

# Section B

## Transportation Energy Consumption by Mode

**Table 4-4**

**U.S. Energy Consumption by the Transportation Sector (Quadrillion Btu)**

	1960	1965	1970	1975	1980	1985	1990	1995	1996	1997	1998	1999
<b>Energy consumption (all sectors)</b>	<b>43.80</b>	<b>52.68</b>	<b>66.43</b>	<b>70.55</b>	<b>75.96</b>	<b>73.98</b>	<sup>R</sup> 81.29	<sup>R</sup> 87.56	<sup>R</sup> 90.42	<sup>R</sup> 90.98	<sup>R</sup> 91.23	92.78
Total transportation consumption <sup>a</sup>	10.60	12.43	16.09	18.24	19.70	20.07	<sup>R</sup> 22.54	<sup>R</sup> 23.97	<sup>R</sup> 24.52	<sup>R</sup> 24.82	<sup>R</sup> 25.36	26.09
% of total energy consumption	24.2	23.6	24.2	25.9	25.9	27.1	27.7	<sup>R</sup> 27.4	<sup>R</sup> 27.1	<sup>R</sup> 27.3	<sup>R</sup> 27.8	28.1
Total primary consumption <sup>b</sup>	10.56	12.40	16.06	18.21	19.66	20.02	22.49	<sup>R</sup> 23.92	<sup>R</sup> 24.47	<sup>R</sup> 24.77	<sup>R</sup> 25.30	26.04
Coal	0.074	0.017	0.007	0.001								
Million short tons	3.0	0.7	0.3	<0.05								
Natural gas <sup>c</sup>	0.36	0.52	0.74	0.60	0.65	0.52	0.68	0.72	0.73	0.78	<sup>R</sup> 0.66	0.66
Trillion cubic feet	0.35	0.50	0.72	0.58	<sup>R</sup> 0.63	0.50	0.66	0.70	0.71	<sup>R</sup> 0.76	<sup>R</sup> 0.64	<sup>E</sup> 0.64
Petroleum products <sup>d</sup>	10.13	11.87	15.31	17.61	19.01	19.50	21.81	<sup>R</sup> 23.20	<sup>R</sup> 23.74	<sup>R</sup> 24.00	<sup>R</sup> 24.64	25.38
Million barrels	1,881	2,205	2,840	3,267	3,495	3,595	4,004	4,281	<sup>R</sup> 4,377	<sup>R</sup> 4,431	<sup>E</sup> 4,552	<sup>E</sup> 4,654
Electricity	0.011	0.010	0.009	0.010	0.011	<sup>R</sup> 0.014	<sup>R</sup> 0.016	<sup>R</sup> 0.017	<sup>R</sup> 0.017	<sup>R</sup> 0.017	<sup>R</sup> 0.017	0.017
Electrical system energy losses	0.027	0.023	0.021	<sup>R</sup> 0.024	<sup>R</sup> 0.027	<sup>R</sup> 0.033	<sup>R</sup> 0.036	<sup>R</sup> 0.036	<sup>R</sup> 0.036	<sup>R</sup> 0.035	<sup>R</sup> 0.036	0.035

KEY: Btu = British thermal unit; E = estimated; R = revised

<sup>a</sup> Sum of primary consumption, electricity, and electrical system energy losses categories.

<sup>b</sup> Sum of coal, natural gas, and petroleum categories.

<sup>c</sup> Consumed in the operation of pipelines, primarily in compressors, and small amounts consumed as vehicle fuel.

<sup>d</sup> Includes small amounts (about 0.1 quadrillion Btu per year since 1990) of renewable energy in the form of ethanol blended into motor gasoline.

<sup>e</sup> From 1980, small amounts of coal consumed for transportation are included in industrial sector consumption.

**NOTES:** Energy consumption (all sectors) differs from totals in table 4-2 for 1990 and subsequent years. Table 4-2 includes primary energy consumption only.

**SOURCES:**

**Energy consumption (all sectors) and total transportation consumption:** 1960-70: U.S. Department of Energy, Energy Information Administration, *Annual Energy Review 1997*, DOE/EIA-0384(97) (Washington DC: July 1998), table 2.1.

1975-99: Ibid., *Monthly Energy Review*, DOE/EIA-0035(00/06) (Washington, DC : June 2000), table 2.2 and table 2.5.

**Total primary consumption:** 1960-70: Ibid., *Annual Energy Review 1990*, DOE/EIA-0384(90) (Washington, DC: May 1991), table 4.

1975-99: Ibid., *Monthly Energy Review*, DOE/EIA-0035(00/06) (Washington, DC: June 2000), table 2.5.

**Coal:** Btu: 1960-70: Ibid., *Annual Energy Review 1997*, DOE/EIA-0384(97) (Washington, DC: July 1998), table 7.3, and A5 for conversion.

1975-99: Ibid., *Monthly Energy Review*, DOE/EIA-0035(00/06) (Washington, DC: June 2000), table 2.5.

*Short tons:* 1960-99: Ibid., *Annual Energy Review 1998*, DOE/EIA-0384(98) (Washington, DC: July 1999), table 7.3.

**Natural gas:** Btu: 1960-70: Ibid., *Annual Energy Review 1997*, DOE/EIA-0384(97) (Washington, DC: July 1998), table 6.6, and A4 for conversion.

1975-99: Ibid., *Monthly Energy Review*, DOE/EIA-0035(00/06) (Washington, DC: June 2000), table 2.5.

*Cubic feet:* 1960-70: Ibid., *Annual Energy Review 1997*, DOE/EIA-0384(97) (Washington, DC: July 1998), table 6.6.

1975-99: Ibid., *Monthly Energy Review*, DOE/EIA-0035(00/06) (Washington, DC: June 2000), table 4.4.

**Petroleum products:** Btu: 1960-70: Ibid., *Annual Energy Review 1997*, DOE/EIA-0384(97) (Washington, DC: July 1998), table 2.1.

1975-99: Ibid., *Monthly Energy Review*, DOE/EIA-0035(00/06) (Washington, DC: June 2000), table 2.5.

*Barrels:* 1960-97: Ibid., *Annual Energy Review 1997*, DOE/EIA-0384(97) (Washington, DC: July 1998), table 5.12b (barrels/day x 365 or 366 for leap years).

**Electricity and electrical system energy losses:** 1960-70: Ibid., *State Energy Data Report 1993* (Washington, DC: July 1995), table 15.

1975-99: Ibid., *Monthly Energy Review*, DOE/EIA-0035(00/06) (Washington, DC: June 2000), table 2.5.

