 496 | 60 | R 2,332 | R 775 | 233 | 28 | (s) | 59 | 36 | 356 | 7 | R 3,470 |
| February | R 1,455 | R 462 | 33 | R 1,950 | 671 | 175 | 25 | (s) | 56 | 33 | 289 | 8 | R 2,919 |
| March | R 1,409 | R 512 | 34 | R 1,955 | R 703 | 212 | 28 | 1 | 68 | 37 | 346 | 4 | R 3,008 |
| April | R 1,313 | R 466 | 28 | R 1,807 | R 621 | 249 | 25 | 1 | 72 | 33 | 379 | 6 | R 2,813 |
| May | R 1,378 | R 531 | 32 | R 1,942 | R 683 | 288 | 26 | 1 | 60 | 34 | 409 | 9 | R 3,044 |
| June | R 1,546 | R 664 | 33 | R 2,243 | R 729 | 285 | 26 | 1 | 53 | 37 | 402 | 11 | R 3,385 |
| July | R 1,651 | R 797 | 34 | R 2,482 | 763 | 225 | 27 | 1 | 46 | 37 | 336 | 14 | R 3,594 |
| August | R 1,697 | R 859 | 37 | R 2,593 | 755 | 188 | 27 | 1 | 52 | 38 | 305 | 15 | R 3,668 |
| September | R 1,443 | R 703 | 29 | R 2,176 | R 686 | 169 | 26 | 1 | 43 | 34 | 273 | 11 | R 3,145 |
| October | R 1,465 | R 547 | 26 | R 2,038 | R 606 | 192 | 27 | 1 | 62 | 33 | 315 | 12 | R 2,971 |
| November | R 1,434 | R 468 | 20 | R 1,922 | 617 | 205 | 27 | (s) | 63 | 35 | 330 | 8 | R 2,878 |
| December | R 1,729 | R 532 | 24 | R 2,285 | R 739 | 242 | 28 | (s) | 62 | 39 | 371 | 11 | R 3,407 |
| **Total** | **R 18,296** | **R 7,039** | **390** | **R 25,725** | **R 8,349** | **2,663** | **320** | **8** | **697** | **426** | **4,113** | **116** | **R 38,304** |
| **2010** January | 1,770 | 555 | 45 | 2,370 | 758 | 216 | 28 | (s) | 63 | 37 | 344 | 14 | 3,486 |

[a] See "Primary Energy Consumption" in Glossary.
[b] See Table 10.2c for notes on series components.
[c] Natural gas only; excludes the estimated portion of supplemental gaseous fuels. See Note 3, "Supplemental Gaseous Fuels," at end of Section 4.
[d] Conventional hydroelectric power.
[e] Through 1988, data are for electric utilities only. Beginning in 1989, data are for electric utilities and independent power producers.

R=Revised. NA=Not available. (s)=Less than 0.5 trillion Btu.

Notes: • Data are for fuels consumed to produce electricity and useful thermal output. • The electric power sector comprises electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public. • See Note 1, "Energy Consumption Data and Surveys," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/consump.html for all available data beginning in 1973.

Sources: Tables 3.8c, 4.3, 6.2, 7.1, 7.2b, 10.2c, A4, A5, and A6.

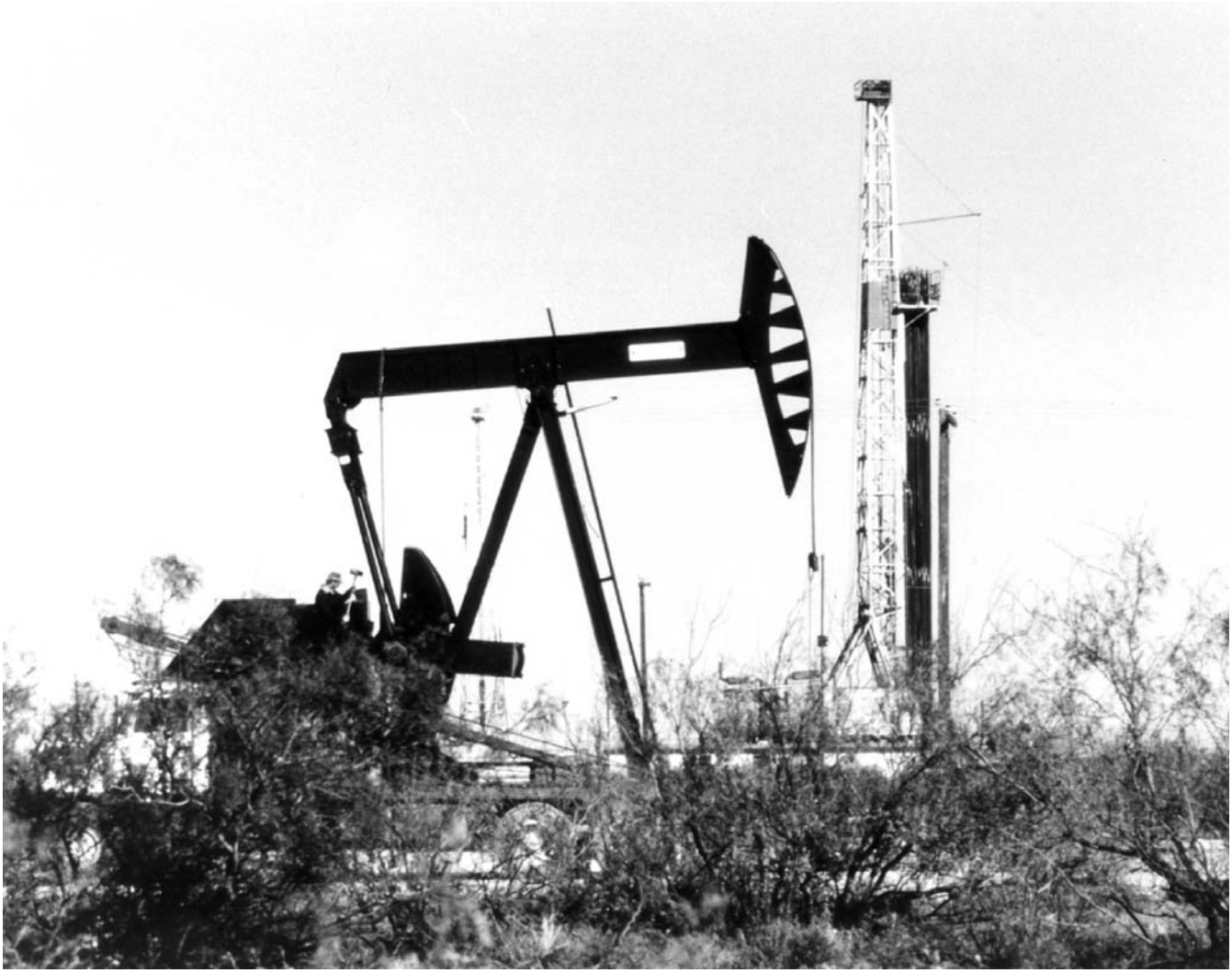
# Energy Consumption by Sector

**Note 1. Energy Consumption Data and Surveys.** Most of the data in this section of the *Monthly Energy Review* (*MER*) are developed from a group of energy-related surveys, typically called "supply surveys," conducted by the U.S. Energy Information Administration (EIA). Supply surveys are directed to suppliers and marketers of specific energy sources. They measure the quantities of specific energy sources produced, or the quantities supplied to the market, or both. The data obtained from EIA's supply surveys are integrated to yield the summary consumption statistics published in this section (and in Section 1) of the MER.

Users of EIA's energy consumption statistics should be aware of a second group of energy-related surveys, typically called "consumption surveys." Consumption surveys gather information on the types of energy consumed by end users of energy, along with the characteristics of those end users that can be associated with energy use. For example, the Manufacturing Energy Consumption Survey belongs to the consumption survey group because it collects information directly from end users (the manufacturing establishments). There are important differences between the supply and consumption surveys that need to be taken into account in any analysis that uses both data sources. For information on those differences, see *Energy Consumption by End-Use Sector, A Comparison of Measures by Consumption and Supply Surveys*, DOE/EIA-0533, U.S. Energy Information Administration, Washington, DC, April 6, 1990.

**Note 2. Electrical System Energy Losses.** Electrical system energy losses are calculated as the difference between total primary consumption by the electric power sector (see Table 2.6) and the total energy content of electricity retail sales (see Tables 7.6 and A6). Most of these losses occur at steam-electric power plants (conventional and nuclear) in the conversion of heat energy into mechanical energy to turn electric generators. The loss is a thermodynamically necessary feature of the steam-electric cycle. Part of the energy input-to-output losses is a result of imputing fossil energy equivalent inputs for hydroelectric and other energy sources, since there is no generally accepted practice for measuring those thermal conversion rates. In addition to conversion losses, other losses include power plant use of electricity, transmission and distribution of electricity from power plants to end-use consumers (also called "line losses"), and unaccounted for electricity. Total losses are allocated to the end-use sectors in proportion to each sector's share of total electricity sales. Overall, about two thirds of total energy input is lost in conversion. Currently, of electricity generated, approximately 5 percent is lost in plant use and 7 percent is lost in transmission and distribution.

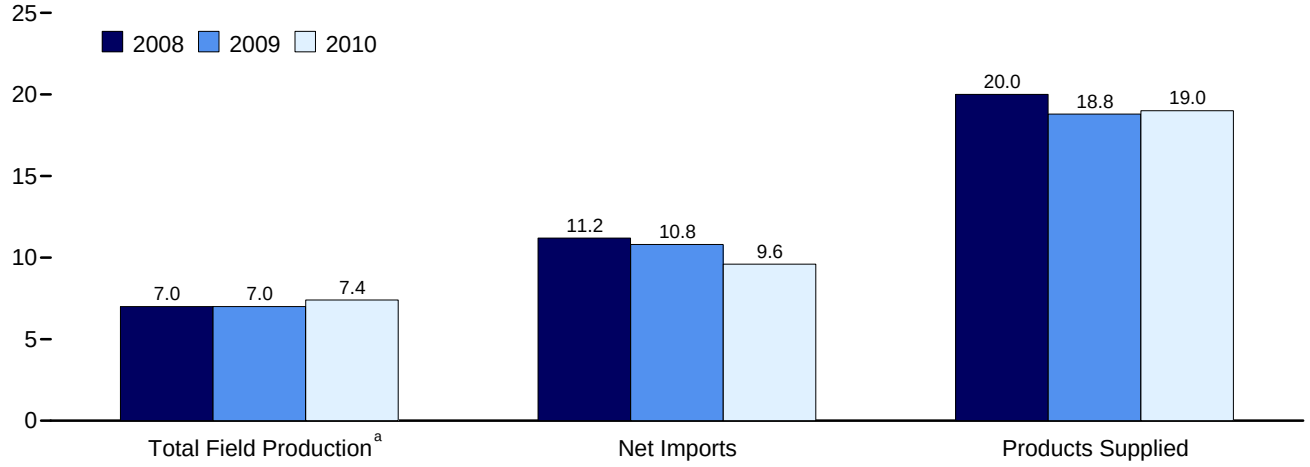
# 3 Petroleum



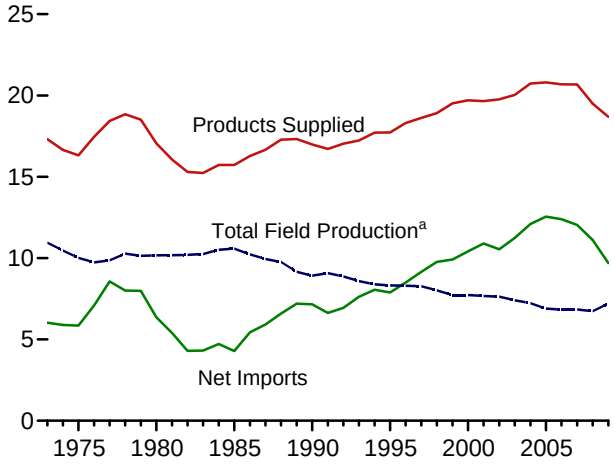
Oil pumping unit and drilling rig, Texas. Source: U.S. Department of Energy.

## Figure 3.1 Petroleum Overview
(Million Barrels per Day)

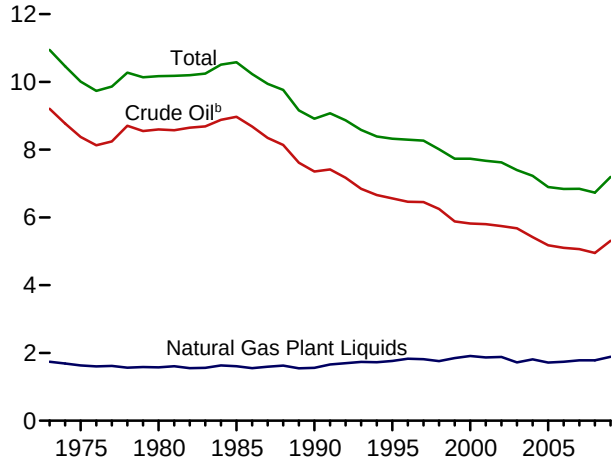
Overview, January-March



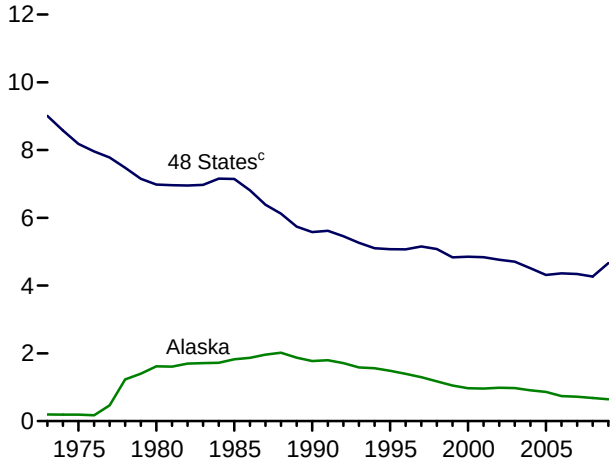

Overview, 1973-2009



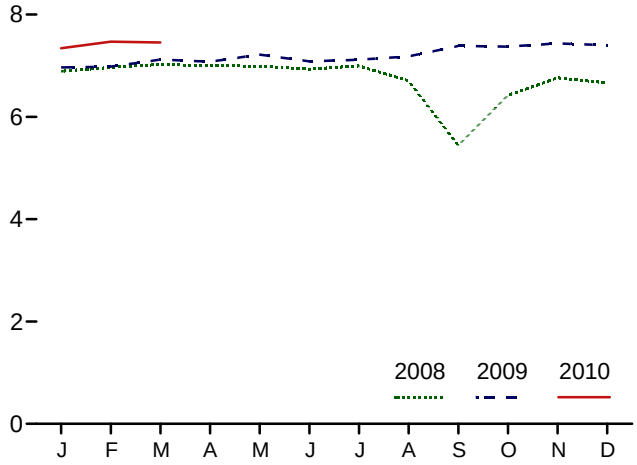

Total Field Production, 1973-2009




Crude Oil[b] Field Production, 1973-2009




Total Field Production,[a] Monthly




[a]Crude oil, including lease condensate, and natural gas plant liquids field production.
[b]Includes lease condensate.
[c]United States excluding Alaska and Hawaii.
Web Page: http://www.eia.doe.gov/emeu/mer/petro.html.
Source: Table 3.1.

# Table 3.1 Petroleum Overview

(Thousand Barrels per Day)

| | Field Production[a] | | | | | Renewable Fuels and Oxygenates[f] | Processing Gain[g] | Trade | | | Stock Change[j] | Adjustments[k] | Petroleum Products Supplied |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Crude Oil[b] | | | NGPL[d,e] | Total | | | Imports[h] | Exports[e] | Net Imports[i] | | | |
| | 48 States[c] | Alaska | Total | | | | | | | | | | |
| **1973 Average** | **9,010** | **198** | **9,208** | **1,738** | **10,946** | **NA** | **453** | **6,256** | **231** | **6,025** | **135** | **18** | **17,308** |
| **1975 Average** | **8,183** | **191** | **8,375** | **1,633** | **10,007** | **NA** | **460** | **6,056** | **209** | **5,846** | **32** | **41** | **16,322** |
| **1980 Average** | **6,980** | **1,617** | **8,597** | **1,573** | **10,170** | **NA** | **597** | **6,909** | **544** | **6,365** | **140** | **64** | **17,056** |
| **1985 Average** | **7,146** | **1,825** | **8,971** | **1,609** | **10,581** | **NA** | **557** | **5,067** | **781** | **4,286** | **-103** | **200** | **15,726** |
| **1990 Average** | **5,582** | **1,773** | **7,355** | **1,559** | **8,914** | **NA** | **683** | **8,018** | **857** | **7,161** | **107** | **338** | **16,988** |
| **1995 Average** | **5,076** | **1,484** | **6,560** | **1,762** | **8,322** | **NA** | **774** | **8,835** | **949** | **7,886** | **-246** | **496** | **17,725** |
| **1996 Average** | **5,071** | **1,393** | **6,465** | **1,830** | **8,295** | **NA** | **837** | **9,478** | **981** | **8,498** | **-151** | **528** | **18,309** |
| **1997 Average** | **5,156** | **1,296** | **6,452** | **1,817** | **8,269** | **NA** | **850** | **10,162** | **1,003** | **9,158** | **143** | **487** | **18,620** |
| **1998 Average** | **5,077** | **1,175** | **6,252** | **1,759** | **8,011** | **NA** | **886** | **10,708** | **945** | **9,764** | **239** | **495** | **18,917** |
| **1999 Average** | **4,832** | **1,050** | **5,881** | **1,850** | **7,731** | **NA** | **886** | **10,852** | **940** | **9,912** | **-422** | **567** | **19,519** |
| **2000 Average** | **4,851** | **970** | **5,822** | **1,911** | **7,733** | **NA** | **948** | **11,459** | **1,040** | **10,419** | **-69** | **532** | **19,701** |
| **2001 Average** | **4,839** | **963** | **5,801** | **1,868** | **7,670** | **NA** | **903** | **11,871** | **971** | **10,900** | **325** | **501** | **19,649** |
| **2002 Average** | **4,761** | **984** | **5,746** | **1,880** | **7,626** | **NA** | **957** | **11,530** | **984** | **10,546** | **-105** | **527** | **19,761** |
| **2003 Average** | **4,706** | **974** | **5,681** | **1,719** | **7,400** | **NA** | **974** | **12,264** | **1,027** | **11,238** | **56** | **478** | **20,034** |
| **2004 Average** | **4,510** | **908** | **5,419** | **1,809** | **7,228** | **NA** | **1,051** | **13,145** | **1,048** | **12,097** | **209** | **564** | **20,731** |
| **2005 Average** | **4,314** | **864** | **5,178** | **1,717** | **6,895** | **NA** | **989** | **13,714** | **1,165** | **12,549** | **145** | **513** | **20,802** |
| **2006 Average** | **4,361** | **741** | **5,102** | **1,739** | **6,841** | **NA** | **994** | **13,707** | **1,317** | **12,390** | **60** | **522** | **20,687** |
| **2007 Average** | **4,342** | **722** | **5,064** | **1,783** | **6,847** | **NA** | **996** | **13,468** | **1,433** | **12,036** | **-148** | **653** | **20,680** |
| **2008** January | 4,389 | 711 | 5,100 | 1,791 | 6,891 | NA | 1,071 | 13,568 | 1,620 | 11,949 | 361 | 699 | 20,247 |
| February | 4,416 | 706 | 5,122 | 1,845 | 6,967 | NA | 962 | 12,660 | 1,848 | 10,812 | -446 | 841 | 20,029 |
| March | 4,424 | 726 | 5,151 | 1,875 | 7,026 | NA | 929 | 12,598 | 1,807 | 10,791 | -287 | 799 | 19,831 |
| April | 4,416 | 701 | 5,117 | 1,885 | 7,002 | NA | 938 | 13,331 | 1,739 | 11,593 | 389 | 672 | 19,815 |
| May | 4,417 | 685 | 5,102 | 1,885 | 6,987 | NA | 1,067 | 12,902 | 1,793 | 11,109 | 248 | 883 | 19,798 |
| June | 4,443 | 655 | 5,098 | 1,836 | 6,934 | NA | 1,014 | 13,398 | 2,146 | 11,252 | 397 | 875 | 19,678 |
| July | 4,493 | 640 | 5,133 | 1,861 | 6,994 | NA | 1,031 | 13,124 | 2,051 | 11,073 | 390 | 849 | 19,557 |
| August | 4,349 | 544 | 4,894 | 1,815 | 6,708 | NA | 1,044 | 13,118 | 2,053 | 11,064 | 403 | 859 | 19,272 |
| September | 3,249 | 681 | 3,930 | 1,514 | 5,444 | NA | 865 | 11,562 | 1,323 | 10,239 | -206 | 1,084 | 17,839 |
| October | 3,953 | 716 | 4,669 | 1,749 | 6,418 | NA | 1,016 | 13,202 | 1,658 | 11,545 | 213 | 932 | 19,698 |
| November | 4,296 | 728 | 5,024 | 1,740 | 6,764 | NA | 1,000 | 12,881 | 1,720 | 11,160 | 700 | 827 | 19,052 |
| December | 4,354 | 702 | 5,056 | 1,607 | 6,663 | NA | 970 | 12,607 | 1,856 | 10,751 | 152 | 910 | 19,142 |
| **Average** | **4,268** | **683** | **4,950** | **1,784** | **6,734** | **NA** | **993** | **12,915** | **1,802** | **11,114** | **195** | **852** | **19,498** |
| **2009** January | E 4,567 | E 679 | E 5,246 | 1,721 | E 6,967 | 664 | 954 | 13,173 | 1,927 | 11,246 | 879 | 174 | 19,125 |
| February | E 4,483 | E 708 | E 5,191 | 1,792 | E 6,983 | 682 | 934 | 12,190 | 1,822 | 10,369 | 288 | 26 | 18,706 |
| March | E 4,561 | E 709 | E 5,270 | 1,850 | E 7,120 | 676 | 906 | 12,474 | 1,838 | 10,636 | 790 | 124 | 18,672 |
| April | E 4,575 | E 653 | E 5,228 | 1,851 | E 7,078 | 677 | 990 | 11,973 | 1,900 | 10,073 | 559 | 212 | 18,471 |
| May | E 4,606 | E 678 | E 5,283 | 1,934 | E 7,217 | 706 | 979 | 11,596 | 2,015 | 9,581 | 558 | 251 | 18,176 |
| June | E 4,612 | E 571 | E 5,183 | 1,901 | E 7,084 | 731 | 1,031 | 11,902 | 1,963 | 9,939 | 332 | 309 | 18,762 |
| July | E 4,681 | E 551 | E 5,233 | 1,884 | E 7,117 | 763 | 987 | 12,053 | 2,348 | 9,704 | 81 | 282 | 18,771 |
| August | E 4,714 | E 572 | E 5,286 | 1,896 | E 7,182 | 764 | 1,002 | 11,243 | 2,119 | 9,124 | -426 | 234 | 18,732 |
| September | E 4,792 | E 652 | E 5,444 | 1,941 | E 7,385 | 756 | 1,012 | 11,721 | 2,105 | 9,616 | 541 | 134 | 18,362 |
| October | E 4,763 | E 658 | E 5,422 | 1,953 | E 7,375 | 769 | 997 | 10,856 | 2,223 | 8,633 | -735 | 218 | 18,727 |
| November | E 4,808 | E 658 | E 5,466 | 1,970 | E 7,436 | 815 | 948 | 11,080 | 2,029 | 9,051 | -273 | 27 | 18,550 |
| December | E 4,805 | E 655 | E 5,460 | 1,937 | E 7,397 | 815 | 1,029 | 10,487 | 1,996 | 8,490 | -1,206 | 226 | 19,163 |
| **Average** | **E 4,665** | **E 645** | **E 5,310** | **1,886** | **E 7,196** | **735** | **981** | **11,726** | **2,026** | **9,700** | **112** | **186** | **18,686** |
| **2010** January | RE 4,792 | RE 640 | RE 5,433 | R 1,910 | RE 7,343 | R 838 | 932 | R 11,236 | R 1,883 | R 9,352 | R 172 | R 234 | R 18,528 |
| February | E 4,856 | E 643 | E 5,499 | E 1,970 | E 7,469 | NA | E 946 | E 11,532 | E 1,707 | E 9,825 | E -90 | NA | E 19,356 |
| March | E 4,861 | E 652 | E 5,513 | E 1,942 | E 7,455 | NA | E 969 | E 11,419 | E 1,653 | E 9,766 | E 136 | NA | E 19,109 |
| **3-Month Average** | **E 4,836** | **E 645** | **E 5,481** | **E 1,940** | **E 7,421** | **NA** | **E 949** | **E 11,391** | **E 1,749** | **E 9,642** | **E 78** | **NA** | **E 18,986** |
| **2009 3-Month Average** | **E 4,539** | **E 698** | **E 5,237** | **1,787** | **E 7,025** | **674** | **931** | **12,626** | **1,863** | **10,763** | **665** | **111** | **18,839** |
| **2008 3-Month Average** | **4,410** | **715** | **5,124** | **1,837** | **6,961** | **NA** | **988** | **12,948** | **1,756** | **11,192** | **-117** | **778** | **20,036** |

[a] Crude oil production on leases, and natural gas liquids (liquefied petroleum gases, pentanes plus, and a small amount of finished petroleum products) production at natural gas processing plants. Excludes what was previously classified as "Field Production" of finished motor gasoline, motor gasoline blending components, and other hydrocarbons and oxygenates; these are now included in "Adjustments."

[b] Includes lease condensate.

[c] United States excluding Alaska and Hawaii.

[d] Natural gas plant liquids.

[e] See Note 6, "Petroleum Data Discrepancies," at end of section.

[f] Renewable fuels and oxygenate plant net production.

[g] Refinery and blender net production minus refinery and blender net inputs. See Table 3.2.

[h] Includes Strategic Petroleum Reserve imports. See Table 3.3b

[i] Net imports equal imports minus exports.

[j] A negative value indicates a decrease in stocks and a positive value indicates an increase. The current month stock change estimate is based on the change from the previous month's estimate, rather than the stocks values shown in Table 3.4. Includes crude oil stocks in the Strategic Petroleum Reserve, but excludes distillate fuel oil stocks in the Northeast Heating Oil Reserve. See Table 3.4. Also see Note 4, "Petroleum New Stock Basis," at end of section.

[k] An adjustment for crude oil, hydrogen, oxygenates, renewable fuels, other hydrocarbons, motor gasoline blending components, finished motor gasoline, and distillate fuel oil. See U.S. Energy Information Administration (EIA), *Petroleum Supply Monthly,* Appendix B, "PSM Explanatory Notes," for further information.

R=Revised. NA=Not available. E=Estimate.

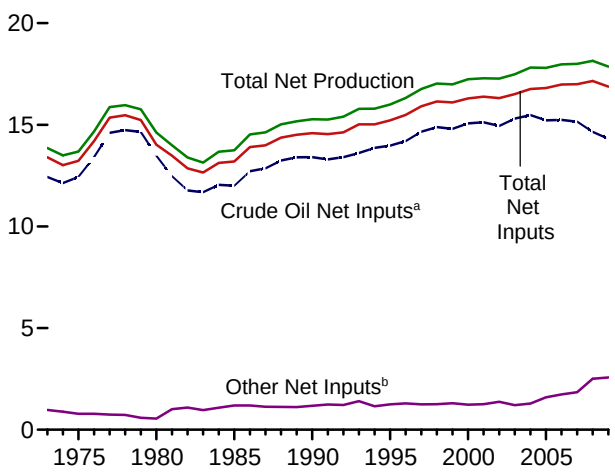
Notes: • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Pages: • For all available data beginning in 1973, see http://www.eia.doe.gov/emeu/mer/petro.html. • For related information, see http://www.eia.doe.gov/oil_gas/petroleum/info_glance/petroleum.html.

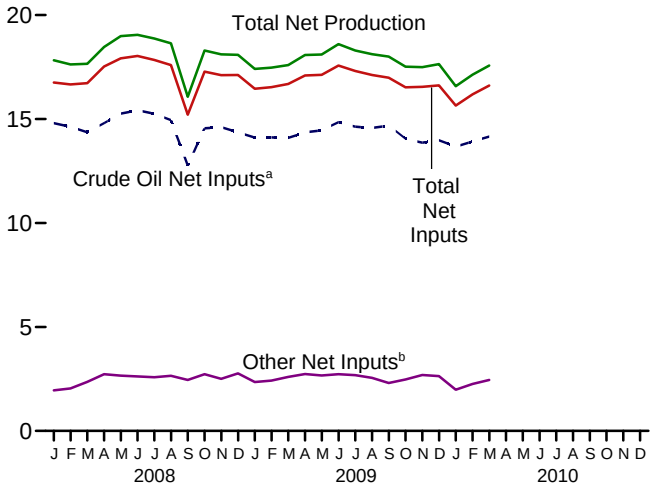
Sources: • **1973-1975:** Bureau of Mines, Mineral Industry Surveys, *Petroleum Statement, Annual,* annual reports. • **1976-1980:** EIA, Energy Data Reports, *Petroleum Statement, Annual,* annual reports. • **1981-2008:** EIA, *Petroleum Supply Annual,* annual reports. • **2009 and 2010:** EIA, *Petroleum Supply Monthly,* monthly reports; and, for the current two months, *Weekly Petroleum Status Report* data system and *Monthly Energy Review* data system calculations.

## Figure 3.2 Refinery and Blender Net Inputs and Net Production
(Million Barrels per Day)

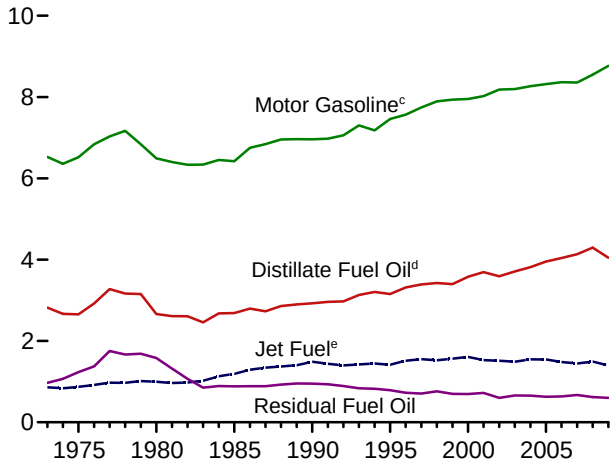
Net Inputs and Net Production, 1973-2009



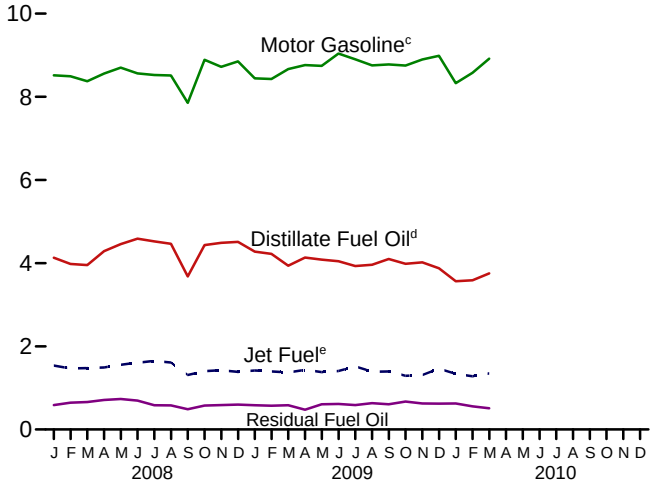

Net Inputs and Net Production, Monthly



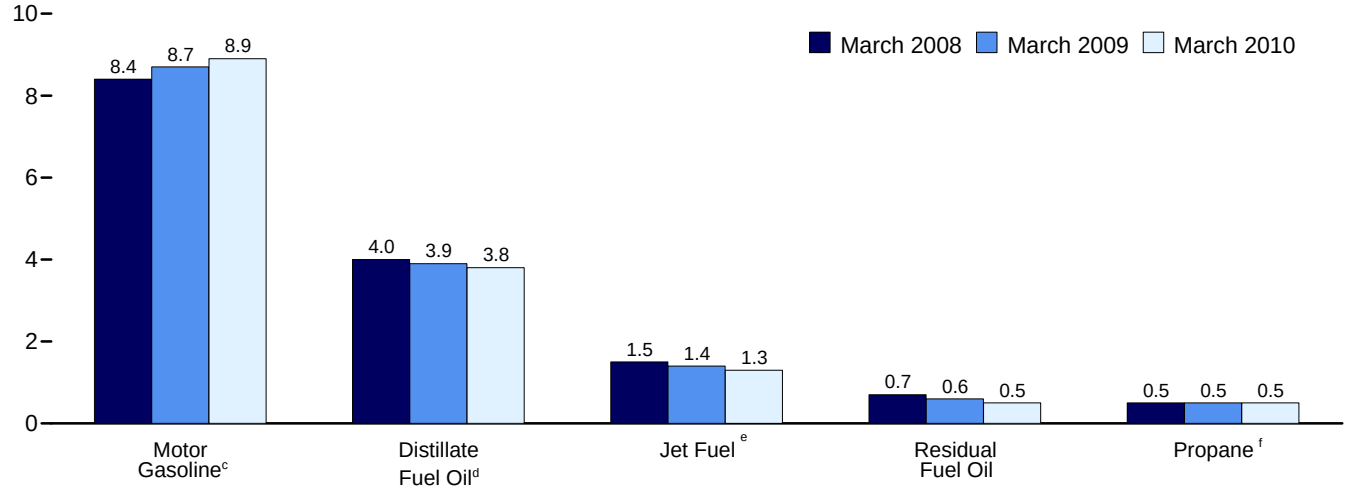

Net Production, Selected Products, 1973-2009




Net Production, Selected Products, Monthly




Net Production, Selected Products




[a]Includes lease condensate.
[b]Natural gas plant liquids and other liquids.
[c]Beginning in 1993, includes fuel ethanol blended into motor gasoline.
[d]Beginning in 2009, includes renewable diesel fuel (including biodiesel) blended into distillate fuel oil.
[e]Beginning in 2005, includes kerosene-type jet fuel only.
[f]Includes propylene.
Web Page: http://www.eia.doe.gov/emeu/mer/petro.html.
Source: Table 3.2.

# Table 3.2 Refinery and Blender Net Inputs and Net Production

(Thousand Barrels per Day)

| | Refinery and Blender Net Inputs[a] | | | | Refinery and Blender Net Production[b] | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | LPG[c] | | | | | |
| | Crude Oil[d] | NGPL[e] | Other Liquids[f] | Total | Distillate Fuel Oil[g] | Jet Fuel[h] | Propane[i] | Total | Motor Gasoline[j] | Residual Fuel Oil | Other Products[k] | Total |
| **1973 Average** | **12,431** | **815** | **155** | **13,401** | **2,820** | **859** | **271** | **375** | **6,527** | **971** | **2,301** | **13,854** |
| **1975 Average** | **12,442** | **710** | **72** | **13,225** | **2,653** | **871** | **234** | **311** | **6,518** | **1,235** | **2,097** | **13,685** |
| **1980 Average** | **13,481** | **462** | **81** | **14,025** | **2,661** | **999** | **269** | **330** | **6,492** | **1,580** | **2,559** | **14,622** |
| **1985 Average** | **12,002** | **509** | **681** | **13,192** | **2,686** | **1,189** | **295** | **391** | **6,419** | **882** | **2,183** | **13,750** |
| **1990 Average** | **13,409** | **467** | **713** | **14,589** | **2,925** | **1,488** | **404** | **499** | **6,959** | **950** | **2,452** | **15,272** |
| **1995 Average** | **13,973** | **471** | **775** | **15,220** | **3,155** | **1,416** | **503** | **654** | **7,459** | **788** | **2,522** | **15,994** |
| **1996 Average** | **14,195** | **450** | **843** | **15,487** | **3,316** | **1,515** | **520** | **662** | **7,565** | **726** | **2,541** | **16,324** |
| **1997 Average** | **14,662** | **416** | **832** | **15,909** | **3,392** | **1,554** | **565** | **691** | **7,743** | **708** | **2,671** | **16,759** |
| **1998 Average** | **14,889** | **403** | **853** | **16,144** | **3,424** | **1,526** | **550** | **674** | **7,892** | **762** | **2,753** | **17,030** |
| **1999 Average** | **14,804** | **372** | **927** | **16,103** | **3,399** | **1,565** | **569** | **684** | **7,934** | **698** | **2,709** | **16,989** |
| **2000 Average** | **15,067** | **380** | **849** | **16,295** | **3,580** | **1,606** | **583** | **705** | **7,951** | **696** | **2,705** | **17,243** |
| **2001 Average** | **15,128** | **429** | **825** | **16,382** | **3,695** | **1,530** | **556** | **667** | **8,022** | **721** | **2,651** | **17,285** |
| **2002 Average** | **14,947** | **429** | **941** | **16,316** | **3,592** | **1,514** | **572** | **671** | **8,183** | **601** | **2,712** | **17,273** |
| **2003 Average** | **15,304** | **419** | **791** | **16,513** | **3,707** | **1,488** | **570** | **658** | **8,194** | **660** | **2,780** | **17,487** |
| **2004 Average** | **15,475** | **422** | **866** | **16,762** | **3,814** | **1,547** | **584** | **645** | **8,265** | **655** | **2,887** | **17,814** |
| **2005 Average** | **15,220** | **441** | **1,149** | **16,811** | **3,954** | **1,546** | **540** | **573** | **8,318** | **628** | **2,782** | **17,800** |
| **2006 Average** | **15,242** | **501** | **1,238** | **16,981** | **4,040** | **1,481** | **543** | **627** | **8,364** | **635** | **2,827** | **17,975** |
| **2007 Average** | **15,156** | **505** | **1,337** | **16,999** | **4,133** | **1,448** | **562** | **655** | **8,358** | **673** | **2,728** | **17,994** |
| **2008** January | 14,804 | 540 | 1,414 | 16,758 | 4,130 | 1,535 | 569 | 478 | 8,516 | 588 | 2,582 | 17,829 |
| February | 14,625 | 502 | 1,538 | 16,665 | 3,980 | 1,467 | 535 | 507 | 8,495 | 643 | 2,536 | 17,627 |
| March | 14,364 | 461 | 1,901 | 16,727 | 3,953 | 1,475 | 526 | 676 | 8,373 | 662 | 2,518 | 17,656 |
| April | 14,799 | 449 | 2,279 | 17,527 | 4,287 | 1,492 | 520 | 809 | 8,560 | 710 | 2,607 | 18,465 |
| May | 15,263 | 445 | 2,211 | 17,919 | 4,459 | 1,558 | 546 | 878 | 8,700 | 734 | 2,658 | 18,986 |
| June | 15,417 | 435 | 2,183 | 18,036 | 4,587 | 1,605 | 544 | 867 | 8,564 | 695 | 2,731 | 19,050 |
| July | 15,255 | 439 | 2,144 | 17,838 | 4,523 | 1,647 | 534 | 837 | 8,523 | 584 | 2,754 | 18,869 |
| August | 14,947 | 413 | 2,236 | 17,596 | 4,466 | 1,609 | 526 | 814 | 8,513 | 579 | 2,660 | 18,641 |
| September | 12,759 | 409 | 2,040 | 15,208 | 3,681 | 1,312 | 420 | 513 | 7,855 | 485 | 2,227 | 16,073 |
| October | 14,552 | 563 | 2,162 | 17,277 | 4,435 | 1,401 | 503 | 460 | 8,889 | 575 | 2,533 | 18,293 |
| November | 14,606 | 576 | 1,925 | 17,107 | 4,489 | 1,425 | 515 | 369 | 8,722 | 588 | 2,516 | 18,108 |
| December | 14,352 | 589 | 2,178 | 17,119 | 4,511 | 1,383 | 489 | 341 | 8,850 | 597 | 2,406 | 18,089 |
| **Average** | **14,648** | **485** | **2,019** | **17,153** | **4,294** | **1,493** | **519** | **630** | **8,548** | **620** | **2,561** | **18,146** |
| **2009** January | 14,112 | 554 | 1,793 | 16,459 | 4,276 | 1,419 | 479 | 382 | 8,445 | 582 | 2,309 | 17,413 |
| February | 14,116 | 497 | 1,922 | 16,535 | 4,222 | 1,395 | 483 | 480 | 8,429 | 572 | 2,371 | 17,469 |
| March | 14,091 | 449 | 2,147 | 16,688 | 3,937 | 1,372 | 519 | 626 | 8,668 | 584 | 2,407 | 17,594 |
| April | 14,354 | 418 | 2,321 | 17,092 | 4,133 | 1,433 | 544 | 791 | 8,761 | 476 | 2,490 | 18,082 |
| May | 14,459 | 435 | 2,231 | 17,125 | 4,086 | 1,378 | 556 | 808 | 8,742 | 606 | 2,484 | 18,104 |
| June | 14,845 | 434 | 2,294 | 17,573 | 4,044 | 1,405 | 567 | 850 | 9,042 | 614 | 2,649 | 18,604 |
| July | 14,633 | 439 | 2,240 | 17,312 | 3,929 | 1,514 | 555 | 818 | 8,903 | 588 | 2,546 | 18,298 |
| August | 14,568 | 406 | 2,147 | 17,121 | 3,962 | 1,391 | 554 | 842 | 8,755 | 632 | 2,539 | 18,122 |
| September | 14,684 | 488 | 1,818 | 16,990 | 4,099 | 1,396 | 561 | 633 | 8,779 | 606 | 2,490 | 18,002 |
| October | 14,053 | 547 | 1,924 | 16,525 | 3,984 | 1,291 | 529 | 486 | 8,752 | 673 | 2,335 | 17,521 |
| November | 13,861 | 617 | 2,071 | 16,550 | 4,019 | 1,311 | 552 | 388 | 8,897 | 626 | 2,257 | 17,497 |
| December | 13,979 | 587 | 2,049 | 16,615 | 3,878 | 1,465 | 554 | 443 | 8,987 | 623 | 2,248 | 17,644 |
| **Average** | **14,313** | **489** | **2,081** | **16,883** | **4,046** | **1,398** | **538** | **630** | **8,765** | **599** | **2,427** | **17,864** |
| **2010** January | R 13,671 | R 497 | R 1,482 | R 15,650 | R 3,563 | R 1,339 | R 529 | R 465 | R 8,327 | R 625 | R 2,262 | R 16,581 |
| February | E 13,922 | RF 495 | RE 1,767 | RF 16,184 | E 3,588 | E 1,281 | RE 503 | F 488 | E 8,577 | E 555 | RE 2,640 | RE 17,130 |
| March | E 14,156 | F 453 | E 1,997 | F 16,607 | E 3,753 | E 1,349 | E 508 | F 647 | E 8,917 | E 509 | E 2,401 | E 17,576 |
| **3-Month Average** | **E 13,916** | **E 481** | **E 1,748** | **E 16,145** | **E 3,636** | **E 1,324** | **E 514** | **E 535** | **E 8,608** | **E 563** | **E 2,427** | **E 17,095** |
| **2009 3-Month Average** | **14,106** | **500** | **1,955** | **16,562** | **4,142** | **1,396** | **494** | **497** | **8,517** | **580** | **2,362** | **17,493** |
| **2008 3-Month Average** | **14,597** | **501** | **1,620** | **16,718** | **4,022** | **1,493** | **544** | **554** | **8,461** | **631** | **2,545** | **17,706** |

[a] See "Refinery and Blender Net Inputs," in Glossary.
[b] See "Refinery and Blender Net Production," in Glossary.
[c] Liquefied petroleum gases.
[d] Includes lease condensate.
[e] Natural gas plant liquids (liquefied petroleum gases and pentanes plus).
[f] Unfinished oils (net), other hydrocarbons, and hydrogen. Beginning in 1981, also includes aviation and motor gasoline blending components (net). Beginning in 1993, also includes oxygenates (net), including fuel ethanol. Beginning in 2009, also includes renewable diesel fuel (including biodiesel).
[g] Beginning in 2009, includes renewable diesel fuel (including biodiesel) blended into distillate fuel oil.
[h] Through 2004, includes kerosene-type and naphtha-type jet fuel. Beginning in 2005, includes kerosene-type jet fuel only; naphtha-type jet fuel is included in "Other Products."
[i] Includes propylene.
[j] Finished motor gasoline. Beginning in 1993, also includes fuel ethanol blended into motor gasoline.
[k] Asphalt and road oil, finished aviation gasoline, kerosene, lubricants, petrochemical feedstocks, petroleum coke, special naphthas, still gas, waxes, and miscellaneous products. Beginning in 2005, also includes naphtha-type jet fuel.

R=Revised. E=Estimate. F=Forecast.

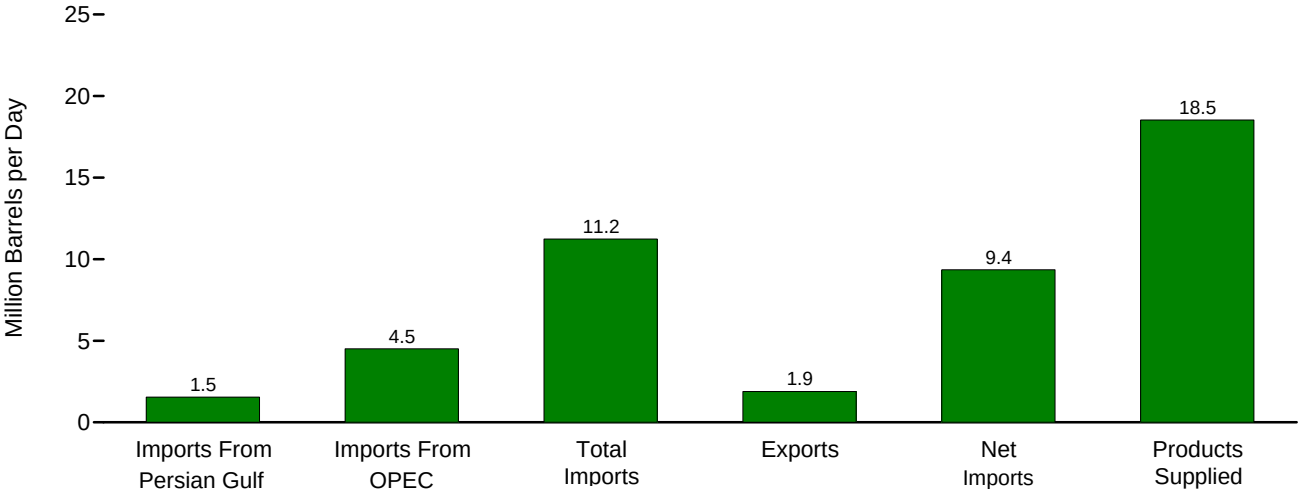
Notes: • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Pages: • For all available data beginning in 1973, see http://www.eia.doe.gov/emeu/mer/petro.html. • For related information, see http://www.eia.doe.gov/oil_gas/petroleum/info_glance/petroleum.html.

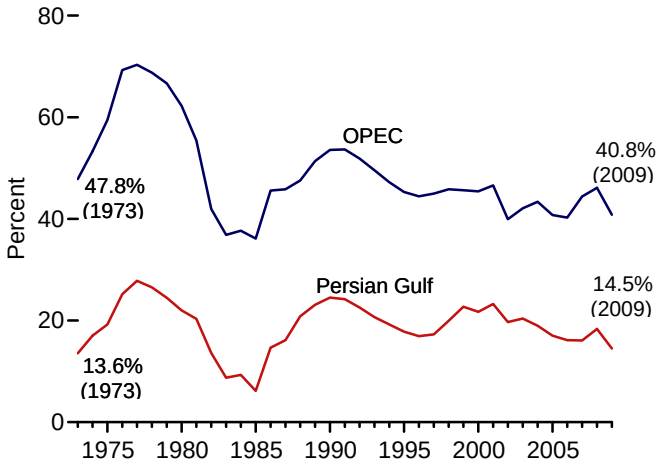
Sources: • **1973-1975:** Bureau of Mines, Mineral Industry Surveys, *Petroleum Statement, Annual,* annual reports. • **1976-1980:** U.S. Energy Information Administration (EIA), Energy Data Reports, *Petroleum Statement, Annual,* annual reports. • **1981-2008:** *Petroleum Supply Annual,* annual reports. • **2009 and 2010:** EIA, *Petroleum Supply Monthly,* monthly reports; and, for the current two months, *Weekly Petroleum Status Report* data system, Short-Term Integrated Forecasting System, and *Monthly Energy Review* data system calculations.

## Figure 3.3a Petroleum Trade: Overview

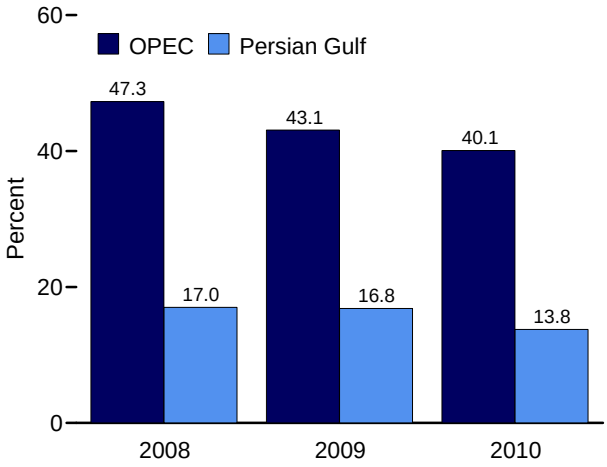
Overview, January 2010



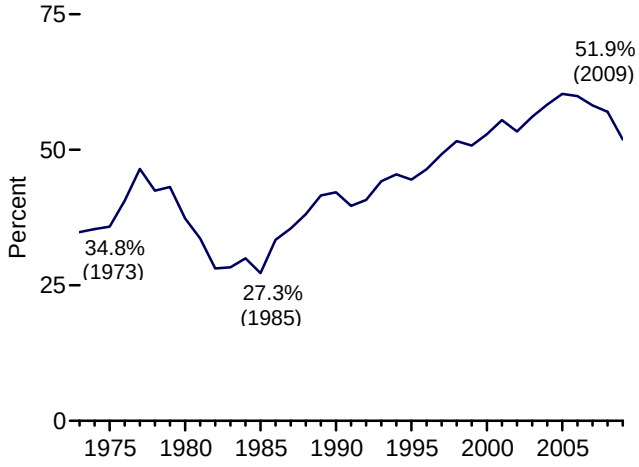

Imports From OPEC and Persian Gulf as Share of Total Imports, 1973-2009



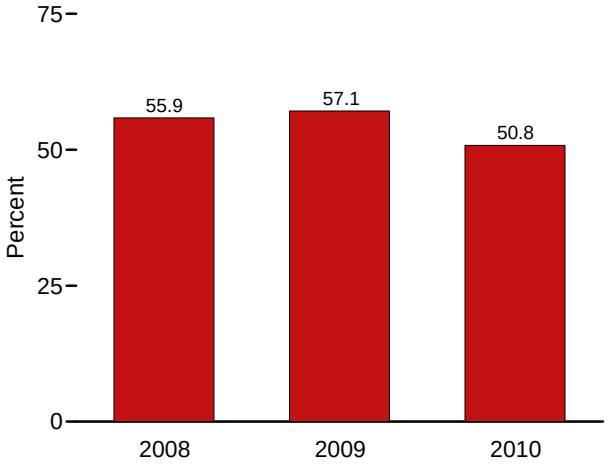

Imports From OPEC and Persian Gulf as Share of Total Imports, January




Net Imports as Share of Products Supplied, 1973-2009




Net Imports as Share of Products Supplied, January-March




Note: OPEC=Organization of the Petroleum Exporting Countries.
Web Page: http://www.eia.doe.gov/emeu/mer/petro.html.
Source: Table 3.3a.

# Table 3.3a Petroleum Trade: Overview

| | Imports From Persian Gulf[a] | Imports From OPEC[b] | Imports | Exports | Net Imports | Products Supplied | As Share of Products Supplied: Imports From Persian Gulf[a] | As Share of Products Supplied: Imports From OPEC[b] | As Share of Products Supplied: Imports | As Share of Products Supplied: Net Imports | As Share of Total Imports: Imports From Persian Gulf[a] | As Share of Total Imports: Imports From OPEC[b] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Thousand Barrels per Day | | | | | | Percent | | | | | |
| **1973 Average** | **848** | **2,993** | **6,256** | **231** | **6,025** | **17,308** | **4.9** | **17.3** | **36.1** | **34.8** | **13.6** | **47.8** |
| **1975 Average** | **1,165** | **3,601** | **6,056** | **209** | **5,846** | **16,322** | **7.1** | **22.1** | **37.1** | **35.8** | **19.2** | **59.5** |
| **1980 Average** | **1,519** | **4,300** | **6,909** | **544** | **6,365** | **17,056** | **8.9** | **25.2** | **40.5** | **37.3** | **22.0** | **62.2** |
| **1985 Average** | **311** | **1,830** | **5,067** | **781** | **4,286** | **15,726** | **2.0** | **11.6** | **32.2** | **27.3** | **6.1** | **36.1** |
| **1990 Average** | **1,966** | **4,296** | **8,018** | **857** | **7,161** | **16,988** | **11.6** | **25.3** | **47.2** | **42.2** | **24.5** | **53.6** |
| **1995 Average** | **1,573** | **4,002** | **8,835** | **949** | **7,886** | **17,725** | **8.9** | **22.6** | **49.8** | **44.5** | **17.8** | **45.3** |
| **1996 Average** | **1,604** | **4,211** | **9,478** | **981** | **8,498** | **18,309** | **8.8** | **23.0** | **51.8** | **46.4** | **16.9** | **44.4** |
| **1997 Average** | **1,755** | **4,569** | **10,162** | **1,003** | **9,158** | **18,620** | **9.4** | **24.5** | **54.6** | **49.2** | **17.3** | **45.0** |
| **1998 Average** | **2,136** | **4,905** | **10,708** | **945** | **9,764** | **18,917** | **11.3** | **25.9** | **56.6** | **51.6** | **19.9** | **45.8** |
| **1999 Average** | **2,464** | **4,953** | **10,852** | **940** | **9,912** | **19,519** | **12.6** | **25.4** | **55.6** | **50.8** | **22.7** | **45.6** |
| **2000 Average** | **2,488** | **5,203** | **11,459** | **1,040** | **10,419** | **19,701** | **12.6** | **26.4** | **58.2** | **52.9** | **21.7** | **45.4** |
| **2001 Average** | **2,761** | **5,528** | **11,871** | **971** | **10,900** | **19,649** | **14.1** | **28.1** | **60.4** | **55.5** | **23.3** | **46.6** |
| **2002 Average** | **2,269** | **4,605** | **11,530** | **984** | **10,546** | **19,761** | **11.5** | **23.3** | **58.3** | **53.4** | **19.7** | **39.9** |
| **2003 Average** | **2,501** | **5,162** | **12,264** | **1,027** | **11,238** | **20,034** | **12.5** | **25.8** | **61.2** | **56.1** | **20.4** | **42.1** |
| **2004 Average** | **2,493** | **5,701** | **13,145** | **1,048** | **12,097** | **20,731** | **12.0** | **27.5** | **63.4** | **58.4** | **19.0** | **43.4** |
| **2005 Average** | **2,334** | **5,587** | **13,714** | **1,165** | **12,549** | **20,802** | **11.2** | **26.9** | **65.9** | **60.3** | **17.0** | **40.7** |
| **2006 Average** | **2,211** | **5,517** | **13,707** | **1,317** | **12,390** | **20,687** | **10.7** | **26.7** | **66.3** | **59.9** | **16.1** | **40.2** |
| **2007 Average** | **2,163** | **5,980** | **13,468** | **1,433** | **12,036** | **20,680** | **10.5** | **28.9** | **65.1** | **58.2** | **16.1** | **44.4** |
| **2008** January | 2,307 | 6,415 | 13,568 | 1,620 | 11,949 | 20,247 | 11.4 | 31.7 | 67.0 | 59.0 | 17.0 | 47.3 |
| February | 2,663 | 5,834 | 12,660 | 1,848 | 10,812 | 20,029 | 13.3 | 29.1 | 63.2 | 54.0 | 21.0 | 46.1 |
| March | 2,518 | 5,934 | 12,598 | 1,807 | 10,791 | 19,831 | 12.7 | 29.9 | 63.5 | 54.4 | 20.0 | 47.1 |
| April | 2,323 | 6,262 | 13,331 | 1,739 | 11,593 | 19,815 | 11.7 | 31.6 | 67.3 | 58.5 | 17.4 | 47.0 |
| May | 2,450 | 5,931 | 12,902 | 1,793 | 11,109 | 19,798 | 12.4 | 30.0 | 65.2 | 56.1 | 19.0 | 46.0 |
| June | 2,363 | 6,054 | 13,398 | 2,146 | 11,252 | 19,678 | 12.0 | 30.8 | 68.1 | 57.2 | 17.6 | 45.2 |
| July | 2,507 | 6,125 | 13,124 | 2,051 | 11,073 | 19,557 | 12.8 | 31.3 | 67.1 | 56.6 | 19.1 | 46.7 |
| August | 2,438 | 6,391 | 13,118 | 2,053 | 11,064 | 19,272 | 12.7 | 33.2 | 68.1 | 57.4 | 18.6 | 48.7 |
| September | 2,086 | 5,127 | 11,562 | 1,323 | 10,239 | 17,839 | 11.7 | 28.7 | 64.8 | 57.4 | 18.0 | 44.3 |
| October | 2,304 | 5,875 | 13,202 | 1,658 | 11,545 | 19,698 | 11.7 | 29.8 | 67.0 | 58.6 | 17.5 | 44.5 |
| November | 2,283 | 5,799 | 12,881 | 1,720 | 11,160 | 19,052 | 12.0 | 30.4 | 67.6 | 58.6 | 17.7 | 45.0 |
| December | 2,208 | 5,679 | 12,607 | 1,856 | 10,751 | 19,142 | 11.5 | 29.7 | 65.9 | 56.2 | 17.5 | 45.0 |
| **Average** | **2,370** | **5,954** | **12,915** | **1,802** | **11,114** | **19,498** | **12.2** | **30.5** | **66.2** | **57.0** | **18.4** | **46.1** |
| **2009** January | 2,218 | 5,676 | 13,173 | 1,927 | 11,246 | 19,125 | 11.6 | 29.7 | 68.9 | 58.8 | 16.8 | 43.1 |
| February | 1,972 | 4,956 | 12,190 | 1,822 | 10,369 | 18,706 | 10.5 | 26.5 | 65.2 | 55.4 | 16.2 | 40.7 |
| March | 1,823 | 5,215 | 12,474 | 1,838 | 10,636 | 18,672 | 9.8 | 27.9 | 66.8 | 57.0 | 14.6 | 41.8 |
| April | 1,700 | 4,754 | 11,973 | 1,900 | 10,073 | 18,471 | 9.2 | 25.7 | 64.8 | 54.5 | 14.2 | 39.7 |
| May | 1,480 | 4,471 | 11,596 | 2,015 | 9,581 | 18,176 | 8.1 | 24.6 | 63.8 | 52.7 | 12.8 | 38.6 |
| June | 1,586 | 4,814 | 11,902 | 1,963 | 9,939 | 18,762 | 8.5 | 25.7 | 63.4 | 53.0 | 13.3 | 40.5 |
| July | 1,955 | 4,623 | 12,053 | 2,348 | 9,704 | 18,771 | 10.4 | 24.6 | 64.2 | 51.7 | 16.2 | 38.4 |
| August | 1,466 | 4,567 | 11,243 | 2,119 | 9,124 | 18,732 | 7.8 | 24.4 | 60.0 | 48.7 | 13.0 | 40.6 |
| September | 1,718 | 5,021 | 11,721 | 2,105 | 9,616 | 18,362 | 9.4 | 27.3 | 63.8 | 52.4 | 14.7 | 42.8 |
| October | 1,545 | 4,581 | 10,856 | 2,223 | 8,633 | 18,727 | 8.3 | 24.5 | 58.0 | 46.1 | 14.2 | 42.2 |
| November | 1,593 | 4,589 | 11,080 | 2,029 | 9,051 | 18,550 | 8.6 | 24.7 | 59.7 | 48.8 | 14.4 | 41.4 |
| December | 1,378 | 4,187 | 10,487 | 1,996 | 8,490 | 19,163 | 7.2 | 21.8 | 54.7 | 44.3 | 13.1 | 39.9 |
| **Average** | **1,701** | **4,786** | **11,726** | **2,026** | **9,700** | **18,686** | **9.1** | **25.6** | **62.8** | **51.9** | **14.5** | **40.8** |
| **2010** January | R 1,546 | R 4,503 | R 11,236 | R 1,883 | R 9,352 | R 18,528 | R 8.3 | R 24.3 | R 60.6 | R 50.5 | R 13.8 | R 40.1 |
| February | NA | NA | E 11,532 | E 1,707 | E 9,825 | E 19,356 | NA | NA | E 59.6 | E 50.8 | NA | NA |
| March | NA | NA | E 11,419 | E 1,653 | E 9,766 | E 19,109 | NA | NA | E 59.8 | E 51.1 | NA | NA |
| **3-Month Average** | **NA** | **NA** | **E 11,391** | **E 1,749** | **E 9,642** | **E 18,986** | **NA** | **NA** | **E 60.0** | **E 50.8** | **NA** | **NA** |
| **2009 3-Month Average** | **2,005** | **5,293** | **12,626** | **1,863** | **10,763** | **18,839** | **10.6** | **28.1** | **67.0** | **57.1** | **15.9** | **41.9** |
| **2008 3-Month Average** | **2,492** | **6,066** | **12,948** | **1,756** | **11,192** | **20,036** | **12.4** | **30.3** | **64.6** | **55.9** | **19.2** | **46.8** |

[a] Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, United Arab Emirates, and the Neutral Zone (between Kuwait and Saudi Arabia).

[b] See "Organization of the Petroleum Exporting Countries (OPEC)" in Glossary. See Table 3.3c for notes on which countries are included in the data.

R=Revised. E=Estimate. NA=Not available.

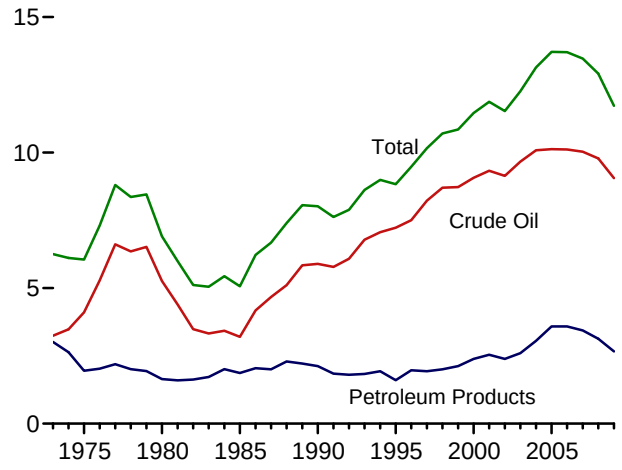
Notes: • Readers of this table may be interested in a feature article, "Measuring Dependence on Imported Oil," that was published in the August 1995 *Monthly Energy Review.* See http://www.eia.doe.gov/emeu/mer/pdf/pages/imported_oil.pdf. • Beginning in October 1977, data include Strategic Petroleum Reserve imports. See Table 3.3b. • Annual averages may not equal average of months due to independent rounding. • U.S. geographic coverage is the 50 States and the District of Columbia. U.S. exports include shipments to U.S. territories, and imports include receipts from U.S. territories.

Web Pages: • For all available data beginning in 1973, see http://www.eia.doe.gov/emeu/mer/petro.html. • For related information, see http://www.eia.doe.gov/oil_gas/petroleum/info_glance/petroleum.html.

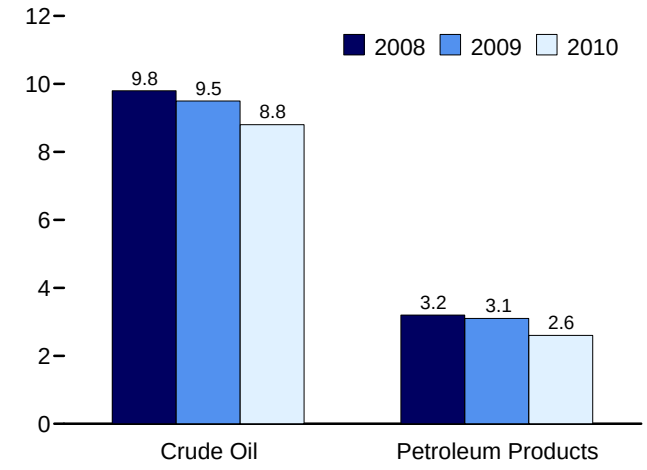
Sources: • **1973-1975:** Bureau of Mines, Mineral Industry Surveys, *Petroleum Statement, Annual,* annual reports. • **1976-1980:** U.S. Energy Information Administration (EIA), Energy Data Reports, *Petroleum Statement, Annual,* annual reports. • **1981-2008:** EIA, *Petroleum Supply Annual,* annual reports. • **2009 and 2010:** EIA, *Petroleum Supply Monthly,* monthly reports; and, for the current two months, *Weekly Petroleum Status Report* data system and *Monthly Energy Review* data system calculations.

## Figure 3.3b Petroleum Trade: Imports
(Million Barrels per Day)

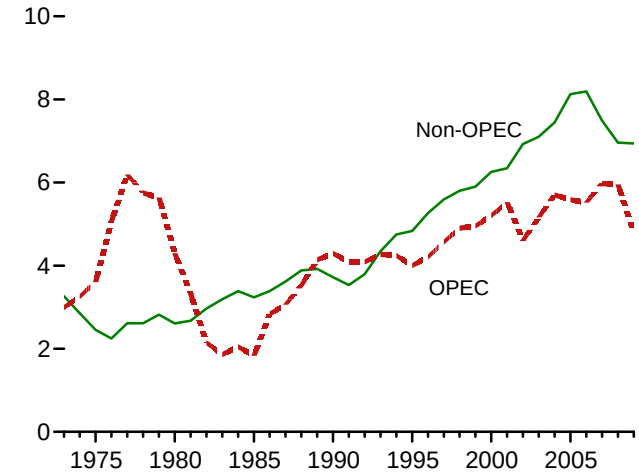
Total, 1973-2009



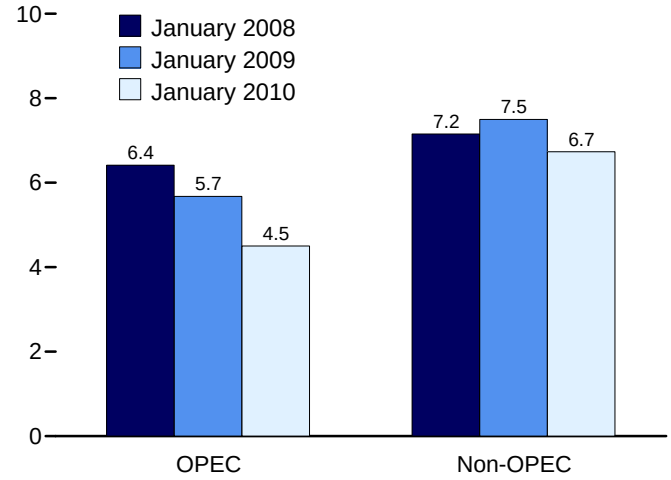

Crude Oil and Petroleum Products, January-March



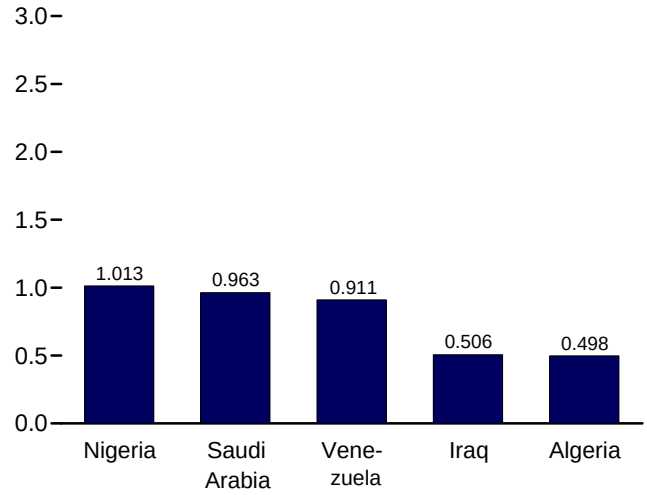

OPEC and Non-OPEC, 1973-2009



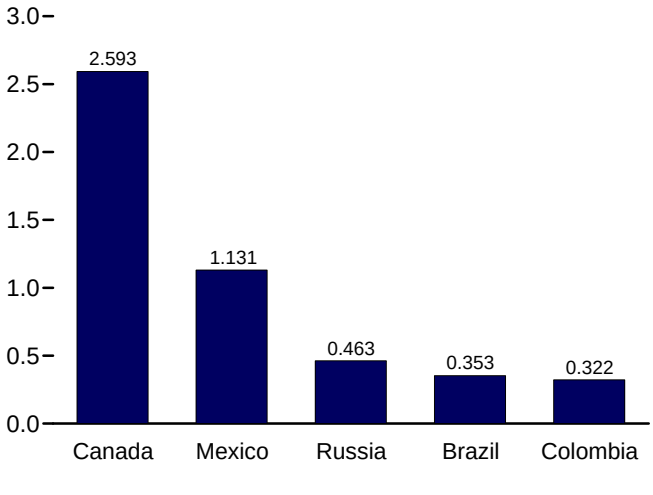

OPEC and Non-OPEC




From Selected OPEC Countries, January 2010




From Selected Non-OPEC Countries, January 2010




Note: OPEC=Organization of the Petroleum Exporting Countries.
Web Page: http://www.eia.doe.gov/emeu/mer/petro.html.
Sources: Tables 3.3b–3.3d.

# Table 3.3b Petroleum Trade: Imports and Exports by Type

(Thousand Barrels per Day)

| | Imports | | | | | | | | | | Exports | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Crude Oil[a] | | Distillate Fuel Oil | Jet Fuel[e] | LPG[b] | | Motor Gasoline[g] | Residual Fuel Oil | Other[h] | Total | Crude Oil[a] | Petroleum Products | Total |
| | SPR[c,d] | Total | | | Propane[f] | Total | | | | | | | |
| **1973 Average** | **– –** | **3,244** | **392** | **212** | **71** | **132** | **134** | **1,853** | **290** | **6,256** | **2** | **229** | **231** |
| **1975 Average** | **– –** | **4,105** | **155** | **133** | **60** | **112** | **184** | **1,223** | **144** | **6,056** | **6** | **204** | **209** |
| **1980 Average** | **44** | **5,263** | **142** | **80** | **69** | **216** | **140** | **939** | **130** | **6,909** | **287** | **258** | **544** |
| **1985 Average** | **118** | **3,201** | **200** | **39** | **67** | **187** | **381** | **510** | **550** | **5,067** | **204** | **577** | **781** |
| **1990 Average** | **27** | **5,894** | **278** | **108** | **115** | **188** | **342** | **504** | **705** | **8,018** | **109** | **748** | **857** |
| **1995 Average** | **0** | **7,230** | **193** | **106** | **102** | **146** | **265** | **187** | **708** | **8,835** | **95** | **855** | **949** |
| **1996 Average** | **0** | **7,508** | **230** | **111** | **119** | **166** | **336** | **248** | **879** | **9,478** | **110** | **871** | **981** |
| **1997 Average** | **0** | **8,225** | **228** | **91** | **113** | **169** | **309** | **194** | **945** | **10,162** | **108** | **896** | **1,003** |
| **1998 Average** | **0** | **8,706** | **210** | **124** | **137** | **194** | **311** | **275** | **888** | **10,708** | **110** | **835** | **945** |
| **1999 Average** | **8** | **8,731** | **250** | **128** | **122** | **182** | **382** | **237** | **943** | **10,852** | **118** | **822** | **940** |
| **2000 Average** | **8** | **9,071** | **295** | **162** | **161** | **215** | **427** | **352** | **938** | **11,459** | **50** | **990** | **1,040** |
| **2001 Average** | **11** | **9,328** | **344** | **148** | **145** | **206** | **454** | **295** | **1,095** | **11,871** | **20** | **951** | **971** |
| **2002 Average** | **16** | **9,140** | **267** | **107** | **145** | **183** | **498** | **249** | **1,085** | **11,530** | **9** | **975** | **984** |
| **2003 Average** | **0** | **9,665** | **333** | **109** | **168** | **225** | **518** | **327** | **1,087** | **12,264** | **12** | **1,014** | **1,027** |
| **2004 Average** | **77** | **10,088** | **325** | **127** | **209** | **263** | **496** | **426** | **1,419** | **13,145** | **27** | **1,021** | **1,048** |
| **2005 Average** | **52** | **10,126** | **329** | **190** | **233** | **328** | **603** | **530** | **1,609** | **13,714** | **32** | **1,133** | **1,165** |
| **2006 Average** | **8** | **10,118** | **365** | **186** | **228** | **332** | **475** | **350** | **1,881** | **13,707** | **25** | **1,292** | **1,317** |
| **2007 Average** | **7** | **10,031** | **304** | **217** | **182** | **247** | **413** | **372** | **1,885** | **13,468** | **27** | **1,405** | **1,433** |
| **2008** January | 17 | 10,082 | 309 | 156 | 263 | 327 | 381 | 435 | 1,879 | 13,568 | 12 | 1,608 | 1,620 |
| February | 0 | 9,636 | 249 | 106 | 214 | 288 | 354 | 308 | 1,719 | 12,660 | 20 | 1,828 | 1,848 |
| March | 35 | 9,636 | 249 | 110 | 218 | 252 | 374 | 416 | 1,561 | 12,598 | 29 | 1,778 | 1,807 |
| April | 17 | 9,979 | 266 | 180 | 155 | 232 | 386 | 361 | 1,927 | 13,331 | 14 | 1,725 | 1,739 |
| May | 94 | 9,664 | 188 | 140 | 164 | 225 | 383 | 351 | 1,951 | 12,902 | 19 | 1,774 | 1,793 |
| June | 43 | 10,018 | 180 | 91 | 99 | 186 | 461 | 383 | 2,080 | 13,398 | 22 | 2,124 | 2,146 |
| July | 26 | 10,132 | 181 | 72 | 130 | 194 | 323 | 282 | 1,940 | 13,124 | 29 | 2,022 | 2,051 |
| August | 0 | 10,324 | 109 | 76 | 186 | 306 | 205 | 334 | 1,763 | 13,118 | 40 | 2,013 | 2,053 |
| September | 0 | 8,447 | 195 | 88 | 186 | 268 | 253 | 289 | 2,023 | 11,562 | 39 | 1,283 | 1,323 |
| October | 0 | 10,086 | 166 | 98 | 179 | 225 | 239 | 355 | 2,033 | 13,202 | 43 | 1,615 | 1,658 |
| November | 0 | 9,944 | 203 | 47 | 196 | 250 | 115 | 285 | 2,036 | 12,881 | 31 | 1,690 | 1,720 |
| December | 0 | 9,419 | 262 | 68 | 229 | 281 | 148 | 383 | 2,045 | 12,607 | 46 | 1,810 | 1,856 |
| **Average** | **19** | **9,783** | **213** | **103** | **185** | **253** | **302** | **349** | **1,913** | **12,915** | **29** | **1,773** | **1,802** |
| **2009** January | – | 9,852 | 368 | 89 | 210 | 239 | 236 | 424 | 1,965 | 13,173 | 36 | 1,890 | 1,927 |
| February | – | 9,205 | 327 | 69 | 195 | 211 | 252 | 372 | 1,754 | 12,190 | 30 | 1,792 | 1,822 |
| March | 221 | 9,441 | 268 | 92 | 209 | 233 | 263 | 384 | 1,793 | 12,474 | 30 | 1,807 | 1,838 |
| April | 130 | 9,406 | 166 | 90 | 108 | 133 | 227 | 396 | 1,555 | 11,973 | 27 | 1,874 | 1,900 |
| May | 34 | 8,931 | 206 | 66 | 103 | 160 | 244 | 387 | 1,601 | 11,596 | 53 | 1,962 | 2,015 |
| June | 90 | 9,172 | 244 | 65 | 68 | 87 | 218 | 384 | 1,731 | 11,902 | 57 | 1,906 | 1,963 |
| July | – | 9,227 | 191 | 115 | 98 | 118 | 230 | 286 | 1,886 | 12,053 | 31 | 2,317 | 2,348 |
| August | 16 | 8,883 | 166 | 92 | 62 | 89 | 304 | 263 | 1,447 | 11,243 | 35 | 2,084 | 2,119 |
| September | 32 | 9,223 | 205 | 91 | 94 | 116 | 142 | 326 | 1,618 | 11,721 | 42 | 2,063 | 2,105 |
| October | – | 8,566 | 177 | 84 | 142 | 167 | 161 | 303 | 1,397 | 10,856 | 72 | 2,151 | 2,223 |
| November | 35 | 8,709 | 163 | 71 | 206 | 231 | 149 | 282 | 1,474 | 11,080 | 46 | 1,983 | 2,029 |
| December | 26 | 8,133 | 217 | 55 | 212 | 230 | 232 | 307 | 1,312 | 10,487 | 65 | 1,931 | 1,996 |
| **Average** | **49** | **9,060** | **224** | **82** | **142** | **168** | **222** | **343** | **1,627** | **11,726** | **44** | **1,982** | **2,026** |
| **2010** January | R – | R 8,454 | R 429 | R 150 | R 191 | R 216 | R 179 | R 373 | R 1,433 | R 11,236 | 33 | R 1,851 | R 1,883 |
| February | NA | E 8,819 | E 401 | E 83 | E 191 | NA | E 204 | E 445 | NA | E 11,532 | E 33 | E 1,674 | E 1,707 |
| March | NA | E 9,017 | E 194 | E 66 | E 169 | NA | E 99 | E 414 | NA | E 11,419 | E 33 | E 1,620 | E 1,653 |
| **3-Month Average** | **NA** | **E 8,762** | **E 339** | **E 100** | **E 183** | **NA** | **E 159** | **E 410** | **NA** | **E 11,391** | **E 33** | **E 1,716** | **E 1,749** |
| **2009 3-Month Average** | **76** | **9,509** | **321** | **84** | **205** | **228** | **250** | **394** | **1,840** | **12,626** | **32** | **1,831** | **1,863** |
| **2008 3-Month Average** | **18** | **9,788** | **270** | **124** | **232** | **289** | **370** | **388** | **1,720** | **12,948** | **20** | **1,736** | **1,756** |

[a] Includes lease condensate.

[b] Liquefied petroleum gases.

[c] "SPR" is the Strategic Petroleum Reserve, which began in October 1977. Through 2003, includes crude oil imports by SPR only; beginning in 2004, includes crude oil imports by SPR, and crude oil imports into SPR by others.

[d] See Note 6, "Petroleum Data Discrepancies," at end of section.

[e] Through 2004, includes kerosene-type and naphtha-type jet fuel. Beginning in 2005, includes kerosene-type jet fuel only; naphtha-type jet fuel is included in "Other."

[f] Includes propylene.

[g] Finished motor gasoline. Through 1980, also includes motor gasoline blending components.

[h] Asphalt and road oil, finished aviation gasoline, gasoline blending components, kerosene, lubricants, pentanes plus, petrochemical feedstocks, petroleum coke, special naphthas, unfinished oils, waxes, other hydrocarbons and oxygenates, and miscellaneous products. Beginning in 2005, also includes naphtha-type jet fuel.

R=Revised. NA=Not available. – – =Not applicable. – =No data reported. E=Estimate.

Notes: • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Pages: • For all available data beginning in 1973, see http://www.eia.doe.gov/emeu/mer/petro.html. • For related information, see http://www.eia.doe.gov/oil_gas/petroleum/info_glance/petroleum.html.

Sources: • **1973-1975:** Bureau of Mines, Mineral Industry Surveys, *Petroleum Statement, Annual,* annual reports. • **1976-1980:** U.S. Energy Information Administration (EIA), Energy Data Reports, *Petroleum Statement, Annual,* annual reports. • **1981-2008:** EIA, *Petroleum Supply Annual,* annual reports. • **2009 and 2010:** EIA, *Petroleum Supply Monthly,* monthly reports; and, for the current two months, *Weekly Petroleum Status Report* data system and *Monthly Energy Review* data system calculations.

# Table 3.3c Petroleum Trade: Imports From OPEC Countries

(Thousand Barrels per Day)

| | Algeria | Angola[a] | Ecuador[b] | Iraq | Kuwait[c] | Libya | Nigeria | Saudi Arabia[c] | Vene-zuela | Other[d] | Total OPEC |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **1973 Average** | **136** | **( [a] )** | **48** | **4** | **47** | **164** | **459** | **486** | **1,135** | **514** | **2,993** |
| **1975 Average** | **282** | **( [a] )** | **57** | **2** | **16** | **232** | **762** | **715** | **702** | **832** | **3,601** |
| **1980 Average** | **488** | **( [a] )** | **27** | **28** | **27** | **554** | **857** | **1,261** | **481** | **577** | **4,300** |
| **1985 Average** | **187** | **( [a] )** | **67** | **46** | **21** | **4** | **293** | **168** | **605** | **439** | **1,830** |
| **1990 Average** | **280** | **( [a] )** | **49** | **518** | **86** | **0** | **800** | **1,339** | **1,025** | **199** | **4,296** |
| **1995 Average** | **234** | **( [a] )** | **( [b] )** | **0** | **218** | **0** | **627** | **1,344** | **1,480** | **98** | **4,002** |
| **1996 Average** | **256** | **( [a] )** | **( [b] )** | **1** | **236** | **0** | **617** | **1,363** | **1,676** | **62** | **4,211** |
| **1997 Average** | **285** | **( [a] )** | **( [b] )** | **89** | **253** | **0** | **698** | **1,407** | **1,773** | **64** | **4,569** |
| **1998 Average** | **290** | **( [a] )** | **( [b] )** | **336** | **301** | **0** | **696** | **1,491** | **1,719** | **73** | **4,905** |
| **1999 Average** | **259** | **( [a] )** | **( [b] )** | **725** | **248** | **0** | **657** | **1,478** | **1,493** | **93** | **4,953** |
| **2000 Average** | **225** | **( [a] )** | **( [b] )** | **620** | **272** | **0** | **896** | **1,572** | **1,546** | **72** | **5,203** |
| **2001 Average** | **278** | **( [a] )** | **( [b] )** | **795** | **250** | **0** | **885** | **1,662** | **1,553** | **105** | **5,528** |
| **2002 Average** | **264** | **( [a] )** | **( [b] )** | **459** | **228** | **0** | **621** | **1,552** | **1,398** | **83** | **4,605** |
| **2003 Average** | **382** | **( [a] )** | **( [b] )** | **481** | **220** | **0** | **867** | **1,774** | **1,376** | **61** | **5,162** |
| **2004 Average** | **452** | **( [a] )** | **( [b] )** | **656** | **250** | **20** | **1,140** | **1,558** | **1,554** | **70** | **5,701** |
| **2005 Average** | **478** | **( [a] )** | **( [b] )** | **531** | **243** | **56** | **1,166** | **1,537** | **1,529** | **47** | **5,587** |
| **2006 Average** | **657** | **( [a] )** | **( [b] )** | **553** | **185** | **87** | **1,114** | **1,463** | **1,419** | **38** | **5,517** |
| **2007 Average** | **670** | **508** | **( [b] )** | **484** | **181** | **117** | **1,134** | **1,485** | **1,361** | **39** | **5,980** |
| **2008** January | 651 | 578 | 260 | 543 | 239 | 105 | 1,191 | 1,503 | 1,276 | 70 | 6,415 |
| February | 380 | 351 | 186 | 780 | 272 | 87 | 1,025 | 1,608 | 1,131 | 14 | 5,834 |
| March | 441 | 388 | 238 | 773 | 203 | 124 | 1,174 | 1,542 | 1,033 | 18 | 5,934 |
| April | 632 | 591 | 170 | 679 | 181 | 133 | 1,221 | 1,462 | 1,189 | 4 | 6,262 |
| May | 620 | 476 | 162 | 583 | 263 | 116 | 918 | 1,604 | 1,171 | 19 | 5,931 |
| June | 492 | 649 | 184 | 693 | 183 | 117 | 1,016 | 1,464 | 1,215 | 43 | 6,054 |
| July | 456 | 652 | 227 | 696 | 122 | 128 | 822 | 1,690 | 1,329 | 5 | 6,125 |
| August | 530 | 495 | 298 | 663 | 203 | 113 | 1,166 | 1,573 | 1,305 | 47 | 6,391 |
| September | 657 | 416 | 233 | 543 | 110 | 63 | 591 | 1,431 | 1,051 | 32 | 5,127 |
| October | 558 | 539 | 200 | 577 | 240 | 132 | 963 | 1,487 | 1,162 | 16 | 5,875 |
| November | 677 | 450 | 229 | 476 | 292 | 79 | 827 | 1,514 | 1,236 | 20 | 5,799 |
| December | 484 | 562 | 258 | 519 | 219 | 43 | 939 | 1,471 | 1,159 | 27 | 5,679 |
| **Average** | **548** | **513** | **221** | **627** | **210** | **103** | **988** | **1,529** | **1,189** | **26** | **5,954** |
| **2009** January | 720 | 543 | 278 | 568 | 242 | 64 | 509 | 1,362 | 1,353 | 38 | 5,676 |
| February | 372 | 671 | 243 | 554 | 251 | 60 | 498 | 1,115 | 1,139 | 51 | 4,956 |
| March | 463 | 657 | 215 | 587 | 181 | 61 | 891 | 967 | 1,106 | 88 | 5,215 |
| April | 612 | 462 | 237 | 484 | 105 | 118 | 733 | 1,021 | 891 | 90 | 4,754 |
| May | 272 | 505 | 193 | 263 | 93 | 92 | 600 | 1,079 | 1,341 | 33 | 4,471 |
| June | 458 | 447 | 154 | 374 | 179 | 103 | 830 | 959 | 1,237 | 75 | 4,814 |
| July | 329 | 320 | 122 | 365 | 261 | 59 | 879 | 1,153 | 959 | 176 | 4,623 |
| August | 551 | 364 | 131 | 500 | 148 | 68 | 917 | 766 | 1,070 | 51 | 4,567 |
| September | 641 | 414 | 153 | 428 | 246 | 54 | 894 | 1,045 | 1,146 | – | 5,021 |
| October | 491 | 450 | 180 | 499 | 104 | 91 | 869 | 943 | 955 | – | 4,581 |
| November | 400 | 431 | 155 | 458 | 287 | 140 | 980 | 848 | 890 | – | 4,589 |
| December | 544 | 278 | 86 | 325 | 160 | 23 | 1,029 | 893 | 849 | – | 4,187 |
| **Average** | **488** | **460** | **178** | **450** | **187** | **78** | **804** | **1,012** | **1,078** | **50** | **4,786** |
| **2010** January | 498 | 280 | 215 | 506 | 77 | 40 | 1,013 | 963 | 911 | – | 4,503 |

[a] Angola joined OPEC in January 2007. For 1973-2006, Angola is included in "Total Non-OPEC" on Table 3.3d.

[b] Ecuador was a member of OPEC from 1973-1992, and rejoined OPEC in November 2007. For 1993-2007, Ecuador is included in "Total Non-OPEC" on Table 3.3d.

[c] Imports from the Neutral Zone are reported as originating in either Saudi Arabia or Kuwait depending on the country reported to U.S. Customs.

[d] For all years, includes Iran, Qatar, and United Arab Emirates. For 1973-2008, also includes Indonesia; and for 1975-1994, also includes Gabon.

– =No data reported.

Notes: • See "Organization of the Petroleum Exporting Countries (OPEC)" in Glossary. Petroleum imports not classified as "OPEC" on this table are included on Table 3.3d. • The country of origin for petroleum products may not be the country of origin for the crude oil from which the products were produced. For example, refined products imported from West European refining areas may have been produced from Middle East crude oil. • Includes imports for the Strategic Petroleum Reserve, which began in October 1977. • Totals may not equal sum of components due to independent rounding. • U.S. geographic coverage is the 50 States and the District of Columbia.

Web Pages: • For all available data beginning in 1973, see http://www.eia.doe.gov/emeu/mer/petro.html. • For related information, see http://www.eia.doe.gov/oil_gas/petroleum/info_glance/petroleum.html.

Sources: • **1973-1975:** Bureau of Mines, Mineral Industry Surveys, *Petroleum Statement, Annual,* annual reports. • **1976-1980:** U.S. Energy Information Administration (EIA), Energy Data Reports, *Petroleum Statement, Annual,* annual reports. • **1981-2008:** EIA, *Petroleum Supply Annual,* annual reports. • **2009 and 2010:** EIA, *Petroleum Supply Monthly,* monthly reports.

# Table 3.3d Petroleum Trade: Imports From Non-OPEC Countries

(Thousand Barrels per Day)

| | Brazil | Canada | Colombia | Mexico | Nether-lands | Norway | Russia[a] | United Kingdom | U.S. Virgin Islands | Other | Total Non-OPEC |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **1973 Average** | **9** | **1,325** | **9** | **16** | **53** | **1** | **26** | **15** | **329** | **1,480** | **3,263** |
| **1975 Average** | **5** | **846** | **9** | **71** | **19** | **17** | **14** | **14** | **406** | **1,052** | **2,454** |
| **1980 Average** | **3** | **455** | **4** | **533** | **2** | **144** | **1** | **176** | **388** | **903** | **2,609** |
| **1985 Average** | **61** | **770** | **23** | **816** | **58** | **32** | **8** | **310** | **247** | **913** | **3,237** |
| **1990 Average** | **49** | **934** | **182** | **755** | **55** | **102** | **45** | **189** | **282** | **1,128** | **3,721** |
| **1995 Average** | **8** | **1,332** | **219** | **1,068** | **15** | **273** | **25** | **383** | **278** | **1,233** | **4,833** |
| **1996 Average** | **9** | **1,424** | **234** | **1,244** | **19** | **313** | **25** | **308** | **313** | **1,377** | **5,267** |
| **1997 Average** | **5** | **1,563** | **271** | **1,385** | **25** | **309** | **13** | **226** | **300** | **1,495** | **5,593** |
| **1998 Average** | **26** | **1,598** | **354** | **1,351** | **31** | **236** | **24** | **250** | **293** | **1,640** | **5,803** |
| **1999 Average** | **26** | **1,539** | **468** | **1,324** | **27** | **304** | **89** | **365** | **280** | **1,478** | **5,899** |
| **2000 Average** | **51** | **1,807** | **342** | **1,373** | **30** | **343** | **72** | **366** | **291** | **1,581** | **6,257** |
| **2001 Average** | **82** | **1,828** | **296** | **1,440** | **43** | **341** | **90** | **324** | **268** | **1,631** | **6,343** |
| **2002 Average** | **116** | **1,971** | **260** | **1,547** | **66** | **393** | **210** | **478** | **236** | **1,649** | **6,925** |
| **2003 Average** | **108** | **2,072** | **195** | **1,623** | **87** | **270** | **254** | **440** | **288** | **1,766** | **7,103** |
| **2004 Average** | **104** | **2,138** | **176** | **1,665** | **101** | **244** | **298** | **380** | **330** | **2,008** | **7,444** |
| **2005 Average** | **156** | **2,181** | **196** | **1,662** | **151** | **233** | **410** | **396** | **328** | **2,413** | **8,127** |
| **2006 Average** | **193** | **2,353** | **155** | **1,705** | **174** | **196** | **369** | **272** | **328** | **2,446** | **8,190** |
| **2007 Average** | **200** | **2,455** | **155** | **1,532** | **128** | **142** | **414** | **277** | **346** | **1,839** | **7,489** |
| **2008** January | 225 | 2,654 | 198 | 1,308 | 94 | 86 | 392 | 213 | 383 | 1,600 | 7,153 |
| February | 172 | 2,530 | 240 | 1,328 | 141 | 100 | 451 | 155 | 351 | 1,357 | 6,826 |
| March | 191 | 2,563 | 165 | 1,359 | 129 | 80 | 402 | 218 | 289 | 1,268 | 6,664 |
| April | 235 | 2,582 | 170 | 1,382 | 185 | 137 | 402 | 229 | 340 | 1,406 | 7,069 |
| May | 338 | 2,367 | 278 | 1,220 | 199 | 183 | 460 | 237 | 340 | 1,347 | 6,971 |
| June | 315 | 2,430 | 180 | 1,256 | 262 | 122 | 764 | 286 | 314 | 1,416 | 7,344 |
| July | 275 | 2,417 | 192 | 1,292 | 152 | 94 | 572 | 187 | 294 | 1,524 | 6,999 |
| August | 208 | 2,247 | 257 | 1,401 | 143 | 84 | 490 | 222 | 298 | 1,378 | 6,727 |
| September | 271 | 2,399 | 149 | 1,003 | 197 | 74 | 433 | 281 | 345 | 1,282 | 6,435 |
| October | 354 | 2,585 | 200 | 1,434 | 176 | 70 | 394 | 386 | 267 | 1,463 | 7,328 |
| November | 286 | 2,534 | 176 | 1,406 | 138 | 114 | 445 | 245 | 338 | 1,403 | 7,082 |
| December | 225 | 2,604 | 198 | 1,228 | 203 | 80 | 382 | 176 | 289 | 1,543 | 6,928 |
| **Average** | **258** | **2,493** | **200** | **1,302** | **168** | **102** | **465** | **236** | **320** | **1,416** | **6,961** |
| **2009** January | 450 | 2,544 | 269 | 1,430 | 127 | 90 | 516 | 147 | 367 | 1,556 | 7,496 |
| February | 381 | 2,515 | 241 | 1,364 | 186 | 74 | 478 | 285 | 333 | 1,379 | 7,235 |
| March | 338 | 2,438 | 283 | 1,199 | 141 | 192 | 650 | 208 | 264 | 1,546 | 7,259 |
| April | 278 | 2,281 | 347 | 1,289 | 117 | 112 | 779 | 424 | 290 | 1,301 | 7,219 |
| May | 386 | 2,206 | 243 | 1,186 | 150 | 171 | 813 | 250 | 313 | 1,407 | 7,125 |
| June | 299 | 2,529 | 313 | 1,183 | 157 | 173 | 578 | 268 | 268 | 1,320 | 7,088 |
| July | 392 | 2,639 | 305 | 1,316 | 118 | 119 | 637 | 188 | 273 | 1,443 | 7,429 |
| August | 275 | 2,524 | 269 | 1,159 | 160 | 52 | 512 | 225 | 223 | 1,277 | 6,676 |
| September | 268 | 2,356 | 301 | 1,271 | 122 | 59 | 486 | 295 | 280 | 1,262 | 6,700 |
| October | 174 | 2,360 | 292 | 1,136 | 84 | 97 | 385 | 266 | 215 | 1,265 | 6,275 |
| November | 268 | 2,527 | 237 | 1,083 | 227 | 110 | 425 | 190 | 205 | 1,218 | 6,491 |
| December | 184 | 2,649 | 231 | 1,204 | 99 | 65 | 385 | 199 | 289 | 996 | 6,300 |
| **Average** | **307** | **2,464** | **278** | **1,234** | **140** | **110** | **554** | **245** | **276** | **1,331** | **6,939** |
| **2010** January | 353 | 2,593 | 322 | 1,131 | 116 | 126 | 463 | 282 | 308 | 1,039 | 6,733 |

[a] Through 1992, may include imports from republics other than Russia in the former U.S.S.R. See "Union of Soviet Socialist Republics (U.S.S.R.)" in Glossary.

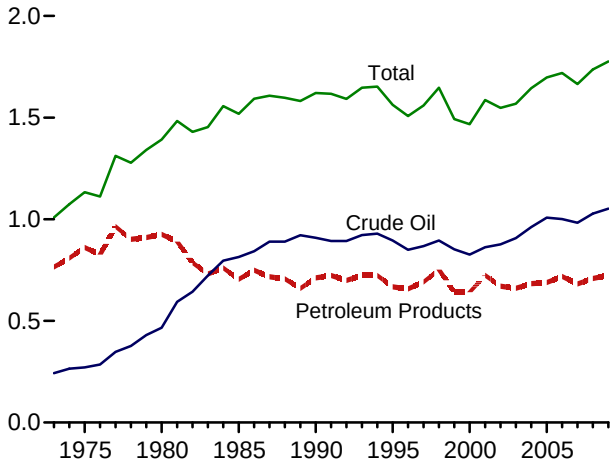
Notes: • See "Organization of the Petroleum Exporting Countries (OPEC)" in Glossary for membership. Petroleum imports not classified as "OPEC" on Table 3.3c are included on this table. • The country of origin for petroleum products may not be the country of origin for the crude oil from which the products were produced. For example, refined products imported from West European refining areas may have been produced from Middle East crude oil. • Includes imports for the Strategic Petroleum Reserve, which began in October 1977. • Totals may not equal sum of components due to independent rounding. • U.S. geographic coverage is the 50 States and the District of Columbia.

Web Pages: • For all available data beginning in 1973, see http://www.eia.doe.gov/emeu/mer/petro.html. • For related information, see http://www.eia.doe.gov/oil_gas/petroleum/info_glance/petroleum.html.

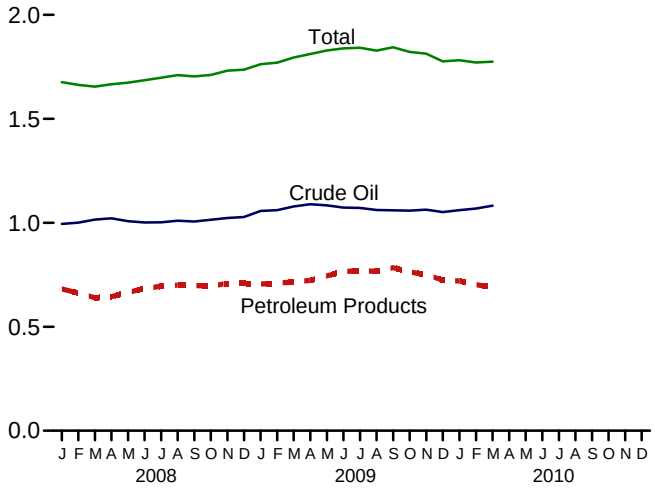
Sources: • **1973-1975:** Bureau of Mines, Mineral Industry Surveys, *Petroleum Statement, Annual,* annual reports. • **1976-1980:** U.S. Energy Information Administration (EIA), Energy Data Reports, *Petroleum Statement, Annual,* annual reports. • **1981-2008:** EIA, *Petroleum Supply Annual,* annual reports. • **2009 and 2010:** EIA, *Petroleum Supply Monthly,* monthly reports.

## Figure 3.4 Petroleum Stocks
(Billion Barrels, Except as Noted)

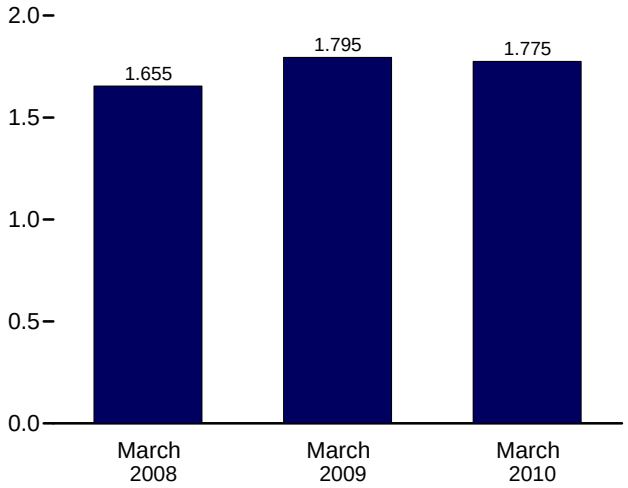
Overview, 1973-2009



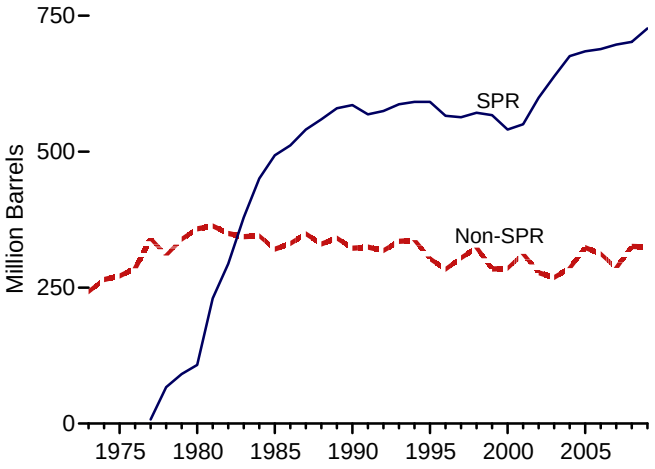

Overview, Monthly



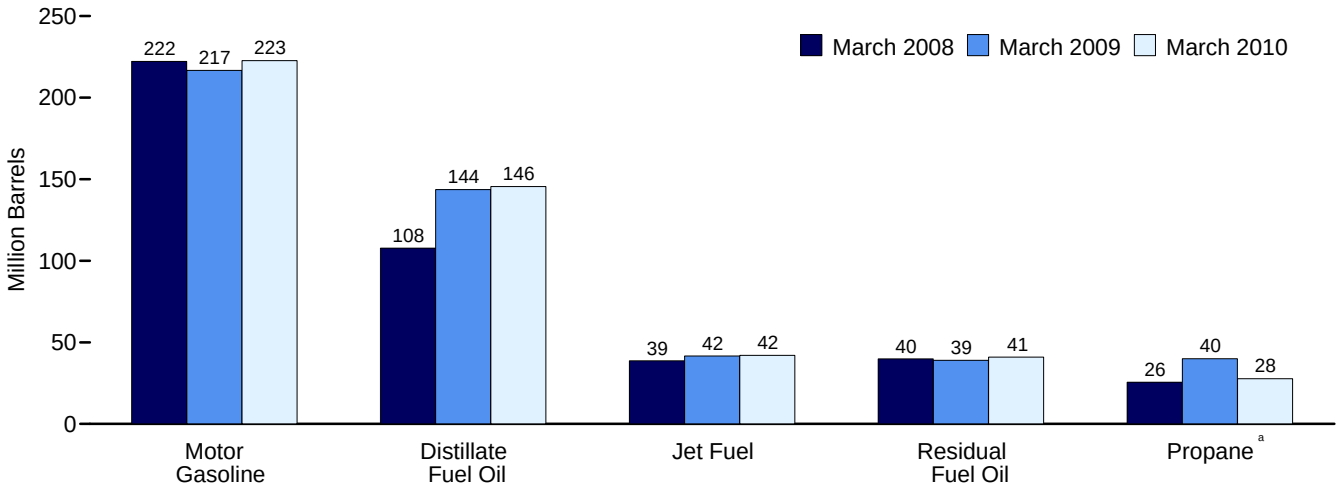

Total Stocks (Crude Oil and Petroleum Products)




SPR and Non-SPR Crude Oil Stocks, 1973-2009




Selected Products




[a] Includes propylene.
Notes: • SPR= Strategic Petroleum Reserve. • Stocks are at end of period.
Web Page: http://www.eia.doe.gov/emeu/mer/petro.html.
Source: Table 3.4.

# Table 3.4 Petroleum Stocks

(Million Barrels)

| | Crude Oil[a] | | | Distillate Fuel Oil[f,g] | Jet Fuel[h] | LPG[b] | | Motor Gasoline[f,j] | Residual Fuel Oil[f] | Other[k] | Total[f] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | SPR[c] | Non-SPR[d,e,f] | Total[e,f] | | | Propane[f,i] | Total[f] | | | | |
| **1973 Year** | **– –** | **242** | **242** | **196** | **29** | **65** | **99** | **209** | **53** | **179** | **1,008** |
| **1975 Year** | **– –** | **271** | **271** | **209** | **30** | **82** | **125** | **235** | **74** | **188** | **1,133** |
| **1980 Year** | **108** | **358** | **466** | **205** | **42** | **65** | **120** | **261** | **92** | **205** | **1,392** |
| **1985 Year** | **493** | **321** | **814** | **144** | **40** | **39** | **74** | **223** | **50** | **174** | **1,519** |
| **1990 Year** | **586** | **323** | **908** | **132** | **52** | **49** | **98** | **220** | **49** | **162** | **1,621** |
| **1995 Year** | **592** | **303** | **895** | **130** | **40** | **43** | **93** | **202** | **37** | **165** | **1,563** |
| **1996 Year** | **566** | **284** | **850** | **127** | **40** | **43** | **86** | **195** | **46** | **164** | **1,507** |
| **1997 Year** | **563** | **305** | **868** | **138** | **44** | **44** | **89** | **210** | **40** | **169** | **1,560** |
| **1998 Year** | **571** | **324** | **895** | **156** | **45** | **65** | **115** | **216** | **45** | **176** | **1,647** |
| **1999 Year** | **567** | **284** | **852** | **125** | **41** | **43** | **89** | **193** | **36** | **157** | **1,493** |
| **2000 Year** | **541** | **286** | **826** | **118** | **45** | **41** | **83** | **196** | **36** | **164** | **1,468** |
| **2001 Year** | **550** | **312** | **862** | **145** | **42** | **66** | **121** | **210** | **41** | **166** | **1,586** |
| **2002 Year** | **599** | **278** | **877** | **134** | **39** | **53** | **106** | **209** | **31** | **152** | **1,548** |
| **2003 Year** | **638** | **269** | **907** | **137** | **39** | **50** | **94** | **207** | **38** | **147** | **1,568** |
| **2004 Year** | **676** | **286** | **961** | **126** | **40** | **55** | **104** | **218** | **42** | **153** | **1,645** |
| **2005 Year** | **685** | **324** | **1,008** | **136** | **42** | **57** | **109** | **208** | **37** | **157** | **1,698** |
| **2006 Year** | **689** | **312** | **1,001** | **144** | **39** | **62** | **113** | **212** | **42** | **169** | **1,720** |
| **2007 Year** | **697** | **286** | **983** | **134** | **39** | **52** | **96** | **218** | **39** | **156** | **1,665** |
| **2008** January | 698 | 296 | 995 | 131 | 41 | 39 | 77 | 233 | 39 | 160 | 1,677 |
| February | 699 | 302 | 1,001 | 118 | 40 | 29 | 65 | 235 | 39 | 165 | 1,664 |
| March | 700 | 315 | 1,015 | 108 | 39 | 26 | 64 | 222 | 40 | 167 | 1,655 |
| April | 701 | 320 | 1,021 | 107 | 39 | 30 | 77 | 211 | 39 | 171 | 1,666 |
| May | 704 | 304 | 1,008 | 114 | 40 | 38 | 92 | 208 | 40 | 172 | 1,674 |
| June | 706 | 296 | 1,002 | 122 | 40 | 43 | 103 | 211 | 41 | 168 | 1,686 |
| July | 707 | 295 | 1,002 | 131 | 41 | 48 | 113 | 207 | 37 | 167 | 1,698 |
| August | 707 | 303 | 1,010 | 133 | 41 | 54 | 127 | 196 | 39 | 165 | 1,711 |
| September | 702 | 304 | 1,006 | 128 | 38 | 59 | 137 | 190 | 39 | 167 | 1,704 |
| October | 702 | 313 | 1,014 | 128 | 38 | 60 | 133 | 195 | 39 | 163 | 1,711 |
| November | 702 | 322 | 1,023 | 136 | 38 | 61 | 126 | 204 | 39 | 166 | 1,732 |
| **December** | **702** | **326** | **1,028** | **146** | **38** | **55** | **113** | **214** | **36** | **162** | **1,737** |
| **2009** January | 704 | 353 | 1,057 | 143 | 41 | 46 | 96 | 218 | 35 | 173 | 1,762 |
| February | 706 | 355 | 1,060 | 146 | 43 | 40 | 89 | 216 | 39 | 177 | 1,770 |
| March | 713 | 366 | 1,079 | 144 | 42 | 40 | 90 | 217 | 39 | 185 | 1,795 |
| April | 719 | 370 | 1,089 | 148 | 43 | 44 | 99 | 213 | 35 | 185 | 1,812 |
| May | 722 | 362 | 1,084 | 155 | 43 | 55 | 116 | 206 | 39 | 187 | 1,829 |
| June | 724 | 349 | 1,073 | 160 | 44 | 65 | 132 | 214 | 37 | 179 | 1,839 |
| July | 724 | 347 | 1,071 | 161 | 46 | 70 | 143 | 210 | 35 | 175 | 1,842 |
| August | 724 | 337 | 1,061 | 165 | 45 | 71 | 152 | 206 | 33 | 166 | 1,828 |
| September | 725 | 335 | 1,060 | 172 | 46 | 75 | 156 | 212 | 35 | 164 | 1,845 |
| October | 725 | 333 | 1,058 | 170 | 43 | 73 | 146 | 209 | 35 | 161 | 1,822 |
| November | 726 | 337 | 1,063 | 171 | 42 | 64 | 124 | 218 | 37 | 158 | 1,814 |
| **December** | **727** | **325** | **1,052** | **165** | **43** | **51** | **103** | **223** | **38** | **153** | **1,776** |
| **2010** January | 727 | R 334 | R 1,061 | R 163 | R 44 | R 35 | 80 | R 232 | 40 | R 162 | R 1,781 |
| February | E 727 | E 342 | E 1,069 | E 151 | E 43 | E 26 | RF 68 | E 231 | E 39 | E 169 | E 1,771 |
| March | E 727 | E 356 | E 1,082 | E 146 | E 42 | E 28 | F 69 | E 223 | E 41 | E 173 | E 1,775 |

[a] Includes lease condensate.

[b] Liquefied petroleum gases.

[c] "SPR" is the Strategic Petroleum Reserve, which began in October 1977. Crude oil stocks in the SPR include non-U.S. stocks held under foreign or commercial storage agreements.

[d] All crude oil stocks other than those in "SPR."

[e] Beginning in 1981, includes stocks of Alaskan crude oil in transit. See Note 5, "Stocks of Alaskan Crude Oil," at end of section.

[f] See Note 4, "Petroleum New Stock Basis," at end of section.

[g] Excludes stocks in the Northeast Heating Oil Reserve. Beginning in 2009, includes renewable diesel fuel (including biodiesel) blended into distillate fuel oil.

[h] Through 2004, includes kerosene-type and naphtha-type jet fuel. Beginning in 2005, includes kerosene-type jet fuel only; naphtha-type jet fuel is included in "Other."

[i] Includes propylene.

[j] Includes finished motor gasoline, motor gasoline blending components, and gasohol; excludes oxygenates.

[k] Asphalt and road oil, aviation gasoline, aviation gasoline blending components, kerosene, lubricants, pentanes plus, petrochemical feedstocks, petroleum coke, special naphthas, unfinished oils, waxes, miscellaneous products, oxygenates, renewable fuels, and other hydrocarbons. Beginning in 2005, also includes naphtha-type jet fuel.

R=Revised. E=Estimate. F=Forecast. – –=Not applicable.

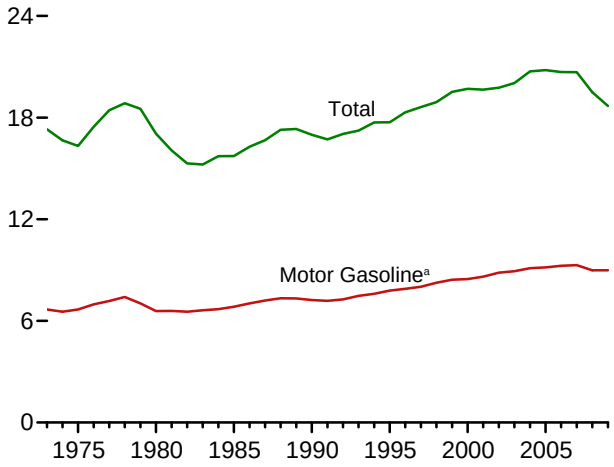
Notes: • Stocks are at end of period. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Pages: • For all available data beginning in 1973, see http://www.eia.doe.gov/emeu/mer/petro.html. • For related information, see http://www.eia.doe.gov/oil_gas/petroleum/info_glance/petroleum.html.

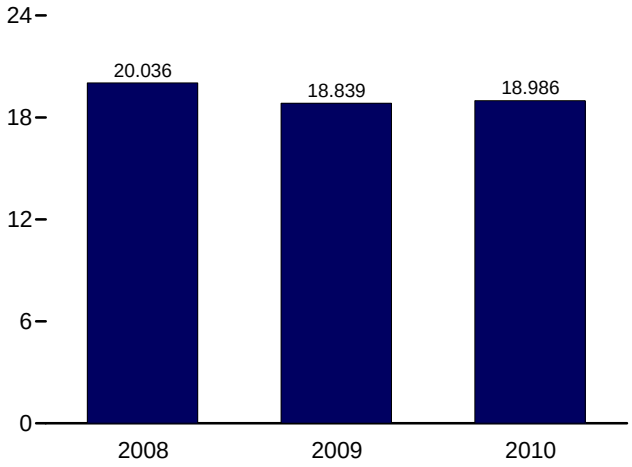
Sources: • **1973-1975:** Bureau of Mines, Mineral Industry Surveys, *Petroleum Statement, Annual,* annual reports. • **1976-1980:** U.S. Energy Information Administration (EIA), Energy Data Reports, *Petroleum Statement, Annual,* annual reports. • **1981-2008:** *Petroleum Supply Annual,* annual reports. • **2009 and 2010:** EIA, *Petroleum Supply Monthly,* monthly reports; and, for the current two months, *Weekly Petroleum Status Report* data system, Short-Term Integrated Forecasting System, and *Monthly Energy Review* data system calculations.

## Figure 3.5 Petroleum Products Supplied by Type
(Million Barrels per Day)

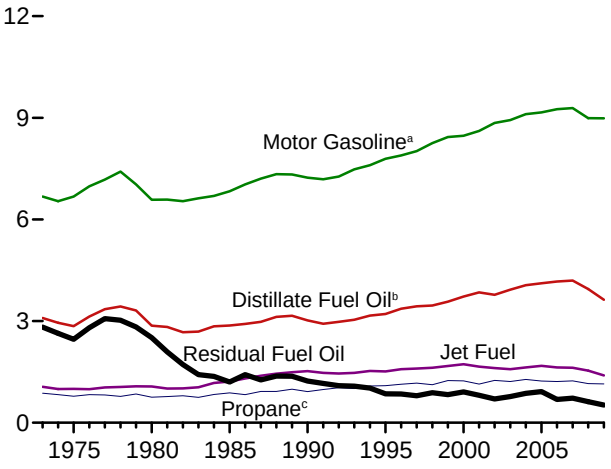
Total and Motor Gasoline, 1973-2009



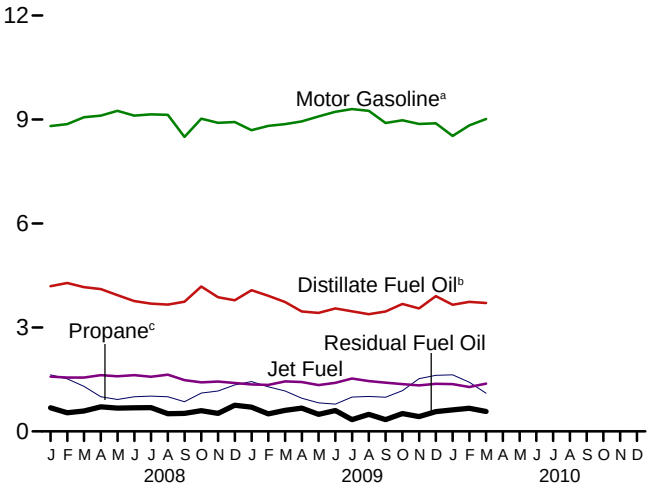

Total, January-March



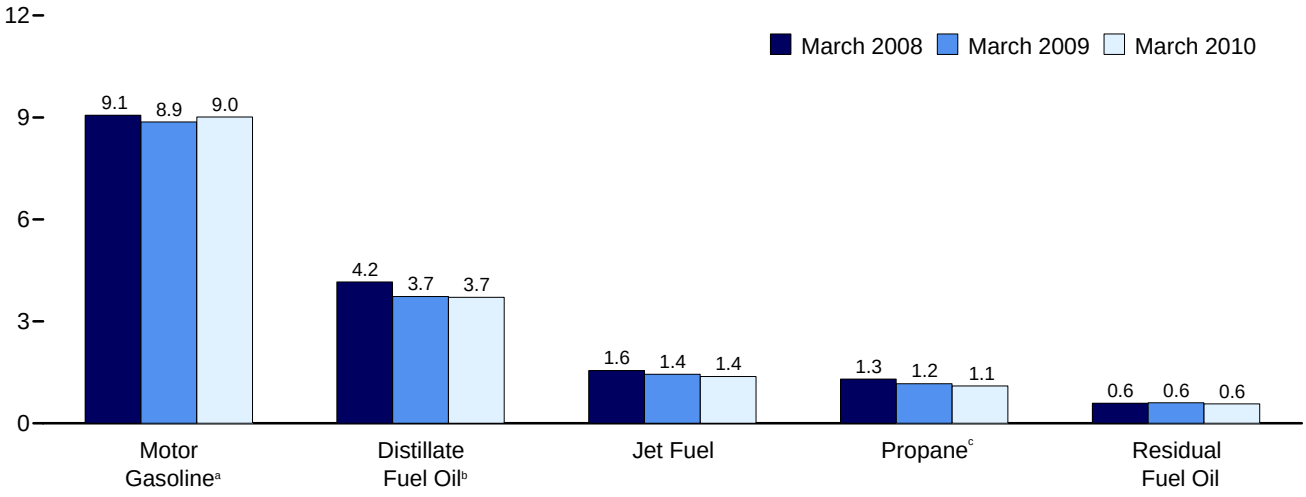

Selected Products,1973-2009




Selected Products, Monthly




Selected Products




[a] Beginning in 1993, includes fuel ethanol blended into motor gasoline.
[b] Beginning in 2009, includes renewable diesel fuel (including biodiesel) blended into distillate fuel oil.
[c] Includes propylene.

Note: SPR= Strategic Petroleum Reserve.
Web Page: http://www.eia.doe.gov/emeu/mer/petro.html.
Source: Table 3.5.

