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Energy Consumption by Mode of Transportation

(trillion Btu)

Embedded Dataset Excel:

Dataset Excel:
[table_04_06_052825.xlsx](#) (68.89 KB)

Notes:
The following conversion rates were used:

Jet fuel = 135,000 Btu/gallon.

Aviation gasoline = 120,200 Btu/gallon.

Automotive gasoline = 125,000 Btu/gallon.

Diesel motor fuel = 138,700 Btu/gallon.

Compressed natural gas = 138,700 Btu/gallon.

Distillate fuel = 138,700 Btu/gallon.

Residual fuel = 149,700 Btu/gallon.

Natural gas = 1,031 Btu/ft³.

Electricity 1kWh = 3,412 Btu, negating electrical system losses. To include approximate electrical system losses, multiply this conversion factor by 3.

Description:

KEY: Btu = British thermal unit; N = data do not exist; R = revised; U = data are not available.

^a Domestic operations only.

^b Includes fuel used in air taxi operations, but not commuter operations. Data for 1996 are estimated using new information on no respondents and are therefore not comparable to earlier years. See the accuracy statement in the appendix for more detailed information.

^c Data from 2007 were calculated using a new methodology developed by FHWA. Data for these years are based on new categories and are not comparable to previous years. The new category *Light duty vehicle, short wheel base* replaces the old category Passenger car and includes passenger cars, light trucks, vans and sport utility vehicles with a wheelbase (WB) equal to or less than 121 inches. The new category *Light duty vehicle, long wheel base* replaces Other 2-axle, 4-tire vehicle and includes large passenger cars, vans, pickup trucks, and sport/utility vehicles with wheelbases (WB) larger than 121 inches. This edition of table 4-5 is not comparable to previous editions before 2013.

^d 1965 data includes *Light duty vehicle, long wheel base* (previously Other 2-axle, 4-tire vehicle).

^e Data from 1997 are not comparable to data before 1997 due to different sources. Prior to 1984, excludes commuter rail, automated guideway, ferryboat, demand responsive vehicles, and most rural and small systems.

^f *Diesel* includes Diesel and Bio-Diesel.

^g *Gasoline and all other nondiesel fuels* include Gasoline, Liquefied Petroleum Gas, Liquefied Natural Gas, Methane, Ethanol, Bunker Fuel, Kerosene, Grain Additive, and Other Fuel.

Source:

Air:

Certificated air carriers:

U.S. Department of Transportation, Bureau of Transportation Statistics, Office of Airline Information, *Fuel Cost and Consumption*, available at <http://www.transtats.bts.gov/fuel.asp> as of May 14, 2025.

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.

1975-93: U.S. Department of Transportation, Federal Aviation Administration, *General Aviation and Air Taxi Activity Survey* (Washington, DC: Annual Issues), table 5.1, and similar tables in earlier editions.

1994-2023: U.S. Department of Transportation, Federal Aviation Administration, Federal Aviation Administration, *FAA Aerospace Forecasts Fiscal Years 2020-2040* (Washington, DC: 2019), tables 23, and similar tables in earlier editions, available at https://www.faa.gov/data_research/aviation/aerospace_forecasts/ as of Jun. 25, 2024.

Highway:

1960-93: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics, Summary to 1995, FHWA-PL-97-009* (Washington, DC: July 1997), table VM-201A, available at <http://www.fhwa.dot.gov/policy/ohpi/hss/hsspubs.cfm> as of Apr. 6/2020.

1994-2023: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics* (Washington, DC: Annual Issues), table VM-1, available at <http://www.fhwa.dot.gov/policyinformation/statistics.cfm> as of May 14, 2025.

Transit:

1960-96: American Public Transportation Association, *2009 Public Transportation Fact Book* (Washington, DC: June 2009), tables 26, 27, 28 and similar tables in earlier editions.

1997-2001: U.S. Department of Transportation, Federal Transit Administration, *National Transportation Database*, table 17 and similar tables in previous years, available at <https://www.transit.dot.gov/ntd/ntd-data> as of Mar. 24, 2016.

2002-23: U.S. Department of Transportation, Federal Transit Administration, *National Transportation Database*, Annual Database Energy Consumption, available at <https://www.transit.dot.gov/ntd/ntd-data> as of May 14, 2025.

Rail:

Association of American Railroads, *Railroad Facts* (Washington, DC: Annual Issues), p. 45 and similar tables in previous issues.

Amtrak:

National Railroad Passenger Corporation (Amtrak), Energy Management Department and Government Affairs Department, personal communications, Apr. 27, 2011, May 8, 2013, Aug. 20, 2014, Sept. 11, 2015, Jun. 21, 2016, Aug. 8, 2017, May 23, 2019, Oct. 21, 2020, Sep. 22, 2022, and Jul. 26, 2023.

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.

1985-2020: U.S. Department of Energy, Energy Information Administration, *Fuel Oil and Kerosene Sales* (Washington, DC: Annual Issues), available at <https://www.eia.gov/petroleum/fueloilkerosene/> as of Feb. 23, 2022.

Gasoline:

U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics* (Washington, DC: Annual Issues), table MF-24 and similar tables in earlier editions, available at <https://www.fhwa.dot.gov/policyinformation/statistics.cfm> as of May 14, 2025.

Pipeline:

U.S. Department of Energy, *Natural Gas Annual*, DOE/EIA-0131(04) (Washington, DC), table 15 and similar tables in earlier editions, available at <https://www.eia.gov/naturalgas/annual/> as of May 14, 2025.

Publications:

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