**Table 4-5 Fuel Consumption by Mode of Transportation**

	1960	1965	1970	1975	1980	1985	1990	1995	1996	1997	1998
<b>Air</b>											
Certificated carriers <sup>a</sup>											
Jet fuel (million gallons)	1,954	3,889	7,857	7,558	9,096	10,121	<sup>R</sup> 12,429	12,812	13,188	13,660	13,877
General aviation <sup>b</sup>											
Aviation gasoline (million gallons)	242	292	551	412	520	421	353	276	287	<sup>R</sup> 292	311
Jet fuel (million gallons)	N	56	208	453	766	691	663	544	568	<sup>R</sup> 642	815
<b>Highway</b>											
Gasoline, diesel and other fuels (million gallons)											
Passenger car and motorcycle	41,171	49,723	67,879	74,253	70,186	71,700	69,759	68,268	69,419	<sup>R</sup> 70,094	72,414
Other 2-axle 4-tire vehicle	N	<sup>e</sup>	12,313	19,081	23,796	27,363	35,611	45,605	47,354	<sup>R</sup> 49,388	50,579
Single-unit 2-axle 6-tire or more truck	N	13,848	3,968	5,420	6,923	7,399	8,357	9,216	9,409	<sup>R</sup> 9,576	9,741
Combination truck	N	6,658	7,348	9,177	13,037	14,005	16,133	19,777	20,193	<sup>R</sup> 20,302	21,100
Bus	827	875	820	1,053	1,018	834	895	968	990	<sup>R</sup> 1,027	1,049
<b>Transit<sup>c</sup></b>											
Electricity (million kWh)	2,908	2,584	2,561	2,646	2,446	4,216	4,837	5,068	5,007	<sup>R</sup> 4,988	<sup>P</sup> 5,250
Motor fuel (million gallons)											
Diesel	208	248	271	365	431	609	651	678	693	<sup>R</sup> 717	<sup>P</sup> 700
Gasoline and other nondiesel fuels <sup>d</sup>	192	124	68	8	11	46	34	61	61	<sup>R</sup> 59	<sup>P</sup> 50
Compressed natural gas	N	N	N	N	N	N	N	11	15	<sup>R</sup> 24	<sup>P</sup> 31
<b>Rail, Class I (in freight service)</b>											
Distillate/diesel fuel (million gallons)	3,463	3,592	3,545	3,657	3,904	3,110	3,115	3,480	3,579	3,575	3,583

KEY: kWh = kilowatt-hour; N = data do not exist;  
P = preliminary; R = revised

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**Table 4-5**

Cont'd

**Fuel Consumption by Mode of Transportation**

	1960	1965	1970	1975	1980	1985	1990	1995	1996	1997	1998
<b>Amtrak</b>											
Electricity (million kWh)	N	N	N	180	254	295	330	304	293	282	275
Distillate/diesel fuel (million gallons)	N	N	N	63	64	65	82	66	71	75	75
<b>Water</b>											
Residual fuel oil (million gallons)	3,952	3,093	3,774	4,060	8,952	4,590	6,326	5,886	5,701	5,010	5,620
Distillate/diesel fuel oil (million gallons)	787	652	819	1,098	1,478	1,699	2,065	2,339	2,491	2,574	2,595
Gasoline (million gallons)	N	N	598	730	1,052	1,053	1,300	1,060	994	987	956
<b>Pipeline</b>											
Natural gas (million cubic feet)	347,075	500,524	722,166	582,963	634,622	503,766	659,816	700,335	711,446	<sup>R</sup> 751,470	635,477

<sup>a</sup> Domestic operations only.

<sup>b</sup> Includes fuel used in air taxi operations, but not commuter operations. Data for 1996 are estimated using new information on nonrespondents and are therefore not comparable to earlier years. See the accuracy statement in the appendix for more detailed information.

<sup>c</sup> Prior to 1984, excludes commuter rail, automated guideway, ferryboat, demand responsive vehicles, and most rural and smaller systems.

<sup>d</sup> Gasoline and all other nondiesel fuels such as liquefied natural gas, methanol and propane, except compressed natural gas.

<sup>e</sup> Included in single-unit 2-axle 6-tire or more truck category.

**SOURCES:**

**Air:**

*Certificated air carriers:* 1960-98: U.S. Department of Transportation, Bureau of Transportation Statistics, Office of Airline Information, Internet site <http://www.bts.gov/oai/fuel/fuelyearly.html>, as of July 5, 2000.

*General aviation:* 1960-70: U.S. Department of Transportation, Federal Aviation Administration, *FAA Statistical Handbook of Aviation - 1972 edition* (Washington, DC: 1973), table 9.12.

1975-97: *Ibid.*, *General Aviation and Air Taxi Activity Survey* (Washington, DC: Annual issues), table 5.1, and similar tables in earlier editions.

1998: *Ibid.*, *FAA Aerospace Forecasts Fiscal Years 2000-2011* (Washington, DC: March 2000), table 29.

**Highway:**

1960-90: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics, Summary to 1995*, FHWA-PL-97-009 (Washington, DC: July 1997), table VM-201A.

1995-98: *Ibid.*, *Highway Statistics* (Washington, DC: Annual issues), table VM-1.

**Transit:**

*Electricity/ motor fuel/ compressed natural gas:* 1960-98: American Public Transit Association, *Transportation Fact Book* (Washington, DC: February 1999), tables 65, 66, 67, and similar tables in earlier editions.

**Rail:**

1960-98: Association of American Railroads, *Railroad Facts* (Washington, DC: May 1999), p. 40.

**Amtrak:**

1975-98: Amtrak, State and Local Affairs Department, personal communication.

**Water:**

*Residual and distillate/ diesel fuel oil:* 1960-80: American Petroleum Institute, *Basic Petroleum Data Book* (Washington, DC: Annual issues), tables 10, 10a, 12, and 12a.

1985-98: U.S. Department of Energy, Energy Information Administration, *Fuel Oil and Kerosene Sales* (Washington, DC: Annual issues), tables 2 and 4, and similar tables in earlier editions.

*Gasoline:* 1970-98: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics* (Washington, DC: Annual issues), table MF-24 and similar tables in earlier editions.

**Pipeline:**

1960-96: U.S. Department of Energy, *Natural Gas Annual 1997* (Washington, DC: October 1998), table 101.

1997-98: U.S. Department of Energy, Energy Information Administration, *Natural Gas Annual 1998* (Washington, DC: Annual Issues), table 1.