# Table 3.5 Petroleum Products Supplied by Type

(Thousand Barrels per Day)

| | Asphalt and Road Oil | Aviation Gasoline | Distillate Fuel Oil[b] | Jet Fuel[c] | Kero-sene | LPG[a] | | Lubri-cants | Motor Gasoline[e] | Petro-leum Coke | Residual Fuel Oil | Other[f] | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Propane[d] | Total | | | | | | |
| **1973 Average** | **522** | **45** | **3,092** | **1,059** | **216** | **872** | **1,449** | **162** | **6,674** | **261** | **2,822** | **1,005** | **17,308** |
| **1975 Average** | **419** | **39** | **2,851** | **1,001** | **159** | **783** | **1,333** | **137** | **6,675** | **247** | **2,462** | **1,001** | **16,322** |
| **1980 Average** | **396** | **35** | **2,866** | **1,068** | **158** | **754** | **1,469** | **159** | **6,579** | **237** | **2,508** | **1,581** | **17,056** |
| **1985 Average** | **425** | **27** | **2,868** | **1,218** | **114** | **883** | **1,599** | **145** | **6,831** | **264** | **1,202** | **1,032** | **15,726** |
| **1990 Average** | **483** | **24** | **3,021** | **1,522** | **43** | **917** | **1,556** | **164** | **7,235** | **339** | **1,229** | **1,373** | **16,988** |
| **1995 Average** | **486** | **21** | **3,207** | **1,514** | **54** | **1,096** | **1,899** | **156** | **7,789** | **365** | **852** | **1,381** | **17,725** |
| **1996 Average** | **484** | **20** | **3,365** | **1,578** | **62** | **1,136** | **2,012** | **151** | **7,891** | **379** | **848** | **1,518** | **18,309** |
| **1997 Average** | **505** | **22** | **3,435** | **1,599** | **66** | **1,170** | **2,038** | **160** | **8,017** | **377** | **797** | **1,605** | **18,620** |
| **1998 Average** | **521** | **19** | **3,461** | **1,622** | **78** | **1,120** | **1,952** | **168** | **8,253** | **447** | **887** | **1,508** | **18,917** |
| **1999 Average** | **547** | **21** | **3,572** | **1,673** | **73** | **1,246** | **2,195** | **169** | **8,431** | **477** | **830** | **1,532** | **19,519** |
| **2000 Average** | **525** | **20** | **3,722** | **1,725** | **67** | **1,235** | **2,231** | **166** | **8,472** | **406** | **909** | **1,458** | **19,701** |
| **2001 Average** | **519** | **19** | **3,847** | **1,655** | **72** | **1,142** | **2,044** | **153** | **8,610** | **437** | **811** | **1,481** | **19,649** |
| **2002 Average** | **512** | **18** | **3,776** | **1,614** | **43** | **1,248** | **2,163** | **151** | **8,848** | **463** | **700** | **1,474** | **19,761** |
| **2003 Average** | **503** | **16** | **3,927** | **1,578** | **55** | **1,215** | **2,074** | **140** | **8,935** | **455** | **772** | **1,579** | **20,034** |
| **2004 Average** | **537** | **17** | **4,058** | **1,630** | **64** | **1,276** | **2,132** | **141** | **9,105** | **524** | **865** | **1,657** | **20,731** |
| **2005 Average** | **546** | **19** | **4,118** | **1,679** | **70** | **1,229** | **2,030** | **141** | **9,159** | **515** | **920** | **1,605** | **20,802** |
| **2006 Average** | **521** | **18** | **4,169** | **1,633** | **54** | **1,215** | **2,052** | **137** | **9,253** | **522** | **689** | **1,640** | **20,687** |
| **2007 Average** | **494** | **17** | **4,196** | **1,622** | **32** | **1,235** | **2,085** | **142** | **9,286** | **490** | **723** | **1,593** | **20,680** |
| **2008** January | 354 | 13 | 4,192 | 1,581 | 14 | 1,630 | 2,399 | 137 | 8,810 | 501 | 683 | 1,564 | 20,247 |
| February | 301 | 12 | 4,281 | 1,553 | 29 | 1,514 | 2,320 | 131 | 8,866 | 425 | 539 | 1,570 | 20,029 |
| March | 295 | 16 | 4,161 | 1,552 | 25 | 1,301 | 2,166 | 144 | 9,066 | 473 | 589 | 1,345 | 19,831 |
| April | 360 | 17 | 4,106 | 1,622 | 1 | 1,001 | 1,860 | 145 | 9,112 | 482 | 707 | 1,403 | 19,815 |
| May | 461 | 19 | 3,931 | 1,590 | 7 | 919 | 1,845 | 143 | 9,251 | 456 | 673 | 1,422 | 19,798 |
| June | 570 | 16 | 3,763 | 1,623 | 5 | 998 | 1,914 | 138 | 9,110 | 451 | 683 | 1,405 | 19,678 |
| July | 556 | 16 | 3,688 | 1,574 | -1 | 1,017 | 1,939 | 139 | 9,150 | 538 | 684 | 1,274 | 19,557 |
| August | 517 | 18 | 3,659 | 1,639 | 3 | 1,000 | 1,915 | 157 | 9,134 | 471 | 511 | 1,249 | 19,272 |
| September | 531 | 16 | 3,740 | 1,478 | 12 | 857 | 1,429 | 97 | 8,497 | 353 | 520 | 1,167 | 17,839 |
| October | 465 | 12 | 4,182 | 1,417 | 10 | 1,106 | 1,832 | 146 | 9,024 | 466 | 597 | 1,547 | 19,698 |
| November | 314 | 15 | 3,872 | 1,440 | 20 | 1,167 | 1,899 | 91 | 8,904 | 438 | 521 | 1,540 | 19,052 |
| December | 271 | 14 | 3,783 | 1,395 | 47 | 1,343 | 1,931 | 104 | 8,927 | 503 | 753 | 1,414 | 19,142 |
| **Average** | **417** | **15** | **3,945** | **1,539** | **14** | **1,154** | **1,954** | **131** | **8,989** | **464** | **622** | **1,408** | **19,498** |
| **2009** January | 230 | 17 | 4,075 | 1,357 | 36 | 1,438 | 2,166 | 111 | 8,690 | 430 | 700 | 1,313 | 19,125 |
| February | 271 | 7 | 3,915 | 1,341 | 39 | 1,286 | 2,028 | 99 | 8,816 | 422 | 506 | 1,263 | 18,706 |
| March | 337 | 11 | 3,732 | 1,441 | 19 | 1,165 | 2,019 | 112 | 8,866 | 420 | 605 | 1,110 | 18,672 |
| April | 262 | 18 | 3,460 | 1,424 | 14 | 958 | 1,872 | 131 | 8,948 | 500 | 673 | 1,169 | 18,471 |
| May | 394 | 13 | 3,421 | 1,338 | 14 | 823 | 1,751 | 102 | 9,087 | 503 | 490 | 1,061 | 18,176 |
| June | 524 | 18 | 3,550 | 1,403 | 11 | 785 | 1,662 | 137 | 9,224 | 536 | 600 | 1,097 | 18,762 |
| July | 412 | 19 | 3,464 | 1,527 | 1 | 989 | 1,858 | 114 | 9,300 | 371 | 338 | 1,368 | 18,771 |
| August | 534 | 16 | 3,383 | 1,450 | 6 | 1,011 | 1,889 | 141 | 9,250 | 409 | 493 | 1,160 | 18,732 |
| September | 464 | 19 | 3,459 | 1,404 | -1 | 987 | 1,875 | 123 | 8,897 | 472 | 341 | 1,309 | 18,362 |
| October | 368 | 11 | 3,677 | 1,364 | 17 | 1,173 | 2,143 | 123 | 8,978 | 349 | 516 | 1,180 | 18,727 |
| November | 285 | 9 | 3,549 | 1,326 | 23 | 1,520 | 2,485 | 109 | 8,871 | 375 | 425 | 1,093 | 18,550 |
| December | 204 | 15 | 3,902 | 1,372 | 25 | 1,619 | 2,489 | 123 | 8,888 | 351 | 571 | 1,223 | 19,163 |
| **Average** | **357** | **14** | **3,631** | **1,396** | **17** | **1,146** | **2,020** | **119** | **8,986** | **428** | **522** | **1,195** | **18,686** |
| **2010** January | R 213 | R 11 | R 3,656 | R 1,365 | R 16 | R 1,630 | R 2,545 | R 106 | R 8,525 | R 266 | R 622 | R 1,204 | R 18,528 |
| February | F 267 | F 14 | E 3,738 | E 1,282 | RF 57 | E 1,419 | RF 2,292 | RF 101 | E 8,832 | RF 441 | E 668 | RE 1,665 | E 19,356 |
| March | F 320 | F 15 | E 3,707 | E 1,376 | F 30 | E 1,101 | F 2,075 | F 125 | E 9,013 | F 459 | E 573 | E 1,416 | E 19,109 |
| **3-Month Average** | **E 267** | **E 13** | **E 3,699** | **E 1,343** | **E 34** | **E 1,382** | **E 2,304** | **E 111** | **E 8,789** | **E 387** | **E 620** | **E 1,421** | **E 18,986** |
| **2009 3-Month Average** | **279** | **12** | **3,907** | **1,381** | **31** | **1,296** | **2,072** | **108** | **8,790** | **424** | **607** | **1,227** | **18,839** |
| **2008 3-Month Average** | **317** | **14** | **4,210** | **1,562** | **23** | **1,481** | **2,294** | **137** | **8,915** | **467** | **605** | **1,491** | **20,036** |

[a] Liquefied petroleum gases.

[b] Beginning in 2009, includes renewable diesel fuel (including biodiesel) blended into distillate fuel oil.

[c] Through 2004, includes kerosene-type and naphtha-type jet fuel. Beginning in 2005, includes kerosene-type jet fuel only; naphtha-type jet fuel is included in "Other."

[d] Includes propylene.

[e] Finished motor gasoline. Beginning in 1993, also includes fuel ethanol blended into motor gasoline.

[f] Pentanes plus, petrochemical feedstocks, special naphthas, still gas (refinery gas), waxes, and miscellaneous products. Beginning in 1981, also includes negative barrels per day of distillate and residual fuel oil reclassified as unfinished oils, and other products (from both primary and secondary supply) reclassified as gasoline blending components. Beginning in 1983, also includes crude oil burned as fuel. Beginning in 2005, also includes naphtha-type jet fuel.

R=Revised. E=Estimate. F=Forecast.

Notes: • Petroleum products supplied is an approximation of petroleum consumption and is synonymous with the term "petroleum consumption" in Tables 3.7a-c and 3.8a-c. • See Note 7, "Petroleum Products Supplied and Petroleum Consumption," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

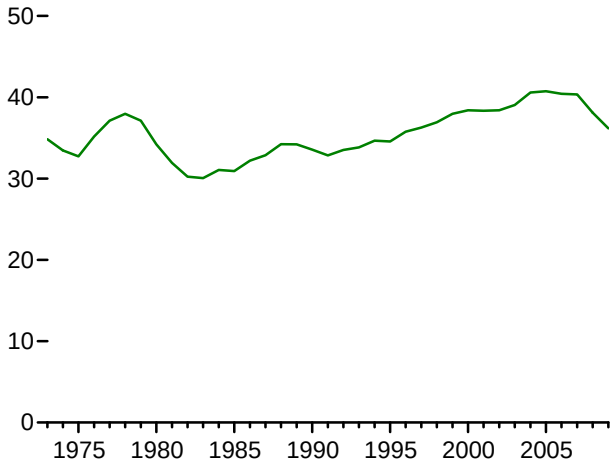
Web Pages: • For all available data beginning in 1973, see http://www.eia.doe.gov/emeu/mer/petro.html. • For related information, see http://www.eia.doe.gov/oil_gas/petroleum/info_glance/petroleum.html.

Sources: • **1973-1975:** Bureau of Mines, Mineral Industry Surveys, *Petroleum Statement, Annual,* annual reports. • **1976-1980:** U.S. Energy Information Administration (EIA), Energy Data Reports, *Petroleum Statement, Annual,* annual reports. • **1981-2008:** EIA, *Petroleum Supply Annual,* annual reports. • **2009 and 2010:** EIA, *Petroleum Supply Monthly,* monthly reports; and, for the current two months, *Weekly Petroleum Status Report* data system, Short-Term Integrated Forecasting System, and *Monthly Energy Review* data system calculations.

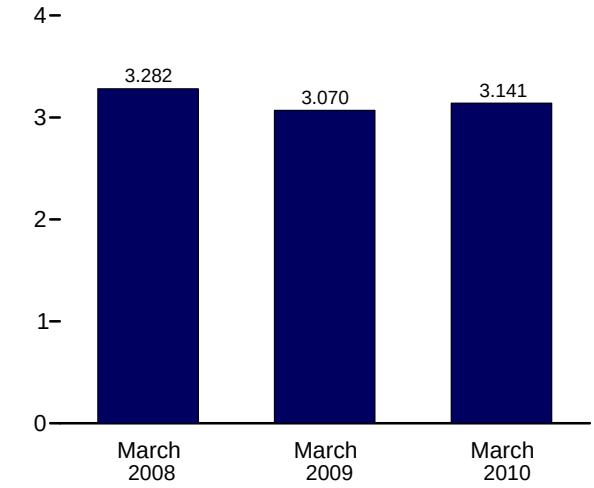
## Figure 3.6 Heat Content of Petroleum Products Supplied by Type

(Quadrillion Btu)

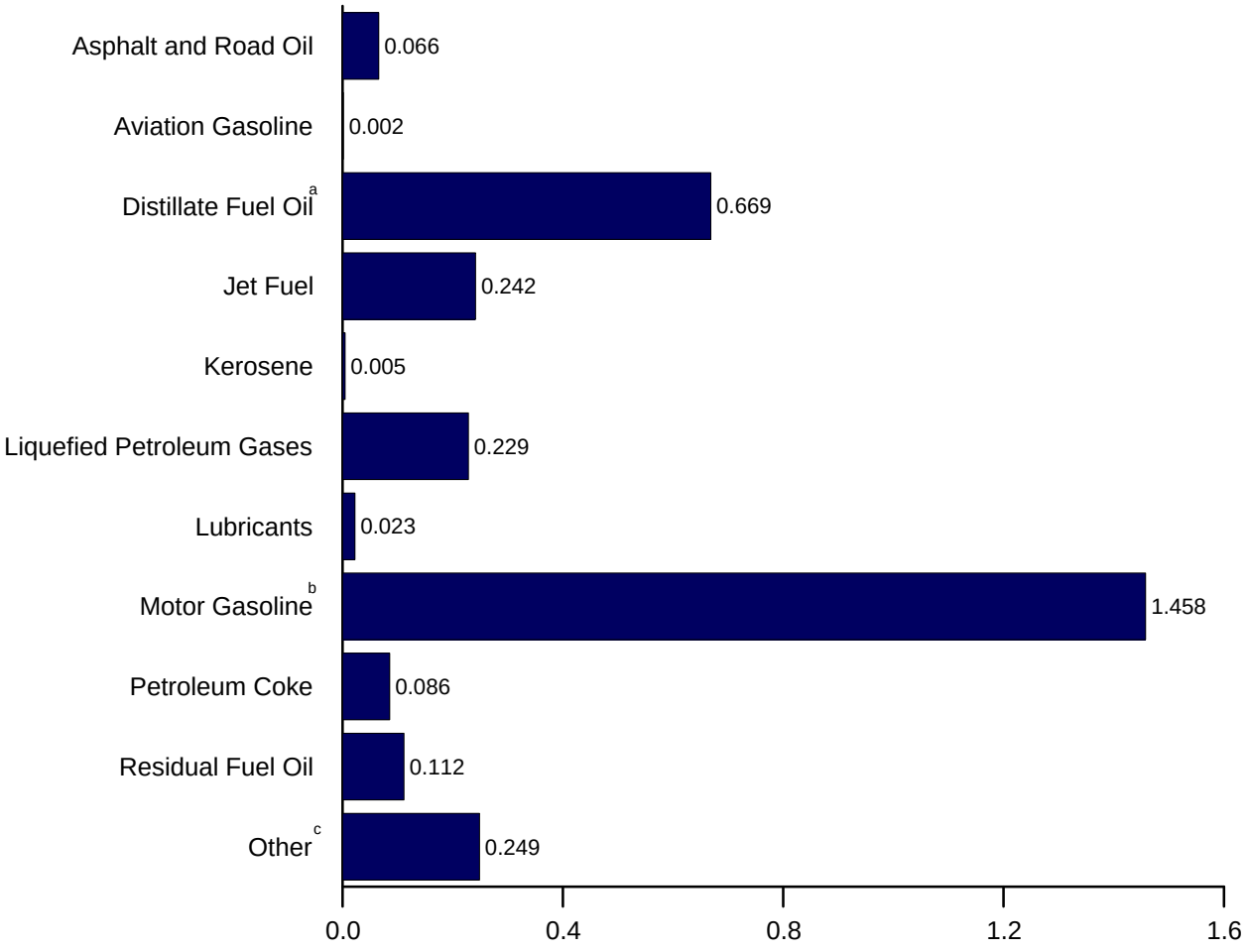
Total, 1973-2009




Total




By Product, March 2010




[a] Includes renewable diesel fuel (including biodiesel) blended into distillate fuel oil.
[b] Includes fuel ethanol blended into motor gasoline.
[c] All petroleum products not shown above.
Web Page: http://www.eia.doe.gov/emeu/mer/petro.html.
Source: Table 3.6.

# Table 3.6 Heat Content of Petroleum Products Supplied by Type

(Trillion Btu)

| | Asphalt and Road Oil | Aviation Gasoline | Distillate Fuel Oil[b] | Jet Fuel[c] | Kero-sene | LPG[a] | | Lubri-cants | Motor Gasoline[e] | Petro-leum Coke | Residual Fuel Oil | Other[f] | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Propane[d] | Total | | | | | | |
| **1973 Total** | **1,264** | **83** | **6,575** | **2,167** | **447** | **1,221** | **1,981** | **359** | **12,797** | **573** | **6,477** | **2,117** | **34,840** |
| **1975 Total** | **1,014** | **71** | **6,061** | **2,047** | **329** | **1,097** | **1,807** | **304** | **12,798** | **542** | **5,649** | **2,107** | **32,731** |
| **1980 Total** | **962** | **64** | **6,110** | **2,190** | **329** | **1,059** | **1,976** | **354** | **12,648** | **522** | **5,772** | **3,275** | **34,202** |
| **1985 Total** | **1,029** | **50** | **6,098** | **2,497** | **236** | **1,236** | **2,103** | **322** | **13,098** | **582** | **2,759** | **2,149** | **30,922** |
| **1990 Total** | **1,170** | **45** | **6,422** | **3,129** | **88** | **1,284** | **2,059** | **362** | **13,872** | **745** | **2,820** | **2,840** | **33,553** |
| **1995 Total** | **1,178** | **40** | **6,818** | **3,132** | **112** | **1,534** | **2,512** | **346** | **14,825** | **802** | **1,955** | **2,834** | **34,553** |
| **1996 Total** | **1,176** | **37** | **7,175** | **3,274** | **128** | **1,594** | **2,660** | **335** | **15,064** | **837** | **1,952** | **3,119** | **35,757** |
| **1997 Total** | **1,224** | **40** | **7,304** | **3,308** | **136** | **1,638** | **2,690** | **354** | **15,254** | **829** | **1,828** | **3,298** | **36,266** |
| **1998 Total** | **1,263** | **35** | **7,359** | **3,357** | **162** | **1,568** | **2,575** | **371** | **15,701** | **982** | **2,036** | **3,093** | **36,934** |
| **1999 Total** | **1,324** | **39** | **7,595** | **3,462** | **151** | **1,745** | **2,897** | **375** | **16,036** | **1,048** | **1,905** | **3,128** | **37,960** |
| **2000 Total** | **1,276** | **36** | **7,935** | **3,580** | **140** | **1,734** | **2,945** | **369** | **16,155** | **895** | **2,091** | **2,981** | **38,404** |
| **2001 Total** | **1,257** | **35** | **8,179** | **3,426** | **150** | **1,598** | **2,697** | **338** | **16,373** | **961** | **1,861** | **3,056** | **38,333** |
| **2002 Total** | **1,240** | **34** | **8,028** | **3,340** | **90** | **1,747** | **2,852** | **334** | **16,819** | **1,018** | **1,605** | **3,041** | **38,401** |
| **2003 Total** | **1,220** | **30** | **8,349** | **3,265** | **113** | **1,701** | **2,747** | **309** | **16,981** | **1,000** | **1,772** | **3,260** | **39,047** |
| **2004 Total** | **1,304** | **31** | **8,652** | **3,383** | **133** | **1,791** | **2,824** | **313** | **17,379** | **1,156** | **1,990** | **3,429** | **40,594** |
| **2005 Total** | **1,323** | **35** | **8,755** | **3,475** | **144** | **1,721** | **2,682** | **312** | **17,444** | **1,133** | **2,111** | **3,320** | **40,735** |
| **2006 Total** | **1,261** | **33** | **8,864** | **3,379** | **111** | **1,701** | **2,701** | **303** | **17,622** | **1,148** | **1,581** | **3,416** | **40,420** |
| **2007 Total** | **1,197** | **32** | **8,921** | **3,358** | **67** | **1,729** | **2,733** | **313** | **17,689** | **1,077** | **1,659** | **3,308** | **40,353** |
| **2008** January | 73 | 2 | 757 | 278 | 2 | 194 | 268 | 26 | 1,425 | 93 | 133 | 294 | 3,351 |
| February | 58 | 2 | 723 | 255 | 5 | 168 | 242 | 23 | 1,342 | 74 | 98 | 278 | 3,101 |
| March | 61 | 2 | 751 | 273 | 4 | 155 | 242 | 27 | 1,467 | 88 | 115 | 252 | 3,282 |
| April | 72 | 3 | 717 | 276 | (s) | 115 | 201 | 26 | 1,426 | 87 | 133 | 232 | 3,174 |
| May | 95 | 3 | 710 | 279 | 1 | 109 | 206 | 27 | 1,496 | 85 | 131 | 243 | 3,277 |
| June | 114 | 2 | 658 | 276 | 1 | 115 | 207 | 25 | 1,426 | 81 | 129 | 233 | 3,152 |
| July | 114 | 2 | 666 | 277 | (s) | 121 | 216 | 26 | 1,480 | 101 | 133 | 221 | 3,237 |
| August | 106 | 3 | 661 | 288 | (s) | 119 | 214 | 30 | 1,478 | 88 | 100 | 223 | 3,190 |
| September | 106 | 2 | 654 | 251 | 2 | 99 | 154 | 18 | 1,330 | 64 | 98 | 178 | 2,857 |
| October | 96 | 2 | 755 | 249 | 2 | 132 | 204 | 27 | 1,460 | 87 | 116 | 262 | 3,260 |
| November | 63 | 2 | 677 | 245 | 3 | 134 | 205 | 17 | 1,394 | 79 | 98 | 269 | 3,052 |
| December | 56 | 2 | 683 | 245 | 8 | 160 | 215 | 20 | 1,444 | 94 | 147 | 254 | 3,168 |
| **Total** | **1,012** | **28** | **8,411** | **3,193** | **30** | **1,620** | **2,574** | **291** | **17,168** | **1,022** | **1,432** | **2,940** | **38,100** |
| **2009** January | 47 | 3 | 736 | 239 | 6 | 171 | 239 | 21 | 1,406 | 80 | 136 | 231 | 3,144 |
| February | 50 | 1 | 638 | 213 | 6 | 138 | 202 | 17 | 1,288 | 71 | 89 | 202 | 2,778 |
| March | 69 | 2 | 674 | 253 | 3 | 139 | 222 | 21 | 1,434 | 78 | 118 | 194 | 3,070 |
| April | 52 | 3 | 605 | 242 | 2 | 110 | 200 | 24 | 1,401 | 90 | 127 | 193 | 2,939 |
| May | 81 | 2 | 618 | 235 | 2 | 98 | 193 | 19 | 1,470 | 94 | 96 | 178 | 2,988 |
| June | 104 | 3 | 620 | 239 | 2 | 90 | 177 | 25 | 1,444 | 97 | 113 | 161 | 2,985 |
| July | 85 | 3 | 626 | 268 | (s) | 118 | 205 | 21 | 1,504 | 69 | 66 | 239 | 3,086 |
| August | 110 | 2 | 611 | 255 | 1 | 120 | 208 | 27 | 1,496 | 76 | 96 | 197 | 3,079 |
| September | 92 | 3 | 604 | 239 | (s) | 114 | 200 | 22 | 1,393 | 85 | 64 | 218 | 2,921 |
| October | 76 | 2 | 664 | 240 | 3 | 139 | 236 | 23 | 1,452 | 65 | 100 | 217 | 3,079 |
| November | 57 | 1 | 620 | 226 | 4 | 175 | 265 | 20 | 1,389 | 68 | 80 | 222 | 2,951 |
| December | 42 | 2 | 705 | 241 | 4 | 193 | 274 | 23 | 1,438 | 65 | 111 | 244 | 3,150 |
| **Total** | **866** | **26** | **7,720** | **2,889** | **35** | **1,604** | **2,620** | **264** | **17,115** | **940** | **1,197** | **2,496** | **36,169** |
| **2010** January | R 44 | 2 | R 660 | 240 | R 3 | R 194 | R 280 | R 20 | R 1,379 | R 50 | R 121 | R 247 | R 3,046 |
| February | F 50 | F 2 | E 610 | E 204 | RF 9 | E 152 | RF 228 | RF 17 | E 1,290 | RF 74 | E 118 | RE 273 | E 2,874 |
| March | F 66 | F 2 | E 669 | E 242 | F 5 | E 131 | F 229 | F 23 | E 1,458 | F 86 | E 112 | E 249 | E 3,141 |
| **3-Month Total** | **E 159** | **E 6** | **E 1,939** | **E 685** | **E 17** | **E 477** | **E 737** | **E 60** | **E 4,127** | **E 210** | **E 351** | **E 770** | **E 9,061** |
| **2009 3-Month Total** | **167** | **5** | **2,048** | **705** | **16** | **448** | **663** | **59** | **4,128** | **230** | **344** | **627** | **8,991** |
| **2008 3-Month Total** | **191** | **6** | **2,232** | **806** | **12** | **517** | **752** | **76** | **4,233** | **256** | **346** | **824** | **9,734** |

[a] Liquefied petroleum gases.

[b] Beginning in 2009, includes renewable diesel fuel (including biodiesel) blended into distillate fuel oil.

[c] Through 2004, includes kerosene-type and naphtha-type jet fuel. Beginning in 2005, includes kerosene-type jet fuel only; naphtha-type jet fuel is included in "Other."

[d] Includes propylene.

[e] Finished motor gasoline. Beginning in 1993, also includes fuel ethanol blended into motor gasoline.

[f] Pentanes plus, petrochemical feedstocks, special naphthas, still gas (refinery gas), waxes, and miscellaneous products. Beginning in 1981, also includes negative barrels per day of distillate and residual fuel oil reclassified as unfinished oils, and other products (from both primary and secondary supply) reclassified as gasoline blending components. Beginning in 1983, also includes crude oil burned as fuel. Beginning in 2005, also includes naphtha-type jet fuel.

R=Revised. E=Estimate. (s)=Less than +0.5 trillion Btu and greater than 0.5 trillion Btu. F=Forecast.

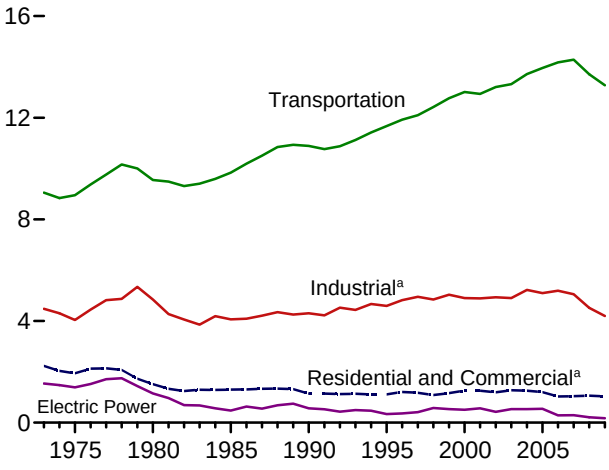
Notes: • Petroleum products supplied is an approximation of petroleum consumption and is synonymous with the term "petroleum consumption" in Tables 3.7a-c and 3.8a-c. • See Note 7, "Petroleum Products Supplied and Petroleum Consumption," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Pages: • For all available data beginning in 1973, see http://www.eia.doe.gov/emeu/mer/petro.html. • For related information, see http://www.eia.doe.gov/oil_gas/petroleum/info_glance/petroleum.html.

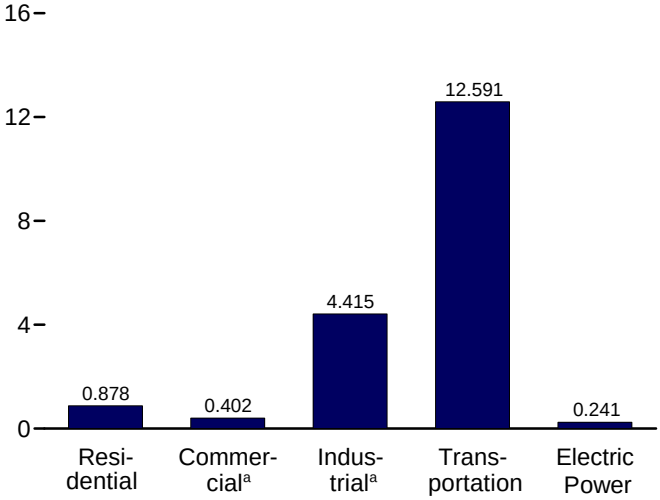
Sources: Tables 3.5, A1, and A3.

## Figure 3.7 Petroleum Consumption by Sector
(Million Barrels per Day)

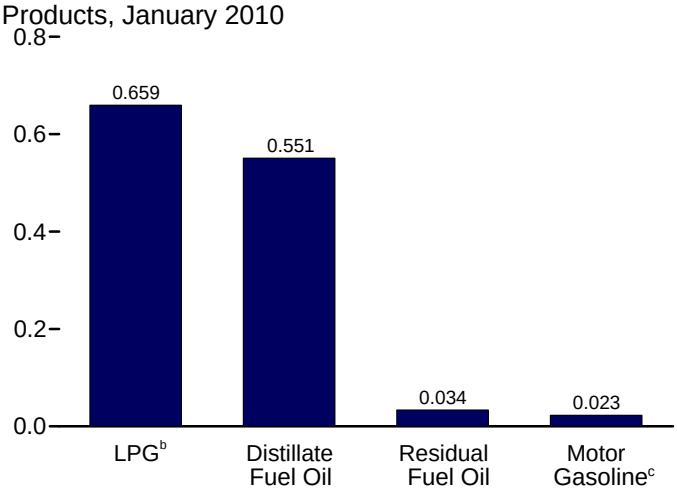
By Sector, 1973-2009



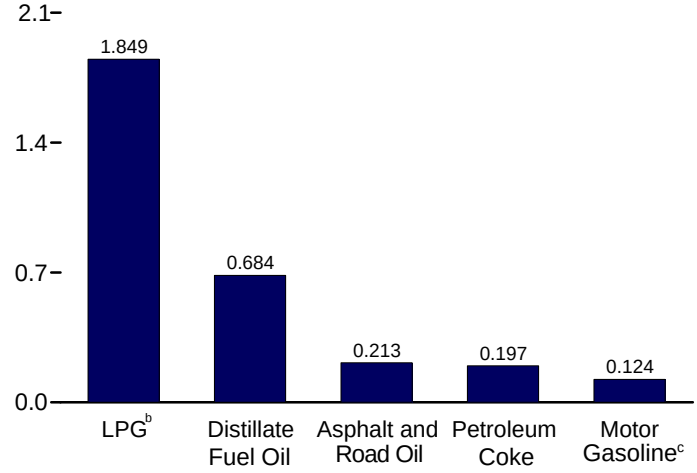

By Sector, January 2010



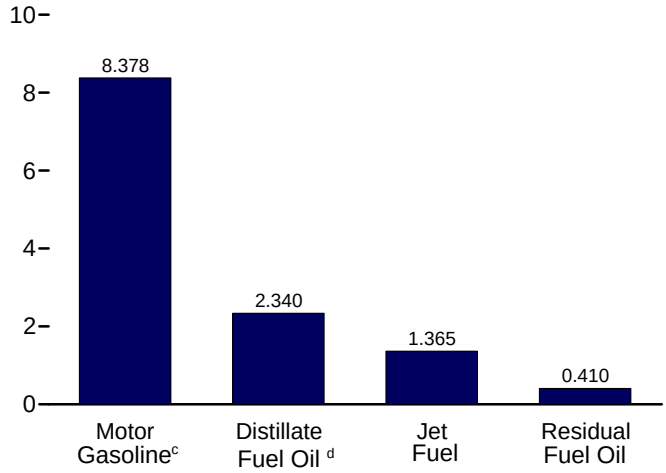

Residential and Commercial Sectors,[a] Selected Products, January 2010



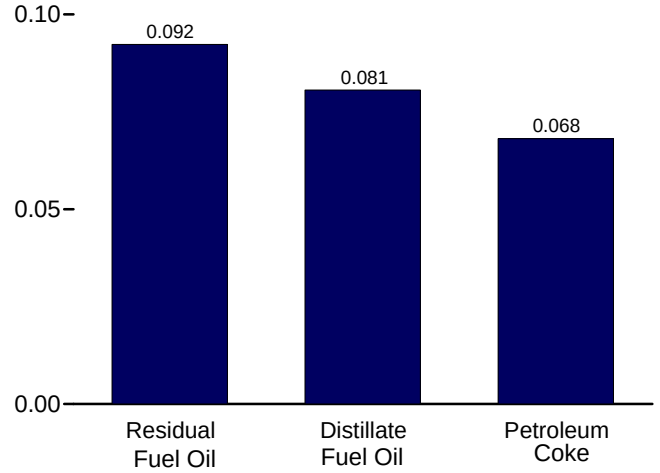

Industrial Sector,[a] Selected Products, January 2010




Transportation Sector, Selected Products, January 2010




Electric Power Sector, January 2010




[a] Includes combined-heat-and-power plants and a small number of electricity-only plants.
[b] Liquefied petroleum gases.
[c] Includes fuel ethanol blended into motor gasoline.
[d] Includes renewable diesel fuel (including biodiesel) blended into distillate fuel oil.
Web Page: http://www.eia.doe.gov/emeu/mer/petro.html.
Sources: Tables 3.7a–3.7c.

## Table 3.7a Petroleum Consumption: Residential and Commercial Sectors

(Thousand Barrels per Day)

| | Residential Sector | | | | Commercial Sector[a] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Distillate Fuel Oil | Kero-sene | Liquefied Petroleum Gases | Total | Distillate Fuel Oil | Kero-sene | Liquefied Petroleum Gases | Motor Gasoline[b] | Petro-leum Coke | Residual Fuel Oil | Total |
| **1973 Average** | **942** | **110** | R **407** | R **1,459** | **303** | **31** | R **105** | **45** | **NA** | **290** | R **774** |
| **1975 Average** | **850** | **78** | R **365** | R **1,293** | **276** | **24** | R **92** | **46** | **NA** | **214** | R **653** |
| **1980 Average** | **617** | **51** | R **222** | R **890** | **243** | **20** | R **63** | **56** | **NA** | **245** | R **626** |
| **1985 Average** | **514** | **77** | R **224** | R **815** | **297** | **16** | R **68** | **50** | **NA** | **99** | R **530** |
| **1990 Average** | **460** | **31** | R **252** | R **742** | **252** | **6** | R **73** | **58** | **0** | **100** | R **489** |
| **1995 Average** | **426** | **36** | R **282** | R **743** | **225** | **11** | R **78** | **10** | **(s)** | **62** | R **385** |
| **1996 Average** | **434** | **43** | R **334** | R **811** | **227** | **10** | R **87** | **14** | **(s)** | **60** | R **397** |
| **1997 Average** | **411** | **45** | R **325** | R **781** | **209** | **12** | R **86** | **22** | **(s)** | **48** | R **378** |
| **1998 Average** | **363** | **52** | R **303** | R **718** | **202** | **15** | R **84** | **20** | **(s)** | **37** | R **358** |
| **1999 Average** | **389** | **54** | R **376** | R **819** | **206** | **13** | R **100** | **15** | **(s)** | **32** | R **366** |
| **2000 Average** | **424** | **46** | R **395** | R **865** | **230** | **14** | R **107** | **23** | **(s)** | **40** | R **415** |
| **2001 Average** | **427** | **46** | R **375** | R **849** | **239** | **15** | R **102** | **20** | **(s)** | **30** | R **406** |
| **2002 Average** | **404** | **29** | R **384** | R **817** | **209** | **8** | R **101** | **24** | **(s)** | **35** | R **376** |
| **2003 Average** | **425** | **34** | R **389** | R **848** | **226** | **9** | R **112** | **32** | **(s)** | **48** | R **428** |
| **2004 Average** | **433** | **41** | R **364** | R **839** | **221** | **10** | R **108** | **23** | **(s)** | **53** | R **416** |
| **2005 Average** | **402** | **40** | R **366** | R **809** | **210** | **10** | R **94** | **24** | **(s)** | **50** | R **389** |
| **2006 Average** | **335** | **32** | R **318** | R **685** | **189** | **7** | R **88** | **26** | **(s)** | **33** | R **343** |
| **2007 Average** | **342** | **21** | R **345** | R **708** | **181** | **4** | R **87** | **32** | **(s)** | **33** | R **337** |
| **2008** January | R 516 | R 10 | R 483 | R 1,009 | R 287 | 2 | R 138 | 23 | (s) | R 53 | R 503 |
| February | R 530 | R 21 | R 467 | R 1,018 | R 294 | 4 | R 134 | 24 | (s) | R 54 | R 510 |
| March | R 376 | R 18 | R 436 | R 830 | R 209 | R 4 | R 125 | 24 | (s) | R 38 | R 400 |
| April | R 293 | 1 | R 375 | R 668 | R 163 | (s) | R 107 | 24 | (s) | R 30 | R 324 |
| May | R 207 | R 5 | R 372 | R 584 | R 115 | 1 | R 106 | 25 | 0 | 21 | R 268 |
| June | R 228 | R 4 | R 386 | R 618 | R 127 | 1 | R 110 | 24 | 0 | 23 | R 285 |
| July | R 216 | -1 | R 391 | R 606 | R 120 | (s) | R 112 | 24 | 0 | R 22 | R 278 |
| August | R 194 | 2 | R 386 | R 582 | R 108 | (s) | R 110 | 24 | 0 | R 20 | R 262 |
| September | R 208 | R 9 | R 288 | R 505 | R 116 | 2 | R 82 | 23 | (s) | 21 | R 244 |
| October | R 233 | R 7 | R 369 | R 610 | R 130 | 1 | R 106 | 24 | (s) | R 24 | R 285 |
| November | R 292 | R 14 | R 383 | R 689 | R 162 | 3 | R 109 | 24 | (s) | R 30 | R 328 |
| December | R 449 | R 34 | R 389 | R 872 | R 249 | R 7 | R 111 | 24 | (s) | R 46 | R 437 |
| **Average** | R **311** | R **10** | R **394** | R **715** | R **173** | **2** | R **113** | **24** | **(s)** | R **32** | R **343** |
| **2009** January | R 449 | R 26 | R 436 | R 912 | R 249 | 5 | R 125 | 23 | (s) | R 43 | R 445 |
| February | R 421 | R 28 | R 409 | R 858 | R 234 | R 6 | R 117 | 23 | (s) | R 40 | R 420 |
| March | R 361 | R 14 | R 407 | R 782 | R 201 | 3 | R 116 | 24 | (s) | R 34 | R 378 |
| April | R 284 | R 10 | R 377 | R 671 | R 158 | 2 | R 108 | 24 | 0 | R 27 | R 319 |
| May | R 194 | R 10 | R 353 | R 557 | R 108 | 2 | R 101 | 24 | 0 | R 18 | R 253 |
| June | R 182 | R 8 | R 335 | R 525 | R 101 | 2 | R 96 | 25 | 0 | R 17 | R 240 |
| July | R 207 | 1 | R 374 | R 582 | R 115 | (s) | R 107 | 25 | 0 | R 20 | R 266 |
| August | R 213 | 4 | R 381 | R 598 | R 118 | 1 | R 109 | 25 | (s) | R 20 | R 273 |
| September | R 260 | (s) | R 378 | R 638 | R 145 | (s) | R 108 | 24 | (s) | R 25 | R 301 |
| October | R 222 | R 13 | R 432 | R 667 | R 124 | R 3 | R 123 | 24 | 0 | R 21 | R 294 |
| November | R 250 | R 17 | R 501 | R 768 | R 139 | 3 | R 143 | 24 | (s) | R 24 | R 333 |
| December | R 399 | R 18 | R 501 | R 918 | R 221 | R 4 | R 143 | 24 | (s) | R 38 | R 430 |
| **Average** | R **286** | R **12** | R **407** | R **706** | R **159** | **2** | R **116** | **24** | **(s)** | R **27** | R **329** |
| **2010** January | 354 | 11 | 513 | 878 | 197 | 2 | 147 | 23 | (s) | 34 | 402 |

[a] Commercial sector fuel use, including that at commercial combined-heat-and-power (CHP) and commercial electricity-only plants.

[b] Finished motor gasoline. Beginning in 1993, also includes fuel ethanol blended into motor gasoline.

R=Revised. NA=Not available. (s)=Less than +500 barrels per day and greater than -500 barrels per day.

Notes: • Data are estimates. • For total petroleum consumption by all sectors, see petroleum products supplied data in Table 3.5. Petroleum products supplied is an approximation of petroleum consumption and is synonymous with the term "petroleum consumption" in Tables 3.7a-c and 3.8a-c. • See Note 7, "Petroleum Products Supplied and Petroleum Consumption," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/petro.html for all available data beginning in 1973.

Sources: See end of section.

Data for residential and commercial consumption of liquefied petroleum gases are revised beginning in 1973 due to a change in the estimation methodology. See Tables 3.7a-3.7c sources for "Liquefied Petroleum Gases" at end of section.

# Table 3.7b Petroleum Consumption: Industrial Sector

(Thousand Barrels per Day)

| | Industrial Sector[a] | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Asphalt and Road Oil | Distillate Fuel Oil | Kerosene | Liquefied Petroleum Gases | Lubricants | Motor Gasoline[b] | Petroleum Coke | Residual Fuel Oil | Other[c] | Total |
| **1973 Average** | **522** | **691** | **75** | **902** | **88** | **133** | **254** | **809** | **1,005** | **4,479** |
| **1975 Average** | **419** | **630** | **58** | **844** | **68** | **116** | **246** | **658** | **1,001** | **4,038** |
| **1980 Average** | **396** | **621** | **87** | **1,172** | **82** | **82** | **234** | **586** | **1,581** | **4,842** |
| **1985 Average** | **425** | **526** | **21** | **1,285** | **75** | **114** | **261** | **326** | **1,032** | **4,065** |
| **1990 Average** | **483** | **541** | **6** | **1,215** | **84** | **97** | **325** | **179** | **1,373** | **4,304** |
| **1995 Average** | **486** | **532** | **7** | **1,527** | **80** | **105** | **328** | **147** | **1,381** | **4,594** |
| **1996 Average** | **484** | **557** | **9** | **1,580** | **78** | **105** | **343** | **146** | **1,518** | **4,819** |
| **1997 Average** | **505** | **566** | **9** | **1,617** | **82** | **111** | **331** | **127** | **1,605** | **4,953** |
| **1998 Average** | **521** | **570** | **11** | **1,553** | **86** | **105** | **390** | **100** | **1,508** | **4,844** |
| **1999 Average** | **547** | **558** | **6** | **1,709** | **87** | **80** | **426** | **90** | **1,532** | **5,035** |
| **2000 Average** | **525** | **563** | **8** | **1,720** | **86** | **79** | **361** | **105** | **1,458** | **4,903** |
| **2001 Average** | **519** | **611** | **11** | **1,557** | **79** | **155** | **390** | **89** | **1,481** | **4,892** |
| **2002 Average** | **512** | **566** | **7** | **1,668** | **78** | **163** | **383** | **83** | **1,474** | **4,934** |
| **2003 Average** | **503** | **534** | **12** | **1,561** | **72** | **171** | **375** | **96** | **1,579** | **4,903** |
| **2004 Average** | **537** | **570** | **14** | **1,646** | **73** | **195** | **423** | **108** | **1,657** | **5,222** |
| **2005 Average** | **546** | **594** | **19** | **1,549** | **72** | **187** | **404** | **123** | **1,605** | **5,100** |
| **2006 Average** | **521** | **594** | **14** | **1,627** | **71** | **198** | **425** | **104** | **1,640** | **5,193** |
| **2007 Average** | **494** | **595** | **6** | **1,637** | **73** | **161** | **412** | **84** | **1,593** | **5,056** |
| **2008** January | 354 | R 774 | R 2 | R 1,743 | 71 | 128 | 422 | R 99 | 1,564 | R 5,157 |
| February | 301 | R 801 | R 4 | R 1,686 | 67 | 129 | 348 | R 77 | 1,570 | R 4,983 |
| March | 295 | R 764 | R 3 | R 1,574 | 74 | 132 | 413 | R 87 | 1,345 | R 4,685 |
| April | 360 | R 710 | (s) | R 1,351 | 75 | 133 | 413 | R 102 | 1,403 | R 4,547 |
| May | 461 | R 633 | 1 | R 1,341 | 73 | 135 | 394 | R 97 | 1,422 | R 4,556 |
| June | 570 | R 418 | 1 | R 1,391 | 71 | 133 | 372 | R 88 | 1,405 | R 4,448 |
| July | 556 | 366 | (s) | R 1,408 | 71 | 133 | 470 | R 91 | 1,274 | R 4,369 |
| August | 517 | R 359 | R (s) | R 1,391 | 81 | 133 | 399 | R 68 | 1,249 | R 4,197 |
| September | 531 | R 501 | 2 | R 1,038 | 50 | 124 | 282 | R 65 | 1,167 | R 3,761 |
| October | 465 | R 789 | R 1 | R 1,331 | 75 | 131 | 394 | R 84 | 1,547 | R 4,819 |
| November | 314 | R 610 | R 3 | R 1,379 | 47 | 130 | 371 | R 71 | 1,540 | R 4,464 |
| December | 271 | R 414 | R 6 | R 1,403 | 53 | 130 | 437 | R 107 | 1,414 | R 4,236 |
| **Average** | **417** | R **594** | R **2** | R **1,420** | **67** | **131** | **394** | R **86** | **1,408** | R **4,518** |
| **2009** January | 230 | R 885 | R 5 | R 1,574 | 57 | 127 | 364 | R 91 | 1,313 | R 4,645 |
| February | 271 | R 743 | R 5 | R 1,473 | 51 | 128 | 355 | R 72 | 1,263 | R 4,362 |
| March | 337 | R 617 | R 3 | R 1,467 | 58 | 129 | 344 | R 87 | 1,110 | R 4,151 |
| April | 262 | R 428 | R 2 | R 1,360 | 67 | 130 | 431 | R 99 | 1,169 | R 3,950 |
| May | 394 | R 447 | R 2 | R 1,272 | 53 | 132 | 436 | R 75 | 1,061 | R 3,873 |
| June | 524 | R 485 | R 1 | R 1,208 | 71 | 134 | 467 | R 85 | 1,097 | R 4,072 |
| July | 412 | R 381 | (s) | R 1,350 | 59 | 135 | 302 | R 43 | 1,368 | R 4,050 |
| August | 534 | R 306 | 1 | R 1,373 | 73 | 135 | 341 | R 66 | 1,160 | R 3,988 |
| September | 464 | R 406 | (s) | R 1,363 | 63 | 130 | 403 | R 47 | 1,309 | R 4,185 |
| October | 368 | R 603 | R 2 | R 1,557 | 63 | 131 | 308 | R 73 | 1,180 | R 4,286 |
| November | 285 | R 576 | R 3 | R 1,806 | 56 | 129 | 332 | R 62 | 1,093 | R 4,342 |
| December | 204 | R 691 | R 3 | R 1,808 | 64 | 129 | 295 | R 85 | 1,223 | R 4,503 |
| **Average** | **357** | R **547** | R **2** | R **1,468** | **61** | **131** | **364** | R **74** | **1,195** | R **4,200** |
| **2010** January | 213 | 684 | 2 | 1,849 | 54 | 124 | 197 | 86 | 1,204 | 4,415 |

[a] Industrial sector fuel use, including that at industrial combined-heat-and-power (CHP) and industrial electricity-only plants.

[b] Finished motor gasoline. Beginning in 1993, also includes fuel ethanol blended into motor gasoline.

[c] Pentanes plus, petrochemical feedstocks, special naphthas, still gas (refinery gas), waxes, and miscellaneous products. Beginning in 1981, also includes negative barrels per day of distillate and residual fuel oil reclassified as unfinished oils, and other products (from both primary and secondary supply) reclassified as gasoline blending components. Beginning in 1983, also includes crude oil burned as fuel. Beginning in 2005, also includes naphtha-type jet fuel.

R=Revised. (s)=Less than +500 barrels per day and greater than -500 barrels per day.

Notes: • Data are estimates. • For total petroleum consumption by all sectors, see petroleum products supplied data in Table 3.5. Petroleum products supplied is an approximation of petroleum consumption and is synonymous with the term "petroleum consumption" in Tables 3.7a-c and 3.8a-c. • See Note 7, "Petroleum Products Supplied and Petroleum Consumption," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/petro.html for all available data beginning in 1973.

Sources: See end of section.

# Table 3.7c Petroleum Consumption: Transportation and Electric Power Sectors

(Thousand Barrels per Day)

| | Transportation Sector | | | | | | | | Electric Power Sector[a] | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Aviation Gasoline | Distillate Fuel Oil[b] | Jet Fuel[c] | Liquefied Petroleum Gases | Lubricants | Motor Gasoline[d] | Residual Fuel Oil | Total | Distillate Fuel Oil[e] | Petroleum Coke | Residual Fuel Oil[f] | Total |
| **1973 Average** | **45** | **1,045** | **1,042** | **35** | **74** | **6,496** | **317** | **9,054** | **129** | **7** | **1,406** | **1,542** |
| **1975 Average** | **39** | **998** | **992** | **31** | **70** | **6,512** | **310** | **8,951** | **107** | **1** | **1,280** | **1,388** |
| **1980 Average** | **35** | **1,311** | **1,062** | **13** | **77** | **6,441** | **608** | **9,546** | **79** | **2** | **1,069** | **1,151** |
| **1985 Average** | **27** | **1,491** | **1,218** | **21** | **71** | **6,667** | **342** | **9,838** | **40** | **3** | **435** | **478** |
| **1990 Average** | **24** | **1,722** | **1,522** | **16** | **80** | **7,080** | **443** | **10,888** | **45** | **14** | **507** | **566** |
| **1995 Average** | **21** | **1,973** | **1,514** | **13** | **76** | **7,674** | **397** | **11,668** | **51** | **37** | **247** | **334** |
| **1996 Average** | **20** | **2,096** | **1,578** | **11** | **73** | **7,772** | **370** | **11,921** | **51** | **36** | **273** | **360** |
| **1997 Average** | **22** | **2,198** | **1,599** | **10** | **78** | **7,883** | **310** | **12,099** | **52** | **46** | **311** | **410** |
| **1998 Average** | **19** | **2,263** | **1,622** | **13** | **81** | **8,128** | **294** | **12,420** | **64** | **56** | **456** | **576** |
| **1999 Average** | **21** | **2,352** | **1,673** | **10** | **82** | **8,336** | **290** | **12,765** | **66** | **51** | **418** | **535** |
| **2000 Average** | **20** | **2,422** | **1,725** | **8** | **81** | **8,370** | **386** | **13,012** | **82** | **45** | **378** | **505** |
| **2001 Average** | **19** | **2,489** | **1,655** | **10** | **74** | **8,435** | **255** | **12,938** | **80** | **47** | **437** | **564** |
| **2002 Average** | **18** | **2,536** | **1,614** | **10** | **73** | **8,662** | **295** | **13,208** | **60** | **80** | **287** | **427** |
| **2003 Average** | **16** | **2,665** | **1,578** | **12** | **68** | **8,733** | **249** | **13,321** | **76** | **79** | **379** | **534** |
| **2004 Average** | **17** | **2,783** | **1,630** | **14** | **69** | **8,887** | **321** | **13,720** | **52** | **101** | **382** | **535** |
| **2005 Average** | **19** | **2,858** | **1,679** | **20** | **68** | **8,948** | **365** | **13,957** | **54** | **111** | **382** | **547** |
| **2006 Average** | **18** | **3,017** | **1,633** | **20** | **67** | **9,029** | **395** | **14,178** | **35** | **97** | **157** | **289** |
| **2007 Average** | **17** | **3,037** | **1,622** | **16** | **69** | **9,093** | **433** | **14,287** | **42** | **78** | **173** | **293** |
| **2008** January | 13 | R 2,564 | 1,581 | R 34 | 67 | 8,658 | R 426 | R 13,343 | 51 | 78 | 105 | 235 |
| February | 12 | R 2,616 | 1,553 | R 33 | 64 | 8,713 | R 318 | R 13,309 | 41 | 77 | 91 | 209 |
| March | 16 | R 2,783 | 1,552 | R 31 | 70 | 8,910 | R 389 | R 13,750 | 30 | 60 | 75 | 165 |
| April | 17 | R 2,908 | 1,622 | R 27 | 71 | 8,955 | R 488 | R 14,088 | 31 | 68 | 88 | 187 |
| May | 19 | R 2,945 | 1,590 | R 26 | 69 | 9,092 | R 465 | R 14,206 | 30 | 62 | 91 | 183 |
| June | 16 | R 2,945 | 1,623 | R 27 | 67 | 8,953 | R 414 | R 14,046 | 45 | 79 | 158 | 281 |
| July | 16 | R 2,955 | 1,574 | R 28 | 67 | 8,992 | R 445 | R 14,078 | 32 | 68 | 125 | 226 |
| August | 18 | R 2,971 | 1,639 | R 27 | 76 | 8,977 | R 318 | R 14,026 | 28 | 72 | 106 | 205 |
| September | 16 | R 2,886 | 1,478 | R 21 | 47 | 8,351 | R 302 | R 13,100 | 29 | 70 | 131 | 230 |
| October | 12 | R 3,005 | 1,417 | R 26 | 71 | 8,869 | R 412 | R 13,812 | 25 | 72 | 76 | 173 |
| November | 15 | R 2,780 | 1,440 | R 27 | 44 | 8,750 | R 332 | R 13,388 | 28 | 67 | 88 | 183 |
| December | 14 | R 2,629 | 1,395 | R 28 | 50 | 8,774 | R 480 | R 13,369 | 43 | 66 | 121 | 229 |
| **Average** | **15** | R **2,833** | **1,539** | R **28** | **64** | **8,834** | R **400** | R **13,712** | **34** | **70** | **104** | **209** |
| **2009** January | 17 | R 2,434 | 1,357 | R 31 | 54 | 8,540 | R 376 | R 12,809 | 58 | 66 | 190 | 314 |
| February | 7 | R 2,477 | 1,341 | R 29 | 48 | 8,664 | R 309 | R 12,876 | 39 | 67 | 84 | 191 |
| March | 11 | R 2,514 | 1,441 | R 29 | 55 | 8,713 | R 419 | R 13,182 | 39 | 76 | 64 | 180 |
| April | 18 | R 2,564 | 1,424 | R 27 | 64 | 8,793 | R 491 | R 13,380 | 26 | 69 | 56 | 151 |
| May | 13 | R 2,639 | 1,338 | R 25 | 50 | 8,931 | R 325 | R 13,321 | 33 | 67 | 72 | 171 |
| June | 18 | R 2,750 | 1,403 | R 24 | 67 | 9,065 | R 418 | R 13,744 | 32 | 69 | 80 | 181 |
| July | 19 | R 2,733 | 1,527 | R 27 | 55 | 9,140 | R 191 | R 13,692 | 29 | 69 | 83 | 181 |
| August | 16 | R 2,714 | 1,450 | R 27 | 69 | 9,091 | R 309 | R 13,676 | 31 | 67 | 98 | 197 |
| September | 19 | R 2,622 | 1,404 | R 27 | 60 | 8,744 | R 207 | R 13,082 | 25 | 68 | 63 | 157 |
| October | 11 | R 2,700 | 1,364 | R 31 | 60 | 8,823 | R 353 | R 13,342 | 28 | 41 | 69 | 138 |
| November | 9 | R 2,558 | 1,326 | R 36 | 53 | 8,719 | R 297 | R 12,997 | 26 | 42 | 42 | 110 |
| December | 15 | R 2,558 | 1,372 | R 36 | 60 | 8,735 | R 407 | R 13,183 | 32 | 55 | 41 | 129 |
| **Average** | **14** | R **2,606** | **1,396** | R **29** | **58** | **8,831** | R **342** | R **13,277** | **33** | **63** | **79** | **175** |
| **2010** January | 11 | 2,340 | 1,365 | 37 | 51 | 8,378 | 410 | 12,591 | 81 | 68 | 92 | 241 |

[a] Electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public. Through 1988, data are for electric utilities only; beginning in 1989, data are for electric utilities and independent power producers.

[b] Beginning in 2009, includes renewable diesel fuel (including biodiesel) blended into distillate fuel oil.

[c] Through 2004, includes kerosene-type and naphtha-type jet fuel. Beginning in 2005, includes kerosene-type jet fuel only; naphtha-type jet fuel is included in "Industrial Sector, Other" on Table 3.7b.

[d] Finished motor gasoline. Beginning in 1993, also includes fuel ethanol blended into motor gasoline.

[e] Fuel oil nos. 1, 2, and 4. Through 2000, electric utility data also include small amounts of kerosene and jet fuel.

[f] Fuel oil nos. 5 and 6. Through 2000, electric utility data also include a small amount of fuel oil no. 4.

R=Revised.

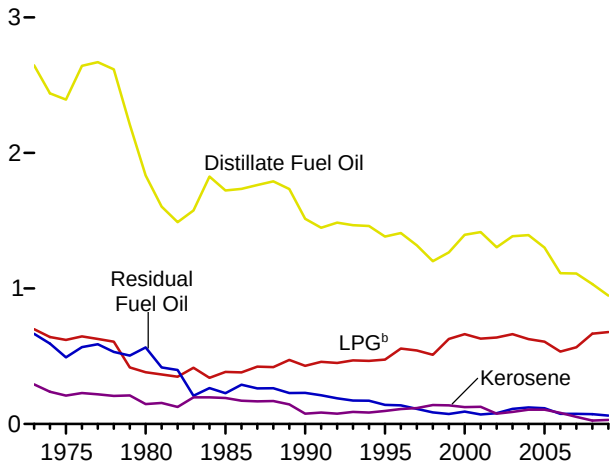
Notes: • Transportation sector data are estimates. • For total petroleum consumption by all sectors, see petroleum products supplied data in Table 3.5. Petroleum products supplied is an approximation of petroleum consumption and is synonymous with the term "petroleum consumption" in Tables 3.7a-c and 3.8a-c. • See Note 7, "Petroleum Products Supplied and Petroleum Consumption," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/petro.html for all available data beginning in 1973.

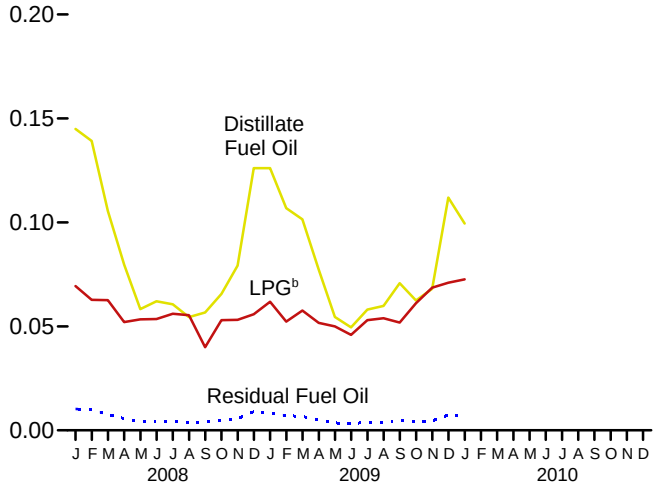
Sources: See end of section.

## Figure 3.8 Heat Content of Petroleum Consumption by Sector, Selected Products
(Quadrillion Btu)

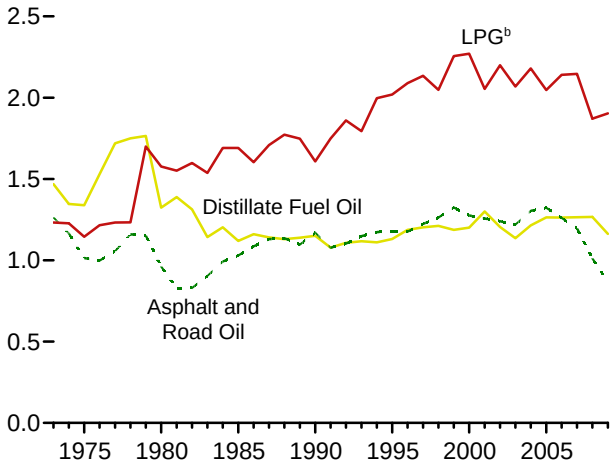
Residential and Commercial Sectors,[a] 1973-2009



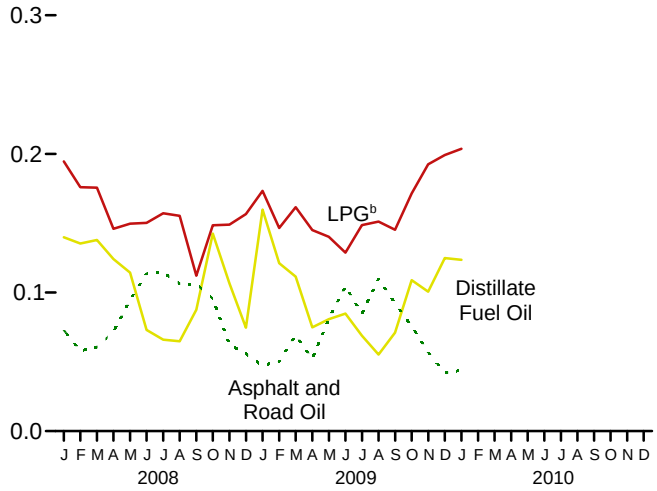

Residential and Commercial Sectors,[a] Monthly



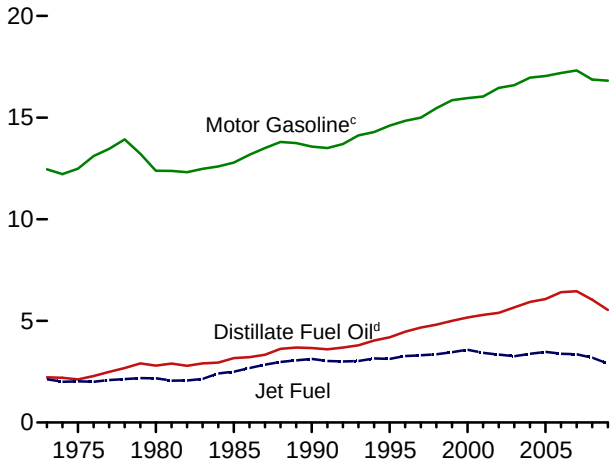

Industrial Sector,[a] 1973-2009



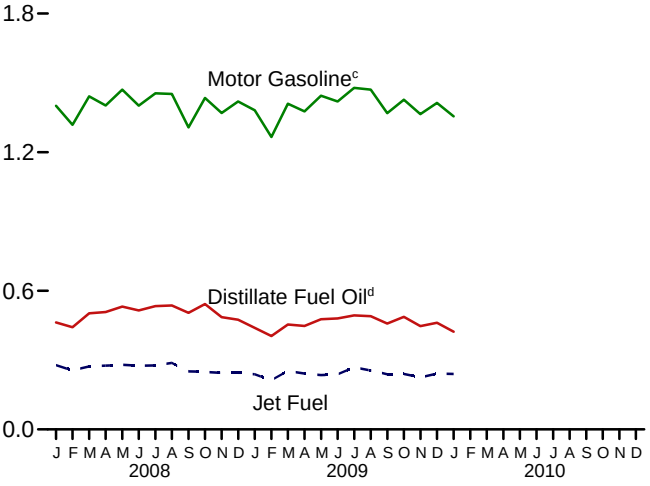

Industrial Sector,[a] Monthly




Transportation Sector, 1973-2009




Transportation Sector, Monthly




[a] Includes combined-heat-and-power plants and a small number of electricity-only plants.
[b] Liquefied petroleum gases.
[c] Beginning in 1993, includes fuel ethanol blended into motor gasoline.
[d] Beginning in 2009, includes renewable diesel fuel (including bio-diesel) blended into distillate fuel oil.
Web Page: http://www.eia.doe.gov/emeu/mer/petro.html.
Sources: Tables 3.8a-3.8c.

## Table 3.8a Heat Content of Petroleum Consumption: Residential and Commercial Sectors (Trillion Btu)

| | Residential Sector | | | | Commercial Sector[a] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Distillate Fuel Oil | Kerosene | Liquefied Petroleum Gases | Total | Distillate Fuel Oil | Kerosene | Liquefied Petroleum Gases | Motor Gasoline[b] | Petroleum Coke | Residual Fuel Oil | Total |
| **1973 Total** | **2,003** | **227** | **R 557** | **R 2,787** | **644** | **65** | **R 143** | **87** | **NA** | **665** | **R 1,604** |
| **1975 Total** | **1,807** | **161** | **R 496** | **R 2,463** | **587** | **49** | **R 125** | **89** | **NA** | **492** | **R 1,342** |
| **1980 Total** | **1,316** | **107** | **R 298** | **R 1,721** | **518** | **41** | **R 84** | **107** | **NA** | **565** | **R 1,314** |
| **1985 Total** | **1,092** | **159** | **R 295** | **R 1,546** | **631** | **33** | **R 89** | **96** | **NA** | **228** | **R 1,077** |
| **1990 Total** | **978** | **64** | **R 333** | **R 1,375** | **536** | **12** | **R 97** | **111** | **0** | **230** | **R 985** |
| **1995 Total** | **905** | **74** | **R 373** | **R 1,352** | **479** | **22** | **R 103** | **18** | **(s)** | **141** | **R 763** |
| **1996 Total** | **926** | **89** | **R 441** | **R 1,456** | **483** | **21** | **R 115** | **27** | **(s)** | **137** | **R 783** |
| **1997 Total** | **874** | **93** | **R 429** | **R 1,396** | **444** | **25** | **R 113** | **43** | **(s)** | **111** | **R 736** |
| **1998 Total** | **772** | **108** | **R 399** | **R 1,280** | **429** | **31** | **R 111** | **39** | **(s)** | **85** | **R 695** |
| **1999 Total** | **828** | **111** | **R 496** | **R 1,435** | **438** | **27** | **R 132** | **28** | **(s)** | **73** | **R 699** |
| **2000 Total** | **905** | **95** | **R 522** | **R 1,521** | **491** | **30** | **R 141** | **45** | **(s)** | **92** | **R 798** |
| **2001 Total** | **908** | **95** | **R 495** | **R 1,499** | **508** | **31** | **R 134** | **37** | **(s)** | **70** | **R 782** |
| **2002 Total** | **860** | **60** | **R 506** | **R 1,426** | **444** | **16** | **R 133** | **45** | **(s)** | **80** | **R 718** |
| **2003 Total** | **905** | **70** | **R 515** | **R 1,490** | **481** | **19** | **R 148** | **60** | **(s)** | **111** | **R 820** |
| **2004 Total** | **924** | **85** | **R 483** | **R 1,491** | **470** | **20** | **R 143** | **45** | **(s)** | **122** | **R 802** |
| **2005 Total** | **854** | **84** | **R 484** | **R 1,422** | **447** | **22** | **R 124** | **46** | **(s)** | **116** | **R 755** |
| **2006 Total** | **712** | **66** | **R 419** | **R 1,197** | **401** | **15** | **R 116** | **49** | **(s)** | **75** | **R 656** |
| **2007 Total** | **726** | **44** | **R 453** | **R 1,223** | **384** | **9** | **R 114** | **61** | **(s)** | **75** | **R 644** |
| **2008** January | R 93 | 2 | R 54 | R 149 | R 52 | (s) | R 15 | 4 | (s) | 10 | R 82 |
| February | R 89 | 3 | R 49 | R 142 | R 50 | 1 | R 14 | 4 | (s) | 10 | R 78 |
| March | R 68 | 3 | R 49 | R 120 | R 38 | 1 | R 14 | 4 | (s) | 7 | R 64 |
| April | R 51 | (s) | R 40 | R 92 | 28 | (s) | R 12 | 4 | (s) | R 6 | R 50 |
| May | R 37 | 1 | R 41 | R 80 | R 21 | (s) | R 12 | 4 | 0 | 4 | R 41 |
| June | R 40 | 1 | R 42 | R 82 | 22 | (s) | R 12 | 4 | 0 | 4 | R 42 |
| July | R 39 | (s) | R 44 | R 82 | R 22 | (s) | R 12 | 4 | 0 | 4 | R 42 |
| August | R 35 | (s) | R 43 | R 78 | 19 | (s) | R 12 | 4 | 0 | 4 | R 40 |
| September | R 36 | 1 | R 31 | R 69 | 20 | (s) | R 9 | 4 | (s) | 4 | R 37 |
| October | R 42 | 1 | R 41 | R 85 | 23 | (s) | R 12 | 4 | (s) | 5 | R 44 |
| November | R 51 | 2 | R 41 | R 95 | 28 | (s) | R 12 | 4 | (s) | R 6 | R 50 |
| December | R 81 | R 6 | R 43 | R 130 | R 45 | 1 | R 12 | 4 | (s) | 9 | R 71 |
| **Total** | **R 664** | **R 21** | **R 519** | **R 1,204** | **R 369** | **4** | **R 148** | **46** | **(s)** | **R 73** | **R 640** |
| **2009** January | R 81 | R 5 | R 48 | R 134 | R 45 | 1 | R 14 | 4 | (s) | R 8 | R 72 |
| February | R 69 | 4 | R 41 | R 114 | R 38 | 1 | R 12 | 3 | (s) | R 7 | R 61 |
| March | R 65 | 2 | R 45 | R 112 | R 36 | (s) | R 13 | 4 | (s) | R 7 | R 60 |
| April | R 50 | 2 | R 40 | R 92 | R 28 | (s) | R 11 | 4 | 0 | R 5 | R 48 |
| May | R 35 | 2 | R 39 | 76 | R 19 | (s) | R 11 | 4 | 0 | 4 | R 38 |
| June | R 32 | 1 | R 36 | 69 | R 18 | (s) | R 10 | 4 | 0 | R 3 | R 35 |
| July | R 37 | (s) | R 41 | 79 | R 21 | (s) | R 12 | 4 | 0 | 4 | R 40 |
| August | R 38 | 1 | R 42 | 81 | R 21 | (s) | R 12 | 4 | (s) | R 4 | R 41 |
| September | R 45 | (s) | R 40 | R 86 | R 25 | (s) | R 12 | 4 | (s) | 5 | R 45 |
| October | R 40 | 2 | R 48 | 90 | R 22 | (s) | R 14 | 4 | 0 | R 4 | R 44 |
| November | R 44 | 3 | R 53 | 100 | R 24 | 1 | R 15 | 4 | (s) | R 4 | R 48 |
| December | R 72 | 3 | R 55 | R 130 | R 40 | 1 | R 16 | 4 | (s) | R 7 | R 68 |
| **Total** | **R 609** | **R 25** | **R 528** | **R 1,162** | **R 338** | **5** | **R 151** | **46** | **(s)** | **R 62** | **R 602** |
| **2010** January | 64 | 2 | 56 | 122 | 36 | (s) | 16 | 4 | (s) | 7 | 62 |

[a] Commercial sector fuel use, including that at commercial combined-heat-and-power (CHP) and commercial electricity-only plants.

[b] Finished motor gasoline. Beginning in 1993, also includes fuel ethanol blended into motor gasoline.

R=Revised. NA=Not available. (s)=Less than +0.5 trillion Btu and greater than -0.5 trillion Btu.

Notes: • Data are estimates. • For total heat content of petroleum consumption by all sectors, see data for heat content of petroleum products supplied in Table 3.6. Petroleum products supplied is an approximation of petroleum consumption and is synonymous with the term "petroleum consumption" in Tables 3.7a-c and 3.8a-c. • See Note 7, "Petroleum Products Supplied and Petroleum Consumption," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/petro.html for all available data beginning in 1973.

Sources: Tables 3.7a, A1, and A3.

Data for residential and commercial consumption of liquefied petroleum gases are revised beginning in 1973 due to a change in the estimation methodology. See Tables 3.7a-3.7c sources for “Liquefied Petroleum Gases” at end of section.

# Table 3.8b Heat Content of Petroleum Consumption: Industrial Sector

(Trillion Btu)

| | Industrial Sector[a] | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Asphalt and Road Oil | Distillate Fuel Oil | Kerosene | Liquefied Petroleum Gases | Lubricants | Motor Gasoline[b] | Petroleum Coke | Residual Fuel Oil | Other[c] | Total |
| **1973 Total** | **1,264** | **1,469** | **156** | **1,233** | **195** | **255** | **558** | **1,858** | **2,117** | **9,104** |
| **1975 Total** | **1,014** | **1,339** | **119** | **1,144** | **149** | **223** | **540** | **1,509** | **2,107** | **8,146** |
| **1980 Total** | **962** | **1,324** | **181** | **1,577** | **182** | **158** | **516** | **1,349** | **3,275** | **9,525** |
| **1985 Total** | **1,029** | **1,119** | **44** | **1,690** | **166** | **218** | **575** | **748** | **2,149** | **7,738** |
| **1990 Total** | **1,170** | **1,150** | **12** | **1,608** | **186** | **185** | **714** | **411** | **2,840** | **8,278** |
| **1995 Total** | **1,178** | **1,131** | **15** | **2,019** | **178** | **200** | **721** | **337** | **2,834** | **8,614** |
| **1996 Total** | **1,176** | **1,187** | **18** | **2,089** | **173** | **200** | **757** | **335** | **3,119** | **9,053** |
| **1997 Total** | **1,224** | **1,203** | **19** | **2,134** | **182** | **212** | **727** | **291** | **3,298** | **9,290** |
| **1998 Total** | **1,263** | **1,211** | **22** | **2,048** | **191** | **199** | **858** | **230** | **3,093** | **9,116** |
| **1999 Total** | **1,324** | **1,187** | **13** | **2,256** | **193** | **152** | **936** | **207** | **3,128** | **9,396** |
| **2000 Total** | **1,276** | **1,200** | **16** | **2,271** | **190** | **150** | **796** | **241** | **2,981** | **9,120** |
| **2001 Total** | **1,257** | **1,300** | **23** | **2,054** | **174** | **295** | **858** | **203** | **3,056** | **9,220** |
| **2002 Total** | **1,240** | **1,204** | **14** | **2,200** | **172** | **309** | **842** | **190** | **3,041** | **9,212** |
| **2003 Total** | **1,220** | **1,136** | **24** | **2,068** | **159** | **324** | **825** | **220** | **3,260** | **9,237** |
| **2004 Total** | **1,304** | **1,214** | **28** | **2,180** | **161** | **372** | **934** | **249** | **3,429** | **9,870** |
| **2005 Total** | **1,323** | **1,264** | **39** | **2,047** | **160** | **356** | **889** | **281** | **3,320** | **9,680** |
| **2006 Total** | **1,261** | **1,263** | **30** | **2,140** | **156** | **376** | **934** | **239** | **3,416** | **9,815** |
| **2007 Total** | **1,197** | **1,265** | **13** | **2,146** | **161** | **306** | **906** | **193** | **3,308** | **9,496** |
| **2008** January | 73 | R 140 | (s) | R 195 | 13 | 21 | 79 | R 19 | 294 | R 833 |
| February | 58 | R 135 | 1 | R 176 | 12 | 20 | 61 | R 14 | 278 | R 754 |
| March | 61 | R 138 | 1 | R 176 | 14 | 21 | 77 | R 17 | 252 | R 756 |
| April | 72 | R 124 | (s) | R 146 | 14 | 21 | 75 | R 19 | 232 | R 702 |
| May | 95 | R 114 | (s) | R 150 | 14 | 22 | 74 | R 19 | 243 | R 730 |
| June | 114 | R 73 | (s) | R 150 | 13 | 21 | 67 | R 17 | 233 | R 688 |
| July | 114 | 66 | (s) | R 157 | 13 | 22 | 88 | R 18 | 221 | R 699 |
| August | 106 | 65 | (s) | R 155 | 15 | 22 | 75 | R 13 | 223 | R 674 |
| September | 106 | R 88 | (s) | R 112 | 9 | 19 | 51 | R 12 | 178 | R 576 |
| October | 96 | R 142 | (s) | R 149 | 14 | 21 | 74 | R 16 | 262 | R 774 |
| November | 63 | R 107 | R (s) | R 149 | 9 | 20 | 67 | R 13 | 269 | R 697 |
| December | 56 | R 75 | R 1 | R 157 | 10 | 21 | 82 | R 21 | 254 | R 676 |
| **Total** | **1,012** | R **1,267** | R **4** | R **1,870** | **150** | **250** | **868** | R **198** | **2,940** | R **8,559** |
| **2009** January | 47 | R 160 | 1 | R 173 | 11 | 20 | 68 | R 18 | 231 | R 730 |
| February | 50 | R 121 | 1 | R 147 | 9 | 19 | 60 | R 13 | 202 | R 621 |
| March | 69 | R 111 | R (s) | R 162 | 11 | 21 | 64 | R 17 | 194 | R 650 |
| April | 52 | R 75 | (s) | R 145 | 12 | 20 | 78 | R 19 | 193 | R 595 |
| May | 81 | R 81 | R (s) | R 140 | 10 | 21 | 81 | R 15 | 178 | R 608 |
| June | 104 | R 85 | (s) | R 129 | 13 | 21 | 84 | R 16 | 161 | R 613 |
| July | 85 | R 69 | (s) | R 149 | 11 | 22 | 56 | R 8 | 239 | R 639 |
| August | 110 | R 55 | (s) | R 151 | 14 | 22 | 64 | R 13 | 197 | R 625 |
| September | 92 | R 71 | (s) | R 145 | 12 | 20 | 73 | R 9 | 218 | R 640 |
| October | 76 | R 109 | R (s) | R 171 | 12 | 21 | 57 | R 14 | 217 | R 678 |
| November | 57 | R 101 | 1 | R 192 | 10 | 20 | 60 | R 12 | 222 | R 675 |
| December | 42 | R 125 | 1 | R 199 | 12 | 21 | 55 | R 17 | 244 | R 715 |
| **Total** | **866** | R **1,162** | R **5** | R **1,904** | **136** | **249** | **801** | R **169** | **2,496** | R **7,788** |
| **2010** January | 44 | 124 | (s) | 204 | 10 | 20 | 37 | 17 | 247 | 703 |

[a] Industrial sector fuel use, including that at industrial combined-heat-and-power (CHP) and industrial electricity-only plants.

[b] Finished motor gasoline. Beginning in 1993, also includes fuel ethanol blended into motor gasoline.

[c] Pentanes plus, petrochemical feedstocks, special naphthas, still gas (refinery gas), waxes, and miscellaneous products. Beginning in 1981, also includes negative barrels per day of distillate and residual fuel oil reclassified as unfinished oils, and other products (from both primary and secondary supply) reclassified as gasoline blending components. Beginning in 1983, also includes crude oil burned as fuel. Beginning in 2005, also includes naphtha-type jet fuel.

R=Revised. (s)=Less than +0.5 trillion Btu and greater than -0.5 trillion Btu.

Notes: • Data are estimates. • For total heat content of petroleum consumption by all sectors, see data for heat content of petroleum products supplied in Table 3.6. Petroleum products supplied is an approximation of petroleum consumption and is synonymous with the term "petroleum consumption" in Tables 3.7a-c and 3.8a-c. • See Note 7, "Petroleum Products Supplied and Petroleum Consumption," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/petro.html for all available data beginning in 1973.

Sources: Tables 3.7b, A1, and A3.

# Table 3.8c Heat Content of Petroleum Consumption: Transportation and Electric Power Sectors (Trillion Btu)

| | Transportation Sector | | | | | | | | Electric Power Sector[a] | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Aviation Gasoline | Distillate Fuel Oil[b] | Jet Fuel[c] | Liquefied Petroleum Gases | Lubricants | Motor Gasoline[d] | Residual Fuel Oil | Total | Distillate Fuel Oil[e] | Petroleum Coke | Residual Fuel Oil[f] | Total |
| **1973 Total** | **83** | **2,222** | **2,131** | **48** | **163** | **12,455** | **727** | **17,831** | **273** | **15** | **3,226** | **3,515** |
| **1975 Total** | **71** | **2,121** | **2,029** | **42** | **155** | **12,485** | **711** | **17,614** | **226** | **2** | **2,937** | **3,166** |
| **1980 Total** | **64** | **2,795** | **2,179** | **17** | **172** | **12,383** | **1,398** | **19,009** | **169** | **5** | **2,459** | **2,634** |
| **1985 Total** | **50** | **3,170** | **2,497** | **28** | **156** | **12,784** | **786** | **19,471** | **85** | **7** | **998** | **1,090** |
| **1990 Total** | **45** | **3,661** | **3,129** | **22** | **176** | **13,575** | **1,016** | **21,625** | **97** | **30** | **1,163** | **1,289** |
| **1995 Total** | **40** | **4,195** | **3,132** | **17** | **168** | **14,607** | **911** | **23,069** | **108** | **81** | **566** | **755** |
| **1996 Total** | **37** | **4,469** | **3,274** | **15** | **163** | **14,837** | **851** | **23,647** | **109** | **80** | **628** | **817** |
| **1997 Total** | **40** | **4,672** | **3,308** | **13** | **172** | **14,999** | **712** | **23,917** | **111** | **102** | **715** | **927** |
| **1998 Total** | **35** | **4,812** | **3,357** | **17** | **180** | **15,463** | **674** | **24,537** | **136** | **124** | **1,047** | **1,306** |
| **1999 Total** | **39** | **5,001** | **3,462** | **13** | **182** | **15,855** | **665** | **25,218** | **140** | **112** | **959** | **1,211** |
| **2000 Total** | **36** | **5,165** | **3,580** | **11** | **179** | **15,960** | **888** | **25,820** | **175** | **99** | **871** | **1,144** |
| **2001 Total** | **35** | **5,292** | **3,426** | **13** | **164** | **16,041** | **586** | **25,556** | **171** | **103** | **1,003** | **1,277** |
| **2002 Total** | **34** | **5,392** | **3,340** | **13** | **162** | **16,465** | **677** | **26,084** | **127** | **175** | **659** | **961** |
| **2003 Total** | **30** | **5,666** | **3,265** | **16** | **150** | **16,597** | **571** | **26,296** | **161** | **175** | **869** | **1,205** |
| **2004 Total** | **31** | **5,932** | **3,383** | **18** | **152** | **16,962** | **740** | **27,218** | **111** | **222** | **879** | **1,212** |
| **2005 Total** | **35** | **6,076** | **3,475** | **27** | **151** | **17,043** | **837** | **27,644** | **115** | **243** | **876** | **1,235** |
| **2006 Total** | **33** | **6,414** | **3,379** | **26** | **147** | **17,197** | **906** | **28,103** | **74** | **214** | **361** | **648** |
| **2007 Total** | **32** | **6,457** | **3,358** | **21** | **152** | **17,321** | **994** | **28,334** | **89** | **171** | **397** | **657** |
| **2008** January | 2 | R 463 | 278 | R 4 | 13 | 1,401 | R 83 | R 2,243 | 9 | 15 | 21 | 44 |
| February | 2 | R 442 | 255 | R 3 | 11 | 1,319 | R 58 | R 2,090 | 7 | 14 | 17 | 37 |
| March | 2 | R 503 | 273 | R 3 | 13 | 1,441 | R 76 | R 2,311 | 5 | 11 | 15 | 31 |
| April | 3 | R 508 | 276 | R 3 | 13 | 1,402 | R 92 | R 2,296 | 5 | 12 | 17 | 34 |
| May | 3 | R 532 | 279 | R 3 | 13 | 1,471 | R 91 | R 2,391 | 5 | 12 | 18 | 35 |
| June | 2 | 515 | 276 | R 3 | 12 | 1,401 | R 78 | R 2,288 | 8 | 14 | 30 | 52 |
| July | 2 | R 534 | 277 | R 3 | 13 | 1,455 | R 87 | 2,370 | 6 | 13 | 24 | 43 |
| August | 3 | R 536 | 288 | R 3 | 14 | 1,452 | R 62 | R 2,359 | 5 | 13 | 21 | 39 |
| September | 2 | R 504 | 251 | R 2 | 9 | 1,307 | R 57 | R 2,133 | 5 | 13 | 25 | 42 |
| October | 2 | R 543 | 249 | R 3 | 13 | 1,435 | R 80 | R 2,325 | 4 | 13 | 15 | 33 |
| November | 2 | R 486 | 245 | R 3 | 8 | 1,370 | R 63 | R 2,176 | 5 | 12 | 17 | 34 |
| December | 2 | 475 | 245 | R 3 | 9 | 1,419 | R 94 | R 2,247 | 8 | 12 | 24 | 44 |
| **Total** | **28** | **R 6,039** | **3,193** | **R 37** | **141** | **16,872** | **R 920** | **R 27,230** | **73** | **154** | **240** | **468** |
| **2009** January | 3 | R 440 | 239 | R 3 | 10 | 1,381 | R 73 | R 2,149 | 10 | 12 | 37 | 60 |
| February | 1 | R 404 | 213 | R 3 | 8 | 1,266 | R 54 | R 1,949 | 6 | 11 | 15 | 33 |
| March | 2 | R 454 | 253 | R 3 | 10 | 1,409 | R 82 | R 2,214 | 7 | 14 | 13 | 34 |
| April | 3 | R 448 | 242 | R 3 | 12 | 1,377 | R 93 | R 2,176 | 4 | 12 | 11 | 28 |
| May | 2 | R 477 | 235 | R 3 | 9 | 1,445 | R 63 | R 2,234 | 6 | 13 | 14 | 32 |
| June | 3 | R 480 | 239 | R 3 | 12 | 1,419 | R 79 | R 2,234 | 6 | 12 | 15 | 33 |
| July | 3 | R 493 | 268 | R 3 | 10 | 1,478 | R 37 | R 2,294 | 5 | 13 | 16 | 34 |
| August | 2 | R 490 | 255 | R 3 | 13 | 1,471 | R 60 | R 2,294 | 6 | 13 | 19 | 37 |
| September | 3 | R 458 | 239 | R 3 | 11 | 1,369 | 39 | R 2,121 | 4 | 12 | 12 | 29 |
| October | 2 | R 488 | 240 | R 3 | 11 | 1,427 | R 69 | R 2,240 | 5 | 8 | 13 | 26 |
| November | 1 | R 447 | 226 | R 4 | 10 | 1,365 | R 56 | R 2,108 | 5 | 8 | 8 | 20 |
| December | 2 | R 462 | 241 | R 4 | 11 | 1,413 | R 79 | R 2,213 | 6 | 10 | 8 | 24 |
| **Total** | **26** | **R 5,541** | **2,889** | **R 38** | **128** | **16,820** | **R 785** | **R 26,227** | **71** | **139** | **181** | **390** |
| **2010** January | 2 | 423 | 240 | 4 | 10 | 1,355 | 80 | 2,113 | 15 | 13 | 18 | 45 |

[a] Electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public. Through 1988, data are for electric utilities only; beginning in 1989, data are for electric utilities and independent power producers.

[b] Beginning in 2009, includes renewable diesel fuel (including biodiesel) blended into distillate fuel oil.

[c] Through 2004, includes kerosene-type and naphtha-type jet fuel. Beginning in 2005, includes kerosene-type jet fuel only; naphtha-type jet fuel is included in "Industrial Sector Other" on Table 3.8b.

[d] Finished motor gasoline. Beginning in 1993, also includes fuel ethanol blended into motor gasoline.

[e] Fuel oil nos. 1, 2, and 4. Through 2000, electric utility data also include small amounts of kerosene and jet fuel.

[f] Fuel oil nos. 5 and 6. Through 2000, electric utility data also include a small amount of fuel oil no. 4.

R=Revised.

Notes: • Transportation sector data are estimates. • For total heat content of petroleum consumption by all sectors, see data for heat content of petroleum products supplied in Table 3.6. Petroleum products supplied is an approximation of petroleum consumption and is synonymous with the term "petroleum consumption" in Tables 3.7a-c and 3.8a-c. • See Note 7, "Petroleum Products Supplied and Petroleum Consumption," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/petro.html for all available data beginning in 1973.

Sources: Tables 3.7c, A1, and A3.

# Petroleum

**Note 1. Petroleum Survey Respondents.** The U.S. Energy Information Administration (EIA) uses a number of sources and methods to maintain the survey respondent lists. On a regular basis, survey managers review such industry publications as the *Oil & Gas Journal* and *Oil Daily* for information on facilities or companies starting up or closing down operations. Those sources are augmented by articles in newspapers, communications from respondents indicating changes in status, and information received from survey systems.

To supplement routine frames maintenance and to provide more thorough coverage, a comprehensive frames investigation is conducted every 3 years. This investigation results in the reassessment and recompilation of the complete frame for each survey. The effort also includes the evaluation of the impact of potential frame changes on the historical time series of data from these respondents. The results of this frame study are usually implemented in January to provide a full year under the same frame.

In 1991, EIA conducted a frame identifier survey of companies that produce, blend, store, or import oxygenates. A summary of the results from the identification survey was published in the *Weekly Petroleum Status Report* dated February 12, 1992, and in the February 1992 issue of the *Petroleum Supply Monthly*. In order to continue to provide relevant information about U.S. and regional gasoline supply, EIA conducted a second frame identifier survey of those companies during 1992. As a result, numerous respondents were added to the monthly surveys effective in January 1993. See *Petroleum Supply Monthly* (*PSM*), Appendix B, "Frame."

**Note 2. Motor Gasoline.** Beginning in January 1981, EIA expanded its universe to include non-refinery blenders and separated blending components from finished motor gasoline as a reporting category. Also, survey forms were modified to describe refinery operations more accurately.

Beginning with the reporting of January 1993 data, EIA made adjustments to the product supplied series for finished motor gasoline. It was recognized that motor gasoline statistics published by EIA through 1992 were underreported because the reporting system was (1) not collecting all fuel ethanol blending, and (2) there was a misreporting of motor gasoline blending components that were blended into finished gasoline. The adjustments are incorporated into EIA's data beginning in January 1993. To facilitate data analysis across the 1992–1993 period, EIA prepared a table of 1992 data adjusted according to the 1993 basis. See *Petroleum Supply Monthly*, March 1993, Table H3.

**Note 3. Distillate and Residual Fuel Oils.** The requirement to report crude oil in pipelines or burned on leases as either distillate or residual fuel oil was eliminated. Prior to January 1981, the refinery input of unfinished oils typically exceeded the available supply of unfinished oils.

That discrepancy was assumed to be due to the redesignation of distillate and residual fuel oils received as such but used as unfinished oil inputs by the receiving refinery. The imbalance between supply and disposition of unfinished oils would then be subtracted from the production of distillate and residual fuel oils. Two-thirds of that difference was subtracted from distillate and one-third from residual. Beginning in January 1981, EIA modified its survey forms to account for redesignated product and discontinued the above-mentioned adjustment.

Prior to 1983, crude oil burned on leases and used at pipeline pump stations was reported as either distillate or residual fuel oil and was included as product supplied for these products.

**Note 4. Petroleum New Stock Basis.** In January 1975, 1979, 1981, and 1983, numerous respondents were added to bulk terminal and pipeline surveys, affecting subsequent stocks reported and stock change calculations. Using the expanded coverage (new basis), the end-of-year stocks, in million barrels, would have been:
Crude Oil: 1982—645 (Total) and 351 (Non-SPR).
Distillate Fuel Oil: 1974—224; 1980—205; and 1982—186.
Jet Fuel (Total): 1974—30; 1980—42; and 1982—39.
Liquefied Petroleum Gases: 1974—113; 1978—136; 1980—128; and 1982—102.
Propane and Propylene: 1978—86; 1980—69; and 1982—57.
Motor Gasoline (Total): 1974—225; 1980—263; 1982—244.
Residual Fuel Oil: 1974—75; 1980—91; and 1982—69.
Total Petroleum: 1974—1,121; 1980—1,425; and 1982—1,461.

Stock change calculations beginning in 1975, 1979, 1981, and 1983 were made by using new basis stock levels.

In January 1984, changes were made in the reporting of natural gas liquids. As a result, unfractionated stream is now reported on a component basis (ethane, propane, normal butane, isobutane, and pentanes plus). This change affects stocks reported and stock change calculations. Under the new basis, 1983 end-of-year stocks, in million barrels, would have been 108 for liquefied petroleum gases, and 55 for propane and propylene.

In January 1993, changes were made in the monthly surveys to begin collecting bulk terminal and pipeline stocks of oxygenates. This change affected stocks reported and stock change calculations. However, a new basis stock level was not calculated for 1992 end-of-year stocks.

**Note 5. Stocks of Alaskan Crude Oil.** Stocks of Alaskan crude oil in transit were included for the first time in January 1981. The major impact of this change is on the

reporting of stock change calculations. Using the expanded coverage (new basis), 1980 end-of-year stocks, in million barrels, would have been 488 (Total) and 380 (Non-SPR).

**Note 6. Petroleum Data Discrepancies.** Due to differences internal to EIA data processing systems, some small discrepancies exist between data in the *Monthly Energy Review* (*MER*) and the *Petroleum Supply Annual* (*PSA*) and *Petroleum Supply Monthly* (*PSM*). The data that have discrepancies are footnoted in Section 3 tables. The corresponding PSA/PSM values, in thousand barrels per day, are: Natural Gas Plant Liquids Production, 1976: 1,603; Total Exports, 1979: 472; Petroleum Products Exports, 1979: 237; and SPR Crude Oil Imports, 1978: 162.

**Note 7. Petroleum Products Supplied and Petroleum Consumption.** Total petroleum products supplied is the sum of the products supplied for each petroleum product, crude oil, unfinished oils, and gasoline blending components. For each of these, except crude oil, product supplied is calculated by adding refinery production, natural gas plant liquids production, new supply of other liquids, imports, and stock withdrawals, and subtracting stock additions, refinery inputs, and exports. Crude oil product supplied is the sum of crude oil burned on leases and at pipeline pump stations as reported on Form EIA-813, "Monthly Crude Oil Report." Prior to 1983, crude oil burned on leases and used at pipeline pump stations was reported as either distillate or residual fuel oil and was included as product supplied for these products. Petroleum product supplied (see Tables 3.5 and 3.6) is an approximation of petroleum consumption and is synonymous with the term "Petroleum Consumption" in Tables 3.7a-c and 3.8a-c.

## Tables 3.7a–3.7c Sources

Petroleum consumption data in these tables are derived from data for "petroleum products supplied" from the following sources:

1973–1975: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, "Petroleum Statement, Annual."

1976–1980: EIA, *Energy Data Reports*, "Petroleum Statement, Annual."

1981–2008: EIA, *Petroleum Supply Annual*.

2009 and 2010: EIA, *Petroleum Supply Monthly*.

Energy-use allocation procedures by individual product are as follows:

**Asphalt and Road Oil**—All consumption of asphalt and road oil is assigned to the industrial sector.

**Aviation Gasoline**—All consumption of aviation gasoline is assigned to the transportation sector.

**Distillate Fuel Oil**—Distillate fuel oil consumption is assigned to the sectors as follows:

**Distillate Fuel Oil Consumed by the Electric Power Sector**—See sources for Table 7.4b. For 1973–1979, electric utility consumption of distillate fuel oil is assumed to be the amount of petroleum (minus small amounts of kerosene and kerosene-type jet fuel deliveries) consumed in gas turbine and internal combustion plants. For 1980–2000, electric utility consumption of distillate fuel oil is assumed to be the amount of light oil (fuel oil nos. 1 and 2, plus small amounts of kerosene and jet fuel) consumed.

**Distillate Fuel Oil Consumed by the End-Use Sectors, Annually**—The aggregate end-use amount is total distillate fuel oil supplied minus the amount consumed by the electric power sector. The end-use total consumed annually is allocated into the individual end-use sectors (residential, commercial, industrial, and transportation) in proportion to each sector's share of sales as reported in EIA's *Fuel Oil and Kerosene Sales* (*Sales*) report series (DOE/EIA-0535), which is based primarily on data collected by Form EIA-821, "Annual Fuel Oil and Kerosene Sales Report" (previously Form EIA-172). Shares for the current year are based on the most recent Sales report.

Following are notes on the individual sector groupings:

Since 1979, the residential sector sales total is directly from the Sales reports. Prior to 1979, each year's sales subtotal of the heating plus industrial category is split into residential, commercial, and industrial (including farm) in proportion to the 1979 shares.

Since 1979, the commercial sector sales total is directly from the Sales reports. Prior to 1979, each year's sales subtotal of the heating plus industrial category is split into residential, commercial, and industrial (including farm) in proportion to the 1979 shares.

Since 1979, the industrial sector sales total is the sum of the sales for industrial, farm, oil company, off-highway diesel, and all other uses. Prior to 1979, each year's sales subtotal of the heating plus industrial category is split into residential, commercial, and industrial (including farm) in proportion to the 1979 shares, and this estimated industrial portion is added to oil company, off-highway diesel, and all other uses.

The transportation sector sales total is the sum of the sales for railroad, vessel bunkering, on-highway diesel, and military uses for all years.

**Distillate Fuel Oil Consumed by the End-Use Sectors, Monthly**—Residential sector and commercial sector monthly consumption is estimated by allocating the annual estimates, which are described above, into the months in proportion to each month's share of the year's sales of No. 2 heating oil. (For each month of the current year, the residential and commercial consumption increase

from the same month in the previous year is based on the percent increase in that month's No. 2 heating oil sales from the same month in the previous year.) The years' No. 2 heating oil sales totals are from the following sources: for 1973–1980, the Ethyl Corporation, *Monthly Report of Heating Oil Sales*; for 1981 and 1982, the American Petroleum Institute, *Monthly Report of Heating Oil Sales*; and for 1983 forward, EIA, Form EIA-782A, "Refiners'/Gas Plant Operators' Monthly Petroleum Product Sales Report," No. 2 Fuel Oil Sales to End Users and for Resale.

The transportation highway use portion is allocated into the months in proportion to each month's share of the year's total sales for highway use as reported by the Federal Highway Administration's Table MF-25, "Private and Commercial Highway Use of Special Fuels by Months." After 1993, the sales-for-highway-use data are no longer available as a monthly series; the 1993 data are used for allocating succeeding year's totals into months.

A distillate fuel oil "balance" is calculated as total distillate fuel oil supplied minus the amount consumed by the electric power sector, residential sector, commercial sector, and for highway use.

Industrial sector monthly consumption is estimated by multiplying each month's distillate fuel oil "balance" by the annual industrial consumption share of the annual distillate fuel oil "balance."

Total transportation sector monthly consumption is estimated as total distillate fuel oil supplied minus the amount consumed by the residential, commercial, industrial, and electric power sectors.

**Jet Fuel**—Through 1982, small amounts of kerosene-type jet fuel were consumed by the electric power sector. Kerosene-type jet fuel deliveries to the electric power sector as reported on Form FERC-423 (formerly Form FPC-423) were used as estimates of this consumption. Through 2004, all remaining jet fuel (kerosene-type and naphtha-type) is consumed by the transportation sector. Beginning in 2005, kerosene-type jet fuel is consumed by the transportation sector, while naphtha-type jet fuel is classified under "Other Petroleum Products," which is assigned to the industrial sector.

**Kerosene**—Kerosene product supplied is allocated into the individual end-use sectors (residential, commercial, and industrial) in proportion to each sector's share of sales as reported in EIA's *Fuel Oil and Kerosene Sales* (*Sales*) report series (DOE/EIA-0535), which is based primarily on data collected by Form EIA-821, "Annual Fuel Oil and Kerosene Sales Report" (previously Form EIA-172).

Since 1979, the residential sector sales total is directly from the Sales reports. Prior to 1979, each year's sales category called "heating" is split into residential, commercial, and industrial in proportion to the 1979 shares.

Since 1979, the commercial sector sales total is directly from the Sales reports. Prior to 1979, each year's sales category called "heating" is split into residential, commercial, and industrial in proportion to the 1979 shares.

Since 1979, the industrial sector sales total is the sum of the sales for industrial, farm, and all other uses. Prior to 1979, each year's sales category called "heating" is split into residential, commercial and industrial in proportion to the 1979 shares, and this estimated industrial (including farm) portion is added to all other uses.

**Liquefied Petroleum Gases (LPG)**—The annual shares of LPG's total consumption that are estimated to be used by each sector are applied to each month's total LPG consumption to create monthly sector consumption estimates. The annual sector shares are calculated as described below.

Sales of LPG to the residential and commercial sectors combined are converted from thousand gallons per year to thousand barrels per year and are assumed to be the annual consumption of LPG by the combined sectors. Since 2003, residential sector LPG consumption is assumed to equal propane retail sales, with the remainder of the combined residential and commercial LPG consumption being assigned to the commercial sector. Prior to 2003, residential sector LPG consumption is based on the average of the State residential shares for 2003-2008, with the remainder of the combined residential and commercial LPG cnsumption being assigned to the commercial sector.

The quantity of LPG sold each year for consumption in internal combustion engines is allocated between the transportation and industrial sectors on the basis of data for special fuels used on highways published by the U.S. Department of Transportation, Federal Highway Administration, in *Highway Statistics*. The allocations of LPG sold for internal combustion engine use to the transportation sector range from a low of 20 percent (in 2001) to a high of 78 percent (in 2008).

LPG consumed annually by the industrial sector is estimated as the difference between LPG total product supplied and the sum of the estimated LPG consumption by the residential, commercial, and transportation sectors. The industrial sector includes LPG used by chemical plants as raw materials or solvents and used in the production of synthetic rubber; refinery fuel use; use as synthetic natural gas feedstock and use in secondary recovery projects; all farm use; LPG sold to gas utility companies for distribution through the mains; and a portion of the use of LPG as an internal combustion engine fuel.

Sources of the annual sales data for creating annual energy shares are:

1973–1982: EIA's "Sales of Liquefied Petroleum Gases

and Ethane" reports, based primarily on data collected by Form EIA-174, "Sales of Liquefied Petroleum Gases."
1983: End-use consumption estimates for 1983 are based on 1982 end-use consumption because the collection of data under Form EIA-174 was discontinued after data year 1982.
1984 forward: American Petroleum Institute (API), "Sales of Natural Gas Liquids and Liquefied Refinery Gases," which is based on an LPG sales survey jointly sponsored by API, the Gas Processors Association, and the National Liquefied Petroleum Gas Association. EIA adjusts the data to remove quantities of pentanes plus and to estimate withheld values.

**Lubricants**—The consumption of lubricants is allocated to the industrial and transportation sectors for all months according to proportions developed from annual sales of lubricants to the two sectors from U.S. Department of Commerce, Bureau of the Census, *Current Industrial Reports*, "Sales of Lubricating and Industrial Oils and Greases." The 1973 shares are applied to 1973 and 1974; the 1975 shares are applied to 1975 and 1976; and the 1977 shares are applied to 1977 forward.

**Motor Gasoline**—The total monthly consumption of motor gasoline is allocated to the sectors in proportion to aggregations of annual sales categories created on the basis of the U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics*, Tables MF-21, MF-24, and MF-25, as follows:

Commercial sales are the sum of sales for public non-highway use and miscellaneous and unclassified uses.

Industrial sales are the sum of sales for agriculture, construction, and industrial and commercial use as classified in the *Highway Statistics.*

Transportation sales are the sum of sales for highway use (minus the sales of special fuels, which are primarily diesel fuel and are accounted for in the transportation sector of distillate fuel) and sales for marine use.

**Petroleum Coke**—Portions of petroleum coke are consumed by the electric power sector (see sources for Table 7.4b) and the commercial sector (see sources for Table 7.4c). The remaining petroleum coke is assigned to the industrial sector.

**Residual Fuel Oil**—Residual fuel oil consumption is assigned to the sectors as follows:

**Residual Fuel Oil Consumed by the Electric Power Sector**—See sources for Table 7.4b. For 1973–1979, electric utility consumption of residual fuel oil is assumed to be the amount of petroleum consumed in steam-electric power plants. For 1980–2000, electric utility consumption of residual fuel oil is assumed to be the amount of heavy oil (fuel oil nos. 4, 5, and 6) consumed.

**Residual Fuel Oil Consumed by the End-Use Sectors, Annually**—The aggregate end-use amount is total residual fuel oil supplied minus the amount consumed by the electric power sector. The end-use total consumed annually is allocated into the individual end-use sectors (commercial, industrial, and transportation) in proportion to each sector's share of sales as reported in EIA's *Fuel Oil and Kerosene Sales* (*Sales*) report series (DOE/EIA-535), which is based primarily on data collected by Form EIA-821, "Annual Fuel Oil and Kerosene Sales Report" (previously Form EIA-172). Shares for the current year are based on the most recent Sales report.

Following are notes on the individual sector groupings:

Since 1979, commercial sales data are directly from the Sales reports. Prior to 1979, each year's sales subtotal of the heating plus industrial category is split into commercial and industrial in proportion to the 1979 shares.

Since 1979, industrial sales data are the sum of sales for industrial, oil company, and all other uses. Prior to 1979, each year's sales subtotal of the heating plus industrial category is split into commercial and industrial in proportion to the 1979 shares, and this estimated industrial portion is added to oil company and all other uses.

Transportation sales are the sum of sales for railroad, vessel bunkering, and military uses for all years.

**Residual Fuel Oil Consumed by the End-Use Sectors, Monthly**—Commercial sector monthly consumption is estimated by allocating the annual estimates, which are described above, into the months in proportion to each month's share of the year's sales of No. 2 heating oil. (For each month of the current year, the consumption increase from the same month in the previous year is based on the percent increase in that month's No. 2 heating oil sales from the same month in the previous year.) The years' No. 2 heating oil sales totals are from the following sources: for 1973–1980, the Ethyl Corporation, *Monthly Report of Heating Oil Sales*; for 1981 and 1982, the American Petroleum Institute, *Monthly Report of Heating Oil Sales*; and for 1983 forward, EIA, Form EIA-782A, "Refiners'/Gas Plant Operators' Monthly Petroleum Product Sales Report," No. 2 Fuel Oil Sales to End Users and for Resale.

A residual fuel oil "balance" is calculated as total residual fuel oil supplied minus the amount consumed by the electric power sector, commercial sector, and by industrial combined-heat-and-power plants (see sources for Table 7.4c).

Transportation sector monthly consumption is estimated by multiplying each month's residual fuel oil "balance" by the annual transportation consumption share of the annual residual fuel oil "balance."

Total industrial sector monthly consumption is estimated as

total residual fuel oil supplied minus the amount consumed by the commercial, transportation, and electric power sectors.

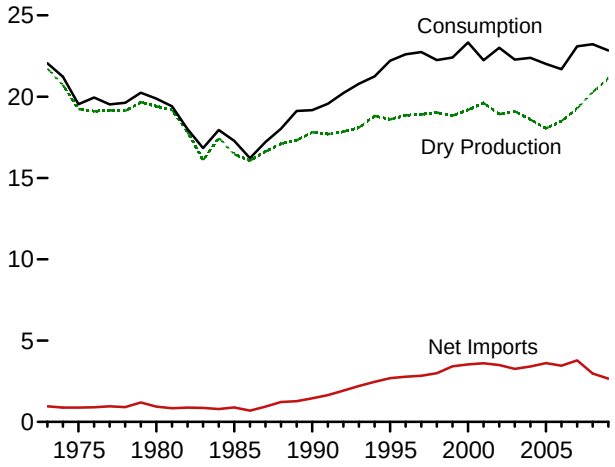
**Other Petroleum Products**—Consumption of all remaining petroleum products is assigned to the industrial sector. Other petroleum products include pentanes plus, petrochemical feedstocks, special naphthas, still gas (refinery gas), waxes, and miscellaneous products. Beginning in 1981, also includes negative barrels per day of distillate and residual fuel oil reclassified as unfinished oils, and other products (from both primary and secondary supply) reclassified as gasoline blending components. Beginning in 1983, also includes crude oil burned as fuel. Beginning in 2005, also includes naphtha-type jet fuel.

# 4 Natural Gas

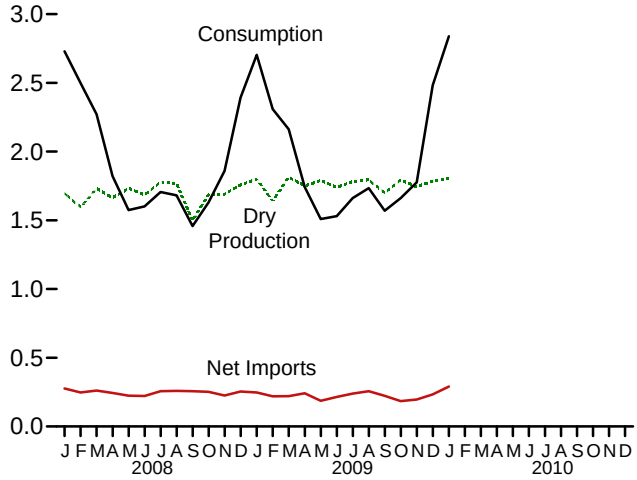
Natural gas pipeline, El Paso County, Texas. Source: U.S. Department of Energy.

## Figure 4.1 Natural Gas
(Trillion Cubic Feet)

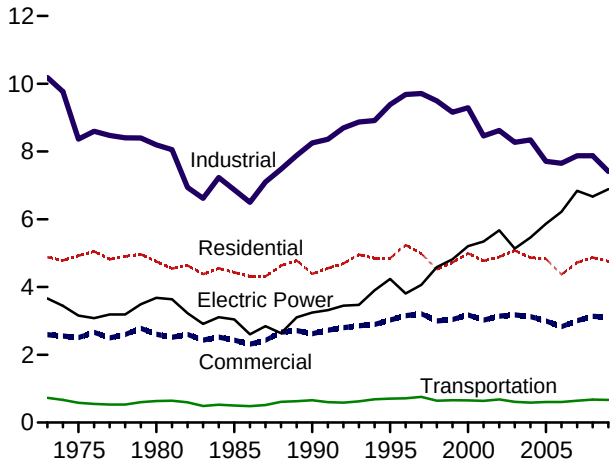
Overview, 1973-2009



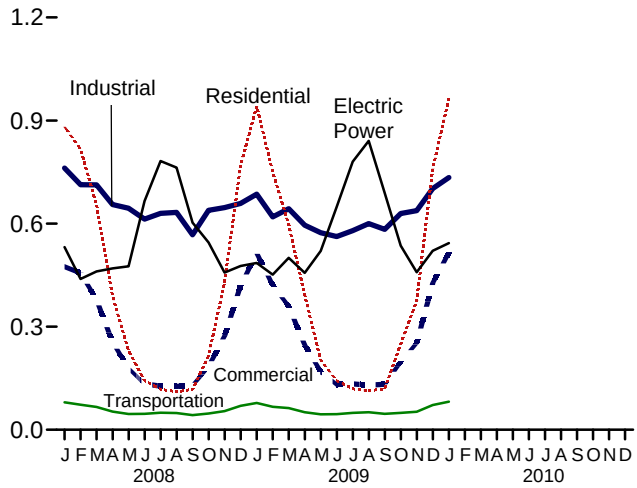

Overview, Monthly



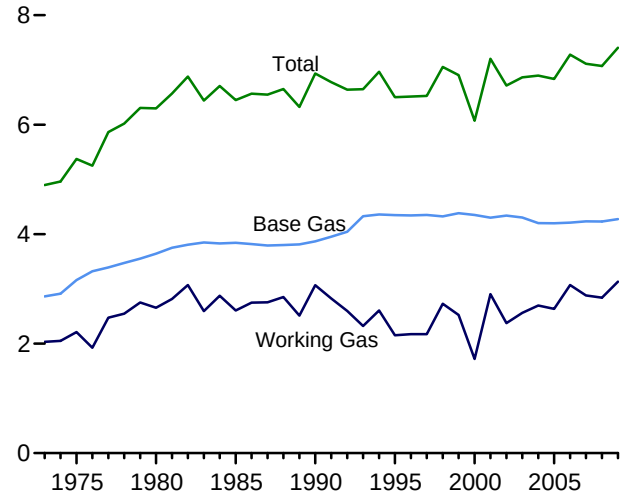

Consumption by Sector, 1973-2009



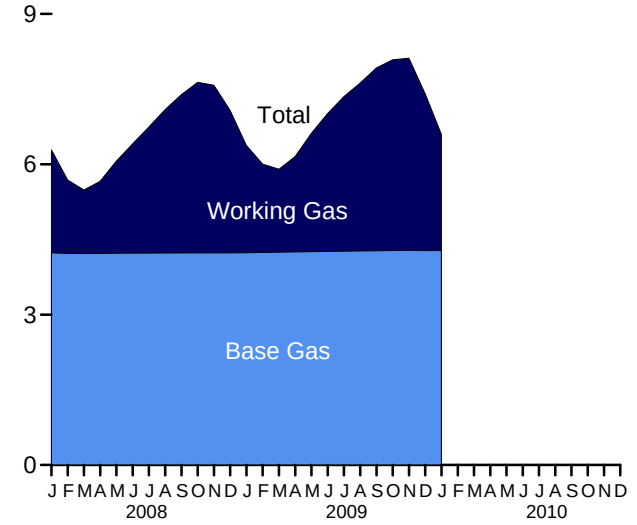

Consumption by Sector, Monthly




Underground Storage, End of Year, 1973-2009




Underground Storage, End of Month




Web Page: http://www.eia.doe.gov/emeu/mer/natgas.html.
Sources: Tables 4.1, 4.3, and 4.4.

# Table 4.1 Natural Gas Overview

(Billion Cubic Feet)

| | Gross Withdrawals[a] | Marketed Production (Wet)[b] | Extraction Loss[c] | Dry Gas Production[d] | Supplemental Gaseous Fuels[e] | Trade | | | Net Storage Withdrawals[f] | Balancing Item[g] | Consumption[h] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Imports | Exports | Net Imports | | | |
| **1973 Total** | **24,067** | **[i]22,648** | **917** | **[i]21,731** | **NA** | **1,033** | **77** | **956** | **-442** | **-196** | **22,049** |
| **1975 Total** | **21,104** | **[i]20,109** | **872** | **[i]19,236** | **NA** | **953** | **73** | **880** | **-344** | **-235** | **19,538** |
| **1980 Total** | **21,870** | **20,180** | **777** | **19,403** | **155** | **985** | **49** | **936** | **23** | **-640** | **19,877** |
| **1985 Total** | **19,607** | **17,270** | **816** | **16,454** | **126** | **950** | **55** | **894** | **235** | **-428** | **17,281** |
| **1990 Total** | **21,523** | **18,594** | **784** | **17,810** | **123** | **1,532** | **86** | **1,447** | **-513** | **307** | **[j]19,174** |
| **1995 Total** | **23,744** | **19,506** | **908** | **18,599** | **110** | **2,841** | **154** | **2,687** | **415** | **396** | **22,207** |
| **1996 Total** | **24,114** | **19,812** | **958** | **18,854** | **109** | **2,937** | **153** | **2,784** | **2** | **860** | **22,609** |
| **1997 Total** | **24,213** | **19,866** | **964** | **18,902** | **103** | **2,994** | **157** | **2,837** | **24** | **871** | **22,737** |
| **1998 Total** | **24,108** | **19,961** | **938** | **19,024** | **102** | **3,152** | **159** | **2,993** | **-530** | **657** | **22,246** |
| **1999 Total** | **23,823** | **19,805** | **973** | **18,832** | **98** | **3,586** | **163** | **3,422** | **172** | **-119** | **22,405** |
| **2000 Total** | **24,174** | **20,198** | **1,016** | **19,182** | **90** | **3,782** | **244** | **3,538** | **829** | **-305** | **23,333** |
| **2001 Total** | **24,501** | **20,570** | **954** | **19,616** | **86** | **3,977** | **373** | **3,604** | **-1,166** | **99** | **22,239** |
| **2002 Total** | **23,941** | **19,885** | **957** | **18,928** | **68** | **4,015** | **516** | **3,499** | **468** | **44** | **23,007** |
| **2003 Total** | **24,119** | **19,974** | **876** | **19,099** | **68** | **3,944** | **680** | **3,264** | **-197** | **44** | **22,277** |
| **2004 Total** | **23,970** | **19,517** | **927** | **18,591** | **60** | **4,259** | **854** | **3,404** | **-114** | **448** | **22,389** |
| **2005 Total** | **23,457** | **18,927** | **876** | **18,051** | **64** | **4,341** | **729** | **3,612** | **52** | **232** | **22,011** |
| **2006 Total** | **23,535** | **19,410** | **906** | **18,504** | **66** | **4,186** | **724** | **3,462** | **-436** | **89** | **21,685** |
| **2007 Total** | **24,664** | **20,196** | **930** | **19,266** | **63** | **4,608** | **822** | **3,785** | **192** | **-209** | **23,097** |
| **2008** January | 2,164 | 1,775 | 80 | 1,695 | 1 | 390 | 113 | 277 | 837 | -82 | 2,729 |
| February | 2,049 | 1,672 | 75 | 1,597 | 5 | 350 | 103 | 247 | 603 | 47 | 2,499 |
| March | 2,213 | 1,814 | 81 | 1,732 | 6 | 367 | 105 | 262 | 225 | 47 | 2,271 |
| April | 2,114 | 1,742 | 78 | 1,664 | 5 | 322 | 79 | 243 | -195 | 104 | 1,822 |
| May | 2,169 | 1,815 | 81 | 1,733 | 5 | 297 | 73 | 224 | -412 | 25 | 1,575 |
| June | 2,122 | 1,764 | 79 | 1,685 | 6 | 287 | 65 | 222 | -349 | 38 | 1,602 |
| July | 2,212 | 1,861 | 84 | 1,777 | 4 | 323 | 66 | 257 | -348 | 16 | 1,706 |
| August | 2,217 | 1,851 | 83 | 1,768 | 5 | 329 | 70 | 259 | -357 | 6 | 1,681 |
| September | 1,929 | 1,569 | 70 | 1,499 | 5 | 314 | 58 | 256 | -306 | 4 | 1,458 |
| October | 2,165 | 1,767 | 79 | 1,687 | 6 | 321 | 69 | 252 | -248 | -67 | 1,631 |
| November | 2,160 | 1,769 | 79 | 1,690 | 6 | 320 | 95 | 226 | 61 | -122 | 1,860 |
| December | 2,240 | 1,841 | 83 | 1,759 | 6 | 365 | 110 | 254 | 523 | -149 | 2,393 |
| **Total** | **25,754** | **21,240** | **953** | **20,286** | **61** | **3,984** | **1,006** | **2,979** | **34** | **-133** | **23,227** |
| **2009** January | [R] 2,255 | [RE] 1,872 | 74 | [RE] 1,798 | 6 | 360 | 113 | 247 | 698 | [R] -46 | 2,704 |
| February | [R] 2,076 | [RE] 1,709 | 68 | [RE] 1,641 | 5 | 322 | 103 | 219 | 371 | [R] 73 | 2,309 |
| March | [R] 2,294 | [RE] 1,891 | 78 | [RE] 1,814 | 6 | 324 | 104 | 221 | 98 | [R] 24 | 2,162 |
| April | [R] 2,195 | [RE] 1,826 | 76 | [RE] 1,750 | 5 | 322 | 80 | 242 | -246 | [R] -9 | [R] 1,742 |
| May | [R] 2,243 | [RE] 1,871 | 81 | [RE] 1,790 | 5 | 264 | 77 | 187 | -467 | [R] -7 | 1,510 |
| June | [R] 2,153 | [RE] 1,817 | 77 | [RE] 1,740 | 2 | 281 | 66 | 215 | -387 | [R] -39 | [R] 1,531 |
| July | [R] 2,191 | [RE] 1,861 | 79 | [RE] 1,782 | 5 | 316 | 76 | 239 | -330 | [R] -34 | 1,662 |
| August | [R] 2,182 | [RE] 1,874 | 80 | [RE] 1,794 | 6 | 336 | 79 | 257 | -268 | [R] -55 | 1,734 |
| September | [R] 2,116 | [RE] 1,778 | 79 | [RE] 1,700 | 5 | 306 | 84 | 222 | -288 | [R] -69 | 1,570 |
| October | [R] 2,236 | [RE] 1,876 | 82 | [RE] 1,794 | 6 | 262 | 77 | 185 | -161 | [R] -162 | 1,662 |
| November | [R] 2,189 | [RE] 1,824 | 81 | [RE] 1,744 | 6 | 292 | 96 | 196 | -31 | [R] -138 | 1,776 |
| December | [R] 2,231 | [RE] 1,870 | 84 | [E] 1,785 | 6 | [R] 348 | [R] 115 | 233 | 699 | -241 | 2,482 |
| **Total** | **[R] 26,359** | **[RE] 22,069** | **938** | **[RE] 21,131** | **64** | **[R] 3,735** | **[R] 1,070** | **2,664** | **-313** | **[R] -703** | **[R] 22,844** |
| **2010** January | 2,258 | [E] 1,890 | 83 | [E] 1,807 | 6 | [E] 391 | [E] 100 | [E] 291 | 812 | -78 | 2,838 |

[a] Gas withdrawn from natural gas and crude oil wells; excludes lease condensate.

[b] Gross withdrawals minus repressuring, nonhydrocarbon gases removed, and vented and flared. See Note 1, "Natural Gas Production," at end of section.

[c] See Note 2, "Natural Gas Extraction Loss," at end of section.

[d] Marketed production (wet) minus extraction loss.

[e] See Note 3, "Supplemental Gaseous Fuels," at end of section.

[f] Net withdrawals from underground storage. For 1980-2008, also includes net withdrawals of liquefied natural gas in above-ground tanks. See Note 4, "Natural Gas Storage," at end of section.

[g] See Note 5, "Natural Gas Balancing Item," at end of section. Since 1980, excludes transit shipments that cross the U.S.-Canada border (i.e., natural gas delivered to its destination via the other country).

[h] See Note 6, "Natural Gas Consumption," at end of section.

[i] May include unknown quantities of nonhydrocarbon gases.

[j] For 1989-1992, a small amount of consumption at independent power producers may be counted in both "Other Industrial" and "Electric Power Sector" on Table 4.3. See Note 7, "Natural Gas Consumption, 1989-1992," at end of section.

R=Revised. E=Estimate. NA=Not available.

Notes: • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/natgas.html for all available data beginning in 1973.

Sources: • **Imports and Exports:** Table 4.2. • **Consumption:** Table 4.3. • **Balancing Item:** Calculated as consumption minus dry gas production, supplemental gaseous fuels, net imports, and net storage withdrawals. • **All Other Data: 1973-2004—**U.S. Energy Information Administration (EIA), *Natural Gas Annual,* annual reports. **2005 forward—**EIA, *Natural Gas Monthly,* March 2010, Table 1.