KEY: kWh = kilowatt-hour; N = data do not exist; P = preliminary; R = revised

**Table 4-6** Energy Consumption by Mode of Transportation (Trillion Btu)

	1960	1965	1970	1975	1980	1985	1990	1995	1996	1997	1998
<b>Air</b>											
Certificated carriers <sup>a</sup>											
Jet fuel	264	525	1,061	1,020	<sup>R</sup> 1,150	1,366	<sup>R</sup> 1,678	1,730	1,780	1,844	1,873
General aviation <sup>b</sup>											
Aviation gasoline	29	35	66	50	63	51	42	<sup>R</sup> 35	<sup>R</sup> 35	35	37
Jet fuel	N	8	28	61	103	93	90	<sup>R</sup> 76	<sup>R</sup> 82	<sup>R</sup> 87	110
<b>Highway</b>											
Gasoline, diesel and other fuels											
Passenger car and motorcycle	5,146	6,215	8,485	9,282	8,773	8,963	8,720	8,534	8,677	<sup>R</sup> 8,762	9,052
Other 2-axle 4-tire vehicle	N	<sup>e</sup>	1,539	2,385	2,975	3,420	4,451	5,701	5,919	<sup>R</sup> 6,173	6,322
Single-unit 2-axle 6-tire or more truck	N	1,921	550	752	960	1,026	1,159	1,278	1,305	<sup>R</sup> 1,328	1,351
Combination truck	N	923	1,019	1,273	1,808	1,942	2,238	2,743	2,801	<sup>R</sup> 2,816	2,927
Bus	115	121	114	146	141	116	124	134	137	<sup>R</sup> 142	145
<b>Transit<sup>c</sup></b>											
Electricity	10	9	9	9	8	14	17	17	17	17	<sup>P</sup> 18
Motor fuel											
Diesel	29	34	38	51	60	84	90	94	96	<sup>R</sup> 99	<sup>P</sup> 97
Gasoline and other nondiesel fuels <sup>d</sup>	24	16	9	1	1	6	4	8	8	7	<sup>P</sup> 6
Compressed natural gas	N	N	N	N	N	N	N	<sup>R</sup> 1	2	3	<sup>P</sup> 4
<b>Rail, Class I (in freight service)</b>											
Distillate/diesel fuel	480	498	492	507	541	431	432	483	496	496	497
<b>Amtrak</b>											
Electricity	N	N	N	1	1	1	1	1	1	1	1
Distillate/diesel fuel	N	N	N	9	9	9	11	9	10	10	10
<b>Water</b>											
Residual fuel oil	592	463	565	608	1,340	687	947	881	853	750	841
Distillate/diesel fuel oil	109	90	114	152	205	236	286	324	346	357	360
Gasoline	N	N	75	91	132	132	163	133	124	123	120
<b>Pipeline</b>											
Natural gas	358	516	745	601	654	519	680	722	734	775	655

KEY: Btu = British thermal units; kWh = kilowatt-hour;  
 N = data do not exist; P = preliminary;  
 R = revised

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**Table 4-6**  
Cont'd**Energy Consumption by Mode of Transportation (Trillion Btu)**

- <sup>a</sup> Domestic operations only.
- <sup>b</sup> Includes fuel used in air taxi operations, but not commuter operations.
- <sup>c</sup> Prior to 1984, excludes commuter rail, automated guideway, ferryboat, demand responsive vehicles, and most rural and smaller systems.
- <sup>d</sup> Gasoline and all other nondiesel fuels such as liquefied natural gas, methanol, and propane, except compressed natural gas.
- <sup>e</sup> Included in other single-unit 2-axle 6-tire or more truck category.
- NOTES:** The following conversion rates were used:
- Jet fuel = 135,000 Btu/gal.  
Compressed natural gas = 138,700 Btu/gal.  
Aviation gasoline = 120,200 Btu/gal.  
Distillate fuel = 138,700 Btu/gal.  
Automotive gasoline = 125,000 Btu/gal.  
Residual fuel = 149,700 Btu/gal.  
Diesel motor fuel = 138,700 Btu/gal.  
Natural gas = 1,031 Btu/ft<sup>3</sup>  
Electricity 1kWh = 3,412 Btu, negating electrical system losses. To include electrical system losses, multiply this conversion factor by approximately 3.
- SOURCES:**
- Air:**
- Certificated air carriers:* 1960-98: U.S. Department of Transportation, Bureau of Transportation Statistics, Office of Airline Information Internet site <http://www.bts.gov/oai/fuel/fuelyearly.html>, as of July 5, 2000.
- General aviation:* 1960-80: U.S. Department of Transportation, Federal Aviation Administration, Office of Aviation Policy, Plans, and Management Analysis, *FAA Statistical Handbook of Aviation* (Washington, DC: Annual issues).
- 1985-97: Ibid., *General Aviation and Avionics Survey* (Washington, DC: Annual issues), table 5.1 and similar tables in earlier editions.
- 1998: Ibid., *FAA Aerospace Forecasts Fiscal Years 2000-2011* (Washington, DC: March 2000), table 29.

**Highway:**

1960-94: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics, Summary to 1995*, FHWA-PL-97-009 (Washington, DC: July 1997), table VM-201A.

1995-98: Ibid., *Highway Statistics* (Washington, DC: Annual issues), table VM-1.

**Transit:**

*Electricity/motor fuel/compressed natural gas:* 1960-98: American Public Transit Association, *Transportation Fact Book* (Washington, DC: February 1999), tables 65, 66, 67, and similar tables in earlier editions.

**Rail:**

1960-98: Association of American Railroads, *Railroad Facts* (Washington, DC: May 1999), p. 40.

**Amtrak:**

1975-98: Amtrak, State and Local Affairs Department, personal communication.

**Water:**

*Residual and distillate/diesel fuel oil:* 1960-80: American Petroleum Institute, *Basic Petroleum Data Book* (Washington, DC: Annual issues), tables 10, 10a, 12, and 12a.

1985-98: U.S. Department of Energy, Energy Information Administration, *Fuel Oil and Kerosene Sales* (Washington, DC: Annual issues), tables 2 and 4, and similar tables in earlier editions.

*Gasoline:* 1970-98: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics* (Washington, DC: Annual issues), table MF-24 and similar tables in earlier editions.

**Pipeline:**

1960-96: U.S. Department of Energy, *Natural Gas Annual 1997* (Washington, DC: October 1998), table 101.

1997-98: Ibid., table 1.

**Table 4-7 Domestic Demand for Gasoline (Million gallons) by Mode**

	1960	1965	1970	1975	1980	1985	1990	1995	1996	1997	1998
<b>Highway</b>	<b>55,429</b>	<b>66,979</b>	<b>85,598</b>	<b>99,354</b>	<b>101,183</b>	<b>103,545</b>	<b>109,529</b>	<b>117,061</b>	<b>119,515</b>	<b>120,938</b>	<b>124,694</b>
<b>Nonhighway</b>											
Agriculture	2,292	1,963	1,932	1,565	1,059	1,081	681	927	918	984	907
Aviation <sup>a</sup>	1,324	501	393	410	413	382	361	367	344	335	351
Marine	61	96	598	730	1,052	1,053	1,300	1,060	994	987	956
Other <sup>b</sup>	1,656	1,647	1,080	938	1,131	1,490	1,733	838	825	990	1,070
<b>Total nonhighway</b>	<b>5,332</b>	<b>4,208</b>	<b>4,003</b>	<b>3,642</b>	<b>3,655</b>	<b>4,005</b>	<b>4,076</b>	<b>3,192</b>	<b>3,081</b>	<b>3,297</b>	<b>3,284</b>
<b>TOTAL demand</b>	<b>60,761</b>	<b>71,187</b>	<b>89,601</b>	<b>102,996</b>	<b>104,838</b>	<b>107,550</b>	<b>113,606</b>	<b>120,253</b>	<b>122,595</b>	<b>124,235</b>	<b>127,978</b>

<sup>a</sup> Does not include aviation jet fuel.

<sup>b</sup> Includes state, county, and municipal use, industrial and commercial use, construction use, and miscellaneous.

**NOTES:** All nonhighway uses of gasoline were estimated by the U.S. Department of Transportation, Federal Highway Administration. These estimates may not be comparable to data for prior years due to revised estimation procedures.

Numbers may not add to totals due to rounding.

**SOURCES:**

**Highway:** 1960-95: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics, Summary to 1995* (Washington, DC: 1996), table MF-221.

1996-98: Ibid., *Highway Statistics* (Washington, DC: Annual issues), table MF-21.

**Nonhighway:** 1960-98: Ibid., *Highway Statistics* (Washington, DC: Annual issues), table MF-24, and unpublished revisions.

**Table 4-8**

**Certificated Air Carrier Fuel Consumption and Travel<sup>a</sup>**

	1960	1965	1970	1975	1980	1985	1990	1995	1996	1997	1998	1999
<b>Number of aircraft</b>	2,135	2,125	2,679	2,495	3,808	4,678	6,083	7,411	7,478	7,616	<sup>R</sup> 8,111	8,228
<b>Average miles flown per aircraft (thousands)</b>	487	667	949	932	768	740	776	759	783	791	<sup>R</sup> 767	774
<b>Aircraft-miles (millions)</b>												
Domestic operations	858	1,134	2,068	1,948	2,523	3,046	3,963	4,629	4,811	4,911	5,031	5,176
International operations	182	284	475	377	401	415	760	998	1,043	1,114	1,191	1,197
<b>Fuel consumption (million gallons)</b>												
Domestic operations	1,954	3,889	7,857	7,558	9,096	<sup>R</sup> 10,115	<sup>R</sup> 12,429	12,812	<sup>R</sup> 13,187	13,660	13,877	14,491
International operations	566	1,280	2,243	1,949	1,938	<sup>R</sup> 2,488	<sup>R</sup> 3,963	<sup>R</sup> 4,511	<sup>R</sup> 4,658	4,964	5,186	5,277
<b>Aircraft-miles flown per gallon</b>												
Domestic operations	0.44	0.29	0.26	0.26	0.28	0.30	0.32	0.36	0.36	0.36	0.36	0.36
International operations	0.32	0.22	0.21	0.19	0.21	0.17	0.19	0.22	0.22	0.22	0.23	0.23

<sup>a</sup> Aircraft operating under 14 CFR 121 and 14 CFR 135.

**SOURCES:**

**Number of aircraft:** 1960-65: U.S. Department of Transportation, Federal Aviation Administration, *FAA Statistical Handbook of Aviation, 1970 edition* (Washington, DC: 1970), table 5.3.

1970-75: Ibid., *FAA Statistical Handbook of Aviation, Calendar Year 1979* (Washington, DC: 1979), table 5.1.

1980-85: Ibid., *FAA Statistical Handbook of Aviation, Calendar Year 1986* (Washington, DC: 1986), table 5.1.

1990-97: Ibid., *FAA Statistical Handbook of Aviation, Calendar Year 1997* (Washington, DC: unpublished), personal communication, Mar. 19, 1999.

1998-99: Aerospace Industries Association, *Aerospace Facts and Figures* (Washington DC: Annual Issues), "Active U.S. Air Carrier Fleet".

**Aircraft-miles flown:** 1960: Civil Aeronautics Board, *Handbook of Airline Statistics 1969* (Washington, DC: 1970), part III, tables 2 and 13.

1965-70: Ibid., *Handbook of Airline Statistics 1973* (Washington, DC: 1974), part III, tables 2 and 13.

1975-80: Ibid., *Air Carrier Traffic Statistics* (Washington, DC: December 1976), pp. 4 and 14; and (December 1981), pp. 2 and 3.

1985-98: U.S. Department of Transportation, Bureau of Transportation Statistics, Office of Airline Information, *Air Carrier Traffic Statistics* (Washington, DC: Annual issues, December), pp. 2 and 3, line 27 plus line 50.

1999: Ibid., Internet site <http://www.bts.gov/programs/oai>, as of July 14, 2000.

**Fuel consumption:** 1960-99: U.S. Department of Transportation, Bureau of Transportation Statistics, Office of Airline Information, Internet site <http://www.bts.gov/programs/oai/fuel/fuelyearly.html>, as of July 5, 2000.

1999: Ibid., Personal communication, July 27, 2000.

KEY: R = revised

**Table 4-9 Motor Vehicle Fuel Consumption and Travel**

	1960	1965	1970	1975	1980	1985	1990	1995	1996	1997	1998
Vehicles registered (thousands) <sup>a</sup>	73,858	90,358	111,242	137,913	161,490	177,133	193,057	205,427	210,441	211,580	215,496
Vehicle-miles traveled (millions)	719,000	888,000	1,110,000	1,328,000	1,527,000	1,775,000	2,144,000	2,423,000	2,486,000	<sup>R</sup> 2,561,695	2,625,367
Fuel consumed (million gallons)	57,880	71,104	92,329	108,984	114,960	121,301	130,755	143,834	147,365	<sup>R</sup> 150,386	154,884
Average miles traveled per vehicle (thousands)	9.7	9.8	10.0	9.6	9.5	10.0	11.1	11.8	11.8	12.1	12.2
Average miles traveled per gallon	12.4	12.5	12.0	12.2	13.3	14.6	16.4	16.8	16.9	17.0	17.0
Average fuel consumed per vehicle (gallons)	784	787	830	790	712	685	677	700	700	711	719

<sup>a</sup> Includes personal passenger vehicles, buses, and trucks.