# Table 4.2 Natural Gas Trade by Country

(Billion Cubic Feet)

| | Imports | | | | | | | | | | Exports | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Algeria[a] | Canada[b] | Egypt[a] | Mexico[b] | Nigeria[a] | Oman[a] | Qatar[a] | Trinidad and Tobago[a] | Other[a,c] | Total | Canada[b] | Japan[a] | Mexico[b] | Total |
| **1973 Total** | **3** | **1,028** | **0** | **2** | **0** | **0** | **0** | **0** | **0** | **1,033** | **15** | **48** | **14** | **77** |
| **1975 Total** | **5** | **948** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **953** | **10** | **53** | **9** | **73** |
| **1980 Total** | **86** | **797** | **0** | **102** | **0** | **0** | **0** | **0** | **0** | **985** | **(s)** | **45** | **4** | **49** |
| **1985 Total** | **24** | **926** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **950** | **(s)** | **53** | **2** | **55** |
| **1990 Total** | **84** | **1,448** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1,532** | **17** | **53** | **16** | **86** |
| **1995 Total** | **18** | **2,816** | **0** | **7** | **0** | **0** | **0** | **0** | **0** | **2,841** | **28** | **65** | **61** | **154** |
| **1996 Total** | **35** | **2,883** | **0** | **14** | **0** | **0** | **0** | **0** | **5** | **2,937** | **52** | **68** | **34** | **153** |
| **1997 Total** | **66** | **2,899** | **0** | **17** | **0** | **0** | **0** | **0** | **12** | **2,994** | **56** | **62** | **38** | **157** |
| **1998 Total** | **69** | **3,052** | **0** | **15** | **0** | **0** | **0** | **0** | **17** | **3,152** | **40** | **66** | **53** | **159** |
| **1999 Total** | **76** | **3,368** | **0** | **55** | **0** | **0** | **20** | **51** | **17** | **3,586** | **39** | **64** | **61** | **163** |
| **2000 Total** | **47** | **3,544** | **0** | **12** | **13** | **10** | **46** | **99** | **11** | **3,782** | **73** | **66** | **106** | **244** |
| **2001 Total** | **65** | **3,729** | **0** | **10** | **38** | **12** | **23** | **98** | **2** | **3,977** | **167** | **66** | **141** | **373** |
| **2002 Total** | **27** | **3,785** | **0** | **2** | **8** | **3** | **35** | **151** | **5** | **4,015** | **189** | **63** | **263** | **516** |
| **2003 Total** | **53** | **3,437** | **0** | **0** | **50** | **9** | **14** | **378** | **3** | **3,944** | **271** | **66** | **343** | **680** |
| **2004 Total** | **120** | **3,607** | **0** | **0** | **12** | **9** | **12** | **462** | **36** | **4,259** | **395** | **62** | **397** | **854** |
| **2005 Total** | **97** | **3,700** | **73** | **9** | **8** | **2** | **3** | **439** | **9** | **4,341** | **358** | **65** | **305** | **729** |
| **2006 Total** | **17** | **3,590** | **120** | **13** | **57** | **0** | **0** | **389** | **0** | **4,186** | **341** | **61** | **322** | **724** |
| **2007 Total** | **77** | **3,783** | **115** | **54** | **95** | **0** | **18** | **448** | **18** | **4,608** | **482** | **47** | **292** | [d]**822** |
| **2008** January | 0 | 360 | 3 | 1 | 0 | 0 | 0 | 25 | 0 | 390 | 70 | 3 | 40 | 113 |
| February | 0 | 326 | 0 | 0 | 0 | 0 | 0 | 21 | 3 | 350 | 63 | 3 | 37 | 103 |
| March | 0 | 342 | 0 | 1 | 0 | 0 | 0 | 21 | 3 | 367 | 70 | 4 | 31 | 105 |
| April | 0 | 290 | 3 | (s) | 3 | 0 | 0 | 26 | 0 | 322 | 47 | 4 | 28 | 79 |
| May | 0 | 261 | 3 | 4 | 0 | 0 | 0 | 25 | 3 | 297 | 43 | 5 | 25 | 73 |
| June | 0 | 251 | 6 | 3 | 3 | 0 | 3 | 21 | 0 | 287 | 30 | 5 | 30 | 65 |
| July | 0 | 288 | 6 | 4 | 0 | 0 | 0 | 25 | 0 | 323 | 31 | 5 | 30 | 66 |
| August | 0 | 289 | 3 | 4 | 3 | 0 | 0 | 26 | 3 | 329 | 29 | 6 | 35 | 70 |
| September | 0 | 276 | 9 | 7 | 3 | 0 | 0 | 20 | 0 | 314 | 27 | 4 | 27 | 58 |
| October | 0 | 288 | 3 | 6 | 0 | 0 | 0 | 24 | 0 | 321 | 37 | 4 | 28 | 69 |
| November | 0 | 292 | 9 | 6 | 0 | 0 | 0 | 14 | 0 | 320 | 65 | 4 | 26 | 95 |
| December | 0 | 327 | 9 | 7 | 0 | 0 | 0 | 19 | 3 | 365 | 79 | 4 | 28 | 110 |
| **Total** | **0** | **3,589** | **55** | **43** | **12** | **0** | **3** | **267** | **15** | **3,984** | **590** | **50** | **365** | **1,006** |
| **2009** January | 0 | 328 | 5 | 6 | 0 | 0 | 0 | 19 | 3 | 360 | 84 | 2 | 28 | 113 |
| February | 0 | 294 | 6 | (s) | 0 | 0 | 0 | 16 | 6 | 322 | 75 | 3 | 25 | 103 |
| March | 0 | 292 | 12 | 1 | 0 | 0 | 0 | 17 | 3 | 324 | 77 | 3 | 24 | 104 |
| April | 0 | 259 | 22 | 7 | 8 | 0 | 0 | 20 | 6 | 322 | 55 | 2 | 23 | 80 |
| May | 0 | 214 | 15 | 1 | 0 | 0 | 0 | 31 | 3 | 264 | 46 | 2 | 29 | 77 |
| June | 0 | 229 | 14 | 1 | 0 | 0 | 0 | 34 | 3 | 281 | 37 | 2 | 28 | 66 |
| July | 0 | 269 | 14 | 2 | 3 | 0 | 0 | 21 | 6 | 316 | 42 | 4 | 31 | 76 |
| August | 0 | 298 | 17 | 3 | 0 | 0 | 0 | 17 | 0 | 336 | 45 | 2 | 32 | 79 |
| September | 0 | 274 | 14 | 1 | 2 | 0 | 0 | 15 | 0 | 306 | 47 | 4 | 33 | 84 |
| October | 0 | 233 | 15 | 2 | 0 | 0 | 0 | 13 | 0 | 262 | 46 | 2 | 29 | 77 |
| November | 0 | 255 | 12 | (s) | 0 | 0 | 8 | 17 | 0 | 292 | 65 | 2 | 29 | 96 |
| December | 0 | [R]310 | 14 | 3 | 0 | 0 | 4 | 17 | 0 | [R]348 | [R]80 | 4 | [R]28 | [e R]115 |
| **Total** | **0** | [R]**3,255** | **160** | **28** | **13** | **0** | **13** | **236** | **29** | [R]**3,735** | [R]**699** | **31** | [R]**338** | [e R]**1,070** |
| **2010** January | 0 | [E]333 | 17 | [E]1 | 0 | 0 | 12 | 22 | 6 | [E]391 | [E]70 | 2 | [E]28 | [E]100 |

[a] As liquefied natural gas.

[b] By pipeline, except for very small amounts of liquefied natural gas imported from Canada in 1973, 1977, and 1981 and exported to Mexico beginning in 1998. See Note 8, "Natural Gas Imports and Exports," at end of section.

[c] Australia in 1997-2001 and 2004; Brunei in 2002; Equatorial Guinea in 2007; Indonesia in 1986 and 2000; Malaysia in 1999 and 2002-2005; Norway in 2008 forward; United Arab Emirates in 1996-2000; and Other (unassigned) in 2004.

[d] Includes 2 billion cubic feet to Russia in October 2007.

[e] Includes 3 billion cubic feet to South Korea.

R=Revised. E=Estimate. (s)=Less than 500 million cubic feet.

Notes: • See Note 8, "Natural Gas Imports and Exports," at end of section. • Totals may not equal sum of components due to independent rounding. • U.S. geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/natgas.html for all available data beginning in 1973.

Sources: • **1973-1987:** U.S. Energy Information Administration (EIA), Form FPC-14, "Annual Report for Importers and Exporters of Natural Gas." • **1988-2007:** EIA, *Natural Gas Annual,* annual reports. • **2008 forward:** EIA, *Natural Gas Monthly,* March 2010, Table 4; and U.S. Department of Energy, Office of Fossil Energy, "Natural Gas Imports and Exports."

# Table 4.3 Natural Gas Consumption by Sector

(Billion Cubic Feet)

| | End-Use Sectors | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Industrial | | | | | Transportation | | | | |
| | | | | Other Industrial | | | | | | | | |
| | Residential | Commercial[a] | Lease and Plant Fuel | CHP[b] | Non-CHP[c] | Total | Total | Pipelines[d] and Distribution[e] | Vehicle Fuel | Total | Electric Power Sector[f,g] | Total |
| **1973 Total** | **4,879** | **2,597** | **1,496** | **(h)** | **8,689** | **8,689** | **10,185** | **728** | **NA** | **728** | **3,660** | **22,049** |
| **1975 Total** | **4,924** | **2,508** | **1,396** | **(h)** | **6,968** | **6,968** | **8,365** | **583** | **NA** | **583** | **3,158** | **19,538** |
| **1980 Total** | **4,752** | **2,611** | **1,026** | **(h)** | **7,172** | **7,172** | **8,198** | **635** | **NA** | **635** | **3,682** | **19,877** |
| **1985 Total** | **4,433** | **2,432** | **966** | **(h)** | **5,901** | **5,901** | **6,867** | **504** | **NA** | **504** | **3,044** | **17,281** |
| **1990 Total** | **4,391** | **2,623** | **1,236** | **1,055** | **5,963** | **[i] 7,018** | **8,255** | **660** | **(s)** | **660** | **[i] 3,245** | **[i] 19,174** |
| **1995 Total** | **4,850** | **3,031** | **1,220** | **1,258** | **6,906** | **8,164** | **9,384** | **700** | **5** | **705** | **4,237** | **22,207** |
| **1996 Total** | **5,241** | **3,158** | **1,250** | **1,289** | **7,146** | **8,435** | **9,685** | **711** | **6** | **718** | **3,807** | **22,609** |
| **1997 Total** | **4,984** | **3,215** | **1,203** | **1,282** | **7,229** | **8,511** | **9,714** | **751** | **8** | **760** | **4,065** | **22,737** |
| **1998 Total** | **4,520** | **2,999** | **1,173** | **1,355** | **6,965** | **8,320** | **9,493** | **635** | **9** | **645** | **4,588** | **22,246** |
| **1999 Total** | **4,726** | **3,045** | **1,079** | **1,401** | **6,678** | **8,079** | **9,158** | **645** | **12** | **657** | **4,820** | **22,405** |
| **2000 Total** | **4,996** | **3,182** | **1,151** | **1,386** | **6,757** | **8,142** | **9,293** | **642** | **13** | **655** | **5,206** | **23,333** |
| **2001 Total** | **4,771** | **3,023** | **1,119** | **1,310** | **6,035** | **7,344** | **8,463** | **625** | **15** | **640** | **5,342** | **22,239** |
| **2002 Total** | **4,889** | **3,144** | **1,113** | **1,240** | **6,267** | **7,507** | **8,620** | **667** | **15** | **682** | **5,672** | **23,007** |
| **2003 Total** | **5,079** | **3,179** | **1,122** | **1,144** | **6,007** | **7,150** | **8,273** | **591** | **18** | **610** | **5,135** | **22,277** |
| **2004 Total** | **4,869** | **3,129** | **1,098** | **1,191** | **6,052** | **7,243** | **8,341** | **566** | **21** | **587** | **5,464** | **22,389** |
| **2005 Total** | **4,827** | **2,999** | **1,112** | **1,084** | **5,514** | **6,597** | **7,709** | **584** | **23** | **607** | **5,869** | **22,011** |
| **2006 Total** | **4,368** | **2,832** | **1,142** | **1,115** | **5,398** | **6,512** | **7,654** | **584** | **24** | **608** | **6,222** | **21,685** |
| **2007 Total** | **4,722** | **3,013** | **1,226** | **1,050** | **5,598** | **6,648** | **7,874** | **621** | **25** | **646** | **6,841** | **23,097** |
| **2008** January | 882 | 475 | 103 | 87 | 572 | 659 | 761 | 77 | 2 | 80 | 531 | 2,729 |
| February | 817 | 457 | 97 | 78 | 538 | 616 | 713 | 71 | 2 | 73 | 439 | 2,499 |
| March | 654 | 378 | 105 | 80 | 527 | 608 | 713 | 64 | 2 | 66 | 461 | 2,271 |
| April | 389 | 254 | 100 | 75 | 480 | 555 | 656 | 51 | 2 | 53 | 470 | 1,822 |
| May | 230 | 179 | 104 | 79 | 462 | 541 | 645 | 43 | 2 | 46 | 475 | 1,575 |
| June | 143 | 133 | 101 | 80 | 432 | 512 | 613 | 44 | 2 | 47 | 665 | 1,602 |
| July | 118 | 127 | 106 | 88 | 436 | 524 | 630 | 47 | 2 | 50 | 782 | 1,706 |
| August | 111 | 126 | 106 | 89 | 438 | 527 | 632 | 46 | 2 | 49 | 763 | 1,681 |
| September | 117 | 129 | 91 | 71 | 405 | 476 | 567 | 40 | 2 | 43 | 603 | 1,458 |
| October | 215 | 184 | 103 | 80 | 456 | 536 | 638 | 45 | 2 | 47 | 545 | 1,631 |
| November | 428 | 273 | 102 | 74 | 470 | 544 | 647 | 52 | 2 | 54 | 458 | 1,860 |
| December | 768 | 420 | 106 | 75 | 477 | 552 | 659 | 67 | 2 | 70 | 476 | 2,393 |
| **Total** | **4,872** | **3,136** | **1,224** | **955** | **5,695** | **6,650** | **7,874** | **648** | **28** | **676** | **6,668** | **23,227** |
| **2009** January | 942 | 513 | [E] 108 | 80 | 498 | 578 | [R] 686 | [E] 75 | [E] 3 | [E] 78 | 485 | 2,704 |
| February | 750 | 421 | [E] 98 | 72 | 449 | 521 | [R] 620 | [E] 64 | [E] 2 | [E] 67 | 452 | 2,309 |
| March | 597 | 359 | [E] 109 | 80 | 454 | 534 | 643 | [E] 60 | [E] 3 | [E] 63 | 500 | 2,162 |
| April | 392 | 247 | [E] 105 | 77 | 413 | 490 | 595 | [E] 49 | [E] 3 | [E] 51 | 456 | [R] 1,742 |
| May | 203 | 168 | [E] 108 | 77 | 388 | 465 | 573 | [E] 42 | [E] 3 | [E] 45 | 521 | 1,510 |
| June | 143 | 132 | [E] 105 | 79 | 379 | 458 | 562 | [E] 43 | [E] 3 | [E] 45 | 649 | [R] 1,531 |
| July | 120 | 134 | [E] 107 | 82 | 391 | [R] 472 | 580 | [E] 46 | [E] 3 | [E] 49 | 780 | 1,662 |
| August | 113 | 130 | [E] 108 | 83 | 409 | 492 | 600 | [E] 48 | [E] 3 | [E] 51 | 841 | 1,734 |
| September | 119 | 132 | [E] 102 | 81 | 400 | 481 | 583 | [E] 44 | [E] 3 | [E] 46 | 689 | 1,570 |
| October | 250 | 198 | [E] 108 | 82 | 439 | 521 | 629 | [E] 46 | [E] 3 | [E] 49 | 536 | 1,662 |
| November | 375 | 253 | [E] 105 | 82 | 451 | 533 | [R] 638 | [E] 50 | [E] 3 | [E] 52 | 459 | 1,776 |
| December | [R] 760 | 427 | [E] 108 | 89 | [R] 506 | [R] 594 | [R] 702 | [E] 69 | [E] 3 | [E] 72 | 521 | 2,482 |
| **Total** | **[R] 4,763** | **3,114** | **[RE] 1,272** | **964** | **[R] 5,176** | **[R] 6,139** | **[R] 7,411** | **[E] 637** | **[E] 32** | **[E] 669** | **6,888** | **[R] 22,844** |
| **2010** January | 964 | 516 | [E] 109 | 88 | 537 | 625 | 734 | [E] 79 | [E] 3 | [E] 82 | 543 | 2,838 |

[a] All commercial sector fuel use, including that at commercial combined-heat-and-power (CHP) and commercial electricity-only plants. See Table 7.4c for CHP fuel use.

[b] Industrial combined-heat-and-power (CHP) and a small number of industrial electricity-only plants.

[c] All industrial sector fuel use other than that in "Lease and Plant Fuel" and "CHP."

[d] Natural gas consumed in the operation of pipelines, primarily in compressors.

[e] Natural gas used as fuel in the delivery of natural gas to consumers.

[f] The electric power sector comprises electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public.

[g] Through 1988, data are for electric utilities only. Beginning in 1989, data are for electric utilities and independent power producers.

[h] Included in "Non-CHP."

[i] For 1989-1992, a small amount of consumption at independent power producers may be counted in both "Other Industrial" and "Electric Power Sector." See Note 7, "Natural Gas Consumption, 1989-1992," at end of section.

R=Revised. E=Estimate. NA=Not available. (s)=Less than 500 million cubic feet.

Notes: • Data are for natural gas, plus a small amount of supplemental gaseous fuels. • See Note, "Classification of Power Plants Into Energy-Use Sectors," at end of Section 7. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/natgas.html for all available data beginning in 1973.

Sources: • **Residential, Commercial, Lease and Plant Fuel, Other Industrial Total** and **Pipelines and Distribution: 1973-2004—**U.S. Energy Information Administration (EIA), *Natural Gas Annual (NGA),* annual reports. **2005 forward—**EIA, *Natural Gas Monthly (NGM),* March 2010, Table 2. • **Industrial CHP:** Table 7.4c. • **Vehicle Fuel: 1990 and 1991—**EIA, NGA 2000, (November 2001), Table 95. **1992-1998—**"Alternatives to Traditional Transportation Fuels 1999" (October 1999), Table 10, and "Alternatives to Traditional Transportation Fuels 2003" (February 2004), Table 10. Data for compressed natural gas and liquefied natural gas in gasoline-equivalent gallons were converted to cubic feet by multiplying by the motor gasoline conversion factor (see Table A3) and dividing by the natural gas end-use sectors conversion factor (see Table A4). **1999-2004—**EIA, NGA, annual reports. **2005 forward—**EIA, NGM, March 2010, Table 2. • **Electric Power Sector:** Table 7.4b.

# Table 4.4 Natural Gas in Underground Storage

(Volumes in Billion Cubic Feet)

| | Natural Gas in Underground Storage, End of Period | | | Change in Working Gas From Same Period Previous Year | | Storage Activity | | |
|---|---|---|---|---|---|---|---|---|
| | Base Gas | Working Gas | Total[a] | Volume | Percent | Withdrawals | Injections | Net[b,c] |
| **1973 Total** | **2,864** | **2,034** | **4,898** | **305** | **17.6** | **1,533** | **1,974** | **-442** |
| **1975 Total** | **3,162** | **2,212** | **5,374** | **162** | **7.9** | **1,760** | **2,104** | **-344** |
| **1980 Total** | **3,642** | **2,655** | **6,297** | **-99** | **-3.6** | **1,910** | **1,896** | **14** |
| **1985 Total** | **3,842** | **2,607** | **6,448** | **-270** | **-9.4** | **2,359** | **2,128** | **231** |
| **1990 Total** | **3,868** | **3,068** | **6,936** | **555** | **22.1** | **1,934** | **2,433** | **-499** |
| **1995 Total** | **4,349** | **2,153** | **6,503** | **-453** | **-17.4** | **2,974** | **2,566** | **408** |
| **1996 Total** | **4,341** | **2,173** | **6,513** | **19** | **.9** | **2,911** | **2,906** | **6** |
| **1997 Total** | **4,350** | **2,175** | **6,525** | **2** | **.1** | **2,824** | **2,800** | **24** |
| **1998 Total** | **4,326** | **2,730** | **7,056** | **554** | **25.5** | **2,379** | **2,905** | **-526** |
| **1999 Total** | **4,383** | **2,523** | **6,906** | **-207** | **-7.6** | **2,772** | **2,598** | **174** |
| **2000 Total** | **4,352** | **1,719** | **6,071** | **-806** | **-31.9** | **3,498** | **2,684** | **814** |
| **2001 Total** | **4,301** | **2,904** | **7,204** | **1,185** | **68.9** | **2,309** | **3,464** | **-1,156** |
| **2002 Total** | **4,340** | **2,375** | **6,715** | **-528** | **-18.2** | **3,138** | **2,670** | **468** |
| **2003 Total** | **4,303** | **2,563** | **6,866** | **187** | **7.9** | **3,099** | **3,292** | **-193** |
| **2004 Total** | **4,201** | **2,696** | **6,897** | **133** | **5.2** | **3,037** | **3,150** | **-113** |
| **2005 Total** | **4,200** | **2,635** | **6,835** | **-61** | **-2.3** | **3,057** | **3,002** | **55** |
| **2006 Total** | **4,211** | **3,070** | **7,281** | **435** | **16.5** | **2,493** | **2,924** | **-431** |
| **2007 Total** | **4,234** | **2,879** | **7,113** | **-191** | **-6.2** | **3,325** | **3,133** | **192** |
| **2008** January | 4,232 | 2,056 | 6,288 | -327 | -13.7 | 891 | 67 | 824 |
| February | 4,222 | 1,465 | 5,686 | -187 | -11.3 | 648 | 56 | 593 |
| March | 4,221 | 1,266 | 5,487 | -337 | -21.0 | 350 | 131 | 219 |
| April | 4,222 | 1,436 | 5,659 | -286 | -16.6 | 106 | 296 | -190 |
| May | 4,225 | 1,840 | 6,065 | -342 | -15.7 | 56 | 461 | -405 |
| June | 4,230 | 2,178 | 6,407 | -405 | -15.7 | 81 | 423 | -342 |
| July | 4,228 | 2,517 | 6,745 | -379 | -13.1 | 88 | 430 | -342 |
| August | 4,228 | 2,866 | 7,094 | -155 | -5.1 | 92 | 442 | -350 |
| September | 4,230 | 3,161 | 7,391 | -155 | -4.7 | 98 | 398 | -300 |
| October | 4,235 | 3,399 | 7,634 | -166 | -4.7 | 91 | 334 | -242 |
| November | 4,232 | 3,346 | 7,577 | -96 | -2.8 | 250 | 193 | 57 |
| December | 4,232 | 2,840 | 7,073 | -39 | -1.4 | 622 | 110 | 513 |
| **Total** | **4,232** | **2,840** | **7,073** | **-39** | **-1.4** | **3,374** | **3,340** | **34** |
| **2009** January | 4,236 | 2,141 | 6,377 | 86 | 4.2 | 778 | 79 | 698 |
| February | 4,242 | 1,761 | 6,003 | 296 | 20.2 | 472 | 100 | 371 |
| March | 4,246 | 1,656 | 5,902 | 408 | 32.7 | 296 | 199 | 98 |
| April | 4,252 | 1,903 | 6,155 | 467 | 32.5 | 107 | 354 | -246 |
| May | 4,253 | 2,367 | 6,620 | 531 | 28.9 | 45 | 512 | -467 |
| June | 4,260 | 2,752 | 7,012 | 575 | 26.4 | 62 | 449 | -387 |
| July | 4,266 | 3,086 | 7,352 | 570 | 22.7 | 83 | 413 | -330 |
| August | 4,268 | 3,352 | 7,620 | 486 | 16.9 | 88 | 356 | -268 |
| September | 4,278 | 3,643 | 7,921 | 480 | 15.2 | 57 | 346 | -288 |
| October | 4,279 | 3,807 | 8,087 | 408 | 12.0 | 97 | 258 | -161 |
| November | 4,284 | 3,833 | 8,117 | 487 | 14.6 | 140 | 171 | -31 |
| December | 4,276 | 3,131 | 7,407 | 290 | 10.2 | 743 | 44 | 699 |
| **Total** | **4,276** | **3,131** | **7,407** | **290** | **10.2** | **2,968** | **3,281** | **-313** |
| **2010** January | 4,278 | 2,319 | 6,597 | 178 | 8.3 | 877 | 65 | 812 |

[a] For total underground storage capacity at the end of each calendar year, see Note 4, "Natural Gas Storage," at end of section.

[b] For 1980-2008, data differ from those shown on Table 4.1, which includes liquefied natural gas storage for that period.

[c] Positive numbers indicate that withdrawals are greater than injections. Negative numbers indicate that injections are greater than withdrawals. Net withdrawals or injections may not equal the difference between applicable ending stocks. See Note 4, "Natural Gas Storage," at end of section.

– – =Not applicable.

Notes: • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/natgas.html for all available data beginning in 1973.

Sources: • **Storage Activity: 1973-1975—**U.S. Energy Information Administration (EIA), *Natural Gas Annual 1994, Volume 2,* Table 9. **1976-1979—**EIA, *Natural Gas Production and Consumption 1979,* Table 1. **1980-1995—**EIA, *Historical Natural Gas Annual 1930 Through 2000,* Table 11. **1996-2004—**EIA, *Natural Gas Monthly (NGM),* monthly issues. **2005 forward—**EIA, NGM, March 2010, Table 6. • **All Other Data: 1973 and 1974—**American Gas Association (AGA), *Gas Facts, 1972 Data,* Table 57, *Gas Facts, 1973 Data,* Table 57, and *Gas Facts, 1974 Data,* Table 40. **1975 and 1976—**Federal Energy Administration (FEA), Form FEA-G318-M-0, "Underground Gas Storage Report," and Federal Power Commission (FPC), Form FPC-8, "Underground Gas Storage Report." **1977 and 1978—**EIA, Form FEA-G318-M-0, "Underground Gas Storage Report," and Federal Energy Regulatory Commission (FERC), Form FERC-8, "Underground Gas Storage Report." **1979-1995—**EIA, Form EIA-191, "Underground Gas Storage Report," and FERC, Form FERC-8, "Underground Gas Storage Report." **1996-2006—**EIA, NGM, monthly issues. **2007 forward—**EIA, NGM, March 2010, Table 6.

# Natural Gas

**Note 1. Natural Gas Production.**
Annual data—Final annual data are from the U.S. Energy Information Administration (EIA) *Natural Gas Annual (NGA)*.

Estimated monthly data—Data for the two most recent months presented are estimated. Some of the data for earlier months are also estimated or computed. For a discussion of computation and estimation procedures, see the EIA *Natural Gas Monthly* (*NGM*).

Preliminary monthly data—Monthly data are considered preliminary until after publication of the EIA NGA. Preliminary monthly data are gathered from reports to the Interstate Oil Compact Commission and the U.S. Minerals Management Service. Volumetric data are converted, as necessary, to a standard 14.73 psi pressure base. Unless there are major changes, data are not revised until after publication of the EIA NGA.

Final monthly data—Differences between annual data in the EIA NGA and the sum of preliminary monthly data (January–December) are allocated proportionally to the months to create final monthly data.

**Note 2. Natural Gas Extraction Loss.** Extraction loss is the reduction in volume of natural gas resulting from the removal of natural gas liquid constituents at natural gas processing plants.

Annual data are from the EIA NGA, where they are estimated on the basis of the type and quantity of liquid products extracted from the gas stream and the calculated volume of such products at standard conditions. For a detailed explanation of the calculations used to derive estimated extraction losses, see the EIA NGA.

Preliminary monthly data are estimated on the basis of extraction loss as an annual percentage of marketed production. This percentage is applied to each month's marketed production to estimate monthly extraction loss.

Monthly data are revised and considered final after the publication of the EIA NGA. Final monthly data are estimated by allocating annual extraction loss data to the months on the basis of total natural gas marketed production data from the EIA NGA.

**Note 3. Supplemental Gaseous Fuels.** Supplemental gaseous fuels are any substances that, introduced into or commingled with natural gas, increase the volume available for disposition. Such substances include, but are not limited to, propane-air, refinery gas, coke oven gas, still gas, manufactured gas, biomass gas, or air or inert gases added for Btu stabilization.

Annual data beginning with 1980 are from the EIA, NGA. Unknown quantities of supplemental gaseous fuels are included in consumption data for 1979 and earlier years. Monthly data are considered preliminary until after the publication of the EIA NGA. Monthly estimates are based on the annual ratio of supplemental gaseous fuels to the sum of dry gas production, net imports, and net withdrawals from storage. The ratio is applied to the monthly sum of the three elements to compute a monthly supplemental gaseous fuels figure.

Although the total amount of supplemental gaseous fuels consumed is known for 1980 forward, EIA estimates the amount consumed by each energy-use sector. It is assumed that supplemental gaseous fuels are commingled with natural gas consumed by the residential, commercial, other industrial, and electric power sectors, but are not commingled with natural gas used for lease and plant fuel, pipelines and distribution, or vehicle fuel. The estimated consumption of supplemental gaseous fuels by each sector (residential, commercial, other industrial, and electric power) is calculated as that sector's natural gas consumption (see Table 4.3) divided by the sum of natural gas consumption by the residential, commercial, other industrial, and electric power sectors (see Table 4.3), and then multiplied by total supplemental gaseous fuels consumption (see Table 4.1). For estimated sectoral consumption of supplemental gaseous fuels in Btu, the residential, commercial, and other industrial values in cubic feet are multiplied by the "End-Use Sectors" conversion factors (see Table A4), and the electric power values in cubic feet are multiplied by the "Electric Power Sector" conversion factors (see Table A4). Total supplemental gaseous fuels consumption in Btu is calculated as the sum of the Btu values for the sectors.

**Note 4. Natural Gas Storage.** Natural gas in storage at the end of a reporting period may not equal the quantity derived by adding or subtracting net injections or withdrawals from the quantity in storage at the end of the previous period. The difference is due to changes in the quantity of native gas included in the base gas and/or losses in base gas due to migration from storage reservoirs.

Total underground storage capacity at the end of each calendar year since 1975 (first year data were available), in billion cubic feet, was:

| | | |
|---|---|---|
| **1975** . . . 6,280 | **1987** . . . 8,124 | **1999** . . . 8,229 |
| **1976** . . . 6,544 | **1988** . . . 8,124 | **2000** . . . 8,241 |
| **1977** . . . 6,678 | **1989** . . . 8,120 | **2001** . . . 8,415 |
| **1978** . . . 6,890 | **1990** . . . 7,794 | **2002** . . . 8,207 |
| **1979** . . . 6,929 | **1991** . . . 7,993 | **2003** . . . 8,206 |
| **1980** . . . 7,434 | **1992** . . . 7,932 | **2004** . . . 8,255 |
| **1981** . . . 7,805 | **1993** . . . 7,989 | **2005** . . . 8,268 |
| **1982** . . . 7,915 | **1994** . . . 8,043 | **2006** . . . 8,330 |
| **1983** . . . 7,985 | **1995** . . . 7,953 | **2007** . . . 8,402 |
| **1984** . . . 8,043 | **1996** . . . 7,980 | **2008** . . . 8,499 |
| **1985** . . . 8,087 | **1997** . . . 8,332 | **2009** . . . 8,569* |
| **1986** . . . 8,145 | **1998** . . . 8,179 | |

* Preliminary

Monthly underground storage data are collected from the Federal Energy Regulatory Commission (FERC) Form FERC-8 (interstate data) and EIA Form EIA-191 (intrastate data). Beginning in January 1991, all data are collected on the revised Form EIA-191. Injection and withdrawal data from the FERC-8/EIA-191 survey are adjusted to correspond to data from Form EIA-176 following publication of the EIA NGA.

The final monthly and annual storage and withdrawal data for 1980–2008 include both underground and liquefied natural gas (LNG) storage. Annual data on LNG additions and withdrawals are from Form EIA-176. Monthly data are estimated by computing the ratio of each month's underground storage additions and withdrawals to annual underground storage additions and withdrawals and applying the ratio to the annual LNG data.

**Note 5. Natural Gas Balancing Item.** The balancing item for natural gas represents the difference between the sum of the components of natural gas supply and the sum of components of natural gas disposition. The differences may be due to quantities lost or to the effects of data reporting problems. Reporting problems include differences due to the net result of conversions of flow data metered at varying temperature and pressure bases and converted to a standard temperature and pressure base; the effect of variations in company accounting and billing practices; differences between billing cycle and calendar period time frames; and imbalances resulting from the merger of data reporting systems that vary in scope, format, definitions, and type of respondents.

The increase of 0.2 trillion cubic feet (Tcf) in the "Balancing Item" category in 1983, followed by a decline of 0.5 Tcf in 1984, reflected unusually large differences resulting from the use of the annual billing cycle (essentially December 15 through the following December 14) consumption data in conjunction with calendar year supply data. Record cold temperatures during the last half of December 1983 resulted in a reported 0.3 Tcf increase in net withdrawals from underground storage for peak shaving as compared with the same period in 1982, but the effect of this cold weather was reflected primarily in 1984 consumption data. For underground storage data, see Table F2 in the May 1985 EIA NGM, which was published in July 1985.

**Note 6. Natural Gas Consumption.** Consumption includes use for lease and plant fuel, pipelines and distribution, vehicle fuel, and electric power plants, as well as deliveries to residential, commercial, and other industrial customers.

Final data for series other than "Other Industrial CHP" and "Electric Power Sector" are from the EIA NGA. Monthly data are considered preliminary until after publication of the EIA NGA. For more detailed information on the methods of estimating preliminary and final monthly data, see the EIA NGM.

**Note 7. Natural Gas Consumption, 1989-1992.** Prior to 1993, deliveries to nonutility generators were not separately collected from natural gas companies on Form EIA-176, "Annual Report of Natural and Supplemental Gas Supply and Disposition." As a result, for 1989 through 1992, those volumes are probably included in both the industrial and electric power sectors and double-counted in total consumption. In 1993, 0.28 trillion cubic feet was reported as delivered to nonutility generators.

**Note 8. Natural Gas Imports and Exports.** The United States imports natural gas via pipeline from Canada and Mexico and imports liquefied natural gas (LNG) via tanker from Algeria, Australia, Brunei, Egypt, Equatorial Guinea, Indonesia, Malaysia, Nigeria, Norway, Oman, Qatar, Trinidad and Tobago, and the United Arab Emirates. In addition, very small amounts of LNG arrived from Canada in 1973 (667 million cubic feet), 1977 (572 million cubic feet), and 1981 (6 million cubic feet). The United States exports natural gas via pipeline to Canada and Mexico and exports LNG via tanker to Japan. Also, small amounts of LNG have gone to Mexico since 1998.

Annual and final monthly data are from the annual EIA Form FPC-14, "Annual Report for Importers and Exporters of Natural Gas," which requires data to be reported by month for the calendar year.

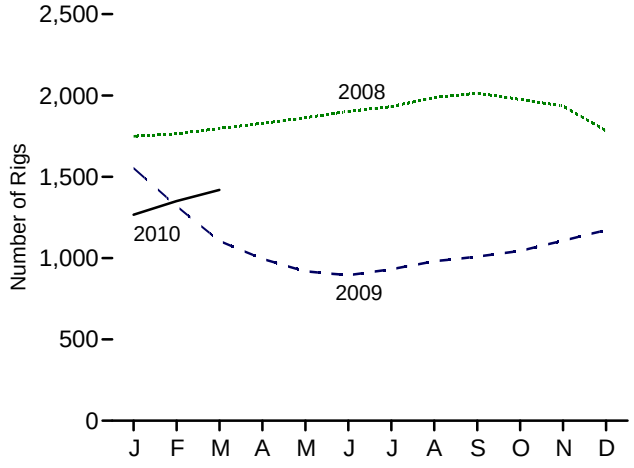
Preliminary monthly data are EIA estimates. For a discussion of estimation procedures, see the EIA NGM. Preliminary data are revised after the publication of the EIA *U.S. Imports and Exports of Natural Gas.*

# 5 Crude Oil and Natural Gas Resource Development

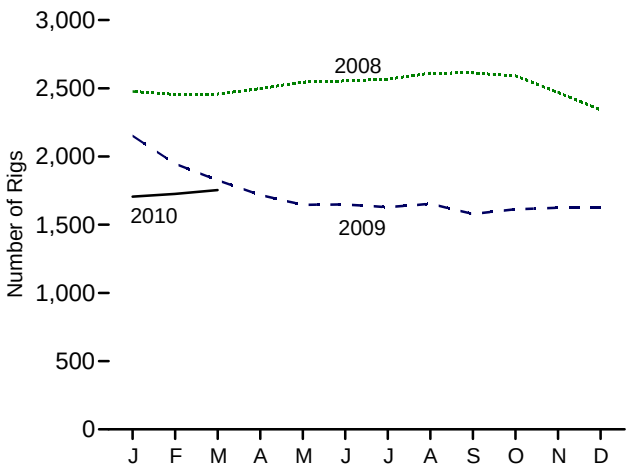
Semisubmersible drilling rig in the Gulf of Mexico. Source: U.S. Department of Energy.

## Figure 5.1 Crude Oil and Natural Gas Resource Development Indicators

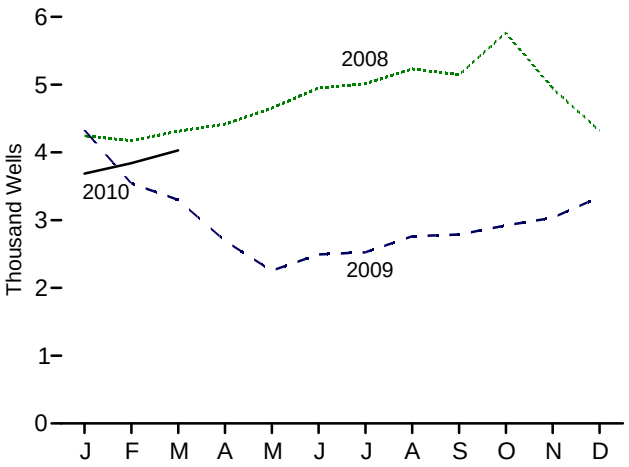
Rotary Rigs in Operation, Monthly



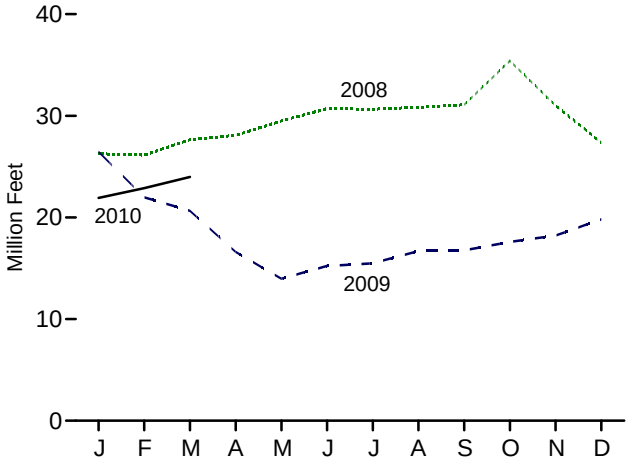

Active Well Service Rig Count, Monthly



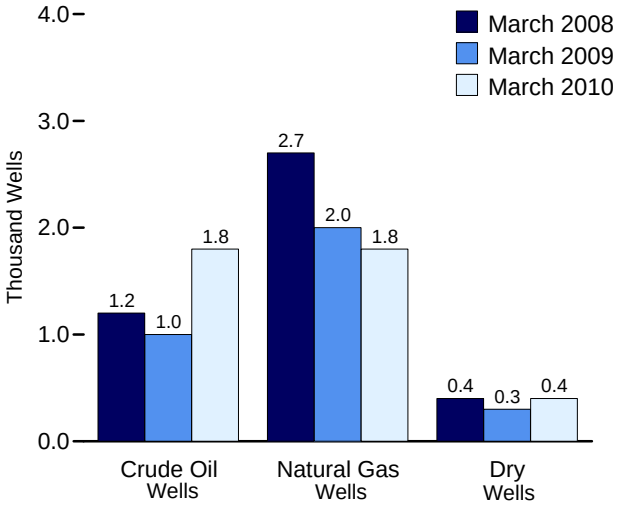

Wells Drilled, Monthly



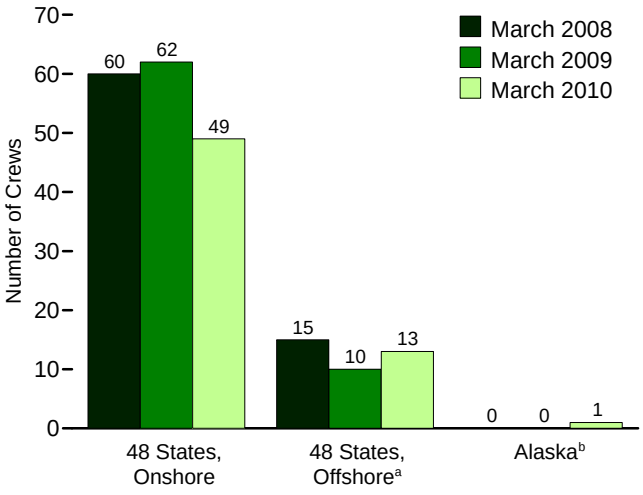

Footage Drilled, Monthly




Wells Drilled by Type




Maximum U.S. Active Seismic Crew Counts




[a]Federal and State Jurisdiction waters of the Gulf of Mexico.
[b]All onshore.

Web Page: http://www.eia.doe.gov/emeu/mer/resource.html.
Sources: Tables 5.1-5.3.

# Table 5.1 Crude Oil and Natural Gas Drilling Activity Measurements

(Number of Rigs)

| | Rotary Rigs in Operation[a] | | | | | Active Well Service Rig Count[c] |
|---|---|---|---|---|---|---|
| | By Site | | By Type | | | |
| | Onshore | Offshore | Crude Oil | Natural Gas | Total[b] | |
| **1973 Average** | **1,110** | **84** | **NA** | **NA** | **1,194** | **2,008** |
| **1975 Average** | **1,554** | **106** | **NA** | **NA** | **1,660** | **2,486** |
| **1980 Average** | **2,678** | **231** | **NA** | **NA** | **2,909** | **4,089** |
| **1985 Average** | **1,774** | **206** | **NA** | **NA** | **1,980** | **4,716** |
| **1990 Average** | **902** | **108** | **532** | **464** | **1,010** | **3,658** |
| **1995 Average** | **622** | **101** | **323** | **385** | **723** | **3,041** |
| **1996 Average** | **671** | **108** | **306** | **464** | **779** | **3,445** |
| **1997 Average** | **821** | **122** | **376** | **564** | **943** | **3,499** |
| **1998 Average** | **703** | **123** | **264** | **560** | **827** | **3,014** |
| **1999 Average** | **519** | **106** | **128** | **496** | **625** | **2,232** |
| **2000 Average** | **778** | **140** | **197** | **720** | **918** | **2,692** |
| **2001 Average** | **1,003** | **153** | **217** | **939** | **1,156** | **2,267** |
| **2002 Average** | **717** | **113** | **137** | **691** | **830** | **1,830** |
| **2003 Average** | **924** | **108** | **157** | **872** | **1,032** | **1,967** |
| **2004 Average** | **1,095** | **97** | **165** | **1,025** | **1,192** | **2,064** |
| **2005 Average** | **1,287** | **94** | **194** | **1,184** | **1,381** | **2,222** |
| **2006 Average** | **1,559** | **90** | **274** | **1,372** | **1,649** | **2,364** |
| **2007 Average** | **1,695** | **72** | **297** | **1,466** | **1,768** | **2,388** |
| **2008** January | 1,690 | 60 | 321 | 1,421 | 1,749 | 2,476 |
| February | 1,709 | 56 | 331 | 1,426 | 1,765 | 2,455 |
| March | 1,737 | 60 | 343 | 1,444 | 1,797 | 2,457 |
| April | 1,765 | 64 | 358 | 1,461 | 1,829 | 2,498 |
| May | 1,794 | 68 | 375 | 1,478 | 1,863 | 2,546 |
| June | 1,834 | 67 | 383 | 1,510 | 1,902 | 2,554 |
| July | 1,865 | 67 | 380 | 1,543 | 1,932 | 2,567 |
| August | 1,920 | 67 | 397 | 1,581 | 1,987 | 2,611 |
| September | 1,942 | 72 | 417 | 1,585 | 2,014 | 2,612 |
| October | 1,903 | 73 | 422 | 1,542 | 1,976 | 2,591 |
| November | 1,872 | 63 | 426 | 1,498 | 1,935 | 2,469 |
| December | 1,716 | 66 | 391 | 1,380 | 1,782 | 2,342 |
| **Average** | **1,814** | **65** | **379** | **1,491** | **1,879** | **2,515** |
| **2009** January | 1,487 | 66 | 328 | 1,215 | 1,553 | 2,152 |
| February | 1,263 | 57 | 271 | 1,037 | 1,320 | 1,947 |
| March | 1,059 | 46 | 225 | 867 | 1,105 | 1,825 |
| April | 947 | 48 | 209 | 775 | 995 | 1,718 |
| May | 864 | 54 | 187 | 723 | 918 | 1,646 |
| June | 848 | 47 | 194 | 691 | 895 | 1,648 |
| July | 893 | 38 | 245 | 675 | 931 | 1,629 |
| August | 949 | 31 | 279 | 691 | 980 | 1,653 |
| September | 976 | 33 | 293 | 704 | 1,009 | 1,579 |
| October | 1,011 | 33 | 312 | 722 | 1,044 | 1,613 |
| November | 1,071 | 36 | 362 | 734 | 1,107 | 1,625 |
| December | 1,136 | 37 | 404 | 758 | 1,172 | 1,625 |
| **Average** | **1,046** | **44** | **278** | **801** | **1,089** | **1,722** |
| **2010** January | 1,225 | 42 | 433 | 822 | 1,267 | 1,706 |
| February | 1,305 | 45 | 446 | 892 | 1,350 | 1,726 |
| March | 1,368 | 51 | 471 | 933 | 1,419 | 1,754 |
| **3-Month Average** | **1,299** | **46** | **450** | **882** | **1,345** | **1,729** |
| **2009 3-Month Average** | **1,287** | **57** | **279** | **1,053** | **1,344** | **1,975** |
| **2008 3-Month Average** | **1,712** | **58** | **332** | **1,430** | **1,770** | **2,463** |

[a] Rotary rigs in operation are reported weekly. Monthly data are averages of 4- or 5-week reporting periods, not calendar months. Multi-month data are averages of the reported data over the covered months, not averages of the weekly data. Annual data are averages over 52 or 53 weeks, not calendar years. Published data are rounded to the nearest whole number.

[b] Sum of rigs drilling for crude oil, rigs drilling for natural gas, and other rigs (not shown) drilling for miscellaneous purposes, such as service wells, injection wells, and stratigraphic tests.

[c] The number of rigs doing true workovers (where tubing is pulled from the well), or doing rod string and pump repair operations, and that are, on average, crewed and working every day of the month.

NA=Not available.

Note: Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/resource.html for all available data beginning in 1973.

Sources: • **Rotary Rigs in Operation: By Site**–Baker Hughes, Inc., Houston, Texas, *Rotary Rigs Running–by State.* **By Type**–Baker Hughes, Inc., Houston, Texas, weekly phone recording. • **Active Well Service Rig Count:** Cameron International Corporation, Houston, Texas.

# Table 5.2 Crude Oil and Natural Gas Exploratory and Development Wells

| | Wells Drilled | | | | | | | | | | | | Total Footage Drilled |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Exploratory | | | | Development | | | | Total | | | | |
| | Crude Oil | Natural Gas | Dry | Total | Crude Oil | Natural Gas | Dry | Total | Crude Oil | Natural Gas | Dry | Total | |
| | Number | | | | | | | | | | | | Thousand Feet |
| **1973 Total** | **642** | **1,067** | **5,952** | **7,661** | **9,525** | **5,866** | **4,368** | **19,759** | **10,167** | **6,933** | **10,320** | **27,420** | **138,223** |
| **1975 Total** | **982** | **1,248** | **7,129** | **9,359** | **15,966** | **6,879** | **6,517** | **29,362** | **16,948** | **8,127** | **13,646** | **38,721** | **180,494** |
| **1980 Total** | **1,777** | **2,099** | **9,081** | **12,957** | **31,182** | **15,362** | **11,704** | **58,248** | **32,959** | **17,461** | **20,785** | **71,205** | **316,943** |
| **1985 Total** | **1,680** | **1,200** | **8,954** | **11,834** | **33,581** | **13,124** | **12,257** | **58,962** | **35,261** | **14,324** | **21,211** | **70,796** | **314,409** |
| **1990 Total** | **778** | R **811** | **3,651** | R **5,240** | R **12,022** | R **10,416** | R **4,586** | R **27,024** | R **12,800** | R **11,227** | R **8,237** | R **32,264** | R **156,201** |
| **1995 Total** | **570** | **557** | **2,023** | **3,150** | R **7,660** | R **7,524** | R **2,790** | R **17,974** | R **8,230** | R **8,081** | R **4,813** | R **21,124** | R **117,457** |
| **1996 Total** | **489** | **576** | **1,956** | **3,021** | R **8,330** | R **8,439** | **2,934** | R **19,703** | R **8,819** | R **9,015** | **4,890** | R **22,724** | R **126,642** |
| **1997 Total** | **491** | **561** | R **2,113** | R **3,165** | R **10,698** | R **10,933** | **3,761** | R **25,392** | R **11,189** | R **11,494** | R **5,874** | R **28,557** | R **161,750** |
| **1998 Total** | **327** | **566** | **1,590** | **2,483** | R **7,332** | R **11,047** | R **3,173** | R **21,552** | R **7,659** | R **11,613** | R **4,763** | R **24,035** | R **137,530** |
| **1999 Total** | **197** | **567** | **1,157** | **1,921** | R **4,562** | R **11,412** | R **2,397** | R **18,371** | R **4,759** | R **11,979** | R **3,554** | R **20,292** | R **102,885** |
| **2000 Total** | **287** | **655** | **1,337** | **2,279** | R **7,802** | R **16,331** | **2,797** | R **26,930** | R **8,089** | R **16,986** | **4,134** | R **29,209** | R **144,349** |
| **2001 Total** | **357** | **1,052** | **1,724** | **3,133** | R **8,523** | R **20,981** | **2,840** | R **32,344** | R **8,880** | R **22,033** | **4,564** | R **35,477** | R **180,130** |
| **2002 Total** | **257** | **843** | **1,279** | **2,379** | R **6,505** | R **16,454** | R **2,449** | R **25,408** | R **6,762** | R **17,297** | R **3,728** | R **27,787** | R **145,130** |
| **2003 Total** | **353** | **999** | R **1,298** | R **2,650** | R **7,751** | R **19,686** | **2,672** | R **30,109** | R **8,104** | R **20,685** | R **3,970** | R **32,759** | R **177,487** |
| **2004 Total** | **385** | **1,677** | R **1,352** | R **3,414** | R **8,379** | R **22,435** | R **2,701** | R **33,515** | R **8,764** | R **24,112** | R **4,053** | R **36,929** | R **204,387** |
| **2005 Total** | R **536** | R **2,146** | **1,472** | R **4,154** | R **10,159** | R **26,350** | R **3,182** | R **39,691** | **10,695** | R **28,496** | R **4,654** | R **43,845** | R **240,616** |
| **2006 Total** | **659** | R **2,463** | **1,528** | R **4,650** | **12,629** | **30,414** | **3,649** | **46,692** | **13,288** | R **32,877** | **5,177** | R **51,342** | R **284,352** |
| **2007 Total** | R **832** | R **2,878** | R **1,616** | R **5,326** | R **12,700** | **30,254** | R **3,508** | R **46,462** | R **13,532** | R **33,132** | R **5,124** | R **51,788** | R **308,738** |
| **2008** January | 89 | 221 | 154 | 464 | R 1,123 | 2,382 | R 276 | R 3,781 | R 1,212 | 2,603 | R 430 | R 4,245 | R 26,258 |
| February | 85 | 244 | 114 | 443 | 1,109 | 2,364 | R 257 | R 3,730 | 1,194 | 2,608 | R 371 | R 4,173 | R 26,134 |
| March | 70 | 241 | 139 | 450 | 1,119 | 2,459 | R 286 | R 3,864 | 1,189 | 2,700 | R 425 | R 4,314 | R 27,653 |
| April | 69 | 227 | 131 | 427 | R 1,208 | R 2,494 | R 288 | R 3,990 | R 1,277 | R 2,721 | R 419 | R 4,417 | R 28,069 |
| May | R 95 | 229 | 137 | R 461 | R 1,363 | 2,580 | 248 | R 4,191 | R 1,458 | 2,809 | 385 | R 4,652 | R 29,499 |
| June | 64 | R 213 | 158 | R 435 | 1,498 | 2,706 | 312 | 4,516 | 1,562 | R 2,919 | 470 | R 4,951 | R 30,700 |
| July | 77 | 175 | 186 | 438 | R 1,460 | R 2,762 | 353 | R 4,575 | R 1,537 | R 2,937 | 539 | R 5,013 | R 30,640 |
| August | 72 | 192 | 153 | 417 | 1,511 | 2,902 | R 401 | R 4,814 | 1,583 | 3,094 | R 554 | R 5,231 | R 30,832 |
| September | 55 | R 191 | 179 | R 425 | R 1,553 | 2,799 | 369 | R 4,721 | R 1,608 | R 2,990 | 548 | R 5,146 | R 31,087 |
| October | 93 | 290 | 187 | 570 | 1,748 | 3,070 | 377 | 5,195 | 1,841 | 3,360 | 564 | 5,765 | R 35,396 |
| November | 107 | 236 | 177 | 520 | R 1,418 | 2,649 | 356 | R 4,423 | R 1,525 | 2,885 | 533 | R 4,943 | R 31,023 |
| December | 70 | 193 | 146 | 409 | R 1,265 | 2,299 | 346 | R 3,910 | R 1,335 | 2,492 | 492 | R 4,319 | R 27,354 |
| **Total** | R **946** | R **2,652** | **1,861** | R **5,459** | R **16,375** | R **31,466** | R **3,869** | R **51,710** | R **17,321** | R **34,118** | R **5,730** | R **57,169** | R **354,645** |
| **2009** January | 92 | 190 | 111 | 393 | 1,334 | 2,340 | 263 | 3,937 | 1,426 | 2,530 | 374 | 4,330 | R 26,455 |
| February | 68 | 158 | 98 | 324 | 1,064 | 1,920 | 235 | 3,219 | 1,132 | 2,078 | 333 | 3,543 | R 21,976 |
| March | 64 | 167 | 107 | 338 | 904 | 1,851 | 208 | 2,963 | 968 | 2,018 | 315 | 3,301 | R 20,639 |
| April | 40 | 84 | 102 | 226 | 817 | 1,429 | 223 | 2,469 | 857 | 1,513 | 325 | 2,695 | R 16,610 |
| May | 58 | 104 | 77 | 239 | 649 | 1,195 | 170 | 2,014 | 707 | 1,299 | 247 | 2,253 | R 13,978 |
| June | 51 | 95 | 75 | 221 | 858 | 1,228 | R 188 | R 2,274 | 909 | 1,323 | R 263 | R 2,495 | R 15,229 |
| July | 44 | 94 | 115 | 253 | R 822 | 1,275 | 176 | R 2,273 | R 866 | 1,369 | 291 | R 2,526 | R 15,483 |
| August | 51 | 89 | R 98 | R 238 | 1,050 | 1,294 | 180 | 2,524 | 1,101 | 1,383 | R 278 | R 2,762 | R 16,700 |
| September | 65 | R 88 | R 102 | R 255 | 1,110 | 1,238 | 185 | 2,533 | 1,175 | R 1,326 | R 287 | R 2,788 | R 16,760 |
| October | 70 | 121 | 84 | 275 | 1,157 | 1,298 | 191 | 2,646 | 1,227 | 1,419 | 275 | 2,921 | R 17,585 |
| November | 74 | 111 | 87 | 272 | 1,238 | 1,328 | 198 | 2,764 | 1,312 | 1,439 | 285 | 3,036 | R 18,222 |
| December | 89 | 122 | 94 | 305 | 1,494 | 1,334 | 209 | 3,037 | 1,583 | 1,456 | 303 | 3,342 | R 19,813 |
| **Total** | **766** | R **1,423** | R **1,150** | R **3,339** | R **12,497** | **17,730** | R **2,426** | R **32,653** | R **13,263** | R **19,153** | R **3,576** | R **35,992** | R **219,450** |
| **2010** January | 95 | 127 | 103 | 325 | 1,627 | 1,505 | 231 | 3,363 | 1,722 | 1,632 | 334 | 3,688 | R 21,915 |
| February | 97 | 128 | 109 | 334 | 1,648 | 1,603 | 255 | 3,506 | 1,745 | 1,731 | 364 | 3,840 | R 22,882 |
| March | 101 | 141 | 114 | 356 | 1,735 | 1,671 | 267 | 3,673 | 1,836 | 1,812 | 381 | 4,029 | 23,988 |
| **3-Month Total** | **293** | **396** | **326** | **1,015** | **5,010** | **4,779** | **753** | **10,542** | **5,303** | **5,175** | **1,079** | **11,557** | **68,785** |
| **2009 3-Month Total** | **224** | **515** | **316** | **1,055** | **3,302** | **6,111** | **706** | **10,119** | **3,526** | **6,626** | **1,022** | **11,174** | **69,070** |
| **2008 3-Month Total** | **244** | **706** | **407** | **1,357** | **3,351** | **7,205** | **819** | **11,375** | **3,595** | **7,911** | **1,226** | **12,732** | **80,045** |

R=Revised.

Notes: • Prior to 1990, these well counts include only the original drilling of a hole intended to discover or further develop already discovered crude oil or natural gas resources. Other drilling activities, such as drilling an old well deeper, drilling of laterals from the original well, drilling of service and injection wells, and drilling for resources other than crude oil or natural gas are excluded. After 1990, a new well is defined as the first hole in the ground whether it is lateral or not. Due to the methodology used to estimate ultimate well counts from the available partially reported data, the counts shown on this page are frequently revised. See Note, "Crude Oil and Natural Gas Exploratory and Development Wells," at end of section.

• Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/resource.html for all available data beginning in 1973.

Sources: • **1973-1989:** U.S. Energy Information Administration (EIA) computations based on well reports submitted to the American Petroleum Institute.

• **1990 forward:** EIA computations based on well reports submitted to IHS, Inc., Denver, CO.

# Table 5.3 Maximum U.S. Active Seismic Crew Counts

(Number of Crews)

| | 48 States, Onshore | | | | 48 States, Offshore[a] | | | | Alaska[b] | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Dimensions[c] | | | | Dimensions[c] | | | | Dimensions[c] | | | | |
| | 2 | 3 | 4 | Total[d] | 2 | 3 | 4 | Total[d] | 2 | 3 | 4 | Total[d] | Total |
| **2000** March | 4 | 36 | 1 | 41 | 7 | 11 | 0 | 19 | 1 | 1 | 0 | 2 | 62 |
| **2001** March | 6 | 38 | 1 | 45 | 9 | 9 | 0 | 18 | 0 | 0 | 0 | 0 | 63 |
| **2002** March | 9 | 26 | 0 | 35 | 10 | 7 | 0 | 17 | 1 | 1 | 0 | 2 | 54 |
| **2003** March | 8 | 20 | 0 | 28 | 7 | 4 | 0 | 11 | 1 | 1 | 0 | 2 | 41 |
| **2004** March | 8 | 27 | 0 | 35 | 5 | 5 | 0 | 10 | 0 | 0 | 0 | 0 | 45 |
| **2005** March | 6 | 33 | 0 | 39 | 6 | 6 | 0 | 12 | 0 | 0 | 0 | 0 | 51 |
| **2006** March | 4 | 42 | 0 | 46 | 6 | 6 | 0 | 12 | 0 | 1 | 0 | 1 | 59 |
| **2007** January | 3 | 51 | 0 | 54 | 3 | 5 | 0 | 8 | 0 | 1 | 0 | 1 | 63 |
| February | 3 | 51 | 0 | 54 | 3 | 5 | 0 | 8 | 0 | 1 | 0 | 1 | 63 |
| March | 4 | 55 | 0 | 59 | 3 | 5 | 0 | 8 | 0 | 1 | 0 | 1 | 68 |
| April | 4 | 55 | 0 | 59 | 4 | 6 | 1 | 11 | 0 | 1 | 0 | 1 | 71 |
| May | 3 | 55 | 0 | 58 | 4 | 6 | 1 | 11 | 0 | 1 | 0 | 1 | 70 |
| June | 3 | 55 | 0 | 58 | 3 | 6 | 1 | 10 | 0 | 1 | 0 | 1 | 69 |
| July | 2 | 57 | 0 | 59 | 3 | 6 | 1 | 10 | 0 | 0 | 0 | 0 | 69 |
| August | 2 | 56 | 0 | 58 | 4 | 8 | 1 | 13 | 0 | 0 | 0 | 0 | 71 |
| September | 3 | 58 | 0 | 61 | 3 | 8 | 1 | 12 | 0 | 0 | 0 | 0 | 73 |
| October | 4 | 60 | 0 | 65 | 3 | 8 | 1 | 12 | 0 | 0 | 0 | 0 | 77 |
| November | 4 | 60 | 0 | 65 | 3 | 10 | 1 | 14 | 0 | 0 | 0 | 0 | 79 |
| December | 5 | 54 | 0 | 60 | 4 | 10 | 1 | 15 | 0 | 0 | 0 | 0 | 75 |
| **2008** January | 6 | 55 | 0 | 61 | 4 | 10 | 1 | 15 | 0 | 0 | 0 | 0 | 76 |
| February | 6 | 55 | 0 | 61 | 4 | 11 | 1 | 16 | 0 | 0 | 0 | 0 | 77 |
| March | 6 | 54 | 0 | 60 | 3 | 11 | 1 | 15 | 0 | 0 | 0 | 0 | 75 |
| April | 4 | 53 | 0 | 57 | 3 | 11 | 1 | 15 | 0 | 0 | 0 | 0 | 72 |
| May | 4 | 54 | 0 | 58 | 3 | 11 | 1 | 15 | 0 | 0 | 0 | 0 | 73 |
| June | 2 | 56 | 0 | 58 | 3 | 11 | 1 | 15 | 0 | 0 | 0 | 0 | 73 |
| July | 2 | 58 | 0 | 60 | 3 | 8 | 1 | 12 | 0 | 0 | 0 | 0 | 72 |
| August | 2 | 58 | 0 | 60 | 3 | 8 | 1 | 12 | 0 | 0 | 0 | 0 | 72 |
| September | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| October | 4 | 60 | 0 | 65 | 3 | 8 | 1 | 12 | 0 | 0 | 0 | 0 | 77 |
| November | 2 | 61 | 0 | 63 | 1 | 7 | 1 | 9 | 0 | 0 | 0 | 0 | 72 |
| December | 2 | 62 | 0 | 64 | 2 | 7 | 0 | 9 | 0 | 0 | 0 | 0 | 73 |
| **2009** January | 2 | 63 | 0 | 65 | 2 | 8 | 0 | 10 | 0 | 0 | 0 | 0 | 75 |
| February | 3 | 62 | 0 | 65 | 2 | 9 | 0 | 11 | 0 | 0 | 0 | 0 | 76 |
| March | 3 | 59 | 0 | 62 | 2 | 8 | 0 | 10 | 0 | 0 | 0 | 0 | 72 |
| April | 3 | 57 | 0 | 60 | 2 | 8 | 0 | 10 | 0 | 0 | 0 | 0 | 70 |
| May | 2 | 54 | 0 | 56 | 2 | 7 | 0 | 9 | 0 | 0 | 0 | 0 | 65 |
| June | 2 | 50 | 0 | 52 | 2 | 6 | 0 | 8 | 0 | 0 | 0 | 0 | 60 |
| July | 2 | 51 | 0 | 53 | 2 | 6 | 0 | 8 | 0 | 0 | 0 | 0 | 61 |
| August | 2 | 49 | 0 | 51 | 3 | 6 | 0 | 9 | 0 | 0 | 0 | 0 | 60 |
| September | 1 | 49 | 0 | 50 | 4 | 6 | 0 | 10 | 0 | 0 | 0 | 0 | 60 |
| October | 1 | 50 | 0 | 51 | 5 | 7 | 0 | 12 | 0 | 0 | 0 | 0 | 63 |
| November | 0 | 49 | 0 | 49 | 5 | 8 | 0 | 13 | 0 | 0 | 0 | 0 | 62 |
| December | 0 | 50 | 0 | 50 | 5 | 8 | 0 | 13 | 0 | 0 | 0 | 0 | 63 |
| **2010** January | 0 | 51 | 0 | 51 | 5 | 8 | 0 | 13 | 0 | 0 | 0 | 0 | 64 |
| February | 0 | 52 | 0 | 52 | 5 | 8 | 0 | 13 | 0 | 0 | 0 | 0 | 65 |
| March | 0 | 49 | 0 | 49 | 5 | 8 | 0 | 13 | 0 | 1 | 0 | 1 | 63 |

[a] Federal and State Jurisdiction waters of the Gulf of Mexico.

[b] All onshore.

[c] In **two-dimensional** (2D) reflection seismic surveying both the sound source and the sound detectors (numbering up to a hundred or more per shot) are moved along a straight line. The resultant product can be thought of as a vertical sonic cross-section of the subsurface beneath the survey line. It is constructed by summing many compressional (pressure) wave reflections from the various sound source and sound detector locations at the halfway sound path points beneath each location (common depth point stacking). In **three-dimensional** (3D) reflection seismic surveying the sound detectors (numbering up to a thousand or more) are spread out over an area and the sound source is moved from location to location through the area. The resultant product can be thought of as a cube of common depth point stacked reflections. Advantages over 2D include the additional dimension, the fact that many more reflections are available for stacking at each point, which provides greatly improved resolution of subsurface features, and elimination of the "ghost" or "side swipe" reflections from nearby offline features that 2D surveys are prone to (except, of course, along the outer faces of the cube). **Four dimensional** (4D) reflection seismic surveying is the exact repetition of a 3D survey at two or more time intervals. The primary application of 4D is mapping the movement of fluid interfaces in producing oil and gas reservoirs.

[d] Includes crews with unknown survey dimension.

NA=Not available.

Notes: • A "seismic crew" is a group of people, of varying number, engaged in a seismic surveying job. • "48 States" is the United States excluding Alaska and Hawaii. • Data are reported on the first and fifteenth of each month, except January when they are reported only on the fifteenth. When semi-monthly values differ for the month, the larger of the two values is shown here. Consequently, this table reflects the maximum number of crews at work at any time during the month.

Web Page: See http://www.eia.doe.gov/emeu/mer/resource.html for all available data beginning in March 2000.

Source: *World Geophysical News,* IHS, Inc., Denver, CO, used with permission.

# Crude Oil and Natural Gas Resource Development

**Note. Crude Oil and Natural Gas Exploratory and Development Wells.** Three well types are considered in the *Monthly Energy Review* (*MER*) drilling statistics: "completed for crude oil," "completed for natural gas," and "dry hole." Wells that productively encounter both crude oil and natural gas are categorized as "completed for crude oil." Both development wells and exploratory wells (new field wildcats, new pool tests, and extension tests) are included in the statistics. All other classes of wells drilled in connection with the search for producible hydrocarbons are excluded. If a lateral is drilled at the same time as the original hole it is not counted separately, but its footage is included.

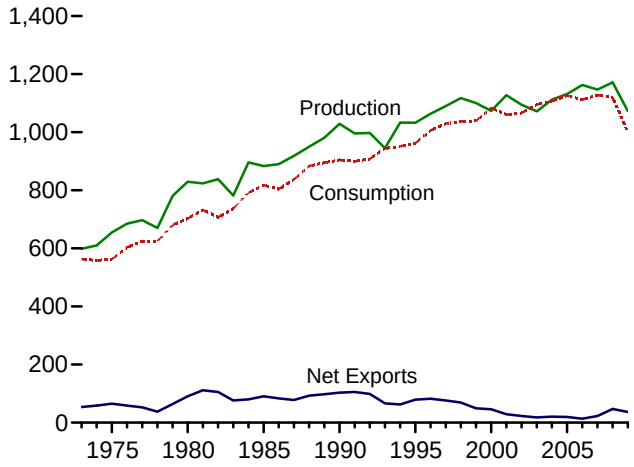
Prior to the March 1985 MER, drilling statistics consisted of completion data for the above types and classes of wells as reported to the American Petroleum Institute (API) during a given month. Due to time lags between the date of well completion and the date of completion reporting to the API, as-reported well completions proved to be an inaccurate indicator of drilling activity. During 1982, for example, as-reported well completions rose, while the number of actual completions fell. Consequently, the drilling statistics published since the March 1985 MER are U.S. Energy Information Administration (EIA) estimates produced by statistically imputing well counts and footage based on the partial data available from the API. These estimates are subject to continuous revision as new data, some of which pertain to earlier months and years, become available. Additional information about the EIA estimation methodology may be found in "Estimating Well Completions," a feature article published in the March 1985 MER.

# 6 Coal

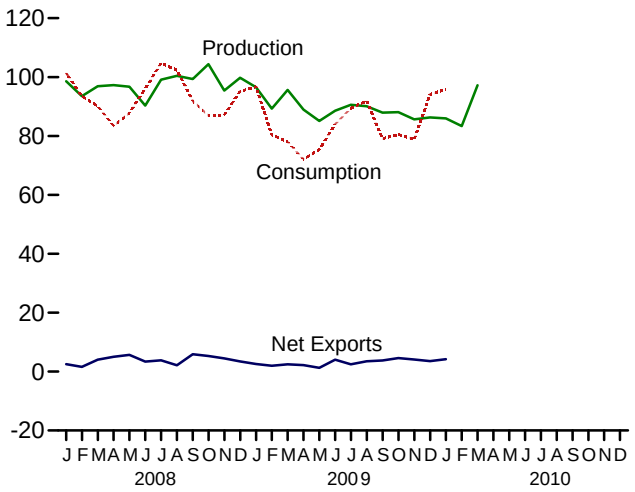

Coal yard, Curtis Bay, Maryland. Source: U.S. Department of Energy.

**Figure 6.1 Coal**
(Million Short Tons)

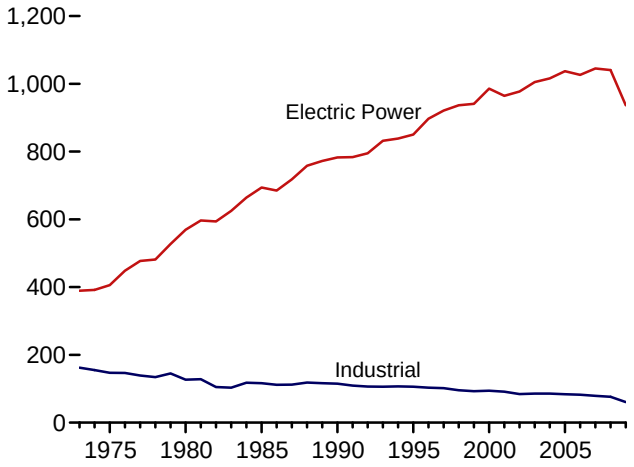
Overview, 1973-2009



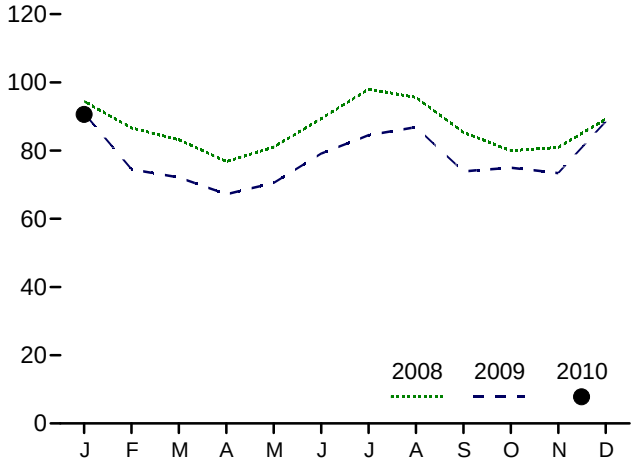

Overview, Monthly



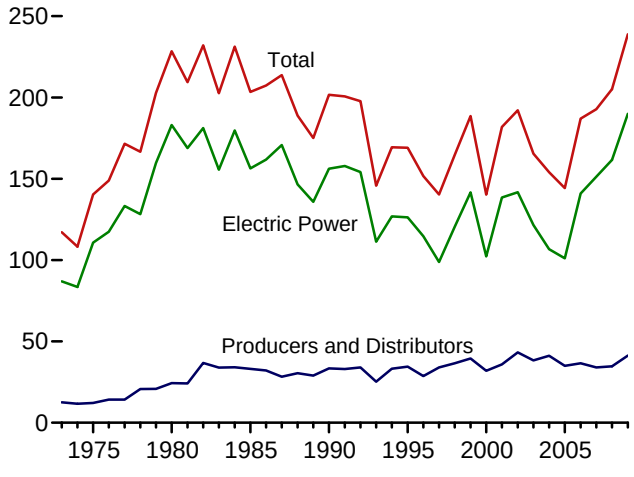

Consumption by Sector, 1973-2009



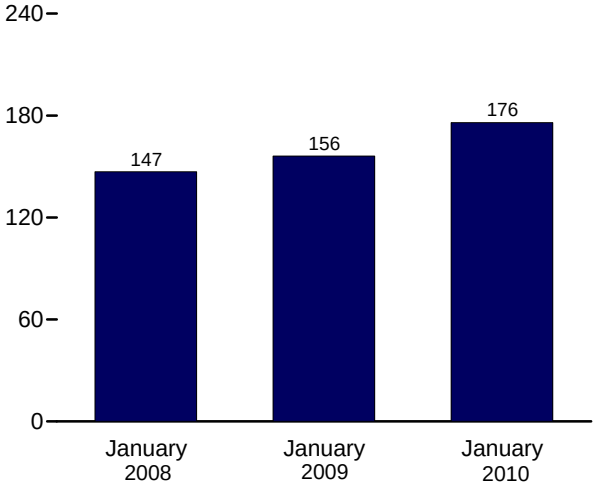

Electric Power Sector Consumption, Monthly




Stocks, End of Year, 1973-2009




Electric Power Sector Stocks, End of Month




Web Page: http://www.eia.doe.gov/emeu/mer/coal.html.
Sources: Tables 6.1, 6.2, and 6.3.

# Table 6.1 Coal Overview

(Thousand Short Tons)

| | Production[a] | Waste Coal Supplied[b] | Trade | | | Stock Change[d] | Losses and Unaccounted for[e] | Consumption |
|---|---|---|---|---|---|---|---|---|
| | | | Imports | Exports | Net Imports[c] | | | |
| **1973 Total** | **598,568** | **NA** | **127** | **53,587** | **-53,460** | **([f])** | **[f] -17,476** | **562,584** |
| **1975 Total** | **654,641** | **NA** | **940** | **66,309** | **-65,369** | **32,154** | **-5,522** | **562,640** |
| **1980 Total** | **829,700** | **NA** | **1,194** | **91,742** | **-90,548** | **25,595** | **10,827** | **702,730** |
| **1985 Total** | **883,638** | **NA** | **1,952** | **92,680** | **-90,727** | **-27,934** | **2,796** | **818,049** |
| **1990 Total** | **1,029,076** | **3,339** | **2,699** | **105,804** | **-103,104** | **26,542** | **-1,730** | **904,498** |
| **1995 Total** | **1,032,974** | **8,561** | **9,473** | **88,547** | **-79,074** | **-275** | **632** | **962,104** |
| **1996 Total** | **1,063,856** | **8,778** | **8,115** | **90,473** | **-82,357** | **-17,456** | **1,411** | **1,006,321** |
| **1997 Total** | **1,089,932** | **8,096** | **7,487** | **83,545** | **-76,058** | **-11,253** | **3,678** | **1,029,544** |
| **1998 Total** | **1,117,535** | **8,690** | **8,724** | **78,048** | **-69,324** | **24,228** | **-4,430** | **1,037,103** |
| **1999 Total** | **1,100,431** | **8,683** | **9,089** | **58,476** | **-49,387** | **23,988** | **-2,906** | **1,038,647** |
| **2000 Total** | **1,073,612** | **9,089** | **12,513** | **58,489** | **-45,976** | **-48,309** | **938** | **1,084,095** |
| **2001 Total** | **1,127,689** | **10,085** | **19,787** | **48,666** | **-28,879** | **41,630** | **7,120** | **1,060,146** |
| **2002 Total** | **1,094,283** | **9,052** | **16,875** | **39,601** | **-22,726** | **10,215** | **4,040** | **1,066,355** |
| **2003 Total** | **1,071,753** | **10,016** | **25,044** | **43,014** | **-17,970** | **-26,659** | **-4,403** | **1,094,861** |
| **2004 Total** | **1,112,099** | **11,299** | **27,280** | **47,998** | **-20,718** | **-11,462** | **6,887** | **1,107,255** |
| **2005 Total** | **1,131,498** | **13,352** | **30,460** | **49,942** | **-19,482** | **-9,702** | **9,092** | **1,125,978** |
| **2006 Total** | **1,162,750** | **14,409** | **36,246** | **49,647** | **-13,401** | **42,642** | **8,824** | **1,112,292** |
| **2007 Total** | **1,146,635** | **14,076** | **36,347** | **59,163** | **-22,816** | **5,812** | **4,085** | **1,127,998** |
| **2008** January | 98,587 | 1,301 | 2,381 | 4,915 | -2,535 | -3,937 | -98 | 101,389 |
| February | 93,525 | 1,138 | 2,619 | 4,205 | -1,586 | -3,763 | 3,399 | 93,442 |
| March | 96,903 | 1,014 | 2,640 | 6,682 | -4,041 | 3,043 | 679 | 90,154 |
| April | 97,287 | 1,086 | 2,985 | 7,979 | -4,994 | 9,314 | 604 | 83,462 |
| May | 96,725 | 1,175 | 2,702 | 8,394 | -5,692 | 3,271 | 1,129 | 87,807 |
| June | 90,319 | 1,160 | 3,295 | 6,695 | -3,401 | -8,840 | 882 | 96,036 |
| July | 99,132 | 1,295 | 2,569 | 6,404 | -3,835 | -10,205 | 2,073 | 104,724 |
| August | 100,428 | 1,214 | 3,144 | 5,264 | -2,120 | -4,738 | 1,870 | 102,390 |
| September | 99,351 | 1,163 | 2,772 | 8,653 | -5,881 | 6,047 | -3,323 | 91,909 |
| October | 104,390 | 1,145 | 2,921 | 8,233 | -5,312 | 13,226 | 69 | 86,927 |
| November | 95,405 | 1,153 | 2,988 | 7,460 | -4,472 | 9,224 | -4,287 | 87,149 |
| December | 99,758 | 1,303 | 3,192 | 6,636 | -3,444 | -289 | 2,744 | 95,162 |
| **Total** | **1,171,809** | **14,146** | **34,208** | **81,519** | **-47,311** | **12,354** | **5,740** | **1,120,548** |
| **2009** January | 96,568 | 1,258 | 2,329 | 4,907 | -2,578 | -1,985 | 506 | 96,727 |
| February | 89,266 | 881 | 1,855 | 3,822 | -1,968 | 7,923 | -119 | 80,375 |
| March | 95,610 | 965 | 2,141 | 4,605 | -2,464 | 12,417 | 3,679 | 78,014 |
| April | 88,944 | 944 | 1,303 | 3,513 | -2,210 | 13,460 | 2,123 | 72,095 |
| May | 85,122 | 854 | 2,283 | 3,552 | -1,269 | 7,523 | 1,799 | 75,384 |
| June | 88,582 | 999 | 1,840 | 5,886 | -4,045 | 2,793 | -1,257 | 83,999 |
| July | 90,606 | 1,107 | 2,018 | 4,477 | -2,459 | -872 | 742 | 89,383 |
| August | 90,069 | 1,089 | 1,568 | 5,056 | -3,488 | -5,046 | 768 | 91,948 |
| September | 87,945 | 1,013 | 1,854 | 5,625 | -3,771 | 4,749 | 1,353 | 79,085 |
| October | 88,086 | 1,050 | 1,762 | 6,364 | -4,603 | 4,362 | -358 | 80,528 |
| November | 85,645 | 1,090 | 1,506 | 5,586 | -4,080 | 2,605 | 1,214 | 78,836 |
| December | 86,310 | 1,186 | 2,179 | 5,703 | -3,524 | -14,219 | 4,142 | 94,049 |
| **Total** | **1,072,752** | **12,435** | **22,639** | **59,097** | **-36,458** | **33,711** | **14,594** | **1,000,424** |
| **2010** January | 85,961 | [RF] 1,069 | [R] 1,665 | [R] 5,866 | [R] -4,202 | [R] -13,437 | [R] 363 | [R] 95,903 |
| February | 83,331 | NA | NA | NA | NA | NA | NA | NA |
| March | 97,232 | NA | NA | NA | NA | NA | NA | NA |
| **3-Month Total** | **266,524** | **NA** | **NA** | **NA** | **NA** | **NA** | **NA** | **NA** |
| **2009 3-Month Total** | **281,444** | **3,104** | **6,325** | **13,335** | **-7,010** | **18,355** | **4,067** | **255,116** |
| **2008 3-Month Total** | **289,015** | **3,453** | **7,640** | **15,802** | **-8,161** | **-4,657** | **3,979** | **284,984** |

[a] Beginning in 2001, includes a small amount of refuse recovery (coal recaptured from a refuse mine and cleaned to reduce the concentration of noncombustible materials).

[b] Waste coal (including fine coal, coal obtained from a refuse bank or slurry dam, anthracite culm, bituminous gob, and lignite waste) consumed by the electric power and industrial sectors. Beginning in 1989, waste coal supplied is counted as a supply-side item to balance the same amount of waste coal included in "Consumption."

[c] Net imports equal imports minus exports. A minus sign indicates exports are greater than imports.

[d] A negative value indicates a decrease in stocks; a positive value indicates an increase.

[e] "Losses and Unaccounted for" is calculated as the sum of production, imports, and waste coal supplied, minus exports, stock change, and consumption.

[f] In 1973, stock change is included in "Losses and Unaccounted for."

R=Revised. NA=Not available. F=Forecast.

Notes: • For methodology used to calculate production, consumption, and stocks, see Note 1, "Coal Production," Note 2, "Coal Consumption," and Note 3, "Coal Stocks," at end of section. • Data values preceded by "F" are derived from the U.S. Energy Information Administration's Short-Term Integrated Forecasting System. See Note 4, "Coal Forecast Values," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/coal.html for all available data beginning in 1973.

Sources: See end of section.

# Table 6.2 Coal Consumption by Sector

(Thousand Short Tons)

| | End-Use Sectors | | | | | | | | | | Electric Power Sector[e,f] | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Commercial | | | Industrial | | | | | | | |
| | | | | | | Other Industrial | | | | | | |
| | Residential | CHP[a] | Other[b] | Total | Coke Plants | CHP[c] | Non-CHP[d] | Total | Total | Transportation | | |
| **1973 Total** | **4,113** | **( g )** | **7,004** | **7,004** | **94,101** | **( h )** | **68,038** | **68,038** | **162,139** | **116** | **389,212** | **562,584** |
| **1975 Total** | **2,823** | **( g )** | **6,587** | **6,587** | **83,598** | **( h )** | **63,646** | **63,646** | **147,244** | **24** | **405,962** | **562,640** |
| **1980 Total** | **1,355** | **( g )** | **5,097** | **5,097** | **66,657** | **( h )** | **60,347** | **60,347** | **127,004** | **( h )** | **569,274** | **702,730** |
| **1985 Total** | **1,711** | **( g )** | **6,068** | **6,068** | **41,056** | **( h )** | **75,372** | **75,372** | **116,429** | **( h )** | **693,841** | **818,049** |
| **1990 Total** | **1,345** | **1,191** | **4,189** | **5,379** | **38,877** | **27,781** | **48,549** | **76,330** | **115,207** | **( h )** | **782,567** | **904,498** |
| **1995 Total** | **755** | **1,419** | **3,633** | **5,052** | **33,011** | **29,363** | **43,693** | **73,055** | **106,067** | **( h )** | **850,230** | **962,104** |
| **1996 Total** | **721** | **1,660** | **3,625** | **5,285** | **31,706** | **29,434** | **42,254** | **71,689** | **103,395** | **( h )** | **896,921** | **1,006,321** |
| **1997 Total** | **711** | **1,738** | **4,015** | **5,752** | **30,203** | **29,853** | **41,661** | **71,515** | **101,718** | **( h )** | **921,364** | **1,029,544** |
| **1998 Total** | **534** | **1,443** | **2,879** | **4,322** | **28,189** | **28,553** | **38,887** | **67,439** | **95,628** | **( h )** | **936,619** | **1,037,103** |
| **1999 Total** | **585** | **1,490** | **2,803** | **4,293** | **28,108** | **27,763** | **36,975** | **64,738** | **92,846** | **( h )** | **940,922** | **1,038,647** |
| **2000 Total** | **454** | **1,547** | **2,126** | **3,673** | **28,939** | **28,031** | **37,177** | **65,208** | **94,147** | **( h )** | **985,821** | **1,084,095** |
| **2001 Total** | **481** | **1,448** | **2,441** | **3,888** | **26,075** | **25,755** | **39,514** | **65,268** | **91,344** | **( h )** | **964,433** | **1,060,146** |
| **2002 Total** | **533** | **1,405** | **2,506** | **3,912** | **23,656** | **26,232** | **34,515** | **60,747** | **84,403** | **( h )** | **977,507** | **1,066,355** |
| **2003 Total** | **551** | **1,816** | **1,869** | **3,685** | **24,248** | **24,846** | **36,415** | **61,261** | **85,509** | **( h )** | **1,005,116** | **1,094,861** |
| **2004 Total** | **512** | **1,917** | **2,693** | **4,610** | **23,670** | **26,613** | **35,582** | **62,195** | **85,865** | **( h )** | **1,016,268** | **1,107,255** |
| **2005 Total** | **378** | **1,922** | **2,420** | **4,342** | **23,434** | **25,875** | **34,465** | **60,340** | **83,774** | **( h )** | **1,037,485** | **1,125,978** |
| **2006 Total** | **290** | **1,886** | **1,050** | **2,936** | **22,957** | **25,262** | **34,210** | **59,472** | **82,429** | **( h )** | **1,026,636** | **1,112,292** |
| **2007 Total** | **353** | **1,927** | **1,247** | **3,173** | **22,715** | **22,537** | **34,078** | **56,615** | **79,331** | ( h ) | **1,045,141** | **1,127,998** |
| **2008** January | 40 | 197 | 159 | 356 | 1,834 | 1,954 | 2,746 | 4,700 | 6,534 | ( h ) | 94,459 | 101,389 |
| February | 36 | 181 | 146 | 327 | 1,792 | 1,850 | 2,811 | 4,661 | 6,452 | ( h ) | 86,626 | 93,442 |
| March | 35 | 176 | 142 | 317 | 1,910 | 1,879 | 2,797 | 4,676 | 6,586 | ( h ) | 83,215 | 90,154 |
| April | 23 | 144 | 63 | 207 | 1,864 | 1,803 | 2,812 | 4,615 | 6,478 | ( h ) | 76,753 | 83,462 |
| May | 23 | 145 | 64 | 208 | 1,911 | 1,857 | 2,751 | 4,609 | 6,520 | ( h ) | 81,056 | 87,807 |
| June | 28 | 177 | 78 | 255 | 1,805 | 1,772 | 2,828 | 4,600 | 6,406 | ( h ) | 89,347 | 96,036 |
| July | 25 | 169 | 53 | 222 | 1,915 | 1,871 | 2,659 | 4,530 | 6,445 | ( h ) | 98,032 | 104,724 |
| August | 25 | 168 | 53 | 221 | 2,034 | 1,841 | 2,680 | 4,521 | 6,555 | ( h ) | 95,590 | 102,390 |
| September | 23 | 155 | 49 | 203 | 1,818 | 1,783 | 2,706 | 4,489 | 6,307 | ( h ) | 85,376 | 91,909 |
| October | 27 | 150 | 96 | 246 | 2,208 | 1,787 | 2,676 | 4,463 | 6,671 | ( h ) | 79,982 | 86,927 |
| November | 30 | 166 | 107 | 272 | 1,626 | 1,721 | 2,616 | 4,337 | 5,963 | ( h ) | 80,883 | 87,149 |
| December | 36 | 195 | 125 | 320 | 1,353 | 1,784 | 2,409 | 4,194 | 5,547 | **( h )** | 89,259 | 95,162 |
| **Total** | **351** | **2,021** | **1,134** | **3,155** | **22,070** | **21,902** | **32,491** | **54,393** | **76,463** | ( h ) | **1,040,580** | **1,120,548** |
| **2009** January | 39 | 196 | 158 | 354 | 1,390 | 1,762 | 2,259 | 4,022 | 5,412 | ( h ) | 90,921 | 96,727 |
| February | 35 | 172 | 139 | 311 | 1,449 | 1,662 | 2,417 | 4,078 | 5,527 | ( h ) | 74,503 | 80,375 |
| March | 33 | 164 | 133 | 297 | 1,559 | 1,738 | 2,246 | 3,984 | 5,543 | ( h ) | 72,141 | 78,014 |
| April | 22 | 129 | 69 | 198 | 1,150 | 1,514 | 2,011 | 3,525 | 4,676 | ( h ) | 67,199 | 72,095 |
| May | 21 | 124 | 67 | 191 | 1,118 | 1,564 | 1,956 | 3,520 | 4,638 | ( h ) | 70,534 | 75,384 |
| June | 23 | 136 | 73 | 208 | 1,134 | 1,606 | 1,900 | 3,506 | 4,640 | ( h ) | 79,128 | 83,999 |
| July | 21 | 137 | 49 | 187 | 1,032 | 1,696 | 1,957 | 3,653 | 4,685 | ( h ) | 84,491 | 89,383 |
| August | 21 | 142 | 51 | 193 | 1,168 | 1,660 | 2,053 | 3,713 | 4,882 | ( h ) | 86,852 | 91,948 |
| September | 20 | 131 | 47 | 178 | 1,250 | 1,574 | 2,175 | 3,750 | 5,000 | ( h ) | 73,887 | 79,085 |
| October | 25 | 134 | 91 | 226 | 1,431 | 1,611 | 2,233 | 3,844 | 5,275 | ( h ) | 75,002 | 80,528 |
| November | 28 | 152 | 103 | 255 | 1,274 | 1,551 | 2,331 | 3,881 | 5,156 | ( h ) | 73,397 | 78,836 |
| December | 32 | 173 | 118 | 291 | 1,371 | 1,722 | 2,153 | 3,874 | 5,245 | **( h )** | 88,481 | 94,049 |
| **Total** | **321** | **1,790** | **1,099** | **2,889** | **15,326** | **19,660** | **25,691** | **45,352** | **60,678** | ( h ) | **936,536** | **1,000,424** |
| **2010** January | F 36 | 193 | F 130 | F 323 | F 1,800 | 2,036 | F 1,121 | F 3,158 | F 4,957 | ( h ) | 90,587 | 95,903 |

[a] Commercial combined-heat-and-power (CHP) and a small number of commercial electricity-only plants, such as those at hospitals and universities. See Note, "Classification of Power Plants Into Energy-Use Sectors," at end of Section 7.

[b] All commercial sector fuel use other than that in "Commercial CHP."

[c] Industrial combined-heat-and-power (CHP) and a small number of industrial electricity-only plants. See Note, "Classification of Power Plants Into Energy-Use Sectors," at end of Section 7.

[d] All industrial sector fuel use other than that in "Coke Plants" and "Industrial CHP."

[e] The electric power sector comprises electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public.

[f] Through 1988, data are for consumption at electric utilities only. Beginning in 1989, data also include consumption at independent power producers.

[g] Included in "Commercial Other."

[h] Included in "Industrial Non-CHP."

R=Revised. F=Forecast.

Notes: • CHP monthly values are from Table 7.4c; electric power sector monthly values are from Table 7.4b; all other monthly values are estimates derived from collected quarterly and annual data. See Note 2, "Coal Consumption," at end of section. • Data values preceded by "F" are derived from the U.S. Energy Information Administration's Short-Term Integrated Forecasting System. See Note 4, "Coal Forecast Values," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/coal.html for all available data beginning in 1973.

Sources: See end of section.

# Table 6.3 Coal Stocks by Sector

(Thousand Short Tons)

| | Producers and Distributors | End-Use Sectors | | | | | Electric Power Sector[b,c] | Total |
|---|---|---|---|---|---|---|---|---|
| | | Residential and Commercial | Industrial | | | Total | | |
| | | | Coke Plants | Other[a] | Total | | | |
| **1973 Year** | **12,530** | **290** | **6,998** | **10,370** | **17,368** | **17,658** | **86,967** | **117,155** |
| **1975 Year** | **12,108** | **233** | **8,797** | **8,529** | **17,326** | **17,559** | **110,724** | **140,391** |
| **1980 Year** | **24,379** | **NA** | **9,067** | **11,951** | **21,018** | **21,018** | **183,010** | **228,407** |
| **1985 Year** | **33,133** | **NA** | **3,420** | **10,438** | **13,857** | **13,857** | **156,376** | **203,367** |
| **1990 Year** | **33,418** | **NA** | **3,329** | **8,716** | **12,044** | **12,044** | **156,166** | **201,629** |
| **1995 Year** | **34,444** | **NA** | **2,632** | **5,702** | **8,334** | **8,334** | **126,304** | **169,083** |
| **1996 Year** | **28,648** | **NA** | **2,667** | **5,688** | **8,355** | **8,355** | **114,623** | **151,627** |
| **1997 Year** | **33,973** | **NA** | **1,978** | **5,597** | **7,576** | **7,576** | **98,826** | **140,374** |
| **1998 Year** | **36,530** | **NA** | **2,026** | **5,545** | **7,571** | **7,571** | **120,501** | **164,602** |
| **1999 Year** | **39,475** | **NA** | **1,943** | **5,569** | **7,511** | **7,511** | [c] **141,604** | **188,590** |
| **2000 Year** | **31,905** | **NA** | **1,494** | **4,587** | **6,081** | **6,081** | **102,296** | **140,282** |
| **2001 Year** | **35,900** | **NA** | **1,510** | **6,006** | **7,516** | **7,516** | **138,496** | **181,912** |
| **2002 Year** | **43,257** | **NA** | **1,364** | **5,792** | **7,156** | **7,156** | **141,714** | **192,127** |
| **2003 Year** | **38,277** | **NA** | **905** | **4,718** | **5,623** | **5,623** | **121,567** | **165,468** |
| **2004 Year** | **41,151** | **NA** | **1,344** | **4,842** | **6,186** | **6,186** | **106,669** | **154,006** |
| **2005 Year** | **34,971** | **NA** | **2,615** | **5,582** | **8,196** | **8,196** | **101,137** | **144,304** |
| **2006 Year** | **36,548** | **NA** | **2,928** | **6,506** | **9,434** | **9,434** | **140,964** | **186,946** |
| **2007 Year** | **33,977** | **NA** | **1,936** | **5,624** | **7,560** | **7,560** | **151,221** | **192,758** |
| **2008** January | 34,252 | [F] 463 | 1,778 | 5,355 | 7,133 | 7,596 | 146,973 | 188,821 |
| February | 35,114 | [F] 456 | 1,620 | 5,087 | 6,707 | 7,162 | 142,782 | 185,058 |
| March | 34,876 | 448 | 1,462 | 4,818 | 6,280 | 6,728 | 146,497 | 188,101 |
| April | 36,494 | 458 | 1,560 | 4,873 | 6,433 | 6,891 | 154,029 | 197,414 |
| May | 34,223 | 468 | 1,658 | 4,928 | 6,586 | 7,055 | 159,408 | 200,686 |
| June | 32,086 | 478 | 1,756 | 4,983 | 6,740 | 7,218 | 152,542 | 191,846 |
| July | 31,693 | 490 | 1,828 | 5,058 | 6,886 | 7,376 | 142,572 | 181,642 |
| August | 30,017 | 502 | 1,899 | 5,133 | 7,033 | 7,535 | 139,352 | 176,904 |
| September | 31,354 | 514 | 1,971 | 5,208 | 7,179 | 7,693 | 143,903 | 182,950 |
| October | 32,444 | 508 | 2,091 | 5,475 | 7,565 | 8,074 | 155,659 | 196,177 |
| November | 33,556 | 503 | 2,211 | 5,741 | 7,952 | 8,455 | 163,390 | 205,401 |
| **December** | **34,688** | **498** | **2,331** | **6,007** | **8,338** | **8,836** | **161,589** | **205,112** |
| **2009** January | 38,394 | 490 | 2,260 | 5,788 | 8,049 | 8,539 | 156,194 | 203,127 |
| February | 42,066 | 483 | 2,190 | 5,570 | 7,760 | 8,243 | 160,741 | 211,050 |
| March | 41,257 | 475 | 2,119 | 5,352 | 7,471 | 7,946 | 174,264 | 223,468 |
| April | 43,195 | 477 | 2,000 | 5,266 | 7,266 | 7,744 | 185,989 | 236,928 |
| May | 41,622 | 480 | 1,880 | 5,181 | 7,061 | 7,541 | 195,288 | 244,451 |
| June | 44,018 | 482 | 1,760 | 5,096 | 6,856 | 7,338 | 195,887 | 247,244 |
| July | 45,372 | 496 | 1,703 | 5,099 | 6,802 | 7,298 | 193,702 | 246,372 |
| August | 42,457 | 510 | 1,647 | 5,101 | 6,748 | 7,259 | 191,611 | 241,326 |
| September | 41,690 | 524 | 1,590 | 5,104 | 6,695 | 7,219 | 197,167 | 246,075 |
| October | 43,882 | 526 | 1,686 | 5,106 | 6,792 | 7,318 | 199,238 | 250,437 |
| November | 42,217 | 527 | 1,781 | 5,108 | 6,889 | 7,416 | 203,409 | 253,042 |
| **December** | **41,257** | **529** | **1,957** | **5,109** | **7,066** | **7,595** | **189,971** | **238,823** |
| **2010** January | [F] 42,393 | [F] 480 | [F] 1,520 | [F] 5,177 | [F] 6,697 | [F] 7,177 | 175,815 | 225,386 |

[a] Through 1977, data are for stocks held by the manufacturing and transportation sectors. Beginning in 1978, data are for stocks held at manufacturing plants only.

[b] The electric power sector comprises electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public.

[c] Through 1998, data are for stocks at electric utilities only. Beginning in 1999, data also include stocks at independent power producers.

R=Revised. NA=Not available. F=Forecast.

Notes: • Stocks are at end of period. • Electric power sector monthly values are from Table 7.5; producers and distributors monthly values are estimates derived from collected annual data; all other monthly values are estimates derived from collected quarterly values. • Data values preceded by "F" are derived from the U.S. Energy Information Administration's Short-Term Integrated Forecasting System. See Note 4, "Coal Forecast Values," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/coal.html for all available data beginning in 1973.

Sources: See end of section.

# Coal

**Note 1. Coal Production.** Preliminary monthly estimates of national coal production are the sum of weekly estimates developed by the U.S. Energy Information Administration (EIA) and published in the *Weekly Coal Production* report. When a week extends into a new month, production is allocated on a daily basis and added to the appropriate month. Weekly estimates are based on Association of American Railroads (AAR) data showing the number of railcars loaded with coal during the week by Class I and certain other railroads.

Prior to 2002, the weekly coal production model converted AAR data into short tons of coal by using the average number of short tons of coal per railcar loaded reported in the "Quarterly Freight Commodity Statistics" from the Surface Transportation Board. If an average coal tonnage per railcar loaded was not available for a specific railroad, the national average was used. To derive the estimate of total weekly production, the total rail tonnage for the week was divided by the ratio of quarterly production shipped by rail and total quarterly production. Data for the corresponding quarter of previous years were used to derive this ratio. This method ensured that the seasonal variations were preserved in the production estimates.

Beginning in 2002, the weekly coal production model uses statistical autoregressive methods to estimate national coal production as a function of railcar loadings of coal, and heating degree-days and cooling degree-days. On Thursday of each week, EIA receives from the AAR data for the previous week. The latest weekly national data for heating degree-days and cooling degree-days are obtained from the National Oceanic and Atmospheric Administration's Climate Prediction Center. The weekly coal model is run and a national level coal production estimate is obtained. The weekly coal model is refit every quarter after preliminary coal data are available.

When preliminary quarterly data become available, the monthly and weekly estimates are adjusted to conform to the quarterly figures. The adjustment procedure uses State-level production data and is explained in EIA's *Quarterly Coal Report*. Initial estimates of annual production published in January of the following year are based on preliminary production data covering the first nine months (three quarters) and weekly/monthly estimates for the fourth quarter. The fourth quarter estimates may or may not be revised when preliminary data become available in March of the following year, depending on the magnitude of the difference between the estimates and the preliminary data. In any event, all quarterly, monthly, and weekly production figures are adjusted to conform to the final annual production data published in the *Monthly Energy Review* in the fall of the following year.

**Note 2. Coal Consumption.** Coal consumption data are reported by major end-use sector. Forecast data (designated by an "F") are derived from forecasted values shown in the U.S. Energy Information Administration (EIA) *Short-Term Energy Outlook* (DOE/EIA-0202) table titled "U.S. Coal Supply and Demand: Base Case." The monthly estimates are based on the quarterly values, which are released in March, June, September, and December. The estimates are revised quarterly as collected data become available from the data sources. Sector-specific information follows:

Residential and Commercial—Coal consumption by the residential and commercial sectors is reported to EIA for the two sectors combined; EIA estimates the amount consumed by the sectors individually. To create the estimates, it is first assumed that an occupied coal-heated housing unit consumes fuel at the same Btu rate as an oil-heated housing unit. Then, for the years in which data are available on the number of occupied housing units by heating source (1973– 1981 and subsequent odd-numbered years), residential consumption of coal is estimated by the following steps: a ratio is created of the number of occupied housing units heated by coal to the number of occupied housing units heated by oil; that ratio is then multiplied by the Btu quantity of oil consumed by the residential sector to derive an estimate of the Btu quantity of coal consumed by the residential sector; and, finally, the amount estimated as the residential sector consumption is subtracted from the residential and commercial sectors' combined consumption to derive the commercial sector's estimated consumption. The 2007 share is applied to 2008 and 2009, and the other missing years' shares are interpolated.

Industrial Coke Plants—Prior to 1980, monthly coke plant consumption data were taken directly from reported data. For 1980–1987, coke plant consumption estimates were derived by proportioning reported quarterly data by using the ratios of monthly-to-quarterly consumption data in 1979, the last year in which monthly data were reported. Beginning in January 1988, monthly coke plant consumption estimates are derived from the reported quarterly data by using monthly ratios of raw steel production data from the American Iron and Steel Institute. The ratios are the monthly raw steel production from open hearth and basic oxygen process furnaces as a proportion of the quarterly production from those kinds of furnaces.

Industrial Other—Prior to 1978, monthly consumption data for the other industrial sector (all industrial users minus coke plants) were derived by using reported data to modify baseline consumption figures from the most recent Bureau of the Census Annual Survey of Manufactures or Census of Manufactures. For 1978 and 1979, monthly estimates were derived from data reported on Forms EIA-3 and EIA-6. For 1980–1987, monthly figures were estimated by proportioning quarterly data by using the ratios of monthly-to-quarterly consumption data in 1979, the last year in which monthly data were reported on Form EIA-3. Beginning in January 1988, monthly consumption for the other industrial sector is estimated from reported quarterly data by using ratios derived from industrial production indices published by the Board of Governors of the

Federal Reserve System. Indices for six major industry groups are used as the basis for calculating the ratios: food manufacturing, which is North American Industry Classification System (NAICS) code 333; paper manufacturing, NAICS 322; chemical manufacturing, NAICS 325; petroleum and coal products, NAICS 324; non-metallic mineral products manufacturing, NAICS 327; and primary metal manufacturing, NAICS 331. The monthly ratios are computed as the monthly sum of the weighted indices as a proportion of the quarterly sum of the weighted indices by using the 1977 proportion as the weights. Prior to 2008, quarterly consumption data for the other industrial sector were derived by adding beginning stocks at manufacturing plants to current receipts and subtracting ending stocks at manufacturing plants. In this calculation, current receipts are the greater of either reported receipts from manufacturing plants (Form EIA-3) or reported shipments to the other industrial sector (Form EIA-6), thereby ensuring that agriculture, forestry, fishing, and construction consumption data were included where appropriate. Beginning in 2008, quarterly consumption totals for other industrial coal include data for manufacturing and mining only. Over time, surveyed coal consumption data for agriculture, forestry, fishing, and construction dwindled to about 20,000 to 30,000 tons annually. Therefore, in 2008, EIA consolidated its programs by eliminating agriculture, forestry, fishing, and construction as surveyed sectors.

Electric Power Sector—Monthly consumption data for electric power plants are taken directly from reported data.

**Note 3. Coal Stocks.** Coal stocks data are reported by major end-use sector. Forecast data for the most recent months (designated by an "F") are derived from forecasted values shown in the U.S. Energy Information Administration (EIA) *Short-Term Energy Outlook* (DOE/EIA-0202) table titled "U.S. Coal Supply and Demand: Base Case." The monthly estimates are based on the quarterly values (released in March, June, September, and December) or annual values. The estimates are revised as collected data become available from the data sources. Sector-specific information follows.

Producers and Distributors—Prior to 1998, quarterly stocks at producers and distributors were taken directly from reported data. Monthly data were estimated by using one-third of the current quarterly change to indicate the monthly change in stocks. Beginning in 1998, end-of-year stocks are taken from reported data. Monthly stocks are estimated by a model.

Residential and Commercial—Prior to 1980, stock estimates for the residential and commercial sector were taken directly from reported data. For 1980-2007, stock estimates were not collected. Beginning in 2008, quarterly stocks data are collected on Form EIA-3 (data for "Commercial and Institutional Coal Users").

Industrial Coke Plants—Prior to 1980, monthly stocks at coke plants were taken directly from reported data. Beginning in 1980, coke plant stocks are estimated by using one-third of the current quarterly change to indicate the monthly change in stocks. Quarterly stocks are taken directly from data reported on Form EIA-5.

Industrial Other—Prior to 1978, stocks for the other industrial sector were derived by using reported data to modify baseline figures from a one-time Bureau of Mines survey of consumers. For 1978–1982, monthly estimates were derived by judgmentally proportioning reported quarterly data based on representative seasonal patterns of supply and demand. Beginning in 1983, other industrial coal stocks are estimated as indicated above for coke plants. Quarterly stocks are taken directly from data reported on Form EIA-3 and therefore include only manufacturing industries; data for agriculture, forestry, fishing, mining, and construction stocks are not available.

Electric Power Sector—Monthly stocks data at electric power plants are taken directly from reported data.

**Note 4. Coal Forecast Values**. Data values preceded by "F" in this section are forecast values. They are derived from EIA's Short-Term Integrated Forecasting System (STIFS). The model is driven primarily by data and assumptions about key macroeconomic variables, the world oil price, and weather. The coal forecast relies on other variables as well, such as alternative fuel prices (natural gas and oil) and power generation by sources other than fossil fuels, including nuclear and hydroelectric power. Each month, EIA staff review the model output and make adjustments, if appropriate, based on their knowledge of developments in the coal industry.

The STIFS model results are published monthly in EIA's *Short-Term Energy Outlook*, which is accessible on the Web at http://www.eia.doe.gov/emeu/steo/pub/contents.html.

**Note 5. Additional Coal Information.** EIA's *Quarterly Coal Report* provides additional information about coal data and estimation procedures.

## Table 6.1 Sources

**Production**

1973–September 1977: U.S. Department of the Interior, Bureau of Mines, *Minerals Yearbook* and *Minerals Industry Surveys*.

October 1977 forward: U.S. Energy Information Administration (EIA), *Weekly Coal Production*.

**Waste Coal Supplied**

1989–1997: EIA, Form EIA-867, "Annual Nonutility Power Producer Report."

1998–2000: EIA, Form EIA-860B, "Annual Electric Generator Report—Nonutility."

2001–2003: EIA, Form EIA-906, "Power Plant Report," and Form EIA-3, "Quarterly Coal Consumption and Quality Report—Manufacturing Plants."
2004–2007: EIA, Form EIA-906, "Power Plant Report," Form EIA-920, "Combined Heat and Power Plant Report," and Form EIA-3, "Quarterly Coal Consumption and Quality Report—Manufacturing Plants."
2008 forward: EIA, Form EIA-923, "Power Plant Operations Report," and Form EIA-3, "Quarterly Coal Consumption and Quality Report, Manufacturing and Transformation/Processing Coal Plants and Commercial and Institutional Coal Users"; and, for forecast values, EIA, Short-Term Integrated Forecasting System.

**Imports and Exports**
U.S. Department of Commerce, Bureau of the Census, Monthly Reports IM 145 (Imports) and EM 545 (Exports).

**Stock Change**
Calculated from data in Table 6.3.

**Losses and Unaccounted for**
Calculated as the sum of production, imports, and waste coal supplied, minus exports, stock change, and consumption.

**Consumption**
Table 6.2.

## Table 6.2 Sources

**Residential and Commercial Total**
Coal consumption by the residential and commercial sectors combined is reported to the U.S. Energy Information Administration (EIA). EIA estimates the sectors individually using the method described in Note 2, "Consumption," at the end of Section 6. Data for the residential and commercial sectors combined are from:

1973–1976: U.S. Department of the Interior (DOI), Bureau of Mines (BOM), *Minerals Yearbook*.
January–September 1977: DOI, BOM, Form 6-1400, "Monthly Coal Report, Retail Dealers—Upper Lake Docks."
October 1977–1979: EIA, Form EIA-2, "Monthly Coal Report, Retail Dealers—Upper Lake Docks."
1980–1997: EIA, Form EIA-6, "Coal Distribution Report," quarterly.
1998-2007: DOI, Mine Safety and Health Administration, Form 7000-2, "Quarterly Mine Employment and Coal Production."
2008 forward: EIA, Form EIA-3, "Quarterly Coal Consumption and Quality Report, Manufacturing and Transformation/Processing Coal Plants and Commercial and Institutional Coal Users" (data for "Commercial and Institutional Coal Users"); and, for forecast values, EIA, Short-Term Integrated Forecasting System.

**Commercial CHP**
Table 7.4c.

**Commercial Other**
Calculated as "Commercial Total" minus "Commercial CHP."

**Industrial Coke Plants**
1973–September 1977: DOI, BOM, *Minerals Yearbook* and *Minerals Industry Surveys*.
October 1977–1980: EIA, Form EIA-5/5A, "Coke and Coal Chemicals—Monthly/Annual Supplement."
1981–1984: EIA, Form EIA-5/5A, "Coke Plant Report—Quarterly/Annual Supplement."
1985 forward: EIA, Form EIA–5, "Coke Plant Report—Quarterly"; and, for forecast values, EIA, Short-Term Integrated Forecasting System.

**Other Industrial Total**
1973–September 1977: DOI, BOM, *Minerals Yearbook* and *Minerals Industry Surveys*.
October 1977–1979: EIA, Form EIA-3, "Monthly Coal Consumption Report—Manufacturing Plants."
1980–1997: EIA, Form EIA-3, "Quarterly Coal Consumption Report—Manufacturing Plants," and Form EIA-6, "Coal Distribution Report," quarterly.
1998-2007: EIA, Form EIA-3, "Quarterly Coal Consumption Report—Manufacturing Plants," Form EIA-6A, "Coal Distribution Report," annual, and Form EIA-7A, "Coal Production Report," annual.
2008 forward: EIA, Form EIA-3, "Quarterly Coal Consumption and Quality Report, Manufacturing and Transformation/Processing Coal Plants and Commercial and Institutional Coal Users," and Form EIA-7A, "Coal Production Report," annual; and, for forecast values, EIA, Short-Term Integrated Forecasting System.

**Other Industrial CHP**
Table 7.4c.

**Other Industrial Non-CHP**
Calculated as "Other Industrial Total" minus "Other Industrial CHP."

**Transportation**
1973–1976: DOI, BOM, *Minerals Yearbook*.
January–September 1977: DOI, BOM, Form 6-1400, "Monthly Coal Report, Retail Dealers—Upper Lake Docks."
October–December 1977: EIA, Form EIA-6, "Coal Distribution Report," quarterly.

**Electric Power**
Table 7.4b.

## Table 6.3 Sources

**Producers and Distributors**
1973–1979: U.S. Department of the Interior (DOI), Bureau of Mines (BOM), Form 6-1419Q, "Distribution of Bituminous Coal and Lignite Shipments."
1980–1997: U.S. Energy Information Administration

(EIA), Form EIA-6, "Coal Distribution Report," quarterly.
1998-2007: EIA, Form EIA-6A, "Coal Distribution Report," annual.
2008 forward: EIA, Form EIA-7A, "Coal Production Report," annual, and Form EIA-8A, "Coal Stocks Report," annual; and, for forecast values, EIA, Short-Term Integrated Forecasting System.

**Residential and Commercial**
1973–1976: DOI, BOM, *Minerals Yearbook*.
January-September 1977: DOI, BOM, Form 6-1400, "Monthly Coal Report, Retail Dealers—Upper Lake Docks."
October 1977–1979: EIA, Form EIA-2, "Monthly Coal Report, Retail Dealers—Upper Lake Docks."
2008 forward: EIA, Form EIA-3, "Quarterly Coal Consumption and Quality Report, Manufacturing and Transformation/Processing Coal Plants and Commercial and Institutional Coal Users" (data for "Commercial and Institutional Coal Users"); and, for forecast values, EIA, Short-Term Integrated Forecasting System**.**

**Industrial Coke Plants**
1973–September 1977: DOI, BOM, *Minerals Yearbook* and *Minerals Industry Surveys*.
October 1977–1980: EIA, Form EIA-5/5A, "Coke and Coal Chemicals—Monthly/Annual."
1981–1984: EIA, Form EIA 5/5A, "Coke Plant Report—Quarterly/Annual Supplement."
1985 forward: EIA, Form EIA-5, "Coke Plant Report—Quarterly"; and, for forecast values, EIA, Short-Term Integrated Forecasting System.

**Industrial Other**
1973–September 1977: DOI, BOM, *Minerals Yearbook* and *Minerals Industry Surveys*.
October 1977–1979: EIA, Form EIA-3, "Monthly Coal Consumption Report—Manufacturing Plants."
1998-2007: EIA, Form EIA-3, "Quarterly Coal Consumption Report—Manufacturing Plants."
2008 forward: EIA, Form EIA-3, "Quarterly Coal Consumption and Quality Report, Manufacturing and Transformation/Processing Coal Plants and Commercial and Institutional Coal Users"; and, for forecast values, EIA, Short-Term Integrated Forecasting System.

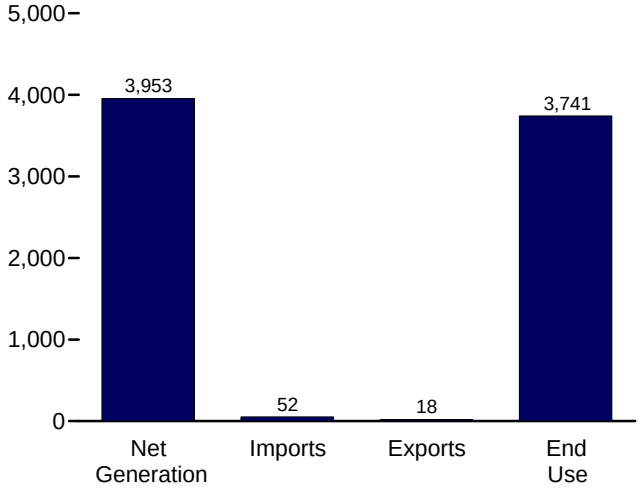
**Electric Power**
Table 7.5.

# 7 Electricity

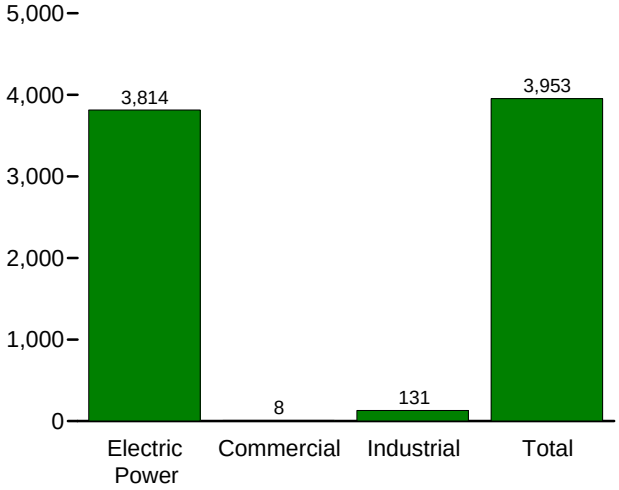
High-tension power lines and towers. Source: U.S. Department of Energy.

## Figure 7.1 Electricity Overview
(Billion Kilowatthours)

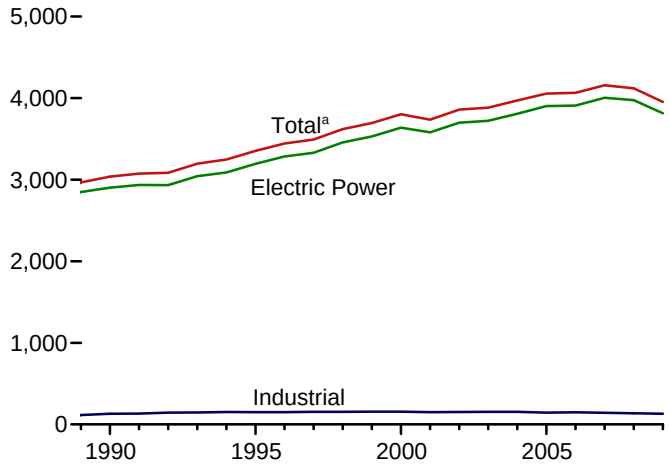
Overview, 2009



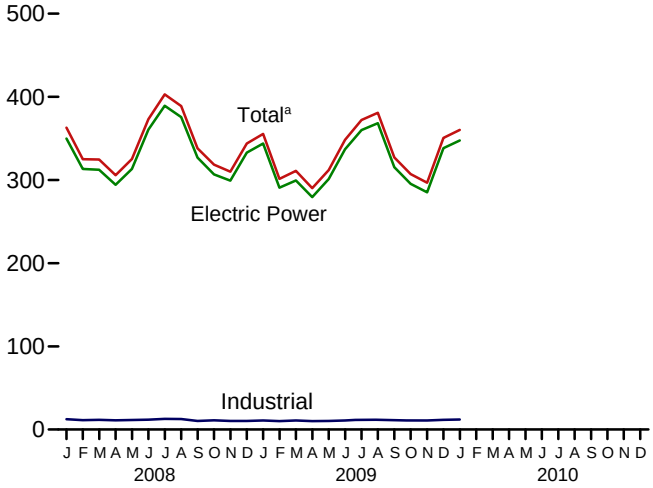

Net Generation, 2009




Net Generation by Sector, 1989-2009

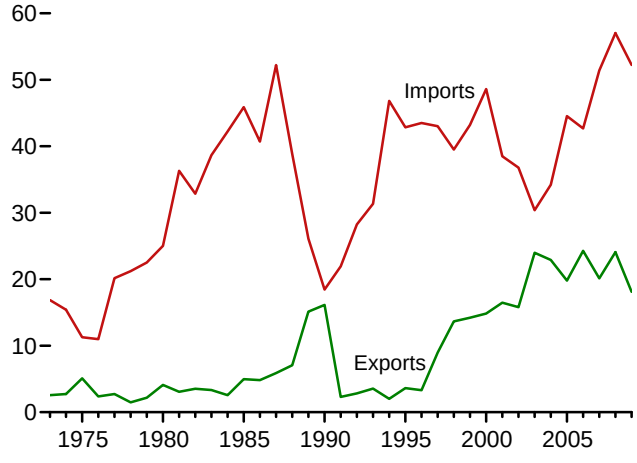



Net Generation by Sector, Monthly




End Use, 2009


Trade, 1973-2009




[a]Includes commercial sector.
[b]Electricity retail sales to ultimate customers reported by electric utilities and other energy service providers.
[c]See "Direct Use" in Glossary.
Web Page: http://www.eia.doe.gov/emeu/mer/elect.html.
Source: Table 7.1.

# Table 7.1 Electricity Overview

(Billion Kilowatthours)

| | Net Generation | | | | Trade | | | T&D Losses[e] and Unaccounted for[f] | End Use | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Electric Power Sector[a] | Commercial Sector[b] | Industrial Sector[c] | Total | Imports[d] | Exports[d] | Net Imports[d] | | Retail Sales[g] | Direct Use[h] | Total |
| **1973 Total** | **1,861** | **NA** | **3** | **1,864** | **17** | **3** | **14** | **165** | **1,713** | **NA** | **1,713** |
| **1975 Total** | **1,918** | **NA** | **3** | **1,921** | **11** | **5** | **6** | **180** | **1,747** | **NA** | **1,747** |
| **1980 Total** | **2,286** | **NA** | **3** | **2,290** | **25** | **4** | **21** | **216** | **2,094** | **NA** | **2,094** |
| **1985 Total** | **2,470** | **NA** | **3** | **2,473** | **46** | **5** | **41** | **190** | **2,324** | **NA** | **2,324** |
| **1990 Total** | **2,901** | **6** | **131** | **3,038** | **18** | **16** | **2** | **203** | **2,713** | **125** | **2,837** |
| **1995 Total** | **3,194** | **8** | **151** | **3,353** | **43** | **4** | **39** | **229** | **3,013** | **151** | **3,164** |
| **1996 Total** | **3,284** | **9** | **151** | **3,444** | **43** | **3** | **40** | **231** | **3,101** | **153** | **3,254** |
| **1997 Total** | **3,329** | **9** | **154** | **3,492** | **43** | **9** | **34** | **224** | **3,146** | **156** | **3,302** |
| **1998 Total** | **3,457** | **9** | **154** | **3,620** | **40** | **14** | **26** | **221** | **3,264** | **161** | **3,425** |
| **1999 Total** | **3,530** | **9** | **156** | **3,695** | **43** | **14** | **29** | **240** | **3,312** | **172** | **3,484** |
| **2000 Total** | **3,638** | **8** | **157** | **3,802** | **49** | **15** | **34** | **244** | **3,421** | **171** | **3,592** |
| **2001 Total** | **3,580** | **7** | **149** | **3,737** | **39** | **16** | **22** | **202** | **3,394** | **163** | **3,557** |
| **2002 Total** | **3,698** | **7** | **153** | **3,858** | **37** | **16** | **21** | **248** | **3,465** | **166** | **3,632** |
| **2003 Total** | **3,721** | **7** | **155** | **3,883** | **30** | **24** | **6** | **228** | **3,494** | **168** | **3,662** |
| **2004 Total** | **3,808** | **8** | **154** | **3,971** | **34** | **23** | **11** | **266** | **3,547** | **168** | **3,716** |
| **2005 Total** | **3,902** | **8** | **145** | **4,055** | **45** | **20** | **25** | **269** | **3,661** | **150** | **3,811** |
| **2006 Total** | **3,908** | **8** | **148** | **4,065** | **43** | **24** | **18** | **266** | **3,670** | **147** | **3,817** |
| **2007 Total** | **4,005** | **8** | **143** | **4,157** | **51** | **20** | **31** | **264** | **3,765** | **159** | **3,924** |
| **2008** January | 350 | 1 | 12 | 363 | 5 | 2 | 3 | R 24 | 326 | RE 16 | R 342 |
| February | 313 | 1 | 11 | 325 | 5 | 2 | 3 | R 9 | 305 | RE 14 | R 319 |
| March | 312 | 1 | 12 | 325 | 5 | 3 | 2 | R 18 | 295 | RE 15 | R 309 |
| April | 294 | 1 | 11 | 306 | 4 | 1 | 3 | R 17 | 278 | RE 14 | R 292 |
| May | 313 | 1 | 11 | 325 | 5 | 3 | 2 | R 25 | 288 | RE 14 | R 303 |
| June | 361 | 1 | 12 | 373 | 6 | 3 | 3 | R 33 | 328 | RE 15 | R 343 |
| July | 389 | 1 | 13 | 403 | 6 | 2 | 4 | R 31 | 360 | RE 16 | R 377 |
| August | 376 | 1 | 13 | 389 | 6 | 1 | 4 | R 25 | 352 | RE 16 | R 368 |
| September | 327 | 1 | 10 | 338 | 5 | 2 | 3 | R 5 | 322 | RE 13 | R 336 |
| October | 307 | 1 | 11 | 319 | 4 | 2 | 2 | R 14 | 292 | RE 14 | R 306 |
| November | 299 | 1 | 10 | 310 | 3 | 2 | 1 | R 20 | 278 | RE 13 | R 291 |
| December | 333 | 1 | 10 | 344 | 3 | 1 | 2 | R 25 | 308 | RE 13 | R 321 |
| **Total** | **3,974** | **8** | **137** | **4,119** | **57** | **24** | **33** | R **246** | **3,733** | R **173** | R **3,906** |
| **2009** January | R 344 | 1 | 11 | 355 | 4 | 2 | 2 | R 24 | 320 | RE 14 | R 334 |
| February | 291 | 1 | 10 | 301 | 4 | 2 | 2 | R 6 | 285 | RE 13 | R 298 |
| March | 299 | 1 | 11 | 311 | 3 | 2 | 1 | R 16 | 282 | RE 14 | R 296 |
| April | 279 | 1 | 10 | 290 | 3 | 1 | 2 | R 15 | 264 | RE 13 | R 277 |
| May | 301 | 1 | 10 | 312 | 4 | 1 | 3 | R 28 | 273 | RE 13 | R 286 |
| June | 337 | 1 | 11 | 348 | 5 | 2 | 3 | R 34 | 303 | RE 14 | R 317 |
| July | 360 | 1 | 12 | 372 | 6 | 1 | 4 | R 26 | 336 | RE 15 | R 351 |
| August | 368 | 1 | 12 | 381 | 6 | 1 | 5 | R 27 | 343 | RE 15 | R 358 |
| September | R 315 | 1 | 11 | 327 | 4 | 1 | 3 | R 7 | 309 | RE 14 | R 323 |
| October | 295 | 1 | 11 | 307 | 5 | 1 | 3 | R 11 | 285 | RE 14 | R 299 |
| November | 285 | 1 | 11 | 297 | 4 | 1 | 2 | R 19 | 266 | RE 14 | R 280 |
| December | 338 | 1 | 12 | R 351 | 5 | 1 | 3 | R 32 | 308 | RE 15 | R 322 |
| **Total** | R **3,814** | **8** | **131** | R **3,953** | **52** | **18** | **34** | R **246** | **3,575** | RE **166** | R **3,741** |
| **2010** January | 348 | 1 | 12 | 360 | 5 | 1 | 4 | 18 | 331 | E 15 | 346 |

[a] Electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public. Through 1988, data are for electric utilities only; beginning in 1989, data are for electric utilities and independent power producers.

[b] Commercial combined-heat-and-power (CHP) and commercial electricity-only plants.

[c] Industrial combined-heat-and-power (CHP) and industrial electricity-only plants. Through 1988, data are for industrial hydroelectric power only.

[d] Electricity transmitted across U.S. borders. Net imports equal imports minus exports.

[e] Transmission and distribution losses (electricity losses that occur between the point of generation and delivery to the customer). See Note 2, "Electrical System Energy Losses," at end of Section 2.

[f] Data collection frame differences and nonsampling error.

[g] Electricity retail sales to ultimate customers by electric utilities and, beginning in 1996, other energy service providers.

[h] Use of electricity that is 1) self-generated, 2) produced by either the same entity that consumes the power or an affiliate, and 3) used in direct support of a service or industrial process located within the same facility or group of facilities that house the generating equipment. Direct use is exclusive of station use.

R=Revised. E=Estimate. NA=Not available.

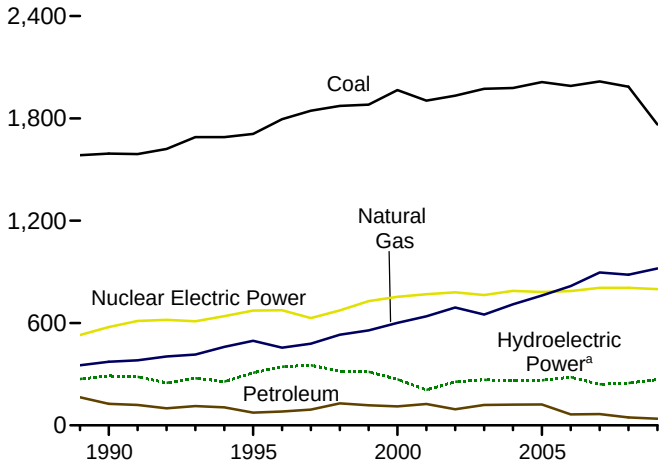
Notes: • See Note, "Classification of Power Plants Into Energy-Use Sectors," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/elect.html for all available data beginning in 1973.

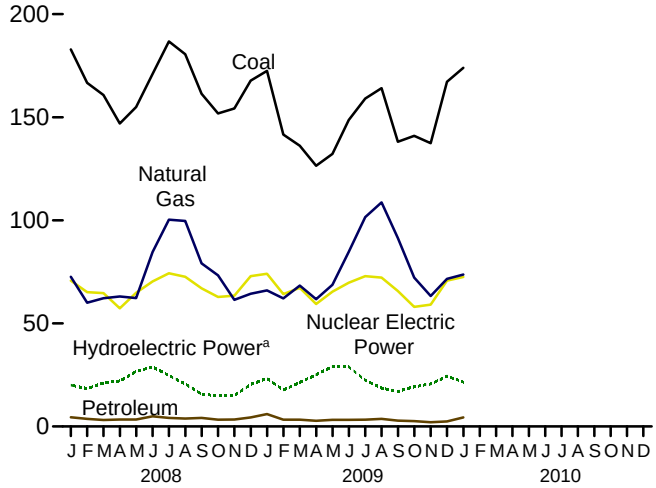
Sources: See end of section.

## Figure 7.2 Electricity Net Generation
(Billion Kilowatthours)

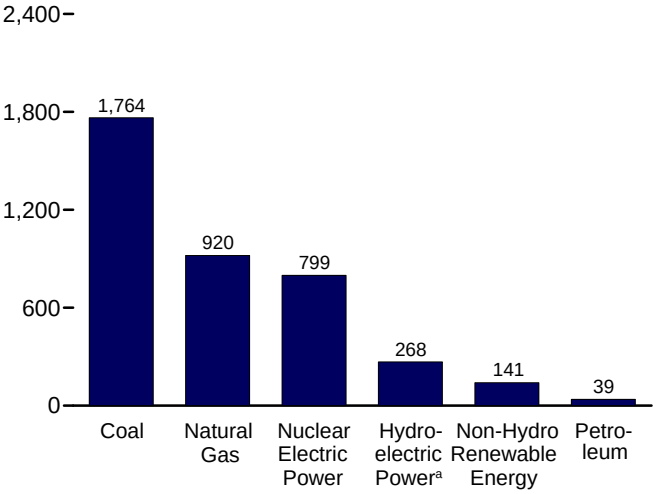
Total (All Sectors), Major Sources, 1989-2009



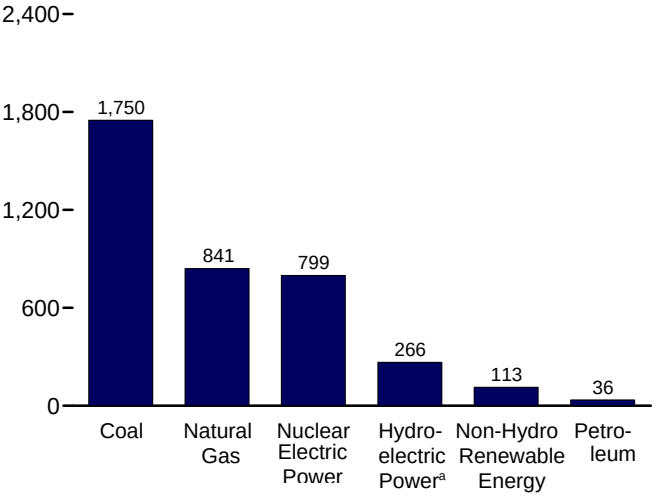

Total (All Sectors), Major Sources, Monthly



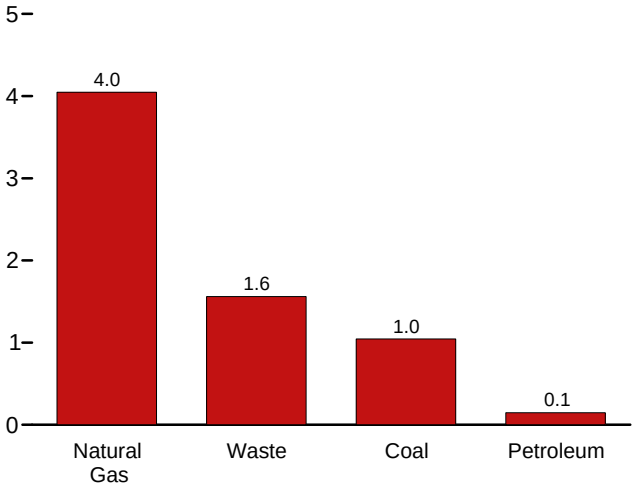

Total (All Sectors), Major Sources, 2009



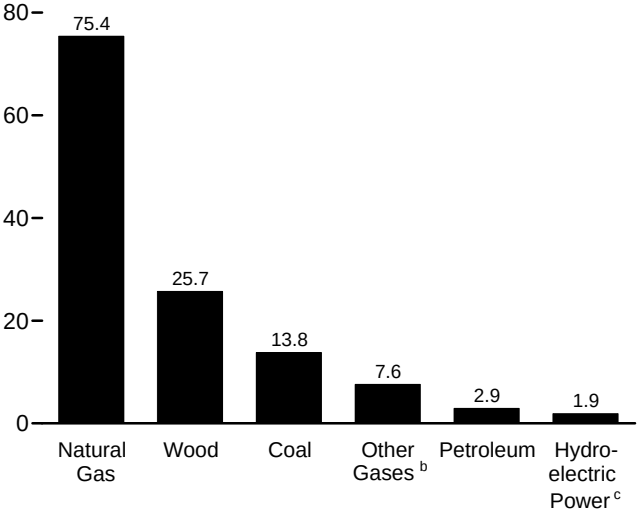

Electric Power Sector, Major Sources, 2009




Commercial Sector, Major Sources, 2009




Industrial Sector, Major Sources, 2009




[a]Conventional and pumped storage hydroelectric power.
[b]Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.
[c]Conventional hydroelectric power.
Web Page: http://www.eia.doe.gov/emeu/mer/elect.html.
Sources: Tables 7.2a, 7.2b, and 7.2c.

# Table 7.2a Electricity Net Generation: Total (All Sectors)

(Sum of Tables 7.2b and 7.2c; Million Kilowatthours)

| | Fossil Fuels | | | | | | Renewable Energy | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Biomass | | | | | |
| | Coal[a] | Petroleum[b] | Natural Gas[c] | Other Gases[d] | Nuclear Electric Power | Hydroelectric Pumped Storage[e] | Conventional Hydroelectric Power[f] | Wood[g] | Waste[h] | Geothermal | Solar/PV[i] | Wind | Total[j] |
| **1973 Total** | **847,651** | **314,343** | **340,858** | **NA** | **83,479** | **(f)** | **275,431** | **130** | **198** | **1,966** | **NA** | **NA** | **1,864,057** |
| **1975 Total** | **852,786** | **289,095** | **299,778** | **NA** | **172,505** | **(f)** | **303,153** | **18** | **174** | **3,246** | **NA** | **NA** | **1,920,755** |
| **1980 Total** | **1,161,562** | **245,994** | **346,240** | **NA** | **251,116** | **(f)** | **279,182** | **275** | **158** | **5,073** | **NA** | **NA** | **2,289,600** |
| **1985 Total** | **1,402,128** | **100,202** | **291,946** | **NA** | **383,691** | **(f)** | **284,311** | **743** | **640** | **9,325** | **11** | **6** | **2,473,002** |
| **1990 Total**[k] | **1,594,011** | **126,460** | **372,765** | **10,383** | **576,862** | **-3,508** | **292,866** | **32,522** | **13,260** | **15,434** | **367** | **2,789** | **3,037,827** |
| **1995 Total** | **1,709,426** | **74,554** | **496,058** | **13,870** | **673,402** | **-2,725** | **310,833** | **36,521** | **20,405** | **13,378** | **497** | **3,164** | **3,353,487** |
| **1996 Total** | **1,795,196** | **81,411** | **455,056** | **14,356** | **674,729** | **-3,088** | **347,162** | **36,800** | **20,911** | **14,329** | **521** | **3,234** | **3,444,188** |
| **1997 Total** | **1,845,016** | **92,555** | **479,399** | **13,351** | **628,644** | **-4,040** | **356,453** | **36,948** | **21,709** | **14,726** | **511** | **3,288** | **3,492,172** |
| **1998 Total** | **1,873,516** | **128,800** | **531,257** | **13,492** | **673,702** | **-4,467** | **323,336** | **36,338** | **22,448** | **14,774** | **502** | **3,026** | **3,620,295** |
| **1999 Total** | **1,881,087** | **118,061** | **556,396** | **14,126** | **728,254** | **-6,097** | **319,536** | **37,041** | **22,572** | **14,827** | **495** | **4,488** | **3,694,810** |
| **2000 Total** | **1,966,265** | **111,221** | **601,038** | **13,955** | **753,893** | **-5,539** | **275,573** | **37,595** | **23,131** | **14,093** | **493** | **5,593** | **3,802,105** |
| **2001 Total** | **1,903,956** | **124,880** | **639,129** | **9,039** | **768,826** | **-8,823** | **216,961** | **35,200** | **14,548** | **13,741** | **543** | **6,737** | **3,736,644** |
| **2002 Total** | **1,933,130** | **94,567** | **691,006** | **11,463** | **780,064** | **-8,743** | **264,329** | **38,665** | **15,044** | **14,491** | **555** | **10,354** | **3,858,452** |
| **2003 Total** | **1,973,737** | **119,406** | **649,908** | **15,600** | **763,733** | **-8,535** | **275,806** | **37,529** | **15,812** | **14,424** | **534** | **11,187** | **3,883,185** |
| **2004 Total** | **1,978,301** | **121,145** | **710,100** | **15,252** | **788,528** | **-8,488** | **268,417** | **38,117** | **15,421** | **14,811** | **575** | **14,144** | **3,970,555** |
| **2005 Total** | **2,012,873** | **122,225** | **760,960** | **13,464** | **781,986** | **-6,558** | **270,321** | **38,856** | **15,420** | **14,692** | **550** | **17,811** | **4,055,423** |
| **2006 Total** | **1,990,511** | **64,166** | **816,441** | **14,177** | **787,219** | **-6,558** | **289,246** | **38,762** | **16,099** | **14,568** | **508** | **26,589** | **4,064,702** |
| **2007 Total** | **2,016,456** | **65,739** | **896,590** | **13,453** | **806,425** | **-6,896** | **247,510** | **39,014** | **16,525** | **14,637** | **612** | **34,450** | **4,156,745** |
| **2008** January | 182,876 | 4,498 | 72,600 | 1,063 | 70,735 | -746 | 20,779 | 3,338 | 1,407 | 1,213 | 16 | 4,273 | 362,998 |
| February | 166,666 | 3,669 | 60,042 | 972 | 65,130 | -451 | 18,789 | 3,010 | 1,364 | 1,090 | 36 | 3,852 | 325,106 |
| March | 160,743 | 3,151 | 62,171 | 1,049 | 64,716 | -553 | 21,669 | 3,123 | 1,472 | 1,261 | 75 | 4,782 | 324,630 |
| April | 146,983 | 3,400 | 63,046 | 1,021 | 57,333 | -132 | 22,234 | 2,930 | 1,504 | 1,229 | 94 | 5,225 | 305,865 |
| May | 154,916 | 3,398 | 62,270 | 1,044 | 64,826 | -587 | 27,221 | 2,927 | 1,475 | 1,270 | 99 | 5,340 | 325,245 |
| June | 171,043 | 4,962 | 84,620 | 1,132 | 70,319 | -372 | 29,177 | 3,114 | 1,502 | 1,270 | 128 | 5,140 | 373,109 |
| July | 186,733 | 4,157 | 100,321 | 1,174 | 74,318 | -799 | 25,555 | 3,327 | 1,608 | 1,289 | 111 | 4,008 | 402,900 |
| August | 180,576 | 3,811 | 99,673 | 1,147 | 72,617 | -648 | 21,229 | 3,342 | 1,529 | 1,283 | 105 | 3,264 | 388,987 |
| September | 161,356 | 4,171 | 79,136 | 823 | 67,054 | -517 | 16,178 | 3,059 | 1,427 | 1,244 | 93 | 3,111 | 338,056 |
| October | 151,841 | 3,286 | 73,283 | 806 | 62,820 | -497 | 15,470 | 3,064 | 1,490 | 1,287 | 60 | 4,756 | 318,547 |
| November | 154,281 | 3,345 | 61,454 | 721 | 63,408 | -489 | 15,668 | 3,077 | 1,449 | 1,244 | 29 | 4,994 | 310,046 |
| December | 167,786 | 4,394 | 64,364 | 753 | 72,931 | -498 | 20,861 | 2,988 | 1,506 | 1,272 | 19 | 6,616 | 343,898 |
| **Total** | **1,985,801** | **46,243** | **882,981** | **11,707** | **806,208** | **-6,288** | **254,831** | **37,300** | **17,734** | **14,951** | **864** | **55,363** | **4,119,388** |
| **2009** January | 172,498 | 6,013 | 65,991 | 801 | R 74,102 | -501 | 23,829 | 3,067 | 1,442 | 1,313 | 5 | 6,018 | R 355,379 |
| February | 141,574 | 3,284 | 62,104 | 774 | 64,227 | -243 | 17,887 | 2,809 | 1,343 | 1,191 | 28 | 5,675 | 301,443 |
| March | 136,167 | 3,328 | 68,308 | 820 | R 67,241 | -315 | 21,692 | 2,889 | 1,547 | 1,334 | 71 | 6,938 | R 310,941 |
| April | 126,461 | 2,785 | 61,770 | 753 | R 59,408 | -272 | 25,418 | 2,707 | 1,556 | 1,205 | 91 | 7,294 | R 290,120 |
| May | 132,204 | 3,228 | 68,697 | 763 | R 65,375 | -349 | 29,419 | 2,744 | 1,498 | 1,257 | 101 | 6,094 | R 311,996 |
| June | 148,679 | 3,248 | 84,703 | 872 | R 69,735 | -226 | 29,130 | 3,020 | 1,543 | 1,227 | 97 | 5,405 | R 348,379 |
| July | 159,099 | 3,337 | 101,570 | 966 | 72,949 | -491 | 22,930 | 3,218 | 1,593 | 1,265 | 111 | 4,700 | 372,249 |
| August | 164,078 | 3,649 | 108,724 | 1,036 | 72,245 | -613 | 19,215 | 3,333 | 1,608 | 1,261 | 105 | 5,243 | 380,890 |
| September | 138,087 | 2,859 | 91,413 | 1,037 | R 65,662 | -237 | 17,265 | 3,009 | 1,477 | 1,242 | 85 | 4,367 | R 327,175 |
| October | 140,992 | 2,590 | 72,204 | 977 | R 58,021 | -385 | 19,650 | 3,057 | 1,485 | 1,269 | 61 | 6,326 | R 307,156 |
| November | 137,407 | 2,087 | 63,325 | 935 | 59,069 | -330 | 20,905 | 3,195 | 1,452 | 1,292 | 36 | 6,430 | 296,735 |
| December | 167,241 | 2,418 | 71,570 | 963 | R 70,710 | -383 | 24,792 | 3,195 | 1,549 | 1,352 | 17 | 6,270 | R 350,647 |
| **Total** | **1,764,486** | **38,827** | **920,378** | **10,698** | **R 798,745** | **-4,346** | **272,131** | **36,243** | **18,093** | **15,210** | **808** | **70,761** | **R 3,953,111** |
| **2010** January | 173,965 | 4,396 | 73,685 | 922 | 72,534 | -537 | 22,071 | 3,227 | 1,432 | 1,350 | 8 | 6,355 | 360,302 |

[a] Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and coal synfuel.

[b] Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other petroleum, and waste oil.

[c] Natural gas, plus a small amount of supplemental gaseous fuels.

[d] Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.

[e] Pumped storage facility production minus energy used for pumping.

[f] Through 1989, hydroelectric pumped storage is included in "Conventional Hydroelectric Power."

[g] Wood and wood-derived fuels.

[h] Municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass. Through 2000, also includes non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

[i] Solar thermal and photovoltaic (PV) energy.

[j] Includes batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, miscellaneous technologies, and, beginning in 2001, non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

[k] Through 1988, all data except hydroelectric are for electric utilities only; hydroelectric data through 1988 include industrial plants as well as electric utilities. Beginning in 1989, data are for electric utilities, independent power producers, commercial plants, and industrial plants.

R=Revised. NA=Not available.

Notes: • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/elect.html for all available data beginning in 1973.

Sources: See sources for Tables 7.2b and 7.2c.

# Table 7.2b Electricity Net Generation: Electric Power Sector

(Subset of Table 7.2a; Million Kilowatthours)

| | Fossil Fuels | | | | | | Renewable Energy | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Biomass | | | | | |
| | Coal[a] | Petroleum[b] | Natural Gas[c] | Other Gases[d] | Nuclear Electric Power | Hydroelectric Pumped Storage[e] | Conventional Hydroelectric Power[f] | Wood[g] | Waste[h] | Geothermal | Solar/PV[i] | Wind | Total[j] |
| **1973 Total** | **847,651** | **314,343** | **340,858** | **NA** | **83,479** | **(f)** | **272,083** | **130** | **198** | **1,966** | **NA** | **NA** | **1,860,710** |
| **1975 Total** | **852,786** | **289,095** | **299,778** | **NA** | **172,505** | **(f)** | **300,047** | **18** | **174** | **3,246** | **NA** | **NA** | **1,917,649** |
| **1980 Total** | **1,161,562** | **245,994** | **346,240** | **NA** | **251,116** | **(f)** | **276,021** | **275** | **158** | **5,073** | **NA** | **NA** | **2,286,439** |
| **1985 Total** | **1,402,128** | **100,202** | **291,946** | **NA** | **383,691** | **(f)** | **281,149** | **743** | **640** | **9,325** | **11** | **6** | **2,469,841** |
| **1990 Total**[k] | **1,572,109** | **118,864** | **309,486** | **621** | **576,862** | **-3,508** | **289,753** | **7,032** | **11,500** | **15,434** | **367** | **2,789** | **2,901,322** |
| **1995 Total** | **1,686,056** | **68,146** | **419,179** | **1,927** | **673,402** | **-2,725** | **305,410** | **7,597** | **17,986** | **13,378** | **497** | **3,164** | **3,194,230** |
| **1996 Total** | **1,771,973** | **74,783** | **378,757** | **1,341** | **674,729** | **-3,088** | **341,159** | **8,386** | **17,816** | **14,329** | **521** | **3,234** | **3,284,141** |
| **1997 Total** | **1,820,762** | **86,479** | **399,596** | **1,533** | **628,644** | **-4,040** | **350,648** | **8,680** | **18,485** | **14,726** | **511** | **3,288** | **3,329,375** |
| **1998 Total** | **1,850,193** | **122,211** | **449,293** | **2,315** | **673,702** | **-4,467** | **317,867** | **8,608** | **19,233** | **14,774** | **502** | **3,026** | **3,457,416** |
| **1999 Total** | **1,858,618** | **111,539** | **472,996** | **1,607** | **728,254** | **-6,097** | **314,663** | **8,961** | **19,493** | **14,827** | **495** | **4,488** | **3,529,982** |
| **2000 Total** | **1,943,111** | **105,192** | **517,978** | **2,028** | **753,893** | **-5,539** | **271,338** | **8,916** | **20,307** | **14,093** | **493** | **5,593** | **3,637,529** |
| **2001 Total** | **1,882,826** | **119,149** | **554,940** | **586** | **768,826** | **-8,823** | **213,749** | **8,294** | **12,944** | **13,741** | **543** | **6,737** | **3,580,053** |
| **2002 Total** | **1,910,613** | **89,733** | **607,683** | **1,970** | **780,064** | **-8,743** | **260,491** | **9,009** | **13,145** | **14,491** | **555** | **10,354** | **3,698,458** |
| **2003 Total** | **1,952,714** | **113,697** | **567,303** | **2,647** | **763,733** | **-8,535** | **271,512** | **9,528** | **13,808** | **14,424** | **534** | **11,187** | **3,721,159** |
| **2004 Total** | **1,957,188** | **114,678** | **627,172** | **3,568** | **788,528** | **-8,488** | **265,064** | **9,736** | **13,062** | **14,811** | **575** | **14,144** | **3,808,360** |
| **2005 Total** | **1,992,054** | **116,482** | **683,829** | **3,777** | **781,986** | **-6,558** | **267,040** | **10,570** | **13,031** | **14,692** | **550** | **17,811** | **3,902,192** |
| **2006 Total** | **1,969,737** | **59,708** | **734,417** | **4,254** | **787,219** | **-6,558** | **286,254** | **10,341** | **13,927** | **14,568** | **508** | **26,589** | **3,908,077** |
| **2007 Total** | **1,998,390** | **61,306** | **814,752** | **4,042** | **806,425** | **-6,896** | **245,843** | **10,711** | **14,294** | **14,637** | **612** | **34,450** | **4,005,343** |
| **2008** January | 181,337 | 4,145 | 65,197 | 293 | 70,735 | -746 | 20,611 | 960 | 1,229 | 1,213 | 16 | 4,273 | 349,836 |
| February | 165,343 | 3,377 | 53,460 | 247 | 65,130 | -451 | 18,627 | 872 | 1,169 | 1,090 | 36 | 3,852 | 313,292 |
| March | 159,284 | 2,856 | 55,499 | 274 | 64,716 | -553 | 21,485 | 885 | 1,285 | 1,261 | 75 | 4,782 | 312,410 |
| April | 145,587 | 3,141 | 56,765 | 280 | 57,333 | -132 | 22,050 | 754 | 1,301 | 1,229 | 94 | 5,225 | 294,203 |
| May | 153,473 | 3,155 | 55,665 | 312 | 64,826 | -587 | 27,046 | 753 | 1,283 | 1,270 | 99 | 5,340 | 313,216 |
| June | 169,600 | 4,676 | 77,685 | 325 | 70,319 | -372 | 29,043 | 883 | 1,309 | 1,270 | 128 | 5,140 | 360,612 |
| July | 185,208 | 3,904 | 92,534 | 342 | 74,318 | -799 | 25,429 | 988 | 1,384 | 1,289 | 111 | 4,008 | 389,318 |
| August | 179,082 | 3,554 | 92,025 | 316 | 72,617 | -648 | 21,111 | 983 | 1,325 | 1,283 | 105 | 3,264 | 375,612 |
| September | 159,933 | 3,888 | 73,270 | 193 | 67,054 | -517 | 16,081 | 894 | 1,246 | 1,244 | 93 | 3,111 | 327,021 |
| October | 150,464 | 3,030 | 66,624 | 221 | 62,820 | -497 | 15,372 | 802 | 1,286 | 1,287 | 60 | 4,756 | 306,769 |
| November | 153,016 | 3,105 | 55,482 | 172 | 63,408 | -489 | 15,546 | 911 | 1,253 | 1,244 | 29 | 4,994 | 299,222 |
| December | 166,512 | 4,050 | 58,166 | 224 | 72,931 | -498 | 20,696 | 953 | 1,308 | 1,272 | 19 | 6,616 | 332,839 |
| **Total** | **1,968,838** | **42,881** | **802,372** | **3,200** | **806,208** | **-6,288** | **253,096** | **10,638** | **15,379** | **14,951** | **864** | **55,363** | **3,974,349** |
| **2009** January | 171,125 | 5,649 | 59,500 | 224 | R 74,102 | -501 | 23,648 | 962 | 1,250 | 1,313 | 5 | 6,018 | R 343,878 |
| February | 140,382 | 3,000 | 55,924 | 215 | 64,227 | -243 | 17,738 | 897 | 1,195 | 1,191 | 28 | 5,675 | 290,761 |
| March | 134,933 | 3,066 | 61,709 | 242 | R 67,241 | -315 | 21,502 | 805 | 1,351 | 1,334 | 71 | 6,938 | R 299,472 |
| April | 125,289 | 2,526 | 55,664 | 233 | R 59,408 | -272 | 25,224 | 705 | 1,373 | 1,205 | 91 | 7,294 | R 279,350 |
| May | 131,022 | 2,960 | 62,502 | 234 | R 65,375 | -349 | 29,218 | 767 | 1,306 | 1,257 | 101 | 6,094 | R 301,083 |
| June | 147,429 | 2,985 | 78,112 | 257 | R 69,735 | -226 | 28,943 | 956 | 1,345 | 1,227 | 97 | 5,405 | R 336,868 |
| July | 157,805 | 3,098 | 94,529 | 295 | 72,949 | -491 | 22,793 | 944 | 1,387 | 1,265 | 111 | 4,700 | 360,019 |
| August | 162,732 | 3,386 | 101,573 | 283 | 72,245 | -613 | 19,083 | 1,013 | 1,390 | 1,261 | 105 | 5,243 | 368,336 |
| September | 136,856 | 2,617 | 84,725 | 303 | R 65,662 | -237 | 17,168 | 855 | 1,273 | 1,242 | 85 | 4,367 | R 315,490 |
| October | 139,730 | 2,399 | 65,535 | 286 | R 58,021 | -385 | 19,509 | 819 | 1,297 | 1,269 | 61 | 6,326 | R 295,438 |
| November | 136,342 | 1,893 | 56,782 | 263 | 59,069 | -330 | 20,771 | 843 | 1,252 | 1,292 | 36 | 6,430 | 285,206 |
| December | 165,980 | 2,214 | 64,390 | 272 | R 70,710 | -383 | 24,605 | 999 | 1,356 | 1,352 | 17 | 6,270 | R 338,398 |
| **Total** | **1,749,626** | **35,793** | **840,946** | **3,108** | **R 798,745** | **-4,346** | **270,202** | **10,565** | **15,776** | **15,210** | **808** | **70,761** | **R 3,814,298** |
| **2010** January | 172,318 | 4,139 | 66,422 | 276 | 72,534 | -537 | 21,898 | 1,003 | 1,246 | 1,350 | 8 | 6,355 | 347,584 |

[a] Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and coal synfuel.
[b] Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other petroleum, and waste oil.
[c] Natural gas, plus a small amount of supplemental gaseous fuels.
[d] Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.
[e] Pumped storage facility production minus energy used for pumping.
[f] Through 1989, hydroelectric pumped storage is included in "Conventional Hydroelectric Power."
[g] Wood and wood-derived fuels.
[h] Municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass. Through 2000, also includes non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).
[i] Solar thermal and photovoltaic (PV) energy.
[j] Includes batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, miscellaneous technologies, and, beginning in 2001, non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).
[k] Through 1988, data are for electric utilities only. Beginning in 1989, data are for electric utilites and independent power producers.

R=Revised. NA=Not available.

Notes: • The electric power sector comprises electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/elect.html for all available data beginning in 1973.

Sources: See end of section.

# Table 7.2c Electricity Net Generation: Commercial and Industrial Sectors

(Subset of Table 7.2a; Million Kilowatthours)

| | Commercial Sector[a] | | | | | Industrial Sector[b] | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Biomass | | | | | | | Biomass | | |
| | Coal[c] | Petroleum[d] | Natural Gas[e] | Waste[f] | Total[g] | Coal[c] | Petroleum[d] | Natural Gas[e] | Other Gases[h] | Hydroelectric Power[i] | Wood[j] | Waste[f] | Total[k] |
| **1973 Total** | **NA** | **NA** | **NA** | **NA** | **NA** | **NA** | **NA** | **NA** | **NA** | **3,347** | **NA** | **NA** | **3,347** |
| **1975 Total** | **NA** | **NA** | **NA** | **NA** | **NA** | **NA** | **NA** | **NA** | **NA** | **3,106** | **NA** | **NA** | **3,106** |
| **1980 Total** | **NA** | **NA** | **NA** | **NA** | **NA** | **NA** | **NA** | **NA** | **NA** | **3,161** | **NA** | **NA** | **3,161** |
| **1985 Total** | **NA** | **NA** | **NA** | **NA** | **NA** | **NA** | **NA** | **NA** | **NA** | **3,161** | **NA** | **NA** | **3,161** |
| **1990 Total** | **796** | **589** | **3,272** | **812** | **5,837** | **21,107** | **7,008** | **60,007** | **9,641** | **2,975** | **25,379** | **949** | **130,830** |
| **1995 Total** | **998** | **379** | **5,162** | **1,519** | **8,232** | **22,372** | **6,030** | **71,717** | **11,943** | **5,304** | **28,868** | **900** | **151,025** |
| **1996 Total** | **1,051** | **369** | **5,249** | **2,176** | **9,030** | **22,172** | **6,260** | **71,049** | **13,015** | **5,878** | **28,354** | **919** | **151,017** |
| **1997 Total** | **1,040** | **427** | **4,725** | **2,342** | **8,701** | **23,214** | **5,649** | **75,078** | **11,814** | **5,685** | **28,225** | **882** | **154,097** |
| **1998 Total** | **985** | **383** | **4,879** | **2,335** | **8,748** | **22,337** | **6,206** | **77,085** | **11,170** | **5,349** | **27,693** | **880** | **154,132** |
| **1999 Total** | **995** | **434** | **4,607** | **2,393** | **8,563** | **21,474** | **6,088** | **78,793** | **12,519** | **4,758** | **28,060** | **686** | **156,264** |
| **2000 Total** | **1,097** | **432** | **4,262** | **1,985** | **7,903** | **22,056** | **5,597** | **78,798** | **11,927** | **4,135** | **28,652** | **839** | **156,673** |
| **2001 Total** | **995** | **438** | **4,434** | **1,007** | **7,416** | **20,135** | **5,293** | **79,755** | **8,454** | **3,145** | **26,888** | **596** | **149,175** |
| **2002 Total** | **992** | **431** | **4,310** | **1,053** | **7,415** | **21,525** | **4,403** | **79,013** | **9,493** | **3,825** | **29,643** | **846** | **152,580** |
| **2003 Total** | **1,206** | **423** | **3,899** | **1,289** | **7,496** | **19,817** | **5,285** | **78,705** | **12,953** | **4,222** | **27,988** | **715** | **154,530** |
| **2004 Total** | **1,340** | **499** | **3,969** | **1,562** | **8,270** | **19,773** | **5,967** | **78,959** | **11,684** | **3,248** | **28,367** | **797** | **153,925** |
| **2005 Total** | **1,353** | **375** | **4,249** | **1,657** | **8,492** | **19,466** | **5,368** | **72,882** | **9,687** | **3,195** | **28,271** | **733** | **144,739** |
| **2006 Total** | **1,310** | **235** | **4,355** | **1,599** | **8,371** | **19,464** | **4,223** | **77,669** | **9,923** | **2,899** | **28,400** | **572** | **148,254** |
| **2007 Total** | **1,371** | **189** | **4,257** | **1,599** | **8,273** | **16,694** | **4,243** | **77,580** | **9,411** | **1,590** | **28,287** | **631** | **143,128** |
| **2008** January | 117 | 20 | 395 | 117 | 709 | 1,422 | 333 | 7,008 | 770 | 163 | 2,376 | 61 | 12,453 |
| February | 107 | 14 | 346 | 114 | 636 | 1,217 | 278 | 6,236 | 725 | 158 | 2,136 | 82 | 11,178 |
| March | 79 | 9 | 352 | 117 | 619 | 1,380 | 286 | 6,319 | 775 | 174 | 2,237 | 70 | 11,601 |
| April | 88 | 8 | 307 | 135 | 614 | 1,308 | 251 | 5,974 | 741 | 174 | 2,174 | 67 | 11,049 |
| May | 96 | 8 | 292 | 137 | 609 | 1,347 | 235 | 6,314 | 732 | 170 | 2,173 | 55 | 11,420 |
| June | 116 | 12 | 330 | 139 | 675 | 1,327 | 273 | 6,605 | 807 | 128 | 2,229 | 55 | 11,822 |
| July | 122 | 17 | 384 | 134 | 728 | 1,403 | 236 | 7,402 | 832 | 122 | 2,337 | 91 | 12,855 |
| August | 117 | 9 | 390 | 132 | 715 | 1,378 | 248 | 7,258 | 831 | 117 | 2,358 | 72 | 12,660 |
| September | 106 | 7 | 366 | 129 | [R] 675 | 1,317 | 276 | 5,500 | 630 | 96 | 2,163 | 52 | 10,360 |
| October | 101 | 8 | 344 | 126 | 642 | 1,276 | 248 | 6,315 | 585 | 95 | 2,261 | 77 | 11,137 |
| November | 99 | 11 | 320 | 128 | 623 | 1,166 | 229 | 5,653 | 549 | 119 | 2,165 | 68 | 10,201 |
| December | 112 | 18 | 360 | 127 | 681 | 1,161 | 326 | 5,838 | 529 | 160 | 2,033 | 71 | 10,378 |
| **Total** | **1,261** | **142** | **4,188** | **1,534** | **7,926** | **15,703** | **3,219** | **76,421** | **8,507** | **1,676** | **26,641** | **821** | **137,113** |
| **2009** January | 108 | 30 | 357 | 125 | 681 | 1,265 | 335 | 6,134 | 577 | 172 | 2,104 | 66 | 10,821 |
| February | 85 | 12 | 333 | 98 | 580 | 1,107 | 273 | 5,847 | 559 | 142 | 1,910 | 50 | 10,102 |
| March | 85 | 10 | 346 | 132 | 648 | 1,148 | 252 | 6,253 | 578 | 180 | 2,082 | 64 | 10,820 |
| April | 75 | 11 | 338 | 122 | 621 | 1,096 | 248 | 5,768 | 520 | 185 | 2,001 | 62 | 10,149 |
| May | 75 | 13 | 321 | 136 | 624 | 1,107 | 255 | 5,874 | 529 | 192 | 1,976 | 56 | 10,289 |
| June | 76 | 9 | 328 | 137 | 627 | 1,174 | 253 | 6,264 | 614 | 179 | 2,062 | 60 | 10,884 |
| July | 88 | 10 | 356 | 138 | 662 | 1,206 | 229 | 6,685 | 671 | 136 | 2,273 | 69 | 11,568 |
| August | 101 | 14 | 364 | 146 | 698 | 1,245 | 249 | 6,787 | 754 | 132 | 2,318 | 72 | 11,856 |
| September | 85 | 10 | 316 | 135 | 613 | 1,146 | 232 | 6,372 | 734 | 96 | 2,152 | 68 | 11,071 |
| October | 80 | 11 | 328 | 127 | 614 | 1,181 | 180 | 6,341 | 691 | 138 | 2,236 | 61 | 11,104 |
| November | 85 | 8 | 308 | 136 | 611 | 979 | 186 | 6,234 | 672 | 129 | 2,350 | 64 | 10,918 |
| December | 102 | 9 | 354 | 127 | 657 | 1,159 | 195 | 6,826 | 692 | 180 | 2,194 | 67 | 11,592 |
| **Total** | **1,044** | **148** | **4,047** | **1,560** | **7,638** | **13,816** | **2,886** | **75,385** | **7,590** | **1,860** | **25,658** | **758** | **131,174** |
| **2010** January | 114 | 10 | 353 | 123 | 664 | 1,534 | 247 | 6,910 | 645 | 167 | 2,222 | 63 | 12,055 |

[a] Commercial combined-heat-and-power (CHP) and commercial electricity-only plants.

[b] Industrial combined-heat-and-power (CHP) and industrial electricity-only plants.

[c] Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and coal synfuel.

[d] Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other petroleum, and waste oil.

[e] Natural gas, plus a small amount of supplemental gaseous fuels.

[f] Municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass. Through 2000, also includes non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

[g] Includes a small amount of conventional hydroelectric power, other gases, photovoltaic (PV) energy, wood, and other, which are not separately displayed.

[h] Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.

[i] Conventional hydroelectric power.

[j] Wood and wood-derived fuels.

[k] Includes batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, miscellaneous technologies, and, beginning in 2001, non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

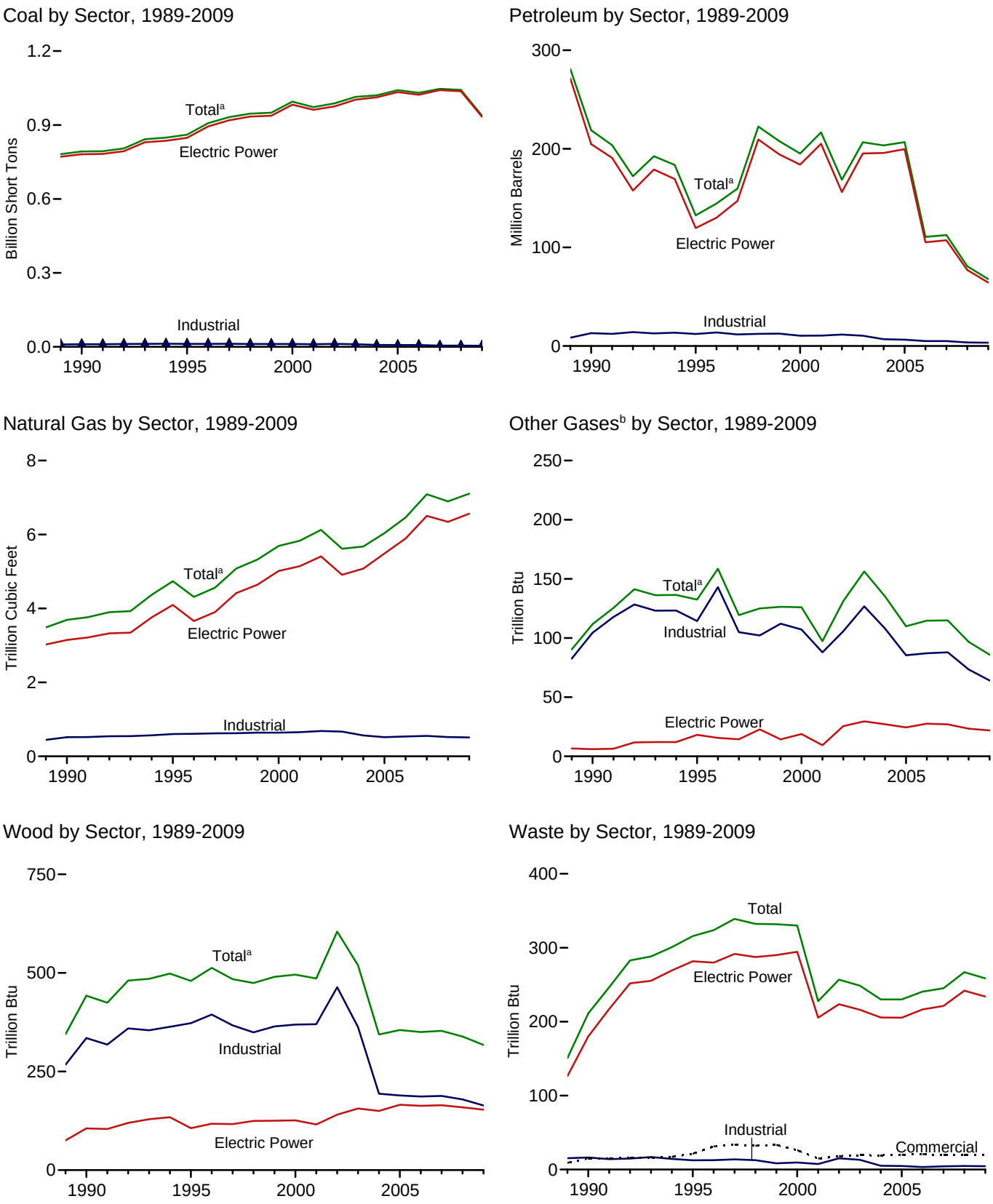
R=Revised. NA=Not available.

Notes: • See Note, "Classification of Power Plants Into Energy-Use Sectors," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/elect.html for all available data beginning in 1973.

Sources: See end of section.

## Figure 7.3 Consumption of Selected Combustible Fuels for Electricity Generation




[a]Includes commercial sector.
[b]Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.

Web Page: http://www.eia.doe.gov/emeu/mer/elect.html.
Sources: Tables 7.3a, 7.3b, and 7.3c.

# Table 7.3a Consumption of Combustible Fuels for Electricity Generation: Total (All Sectors) (Sum of Tables 7.3b and 7.3c)

| | Coal[a] | Petroleum | | | | | Natural Gas[f] | Other Gases[g] | Biomass | | Other[j] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Distillate Fuel Oil[b] | Residual Fuel Oil[c] | Other Liquids[d] | Petroleum Coke[e] | Total[e] | | | Wood[h] | Waste[i] | |
| | Thousand Short Tons | Thousand Barrels | | | Thousand Short Tons | Thousand Barrels | Billion Cubic Feet | Trillion Btu | | | |
| **1973 Total** | **389,212** | **47,058** | **513,190** | **NA** | **507** | **562,781** | **3,660** | **NA** | **1** | **2** | **NA** |
| **1975 Total** | **405,962** | **38,907** | **467,221** | **NA** | **70** | **506,479** | **3,158** | **NA** | **(s)** | **2** | **NA** |
| **1980 Total** | **569,274** | **29,051** | **391,163** | **NA** | **179** | **421,110** | **3,682** | **NA** | **3** | **2** | **NA** |
| **1985 Total** | **693,841** | **14,635** | **158,779** | **NA** | **231** | **174,571** | **3,044** | **NA** | **8** | **7** | **NA** |
| **1990 Total**[k] | **792,457** | **18,143** | **190,652** | **437** | **1,914** | **218,800** | **3,692** | **112** | **442** | **211** | **36** |
| **1995 Total** | **860,594** | **19,615** | **95,507** | **680** | **3,355** | **132,578** | **4,738** | **133** | **480** | **316** | **42** |
| **1996 Total** | **907,209** | **20,252** | **106,055** | **1,712** | **3,322** | **144,626** | **4,312** | **159** | **513** | **324** | **37** |
| **1997 Total** | **931,949** | **20,309** | **118,741** | **237** | **4,086** | **159,715** | **4,565** | **119** | **484** | **339** | **36** |
| **1998 Total** | **946,295** | **25,062** | **172,728** | **549** | **4,860** | **222,640** | **5,081** | **125** | **475** | **332** | **36** |
| **1999 Total** | **949,802** | **25,951** | **158,187** | **974** | **4,552** | **207,871** | **5,322** | **126** | **490** | **332** | **41** |
| **2000 Total** | **994,933** | **31,675** | **143,381** | **1,450** | **3,744** | **195,228** | **5,691** | **126** | **496** | **330** | **46** |
| **2001 Total** | **972,691** | **31,150** | **165,312** | **855** | **3,871** | **216,672** | **5,832** | **97** | **486** | **228** | **160** |
| **2002 Total** | **987,583** | **23,286** | **109,235** | **1,894** | **6,836** | **168,597** | **6,126** | **131** | **605** | **257** | **191** |
| **2003 Total** | **1,014,058** | **29,672** | **142,518** | **2,947** | **6,303** | **206,653** | **5,616** | **156** | **519** | **249** | **193** |
| **2004 Total** | **1,020,523** | **20,163** | **142,088** | **2,856** | **7,677** | **203,494** | **5,675** | **135** | **344** | **230** | **183** |
| **2005 Total** | **1,041,448** | **20,651** | **141,518** | **2,968** | **8,330** | **206,785** | **6,036** | **110** | **355** | **230** | **173** |
| **2006 Total** | **1,030,556** | **13,174** | **58,473** | **2,174** | **7,363** | **110,634** | **6,462** | **115** | **350** | **241** | **172** |
| **2007 Total** | **1,046,795** | **15,683** | **63,833** | **2,917** | **6,036** | **112,615** | **7,089** | **115** | **353** | **245** | **168** |
| **2008** January | 94,532 | 1,633 | 3,309 | 350 | 514 | 7,864 | 554 | 9 | 30 | 21 | 14 |
| February | 86,702 | 1,198 | 2,697 | 265 | 469 | 6,508 | 458 | 8 | 28 | 20 | 13 |
| March | 83,373 | 936 | 2,352 | 250 | 396 | 5,517 | 480 | 9 | 29 | 23 | 15 |
| April | 76,924 | 934 | 2,627 | 193 | 432 | 5,915 | 487 | 8 | 26 | 22 | 14 |
| May | 81,248 | 940 | 2,802 | 196 | 409 | 5,982 | 495 | 8 | 26 | 22 | 15 |
| June | 89,532 | 1,351 | 4,722 | 237 | 500 | 8,812 | 682 | 9 | 28 | 23 | 15 |
| July | 98,194 | 1,028 | 3,863 | 200 | 452 | 7,349 | 805 | 10 | 30 | 24 | 16 |
| August | 95,752 | 901 | 3,223 | 179 | 480 | 6,703 | 786 | 10 | 30 | 23 | 15 |
| September | 85,545 | 929 | 3,896 | 194 | 447 | 7,253 | 618 | 7 | 28 | 22 | 14 |
| October | 80,186 | 771 | 2,339 | 176 | 469 | 5,633 | 565 | 7 | 27 | 22 | 13 |
| November | 80,993 | 850 | 2,610 | 210 | 423 | 5,786 | 473 | 6 | 28 | 22 | 13 |
| December | 89,353 | 1,358 | 3,751 | 373 | 426 | 7,610 | 491 | 6 | 27 | 23 | 14 |
| **Total** | **1,042,335** | **12,832** | **38,191** | **2,822** | **5,417** | **80,932** | **6,896** | **97** | **339** | **267** | **170** |
| **2009** January | 91,018 | 1,767 | 5,936 | 443 | 428 | 10,287 | 500 | 6 | 28 | 21 | 12 |
| February | 74,577 | 1,176 | 2,365 | 288 | 392 | 5,788 | 467 | 6 | 25 | 19 | 11 |
| March | 72,264 | 1,217 | 1,993 | 274 | 496 | 5,966 | 518 | 6 | 25 | 22 | 13 |
| April | 67,328 | 794 | 1,655 | 197 | 436 | 4,826 | 471 | 6 | 23 | 22 | 13 |
| May | 70,665 | 1,083 | 2,202 | 210 | 438 | 5,687 | 536 | 6 | 24 | 22 | 14 |
| June | 79,264 | 1,006 | 2,366 | 166 | 435 | 5,712 | 667 | 7 | 26 | 23 | 14 |
| July | 84,658 | 953 | 2,538 | 176 | 448 | 5,909 | 800 | 8 | 29 | 23 | 14 |
| August | 87,039 | 1,025 | 2,999 | 206 | 441 | 6,435 | 860 | 8 | 30 | 23 | 14 |
| September | 74,051 | 803 | 1,856 | 178 | 432 | 4,997 | 708 | 8 | 26 | 21 | 13 |
| October | 75,163 | 888 | 2,068 | 195 | 273 | 4,517 | 555 | 8 | 26 | 21 | 13 |
| November | 73,459 | 791 | 1,219 | 185 | 273 | 3,562 | 478 | 7 | 28 | 21 | 13 |
| December | 88,572 | 1,020 | 1,229 | 203 | 362 | 4,262 | 543 | 9 | 29 | 22 | 13 |
| **Total** | **938,059** | **12,523** | **28,426** | **2,723** | **4,855** | **67,948** | **7,105** | **86** | **318** | **259** | **159** |
| **2010** January | 90,914 | 2,508 | 2,838 | 251 | 447 | 7,832 | 564 | 8 | 29 | 20 | 13 |

[a] Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and coal synfuel.

[b] Fuel oil nos. 1, 2, and 4. For 1973-1979, data are for gas turbine and internal combustion plant use of petroleum. For 1980-2000, electric utility data also include small amounts of kerosene and jet fuel.

[c] Fuel oil nos. 5 and 6. For 1973-1979, data are for steam plant use of petroleum. For 1980-2000, electric utility data also include a small amount of fuel oil no. 4.

[d] Jet fuel, kerosene, other petroleum liquids, and waste oil.

[e] Petroleum coke is converted from short tons to barrels by multiplying by 5.

[f] Natural gas, plus a small amount of supplemental gaseous fuels.

[g] Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.

[h] Wood and wood-derived fuels.

[i] Municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass. Through 2000, also includes non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

[j] Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, miscellaneous technologies, and, beginning in 2001, non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

[k] Through 1988, data are for electric utilities only. Beginning in 1989, data are for electric utilities, independent power producers, commercial plants, and industrial plants.

R=Revised. NA=Not available. (s)=Less than 0.5 trillion Btu.

Notes: • Data are for fuels consumed to produce electricity. Data also include fuels consumed to produce useful thermal output at a small number of electric utility combined-heat-and-power (CHP) plants. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/elect.html for all available data beginning in 1973.

Sources: See sources for Tables 7.3b and 7.3c.

# Table 7.3b Consumption of Combustible Fuels for Electricity Generation: Electric Power Sector (Subset of Table 7.3a)

| | Coal[a] | Petroleum | | | | | Natural Gas[f] | Other Gases[g] | Biomass | | Other[j] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Distillate Fuel Oil[b] | Residual Fuel Oil[c] | Other Liquids[d] | Petroleum Coke[e] | Total[e] | | | Wood[h] | Waste[i] | |
| | Thousand Short Tons | Thousand Barrels | | | Thousand Short Tons | Thousand Barrels | Billion Cubic Feet | Trillion Btu | | | |
| **1973 Total** | **389,212** | **47,058** | **513,190** | **NA** | **507** | **562,781** | **3,660** | **NA** | **1** | **2** | **NA** |
| **1975 Total** | **405,962** | **38,907** | **467,221** | **NA** | **70** | **506,479** | **3,158** | **NA** | **(s)** | **2** | **NA** |
| **1980 Total** | **569,274** | **29,051** | **391,163** | **NA** | **179** | **421,110** | **3,682** | **NA** | **3** | **2** | **NA** |
| **1985 Total** | **693,841** | **14,635** | **158,779** | **NA** | **231** | **174,571** | **3,044** | **NA** | **8** | **7** | **NA** |
| **1990 Total**[k] | **781,301** | **16,394** | **183,285** | **25** | **1,008** | **204,745** | **3,147** | **6** | **106** | **180** | **(s)** |
| **1995 Total** | **847,854** | **18,066** | **88,895** | **441** | **2,452** | **119,663** | **4,094** | **18** | **106** | **282** | **2** |
| **1996 Total** | **894,400** | **18,472** | **98,795** | **567** | **2,467** | **130,168** | **3,660** | **16** | **117** | **280** | **2** |
| **1997 Total** | **919,009** | **18,646** | **112,423** | **130** | **3,201** | **147,202** | **3,903** | **14** | **117** | **292** | **1** |
| **1998 Total** | **934,126** | **23,166** | **165,875** | **411** | **3,999** | **209,447** | **4,416** | **23** | **125** | **287** | **2** |
| **1999 Total** | **937,888** | **23,875** | **151,921** | **514** | **3,607** | **194,345** | **4,644** | **14** | **125** | **290** | **1** |
| **2000 Total** | **982,713** | **29,722** | **138,047** | **403** | **3,155** | **183,946** | **5,014** | **19** | **126** | **294** | **1** |
| **2001 Total** | **961,523** | **29,056** | **159,150** | **374** | **3,308** | **205,119** | **5,142** | **9** | **116** | **205** | **109** |
| **2002 Total** | **975,251** | **21,810** | **104,577** | **1,243** | **5,705** | **156,154** | **5,408** | **25** | **141** | **224** | **137** |
| **2003 Total** | **1,003,036** | **27,441** | **137,361** | **1,937** | **5,719** | **195,336** | **4,909** | **30** | **156** | **216** | **136** |
| **2004 Total** | **1,012,459** | **18,793** | **138,831** | **2,511** | **7,135** | **195,809** | **5,075** | **27** | **150** | **206** | **131** |
| **2005 Total** | **1,033,567** | **19,450** | **138,337** | **2,591** | **7,877** | **199,760** | **5,485** | **24** | **166** | **205** | **116** |
| **2006 Total** | **1,022,802** | **12,578** | **56,347** | **1,783** | **6,905** | **105,235** | **5,891** | **28** | **163** | **216** | **117** |
| **2007 Total** | **1,041,346** | **15,135** | **62,072** | **2,496** | **5,523** | **107,316** | **6,502** | **27** | **165** | **221** | **117** |
| **2008** January | 94,085 | 1,573 | 3,175 | 336 | 476 | 7,467 | 503 | 2 | 14 | 20 | 10 |
| February | 86,301 | 1,155 | 2,584 | 252 | 437 | 6,177 | 413 | 2 | 13 | 18 | 9 |
| March | 82,904 | 905 | 2,248 | 224 | 363 | 5,192 | 434 | 2 | 14 | 21 | 11 |
| April | 76,465 | 910 | 2,547 | 182 | 398 | 5,631 | 444 | 2 | 11 | 20 | 10 |
| May | 80,763 | 911 | 2,731 | 185 | 376 | 5,707 | 450 | 2 | 12 | 20 | 10 |
| June | 89,057 | 1,320 | 4,648 | 226 | 461 | 8,500 | 634 | 2 | 13 | 20 | 10 |
| July | 97,694 | 971 | 3,806 | 189 | 414 | 7,035 | 752 | 2 | 15 | 22 | 11 |
| August | 95,263 | 857 | 3,171 | 171 | 441 | 6,405 | 734 | 2 | 15 | 21 | 11 |
| September | 85,078 | 849 | 3,845 | 174 | 412 | 6,930 | 578 | 1 | 13 | 20 | 10 |
| October | 79,729 | 747 | 2,281 | 158 | 433 | 5,352 | 519 | 2 | 12 | 20 | 10 |
| November | 80,601 | 815 | 2,548 | 202 | 393 | 5,531 | 432 | 1 | 13 | 20 | 10 |
| December | 88,952 | 1,307 | 3,637 | 309 | 394 | 7,220 | 449 | 2 | 14 | 21 | 10 |
| **Total** | **1,036,891** | **12,318** | **37,222** | **2,608** | **5,000** | **77,149** | **6,342** | **23** | **159** | **242** | **120** |
| **2009** January | 90,589 | 1,691 | 5,794 | 424 | 394 | 9,879 | 456 | 1 | 14 | 19 | 10 |
| February | 74,201 | 1,073 | 2,291 | 270 | 362 | 5,446 | 425 | 1 | 13 | 17 | 9 |
| March | 71,854 | 1,179 | 1,932 | 233 | 461 | 5,650 | 473 | 2 | 12 | 20 | 10 |
| April | 66,938 | 746 | 1,605 | 170 | 402 | 4,531 | 430 | 2 | 10 | 20 | 10 |
| May | 70,259 | 991 | 2,148 | 199 | 404 | 5,358 | 494 | 2 | 11 | 20 | 10 |
| June | 78,847 | 938 | 2,316 | 148 | 401 | 5,410 | 622 | 2 | 13 | 21 | 10 |
| July | 84,227 | 885 | 2,496 | 169 | 414 | 5,620 | 752 | 2 | 14 | 21 | 11 |
| August | 86,591 | 951 | 2,950 | 190 | 406 | 6,122 | 811 | 2 | 15 | 21 | 11 |
| September | 73,644 | 744 | 1,811 | 165 | 399 | 4,715 | 662 | 2 | 12 | 19 | 10 |
| October | 74,743 | 850 | 2,026 | 187 | 248 | 4,303 | 509 | 2 | 12 | 19 | 9 |
| November | 73,128 | 757 | 1,180 | 177 | 245 | 3,340 | 433 | 2 | 13 | 18 | 9 |
| December | 88,177 | 985 | 1,173 | 194 | 333 | 4,018 | 494 | 2 | 15 | 20 | 10 |
| **Total** | **933,197** | **11,791** | **27,723** | **2,525** | **4,471** | **64,393** | **6,561** | **22** | **153** | **234** | **118** |
| **2010** January | 90,260 | 2,464 | 2,779 | 240 | 412 | 7,541 | 514 | 2 | 15 | 18 | 9 |

[a] Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and coal synfuel.

[b] Fuel oil nos. 1, 2, and 4. For 1973-1979, data are for gas turbine and internal combustion plant use of petroleum. For 1980-2000, electric utility data also include small amounts of kerosene and jet fuel.

[c] Fuel oil nos. 5 and 6. For 1973-1979, data are for steam plant use of petroleum. For 1980-2000, electric utility data also include a small amount of fuel oil no. 4.

[d] Jet fuel, kerosene, other petroleum liquids, and waste oil.

[e] Petroleum coke is converted from short tons to barrels by multiplying by 5.

[f] Natural gas, plus a small amount of supplemental gaseous fuels.

[g] Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.

[h] Wood and wood-derived fuels.

[i] Municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass. Through 2000, also includes non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

[j] Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, miscellaneous technologies, and, beginning in 2001, non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

[k] Through 1988, data are for electric utilities only. Beginning in 1989, data are for electric utilities and independent power producers.

R=Revised. NA=Not available. (s)=Less than 0.5 trillion Btu.

Notes: • Data are for fuels consumed to produce electricity. Data also include fuels consumed to produce useful thermal output at a small number of electric utility combined-heat-and-power (CHP) plants. • The electric power sector comprises electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/elect.html for all available data beginning in 1973.

Sources: See end of section.

# Table 7.3c Consumption of Selected Combustible Fuels for Electricity Generation: Commercial and Industrial Sectors (Subset of Table 7.3a)

| | Commercial Sector[a] | | | | Industrial Sector[b] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Biomass | | | | | Biomass | | |
| | Coal[c] | Petroleum[d] | Natural Gas[e] | Waste[f] | Coal[c] | Petroleum[d] | Natural Gas[e] | Other Gases[g] | Wood[h] | Waste[f] | Other[i] |
| | Thousand Short Tons | Thousand Barrels | Billion Cubic Feet | Trillion Btu | Thousand Short Tons | Thousand Barrels | Billion Cubic Feet | Trillion Btu | | | |
| **1989 Total** | **414** | **1,165** | **18** | **9** | **9,707** | **8,482** | **444** | **83** | **267** | **15** | **37** |
| **1990 Total** | **417** | **953** | **28** | **15** | **10,740** | **13,103** | **517** | **104** | **335** | **16** | **36** |
| **1995 Total** | **569** | **649** | **43** | **21** | **12,171** | **12,265** | **601** | **114** | **373** | **13** | **40** |
| **1996 Total** | **656** | **645** | **42** | **31** | **12,153** | **13,813** | **610** | **143** | **394** | **13** | **35** |
| **1997 Total** | **630** | **790** | **39** | **34** | **12,311** | **11,723** | **623** | **105** | **367** | **14** | **36** |
| **1998 Total** | **440** | **802** | **41** | **32** | **11,728** | **12,392** | **625** | **102** | **349** | **13** | **35** |
| **1999 Total** | **481** | **931** | **39** | **33** | **11,432** | **12,595** | **639** | **112** | **364** | **8** | **39** |
| **2000 Total** | **514** | **823** | **37** | **26** | **11,706** | **10,459** | **640** | **107** | **369** | **10** | **45** |
| **2001 Total** | **532** | **1,023** | **36** | **15** | **10,636** | **10,530** | **654** | **88** | **370** | **7** | **44** |
| **2002 Total** | **477** | **834** | **33** | **18** | **11,855** | **11,608** | **685** | **106** | **464** | **15** | **43** |
| **2003 Total** | **582** | **894** | **38** | **19** | **10,440** | **10,424** | **668** | **127** | **362** | **13** | **46** |
| **2004 Total** | **377** | **766** | **33** | **19** | **7,687** | **6,919** | **566** | **108** | **194** | **5** | **41** |
| **2005 Total** | **377** | **585** | **34** | **20** | **7,504** | **6,440** | **518** | **85** | **189** | **5** | **46** |
| **2006 Total** | **347** | **333** | **35** | **21** | **7,408** | **5,066** | **536** | **87** | **187** | **3** | **45** |
| **2007 Total** | **361** | **258** | **34** | **19** | **5,089** | **5,041** | **554** | **88** | **188** | **4** | **41** |
| **2008** January | 33 | 22 | 3 | 2 | 414 | 375 | 48 | 6 | 16 | (s) | 3 |
| February | 31 | 18 | 3 | 2 | 371 | 313 | 42 | 6 | 14 | 1 | 3 |
| March | 25 | 10 | 3 | 2 | 444 | 315 | 43 | 7 | 15 | (s) | 3 |
| April | 25 | 9 | 2 | 2 | 433 | 274 | 41 | 6 | 15 | (s) | 3 |
| May | 28 | 9 | 2 | 2 | 457 | 266 | 43 | 6 | 15 | (s) | 4 |
| June | 35 | 13 | 3 | 2 | 441 | 299 | 45 | 7 | 15 | (s) | 4 |
| July | 36 | 18 | 3 | 2 | 464 | 296 | 50 | 7 | 16 | 1 | 4 |
| August | 34 | 11 | 3 | 2 | 455 | 287 | 49 | 8 | 16 | (s) | 4 |
| September | 32 | 8 | 3 | 2 | 435 | 315 | 37 | 6 | 14 | (s) | 3 |
| October | 28 | 10 | 3 | 2 | 428 | 271 | 43 | 5 | 15 | (s) | 3 |
| November | 29 | 14 | 3 | 2 | 362 | 242 | 39 | 5 | 15 | (s) | 2 |
| December | 32 | 24 | 3 | 2 | 369 | 365 | 39 | 5 | 13 | (s) | 2 |
| **Total** | **369** | **166** | **33** | **20** | **5,075** | **3,617** | **520** | **73** | **179** | **5** | **39** |
| **2009** January | 33 | 31 | 3 | 2 | 396 | 377 | 42 | 5 | 13 | (s) | 2 |
| February | 28 | 13 | 3 | 1 | 347 | 330 | 39 | 5 | 12 | (s) | 2 |
| March | 25 | 11 | 3 | 2 | 385 | 304 | 42 | 5 | 13 | (s) | 3 |
| April | 23 | 13 | 3 | 2 | 367 | 282 | 39 | 4 | 13 | (s) | 3 |
| May | 22 | 15 | 3 | 2 | 383 | 314 | 40 | 4 | 13 | (s) | 3 |
| June | 23 | 11 | 3 | 2 | 394 | 291 | 42 | 5 | 13 | (s) | 3 |
| July | 26 | 12 | 3 | 2 | 405 | 276 | 45 | 6 | 15 | (s) | 3 |
| August | 29 | 17 | 3 | 2 | 420 | 296 | 46 | 6 | 15 | (s) | 3 |
| September | 25 | 13 | 3 | 2 | 383 | 268 | 44 | 6 | 14 | (s) | 3 |
| October | 24 | 13 | 3 | 2 | 396 | 201 | 43 | 6 | 14 | (s) | 3 |
| November | 25 | 10 | 2 | 2 | 307 | 211 | 43 | 6 | 15 | (s) | 3 |
| December | 29 | 11 | 3 | 2 | 366 | 233 | 47 | 7 | 14 | (s) | 3 |
| **Total** | **313** | **171** | **32** | **20** | **4,549** | **3,383** | **511** | **64** | **164** | **4** | **31** |
| **2010** January | 33 | 11 | 3 | 2 | 621 | 280 | 48 | 6 | 14 | (s) | 3 |

[a] Commercial combined-heat-and-power (CHP) and commercial electricity-only plants.
[b] Industrial combined-heat-and-power (CHP) and industrial electricity-only plants.
[c] Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and coal synfuel.
[d] Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other petroleum, and waste oil.
[e] Natural gas, plus a small amount of supplemental gaseous fuels.
[f] Municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass. Through 2000, also includes non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).
[g] Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.
[h] Wood and wood-derived fuels.
[i] Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, miscellaneous technologies, and, beginning in 2001, non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

R=Revised. (s)=Less than 0.5 trillion Btu.

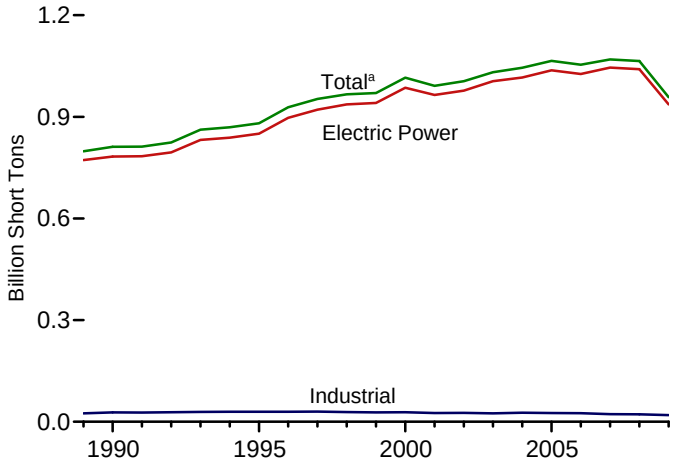
Notes: • Data are for fuels consumed to produce electricity. Through 1988, data are not available. • See Note, "Classification of Power Plants Into Energy-Use Sectors," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/elect.html for all available data beginning in 1989.

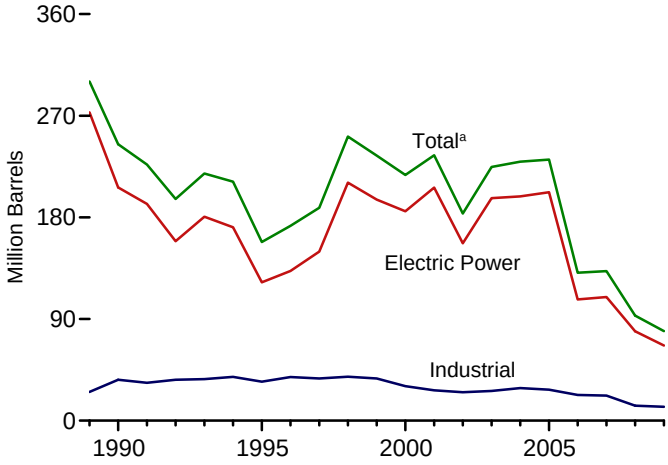
Sources: • **1989-1997:** U.S. Energy Information Administration (EIA), Form EIA-867, "Annual Nonutility Power Producer Report." • **1998-2000:** EIA, Form EIA-860B, "Annual Electric Generator Report—Nonutility." • **2001-2003:** EIA, Form EIA-906, "Power Plant Report." • **2004-2007:** EIA, Form EIA-906, "Power Plant Report," and Form EIA-920, "Combined Heat and Power Plant Report." • **2008 forward:** EIA, Form EIA-923, "Power Plant Operations Report."

## Figure 7.4 Consumption of Selected Combustible Fuels for Electricity Generation and Useful Thermal Output

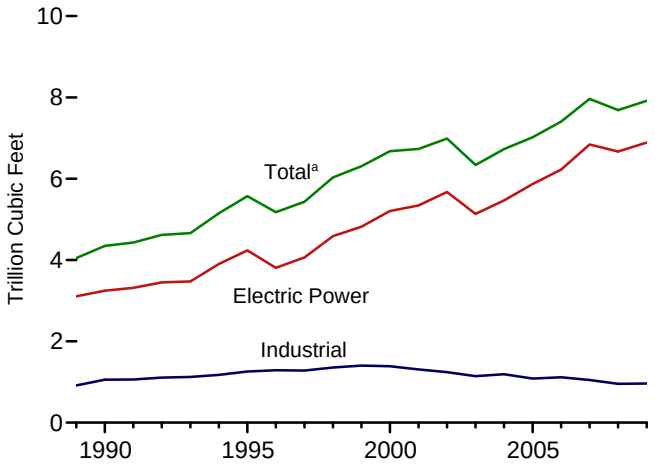
Coal by Sector, 1989-2009



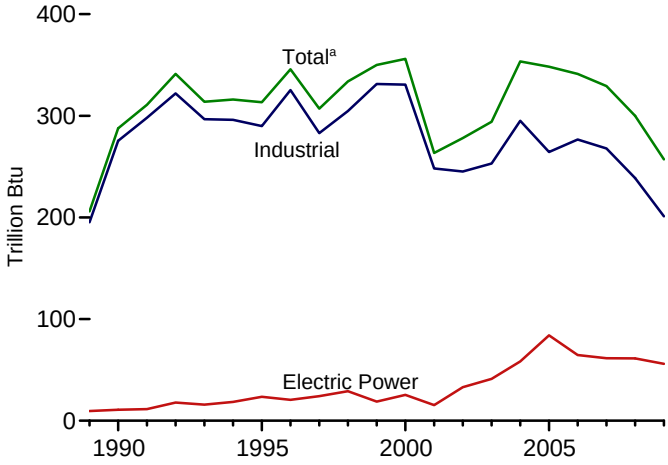

Petroleum by Sector, 1989-2009



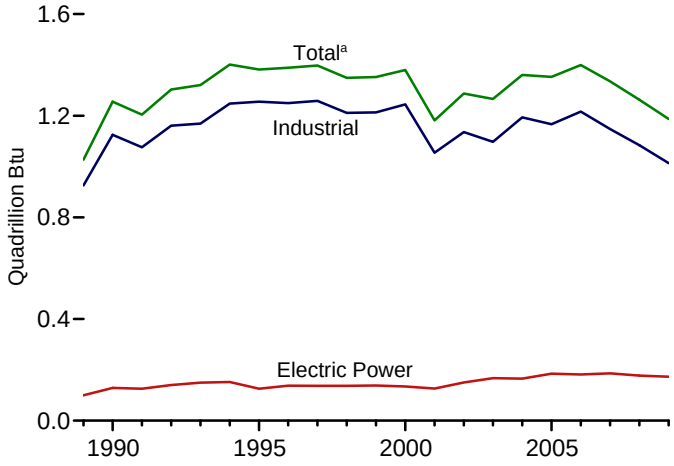

Natural Gas by Sector, 1989-2009



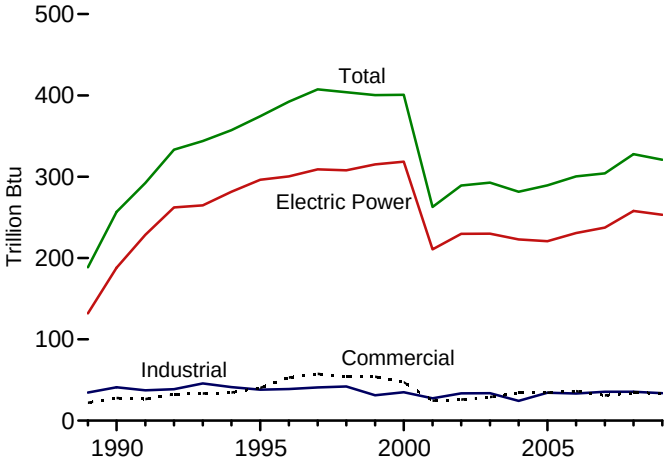

Other Gases[b] by Sector, 1989-2009




Wood by Sector, 1989-2009




Waste by Sector, 1989-2009




[a]Includes commercial sector.
[b]Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.

Web Page: http://www.eia.doe.gov/emeu/mer/elect.html.
Sources: Tables 7.4a, 7.4b, and 7.4c.

# Table 7.4a Consumption of Combustible Fuels for Electricity Generation and Useful Thermal Output: Total (All Sectors) (Sum of Tables 7.4b and 7.4c)

| | Coal[a] | Petroleum | | | | | Natural Gas[f] | Other Gases[g] | Biomass | | Other[j] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Distillate Fuel Oil[b] | Residual Fuel Oil[c] | Other Liquids[d] | Petroleum Coke[e] | Total[e] | | | Wood[h] | Waste[i] | |
| | Thousand Short Tons | Thousand Barrels | | | Thousand Short Tons | Thousand Barrels | Billion Cubic Feet | Trillion Btu | | | |
| **1973 Total** | **389,212** | **47,058** | **513,190** | **NA** | **507** | **562,781** | **3,660** | **NA** | **1** | **2** | **NA** |
| **1975 Total** | **405,962** | **38,907** | **467,221** | **NA** | **70** | **506,479** | **3,158** | **NA** | **0** | **2** | **NA** |
| **1980 Total** | **569,274** | **29,051** | **391,163** | **NA** | **179** | **421,110** | **3,682** | **NA** | **3** | **2** | **NA** |
| **1985 Total** | **693,841** | **14,635** | **158,779** | **NA** | **231** | **174,571** | **3,044** | **NA** | **8** | **7** | **NA** |
| **1990 Total**[k] | **811,538** | **20,194** | **209,081** | **1,332** | **2,832** | **244,765** | **4,346** | **288** | **1,256** | **257** | **86** |
| **1995 Total** | **881,012** | **21,697** | **112,168** | **1,322** | **4,590** | **158,140** | **5,572** | **313** | **1,382** | **374** | **97** |
| **1996 Total** | **928,015** | **22,444** | **124,607** | **2,468** | **4,596** | **172,499** | **5,178** | **346** | **1,389** | **392** | **91** |
| **1997 Total** | **952,955** | **22,893** | **134,623** | **526** | **6,095** | **188,517** | **5,433** | **307** | **1,397** | **407** | **103** |
| **1998 Total** | **966,615** | **30,006** | **189,267** | **1,230** | **6,196** | **251,486** | **6,030** | **334** | **1,349** | **404** | **95** |
| **1999 Total** | **970,175** | **30,616** | **172,319** | **1,812** | **5,989** | **234,694** | **6,305** | **350** | **1,352** | **400** | **101** |
| **2000 Total** | **1,015,398** | **34,572** | **156,673** | **2,904** | **4,669** | **217,494** | **6,677** | **356** | **1,380** | **401** | **109** |
| **2001 Total** | **991,635** | **33,724** | **177,137** | **1,418** | **4,532** | **234,940** | **6,731** | **263** | **1,182** | **263** | **229** |
| **2002 Total** | **1,005,144** | **24,749** | **118,637** | **3,257** | **7,353** | **183,409** | **6,986** | **278** | **1,287** | **289** | **252** |
| **2003 Total** | **1,031,778** | **31,825** | **152,859** | **4,576** | **7,067** | **224,593** | **6,337** | **294** | **1,266** | **293** | **262** |
| **2004 Total** | **1,044,798** | **23,520** | **157,478** | **4,764** | **8,721** | **229,364** | **6,727** | **353** | **1,360** | **282** | **254** |
| **2005 Total** | **1,065,281** | **24,446** | **156,915** | **4,270** | **9,113** | **231,193** | **7,021** | **348** | **1,353** | **289** | **237** |
| **2006 Total** | **1,053,783** | **14,655** | **69,846** | **3,396** | **8,622** | **131,005** | **7,404** | **341** | **1,399** | **300** | **247** |
| **2007 Total** | **1,069,606** | **17,042** | **74,616** | **4,237** | **7,299** | **132,389** | **7,962** | **329** | **1,336** | **304** | **239** |
| **2008** January | 96,610 | 1,830 | 3,975 | 468 | 592 | 9,233 | 625 | 31 | 128 | 27 | 17 |
| February | 88,657 | 1,294 | 3,214 | 369 | 537 | 7,561 | 522 | 32 | 106 | 27 | 17 |
| March | 85,270 | 1,017 | 2,826 | 373 | 464 | 6,534 | 547 | 27 | 108 | 29 | 18 |
| April | 78,700 | 1,007 | 3,038 | 271 | 499 | 6,810 | 550 | 24 | 106 | 27 | 17 |
| May | 83,058 | 1,017 | 3,203 | 267 | 480 | 6,887 | 559 | 25 | 105 | 27 | 18 |
| June | 91,296 | 1,450 | 5,131 | 299 | 576 | 9,761 | 750 | 26 | 102 | 27 | 18 |
| July | 100,072 | 1,129 | 4,247 | 257 | 525 | 8,258 | 876 | 27 | 107 | 28 | 19 |
| August | 97,599 | 987 | 3,587 | 230 | 556 | 7,586 | 858 | 27 | 105 | 27 | 19 |
| September | 87,314 | 1,000 | 4,244 | 251 | 521 | 8,098 | 679 | 22 | 99 | 26 | 17 |
| October | 81,919 | 867 | 2,662 | 236 | 554 | 6,533 | 630 | 22 | 102 | 27 | 16 |
| November | 82,770 | 986 | 2,978 | 259 | 504 | 6,743 | 537 | 18 | 101 | 28 | 16 |
| December | 91,239 | 1,553 | 4,372 | 485 | 507 | 8,945 | 557 | 19 | 94 | 28 | 17 |
| **Total** | **1,064,503** | **14,137** | **43,477** | **3,765** | **6,314** | **92,948** | **7,689** | **300** | **1,263** | **328** | **209** |
| **2009** January | 92,879 | 1,991 | 6,628 | 517 | 515 | 11,712 | 571 | 21 | 99 | 27 | 14 |
| February | 76,337 | 1,351 | 2,804 | 354 | 475 | 6,884 | 529 | 20 | 92 | 23 | 13 |
| March | 74,043 | 1,344 | 2,327 | 355 | 565 | 6,852 | 587 | 21 | 94 | 31 | 15 |
| April | 68,842 | 931 | 1,965 | 272 | 502 | 5,679 | 539 | 19 | 90 | 26 | 15 |
| May | 72,222 | 1,225 | 2,695 | 277 | 501 | 6,701 | 602 | 19 | 92 | 27 | 16 |
| June | 80,870 | 1,149 | 2,646 | 204 | 497 | 6,483 | 733 | 20 | 94 | 27 | 16 |
| July | 86,324 | 1,109 | 2,833 | 211 | 516 | 6,733 | 867 | 23 | 105 | 28 | 17 |
| August | 88,654 | 1,156 | 3,323 | 249 | 515 | 7,304 | 929 | 24 | 109 | 28 | 17 |
| September | 75,593 | 934 | 2,150 | 239 | 499 | 5,816 | 774 | 24 | 99 | 26 | 15 |
| October | 76,748 | 986 | 2,381 | 238 | 368 | 5,443 | 623 | 22 | 104 | 25 | 15 |
| November | 75,099 | 881 | 1,482 | 225 | 378 | 4,476 | 545 | 21 | 103 | 26 | 15 |
| December | 90,376 | 1,103 | 1,571 | 249 | 463 | 5,237 | 615 | 23 | 106 | 28 | 16 |
| **Total** | **957,986** | **14,158** | **32,805** | **3,390** | **5,793** | **79,318** | **7,915** | **257** | **1,187** | **321** | **185** |
| **2010** January | 92,816 | 2,620 | 3,204 | 316 | 527 | 8,776 | 637 | 22 | 105 | 26 | 15 |

[a] Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and coal synfuel.

[b] Fuel oil nos. 1, 2, and 4. Through 2000, electric utility data also include small amounts of kerosene and jet fuel.

[c] Fuel oil nos. 5 and 6. Through 2000, electric utility data also include a small amount of fuel oil no. 4.

[d] Jet fuel, kerosene, other petroleum liquids, and waste oil.

[e] Petroleum coke is converted from short tons to barrels by multiplying by 5.

[f] Natural gas, plus a small amount of supplemental gaseous fuels.

[g] Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.

[h] Wood and wood-derived fuels.

[i] Municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass. Through 2000, also includes non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

[j] Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, miscellaneous technologies, and, beginning in 2001, non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

[k] Through 1988, data are for electric utilities only. Beginning in 1989, data are for electric utilities, independent power producers, commercial plants, and industrial plants.

R=Revised. NA=Not available.

Notes: • Data are for fuels consumed to produce electricity and useful thermal output. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/elect.html for all available data beginning in 1973.

Sources: See sources for Tables 7.4b and 7.4c.

# Table 7.4b Consumption of Combustible Fuels for Electricity Generation and Useful Thermal Output: Electric Power Sector (Subset of Table 7.4a)

| | Coal[a] | Petroleum | | | | | Natural Gas[f] | Other Gases[g] | Biomass | | Other[j] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Distillate Fuel Oil[b] | Residual Fuel Oil[c] | Other Liquids[d] | Petroleum Coke[e] | Total[e] | | | Wood[h] | Waste[i] | |
| | Thousand Short Tons | Thousand Barrels | | | Thousand Short Tons | Thousand Barrels | Billion Cubic Feet | Trillion Btu | | | |
| **1973 Total** | **389,212** | **47,058** | **513,190** | **NA** | **507** | **562,781** | **3,660** | **NA** | **1** | **2** | **NA** |
| **1975 Total** | **405,962** | **38,907** | **467,221** | **NA** | **70** | **506,479** | **3,158** | **NA** | **(s)** | **2** | **NA** |
| **1980 Total** | **569,274** | **29,051** | **391,163** | **NA** | **179** | **421,110** | **3,682** | **NA** | **3** | **2** | **NA** |
| **1985 Total** | **693,841** | **14,635** | **158,779** | **NA** | **231** | **174,571** | **3,044** | **NA** | **8** | **7** | **NA** |
| **1990 Total**[k] | **782,567** | **16,567** | **184,915** | **26** | **1,008** | **206,550** | **3,245** | **11** | **129** | **188** | **(s)** |
| **1995 Total** | **850,230** | **18,553** | **90,023** | **499** | **2,674** | **122,447** | **4,237** | **24** | **125** | **296** | **2** |
| **1996 Total** | **896,921** | **18,780** | **99,951** | **653** | **2,642** | **132,593** | **3,807** | **20** | **138** | **300** | **2** |
| **1997 Total** | **921,364** | **18,989** | **113,669** | **152** | **3,372** | **149,668** | **4,065** | **24** | **137** | **309** | **1** |
| **1998 Total** | **936,619** | **23,300** | **166,528** | **431** | **4,102** | **210,769** | **4,588** | **29** | **137** | **308** | **2** |
| **1999 Total** | **940,922** | **24,058** | **152,493** | **544** | **3,735** | **195,769** | **4,820** | **19** | **138** | **315** | **1** |
| **2000 Total** | **985,821** | **30,016** | **138,513** | **454** | **3,275** | **185,358** | **5,206** | **25** | **134** | **318** | **1** |
| **2001 Total** | **964,433** | **29,274** | **159,504** | **377** | **3,427** | **206,291** | **5,342** | **15** | **126** | **211** | **113** |
| **2002 Total** | **977,507** | **21,876** | **104,773** | **1,267** | **5,816** | **156,996** | **5,672** | **33** | **150** | **230** | **143** |
| **2003 Total** | **1,005,116** | **27,632** | **138,279** | **2,026** | **5,799** | **196,932** | **5,135** | **41** | **167** | **230** | **140** |
| **2004 Total** | **1,016,268** | **19,107** | **139,816** | **2,713** | **7,372** | **198,498** | **5,464** | **58** | **165** | **223** | **138** |
| **2005 Total** | **1,037,485** | **19,675** | **139,409** | **2,685** | **8,083** | **202,184** | **5,869** | **84** | **185** | **221** | **123** |
| **2006 Total** | **1,026,636** | **12,646** | **57,345** | **1,870** | **7,101** | **107,365** | **6,222** | **65** | **182** | **231** | **125** |
| **2007 Total** | **1,045,141** | **15,327** | **63,086** | **2,594** | **5,685** | **109,431** | **6,841** | **61** | **186** | **237** | **124** |
| **2008** January | 94,459 | 1,596 | 3,263 | 344 | 486 | 7,631 | 531 | 5 | 16 | 21 | 11 |
| February | 86,626 | 1,182 | 2,629 | 259 | 449 | 6,315 | 439 | 5 | 15 | 20 | 11 |
| March | 83,215 | 925 | 2,323 | 245 | 374 | 5,363 | 461 | 6 | 15 | 23 | 11 |
| April | 76,753 | 925 | 2,635 | 189 | 409 | 5,791 | 470 | 5 | 13 | 21 | 10 |
| May | 81,056 | 928 | 2,817 | 191 | 385 | 5,863 | 475 | 6 | 13 | 21 | 11 |
| June | 89,347 | 1,339 | 4,726 | 228 | 472 | 8,652 | 665 | 6 | 14 | 22 | 11 |
| July | 98,032 | 986 | 3,890 | 190 | 424 | 7,186 | 782 | 6 | 16 | 23 | 11 |
| August | 95,590 | 873 | 3,271 | 172 | 445 | 6,541 | 763 | 6 | 16 | 22 | 11 |
| September | 85,376 | 866 | 3,931 | 175 | 421 | 7,075 | 603 | 4 | 15 | 21 | 10 |
| October | 79,982 | 764 | 2,369 | 161 | 444 | 5,513 | 545 | 5 | 14 | 21 | 10 |
| November | 80,883 | 836 | 2,646 | 205 | 405 | 5,710 | 458 | 4 | 15 | 21 | 10 |
| December | 89,259 | 1,327 | 3,742 | 312 | 407 | 7,415 | 476 | 4 | 16 | 22 | 11 |
| **Total** | **1,040,580** | **12,547** | **38,241** | **2,670** | **5,119** | **79,056** | **6,668** | **61** | **177** | **258** | **128** |
| **2009** January | 90,921 | 1,798 | 5,897 | 447 | 406 | 10,173 | 485 | 4 | 16 | 20 | 10 |
| February | 74,503 | 1,105 | 2,363 | 292 | 373 | 5,627 | 452 | 4 | 14 | 19 | 9 |
| March | 72,141 | 1,220 | 1,997 | 245 | 471 | 5,817 | 500 | 4 | 13 | 24 | 10 |
| April | 67,199 | 765 | 1,691 | 180 | 413 | 4,702 | 456 | 4 | 12 | 21 | 10 |
| May | 70,534 | 1,009 | 2,225 | 218 | 415 | 5,527 | 521 | 5 | 13 | 21 | 11 |
| June | 79,128 | 952 | 2,397 | 150 | 414 | 5,567 | 649 | 5 | 15 | 22 | 11 |
| July | 84,491 | 898 | 2,580 | 171 | 426 | 5,780 | 780 | 5 | 15 | 22 | 11 |
| August | 86,852 | 966 | 3,037 | 192 | 418 | 6,284 | 841 | 5 | 16 | 22 | 11 |
| September | 73,887 | 757 | 1,894 | 167 | 409 | 4,865 | 689 | 5 | 13 | 20 | 10 |
| October | 75,002 | 866 | 2,127 | 189 | 257 | 4,468 | 536 | 5 | 13 | 20 | 10 |
| November | 73,397 | 773 | 1,267 | 178 | 255 | 3,493 | 459 | 5 | 14 | 20 | 10 |
| December | 88,481 | 1,004 | 1,263 | 196 | 343 | 4,180 | 521 | 5 | 17 | 22 | 11 |
| **Total** | **936,536** | **12,115** | **28,738** | **2,622** | **4,602** | **66,483** | **6,888** | **56** | **173** | **253** | **126** |
| **2010** January | 90,587 | 2,499 | 2,862 | 245 | 422 | 7,718 | 543 | 5 | 17 | 20 | 10 |

[a] Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and coal synfuel.
[b] Fuel oil nos. 1, 2, and 4. Through 2000, electric utility data also include small amounts of kerosene and jet fuel.
[c] Fuel oil nos. 5 and 6. Through 2000, electric utility data also include a small amount of fuel oil no. 4.
[d] Jet fuel, kerosene, other petroleum liquids, and waste oil.
[e] Petroleum coke is converted from short tons to barrels by multiplying by 5.
[f] Natural gas, plus a small amount of supplemental gaseous fuels.
[g] Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.
[h] Wood and wood-derived fuels.
[i] Municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass. Through 2000, also includes non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).
[j] Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, miscellaneous technologies, and, beginning in 2001, non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).
[k] Through 1988, data are for electric utilities only. Beginning in 1989, data are for electric utilities and independent power producers.

R=Revised. NA=Not available. (s)=Less than 0.5 trillion Btu.

Notes: • Data are for fuels consumed to produce electricity and useful thermal output. • The electric power sector comprises electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/elect.html for all available data beginning in 1973.

Sources: See end of section.

# Table 7.4c Consumption of Selected Combustible Fuels for Electricity Generation and Useful Thermal Output: Commercial and Industrial Sectors (Subset of Table 7.4a)

| | Commercial Sector[a] | | | | Industrial Sector[b] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Biomass | | | | | Biomass | | |
| | Coal[c] | Petroleum[d] | Natural Gas[e] | Waste[f] | Coal[c] | Petroleum[d] | Natural Gas[e] | Other Gases[g] | Wood[h] | Waste[f] | Other[i] |
| | Thousand Short Tons | Thousand Barrels | Billion Cubic Feet | Trillion Btu | Thousand Short Tons | Thousand Barrels | Billion Cubic Feet | Trillion Btu | | | |
| **1989 Total** | **1,125** | **1,967** | **30** | **22** | **24,867** | **25,444** | **914** | **195** | **926** | **35** | **85** |
| **1990 Total** | **1,191** | **2,056** | **46** | **28** | **27,781** | **36,159** | **1,055** | **275** | **1,125** | **41** | **86** |
| **1995 Total** | **1,419** | **1,245** | **78** | **40** | **29,363** | **34,448** | **1,258** | **290** | **1,255** | **38** | **95** |
| **1996 Total** | **1,660** | **1,246** | **82** | **53** | **29,434** | **38,661** | **1,289** | **325** | **1,249** | **39** | **89** |
| **1997 Total** | **1,738** | **1,584** | **87** | **58** | **29,853** | **37,265** | **1,282** | **283** | **1,259** | **41** | **102** |
| **1998 Total** | **1,443** | **1,807** | **87** | **54** | **28,553** | **38,910** | **1,355** | **305** | **1,211** | **42** | **93** |
| **1999 Total** | **1,490** | **1,613** | **84** | **54** | **27,763** | **37,312** | **1,401** | **331** | **1,213** | **31** | **99** |
| **2000 Total** | **1,547** | **1,615** | **85** | **47** | **28,031** | **30,520** | **1,386** | **331** | **1,244** | **35** | **108** |
| **2001 Total** | **1,448** | **1,832** | **79** | **25** | **25,755** | **26,817** | **1,310** | **248** | **1,054** | **27** | **101** |
| **2002 Total** | **1,405** | **1,250** | **74** | **26** | **26,232** | **25,163** | **1,240** | **245** | **1,136** | **34** | **92** |
| **2003 Total** | **1,816** | **1,449** | **58** | **29** | **24,846** | **26,212** | **1,144** | **253** | **1,097** | **34** | **103** |
| **2004 Total** | **1,917** | **2,009** | **72** | **34** | **26,613** | **28,857** | **1,191** | **295** | **1,193** | **24** | **94** |
| **2005 Total** | **1,922** | **1,630** | **68** | **34** | **25,875** | **27,380** | **1,084** | **264** | **1,166** | **34** | **94** |
| **2006 Total** | **1,886** | **935** | **68** | **36** | **25,262** | **22,706** | **1,115** | **277** | **1,216** | **33** | **102** |
| **2007 Total** | **1,927** | **752** | **70** | **31** | **22,537** | **22,207** | **1,050** | **268** | **1,148** | **36** | **98** |
| **2008** January | 197 | 108 | 6 | 3 | 1,954 | 1,494 | 87 | 26 | 112 | 3 | 5 |
| February | 181 | 71 | 6 | 3 | 1,850 | 1,175 | 78 | 27 | 92 | 4 | 5 |
| March | 176 | 35 | 6 | 3 | 1,879 | 1,136 | 80 | 21 | 92 | 4 | 5 |
| April | 144 | 26 | 5 | 3 | 1,803 | 992 | 75 | 19 | 93 | 3 | 5 |
| May | 145 | 20 | 4 | 3 | 1,857 | 1,004 | 79 | 20 | 92 | 2 | 6 |
| June | 177 | 60 | 5 | 3 | 1,772 | 1,048 | 80 | 20 | 88 | 2 | 6 |
| July | 169 | 93 | 6 | 3 | 1,871 | 978 | 88 | 21 | 90 | 2 | 6 |
| August | 168 | 36 | 6 | 3 | 1,841 | 1,008 | 89 | 21 | 88 | 2 | 6 |
| September | 155 | 22 | 6 | 3 | 1,783 | 1,001 | 71 | 18 | 84 | 2 | 5 |
| October | 150 | 29 | 5 | 3 | 1,787 | 991 | 80 | 17 | 88 | 3 | 4 |
| November | 166 | 51 | 5 | 3 | 1,721 | 981 | 74 | 15 | 86 | 4 | 4 |
| December | 195 | 118 | 6 | 3 | 1,784 | 1,412 | 75 | 15 | 78 | 4 | 4 |
| **Total** | **2,021** | **671** | **66** | **34** | **21,902** | **13,222** | **955** | **239** | **1,084** | **35** | **60** |
| **2009** January | 196 | 116 | 6 | 3 | 1,762 | 1,424 | 80 | 16 | 83 | 3 | 2 |
| February | 172 | 48 | 5 | 2 | 1,662 | 1,208 | 72 | 16 | 77 | 2 | 3 |
| March | 164 | 47 | 6 | 4 | 1,738 | 987 | 80 | 16 | 81 | 4 | 3 |
| April | 129 | 40 | 5 | 3 | 1,514 | 937 | 77 | 15 | 78 | 3 | 3 |
| May | 124 | 49 | 5 | 3 | 1,564 | 1,125 | 77 | 15 | 79 | 3 | 4 |
| June | 136 | 43 | 5 | 3 | 1,606 | 872 | 79 | 15 | 79 | 3 | 3 |
| July | 137 | 45 | 5 | 3 | 1,696 | 908 | 82 | 18 | 89 | 3 | 4 |
| August | 142 | 58 | 5 | 3 | 1,660 | 962 | 83 | 19 | 93 | 3 | 4 |
| September | 131 | 44 | 5 | 3 | 1,574 | 906 | 81 | 19 | 86 | 3 | 3 |
| October | 134 | 42 | 5 | 2 | 1,611 | 933 | 82 | 17 | 91 | 3 | 3 |
| November | 152 | 35 | 5 | 3 | 1,551 | 948 | 82 | 16 | 88 | 3 | 4 |
| December | 173 | 47 | 6 | 3 | 1,722 | 1,010 | 89 | 18 | 89 | 3 | 3 |
| **Total** | **1,790** | **617** | **63** | **34** | **19,660** | **12,219** | **964** | **201** | **1,013** | **34** | **39** |
| **2010** January | 193 | 49 | 6 | 3 | 2,036 | 1,010 | 88 | 18 | 88 | 3 | 3 |

[a] Commercial combined-heat-and-power (CHP) and commercial electricity-only plants.
[b] Industrial combined-heat-and-power (CHP) and industrial electricity-only plants.
[c] Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and coal synfuel.
[d] Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other petroleum, and waste oil.
[e] Natural gas, plus a small amount of supplemental gaseous fuels.
[f] Municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass. Through 2000, also includes non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).
[g] Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.
[h] Wood and wood-derived fuels.
[i] Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, miscellaneous technologies, and, beginning in 2001, non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

R=Revised.

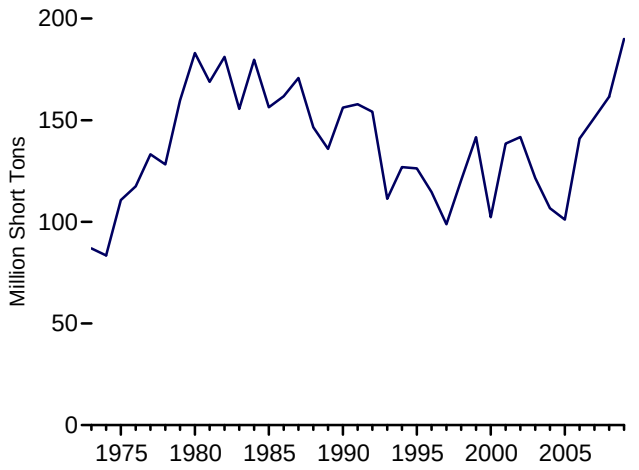
Notes: • Data are for fuels consumed to produce electricity and useful thermal output. Through 1988, data are not available. • See Note, "Classification of Power Plants Into Energy-Use Sectors," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/elect.html for all available data beginning in 1989.

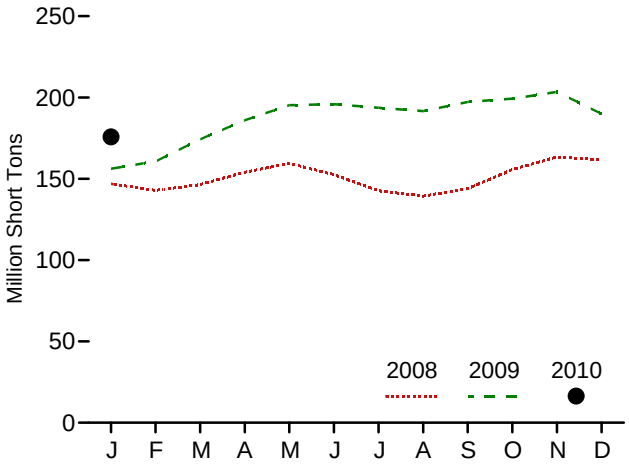
Sources: • **1989-1997:** U.S. Energy Information Administration (EIA), Form EIA-867, "Annual Nonutility Power Producer Report." • **1998-2000:** EIA, Form EIA-860B, "Annual Electric Generator Report—Nonutility." • **2001-2003:** EIA, Form EIA-906, "Power Plant Report." • **2004-2007:** EIA, Form EIA-906, "Power Plant Report," and Form EIA-920, "Combined Heat and Power Plant Report." • **2008 forward:** EIA, Form EIA-923, "Power Plant Operations Report."

## Figure 7.5 Stocks of Coal and Petroleum: Electric Power Sector

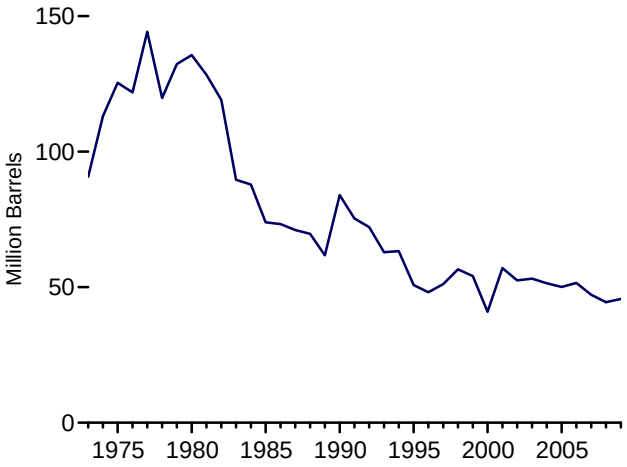
Coal, 1973-2009



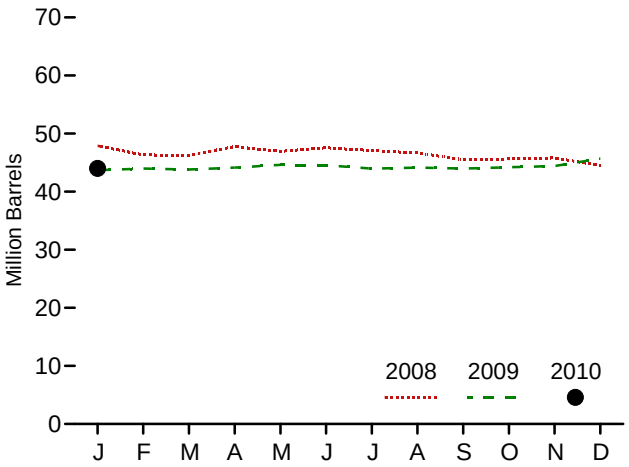

Coal, Monthly



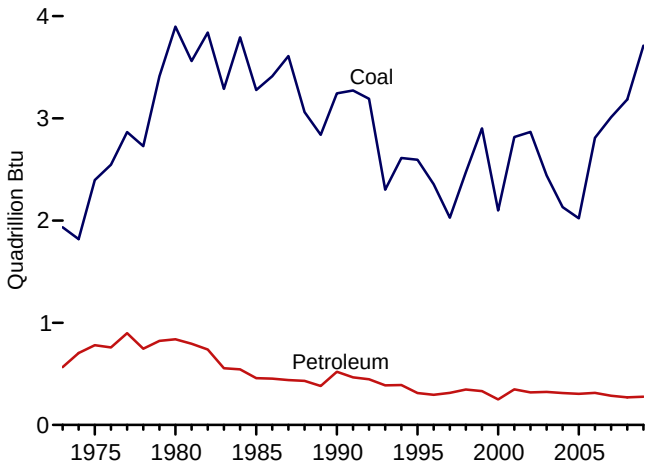

Total Petroleum, 1973-2009



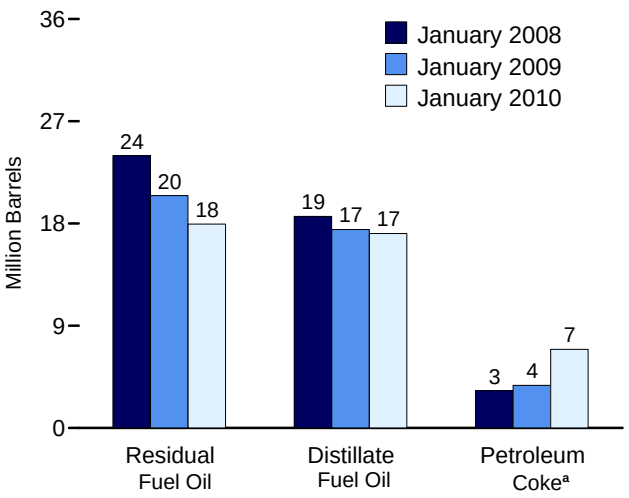

Total Petroleum, Monthly




Coal and Petroleum Stocks, 1973-2009




Petroleum by Major Type, End of Month




[a]Converted from short tons to barrels by multiplying by five.
Web Page: http://www.eia.doe.gov/emeu/mer/elect.html.
Sources: Tables 7.5, A1, and A5 (column 6).

# Table 7.5 Stocks of Coal and Petroleum: Electric Power Sector

| | Coal[a] | Petroleum | | | | |
|---|---|---|---|---|---|---|
| | | Distillate Fuel Oil[b] | Residual Fuel Oil[c] | Other Liquids[d] | Petroleum Coke[e] | Total[e] |
| | Thousand Short Tons | Thousand Barrels | | | Thousand Short Tons | Thousand Barrels |
| **1973 Year** | **86,967** | **10,095** | **79,121** | **NA** | **312** | **90,776** |
| **1975 Year** | **110,724** | **16,432** | **108,825** | **NA** | **31** | **125,413** |
| **1980 Year** | **183,010** | **30,023** | **105,351** | **NA** | **52** | **135,635** |
| **1985 Year** | **156,376** | **16,386** | **57,304** | **NA** | **49** | **73,933** |
| **1990 Year** | **156,166** | **16,471** | **67,030** | **NA** | **94** | **83,970** |
| **1995 Year** | **126,304** | **15,392** | **35,102** | **NA** | **65** | **50,821** |
| **1996 Year** | **114,623** | **15,216** | **32,473** | **NA** | **91** | **48,146** |
| **1997 Year** | **98,826** | **15,456** | **33,336** | **NA** | **469** | **51,138** |
| **1998 Year** | **120,501** | **16,343** | **37,451** | **NA** | **559** | **56,591** |
| **1999 Year**[f] | **141,604** | **17,995** | **34,256** | **NA** | **372** | **54,109** |
| **2000 Year** | **102,296** | **15,127** | **24,748** | **NA** | **211** | **40,932** |
| **2001 Year** | **138,496** | **20,486** | **34,594** | **NA** | **390** | **57,031** |
| **2002 Year** | **141,714** | **17,413** | **25,723** | **800** | **1,711** | **52,490** |
| **2003 Year** | **121,567** | **19,153** | **25,820** | **779** | **1,484** | **53,170** |
| **2004 Year** | **106,669** | **19,275** | **26,596** | **879** | **937** | **51,434** |
| **2005 Year** | **101,137** | **18,778** | **27,624** | **1,012** | **530** | **50,062** |
| **2006 Year** | **140,964** | **18,013** | **28,823** | **1,380** | **674** | **51,583** |
| **2007 Year** | **151,221** | **18,395** | **24,136** | **1,902** | **554** | **47,203** |
| **2008** January | 146,973 | 18,633 | 23,972 | 1,997 | 656 | 47,884 |
| February | 142,782 | 18,307 | 23,301 | 1,859 | 573 | 46,334 |
| March | 146,497 | 18,091 | 22,807 | 2,062 | 662 | 46,271 |
| April | 154,029 | 17,888 | 24,164 | 2,083 | 722 | 47,743 |
| May | 159,408 | 17,824 | 23,228 | 2,087 | 758 | 46,927 |
| June | 152,542 | 17,880 | 23,963 | 2,106 | 723 | 47,562 |
| July | 142,572 | 17,911 | 23,175 | 2,111 | 776 | 47,075 |
| August | 139,352 | 17,909 | 23,078 | 2,126 | 712 | 46,671 |
| September | 143,903 | 17,830 | 22,081 | 2,129 | 689 | 45,483 |
| October | 155,659 | 17,911 | 22,112 | 2,197 | 683 | 45,634 |
| November | 163,390 | 18,241 | 21,488 | 2,198 | 777 | 45,811 |
| **December** | **161,589** | **17,761** | **21,088** | **1,955** | **739** | **44,498** |
| **2009** January | 156,194 | 17,470 | 20,452 | 2,043 | 749 | 43,713 |
| February | 160,741 | 17,204 | 21,083 | 2,038 | 733 | 43,988 |
| March | 174,264 | 17,134 | 21,087 | 2,038 | 712 | 43,821 |
| April | 185,989 | 17,794 | 20,796 | 2,043 | 701 | 44,137 |
| May | 195,288 | 17,697 | 20,919 | 2,080 | 786 | 44,624 |
| June | 195,887 | 17,621 | 21,046 | 2,101 | 757 | 44,554 |
| July | 193,702 | 17,692 | 20,588 | 2,091 | 722 | 43,981 |
| August | 191,611 | 17,759 | 19,928 | 2,075 | 876 | 44,140 |
| September | 197,167 | 17,858 | 19,212 | 2,081 | 965 | 43,978 |
| October | 199,238 | 17,695 | 18,669 | 2,074 | 1,152 | 44,197 |
| November | 203,409 | 17,595 | 18,509 | 2,062 | 1,252 | 44,424 |
| **December** | **189,971** | **17,804** | **18,846** | **2,049** | **1,395** | **45,675** |
| **2010** January | 175,815 | 17,115 | 17,953 | 2,018 | 1,384 | 44,006 |

[a] Anthracite, bituminous coal, subbituminous coal, and lignite.

[b] Fuel oil nos. 1, 2 and 4. For 1973-1979, data are for gas turbine and internal combustion plant stocks of petroleum. For 1980-2000, electric utility data also include small amounts of kerosene and jet fuel.

[c] Fuel oil nos. 5 and 6. For 1973-1979, data are for steam plant stocks of petroleum. For 1980-2000, electric utility data also include a small amount of fuel oil no. 4.

[d] Jet fuel and kerosene. Through 2003, data also include a small amount of waste oil.

[e] Petroleum coke is converted from short tons to barrels by multiplying by 5.

[f] Through 1998, data are for electric utilities only. Beginning in 1999, data are for electric utilities and independent power producers.

R=Revised. NA=Not available.

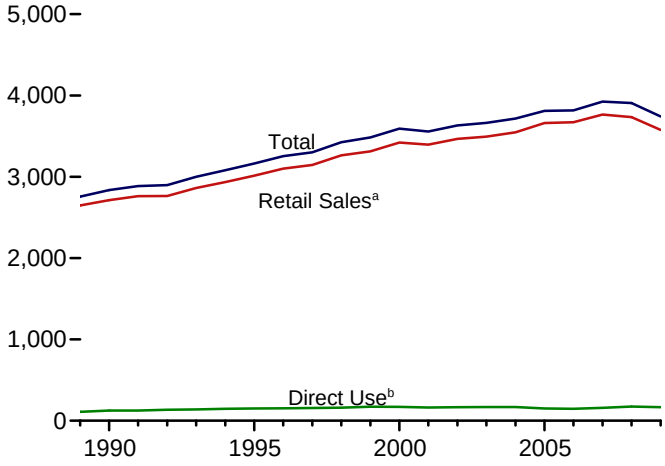
Notes: • The electric power sector comprises electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public. • Stocks are at end of period. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/elect.html for all available data beginning in 1973.

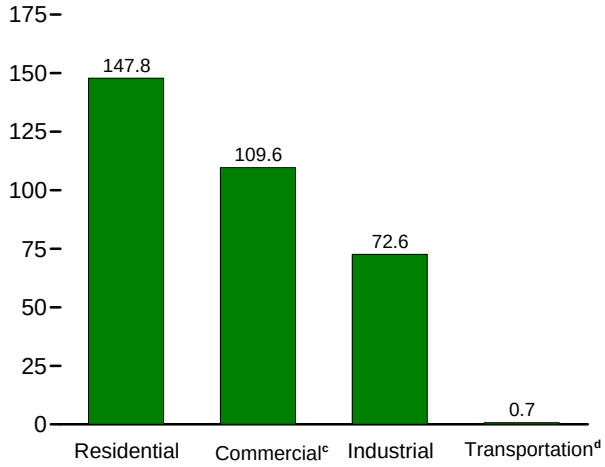
Sources: • **1973-September 1977:** Federal Power Commission, Form FPC-4, "Monthly Power Plant Report." • **October 1977-1981:** Federal Energy Regulatory Commission, Form FPC-4, "Monthly Power Plant Report." • **1982-1988:** U.S. Energy Information Administration (EIA), Form EIA-759, "Monthly Power Plant Report." • **1989-1997:** EIA, Form EIA-759, "Monthly Power Plant Report," and Form EIA-867, "Annual Nonutility Power Producer Report." • **1998-2000:** EIA, Form EIA-759, "Monthly Power Plant Report," and Form EIA-860B, "Annual Electric Generator Report—Nonutility." • **2001-2003:** Form EIA-906, "Power Plant Report"; • **2004-2007:** EIA, Form EIA-906, "Power Plant Report," and Form EIA-920, "Combined Heat and Power Plant Report." • **2008 forward:** EIA, Form EIA-923, "Power Plant Operations Report."

## Figure 7.6 Electricity End Use
(Billion Kilowatthours)

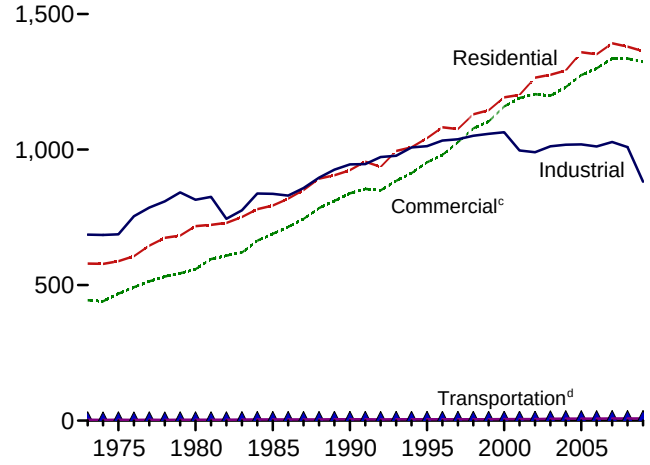
Electricity End Use Overview, 1989-2009



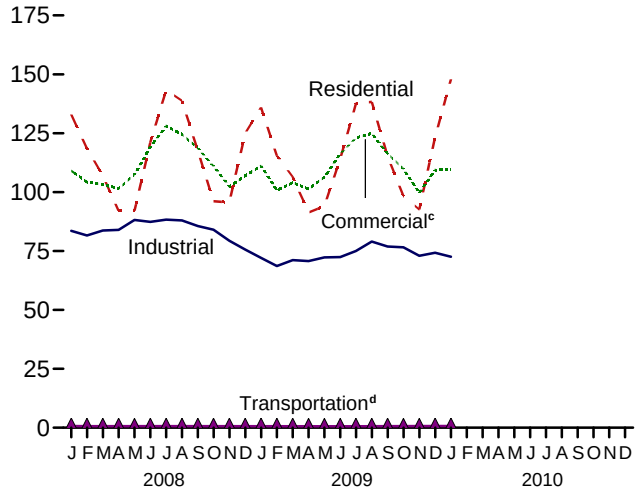

Retail Sales[a] by Sector, January 2010



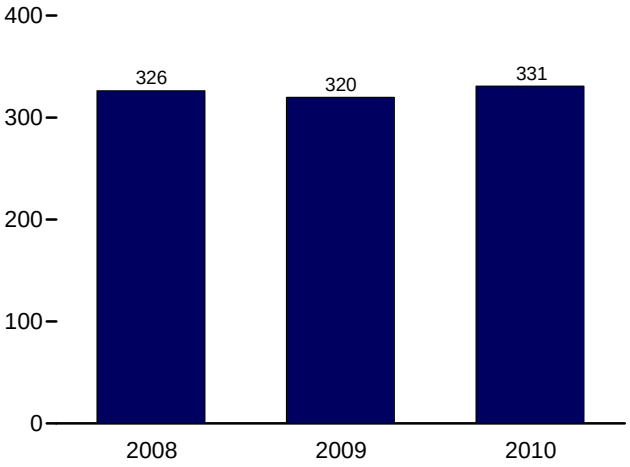

Retail Sales[a] by Sector, 1973-2009



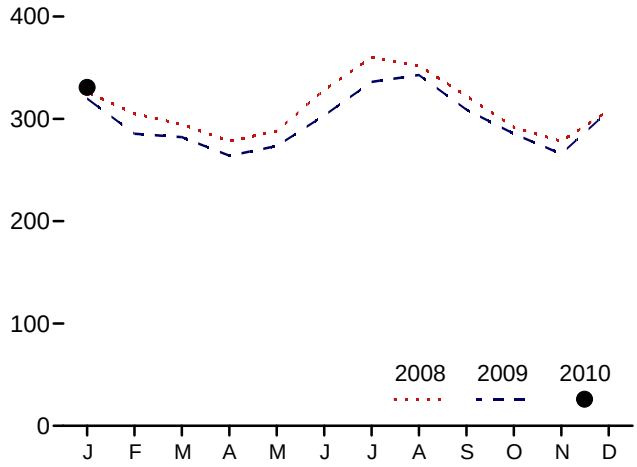

Retail Sales[a] by Sector, Monthly




Retail Sales[a] Total, January




Retail Sales[a] Total, Monthly




[a]Electricity retail sales to ultimate customers reported by electric utilities and other energy service providers.
[b]See "Direct Use" in Glossary.
[c]Commercial sector, including public street and highway lighting, interdepartmental sales, and other sales to public authorities.
[d]Transportation sector, including sales to railroads and railways.
Web Page: http://www.eia.doe.gov/emeu/mer/elect.html.
Source: Table 7.6.