**NOTE:** See tables 4-11, 4-12, 4-13, 4-14, and 4-15 for individual highway vehicles.

**SOURCES:** 1960-90: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics Summary to 1995*, FHWA-PL-97-009 (Washington, DC: July 1997), table VM-201A.

1995-98: Ibid., *Highway Statistics* (Washington, DC: Annual issues), table VM-1.

KEY: R = revised

**Table 4-10**

**Estimated Consumption of Alternative and Replacement Fuels for Highway Vehicles**  
(Thousand gasoline-equivalent gallons)

	1992	1993	1994	1995	1996	1997	1998 <sup>R</sup>	1999	2000 <sup>E</sup>
<b>Alternative fuels</b>									
Liquefied petroleum gases	208,142	264,655	248,467	232,701	239,158	238,356	241,583	<sup>R</sup> 243,648	249,550
Compressed natural gas	16,823	21,603	24,160	35,162	46,923	<sup>R</sup> 65,192	73,251	<sup>R</sup> 86,073	104,501
Liquefied natural gas	585	1,901	2,345	2,759	3,247	3,714	5,343	<sup>R</sup> 6,062	7,460
Methanol, 85% <sup>a</sup>	1,069	1,593	2,340	2,023	1,775	1,554	1,212	<sup>R</sup> 1,108	1,062
Methanol, neat	2,547	3,166	3,190	2,150	347	347	449	<sup>R</sup> 449	449
Ethanol, 85% <sup>a</sup>	21	48	80	190	694	1,280	1,727	<sup>R</sup> 2,489	3,283
Ethanol, 95% <sup>a</sup>	85	80	140	995	2,699	1,136	59	59	59
Electricity	359	288	430	663	773	1,010	1,202	<sup>R</sup> 1,458	1,712
<b>Total</b>	<b>229,631</b>	<b>293,334</b>	<b>281,152</b>	<b>276,643</b>	<b>295,616</b>	<b><sup>R</sup>312,589</b>	<b>324,826</b>	<b><sup>R</sup>341,346</b>	<b>368,076</b>
<b>Oxygenates</b>									
Methyl-tertiary-butyl-ether <sup>b</sup>	1,175,000	2,069,200	2,018,800	2,691,200	2,749,700	3,104,200	2,915,600	<sup>R</sup> 3,079,800	3,111,500
Ethanol in gasohol	701,000	760,000	845,900	910,700	660,200	830,700	916,000	<sup>R</sup> 890,200	908,700
<b>Traditional fuels</b>									
Gasoline <sup>c</sup>	110,135,000	111,323,000	113,144,000	115,943,000	117,783,000	119,336,000	122,849,000	<sup>R</sup> 124,591,000	127,568,000
Diesel	23,866,000	24,296,630	27,293,370	28,555,040	30,101,430	31,949,270	33,665,360	<sup>R</sup> 34,239,260	35,212,860
<b>Total</b>	<b>134,001,000</b>	<b>135,620,000</b>	<b>140,437,000</b>	<b>144,498,000</b>	<b>147,884,000</b>	<b>151,285,270</b>	<b>156,514,360</b>	<b><sup>R</sup>158,830,260</b>	<b>162,780,860</b>
<b>TOTAL fuel consumption<sup>d</sup></b>	<b>134,231,000</b>	<b>135,913,000</b>	<b>140,719,000</b>	<b>144,775,000</b>	<b>148,180,000</b>	<b><sup>R</sup>151,597,859</b>	<b>156,839,186</b>	<b><sup>R</sup>159,171,606</b>	<b>163,148,936</b>

<sup>a</sup> The remaining portion of 85% methanol, 85% ethanol, and 95% ethanol fuels is gasoline. Consumption data include the gasoline portion of the fuel.

<sup>b</sup> Includes a very small amount of other ethers, primarily tertiary-amyl-methyl-ether and ethyl-tertiary-butyl-ether.

<sup>c</sup> Gasoline consumption includes ethanol in gasohol and methyl-tertiary-butyl-ether.

<sup>d</sup> Total fuel consumption is the sum of alternative fuels, gasoline, and diesel. Oxygenate consumption is included in gasoline consumption.

**NOTE:** Numbers may not add to totals due to rounding.

**SOURCE:** U.S. Department of Energy, Energy Information Administration, available at Internet site [www.eia.doe.gov/cneaf/solar.renewables/alt\\_trans\\_fuel98/atf\\_99.html](http://www.eia.doe.gov/cneaf/solar.renewables/alt_trans_fuel98/atf_99.html) as of June 26, 2000.

KEY: E = estimate; R = revised

**Table 4-11 Passenger Car and Motorcycle Fuel Consumption and Travel**

	1960	1965	1970	1975	1980	1985	1990	1995	1996	1997	1998
<b>Vehicles registered (thousands)</b>											
Passenger cars	61,671	75,258	89,244	106,706	121,601	127,885	133,700	128,387	129,728	129,749	131,839
Motorcycles	574	1,382	2,824	4,964	5,694	5,444	4,259	3,897	3,872	3,826	3,879
<b>Vehicle-miles traveled (millions)</b>											
Passenger cars	587,000	723,000	917,000	1,034,000	1,112,000	1,247,000	1,408,000	1,438,000	1,470,000	<sup>R</sup> 1,502,556	1,545,830
Motorcycles	<sup>a</sup>	<sup>a</sup>	3,000	5,600	10,200	9,100	9,600	9,800	9,900	<sup>R</sup> 10,081	10,260
<b>Fuel consumed (million gallons)</b>											
Passenger cars	41,171	49,723	67,819	74,140	69,982	71,518	69,568	68,072	69,221	<sup>R</sup> 69,892	72,209
Motorcycles	<sup>a</sup>	<sup>a</sup>	60	113	204	182	191	196	198	202	205
<b>Average miles traveled per vehicle (thousands)</b>											
Passenger cars	9.5	9.6	10.3	9.7	9.1	9.8	10.5	11.2	11.3	11.6	11.7
Motorcycles	<sup>a</sup>	<sup>a</sup>	1.1	1.1	1.8	1.7	2.2	2.5	2.6	2.6	2.6
<b>Average miles traveled per gallon</b>											
Passenger cars	14.3	14.5	13.5	13.9	15.9	17.4	20.2	21.1	21.2	21.5	21.4
Motorcycles	<sup>a</sup>	<sup>a</sup>	50	50	50	50	50	50	50	50	50
<b>Average fuel consumed per vehicle (gallons)</b>											
Passenger cars	668	661	760	695	576	559	520	530	534	<sup>R</sup> 539	548
Motorcycles	<sup>a</sup>	<sup>a</sup>	21	23	36	33	45	50	51	53	53

KEY: R = revised

Continued next page

**Table 4-11**

Cont'd

**Passenger Car and Motorcycle Fuel Consumption and Travel**

<sup>a</sup> Included in passenger car.