# Table 7.6 Electricity End Use

(Million Kilowatthours)

| | Retail Sales[a] | | | | | | | Discontinued Retail Sales Series | |
|---|---|---|---|---|---|---|---|---|---|
| | Residential | Commercial[b] | Industrial[c] | Transportation[d] | Total Retail Sales[e] | Direct Use[f] | Total End Use[g] | *Commercial (Old)* [h] | *Other (Old)* [i] |
| **1973 Total** | **579,231** | [E] **444,505** | **686,085** | [E] **3,087** | **1,712,909** | **NA** | **1,712,909** | ***388,266*** | ***59,326*** |
| **1975 Total** | **588,140** | [E] **468,296** | **687,680** | [E] **2,974** | **1,747,091** | **NA** | **1,747,091** | ***403,049*** | ***68,222*** |
| **1980 Total** | **717,495** | **558,643** | **815,067** | **3,244** | **2,094,449** | **NA** | **2,094,449** | ***488,155*** | ***73,732*** |
| **1985 Total** | **793,934** | **689,121** | **836,772** | **4,147** | **2,323,974** | **NA** | **2,323,974** | ***605,989*** | ***87,279*** |
| **1990 Total** | **924,019** | **838,263** | **945,522** | **4,751** | **2,712,555** | **124,529** | **2,837,084** | ***751,027*** | ***91,988*** |
| **1995 Total** | **1,042,501** | **953,117** | **1,012,693** | **4,975** | **3,013,287** | **150,677** | **3,163,963** | ***862,685*** | ***95,407*** |
| **1996 Total** | **1,082,512** | **980,061** | **1,033,631** | **4,923** | **3,101,127** | **152,638** | **3,253,765** | ***887,445*** | ***97,539*** |
| **1997 Total** | **1,075,880** | **1,026,626** | **1,038,197** | **4,907** | **3,145,610** | **156,239** | **3,301,849** | ***928,633*** | ***102,901*** |
| **1998 Total** | **1,130,109** | **1,077,957** | **1,051,203** | **4,962** | **3,264,231** | **160,866** | **3,425,097** | ***979,401*** | ***103,518*** |
| **1999 Total** | **1,144,923** | **1,103,821** | **1,058,217** | **5,126** | **3,312,087** | **171,629** | **3,483,716** | ***1,001,996*** | ***106,952*** |
| **2000 Total** | **1,192,446** | **1,159,347** | **1,064,239** | **5,382** | **3,421,414** | **170,943** | **3,592,357** | ***1,055,232*** | ***109,496*** |
| **2001 Total** | **1,201,607** | **1,190,518** | **996,609** | **5,724** | **3,394,458** | **162,649** | **3,557,107** | ***1,083,069*** | ***113,174*** |
| **2002 Total** | **1,265,180** | **1,204,531** | **990,238** | **5,517** | **3,465,466** | **166,184** | **3,631,650** | ***1,104,497*** | ***105,552*** |
| **2003 Total** | **1,275,824** | **1,198,728** | **1,012,373** | **6,810** | **3,493,734** | **168,295** | **3,662,029** | **– –** | **– –** |
| **2004 Total** | **1,291,982** | **1,230,425** | **1,017,850** | **7,224** | **3,547,479** | **168,470** | **3,715,949** | **– –** | **– –** |
| **2005 Total** | **1,359,227** | **1,275,079** | **1,019,156** | **7,506** | **3,660,969** | **150,016** | **3,810,984** | **– –** | **– –** |
| **2006 Total** | **1,351,520** | **1,299,744** | **1,011,298** | **7,358** | **3,669,919** | **146,927** | **3,816,845** | **– –** | **– –** |
| **2007 Total** | **1,392,241** | **1,336,315** | **1,027,832** | **8,173** | **3,764,561** | **159,254** | **3,923,814** | **– –** | **– –** |
| **2008** January | 132,938 | 109,028 | 83,582 | 714 | 326,263 | [RE] 15,743 | [R] 342,006 | – – | – – |
| February | 118,471 | 104,288 | 81,603 | 658 | 305,021 | [RE] 14,131 | [R] 319,151 | – – | – – |
| March | 107,057 | 103,239 | 83,714 | 638 | 294,647 | [RE] 14,616 | [R] 309,264 | – – | – – |
| April | 91,977 | 101,502 | 83,999 | 617 | 278,095 | [RE] 13,950 | [R] 292,044 | – – | – – |
| May | 92,018 | 107,379 | 88,166 | 598 | 288,162 | [RE] 14,388 | [R] 302,550 | – – | – – |
| June | 121,137 | 119,063 | 87,345 | 625 | 328,170 | [RE] 14,948 | [R] 343,118 | – – | – – |
| July | 143,269 | 128,028 | 88,310 | 653 | 360,261 | [RE] 16,246 | [R] 376,507 | – – | – – |
| August | 138,765 | 124,496 | 87,990 | 647 | 351,898 | [RE] 15,998 | [R] 367,896 | – – | – – |
| September | 117,589 | 118,677 | 85,565 | 626 | 322,457 | [RE] 13,199 | [R] 335,655 | – – | – – |
| October | 96,093 | 110,988 | 84,032 | 635 | 291,748 | [RE] 14,088 | [R] 305,836 | – – | – – |
| November | 95,665 | 102,384 | 79,373 | 615 | 278,037 | [RE] 12,947 | [R] 290,984 | – – | – – |
| December | 125,003 | 106,909 | 75,619 | 672 | 308,203 | [RE] 13,228 | [R] 321,431 | – – | – – |
| **Total** | **1,379,981** | **1,335,981** | **1,009,300** | **7,700** | **3,732,962** | [R] **173,481** | [R] **3,906,443** | **– –** | **– –** |
| **2009** January | 135,904 | 111,126 | 72,088 | 746 | 319,865 | [RE] 13,757 | [R] 333,622 | – – | – – |
| February | 115,432 | 100,772 | 68,603 | 655 | 285,461 | [RE] 12,777 | [R] 298,239 | – – | – – |
| March | 106,467 | 104,015 | 71,105 | 664 | 282,252 | [RE] 13,718 | [R] 295,969 | – – | – – |
| April | 91,395 | 101,302 | 70,730 | 604 | 264,032 | [RE] 12,882 | [R] 276,914 | – – | – – |
| May | 94,084 | 106,401 | 72,267 | 587 | 273,340 | [RE] 13,053 | [R] 286,393 | – – | – – |
| June | 114,178 | 116,139 | 72,425 | 605 | 303,347 | [RE] 13,769 | [R] 317,115 | – – | – – |
| July | 137,467 | 123,010 | 75,032 | 656 | 336,166 | [RE] 14,628 | [R] 350,794 | – – | – – |
| August | 138,290 | 124,975 | 79,016 | 633 | 342,915 | [RE] 15,016 | [R] 357,932 | – – | – – |
| September | 115,217 | 116,315 | 76,884 | 636 | 309,051 | [RE] 13,976 | [R] 323,027 | – – | – – |
| October | 98,399 | 109,895 | 76,556 | 603 | 285,452 | [RE] 14,016 | [R] 299,468 | – – | – – |
| November | 92,614 | 99,669 | 72,945 | 597 | 265,825 | [RE] 13,791 | [R] 279,616 | – – | – – |
| December | 123,423 | 109,370 | 74,252 | 701 | 307,745 | [RE] 14,651 | [R] 322,396 | – – | – – |
| **Total** | **1,362,869** | **1,322,989** | **881,903** | **7,689** | **3,575,450** | [RE] **166,034** | [R] **3,741,484** | **– –** | **– –** |
| **2010** January | 147,849 | 109,639 | 72,584 | 732 | 330,804 | [E] 15,213 | 346,017 | – – | – – |

[a] Electricity retail sales to ultimate customers reported by electric utilities and, beginning in 1996, other energy service providers.

[b] Commercial sector, including public street and highway lighting, interdepartmental sales, and other sales to public authorities.

[c] Industrial sector. Through 2002, excludes agriculture and irrigation; beginning in 2003, includes agriculture and irrigation.

[d] Transportation sector, including sales to railroads and railways.

[e] The sum of "Residential," "Commercial," "Industrial," and "Transportation."

[f] Use of electricity that is 1) self-generated, 2) produced by either the same entity that consumes the power or an affiliate, and 3) used in direct support of a service or industrial process located within the same facility or group of facilities that house the generating equipment. Direct use is exclusive of station use.

[g] The sum of "Total Retail Sales" and "Direct Use."

[h] "Commercial (Old)" is a discontinued series—data are for the commercial sector, excluding public street and highway lighting, interdepartmental sales, and other sales to public authorities.

[i] "Other (Old)" is a discontinued series—data are for public street and highway lighting, interdepartmental sales, other sales to public authorities, agriculture and irrigation, and transportation including railroads and railways.

R=Revised. E=Estimate. NA=Not available. – – =Not applicable.

Notes: • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/elect.html for all available data beginning in 1973.

Sources: See end of section.

# Electricity

**Note. Classification of Power Plants Into Energy-Use Sectors.** The U.S. Energy Information Administration (EIA) classifies power plants (both electricity-only and combined-heat-and-power plants) into energy-use sectors based on the North American Industry Classification System (NAICS), which replaced the Standard Industrial Classification (SIC) system in 1997. Plants with a NAICS code of 22 are assigned to the Electric Power Sector. Those with NAICS codes beginning with 11 (agriculture, forestry, fishing, and hunting); 21 (mining, including oil and gas extraction); 23 (construction); 31–33 (manufacturing); 2212 (natural gas distribution); and 22131 (water supply and irrigation systems) are assigned to the Industrial Sector. Those with all other codes are assigned to the Commercial Sector. Form EIA-860, "Annual Electric Generator Report," asks respondents to indicate the primary purpose of the facility by assigning a NAICS code from the list at:
http://www.eia.doe.gov/cneaf/electricity/forms/eia860/eia860.doc.

## Table 7.1 Sources

### Net Generation, Electric Power Sector
Table 7.2b.

### Net Generation, Commercial and Industrial Sectors
Table 7.2c.

### Imports and Exports, Electricity Trade With Canada and Mexico, 1973–1989
1973–September 1977: Unpublished Federal Power Commission data.
October 1977–1980: Unpublished Economic Regulatory Administration (ERA) data.
1981: U.S. Department of Energy (DOE), Office of Energy Emergency Operations, "Report on Electric Energy Exchanges with Canada and Mexico for Calendar Year 1981," April 1982 (revised June 1982).
1982 and 1983: DOE, ERA, *Electricity Exchanges Across International Borders*.
1984–1986: DOE, ERA, *Electricity Transactions Across International Borders*.
1987 and 1988: DOE, ERA, Form ERA-781R, "Annual Report of International Electrical Export/Import Data."
1989: DOE, Fossil Energy, Form FE-781R, "Annual Report of International Electrical Export/Import Data."

### Imports and Exports, Electricity Trade with Canada, 1990 Forward
National Energy Board of Canada, data for total sales (firm and interruptible; which exclude non-revenue, inadvertent, and service) from Canada to the United States, and data for total purchases (which exclude non-revenue, inadvertent, and service) by Canada from the United States.

### Imports and Exports, Electricity Trade with Mexico, 1990 Forward
DOE, Fossil Energy, Office of Fuels Programs, Form FE-781R, "Annual Report of International Electrical Export/Import Data." For 2001 forward, data from the California Independent System Operator were used in combination with the Form FE-781R values to estimate electricity trade with Mexico.

### T&D Losses and Unaccounted for
Calculated as the sum of total net generation and imports minus end use and exports.

### End Use
Table 7.6.

## Table 7.2b Sources

1973–September 1977: Federal Power Commission, Form FPC-4, "Monthly Power Plant Report."
October 1977–1981: Federal Energy Regulatory Commission, Form FPC-4, "Monthly Power Plant Report."
1982–1988: U.S. Energy Information Administration (EIA), Form EIA-759, "Monthly Power Plant Report."
1989–1997: EIA, Form EIA-759, "Monthly Power Plant Report," and Form EIA-867, "Annual Nonutility Power Producer Report."
1998–2000: EIA, Form EIA-759, "Monthly Power Plant Report," and Form EIA-860B, "Annual Electric Generator Report–Nonutility."
2001–2003: EIA, Form EIA-906, "Power Plant Report."
2004–2007: EIA, Form EIA-906, "Power Plant Report," and Form EIA-920, "Combined Heat and Power Plant Report."
2008 forward: EIA, Form EIA-923, "Power Plant Operations Report."

## Table 7.2c Sources

### Industrial Sector, Hydroelectric Power, 1973–1988
1973–September 1977: Federal Power Commission (FPC), Form FPC-4, "Monthly Power Plant Report," for plants with generating capacity exceeding 10 megawatts, and FPC, Form FPC-12C, "Industrial Electric Generating Capacity," for all other plants.
October 1977–1978: Federal Energy Regulatory Commission (FERC), Form FPC-4, "Monthly Power Plant Report," for plants with generating capacity exceeding 10 megawatts, and FERC, Form FPC-12C, "Industrial Electric Generating Capacity," for all other plants.
1979: FERC, Form FPC-4, "Monthly Power Plant Report," for plants with generating capacity exceeding 10 megawatts, and U.S. Energy Information Administration (EIA) estimates for all other plants.

1980–1988: Estimated by EIA as the average generation over the 6-year period of 1974–1979.

**All Data, 1989 Forward**
1989–1997: EIA, Form EIA-867, "Annual Nonutility Power Producer Report."
1998–2000: EIA, Form EIA-860B, "Annual Electric Generator Report—Nonutility."
2001–2003: EIA, Form EIA-906, "Power Plant Report."
2004–2007: EIA, Form EIA-906, "Power Plant Report," and Form EIA-920, "Combined Heat and Power Plant Report."
2008 forward: EIA, Form EIA-923, "Power Plant Operations Report."

## Table 7.3b Sources

1973–September 1977: Federal Power Commission, Form FPC-4, "Monthly Power Plant Report."
October 1977–1981: Federal Energy Regulatory Commission, Form FPC-4, "Monthly Power Plant Report."
1982–1988: U.S. Energy Information Administration (EIA), Form EIA-759, "Monthly Power Plant Report."
1989–1997: EIA, Form EIA-759, "Monthly Power Plant Report," and Form EIA-867, "Annual Nonutility Power Producer Report."
1998–2000: EIA, Form EIA-759, "Monthly Power Plant Report," and Form EIA-860B, "Annual Electric Generator Report–Nonutility."
2001–2003: EIA, Form EIA-906, "Power Plant Report."
2004–2007: EIA, Form EIA-906, "Power Plant Report," and Form EIA-920, "Combined Heat and Power Plant Report."
2008 forward: EIA, Form EIA-923, "Power Plant Operations Report."

## Table 7.4b Sources

1973–September 1977: Federal Power Commission, Form FPC-4, "Monthly Power Plant Report."
October 1977–1981: Federal Energy Regulatory Commission, Form FPC-4, "Monthly Power Plant Report."
1982–1988: U.S. Energy Information Administration (EIA), Form EIA-759, "Monthly Power Plant Report."
1989–1997: EIA, Form EIA-759, "Monthly Power Plant Report," and Form EIA-867, "Annual Nonutility Power Producer Report."
1998–2000: EIA, Form EIA-759, "Monthly Power Plant Report," and Form EIA-860B, "Annual Electric Generator Report–Nonutility."
2001–2003: EIA, Form EIA-906, "Power Plant Report."
2004–2007: EIA, Form EIA-906, "Power Plant Report," and Form EIA-920, "Combined Heat and Power Plant Report."
2008 forward: EIA, Form EIA-923, "Power Plant Operations Report."

## Table 7.6 Sources

**Retail Sales, Residential and Industrial**
1973–September 1977: Federal Power Commission, Form FPC-5, "Monthly Statement of Electric Operating Revenue and Income."
October 1977–February 1980: Federal Energy Regulatory Commission (FERC), Form FPC-5, "Monthly Statement of Electric Operating Revenue and Income."
March 1980–1982: FERC, Form FPC-5, "Electric Utility Company Monthly Statement."
1983: U.S. Energy Information Administration (EIA), Form EIA-826, "Electric Utility Company Monthly Statement."
1984–1993: EIA, Form EIA-861, "Annual Electric Utility Report."
1994 forward: EIA, *Electric Power Monthly*, April 2010, Table 5.1.

**Retail Sales, Commercial**
1973–2002: Estimated by EIA as the sum of "Commercial (Old)" and the non-transportation portion of "Other (Old)." See estimation methodology at http://www.eia.doe.gov/emeu/states/sep_use/notes/use_elec.pdf.
2003 forward: EIA, *Electric Power Monthly*, April 2010, Table 5.1.

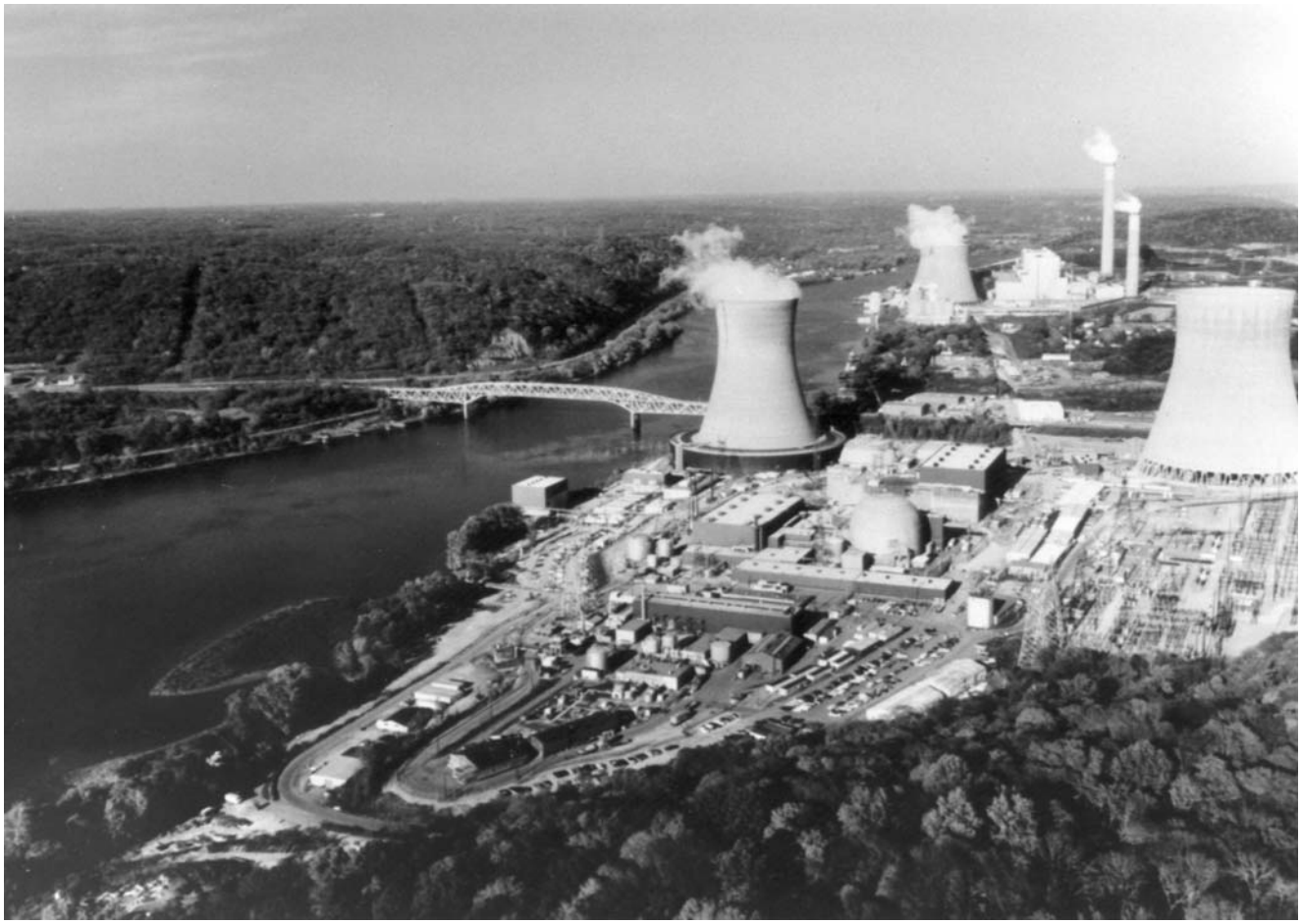
**Retail Sales, Transportation**
1973–2002: Estimated by EIA as the transportation portion of "Other (Old)." See estimation methodology at http://www.eia.doe.gov/emeu/states/sep_use/notes/use_elec.pdf.
2003 forward: EIA, *Electric Power Monthly*, April 2010, Table 5.1.

**Direct Use, Annual**
1989–1996: EIA, Form EIA-867, "Annual Nonutility Power Producer Report."
1997–2008: EIA, *Electric Power Annual 2008*, January 2010, Table 7.2.
2009: Sum of monthly estimates.

**Direct Use, Monthly**
Annual shares are calculated as annual direct use divided by annual commercial and industrial net generation (on Table 7.1). Then monthly direct use estimates are calculated as the annual share multiplied by the monthly commercial and industrial net generation values. For 2009 and 2010, the 2008 annual share is used.

**Discontinued Retail Sales Series Commercial (Old) and Other (Old)** 1973–2002: See sources for "Residential" and "Industrial."

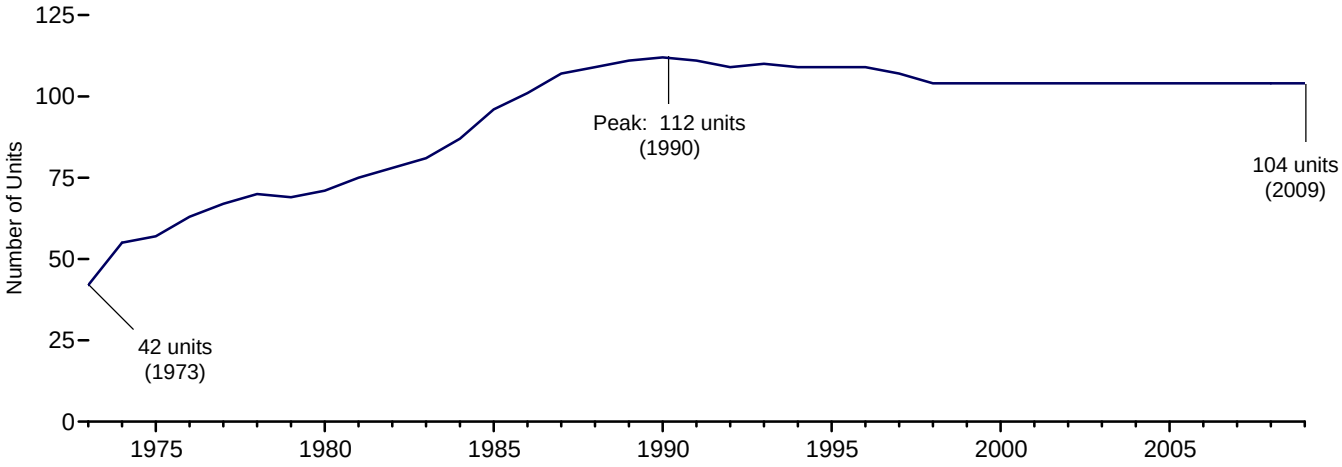
# 8 Nuclear Energy



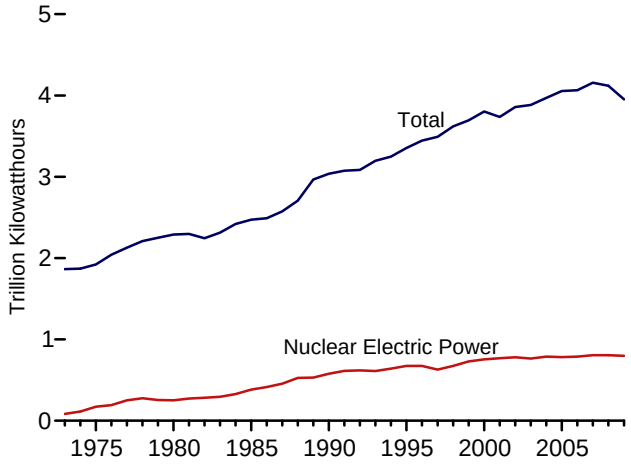
Site of Shippingport atomic power station, the first commercial nuclear power plant in the United States (rectangular reactor building and foreground); background, Beaver Valley 1 and 2 nuclear power plants and Bruce Mansfield coal-fired power plant (southwestern Pennsylvania). Source: U.S. Department of Energy.

## Figure 8.1 Nuclear Energy Overview

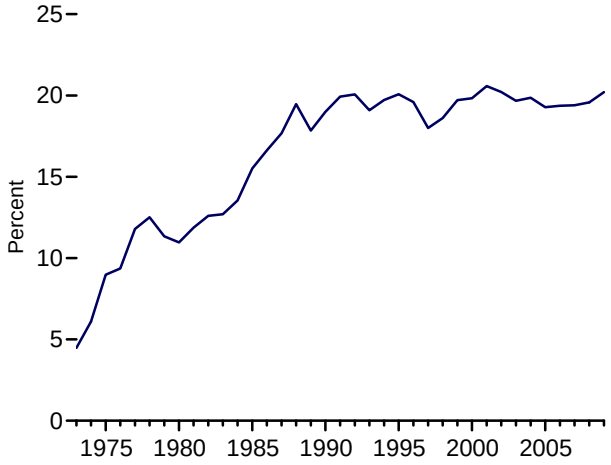
Operable Units, End of Year, 1973-2009



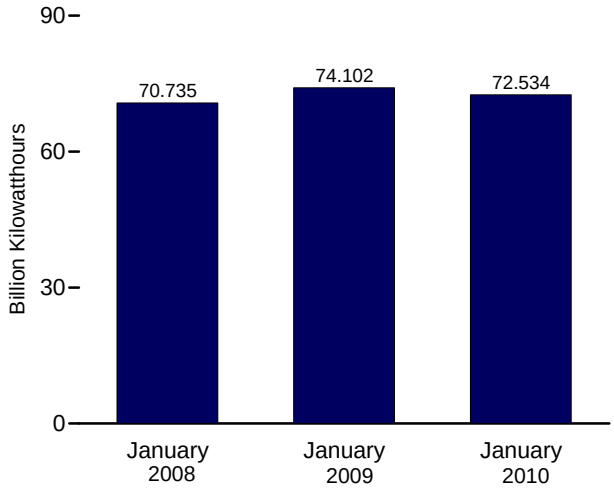

Electricity Net Generation, 1973-2009



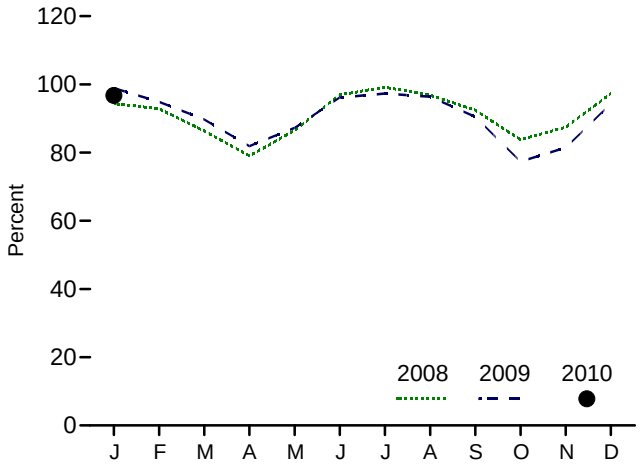

Nuclear Share of Electricity Net Generation, 1973-2009




Nuclear Electricity Net Generation




Capacity Factor, Monthly




Web Page: http://www.eia.doe.gov/emeu/mer/nuclear.html.
Sources: Tables 7.2a and 8.1.

## Table 8.1 Nuclear Energy Overview

| | Total Operable Units[a,b] | Net Summer Capacity of Operable Units[b,c] | Nuclear Electricity Net Generation | Nuclear Share of Electricity Net Generation | Capacity Factor[d] |
|---|---|---|---|---|---|
| | Number | Million Kilowatts | Million Kilowatthours | Percent | |
| **1973 Total** | **42** | **22.683** | **83,479** | **4.5** | **53.5** |
| **1975 Total** | **57** | **37.267** | **172,505** | **9.0** | **55.9** |
| **1980 Total** | **71** | **51.810** | **251,116** | **11.0** | **56.3** |
| **1985 Total** | **96** | **79.397** | **383,691** | **15.5** | **58.0** |
| **1990 Total** | **112** | **99.624** | **576,862** | **19.0** | **66.0** |
| **1995 Total** | **109** | **99.515** | **673,402** | **20.1** | **77.4** |
| **1996 Total** | **109** | **100.784** | **674,729** | **19.6** | **76.2** |
| **1997 Total** | **107** | **99.716** | **628,644** | **18.0** | **71.1** |
| **1998 Total** | **104** | **97.070** | **673,702** | **18.6** | **78.2** |
| **1999 Total** | **104** | **97.411** | **728,254** | **19.7** | **85.3** |
| **2000 Total** | **104** | **97.860** | **753,893** | **19.8** | **88.1** |
| **2001 Total** | **104** | **98.159** | **768,826** | **20.6** | **89.4** |
| **2002 Total** | **104** | **98.657** | **780,064** | **20.2** | **90.3** |
| **2003 Total** | **104** | **99.209** | **763,733** | **19.7** | **87.9** |
| **2004 Total** | **104** | **99.628** | **788,528** | **19.9** | **90.1** |
| **2005 Total** | **104** | **99.988** | **781,986** | **19.3** | **89.3** |
| **2006 Total** | **104** | **100.334** | **787,219** | **19.4** | **89.6** |
| **2007 Total** | **104** | **100.266** | **806,425** | **19.4** | **91.8** |
| **2008** January | 104 | 100.755 | 70,735 | 19.5 | 94.4 |
| February | 104 | 100.755 | 65,130 | 20.0 | 92.9 |
| March | 104 | 100.755 | 64,716 | 19.9 | 86.3 |
| April | 104 | 100.755 | 57,333 | 18.7 | 79.0 |
| May | 104 | 100.755 | 64,826 | 19.9 | 86.5 |
| June | 104 | 100.755 | 70,319 | 18.8 | 96.9 |
| July | 104 | 100.755 | 74,318 | 18.4 | 99.1 |
| August | 104 | 100.755 | 72,617 | 18.7 | 96.9 |
| September | 104 | 100.755 | 67,054 | 19.8 | 92.4 |
| October | 104 | 100.755 | 62,820 | 19.7 | 83.8 |
| November | 104 | 100.755 | 63,408 | 20.5 | 87.4 |
| December | 104 | 100.755 | 72,931 | 21.2 | 97.3 |
| **Total** | **104** | **100.755** | **806,208** | **19.6** | **91.1** |
| **2009** January | 104 | 100.755 | [R] 74,102 | [R] 20.9 | [R] 98.9 |
| February | 104 | 100.755 | 64,227 | 21.3 | 94.9 |
| March | 104 | 100.755 | [R] 67,241 | [R] 21.6 | [R] 89.7 |
| April | 104 | 100.755 | [R] 59,408 | [R] 20.5 | [R] 81.9 |
| May | 104 | 100.755 | [R] 65,375 | [R] 21.0 | [R] 87.2 |
| June | 104 | 100.755 | [R] 69,735 | [R] 20.0 | [R] 96.1 |
| July | 104 | 100.755 | 72,949 | 19.6 | 97.3 |
| August | 104 | 100.755 | 72,245 | 19.0 | 96.4 |
| September | 104 | 100.755 | [R] 65,662 | 20.1 | [R] 90.5 |
| October | 104 | 100.755 | [R] 58,021 | [R] 18.9 | [R] 77.4 |
| November | 104 | 100.755 | 59,069 | 19.9 | 81.4 |
| December | 104 | 100.755 | [R] 70,710 | [R] 20.2 | [R] 94.3 |
| **Total** | **104** | **100.755** | [R] **798,745** | **20.2** | [R] **90.5** |
| **2010** January | 104 | 100.755 | 72,534 | 20.1 | 96.8 |

[a] Total of nuclear generating units holding full-power licenses, or equivalent permission to operate, at end of period. See Note 1, "Operable Nuclear Reactors," at end of section. For additional information on nuclear generating units, see *Annual Energy Review 2008,* June 2009, Table 9.1, http://www.eia.doe.gov/emeu/aer/nuclear.html.

[b] At end of period.

[c] For the definition of "Net Summer Capacity," see Note 2, "Nuclear Capacity," at end of section.

[d] For an explanation of the method of calculating the capacity factor, see Note 2, "Nuclear Capacity," at end of section.

R=Revised.

Notes: • For a discussion of nuclear reactor unit coverage, see Note 1, "Operable Nuclear Reactors," at end of section. • Nuclear electricity net generation totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/nuclear.html for all available data beginning in 1973.

Sources: See end of section.

# Nuclear Energy

**Note 1. Operable Nuclear Reactors.** A reactor is generally defined as operable while it possessed a full-power license from the Nuclear Regulatory Commission or its predecessor the Atomic Energy Commission, or equivalent permission to operate, at the end of the year or month shown. The definition is liberal in that it does not exclude units retaining full-power licenses during long, non-routine shutdowns that for a time rendered them unable to generate electricity. Examples are:

(a) In 1985 the five then-active Tennessee Valley Authority (TVA) units (Browns Ferry 1, 2, and 3, and Sequoyah 1 and 2) were shut down under a regulatory forced outage. All five units were idle for several years, restarting in 2007, 1991, 1995, 1988, and 1988, respectively and were counted as operable during the shutdowns.

(b) Shippingport was shut down from 1974 through 1976 for conversion to a light-water breeder reactor, but is counted as operable from 1957 until its retirement in 1982.

(c) Calvert Cliffs 2 was shut down in 1989 and 1990 for replacement of pressurizer heater sleeves but is counted as operable during those years.

Exceptions to the definition are Shoreham and Three Mile Island 2. Shoreham was granted a full-power license in April 1989, but was shut down two months later and never restarted. In 1991, the license was changed to Possession Only. Although not operable at the end of the year, Shoreham is counted as operable during 1989. A major accident closed Three Mile Island 2 in 1979, and although the unit retained its full-power license for several years, it is considered permanently shut down since that year.

**Note 2. Nuclear Capacity.** Nuclear generating units may have more than one type of net capacity rating, including the following:

(a) Net Summer Capacity—The steady hourly output that generating equipment is expected to supply to system load, exclusive of auxiliary power, as demonstrated by test at the time of summer peak demand. Auxiliary power of a typical nuclear power plant is about 5 percent of gross generation.

(b) Net Design Capacity or Net Design Electrical Rating (DER)—The nominal net electrical output of a unit, specified by the utility and used for plant design.

The monthly capacity factors are calculated as the monthly nuclear electricity net generation divided by the maximum possible nuclear electricity net generation for that month. The maximum possible nuclear electricity net generation is the number of hours in the month (assuming 24-hour days, with no adjustment for changes to or from Daylight Savings Time) multiplied by the net summer capacity of operable nuclear generating units at the end of the month. That fraction is then multiplied by 100 to obtain a percentage. Annual capacity factors are calculated as the annual nuclear electricity net generation divided by the annual maximum possible nuclear electricity net generation (the sum of the monthly values for maximum possible nuclear electricity net generation).

## Table 8.1 Sources

**Total Operable Units** and **Net Summer Capacity of Operable Units**
1973-1982: Compiled from various sources, primarily U.S. Department of Energy, Office of Nuclear Reactor Programs, "U.S. Central Station Nuclear Electric Generating Units: Significant Milestones."

1983 forward: U.S. Energy Information Administration (EIA), Form EIA-860, "Annual Electric Generator Report," and monthly updates as appropriate. For a list of currently operable units, see:
http://www.eia.doe.gov/cneaf/nuclear/page/nuc_reactors/operational.xls.

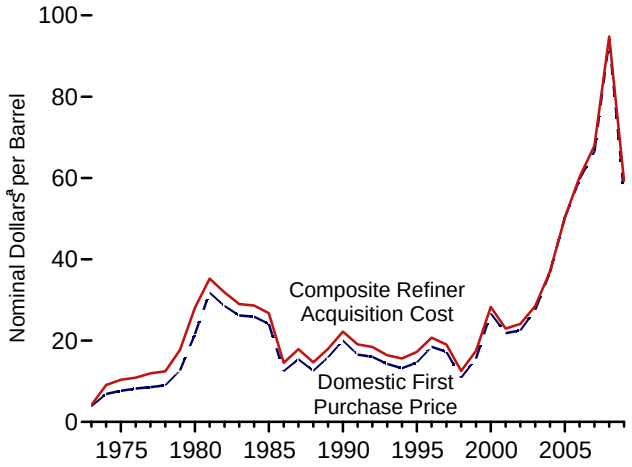
**Nuclear Electricity Net Generation** and **Nuclear Share of Electricity Net Generation**
See Table 7.2a.

**Capacity Factor**
Calculated by EIA using the method described above in Note 2.

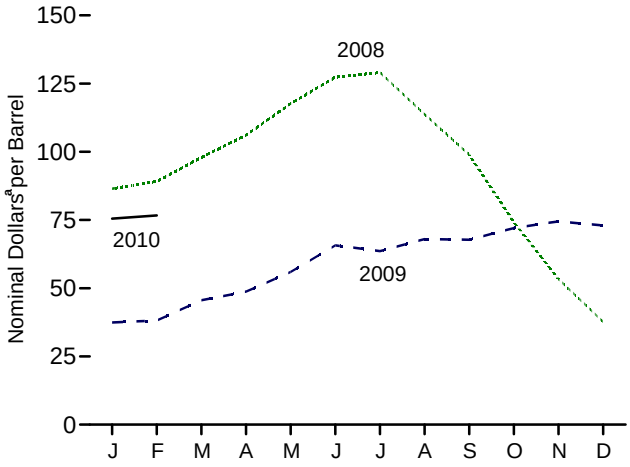
# 9 Energy Prices

## Figure 9.1 Petroleum Prices

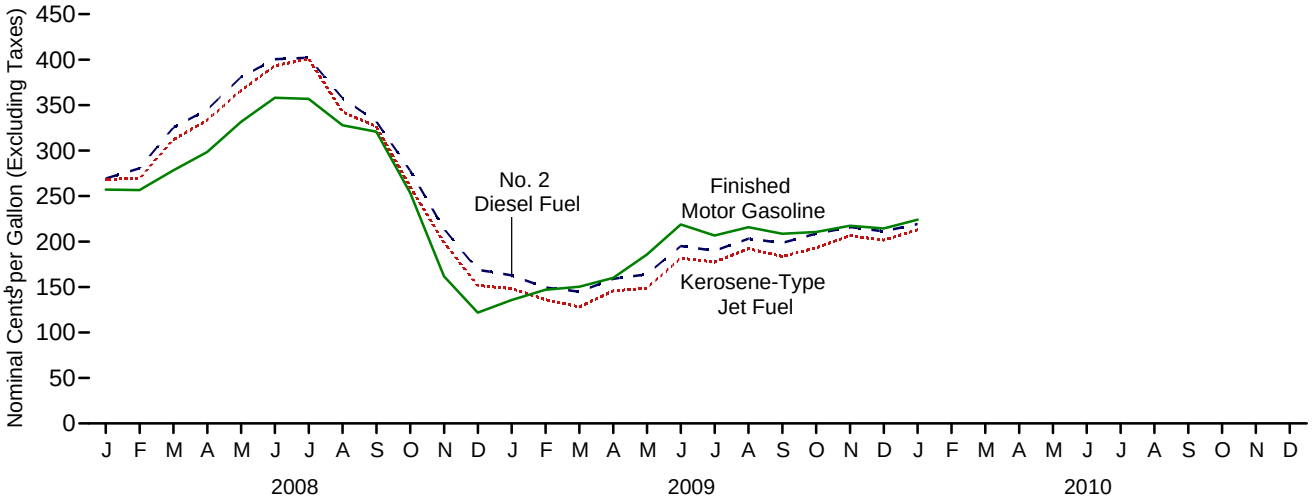
Crude Oil Prices, 1973-2009



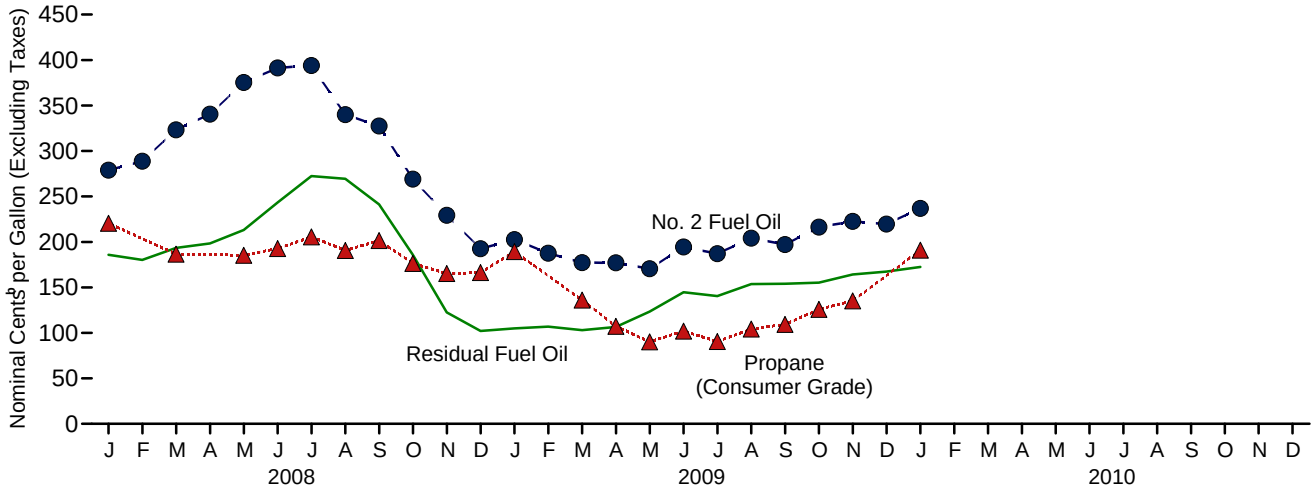

Composite Refiner Acquisition Cost, Monthly




Refiner Prices to End Users: Motor Gasoline, Diesel Fuel, and Jet Fuel, Monthly




Refiner Prices to End Users: No. 2 Fuel Oil, Propane, and Residual Fuel, Monthly




[a]See "Nominal Dollars" in Glossary.
[b]See "Nominal Price" in Glossary.

Web Page: http://www.eia.doe.gov/emeu/mer/prices.html.
Sources: Tables 9.1, 9.5, and 9.7.

# Table 9.1 Crude Oil Price Summary

(Nominal Dollars[a] per Barrel)

| | Domestic First Purchase Price[c] | F.O.B. Cost of Imports[d] | Landed Cost of Imports[e] | Refiner Acquisition Cost[b] | | |
|---|---|---|---|---|---|---|
| | | | | Domestic | Imported | Composite |
| **1973 Average** | **3.89** | **[f] 5.21** | **[f] 6.41** | **[E] 4.17** | **[E] 4.08** | **[E] 4.15** |
| **1975 Average** | **7.67** | **11.18** | **12.70** | **8.39** | **13.93** | **10.38** |
| **1980 Average** | **21.59** | **32.37** | **33.67** | **24.23** | **33.89** | **28.07** |
| **1985 Average** | **24.09** | **25.84** | **26.67** | **26.66** | **26.99** | **26.75** |
| **1990 Average** | **20.03** | **20.37** | **21.13** | **22.59** | **21.76** | **22.22** |
| **1995 Average** | **14.62** | **15.69** | **16.78** | **17.33** | **17.14** | **17.23** |
| **1996 Average** | **18.46** | **19.32** | **20.31** | **20.77** | **20.64** | **20.71** |
| **1997 Average** | **17.23** | **16.94** | **18.11** | **19.61** | **18.53** | **19.04** |
| **1998 Average** | **10.87** | **10.76** | **11.84** | **13.18** | **12.04** | **12.52** |
| **1999 Average** | **15.56** | **16.47** | **17.23** | **17.90** | **17.26** | **17.51** |
| **2000 Average** | **26.72** | **26.27** | **27.53** | **29.11** | **27.70** | **28.26** |
| **2001 Average** | **21.84** | **20.46** | **21.82** | **24.33** | **22.00** | **22.95** |
| **2002 Average** | **22.51** | **22.63** | **23.91** | **24.65** | **23.71** | **24.10** |
| **2003 Average** | **27.56** | **25.86** | **27.69** | **29.82** | **27.71** | **28.53** |
| **2004 Average** | **36.77** | **33.75** | **36.07** | **38.97** | **35.90** | **36.98** |
| **2005 Average** | **50.28** | **47.60** | **49.29** | **52.94** | **48.86** | **50.24** |
| **2006 Average** | **59.69** | **57.03** | **59.11** | **62.62** | **59.02** | **60.24** |
| **2007 Average** | **66.52** | **66.36** | **67.97** | **69.65** | **67.04** | **67.94** |
| **2008** January | 87.06 | 83.49 | 86.65 | 89.57 | 84.82 | 86.48 |
| February | 89.41 | 87.84 | 90.71 | 92.23 | 87.41 | 89.09 |
| March | 98.44 | 96.32 | 99.94 | 99.87 | 96.96 | 97.96 |
| April | 106.64 | 104.04 | 108.40 | 108.54 | 104.72 | 106.09 |
| May | 118.55 | 115.02 | 119.40 | 119.75 | 116.55 | 117.64 |
| June | 127.47 | 123.34 | 125.65 | 129.45 | 126.22 | 127.32 |
| July | 128.08 | 122.12 | 124.20 | 131.47 | 127.77 | 129.03 |
| August | 112.83 | 108.10 | 109.64 | 118.42 | 111.19 | 113.74 |
| September | 98.50 | 90.85 | 91.83 | 103.73 | 96.38 | 98.91 |
| October | 73.18 | 63.09 | 65.40 | 81.03 | 70.84 | 74.22 |
| November | 53.67 | 44.95 | 46.96 | 61.65 | 49.10 | 53.33 |
| December | 36.80 | 34.23 | 36.86 | 41.42 | 35.59 | 37.67 |
| **Average** | **94.04** | **90.32** | **93.33** | **98.47** | **92.77** | **94.74** |
| **2009** January | 35.00 | 36.86 | 38.51 | 38.67 | 36.84 | 37.45 |
| February | 34.14 | 38.08 | 40.14 | 37.51 | 38.56 | 38.15 |
| March | 42.46 | 44.34 | 46.61 | 44.92 | 45.96 | 45.57 |
| April | 45.22 | 47.62 | 51.33 | 47.52 | 49.58 | 48.78 |
| May | 52.69 | 55.46 | 58.01 | 54.58 | 56.77 | 55.96 |
| June | 63.08 | 64.81 | 65.85 | 64.61 | 66.37 | 65.71 |
| July | 60.43 | 62.32 | 64.73 | 63.78 | 63.46 | 63.58 |
| August | 65.28 | 67.46 | 68.46 | 67.78 | 68.09 | 67.98 |
| September | 65.27 | 65.41 | 68.45 | 67.86 | 67.65 | 67.74 |
| October | 69.82 | 70.42 | 72.54 | 72.04 | 72.06 | 72.05 |
| November | 71.98 | [R] 73.16 | [R] 74.40 | 74.60 | 74.40 | 74.48 |
| December | [R] 70.53 | [R] 71.33 | [R] 73.28 | 73.35 | 72.67 | 72.95 |
| **Average** | **56.39** | **[R] 57.74** | **[R] 60.03** | **59.44** | **59.17** | **59.27** |
| **2010** January | [R] 72.89 | [R] 73.14 | [R] 74.33 | [R] 76.04 | [R] 75.07 | [R] 75.48 |
| February | NA | NA | NA | [E] 76.33 | [E] 76.96 | [E] 76.65 |

[a] See "Nominal Dollars" in Glossary.
[b] See Note 4, "Crude Oil Refinery Acquisition Costs," at end of section.
[c] See Note 1, "Crude Oil Domestic First Purchase Prices," at end of section.
[d] See Note 2, "Crude Oil F.O.B. Costs," at end of section.
[e] See Note 3, "Crude Oil Landed Costs," at end of section.
[f] Based on October, November, and December data only.
R=Revised. NA=Not available. E=Estimate.

Notes: • Values for Domestic First Purchase Price and Refiner Acquisition Cost for the current two months and for F.O.B. and Landed Costs of Imports for the current three months are preliminary. • F.O.B. and landed costs through 1980 reflect the period of reporting; prices since then reflect the period of loading. • Annual averages are the averages of the monthly prices, weighted by volume. • Geographic coverage is the 50 States, the District of Columbia, Puerto Rico, the Virgin Islands, and all U.S. Territories and Possessions.

Web Page: See http://www.eia.doe.gov/emeu/mer/prices.html for all available data beginning in 1973.

Sources: See end of section.

# Table 9.2 F.O.B. Costs of Crude Oil Imports From Selected Countries

(Nominal Dollars[a] per Barrel)

| | Selected Countries | | | | | | | Persian Gulf Nations[b] | Total OPEC[c] | Total Non-OPEC[c] |
|---|---|---|---|---|---|---|---|---|---|---|
| | Angola | Colombia | Mexico | Nigeria | Saudi Arabia | United Kingdom | Venezuela | | | |
| **1973 Average**[d] | **W** | **W** | **–** | **7.81** | **3.25** | **–** | **5.39** | **3.68** | **5.43** | **4.80** |
| **1975 Average** | **10.97** | **–** | **11.44** | **11.82** | **10.87** | **–** | **11.04** | **10.88** | **11.34** | **10.62** |
| **1980 Average** | **33.45** | **W** | **31.06** | **35.93** | **28.17** | **34.36** | **24.81** | **28.92** | **32.21** | **32.85** |
| **1985 Average** | **26.30** | **–** | **25.33** | **28.04** | **22.04** | **27.64** | **23.64** | **23.31** | **25.67** | **25.96** |
| **1990 Average** | **20.23** | **20.75** | **19.26** | **22.46** | **20.36** | **23.43** | **19.55** | **18.54** | **20.40** | **20.32** |
| **1995 Average** | **16.58** | **16.73** | **15.64** | **17.40** | **W** | **16.94** | **13.86** | **W** | **15.36** | **16.02** |
| **1996 Average** | **20.71** | **21.33** | **19.14** | **21.27** | **19.28** | **19.43** | **17.73** | **19.22** | **18.94** | **19.65** |
| **1997 Average** | **18.81** | **18.85** | **16.72** | **19.43** | **15.16** | **18.59** | **15.33** | **15.24** | **16.26** | **17.51** |
| **1998 Average** | **12.11** | **12.56** | **10.49** | **12.97** | **8.87** | **12.52** | **9.31** | **9.09** | **10.20** | **11.21** |
| **1999 Average** | **17.46** | **17.20** | **15.89** | **17.32** | **17.65** | **19.14** | **14.33** | **17.15** | **15.90** | **16.84** |
| **2000 Average** | **27.90** | **29.04** | **25.39** | **28.70** | **24.62** | **27.21** | **24.45** | **24.72** | **25.56** | **26.77** |
| **2001 Average** | **23.25** | **24.25** | **18.89** | **24.85** | **18.98** | **23.30** | **18.01** | **18.89** | **19.73** | **21.04** |
| **2002 Average** | **24.09** | **24.64** | **21.60** | **25.38** | **23.92** | **24.50** | **20.13** | **23.38** | **22.18** | **22.93** |
| **2003 Average** | **28.22** | **28.89** | **24.83** | **29.40** | **25.03** | **28.76** | **23.81** | **25.17** | **25.36** | **26.21** |
| **2004 Average** | **37.26** | **37.73** | **31.55** | **38.71** | **34.08** | **37.30** | **31.78** | **33.08** | **33.95** | **33.58** |
| **2005 Average** | **52.48** | **51.89** | **43.00** | **55.95** | **47.96** | **54.48** | **46.39** | **47.21** | **49.60** | **45.79** |
| **2006 Average** | **62.23** | **59.77** | **52.91** | **65.69** | **56.09** | **66.03** | **55.80** | **56.02** | **59.18** | **55.35** |
| **2007 Average** | **67.80** | **67.93** | **61.35** | **76.64** | **W** | **69.96** | **64.10** | **69.93** | **69.58** | **62.69** |
| **2008** January | 88.77 | 80.54 | 80.10 | 93.59 | 88.52 | – | 80.49 | 83.79 | 85.51 | 80.72 |
| February | 93.84 | 83.63 | 80.49 | 98.72 | W | W | 84.10 | 94.00 | 91.87 | 83.21 |
| March | 101.34 | 99.67 | 87.46 | 107.04 | W | – | 89.63 | 101.72 | 99.90 | 92.25 |
| April | 110.80 | 106.06 | 94.08 | 114.87 | W | – | 96.71 | 113.04 | 108.19 | 98.89 |
| May | 119.61 | 117.49 | 103.53 | 127.35 | 123.98 | – | 107.89 | 121.13 | 118.23 | 111.30 |
| June | 130.72 | 125.58 | 116.15 | 140.01 | 125.58 | W | 119.15 | 124.37 | 126.30 | 120.14 |
| July | 127.19 | 122.27 | 123.19 | 134.58 | 110.61 | W | 123.18 | 110.34 | 121.93 | 122.37 |
| August | 107.58 | 108.36 | 108.45 | 117.21 | 107.54 | W | 110.20 | 105.06 | 108.99 | 107.17 |
| September | 92.42 | 95.87 | 92.26 | 95.68 | 70.86 | W | 92.76 | 75.41 | 89.61 | 92.24 |
| October | 62.08 | 61.83 | 63.74 | 67.28 | 66.18 | W | 60.35 | 61.78 | 62.77 | 63.42 |
| November | 48.16 | 42.14 | 42.37 | 51.45 | 47.97 | – | 42.22 | 45.14 | 45.61 | 44.30 |
| December | W | W | 32.86 | 44.02 | W | – | 32.98 | 35.69 | 35.79 | 32.90 |
| **Average** | **95.66** | **91.17** | **84.61** | **102.06** | **93.03** | **96.33** | **88.06** | **91.44** | **93.15** | **87.15** |
| **2009** January | 39.88 | 26.24 | 36.96 | 46.12 | W | W | 36.68 | 35.24 | 37.60 | 36.15 |
| February | 40.60 | 32.55 | 37.59 | 45.02 | W | – | 38.03 | 36.38 | 39.71 | 36.81 |
| March | 44.76 | 46.69 | 40.94 | 49.91 | 48.31 | W | 41.77 | 47.66 | 45.75 | 42.96 |
| April | 50.57 | W | 46.71 | 52.93 | W | – | 45.82 | 51.05 | 48.67 | 46.86 |
| May | 55.79 | 54.17 | 55.49 | 57.80 | W | – | 54.36 | 58.05 | 55.89 | 55.12 |
| June | 67.03 | 62.94 | 63.83 | 68.74 | W | – | 63.16 | 64.14 | 65.36 | 64.34 |
| July | 63.34 | 58.58 | 60.42 | 69.73 | W | – | 60.16 | 63.42 | 63.25 | 61.39 |
| August | W | 64.41 | 67.20 | 72.37 | 66.37 | W | 65.42 | 66.17 | 67.62 | 67.31 |
| September | 67.49 | 63.68 | 64.51 | 69.65 | W | – | 64.18 | 67.25 | 65.91 | 65.04 |
| October | 71.19 | 69.59 | 68.71 | 76.33 | W | W | 66.95 | 73.45 | 70.48 | 70.38 |
| November | 76.89 | 70.96 | 72.71 | 77.58 | W | W | 69.43 | 72.99 | 73.60 | R 72.81 |
| December | R 74.56 | 66.72 | 69.75 | R 76.06 | W | – | R 68.35 | 72.85 | R 72.49 | R 70.15 |
| **Average** | **R 57.13** | **57.79** | **56.47** | **R 64.12** | **R 57.90** | **65.63** | **R 55.46** | **59.50** | **R 58.42** | **R 57.15** |
| **2010** January | 73.28 | 70.08 | 73.08 | 77.36 | W | – | 71.15 | W | 73.42 | 72.83 |

[a] See "Nominal Dollars" in Glossary.

[b] Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, United Arab Emirates, and the Neutral Zone (between Kuwait and Saudi Arabia).

[c] See "Organization of the Petroleum Exporting Countries (OPEC)" in Glossary. On this table, "Total OPEC" for all years includes Algeria, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates, and Venezuela; for 1973-2008, also includes Indonesia; for 1973-1992 and again beginning in 2008, also includes Ecuador (although Ecuador rejoined OPEC in November 2007, on this table Ecuador is included in "Total Non-OPEC" for 2007); for 1974-1995, also includes Gabon (although Gabon was a member of OPEC for only 1975-1994); and beginning in 2007, also includes Angola. Data for all countries not included in "Total OPEC" are included in "Total Non-OPEC."

[d] Based on October, November, and December data only.

R=Revised. – =No data reported. W=Value withheld to avoid disclosure of individual company data.

Notes: • The Free on Board (F.O.B.) cost at the country of origin excludes all costs related to insurance and transportation. See "F.O.B." in Glossary, and Note 2, "Crude Oil F.O.B. Costs," at end of section. • Values for the current two months are preliminary. • Prices through 1980 reflect the period of reporting; prices since then reflect the period of loading. • Annual averages are averages of the monthly prices, including prices not published, weighted by volume. • Cargoes that are purchased on a "netback" basis, or under similar contractual arrangements whereby the actual purchase price is not established at the time the crude oil is acquired for importation into the United States, are not included in the published data until the actual prices have been determined and reported. • U.S. geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/prices.html for all available data beginning in 1973.

Sources: See end of section.

# Table 9.3 Landed Costs of Crude Oil Imports From Selected Countries

(Nominal Dollars[a] per Barrel)

| | Selected Countries | | | | | | | | Persian Gulf Nations[b] | Total OPEC[c] | Total Non-OPEC[c] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Angola | Canada | Colombia | Mexico | Nigeria | Saudi Arabia | United Kingdom | Venezuela | | | |
| **1973 Average**[d] | **W** | **5.33** | **W** | **–** | **9.08** | **5.37** | **–** | **5.99** | **5.91** | **6.85** | **5.64** |
| **1975 Average** | **11.81** | **12.84** | **–** | **12.61** | **12.70** | **12.50** | **–** | **12.36** | **12.64** | **12.70** | **12.70** |
| **1980 Average** | **34.76** | **30.11** | **W** | **31.77** | **37.15** | **29.80** | **35.68** | **25.92** | **30.59** | **33.56** | **33.99** |
| **1985 Average** | **27.39** | **25.71** | **–** | **25.63** | **28.96** | **24.72** | **28.36** | **24.43** | **25.50** | **26.86** | **26.53** |
| **1990 Average** | **21.51** | **20.48** | **22.34** | **19.64** | **23.33** | **21.82** | **22.65** | **20.31** | **20.55** | **21.23** | **20.98** |
| **1995 Average** | **17.66** | **16.65** | **17.45** | **16.19** | **18.25** | **16.84** | **17.91** | **14.81** | **16.78** | **16.61** | **16.95** |
| **1996 Average** | **21.86** | **19.94** | **22.02** | **19.64** | **21.95** | **20.49** | **20.88** | **18.59** | **20.45** | **20.14** | **20.47** |
| **1997 Average** | **20.24** | **17.63** | **19.71** | **17.30** | **20.64** | **17.52** | **20.64** | **16.35** | **17.44** | **17.73** | **18.45** |
| **1998 Average** | **13.37** | **11.62** | **13.26** | **11.04** | **14.14** | **11.16** | **13.55** | **10.16** | **11.18** | **11.46** | **12.22** |
| **1999 Average** | **18.37** | **17.54** | **18.09** | **16.12** | **17.63** | **17.48** | **18.26** | **15.58** | **17.37** | **16.94** | **17.51** |
| **2000 Average** | **29.57** | **26.69** | **29.68** | **26.03** | **30.04** | **26.58** | **29.26** | **26.05** | **26.77** | **27.29** | **27.80** |
| **2001 Average** | **25.13** | **20.72** | **25.88** | **19.37** | **26.55** | **20.98** | **25.32** | **19.81** | **20.73** | **21.52** | **22.17** |
| **2002 Average** | **25.43** | **22.98** | **25.28** | **22.09** | **26.45** | **24.77** | **26.35** | **21.93** | **24.13** | **23.83** | **23.97** |
| **2003 Average** | **30.14** | **26.76** | **30.55** | **25.48** | **31.07** | **27.50** | **30.62** | **25.70** | **27.54** | **27.70** | **27.68** |
| **2004 Average** | **39.62** | **34.51** | **39.03** | **32.25** | **40.95** | **37.11** | **39.28** | **33.79** | **36.53** | **36.84** | **35.29** |
| **2005 Average** | **54.31** | **44.73** | **53.42** | **43.47** | **57.55** | **50.31** | **55.28** | **47.87** | **49.68** | **51.36** | **47.31** |
| **2006 Average** | **64.85** | **53.90** | **62.13** | **53.76** | **68.26** | **59.19** | **67.44** | **57.37** | **58.92** | **61.21** | **57.14** |
| **2007 Average** | **71.27** | **60.38** | **70.91** | **62.31** | **78.01** | **70.78** | **72.47** | **66.13** | **69.83** | **71.14** | **63.96** |
| **2008** January | 93.21 | 77.83 | 85.22 | 81.28 | 97.03 | 92.42 | W | 83.23 | 89.70 | 89.66 | 82.10 |
| February | 97.79 | 81.40 | 85.20 | 81.33 | 101.23 | 97.64 | W | 86.34 | 96.04 | 94.71 | 85.13 |
| March | 106.19 | 93.34 | 102.88 | 88.49 | 109.73 | 108.26 | W | 93.01 | 105.39 | 103.78 | 94.65 |
| April | 117.34 | 103.08 | 105.95 | 95.27 | 117.83 | 118.54 | W | 100.13 | 115.56 | 112.11 | 103.30 |
| May | 127.06 | 111.83 | 118.43 | 104.42 | 130.89 | 126.38 | 128.95 | 111.77 | 124.49 | 122.98 | 114.83 |
| June | 133.68 | 119.41 | 127.35 | 117.29 | 142.66 | 125.38 | W | 122.29 | 125.28 | 128.10 | 122.57 |
| July | 128.58 | 122.83 | 126.22 | 124.28 | 137.22 | 116.22 | W | 124.91 | 116.43 | 124.20 | 124.20 |
| August | 110.00 | 110.63 | 113.17 | 109.61 | 123.02 | 104.42 | 104.13 | 111.78 | 103.92 | 109.56 | 109.74 |
| September | 94.05 | 96.38 | 97.72 | 93.59 | 98.82 | 77.92 | 88.13 | 95.67 | 78.65 | 89.55 | 94.43 |
| October | 62.74 | 69.52 | 62.09 | 65.65 | 72.38 | 62.89 | 69.17 | 62.47 | 60.47 | 64.33 | 66.68 |
| November | 49.22 | 49.00 | 44.28 | 43.05 | 55.13 | 47.77 | 60.68 | 44.08 | 46.29 | 47.34 | 46.52 |
| December | 40.13 | 33.39 | 35.28 | 33.94 | 47.15 | 38.28 | – | 34.95 | 37.86 | 38.36 | 35.17 |
| **Average** | **98.18** | **90.00** | **93.43** | **85.97** | **104.83** | **94.75** | **96.95** | **90.76** | **93.59** | **95.49** | **90.59** |
| **2009** January | 43.88 | 34.17 | 32.08 | 38.08 | 47.68 | 39.78 | W | 39.14 | 39.01 | 39.93 | 36.89 |
| February | 42.83 | 35.83 | 34.49 | 38.16 | 46.71 | 44.46 | W | 39.58 | 42.56 | 42.49 | 38.07 |
| March | 47.80 | 44.22 | 46.70 | 41.76 | 51.86 | 51.71 | 47.44 | 43.86 | 50.35 | 48.29 | 45.09 |
| April | 53.54 | 47.61 | 46.86 | 47.26 | 58.10 | 57.32 | 52.41 | 48.25 | 57.16 | 54.08 | 48.70 |
| May | 56.66 | 54.42 | 54.90 | 56.22 | 62.71 | 61.93 | 58.66 | 56.28 | 61.46 | 59.53 | 56.73 |
| June | 68.42 | 64.00 | 65.65 | 64.39 | 69.19 | 66.24 | 67.33 | 64.52 | 66.27 | 66.63 | 65.11 |
| July | 66.73 | 62.18 | 63.24 | 60.99 | 71.08 | 65.97 | W | 62.11 | 66.20 | 66.13 | 63.29 |
| August | 72.48 | 64.23 | 66.71 | 67.71 | 73.83 | 69.33 | 73.66 | 67.23 | 69.08 | 69.91 | 66.96 |
| September | 72.55 | 66.58 | 66.27 | 65.00 | 71.98 | 72.77 | W | 65.85 | 71.93 | 69.95 | 66.84 |
| October | 75.03 | 70.28 | 71.24 | 69.40 | 77.77 | 74.20 | W | 68.85 | 74.18 | 73.68 | 71.41 |
| November | 78.25 | R 71.95 | 72.70 | 73.29 | R 79.05 | R 73.92 | W | 71.41 | R 73.99 | R 75.18 | R 73.67 |
| December | R 77.26 | R 69.99 | R 69.92 | R 70.20 | R 78.43 | R 72.90 | R 77.64 | R 70.49 | R 74.36 | R 74.89 | R 71.60 |
| **Average** | R **61.14** | R **57.53** | R **58.26** | R **57.35** | R **67.60** | R **61.90** | R **60.99** | R **57.70** | R **61.75** | R **61.63** | R **58.46** |
| **2010** January | 76.11 | 72.15 | 74.26 | 73.45 | 79.62 | 76.39 | W | 72.75 | 75.72 | 75.42 | 73.33 |

[a] See "Nominal Dollars" in Glossary.

[b] Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, United Arab Emirates, and the Neutral Zone (between Kuwait and Saudi Arabia).

[c] See "Organization of the Petroleum Exporting Countries (OPEC)" in Glossary. On this table, "Total OPEC" for all years includes Algeria, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates, and Venezuela; for 1973-2008, also includes Indonesia; for 1973-1992 and again beginning in 2008, also includes Ecuador (although Ecuador rejoined OPEC in November 2007, on this table Ecuador is included in "Total Non-OPEC" for 2007); for 1974-1995, also includes Gabon (although Gabon was a member of OPEC for only 1975-1994); and beginning in 2007, also includes Angola. Data for all countries not included in "Total OPEC" are included in "Total Non-OPEC."

[d] Based on October, November, and December data only.

R=Revised. – =No data reported. W=Value withheld to avoid disclosure of individual company data.

Notes: • See "Landed Costs" in Glossary, and Note 3, "Crude Oil Landed Costs," at end of section. • Values for the current two months are preliminary. • Prices through 1980 reflect the period of reporting; prices since then reflect the period of loading. • Annual averages are averages of the monthly prices, including prices not published, weighted by volume. • Cargoes that are purchased on a "netback" basis, or under similar contractual arrangements whereby the actual purchase price is not established at the time the crude oil is acquired for importation into the United States, are not included in the published data until the actual prices have been determined and reported. • U.S. geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/prices.html for all available data beginning in 1973.

Sources: • **October 1973-September 1977:** Federal Energy Administration, Form FEA-F701-M-0, "Transfer Pricing Report." • **October 1977-December 1977:** U.S. Energy Information Administration (EIA), Form FEA-F701-M-0, "Transfer Pricing Report." • **1978-2008:** EIA, *Petroleum Marketing Annual 2008,* Table 22. • **2009 and 2010:** EIA, *Petroleum Marketing Monthly,* April 2010, Table 22.

# Table 9.4 Motor Gasoline Retail Prices, U.S. City Average

(Nominal Cents[a] per Gallon, Including Taxes)

| | Leaded Regular | Unleaded Regular | Unleaded Premium[b] | All Types[c] |
|---|---|---|---|---|
| **1973 Average** | **38.8** | **NA** | **NA** | **NA** |
| **1975 Average** | **56.7** | **NA** | **NA** | **NA** |
| **1980 Average** | **119.1** | **124.5** | **NA** | **122.1** |
| **1985 Average** | **111.5** | **120.2** | **134.0** | **119.6** |
| **1990 Average** | **114.9** | **116.4** | **134.9** | **121.7** |
| **1995 Average** | **NA** | **114.7** | **133.6** | **120.5** |
| **1996 Average** | **NA** | **123.1** | **141.3** | **128.8** |
| **1997 Average** | **NA** | **123.4** | **141.6** | **129.1** |
| **1998 Average** | **NA** | **105.9** | **125.0** | **111.5** |
| **1999 Average** | **NA** | **116.5** | **135.7** | **122.1** |
| **2000 Average** | **NA** | **151.0** | **169.3** | **156.3** |
| **2001 Average** | **NA** | **146.1** | **165.7** | **153.1** |
| **2002 Average** | **NA** | **135.8** | **155.6** | **144.1** |
| **2003 Average** | **NA** | **159.1** | **177.7** | **163.8** |
| **2004 Average** | **NA** | **188.0** | **206.8** | **192.3** |
| **2005 Average** | **NA** | **229.5** | **249.1** | **233.8** |
| **2006 Average** | **NA** | **258.9** | **280.5** | **263.5** |
| **2007 Average** | **NA** | **280.1** | **303.3** | **284.9** |
| **2008** January | NA | 304.7 | 329.1 | 309.6 |
| February | NA | 303.3 | 327.2 | 308.3 |
| March | NA | 325.8 | 350.2 | 330.7 |
| April | NA | 344.1 | 369.0 | 349.1 |
| May | NA | 376.4 | 400.3 | 381.3 |
| June | NA | 406.5 | 431.9 | 411.5 |
| July | NA | 409.0 | 435.0 | 414.2 |
| August | NA | 378.6 | 404.5 | 383.8 |
| September | NA | 369.8 | 394.0 | 374.9 |
| October | NA | 317.3 | 343.2 | 322.5 |
| November | NA | 215.1 | 243.3 | 220.8 |
| December | NA | 168.9 | 195.1 | 174.2 |
| **Average** | **NA** | **326.6** | **351.9** | **331.7** |
| **2009** January | NA | 178.7 | 203.6 | 183.8 |
| February | NA | 192.8 | 218.2 | 197.9 |
| March | NA | 194.9 | 219.7 | 200.0 |
| April | NA | 205.6 | 230.9 | 210.7 |
| May | NA | 226.5 | 251.1 | 231.4 |
| June | NA | 263.1 | 288.3 | 268.1 |
| July | NA | 254.3 | 280.6 | 259.4 |
| August | NA | 262.7 | 288.7 | 267.7 |
| September | NA | 257.4 | 284.5 | 262.6 |
| October | NA | 256.1 | 282.6 | 261.3 |
| November | NA | 266.0 | 291.7 | 270.9 |
| December | NA | 262.1 | 288.2 | 267.1 |
| **Average** | **NA** | **235.0** | **260.7** | **240.1** |
| **2010** January | NA | 273.1 | 298.7 | 277.9 |
| February | NA | 265.9 | 292.2 | 270.9 |
| March | NA | 278.0 | 303.5 | 282.9 |

[a] See "Nominal Price" in Glossary.

[b] The 1981 average (available in Web file) is based on September through December data only.

[c] Also includes types of motor gasoline not shown separately.

NA=Not available.

Notes: • See Note 5, "Motor Gasoline Prices," at end of section. • In September 1981, the Bureau of Labor Statistics changed the weights used in the calculation of average motor gasoline prices. From September 1981 forward, gasohol is included in the average for all types, and unleaded premium is weighted more heavily. • Geographic coverage for 1973-1977 is 56 urban areas. Geographic coverage for 1978 forward is 85 urban areas.

Web Page: See http://www.eia.doe.gov/emeu/mer/prices.html for all available data beginning in 1973.

Sources: • **Monthly Data:** U.S. Department of Labor, Bureau of Labor Statistics, *Consumer Prices: Energy.* • **Annual Data: 1973**—*Platt's Oil Price Handbook and Oilmanac,* 1974, 51st Edition. **1974 forward**—calculated by the U.S. Energy Information Administration as the simple averages of monthly data.

# Table 9.5 Refiner Prices of Residual Fuel Oil

(Nominal Cents[a] per Gallon, Excluding Taxes)

| | Residual Fuel Oil Sulfur Content Less Than or Equal to 1 Percent | | Residual Fuel Oil Sulfur Content Greater Than 1 Percent | | Average | |
|---|---|---|---|---|---|---|
| | Sales for Resale | Sales to End Users | Sales for Resale | Sales to End Users | Sales for Resale | Sales to End Users |
| **1978 Average** | **29.3** | **31.4** | **24.5** | **27.5** | **26.3** | **29.8** |
| **1980 Average** | **60.8** | **67.5** | **47.9** | **52.3** | **52.8** | **60.7** |
| **1985 Average** | **61.0** | **64.4** | **56.0** | **58.2** | **57.7** | **61.0** |
| **1990 Average** | **47.2** | **50.5** | **37.2** | **40.0** | **41.3** | **44.4** |
| **1995 Average** | **38.3** | **43.6** | **33.8** | **37.7** | **36.3** | **39.2** |
| **1996 Average** | **45.6** | **52.6** | **38.9** | **43.3** | **42.0** | **45.5** |
| **1997 Average** | **41.5** | **48.8** | **36.6** | **40.3** | **38.7** | **42.3** |
| **1998 Average** | **29.9** | **35.4** | **26.9** | **28.7** | **28.0** | **30.5** |
| **1999 Average** | **38.2** | **40.5** | **32.9** | **36.2** | **35.4** | **37.4** |
| **2000 Average** | **62.7** | **70.8** | **51.2** | **56.6** | **56.6** | **60.2** |
| **2001 Average** | **52.3** | **64.2** | **42.8** | **49.2** | **47.6** | **53.1** |
| **2002 Average** | **54.6** | **64.0** | **50.8** | **54.4** | **53.0** | **56.9** |
| **2003 Average** | **72.8** | **80.4** | **58.8** | **65.1** | **66.1** | **69.8** |
| **2004 Average** | **76.4** | **83.5** | **60.1** | **69.2** | **68.1** | **73.9** |
| **2005 Average** | **111.5** | **116.8** | **84.2** | **97.4** | **97.1** | **104.8** |
| **2006 Average** | **120.2** | **134.2** | **108.5** | **117.3** | **113.6** | **121.8** |
| **2007 Average** | **140.6** | **143.6** | **131.4** | **135.0** | **135.0** | **137.4** |
| **2008** January | 199.7 | 203.9 | 166.2 | 178.3 | 176.4 | 185.9 |
| February | 187.0 | 200.4 | 162.5 | 172.0 | 171.4 | 180.2 |
| March | 195.6 | 204.8 | 171.7 | 188.1 | 176.9 | 193.4 |
| April | 213.9 | 222.1 | 182.2 | 190.4 | 188.0 | 198.3 |
| May | 232.2 | 234.9 | 198.9 | 206.9 | 204.2 | 213.2 |
| June | 257.8 | 265.8 | 218.1 | 233.3 | 227.4 | 243.4 |
| July | 283.3 | 294.5 | 254.2 | 265.7 | 263.6 | 272.4 |
| August | 254.6 | 300.5 | 244.5 | 255.4 | 248.6 | 269.4 |
| September | 217.5 | 266.6 | 218.0 | 230.0 | 217.9 | 241.2 |
| October | 157.4 | 216.6 | 160.3 | 175.9 | 159.2 | 185.9 |
| November | 103.6 | 165.4 | 97.1 | 105.5 | 100.4 | 122.5 |
| December | 101.0 | 121.1 | 78.4 | 87.7 | 87.6 | 102.1 |
| **Average** | **191.8** | **214.4** | **184.3** | **188.9** | **186.6** | **196.4** |
| **2009** January | 103.5 | 116.4 | 89.0 | 95.3 | 94.7 | 104.9 |
| February | 101.1 | 120.4 | 91.8 | 97.4 | 95.4 | 106.8 |
| March | 101.9 | 118.3 | 91.7 | 95.2 | 95.2 | 103.0 |
| April | 107.7 | 117.4 | 99.2 | 102.7 | 101.7 | 106.6 |
| May | 120.5 | 121.3 | 119.1 | 124.5 | 119.5 | 123.4 |
| June | 140.1 | 144.0 | 137.3 | 145.0 | 138.1 | 144.7 |
| July | 141.7 | 148.8 | 139.9 | 136.9 | 140.5 | 140.4 |
| August | 158.6 | 164.1 | 156.7 | 148.8 | 157.3 | 153.6 |
| September | 153.3 | 168.9 | 155.5 | 149.2 | 154.9 | 154.0 |
| October | 161.9 | 171.7 | 154.8 | 150.1 | 156.0 | 155.3 |
| November | 174.3 | 173.9 | 170.0 | 160.2 | 171.1 | 164.2 |
| December | R 172.3 | 181.8 | 167.3 | R 161.4 | R 168.4 | 167.3 |
| **Average** | R **133.7** | **141.3** | **134.9** | **130.6** | R **134.6** | **134.1** |
| **2010** January | 176.7 | 185.2 | 170.2 | 166.0 | 171.8 | 172.5 |

[a] See "Nominal Price" in Glossary.

R=Revised.

Notes: • Sales for resale are those made to purchasers other than ultimate consumers. Sales to end users are those made directly to ultimate consumers, including bulk consumers (such as agriculture, industry, and electric utilities) and commercial consumers. • Values for the current month are preliminary. • Prices prior to 1983 are U.S. Energy Information Administration (EIA) estimates. See Note 6, "Historical Petroleum Prices," at end of section. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/prices.html for all available data beginning in 1978.

Sources: • **1978-2008:** EIA, *Petroleum Marketing Annual 2008,* Table 16. • **2009 and 2010:** EIA, *Petroleum Marketing Monthly,* April 2010, Table 16.

# Table 9.6 Refiner Prices of Petroleum Products for Resale

(Nominal Cents[a] per Gallon, Excluding Taxes)

| | Finished Motor Gasoline[b] | Finished Aviation Gasoline | Kerosene-Type Jet Fuel | Kerosene | No. 2 Fuel Oil | No. 2 Diesel Fuel | Propane (Consumer Grade) |
|---|---|---|---|---|---|---|---|
| **1978 Average** | **43.4** | **53.7** | **38.6** | **40.4** | **36.9** | **36.5** | **23.7** |
| **1980 Average** | **94.1** | **112.8** | **86.8** | **86.4** | **80.3** | **80.1** | **41.5** |
| **1985 Average** | **83.5** | **113.0** | **79.4** | **87.4** | **77.6** | **77.2** | **39.8** |
| **1990 Average** | **78.6** | **106.3** | **77.3** | **83.9** | **69.7** | **69.4** | **38.6** |
| **1995 Average** | **62.6** | **97.5** | **53.9** | **58.0** | **51.1** | **53.8** | **34.4** |
| **1996 Average** | **71.3** | **105.5** | **64.6** | **71.4** | **63.9** | **65.9** | **46.1** |
| **1997 Average** | **70.0** | **106.5** | **61.3** | **65.3** | **59.0** | **60.6** | **41.6** |
| **1998 Average** | **52.6** | **91.2** | **45.0** | **46.5** | **42.2** | **44.4** | **28.8** |
| **1999 Average** | **64.5** | **100.7** | **53.3** | **55.0** | **49.3** | **54.6** | **34.2** |
| **2000 Average** | **96.3** | **133.0** | **88.0** | **96.9** | **88.6** | **89.8** | **59.5** |
| **2001 Average** | **88.6** | **125.6** | **76.3** | **82.1** | **75.6** | **78.4** | **54.0** |
| **2002 Average** | **82.8** | **114.6** | **71.6** | **75.2** | **69.4** | **72.4** | **43.1** |
| **2003 Average** | **100.2** | **128.8** | **87.1** | **95.5** | **88.1** | **88.3** | **60.7** |
| **2004 Average** | **128.8** | **162.7** | **120.8** | **127.1** | **112.5** | **118.7** | **75.1** |
| **2005 Average** | **167.0** | **207.6** | **172.3** | **175.7** | **162.3** | **173.7** | **93.3** |
| **2006 Average** | **196.9** | **249.0** | **196.1** | **200.7** | **183.4** | **201.2** | **103.1** |
| **2007 Average** | **218.2** | **275.8** | **217.1** | **224.9** | **207.2** | **220.3** | **119.4** |
| **2008** January | 239.5 | 296.9 | 266.5 | 283.2 | 256.4 | 258.0 | 151.9 |
| February | 243.6 | 300.7 | 267.4 | 284.2 | 260.7 | 273.8 | 146.9 |
| March | 264.0 | 326.3 | 310.6 | 328.1 | 297.7 | 315.8 | 149.5 |
| April | 286.1 | 346.8 | 331.5 | 354.3 | 319.5 | 335.6 | 157.1 |
| May | 317.2 | 375.1 | 364.2 | 376.7 | 353.6 | 371.2 | 167.5 |
| June | 341.6 | 401.8 | 391.2 | 397.3 | 376.1 | 385.9 | 176.1 |
| July | 334.7 | 394.6 | 397.8 | 398.0 | 380.2 | 387.6 | 183.3 |
| August | 307.8 | 373.7 | 339.3 | 345.6 | 328.7 | 333.8 | 166.7 |
| September | 300.0 | 370.5 | 327.8 | 336.5 | 300.3 | 316.0 | 156.5 |
| October | 214.9 | 279.0 | 256.9 | 268.1 | 240.0 | 251.4 | 124.2 |
| November | 139.3 | 214.0 | 197.4 | 228.8 | 194.7 | 195.5 | 100.5 |
| December | 106.1 | 179.9 | 147.0 | 171.5 | 157.9 | 146.9 | 91.6 |
| **Average** | **258.6** | **334.2** | **302.0** | **285.1** | **274.5** | **299.4** | **143.7** |
| **2009** January | 124.5 | 185.1 | 147.1 | 181.0 | 155.0 | 147.9 | 97.4 |
| February | 133.2 | 203.8 | 134.6 | 160.7 | 142.1 | 132.6 | 90.1 |
| March | 139.7 | 203.1 | 126.5 | 145.6 | 135.8 | 131.3 | 80.5 |
| April | 148.2 | 222.5 | 142.2 | 148.0 | 139.7 | 145.5 | 72.0 |
| May | 176.2 | 247.8 | 146.1 | 153.9 | 146.2 | 152.9 | 73.2 |
| June | 202.4 | 274.3 | 178.0 | 184.1 | 174.4 | 182.8 | 82.1 |
| July | 186.7 | 254.8 | 175.9 | 177.3 | 165.6 | 174.4 | 75.6 |
| August | 202.6 | 275.9 | 189.2 | 195.1 | 180.4 | 193.6 | 83.1 |
| September | 191.5 | 259.2 | 182.1 | 185.7 | 177.3 | 184.8 | 91.4 |
| October | 197.5 | 259.6 | 191.7 | 205.0 | 191.8 | 197.8 | 99.4 |
| November | 203.8 | 270.1 | 205.5 | 207.5 | 199.3 | 203.7 | 107.9 |
| December | 199.9 | 265.5 | 201.1 | 214.8 | 198.9 | R 199.7 | R 117.8 |
| **Average** | **176.6** | **247.8** | **171.2** | **184.9** | **165.6** | **171.2** | **91.9** |
| **2010** January | 209.8 | 275.9 | 212.1 | 228.2 | 207.5 | 207.8 | 133.2 |

[a] See "Nominal Price" in Glossary.

[b] See Note 5, "Motor Gasoline Prices," at end of section.

R=Revised.

Notes: • Sales for resale are those made to purchasers other than ultimate consumers. Sales to end users are shown in Table 9.7; they are sales made directly to ultimate consumers, including bulk consumers (such as agriculture, industry, and electric utilities) and residential and commercial consumers. • Values for the current month are preliminary. • Prices prior to 1983 are U.S. Energy Information Administration (EIA) estimates. See Note 6, "Historical Petroleum Prices," at end of section. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/prices.html for all available data beginning in 1978.

Sources: • **1978-2008:** EIA, *Petroleum Marketing Annual 2008,* Table 4. • **2009 and 2010:** EIA, *Petroleum Marketing Monthly,* April 2010, Table 4.

# Table 9.7 Refiner Prices of Petroleum Products to End Users

(Nominal Cents[a] per Gallon, Excluding Taxes)

| | Finished Motor Gasoline[b] | Finished Aviation Gasoline | Kerosene-Type Jet Fuel | Kerosene | No. 2 Fuel Oil | No. 2 Diesel Fuel | Propane (Consumer Grade) |
|---|---|---|---|---|---|---|---|
| **1978 Average** | **48.4** | **51.6** | **38.7** | **42.1** | **40.0** | **37.7** | **33.5** |
| **1980 Average** | **103.5** | **108.4** | **86.8** | **90.2** | **78.8** | **81.8** | **48.2** |
| **1985 Average** | **91.2** | **120.1** | **79.6** | **103.0** | **84.9** | **78.9** | **71.7** |
| **1990 Average** | **88.3** | **112.0** | **76.6** | **92.3** | **73.4** | **72.5** | **74.5** |
| **1995 Average** | **76.5** | **100.5** | **54.0** | **58.9** | **56.2** | **56.0** | **49.2** |
| **1996 Average** | **84.7** | **111.6** | **65.1** | **74.0** | **67.3** | **68.1** | **60.5** |
| **1997 Average** | **83.9** | **112.8** | **61.3** | **74.5** | **63.6** | **64.2** | **55.2** |
| **1998 Average** | **67.3** | **97.5** | **45.2** | **50.1** | **48.2** | **49.4** | **40.5** |
| **1999 Average** | **78.1** | **105.9** | **54.3** | **60.5** | **55.8** | **58.4** | **45.8** |
| **2000 Average** | **110.6** | **130.6** | **89.9** | **112.3** | **92.7** | **93.5** | **60.3** |
| **2001 Average** | **103.2** | **132.3** | **77.5** | **104.5** | **82.9** | **84.2** | **50.6** |
| **2002 Average** | **94.7** | **128.8** | **72.1** | **99.0** | **73.7** | **76.2** | **41.9** |
| **2003 Average** | **115.6** | **149.3** | **87.2** | **122.4** | **93.3** | **94.4** | **57.7** |
| **2004 Average** | **143.5** | **181.9** | **120.7** | **116.0** | **117.3** | **124.3** | **83.9** |
| **2005 Average** | **182.9** | **223.1** | **173.5** | **195.7** | **170.5** | **178.6** | **108.9** |
| **2006 Average** | **212.8** | **268.2** | **199.8** | **224.4** | **198.2** | **209.6** | **135.8** |
| **2007 Average** | **234.5** | **284.9** | **216.5** | **226.3** | **224.1** | **226.7** | **148.9** |
| **2008** January | 257.1 | 298.7 | 268.5 | 338.1 | 279.0 | 269.2 | 220.6 |
| February | 256.6 | 295.4 | 269.3 | 340.4 | 288.8 | 280.5 | NA |
| March | 278.3 | 329.6 | 312.0 | 359.2 | 323.2 | 325.2 | 186.5 |
| April | 298.4 | 335.8 | 333.4 | 377.4 | 340.5 | 345.1 | NA |
| May | 331.6 | 361.5 | 366.1 | 395.0 | 375.3 | 380.8 | 185.3 |
| June | 358.0 | 396.5 | 393.3 | 415.9 | 391.4 | 400.4 | 192.8 |
| July | 356.8 | 392.9 | 400.8 | 439.3 | 393.9 | 402.1 | 205.5 |
| August | 327.9 | 379.2 | 342.5 | 405.5 | 339.9 | 357.6 | 190.6 |
| September | 320.7 | 383.7 | 326.6 | 401.3 | 327.5 | 332.0 | 201.5 |
| October | 253.7 | 297.5 | 260.3 | 299.3 | 269.0 | 278.1 | 176.3 |
| November | 161.7 | 223.0 | 198.8 | 308.5 | 229.3 | 213.9 | 165.2 |
| December | 121.9 | 181.4 | 151.8 | 282.3 | 192.6 | 169.0 | 166.4 |
| **Average** | **277.5** | **327.3** | **305.2** | **328.3** | **298.6** | **315.0** | **189.2** |
| **2009** January | 135.7 | 185.7 | 148.2 | 261.3 | 202.6 | 162.9 | 189.4 |
| February | 146.9 | 196.1 | 136.0 | 263.1 | 187.7 | 149.5 | NA |
| March | 150.3 | 196.4 | 128.1 | 256.5 | 177.2 | 144.9 | 136.0 |
| April | 160.0 | 215.0 | 145.8 | 254.0 | 177.0 | 158.9 | 107.2 |
| May | 185.6 | 242.3 | 148.7 | 249.7 | 170.6 | 164.0 | 90.1 |
| June | 218.7 | 270.7 | 181.8 | 249.0 | 194.4 | 195.0 | 102.0 |
| July | 206.7 | 260.7 | 177.4 | 246.2 | 187.1 | 189.9 | 90.5 |
| August | 215.7 | 276.3 | 192.2 | 254.5 | 204.1 | 203.1 | 104.3 |
| September | 208.6 | 268.4 | 183.5 | NA | 197.2 | 198.5 | 109.3 |
| October | 210.4 | 269.3 | 193.0 | 273.8 | 216.3 | 208.6 | 125.8 |
| November | 217.3 | 283.9 | 206.4 | 287.5 | 222.7 | 216.0 | 135.2 |
| December | 214.4 | 279.0 | 201.6 | 289.4 | 219.7 | [R] 211.2 | [R] NA |
| **Average** | **188.8** | **243.8** | **170.4** | **267.2** | **196.3** | **183.3** | **123.6** |
| **2010** January | 224.0 | 291.4 | 212.9 | 298.6 | 236.9 | 219.2 | 191.0 |

[a] See "Nominal Price" in Glossary.

[b] See Note 5, "Motor Gasoline Prices," at end of section.

R=Revised. NA=Not available. W=Value withheld to avoid disclosure of individual company data.

Notes: • Sales to end users are those made directly to ultimate consumers, including bulk consumers (such as agriculture, industry, and electric utilities) and residential and commercial consumers. Sales for resale are shown in Table 9.6; they are sales made to purchasers other than ultimate consumers. • Values for the current month are preliminary. • Prices prior to 1983 are U.S. Energy Information Administration (EIA) estimates. See Note 6, "Historical Petroleum Prices," at end of section. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/prices.html for all available data beginning in 1978.

Sources: • **1978-2008:** EIA, *Petroleum Marketing Annual 2008,* Table 2. • **2009 and 2010:** EIA, *Petroleum Marketing Monthly,* April 2010, Table 2.

## Table 9.8a No. 2 Distillate Prices to Residences: Northeastern States

(Nominal Cents[a] per Gallon, Excluding Taxes)

| | Maine | New Hampshire | Vermont | Massachusetts | Rhode Island | Connecticut | New York | New Jersey | Pennsylvania |
|---|---|---|---|---|---|---|---|---|---|
| **1978 Average** | **48.6** | **50.3** | **50.8** | **48.8** | **50.7** | **50.1** | **50.1** | **49.6** | **48.8** |
| **1980 Average** | **96.3** | **100.4** | **101.5** | **97.8** | **101.1** | **98.3** | **98.2** | **97.9** | **96.4** |
| **1985 Average** | **99.7** | **102.4** | **107.7** | **107.0** | **106.7** | **108.0** | **111.3** | **105.9** | **102.3** |
| **1990 Average** | **98.9** | **102.8** | **107.0** | **108.4** | **108.6** | **109.8** | **112.5** | **108.7** | **102.6** |
| **1995 Average** | **78.7** | **77.9** | **85.3** | **84.4** | **87.4** | **86.4** | **95.5** | **88.8** | **82.6** |
| **1996 Average** | **97.2** | **94.0** | **96.9** | **97.6** | **98.6** | **98.6** | **106.3** | **102.4** | **95.3** |
| **1997 Average** | **94.2** | **94.2** | **98.7** | **96.0** | **98.9** | **96.3** | **106.5** | **103.3** | **95.0** |
| **1998 Average** | **78.8** | **78.8** | **87.3** | **81.8** | **86.8** | **83.1** | **94.8** | **89.2** | **81.4** |
| **1999 Average** | **81.3** | **77.0** | **85.4** | **83.6** | **85.8** | **85.2** | **96.9** | **91.3** | **81.5** |
| **2000 Average** | **129.7** | **128.1** | **125.5** | **127.3** | **125.9** | **129.1** | **144.2** | **140.4** | **122.4** |
| **2001 Average** | **121.7** | **125.6** | **126.1** | **122.1** | **123.6** | **123.9** | **136.3** | **131.4** | **115.9** |
| **2002 Average** | **112.9** | **111.9** | **117.2** | **114.1** | **112.4** | **111.8** | **121.8** | **122.0** | **106.4** |
| **2003 Average** | **131.4** | **131.2** | **130.9** | **138.6** | **134.4** | **135.5** | **143.6** | **148.9** | **130.4** |
| **2004 Average** | **151.1** | **149.7** | **150.5** | **155.9** | **151.1** | **151.8** | **162.7** | **166.2** | **148.9** |
| **2005 Average** | **198.6** | **197.2** | **198.7** | **206.4** | **200.0** | **201.2** | **210.5** | **216.6** | **197.4** |
| **2006 Average** | **229.4** | **228.3** | **240.8** | **235.5** | **236.0** | **235.7** | **245.8** | **246.7** | **228.6** |
| **2007 Average** | **254.0** | **253.5** | **267.9** | **257.6** | **260.2** | **261.5** | **267.4** | **266.4** | **250.8** |
| **2008** January | 304.6 | 305.1 | 309.5 | 313.6 | 317.3 | 309.1 | 321.8 | 332.5 | 305.7 |
| February | 305.0 | 305.0 | 310.5 | 319.3 | 320.2 | 312.3 | 325.8 | 335.1 | 309.7 |
| March | 330.9 | 331.1 | 337.1 | 352.5 | 349.5 | 336.2 | 352.1 | 369.0 | 340.3 |
| April | 349.0 | 347.4 | 357.5 | 370.1 | 366.2 | 349.4 | 364.9 | 385.5 | 355.3 |
| May | 376.3 | 384.3 | 391.3 | 397.7 | 392.7 | 380.6 | 393.4 | 413.5 | 385.1 |
| June | 419.7 | 425.7 | 425.2 | 429.3 | 417.6 | 411.3 | 416.4 | 447.2 | 416.4 |
| July | 429.0 | 442.7 | 448.4 | 435.9 | 428.7 | 419.4 | 428.9 | 455.4 | 432.6 |
| August | 395.7 | 404.8 | 417.6 | 389.2 | 384.2 | NA | 388.9 | 402.3 | NA |
| September | 375.7 | 376.8 | 393.9 | 362.8 | 357.5 | 368.1 | 371.8 | 376.1 | 357.3 |
| October | 322.8 | 331.8 | 350.2 | 306.7 | 300.0 | 319.9 | 329.5 | 319.8 | 310.3 |
| November | 279.5 | 285.7 | 313.7 | 264.6 | 273.5 | 288.6 | 296.2 | 272.7 | 275.7 |
| December | 251.3 | 255.9 | 280.2 | 233.9 | 240.8 | 261.3 | 258.9 | 238.1 | 244.9 |
| **Average** | **319.9** | **320.7** | **332.3** | **319.7** | **321.0** | **319.5** | **329.3** | **326.7** | **315.7** |
| **2009** January | 250.4 | 248.6 | 273.8 | 236.9 | 235.7 | 256.7 | 253.3 | 239.4 | 242.4 |
| February | 237.9 | 238.0 | 265.4 | 224.7 | 222.6 | 242.4 | 244.0 | 229.1 | 226.7 |
| March | 224.0 | 224.4 | 251.8 | 217.8 | 213.8 | 235.7 | 232.6 | 216.7 | 220.0 |
| April | 224.4 | 220.8 | 242.0 | 220.8 | 214.0 | 230.9 | 233.0 | 218.8 | 218.0 |
| May | 217.5 | 212.2 | 236.4 | 216.2 | 207.5 | 222.3 | 228.7 | 219.2 | 217.7 |
| June | 227.5 | 218.0 | 237.2 | 238.0 | 237.6 | 240.6 | 242.0 | 238.2 | 220.7 |
| July | 225.3 | 213.3 | 232.2 | 232.0 | 227.9 | 234.8 | 241.0 | 232.5 | 213.8 |
| August | 234.8 | 222.8 | 239.0 | 245.4 | 243.8 | 248.1 | 251.2 | 245.2 | 225.7 |
| September | 232.9 | 226.3 | 241.2 | 242.6 | 233.5 | 234.6 | 246.4 | 242.0 | 219.6 |
| October | 239.3 | 235.8 | 249.3 | 250.5 | 251.6 | 251.3 | 258.1 | 254.4 | 231.5 |
| November | 246.7 | 248.2 | 261.2 | 262.5 | 268.3 | 264.1 | 274.5 | 271.3 | 251.5 |
| December | 248.9 | R 250.9 | 264.9 | R 263.6 | R 271.5 | R 266.2 | R 273.1 | R 273.3 | R 253.4 |
| **Average** | **237.7** | R **236.4** | **257.7** | R **237.3** | R **237.5** | **248.2** | **250.3** | **240.5** | **232.8** |
| **2010** January | 258.0 | 261.1 | 275.3 | 276.1 | 285.4 | 275.9 | 289.0 | 290.8 | 269.3 |

[a] See "Nominal Price" in Glossary.

R=Revised. NA=Not available.

Notes: • States are grouped in Tables 9.8a, 9.8b, and 9.8c by geographic region of the country. • Values for the current month are preliminary. • Prices prior to 1983 are U.S. Energy Information Administration (EIA) estimates. See Note 6, "Historical Petroleum Prices," at end of section.

Web Page: See http://www.eia.doe.gov/emeu/mer/prices.html for all available data beginning in 1978.

Sources: • **1978-2008:** EIA, *Petroleum Marketing Annual 2008,* Table 15. • **2009 and 2010:** EIA, *Petroleum Marketing Monthly,* April 2010, Table 15.

## Table 9.8b No. 2 Distillate Prices to Residences: Selected South Atlantic and Midwestern States (Nominal Cents[a] per Gallon, Excluding Taxes)

| | Delaware | District of Columbia | Maryland | Virginia | West Virginia | Ohio | Michigan | Indiana | Illinois | Wisconsin | Minnesota |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **1978 Average** | **47.8** | **50.7** | **49.2** | **49.1** | **46.2** | **47.4** | **47.9** | **48.5** | **46.5** | **44.7** | **47.8** |
| **1980 Average** | **95.4** | **102.6** | **97.9** | **98.5** | **92.2** | **91.9** | **97.8** | **99.6** | **95.8** | **91.5** | **99.9** |
| **1985 Average** | **104.6** | **114.3** | **108.8** | **106.3** | **98.0** | **99.7** | **102.1** | **99.1** | **97.5** | **98.3** | **101.9** |
| **1990 Average** | **105.8** | **107.8** | **111.9** | **110.6** | **99.1** | **98.1** | **100.9** | **99.3** | **96.1** | **94.2** | **101.4** |
| **1995 Average** | **87.0** | **101.0** | **93.6** | **84.4** | **81.5** | **80.8** | **86.0** | **81.6** | **78.5** | **81.2** | **80.1** |
| **1996 Average** | **98.4** | **117.8** | **106.3** | **95.2** | **96.0** | **92.1** | **97.7** | **91.2** | **89.3** | **89.9** | **90.9** |
| **1997 Average** | **98.4** | **117.4** | **105.7** | **94.8** | **96.2** | **91.3** | **94.2** | **86.5** | **87.0** | **93.3** | **89.9** |
| **1998 Average** | **85.8** | **102.2** | **90.2** | **85.6** | **81.8** | **76.7** | **80.4** | **74.8** | **73.5** | **80.1** | **73.8** |
| **1999 Average** | **88.4** | **101.1** | **90.7** | **87.0** | **78.9** | **82.0** | **88.3** | **79.3** | **71.6** | **84.7** | **77.4** |
| **2000 Average** | **127.0** | **W** | **135.1** | **126.9** | **125.1** | **122.0** | **NA** | **120.7** | **109.5** | **117.1** | **115.6** |
| **2001 Average** | **123.4** | **143.1** | **134.2** | **120.2** | **113.9** | **116.0** | **NA** | **113.3** | **112.1** | **118.0** | **112.2** |
| **2002 Average** | **116.4** | **W** | **120.1** | **105.7** | **105.4** | **105.8** | **110.9** | **102.5** | **97.5** | **107.3** | **105.1** |
| **2003 Average** | **143.3** | **W** | **145.5** | **131.1** | **130.4** | **128.4** | **132.1** | **120.2** | **119.8** | **126.9** | **121.8** |
| **2004 Average** | **157.0** | **W** | **163.2** | **146.2** | **149.3** | **147.5** | **153.9** | **153.7** | **140.5** | **146.5** | **143.3** |
| **2005 Average** | **207.5** | **W** | **212.7** | **204.4** | **204.3** | **200.9** | **205.3** | **201.7** | **202.1** | **199.3** | **198.7** |
| **2006 Average** | **238.1** | **W** | **239.8** | **226.8** | **226.1** | **224.4** | **232.9** | **231.7** | **231.2** | **229.7** | **226.8** |
| **2007 Average** | **258.4** | **W** | **266.8** | **240.7** | **247.8** | **249.4** | **258.8** | **255.7** | **252.8** | **257.1** | **258.7** |
| **2008** January | 322.8 | W | 326.4 | 306.4 | 311.5 | 304.6 | 304.6 | 306.3 | 300.5 | 303.9 | 297.1 |
| February | 326.0 | W | 331.1 | 314.8 | 316.3 | 318.4 | 316.9 | 312.3 | 310.0 | 311.4 | 311.1 |
| March | 354.8 | W | 354.5 | 340.6 | 347.9 | 354.8 | 359.1 | 345.3 | 357.4 | 351.2 | 352.8 |
| April | 362.6 | W | 367.2 | 352.8 | 363.9 | 372.6 | 370.2 | 364.3 | 368.5 | 365.7 | 371.3 |
| May | 390.3 | W | 402.9 | 384.8 | 391.6 | 407.6 | 400.0 | 409.1 | 405.0 | 395.6 | 399.7 |
| June | 423.1 | W | 424.6 | 412.6 | 425.2 | 417.5 | 421.4 | 427.4 | NA | NA | 417.1 |
| July | 434.5 | W | 441.4 | 412.3 | 430.6 | 414.7 | 417.8 | 426.4 | 401.1 | 399.3 | 416.3 |
| August | 389.8 | W | 408.7 | 376.4 | 386.3 | 379.4 | 373.8 | 379.7 | NA | 366.6 | 379.4 |
| September | 362.4 | W | 382.8 | 355.8 | 356.6 | 367.0 | 365.2 | 368.8 | 360.0 | 360.1 | 365.8 |
| October | 314.8 | W | 329.7 | 315.8 | 316.2 | 301.9 | 307.9 | 309.8 | 303.9 | 308.6 | 309.8 |
| November | 267.7 | W | 289.4 | 266.8 | 268.8 | 250.9 | 248.5 | 252.6 | 251.4 | 252.0 | 258.2 |
| December | 244.1 | W | 255.0 | 235.0 | 233.3 | 208.1 | 207.9 | 211.8 | 212.9 | 211.1 | 207.2 |
| **Average** | **318.7** | **W** | **327.3** | **312.4** | **322.1** | **314.7** | **306.7** | **310.5** | **315.2** | **308.8** | **306.5** |
| **2009** January | 241.0 | W | 245.6 | 222.3 | 230.0 | 204.6 | 200.1 | 206.1 | 206.9 | 200.2 | 197.6 |
| February | 229.3 | W | 239.2 | 215.3 | 220.2 | 189.3 | 187.6 | 190.9 | 186.9 | 185.4 | 181.8 |
| March | 225.3 | W | 226.6 | 200.5 | 204.2 | 182.1 | 180.6 | 181.9 | 183.3 | 178.2 | 173.7 |
| April | 226.6 | W | 225.2 | NA | 203.3 | 190.0 | 181.4 | 192.2 | 198.2 | 187.2 | 189.1 |
| May | 225.3 | W | 221.5 | 182.2 | 199.9 | 192.2 | 180.9 | 197.2 | NA | 197.6 | 187.2 |
| June | 228.9 | W | 230.2 | 203.7 | 209.7 | 215.0 | 209.5 | 217.4 | 205.9 | 218.9 | 215.5 |
| July | 225.4 | W | 229.2 | 205.4 | 212.3 | 211.2 | 196.4 | 218.2 | NA | 218.3 | 209.2 |
| August | 234.0 | W | 238.2 | 214.1 | 225.2 | 228.5 | 215.3 | NA | 214.7 | 228.4 | 229.7 |
| September | 230.9 | W | 238.7 | 211.1 | 227.1 | 221.5 | 218.0 | 229.0 | NA | 226.2 | 222.0 |
| October | 250.7 | W | 255.6 | 232.3 | 241.0 | 236.8 | 233.6 | 239.1 | 238.5 | 233.3 | 230.3 |
| November | 268.8 | W | 270.3 | 240.7 | 252.6 | 248.2 | 248.4 | 247.5 | 247.6 | 242.4 | 238.6 |
| December | R 272.6 | W | R 276.0 | R 249.4 | R 252.6 | R 249.5 | R 244.6 | 250.7 | 242.7 | R 239.8 | 239.2 |
| **Average** | **R 241.3** | **W** | **R 246.3** | **R 219.4** | **R 229.2** | **R 213.3** | **R 210.0** | **218.7** | **215.6** | **R 210.5** | **R 212.3** |
| **2010** January | 287.6 | W | 286.0 | 262.0 | 268.9 | 257.1 | 252.5 | 256.4 | 252.6 | 246.6 | 250.1 |

[a] See "Nominal Price" in Glossary.

R=Revised. NA=Not available. W=Value withheld to avoid disclosure of individual company data.

Notes: • States are grouped in Tables 9.8a, 9.8b, and 9.8c by geographic region of the country. • Values for the current month are preliminary. • Prices prior to 1983 are U.S. Energy Information Administration (EIA) estimates. See Note 6, "Historical Petroleum Prices," at end of section.

Web Page: See http://www.eia.doe.gov/emeu/mer/prices.html for all available data beginning in 1978.

Sources: • **1978-2008:** EIA, *Petroleum Marketing Annual 2008,* Table 15. • **2009 and 2010:** EIA, *Petroleum Marketing Monthly,* April 2010, Table 15.

# Table 9.8c No. 2 Distillate Prices to Residences: Selected Western States and U.S. Average (Nominal Cents[a] per Gallon, Excluding Taxes)

| | Idaho | Washington | Oregon | Alaska | U.S. Average |
|---|---|---|---|---|---|
| **1978 Average** | **43.6** | **48.6** | **45.8** | **53.2** | **49.0** |
| **1980 Average** | **91.6** | **100.8** | **97.3** | **97.8** | **97.4** |
| **1985 Average** | **97.2** | **101.1** | **97.1** | **108.3** | **105.3** |
| **1990 Average** | **97.4** | **102.9** | **97.0** | **110.1** | **106.3** |
| **1995 Average** | **83.9** | **96.2** | **89.4** | **83.4** | **86.7** |
| **1996 Average** | **93.3** | **108.0** | **98.9** | **90.9** | **98.9** |
| **1997 Average** | **95.3** | **113.9** | **103.1** | **97.3** | **98.4** |
| **1998 Average** | **78.4** | **97.8** | **86.1** | **85.2** | **85.2** |
| **1999 Average** | **76.2** | **106.5** | **93.8** | **96.6** | **87.6** |
| **2000 Average** | **117.0** | **144.5** | **136.8** | **133.7** | **131.1** |
| **2001 Average** | **103.8** | **133.6** | **121.1** | **137.7** | **125.0** |
| **2002 Average** | **91.9** | **120.4** | **106.0** | **108.7** | **112.9** |
| **2003 Average** | **118.8** | **148.7** | **130.3** | **124.3** | **135.5** |
| **2004 Average** | **149.5** | **174.9** | **159.4** | **152.4** | **154.8** |
| **2005 Average** | **212.3** | **238.5** | **214.6** | **206.1** | **205.2** |
| **2006 Average** | **239.1** | **268.1** | **241.1** | **239.5** | **236.5** |
| **2007 Average** | **259.8** | **290.9** | **250.0** | **251.8** | **259.2** |
| **2008** January | 296.0 | 329.1 | 299.3 | 301.3 | 313.8 |
| February | 305.7 | 339.8 | 311.5 | 308.4 | 318.1 |
| March | 348.7 | 382.3 | 349.5 | 337.7 | 347.5 |
| April | 375.5 | 404.3 | 374.0 | 365.8 | 362.6 |
| May | 399.8 | 432.0 | 399.1 | 399.9 | 392.1 |
| June | 417.8 | 454.5 | 423.7 | 430.9 | 420.4 |
| July | 421.6 | 452.5 | 429.3 | 446.5 | 429.6 |
| August | 384.4 | 412.4 | 383.6 | 422.1 | 386.6 |
| September | 358.2 | 382.4 | 355.2 | 389.7 | 366.7 |
| October | 312.7 | 327.9 | 300.7 | NA | 316.9 |
| November | 245.0 | 284.1 | 240.2 | 262.2 | 277.9 |
| December | 187.8 | 228.4 | 190.2 | 222.6 | 245.0 |
| **Average** | **307.8** | **340.1** | **306.0** | **348.5** | **321.9** |
| **2009** January | 187.9 | 238.9 | 193.9 | 216.0 | 242.2 |
| February | 176.2 | 225.4 | 182.8 | NA | 230.7 |
| March | 167.4 | 212.4 | 173.8 | 194.6 | 220.8 |
| April | 186.3 | 238.3 | 199.7 | 214.0 | 220.9 |
| May | 187.8 | 247.3 | 204.6 | 225.6 | 216.2 |
| June | 214.8 | 254.2 | 226.8 | 250.6 | 230.2 |
| July | 212.3 | 237.8 | 214.9 | 236.2 | 225.0 |
| August | 215.8 | 251.9 | 232.5 | 255.4 | 237.0 |
| September | 227.1 | 267.3 | 235.6 | NA | 234.1 |
| October | 233.3 | 275.0 | 246.9 | NA | 246.4 |
| November | 245.9 | 287.1 | 255.0 | NA | 260.7 |
| December | 235.4 | R 283.0 | 247.4 | NA | R 262.7 |
| **Average** | **204.8** | R **249.0** | **213.8** | R **250.3** | R **238.5** |
| **2010** January | NA | R 291.8 | R 258.0 | NA | R 276.1 |
| February | NA | NA | NA | NA | E 273.2 |

[a] See "Nominal Price" in Glossary.

R=Revised. NA=Not available. E=Estimate.

Notes: • States are grouped in Tables 9.8a, 9.8b, and 9.8c by geographic region of the country. • Values for the current month are preliminary. • Prices prior to 1983 are U.S. Energy Information Administration (EIA) estimates. See Note 6, "Historical Petroleum Prices," at end of section.

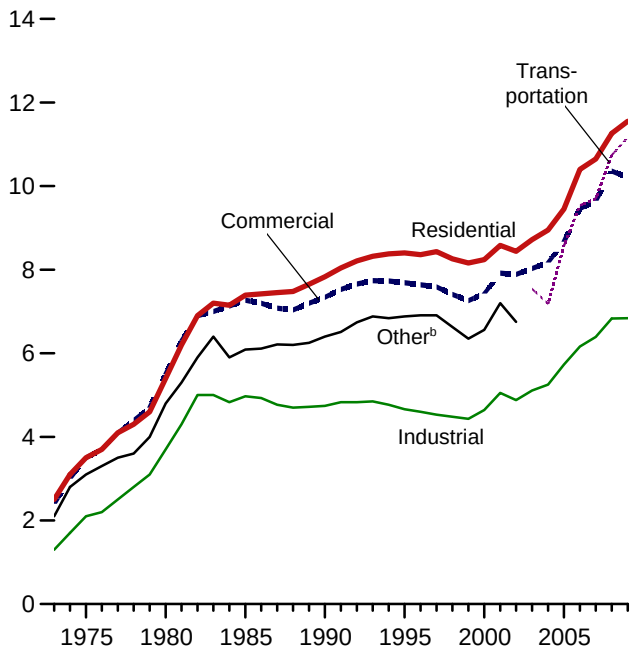
Web Page: See http://www.eia.doe.gov/emeu/mer/prices.html for all available data beginning in 1978.

Sources: • **1978-2008:** EIA, *Petroleum Marketing Annual 2008,* Table 15. • **2009 and 2010:** EIA, *Petroleum Marketing Monthly,* April 2010, Table 15.

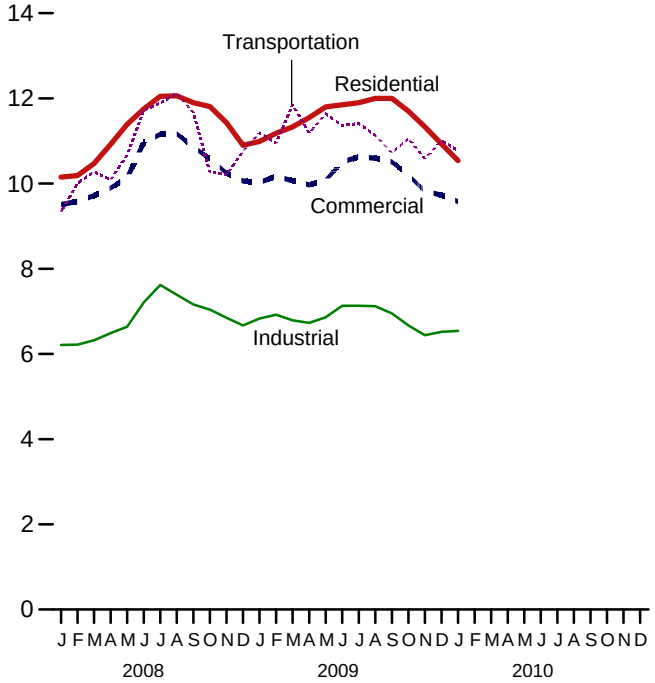
## Figure 9.2 Average Retail Prices of Electricity

(Nominal Cents[a] per Kilowatthour)

By Sector, 1973-2009




By Sector, Monthly



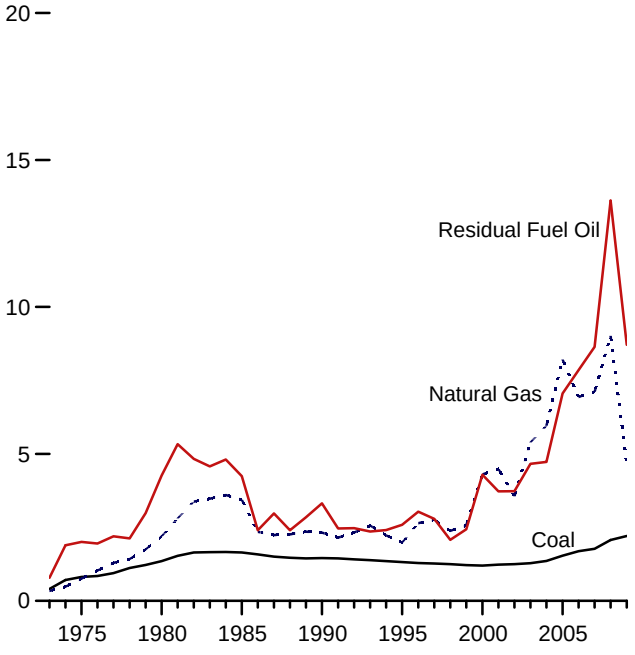

[a]See "Nominal Price" in Glossary.
[b]Public street and highway lighting, interdepartmental sales, other sales to public authorities, agricultural and irrigation, and transportation including railroads and railways.

Note: Includes taxes.
Web Page: http://www.eia.doe.gov/emeu/mer/prices.html.
Source: Table 9.9.

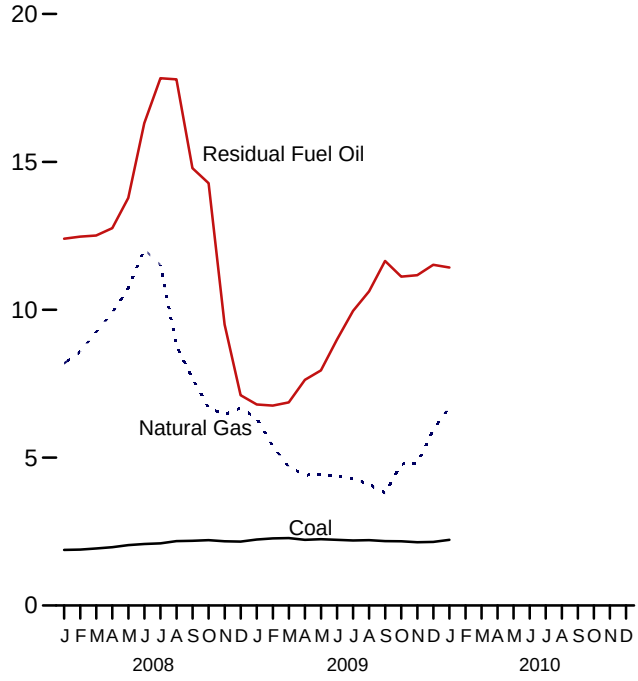
## Figure 9.3 Cost of Fossil-Fuel Receipts at Electric Generating Plants

(Nominal Dollars[a] per Million Btu, Including Taxes )

Costs, 1973-2009




Costs, Monthly




[a]See "Nominal Dollars" in Glossary.
Web Page: http://www.eia.doe.gov/emeu/mer/prices.html.
Source: Table 9.10.

# Table 9.9 Average Retail Prices of Electricity

(Nominal Cents[a] per Kilowatthour, Including Taxes)

| | Residential | Commercial[b] | Industrial[c] | Transportation[d] | Other[e] | Total |
|---|---|---|---|---|---|---|
| **1973 Average** | **2.5** | **2.4** | **1.3** | **NA** | **2.1** | **2.0** |
| **1975 Average** | **3.5** | **3.5** | **2.1** | **NA** | **3.1** | **2.9** |
| **1980 Average** | **5.4** | **5.5** | **3.7** | **NA** | **4.8** | **4.7** |
| **1985 Average** | **7.39** | **7.27** | **4.97** | **NA** | **6.09** | **6.44** |
| **1990 Average** | **7.83** | **7.34** | **4.74** | **NA** | **6.40** | **6.57** |
| **1995 Average** | **8.40** | **7.69** | **4.66** | **NA** | **6.88** | **6.89** |
| **1996 Average** | **8.36** | **7.64** | **4.60** | **NA** | **6.91** | **6.86** |
| **1997 Average** | **8.43** | **7.59** | **4.53** | **NA** | **6.91** | **6.85** |
| **1998 Average** | **8.26** | **7.41** | **4.48** | **NA** | **6.63** | **6.74** |
| **1999 Average** | **8.16** | **7.26** | **4.43** | **NA** | **6.35** | **6.64** |
| **2000 Average** | **8.24** | **7.43** | **4.64** | **NA** | **6.56** | **6.81** |
| **2001 Average** | **8.58** | **7.92** | **5.05** | **NA** | **7.20** | **7.29** |
| **2002 Average** | **8.44** | **7.89** | **4.88** | **NA** | **6.75** | **7.20** |
| **2003 Average** | **8.72** | **8.03** | **5.11** | **7.54** | **– –** | **7.44** |
| **2004 Average** | **8.95** | **8.17** | **5.25** | **7.18** | **– –** | **7.61** |
| **2005 Average** | **9.45** | **8.67** | **5.73** | **8.57** | **– –** | **8.14** |
| **2006 Average** | **10.40** | **9.46** | **6.16** | **9.54** | **– –** | **8.90** |
| **2007 Average** | **10.65** | **9.65** | **6.39** | **9.70** | – – | **9.13** |
| **2008** January | 10.15 | 9.51 | 6.21 | 9.34 | – – | 8.92 |
| February | 10.19 | 9.58 | 6.22 | 10.01 | – – | 8.92 |
| March | 10.47 | 9.72 | 6.32 | 10.27 | – – | 9.03 |
| April | 10.92 | 9.90 | 6.49 | 10.09 | – – | 9.21 |
| May | 11.39 | 10.13 | 6.64 | 10.67 | – – | 9.47 |
| June | 11.75 | 10.97 | 7.21 | 11.72 | – – | 10.26 |
| July | 12.05 | 11.16 | 7.62 | 11.89 | – – | 10.65 |
| August | 12.06 | 11.17 | 7.39 | 12.12 | – – | 10.58 |
| September | 11.90 | 10.86 | 7.16 | 11.67 | – – | 10.26 |
| October | 11.81 | 10.58 | 7.04 | 10.27 | – – | 9.96 |
| November | 11.43 | 10.25 | 6.85 | 10.21 | – – | 9.68 |
| December | 10.90 | 10.06 | 6.67 | 10.76 | **– –** | 9.57 |
| **Average** | **11.26** | **10.36** | **6.83** | **10.74** | – – | **9.74** |
| **2009** January | 10.99 | 10.03 | 6.83 | 11.19 | – – | 9.72 |
| February | 11.18 | 10.17 | 6.92 | 10.95 | – – | 9.80 |
| March | 11.33 | 10.07 | 6.79 | 11.85 | – – | 9.72 |
| April | 11.55 | 9.97 | 6.73 | 11.19 | – – | 9.65 |
| May | 11.80 | 10.08 | 6.86 | 11.64 | – – | 9.83 |
| June | 11.85 | 10.51 | 7.13 | 11.36 | – – | 10.21 |
| July | 11.90 | 10.63 | 7.13 | 11.41 | – – | 10.37 |
| August | 12.00 | 10.60 | 7.12 | 11.13 | – – | 10.36 |
| September | 12.00 | 10.51 | 6.95 | 10.72 | – – | 10.18 |
| October | 11.70 | 10.20 | 6.67 | 11.06 | – – | 9.77 |
| November | 11.33 | 9.82 | 6.44 | 10.58 | – – | 9.42 |
| December | 10.93 | 9.73 | 6.52 | 11.01 | **– –** | 9.44 |
| **Average** | **11.55** | **10.21** | **6.84** | **11.17** | – – | **9.89** |
| **2010** January | 10.54 | 9.58 | 6.54 | 10.77 | – – | 9.35 |

[a] See "Nominal Price" in Glossary.

[b] Commercial sector. For 1973-2002, prices exclude public street and highway lighting, interdepartmental sales, and other sales to public authorities.

[c] Industrial sector. For 1973-2002, prices exclude agriculture and irrigation.

[d] Transportation sector, including railroads and railways.

[e] Public street and highway lighting, interdepartmental sales, other sales to public authorities, agriculture and irrigation, and transportation including railroads and railways.

R=Revised. NA=Not available. – – =Not applicable.

Notes: • Beginning in 2003, the category "Other" has been replaced by "Transportation," and the categories "Commercial" and "Industrial" have been redefined. • Prices are calculated by dividing revenue by sales. Revenue may not correspond to sales for a particular month because of energy service provider billing and accounting procedures. That lack of correspondence could result in uncharacteristic increases or decreases in the monthly prices. • Prices include State and local taxes, energy or demand charges, customer service charges, environmental surcharges, franchise fees, fuel adjustments, and other miscellaneous charges applied to end-use customers during normal billing operations. Prices do not include deferred charges, credits, or other adjustments, such as fuel or revenue from purchased power, from previous reporting periods. • See Note 7, "Electricity Retail Prices," at end of section for plant coverage, and for information on preliminary and final values. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/prices.html for all available data beginning in 1973.

Sources: • **1973-September 1977:** Federal Power Commission, Form FPC-5, "Monthly Statement of Electric Operating Revenues and Income." • **October 1977-February 1980:** Federal Energy Regulatory Commission (FERC), Form FPC-5, "Monthly Statement of Electric Operating Revenues and Income." • **March 1980-1982:** FERC, Form FERC-5, "Electric Utility Company Monthly Statement." • **1983:** U.S. Energy Information Administration (EIA), Form EIA-826, "Electric Utility Company Monthly Statement." • **1984-1992:** EIA, Form EIA-861, "Annual Electric Utility Report." • **1993 forward:** EIA, *Electric Power Monthly,* April 2010, Table 5.3.