**NOTE:** See table 4-12 for other 2-axle 4-tire vehicles.

**SOURCES:****Passenger car:**

**Number registered:** 1960-94: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics Summary to 1995*, FHWA-PL-97-009 (Washington, DC: July 1997), table MV-201.

1995-98: Ibid., *Highway Statistics* (Washington, DC: Annual issues), table VM-1.

**All other passenger car data:** 1960-94: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics Summary to 1995*, FHWA-PL-97-009 (Washington, DC: July 1997), table VM-201A. For 1970-94, the unrevised motorcycle vehicle-miles and fuel consumed are subtracted from the combined passenger car and motorcycle vehicle-miles and fuel consumed from VM-201A.

1995-98: Ibid., *Highway Statistics* (Washington, DC: Annual issues), table VM-1.

**Motorcycle:**

**Number registered:** 1960-94: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics Summary to 1995*, FHWA-PL-97-009 (Washington, DC: July 1997), table MV-201.

1995-98: Ibid., *Highway Statistics* (Washington, DC: Annual issues), table VM-1.

**All other motorcycle data:** 1970-85: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics Summary to 1985*, table VM-201A.

1990-98: Ibid., *Highway Statistics* (Washington, DC: Annual issues), table VM-1.

Average miles traveled per vehicle, average miles traveled per gallon, average fuel consumed per vehicle: Derived by calculation.

**Table 4-12 Other 2-Axle 4-Tire Vehicle Fuel Consumption and Travel**

	1970	1975	1980	1985	1990	1995	1996	1997	1998
Number registered (thousands)	14,211	20,418	27,876	37,214	48,275	65,738	69,134	70,224	71,818
Vehicle-miles traveled (millions)	123,000	201,000	291,000	391,000	575,000	790,000	817,000	850,000	866,228
Fuel consumed (million gallons)	12,313	19,081	23,796	27,363	35,611	45,605	47,354	49,370	50,579
Average miles traveled per vehicle (thousands)	8.7	9.8	10.4	10.5	11.9	12.0	11.8	12.1	12.1
Average miles traveled per gallon	10.0	10.5	12.2	14.3	16.1	17.3	17.2	17.2	17.1
Average fuel consumed per vehicle (gallons)	866	934	854	735	738	694	685	703	704

**NOTES:** Nearly all vehicles in this category are light trucks, which include vans, pickup trucks, and sport utility vehicles. In 1995, the U.S. Department of Transportation, Federal Highway Administration revised its vehicle categories beginning with 1993 data. They are passenger car, other 2-axle 4-tire vehicle, single-unit 2-axle 6-tire or more truck, and combination truck. Prior to 1993, some minivans and sport utility vehicles were included under the passenger car category.

**SOURCES:** 1970-90: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics Summary to 1999*, FHWA-PL-97-009 (Washington, DC: July 1997), table VM-201A.

1995-98: Ibid., *Highway Statistics* (Washington, DC: Annual issues), table VM-1.

**Table 4-13 Single-Unit 2-Axle 6-Tire or More Truck Fuel Consumption and Travel**

	1970	1975	1980	1985	1990	1995	1996	1997	1998
Number registered (thousands)	3,681	4,232	4,374	4,593	4,487	5,024	<sup>R</sup> 5,265	5,293	5,414
Vehicle-miles (millions)	27,100	34,600	39,800	45,400	51,900	<sup>R</sup> 62,705	<sup>R</sup> 63,967	<sup>R</sup> 66,893	67,894
Fuel consumed (million gallons)	3,968	5,420	6,923	7,399	8,357	9,216	<sup>R</sup> 9,365	<sup>R</sup> 9,576	9,741
Average miles traveled per vehicle (thousands)	7.4	8.2	9.1	9.9	11.6	12.5	12.2	12.6	12.5
Average miles traveled per gallon	6.8	6.4	5.8	6.1	6.2	6.8	6.8	7.0	7.0
Average fuel consumed per vehicle (gallons)	1,078	1,281	1,583	1,611	1,862	1,835	<sup>R</sup> 1,779	<sup>R</sup> 1,809	1,799

**NOTES:** In 1995, the U.S. Department of Transportation, Federal Highway Administration revised its vehicle categories beginning with 1993 data to include passenger cars, other 2-axle 4-tire vehicles, single-unit 2-axle 6-tire or more trucks, and combination trucks. Single-unit 2-axle 6-tire or more trucks are on a single frame with at least 2 axles and 6 tires. Pre-1995 data have been reassigned to the most appropriate category.

**SOURCES:** 1970-90: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics Summary to 1995*, FHWA-PL-97-009 (Washington, DC: July 1997), table VM-201A.

1995-98: Ibid., *Highway Statistics* (Washington, DC: Annual issues), table VM-1.

KEY: R = revised

**Table 4-14** Combination Truck Fuel Consumption and Travel

	1965	1970	1975	1980	1985	1990	1995	1996	1997	1998
Number registered (thousands)	787	905	1,131	1,417	1,403	1,709	1,696	1,747	1,790	1,831
Vehicle-miles traveled (millions)	31,700	35,100	46,700	68,700	78,100	94,300	115,500	118,900	<sup>R</sup> 124,584	128,159
Fuel consumed (million gallons)	6,658	7,348	9,177	13,037	14,005	16,133	19,777	20,193	20,294	21,100
Average miles traveled per vehicle (thousands)	40.3	38.8	41.3	48.5	55.6	55.2	68.1	68.1	69.6	70.0
Average miles traveled per gallon	4.8	4.8	5.1	5.3	5.6	5.8	5.8	5.9	6.1	6.1
Average fuel consumed per vehicle (gallons)	8,465	8,119	8,116	9,201	9,980	9,441	11,663	11,561	11,338	11,526

**SOURCES:** 1965-90: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics Summary to 1995*, FHWA-PL-97-009 (Washington, DC: July 1997), table VM-201A.

1995-98: Ibid., *Highway Statistics* (Washington, DC: Annual issues), table VM-1.