# Table 9.10 Cost of Fossil-Fuel Receipts at Electric Generating Plants

(Nominal Dollars[a] per Million Btu, Including Taxes)

| | Coal | Petroleum | | | | Natural Gas[e] | All Fossil Fuels[f] |
|---|---|---|---|---|---|---|---|
| | | Residual Fuel Oil[b] | Distillate Fuel Oil[c] | Petroleum Coke | Total[d] | | |
| **1973 Average** | **0.41** | **0.79** | **NA** | **NA** | **0.80** | **0.34** | **0.48** |
| **1975 Average** | **.81** | **2.01** | **NA** | **NA** | **2.02** | **.75** | **1.04** |
| **1980 Average** | **1.35** | **4.27** | **NA** | **NA** | **4.35** | **2.20** | **1.93** |
| **1985 Average** | **1.65** | **4.24** | **NA** | **NA** | **4.32** | **3.44** | **2.09** |
| **1990 Average** | **1.45** | **3.32** | **5.38** | **.80** | **3.35** | **2.32** | **1.69** |
| **1995 Average** | **1.32** | **2.59** | **3.99** | **.65** | **2.57** | **1.98** | **1.45** |
| **1996 Average** | **1.29** | **3.03** | **4.87** | **.78** | **3.03** | **2.64** | **1.52** |
| **1997 Average** | **1.27** | **2.79** | **4.49** | **.91** | **2.73** | **2.76** | **1.52** |
| **1998 Average** | **1.25** | **2.08** | **3.30** | **.71** | **2.02** | **2.38** | **1.44** |
| **1999 Average** | **1.22** | **2.44** | **4.03** | **.65** | **2.36** | **2.57** | **1.44** |
| **2000 Average** | **1.20** | **4.29** | **6.65** | **.58** | **4.18** | **4.30** | **1.74** |
| **2001 Average** | **1.23** | **3.73** | **6.30** | **.78** | **3.69** | **4.49** | **1.73** |
| **2002 Average**[g] | **1.25** | **3.73** | **5.34** | **.78** | **3.34** | **3.56** | **1.86** |
| **2003 Average** | **1.28** | **4.66** | **6.82** | **.72** | **4.33** | **5.39** | **2.28** |
| **2004 Average** | **1.36** | **4.73** | **8.02** | **.83** | **4.29** | **5.96** | **2.48** |
| **2005 Average** | **1.54** | **7.06** | **11.72** | **1.11** | **6.44** | **8.21** | **3.25** |
| **2006 Average** | **1.69** | **7.85** | **13.28** | **1.33** | **6.23** | **6.94** | **3.02** |
| **2007 Average** | **1.77** | **8.64** | **14.85** | **1.51** | **7.17** | **7.11** | **3.23** |
| **2008** January | 1.88 | 12.40 | 19.43 | 1.62 | 9.80 | 8.19 | 3.73 |
| February | 1.89 | 12.47 | 20.16 | 1.82 | 10.59 | 8.58 | 3.66 |
| March | 1.93 | 12.51 | 21.09 | 1.82 | 9.00 | 9.25 | 3.83 |
| April | 1.97 | 12.76 | 23.09 | 1.79 | 10.56 | 9.89 | 4.11 |
| May | 2.04 | 13.78 | 25.99 | 1.96 | 11.55 | 10.73 | 4.33 |
| June | 2.08 | 16.31 | 26.44 | 2.01 | 14.19 | 12.04 | 5.45 |
| July | 2.10 | 17.83 | 27.76 | 1.96 | 13.78 | 11.51 | 5.45 |
| August | 2.18 | 17.79 | 25.04 | 2.75 | 13.91 | 8.79 | 4.46 |
| September | 2.19 | 14.79 | 23.35 | 2.49 | 12.01 | 7.68 | 3.91 |
| October | 2.21 | 14.28 | 19.53 | 2.39 | 10.33 | 6.69 | 3.50 |
| November | 2.17 | 9.50 | 15.75 | 2.38 | 7.64 | 6.45 | 3.28 |
| December | 2.16 | 7.11 | 12.39 | 2.30 | 6.40 | 6.68 | 3.37 |
| **Average** | **2.07** | **13.62** | **21.46** | **2.11** | **10.87** | **9.02** | **4.11** |
| **2009** January | 2.23 | 6.80 | 11.45 | 2.06 | 6.52 | 6.33 | 3.39 |
| February | 2.27 | 6.76 | 11.08 | 1.83 | 6.02 | 5.39 | 3.12 |
| March | 2.28 | 6.87 | 10.61 | 1.66 | 5.55 | 4.69 | 2.96 |
| April | 2.22 | 7.63 | 11.39 | 1.19 | 5.80 | 4.41 | 2.84 |
| May | 2.24 | 7.95 | 11.91 | 1.72 | 6.04 | 4.43 | 2.93 |
| June | 2.22 | 8.99 | 13.44 | 1.58 | 7.14 | 4.39 | 3.00 |
| July | 2.20 | 9.96 | 14.07 | 1.61 | 7.40 | 4.28 | 3.01 |
| August | 2.21 | 10.62 | 14.72 | 1.84 | 7.56 | 4.10 | 2.97 |
| September | 2.18 | 11.65 | 15.03 | 1.38 | 6.64 | 3.80 | 2.78 |
| October | 2.17 | 11.12 | 15.49 | 1.55 | 7.09 | 4.78 | 3.02 |
| November | 2.14 | 11.17 | 15.40 | 1.26 | 7.80 | 4.81 | 2.94 |
| December | 2.15 | 11.52 | 15.73 | 1.58 | 8.21 | 5.93 | 3.38 |
| **Average** | **2.21** | **8.71** | **13.17** | **1.62** | **6.79** | **4.70** | **3.03** |
| **2010** January | 2.22 | 11.43 | 15.60 | 1.85 | 9.57 | 6.71 | 3.72 |

[a] See "Nominal Dollars" in Glossary.

[b] For 1973-2001, electric utility data are for heavy oil (fuel oil nos. 5 and 6, and small amounts of fuel oil no. 4).

[c] For 1973-2001, electric utility data are for light oil (fuel oil nos. 1 and 2).

[d] Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other petroleum, and waste oil. For 1973-1982, data do not include refined motor oil, bunker oil, and liquefied petroleum gases. For 1973-1989, data do not include petroleum coke.

[e] Natural gas, plus a small amount of supplemental gaseous fuels. For 1973-2000, data also include a small amount of blast furnace gas and other gases derived from fossil fuels.

[f] Weighted average of costs shown under "Coal," "Petroleum," and "Natural Gas."

[g] Through 2001, data are for electric utilities only. Beginning in 2002, data also include independent power producers, and electric generating plants in the commercial and industrial sectors. See Note 8, "Costs of Fossil-Fuel Receipts at Electric Generating Plants," at end of section for plant coverage.

R=Revised. NA=Not available.

Notes: • Receipts are purchases of fuel. • Yearly costs are averages of monthly values, weighted by quantities in Btu. • Geographic coverage is the 50 States and the District of Columbia.

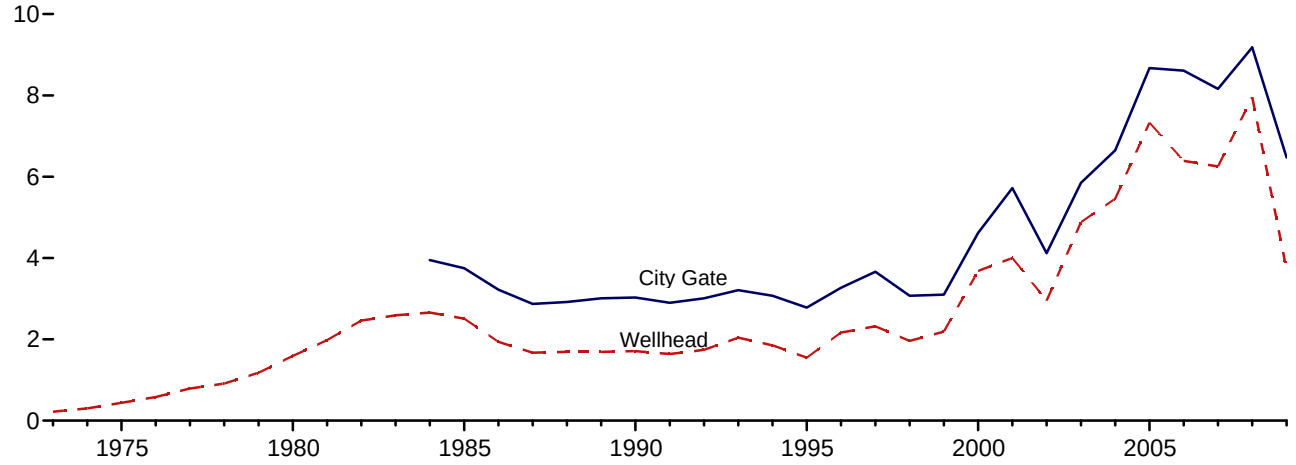
Web Page: See http://www.eia.doe.gov/emeu/mer/prices.html for all available data beginning in 1973.

Sources: See end of section.

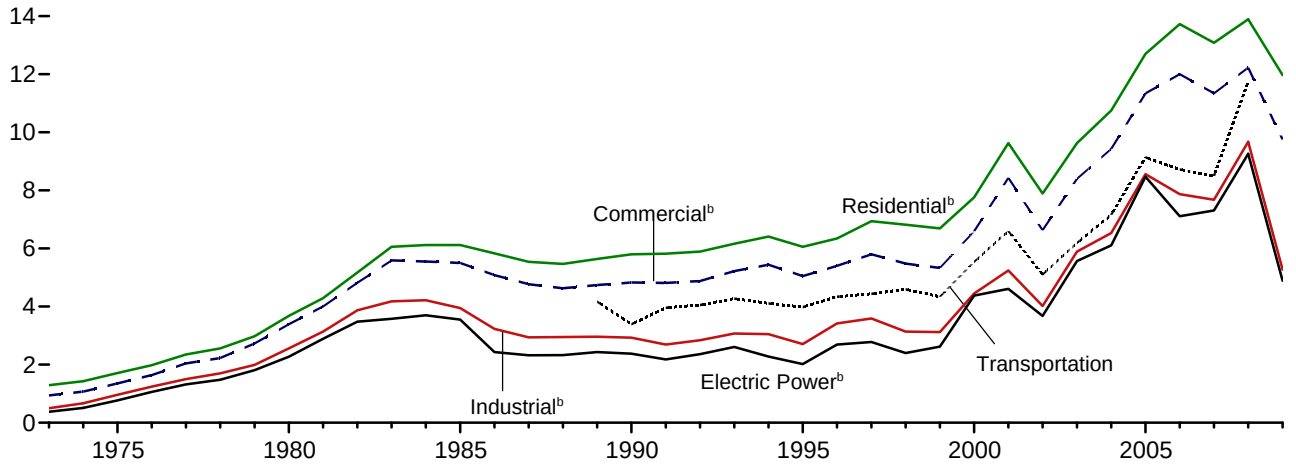
## Figure 9.4 Natural Gas Prices

(Nominal Dollars[a] per Thousand Cubic Feet)

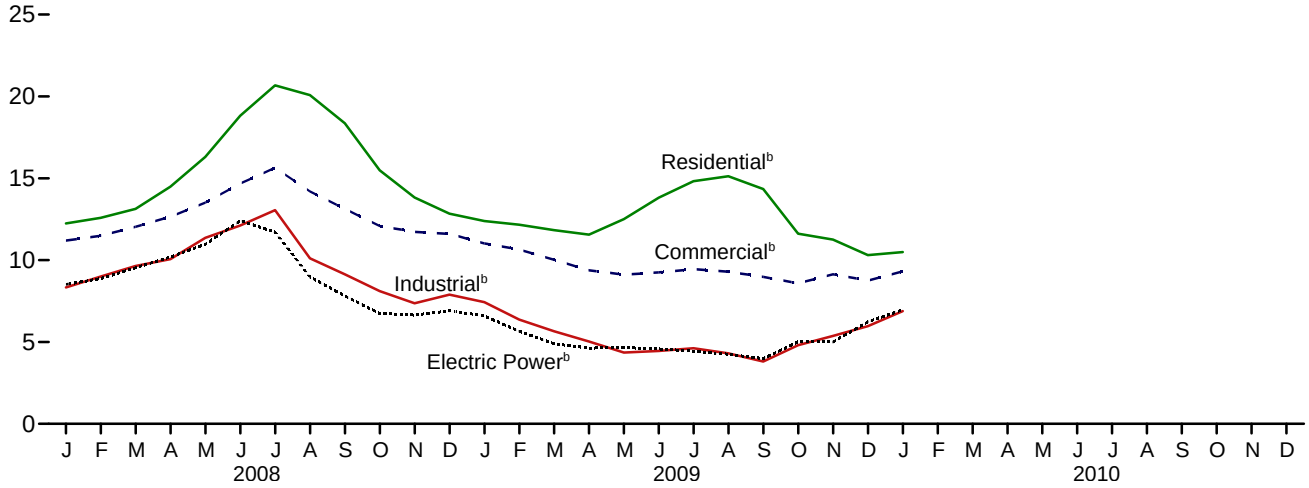
Selected Prices, 1973-2009




Consuming Sectors, 1973-2009




Consuming Sectors, Monthly




[a] See "Nominal Dollars" in Glossary.
[b] Includes taxes.

Web Page: http://www.eia.doe.gov/emeu/mer/prices.html.
Source: Table 9.11.

# Table 9.11 Natural Gas Prices

(Nominal Dollars[a] per Thousand Cubic Feet)

| | Wellhead Price | City Gate Price | Consuming Sectors[b] | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Residential | | Commercial[c] | | Industrial[d] | | Transportation | Electric Power[e] | |
| | | | Price[f] | Percentage of Sector[g] | Price[f] | Percentage of Sector[g] | Price[f] | Percentage of Sector[g] | Vehicle Fuel[h] Price[f] | Price[f] | Percentage of Sector[g,i] |
| **1973 Average** | **0.22** | **NA** | **1.29** | **NA** | **0.94** | **NA** | **0.50** | **NA** | **NA** | **0.38** | **92.1** |
| **1975 Average** | **.44** | **NA** | **1.71** | **NA** | **1.35** | **NA** | **.96** | **NA** | **NA** | **.77** | **96.1** |
| **1980 Average** | **1.59** | **NA** | **3.68** | **NA** | **3.39** | **NA** | **2.56** | **NA** | **NA** | **2.27** | **96.9** |
| **1985 Average** | **2.51** | **3.75** | **6.12** | **NA** | **5.50** | **NA** | **3.95** | **68.8** | **NA** | **3.55** | **94.0** |
| **1990 Average** | **1.71** | **3.03** | **5.80** | **99.2** | **4.83** | **86.6** | **2.93** | **35.2** | **3.39** | **2.38** | **76.8** |
| **1995 Average** | **1.55** | **2.78** | **6.06** | **99.0** | **5.05** | **76.7** | **2.71** | **24.5** | **3.98** | **2.02** | **71.4** |
| **1996 Average** | **2.17** | **3.27** | **6.34** | **99.0** | **5.40** | **77.6** | **3.42** | **19.4** | **4.34** | **2.69** | **68.4** |
| **1997 Average** | **2.32** | **3.66** | **6.94** | **98.8** | **5.80** | **70.8** | **3.59** | **18.1** | **4.44** | **2.78** | **68.0** |
| **1998 Average** | **1.96** | **3.07** | **6.82** | **97.7** | **5.48** | **67.0** | **3.14** | **16.1** | **4.59** | **2.40** | **63.7** |
| **1999 Average** | **2.19** | **3.10** | **6.69** | **95.2** | **5.33** | **66.1** | **3.12** | **18.8** | **4.34** | **2.62** | **58.3** |
| **2000 Average** | **3.68** | **4.62** | **7.76** | **92.6** | **6.59** | **63.9** | **4.45** | **19.8** | **5.54** | **4.38** | **50.5** |
| **2001 Average** | **4.00** | **5.72** | **9.63** | **92.4** | **8.43** | **66.0** | **5.24** | **20.8** | **6.60** | **4.61** | **40.2** |
| **2002 Average** | **2.95** | **4.12** | **7.89** | **97.9** | **6.63** | **77.4** | **4.02** | **22.7** | **5.10** | [e]**3.68** | **83.9** |
| **2003 Average** | **4.88** | **5.85** | **9.63** | **97.5** | **8.40** | **78.2** | **5.89** | **22.1** | **6.19** | **5.57** | **91.2** |
| **2004 Average** | **5.46** | **6.65** | **10.75** | **97.7** | **9.43** | **78.0** | **6.53** | **23.7** | **7.16** | **6.11** | **89.8** |
| **2005 Average** | **7.33** | **8.67** | **12.70** | **98.2** | **11.34** | **82.1** | **8.56** | **24.1** | **9.14** | [R]**8.47** | [R]**91.3** |
| **2006 Average** | **6.39** | **8.61** | **13.73** | **98.1** | **12.00** | **80.8** | **7.87** | **23.4** | **8.72** | **7.11** | **93.4** |
| **2007 Average** | **6.25** | **8.16** | **13.08** | **98.0** | **11.34** | **80.4** | **7.68** | **22.2** | **8.50** | **7.31** | **92.2** |
| **2008** January | 7.16 | 8.37 | 12.24 | NA | 11.20 | 82.9 | 8.33 | 20.7 | NA | 8.52 | 100.7 |
| February | 7.71 | 8.91 | 12.58 | NA | 11.49 | 82.6 | 9.00 | 20.6 | NA | 8.87 | 101.4 |
| March | 8.44 | 9.49 | 13.13 | NA | 12.04 | 82.6 | 9.64 | 21.6 | NA | 9.53 | 101.4 |
| April | 9.04 | 9.84 | 14.49 | NA | 12.65 | 80.0 | 10.06 | 22.1 | NA | 10.19 | 101.9 |
| May | 10.15 | 11.05 | 16.31 | NA | 13.51 | 76.9 | 11.36 | 21.4 | NA | 10.97 | 101.5 |
| June | 10.79 | 11.85 | 18.82 | NA | 14.67 | 76.6 | 12.11 | 20.9 | NA | 12.41 | 100.9 |
| July | 11.32 | 12.48 | 20.68 | NA | 15.64 | 73.6 | 13.05 | 20.7 | NA | 11.71 | 100.3 |
| August | 8.34 | 10.20 | 20.08 | NA | 14.20 | 72.5 | 10.11 | 20.5 | NA | 8.97 | 100.8 |
| September | 6.72 | 8.99 | 18.36 | NA | 13.13 | 72.7 | 9.13 | 19.1 | NA | 7.81 | 101.1 |
| October | 5.50 | 7.80 | 15.49 | NA | 12.08 | 75.6 | 8.11 | 19.0 | NA | 6.74 | 101.5 |
| November | 4.75 | 7.93 | 13.82 | NA | 11.72 | 79.6 | 7.36 | 19.6 | NA | 6.64 | 101.3 |
| December | 5.52 | 8.16 | 12.84 | NA | 11.61 | 82.1 | 7.89 | 20.0 | NA | 6.90 | 101.1 |
| **Average** | **7.96** | **9.18** | **13.89** | **97.9** | **12.23** | **79.9** | **9.67** | **20.5** | **11.75** | **9.26** | **101.1** |
| **2009** January | [E]5.15 | 7.98 | 12.39 | NA | 11.02 | 78.9 | 7.43 | 18.9 | NA | 6.59 | 101.1 |
| February | [E]4.19 | 7.25 | 12.16 | NA | 10.65 | 78.2 | 6.37 | 18.9 | NA | 5.65 | 101.3 |
| March | [E]3.72 | 6.83 | 11.83 | NA | 10.02 | 76.5 | 5.65 | 18.4 | NA | 4.89 | 102.1 |
| April | [E]3.43 | 5.68 | 11.56 | NA | 9.38 | 74.0 | 5.03 | 17.7 | NA | 4.63 | 101.6 |
| May | [E]3.45 | [R]5.49 | 12.50 | NA | 9.11 | 67.7 | 4.35 | 18.0 | NA | 4.66 | 101.6 |
| June | [E]3.45 | 5.53 | 13.81 | NA | 9.25 | 68.5 | 4.45 | 17.7 | NA | 4.58 | 101.1 |
| July | [E]3.43 | 5.68 | 14.82 | NA | 9.45 | 60.2 | 4.62 | 17.7 | NA | 4.43 | 100.9 |
| August | [E]3.14 | 5.59 | 15.12 | NA | 9.29 | 60.7 | 4.31 | 17.3 | NA | 4.25 | 100.8 |
| September | [E]2.92 | 5.36 | 14.34 | NA | 8.98 | 61.4 | 3.81 | 17.1 | NA | 3.98 | 100.6 |
| October | [E]3.60 | 5.65 | 11.62 | NA | 8.59 | 67.3 | 4.80 | 16.6 | NA | 5.01 | 102.6 |
| November | [E]3.64 | 6.33 | 11.25 | NA | 9.13 | 69.4 | 5.37 | 16.6 | NA | 5.00 | 101.9 |
| December | [E]4.44 | 6.24 | 10.31 | NA | [R]8.75 | 75.5 | 5.97 | 17.7 | NA | 6.23 | 100.2 |
| **Average** | [E]**3.71** | **6.47** | [R]**11.97** | [E]**98.0** | **9.75** | **72.9** | **5.27** | **17.7** | **NA** | **4.89** | **101.2** |
| **2010** January | [E]5.14 | 6.89 | 10.49 | NA | 9.31 | 76.4 | 6.89 | 17.6 | NA | 6.97 | 101.3 |

[a] See "Nominal Dollars" in Glossary.

[b] See Note 9, "Natural Gas Prices," at end of section.

[c] Commercial sector, including commercial combined-heat-and-power (CHP) and commercial electricity-only plants. See Note, "Classification of Power Plants Into Energy-Use Sectors," at end of Section 7.

[d] Industrial sector, including industrial combined-heat-and-power (CHP) and industrial electricity-only plants. See Note, "Classification of Power Plants Into Energy-Use Sectors," at end of Section 7.

[e] The electric power sector comprises electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public. Through 2001, data are for electric utilities only; beginning in 2002, data also include independent power producers. See Note 8, "Costs of Fossil-Fuel Receipts at Electric Generating Plants," at end of section for plant coverage.

[f] Includes taxes.

[g] The percentage of the sector's consumption in Table 4.3 for which price data are available. For details on how the percentages are derived, see Table 9.11 Sources at end of section.

[h] Much of the natural gas delivered for vehicle fuel represents deliveries to fueling stations that are used primarily or exclusively by fleet vehicles. Thus, the prices are often those associated with the cost of gas in the operation of fleet vehicles.

[i] Percentages exceed 100 percent when reported natural gas receipts are greater than reported natural gas consumption—this can occur when combined-heat-and-power plants report fuel receipts related to non-electric generating activities.

R=Revised. NA=Not available. E=Estimate.

Notes: • Prices are for natural gas, plus a small amount of supplemental gaseous fuels. • Prices are intended to include all taxes. See Note 9, "Natural Gas Prices," at end of section. • Wellhead annual and year-to-date prices are simple averages of the monthly prices; all other annual and year-to-date prices are volume-weighted averages of the monthly prices. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/prices.html for all available data beginning in 1973.

Sources: See end of section.

# Energy Prices

**Note 1. Crude Oil Domestic First Purchase Prices.** The average domestic first purchase price represents the average price at which all domestic crude oil is purchased. Prior to February 1976, the price represented an estimate of the average of posted prices; beginning with February 1976, the price represents an average of actual first purchase prices. The data series was previously called "Actual Domestic Wellhead Price."

**Note 2. Crude Oil F.O.B. Costs.** F.O.B. literally means "Free on Board." It denotes a transaction whereby the seller makes the product available with an agreement on a given port at a given price; it is the responsibility of the buyer to arrange for the transportation and insurance.

**Note 3. Crude Oil Landed Costs.** The landed cost of imported crude oil from selected countries does not represent the total cost of all imported crude. Prior to April 1975, imported crude costs to U.S. company-owned refineries in the Caribbean were not included in the landed cost, and costs of crude oil from countries that export only small amounts to the United States were also excluded. Beginning in April 1975, however, coverage was expanded to include U.S. company-owned refineries in the Caribbean. Landed costs do not include supplemental fees.

**Note 4. Crude Oil Refinery Acquisition Costs.** Beginning with January 1981, refiner acquisition costs of crude oil are from data collected on U.S. Energy Information Administration (EIA) Form EIA-14, "Refiners' Monthly Cost Report." Those costs were previously published from data collected on Economic Regulatory Administration (ERA) Form ERA-49, "Domestic Crude Oil Entitlements Program Refiners Monthly Report." Form ERA-49 was discontinued with the decontrol of crude oil on January 28, 1981. Crude oil purchases and costs are defined for Form EIA-14 in accordance with conventions used for Form ERA-49. The respondents for the two forms are also essentially the same. However, due to possible different interpretations of the filing requirements and a different method for handling prior period adjustments, care must be taken when comparing the data collected on the two forms.

The refiner acquisition cost of crude oil is the average price paid by refiners for crude oil booked into their refineries in accordance with accounting procedures generally accepted and consistently and historically applied by the refiners concerned. Domestic crude oil is that oil produced in the United States or from the outer continental shelf as defined in 43 USC Section 1331. Imported crude oil is either that oil reported on Form ERA-51, "Transfer Pricing Report," or any crude oil that is not domestic oil. The composite cost is the weighted average of domestic and imported crude oil costs.

Crude oil costs and volumes reported on Form ERA-49 excluded unfinished oils but included the Strategic Petroleum Reserve (SPR). Crude oil costs and volumes reported on Federal Energy Administration (FEA) Form FEA-P110-M-1, "Refiners' Monthly Cost Allocation Report," included unfinished oils but excluded SPR. Imported averages derived from Form ERA-49 exclude oil purchased for SPR, whereas the composite averages derived from Form ERA-49 include SPR. None of the prices derived from Form EIA-14 include either unfinished oils or SPR.

**Note 5. Motor Gasoline Prices.** Several different series of motor gasoline prices are published in this section. U.S. city average retail prices of motor gasoline are calculated monthly by the Bureau of Labor Statistics during the development of the Consumer Price Index (CPI). These prices include all Federal, State, and local taxes paid at the time of sale. From 1974-1977, prices were collected in 56 urban areas. From 1978 forward, prices are collected from a new sample of service stations in 85 urban areas selected to represent all urban consumers-about 80 percent of the total U.S. population. The service stations are selected initially, and on a replacement basis, in such a way that they represent the purchasing habits of the CPI population. Service stations in the current sample include those providing all types of service (i.e., full-, mini-, and self-serve).

Refiner prices of finished motor gasoline for resale and to end users are determined by the EIA in a monthly survey of refiners and gas plant operators (Form EIA-782A). The prices do not include any Federal, State, or local taxes paid at the time of sale. Estimates of prices prior to January 1983 are based on Form FEA-P302-M-1/EIA-460, "Petroleum Industry Monthly Report for Product Prices," and also exclude all Federal, State, or local taxes paid at the time of sale. Sales for resale are those made to purchasers who are other-than-ultimate consumers. Sales to end users are sales made directly to the consumer of the product, including bulk consumers (such as agriculture, industry, and utilities) and residential and commercial consumers.

**Note 6. Historical Petroleum Prices.** Starting in January 1983, Form EIA-782, "Monthly Petroleum Product Sales Report," replaced 10 previous surveys. Every attempt was made to continue the most important price series. However, prices published through December 1982 and those published since January 1983 do not necessarily form continuous data series due to changes in survey forms, definitions, instructions, populations, samples, processing systems, and statistical procedures. To provide historical data, continuous series were generated for annual data 1978–1982 and for monthly data 1981 and 1982 by estimating the prices that would have been published had Form EIA-782 survey and system been in operation at that time. This form of estimation was performed after detailed adjustment was made for product and sales type matching and for discontinuity due to other factors. An important difference between the previous and present prices is the distinction between wholesale and resale and between retail and end user. The resale category continues to include sales among resellers. However, sales to bulk consumers, such as utility, industrial, and commercial accounts previously included in

the wholesale category, are now counted as made to end users. The end-user category continues to include retail sales through company-owned and operated outlets but also includes sales to the bulk consumers such as agriculture, industry, and electric utilities. Additional information may be found in "Estimated Historic Time Series for the EIA-782," a feature article by Paula Weir, printed in the December 1983 [3] *Petroleum Marketing Monthly*, published by EIA.

**Note 7. Electricity Retail Prices.** Average annual retail prices of electricity have the following plant coverage: Through 1979, annual data are for Classes A and B privately owned electric utilities only. For 1980-1982, annual data are for selected Class A utilities whose electric operating revenues were $100 million or more during the previous year. For 1983, annual data are for a selected sample of electric utilities. Beginning in 1984, data are for a census of electric utilities. Beginning in 1996, annual data also include energy service providers selling to retail customers.

Average monthly retail prices of electricity have the following plant coverage: Through 1985, monthly data are derived from selected privately owned electric utilities and, therefore, are not national averages. Beginning in 1986, monthly data are based on a sample of publicly and privately owned electric utilities. Beginning in 1996, monthly data also include energy service providers selling to retail customers.

Preliminary monthly data are from Form EIA-826, "Monthly Electric Sales and Revenue Report With State Distributions Report," which is a monthly collection of data from approximately 450 of the largest publicly and privately owned electric utilities as well as a census of energy service providers with retail sales in deregulated States; a model is then applied to the collected data to estimate for the entire universe of U.S. electric utilities. Preliminary annual data are the sum of the monthly revenues divided by the sum of the monthly sales. When final annual data become available each year from Form EIA-861, "Annual Electric Power Industry Report," their ratios to the preliminary Form EIA-826 values are used to derive adjusted final monthly values.

**Note 8. Costs of Fossil-Fuel Receipts at Electric Generating Plants.** Data for 1973–1982 cover all regulated electric generating plants at which the generator nameplate capacity of all steam-electric units combined totaled 25 megawatts or greater. From 1974–1982, peaking units were included in the data and counted towards the 25-megawatt-or-greater total. Data for 1983–1990 cover all regulated electric generating plants at which the generator nameplate capacity of all steam-electric units combined totaled 50 megawatts or greater. Data for 1991–2001 cover all regulated electric generating plants at which the generator nameplate capacity of all steam-electric units and combined-cycle units together totaled 50 megawatts or greater. Data for 2002 forward cover the aforementioned regulated generating plants plus unregulated generating plants (independent power producers, as well as combined-heat-and-power generating plants and electricity-only plants in the commercial and industrial sector) whose total facility fossil-fueled nameplate generating capacity is 50 or more megawatts, regardless of unit type.

**Note 9. Natural Gas Prices.** Natural gas prices are intended to include all taxes. Instructions on the data collection forms specifically direct that all Federal, State, and local taxes, surcharges, and/or adjustments billed to consumers are to be included. However, sales and other taxes itemized on more than 3,000 consumers' bills are sometimes excluded by the reporting utilities. Delivered-to-consumers prices for 1987 forward represent natural gas delivered and sold to residential, commercial, industrial, vehicle fuel, and electric power consumers. They do not include the price of natural gas delivered on behalf of third parties to residential, commercial, industrial, and vehicle fuel customers except for certain States in the residential and commercial sectors for 2002 forward. Volumes of natural gas delivered on behalf of third parties are included in the consumption data shown in Table 4.3. Additional information is available in the EIA *Natural Gas Monthly*, Appendix C.

## Table 9.1 Sources

**Domestic First Purchase Price**
1973–1976: U.S. Department of the Interior (DOI), Bureau of Mines (BOM), *Minerals Yearbook*, "Crude Petroleum and Petroleum Products" chapter.
1977: Federal Energy Administration, based on Form FEA-P124, "Domestic Crude Oil Purchaser's Monthly Report."
1978–2008: U.S. Energy Information Administration (EIA), *Petroleum Marketing Annual 2008*, Table 1.
2009 and 2010: EIA, *Petroleum Marketing Monthly*, April 2010, Table 1.

**F.O.B. and Landed Cost of Imports**
October 1973–September 1977: Federal Energy Administration, Form FEA-F701-M-0, "Transfer Pricing Report."
October–December 1977: EIA, Form FEA-F701-M-0, "Transfer Pricing Report."
1978–2008: EIA, *Petroleum Marketing Annual 2008*, Table 1.
2009 and 2010: EIA, *Petroleum Marketing Monthly*, April 2010, Table 1.

**Refiner Acquisition Cost**
1973: EIA estimates. The domestic price was derived by adding estimated transportation costs to the reported domestic first purchase price. The imported price was derived by adding an estimated ocean transport cost to the average "Free Alongside Ship" value published by the U.S. Bureau of the Census.

1974–1976: DOI, BOM, *Minerals Yearbook*, "Crude Petroleum and Petroleum Products" chapter.
1977: January–September, FEA, based on Form FEA-P110-M-1, "Refiners' Monthly Cost Allocation Report." October–December, EIA, based on Form FEA-P110-M-1, "Refiners' Monthly Cost Allocation Report."
1978–2008: EIA, *Petroleum Marketing Annual 2008*, Table 1.
2009 and 2010: EIA, *Petroleum Marketing Monthly*, April 2010, Table 1.

## Table 9.2 Sources

October 1973–September 1977: Federal Energy Administration, Form FEA-F701-M-0, "Transfer Pricing Report." October 1977–December 1977: U.S. Energy Information Administration (EIA), Frorm FEA-F701-M-0, "Transfer Pricing Report."
1978–2008: EIA, *Petroleum Marketing Annual 2008*, Table 21.
2009 and 2010: EIA, *Petroleum Marketing Monthly*, April 2010, Table 21.

## Table 9.10 Sources

1973–September 1977: Federal Power Commission, Form FPC-423, "Monthly Report of Cost and Quality of Fuels for Electric Utility Plants."
October 1977–December 1977: Federal Energy Regulatory Commission, Form FERC-423, "Monthly Report of Cost and Quality of Fuels for Electric Utility Plants."
1978 and 1979: U.S. Energy Information Administration (EIA), Form FERC-423, "Monthly Report of Cost and Quality of Fuels for Electric Utility Plants."
1980–1989: EIA, *Electric Power Monthly*, May issues.
1990–2000: EIA, *Electric Power Monthly*, March 2003, Table 26.
2001–2007: EIA, *Electric Power Monthly*, October 2008, Table 4.1; Federal Energy Regulatory Commission, Form FERC-423, "Monthly Report of Cost and Quality of Fuels for Electric Utility Plants"; and EIA, Form EIA-423, "Monthly Cost and Quality of Fuels for Electric Plants Report."
2008 forward: EIA, *Electric Power Monthly*, April 2010, Table 4.1; and Form EIA-923, "Power Plant Operations Report."

## Table 9.11 Sources

**All Prices Except Vehicle Fuel and Electric Power**
1973–2002: U.S. Energy Information Administration (EIA), *Natural Gas Annual* (*NGA*), annual reports.
2003 forward: EIA, *Natural Gas Monthly* (*NGM*), March 2010, Table 3.

**Vehicle Fuel Price**
EIA, NGA, annual reports.

**Electric Power Sector Price**
1973–1998: EIA, NGA 2000, Table 96.
1999–2002: EIA, NGM, October 2004, Table 4.
2003-2007: Federal Energy Regulatory Commission, Form FERC-423, "Monthly Report of Cost and Quality of Fuels for Electric Utility Plants," and EIA, Form EIA-423 "Monthly Cost and Quality of Fuels for Electric Plants Report."
2008 forward: Form EIA-923, "Power Plant Operations Report."

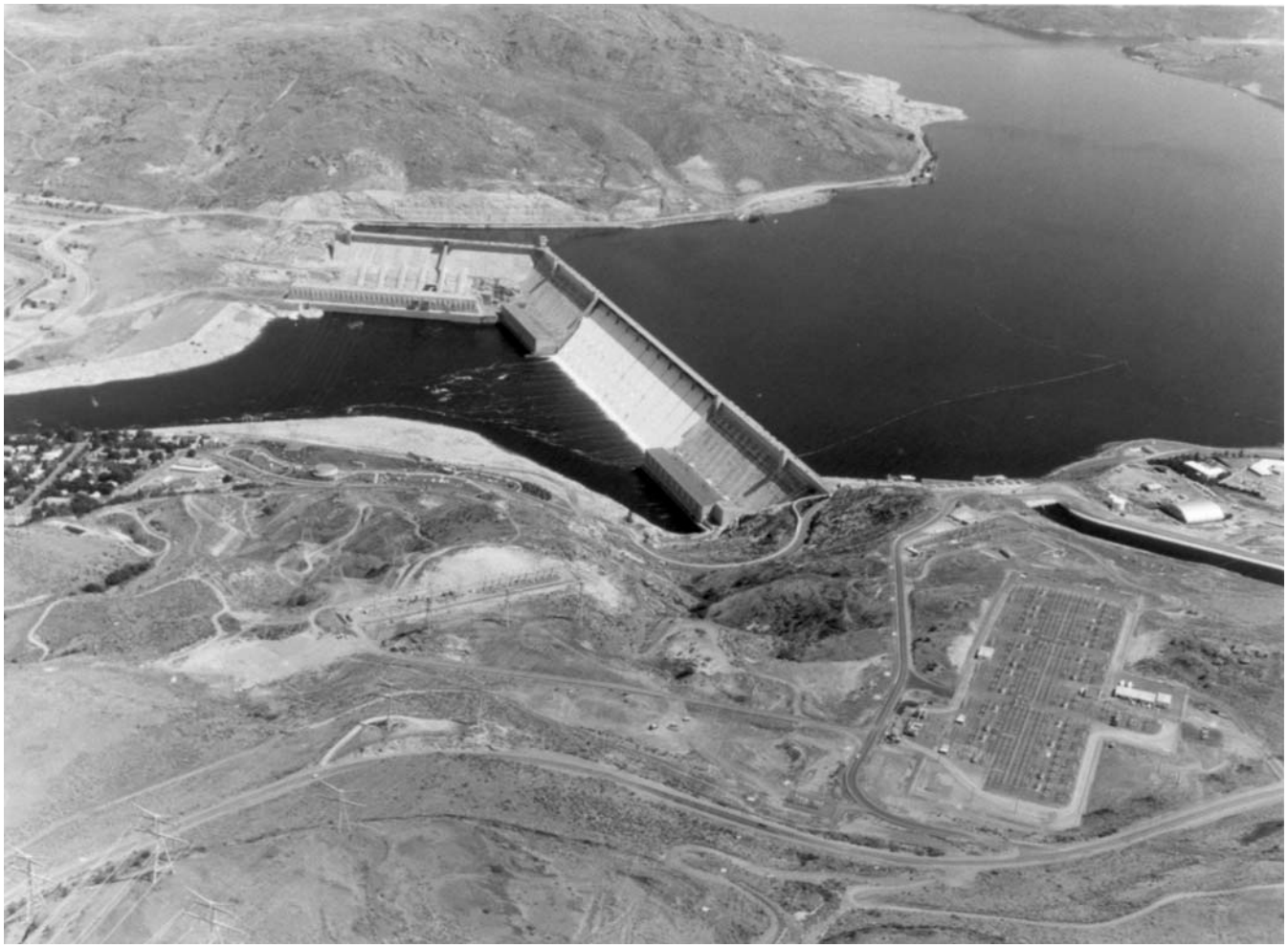
**Percentage of Residential Sector**
1989–2008: EIA, Form EIA-176, "Annual Report of Natural and Supplemental Gas Supply and Disposition."
2009: Estimated by EIA as the average of the three previous annual values.

**Percentage of Commercial Sector**
1987–2002: EIA, NGA, annual reports. Calculated as the total amount of natural gas delivered to commercial consumers minus the amount delivered for the account of others, and then divided by the total amount delivered to commercial consumers.
2003 forward: EIA, NGM, March 2010, Table 3.

**Percentage of Industrial Sector**
1982–2002: EIA, NGA, annual reports. Calculated as the total amount of natural gas delivered to industrial consumers minus the amount delivered for the account of others, and then divided by the total amount delivered to industrial consumers.
2003 forward: EIA, NGM, March 2010, Table 3.

**Percentage of Electric Power Sector**
1973–2001: Calculated by EIA as the quantity of natural gas receipts by electric utilities reported on Form FERC-423, "Monthly Report of Cost and Quantity of Fuels for Electric Utility Plants" (and predecessor forms) divided by the quantity of natural gas consumed by the electric power sector (for 1973-1988, see *Monthly Energy Review*, Table 7.3b; for 1989-2001, see *Monthly Energy Review*, Table 7.4b).
2002-2007: Calculated by EIA as the quantity of natural gas receipts by electric utilities and independent power producers reported on Form FERC-423, "Monthly Report of Cost and Quantity of Fuels for Electric Utility Plants," and EIA-423, "Monthly Cost and Quality of Fuels for Electric Plants Report," divided by the quantity of natural gas consumed by the electric power sector (see *Monthly Energy Review*, Table 7.4b).
2008 forward: Calculated by EIA as the quantity of natural gas receipts by electric utilities and independent power producers reported on Form EIA-923, "Power Plant Operations Report," divided by the quantity of natural gas consumed by the electric power sector (see *Monthly Energy Review*, Table 7.4b).

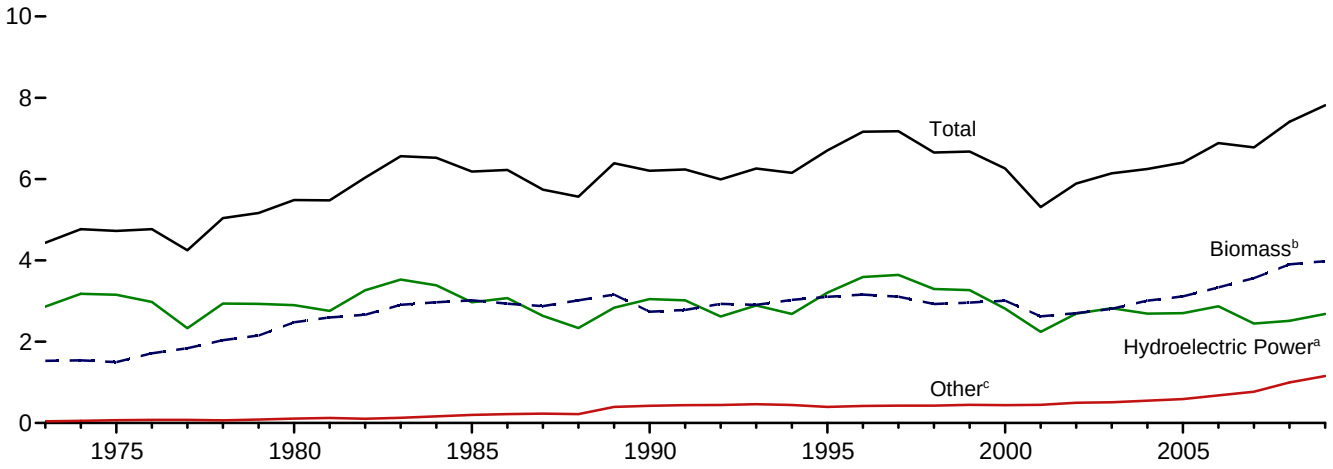
# 10 Renewable Energy



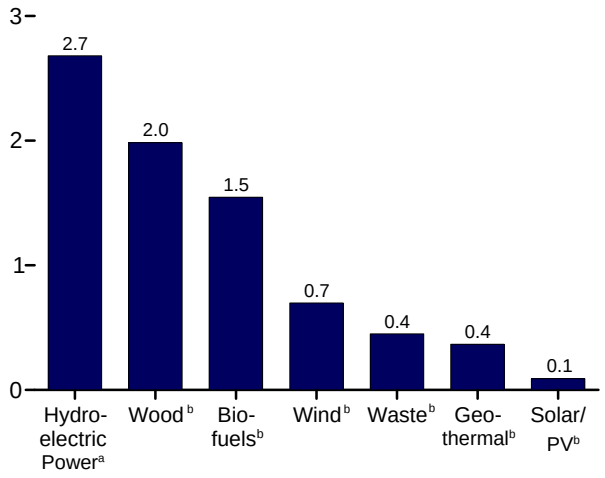
Grand Coulee Dam, Washington State. Source: U.S. Bureau of Reclamation.

## Figure 10.1 Renewable Energy Consumption
(Quadrillion Btu)

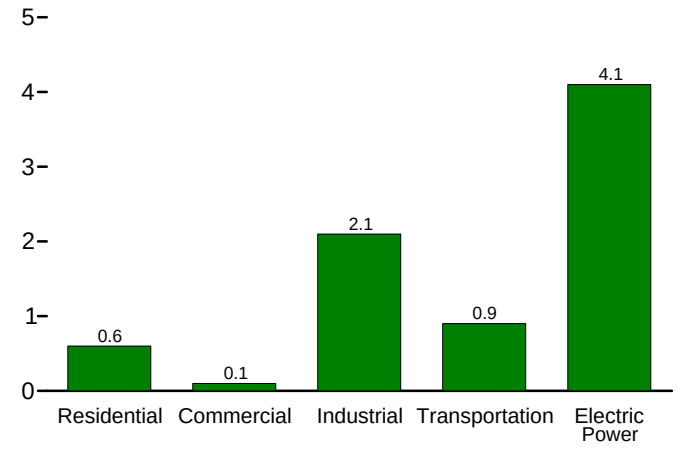
Total and Major Sources, 1973-2009



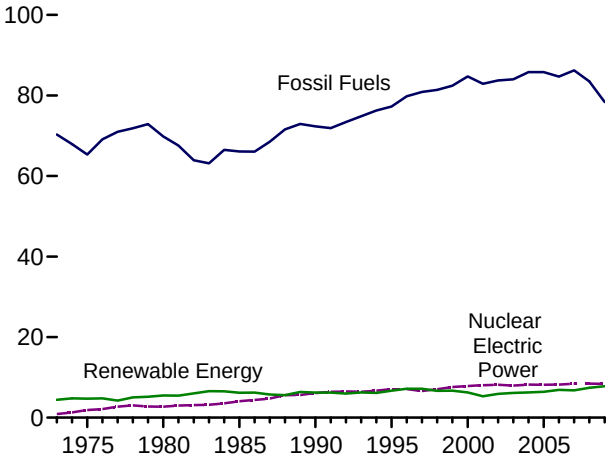

By Source, 2009



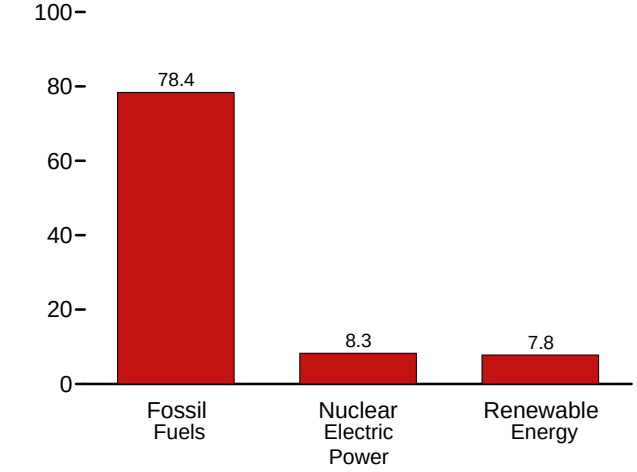

By Sector, 2009




Compared With Other Resources, 1973-2009




Compared With Other Resources, 2009




[a]Conventional hydroelectric power.
[b]See Table 10.1 for definition.
[c]Geothermal, solar/PV, and wind.

Web Page: http://www.eia.doe.gov/emeu/mer/renew.html.
Sources: Tables 1.3, 10.1, and 10.2a-c.

# Table 10.1 Renewable Energy Production and Consumption by Source

(Trillion Btu)

| | Production[a] | | | Consumption | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Biomass | | Total Renewable Energy[d] | Hydroelectric Power[e] | Geothermal[f] | Solar/PV[g] | Wind[h] | Biomass | | | | Total Renewable Energy |
| | Biofuels[b] | Total[c] | | | | | | Wood[i] | Waste[j] | Biofuels[k] | Total | |
| **1973 Total** | **NA** | **1,529** | **4,433** | **2,861** | **43** | **NA** | **NA** | **1,527** | **2** | **NA** | **1,529** | **4,433** |
| **1975 Total** | **NA** | **1,499** | **4,723** | **3,155** | **70** | **NA** | **NA** | **1,497** | **2** | **NA** | **1,499** | **4,723** |
| **1980 Total** | **NA** | **2,475** | **5,485** | **2,900** | **110** | **NA** | **NA** | **2,474** | **2** | **NA** | **2,475** | **5,485** |
| **1985 Total** | **93** | **3,016** | **6,185** | **2,970** | **198** | **(s)** | **(s)** | **2,687** | **236** | **93** | **3,016** | **6,185** |
| **1990 Total** | **111** | **2,735** | **6,206** | **3,046** | **336** | **60** | **29** | **2,216** | **408** | **111** | **2,735** | **6,206** |
| **1995 Total** | **198** | **3,099** | **6,701** | **3,205** | **294** | **70** | **33** | **2,370** | **531** | **200** | **3,101** | **6,703** |
| **1996 Total** | **141** | **3,155** | **7,165** | **3,590** | **316** | **71** | **33** | **2,437** | **577** | **143** | **3,157** | **7,166** |
| **1997 Total** | **186** | **3,108** | **7,177** | **3,640** | **325** | **70** | **34** | **2,371** | **551** | **184** | **3,105** | **7,175** |
| **1998 Total** | **202** | **2,929** | **6,655** | **3,297** | **328** | **70** | **31** | **2,184** | **542** | **201** | **2,928** | **6,654** |
| **1999 Total** | **211** | **2,965** | **6,678** | **3,268** | **331** | **69** | **46** | **2,214** | **540** | **209** | **2,963** | **6,677** |
| **2000 Total** | **233** | **3,006** | **6,257** | **2,811** | **317** | **66** | **57** | **2,262** | **511** | **236** | **3,008** | **6,260** |
| **2001 Total** | **254** | **2,624** | **5,312** | **2,242** | **311** | **65** | **70** | **2,006** | **364** | **253** | **2,622** | **5,311** |
| **2002 Total** | **308** | **2,705** | **5,892** | **2,689** | **328** | **64** | **105** | **1,995** | **402** | **303** | **2,701** | **5,888** |
| **2003 Total** | **402** | **2,805** | **6,139** | **2,825** | **331** | **64** | **115** | **2,002** | **401** | **404** | **2,807** | **6,141** |
| **2004 Total** | **487** | **2,998** | **6,235** | **2,690** | **341** | **65** | **142** | **2,121** | **389** | **500** | **3,010** | **6,247** |
| **2005 Total** | **564** | **3,104** | **6,393** | **2,703** | **343** | **66** | **178** | **2,136** | **403** | **577** | **3,117** | **6,406** |
| **2006 Total** | **720** | **3,286** | **6,834** | **2,869** | **343** | **72** | **264** | **2,152** | **414** | **771** | **3,337** | **6,885** |
| **2007 Total** | **978** | **3,550** | **6,767** | **2,446** | **349** | **81** | **341** | **2,142** | **430** | **991** | **3,564** | **6,780** |
| **2008** January | 102 | 335 | 618 | 205 | 29 | 7 | 42 | 195 | 38 | 98 | 331 | 615 |
| February | 98 | 304 | 561 | 185 | 27 | 7 | 38 | 169 | 37 | 97 | 304 | 560 |
| March | 110 | 325 | 624 | 214 | 30 | 8 | 47 | 175 | 40 | 103 | 318 | 617 |
| April | 108 | 318 | 626 | 219 | 30 | 8 | 51 | 172 | 38 | 108 | 317 | 625 |
| May | 118 | 328 | 688 | 268 | 31 | 8 | 53 | 173 | 38 | 114 | 325 | 684 |
| June | 112 | 317 | 694 | 288 | 30 | 8 | 51 | 168 | 37 | 111 | 316 | 693 |
| July | 122 | 335 | 665 | 252 | 31 | 8 | 39 | 174 | 39 | 121 | 335 | 665 |
| August | 128 | 338 | 618 | 209 | 31 | 8 | 32 | 172 | 38 | 126 | 336 | 617 |
| September | 123 | 323 | 551 | 159 | 30 | 8 | 31 | 164 | 36 | 124 | 324 | 552 |
| October | 127 | 334 | 572 | 152 | 31 | 8 | 47 | 170 | 38 | 129 | 336 | 574 |
| November | 127 | 331 | 572 | 154 | 30 | 7 | 49 | 166 | 38 | 125 | 329 | 570 |
| December | 126 | 327 | 636 | 206 | 31 | 7 | 65 | 162 | 39 | 129 | 330 | 639 |
| **Total** | **1,400** | **3,916** | **7,425** | **2,511** | **360** | **91** | **546** | **2,060** | **457** | **1,385** | **3,902** | **7,410** |
| **2009** January | 119 | 323 | 656 | 235 | 32 | 7 | 59 | 167 | 38 | 116 | 320 | 653 |
| February | 110 | 296 | 564 | 176 | 29 | 7 | 56 | 153 | 33 | 101 | 287 | 554 |
| March | 120 | 324 | 645 | 214 | 32 | 8 | 68 | 162 | 42 | 120 | 324 | 646 |
| April | 117 | 309 | 668 | 250 | 29 | 8 | 72 | 156 | 36 | 120 | 312 | 671 |
| May | 126 | 324 | 712 | 290 | 30 | 8 | 60 | 160 | 38 | 129 | 327 | 715 |
| June | 126 | 324 | 702 | 287 | 30 | 8 | 53 | 160 | 38 | 128 | 326 | 703 |
| July | 137 | 348 | 659 | 226 | 31 | 8 | 46 | 172 | 38 | 137 | 348 | 659 |
| August | 138 | 354 | 633 | 189 | 30 | 8 | 52 | 177 | 39 | 137 | 353 | 632 |
| September | 133 | 334 | 584 | 170 | 30 | 8 | 43 | 165 | 36 | 132 | 332 | 583 |
| October | 141 | 348 | 642 | 194 | 31 | 8 | 62 | 171 | 36 | 141 | 348 | 643 |
| November | 146 | 351 | 658 | 206 | 31 | 7 | 63 | 168 | 37 | 142 | 347 | 654 |
| December | 150 | 363 | 708 | 244 | 32 | 7 | 62 | 174 | 39 | 144 | 357 | 702 |
| **Total** | **1,563** | **3,997** | **7,833** | **2,682** | **366** | **91** | **697** | **1,985** | **450** | **1,546** | **3,980** | **7,815** |
| **2010** January | 151 | 361 | 680 | 217 | 32 | 7 | 63 | 172 | 37 | 145 | 354 | 674 |

[a] Production equals consumption for all renewable energy sources except biofuels.

[b] Total biomass inputs to the production of fuel ethanol and biodiesel.

[c] Wood and wood-derived fuels, biomass waste, fuel ethanol (minus denaturant), and biodiesel.

[d] Hydroelectric power, geothermal, solar/photovoltaic, wind, and biomass.

[e] Conventional hydroelectricity net generation (converted to Btu using the fossil-fueled plants heat rate).

[f] Geothermal electricity net generation (converted to Btu using the geothermal energy plants heat rate), and geothermal heat pump and direct use energy.

[g] Solar thermal and photovoltaic (PV) electricity net generation (converted to Btu using the fossil-fueled plants heat rate), and solar thermal direct use energy.

[h] Wind electricity net generation (converted to Btu using the fossil-fueled plants heat rate).

[i] Wood and wood-derived fuels.

[j] Municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass. Through 2000, also includes non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

[k] Fuel ethanol (minus denaturant) and biodiesel consumption, plus losses and co-products from the production of fuel ethanol and biodiesel.

R=Revised. NA=Not available. (s)=Less than 0.5 trillion Btu.

Notes: • Most data for the residential, commercial, industrial, and transportation sectors are estimates. See notes and sources for Tables 10.2a and 10.2b. • See Note, "Renewable Energy Production and Consumption," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/renew.html for all available data beginning in 1973.

Sources: Tables 10.2a-c, 10.3, and 10.4.

# Table 10.2a Renewable Energy Consumption: Residential and Commercial Sectors

(Trillion Btu)

| | Residential Sector | | | | Commercial Sector[a] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Biomass | | | | Biomass | | | | |
| | Geo-thermal[b] | Solar/ PV[c] | Wood[d] | Total | Hydro-electric Power[e] | Geo-thermal[b] | Wood[d] | Waste[f] | Fuel Ethanol[g] | Total | Total |
| **1973 Total** | **NA** | **NA** | **354** | **354** | **NA** | **NA** | **7** | **NA** | **NA** | **7** | **7** |
| **1975 Total** | **NA** | **NA** | **425** | **425** | **NA** | **NA** | **8** | **NA** | **NA** | **8** | **8** |
| **1980 Total** | **NA** | **NA** | **850** | **850** | **NA** | **NA** | **21** | **NA** | **NA** | **21** | **21** |
| **1985 Total** | **NA** | **NA** | **1,010** | **1,010** | **NA** | **NA** | **24** | **NA** | **(s)** | **24** | **24** |
| **1990 Total** | **6** | **56** | **580** | **641** | **1** | **3** | **66** | **28** | **(s)** | **94** | **98** |
| **1995 Total** | **7** | **65** | **520** | **591** | **1** | **5** | **72** | **40** | **(s)** | **113** | **118** |
| **1996 Total** | **7** | **65** | **540** | **612** | **1** | **5** | **76** | **53** | **(s)** | **129** | **135** |
| **1997 Total** | **8** | **65** | **430** | **503** | **1** | **6** | **73** | **58** | **(s)** | **131** | **138** |
| **1998 Total** | **8** | **65** | **380** | **452** | **1** | **7** | **64** | **54** | **(s)** | **118** | **127** |
| **1999 Total** | **9** | **64** | **390** | **462** | **1** | **7** | **67** | **54** | **(s)** | **121** | **129** |
| **2000 Total** | **9** | **61** | **420** | **490** | **1** | **8** | **71** | **47** | **(s)** | **119** | **128** |
| **2001 Total** | **9** | **60** | **370** | **439** | **1** | **8** | **67** | **25** | **(s)** | **92** | **101** |
| **2002 Total** | **10** | **59** | **380** | **449** | **(s)** | **9** | **69** | **26** | **(s)** | **95** | **104** |
| **2003 Total** | **13** | **58** | **400** | **471** | **1** | **11** | **71** | **29** | **1** | **101** | **113** |
| **2004 Total** | **14** | **59** | **410** | **483** | **1** | **12** | **70** | **34** | **1** | **105** | **118** |
| **2005 Total** | **16** | **61** | **430** | **507** | **1** | **14** | **70** | **34** | **1** | **105** | **119** |
| **2006 Total** | **18** | **67** | **390** | **475** | **1** | **14** | **65** | **36** | **1** | **102** | **117** |
| **2007 Total** | **22** | **75** | **430** | **527** | **1** | **14** | **69** | **31** | **2** | **102** | **118** |
| **2008** January | 2 | 7 | 42 | 51 | (s) | 1 | 6 | 3 | (s) | 9 | 10 |
| February | 2 | 7 | 39 | 47 | (s) | 1 | 6 | 3 | (s) | 8 | 10 |
| March | 2 | 7 | 42 | 51 | (s) | 1 | 6 | 3 | (s) | 9 | 10 |
| April | 2 | 7 | 40 | 49 | (s) | 1 | 6 | 3 | (s) | 9 | 10 |
| May | 2 | 7 | 42 | 51 | (s) | 1 | 6 | 3 | (s) | 9 | 11 |
| June | 2 | 7 | 40 | 49 | (s) | 1 | 6 | 3 | (s) | 9 | 10 |
| July | 2 | 7 | 42 | 51 | (s) | 1 | 6 | 3 | (s) | 9 | 11 |
| August | 2 | 7 | 42 | 51 | (s) | 1 | 6 | 3 | (s) | 9 | 11 |
| September | 2 | 7 | 40 | 49 | (s) | 1 | 6 | 3 | (s) | 9 | 10 |
| October | 2 | 7 | 42 | 51 | (s) | 1 | 6 | 3 | (s) | 9 | 10 |
| November | 2 | 7 | 40 | 49 | (s) | 1 | 6 | 3 | (s) | 9 | 10 |
| December | 2 | 7 | 42 | 51 | (s) | 1 | 6 | 3 | (s) | 9 | 10 |
| **Total** | **26** | **83** | **490** | **599** | **1** | **15** | **72** | **34** | **2** | **109** | **124** |
| **2009** January | 2 | 7 | 42 | 51 | (s) | 1 | 6 | 3 | (s) | 9 | 11 |
| February | 2 | 6 | 38 | 46 | (s) | 1 | 6 | 2 | (s) | 8 | 9 |
| March | 2 | 7 | 42 | 51 | (s) | 1 | 6 | 4 | (s) | 10 | 11 |
| April | 2 | 7 | 40 | 49 | (s) | 1 | 6 | 3 | (s) | 9 | 10 |
| May | 2 | 7 | 42 | 51 | (s) | 1 | 6 | 3 | (s) | 9 | 10 |
| June | 2 | 7 | 40 | 49 | (s) | 1 | 6 | 3 | (s) | 9 | 10 |
| July | 2 | 7 | 42 | 51 | (s) | 1 | 6 | 3 | (s) | 9 | 10 |
| August | 2 | 7 | 42 | 51 | (s) | 1 | 6 | 3 | (s) | 9 | 11 |
| September | 2 | 7 | 40 | 49 | (s) | 1 | 6 | 3 | (s) | 9 | 10 |
| October | 2 | 7 | 42 | 51 | (s) | 1 | 6 | 2 | (s) | 9 | 10 |
| November | 2 | 7 | 40 | 49 | (s) | 1 | 6 | 3 | (s) | 9 | 10 |
| December | 2 | 7 | 42 | 51 | (s) | 1 | 6 | 3 | (s) | 9 | 11 |
| **Total** | **26** | **83** | **490** | **599** | **1** | **15** | **72** | **34** | **2** | **109** | **124** |
| **2010** January | 2 | 7 | 42 | 51 | (s) | 1 | 6 | 3 | (s) | 9 | 11 |

[a] Commercial sector, including commercial combined-heat-and-power (CHP) and commercial electricity-only plants. See Note, "Classification of Power Plants Into Energy-Use Sectors," at end of Section 7.

[b] Geothermal heat pump and direct use energy.

[c] Solar thermal direct use energy, and photovoltaic (PV) electricity net generation (converted to Btu using the fossil-fueled plants heat rate). Includes a small amount of commercial sector use.

[d] Wood and wood-derived fuels.

[e] Conventional hydroelectricity net generation (converted to Btu using the fossil-fueled plants heat rate).

[f] Municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass. Through 2000, also includes non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

[g] The fuel ethanol (minus denaturant) portion of motor fuels, such as E10, consumed by the commercial sector.

R=Revised. NA=Not available. (s)=Less than 0.5 trillion Btu and greater than -0.5 trillion Btu.

Notes: • Data are estimates, except for commercial sector hydroelectric power and waste. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/renew.html for all available data beginning in 1973.

Sources: See end of section.

# Table 10.2b Renewable Energy Consumption: Industrial and Transportation Sectors

(Trillion Btu)

| | Industrial Sector[a] | | | | | | | | Transportation Sector | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Biomass | | | | | | Biomass | | |
| | Hydroelectric Power[b] | Geothermal[c] | Wood[d] | Waste[e] | Fuel Ethanol[f] | Losses and Co-products[g] | Total | Total | Fuel Ethanol[h] | Biodiesel[i] | Total |
| **1973 Total** | **35** | **NA** | **1,165** | **NA** | **NA** | **NA** | **1,165** | **1,200** | **NA** | **NA** | **NA** |
| **1975 Total** | **32** | **NA** | **1,063** | **NA** | **NA** | **NA** | **1,063** | **1,096** | **NA** | **NA** | **NA** |
| **1980 Total** | **33** | **NA** | **1,600** | **NA** | **NA** | **NA** | **1,600** | **1,633** | **NA** | **NA** | **NA** |
| **1985 Total** | **33** | **NA** | **1,645** | **230** | **1** | **42** | **1,918** | **1,951** | **50** | **NA** | **50** |
| **1990 Total** | **31** | **2** | **1,442** | **192** | **1** | **49** | **1,684** | **1,717** | **60** | **NA** | **60** |
| **1995 Total** | **55** | **3** | **1,652** | **195** | **2** | **86** | **1,934** | **1,992** | **113** | **NA** | **113** |
| **1996 Total** | **61** | **3** | **1,683** | **224** | **1** | **61** | **1,969** | **2,033** | **81** | **NA** | **81** |
| **1997 Total** | **58** | **3** | **1,731** | **184** | **1** | **80** | **1,996** | **2,057** | **102** | **NA** | **102** |
| **1998 Total** | **55** | **3** | **1,603** | **180** | **1** | **86** | **1,872** | **1,929** | **113** | **NA** | **113** |
| **1999 Total** | **49** | **4** | **1,620** | **171** | **1** | **90** | **1,882** | **1,934** | **118** | **NA** | **118** |
| **2000 Total** | **42** | **4** | **1,636** | **145** | **1** | **99** | **1,881** | **1,928** | **135** | **NA** | **135** |
| **2001 Total** | **33** | **5** | **1,443** | **129** | **3** | **108** | **1,681** | **1,719** | **141** | **1** | **142** |
| **2002 Total** | **39** | **5** | **1,396** | **146** | **3** | **130** | **1,676** | **1,720** | **168** | **2** | **170** |
| **2003 Total** | **43** | **3** | **1,363** | **142** | **4** | **169** | **1,679** | **1,726** | **228** | **2** | **230** |
| **2004 Total** | **33** | **4** | **1,476** | **132** | **6** | **203** | **1,817** | **1,853** | **286** | **3** | **290** |
| **2005 Total** | **32** | **4** | **1,452** | **148** | **7** | **230** | **1,837** | **1,873** | **328** | **12** | **339** |
| **2006 Total** | **29** | **4** | **1,515** | **147** | **10** | **285** | **1,957** | **1,990** | **442** | **33** | **475** |
| **2007 Total** | **16** | **5** | **1,457** | **162** | **10** | **377** | **2,005** | **2,026** | **557** | **46** | **603** |
| **2008** January | 2 | (s) | 132 | 14 | 1 | 39 | 185 | 187 | 54 | 5 | 58 |
| February | 2 | (s) | 110 | 14 | 1 | 37 | 163 | 165 | 55 | 4 | 59 |
| March | 2 | (s) | 112 | 15 | 1 | 42 | 170 | 172 | 57 | 2 | 60 |
| April | 2 | (s) | 112 | 14 | 1 | 41 | 168 | 170 | 63 | 3 | 66 |
| May | 2 | (s) | 112 | 13 | 1 | 45 | 172 | 174 | 65 | 3 | 68 |
| June | 1 | (s) | 107 | 12 | 1 | 42 | 163 | 165 | 65 | 2 | 68 |
| July | 1 | (s) | 110 | 13 | 1 | 46 | 170 | 172 | 69 | 5 | 75 |
| August | 1 | (s) | 108 | 13 | 1 | 48 | 170 | 172 | 70 | 6 | 77 |
| September | 1 | (s) | 103 | 13 | 1 | 46 | 163 | 164 | 70 | 6 | 76 |
| October | 1 | (s) | 108 | 14 | 1 | 48 | 172 | 173 | 73 | 6 | 79 |
| November | 1 | (s) | 105 | 14 | 1 | 48 | 169 | 170 | 69 | 6 | 75 |
| December | 2 | (s) | 98 | 15 | 1 | 49 | 163 | 165 | 75 | 5 | 79 |
| **Total** | **17** | **5** | **1,320** | **164** | **12** | **532** | **2,029** | **2,050** | **786** | **53** | **839** |
| **2009** January | 2 | (s) | 103 | 14 | 1 | 46 | 164 | 167 | 68 | (s) | 68 |
| February | 1 | (s) | 95 | 12 | 1 | 43 | 151 | 153 | 57 | (s) | 57 |
| March | 2 | (s) | 101 | 15 | 1 | 47 | 163 | 166 | 68 | 4 | 72 |
| April | 2 | (s) | 97 | 13 | 1 | 46 | 157 | 160 | 69 | 4 | 73 |
| May | 2 | (s) | 99 | 14 | 1 | 49 | 163 | 166 | 75 | 3 | 79 |
| June | 2 | (s) | 98 | 13 | 1 | 49 | 162 | 164 | 74 | 4 | 77 |
| July | 1 | (s) | 109 | 14 | 1 | 53 | 178 | 179 | 79 | 3 | 82 |
| August | 1 | (s) | 113 | 14 | 1 | 53 | 181 | 183 | 77 | 5 | 82 |
| September | 1 | (s) | 105 | 13 | 1 | 52 | 171 | 172 | 73 | 6 | 79 |
| October | 1 | (s) | 111 | 14 | 1 | 54 | 180 | 182 | 81 | 4 | 85 |
| November | 1 | (s) | 108 | 14 | 1 | 56 | 178 | 180 | 80 | 5 | 84 |
| December | 2 | (s) | 109 | 14 | 1 | 58 | 182 | 185 | 79 | 6 | 85 |
| **Total** | **18** | **5** | **1,249** | **163** | **13** | **607** | **2,032** | **2,056** | **879** | **44** | **923** |
| **2010** January | 2 | (s) | 108 | 14 | 1 | 59 | 183 | 185 | 83 | 1 | 84 |

[a] Industrial sector, including industrial combined-heat-and-power (CHP) and industrial electricity-only plants. See Note, "Classification of Power Plants Into Energy-Use Sectors," at end of Section 7.

[b] Conventional hydroelectricity net generation (converted to Btu using the fossil-fueled plants heat rate).

[c] Geothermal heat pump and direct use energy.

[d] Wood and wood-derived fuels.

[e] Municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass. Through 2000, also includes non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

[f] The fuel ethanol (minus denaturant) portion of motor fuels, such as E10, consumed by the industrial sector.

[g] Losses and co-products from the production of fuel ethanol and biodiesel. Does not include natural gas, electricity, and other non-biomass energy used in the production of fuel ethanol and biodiesel—these are included in the industrial sector consumption statistics for the appropriate energy source.

[h] The fuel ethanol (minus denaturant) portion of motor fuels, such as E10 and E85, consumed by the transportation sector.

[i] "Biodiesel" is any liquid biofuel suitable as a diesel fuel substitute, additive, or extender. See "Biodiesel" in Glossary.

R=Revised. NA=Not available. (s)=Less than 0.5 trillion Btu.

Notes: • Data are estimates, except for industrial sector hydroelectric power in 1973-1978 and 1989 forward. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/renew.html for all available data beginning in 1973.

Sources: See end of section.

# Table 10.2c Renewable Energy Consumption: Electric Power Sector

(Trillion Btu)

| | Hydro-electric Power[a] | Geo-thermal[b] | Solar/PV[c] | Wind[d] | Biomass | | | Total |
|---|---|---|---|---|---|---|---|---|
| | | | | | Wood[e] | Waste[f] | Total | |
| **1973 Total** | **2,827** | **43** | **NA** | **NA** | **1** | **2** | **3** | **2,873** |
| **1975 Total** | **3,122** | **70** | **NA** | **NA** | **(s)** | **2** | **2** | **3,194** |
| **1980 Total** | **2,867** | **110** | **NA** | **NA** | **3** | **2** | **4** | **2,982** |
| **1985 Total** | **2,937** | **198** | **(s)** | **(s)** | **8** | **7** | **14** | **3,150** |
| **1990 Total**[g] | **3,014** | **326** | **4** | **29** | **129** | **188** | **317** | **3,689** |
| **1995 Total** | **3,149** | **280** | **5** | **33** | **125** | **296** | **422** | **3,889** |
| **1996 Total** | **3,528** | **300** | **5** | **33** | **138** | **300** | **438** | **4,305** |
| **1997 Total** | **3,581** | **309** | **5** | **34** | **137** | **309** | **446** | **4,375** |
| **1998 Total** | **3,241** | **311** | **5** | **31** | **137** | **308** | **444** | **4,032** |
| **1999 Total** | **3,218** | **312** | **5** | **46** | **138** | **315** | **453** | **4,034** |
| **2000 Total** | **2,768** | **296** | **5** | **57** | **134** | **318** | **453** | **3,579** |
| **2001 Total** | **2,209** | **289** | **6** | **70** | **126** | **211** | **337** | **2,910** |
| **2002 Total** | **2,650** | **305** | **6** | **105** | **150** | **230** | **380** | **3,445** |
| **2003 Total** | **2,781** | **303** | **5** | **115** | **167** | **230** | **397** | **3,601** |
| **2004 Total** | **2,656** | **311** | **6** | **142** | **165** | **223** | **388** | **3,503** |
| **2005 Total** | **2,670** | **309** | **6** | **178** | **185** | **221** | **406** | **3,568** |
| **2006 Total** | **2,839** | **306** | **5** | **264** | **182** | **231** | **412** | **3,827** |
| **2007 Total** | **2,430** | **308** | **6** | **341** | **186** | **237** | **423** | **3,508** |
| **2008** January | 203 | 26 | (s) | 42 | 16 | 21 | 37 | 308 |
| February | 184 | 23 | (s) | 38 | 15 | 20 | 35 | 279 |
| March | 212 | 26 | 1 | 47 | 15 | 23 | 38 | 324 |
| April | 217 | 26 | 1 | 51 | 13 | 21 | 34 | 330 |
| May | 267 | 27 | 1 | 53 | 13 | 21 | 34 | 381 |
| June | 286 | 27 | 1 | 51 | 14 | 22 | 36 | 401 |
| July | 251 | 27 | 1 | 39 | 16 | 23 | 39 | 357 |
| August | 208 | 27 | 1 | 32 | 16 | 22 | 38 | 307 |
| September | 158 | 26 | 1 | 31 | 15 | 21 | 36 | 252 |
| October | 151 | 27 | 1 | 47 | 14 | 21 | 35 | 261 |
| November | 153 | 26 | (s) | 49 | 15 | 21 | 36 | 265 |
| December | 204 | 27 | (s) | 65 | 16 | 22 | 38 | 334 |
| **Total** | **2,494** | **314** | **9** | **546** | **177** | **258** | **435** | **3,798** |
| **2009** January | 233 | 28 | (s) | 59 | 16 | 20 | 36 | 356 |
| February | 175 | 25 | (s) | 56 | 14 | 19 | 33 | 289 |
| March | 212 | 28 | 1 | 68 | 13 | 24 | 37 | 346 |
| April | 249 | 25 | 1 | 72 | 12 | 21 | 33 | 379 |
| May | 288 | 26 | 1 | 60 | 13 | 21 | 34 | 409 |
| June | 285 | 26 | 1 | 53 | 15 | 22 | 37 | 402 |
| July | 225 | 27 | 1 | 46 | 15 | 22 | 37 | 336 |
| August | 188 | 27 | 1 | 52 | 16 | 22 | 38 | 305 |
| September | 169 | 26 | 1 | 43 | 13 | 20 | 34 | 273 |
| October | 192 | 27 | 1 | 62 | 13 | 20 | 33 | 315 |
| November | 205 | 27 | (s) | 63 | 14 | 20 | 35 | 330 |
| December | 242 | 28 | (s) | 62 | 17 | 22 | 39 | 371 |
| **Total** | **2,663** | **320** | **8** | **697** | **173** | **253** | **426** | **4,113** |
| **2010** January | 216 | 28 | (s) | 63 | 17 | 20 | 37 | 344 |

[a] Conventional hydroelectricity net generation (converted to Btu using the fossil-fueled plants heat rate).

[b] Geothermal electricity net generation (converted to Btu using the geothermal energy plants heat rate).

[c] Solar thermal and photovoltaic (PV) electricity net generation (converted to Btu using the plants heat rate).

[d] Wind electricity net generation (converted to Btu using the fossil-fueled plants heat rate).

[e] Wood and wood-derived fuels.

[f] Municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass. Through 2000, also includes non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

[g] Through 1988, data are for electric utilities only. Beginning in 1989, data are for electric utilities and independent power producers.

R=Revised. NA=Not available. (s)=Less than 0.5 trillion Btu.

Notes: • The electric power sector comprises electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/renew.html for all available data beginning in 1973.

Sources: • **Biomass:** Table 7.4b. • **All Other Data:** Tables 7.2b and A6.

# Table 10.3 Fuel Ethanol Overview

| | Feedstock[a] | Losses and Co-products[b] | Denaturant[c] | Production[d] | | | Trade[d] Net Imports[e] | Stocks[d,f] | Stock Change[d,g] | Consumption[d] | | | *Consumption Minus Denaturant*[h] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | TBtu | TBtu | Mbbl | Mbbl | MMgal | TBtu | Mbbl | Mbbl | Mbbl | Mbbl | MMgal | TBtu | *TBtu* |
| **1981 Total** | **13** | **6** | **40** | **1,978** | **83** | **7** | **NA** | **NA** | **NA** | **1,978** | **83** | **7** | ***7*** |
| **1985 Total** | **93** | **42** | **294** | **14,693** | **617** | **52** | **NA** | **NA** | **NA** | **14,693** | **617** | **52** | ***51*** |
| **1990 Total** | **111** | **49** | **356** | **17,802** | **748** | **63** | **NA** | **NA** | **NA** | **17,802** | **748** | **63** | ***62*** |
| **1995 Total** | **198** | **86** | **647** | **32,325** | **1,358** | **115** | **387** | **2,186** | **-207** | **32,919** | **1,383** | **117** | ***114*** |
| **1996 Total** | **141** | **61** | **464** | **23,178** | **973** | **83** | **313** | **2,065** | **-121** | **23,612** | **992** | **84** | ***82*** |
| **1997 Total** | **186** | **80** | **613** | **30,674** | **1,288** | **109** | **85** | **2,925** | **860** | **29,899** | **1,256** | **107** | ***104*** |
| **1998 Total** | **202** | **86** | **669** | **33,453** | **1,405** | **119** | **66** | **3,406** | **481** | **33,038** | **1,388** | **118** | ***115*** |
| **1999 Total** | **211** | **90** | **698** | **34,881** | **1,465** | **124** | **87** | **4,024** | **618** | **34,350** | **1,443** | **122** | ***119*** |
| **2000 Total** | **233** | **99** | **773** | **38,627** | **1,622** | **138** | **116** | **3,400** | **-624** | **39,367** | **1,653** | **140** | ***137*** |
| **2001 Total** | **253** | **108** | **841** | **42,028** | **1,765** | **150** | **315** | **4,298** | **898** | **41,445** | **1,741** | **148** | ***144*** |
| **2002 Total** | **307** | **130** | **1,019** | **50,956** | **2,140** | **182** | **306** | **6,200** | **1,902** | **49,360** | **2,073** | **176** | ***171*** |
| **2003 Total** | **400** | **169** | **1,335** | **66,772** | **2,804** | **238** | **292** | **5,978** | **-222** | **67,286** | **2,826** | **240** | ***233*** |
| **2004 Total** | **484** | **203** | **1,621** | **81,058** | **3,404** | **289** | **3,542** | **6,002** | **24** | **84,576** | **3,552** | **301** | ***293*** |
| **2005 Total** | **552** | **230** | **1,859** | **92,961** | **3,904** | **331** | **3,234** | **5,563** | **-439** | **96,634** | **4,059** | **344** | ***335*** |
| **2006 Total** | **688** | **285** | **2,326** | **116,294** | **4,884** | **414** | **17,408** | **8,760** | **3,197** | **130,505** | **5,481** | **465** | ***453*** |
| **2007 Total** | **914** | **376** | **3,105** | **155,263** | **6,521** | **553** | **10,457** | **10,535** | **1,775** | **163,945** | **6,886** | **584** | ***569*** |
| **2008** January | 94 | 38 | 321 | 16,058 | 674 | 57 | 510 | 11,383 | 848 | 15,720 | 660 | 56 | *55* |
| February | 91 | 37 | 311 | 15,527 | 652 | 55 | 505 | 11,173 | -210 | 16,242 | 682 | 58 | *56* |
| March | 103 | 42 | 351 | 17,527 | 736 | 62 | 368 | 12,288 | 1,115 | 16,780 | 705 | 60 | *58* |
| April | 101 | 41 | 343 | 17,152 | 720 | 61 | 1,491 | 12,572 | 284 | 18,359 | 771 | 65 | *64* |
| May | 110 | 45 | 375 | 18,756 | 788 | 67 | 962 | 13,297 | 725 | 18,993 | 798 | 68 | *66* |
| June | 103 | 42 | 353 | 17,651 | 741 | 63 | 1,571 | 13,323 | 26 | 19,196 | 806 | 68 | *67* |
| July | 112 | 46 | 381 | 19,040 | 800 | 68 | 1,459 | 13,448 | 125 | 20,374 | 856 | 73 | *71* |
| August | 118 | 48 | 401 | 20,059 | 842 | 71 | 1,931 | 14,771 | 1,323 | 20,667 | 868 | 74 | *72* |
| September | 113 | 46 | 387 | 19,338 | 812 | 69 | 2,466 | 16,110 | 1,339 | 20,465 | 860 | 73 | *71* |
| October | 118 | 48 | 401 | 20,048 | 842 | 71 | 606 | 15,214 | -896 | 21,550 | 905 | 77 | *75* |
| November | 118 | 48 | 403 | 20,139 | 846 | 72 | 278 | 15,286 | 72 | 20,345 | 854 | 72 | *71* |
| December | 119 | 49 | 407 | 20,342 | 854 | 72 | 463 | 14,226 | -1,060 | 21,865 | 918 | 78 | *76* |
| **Total** | **1,300** | **531** | **4,433** | **221,637** | **9,309** | **790** | **12,610** | **14,226** | **3,691** | **230,556** | **9,683** | **821** | ***800*** |
| **2009** January | 114 | 46 | 362 | 19,545 | 821 | 70 | 371 | 14,186 | [i]-33 | 19,949 | 838 | 71 | *69* |
| February | 106 | 43 | 379 | 18,120 | 761 | 65 | 51 | 15,688 | 1,502 | 16,669 | 700 | 59 | *58* |
| March | 116 | 47 | 412 | 19,837 | 833 | 71 | 78 | 15,652 | -36 | 19,951 | 838 | 71 | *69* |
| April | 112 | 45 | 403 | 19,220 | 807 | 68 | 167 | 14,845 | -807 | 20,194 | 848 | 72 | *70* |
| May | 121 | 49 | 458 | 20,752 | 872 | 74 | 504 | 13,999 | -846 | 22,102 | 928 | 79 | *76* |
| June | 121 | 49 | 454 | 20,822 | 875 | 74 | 702 | 13,903 | -96 | 21,620 | 908 | 77 | *75* |
| July | 131 | 53 | 503 | 22,577 | 948 | 80 | 1,010 | 14,294 | 391 | 23,196 | 974 | 83 | *80* |
| August | 131 | 53 | 489 | 22,552 | 947 | 80 | 921 | 15,001 | 707 | 22,766 | 956 | 81 | *79* |
| September | 127 | 51 | 469 | 21,752 | 914 | 78 | 307 | 15,688 | 687 | 21,372 | 898 | 76 | *74* |
| October | 134 | 54 | 503 | 22,956 | 964 | 82 | 206 | 15,080 | -608 | 23,770 | 998 | 85 | *82* |
| November | 137 | 56 | 513 | 23,592 | 991 | 84 | 285 | 15,518 | 438 | 23,439 | 984 | 84 | *81* |
| December | 142 | 58 | 562 | 24,424 | 1,026 | 87 | 12 | 16,711 | 1,193 | 23,243 | 976 | 83 | *80* |
| **Total** | **1,493** | **606** | **5,507** | **256,149** | **10,758** | **913** | **4,614** | **16,711** | **2,492** | **258,271** | **10,847** | **920** | ***894*** |
| **2010** January | 147 | 59 | 533 | 25,366 | 1,065 | 90 | 34 | 17,800 | 1,089 | 24,311 | 1,021 | 87 | *84* |

[a] Total corn and other biomass inputs to the production of undenatured ethanol used for fuel ethanol.

[b] Losses and co-products from the production of fuel ethanol. Does not include natural gas, electricity, and other non-biomass energy used in the production of fuel ethanol—these are included in the industrial sector consumption statistics for the appropriate energy source.

[c] The amount of denaturant in fuel ethanol produced.

[d] Includes denaturant.

[e] Fuel ethanol imports only. Data for fuel ethanol exports are not available.

[f] Stocks are at end of period.

[g] A negative value indicates a decrease in stocks and a positive value indicates an increase.

[h] Consumption of fuel ethanol minus denaturant. Data for fuel ethanol minus denaturant are used to develop data for "Renewable Energy/Biomass" in Tables 10.1-10.2b, as well as in Sections 1 and 2.

[i] Derived from the preliminary December 2008 stocks value, not the final December 2008 value that is shown under "Stocks."

NA=Not available.

Notes: • Mbbl = thousand barrels. MMgal = million U.S. gallons. TBtu = trillion Btu. • Fuel ethanol data in thousand barrels are converted to million gallons by multiplying by 0.042, and are converted to Btu by multiplying by the approximate heat content of fuel ethanol—see Table A3. • Through 1980, data are not available. For 1981-1992, data are estimates. For 1993-2008, only data for feedstock, losses and co-products, and denaturant are estimates. Beginning in 2009, only data for feedstock, and losses and co-products, are estimates. • See "Denaturant," "Ethanol," "Fuel Ethanol," and "Fuel Ethanol Minus Denaturant" in Glossary. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/renew.html for all available data beginning in 1981.

Sources: See end of section.

# Table 10.4 Biodiesel Overview

| | Feed-stock[a] | Losses and Co-products[b] | Production | | | Trade | | | Stocks[d] | Stock Change[e] | Bal-ancing Item[f] | Consumption | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Imports | Exports | Net Imports[c] | | | | | | |
| | TBtu | TBtu | Mbbl | MMgal | TBtu | Mbbl | Mbbl | Mbbl | Mbbl | Mbbl | Mbbl | Mbbl | MMgal | TBtu |
| **2001 Total** | **1** | **(s)** | **204** | **9** | **1** | **78** | **39** | **39** | **NA** | **NA** | **NA** | **243** | **10** | **1** |
| **2002 Total** | **1** | **(s)** | **250** | **10** | **1** | **191** | **56** | **135** | **NA** | **NA** | **NA** | **385** | **16** | **2** |
| **2003 Total** | **2** | **(s)** | **338** | **14** | **2** | **94** | **110** | **-16** | **NA** | **NA** | **NA** | **322** | **14** | **2** |
| **2004 Total** | **4** | **(s)** | **666** | **28** | **4** | **97** | **124** | **-26** | **NA** | **NA** | **NA** | **640** | **27** | **3** |
| **2005 Total** | **12** | **(s)** | **2,162** | **91** | **12** | **207** | **206** | **1** | **NA** | **NA** | **NA** | **2,163** | **91** | **12** |
| **2006 Total** | **32** | **(s)** | **5,963** | **250** | **32** | **1,069** | **828** | **242** | **NA** | **NA** | **NA** | **6,204** | **261** | **33** |
| **2007 Total** | **63** | **1** | **11,662** | **490** | **62** | **3,342** | **6,477** | **-3,135** | **NA** | **NA** | **NA** | **8,528** | **358** | **46** |
| **2008** January | 7 | (s) | 1,369 | 58 | 7 | 598 | 1,100 | -501 | NA | NA | NA | 868 | 36 | 5 |
| February | 7 | (s) | 1,228 | 52 | 7 | 838 | 1,384 | -546 | NA | NA | NA | 683 | 29 | 4 |
| March | 7 | (s) | 1,359 | 57 | 7 | 274 | 1,172 | -898 | NA | NA | NA | 461 | 19 | 2 |
| April | 8 | (s) | 1,451 | 61 | 8 | 688 | 1,592 | -904 | NA | NA | NA | 547 | 23 | 3 |
| May | 8 | (s) | 1,478 | 62 | 8 | 513 | 1,364 | -850 | NA | NA | NA | 628 | 26 | 3 |
| June | 9 | (s) | 1,653 | 69 | 9 | 512 | 1,758 | -1,246 | NA | NA | NA | 406 | 17 | 2 |
| July | 10 | (s) | 1,835 | 77 | 10 | 526 | 1,421 | -894 | NA | NA | NA | 941 | 40 | 5 |
| August | 10 | (s) | 1,856 | 78 | 10 | 907 | 1,606 | -699 | NA | NA | NA | 1,157 | 49 | 6 |
| September | 9 | (s) | 1,716 | 72 | 9 | 908 | 1,452 | -544 | NA | NA | NA | 1,173 | 49 | 6 |
| October | 9 | (s) | 1,675 | 70 | 9 | 721 | 1,333 | -612 | NA | NA | NA | 1,064 | 45 | 6 |
| November | 9 | (s) | 1,645 | 69 | 9 | 612 | 1,181 | -569 | NA | NA | NA | 1,076 | 45 | 6 |
| December | 7 | (s) | 1,203 | 51 | 6 | 404 | 766 | -362 | NA | NA | NA | 841 | 35 | 5 |
| **Total** | **100** | **1** | **18,468** | **776** | **99** | **7,502** | **16,128** | **-8,626** | **NA** | **NA** | **NA** | **9,842** | **413** | **53** |
| **2009** January | 4 | (s) | 795 | 33 | 4 | 261 | 1,150 | -889 | 57 | 57 | 180 | 29 | 1 | (s) |
| February | 5 | (s) | 846 | 36 | 5 | 158 | 1,166 | -1,009 | 119 | 62 | 254 | 29 | 1 | (s) |
| March | 4 | (s) | 767 | 32 | 4 | 383 | 203 | 180 | 357 | 238 | 0 | 709 | 30 | 4 |
| April | 5 | (s) | 912 | 38 | 5 | 52 | 154 | -102 | 389 | 32 | 0 | 778 | 33 | 4 |
| May | 5 | (s) | 929 | 39 | 5 | 117 | 417 | -300 | 375 | -14 | 0 | 643 | 27 | 3 |
| June | 5 | (s) | 904 | 38 | 5 | 138 | 366 | -228 | 367 | -8 | 0 | 684 | 29 | 4 |
| July | 6 | (s) | 1,077 | 45 | 6 | 58 | 581 | -523 | 309 | -58 | 0 | 611 | 26 | 3 |
| August | 7 | (s) | 1,214 | 51 | 7 | 126 | 397 | -271 | 317 | 8 | 0 | 935 | 39 | 5 |
| September | 6 | (s) | 1,123 | 47 | 6 | 123 | 224 | -101 | 222 | -95 | 0 | 1,117 | 47 | 6 |
| October | 7 | (s) | 1,292 | 54 | 7 | 159 | 424 | -265 | 439 | 217 | 0 | 811 | 34 | 4 |
| November | 8 | (s) | 1,550 | 65 | 8 | 105 | 819 | -714 | 430 | -9 | 0 | 844 | 35 | 5 |
| December | 8 | (s) | 1,439 | 60 | 8 | 165 | 431 | -265 | 506 | 76 | 0 | 1,097 | 46 | 6 |
| **Total** | **70** | **1** | **12,847** | **540** | **69** | **1,844** | **6,332** | **-4,489** | **506** | **506** | **434** | **8,286** | **348** | **44** |
| **2010** January | 4 | (s) | 764 | 32 | 4 | 41 | 296 | -256 | 834 | 328 | 0 | 181 | 8 | 1 |

[a] Total vegetable oil and other biomass inputs to the production of biodiesel.

[b] Losses and co-products from the production of biodiesel. Does not include natural gas, electricity, and other non-biomass energy used in the production of biodiesel—these are included in the industrial sector consumption statistics for the appropriate energy source.

[c] Net imports equal imports minus exports.

[d] Stocks are at end of period.

[e] A negative value indicates a decrease in stocks and a positive value indicates an increase.

[f] Beginning in 2009, because of incomplete data coverage and different data sources, “Balancing Item” is used to balance biodiesel supply and disposition.

NA=Not available. (s)=Less than 0.5 trillion Btu.

Notes: • Mbbl = thousand barrels. MMgal = million U.S. gallons. TBtu = trillion Btu. • Biodiesel data in thousand barrels are converted to million gallons by multiplying by 0.042, and are converted to Btu by multiplying by 5.359 million Btu per barrel (the approximate heat content of biodiesel—see Table A3). • Through 2000, data are not available. Beginning in 2001, data are estimates.• Totals may not equal sum of components due to independent rounding.• Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/renew.html for all available data beginning in 2001.

Sources: • **Feedstock:** Calculated as biodiesel production in thousand barrels multiplied by 5.433 million Btu per barrel (the biodiesel feedstock factor—see Table A3). • **Losses and Co-products:** Calculated as biodiesel feedstock minus biodiesel production. • **Production: 2001-2005—**U.S. Department of Agriculture, Commodity Credit Corporation, Bioenergy Program records. Annual data are derived from quarterly data. Monthly data are estimated by dividing the annual data by the number of days in the year and then multiplying by the number of days in the month. **2006—**U.S. Department of Commerce, Bureau of the Census, "M311K - Fats and Oils: Production, Consumption, and Stocks," data for soybean oil consumed in methyl esters (biodiesel). In addition, the U.S. Energy Information Administration (EIA), Office of Integrated Analysis and Forecasting, estimates that 14.4 million gallons of yellow grease were consumed in methyl esters (biodiesel). **2007 forward—**U.S. Department of Commerce, Bureau of the Census, "M311K - Fats and Oils: Production, Consumption, and Stocks," data for all fats and oils consumed in methyl esters (biodiesel). • **Trade:** U.S. Department of Agriculture, imports data for Harmonized Tariff Schedule code 3824.90.40.20 (Fatty Esters Animal/Vegetable/Mixture), and exports data for Schedule B code 3824.90.40.00 (Fatty Substances Animal/Vegetable/Mixture). Although these categories include products other than biodiesel (such as those destined for soaps, cosmetics, and other items), biodiesel is the largest component. In the absence of other reliable data for biodiesel trade, EIA sees these data as good estimates. • **Stocks** and **Stock Change:** EIA, *Petroleum Supply Monthly (PSM),* monthly reports, Table 1, data for renewable fuels except fuel ethanol. • **Balancing Item:** Calculated as biodiesel consumption and biodiesel stock change minus biodiesel production and biodiesel net imports. • **Consumption: 2001-2008—**Calculated as biodiesel production plus biodiesel net imports. **January and February 2009—**EIA, *PSM,* monthly reports, Table 1, data for refinery and blender net inputs of renewable fuels except fuel ethanol. **March 2009 forward—**Calculated as biodiesel production plus biodiesel net imports minus biodiesel stock change.

# Renewable Energy

**Note. Renewable Energy Production and Consumption.** In Table 10.1, renewable energy consumption consists of: conventional hydroelectricity net generation (converted to Btu using the fossil-fueled plants heat rate); geothermal electricity net generation (converted to Btu using the geothermal plants heat rate), and geothermal heat pump and geothermal direct use energy; solar thermal and photovoltaic electricity net generation (converted to Btu using the fossil-fueled plants heat rate), and solar thermal direct use energy; wind electricity net generation (converted to Btu using the fossil-fueled plants heat rate); wood and wood-derived fuels consumption; biomass waste (municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass) consumption; fuel ethanol (minus denaturant) and biodiesel consumption; and losses and co-products from the production of fuel ethanol and biodiesel. Production is assumed to equal consumption for all renewable energy sources except biofuels (biofuels production comprises biomass inputs to the production of fuel ethanol and biodiesel).

## Table 10.2a Sources

### Residential Sector, Geothermal

Oregon Institute of Technology, Geo-Heat Center. Monthly estimates are created by dividing the annual estimates by the number of days in the year and then multiplying by the number of days in the month. (The annual estimate for the current year is set equal to that of the previous year.)

### Residential Sector, Solar/PV

U.S. Energy Information Administration (EIA), Office of Coal, Nuclear, Electric and Alternate Fuels (CNEAF), estimates based on Form EIA-63A, "Annual Solar Thermal Collector Manufacturers Survey," and Form EIA-63B, "Annual Photovoltaic Module/Cell Manufacturers Survey." Monthly estimates are created by dividing the annual estimates by the number of days in the year and then multiplying by the number of days in the month. (The annual estimate for the current year is set equal to that of the previous year.)

### Residential Sector, Wood

1973–1979: EIA, *Estimates of U.S. Wood Energy Consumption from 1949 to 1981*, Table A2.

1980 forward: EIA, Form EIA-457, "Residential Energy Consumption Survey"; and EIA, CNEAF, estimates based on Form EIA-457 and regional heating degree-day data. Monthly estimates are created by dividing the annual estimates by the number of days in the year and then multiplying by the number of days in the month. (The annual estimate for the current year is set equal to that of the previous year.)

### Commercial Sector, Hydroelectric Power

EIA, *Monthly Energy Review (MER)*, Tables 7.2a–7.2c and A6. Calculated as total conventional hydroelectric power minus conventional hydroelectric power in the electric power and industrial sectors, multiplied by the fossil-fueled plants heat rate.

### Commercial Sector, Geothermal

Oregon Institute of Technology, Geo-Heat Center. Monthly estimates are created by dividing the annual estimates by the number of days in the year and then multiplying by the number of days in the month. (The annual estimate for the current year is set equal to that of the previous year.)

### Commercial Sector, Wood

1973–1979: EIA, *Estimates of U.S. Wood Energy Consumption from 1949 to 1981*, Table A2.

1980–1983: EIA, *Estimates of U.S. Wood Energy Consumption 1980-1983*, Table ES1.

1984: EIA, CNEAF, estimate.

1985–1988: Values interpolated.

1989 forward: EIA, MER, Tables 7.4a–c; and EIA, CNEAF, estimates based on Form EIA-871, "Commercial Buildings Energy Consumption Survey." Data for wood consumption at commercial combined-heat-and-power (CHP) plants are calculated as total wood consumption at electricity-only and CHP plants (MER, Table 7.4a) minus wood consumption in the electric power sector (MER, Table 7.4b) and at industrial CHP plants (MER, Table 7.4c). Annual estimates for wood consumption at other commercial plants are based on Form EIA-871 (the annual estimate for the current year is set equal to that of the previous year); monthly estimates are created by dividing the annual estimates by the number of days in the year and then multiplying by the number of days in the month.

### Commercial Sector, Biomass Waste

EIA, MER, Table 7.4c.

### Commercial Sector, Fuel Ethanol (Minus Denaturant)

EIA, MER, Tables 3.5, 3.7a, and 10.3. Calculated as commercial sector motor gasoline consumption (Table 3.7a) divided by total motor gasoline product supplied (Table 3.5), and then multiplied by fuel ethanol (minus denaturant) consumption (Table 10.3).

## Table 10.2b Sources

### Industrial Sector, Hydroelectric Power

U.S. Energy Information Administration (EIA), MER Tables 7.2c and A6.

### Industrial Sector, Geothermal

Oregon Institute of Technology, Geo-Heat Center. Monthly estimates are created by dividing the annual estimates by the

number of days in the year and then multiplying by the number of days in the month. (The annual estimate for the current year is set equal to that of the previous year.)

### Industrial Sector, Wood

1973–1979: EIA, *Estimates of U.S. Wood Energy Consumption from 1949 to 1981*, Table A2.

1980–1983: EIA, *Estimates of U.S. Wood Energy Consumption 1980-1983*, Table ES1.

1984: EIA, *Estimates of U.S. Biofuels Consumption 1990*, Table 1.

1985 and 1986: Values interpolated.

1987: EIA, *Estimates of Biofuels Consumption in the United States During 1987*, Table 2.

1988: Value interpolated.

1989 forward: EIA, MER, Table 7.4c; and EIA, Office of Coal, Nuclear, Electric and Alternate Fuels (CNEAF), estimates based on Form EIA-846, "Manufacturing Energy Consumption Survey." Data for wood consumption at industrial combined-heat-and-power (CHP) plants are from MER, Table 7.4c. Annual estimates for wood consumption at other industrial plants are based on Form-EIA-846 (the annual estimate for the current year is set equal to that of the previous year); monthly estimates are created by dividing the annual estimates by the number of days in the year and then multiplying by the number of days in the month.

### Industrial Sector, Biomass Waste

1981: EIA, *Estimates of U.S. Biofuels Consumption 1990*, Table 8; and EIA, MER, Table 10.2c. Estimates are calculated as total waste consumption minus electric power sector waste consumption.

1982 and 1983: EIA, CNEAF, estimates for total waste consumption; and EIA, MER, Table 10.2c. Estimates are calculated as total waste consumption minus electric power sector waste consumption.

1984: EIA, *Estimates of U.S. Biofuels Consumption 1990*, Table 8; and EIA, MER, Table 10.2c. Estimates are calculated as total waste consumption minus electric power sector waste consumption.

1985 and 1986: Values interpolated.

1987: EIA, *Estimates of U.S. Biofuels Consumption 1990*, Table 8; and EIA, MER, Table 10.2c. Estimates are calculated as total waste consumption minus electric power sector waste consumption.

1988: Value interpolated.

1989 forward: EIA, MER, Table 7.4c; and EIA, CNEAF, estimates based on information presented in Government Advisory Associates, *Resource Recovery Yearbook* and *Methane Recovery Yearbook*, and information provided by the U.S. Environmental Protection Agency, Landfill Methane Outreach Program. Data for waste consumption at industrial CHP plants are from MER, Table 7.4c. Annual estimates for waste consumption at other industrial plants are based on the non-EIA sources listed above (the annual estimate for the current year is set equal to that of the previous year); monthly estimates are created by dividing the annual estimates by the number of days in the year and then multiplying by the number of days in the month.

### Industrial Sector, Fuel Ethanol (Minus Denaturant)

EIA, MER, Tables 3.5, 3.7b, and 10.3. Calculated as industrial sector motor gasoline consumption (Table 3.7b) divided by total motor gasoline product supplied (Table 3.5), and then multiplied by fuel ethanol (minus denaturant) consumption (Table 10.3).

### Industrial Sector, Losses and Co-products

EIA, MER, Tables 10.3 and 10.4.

### Transportation Sector, Fuel Ethanol (Minus Denaturant)

EIA, MER, Tables 3.5, 3.7c, and 10.3. Calculated as transportation sector motor gasoline consumption (Table 3.7c) divided by total motor gasoline product supplied (Table 3.5), and then multiplied by fuel ethanol (minus denaturant) consumption (Table 10.3).

### Transportation Sector, Biodiesel

EIA, MER, Table 10.4. Transportation sector biodiesel consumption is assumed to equal total biodiesel consumption.

## Table 10.3 Sources

### Feedstock

Calculated as fuel ethanol production (in thousand barrels) minus denaturant, and then multiplied by the fuel ethanol feedstock factor—see Table A3.

### Losses and Co-products

Calculated as fuel ethanol feedstock plus denaturant minus fuel ethanol production.

### Denaturant

1981–2008: Data in thousand barrels for petroleum denaturant in fuel ethanol produced are estimated as 2 percent of fuel ethanol production; these data are converted to Btu by multiplying by 4.641 million Btu per barrel (the estimated quantity-weighted factor of pentanes plus and conventional motor gasoline used as denaturant).

2009 and 2010: U.S. Energy Information Administration (EIA), *Petroleum Supply Monthly (PSM)*, monthly reports, Table 1. Data in thousand barrels for net production of pentanes plus at renewable fuels and oxygenate plants are multiplied by -1; these data are converted to Btu by multiplying by

4.620 million Btu per barrel (the approximate heat content of pentanes plus). Data in thousand barrels for net production of conventional motor gasoline at renewable fuels and oxygenate plants are multiplied by -1; these data are converted to Btu by multiplying by 5.253 million Btu per barrel (the approximate heat content of conventional motor gasoline). Total denaturant is the sum of the values for pentanes plus and conventional motor gasoline.

## Production

1981–1992: Fuel ethanol production is assumed to equal fuel ethanol consumption—see sources for "Consumption."

1993–2004: Calculated as fuel ethanol consumption plus fuel ethanol stock change minus fuel ethanol net imports. These data differ slightly from the original production data from EIA, Form EIA-819, "Monthly Oxygenate Report," and predecessor form, which were not reconciled and updated to be consistent with the final balance.

2005–2008: EIA, Form EIA-819, "Monthly Oxygenate Report."

2009 and 2010: EIA, PSM, monthly reports.

## Trade, Stocks, and Stock Change

1992–2008: EIA, *Petroleum Supply Annual (PSA)*, annual reports.

2009 and 2010: EIA, PSM, monthly reports.

## Consumption

1981–1989: EIA, *Estimates of U.S. Biofuels Consumption 1990*, Table 10; and EIA, Office of Coal, Nuclear, Electric and Alternate Fuels (CNEAF), estimates.

1990–1992: EIA, *Estimates of U.S. Biomass Energy Consumption 1992*, Table D2; and EIA, CNEAF, estimates.

1993–2004: EIA, PSA, annual reports, Tables 2 and 16. Calculated as 10 percent of oxygenated finished motor gasoline field production (Table 2), plus fuel ethanol refinery input (Table 16).

2005–2008: EIA, PSA, annual reports, Tables 1 and 15. Calculated as motor gasoline blending components adjustments (Table 1), plus finished motor gasoline adjustments (Table 1), plus fuel ethanol refinery and blender net inputs (Table 15).

2009 and 2010: EIA, PSM, monthly reports, Table 1. Calculated as fuel ethanol refinery and blender net inputs minus fuel ethanol adjustments.

## Consumption Minus Denaturant

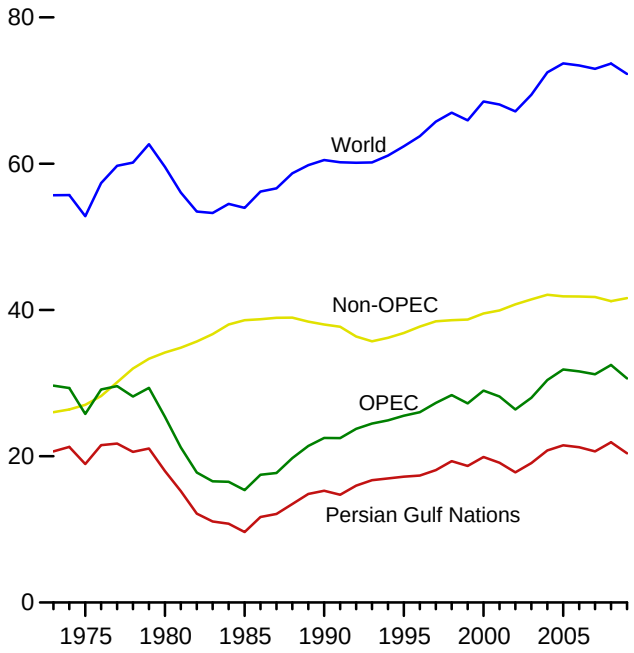
Calculated as fuel ethanol consumption minus the amount of denaturant in fuel ethanol consumed. Denaturant in fuel ethanol consumed is estimated by multiplying denaturant in fuel ethanol produced by the fuel ethanol consumption-to-production ratio.

# 11 International Petroleum

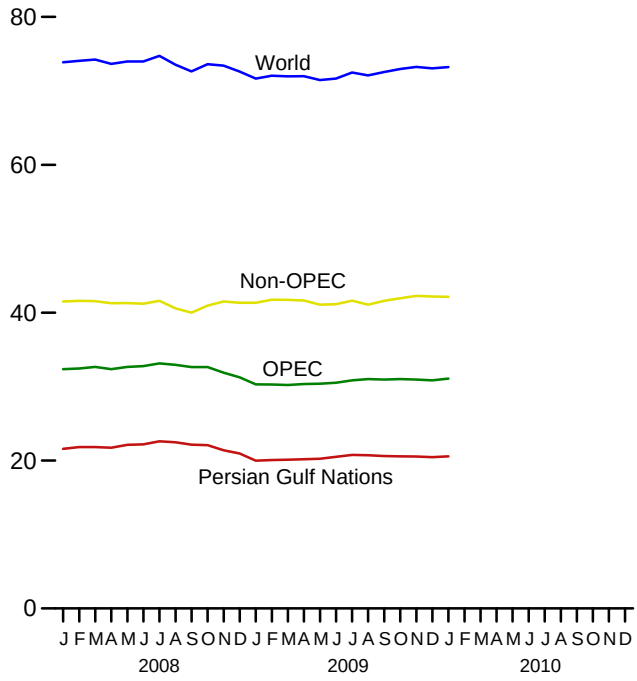
Drilling rig, Gansu Province, People's Republic of China. Source: U.S. Department of Energy.

## Figure 11.1a World Crude Oil Production Overview
(Million Barrels per Day)

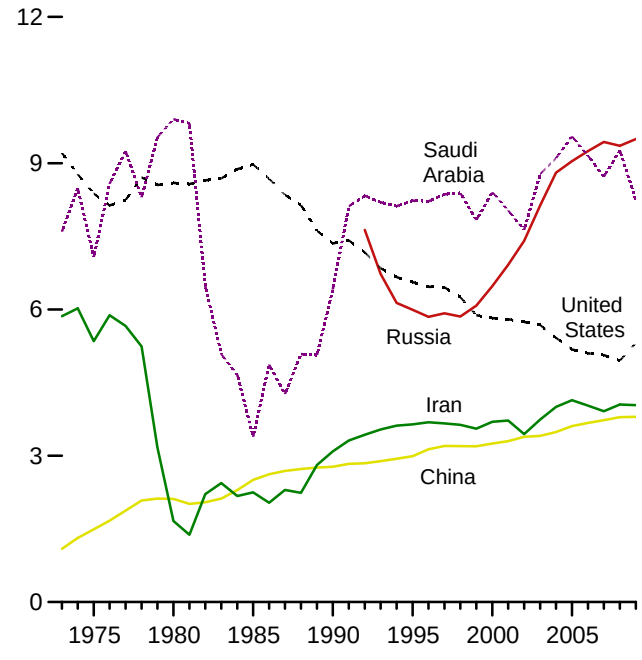
World Production, 1973-2009



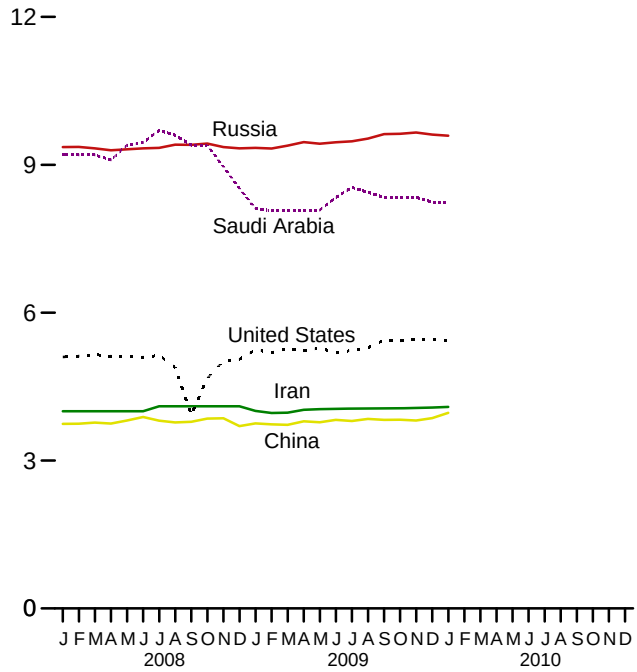

World Production, Monthly




Selected Producers, 1973-2009



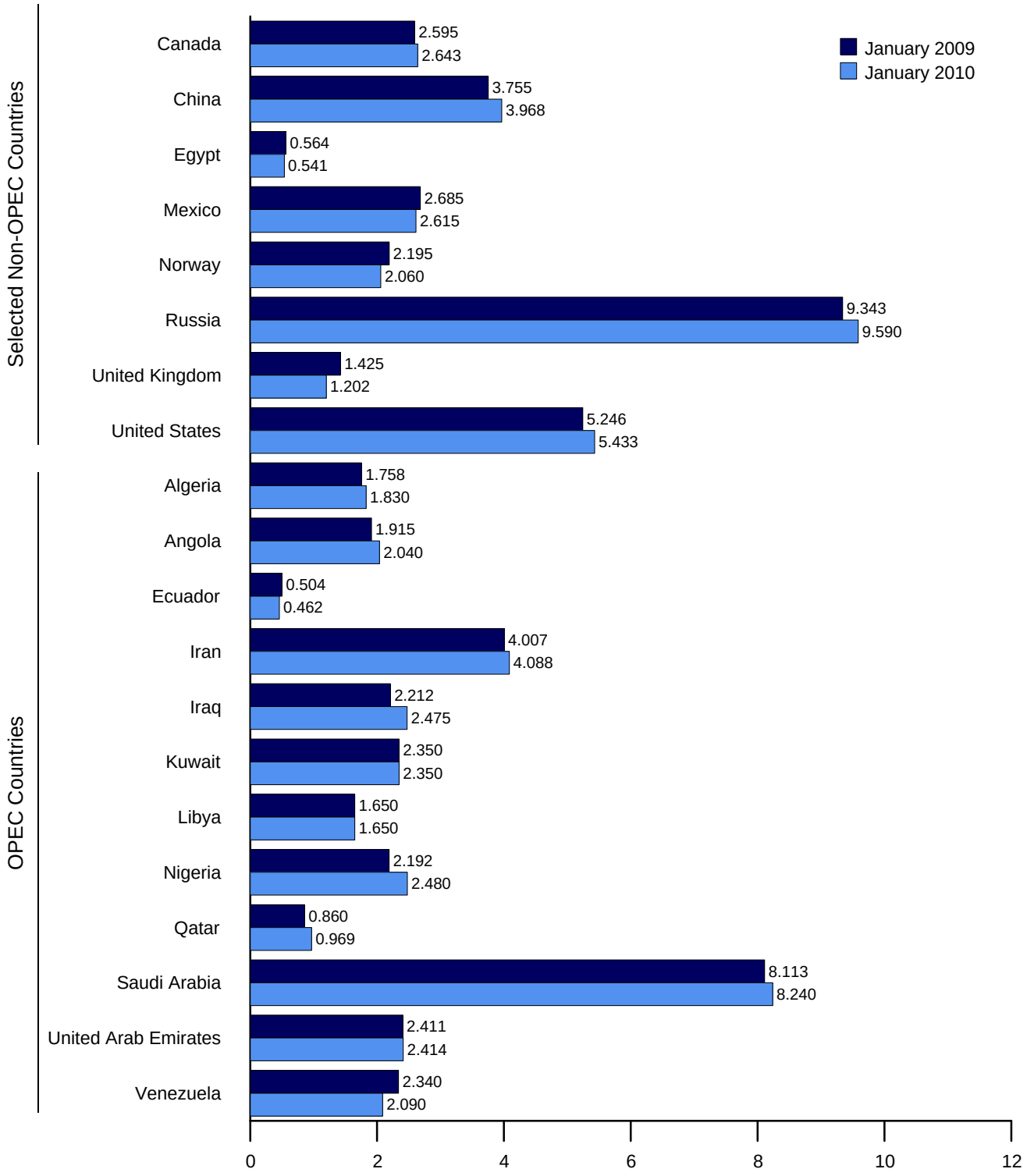

Selected Producers, Monthly




Notes: • OPEC is the Organization of the Petroleum Exporting Countries. • The Persian Gulf Nations are Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, and the United Arab Emirates. Production from the Neutral Zone between Kuwait and Saudi Arabia is included in "Persian Gulf Nations."

Web Page: http://www.eia.doe.gov/emeu/mer/inter.html.
Sources: Tables 11.1a and 11.1b.

**Figure 11.1b World Crude Oil Production by Selected Country**
(Million Barrels per Day)




Note: OPEC is the Organization of the Petroleum Exporting Countries.
Web Page: http://www.eia.doe.gov/emeu/mer/inter.html.
Sources: Tables 11.1a and 11.1b.

# Table 11.1a World Crude Oil Production: OPEC Members

(Thousand Barrels per Day)

| | Algeria | Angola | Ecuador | Iran | Iraq | Kuwait[a] | Libya | Nigeria | Qatar | Saudi Arabia[a] | United Arab Emirates | Vene-zuela | Total OPEC[b] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1973 Average** | **1,097** | **162** | **209** | **5,861** | **2,018** | **3,020** | **2,175** | **2,054** | **570** | **7,596** | **1,533** | **3,366** | **29,661** |
| **1975 Average** | **983** | **165** | **161** | **5,350** | **2,262** | **2,084** | **1,480** | **1,783** | **438** | **7,075** | **1,664** | **2,346** | **25,790** |
| **1980 Average** | **1,106** | **150** | **204** | **1,662** | **2,514** | **1,656** | **1,787** | **2,055** | **472** | **9,900** | **1,709** | **2,168** | **25,383** |
| **1985 Average** | **1,037** | **231** | **281** | **2,250** | **1,433** | **1,023** | **1,059** | **1,495** | **301** | **3,388** | **1,193** | **1,677** | **15,368** |
| **1990 Average** | **1,175** | **475** | **285** | **3,088** | **2,040** | **1,175** | **1,375** | **1,810** | **406** | **6,410** | **2,117** | **2,137** | **22,493** |
| **1995 Average** | **1,202** | **646** | **392** | **3,643** | **560** | **2,057** | **1,390** | **1,993** | **442** | **8,231** | **2,233** | **2,750** | **25,540** |
| **1996 Average** | **1,242** | **709** | **396** | **3,686** | **579** | **2,062** | **1,401** | **2,001** | **510** | **8,218** | **2,278** | **2,938** | **26,018** |
| **1997 Average** | **1,277** | **714** | **388** | **3,664** | **1,155** | **2,007** | **1,446** | **2,132** | **550** | **8,362** | **2,316** | **3,280** | **27,292** |
| **1998 Average** | **1,246** | **735** | **375** | **3,634** | **2,150** | **2,085** | **1,390** | **2,153** | **696** | **8,389** | **2,345** | **3,167** | **28,366** |
| **1999 Average** | **1,202** | **745** | **373** | **3,557** | **2,508** | **1,898** | **1,319** | **2,130** | **665** | **7,833** | **2,169** | **2,826** | **27,224** |
| **2000 Average** | **1,254** | **746** | **395** | **3,696** | **2,571** | **2,079** | **1,410** | **2,165** | **737** | **8,404** | **2,368** | **3,155** | **28,980** |
| **2001 Average** | **1,310** | **742** | **412** | **3,724** | **2,390** | **1,998** | **1,367** | **2,256** | **714** | **8,031** | **2,205** | **3,010** | **28,159** |
| **2002 Average** | **1,306** | **896** | **393** | **3,444** | **2,023** | **1,894** | **1,319** | **2,118** | **679** | **7,634** | **2,082** | **2,604** | **26,392** |
| **2003 Average** | **1,611** | **903** | **411** | **3,743** | **1,308** | **2,136** | **1,421** | **2,275** | **715** | **8,775** | **2,348** | **2,335** | **27,980** |
| **2004 Average** | **1,677** | **1,052** | **528** | **4,001** | **2,011** | **2,376** | **1,515** | **2,329** | **783** | **9,101** | **2,478** | **2,557** | **30,408** |
| **2005 Average** | **1,797** | **1,250** | **532** | **4,139** | **1,878** | **2,529** | **1,633** | **2,627** | **835** | **9,550** | **2,535** | **2,565** | **31,871** |
| **2006 Average** | **1,814** | **1,413** | **536** | **4,028** | **1,996** | **2,535** | **1,681** | **2,440** | **850** | **9,152** | **2,636** | **2,511** | **31,591** |
| **2007 Average** | **1,834** | **1,744** | **511** | **3,912** | **2,086** | **2,464** | **1,702** | **2,350** | **851** | **8,722** | **2,603** | **2,433** | **31,210** |
| **2008** January | 1,826 | 1,992 | 520 | 4,000 | 2,203 | 2,550 | 1,790 | 2,230 | 892 | 9,200 | 2,709 | 2,440 | 32,352 |
| February | 1,826 | 1,997 | 519 | 4,000 | 2,353 | 2,600 | 1,790 | 2,100 | 916 | 9,200 | 2,709 | 2,440 | 32,449 |
| March | 1,825 | 2,003 | 508 | 4,000 | 2,353 | 2,600 | 1,790 | 2,330 | 920 | 9,200 | 2,710 | 2,430 | 32,669 |
| April | 1,825 | 2,009 | 510 | 4,000 | 2,353 | 2,600 | 1,769 | 2,130 | 934 | 9,100 | 2,710 | 2,420 | 32,361 |
| May | 1,825 | 2,015 | 499 | 4,000 | 2,453 | 2,600 | 1,745 | 2,060 | 938 | 9,400 | 2,710 | 2,410 | 32,655 |
| June | 1,824 | 2,013 | 495 | 4,000 | 2,453 | 2,607 | 1,745 | 2,140 | 942 | 9,450 | 2,710 | 2,400 | 32,780 |
| July | 1,824 | 2,009 | 498 | 4,100 | 2,505 | 2,614 | 1,720 | 2,120 | 947 | 9,700 | 2,710 | 2,390 | 33,138 |
| August | 1,824 | 1,937 | 503 | 4,100 | 2,456 | 2,622 | 1,645 | 2,216 | 951 | 9,600 | 2,711 | 2,380 | 32,945 |
| September | 1,824 | 1,871 | 498 | 4,100 | 2,328 | 2,629 | 1,745 | 2,210 | 955 | 9,400 | 2,711 | 2,370 | 32,640 |
| October | 1,824 | 1,990 | 497 | 4,100 | 2,328 | 2,629 | 1,745 | 2,185 | 925 | 9,400 | 2,661 | 2,360 | 32,643 |
| November | 1,824 | 1,990 | 502 | 4,100 | 2,359 | 2,486 | 1,700 | 2,180 | 885 | 8,959 | 2,561 | 2,350 | 31,895 |
| December | 1,824 | 1,940 | 508 | 4,100 | 2,360 | 2,493 | 1,650 | 2,080 | 885 | 8,518 | 2,561 | 2,340 | 31,259 |
| **Average** | **1,825** | **1,981** | **505** | **4,050** | **2,375** | **2,586** | **1,736** | **2,165** | **924** | **9,261** | **2,681** | **2,394** | **32,483** |
| **2009** January | 1,758 | 1,915 | 504 | 4,007 | 2,212 | 2,350 | 1,650 | 2,192 | 860 | 8,113 | 2,411 | 2,340 | 30,312 |
| February | 1,757 | 1,840 | 498 | 3,963 | 2,313 | 2,350 | 1,650 | 2,162 | 935 | 8,068 | 2,412 | 2,340 | 30,288 |
| March | 1,757 | 1,840 | 497 | 3,970 | 2,365 | 2,350 | 1,650 | 2,060 | 910 | 8,072 | 2,412 | 2,340 | 30,223 |
| April | 1,757 | 1,840 | 495 | 4,030 | 2,366 | 2,350 | 1,650 | 2,217 | 910 | 8,077 | 2,412 | 2,240 | 30,344 |
| May | 1,757 | 1,840 | 486 | 4,044 | 2,418 | 2,350 | 1,650 | 2,212 | 910 | 8,081 | 2,412 | 2,240 | 30,399 |
| June | 1,756 | 1,840 | [R] 491 | 4,050 | 2,419 | 2,350 | 1,650 | 2,059 | 910 | 8,335 | 2,412 | 2,240 | 30,514 |
| July | 1,806 | 1,890 | 483 | 4,053 | 2,470 | 2,350 | 1,650 | 2,051 | 910 | 8,540 | 2,413 | 2,240 | 30,857 |
| August | 1,826 | 1,950 | 477 | 4,056 | 2,472 | 2,350 | 1,650 | 2,193 | 945 | 8,440 | 2,413 | 2,240 | 31,012 |
| September | 1,826 | 1,950 | 475 | 4,060 | 2,473 | 2,350 | 1,650 | 2,240 | 945 | 8,340 | 2,413 | 2,240 | 30,962 |
| October | 1,826 | 1,990 | [R] 475 | 4,063 | 2,425 | 2,350 | 1,650 | 2,290 | 951 | 8,340 | 2,413 | 2,240 | [R] 31,013 |
| November | 1,826 | 1,990 | 477 | 4,067 | 2,375 | 2,350 | 1,650 | 2,370 | 962 | 8,340 | 2,413 | 2,140 | 30,960 |
| December | 1,826 | 1,990 | 470 | 4,076 | 2,375 | 2,350 | 1,650 | 2,450 | 974 | 8,240 | 2,414 | 2,040 | 30,854 |
| **Average** | **1,790** | **1,907** | **486** | **4,037** | **2,391** | **2,350** | **1,650** | **2,208** | **927** | **8,250** | **2,413** | **2,239** | **30,647** |
| **2010** January | 1,830 | 2,040 | 462 | 4,088 | 2,475 | 2,350 | 1,650 | 2,480 | 969 | 8,240 | 2,414 | 2,090 | 31,088 |

[a] Except for the period from August 1990 through May 1991, includes about one-half of the production in the Kuwait-Saudi Arabia Neutral Zone. Kuwaiti Neutral Zone output was discontinued following Iraq's invasion of Kuwait on August 2, 1990, but was resumed in June 1991. In January 2010, Neutral Zone production by both Kuwait and Saudi Arabia totaled about 510 thousand barrels per day. Data for Saudi Arabia include approximately 150 thousand barrels per day from the Abu Safah field produced on behalf of Bahrain.