KEY: R = revised

**Table 4-15** Bus Fuel Consumption and Travel

	1960	1965	1970	1975	1980	1985	1990	1995	1996	1997	1998
Number registered (thousands)	272	314	378	462	529	593	627	686	695	698	716
Vehicle-miles traveled (millions)	4,300	4,700	4,500	6,100	6,100	4,500	5,700	6,400	6,600	<sup>R</sup> 6,842	6,996
Fuel consumed (million gallons)	827	875	820	1,053	1,018	834	895	968	990	<sup>R</sup> 1,027	1,049
Average miles traveled per vehicle (thousands)	16.0	14.9	12.0	13.1	11.5	7.5	9.1	9.4	9.4	9.8	9.8
Average miles traveled per gallon	5.3	5.3	5.5	5.8	6.0	5.4	6.4	6.6	6.6	6.7	6.7
Average fuel consumed per vehicle <sup>R</sup> (gallons)	3,039	2,784	2,172	2,279	1,926	1,405	1,428	1,412	1,425	1,471	1,466

**NOTE:** Includes both publicly and privately owned school, transit, and other commercial buses.

1995-98: Ibid., *Highway Statistics* (Washington, DC: Annual issues), table VM-1.

**SOURCES:** 1960-90: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics Summary to 1995*, FHWA-PL-97-009 (Washington, DC: July 1997), table VM-201A.

KEY: R = revised

**Table 4-16**

**Transit Industry Electric Power and Primary Energy Consumption<sup>a</sup> and Travel**

	1960	1965	1970	1975	1980	1985	1990	1995	1996	1997 <sup>R</sup>	1998 <sup>P</sup>
Number of vehicles	65,292	61,717	61,298	62,183	75,388	94,368	92,961	115,874	122,362	126,360	128,970
Vehicle-miles traveled	2,143	2,008	1,883	2,176	2,287	2,791	3,242	3,550	3,650	3,746	3,932
Electric power consumed (million kWh hours)	2,908	2,584	2,561	2,646	2,446	4,216	4,837	5,068	5,007	4,988	5,250
<b>Primary energy consumed (thousand gallons)</b>											
Diesel	208,100	248,400	270,600	365,060	431,400	608,738	651,030	678,286	692,714	716,952	700,081
Gasoline and other nondiesel fuels <sup>b</sup>	191,900	124,200	68,200	7,576	11,400	45,704	33,906	60,730	61,213	59,463	50,405
Compressed natural gas <sup>R</sup>	N	N	N	N	N	N	N	10,740	15,092	23,906	30,915

<sup>a</sup> Prior to 1985, excludes commuter rail, automated guideway, urban ferryboat, demand responsive vehicles, and most rural and smaller systems.

<sup>b</sup> For 1995, includes propane, liquid petroleum gas, liquefied natural gas, kerosene, and all other nondiesel fuels except compressed natural gas. 1960 to 1990 data include propane.

**NOTES:** The heat equivalent factors used in Btu conversions are: diesel = 138,700 Btu/gallon; electric = 3,412 Btu/kWh, negating electrical system losses (to include electrical system losses, multiply this conversion factor by approximately three) gasoline = 125,000 Btu/gallon.

In January 2000, the American Public Transit Association changed its

name to the American Public Transportation Association (APTA). The *Transit Fact Book* is now referred to as the *Public Transportation Fact Book*.

**SOURCE:** American Public Transportation Association, *Public Transportation Fact Book* (Washington, DC: March 2000), tables 42, 46, 65, 66, 67, and similar tables in earlier editions of the APTA *Transit Fact Book*.

**KEY:** Btu = British thermal unit; kWh = kilowatt hour;  
N = data do not exist; P = preliminary; R = revised

Table 4-17

## Class I Rail Freight Fuel Consumption and Travel

	1960	1965	1970	1975	1980	1985	1990	1995	1996	1997	1998
<b>Number in use</b>											
Locomotives <sup>a</sup>	29,031	27,780	27,077	27,846	28,094	22,548	18,835	18,812	19,269	19,684	20,261
Cars <sup>b</sup>	1,965,486	1,800,962	1,784,181	1,723,605	1,710,827	1,421,686	1,212,261	1,218,927	1,240,573	1,270,419	1,315,667
<b>Miles traveled (millions)</b>											
Freight train-miles <sup>c</sup>	404	421	427	403	428	347	380	458	469	475	475
Locomotive unit-miles	N	N	N	1,479	1,531	1,228	1,280	1,445	1,465	1,423	1,440
Car-miles	28,170	29,336	29,890	27,656	29,277	24,920	26,159	30,383	31,715	31,660	32,657
<b>Average miles traveled per vehicle (thousands)</b>											
Locomotives	N	N	N	53.1	54.5	54.5	68.0	76.8	76.0	72.3	71.1
Cars	14.3	16.3	16.8	16.0	17.1	17.5	21.6	24.9	25.6	24.9	24.8
<b>Average miles traveled per gallon</b>											
Trains	0.12	0.12	0.12	0.11	0.11	0.11	0.12	0.13	0.13	0.13	0.13
Cars	8.13	8.17	8.43	7.56	7.50	8.01	8.40	8.73	8.86	8.86	9.11
<b>Fuel consumed (million gallons)</b>	3,463	3,592	3,545	3,657	3,904	3,110	3,115	3,480	3,579	3,575	3,583
<b>Average fuel consumed per locomotive<sup>a</sup> (thousand gallons)</b>	119.3	129.3	130.9	131.3	139.0	137.9	165.4	185.0	185.7	181.6	176.8

<sup>a</sup> For 1960-80, the total includes a small number of steam and electric units, which are not included in the per locomotive fuel consumption figure.

<sup>b</sup> Includes cars owned by Class I railroads, other railroads, and car companies and shippers.

<sup>c</sup> Based on the distance run between terminals and/or stations; does not include yard or passenger train-miles.

**SOURCES:**

**All data except for locomotive unit-miles:** Association of American Railroads, *Railroad Facts* (Washington, DC: October 1999), pp. 33, 34, 40, 48, 50.

**Locomotive unit-miles:** 1975-90: Ibid., *Railroad Ten-Year Trends* (Washington, DC: Annual issues).

1995-98: Ibid., *Analysis of Class I Railroads* (Washington, DC: Annual issues), p. 29.

KEY: N = data do not exist
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**Table 4-18 Amtrak Fuel Consumption and Travel**

	1972	1975	1980	1985	1990	1995	1996	1997	1998	1999
<b>Number in use</b>										
Locomotives	185	355	419	291	318	313	299	332	345	329
Cars	1,569	1,913	2,128	1,854	1,863	1,722	1,730	1,728	1,962	1,992
<b>Miles traveled (millions)</b>										
Train-miles	26	30	30	30	33	32	30	32	33	34
Car-miles	213	253	235	251	301	292	276	288	312	342
<b>Locomotive fuel consumed</b>										
Electric (million of kWh hours)	N	180	254	295	330	304	293	282	275	283
Diesel (million gallons)	N	63	64	65	82	66	71	75	75	74
<b>Average miles traveled per car</b>	136,000	132,000	110,000	135,000	162,000	170,000	160,000	167,000	159,000	172,000

**NOTE:** The heat equivalent factors used in Btu conversions are: diesel = 138,700 Btu/gallon; electric = 3,412 Btu/kWh, negating electrical system losses (to include electrical system losses, multiply this conversion factor by approximately three).