[b] See "Organization of the Petroleum Exporting Countries (OPEC)" in Glossary. On Tables 11.1a and 11.1b, countries are classified as "OPEC" or "Non-OPEC" in all years based on their status in the most current year. For example, Ecuador rejoined OPEC in 2007, and is thus included in "Total OPEC" for all years; and Indonesia left OPEC at the end of 2008, and is thus included in "Total Non-OPEC" for all years.

R=Revised.

Notes: • Data are for crude oil and lease condensate; they exclude natural gas plant liquids. • Monthly data are often preliminary figures and may not average to the annual totals because of rounding or because updates to the preliminary monthly data are not available.

Web Page: See http://www.eia.doe.gov/emeu/mer/inter.html for all available data beginning in 1973.

Sources: See end of section.

# Table 11.1b World Crude Oil Production: Persian Gulf Nations, Non-OPEC, and World (Thousand Barrels per Day)

| | Persian Gulf Nations[b] | Selected Non-OPEC[a] Producers | | | | | | | | | Total Non-OPEC[a] | World |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Canada | China | Egypt | Mexico | Norway | Former U.S.S.R. | Russia | United Kingdom | United States | | |
| **1973 Average** | **20,668** | **1,798** | **1,090** | **165** | **465** | **32** | **8,324** | **NA** | **2** | **9,208** | **26,018** | **55,679** |
| **1975 Average** | **18,934** | **1,430** | **1,490** | **235** | **705** | **189** | **9,523** | **NA** | **12** | **8,375** | **27,039** | **52,828** |
| **1980 Average** | **17,961** | **1,435** | **2,114** | **595** | **1,936** | **486** | **11,706** | **NA** | **1,622** | **8,597** | **34,175** | **59,558** |
| **1985 Average** | **9,630** | **1,471** | **2,505** | **887** | **2,745** | **773** | **11,585** | **NA** | **2,530** | **8,971** | **38,598** | **53,966** |
| **1990 Average** | **15,278** | **1,553** | **2,774** | **873** | **2,553** | **1,630** | **10,975** | **NA** | **1,820** | **7,355** | **37,999** | **60,492** |
| **1995 Average** | **17,208** | **1,805** | **2,990** | **920** | **2,618** | **2,766** | **– –** | **5,995** | **2,489** | **6,560** | **36,845** | **62,385** |
| **1996 Average** | **17,367** | **1,837** | **3,131** | **922** | **2,855** | **3,091** | **– –** | **5,850** | **2,568** | **6,465** | **37,733** | **63,752** |
| **1997 Average** | **18,095** | **1,922** | **3,200** | **856** | **3,023** | **3,142** | **– –** | **5,920** | **2,518** | **6,452** | **38,452** | **65,744** |
| **1998 Average** | **19,337** | **1,981** | **3,198** | **834** | **3,070** | **3,011** | **– –** | **5,854** | **2,616** | **6,252** | **38,599** | **66,966** |
| **1999 Average** | **18,667** | **1,907** | **3,195** | **852** | **2,906** | **3,019** | **– –** | **6,079** | **2,684** | **5,881** | **38,698** | **65,922** |
| **2000 Average** | **19,892** | **1,977** | **3,249** | **768** | **3,012** | **3,222** | **– –** | **6,479** | **2,275** | **5,822** | **39,515** | **68,495** |
| **2001 Average** | **19,098** | **2,029** | **3,300** | **720** | **3,127** | **3,226** | **– –** | **6,917** | **2,282** | **5,801** | **39,940** | **68,099** |
| **2002 Average** | **17,794** | **2,171** | **3,390** | **715** | **3,177** | **3,131** | **– –** | **7,408** | **2,292** | **5,746** | **40,766** | **67,158** |
| **2003 Average** | **19,063** | **2,306** | **3,409** | **713** | **3,371** | **3,042** | **– –** | **8,132** | **2,093** | **5,681** | **41,452** | **69,433** |
| **2004 Average** | **20,787** | **2,398** | **3,485** | **673** | **3,383** | **2,954** | **– –** | **8,805** | **1,845** | **5,419** | **42,068** | **72,476** |
| **2005 Average** | **21,501** | **2,369** | **3,609** | **658** | **3,334** | **2,698** | **– –** | **9,043** | **1,649** | **5,178** | **41,849** | **73,719** |
| **2006 Average** | **21,232** | **2,525** | **3,673** | **639** | **3,256** | **2,491** | **– –** | **9,247** | **1,490** | **5,102** | **41,844** | **73,435** |
| **2007 Average** | **20,672** | **R 2,628** | **3,729** | **637** | **3,076** | **2,270** | **– –** | **9,437** | **1,498** | **5,064** | **R 41,777** | **R 72,987** |
| **2008** January | 21,588 | 2,528 | 3,744 | 609 | 2,928 | 2,209 | – – | 9,359 | 1,456 | 5,100 | 41,523 | 73,874 |
| February | 21,813 | 2,561 | 3,747 | 605 | 2,909 | 2,176 | – – | 9,362 | 1,491 | 5,122 | 41,609 | 74,058 |
| March | 21,818 | 2,654 | 3,769 | 601 | 2,839 | 2,209 | – – | 9,334 | 1,450 | 5,151 | 41,569 | 74,238 |
| April | 21,732 | 2,529 | 3,751 | 597 | 2,757 | 2,111 | – – | 9,296 | 1,491 | 5,117 | 41,286 | 73,646 |
| May | 22,136 | 2,453 | 3,811 | 593 | 2,791 | 2,247 | – – | 9,315 | 1,485 | 5,102 | 41,309 | 73,963 |
| June | 22,197 | 2,488 | 3,884 | 589 | 2,833 | 2,002 | – – | 9,334 | 1,363 | 5,098 | 41,203 | 73,983 |
| July | 22,610 | 2,677 | 3,808 | 606 | 2,778 | 2,302 | – – | 9,344 | 1,307 | 5,133 | 41,591 | 74,729 |
| August | 22,474 | 2,696 | 3,774 | 622 | 2,759 | 2,057 | – – | 9,409 | 1,099 | 4,894 | 40,587 | 73,532 |
| September | 22,157 | 2,591 | 3,788 | 638 | 2,722 | 2,057 | – – | 9,406 | 1,392 | 3,930 | 39,989 | 72,629 |
| October | 22,077 | 2,607 | 3,850 | 634 | 2,757 | 2,241 | – – | 9,430 | 1,352 | 4,669 | 40,960 | 73,603 |
| November | 21,384 | 2,711 | 3,859 | 570 | 2,711 | 2,276 | – – | 9,359 | 1,396 | 5,024 | 41,514 | 73,409 |
| December | 20,952 | 2,654 | 3,699 | 566 | 2,717 | 2,287 | – – | 9,333 | 1,423 | 5,056 | 41,345 | 72,604 |
| **Average** | **21,913** | **2,596** | **3,790** | **603** | **2,792** | **2,182** | **– –** | **9,357** | **1,391** | **4,950** | **41,207** | **73,690** |
| **2009** January | 19,989 | 2,595 | 3,755 | 564 | 2,685 | 2,195 | – – | 9,343 | 1,425 | E 5,246 | R 41,349 | R 71,662 |
| February | 20,076 | 2,705 | 3,733 | 562 | 2,663 | 2,260 | – – | 9,331 | 1,449 | E 5,191 | R 41,753 | R 72,041 |
| March | 20,114 | 2,592 | 3,726 | 560 | 2,652 | 2,238 | – – | 9,388 | 1,451 | E 5,270 | R 41,728 | R 71,952 |
| April | 20,179 | 2,484 | 3,795 | 558 | 2,642 | 2,072 | – – | 9,459 | 1,468 | E 5,228 | R 41,648 | R 71,992 |
| May | 20,249 | 2,373 | 3,775 | 556 | 2,609 | 1,890 | – – | 9,429 | 1,390 | E 5,283 | R 41,072 | R 71,471 |
| June | 20,511 | 2,494 | 3,824 | 554 | 2,519 | 1,850 | – – | 9,457 | 1,359 | E 5,183 | 41,139 | R 71,652 |
| July | 20,771 | 2,594 | 3,801 | 552 | 2,561 | 2,147 | – – | 9,476 | 1,342 | E 5,233 | R 41,615 | 72,472 |
| August | 20,711 | 2,521 | 3,844 | 550 | 2,542 | 1,970 | – – | 9,532 | 993 | E 5,286 | R 41,080 | R 72,092 |
| September | 20,616 | 2,484 | 3,826 | 548 | 2,599 | 1,923 | – – | 9,623 | 1,119 | E 5,444 | R 41,593 | R 72,555 |
| October | 20,577 | 2,515 | 3,828 | 546 | 2,602 | 2,077 | – – | 9,629 | 1,266 | E 5,422 | R 41,948 | R 72,961 |
| November | 20,542 | 2,750 | 3,813 | 544 | 2,553 | 2,123 | – – | 9,654 | 1,372 | E 5,466 | R 42,273 | R 73,233 |
| December | 20,464 | 2,674 | 3,863 | 542 | 2,593 | 2,073 | – – | 9,614 | 1,310 | E 5,460 | R 42,183 | R 73,038 |
| **Average** | **20,402** | **2,564** | **3,799** | **553** | **2,601** | **2,067** | **– –** | **9,495** | **1,328** | **E 5,310** | **R 41,614** | **R 72,261** |
| **2010** January | 20,571 | 2,643 | 3,968 | 541 | 2,615 | 2,060 | – – | 9,590 | 1,202 | E 5,433 | 42,138 | 73,226 |

[a] See "Organization of the Petroleum Exporting Countries (OPEC)" in Glossary. On Tables 11.1a and 11.1b, countries are classified as "OPEC" or "Non-OPEC" in all years based on their status in the most current year. For example, Ecuador rejoined OPEC in 2007, and is thus included in "Total OPEC" for all years; and Indonesia left OPEC at the end of 2008, and is thus included in "Total Non-OPEC" for all years.

[b] Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, United Arab Emirates, and the Neutral Zone (between Kuwait and Saudi Arabia).

R=Revised. NA=Not available. – – =Not applicable. E=Estimate.

Notes: • Data are for crude oil and lease condensate; they exclude natural gas plant liquids. • Monthly data are often preliminary figures and may not average to the annual totals because of rounding or because updates to the preliminary monthly data are not available. • Data for countries may not sum to World totals due to independent rounding. • U.S. geographic coverage is the 50 States and the District of Columbia.

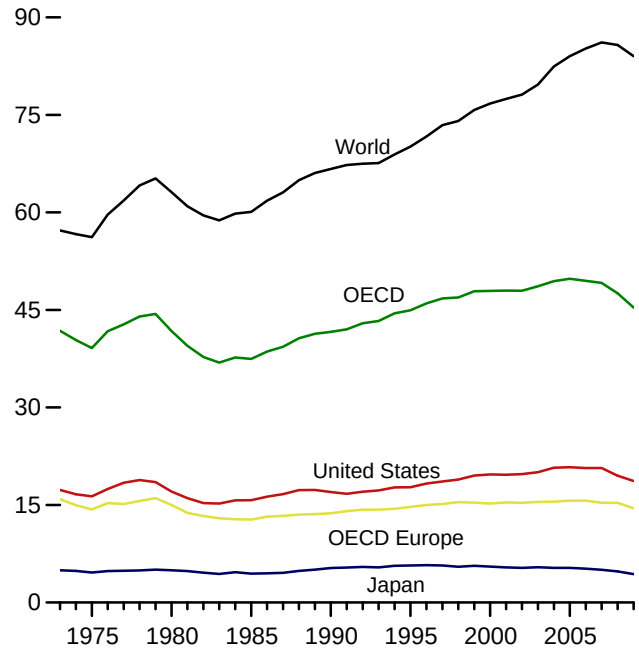
Web Page: See http://www.eia.doe.gov/emeu/mer/inter.html for all available data beginning in 1973.

Sources: See end of section.

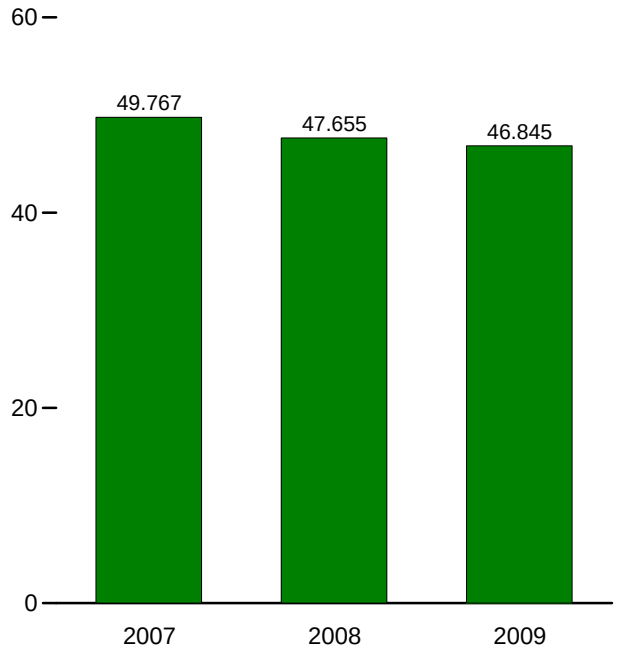
## Figure 11.2 Petroleum Consumption in OECD Countries

(Million Barrels per Day)

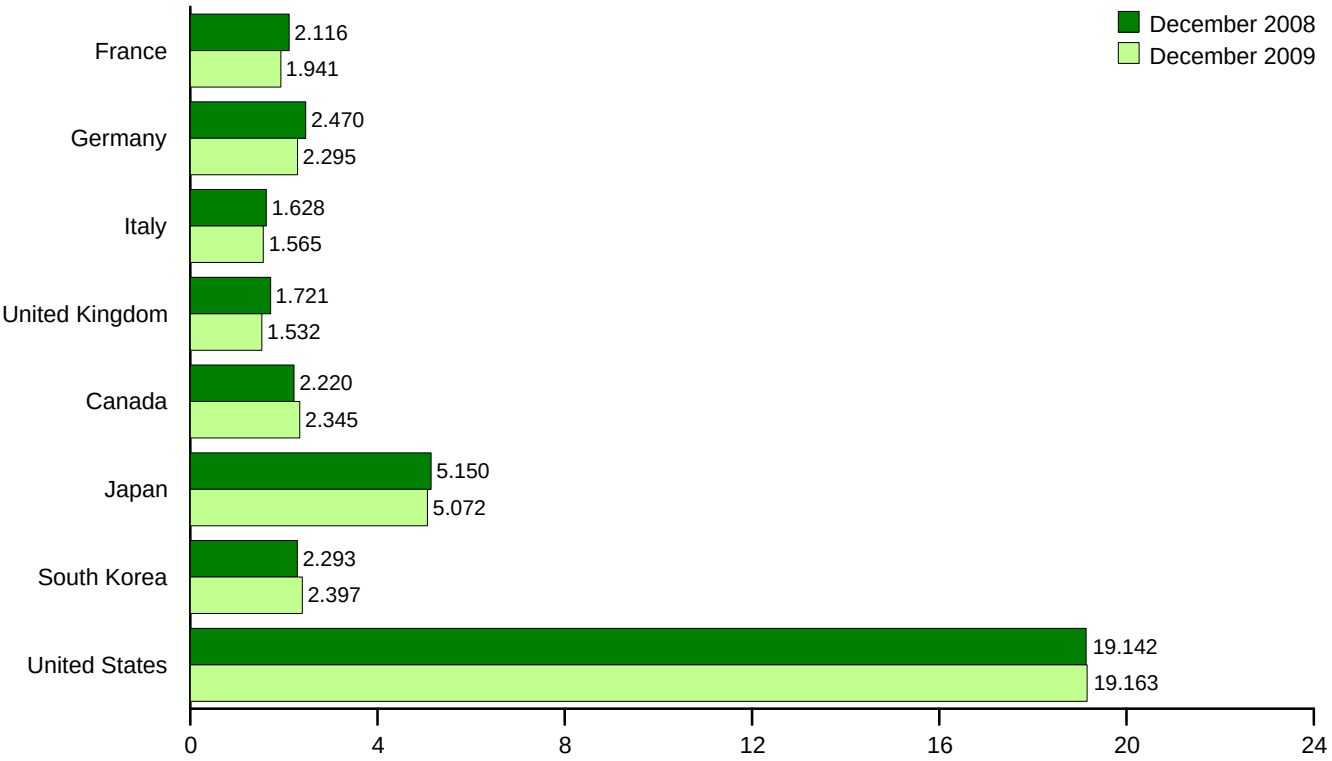
Overview, 1973-2009




OECD Total, December




By Selected OECD Country




Note: OECD is the Organization for Economic Cooperation and Development.
Web Page: http://www.eia.doe.gov/emeu/mer/inter.html.
Source: Table 11.2.

# Table 11.2 Petroleum Consumption in OECD Countries

(Thousand Barrels per Day)

| | France | Germany[a] | Italy | United Kingdom | OECD Europe[b] | Canada | Japan | South Korea | United States | Other OECD[c] | OECD[d] | World |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1973 Average** | **2,601** | **3,324** | **2,068** | **2,341** | **15,879** | **1,729** | **4,949** | **281** | **17,308** | **1,658** | **41,804** | **57,237** |
| **1975 Average** | **2,252** | **2,957** | **1,855** | **1,911** | **14,314** | **1,779** | **4,621** | **311** | **16,322** | **1,794** | **39,141** | **56,198** |
| **1980 Average** | **2,256** | **3,082** | **1,934** | **1,725** | **14,995** | **1,873** | **4,960** | **537** | **17,056** | **2,342** | **41,763** | **63,113** |
| **1985 Average** | **1,753** | **2,651** | **1,705** | **1,617** | **12,772** | **1,526** | **4,436** | **552** | **15,726** | **2,469** | **37,481** | **60,085** |
| **1990 Average** | **1,826** | **2,682** | **1,868** | **1,776** | **13,729** | **1,737** | **5,315** | **1,048** | **16,988** | **2,804** | **41,621** | **66,687** |
| **1995 Average** | **1,920** | **2,882** | **1,942** | **1,816** | **14,716** | **1,817** | **5,693** | **2,008** | **17,725** | **3,001** | **44,960** | **70,132** |
| **1996 Average** | **1,949** | **2,922** | **1,920** | **1,852** | **14,997** | **1,871** | **5,739** | **2,101** | **18,309** | **2,995** | **46,012** | **71,671** |
| **1997 Average** | **1,969** | **2,917** | **1,934** | **1,810** | **15,140** | **1,959** | **5,702** | **2,255** | **18,620** | **3,089** | **46,766** | **73,431** |
| **1998 Average** | **2,043** | **2,923** | **1,943** | **1,792** | **15,447** | **1,949** | **5,507** | **1,917** | **18,917** | **3,192** | **46,929** | **74,067** |
| **1999 Average** | **2,031** | **2,838** | **1,891** | **1,811** | **15,364** | **2,036** | **5,642** | **2,084** | **19,519** | **3,235** | **47,880** | **75,758** |
| **2000 Average** | **2,000** | **2,772** | **1,854** | **1,765** | **15,217** | **2,035** | **5,515** | **2,135** | **19,701** | **3,326** | **47,930** | **76,741** |
| **2001 Average** | **2,054** | **2,815** | **1,832** | **1,747** | **15,385** | **2,066** | **5,412** | **2,132** | **19,649** | **3,337** | **47,980** | **77,468** |
| **2002 Average** | **1,985** | **2,722** | **1,870** | **1,739** | **15,336** | **2,087** | **5,319** | **2,149** | **19,761** | **3,289** | **47,942** | **78,119** |
| **2003 Average** | **2,001** | **2,679** | **1,860** | **1,759** | **15,460** | **2,217** | **5,427** | **2,175** | **20,034** | **3,324** | **48,637** | **79,681** |
| **2004 Average** | **2,009** | **2,665** | **1,794** | **1,785** | **15,529** | **2,310** | **5,318** | **2,155** | **20,731** | **3,390** | **49,434** | **82,456** |
| **2005 Average** | **1,991** | **2,647** | **1,755** | **1,823** | **15,658** | **2,342** | **5,328** | **2,191** | **20,802** | **3,481** | **49,802** | **84,038** |
| **2006 Average** | **1,985** | **2,692** | **1,743** | **1,804** | **15,673** | **2,253** | **5,197** | **2,180** | **20,687** | **3,499** | **49,490** | **85,202** |
| **2007 Average** | **1,968** | **2,471** | **1,688** | **1,738** | **15,338** | **2,306** | **5,036** | **2,241** | **20,680** | **3,560** | **49,161** | **86,138** |
| **2008** January | 2,090 | 2,493 | 1,659 | 1,706 | 15,390 | 2,327 | 5,408 | 2,394 | 20,247 | 3,490 | 49,257 | NA |
| February | 2,023 | 2,584 | 1,732 | 1,817 | 15,636 | 2,351 | 5,924 | 2,371 | 20,029 | 3,572 | 49,884 | NA |
| March | 1,911 | 2,411 | 1,585 | 1,686 | 14,855 | 2,249 | 5,061 | 2,288 | 19,831 | 3,428 | 47,711 | NA |
| April | 2,036 | 2,525 | 1,643 | 1,833 | 15,605 | 2,138 | 5,035 | 2,121 | 19,815 | 3,694 | 48,408 | NA |
| May | 1,880 | 2,320 | 1,639 | 1,631 | 14,678 | 2,199 | 4,489 | 2,203 | 19,798 | 3,607 | 46,974 | NA |
| June | 1,928 | 2,434 | 1,638 | 1,720 | 14,951 | 2,244 | 4,383 | 2,016 | 19,678 | 3,468 | 46,740 | NA |
| July | 1,954 | 2,647 | 1,732 | 1,635 | 15,459 | 2,288 | 4,479 | 2,050 | 19,557 | 3,680 | 47,512 | NA |
| August | 1,885 | 2,632 | 1,527 | 1,588 | 15,002 | 2,203 | 4,215 | 2,050 | 19,272 | 3,511 | 46,254 | NA |
| September | 2,025 | 2,842 | 1,667 | 1,733 | 16,134 | 2,263 | 4,333 | 2,190 | 17,839 | 3,406 | 46,164 | NA |
| October | 2,078 | 2,857 | 1,663 | 1,738 | 15,944 | 2,297 | 4,379 | 2,045 | 19,698 | 3,374 | 47,738 | NA |
| November | 1,911 | 2,620 | 1,561 | 1,721 | 15,069 | 2,274 | 4,609 | 2,082 | 19,052 | 3,307 | 46,393 | NA |
| December | 2,116 | 2,470 | 1,628 | 1,721 | 15,277 | 2,220 | 5,150 | 2,293 | 19,142 | 3,571 | 47,655 | NA |
| **Average** | **1,986** | **2,569** | **1,639** | **1,710** | **15,331** | **2,254** | **4,785** | **2,175** | **19,498** | **3,509** | **47,552** | **85,752** |
| **2009** January | 2,037 | 2,389 | 1,528 | 1,746 | R 14,749 | 2,232 | 4,845 | 2,328 | 19,125 | 3,297 | R 46,577 | NA |
| February | 2,049 | 2,613 | 1,585 | 1,701 | R 15,056 | 2,221 | 4,716 | 2,490 | 18,706 | 3,406 | R 46,595 | NA |
| March | 1,966 | 2,723 | 1,531 | 1,742 | R 14,911 | 2,154 | 4,611 | 2,218 | 18,672 | 3,365 | R 45,931 | NA |
| April | 1,847 | 2,475 | 1,531 | 1,710 | R 14,418 | 2,049 | 4,226 | 2,241 | 18,471 | 3,329 | R 44,734 | NA |
| May | 1,715 | 2,329 | 1,490 | 1,616 | R 13,752 | 2,053 | 3,818 | 2,159 | 18,176 | 3,354 | R 43,312 | NA |
| June | 1,865 | 2,363 | 1,545 | 1,694 | R 14,554 | 2,142 | 4,064 | 2,109 | 18,762 | 3,463 | R 45,093 | NA |
| July | 1,885 | 2,408 | 1,704 | 1,662 | R 14,700 | 2,170 | 3,996 | 2,036 | 18,771 | 3,487 | R 45,160 | NA |
| August | 1,623 | 2,259 | 1,407 | 1,657 | R 13,749 | 2,157 | 4,172 | 2,096 | 18,732 | 3,458 | R 44,365 | NA |
| September | 1,931 | 2,545 | 1,608 | 1,675 | R 14,961 | R 2,138 | 4,142 | 2,066 | 18,362 | 3,402 | R 45,071 | NA |
| October | 1,891 | 2,505 | 1,618 | 1,654 | R 14,804 | 2,102 | 4,298 | 2,219 | 18,727 | 3,527 | R 45,678 | NA |
| November | 1,762 | 2,356 | 1,512 | 1,643 | R 14,173 | R 2,315 | 4,395 | 2,259 | 18,550 | 3,554 | R 45,247 | NA |
| December | 1,941 | 2,295 | 1,565 | 1,532 | 14,190 | 2,345 | 5,072 | 2,397 | 19,163 | 3,678 | 46,845 | NA |
| **Average** | **1,875** | **2,437** | **1,552** | **1,669** | **14,497** | **2,173** | **4,362** | **2,216** | **18,686** | **3,444** | **45,378** | **84,039** |

[a] Data are for unified Germany, i.e., the former East Germany and West Germany.

[b] "OECD Europe" consists of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Poland, Portugal, Slovakia, Spain, Sweden, Switzerland, Turkey, and the United Kingdom.

[c] "Other OECD" consists of Australia, Mexico, New Zealand, and the U.S. Territories.

[d] The Organization for Economic Cooperation and Development (OECD) consists of "OECD Europe," Canada, Japan, South Korea, the United States, and "Other OECD."

R=Revised. NA=Not available.

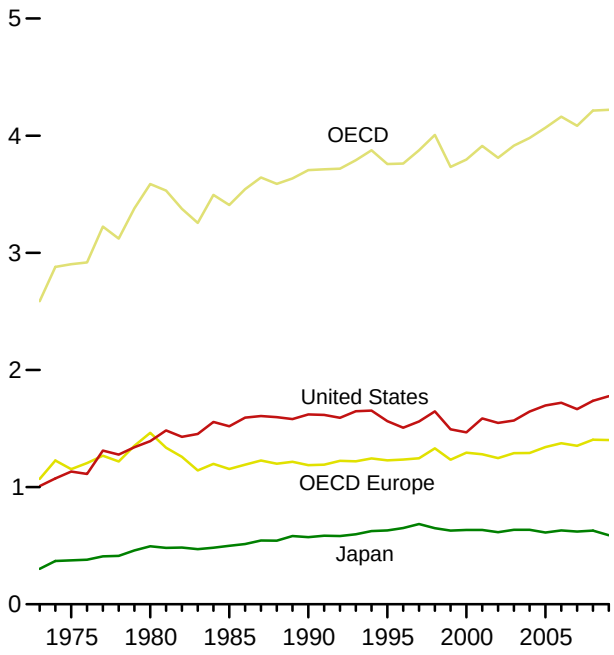
Notes: • Totals may not equal sum of components due to independent rounding. • U.S. geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/inter.html for all available data beginning in 1973.

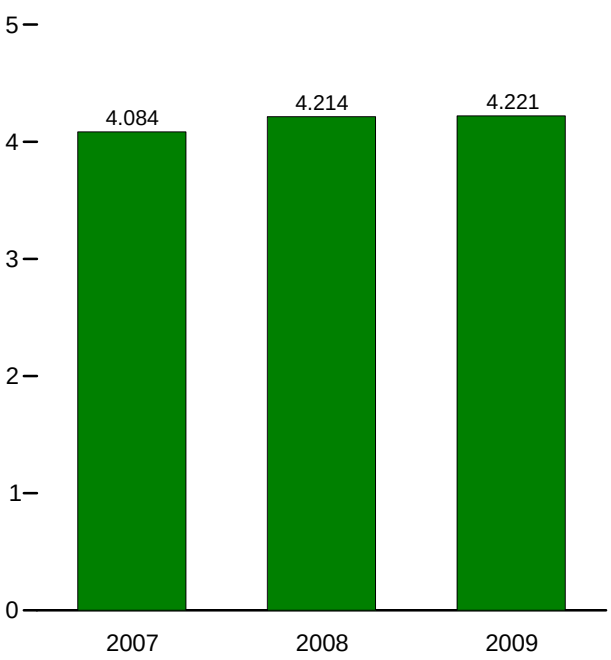
Sources: • **United States:** Table 3.1. • **U.S. Territories: 1983 forward—**U.S. Energy Information Administration (EIA), International Energy Database. • **East Germany, Former Czechoslavakia, Hungary, Mexico, Poland, South Korea, Non-OECD Countries,** and **World: 1973-1979—**EIA, International Energy Database. **1980-1983—**EIA, *International Energy Annual 2005,* August 2007, Table 1.2. • **Non-OECD Countries: 1984-2005—**EIA, *International Energy Annual 2005,* August 2007, Table 1.2. **2006 and 2007—**EIA, *Short Term Energy Outlook,* May 2008. • **World: 1984-2007—**Sum of OECD and Non-OECD Countries. • **All Other Data: 1973-1981—**International Energy Agency (IEA), *Quarterly Oil Statistics and Energy Balances in OECD Countries,* various issues. **1982 and 1983—**IEA, Monthly Oil and Gas Statistics Database. **1984 forward—**IEA, Monthly Oil Data Service, March 12, 2010.

## Figure 11.3 Petroleum Stocks in OECD Countries
(Billion Barrels)

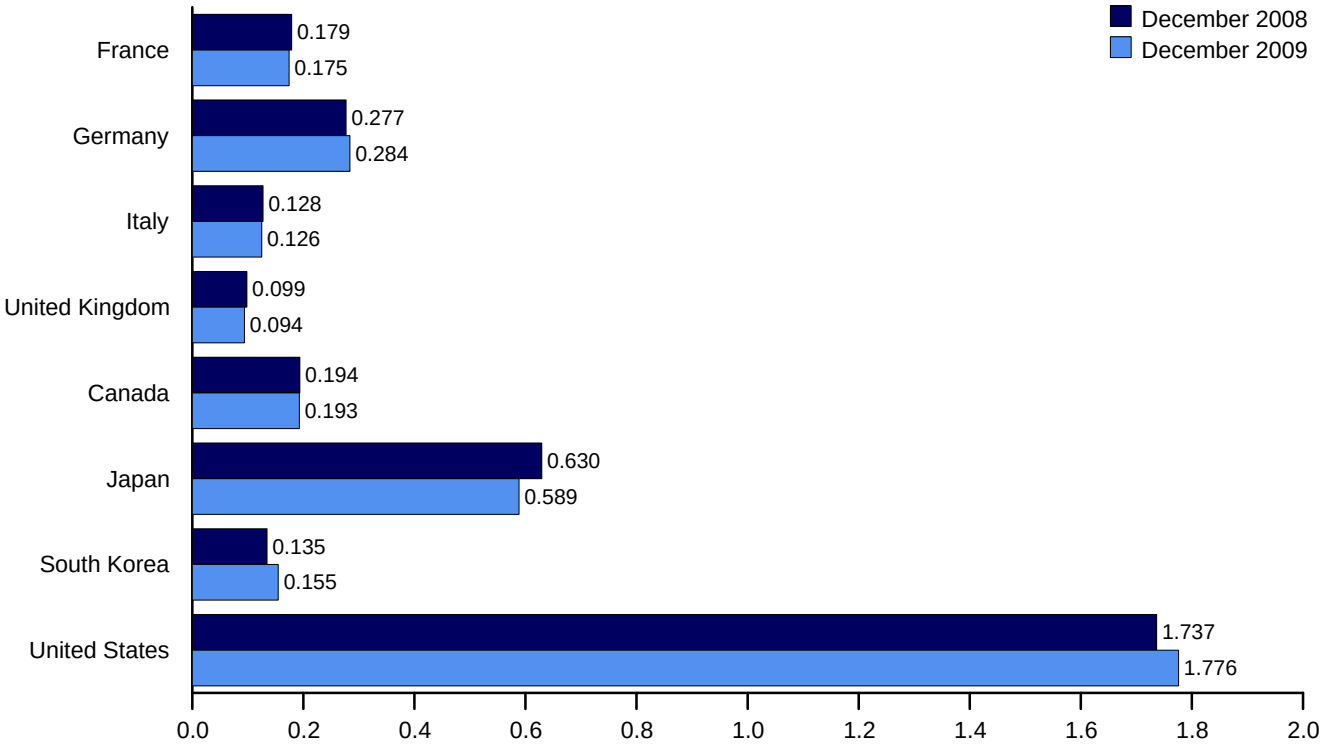
Overview, End of Year, 1973-2009




OECD Stocks, End of Month, December




By Selected OECD Country, End of Month




Note: OECD is the Organization for Economic Cooperation and Development.
Web Page: http://www.eia.doe.gov/emeu/mer/inter.html.
Source: Table 11.3.

# Table 11.3 Petroleum Stocks in OECD Countries

(Million Barrels)

| | France | Germany[a] | Italy | United Kingdom | OECD Europe[b] | Canada | Japan | South Korea | United States | Other OECD[c] | OECD[d] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **1973 Year** | **201** | **181** | **152** | **156** | **1,070** | **140** | **303** | **NA** | **1,008** | **67** | **2,588** |
| **1975 Year** | **225** | **187** | **143** | **165** | **1,154** | **174** | **375** | **NA** | **1,133** | **67** | **2,903** |
| **1980 Year** | **243** | **319** | **170** | **168** | **1,464** | **164** | **495** | **NA** | **1,392** | **72** | **3,587** |
| **1985 Year** | **139** | **277** | **156** | **131** | **1,154** | **112** | **500** | **13** | **1,519** | **110** | **3,408** |
| **1990 Year** | **143** | **280** | **143** | **103** | **1,188** | **143** | **572** | **64** | **1,621** | **117** | **3,706** |
| **1995 Year** | **155** | **302** | **141** | **101** | **1,228** | **132** | **631** | **92** | **1,563** | **113** | **3,758** |
| **1996 Year** | **154** | **303** | **135** | **103** | **1,235** | **127** | **651** | **123** | **1,507** | **118** | **3,762** |
| **1997 Year** | **161** | **299** | **129** | **100** | **1,246** | **144** | **685** | **124** | **1,560** | **115** | **3,875** |
| **1998 Year** | **169** | **323** | **135** | **104** | **1,331** | **139** | **649** | **129** | **1,647** | **111** | **4,006** |
| **1999 Year** | **160** | **290** | **130** | **101** | **1,233** | **142** | **629** | **132** | **1,493** | **105** | **3,733** |
| **2000 Year** | **170** | **272** | **140** | **100** | **1,294** | **144** | **634** | **140** | **1,468** | **117** | **3,796** |
| **2001 Year** | **165** | **273** | **134** | **113** | **1,281** | **156** | **634** | **143** | **1,586** | **112** | **3,912** |
| **2002 Year** | **170** | **253** | **138** | **104** | **1,247** | **157** | **615** | **140** | **1,548** | **103** | **3,811** |
| **2003 Year** | **179** | **273** | **135** | **100** | **1,290** | **170** | **636** | **155** | **1,568** | **96** | **3,914** |
| **2004 Year** | **177** | **267** | **136** | **101** | **1,292** | **160** | **635** | **149** | **1,645** | **99** | **3,980** |
| **2005 Year** | **185** | **283** | **132** | **95** | **[R] 1,342** | **178** | **612** | **135** | **1,698** | **103** | **[R] 4,068** |
| **2006 Year** | **182** | **283** | **133** | **103** | **[R] 1,375** | **181** | **631** | **152** | **1,720** | **103** | **[R] 4,162** |
| **2007 Year** | **180** | **275** | **133** | **90** | **[R] 1,353** | **194** | **621** | **143** | **1,665** | **108** | **[R] 4,084** |
| **2008** January | 182 | 281 | 136 | 95 | 1,381 | 195 | 621 | 155 | 1,677 | 110 | 4,139 |
| February | 176 | 276 | 129 | 95 | 1,355 | 193 | 605 | 149 | 1,664 | 114 | 4,080 |
| March | 177 | 281 | 131 | 100 | 1,384 | 193 | 610 | 143 | 1,655 | 111 | [R] 4,095 |
| April | 173 | 279 | 134 | 98 | [R] 1,366 | 191 | 610 | 141 | 1,666 | 106 | [R] 4,081 |
| May | 177 | 277 | 136 | 99 | [R] 1,370 | 193 | 617 | 146 | 1,674 | 107 | [R] 4,107 |
| June | 177 | 273 | 137 | 99 | [R] 1,368 | 193 | 619 | 147 | 1,686 | 110 | [R] 4,122 |
| July | 179 | 274 | 135 | 95 | [R] 1,387 | 197 | 627 | 153 | 1,698 | 105 | [R] 4,167 |
| August | 176 | 276 | 131 | 96 | 1,382 | 202 | 643 | 150 | 1,711 | 106 | 4,193 |
| September | 177 | 274 | 130 | 95 | 1,364 | 202 | 646 | 141 | 1,704 | 117 | 4,174 |
| October | 179 | 270 | 129 | 93 | [R] 1,361 | 202 | 648 | 138 | 1,711 | 122 | [R] 4,182 |
| November | 179 | 275 | 127 | 96 | [R] 1,377 | 200 | 641 | 139 | 1,732 | 117 | 4,207 |
| **December** | **179** | **277** | **128** | **99** | **[R] 1,405** | **194** | **630** | **135** | **1,737** | **114** | **[R] 4,214** |
| **2009** January | 179 | 280 | 136 | 100 | [R] 1,409 | 196 | 618 | 149 | 1,762 | 115 | [R] 4,249 |
| February | 178 | 279 | 128 | 98 | [R] 1,405 | 196 | 619 | 157 | 1,770 | 109 | [R] 4,256 |
| March | 178 | 278 | 131 | 100 | [R] 1,409 | 198 | 611 | 155 | 1,795 | 110 | [R] 4,278 |
| April | 173 | 279 | 132 | 98 | [R] 1,400 | 199 | 606 | 152 | 1,812 | 115 | [R] 4,283 |
| May | 176 | 281 | 133 | 92 | [R] 1,395 | 198 | 609 | 149 | 1,829 | 112 | [R] 4,291 |
| June | 173 | 280 | 129 | 92 | [R] 1,395 | 198 | 611 | 149 | 1,839 | 110 | [R] 4,302 |
| July | 174 | 277 | 127 | 97 | [R] 1,389 | 202 | 607 | 157 | 1,842 | 108 | [R] 4,304 |
| August | 178 | 284 | 130 | 96 | [R] 1,407 | 201 | 610 | 160 | 1,828 | 111 | [R] 4,318 |
| September | 174 | 277 | 129 | 94 | [R] 1,397 | 196 | 607 | 167 | 1,845 | 117 | [R] 4,328 |
| October | 173 | 278 | 130 | 96 | [R] 1,377 | [R] 199 | 604 | 167 | 1,822 | 109 | [R] 4,279 |
| November | 179 | [R] 286 | 130 | [R] 96 | [R] 1,410 | [R] 197 | 606 | 162 | 1,814 | 108 | [R] 4,297 |
| **December** | **175** | **284** | **126** | **94** | **1,403** | **193** | **589** | **155** | **1,776** | **105** | **4,221** |

[a] Through December 1983, the data for Germany are for the former West Germany only. Beginning with January 1984, the data for Germany are for the unified Germany, i.e., the former East Germany and West Germany.

[b] "OECD Europe" consists of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, and the United Kingdom, and, for 1984 forward, Czech Republic, Hungary, Poland, and Slovakia.

[c] "Other OECD" consists of Australia, New Zealand, and the U.S. Territories, and, for 1984 forward, Mexico.

[d] The Organization for Economic Cooperation and Development (OECD) consists of "OECD Europe," Canada, Japan, South Korea, the United States, and "Other OECD."

R=Revised. NA=Not available.

Notes: • Stocks are at end of period. • Petroleum stocks include crude oil (including strategic reserves), unfinished oils, natural gas plant liquids, and refined products. • In the United States in January 1975, 1981, and 1983, numerous respondents were added to bulk terminal and pipeline surveys, thereby affecting subsequent stocks reported. New-basis end-of-year U.S. stocks, in million barrels, would have been 1,121 in 1974, 1,425 in 1980, and 1,461 in 1982. • Totals may not equal sum of components due to independent rounding. • U.S. geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/inter.html for all available data beginning in 1973.

Sources: • **United States:** Table 3.4. • **U.S. Territories: 1983 forward—**U.S. Energy Information Administration, International Energy Database. • **All Other Data: 1973-1982—**International Energy Agency (IEA), *Quarterly Oil Statistics and Energy Balances,* various issues. **1983—**IEA, Monthly Oil and Gas Statistics Database. **1984 forward—**IEA, Monthly Oil Data Service, March 12, 2010.

# International Petroleum

## Tables 11.1a and 11.1b Sources

**United States**
Table 3.1.

**All Other Countries and World, Annual Data**
1973–1979: U.S. Energy Information Administration (EIA), *International Energy Annual 1981*, Table 8.
1980 forward: EIA, Office of Energy Markets and End Use (EMEU), International Energy Database, April 2010.

**All Other Countries and World, Monthly Data**
1973–1980: *Petroleum Intelligence Weekly (PIW)*, *Oil & Gas Journal (OGJ)*, and EIA adjustments.
1981–1993: *PIW*, *OGJ*, and other industry sources.
1994 forward: EIA, *International Petroleum Monthly*, and EMEU, International Energy Database, April 2010.

# 12 Environment

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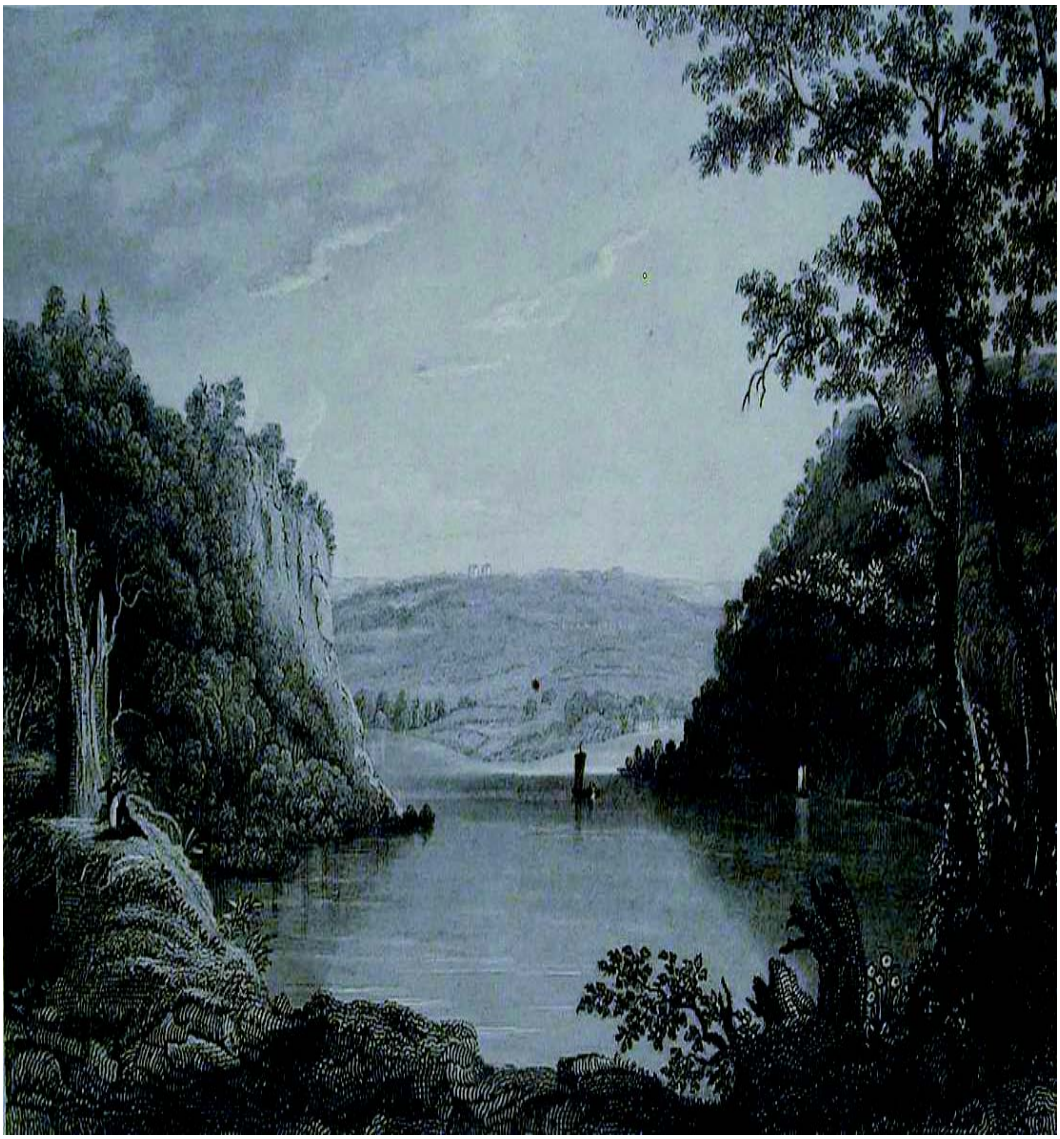
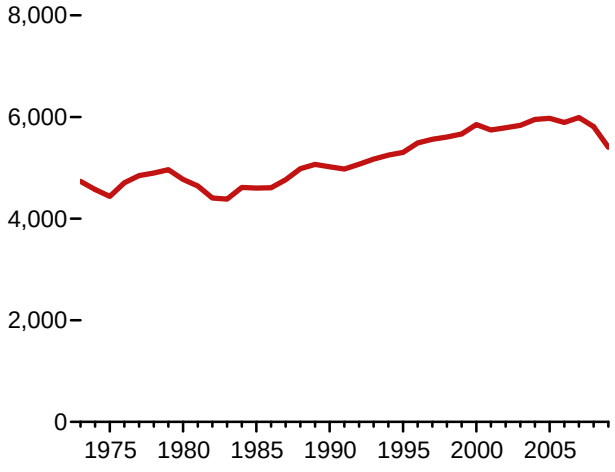


"Harpers Ferry, Junction of the Rivers Shenandoah and Potomac." Engraving by W. Goodacre and James Archer, published in *The History and Topography of the United States of North America*, by John Howard Hinton, 1852. From the collection of the National Park Service, Harpers Ferry National Historical Park, Accession #1297.

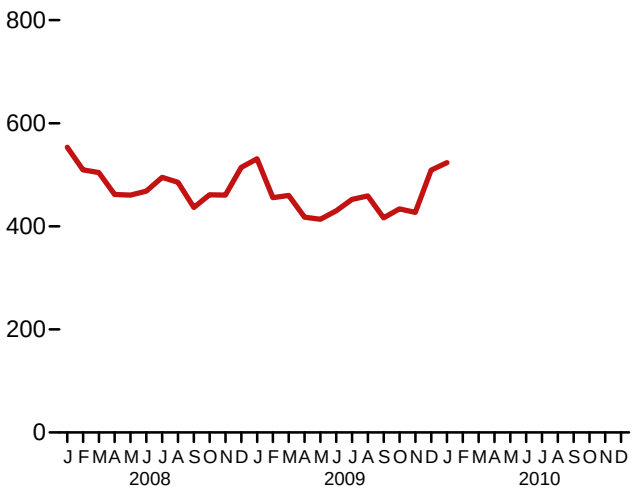
## Figure 12.1 Carbon Dioxide Emissions From Energy Consumption by Source

(Million Metric Tons of Carbon Dioxide)

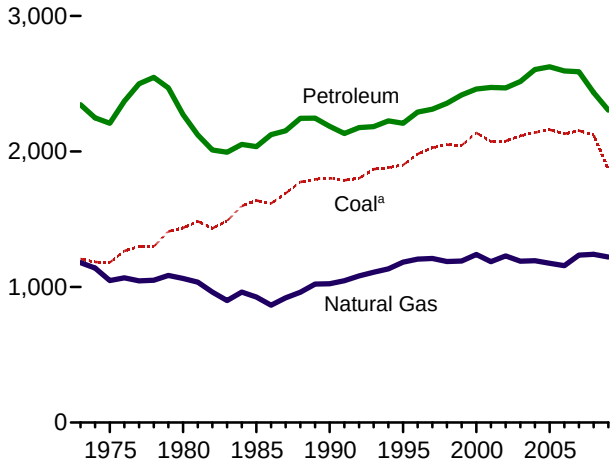
Total, 1973-2009



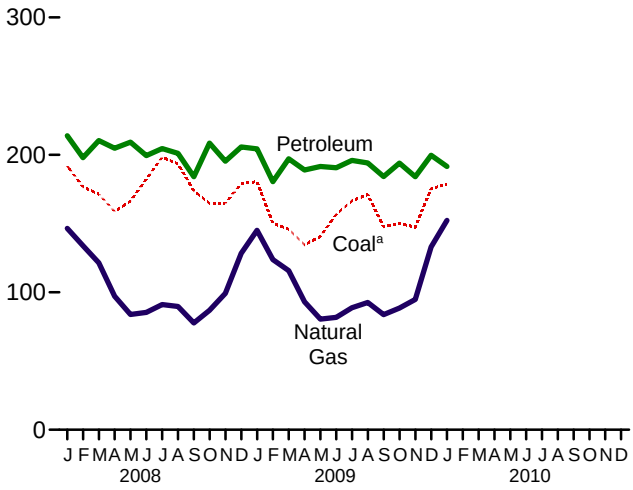

Total, Monthly



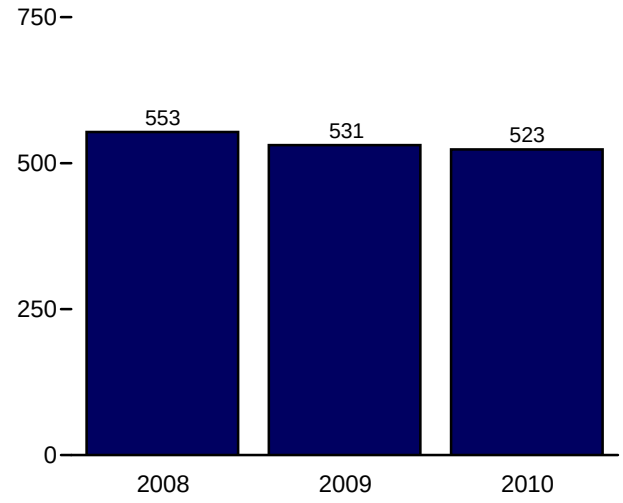

By Source, 1973-2009



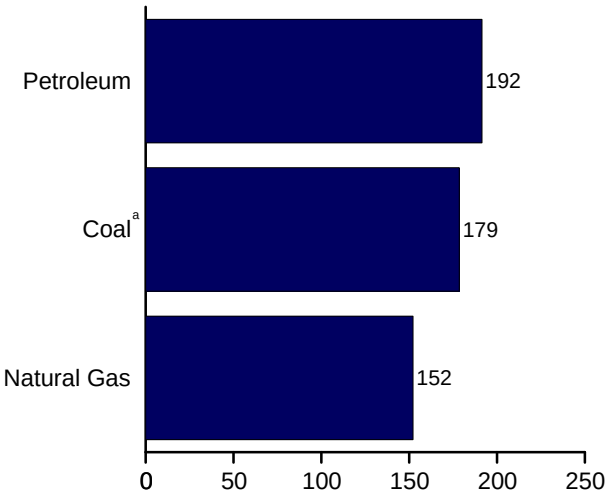

By Source, Monthly




Total, January




By Source, January 2010




[a] Includes coal coke net imports.
Web Page: http://www.eia.doe.gov/emeu/mer/environ.html.
Source: Table 12.1.

# Table 12.1 Carbon Dioxide Emissions From Energy Consumption by Source

(Million Metric Tons of Carbon Dioxide[a])

| | | | Petroleum | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Coal[b] | Natural Gas[c] | Aviation Gasoline | Distillate Fuel Oil[d] | Jet Fuel | Kero-sene | LPG[e] | Lubri-cants | Motor Gasoline[f] | Petroleum Coke | Residual Fuel Oil | Other[g] | Total | Total[h] |
| **1973 Total** | **1,207** | **1,181** | **6** | **480** | **155** | **32** | **91** | **13** | **911** | **51** | **508** | **100** | **2,346** | **4,733** |
| **1975 Total** | **1,181** | **1,047** | **5** | **443** | **146** | **24** | **82** | **11** | **911** | **48** | **443** | **97** | **2,209** | **4,437** |
| **1980 Total** | **1,436** | **1,063** | **4** | **446** | **156** | **24** | **87** | **13** | **900** | **46** | **453** | **142** | **2,272** | **4,770** |
| **1985 Total** | **1,638** | **926** | **3** | **445** | **178** | **17** | **86** | **12** | **930** | **55** | **216** | **93** | **2,035** | **4,600** |
| **1990 Total** | **1,803** | **1,025** | **3** | **470** | **223** | **6** | **69** | **13** | **987** | **67** | **220** | **127** | **2,186** | **5,020** |
| **1995 Total** | **1,900** | **1,184** | **3** | **498** | **222** | **8** | **78** | **13** | **1,045** | **75** | **152** | **114** | **2,208** | **5,302** |
| **1996 Total** | **1,982** | **1,205** | **3** | **524** | **232** | **9** | **84** | **12** | **1,063** | **78** | **152** | **132** | **2,290** | **5,488** |
| **1997 Total** | **2,027** | **1,211** | **3** | **534** | **234** | **10** | **85** | **13** | **1,075** | **79** | **142** | **138** | **2,313** | **5,562** |
| **1998 Total** | **2,050** | **1,189** | **2** | **538** | **238** | **12** | **75** | **14** | **1,105** | **89** | **158** | **125** | **2,356** | **5,605** |
| **1999 Total** | **2,046** | **1,192** | **3** | **555** | **245** | **11** | **91** | **14** | **1,128** | **93** | **148** | **130** | **2,417** | **5,665** |
| **2000 Total** | **2,138** | **1,241** | **3** | **580** | **254** | **10** | **102** | **14** | **1,136** | **84** | **163** | **117** | **2,461** | **5,850** |
| **2001 Total** | **2,074** | **1,187** | **2** | **598** | **243** | **11** | **92** | **13** | **1,151** | **88** | **145** | **132** | **2,473** | **5,745** |
| **2002 Total** | **2,077** | **1,229** | **2** | **587** | **237** | **6** | **98** | **12** | **1,181** | **94** | **125** | **127** | **2,470** | **5,789** |
| **2003 Total** | **2,116** | **R 1,191** | **2** | **610** | **231** | **8** | **95** | **11** | **1,187** | **94** | **138** | **140** | **2,517** | **R 5,835** |
| **2004 Total** | **2,140** | **R 1,194** | **2** | **632** | **240** | **10** | **98** | **12** | **1,210** | **105** | **155** | **142** | **2,605** | **R 5,951** |
| **2005 Total** | **2,161** | **R 1,175** | **2** | **640** | **246** | **10** | **94** | **12** | **1,212** | **105** | **164** | **141** | **2,626** | **R 5,973** |
| **2006 Total** | **2,130** | **1,157** | **2** | **648** | **240** | **8** | **93** | **11** | **1,216** | **104** | **122** | **150** | **2,595** | **5,893** |
| **2007 Total** | **2,155** | **R 1,235** | **2** | **652** | **238** | **5** | **94** | **12** | **1,212** | **98** | **128** | **148** | **2,588** | **R 5,990** |
| **2008** January | 192 | 147 | (s) | 55 | 20 | (s) | 10 | 1 | 97 | 8 | 10 | 12 | 214 | R 553 |
| February | 177 | 134 | (s) | 53 | 18 | (s) | 9 | 1 | 91 | 7 | 8 | 12 | 198 | 510 |
| March | 171 | 122 | (s) | 55 | 19 | (s) | 8 | 1 | 100 | 8 | 9 | 10 | 210 | R 504 |
| April | 159 | 97 | (s) | 52 | 20 | (s) | 7 | 1 | 96 | 8 | 10 | 11 | 205 | 462 |
| May | 166 | 84 | (s) | 52 | 20 | (s) | 6 | 1 | 101 | 8 | 10 | 11 | 209 | R 460 |
| June | R 182 | 85 | (s) | 48 | 20 | (s) | 7 | 1 | 96 | 7 | 10 | 10 | 199 | 468 |
| July | 198 | 91 | (s) | 49 | 20 | (s) | 7 | 1 | 100 | 9 | 10 | 9 | 205 | 495 |
| August | R 193 | 90 | (s) | 48 | 20 | (s) | 7 | 1 | 100 | 8 | 8 | 9 | 201 | 485 |
| September | 174 | 78 | (s) | 48 | 18 | (s) | 5 | 1 | 89 | 6 | 8 | 10 | 184 | 437 |
| October | 165 | 87 | (s) | 55 | 18 | (s) | 7 | 1 | 98 | 8 | 9 | 12 | 209 | 461 |
| November | 165 | 99 | (s) | 49 | 17 | (s) | 7 | 1 | 94 | 7 | 8 | 12 | 195 | R 460 |
| December | 179 | 128 | (s) | 50 | 17 | 1 | 8 | 1 | 97 | 8 | 11 | 12 | 206 | 514 |
| **Total** | **R 2,122** | **R 1,241** | **2** | **615** | **226** | **2** | **89** | **11** | **1,159** | **92** | **110** | **130** | **R 2,435** | **R 5,810** |
| **2009** January | R 180 | 145 | (s) | 54 | 17 | (s) | 9 | 1 | 95 | 7 | 11 | 11 | 204 | R 531 |
| February | R 150 | 124 | (s) | 47 | 15 | (s) | 7 | 1 | 87 | 6 | 7 | 10 | 181 | R 456 |
| March | R 146 | 116 | (s) | 49 | 18 | (s) | 8 | 1 | 97 | 7 | 9 | 8 | 197 | R 460 |
| April | R 135 | 93 | (s) | 44 | 17 | (s) | 6 | 1 | 94 | 8 | 10 | 8 | 189 | R 418 |
| May | R 141 | R 80 | (s) | 45 | 17 | (s) | 6 | 1 | 99 | 8 | 7 | 8 | 192 | R 414 |
| June | R 157 | 82 | (s) | 45 | 17 | (s) | 5 | 1 | 97 | 9 | 9 | 7 | 191 | R 430 |
| July | R 167 | 89 | (s) | 46 | 19 | (s) | 7 | 1 | 101 | 6 | 5 | 11 | 196 | R 452 |
| August | R 171 | 93 | (s) | 45 | 18 | (s) | 7 | 1 | 100 | 7 | 7 | 9 | 194 | R 459 |
| September | R 148 | 84 | (s) | 44 | 17 | (s) | 6 | 1 | 93 | 8 | 5 | 10 | 184 | R 417 |
| October | R 150 | 89 | (s) | 48 | 17 | (s) | 8 | 1 | 97 | 6 | 8 | 9 | 194 | R 434 |
| November | R 147 | 95 | (s) | 45 | 16 | (s) | 9 | 1 | 93 | 6 | 6 | 8 | 184 | R 427 |
| December | R 175 | 133 | (s) | 51 | 17 | (s) | 10 | 1 | 96 | 6 | 9 | 9 | 200 | R 509 |
| **Total** | **R 1,867** | **R 1,222** | **2** | **564** | **205** | **3** | **88** | **10** | **1,150** | **85** | **93** | **108** | **2,306** | **R 5,405** |
| **2010** January | 179 | 152 | (s) | 48 | 17 | (s) | 10 | 1 | 92 | 5 | 9 | 10 | 192 | 523 |

[a] Metric tons of carbon dioxide can be converted to metric tons of carbon equivalent by multiplying by 12/44.

[b] Includes coal coke net imports.

[c] Natural gas, excluding supplemental gaseous fuels.

[d] Distillate fuel oil, excluding biodiesel.

[e] Liquefied petroleum gases.

[f] Finished motor gasoline, excluding fuel ethanol.

[g] Aviation gasoline blending components, crude oil, motor gasoline blending components, pentanes plus, petrochemical feedstocks, special naphthas, still gas, unfinished oils, waxes, and miscellaneous petroleum products.

[h] Includes electric power sector use of geothermal energy and non-biomass waste. See Table 12.6.

R=Revised. (s)=Less than 0.5 million metric tons.

Notes: • Data are estimates. See "Section 12 Methodology and Sources" at end of section. • See "Carbon Dioxide" in Glossary. • See Note, "Emissions of Carbon Dioxide and Other Greenhouse Gases," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

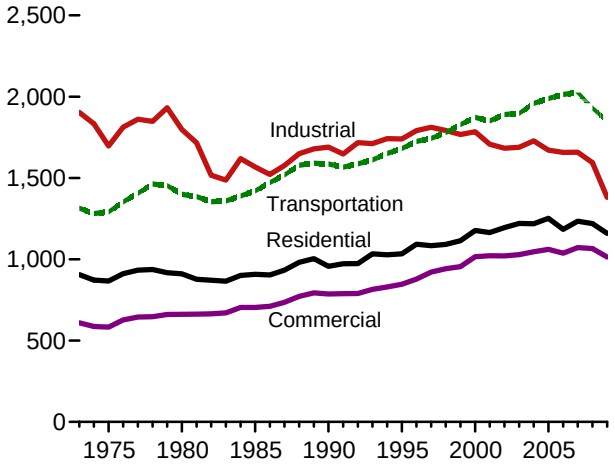
Web Page: See http://www.eia.doe.gov/emeu/mer/environ.html for all available data beginning in 1973.

Sources: See end of section.

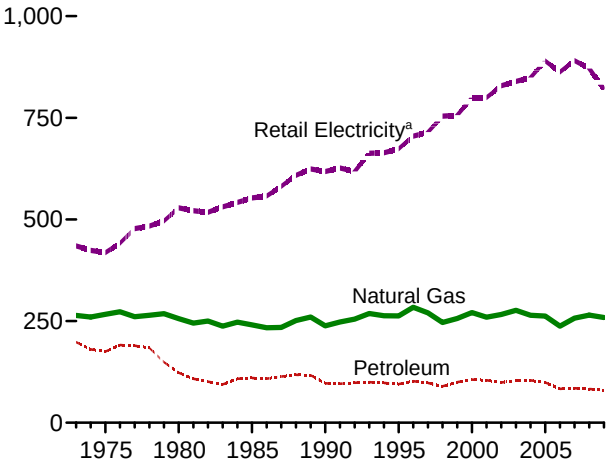
## Figure 12.2 Carbon Dioxide Emissions From Energy Consumption by Sector

(Million Metric Tons of Carbon Dioxide)

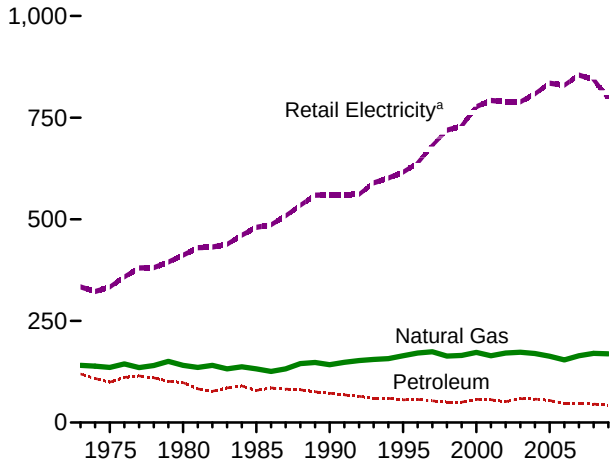
Total by End-Use Sector,[a] 1973-2009



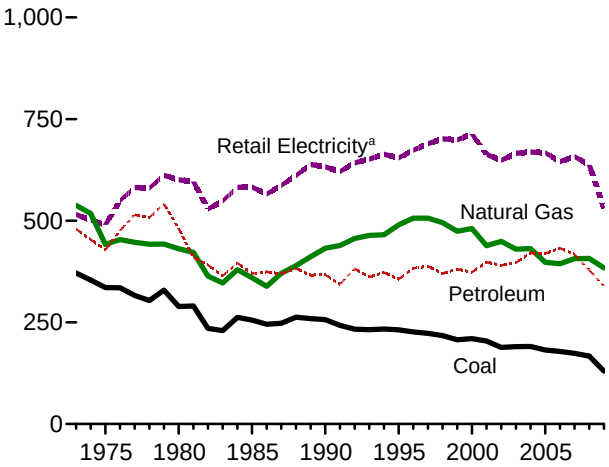

Residential Sector by Major Source, 1973-2009



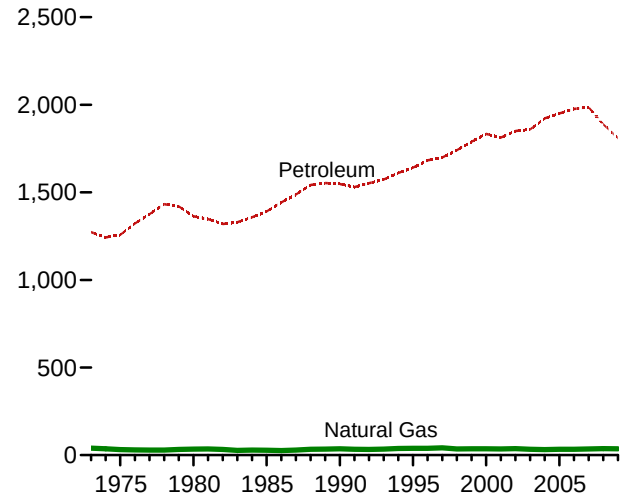

Commercial Sector by Major Source, 1973-2009



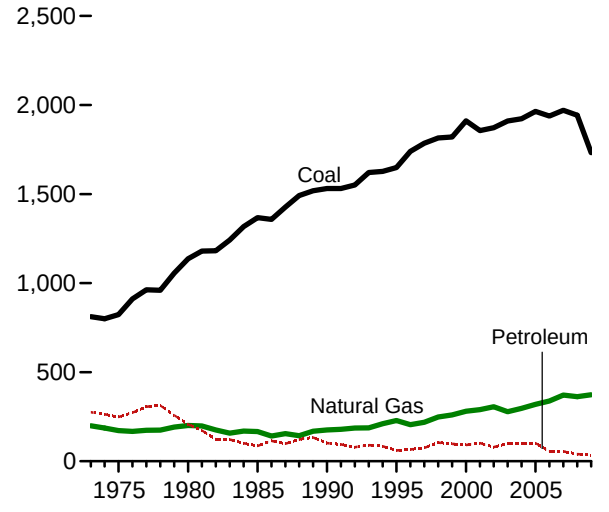

Industrial Sector by Major Source, 1973-2009




Transportation Sector by Major Source, 1973-2009




Electric Power Sector by Major Source, 1973-2009




[a] Emissions from energy consumption in the electric power sector are allocated to the end-use sectors in proportion to each sector's share of total electricity retail sales.

Web Page: http://www.eia.doe.gov/emeu/mer/environ.html.
Sources: Table 12.2-12.6.

## Table 12.2 Carbon Dioxide Emissions From Energy Consumption: Residential Sector

(Million Metric Tons of Carbon Dioxide[a])

| | Coal | Natural Gas[b] | Petroleum | | | | Retail Electricity[e] | Total |
|---|---|---|---|---|---|---|---|---|
| | | | Distillate Fuel Oil[c] | Kerosene | LPG[d] | Total | | |
| **1973 Total** | **9** | **264** | **147** | **16** | **R 35** | **R 198** | **435** | **R 906** |
| **1975 Total** | **6** | **266** | **132** | **12** | **R 31** | **R 175** | **419** | **R 866** |
| **1980 Total** | **3** | **256** | **96** | **8** | **R 19** | **R 123** | **529** | **R 911** |
| **1985 Total** | **4** | **241** | **80** | **11** | **R 19** | **R 110** | **553** | **R 907** |
| **1990 Total** | **3** | **238** | **72** | **5** | **R 21** | **R 97** | **618** | **R 957** |
| **1995 Total** | **2** | **263** | **66** | **5** | **R 24** | **R 95** | **674** | **R 1,034** |
| **1996 Total** | **2** | **284** | **68** | **6** | **R 28** | **R 102** | **705** | **R 1,093** |
| **1997 Total** | **2** | **270** | **64** | **7** | **R 27** | **R 98** | **715** | **R 1,084** |
| **1998 Total** | **1** | **247** | **56** | **8** | **R 25** | **R 89** | **754** | **R 1,091** |
| **1999 Total** | **1** | **257** | **61** | **8** | **R 31** | **R 100** | **757** | **R 1,114** |
| **2000 Total** | **1** | **271** | **66** | **7** | **R 33** | **R 106** | **799** | **R 1,177** |
| **2001 Total** | **1** | **259** | **66** | **7** | **R 31** | **R 105** | **800** | **R 1,165** |
| **2002 Total** | **1** | **266** | **63** | **4** | **R 32** | **R 99** | **829** | **R 1,195** |
| **2003 Total** | **1** | **R 276** | **66** | **5** | **R 32** | **R 104** | **839** | **R 1,221** |
| **2004 Total** | **1** | **R 264** | **68** | **6** | **R 30** | **R 104** | **849** | **R 1,219** |
| **2005 Total** | **1** | **R 262** | **62** | **6** | **R 31** | **R 99** | **890** | **R 1,252** |
| **2006 Total** | **1** | **237** | **52** | **5** | **R 26** | **R 83** | **863** | **R 1,184** |
| **2007 Total** | **1** | **257** | **53** | **3** | **R 29** | **R 85** | **891** | **R 1,234** |
| **2008** January | (s) | 48 | 7 | (s) | 3 | 10 | 86 | 144 |
| February | (s) | R 44 | 7 | (s) | 3 | 10 | 74 | 128 |
| March | (s) | 36 | 5 | (s) | 3 | 8 | 67 | 111 |
| April | (s) | 21 | 4 | (s) | R 3 | 6 | 57 | R 85 |
| May | (s) | 12 | 3 | (s) | R 3 | 5 | 58 | 76 |
| June | (s) | 8 | 3 | (s) | R 3 | R 6 | 77 | 90 |
| July | (s) | 6 | 3 | (s) | R 3 | R 6 | 92 | R 104 |
| August | (s) | 6 | 3 | (s) | R 3 | 5 | 88 | 100 |
| September | (s) | 6 | 3 | (s) | 2 | 5 | 72 | 83 |
| October | (s) | 12 | 3 | (s) | R 3 | 6 | 60 | 78 |
| November | (s) | 23 | 4 | (s) | R 3 | R 7 | 62 | 92 |
| December | (s) | 42 | 6 | (s) | R 3 | 9 | 80 | 131 |
| **Total** | **1** | **265** | **R 49** | **R 2** | **R 33** | **R 83** | **R 871** | **R 1,219** |
| **2009** January | (s) | 51 | R 6 | (s) | 3 | R 9 | R 85 | R 146 |
| February | (s) | 41 | R 5 | (s) | R 3 | 8 | R 67 | R 116 |
| March | (s) | 32 | 5 | (s) | R 3 | 8 | R 62 | R 102 |
| April | (s) | 21 | 4 | (s) | R 3 | R 6 | 53 | R 80 |
| May | (s) | 11 | 3 | (s) | 2 | 5 | 56 | R 72 |
| June | (s) | 8 | R 2 | (s) | 2 | 5 | 70 | R 82 |
| July | (s) | R 6 | 3 | (s) | R 3 | 5 | 83 | 95 |
| August | (s) | 6 | 3 | (s) | R 3 | 6 | R 85 | 97 |
| September | (s) | 6 | R 3 | (s) | R 3 | 6 | R 66 | 79 |
| October | (s) | 14 | 3 | (s) | 3 | 6 | 59 | 79 |
| November | (s) | 20 | R 3 | (s) | 3 | 7 | 57 | R 84 |
| December | (s) | 41 | R 5 | (s) | 3 | 9 | R 78 | R 129 |
| **Total** | **1** | **259** | **R 45** | **2** | **R 33** | **R 80** | **R 820** | **R 1,159** |
| **2010** January | (s) | 52 | 5 | (s) | 4 | 8 | 90 | 151 |

[a] Metric tons of carbon dioxide can be converted to metric tons of carbon equivalent by multiplying by 12/44.

[b] Natural gas, excluding supplemental gaseous fuels.

[c] Distillate fuel oil, excluding biodiesel.

[d] Liquefied petroleum gases.

[e] Emissions from energy consumption (for electricity and a small amount of useful thermal output) in the electric power sector are allocated to the end-use sectors in proportion to each sector's share of total electricity retail sales. See Tables 7.6 and 12.6.

R=Revised. (s)=Less than 0.5 million metric tons.

Notes: • Data are estimates. See "Section 12 Methodology and Sources" at end of section. • See "Carbon Dioxide" in Glossary. • See Note, "Emissions of Carbon Dioxide and Other Greenhouse Gases," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/environ.html for all available data beginning in 1973.

Sources: See end of section.

LPG data are revised beginning in 1973 due to a change in the estimation methodology for the physical data in Table 3.7a.

## Table 12.3 Carbon Dioxide Emissions From Energy Consumption: Commercial Sector

(Million Metric Tons of Carbon Dioxide[a])

| | Coal | Natural Gas[b] | Petroleum | | | | | | | Retail Electricity[f] | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Distillate Fuel Oil[c] | Kerosene | LPG[d] | Motor Gasoline[e] | Petroleum Coke | Residual Fuel Oil | Total | | |
| **1973 Total** | **15** | **141** | **47** | **5** | R **9** | **6** | **NA** | **52** | R **119** | **334** | R **609** |
| **1975 Total** | **14** | **136** | **43** | **4** | R **8** | **6** | **NA** | **39** | R **99** | **333** | R **583** |
| **1980 Total** | **11** | **141** | **38** | **3** | R **5** | **8** | **NA** | **44** | R **98** | **412** | R **662** |
| **1985 Total** | **13** | **132** | **46** | **2** | R **6** | **7** | **NA** | **18** | R **79** | **480** | R **704** |
| **1990 Total** | **12** | **142** | **39** | **1** | R **6** | **8** | **0** | **18** | R **72** | **561** | R **787** |
| **1995 Total** | **11** | **164** | **35** | **2** | R **6** | **1** | **(s)** | **11** | R **56** | **616** | R **847** |
| **1996 Total** | **12** | **171** | **35** | **2** | R **7** | **2** | **(s)** | **11** | R **57** | **638** | R **878** |
| **1997 Total** | **12** | **174** | **32** | **2** | R **7** | **3** | **(s)** | **9** | R **53** | **682** | R **922** |
| **1998 Total** | **9** | **164** | **31** | **2** | R **7** | **3** | **(s)** | **7** | R **50** | **719** | R **942** |
| **1999 Total** | **10** | **165** | **32** | **2** | R **8** | **2** | **(s)** | **6** | R **50** | **729** | R **955** |
| **2000 Total** | **9** | **173** | **36** | **2** | R **9** | **3** | **(s)** | **7** | R **57** | **777** | R **1,016** |
| **2001 Total** | **9** | **164** | **37** | **2** | R **8** | **3** | **(s)** | **6** | R **56** | **792** | R **1,022** |
| **2002 Total** | **9** | **171** | **32** | **1** | R **8** | **3** | **(s)** | **6** | R **51** | **789** | R **1,020** |
| **2003 Total** | **8** | R **173** | **35** | **1** | R **9** | **4** | **(s)** | **9** | R **59** | **789** | R **1,028** |
| **2004 Total** | **10** | **170** | **34** | **1** | R **9** | **3** | **(s)** | **10** | R **58** | **809** | R **1,046** |
| **2005 Total** | **9** | **163** | **33** | **2** | R **8** | **3** | **(s)** | **9** | R **54** | **835** | R **1,062** |
| **2006 Total** | **6** | **154** | **29** | **1** | R **7** | **3** | **(s)** | **6** | R **47** | **830** | R **1,037** |
| **2007 Total** | **7** | **164** | **28** | **1** | R **7** | **4** | **(s)** | **6** | R **46** | **855** | R **1,072** |
| **2008** January | 1 | 26 | 4 | (s) | 1 | (s) | (s) | 1 | R 6 | 70 | R 103 |
| February | 1 | 25 | 4 | (s) | R 1 | (s) | (s) | 1 | R 6 | 65 | 96 |
| March | 1 | 21 | 3 | (s) | R 1 | (s) | (s) | 1 | R 5 | R 64 | 90 |
| April | (s) | 14 | 2 | (s) | R 1 | (s) | (s) | (s) | R 4 | 63 | R 81 |
| May | (s) | 10 | R 2 | (s) | R 1 | (s) | 0 | (s) | R 3 | R 67 | R 81 |
| June | 1 | 7 | 2 | (s) | R 1 | (s) | 0 | (s) | 3 | 76 | 86 |
| July | (s) | 7 | 2 | (s) | R 1 | (s) | 0 | (s) | 3 | 82 | 92 |
| August | (s) | 7 | 1 | (s) | R 1 | (s) | 0 | (s) | R 3 | 79 | 89 |
| September | (s) | 7 | 1 | (s) | R 1 | (s) | (s) | (s) | R 3 | 72 | 82 |
| October | 1 | 10 | 2 | (s) | R 1 | (s) | (s) | (s) | 3 | 70 | 83 |
| November | 1 | 15 | 2 | (s) | R 1 | (s) | (s) | (s) | R 4 | 66 | 85 |
| December | 1 | 23 | 3 | (s) | R 1 | (s) | (s) | 1 | 5 | 68 | 97 |
| **Total** | R **7** | R **170** | R **27** | **(s)** | R **9** | **3** | **(s)** | **6** | R **46** | R **843** | R **1,066** |
| **2009** January | 1 | 28 | R 3 | (s) | R 1 | (s) | (s) | 1 | 5 | 70 | R 103 |
| February | 1 | 23 | 3 | (s) | R 1 | (s) | (s) | 1 | 4 | 59 | R 86 |
| March | 1 | R 19 | 3 | (s) | R 1 | (s) | (s) | 1 | 4 | 61 | R 85 |
| April | (s) | 13 | 2 | (s) | R 1 | (s) | 0 | (s) | 3 | R 58 | 76 |
| May | (s) | 9 | R 1 | (s) | R 1 | (s) | 0 | (s) | 3 | R 63 | R 75 |
| June | (s) | 7 | 1 | (s) | R 1 | (s) | 0 | (s) | 2 | R 71 | R 81 |
| July | (s) | 7 | 2 | (s) | R 1 | (s) | 0 | (s) | 3 | R 74 | 85 |
| August | (s) | 7 | 2 | (s) | R 1 | (s) | (s) | (s) | 3 | 77 | R 87 |
| September | (s) | 7 | 2 | (s) | R 1 | (s) | (s) | (s) | 3 | 67 | 78 |
| October | (s) | 11 | 2 | (s) | R 1 | (s) | 0 | (s) | 3 | 66 | R 80 |
| November | 1 | 14 | 2 | (s) | 1 | (s) | (s) | (s) | 3 | R 61 | 79 |
| December | 1 | 23 | 3 | (s) | 1 | (s) | (s) | 1 | 5 | R 69 | 98 |
| **Total** | **6** | **169** | R **25** | **(s)** | R **10** | **3** | **(s)** | R **5** | R **43** | R **796** | R **1,014** |
| **2010** January | 1 | 28 | 3 | (s) | 1 | (s) | (s) | 1 | 4 | 67 | 100 |

[a] Metric tons of carbon dioxide can be converted to metric tons of carbon equivalent by multiplying by 12/44.
[b] Natural gas, excluding supplemental gaseous fuels.
[c] Distillate fuel oil, excluding biodiesel.
[d] Liquefied petroleum gases.
[e] Finished motor gasoline, excluding fuel ethanol.
[f] Emissions from energy consumption (for electricity and a small amount of useful thermal output) in the electric power sector are allocated to the end-use sectors in proportion to each sector's share of total electricity retail sales. See Tables 7.6 and 12.6.

R=Revised. NA=Not available. (s)=Less than 0.5 million metric tons.

Notes: • Data are estimates. See "Section 12 Methodology and Sources" at end of section. • See "Carbon Dioxide" in Glossary. • See Note, "Emissions of Carbon Dioxide and Other Greenhouse Gases," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/environ.html for all available data beginning in 1973.

Sources: See end of section.

LPG data are revised beginning in 1973 due to a change in the estimation methodology for the physical data in Table 3.7a.

# Table 12.4 Carbon Dioxide Emissions From Energy Consumption: Industrial Sector

(Million Metric Tons of Carbon Dioxide[a])

| | Coal | Coal Coke Net Imports | Natural Gas[b] | Petroleum | | | | | | | | | Retail Electricity[g] | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Distillate Fuel Oil[c] | Kerosene | LPG[d] | Lubricants | Motor Gasoline[e] | Petroleum Coke | Residual Fuel Oil | Other[f] | Total | | |
| **1973 Total** | **371** | **-1** | **538** | **106** | **11** | **44** | **7** | **18** | **49** | **144** | **100** | **480** | **515** | **1,903** |
| **1975 Total** | **336** | **2** | **442** | **97** | **9** | **40** | **6** | **16** | **48** | **117** | **97** | **429** | **490** | **1,697** |
| **1980 Total** | **289** | **-4** | **431** | **96** | **13** | **62** | **7** | **11** | **45** | **105** | **142** | **481** | **601** | **1,798** |
| **1985 Total** | **256** | **-2** | **360** | **81** | **3** | **60** | **6** | **15** | **54** | **57** | **93** | **370** | **583** | **1,567** |
| **1990 Total** | **257** | **1** | **432** | **84** | **1** | **41** | **7** | **13** | **64** | **31** | **127** | **367** | **633** | **1,690** |
| **1995 Total** | **231** | **7** | **490** | **82** | **1** | **47** | **7** | **14** | **67** | **24** | **114** | **357** | **655** | **1,740** |
| **1996 Total** | **226** | **3** | **506** | **86** | **1** | **48** | **6** | **14** | **70** | **24** | **132** | **383** | **673** | **1,792** |
| **1997 Total** | **223** | **5** | **506** | **88** | **1** | **50** | **7** | **15** | **68** | **21** | **138** | **388** | **690** | **1,812** |
| **1998 Total** | **218** | **8** | **495** | **88** | **2** | **41** | **7** | **14** | **77** | **16** | **125** | **370** | **701** | **1,792** |
| **1999 Total** | **207** | **7** | **474** | **86** | **1** | **51** | **7** | **11** | **81** | **14** | **130** | **381** | **699** | **1,768** |
| **2000 Total** | **210** | **7** | **481** | **87** | **1** | **59** | **7** | **11** | **74** | **17** | **117** | **373** | **713** | **1,785** |
| **2001 Total** | **204** | **3** | **439** | **95** | **2** | **51** | **6** | **21** | **77** | **14** | **132** | **398** | **663** | **1,707** |
| **2002 Total** | **188** | **7** | **449** | **88** | **1** | **57** | **6** | **22** | **76** | **13** | **127** | **390** | **649** | **1,683** |
| **2003 Total** | **190** | **6** | R **430** | **83** | **2** | **52** | **6** | **23** | **76** | **15** | **140** | **397** | **666** | R **1,689** |
| **2004 Total** | **191** | **16** | **432** | **88** | **2** | **58** | **6** | **26** | **82** | **17** | **142** | **421** | **669** | **1,728** |
| **2005 Total** | **182** | **5** | **398** | **92** | **3** | **54** | **6** | **25** | **80** | **20** | **141** | **419** | **667** | **1,671** |
| **2006 Total** | **178** | **7** | **394** | **92** | **2** | **58** | **6** | **26** | **82** | **16** | **150** | **432** | **646** | **1,658** |
| **2007 Total** | **174** | **3** | R **407** | **92** | **1** | **57** | **6** | **21** | **80** | **13** | **148** | **417** | **658** | **1,658** |
| **2008** January | 14 | (s) | 39 | R 10 | (s) | R 5 | (s) | 1 | 7 | 1 | 12 | 38 | 54 | R 145 |
| February | 14 | (s) | 37 | R 10 | (s) | 5 | (s) | 1 | 5 | 1 | 12 | 34 | 51 | 136 |
| March | 14 | 1 | 37 | R 10 | (s) | R 4 | 1 | 1 | 7 | 1 | 10 | 34 | 52 | R 138 |
| April | 14 | 1 | 34 | R 9 | (s) | R 3 | 1 | 1 | 7 | 1 | 11 | 32 | 52 | R 133 |
| May | 14 | (s) | 33 | 8 | (s) | R 3 | 1 | 1 | 6 | 1 | 11 | 32 | 55 | 135 |
| June | 14 | 1 | 32 | 5 | (s) | R 3 | (s) | 1 | 6 | 1 | 10 | 28 | 55 | R 130 |
| July | 14 | 1 | 33 | 5 | (s) | 4 | (s) | 1 | 8 | 1 | 9 | R 28 | 56 | R 132 |
| August | 14 | (s) | 33 | 5 | (s) | 4 | 1 | 1 | 7 | 1 | 9 | R 26 | 56 | R 130 |
| September | 14 | (s) | 29 | 6 | (s) | 3 | (s) | 1 | 4 | 1 | 10 | 26 | 52 | R 121 |
| October | 15 | (s) | 33 | 10 | (s) | 4 | 1 | 1 | 6 | 1 | 12 | 36 | 53 | 136 |
| November | 13 | (s) | 33 | R 8 | (s) | 4 | (s) | 1 | 6 | 1 | 12 | 32 | 51 | 130 |
| December | 12 | (s) | 34 | 5 | (s) | R 4 | (s) | 1 | 7 | 1 | 12 | 33 | 48 | 127 |
| **Total** | **167** | **5** | R **407** | R **92** | **(s)** | R **45** | **6** | **17** | **76** | R **13** | **130** | R **378** | R **637** | R **1,594** |
| **2009** January | 12 | (s) | R 35 | R 12 | (s) | 5 | (s) | 1 | 6 | 1 | 11 | R 36 | R 45 | R 128 |
| February | 12 | (s) | 32 | R 9 | (s) | 4 | (s) | 1 | 5 | 1 | 10 | R 30 | 40 | R 114 |
| March | 12 | (s) | 33 | R 8 | (s) | R 4 | (s) | 1 | 6 | 1 | 8 | R 29 | R 41 | R 115 |
| April | 10 | (s) | 31 | R 5 | (s) | R 3 | (s) | 1 | 7 | 1 | 8 | R 26 | 41 | R 108 |
| May | 10 | (s) | 30 | R 6 | (s) | 3 | (s) | 1 | 7 | 1 | 8 | R 27 | 43 | R 109 |
| June | 10 | (s) | 29 | R 6 | (s) | R 2 | (s) | 1 | 7 | 1 | 7 | R 26 | R 44 | R 109 |
| July | 10 | (s) | 30 | R 5 | (s) | R 3 | (s) | 1 | 5 | 1 | 11 | R 27 | R 45 | R 112 |
| August | R 10 | (s) | 31 | R 4 | (s) | R 3 | 1 | 1 | 6 | 1 | 9 | R 24 | R 48 | R 114 |
| September | 11 | (s) | 30 | R 5 | (s) | R 3 | (s) | 1 | 6 | 1 | 10 | R 27 | R 44 | 111 |
| October | R 11 | (s) | 33 | R 8 | (s) | R 4 | (s) | 1 | 5 | 1 | 9 | R 28 | 46 | R 118 |
| November | 11 | (s) | 33 | R 7 | (s) | R 5 | (s) | 1 | 5 | 1 | 8 | R 27 | 45 | R 116 |
| December | 11 | (s) | 36 | R 9 | (s) | R 5 | (s) | 1 | 5 | 1 | 9 | R 31 | 47 | R 126 |
| **Total** | R **130** | **-3** | **384** | R **84** | R **(s)** | R **43** | **5** | **17** | **70** | R **12** | **108** | R **339** | R **531** | R **1,381** |
| **2010** January | 11 | (s) | 38 | 9 | (s) | 5 | (s) | 1 | 3 | 1 | 10 | 30 | 44 | 122 |

[a] Metric tons of carbon dioxide can be converted to metric tons of carbon equivalent by multiplying by 12/44.

[b] Natural gas, excluding supplemental gaseous fuels.

[c] Distillate fuel oil, excluding biodiesel.

[d] Liquefied petroleum gases.

[e] Finished motor gasoline, excluding fuel ethanol.

[f] Aviation gasoline blending components, crude oil, motor gasoline blending components, pentanes plus, petrochemical feedstocks, special naphthas, still gas, unfinished oils, waxes, and miscellaneous petroleum products.

[g] Emissions from energy consumption (for electricity and a small amount of useful thermal output) in the electric power sector are allocated to the end-use sectors in proportion to each sector's share of total electricity retail sales. See Tables 7.6 and 12.6.

R=Revised. (s)=Less than 0.5 million metric tons and greater than -0.5 million metric tons.

Notes: • Data are estimates. See "Section 12 Methodology and Sources" at end of section. • See "Carbon Dioxide" in Glossary. • See Note, "Emissions of Carbon Dioxide and Other Greenhouse Gases," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/environ.html for all available data beginning in 1973.

Sources: See end of section.

# Table 12.5 Carbon Dioxide Emissions From Energy Consumption: Transportation Sector

(Million Metric Tons of Carbon Dioxide[a])

| | Coal | Natural Gas[b] | Petroleum | | | | | | | | Retail Electricity[f] | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Aviation Gasoline | Distillate Fuel Oil[c] | Jet Fuel | LPG[d] | Lubricants | Motor Gasoline[e] | Residual Fuel Oil | Total | | |
| **1973 Total** | **(s)** | **39** | **6** | **163** | **152** | **3** | **6** | **886** | **57** | **1,273** | **2** | **1,315** |
| **1975 Total** | **(s)** | **32** | **5** | **155** | **145** | **3** | **6** | **889** | **56** | **1,258** | **2** | **1,291** |
| **1980 Total** | **(g)** | **34** | **4** | **204** | **155** | **1** | **6** | **881** | **110** | **1,363** | **2** | **1,400** |
| **1985 Total** | **(g)** | **28** | **3** | **232** | **178** | **2** | **6** | **908** | **62** | **1,391** | **3** | **1,421** |
| **1990 Total** | **(g)** | **36** | **3** | **268** | **223** | **1** | **7** | **966** | **80** | **1,548** | **3** | **1,587** |
| **1995 Total** | **(g)** | **38** | **3** | **307** | **222** | **1** | **6** | **1,030** | **72** | **1,640** | **3** | **1,682** |
| **1996 Total** | **(g)** | **39** | **3** | **327** | **232** | **1** | **6** | **1,047** | **67** | **1,683** | **3** | **1,725** |
| **1997 Total** | **(g)** | **41** | **3** | **342** | **234** | **1** | **6** | **1,057** | **56** | **1,699** | **3** | **1,744** |
| **1998 Total** | **(g)** | **35** | **2** | **352** | **238** | **1** | **7** | **1,088** | **53** | **1,741** | **3** | **1,780** |
| **1999 Total** | **(g)** | **36** | **3** | **366** | **245** | **1** | **7** | **1,115** | **52** | **1,789** | **3** | **1,828** |
| **2000 Total** | **(g)** | **36** | **3** | **378** | **254** | **1** | **7** | **1,122** | **70** | **1,833** | **4** | **1,873** |
| **2001 Total** | **(g)** | **35** | **2** | **387** | **243** | **1** | **6** | **1,127** | **46** | **1,813** | **4** | **1,851** |
| **2002 Total** | **(g)** | **37** | **2** | **394** | **237** | **1** | **6** | **1,156** | **53** | **1,850** | **4** | **1,891** |
| **2003 Total** | **(g)** | **33** | **2** | **414** | **231** | **1** | **6** | **1,160** | **45** | **1,859** | **4** | **1,897** |
| **2004 Total** | **(g)** | **32** | **2** | **434** | **240** | **1** | **6** | **1,181** | **58** | **1,922** | **5** | **1,959** |
| **2005 Total** | **(g)** | **33** | **2** | **444** | **246** | **2** | **6** | **1,184** | **66** | **1,951** | **5** | **1,989** |
| **2006 Total** | **(g)** | **33** | **2** | **469** | **240** | **2** | **5** | **1,187** | **71** | **1,976** | **5** | **2,014** |
| **2007 Total** | **(g)** | **35** | **2** | **472** | **238** | **1** | **6** | **1,187** | **78** | **1,985** | **5** | **2,025** |
| **2008** January | (g) | 4 | (s) | R 34 | 20 | (s) | (s) | 95 | 7 | R 156 | (s) | R 161 |
| February | (g) | 4 | (s) | R 32 | 18 | (s) | (s) | 89 | 5 | R 145 | (s) | 150 |
| March | (g) | 4 | (s) | 37 | 19 | (s) | (s) | 98 | 6 | R 161 | (s) | R 165 |
| April | (g) | 3 | (s) | R 37 | 20 | (s) | (s) | 95 | 7 | 160 | (s) | 163 |
| May | (g) | 2 | (s) | 39 | 20 | (s) | (s) | 100 | 7 | R 166 | (s) | R 169 |
| June | (g) | 3 | (s) | 38 | 20 | (s) | (s) | 95 | 6 | 159 | (s) | 162 |
| July | (g) | 3 | (s) | 39 | 20 | (s) | (s) | 98 | 7 | 164 | (s) | 167 |
| August | (g) | 3 | (s) | 39 | 20 | (s) | 1 | 98 | 5 | 163 | (s) | 166 |
| September | (g) | 2 | (s) | 37 | 18 | (s) | (s) | 88 | R 4 | R 147 | (s) | 150 |
| October | (g) | 3 | (s) | 40 | 18 | (s) | (s) | 96 | 6 | 161 | (s) | 164 |
| November | (g) | 3 | (s) | 36 | 17 | (s) | (s) | 92 | 5 | 151 | (s) | 154 |
| December | (g) | 4 | (s) | 35 | 17 | (s) | (s) | 95 | R 7 | 155 | (s) | 160 |
| **Total** | **(g)** | **37** | **2** | **R 442** | **226** | **R 2** | **5** | **1,139** | **R 72** | **R 1,889** | **5** | **R 1,930** |
| **2009** January | (g) | 4 | (s) | R 32 | 17 | (s) | (s) | 93 | 6 | R 149 | (s) | R 153 |
| February | (g) | 4 | (s) | R 30 | 15 | (s) | (s) | 86 | 4 | R 135 | (s) | R 139 |
| March | (g) | 3 | (s) | R 33 | 18 | (s) | (s) | 95 | R 6 | R 153 | (s) | R 157 |
| April | (g) | 3 | (s) | R 33 | 17 | (s) | (s) | 93 | 7 | R 151 | (s) | R 154 |
| May | (g) | 2 | (s) | R 35 | 17 | (s) | (s) | 97 | 5 | R 154 | (s) | R 157 |
| June | (g) | 2 | (s) | R 35 | 17 | (s) | (s) | 95 | 6 | R 154 | (s) | R 157 |
| July | (g) | 3 | (s) | R 36 | 19 | (s) | (s) | 99 | 3 | R 158 | (s) | R 161 |
| August | (g) | 3 | (s) | R 36 | 18 | (s) | (s) | 99 | 5 | R 158 | (s) | R 161 |
| September | (g) | 3 | (s) | R 33 | 17 | (s) | (s) | 92 | 3 | R 146 | (s) | R 149 |
| October | (g) | 3 | (s) | R 36 | 17 | (s) | (s) | 95 | R 5 | R 154 | (s) | R 157 |
| November | (g) | 3 | (s) | R 33 | 16 | (s) | (s) | 91 | 4 | R 145 | (s) | R 148 |
| December | (g) | 4 | (s) | R 34 | 17 | (s) | (s) | R 95 | 6 | R 152 | (s) | R 157 |
| **Total** | **(g)** | **R 36** | **2** | **R 405** | **205** | **R 2** | **5** | **R 1,130** | **R 62** | **R 1,810** | **5** | **R 1,851** |
| **2010** January | (g) | 4 | (s) | 31 | 17 | (s) | (s) | 90 | 6 | 145 | (s) | 150 |

[a] Metric tons of carbon dioxide can be converted to metric tons of carbon equivalent by multiplying by 12/44.

[b] Natural gas, excluding supplemental gaseous fuels.

[c] Distillate fuel oil, excluding biodiesel.

[d] Liquefied petroleum gases.

[e] Finished motor gasoline, excluding fuel ethanol.

[f] Emissions from energy consumption (for electricity and a small amount of useful thermal output) in the electric power sector are allocated to the end-use sectors in proportion to each sector's share of total electricity retail sales. See Tables 7.6 and 12.6.

[g] Beginning in 1978, the small amounts of coal consumed for transportation are reported as industrial sector consumption.

R=Revised. (s)=Less than 0.5 million metric tons.

Notes: • Data are estimates. See "Section 12 Methodology and Sources" at end of section. • See "Carbon Dioxide" in Glossary. • See Note, "Emissions of Carbon Dioxide and Other Greenhouse Gases," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/environ.html for all available data beginning in 1973.

Sources: See end of section.

# Table 12.6 Carbon Dioxide Emissions From Energy Consumption: Electric Power Sector

(Million Metric Tons of Carbon Dioxide[a])

| | Coal | Natural Gas[b] | Petroleum | | | | Geo-thermal | Non-Biomass Waste[d] | Total |
|---|---|---|---|---|---|---|---|---|---|
| | | | Distillate Fuel Oil[c] | Petroleum Coke | Residual Fuel Oil | Total | | | |
| **1973 Total** | **812** | **199** | **20** | **2** | **254** | **276** | **NA** | **NA** | **1,286** |
| **1975 Total** | **824** | **172** | **17** | **(s)** | **231** | **248** | **NA** | **NA** | **1,244** |
| **1980 Total** | **1,137** | **200** | **12** | **1** | **194** | **207** | **NA** | **NA** | **1,544** |
| **1985 Total** | **1,367** | **166** | **6** | **1** | **79** | **86** | **NA** | **NA** | **1,619** |
| **1990 Total** | **1,531** | **176** | **7** | **3** | **92** | **102** | **(s)** | **6** | **1,815** |
| **1995 Total** | **1,649** | **228** | **8** | **8** | **45** | **61** | **(s)** | **10** | **1,948** |
| **1996 Total** | **1,740** | **205** | **8** | **8** | **50** | **66** | **(s)** | **10** | **2,020** |
| **1997 Total** | **1,785** | **219** | **8** | **10** | **56** | **75** | **(s)** | **10** | **2,090** |
| **1998 Total** | **1,815** | **248** | **10** | **13** | **82** | **105** | **(s)** | **10** | **2,178** |
| **1999 Total** | **1,821** | **260** | **10** | **11** | **76** | **97** | **(s)** | **10** | **2,189** |
| **2000 Total** | **1,911** | **281** | **13** | **10** | **69** | **91** | **(s)** | **10** | **2,294** |
| **2001 Total** | **1,856** | **290** | **12** | **11** | **79** | **102** | **(s)** | **11** | **2,259** |
| **2002 Total** | **1,872** | **306** | **9** | **18** | **52** | **79** | **(s)** | **13** | **2,270** |
| **2003 Total** | **1,911** | **278** | **12** | **18** | **69** | **98** | **(s)** | **11** | **2,299** |
| **2004 Total** | **1,923** | **297** | **8** | **23** | **69** | **100** | **(s)** | **11** | **2,331** |
| **2005 Total** | **1,964** | **319** | **8** | **25** | **69** | **102** | **(s)** | **11** | **2,397** |
| **2006 Total** | **1,938** | **338** | **5** | **22** | **28** | **56** | **(s)** | **11** | **2,343** |
| **2007 Total** | **1,971** | **372** | **7** | **17** | **31** | **55** | **(s)** | **11** | **2,409** |
| **2008** January | 176 | 29 | 1 | 1 | 2 | 4 | (s) | 1 | 210 |
| February | 162 | 24 | 1 | 1 | 1 | 3 | (s) | 1 | 190 |
| March | 155 | 25 | (s) | 1 | 1 | 3 | (s) | 1 | 184 |
| April | 143 | 26 | (s) | 1 | 1 | 3 | (s) | 1 | 173 |
| May | 151 | 26 | (s) | 1 | 1 | 3 | (s) | 1 | 181 |
| June | 167 | 36 | 1 | 1 | 2 | 4 | (s) | 1 | 208 |
| July | 183 | 42 | (s) | 1 | 2 | 4 | (s) | 1 | 230 |
| August | R 178 | 41 | (s) | 1 | 2 | 3 | (s) | 1 | 224 |
| September | 159 | 33 | (s) | 1 | 2 | 4 | (s) | 1 | 197 |
| October | 149 | 30 | (s) | 1 | 1 | 3 | (s) | 1 | 183 |
| November | 151 | 25 | (s) | 1 | 1 | 3 | (s) | 1 | 180 |
| December | 167 | 26 | 1 | 1 | 2 | 4 | (s) | 1 | 197 |
| **Total** | **R 1,943** | **362** | **5** | **16** | **19** | **40** | **(s)** | **11** | **R 2,357** |
| **2009** January | R 168 | 26 | 1 | 1 | 3 | 5 | (s) | 1 | R 200 |
| February | R 138 | R 24 | (s) | 1 | 1 | 3 | (s) | 1 | R 166 |
| March | R 133 | 27 | 1 | 1 | 1 | 3 | (s) | 1 | R 165 |
| April | R 124 | 25 | (s) | 1 | 1 | 2 | (s) | 1 | R 152 |
| May | R 130 | 28 | (s) | 1 | 1 | 3 | (s) | 1 | R 162 |
| June | R 146 | 35 | (s) | 1 | 1 | 3 | (s) | 1 | R 185 |
| July | R 156 | 42 | (s) | 1 | 1 | 3 | (s) | 1 | R 203 |
| August | R 161 | 46 | (s) | 1 | 2 | 3 | (s) | 1 | R 210 |
| September | R 137 | 37 | (s) | 1 | 1 | 3 | (s) | 1 | R 177 |
| October | R 139 | 29 | (s) | 1 | 1 | 2 | (s) | 1 | R 171 |
| November | R 136 | 25 | (s) | 1 | 1 | 2 | (s) | 1 | R 163 |
| December | R 164 | 28 | (s) | 1 | 1 | 2 | (s) | 1 | R 195 |
| **Total** | **R 1,733** | **R 373** | **5** | **14** | **14** | **34** | **(s)** | **11** | **R 2,151** |
| **2010** January | 168 | 29 | 1 | 1 | 1 | 4 | (s) | 1 | 202 |

[a] Metric tons of carbon dioxide can be converted to metric tons of carbon equivalent by multiplying by 12/44.

[b] Natural gas, excluding supplemental gaseous fuels.

[c] Distillate fuel oil, excluding biodiesel.

[d] Municipal solid waste from non-biogenic sources, and tire-derived fuels.

R=Revised. NA=Not available. (s)=Less than 0.5 million metric tons.

Notes: • Data are estimates. See "Section 12 Methodology and Sources" at end of section. • See "Carbon Dioxide" in Glossary. • See Note, "Emissions of Carbon Dioxide and Other Greenhouse Gases," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: See http://www.eia.doe.gov/emeu/mer/environ.html for all available data beginning in 1973.

Sources: See end of section.

# Environment

**Note. Emissions of Carbon Dioxide and Other Greenhouse Gases.** Greenhouse gases are those gases—such as water vapor, carbon dioxide ($CO_2$), methane, nitrous oxide, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride—that are transparent to solar (short-wave) radiation but opaque to long-wave (infrared) radiation, thus preventing long-wave radiant energy from leaving Earth's atmosphere. The net effect is a trapping of absorbed radiation and a tendency to warm the planet's surface.

Energy-related carbon dioxide emissions account for about 98 percent of U.S. $CO_2$ emissions. The vast majority of $CO_2$ emissions come from fossil fuel combustion, with smaller amounts from the nonfuel use of fossil fuels, as well as from electricity generation using geothermal energy and non-biomass waste. Other sources of $CO_2$ emissions include industrial processes, such as cement and limestone production. Data in the U.S. Energy Information Administration's (EIA) *Monthly Energy Review* (*MER*), Tables 12.1-12.6, are estimates for U.S. $CO_2$ emissions from energy consumption.

For annual U.S. estimates for emissions of $CO_2$ from all sources, as well as for emissions of other greenhouse gases, see EIA's *Emissions of Greenhouse Gases Report* at http://www.eia.doe.gov/oiaf/1605/ggrpt/carbon.html.

## Section 12 Methodology and Sources

To estimate carbon dioxide emissions from energy consumption for the *Monthly Energy Review (MER)*, Tables 12.1-12.6, the U.S. Energy Information Administration (EIA) uses the following methodology and sources:

**Step 1. Determine Fossil Fuel Consumption**

Coal—Coal sectoral (residential, commercial, coke plants, other industrial, transportation, electric power) consumption data in thousand short tons are from MER Table 6.2. Coal sectoral consumption data are converted to trillion Btu by multiplying by the coal heat content factors in MER Table A5.

Coal Coke Net Imports—Coal coke net imports data in trillion Btu are derived from coal coke imports and exports data in MER Tables 1.4a and 1.4b.

Natural Gas (excluding supplemental gaseous fuels)—Natural gas sectoral consumption data in trillion Btu are from MER Tables 2.2-2.6.

Petroleum—Total and sectoral consumption (product supplied) data in thousand barrels per day for asphalt and road oil, aviation gasoline, distillate fuel oil, jet fuel, kerosene, liquefied petroleum gases (LPG), lubricants, motor gasoline, petroleum coke, and residual fuel oil are from MER Tables 3.5 and 3.7a-c. For the component products of LPG (ethane/ethylene, propane/propylene, normal butane/butylene, and isobutane/isobutylene) and "other petroleum" (aviation gasoline blending components, crude oil, motor gasoline blending components, naphthas for petrochemical feedstock use, other oils for petrochemical feedstock use, pentanes plus, special naphthas, still gas, unfinished oils, waxes, and miscellaneous petroleum products), consumption (product supplied) data in thousand barrels per day are from EIA's *Petroleum Supply Annual* (*PSA*), *Petroleum Supply Monthly* (*PSM*), and earlier publications (see sources for MER Table 3.5). Petroleum consumption data by product are converted to trillion Btu by multiplying by the petroleum heat content factors in MER Table A1 (Table A3 for LPG and motor gasoline).

**Step 2. Remove Biofuels From Petroleum**

Distillate Fuel Oil—Beginning in 2009, the distillate fuel oil data (for total and transportation sector) in Step 1 include biodiesel, a non-fossil renewable fuel. To remove the biodiesel portion from distillate fuel oil, data in thousand barrels per day for refinery and blender net inputs of renewable diesel fuel (from the PSA/PSM) are converted to trillion Btu by multiplying by the biodiesel heat content factor in MER Table A3, and then subtracted from the distillate fuel oil consumption values.

Motor Gasoline—Beginning in 1993, the motor gasoline data (for total, commercial sector, industrial sector, and transportation sector) in Step 1 include fuel ethanol, a non-fossil renewable fuel. To remove the fuel ethanol portion from motor gasoline, data in trillion Btu for fuel ethanol consumption (from MER Tables 10.2a, 10.2b, and 10.3) are subtracted from the motor gasoline consumption values. (Note that about 2 percent of fuel ethanol is fossil-based petroleum denaturant, to make the fuel ethanol undrinkable. For 1993-2008, petroleum denaturant is double counted in the PSA product supplied statistics, in both the original product category—e.g., pentanes plus—and also in the finished motor gasoline category; for this time period for MER Section 12, petroleum denaturant is removed along with the fuel ethanol from motor gasoline, but left in the original product. Beginning in 2009, petroleum denaturant is counted only in the PSA/PSM product supplied statistics for motor gasoline; for this time period for MER Section 12, petroleum denaturant is left in motor gasoline.)

**Step 3. Remove Carbon Sequestered by Nonfuel Use**

The following fuels have industrial nonfuel uses as chemical feedstocks and other products: coal, natural gas, asphalt and road oil, distillate fuel oil, liquefied petroleum gases (ethane/ethylene, propane/propylene, normal butane/butylene, and isobutane/isobutylene), lubricants (which have industrial and transportation nonfuel uses), naphthas for petrochemical feedstock use, other oils for petrochemical feedstock use, pentanes plus, petroleum coke, residual fuel

oil, special naphthas, still gas, waxes, and miscellaneous petroleum products. In the nonfuel use of these fuels, some of the carbon is sequestered, and is thus subtracted from the fuel consumption values in Steps 1 and 2.

Estimates of annual nonfuel use and associated carbon sequestration are from EIA's Office of Integrated Forecasting and Analysis—for details, see "Documentation for *Emissions of Greenhouse Gases in the United States 2006*" at http://www.eia.doe.gov/oiaf/1605/ggrpt/documentation/pdf/0638(2006).pdf.

To obtain monthly estimates of nonfuel use and associated carbon sequestration, monthly patterns for industrial consumption and product supplied data series are used. For coal nonfuel use, the monthly pattern for coke plants coal consumption from MER Table 6.2 is used. For natural gas, the monthly pattern for other industrial non-CHP natural gas consumption from MER Table 4.3 is used. For distillate fuel oil, petroleum coke, and residual fuel oil, the monthly patterns for industrial consumption from MER Table 3.7b are used. For the other petroleum products, the monthly patterns for product supplied from the PSA and PSM are used.

**Step 4. Determine Carbon Dioxide Emissions From Energy Consumption**

Carbon dioxide emissions data in million metric tons for fossil fuels are calculated by multiplying consumption values in trillion Btu from Steps 1 and 2 (minus the carbon sequestered in nonfuel use in Step 3) by the $CO_2$ emissions factors at http://www.eia.doe.gov/oiaf/1605/ggrpt/excel/CO2_coeff.xls. For 2007-2010, the 2006 factors are used.

Coal—$CO_2$ emissions for coal are calculated for each sector (residential, commercial, coke plants, other industrial, transportation, electric power). Total coal emissions are the sum of the sectoral coal emissions.

Coal Coke Net Imports—$CO_2$ emissions for coal coke net imports are calculated using a coal coke factor of 114.14 million metric tons $CO_2$ per quadrillion Btu.

Natural Gas—$CO_2$ emissions for natural gas are calculated for each sector (residential, commercial, industrial, transportation, electric power). Total natural gas emissions are the sum of the sectoral natural gas emissions.

Petroleum—$CO_2$ emissions are calculated for each petroleum product. Total petroleum emissions are the sum of the product emissions. Total LPG emissions are the sum of the emissions for the component products (ethane/ethylene, propane/propylene, normal butane/butylene, and isobutane/isobutylene); residential, commercial, and transportation sector LPG emissions are estimated by multiplying consumption values in trillion Btu from MER Tables 3.8a and 3.8c by the propane emissions factor; industrial sector LPG emissions are estimated as total LPG emissions minus emissions by the other sectors. Residual fuel oil emissions are calculated using the "Residual Fuel" (not the "Residual Fuel-Electric Utility") factor.

Geothermal and Non-Biomass Waste—Annual 1989-2007 $CO_2$ emissions data for geothermal and non-biomass waste are from EIA's *Annual Energy Review* (*AER*), Table 12.7b. Monthly estimates are created by dividing the annual data by the number of days in the year and then multiplying by the number of days in the month. (Annual estimates for the current year are set equal to those of the previous year.)

# A Appendix

# British Thermal Unit Conversion Factors

The thermal conversion factors presented in the following tables can be used to estimate the heat content in British thermal units (Btu) of a given amount of energy measured in physical units, such as barrels or cubic feet. For example, 10 barrels of asphalt has a heat content of approximately 66.36 million Btu (10 barrels x 6.636 million Btu per barrel = 66.36 million Btu).

The heat content rates (i.e., thermal conversion factors) provided in this section represent the gross (or higher or upper) energy content of the fuels. Gross heat content rates are applied in all Btu calculations for the *Monthly Energy Review* and are commonly used in energy calculations in the United States; net (or lower) heat content rates are typically used in European energy calculations. The difference between the two rates is the amount of energy that is consumed to vaporize water that is created during the combustion process. Generally, the difference ranges from 2 percent to 10 percent, depending on the specific fuel and its hydrogen content. Some fuels, such as unseasoned wood, can be more than 40 percent different in their gross and net heat content rates. See "Heat Content" and "British Thermal Unit (Btu)" in the Glossary for more information.

Thermal conversion factors for hydrocarbon mixes (Table A1) are weighted averages of the thermal conversion factors for each hydrocarbon included in the mix. For example, in calculating the thermal conversion factor for a 60-40 butane-propane mixture, the thermal conversion factor for butane is weighted 1.5 times the thermal conversion factor for propane.

In general, the annual thermal conversion factors presented in Tables A2 through A6 are computed from final annual data or from the best available data and labeled "preliminary." Often, the previous year's factor is used as a preliminary value until data become available to calculate the factor appropriate to the year. The source of each factor is described in the section entitled "Thermal Conversion Factor Source Documentation," which follows Table A6 in this appendix.

## Table A1. Approximate Heat Content of Petroleum Products
(Million Btu per Barrel)

| Petroleum Product | Heat Content | Petroleum Product | Heat Content |
|---|---|---|---|
| Asphalt | 6.636 | Pentanes Plus | 4.620 |
| Aviation Gasoline | 5.048 | Petrochemical Feedstocks | |
| Butane | 4.326 | Naptha Less Than 401°F | 5.248 |
| Butane-Propane Mixture[a] | 4.130 | Other Oils Equal to or Greater Than 401°F | 5.825 |
| Distillate Fuel Oil[b] | 5.825 | Still Gas | 6.000 |
| Ethane | 3.082 | Petroleum Coke | 6.024 |
| Ethane-Propane Mixture[c] | 3.308 | Plant Condensate | 5.418 |
| Isobutane | 3.974 | Propane | 3.836 |
| Jet Fuel, Kerosene Type | 5.670 | Residual Fuel Oil | 6.287 |
| Jet Fuel, Naphtha Type | 5.355 | Road Oil | 6.636 |
| Kerosene | 5.670 | Special Naphthas | 5.248 |
| Lubricants | 6.065 | Still Gas | 6.000 |
| Motor Gasoline[d] | | Unfinished Oils | 5.825 |
| Conventional | 5.253 | Unfractionated Stream | 5.418 |
| Reformulated | 5.150 | Waxes | 5.537 |
| Oxygenated | 5.150 | Miscellaneous | 5.796 |
| Natural Gasoline and Isopentane | 4.620 | | |

[a] 60 percent butane and 40 percent propane.
[b] Does not include biodiesel. See Table A3 for biodiesel heat contents.
[c] 70 percent ethane and 30 percent propane.
[d] See Table A3 for motor gasoline weighted heat contents beginning in 1994, and for fuel ethanol heat contents.
Note: The values in this table are for gross heat contents. See "Heat Content" in Glossary.
Web Page: http://www.eia.doe.gov/emeu/mer/append_a.html.
Sources: See "Thermal Conversion Factor Source Documentation," which follows Table A6.

# Table A2. Approximate Heat Content of Petroleum Production, Imports, and Exports

(Million Btu per Barrel)

| | Production | | Imports | | | Exports | | |
|---|---|---|---|---|---|---|---|---|
| | Crude Oil[a] | Natural Gas Plant Liquids | Crude Oil[a] | Petroleum Products | Total | Crude Oil[a] | Petroleum Products | Total |
| 1973 | 5.800 | 4.049 | 5.817 | 5.983 | 5.897 | 5.800 | 5.752 | 5.752 |
| 1974 | 5.800 | 4.011 | 5.827 | 5.959 | 5.884 | 5.800 | 5.773 | 5.774 |
| 1975 | 5.800 | 3.984 | 5.821 | 5.935 | 5.858 | 5.800 | 5.747 | 5.748 |
| 1976 | 5.800 | 3.964 | 5.808 | 5.980 | 5.856 | 5.800 | 5.743 | 5.745 |
| 1977 | 5.800 | 3.941 | 5.810 | 5.908 | 5.834 | 5.800 | 5.796 | 5.797 |
| 1978 | 5.800 | 3.925 | 5.802 | 5.955 | 5.839 | 5.800 | 5.814 | 5.808 |
| 1979 | 5.800 | 3.955 | 5.810 | 5.811 | 5.810 | 5.800 | 5.864 | 5.832 |
| 1980 | 5.800 | 3.914 | 5.812 | 5.748 | 5.796 | 5.800 | 5.841 | 5.820 |
| 1981 | 5.800 | 3.930 | 5.818 | 5.659 | 5.775 | 5.800 | 5.837 | 5.821 |
| 1982 | 5.800 | 3.872 | 5.826 | 5.664 | 5.775 | 5.800 | 5.829 | 5.820 |
| 1983 | 5.800 | 3.839 | 5.825 | 5.677 | 5.774 | 5.800 | 5.800 | 5.800 |
| 1984 | 5.800 | 3.812 | 5.823 | 5.613 | 5.745 | 5.800 | 5.867 | 5.850 |
| 1985 | 5.800 | 3.815 | 5.832 | 5.572 | 5.736 | 5.800 | 5.819 | 5.814 |
| 1986 | 5.800 | 3.797 | 5.903 | 5.624 | 5.808 | 5.800 | 5.839 | 5.832 |
| 1987 | 5.800 | 3.804 | 5.901 | 5.599 | 5.820 | 5.800 | 5.860 | 5.858 |
| 1988 | 5.800 | 3.800 | 5.900 | 5.618 | 5.820 | 5.800 | 5.842 | 5.840 |
| 1989 | 5.800 | 3.826 | 5.906 | 5.641 | 5.833 | 5.800 | 5.869 | 5.857 |
| 1990 | 5.800 | 3.822 | 5.934 | 5.614 | 5.849 | 5.800 | 5.838 | 5.833 |
| 1991 | 5.800 | 3.807 | 5.948 | 5.636 | 5.873 | 5.800 | 5.827 | 5.823 |
| 1992 | 5.800 | 3.804 | 5.953 | 5.623 | 5.877 | 5.800 | 5.774 | 5.777 |
| 1993 | 5.800 | 3.801 | 5.954 | 5.620 | 5.883 | 5.800 | 5.777 | 5.779 |
| 1994 | 5.800 | 3.794 | 5.950 | 5.534 | 5.861 | 5.800 | 5.777 | 5.779 |
| 1995 | 5.800 | 3.796 | 5.938 | 5.483 | 5.855 | 5.800 | 5.740 | 5.746 |
| 1996 | 5.800 | 3.777 | 5.947 | 5.468 | 5.847 | 5.800 | 5.728 | 5.736 |
| 1997 | 5.800 | 3.762 | 5.954 | 5.469 | 5.862 | 5.800 | 5.726 | 5.734 |
| 1998 | 5.800 | 3.769 | 5.953 | 5.462 | 5.861 | 5.800 | 5.710 | 5.720 |
| 1999 | 5.800 | 3.744 | 5.942 | 5.421 | 5.840 | 5.800 | 5.684 | 5.699 |
| 2000 | 5.800 | 3.733 | 5.959 | 5.432 | 5.849 | 5.800 | 5.651 | 5.658 |
| 2001 | 5.800 | 3.735 | 5.976 | 5.443 | 5.862 | 5.800 | 5.751 | 5.752 |
| 2002 | 5.800 | 3.729 | 5.971 | 5.451 | 5.863 | 5.800 | 5.687 | 5.688 |
| 2003 | 5.800 | 3.739 | 5.970 | 5.438 | 5.857 | 5.800 | 5.739 | 5.740 |
| 2004 | 5.800 | 3.724 | 5.981 | 5.475 | 5.863 | 5.800 | 5.753 | 5.754 |
| 2005 | 5.800 | 3.724 | 5.977 | 5.474 | 5.845 | 5.800 | 5.741 | 5.743 |
| 2006 | 5.800 | 3.712 | 5.980 | 5.454 | 5.842 | 5.800 | 5.723 | 5.724 |
| 2007 | 5.800 | 3.701 | 5.985 | 5.503 | 5.862 | 5.800 | 5.749 | 5.750 |
| 2008 | 5.800 | 3.706 | 5.990 | 5.479 | 5.866 | 5.800 | 5.762 | 5.762 |
| 2009[P] | 5.800 | 3.690 | 5.989 | 5.530 | 5.885 | 5.800 | 5.736 | 5.737 |
| 2010[E] | 5.800 | 3.690 | 5.989 | 5.530 | 5.885 | 5.800 | 5.736 | 5.737 |

[a] Includes lease condensate.