**SOURCES:**

**Number of locomotives and cars:** 1972-80: Amtrak, State and Local Affairs Department, personal communication.  
1985-99: Ibid., *Amtrak Annual Report*, Statistical Appendix (Washington, DC: Annual issues).

**Miles traveled:**

*Train-miles:* 1972-99: Ibid., *Amtrak Annual Report*, Statistical Appendix (Washington, DC: Annual issues).

*Car-miles:* 1972: Ibid., *Train Information System Reports* (Washington, DC).

1975: Association of American Railroads, *Yearbook of Railroad Facts 1975* (Washington, DC: 1976), p. 40.

1980-85: Amtrak, State and Local Affairs Department and Public Affairs Department, personal communication.

1990-99: Ibid., Amtrak Corporate Reporting, Route Profitability System, personal communication, May 4, 2000.

**Locomotive fuel consumed:**

1975-99: Ibid., State and Local Affairs Department, personal communications.

KEY: Btu = British thermal unit; kWh = kilowatt hour; N = data do not exist
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Table 4-19

## U.S. Government Energy Consumption by Agency and Source (Trillion Btu)

	Petroleum				Total	Electricity	Natural gas	Coal and other <sup>b</sup>	Total
	Motor gasoline	Distillate and residual fuel oil	Jet fuel and aviation gas	Other <sup>a</sup>					
<b>1989</b>									
Agriculture	4.5	0.7	0.1	0.2	5.4	1.8	1.4	0.1	8.7
Defense	17.9	220.7	752.0	3.7	994.3	119.7	108.1	52.3	1,274.4
Energy	1.3	3.1	0.5	0.2	5.0	19.2	9.2	10.8	44.3
GSA	0.1	0.5	0.0	0.0	0.7	7.4	2.7	1.9	12.7
Health and Human Services	0.2	1.9	0.0	0.1	2.3	2.5	1.8	0.1	6.7
Interior	1.9	1.2	0.2	1.1	4.5	1.5	1.0	0.1	7.1
Justice	1.9	0.3	0.2	0.0	2.5	1.7	2.5	1.1	7.7
NASA	0.2	1.0	1.4	0.0	2.6	6.4	2.8	0.3	12.1
Postal Service	8.8	4.6	0.0	0.2	13.6	11.4	4.7	0.6	30.3
Transportation	0.8	5.6	6.9	0.1	13.4	4.0	1.1	0.0	18.5
Veterans Affairs	0.5	2.4	0.0	0.0	3.0	7.8	14.3	1.2	26.2
Other <sup>c</sup>	3.0	3.1	1.2	0.0	7.3	5.0	2.7	0.6	15.6
<b>Total</b>	<b>41.1</b>	<b>245.1</b>	<b>762.5</b>	<b>5.7</b>	<b>1,054.4</b>	<b>188.5</b>	<b>152.4</b>	<b>69.2</b>	<b>1,464.5</b>
<b>1999<sup>p</sup></b>									
Agriculture	3.3	0.1	0.0	0.1	3.5	1.9	2.0	0.5	7.8
Defense	13.5	143.4	436.8	1.7	595.4	98.7	86.0	30.5	810.7
Energy	1.0	1.1	0.0	0.1	2.3	15.7	6.7	4.7	29.4
GSA	0.1	0.1	0.0	0.0	0.2	9.5	3.2	1.5	14.3
Health and Human Services	0.4	0.3	0.0	0.1	0.9	2.8	3.3	0.1	7.0
Interior	2.8	0.8	0.1	0.7	4.5	1.5	1.4	0.1	7.5
Justice	4.8	0.4	1.5	0.0	6.7	3.8	4.5	0.4	15.4
NASA	0.2	0.4	1.1	0.0	1.8	6.4	3.0	0.2	11.4
Postal Service	10.4	5.0	0.0	0.0	15.4	16.3	7.5	0.6	39.8
Transportation	0.8	6.5	4.4	0.0	11.7	7.8	1.0	0.0	20.5
Veterans Affairs	1.2	1.1	0.0	0.0	2.3	9.4	14.3	1.5	27.5
Other <sup>d</sup>	2.4	3.1	0.9	0.0	6.4	13.3	4.8	0.6	25.1
<b>Total</b>	<b>41.1</b>	<b>162.3</b>	<b>444.7</b>	<b>2.9</b>	<b>651.0</b>	<b>187.2</b>	<b>137.6</b>	<b>40.5</b>	<b>1,016.3</b>

KEY: Btu = British thermal unit; GSA = General Services Administration;  
NASA = National Aeronautics and Space Administration; P = preliminary

Continued next page

**Table 4-19**  
Cont'd

**U.S. Government Energy Consumption by Agency and Source (Trillion Btu)**

- <sup>a</sup> Includes liquefied petroleum gases.
- <sup>b</sup> Includes purchased steam, coal, and other.
- <sup>c</sup> Includes U.S. Department of Commerce, Panama Canal Commission, Tennessee Valley Authority, U.S. Department of Labor, U.S. Department of Housing and Urban Development, Federal Communications Commission, Office of Personnel Management, U.S. Department of State, Small Business Administration, National Science Foundation, U.S. Department of Treasury, and Environmental Protection Agency.
- <sup>d</sup> Includes National Archives and Records Administration, U.S. Department of Commerce, U.S. Department of Labor, U.S. Department of State, Environmental Protection Agency, Federal Communications Commission, Federal Trade Commission, Panama Canal Commission, Equal Employment Opportunity Commission, Nuclear Regulatory Commission, Office of Personnel Management, U.S. Department of Housing and Urban Development, U.S. Department of Treasury, Tennessee Valley Authority, Railroad Retirement Board, U.S. Information Agency, and Federal Emergency Management Agency.

**NOTES:** Numbers may not add to totals due to rounding. These data include energy consumed at foreign installations and in foreign operations, including aviation and ocean bunkering, primarily by the U.S. Department of Defense. U.S. government energy use for electricity generation and uranium enrichment is excluded. Other energy used by U.S. agencies that produce electricity or enriched uranium is included. The U.S. government's fiscal year runs from October 1 through September 30.

This table uses a conversion factor for electricity of 3,412 Btu per kilowatt-hour, and a conversion factor for purchased steam of 1,000 Btu per pound.

**SOURCE:** U.S. Department of Energy, Energy Information Administration, *Annual Energy Review 1999*, DOE/EIA-0384(99) (Washington, DC: July 2000), table 1.13. Internet site <http://www.eia.doe.gov/emcu/aer/> as of June 27, 2000.