R=Revised. P=Preliminary. E=Estimate.

Note: The values in this table are for gross heat contents. See "Heat Content" in Glossary.

Web Page: http://www.eia.doe.gov/emeu/mer/append_a.html.

Sources: See "Thermal Conversion Factor Source Documentation," which follows Table A6.

# Table A3. Approximate Heat Content of Petroleum Consumption and Biofuels Production

(Million Btu per Barrel)

| | Total Petroleum [a] Consumption by Sector | | | | | | Liquefied Petroleum Gases Consumption[f] | Motor Gasoline Consumption[g] | Fuel Ethanol[h] | *Fuel Ethanol Feedstock Factor*[i] | Biodiesel | *Biodiesel Feedstock Factor*[j] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Residential | Commercial[b] | Industrial[b] | Transportation[b,c] | Electric Power[d,e] | Total[b,c] | | | | | | |
| 1973 | R 5.233 | R 5.677 | 5.569 | 5.395 | 6.245 | 5.515 | 3.746 | 5.253 | NA | *NA* | NA | *NA* |
| 1974 | R 5.223 | R 5.668 | 5.538 | 5.394 | 6.238 | 5.504 | 3.730 | 5.253 | NA | *NA* | NA | *NA* |
| 1975 | R 5.219 | R 5.631 | 5.527 | 5.392 | 6.250 | 5.494 | 3.715 | 5.253 | NA | *NA* | NA | *NA* |
| 1976 | R 5.243 | R 5.655 | 5.536 | 5.395 | 6.251 | 5.504 | 3.711 | 5.253 | NA | *NA* | NA | *NA* |
| 1977 | R 5.242 | R 5.661 | 5.554 | 5.400 | 6.249 | 5.518 | 3.677 | 5.253 | NA | *NA* | NA | *NA* |
| 1978 | R 5.242 | R 5.643 | 5.554 | 5.404 | 6.251 | 5.519 | 3.669 | 5.253 | NA | *NA* | NA | *NA* |
| 1979 | R 5.330 | R 5.701 | 5.419 | 5.428 | 6.258 | 5.494 | 3.680 | 5.253 | NA | *NA* | NA | *NA* |
| 1980 | R 5.280 | R 5.735 | 5.374 | 5.440 | 6.254 | 5.479 | 3.674 | 5.253 | 3.563 | *6.586* | NA | *NA* |
| 1981 | R 5.231 | R 5.671 | 5.312 | 5.432 | 6.258 | 5.448 | 3.643 | 5.253 | 3.563 | *6.562* | NA | *NA* |
| 1982 | R 5.205 | R 5.673 | 5.263 | 5.422 | 6.258 | 5.415 | 3.615 | 5.253 | 3.563 | *6.539* | NA | *NA* |
| 1983 | R 5.064 | R 5.565 | 5.275 | 5.415 | 6.255 | 5.406 | 3.614 | 5.253 | 3.563 | *6.515* | NA | *NA* |
| 1984 | R 5.247 | R 5.634 | 5.222 | 5.418 | 6.251 | 5.395 | 3.599 | 5.253 | 3.563 | *6.492* | NA | *NA* |
| 1985 | R 5.198 | R 5.568 | 5.215 | 5.422 | 6.247 | 5.387 | 3.603 | 5.253 | 3.563 | *6.469* | NA | *NA* |
| 1986 | R 5.214 | R 5.609 | 5.283 | 5.425 | 6.257 | 5.418 | 3.640 | 5.253 | 3.563 | *6.446* | NA | *NA* |
| 1987 | R 5.188 | R 5.571 | 5.248 | 5.429 | 6.249 | 5.403 | 3.659 | 5.253 | 3.563 | *6.423* | NA | *NA* |
| 1988 | R 5.206 | R 5.573 | 5.241 | 5.433 | 6.250 | 5.410 | 3.652 | 5.253 | 3.563 | *6.400* | NA | *NA* |
| 1989 | R 5.146 | R 5.525 | 5.234 | 5.437 | c 6.240 | 5.410 | 3.683 | 5.253 | 3.563 | *6.377* | NA | *NA* |
| 1990 | R 5.073 | R 5.521 | 5.270 | 5.442 | 6.244 | 5.411 | 3.625 | 5.253 | 3.563 | *6.355* | NA | *NA* |
| 1991 | R 5.014 | R 5.491 | 5.186 | 5.440 | 6.246 | 5.384 | 3.614 | 5.253 | 3.563 | *6.332* | NA | *NA* |
| 1992 | R 5.050 | R 5.477 | 5.185 | 5.442 | 6.238 | 5.378 | 3.624 | 5.253 | 3.563 | *6.309* | NA | *NA* |
| 1993 | R 5.019 | R 5.461 | b 5.196 | b 5.436 | 6.230 | b 5.379 | 3.606 | 5.253 | 3.563 | *6.287* | NA | *NA* |
| 1994 | R 5.026 | R 5.477 | 5.166 | 5.424 | 6.213 | 5.361 | 3.635 | f 5.230 | 3.563 | *6.264* | NA | *NA* |
| 1995 | R 4.982 | R 5.435 | 5.137 | 5.417 | 6.188 | 5.341 | 3.623 | 5.215 | 3.563 | *6.242* | NA | *NA* |
| 1996 | R 4.906 | R 5.384 | 5.133 | 5.420 | 6.195 | 5.336 | 3.613 | 5.216 | 3.563 | *6.220* | NA | *NA* |
| 1997 | R 4.897 | R 5.341 | 5.138 | 5.416 | 6.199 | 5.336 | 3.616 | 5.213 | 3.563 | *6.198* | NA | *NA* |
| 1998 | R 4.882 | R 5.313 | 5.155 | 5.413 | 6.210 | 5.349 | 3.614 | 5.212 | 3.563 | *6.176* | NA | *NA* |
| 1999 | R 4.801 | R 5.231 | 5.113 | 5.413 | 6.205 | 5.328 | 3.616 | 5.211 | 3.563 | *6.167* | NA | *NA* |
| 2000 | R 4.804 | R 5.257 | 5.082 | 5.421 | 6.189 | 5.326 | 3.607 | 5.210 | 3.563 | *6.159* | NA | *NA* |
| 2001 | R 4.838 | R 5.270 | 5.164 | 5.412 | 6.199 | 5.345 | 3.614 | 5.210 | 3.563 | *6.151* | 5.359 | *5.433* |
| 2002 | R 4.781 | R 5.234 | 5.116 | 5.410 | 6.173 | 5.324 | 3.613 | 5.208 | 3.563 | *6.143* | 5.359 | *5.433* |
| 2003 | R 4.812 | R 5.253 | 5.161 | 5.408 | 6.182 | 5.340 | 3.629 | 5.207 | 3.563 | *6.116* | 5.359 | *5.433* |
| 2004 | R 4.858 | R 5.271 | 5.164 | 5.420 | 6.192 | 5.350 | 3.618 | 5.215 | 3.563 | *6.089* | 5.359 | *5.433* |
| 2005 | R 4.818 | R 5.312 | 5.200 | 5.426 | 6.188 | 5.365 | 3.620 | 5.218 | 3.563 | *6.063* | 5.359 | *5.433* |
| 2006 | R 4.787 | R 5.251 | 5.179 | 5.431 | 6.143 | 5.353 | 3.605 | 5.218 | 3.563 | *6.036* | 5.359 | *5.433* |
| 2007 | R 4.731 | R 5.235 | 5.146 | 5.433 | 6.151 | 5.346 | 3.591 | 5.219 | 3.563 | *6.009* | 5.359 | *5.433* |
| 2008 | R 4.598 | R 5.095 | R 5.175 | R 5.426 | R 6.123 | 5.339 | 3.600 | 5.218 | 3.563 | *5.983* | 5.359 | *5.433* |
| 2009 | RE 4.512 | RE 5.015 | RE 5.080 | RE 5.412 | R P 6.105 | P 5.303 | P 3.553 | P 5.218 | 3.563 | *5.957* | 5.359 | *5.433* |
| 2010 | RE 4.512 | RE 5.015 | RE 5.080 | RE 5.412 | RE 6.105 | E 5.303 | E 3.553 | E 5.218 | E 3.563 | *5.930* | 5.359 | *5.433* |

[a] Petroleum products supplied, including natural gas plant liquids and crude oil burned directly as fuel. Quantity-weighted averages of the petroleum products included in each category are calculated by using heat content values shown in Table A1.

[b] Beginning in 1993, includes fuel ethanol blended into motor gasoline.

[c] Beginning in 2009, includes renewable diesel fuel (including biodiesel) blended into distillate fuel oil.

[d] Electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public. Through 1988, data are for electric utilities only; beginning in 1989, data are for electric utilities and independent power producers.

[e] Electric power sector factors are weighted average heat contents for distillate fuel oil, petroleum coke, and residual fuel oil; they exclude other liquids.

[f] Quantity-weighted averages of the major components of liquefied petroleum gases are calculated by using heat content values shown in Table A1.

[g] There is a discontinuity in this time series between 1993 and 1994; beginning in 1994, the single constant factor is replaced by a quantity-weighted factor—quantity-weighted averages of the major components of motor gasoline, including fuel ethanol, are calculated by using heat content values shown in Table A3.

[h] Includes denaturant (petroleum added to ethanol to make it undrinkable). Fuel ethanol factors are weighted average heat contents for undenatured ethanol (3.539 million Btu per barrel), pentanes plus used as denaturant (4.620 million Btu per barrel), and conventional motor gasoline used as denaturant (5.253 million Btu per barrel). The factor for 2009 is used as the estimated factor for 1980-2008 and 2010.

[i] Corn input to the production of undenatured ethanol (million Btu corn per barrel undenatured ethanol), used as the factor to estimate total biomass inputs to the production of undenatured ethanol. Observed ethanol yields (gallons undenatured ethanol per bushel of corn) are 2.5 in 1980, 2.666 in 1998, 2.68 in 2002, and 2.764 in 2009; yields in other years are estimated. Corn is assumed to have a gross heat content of 0.392 million Btu per bushel. Undenatured ethanol is assumed to have a gross heat content of 3.539 million Btu per barrel.

[j] Soybean oil input to the production of biodiesel (million Btu soybean oil per barrel biodiesel), used as the factor to estimate total biomass inputs to the production of biodiesel. It is assumed that 7.65 pounds of soybean oil are needed to produce one gallon of biodiesel, and 5.433 million Btu of soybean oil are needed to produce one barrel of biodiesel. Soybean oil is assumed to have a gross heat content of 16,909 Btu per pound, or 5.483 million Btu per barrel. Biodiesel is assumed to have a gross heat content of 17,253 Btu per pound, or 5.359 million Btu per barrel.

R=Revised. P=Preliminary. E=Estimate. NA=Not available.

Note: The heat content values in this table are for gross heat contents. See "Heat Content" in Glossary.

Web Page: http://www.eia.doe.gov/emeu/mer/append_a.html.

Sources: See "Thermal Conversion Factor Source Documentation," which follows Table A6.

Residential and commercial petroleum heat contents are revised beginning in 1973 due to a change in the estimation methodology for the physical data in Table 3.7a.

# Table A4. Approximate Heat Content of Natural Gas

(Btu per Cubic Foot)

| | Production | | Consumption[a] | | | | |
|---|---|---|---|---|---|---|---|
| | Marketed | Dry | End-Use Sectors[b] | Electric Power Sector[c] | Total | Imports | Exports |
| 1973 | 1,093 | 1,021 | 1,020 | 1,024 | 1,021 | 1,026 | 1,023 |
| 1974 | 1,097 | 1,024 | 1,024 | 1,022 | 1,024 | 1,027 | 1,016 |
| 1975 | 1,095 | 1,021 | 1,020 | 1,026 | 1,021 | 1,026 | 1,014 |
| 1976 | 1,093 | 1,020 | 1,019 | 1,023 | 1,020 | 1,025 | 1,013 |
| 1977 | 1,093 | 1,021 | 1,019 | 1,029 | 1,021 | 1,026 | 1,013 |
| 1978 | 1,088 | 1,019 | 1,016 | 1,034 | 1,019 | 1,030 | 1,013 |
| 1979 | 1,092 | 1,021 | 1,018 | 1,035 | 1,021 | 1,037 | 1,013 |
| 1980 | 1,098 | 1,026 | 1,024 | 1,035 | 1,026 | 1,022 | 1,013 |
| 1981 | 1,103 | 1,027 | 1,025 | 1,035 | 1,027 | 1,014 | 1,011 |
| 1982 | 1,107 | 1,028 | 1,026 | 1,036 | 1,028 | 1,018 | 1,011 |
| 1983 | 1,115 | 1,031 | 1,031 | 1,030 | 1,031 | 1,024 | 1,010 |
| 1984 | 1,109 | 1,031 | 1,030 | 1,035 | 1,031 | 1,005 | 1,010 |
| 1985 | 1,112 | 1,032 | 1,031 | 1,038 | 1,032 | 1,002 | 1,011 |
| 1986 | 1,110 | 1,030 | 1,029 | 1,034 | 1,030 | 997 | 1,008 |
| 1987 | 1,112 | 1,031 | 1,031 | 1,032 | 1,031 | 999 | 1,011 |
| 1988 | 1,109 | 1,029 | 1,029 | 1,028 | 1,029 | 1,002 | 1,018 |
| 1989 | 1,107 | 1,031 | 1,031 | [c]1,028 | 1,031 | 1,004 | 1,019 |
| 1990 | 1,105 | 1,029 | 1,030 | 1,027 | 1,029 | 1,012 | 1,018 |
| 1991 | 1,108 | 1,030 | 1,031 | 1,025 | 1,030 | 1,014 | 1,022 |
| 1992 | 1,110 | 1,030 | 1,031 | 1,025 | 1,030 | 1,011 | 1,018 |
| 1993 | 1,106 | 1,027 | 1,028 | 1,025 | 1,027 | 1,020 | 1,016 |
| 1994 | 1,105 | 1,028 | 1,029 | 1,025 | 1,028 | 1,022 | 1,011 |
| 1995 | 1,106 | 1,026 | 1,027 | 1,021 | 1,026 | 1,021 | 1,011 |
| 1996 | 1,109 | 1,026 | 1,027 | 1,020 | 1,026 | 1,022 | 1,011 |
| 1997 | 1,107 | 1,026 | 1,027 | 1,020 | 1,026 | 1,023 | 1,011 |
| 1998 | 1,109 | 1,031 | 1,033 | 1,024 | 1,031 | 1,023 | 1,011 |
| 1999 | 1,107 | 1,027 | 1,028 | 1,022 | 1,027 | 1,022 | 1,006 |
| 2000 | 1,107 | 1,025 | 1,026 | 1,021 | 1,025 | 1,023 | 1,006 |
| 2001 | 1,105 | 1,028 | 1,029 | 1,026 | 1,028 | 1,023 | 1,010 |
| 2002 | 1,106 | 1,027 | 1,029 | 1,020 | 1,027 | 1,022 | 1,008 |
| 2003 | 1,106 | [R]1,028 | [R]1,029 | 1,025 | [R]1,028 | 1,025 | 1,009 |
| 2004 | [R]1,104 | [R]1,026 | [R]1,026 | 1,027 | [R]1,026 | 1,025 | 1,009 |
| 2005 | [R]1,104 | [R]1,028 | [R]1,028 | 1,028 | [R]1,028 | 1,025 | 1,009 |
| 2006 | 1,103 | 1,028 | 1,028 | 1,028 | 1,028 | 1,025 | 1,009 |
| 2007 | 1,104 | [R]1,029 | [R]1,030 | 1,027 | [R]1,029 | 1,025 | 1,009 |
| 2008 | [R]1,100 | [R]1,027 | [R]1,027 | 1,027 | [R]1,027 | 1,025 | 1,009 |
| 2009 | [RE]1,100 | [RE]1,026 | [RE]1,027 | [R P]1,025 | [RE]1,026 | [E]1,025 | [E]1,009 |
| 2010 | [E]1,100 | [E]1,026 | [E]1,027 | [E]1,025 | [E]1,026 | [E]1,025 | [E]1,009 |

[a] Consumption factors are for natural gas, plus a small amount of supplemental gaseous fuels.

[b] Residential, commercial, industrial, and transportation sectors.

[c] Electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public. Through 1988, data are for electric utilities only; beginning in 1989, data are for electric utilities and independent power producers.

R=Revised. P=Preliminary. E=Estimate.

Note: The values in this table are for gross heat contents. See "Heat Content" in Glossary.

Web Page: http://www.eia.doe.gov/emeu/mer/append_a.html.

Sources: See "Thermal Conversion Factor Source Documentation," which follows Table A6.

# Table A5. Approximate Heat Content of Coal and Coal Coke

(Million Btu per Short Ton)

| | Coal | | | | | | | | | Coal Coke |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Consumption | | | | | | | |
| | Production[a] | Waste Coal Supplied[b] | Residential and Commercial Sectors | Industrial Sector | | Electric Power Sector[d,e] | Total | Imports | Exports | Imports and Exports |
| | | | | Coke Plants | Other[c] | | | | | |
| 1973 | 23.376 | NA | 22.831 | 26.780 | 22.586 | 22.246 | 23.057 | 25.000 | 26.596 | 24.800 |
| 1974 | 23.072 | NA | 22.479 | 26.778 | 22.419 | 21.781 | 22.677 | 25.000 | 26.700 | 24.800 |
| 1975 | 22.897 | NA | 22.261 | 26.782 | 22.436 | 21.642 | 22.506 | 25.000 | 26.562 | 24.800 |
| 1976 | 22.855 | NA | 22.774 | 26.781 | 22.530 | 21.679 | 22.498 | 25.000 | 26.601 | 24.800 |
| 1977 | 22.597 | NA | 22.919 | 26.787 | 22.322 | 21.508 | 22.265 | 25.000 | 26.548 | 24.800 |
| 1978 | 22.248 | NA | 22.466 | 26.789 | 22.207 | 21.275 | 22.017 | 25.000 | 26.478 | 24.800 |
| 1979 | 22.454 | NA | 22.242 | 26.788 | 22.452 | 21.364 | 22.100 | 25.000 | 26.548 | 24.800 |
| 1980 | 22.415 | NA | 22.543 | 26.790 | 22.690 | 21.295 | 21.947 | 25.000 | 26.384 | 24.800 |
| 1981 | 22.308 | NA | 22.474 | 26.794 | 22.585 | 21.085 | 21.713 | 25.000 | 26.160 | 24.800 |
| 1982 | 22.239 | NA | 22.695 | 26.797 | 22.712 | 21.194 | 21.674 | 25.000 | 26.223 | 24.800 |
| 1983 | 22.052 | NA | 22.775 | 26.798 | 22.691 | 21.133 | 21.576 | 25.000 | 26.291 | 24.800 |
| 1984 | 22.010 | NA | 22.844 | 26.799 | 22.543 | 21.101 | 21.573 | 25.000 | 26.402 | 24.800 |
| 1985 | 21.870 | NA | 22.646 | 26.798 | 22.020 | 20.959 | 21.366 | 25.000 | 26.307 | 24.800 |
| 1986 | 21.913 | NA | 22.947 | 26.798 | 22.198 | 21.084 | 21.462 | 25.000 | 26.292 | 24.800 |
| 1987 | 21.922 | NA | 23.404 | 26.799 | 22.381 | 21.136 | 21.517 | 25.000 | 26.291 | 24.800 |
| 1988 | 21.823 | NA | 23.571 | 26.799 | 22.360 | 20.900 | 21.328 | 25.000 | 26.299 | 24.800 |
| 1989 | 21.765 | [b]10.391 | 23.650 | 26.800 | 22.347 | [d]20.898 | 21.307 | 25.000 | 26.160 | 24.800 |
| 1990 | 21.822 | 9.303 | 23.137 | 26.799 | 22.457 | 20.779 | 21.197 | 25.000 | 26.202 | 24.800 |
| 1991 | 21.681 | 10.758 | 23.114 | 26.799 | 22.460 | 20.730 | 21.120 | 25.000 | 26.188 | 24.800 |
| 1992 | 21.682 | 10.396 | 23.105 | 26.799 | 22.250 | 20.709 | 21.068 | 25.000 | 26.161 | 24.800 |
| 1993 | 21.418 | 10.638 | 22.994 | 26.800 | 22.123 | 20.677 | 21.010 | 25.000 | 26.335 | 24.800 |
| 1994 | 21.394 | 11.097 | 23.112 | 26.800 | 22.068 | 20.589 | 20.929 | 25.000 | 26.329 | 24.800 |
| 1995 | 21.326 | 11.722 | 23.118 | 26.800 | 21.950 | 20.543 | 20.880 | 25.000 | 26.180 | 24.800 |
| 1996 | 21.322 | 12.147 | 23.011 | 26.800 | 22.105 | 20.547 | 20.870 | 25.000 | 26.174 | 24.800 |
| 1997 | 21.296 | 12.158 | 22.494 | 26.800 | 22.172 | 20.518 | 20.830 | 25.000 | 26.251 | 24.800 |
| 1998 | 21.418 | 12.639 | 21.620 | 27.426 | 23.164 | 20.516 | 20.881 | 25.000 | 26.800 | 24.800 |
| 1999 | 21.070 | 12.552 | 23.880 | 27.426 | 22.489 | 20.490 | 20.818 | 25.000 | 26.081 | 24.800 |
| 2000 | 21.072 | 12.360 | 25.020 | 27.426 | 22.433 | 20.511 | 20.828 | 25.000 | 26.117 | 24.800 |
| 2001 | [a]20.772 | 12.169 | 24.909 | 27.426 | 22.622 | 20.337 | 20.671 | 25.000 | 25.998 | 24.800 |
| 2002 | 20.673 | 12.165 | 22.962 | 27.426 | 22.562 | 20.238 | 20.541 | 25.000 | 26.062 | 24.800 |
| 2003 | 20.499 | 12.360 | 22.242 | 27.425 | 22.468 | 20.082 | 20.387 | 25.000 | 25.972 | 24.800 |
| 2004 | 20.424 | 12.266 | 22.324 | 27.426 | 22.473 | 19.980 | 20.290 | 25.000 | 26.108 | 24.800 |
| 2005 | 20.348 | 12.093 | 22.342 | 26.279 | 22.178 | 19.988 | 20.246 | 25.000 | 25.494 | 24.800 |
| 2006 | 20.310 | 12.080 | 22.066 | 26.271 | 22.050 | 19.931 | 20.181 | 25.000 | 25.453 | 24.800 |
| 2007 | 20.340 | 12.090 | 22.069 | 26.329 | 22.371 | 19.909 | 20.168 | 25.000 | 25.466 | 24.800 |
| 2008 | [R]20.208 | [R]12.121 | [R]21.887 | 26.281 | 22.348 | [R]19.713 | [R]19.977 | 25.000 | 25.399 | 24.800 |
| 2009[P] | [R]19.973 | [R]12.245 | [R]21.285 | [R]26.334 | [R]21.893 | [R]19.536 | [R]19.753 | 25.000 | [R]25.633 | 24.800 |
| 2010[E] | 19.973 | 12.245 | 21.285 | 26.334 | 21.893 | 19.536 | 19.753 | 25.000 | 25.633 | 24.800 |

[a] Beginning in 2001, includes a small amount of refuse recovery (coal recaptured from a refuse mine, and cleaned to reduce the concentration of noncombustible materials).

[b] Waste coal (including fine coal, coal obtained from a refuse bank or slurry dam, anthracite culm, bituminous gob, and lignite waste) consumed by the electric power and industrial sectors. Beginning in 1989, waste coal supplied is counted as a supply-side item to balance the same amount of waste coal included in "Consumption."

[c] Includes transportation. Excludes coal synfuel plants.

[d] Electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public. Through 1988, data are for electric utilities only; beginning in 1989, data are for electric utilities and independent power producers.

[e] Electric power sector factors are for anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and, beginning in 1998, coal synfuel.

R=Revised. P=Preliminary. E=Estimate. NA=Not available.

Note: The values in this table are for gross heat contents. See "Heat Content" in Glossary.

Web Page: http://www.eia.doe.gov/emeu/mer/append_a.html.

Sources: See "Thermal Conversion Factor Source Documentation," which follows Table A6.

# Table A6. Approximate Heat Rates for Electricity, and Heat Content of Electricity

(Btu per Kilowatthour)

| | Approximate Heat Rates[a] for Electricity Net Generation | | | |
|---|---|---|---|---|
| | Fossil-Fueled Plants[b,c] | Nuclear Plants[d] | Geothermal Energy Plants[e] | Heat Content[f] of Electricity[g] |
| 1973 | 10,389 | 10,903 | 21,674 | 3,412 |
| 1974 | 10,442 | 11,161 | 21,674 | 3,412 |
| 1975 | 10,406 | 11,013 | 21,611 | 3,412 |
| 1976 | 10,373 | 11,047 | 21,611 | 3,412 |
| 1977 | 10,435 | 10,769 | 21,611 | 3,412 |
| 1978 | 10,361 | 10,941 | 21,611 | 3,412 |
| 1979 | 10,353 | 10,879 | 21,545 | 3,412 |
| 1980 | 10,388 | 10,908 | 21,639 | 3,412 |
| 1981 | 10,453 | 11,030 | 21,639 | 3,412 |
| 1982 | 10,454 | 11,073 | 21,629 | 3,412 |
| 1983 | 10,520 | 10,905 | 21,290 | 3,412 |
| 1984 | 10,440 | 10,843 | 21,303 | 3,412 |
| 1985 | 10,447 | 10,622 | 21,263 | 3,412 |
| 1986 | 10,446 | 10,579 | 21,263 | 3,412 |
| 1987 | 10,419 | 10,442 | 21,263 | 3,412 |
| 1988 | 10,324 | 10,602 | 21,096 | 3,412 |
| 1989 | 10,432 | 10,583 | 21,096 | 3,412 |
| 1990 | 10,402 | 10,582 | 21,096 | 3,412 |
| 1991 | 10,436 | 10,484 | 20,997 | 3,412 |
| 1992 | 10,342 | 10,471 | 20,914 | 3,412 |
| 1993 | 10,309 | 10,504 | 20,914 | 3,412 |
| 1994 | 10,316 | 10,452 | 20,914 | 3,412 |
| 1995 | 10,312 | 10,507 | 20,914 | 3,412 |
| 1996 | 10,340 | 10,503 | 20,960 | 3,412 |
| 1997 | 10,213 | 10,494 | 20,960 | 3,412 |
| 1998 | 10,197 | 10,491 | 21,017 | 3,412 |
| 1999 | 10,226 | 10,450 | 21,017 | 3,412 |
| 2000 | 10,201 | 10,429 | 21,017 | 3,412 |
| 2001 | [c]10,333 | 10,443 | 21,017 | 3,412 |
| 2002 | 10,173 | 10,442 | 21,017 | 3,412 |
| 2003 | 10,241 | 10,421 | 21,017 | 3,412 |
| 2004 | 10,022 | 10,427 | 21,017 | 3,412 |
| 2005 | 9,999 | 10,436 | 21,017 | 3,412 |
| 2006 | 9,919 | 10,436 | 21,017 | 3,412 |
| 2007 | 9,884 | 10,485 | 21,017 | 3,412 |
| 2008 | 9,854 | 10,453 | 21,017 | 3,412 |
| 2009 | [E] 9,854 | [E] 10,453 | [E] 21,017 | 3,412 |
| 2010 | [E] 9,854 | [E] 10,453 | [E] 21,017 | 3,412 |

[a] The values in columns 1-3 of this table are for net heat rates. See "Heat Rate" in Glossary.

[b] Used as the thermal conversion factor for hydro, solar/photovoltaic, and wind electricity net generation to approximate the quantity of fossil fuels replaced by these sources. Through 2000, also used as the thermal conversion factor for wood and waste electricity net generation at electric utilities; beginning in 2001, Btu data for wood and waste at electric utilities are available from surveys.

[c] Through 2000, heat rates are for fossil-fueled steam-electric plants at electric utilities. Beginning in 2001, heat rates are for all fossil-fueled plants at electric utilities and electricity-only independent power producers.

[d] Used as the thermal conversion factor for nuclear electricity net generation.

[e] Used as the thermal conversion factor for geothermal electricity net generation.

[f] See "Heat Content" in Glossary.

[g] The value of 3,412 Btu per kilowatthour is a constant. It is used as the thermal conversion factor for electricity retail sales, and electricity imports and exports.

E=Estimate.

Web Page: http://www.eia.doe.gov/emeu/mer/append_a.html.

Sources: See "Thermal Conversion Factor Source Documentation," which follows this table.

# Thermal Conversion Factor Source Documentation

## Approximate Heat Content of Petroleum and Natural Gas Plant Liquids

**Asphalt**. The U.S. Energy Information Administration (EIA) adopted the thermal conversion factor of 6.636 million British thermal units (Btu) per barrel as estimated by the Bureau of Mines and first published in the *Petroleum Statement, Annual, 1956*.

**Aviation Gasoline**. EIA adopted the thermal conversion factor of 5.048 million Btu per barrel as adopted by the Bureau of Mines from the Texas Eastern Transmission Corporation publication *Competition and Growth in American Energy Markets 1947–1985*, a 1968 release of historical and projected statistics.

**Butane**. EIA adopted the Bureau of Mines thermal conversion factor of 4.326 million Btu per barrel as published in the *California Oil World and Petroleum Industry*, First Issue, April 1942.

**Butane-Propane Mixture**. EIA adopted the Bureau of Mines calculation of 4.130 million Btu per barrel based on an assumed mixture of 60 percent butane and 40 percent propane. See **Butane** and **Propane**.

**Crude Oil Exports**. Assumed by EIA to be 5.800 million Btu per barrel or equal to the thermal conversion factor for crude oil produced in the United States. See **Crude Oil Production**.

**Crude Oil Imports**. Calculated annually by EIA as the average of the thermal conversion factors for each type of crude oil imported weighted by the quantities imported. Thermal conversion factors for each type were calculated on a foreign country basis, by determining the average American Petroleum Institute (API) gravity of crude oil imported from each foreign country from Form ERA-60 in 1977 and converting average API gravity to average Btu content by using National Bureau of Standards, Miscellaneous Publication No. 97, *Thermal Properties of Petroleum Products*, 1933.

**Crude Oil Production**. EIA adopted the thermal conversion factor of 5.800 million Btu per barrel as reported in a Bureau of Mines internal memorandum, "Bureau of Mines Standard Average Heating Values of Various Fuels, Adopted January 3, 1950."

**Distillate Fuel Oil**. EIA adopted the Bureau of Mines thermal conversion factor of 5.825 million Btu per barrel as reported in a Bureau of Mines internal memorandum, "Bureau of Mines Standard Average Heating Values of Various Fuels, Adopted January 3, 1950."

**Ethane**. EIA adopted the Bureau of Mines thermal conversion factor of 3.082 million Btu per barrel as published in the *California Oil World and Petroleum Industry*, First Issue, April 1942.

**Ethane-Propane Mixture**. EIA calculation of 3.308 million Btu per barrel based on an assumed mixture of 70 percent ethane and 30 percent propane. See **Ethane** and **Propane**.

**Isobutane**. EIA adopted the Bureau of Mines thermal conversion factor of 3.974 million Btu per barrel as published in the *California Oil World and Petroleum Industry*, First Issue, April 1942.

**Jet Fuel, Kerosene-Type**. EIA adopted the Bureau of Mines thermal conversion factor of 5.670 million Btu per barrel for "Jet Fuel, Commercial" as published by the Texas Eastern Transmission Corporation in the report *Competition and Growth in American Energy Markets 1947–1985*, a 1968 release of historical and projected statistics.

**Jet Fuel, Naphtha-Type**. EIA adopted the Bureau of Mines thermal conversion factor of 5.355 million Btu per barrel for "Jet Fuel, Military" as published by the Texas Eastern Transmission Corporation in the report *Competition and Growth in American Energy Markets 1947–1985*, a 1968 release of historical and projected statistics.

**Kerosene**. EIA adopted the Bureau of Mines thermal conversion factor of 5.670 million Btu per barrel as reported in a Bureau of Mines internal memorandum, "Bureau of Mines Standard Average Heating Values of Various Fuels, Adopted January 3, 1950."

**Liquefied Petroleum Gases Consumption.** Calculated annually by EIA as the average of the thermal conversion factors for all liquefied petroleum gases consumed (see Table A1) weighted by the quantities consumed. The component products of liquefied petroleum gases are ethane (including ethylene), propane (including propylene), normal butane (including butylene), butane-propane mixtures, ethane-propane mixtures, and isobutane. For 1973–1980, quantities consumed are from EIA, Energy Data Reports, "Petroleum Statement, Annual," Table 1. For 1981 forward, quantities consumed are from EIA, *Petroleum Supply Annual*, Table 2.

**Lubricants**. EIA adopted the thermal conversion factor of 6.065 million Btu per barrel as estimated by the Bureau of Mines and first published in the *Petroleum Statement, Annual, 1956*.

**Miscellaneous Products**. EIA adopted the thermal conversion factor of 5.796 million Btu per barrel as estimated by the Bureau of Mines and first published in the *Petroleum Statement, Annual, 1956*.

**Motor Gasoline Consumption.** 1973–1993: EIA adopted the Bureau of Mines thermal conversion factor of 5.253 million Btu per barrel for "Gasoline, Motor Fuel" as published by the Texas Eastern Transmission Corporation in Appendix V of *Competition and Growth in American Energy Markets 1947–1985*, a 1968 release of historical and projected statistics. 1994 forward: EIA calculated national annual quantity-weighted average conversion factors for conventional, reformulated, and oxygenated motor gasolines (see Table A3). The factor for conventional motor gasoline is 5.253 million Btu per barrel, as used for

previous years. The factors for reformulated and oxygenated gasolines, both currently 5.150 million Btu per barrel, are based on data published in Environmental Protection Agency, Office of Mobile Sources, National Vehicle and Fuel Emissions Laboratory report EPA 420-F-95-003, "Fuel Economy Impact Analysis of Reformulated Gasoline." See **Fuel Ethanol (Denatured).**

**Natural Gas Plant Liquids Production**. Calculated annually by EIA as the average of the thermal conversion factors for each natural gas plant liquid produced weighted by the quantities produced.

**Natural Gasoline**. EIA adopted the thermal conversion factor of 4.620 million Btu per barrel as estimated by the Bureau of Mines and first published in the *Petroleum Statement, Annual, 1956*.

**Pentanes Plus**. EIA assumed the thermal conversion factor to be 4.620 million Btu or equal to that for natural gasoline. See **Natural Gasoline**.

**Petrochemical Feedstocks, Naphtha less than 401° F**. Assumed by EIA to be 5.248 million Btu per barrel, equal to the thermal conversion factor for special naphthas. See **Special Naphthas**.

**Petrochemical Feedstocks, Other Oils equal to or greater than 401° F**. Assumed by EIA to be 5.825 million Btu per barrel, equal to the thermal conversion factor for distillate fuel oil. See **Distillate Fuel Oil**.

**Petrochemical Feedstocks, Still Gas**. Assumed by EIA to be 6.000 million Btu per barrel, equal to the thermal conversion factor for still gas. See **Still Gas**.

**Petroleum Coke**. EIA adopted the thermal conversion factor of 6.024 million Btu per barrel as reported in Btu per short ton in the Bureau of Mines internal memorandum, "Bureau of Mines Standard Average Heating Values of Various Fuels, Adopted January 3, 1950." The Bureau of Mines calculated this factor by dividing 30.120 million Btu per short ton, as given in the referenced Bureau of Mines internal memorandum, by 5.0 barrels per short ton, as given in the Bureau of Mines Form 6-1300-M and successor EIA forms.

**Petroleum Consumption, Commercial Sector**. Calculated annually by EIA as the average of the thermal conversion factors for all petroleum products consumed by the commercial sector weighted by the estimated quantities consumed by the commercial sector. The quantities of petroleum products consumed by the commercial sector are estimated in the State Energy Data System—see documentation at http://www.eia.doe.gov/emeu/states/sep_use/notes/use_petrol.pdf.

**Petroleum Consumption, Electric Power Sector**. Calculated annually by EIA as the average of the thermal conversion factors for all petroleum products consumed by the electric power sector weighted by the quantities consumed by the electric power sector. Data are from Form EIA-923, "Power Plant Operations Report," and predecessor forms.

**Petroleum Consumption, Industrial Sector**. Calculated annually by EIA as the average of the thermal conversion factors for all petroleum products consumed by the industrial sector weighted by the estimated quantities consumed by the industrial sector. The quantities of petroleum products consumed by the industrial sector are estimated in the State Energy Data System—see documentation at http://www.eia.doe.gov/emeu/states/sep_use/notes/use_petrol.pdf.

**Petroleum Consumption, Residential Sector**. Calculated annually by EIA as the average of the thermal conversion factors for all petroleum products consumed by the residential sector weighted by the estimated quantities consumed by the residential sector. The quantities of petroleum products consumed by the residential sector are estimated in the State Energy Data System—see documentation at http://www.eia.doe.gov/emeu/states/sep_use/notes/use_petrol.pdf.

**Petroleum Consumption, Total**. Calculated annually by EIA as the average of the thermal conversion factors for all petroleum products consumed weighted by the quantities consumed.

**Petroleum Consumption, Transportation Sector**. Calculated annually by EIA as the average of the thermal conversion factors for all petroleum products consumed by the transportation sector weighted by the estimated quantities consumed by the transportation sector. The quantities of petroleum products consumed by the transportation sector are estimated in the State Energy Data System—see documentation at http://www.eia.doe.gov/emeu/states/sep_use/notes/use_petrol.pdf.

**Petroleum Products Exports**. Calculated annually by EIA as the average of the thermal conversion factors for each petroleum product exported weighted by the quantities exported.

**Petroleum Products Imports**. Calculated annually by EIA as the average of the thermal conversion factors for each petroleum product imported weighted by the quantities imported.

**Plant Condensate**. Estimated to be 5.418 million Btu per barrel by EIA from data provided by McClanahan Consultants, Inc., Houston, Texas.

**Propane**. EIA adopted the Bureau of Mines thermal conversion factor of 3.836 million Btu per barrel as published in the *California Oil World and Petroleum Industry*, First Issue, April 1942.

**Residual Fuel Oil**. EIA adopted the thermal conversion factor of 6.287 million Btu per barrel as reported in the

Bureau of Mines internal memorandum, "Bureau of Mines Standard Average Heating Values of Various Fuels, Adopted January 3, 1950."

**Road Oil**. EIA adopted the Bureau of Mines thermal conversion factor of 6.636 million Btu per barrel, which was assumed to be equal to that of asphalt (see **Asphalt**) and was first published by the Bureau of Mines in the *Petroleum Statement, Annual, 1970*.

**Special Naphthas**. EIA adopted the Bureau of Mines thermal conversion factor of 5.248 million Btu per barrel, which was assumed to be equal to that of the total gasoline (aviation and motor) factor and was first published in the *Petroleum Statement, Annual, 1970*.

**Still Gas**. EIA adopted the Bureau of Mines estimated thermal conversion factor of 6.000 million Btu per barrel, first published in the *Petroleum Statement, Annual, 1970*.

**Total Petroleum Exports**. Calculated annually by EIA as the average of the thermal conversion factors for crude oil and each petroleum product exported weighted by the quantities exported. See **Crude Oil Exports** and **Petroleum Products Exports**.

**Total Petroleum Imports**. Calculated annually by EIA as the average of the thermal conversion factors for each type of crude oil and petroleum product imported weighted by the quantities imported. See **Crude Oil Imports** and **Petroleum Products Imports**.

**Unfinished Oils**. EIA assumed the thermal conversion factor to be 5.825 million Btu per barrel or equal to that for distillate fuel oil (see **Distillate Fuel Oil**) and first published it in EIA's *Annual Report to Congress, Volume 3, 1977*.

**Unfractionated Stream**. EIA assumed the thermal conversion factor to be 5.418 million Btu per barrel or equal to that for plant condensate (see **Plant Condensate**) and first published it in EIA's *Annual Report to Congress, Volume 2, 1981*.

**Waxes**. EIA adopted the thermal conversion factor of 5.537 million Btu per barrel as estimated by the Bureau of Mines and first published in the *Petroleum Statement, Annual, 1956*.

## Approximate Heat Content of Biofuels

**Biodiesel.** EIA estimated the thermal conversion factor for biodiesel to be 5.359 million Btu per barrel, or 17,253 Btu per pound.

**Biodiesel Feedstock.** EIA used soybean oil input to the production of biodiesel (million Btu soybean oil per barrel biodiesel) as the factor to estimate total biomass inputs to the production of biodiesel. EIA assumed that 7.65 pounds of soybean oil are needed to produce one gallon of biodiesel, and 5.433 million Btu of soybean oil are needed to produce one barrel of biodiesel. EIA also assumed that soybean oil has a gross heat content of 16,909 Btu per pound, or 5.483 million Btu per barrel.

**Ethanol (Undenatured).** EIA adopted the thermal conversion factor of 3.539 million Btu per barrel published in "Oxygenate Flexibility for Future Fuels," a paper presented by William J. Piel of the ARCO Chemical Company at the National Conference on Reformulated Gasolines and Clean Air Act Implementation, Washington, D.C., October 1991.

**Fuel Ethanol (Denatured).** 1981–2008 and 2010: EIA used the 2009 factor. 2009: Calculated by EIA as the annual quantity-weighted average of the thermal conversion factors for undenatured ethanol (3.539 million Btu per barrel), pentanes plus used as denaturant (4.620 million Btu per barrel), and conventional motor gasoline used as denaturant (5.253 million Btu per barrel). The quantity of ethanol consumed is from EIA, *Petroleum Supply Monthly (PSM)*, Table 1, data for renewable fuels and oxygenate plant net production of fuel ethanol. The quantity of pentanes plus used as denaturant is from EIA, PSM, Table 1, data for renewable fuels and oxygenate plant net production of pentanes plus, multiplied by -1. The quantity of conventional motor gasoline used as denaturant is from EIA, PSM, Table 1, data for renewable fuels and oxygenate plant net production of conventional motor gasoline, multiplied by -1.

**Fuel Ethanol Feedstock.** EIA used corn input to the production of undenatured ethanol (million Btu corn per barrel undenatured ethanol) as the annual factor to estimate total biomass inputs to the production of undenatured ethanol. U.S. Department of Agriculture observed ethanol yields (gallons undenatured ethanol per bushel of corn) were 2.5 in 1980, 2.666 in 1998, 2.68 in 2002, and 2.764 in 2009; EIA estimated the ethanol yields in other years. EIA also assumed that corn has a gross heat content of 0.392 million Btu per bushel.

## Approximate Heat Content of Natural Gas

**Natural Gas Consumption, Electric Power Sector**. Calculated annually by EIA by dividing the heat content of natural gas consumed by the electric power sector by the quantity consumed. Data are from Form EIA-923, "Power Plant Operations Report," and predecessor forms.

**Natural Gas Consumption, End-Use Sectors**. Calculated annually by EIA by dividing the heat content of natural gas consumed by the end-use sectors (residential, commercial, industrial, and transportation) by the quantity consumed. Data are from Form EIA-176, "Annual Report of Natural and Supplemental Gas Supply and Disposition."

**Natural Gas Consumption, Total**. 1973–1979: EIA adopted the thermal conversion factor calculated annually by the American Gas Association (AGA) and published in *Gas Facts*, an AGA annual publication. 1980 forward: Calculated annually by EIA by dividing the total heat content of natural gas consumed by the total quantity consumed.

**Natural Gas Exports**. Calculated annually by EIA by dividing the heat content of natural gas exported by the quantity exported. For 1973–1995, data are from Form FPC-14, "Annual Report for Importers and Exporters of Natural Gas." Beginning in 1996, data are from U.S. Department of Energy, Office of Fossil Energy, *Natural Gas Imports and Exports*.

**Natural Gas Imports**. Calculated annually by EIA by dividing the heat content of natural gas imported by the quantity imported. For 1973–1995, data are from Form FPC-14, "Annual Report for Importers and Exporters of Natural Gas." Beginning in 1996, data are from U.S. Department of Energy, Office of Fossil Energy, *Natural Gas Imports and Exports*.

**Natural Gas Production, Dry**. Assumed by EIA to be equal to the thermal conversion factor for dry natural gas consumed. See **Natural Gas Consumption, Total**.

**Natural Gas Production, Marketed**. Calculated annually by EIA by dividing the heat content of dry natural gas produced (see **Natural Gas Production, Dry**) and natural gas plant liquids produced (see **Natural Gas Plant Liquids Production**) by the total quantity of marketed natural gas produced.

## Approximate Heat Content of Coal and Coal Coke

**Coal Coke Imports and Exports**. EIA adopted the Bureau of Mines estimate of 24.800 million Btu per short ton.

**Coal Consumption, Electric Power Sector**. Calculated annually by EIA by dividing the heat content of coal consumed by the electric power sector by the quantity consumed. Data are from Form EIA-923, "Power Plant Operations Report," and predecessor forms.

**Coal Consumption, Industrial Sector, Coke Plants**. Calculated annually by EIA by dividing the heat content of coal consumed by coke plants by the quantity consumed. Data are from Form EIA-5, "Quarterly Coal Consumption and Quality Report—Coke Plants."

**Coal Consumption, Industrial Sector, Other**. Calculated annually by EIA by dividing the heat content of coal consumed by manufacturing plants by the quantity consumed. Data are from Form EIA-3, "Quarterly Coal Consumption and Quality Report—Manufacturing Plants."

**Coal Consumption, Residential and Commercial Sectors**. Calculated annually by EIA by dividing the heat content of coal consumed by the residential and commercial sectors by the quantity consumed. Through 1999, data are from Form EIA-6, "Coal Distribution Report." Beginning in 2000, data are for commercial combined-heat-and-power (CHP) plants from Form EIA-923, "Power Plant Operations Report," and predecessor forms.

**Coal Consumption, Total**. Calculated annually by EIA by dividing the total heat content of coal consumed by all sectors by the total quantity consumed.

**Coal Exports**. Calculated annually by EIA by dividing the heat content of steam coal and metallurgical coal exported by the quantity exported. Data are from U.S. Department of Commerce, Bureau of the Census, "Monthly Report EM 545."

**Coal Imports**. Assumed by EIA to be 25.000 million Btu per short ton.

**Coal Production**. Calculated annually by EIA to balance the heat content of coal supply (production and imports) and the heat content of coal disposition (exports, stock change, and consumption).

**Waste Coal Supplied**. Calculated annually by EIA by dividing the total heat content of waste coal supplied by the quantity supplied. For 1989–1997, data are from Form EIA-867, "Annual Nonutility Power Producer Report." For 1998–2000, data are from Form EIA-860B, "Annual Electric Generator Report—Nonutility." For 2001 forward, data are from Form EIA-3, "Quarterly Coal Consumption and Quality Report—Manufacturing Plants"; Form EIA-923, "Power Plant Operations Report"; and predecessor forms.

## Approximate Heat Rates for Electricity

**Electricity Net Generation, Fossil-Fueled Plants**. There is no generally accepted practice for measuring the thermal conversion rates for power plants that generate electricity from hydro, wind, photovoltaic, or solar thermal energy sources. Therefore, EIA calculates a rate factor that is equal to the annual average heat rate factor for fossil-fueled power plants in the United States. By using that factor, it is possible to evaluate fossil fuel requirements for replacing those sources during periods of interruption, such as droughts. The heat content of a kilowatthour of electricity produced, regardless of the generation process, is 3,412 Btu. 1973–1988: The weighted annual average heat rate for fossil-fueled steam-electric power plants in the United States, as published in EIA, *Electric Plant Cost and Power Production Expenses 1991*, Table 9. 1989–2000: Calculated annually by EIA by using the heat rate data reported on Form EIA-860, "Annual Electric Generator Report" (and predecessor forms); and net generation data reported on Form EIA-759, "Monthly Power Plant Report." The computation includes data for all electric utility steam-electric plants using fossil fuels.

2001 forward: Calculated annually by EIA by using fuel consumption and net generation data reported on Form EIA-923, "Power Plant Operations Report," and predecessor forms. The computation includes data for all electric utilities and electricity-only independent power producers using fossil fuels.

**Electricity Net Generation, Geothermal Energy Plants**. 1973–1981: Calculated annually by EIA by weighting the annual average heat rates of operating geothermal units by the installed nameplate capacities as reported on Form FPC-12, "Power System Statement." 1982 forward: Estimated annually by EIA on the basis of an informal survey of relevant plants.

**Electricity Net Generation, Nuclear Plants**. 1973–1984: Calculated annually by dividing the total heat content consumed in nuclear generating units by the total (net) electricity generated by nuclear generating units. The heat content and electricity generation were reported on Form FERC-1, "Annual Report of Major Electric Utilities, Licensees, and Others"; Form EIA-412, "Annual Report of Public Electric Utilities"; and predecessor forms. For 1982, the factors were published in EIA, *Historical Plant Cost and Annual Production Expenses for Selected Electric Plants 1982*, page 215. For 1983 and 1984, the factors were published in EIA, *Electric Plant Cost and Power Production Expenses 1991*, Table 13. 1985 forward: Calculated annually by EIA by using the heat rate reported on Form EIA-860, "Annual Electric Generator Report" (and predecessor forms), and the generation reported on Form EIA-923, "Power Plant Operations Report" (and predecessor forms).

# B

# Appendix

## Metric Conversion Factors, Metric Prefixes, and Other Physical Conversion Factors

Data presented in the *Monthly Energy Review* and in other U.S. Energy Information Administration publications are expressed predominately in units that historically have been used in the United States, such as British thermal units, barrels, cubic feet, and short tons. However, because U.S. commerce involves other nations, most of which use metric units of measure, the U.S. Government is committed to the transition to the metric system, as stated in the Metric Conversion Act of 1975 (Public Law 94–168), amended by the Omnibus Trade and Competitiveness Act of 1988 (Public Law 100–418), and Executive Order 12770 of July 25, 1991.

The metric conversion factors presented in Table B1 can be used to calculate the metric-unit equivalents of values expressed in U.S. Customary units. For example, 500 short tons are the equivalent of 453.6 metric tons (500 short tons x 0.9071847 metric tons/short ton = 453.6 metric tons).

In the metric system of weights and measures, the names of multiples and subdivisions of any unit may be derived by combining the name of the unit with prefixes, such as deka, hecto, and kilo, meaning, respectively, 10, 100, 1,000, and deci, centi, and milli, meaning, respectively, one-tenth, one-hundredth, and one-thousandth. Common metric prefixes can be found in Table B2.

The conversion factors presented in Table B3 can be used to calculate equivalents in various physical units commonly used in energy analyses. For example, 10 barrels are the equivalent of 420 U.S. gallons (10 barrels x 42 gallons/barrel = 420 gallons).

## Table B1. Metric Conversion Factors

| Type of Unit | U.S. Unit | | Equivalent in Metric Units | |
|---|---|---|---|---|
| **Mass** | 1 short ton (2,000 lb) | = | 0.907 184 7 | metric tons (t) |
| | 1 long ton | = | 1.016 047 | metric tons (t) |
| | 1 pound (lb) | = | 0.453 592 37[a] | kilograms (kg) |
| | 1 pound uranium oxide (lb $U_3O_8$) | = | 0.384 647[b] | kilograms uranium (kgU) |
| | 1 ounce, avoirdupois (avdp oz) | = | 28.349 52 | grams (g) |
| **Volume** | 1 barrel of oil (bbl) | = | 0.158 987 3 | cubic meters ($m^3$) |
| | 1 cubic yard ($yd^3$) | = | 0.764 555 | cubic meters ($m^3$) |
| | 1 cubic foot ($ft^3$) | = | 0.028 316 85 | cubic meters ($m^3$) |
| | 1 U.S. gallon (gal) | = | 3.785 412 | liters (L) |
| | 1 ounce, fluid (fl oz) | = | 29.573 53 | milliliters (mL) |
| | 1 cubic inch ($in^3$) | = | 16.387 06 | milliliters (mL) |
| **Length** | 1 mile (mi) | = | 1.609 344[a] | kilometers (km) |
| | 1 yard (yd) | = | 0.914 4[a] | meters (m) |
| | 1 foot (ft) | = | 0.304 8[a] | meters (m) |
| | 1 inch (in) | = | 2.54[a] | centimeters (cm) |
| **Area** | 1 acre | = | 0.404 69 | hectares (ha) |
| | 1 square mile ($mi^2$) | = | 2.589 988 | square kilometers ($km^2$) |
| | 1 square yard ($yd^2$) | = | 0.836 127 4 | square meters ($m^2$) |
| | 1 square foot ($ft^2$) | = | 0.092 903 04[a] | square meters ($m^2$) |
| | 1 square inch ($in^2$) | = | 6.451 6[a] | square centimeters ($cm^2$) |
| **Energy** | 1 British thermal unit (Btu)[c] | = | 1,055.055 852 62[a] | joules (J) |
| | 1 calorie (cal) | = | 4.186 8[a] | joules (J) |
| | 1 kilowatthour (kWh) | = | 3.6[a] | megajoules (MJ) |
| **Temperature[d]** | 32 degrees Fahrenheit (°F) | = | 0[a] | degrees Celsius (°C) |
| | 212 degrees Fahrenheit (°F) | = | 100[a] | degrees Celsius (°C) |

[a]Exact conversion.
[b]Calculated by the U.S. Energy Information Administration.
[c]The Btu used in this table is the International Table Btu adopted by the Fifth International Conference on Properties of Steam, London, 1956.
[d]To convert degrees Fahrenheit (°F) to degrees Celsius (°C) exactly, subtract 32, then multiply by 5/9.

Notes: • Spaces have been inserted after every third digit to the right of the decimal for ease of reading. • Most metric units belong to the International System of Units (SI), and the liter, hectare, and metric ton are accepted for use with the SI units. For more information about the SI units, see http://physics.nist.gov/cuu/Units/index.html.

Web Page: http://www.eia.doe.gov/emeu/mer/append_b.html.

Sources: • General Services Administration, Federal Standard 376B, *Preferred Metric Units for General Use by the Federal Government* (Washington, DC, January 1993), pp. 9-11, 13, and 16. • U.S. Department of Commerce, National Institute of Standards and Technology, Special Publications 330, 811, and 814. • American National Standards Institute/Institute of Electrical and Electronic Engineers, ANSI/IEEE Std 268-1992, pp. 28 and 29.

## Table B2. Metric Prefixes

| Unit Multiple | Prefix | Symbol | Unit Subdivision | Prefix | Symbol |
|---|---|---|---|---|---|
| $10^{1}$ | deka | da | $10^{-1}$ | deci | d |
| $10^{2}$ | hecto | h | $10^{-2}$ | centi | c |
| $10^{3}$ | kilo | k | $10^{-3}$ | milli | m |
| $10^{6}$ | mega | M | $10^{-6}$ | micro | µ |
| $10^{9}$ | giga | G | $10^{-9}$ | nano | n |
| $10^{12}$ | tera | T | $10^{-12}$ | pico | p |
| $10^{15}$ | peta | P | $10^{-15}$ | femto | f |
| $10^{18}$ | exa | E | $10^{-18}$ | atto | a |
| $10^{21}$ | zetta | Z | $10^{-21}$ | zepto | z |
| $10^{24}$ | yotta | Y | $10^{-24}$ | yocto | y |

Web Page: http://www.eia.doe.gov/emeu/mer/append_b.html.
Source: U.S. Department of Commerce, National Institute of Standards and Technology, *The International System of Units (SI)*, NIST Special Publication 330, 1991 Edition (Washington, DC, August 1991), p.10.

## Table B3. Other Physical Conversion Factors

| Energy Source | Original Unit | | Equivalent in Final Units | |
|---|---|---|---|---|
| **Petroleum** | 1 barrel (bbl) | = | 42[a] | U.S. gallons (gal) |
| **Coal** | 1 short ton | = | 2,000[a] | pounds (lb) |
| | 1 long ton | = | 2,240[a] | pounds (lb) |
| | 1 metric ton (t) | = | 1,000[a] | kilograms (kg) |
| **Wood** | 1 cord (cd) | = | 1.25[b] | shorts tons |
| | 1 cord (cd) | = | 128[a] | cubic feet ($ft^3$) |

[a]Exact conversion.
[b]Calculated by the U.S. Energy Information Administration.
Web Page: http://www.eia.doe.gov/emeu/mer/append_b.html.
Source: U.S. Department of Commerce, National Institute of Standards and Technology, *Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices*, NIST Handbook 44, 1994 Edition (Washington, DC, October 1993), pp. B-10, C-17 and C-21.

# Glossary

**Alcohol:** The family name of a group of organic chemical compounds composed of carbon, hydrogen, and oxygen. The series of molecules vary in chain length and are composed of a **hydrocarbon** plus a hydroxyl group; $CH(3)-(CH(2))_n-OH$ (e.g., **methanol**, **ethanol**, and tertiary butyl alcohol). See **Fuel Ethanol.**

**Alternative Fuel:** Alternative fuels, for transportation applications, include the following: **methanol**; denatured **ethanol**, and other **alcohols**; fuel mixtures containing 85 percent or more by volume of methanol, denatured ethanol, and other alcohols with **motor gasoline** or other fuels; **natural gas**; **liquefied petroleum gas** (**propane**); **hydrogen**; **coal**-derived liquid fuels; fuels (other than alcohol) derived from biological materials (**biofuels** such as soy **diesel fuel**); **electricity** (including electricity from **solar energy**); and "... any other fuel the Secretary determines, by rule, is substantially not **petroleum** and would yield substantial energy security benefits and substantial environmental benefits." The term "alternative fuel" does not include alcohol or other blended portions of primarily petroleum-based fuels used as **oxygenates** or extenders, i.e., **MTBE**, ETBE, other ethers, and the 10-percent ethanol portion of **gasohol**.

**Alternative-Fuel Vehicle (AFV):** A vehicle designed to operate on an **alternative fuel** (e.g., compressed **natural gas**, **methane** blend, or **electricity**). The vehicle could be either a dedicated vehicle designed to operate exclusively on alternative fuel or a nondedicated vehicle designed to operate on alternative fuel and/or a traditional fuel.

**Anthracite:** The highest rank of **coal**; used primarily for residential and commercial space heating. It is a hard, brittle, and black lustrous coal, often referred to as hard coal, containing a high percentage of fixed carbon and a low percentage of volatile matter. The moisture content of fresh-mined anthracite generally is less than 15 percent. The heat content of anthracite ranges from 22 to 28 million **Btu** per **short ton** on a moist, mineral-matter-free basis. The heat content of anthracite coal consumed in the United States averages 25 million Btu per short ton, on the as-received basis (i.e., containing both inherent moisture and mineral matter). *Note:* Since the 1980's, anthracite refuse or mine waste has been used for steam-electric power generation. This fuel typically has a heat content of 15 million Btu per ton or less.

**Anthropogenic:** Made or generated by a human or caused by human activity. The term is used in the context of global **climate change** to refer to gaseous emissions that are the result of human activities, as well as other potentially climate-altering activities, such as deforestation.

**Asphalt:** A dark-brown-to-black cement-like material containing bitumens as the predominant constituents obtained by petroleum processing. The definition includes crude asphalt as well as the following finished products: cements, fluxes, the asphalt content of emulsions (exclusive of water), and petroleum distillates blended with asphalt to make cutback asphalts.

**ASTM:** The American Society for Testing and Materials.

**Aviation Gasoline Blending Components:** Naphthas that will be used for blending or compounding into finished aviation gasoline (e.g., straight run gasoline, alkylate, reformate, benzene, toluene, and xylene). Excludes oxygenates (alcohols, ethers), butane, and pentanes plus.

**Aviation Gasoline, Finished:** A complex mixture of relatively volatile hydrocarbons with or without small quantities of additives, blended to form a fuel suitable for use in aviation reciprocating engines. Fuel specifications are provided in ASTM Specification D 910 and Military Specification MIL-G-5572. *Note:* Data on blending components are not counted in data on finished aviation gasoline.

**Barrel (Petroleum):** A unit of volume equal to 42 U.S. Gallons.

**Base Gas:** The volume of gas needed as a permanent inventory to maintain adequate underground storage reservoir pressures and deliverability rates throughout the withdrawal season. All native gas is included in the base gas volume.

**Biodiesel:** A fuel typically made from soybean, canola, or other vegetable oils; animal fats; and recycled grease. It can serve as a substitute for **petroleum**-derived **diesel fuel** or **distillate fuel oil**. For U.S. Energy Information Administration reporting, it is a fuel composed of mono-alkyl esters of long chain fatty acids derived from vegetable oils or animal fats, designated B100, and meeting the requirements of ASTM (American Society for Testing & Materials) D 6751.

**Biofuels:** Liquid fuels and blending components produced from **biomass** (plant) feedstocks, used primarily for transportation. See **Biodiesel** and **Fuel Ethanol**.

**Biogenic:** Produced by biological processes of living organisms**.** Note: EIA uses the term “biogenic” to refer only to organic nonfossil material of biological origin.

**Biomass:** Organic non-fossil material of biological origin constituting a **renewable energy** source. See **Biodiesel**, **Biofuels**, **Biomass Waste, Fuel Ethanol**, and **Wood and Wood-Derived Fuels.**

**Biomass Waste:** Organic non-fossil material of biological origin that is a byproduct or a discarded product. "Biomass waste" includes municipal solid waste from **biogenic** sources, landfill gas, sludge waste, agricultural crop byproducts, straw, and other **biomass** solids, liquids, and gases; but excludes **wood and wood-derived fuels** (including **black liquor**), **biofuels** feedstock, **biodiesel**, and **fuel ethanol**. **Note:** EIA "biomass waste" data also include energy crops grown specifically for energy production, which would not normally constitute waste.

**Bituminous Coal:** A dense **coal**, usually black, sometimes dark brown, often with well-defined bands of bright and dull material, used primarily as fuel in steam-electric power generation, with substantial quantities also used for heat and power applications in manufacturing and to make **coke**. Bituminous coal is the most abundant coal in active U.S. mining regions. Its moisture content usually is less than 20 percent. The heat content of bituminous coal ranges from 21 to 30 million **Btu** per **short ton** on a moist, mineral-matter-free basis. The heat content of bituminous coal consumed in the United States averages 24 million Btu per short ton, on the as-received basis (i.e., containing both inherent moisture and mineral matter).

**Black Liquor:** A byproduct of the paper production process, alkaline spent liquor, that can be used as a source of energy. Alkaline spent liquor is removed from the digesters in the process of chemically pulping wood. After evaporation, the residual "black" liquor is burned as a fuel in a recovery furnace that permits the recovery of certain basic chemicals.

**British Thermal Unit (Btu):** The quantity of heat required to raise the temperature of 1 pound of liquid water by 1 degree Fahrenheit at the temperature at which water has its greatest density (approximately 39 degrees Fahrenheit). See **Heat Content**.

**Btu:** See **British Thermal Unit.**

**Btu Conversion Factor:** A factor for converting **energy** data between one unit of measurement and **British thermal units (Btu)**. Btu conversion factors are generally used to convert energy data from physical units of measure (such as **barrels**, **cubic feet**, or **short tons**) into the energy-equivalent measure of Btu. (See http://www.eia.doe.gov/emeu/mer/append_a.html for further information on Btu conversion factors.)

**Butane:** A normally gaseous straight-chain or branched-chain hydrocarbon ($C_4H_{10}$). It is extracted from natural gas or refinery gas streams. It includes isobutane and normal butane and is designated in ASTM Specification D1835 and Gas Processors Association Specifications for commercial butane.

*Isobutane*: A normally gaseous branched-chain hydrocarbon. It is a colorless paraffinic gas that boils at a temperature of 10.9º F. It is extracted from natural gas or refinery gas streams.

*Normal Butane*: A normally gaseous straight-chain hydrocarbon. It is a colorless paraffinic gas that boils at a temperature of 31.1º F. It is extracted from natural gas or refinery gas streams.

**Butylene:** An olefinic hydrocarbon ($C_4H_8$) recovered from refinery processes.

**Capacity Factor:** The ratio of the electrical energy produced by a generating unit for a given period of time to the electrical energy that could have been produced at continuous full-power operation during the same period.

**Carbon Dioxide ($CO_2$):** A colorless, odorless, nonpoisonous gas that is a normal part of Earth's atmosphere. Carbon dioxide is a product of **fossil-fuel** combustion as well as other processes. It is considered a **greenhouse gas** as it traps heat (infrared energy) radiated by the Earth into the atmosphere and thereby contributes to the potential for **global warming**. The **global warming potential** (GWP) of other greenhouse gases is measured in relation to that of carbon dioxide, which by international scientific convention is assigned a value of one (1).

**Chained Dollars:** A measure used to express **real prices**. Real prices are those that have been adjusted to remove the effect of changes in the purchasing power of the dollar; they usually reflect buying power relative to a reference year. Prior to 1996, real prices were expressed in constant dollars, a measure based on the weights of goods and services in a single year, usually a recent year. In 1996, the U.S. Department of Commerce introduced the chained-dollar measure. The new measure is based on the average weights of goods and services in successive pairs of years. It is "chained" because the second year in each pair, with its weights, becomes the first year of the next pair. The advantage of using the chained-dollar measure is that it is more closely related to any given period and is therefore subject to less distortion over time.

**CIF:** See **Cost, Insurance, Freight**.

**City Gate:** A point or measuring station at which a distribution gas utility receives gas from a natural gas pipeline company or transmission system.

**Climate Change:** A term used to refer to all forms of climatic inconsistency, but especially to significant change from one prevailing climatic condition to another. In some cases, "climate change" has been used synonymously with the term **"global warming"**; scientists, however, tend to use the term in a wider sense inclusive of natural changes in climate, including climatic cooling.

**Coal:** A readily combustible black or brownish-black rock whose composition, including inherent moisture,

consists of more than 50 percent by weight and more than 70 percent by volume of carbonaceous material. It is formed from plant remains that have been compacted, hardened, chemically altered, and metamorphosed by heat and pressure over geologic time. See **Anthracite, Bituminous Coal**, **Lignite**, **Subbituminous Coal**, **Waste Coal**, and **Coal Synfuel**.

**Coal Coke:** See **Coke, Coal**.

**Coal Stocks:** Coal quantities that are held in storage for future use and disposition. Note: When coal data are collected for a particular reporting period (month, quarter, or year), coal stocks are commonly measured as of the last day of the period.

**Coal Synfuel:** **Coal**-based solid fuel that has been processed by a **coal synfuel plant**; and coal-based fuels such as briquettes, pellets, or extrusions, which are formed from fresh or recycled coal and binding materials.

**Coal Synfuel Plant:** A plant engaged in the chemical transformation of **coal** into **coal synfuel**.

**Coke, Coal:** A solid carbonaceous residue derived from low-ash, low-sulfur bituminous coal from which the volatile constituents are driven off by baking in an oven at temperatures as high as 2,000º F so that the fixed carbon and residual ash are fused together. Coke is used as a fuel and as a reducing agent in smelting iron ore in a blast furnace. Coke (coal) has a heating value of 24.8 million Btu per ton.

**Coke, Petroleum:** A residue high in carbon content and low in hydrogen that is the final product of thermal decomposition in the condensation process in cracking. This product is reported as marketable coke or catalyst coke. The conversion is 5 barrels (42 U.S. gallons each) per short ton. Coke (petroleum) has a heating value of 6.024 million Btu per barrel.

**Coking Coal:** Bituminous coal suitable for making coke. See **Coke, Coal**.

**Combined-Heat-and-Power (CHP) Plant:** A plant designed to produce both heat and electricity from a single heat source. Note: This term is being used in place of the term "cogenerator" that was used by EIA in the past. CHP better describes the facilities because some of the plants included do not produce heat and power in a sequential fashion and, as a result, do not meet the legal definition of cogeneration specified in the Public Utility Regulatory Policies Act (PURPA).

**Commercial Sector:** An energy-consuming sector that consists of service-providing facilities and equipment of: businesses; Federal, State, and local governments; and other private and public organizations, such as religious, social, or fraternal groups. The commercial sector includes institutional living quarters. It also includes sewage treatment facilities. Common uses of energy associated with this sector include space heating, water heating, air conditioning, lighting, refrigeration, cooking, and running a wide variety of other equipment. *Note*: This sector includes generators that produce electricity and/or useful thermal output primarily to support the activities of the above-mentioned commercial establishments. Various EIA programs differ in sectoral coverage-for more information see http://www.eia.doe.gov/neic/datadefinitions/Guideforwebcom.html. See **End-Use Sectors** and **Energy-Use Sectors**.

**Completion:** The installation of permanent equipment for the production of oil or gas. If a well is equipped to produce only oil or gas from one zone or reservoir, the definition of a well (classified as an oil well or gas well) and the definition of a completion are identical. However, if a well is equipped to produce oil and/or gas separately from more than one reservoir, a well is not synonymous with a completion.

**Conventional Gasoline:** Finished motor gasoline not included in the oxygenated or reformulated gasoline categories. *Note*: This category excludes reformulated gasoline blendstock for oxygenate blending (RBOB) as well as other blendstock.

**Conventional Hydroelectric Power:** Hydroelectric power generated from flowing water that is not created by **hydroelectric pumped storage**.

**Conversion Factor:** A factor for converting data between one unit of measurement and another (such as between **short tons** and **British thermal units**, or between **barrels** and gallons). (See http://www.eia.doe.gov/emeu/mer/append_a.html and http://www.eia.doe.gov/emeu/mer/append_b.html for further information on conversion factors.) See **Btu Conversion Factor** and **Thermal Conversion Factor**.

**Cost, Insurance, Freight (CIF):** A sales transaction in which the seller pays for the transportation and insurance of the goods to the port of destination specified by the buyer.

**Crude Oil:** A mixture of hydrocarbons that exists in liquid phase in natural underground reservoirs and remains liquid at atmospheric pressure after passing through surface separating facilities. Depending upon the characteristics of the crude stream, it may also include: 1) small amounts of hydrocarbons that exist in gaseous phase in natural underground reservoirs but are liquid at atmospheric pressure after being recovered from oil well (casinghead) gas in lease separators and are subsequently commingled with the crude stream without being separately measured. Lease condensate recovered as a liquid from natural gas wells in lease or field separation facilities and later mixed into the crude stream is also included; 2) small amounts of nonhydrocarbons produced with the oil, such as sulfur and

various metals; and 3) drip gases, and liquid hydrocarbons produced from tar sands, oil sands, gilsonite, and oil shale.

Liquids produced at natural gas processing plants are excluded. Crude oil is refined to produce a wide array of petroleum products, including heating oils; gasoline, diesel and jet fuels; lubricants; asphalt; ethane, propane, and butane; and many other products used for their energy or chemical content.

**Crude Oil F.O.B. Price:** The crude oil price actually charged at the oil-producing country's port of loading. Includes deductions for any rebates and discounts or additions of premiums, where applicable. It is the actual price paid with no adjustment for credit terms.

**Crude Oil (Including Lease Condensate):** A mixture of hydrocarbons that exists in liquid phase in underground reservoirs and remains liquid at atmospheric pressure after passing through surface separating facilities. Included are lease condensate and liquid hydrocarbons produced from tar sands, gilsonite, and oil shale. Drip gases are also included, but topped crude oil (residual oil) and other unfinished oils are excluded. Where identifiable, liquids produced at natural gas processing plants and mixed with crude oil are likewise excluded.

**Crude Oil Landed Cost:** The price of crude oil at the port of discharge, including charges associated with the purchase, transporting, and insuring of a cargo from the purchase point to the port of discharge. The cost does not include charges incurred at the discharge port (e.g., import tariffs or fees, wharfage charges, and demurrage).

**Crude Oil Refinery Input:** The total crude oil put into processing units at refineries.

**Crude Oil Stocks:** Stocks of crude oil and lease condensate held at refineries, in pipelines, at pipeline terminals, and on leases.

**Crude Oil Used Directly:** Crude oil consumed as fuel by crude oil pipelines and on crude oil leases.

**Crude Oil Well:** A well completed for the production of crude oil from one or more oil zones or reservoirs. Wells producing both crude oil and natural gas are classified as oil wells.

**Cubic Foot (Natural Gas):** A unit of volume equal to 1 cubic foot at a pressure base of 14.73 pounds standard per square inch absolute and a temperature base of 60º F.

**Degree-Day Normals:** Simple arithmetic averages of monthly or annual degree-days over a long period of time (usually the 30-year period 1961-1990). The averages may be simple degree-day normals or population-weighted degree-day normals.

**Degree-Days, Cooling (CDD):** A measure of how warm a location is over a period of time relative to a base temperature, most commonly specified as 65 degrees Fahrenheit. The measure is computed for each day by subtracting the base temperature (65 degrees) from the average of the day's high and low temperatures, with negative values set equal to zero. Each day's cooling degree-days are summed to create a cooling degree-day measure for a specified reference period. Cooling degree-days are used in energy analysis as an indicator of air conditioning energy requirements or use.

**Degree-Days, Heating (HDD):** A measure of how cold a location is over a period of time relative to a base temperature, most commonly specified as 65 degrees Fahrenheit. The measure is computed for each day by subtracting the average of the day's high and low temperatures from the base temperature (65 degrees), with negative values set equal to zero. Each day's heating degree-days are summed to create a heating degree-day measure for a specified reference period. Heating degree-days are used in energy analysis as an indicator of space heating energy requirements or use.

**Degree-Days, Population-Weighted:** Heating or cooling degree-days weighted by the population of the area in which the degree-days are recorded. To compute State population-weighted degree-days, each State is divided into from one to nine climatically homogeneous divisions, which are assigned weights based on the ratio of the population of the division to the total population of the State. Degree-day readings for each division are multiplied by the corresponding population weight for each division and those products are then summed to arrive at the State population-weighted degree-day figure. To compute national population-weighted degree-days, the Nation is divided into nine Census regions, each comprising from three to eight States, which are assigned weights based on the ratio of the population of the region to the total population of the Nation. Degree-day readings for each region are multiplied by the corresponding population weight for each region and those products are then summed to arrive at the national population-weighted degree-day figure.

**Denaturant: Petroleum**, typically **pentanes plus** or **conventional motor gasoline**, added to **fuel ethanol** to make it unfit for human consumption. Fuel ethanol is denatured, usually prior to transport from the ethanol production facility, by adding 2 to 5 volume percent denaturant. See **Fuel Ethanol** and **Fuel Ethanol Minus Denaturant**.

**Design Electrical Rating, Net:** The nominal net electrical output of a nuclear unit as specified by the electric utility for the purpose of plant design.

**Development Well:** A well drilled within the proved area of an oil or gas reservoir to the depth of a stratigraphic horizon known to be productive.

**Diesel Fuel:** A fuel composed of **distillate fuel oils** obtained in petroleum refining operation or blends of such distillate fuel oils with **residual fuel oil** used in motor vehicles. The boiling point and specific gravity are higher for diesel fuels than for gasoline.

**Direct Use:** Use of electricity that 1) is self-generated, 2) is produced by either the same entity that consumes the power or an affiliate, and 3) is used in direct support of a service or industrial process located within the same facility or group of facilities that house the generating equipment. Direct use is exclusive of **station use**.

**Distillate Fuel Oil:** A general classification for one of the **petroleum** fractions produced in conventional distillation operations. It includes **diesel fuels** and fuel oils. Products known as No. 1, No. 2, and No. 4 diesel fuel are used in on-highway diesel engines, such as those in trucks and automobiles, as well as off-highway engines, such as those in railroad locomotives and agricultural machinery. Products known as No. 1, No. 2, and No. 4 fuel oils are used primarily for space heating and **electricity generation**.

**Dry Hole:** An exploratory or development well found to be incapable of producing either oil or gas in sufficient quantities to justify completion as an oil or gas well.

**Dry Natural Gas Production:** See **Natural Gas (Dry) Production**.

**E85:** A fuel containing a mixture of 85 percent **ethanol** and 15 percent **motor gasoline**.

**Electric Power Plant:** A station containing prime movers, electric generators, and auxiliary equipment for converting mechanical, chemical, and/or fission energy into electric energy.

**Electric Power Sector:** An energy-consuming sector that consists of electricity-only and combined-heat-and-power (CHP) plants whose primary business is to sell electricity, or electricity and heat, to the public-i.e., North American Industry Classification System 22 plants. See also **Combined-Heat-and-Power (CHP) Plant**, **Electricity-Only Plant**, **Electric Utility**, and **Independent Power Producer**.

**Electric Utility:** Any entity that generates, transmits, or distributes **electricity** and recovers the cost of its generation, transmission or distribution assets and operations, either directly or indirectly, through cost-based rates set by a separate regulatory authority (e.g., State Public Service Commission), or is owned by a governmental unit or the consumers that the entity serves. Examples of these entities include: investor-owned entities, public power districts, public utility districts, municipalities, rural electric cooperatives, and State and Federal agencies. Electric utilities may have Federal Energy Regulatory Commission approval for interconnection agreements and wholesale trade tariffs covering either cost-of-service and/or market-based rates under the authority of the Federal Power Act. See **Electric Power Sector**.

**Electrical System Energy Losses:** The amount of energy lost during generation, transmission, and distribution of electricity, including plant and unaccounted-for uses.

**Electricity:** A form of energy characterized by the presence and motion of elementary charged particles generated by friction, induction, or chemical change.

**Electricity Generation:** The process of producing electric energy, or the amount of electric energy produced by transforming other forms of energy, commonly expressed in **kilowatthours** (kWh) or megawatthours (Mwh).

**Electricity Generation, Gross:** The total amount of electric energy produced by generating units and measured at the generating terminal in **kilowatthours** (kWh) or megawatthours (MWh).

**Electricity Generation, Net:** The amount of **gross electricity generation** less **station use** (the **electric energy** consumed at the generating station(s) for station service or auxiliaries). *Note*: Electricity required for pumping at **hydroelectric pumped-storage** plants is regarded as electricity for station service and is deducted from gross generation.

**Electricity-Only Plant:** A plant designed to produce electricity only. See also **Combined-Heat-and-Power (CHP) Plant**.

**Electricity Retail Sales:** The amount of electricity sold to customers purchasing electricity for their own use and not for resale.

**End-Use Sectors:** The **residential**, **commercial**, **industrial**, and **transportation** sectors of the economy.

**Energy:** The capacity for doing work as measured by the capability of doing work (potential energy) or the conversion of this capability to motion (kinetic energy). Energy has several forms, some of which are easily convertible and can be changed to another form useful for work. Most of the world's convertible energy comes from fossil fuels that are burned to produce heat that is then used as a transfer medium to mechanical or other means in order to accomplish tasks. Electrical energy is usually measured in kilowatthours, while heat energy is usually measured in British thermal units.

**Energy Consumption:** The use of energy as a source of heat or power or as an input in the manufacturing process.

**Energy Service Provider:** An energy entity that provides service to a retail or end-use customer.

**Energy-Use Sectors:** A group of major energy-consuming components of U.S. society developed to measure and

analyze energy use. The sectors most commonly referred to in EIA are: **residential**, **commercial**, **industrial**, **transportation**, and **electric power**.

**Ethane:** A normally gaseous straight-chain hydrocarbon ($C_2H_6$). It is a colorless, paraffinic gas that boils at a temperature of -127.48º F. It is extracted from natural gas and refinery gas streams.

**Ethanol ($C_2H_5OH$):** A clear, colorless, flammable **alcohol**. Ethanol is typically produced biologically from **biomass** feedstocks such as agricultural crops and cellulosic residues from agricultural crops or wood. Ethanol can also be produced chemically from **ethylene**. See **Biomass**, **Fuel Ethanol**, and **Fuel Ethanol Minus Denaturant**.

**Ethylene:** An olefinic hydrocarbon (C2H4) recovered from refinery processes or petrochemical processes.

**Exploratory Well:** A well drilled to find and produce oil or gas in an area previously considered an unproductive area, to find a new reservoir in a known field (i.e., one previously found to be producing oil or gas in another reservoir), or to extend the limit of a known oil or gas reservoir.

**Exports:** Shipments of goods from within the 50 States and the District of Columbia to U.S. possessions and territories or to foreign countries.

**Extraction Loss:** The reduction in volume of natural gas due to the removal of natural gas liquid constituents, such as ethane, propane, and butane, at natural gas processing plants.

**Federal Energy Administration (FEA):** A predecessor of the U.S. Energy Information Administration.

**Federal Energy Regulatory Commission (FERC):** The Federal agency with jurisdiction over interstate electricity sales, wholesale electric rates, hydroelectric licensing, natural gas pricing, oil pipeline rates, and gas pipeline certification. FERC is an independent regulatory agency within the U.S. Department of Energy and is the successor to the Federal Power Commission.

**Federal Power Commission (FPC):** The predecessor agency of the Federal Energy Regulatory Commission. The Federal Power Commission was created by an Act of Congress under the Federal Water Power Act on June 10, 1920. It was charged originally with regulating the electric power and natural gas industries. It was abolished on September 30, 1977, when the U.S. Department of Energy was created. Its functions were divided between the U.S. Department of Energy and the Federal Energy Regulatory Commission, an independent regulatory agency.

**First Purchase Price:** The price for domestic crude oil reported by the company that owns the crude oil the first time it is removed from the lease boundary.

**Flared Natural Gas:** Natural gas burned in flares on the base site or at gas processing plants.

**F.O.B. (Free on Board):** A sales transaction in which the seller makes the product available for pick up at a specified port or terminal at a specified price and the buyer pays for the subsequent transportation and insurance.

**Footage Drilled:** Total footage for wells in various categories, as reported for any specified period, includes (1) the deepest total depth (length of well bores) of all wells drilled from the surface, (2) the total of all bypassed footage drilled in connection with reported wells, and (3) all new footage drilled for directional sidetrack wells. Footage reported for directional sidetrack wells does not include footage in the common bore, which is reported as footage for the original well. In the case of old wells drilled deeper, the reported footage is that which was drilled below the total depth of the old well.

**Former U.S.S.R.:** See **Union of Soviet Socialist Republics (U.S.S.R.).**

**Fossil Fuel:** An energy source formed in the Earth's crust from decayed organic material, such as **petroleum**, **coal**, and **natural gas**.

**Fossil-Fueled Steam-Electric Power Plant:** An electricity generation plant in which the prime mover is a turbine rotated by high-pressure steam produced in a boiler by heat from burning fossil fuels.

**Fuel Ethanol: Ethanol** intended for fuel use. Fuel ethanol in the United States must be anhydrous (less than 1 percent water). Fuel ethanol is denatured (made unfit for human consumption), usually prior to transport from the ethanol production facility, by adding 2 to 5 volume percent petroleum, typically **pentanes plus** or **conventional motor gasoline**. Fuel ethanol is used principally for blending in low concentrations with **motor gasoline** as an **oxygenate** or octane enhancer. In high concentrations, it is used to fuel **alternative-fuel vehicles** specially designed for its use. See **Alternative-Fuel Vehicle**, **Denaturant**, **E85**, **Ethanol**, **Fuel Ethanol Minus Denaturant**, and **Oxygenates**.

**Fuel Ethanol Minus Denaturant:** An unobserved quantity of anhydrous, **biomass**-derived, undenatured **ethanol** for fuel use. The quantity is obtained by subtracting the estimated **denaturant** volume from **fuel ethanol** volume. Fuel ethanol minus denaturant is counted as **renewable energy**, while denaturant is counted as **nonrenewable fuel**. See **Denaturant**, **Ethanol**, **Fuel Ethanol**, **Nonrenewable Fuels**, **Oxygenates**, and **Renewable Energy**.

**Full-Power Operation:** Operation of a nuclear generating unit at 100 percent of its design capacity. Full-power operation precedes commercial operation.

**Gasohol:** A blend of finished motor gasoline containing alcohol (generally **ethanol** but sometimes methanol) at a concentration between 5.7 percent and 10 percent by volume. See **Motor Gasoline, Oxygenated**.

**Gas Well:** A well completed for the production of natural gas from one or more gas zones or reservoirs. (Wells producing both crude oil and natural gas are classified as oil wells.)

**Geothermal Energy:** Hot water or steam extracted from geothermal reservoirs in the earth's crust and used for geothermal heat pumps, water heating, or electricity generation.

**Global Warming:** An increase in the near-surface temperature of the Earth. Global warming has occurred in the distant past as the result of natural influences, but the term is today most often used to refer to the warming some scientists predict will occur as a result of increased **anthropogenic** emissions of **greenhouse gases**. See **Climate Change**.

**Global Warming Potential (GWP):** An index used to compare the relative radiative forcing of different gases without directly calculating the changes in atmospheric concentrations. GWPs are calculated as the ratio of the radiative forcing that would result from the emission of one kilogram of a **greenhouse gas** to that from the emission of one kilogram of **carbon dioxide** over a fixed period of time, such as 100 years.

**Greenhouse Gases:** Those gases, such as water vapor, **carbon dioxide**, nitrous oxide, **methane**, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulfur hexafluoride, that are transparent to solar (short-wave) radiation but opaque to long-wave (infrared) radiation, thus preventing long-wave radiant energy from leaving Earth's atmosphere. The net effect is a trapping of absorbed radiation and a tendency to warm the planet's surface.

**Gross Domestic Product (GDP):** The total value of goods and services produced by labor and property located in the United States. As long as the labor and property are located in the United States, the supplier (that is, the workers and, for property, the owners) may be either U.S. residents or residents of foreign countries.

**GT/IC:** Gas turbine and internal combustion plants.

**Heat Content:** The amount of heat energy available to be released by the transformation or use of a specified physical unit of an energy form (e.g., a ton of coal, a barrel of oil, a kilowatthour of electricity, a cubic foot of natural gas, or a pound of steam). The amount of heat energy is commonly expressed in **British thermal units (Btu)**. *Note*: Heat content of combustible energy forms can be expressed in terms of either gross heat content (higher or upper heating value) or net heat content (lower heating value), depending upon whether or not the available heat energy includes or excludes the energy used to vaporize water (contained in the original energy form or created during the combustion process). The U.S. Energy Information Administration typically uses gross heat content values.

**Heat Rate:** A measure of generating station thermal efficiency commonly stated as **Btu** per **kilowatthour**. *Note:* Heat rates can be expressed as either gross or net heat rates, depending whether the electricity output is gross or net generation. Heat rates are typically expressed as net heat rates.

**Hydrocarbon:** An organic chemical compound of hydrogen and carbon in the gaseous, liquid, or solid phase. The molecular structure of hydrocarbon compounds varies from the simplest (methane, the primary constituent of natural gas) to the very heavy and very complex.

**Hydroelectric Power:** The production of electricity from the kinetic energy of falling water.

**Hydroelectric Power Plant:** A plant in which the turbine generators are driven by falling water.

**Hydroelectric Pumped Storage:** Hydroelectricity that is generated during peak load periods by using water previously pumped into an elevated storage reservoir during off-peak periods when excess generating capacity is available to do so. When additional generating capacity is needed, the water can be released from the reservoir through a conduit to turbine generators located in a power plant at a lower level.

**Hydrogen (H):** The lightest of all gases, hydrogen occurs chiefly in combination with oxygen in water. It also exists in acids, bases, **alcohols**, **petroleum**, and other **hydrocarbons**.

**Imports:** Receipts of goods into the 50 States and the District of Columbia from U.S. possessions and territories or from foreign countries.

**Independent Power Producer:** A corporation, person, agency, authority, or other legal entity or instrumentality that owns or operates facilities for the generation of electricity for use primarily by the public, and that is not an **electric utility**.

**Industrial Sector:** An **energy**-consuming sector that consists of all facilities and equipment used for producing, processing, or assembling goods. The industrial sector encompasses the following types of activity: manufacturing (**NAICS** codes 31-33); agriculture, forestry, fishing and hunting (NAICS code 11); mining, including oil and gas extraction (NAICS code 21); and construction (NAICS code 23). Overall energy use in this sector is largely for process heat and cooling and powering machinery, with lesser amounts used for facility heating, air conditioning, and lighting. Fossil fuels are also used as raw material inputs to manufactured products. *Note:* This sector includes **generators** that produce **electricity** and/or **useful thermal output** primarily to support the above-mentioned industrial activities. Various EIA programs

differ in sectoral coverage-for more information see http://www.eia.doe.gov/neic/datadefinitions/Guideforwebind.htm. See **End-Use Sectors** and **Energy-Use Sectors**.

**Injections (Natural Gas):** Natural gas injected into storage reservoirs.

**Isobutane:** A normally gaseous branch-chain hydrocarbon. It is a colorless paraffinic gas that boils at a temperature of 10.9° F. It is extracted from natural gas or refinery gas streams. See **Butane**.

**Isobutylene:** An olefinic hydrocarbon recovered from refinery processes or petrochemical processes.

**Isopentane:** A saturated branched-chain hydrocarbon obtained by fractionation of natural gasoline or isomerization of normal pentane.

**Jet Fuel:** A refined petroleum product used in jet aircraft engines. It includes kerosene-type jet fuel and naphtha-type jet fuel.

**Jet Fuel, Kerosene-Type:** A kerosene-based product with a maximum distillation temperature of 400° F at the 10-percent recovery point and a final maximum boiling point of 572° F. Fuel specifications are provided in ASTM Specification D 1655 and Military Specifications MIL-T-5624P and MIL-T-83133D (Grades JP-5 and JP-8). It isused primarily for commercial turbojet and turboprop aircraft engines.

**Jet Fuel, Naphtha-Type:** A fuel in the heavy naphtha boiling range, with an average gravity of 52.8 degrees API, 20 to 90 percent distillation temperatures of 290° to 470° F and meeting Military Specification MIL-T-5624L (Grade JP-4). It is used by the military for turbojet and turboprop engines.

**Kerosene:** A petroleum distillate having a maximum distillation temperature of 401º F at the 10-percent recovery point, a final boiling point of 572º F, and a minimum flash point of 100º F. Included are the two grades designated in ASTM D3699 (No. 1-K and No. 2-K) and all grades of kerosene called range or stove oil. Kerosene is used in space heaters, cook stoves, and water heaters; it is suitable for use as an illuminant when burned in wick lamps.

**Kilowatt:** A unit of electrical power equal to 1,000 **watts**.

**Kilowatthour (kWh):** A measure of electricity defined as a unit of work or energy, measured as 1 **kilowatt** (1,000 **watts**) of power expended for 1 hour. One kilowatthour is equivalent to 3,412 Btu. See **Watthour**.

**Landed Costs:** The dollar-per-barrel price of crude oil at the port of discharge. Included are the charges associated with the purchase, transporting, and insuring of a cargo from the purchase point to the port of discharge. Not included are charges incurred at the discharge port (e.g., import tariffs or fees, wharfage charges, and demurrage charges).

**Lease and Plant Fuel:** Natural gas used in well, field, and lease operations (such as gas used in drilling operations, heaters, dehydrators, and field compressors) and used as fuel in natural gas processing plants.

**Lease Condensate:** A mixture consisting primarily of pentanes and heavier hydrocarbons, which is recovered as a liquid from natural gas in lease or field separation facilities. Note: This category excludes natural gas liquids, such as butane and propane, which are recovered at natural gas processing plants or facilities.

**Lignite:** The lowest rank of **coal**, often referred to as brown coal, used almost exclusively as fuel for steam-electric power generation. It is brownish-black and has a high inherent moisture content, sometimes as high as 45 percent. The heat content of lignite ranges from 9 to 17 million **Btu** per **short ton** on a moist, mineral-matter-free basis. The heat content of lignite consumed in the United States averages 13 million Btu per short ton, on the as-received basis (i.e., containing both inherent moisture and mineral matter).

**Liquefied Natural Gas (LNG):** Natural gas (primarily methane) that has been liquefied by reducing its temperature to -260º F at atmospheric pressure.

**Liquefied Petroleum Gases (LPG):** Ethane, ethylene, propane, propylene, normal butane, butylene, and isobutane produced at refineries or natural gas processing plants, including plants that fractionate new natural gas plant liquids.

**Low-Power Testing:** The period of time between a nuclear generating unit's initial fuel loading date and the issuance of its operating (full-power) license. The maximum level of operation during that period is 5 percent of the unit's design thermal rating.

**Lubricants:** Substances used to reduce friction between bearing surfaces or as process materials either incorporated into other materials used as processing aids in the manufacturing of other products or as carriers of other materials. Petroleum lubricants may be produced either from distillates or residues. Other substances may be added to impart or improve certain required properties. Excluded are byproducts of lubricating oil refining, such as aromatic extracts derived from solvent extraction or tars derived from deasphalting. Included are all grades of lubricating oils from spindle oil to cylinder oil and those used in greases. Lubricant categories are paraffinic and naphthenic.

**Marketed Production (Natural Gas):** Gross withdrawals less gas used for repressuring, quantities vented and flared, and nonhydrocarbon gases removed in treating or

processing operations. Includes all quantities of gas used in field and processing operations.

**Methane:** A colorless, flammable, odorless, hydrocarbon gas ($CH_4$) that is the principal constituent of natural gas. It is also an important source of hydrogen in various industrial processes.

**Methyl Tertiary Butyl Ether (MTBE):** An ether, $(CH_3)_3COCH_3$, intended for motor gasoline blending. See **Oxygenates**.

**Methanol:** A light, volatile alcohol ($CH_3OH$) eligible for motor gasoline blending. See **Oxygenates**.

**Miscellaneous Petroleum Products:** All finished petroleum products not classified elsewhere-for example, petrolatum, lube refining byproducts (aromatic extracts and tars), absorption oils, ram-jet fuel, petroleum rocket fuels, synthetic natural gas feedstocks, and specialty oils.

**Motor Gasoline Blending:** Mechanical mixing of **motor gasoline blending components** and **oxygenates** as required, to produce finished motor gasoline. Finished motor gasoline may be further mixed with other motor gasoline blending components or oxygenates, resulting in increased volumes of finished motor gasoline and/or changes in the formulation of finished motor gasoline (e.g., conventional motor gasoline mixed with MTBE to produce oxygenated motor gasoline).

**Motor Gasoline Blending Components:** Naphtha (e.g., straight-run gasoline, alkylate, reformate, benzene, toluene, xylene) used for blending or compounding into finished motor gasoline. These components include reformulated gasoline blendstock (RBOB) but exclude oxygenates (alcohols, ethers), butane, and pentanes plus. *Note*: oxygenates are reported as individual components and are included in the total for other hydrocarbons, hydrogens, and oxygenates.

**Motor Gasoline, Finished:** A complex mixture of relatively volatile hydrocarbons with or without small quantities of additives, blended to form a fuel suitable for use in spark-ignition. Motor gasoline, as defined in ASTM Specification D-4814 or Federal Specification VV-G-1690C, is characterized as having a boiling range of 122ºF to 158ºF at the 10-percent recovery point to 365ºF to 374ºF at the 90-percent recovery point. "Motor gasoline" includes conventional gasoline, all types of oxygenated gasoline including gasohol, and reformulated gasoline, but excludes aviation gasoline. Note: Volumetric data on blending components, as well as oxygenates, are not counted in data on finished motor gasoline until the blending components are blended into the gasoline.

**Motor Gasoline Grades:** The classification of gasoline by octane ratings. Each type of gasoline (conventional, oxygenated, and reformulated) is classified by three grades: regular, midgrade, and premium. *Note*: Gasoline sales are reported by grade in accordance with their classification at the time of sale. In general, automotive octane requirements are lower at high altitudes. Therefore, in some areas of the United States, such as the Rocky Mountain States, the octane ratings for the gasoline grades may be 2 or more octane points lower.

*Regular Gasoline*: Gasoline having an antiknock index, i.e., octane rating, greater than or equal to 85 and less than 88. Note: Octane requirements may vary by altitude. See **Motor Gasoline Grades**.

*Midgrade Gasoline*: Gasoline having an antiknock index, i.e., octane rating, greater than or equal to 88 and less than or equal to 90. Note: Octane requirements may vary by altitude. See **Motor Gasoline Grades**.

*Premium Gasoline*: Gasoline having an antiknock index, i.e., octane rating, greater than 90. Note: Octane requirements may vary by altitude. See **Motor Gasoline Grades**.

**Motor Gasoline, Oxygenated:** Finished motor gasoline, other than reformulated gasoline, having an oxygen content of 2.7 percent or higher by weight and required by the U.S. Environmental Protection Agency (EPA) to be sold in areas designated by EPA as carbon monoxide (CO) nonattainment areas. Note: Oxygenated gasoline excludes oxygenated fuels program reformulated gasoline (OPRG) and reformulated gasoline blendstock for oxygenate blending (RBOB). Data on gasohol that has at least 2.7 percent oxygen, by weight, and is intended for sale inside CO nonattainment areas are included in data on oxygenated gasoline. Other data on gasohol are included in data on conventional gasoline.

**Motor Gasoline, Reformulated:** Finished motor gasoline formulated for use in motor vehicles, the composition and properties of which meet the requirements of the reformulated gasoline regulations promulgated by the U.S. Environmental Protection Agency under Section 211(k) of the Clean Air Act. Note: This category includes oxygenated fuels program reformulated gasoline (OPRG) but excludes reformulated gasoline blendstock for oxygenate blending (RBOB).

**Motor Gasoline Retail Prices:** Motor gasoline prices calculated each month by the Bureau of Labor Statistics (BLS) in conjunction with the construction of the Consumer Price Index (CPI). Those prices are collected in 85 urban areas selected to represent all urban consumers-about 80 percent of the total U.S. population. The service stations are selected initially, and on a replacement basis, in such a way that they represent the purchasing habits of the CPI population. Service stations in the current sample include those providing all types of service (i.e., full-, mini-, and self-service.

**Motor Gasoline (Total):** For stock level data, a sum including finished motor gasoline stocks plus stocks of motor gasoline blending components but excluding stocks of oxygenates.

**MTBE:** See **Methyl Tertiary Butyl Ether**.

**NAICS (North American Industry Classification System):** A coding system developed jointly by the United States, Canada, and Mexico to classify businesses and industries according to the type of economic activity in which they are engaged. NAICS replaces the Standard Industrial Classification (SIC) codes. For additional information on NAICS, go to http://www.census.gov/epcd/www/naics.html.

**Naphtha:** A generic term applied to a petroleum fraction with an approximate boiling range between 122 and 400° F.

**Natural Gas:** A gaseous mixture of hydrocarbon compounds, primarily methane, used as a fuel for electricity generation and in a variety of ways in buildings, and as raw material input and fuel for industrial processes.

**Natural Gas, Dry:** Natural gas which remains after: 1) the liquefiable hydrocarbon portion has been removed from the gas stream (i.e., gas after lease, field, and/or plant separation); and 2) any volumes of nonhydrocarbon gases have been removed where they occur in sufficient quantity to render the gas unmarketable. *Note:* Dry natural gas is also known as consumer-grade natural gas. The parameters for measurement are cubic feet at 60 degrees Fahrenheit and 14.73 pounds per square inch absolute.

**Natural Gas (Dry) Production:** The process of producing consumer-grade natural gas. Natural gas withdrawn from reservoirs is reduced by volumes used at the production (lease) site and by processing losses. Volumes used at the production site include 1) the volume returned to reservoirs in cycling, repressuring of oil reservoirs, and conservation operations; and 2) gas vented and flared. Processing losses include 1) nonhydrocarbon gases (e.g., water vapor, carbon dioxide, helium, hydrogen sulfide, and nitrogen) removed from the gas stream; and 2) gas converted to liquid form, such as lease condensate and plant liquids. Volumes of dry gas withdrawn from gas storage reservoirs are not considered part of production. Dry natural gas production equals marketed production less extraction loss.

**Natural Gas Marketed Production:** Gross withdrawals of natural gas from production reservoirs, less gas used for reservoir repressuring; nonhydrocarbon gases removed in treating and processing operations; and quantities vented and flared.

**Natural Gas Plant Liquids (NGPL):** Natural gas liquids recovered from natural gas in processing plants and, in some situations, from natural gas field facilities, as well as those extracted by fractionators. Natural gas plant liquids are defined according to the published specifications of the Gas Processors Association and the American Society for Testing and Material as follows: ethane, propane, normal butane, isobutane, pentanes plus, and other products from natural gas processing plants (i.e., products meeting the standards for finished petroleum products produced at natural gas processing plants, such as finished motor gasoline, finished aviation gasoline, special naphthas, kerosene, distillate fuel oil, and miscellaneous products).

**Natural Gas Wellhead Price:** The wellhead price of natural gas is calculated by dividing the total reported value at the wellhead by the total quantity produced as reported by the appropriate agencies of individual producing States and the U.S. Minerals Management Service. The price includes all costs prior to shipment from the lease, including gathering and compression costs, in addition to State production, severance, and similar charges.

**Natural Gasoline:** A mixture of hydrocarbons (mostly pentanes and heavier) extracted from natural gas that meets vapor pressure, end-point, and other specifications for natural gasoline set by the Gas Processors Association. Includes isopentane, which is a saturated branch-chain hydrocarbon obtained by fractionation of natural gasoline or isomerization of normal pentane.

**Net Summer Capacity:** The maximum output, commonly expressed in **kilowatts** (kW) or megawatts (MW), that generating equipment can supply to system load, as demonstrated by a multi-hour test, at the time of summer peak demand (period of June 1 through September 30). This output reflects a reduction in capacity due to electricity use for station service or auxiliaries.

**Neutral Zone:** A 6,200 square-mile area shared equally between Kuwait and Saudi Arabia under a 1992 agreement. The Neutral Zone contains an estimated 5 billion barrels of oil and 8 trillion cubic feet of natural gas.

**Nominal Dollars:** A measure used to express **nominal price**.

**Nominal Price:** The price paid for a product or service at the time of the transaction. Nominal prices are those that have not been adjusted to remove the effect of changes in the purchasing power of the dollar; they reflect buying power in the year in which the transaction occurred.

**Non-Biomass Waste:** Material of non-biological origin that is a byproduct or a discarded product. "Non-biomass waste" includes municipal solid waste from non-biogenic sources**,** such as plastics, and tire-derived fuels.

**Nonhydrocarbon Gases:** Typical nonhydrocarbon gases that may be present in reservoir natural gas are carbon dioxide, helium, hydrogen sulfide, and nitrogen.

**Nonrenewable Fuels:** Fuels that cannot be easily made or "renewed," such as **crude oil**, **natural gas**, and **coal**.

**Nuclear Electric Power (Nuclear Power):** Electricity generated by the use of the thermal energy released from the fission of nuclear fuel in a reactor.

**Nuclear Electric Power Plant:** A single-unit or multiunit facility in which heat produced in one or more reactors by the fissioning of nuclear fuel is used to drive one or more steam turbines.

**Nuclear Reactor:** An apparatus in which a nuclear fission chain reaction can be initiated, controlled, and sustained at a specific rate. A reactor includes fuel (fissionable material), moderating material to control the rate of fission, a heavy-walled pressure vessel to house reactor components, shielding to protect personnel, a system to conduct heat away from the reactor, and instrumentation for monitoring and controlling the reactor's systems.

**OECD:** See **Organization for Economic Cooperation and Development**.

**Offshore:** That geographic area that lies seaward of the coastline. In general, the coastline is the line of ordinary low water along with that portion of the coast that is in direct contact with the open sea or the line marking the seaward limit of inland water.

**Oil:** See **Crude Oil**.

**OPEC:** See **Organization of the Petroleum Exporting Countries.**

**Operable Unit (Nuclear):** In the United States, a nuclear generating unit that has completed low-power testing and been issued a full-power operating license by the Nuclear Regulatory Commission, or equivalent permission to operate.

**Organization for Economic Cooperation and Development (OECD):** Members are Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovakia, South Korea, Spain, Sweden, Switzerland, Turkey, United Kingdom, and United States and its territories (Guam, Puerto Rico, and the Virgin Islands).

**Organization of the Petroleum Exporting Countries (OPEC):** An intergovernmental organization whose stated objective is to "coordinate and unify the petroleum policies of member countries." It was created at the Baghdad Conference on September 10–14, 1960. Current members (with years of membership) include Algeria (1969–present), Angola (2007–present), Ecuador (1973–1992 and 2007–present), Iran (1960–present), Iraq (1960–present), Kuwait (1960–present), Libya (1962–present), Nigeria (1971–present), Qatar (1961–present), Saudi Arabia (1960–present), United Arab Emirates (1967–present), and Venezuela (1960–present). Countries no longer members of OPEC include Gabon (1975–1994) and Indonesia (1962–2008).

**Oxygenates:** Substances which, when added to gasoline, increase the amount of oxygen in that gasoline blend. **Ethanol, Methyl Tertiary Butyl Ether (MTBE),** Ethyl Tertiary Butyl Ether (ETBE), and methanol are common oxygenates.

**PAD Districts:** Petroleum Administration for Defense Districts. Geographic aggregations of the 50 States and the District of Columbia into five districts for the Petroleum Administration for Defense in 1950. The districts were originally instituted for economic and geographic reasons as Petroleum Administration for War (PAW) Districts, which were established in 1942.

**Pentanes Plus:** A mixture of hydrocarbons, mostly pentanes and heavier, extracted from natural gas. Includes isopentane, natural gasoline, and plant condensate.

**Petrochemical Feedstocks:** Chemical feedstocks derived from petroleum principally for the manufacture of chemicals, synthetic rubber, and a variety of plastics.

**Petroleum:** A broadly defined class of liquid hydrocarbon mixtures. Included are crude oil, lease condensate, unfinished oils, refined products obtained from the processing of crude oil, and natural gas plant liquids. Note: Volumes of finished petroleum products include nonhydrocarbon compounds, such as additives and detergents, after they have been blended into the products.

**Petroleum Coke:** See **Coke, Petroleum**.

**Petroleum Consumption:** See **Products Supplied (Petroleum).**

**Petroleum Imports:** Imports of petroleum into the 50 States and the District of Columbia from foreign countries and from Puerto Rico, the Virgin Islands, and other U.S. territories and possessions. Included are imports for the Strategic Petroleum Reserve and withdrawals from bonded warehouses for onshore consumption, offshore bunker use, and military use. Excluded are receipts of foreign petroleum into bonded warehouses and into U.S. territories and U.S. Foreign Trade Zones.

**Petroleum Products:** Products obtained from the processing of crude oil (including lease condensate), natural gas, and other hydrocarbon compounds. Petroleum products include unfinished oils, liquefied petroleum gases, pentanes plus, aviation gasoline, motor gasoline, naphtha-type jet fuel, kerosene-type jet fuel, kerosene, distillate fuel oil, residual fuel oil, petrochemical feedstocks, special naphthas, lubricants, waxes, petroleum coke, asphalt, road oil, still gas, and miscellaneous products.

**Petroleum Stocks, Primary:** For individual products, quantities that are held at refineries, in pipelines, and at bulk terminals that have a capacity of 50,000 barrels or more, or that are in transit thereto. Stocks held by product retailers and resellers, as well as tertiary stocks held at the point of consumption, are excluded. Stocks of individual products held at gas processing plants are excluded from individual product estimates but are included in other oils estimates and total.

**Photovoltaic Energy:** Direct-current electricity generated from sunlight through solid-state semiconductor devices that have no moving parts.

**Pipeline Fuel:** Gas consumed in the operation of pipelines, primarily in compressors.

**Plant Condensate:** One of the natural gas liquids, mostly pentanes and heavier hydrocarbons, recovered and separated as liquid at gas inlet separators or scrubbers in processing plants.

**Primary Energy:** **Energy** in the form that it is first accounted for in a statistical energy balance, before any transformation to secondary or tertiary forms of energy. For example, **coal** can be converted to synthetic gas, which can be converted to **electricity**; in this example, coal is primary energy, synthetic gas is secondary energy, and electricity is tertiary energy. See **Primary Energy Production** and **Primary Energy Consumption**.

**Primary Energy Consumption:** Consumption of **primary energy**. (Energy sources that are produced from other energy sources—e.g., **coal coke** from **coal**—are included in primary energy consumption only if their energy content has not already been included as part of the original energy source. Thus, U.S. primary energy consumption does include net imports of coal coke, but not the coal coke produced from domestic coal.) The U.S. Energy Information Administration includes the following in U.S. primary energy consumption: coal consumption; coal coke net imports; **petroleum consumption** (**petroleum products supplied**, including **natural gas plant liquids** and **crude oil** burned as fuel); **dry natural gas**—excluding **supplemental gaseous fuels**—consumption; **nuclear electricity net generation** (converted to **Btu** using the nuclear plants **heat rate**); **conventional hydroelectricity** net generation (converted to Btu using the fossil-fueled plants heat rate); **geothermal** electricity net generation (converted to Btu using the geothermal plants heat rate), and geothermal heat pump energy and geothermal direct use energy; **solar thermal** and **photovoltaic** electricity net generation (converted to Btu using the fossil-fueled plants heat rate), and solar thermal direct use energy; **wind** electricity net generation (converted to Btu using the fossil-fueled plants heat rate); **wood and wood-derived fuels** consumption; **biomass waste** consumption; **fuel ethanol** and **biodiesel** consumption; losses and co-products from the production of fuel ethanol and biodiesel; and electricity net imports (converted to Btu using the electricity heat content of 3,412 Btu per kilowatthour).

**Primary Energy Production:** Production of **primary energy**. The U.S. Energy Information Administration includes the following in U.S. primary energy production: **coal** production, **waste coal** supplied, and coal refuse recovery; **crude oil** and **lease condensate** production; **natural gas plant liquids** production; **dry natural gas**—excluding **supplemental gaseous fuels**—production; **nuclear electricity net generation** (converted to **Btu** using the nuclear plants **heat rate**); **conventional hydroelectricity** net generation (converted to Btu using the fossil-fueled plants heat rate); **geothermal** electricity net generation (converted to Btu using the geothermal plants heat rate), and geothermal heat pump energy and geothermal direct use energy; **solar thermal** and **photovoltaic** electricity net generation (converted to Btu using the fossil-fueled plants heat rate), and solar thermal direct use energy; **wind** electricity net generation (converted to Btu using the fossil-fueled plants heat rate); **wood and wood-derived fuels** consumption; **biomass waste** consumption; and **biofuels** feedstock.

**Prime Mover:** The engine, turbine, water wheel, or similar machine that drives an electric generator; or, for reporting purposes, a device that converts energy to electricity directly.

**Products Supplied (Petroleum):** Approximately represents consumption of petroleum products because it measures the disappearance of these products from primary sources, i.e., refineries, natural gas-processing plants, blending plants, pipelines, and bulk terminals. In general, product supplied of each product in any given period is computed as follows: field production, plus refinery production, plus imports, plus unaccounted-for crude oil (plus net receipts when calculated on a PAD District basis) minus stock change, minus crude oil losses, minus refinery inputs, and minus exports.

**Propane:** A normally gaseous straight-chain hydrocarbon ($C_3H_8$). It is a colorless paraffinic gas that boils at a temperature of -43.67º F. It is extracted from natural gas or refinery gas streams. It includes all products designated in ASTM Specification D1835 and Gas Processors Association Specifications for commercial propane and HD-5 propane.

**Propylene:** An olefinic hydrocarbon ($C_3H_6$) recovered from refinery or petrochemical processes.

**Real Dollars:** These are dollars that have been adjusted for inflation. See **Real Price**.

**Real Price:** A price that has been adjusted to remove the effect of changes in the purchasing power of the dollar. Real prices, which are expressed in constant dollars, usually reflect buying power relative to a base year.

**Refiner Acquisition Cost of Crude Oil:** The cost of crude oil to the refiner, including transportation and fees. The composite cost is the weighted average of domestic and imported crude oil costs.

**Refinery and Blender Net Inputs:** Raw materials, **unfinished oils**, and blending components processed at refineries, or blended at refineries or petroleum storage terminals to produce finished **petroleum products**. Included are gross inputs of **crude oil**, **natural gas plant liquids**, other **hydrocarbon** raw materials, **hydrogen**, **oxygenates** (excluding **fuel ethanol**), and renewable fuels (including fuel ethanol). Also included are net inputs of unfinished oils, **motor gasoline blending components**, and **aviation gasoline blending components**. Net inputs are calculated as gross inputs minus gross production. Negative net inputs indicate gross inputs are less than gross production. Examples of negative net inputs include reformulated gasoline blendstock for oxygenate blending (RBOB) produced at refineries for shipment to blending terminals, and unfinished oils produced and added to inventory in advance of scheduled maintenance of a refinery crude oil distillation unit.

**Refinery and Blender Net Production:** Liquefied refinery gases, and finished **petroleum products** produced at a **refinery** or petroleum storage terminal blending facility. Net production equals gross production minus gross inputs. Negative net production indicates gross production is less than gross inputs for a finished petroleum product. Examples of negative net production include reclassification of one finished product to another finished product, or reclassification of a finished product to **unfinished oils** or blending components.

**Refinery (Petroleum):** An installation that manufactures finished petroleum products from crude oil, unfinished oils, natural gas liquids, other hydrocarbons, and alcohol.

**Refuse Mine:** A surface site where **coal** is recovered from previously mined coal. It may also be known as a silt bank, culm bank, refuse bank, slurry dam, or dredge operation.

**Refuse Recovery:** The recapture of **coal** from a **refuse mine** or the coal recaptured by that process. The resulting product has been cleaned to reduce the concentration of noncombustible materials.

**Renewable Energy:** Energy obtained from sources that are essentially inexhaustible (unlike, for example, the **fossil fuels**, of which there is a finite supply). Renewable sources of energy include **conventional hydroelectric power**, **biomass**, **geothermal**, **solar**, and **wind**.

**Repressuring:** The injection of a pressurized fluid (such as air, gas, or water) into oil and gas reservoir formations to effect greater ultimate recovery.

**Residential Sector:** An energy-consuming sector that consists of living quarters for private households. Common uses of energy associated with this sector include space heating, water heating, air conditioning, lighting, refrigeration, cooking, and running a variety of other appliances. The residential sector excludes institutional living quarters. *Note:* Various EIA programs differ in sectoral coverage for more information see http://www.eia.doe.gov/neic/datadefinitions/Guideforwebres.html. See **End-Use Sectors** and **Energy-Use Sectors**.

**Residual Fuel Oil:** The heavier oils that remain after the distillate fuel oils and lighter hydrocarbons are distilled away in refinery operations and that conform to ASTM Specifications D396 and 975. Included are No. 5, a residual fuel oil of medium viscosity; Navy Special, for use in steam-powered vessels in government service and in shore power plants; and No. 6, which includes Bunker C fuel oil and is used for commercial and industrial heating, for electricity generation, and to power ships. Imports of residual fuel oil include imported crude oil burned as fuel.

**Road Oil:** Any heavy petroleum oil, including residual asphaltic oil used as a dust palliative and surface treatment on roads and highways. It is generally produced in six grades, from 0, the most liquid, to 5, the most viscous.

**Rotary Rig:** A machine used for drilling wells that employs a rotating tube attached to a bit for boring holes through rock.

**Short Ton (Coal):** A unit of weight equal to 2,000 pounds.

**SIC (Standard Industrial Classification):** A set of codes developed by the U.S. Office of Management and Budget which categorizes industries into groups with similar economic activities. Replaced by **NAICS (North American Industry Classification System)**.

**Solar Energy:** See **Solar Thermal Energy** and **Photovoltaic Energy**.

**Solar Thermal Energy:** The radiant energy of the sun that can be converted into other forms of energy, such as heat or **electricity**.

**Special Naphthas:** All finished products within the naphtha boiling ranges that are used as paint thinner, cleaners or solvents. Those products are refined to a specified flash point. Special naphthas include all commercial hexane and cleaning solvents conforming to ASTM Specifications D1836 and D484, respectively. Naphthas to be blended or marketed as motor gasoline or aviation gasoline, or that are to be used as petrochemical and synthetic natural gas (SNG) feedstocks, are excluded.

**Station Use:** Energy that is used to operate an **electric power plant**. It includes energy consumed for plant lighting, power, and auxiliary facilities, regardless of whether the energy is produced at the plant or comes from another source.

**Steam Coal:** All nonmetallurgical coal.

**Steam-Electric Power Plant:** A plant in which the prime mover is a steam turbine. The steam used to drive the turbine is produced in a boiler where fossil fuels are burned.

**Still Gas (Refinery Gas):** Any form or mixture of gas produced in refineries by distillation, cracking, reforming, and other processes. The principal constituents are methane, ethane, ethylene, normal butane, butylene, propane, and propylene. It is used primarily as refinery fuel and, petrochemical feedstock.

**Stocks:** See **Coal Stocks**, **Crude Oil Stocks**, or **Petroleum Stocks, Primary**.

**Strategic Petroleum Reserve (SPR):** Petroleum stocks maintained by the Federal Government for use during periods of major supply interruption.

**Subbituminous Coal:** A **coal** whose properties range from those of **lignite** to those of **bituminous coal** and used primarily as fuel for steam-electric power generation. It may be dull, dark brown to black, soft and crumbly, at the lower end of the range, to bright, jet black, hard, and relatively strong, at the upper end. Subbituminous coal contains 20 to 30 percent inherent moisture by weight. The heat content of subbituminous coal ranges from 17 to 24 million **Btu** per **short ton** on a moist, mineral-matter-free basis. The heat content of subbituminous coal consumed in the United States averages 17 to 18 million Btu per ton, on the as-received basis (i.e., containing both inherent moisture and mineral matter).

**Supplemental Gaseous Fuels:** Synthetic natural gas, propane-air, coke oven gas, refinery gas, biomass gas, air injected for Btu stabilization, and manufactured gas commingled and distributed with natural gas.

**Synthetic Natural Gas (SNG):** (Also referred to as substitute natural gas) A manufactured product, chemically similar in most respects to **natural gas**, resulting from the conversion or reforming of **hydrocarbons** that may easily be substituted for or interchanged with pipeline-quality natural gas.

**Thermal Conversion Factor:** A factor for converting data between physical units of measure (such as **barrels**, **cubic feet**, or **short tons**) and thermal units of measure (such as **British thermal units**, calories, or joules); or for converting data between different thermal units of measure. See **Btu Conversion Factor.**

**Transportation Sector:** An energy-consuming sector that consists of all vehicles whose primary purpose is transporting people and/or goods from one physical location to another. Included are automobiles; trucks; buses; motorcycles; trains, subways, and other rail vehicles; aircraft; and ships, barges, and other waterborne vehicles. Vehicles whose primary purpose is not transportation (e.g., construction cranes and bulldozers, farming vehicles, and warehouse tractors and forklifts) are classified in the sector of their primary use. Note: Various EIA programs differ in sectoral coverage-for more information see http://www.eia.doe.gov/neic/datadefinitions/Guideforwebtrans.html See **End-Use Sectors** and **Energy-Use Sectors**.

**Underground Storage:** The storage of natural gas in underground reservoirs at a different location from which it was produced.

**Unfinished Oils:** All oils requiring further refinery processing except those requiring only mechanical blending. Includes naphthas and lighter oils, kerosene and light gas oils, heavy gas oils, and residuum.

**Unfractionated Stream:** Mixtures of unsegregated natural gas liquid components, excluding those in plant condensate. This product is extracted from natural gas.

**Union of Soviet Socialist Republics (U.S.S.R.):** A political entity that consisted of 15 constituent republics: Armenia, Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan. The U.S.S.R. ceased to exist as of December 31, 1991.

**United States:** The 50 States and the District of Columbia. Note: The United States has varying degrees of jurisdiction over a number of territories and other political entities outside the 50 States and the District of Columbia, including Puerto Rico, the U.S. Virgin Islands, Guam, American Samoa, Johnston Atoll, Midway Islands, Wake Island, and the Northern Mariana Islands. EIA data programs may include data from some or all of these areas in U.S. totals. For these programs, data products will contain notes explaining the extent of geographic coverage included under the term "United States."

**Useful Thermal Output:** The thermal energy made available in a combined-heat-and-power system for use in any industrial or commercial process, heating or cooling application, or delivered to other end users, i.e., total thermal energy made available for processes and applications other than electrical generation.

**U.S.S.R.:** See **Union of Soviet Socialist Republics (U.S.S.R.).**

**Vented Natural Gas:** Gas released into the air on the production site or at processing plants.

**Vessel Bunkering:** Includes sales for the fueling of commercial or private boats, such as pleasure craft, fishing boats, tugboats, and ocean-going vessels, including vessels operated by oil companies. Excluded are volumes sold to the U.S. Armed Forces.

**Waste Coal:** Usable material that is a byproduct of previous **coal** processing operations. Waste coal is usually

composed of mixed coal, soil, and rock (mine waste). Most waste coal is burned as-is in unconventional fluidized-bed combustors. For some uses, waste coal may be partially cleaned by removing some extraneous noncombustible constituents. Examples of waste coal include fine coal, coal obtained from a refuse bank or slurry dam, anthracite culm, bituminous gob, and lignite waste.

**Waste:** See **Biomass Waste** and **Non-Biomass Waste**.

**Watt (W):** The unit of electrical power equal to one ampere under a pressure of one volt. A watt is equal to 1/746 horsepower.

**Watthour (Wh):** The electrical energy unit of measure equal to one watt of power supplied to, or taken from, an electric circuit steadily for one hour.

**Waxes:** Solid or semisolid material derived from petroleum distillates or residues. Waxes are light-colored, more or less translucent crystalline masses, slightly greasy to the touch, consisting of a mixture of solid hydrocarbons in which the paraffin series predominates. Included are all marketable waxes, whether crude scale or fully refined. Waxes are used primarily as industrial coating for surface protection.

**Wellhead Price:** The value of crude oil or natural gas at the mouth of the well.

**Wind Energy:** Kinetic energy present in wind motion that can be converted to mechanical energy for driving pumps, mills, and electric power generators.

**Wood and Wood-Derived Fuels:** Wood and products derived from wood that are used as fuel, including round wood (cord wood), limb wood, wood chips, bark, sawdust, forest residues, charcoal, paper pellets, railroad ties, utility poles, **black liquor**, red liquor, sludge wood, spent sulfite liquor, and other wood-based solids and liquids.

**Working Gas:** The volume of gas in a reservoir that is in addition to the base gas. It may or may not be completely withdrawn during any particular withdrawal season. Conditions permitting, the total working capacity could be used more than once during any season.