

GLOSSARY

Aggregate Ratio: See Mean and Ratio Estimate.

AMPD: Average miles driven per day.

Annual Vehicle-Miles Traveled: See Vehicle-Miles Traveled.

Automobile: Includes standard passenger car, 2-seater car and station wagons; excludes passenger vans, cargo vans, motor homes, pickup trucks, and sport-utility or similar vehicles. See Vehicle.

Average Number of Vehicles per Household: The average number of vehicles used by a household for personal transportation. For this report, the average number of vehicles per household is computed as the ratio of the total number of vehicles to the total number of households within any subgroup or "table cell." The total number of vehicles used by a household is based on the number of days each vehicle is used. For example, a total of one vehicle may represent two vehicles, each used for half of the year. See Vehicle.

Average Vehicle Fuel Consumption: A ratio estimate defined as total gallons of fuel consumed by all vehicles, divided by: (1) the total number of vehicles (for average fuel consumption per vehicle) or (2) the total number of households (for average fuel consumption per household). See Ratio Estimate.

Average Vehicle-Miles Traveled: A ratio estimate defined as total miles traveled by all vehicles, divided by: (1) the total number of vehicles (for average miles traveled per vehicle) or (2) the total number of households (for average miles traveled per household). See Ratio Estimate and Vehicle Miles Traveled.

BLS: Bureau of Labor Statistics within the U.S. Department of Labor. See Price.

British Thermal Unit (Btu): The amount of energy required to raise the temperature of 1 pound of water 1 degree Fahrenheit (F) at or near 39.1 degrees F and 1 atmosphere of pressure. One Btu is about equal to the heat given off by a blue-tip match. See Conversion Factor.

Btu: See British Thermal Unit.

Btu Conversion Factor: See Conversion Factor.

Bureau of Labor Statistics (BLS) Pump Price Series: See Price.

Carburetor: A fuel delivery device for producing a proper mixture of gasoline and air, and delivering it to the intake manifold of an internal combustion engine. The efficiency of carburetors is more temperature dependent than fuel injection systems. See Fuel Injection and Diesel Fuel System.

Census Division: A geographic area consisting of several States as defined by the U.S. Department of Commerce, Bureau of the Census. The States are grouped into nine divisions and four regions:

Census Division States

Northeast:

New England: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont

Middle Atlantic: New Jersey, New York, and Pennsylvania

Midwest

East North Central: Illinois, Indiana, Michigan, Ohio, and Wisconsin

West North Central: Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota

South:

South Atlantic: Delaware, the District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, and West Virginia

East South Central: Alabama, Kentucky, Mississippi, and Tennessee

West South Central: Arkansas, Louisiana, Oklahoma, and Texas

West:

Mountain: Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming

Pacific: Alaska, California, Hawaii, Oregon, and Washington

Census Region: See Census Division.

Central City: Usually one or more legally incorporated cities within the Metropolitan Statistical Area (MSA) that is significantly large by itself or large relative to the largest city in the MSA. Additional criteria for being classified "central city" include having at least 75 jobs for each 100 employed residents and having at least 40 percent of the resident workers employed within the city limits. Every MSA has at least one central city, which is usually the largest city. Central cities are commonly regarded as relatively large communities with a denser population and a higher concentration of economic activities than the outlying or suburban areas of the MSA. "Suburban" are those parts of the MSA that are not designated as central city. (See Metropolitan Statistical Areas, Urban, Suburban, and Rural.)

CID: Cubic Inch Displacement. See Engine Size.

Cold-Deck Imputation: A statistical procedure that replaces a missing value of an item with a constant value from an external source such as a value from a previous survey.

Conversion Factor: A number that translates units of one system into corresponding values of another system. Conversion factors are used to translate physical units of measures for various fuels into Btu equivalents.

Diesel Fuel: A fuel composed of distillates obtained in petroleum refining operation or blends of such distillates with residual oil used in motor vehicles. The boiling point and specific gravity are higher for diesel fuels than for gasoline. See Diesel Fuel System.

Diesel Fuel System: Diesel engines are internal combustion engines that burn diesel oil rather than gasoline. Injectors are used to spray droplets of diesel oil into the combustion chambers, at or near the top of the compression stroke. Ignition follows due to the very high temperature of the compressed in-take air, or to the use of "glow plugs," which retain heat from previous ignitions (spark plugs are not used). Diesel engines are generally more fuel economic than gasoline engines, but must be stronger and heavier due to high compression ratios. See Diesel Fuel, Carburetor, and Fuel Injection.

Drivers: Household members who drove a vehicle on a regular basis at the time of the survey.

E85: A fuel containing a mixture of 85 percent ethanol and 15 percent gasoline.

E95: A fuel containing a mixture of 95 percent ethanol and 5 percent gasoline.

EIA: The Energy Information Administration. An independent agency within the U.S. Department of Energy that develops surveys, collects energy data, and analyzes and models energy issues. The Agency must meet the requests of Congress, other elements within the Department of Energy, Federal Energy Regulatory Commission, the Executive Branch, its own independent needs, and assist the general public, or other interest groups, without taking a policy position. See more information about EIA at <http://www.eia.doe.gov/neic/aboutEIA/aboutus.htm>.

Engine Size: The total volume within all cylinders of an engine, when pistons are at their lowest positions. The engine is usually measured in "liters" or "cubic inches of displacement (CID)." Generally, larger engines result in greater engine power, but less fuel economy. There are 61.024 cubic inches in a liter. See Number of Cylinders.

Environmental Protection Agency (EPA) Certification Files: Computer files produced by EPA for analysis purposes. For each vehicle make, model, and year, the files contain the EPA test miles-per-gallon (mpg) values (city, highway, and 55/45 composite). These mpg values are associated with various combinations of engine and drive-train technologies (e.g., number of cylinders, engine size, gasoline or diesel fuel, and automatic or manual transmission). These files also contain information similar to that in the DOE/EPA Gas Mileage Guide, although the mpg values in that publication are adjusted for shortfall.

EPA Certification Files: See Environmental Protection Agency (EPA) Certification Files.

EPA Composite Miles per Gallon (mpg): The harmonic mean of the EPA city and highway mpg, weighted under the assumption of 55 percent city driving and 45 percent highway driving.

Ethanol (CH₃-CH₂OH): A clear, colorless, flammable oxygenated hydrocarbon. Ethanol is typically produced chemically from ethylene, or biologically from fermentation of various sugars from carbohydrates found in agricultural crops and cellulosic residues from crops or wood. It is used in the United States as a gasoline octane enhancer and oxygenate (blended up to 10 percent concentration). Ethanol can also be used in high concentrations (E85) in vehicles designed for its use. See **Fuel ethanol** and **E85**. Note: The lower heating value, equal to 76,000 Btu per gallon, is assumed for estimates in EIA's *Renewables Energy Annual* report.

Family Income: The total combined annual income of all members of the family from all sources before taxes and deductions. It includes wages, salaries, tips, commissions, income from Social Security, pensions, interest, dividends, rent, public assistance, and unemployment insurance. This includes the total income for all family members who lived in the household. Income of nonfamily members of the household is not included. "Family" includes the following types of relationships: mother, father, sister, brother, son, daughter, father-in-law, uncle, aunt, niece, grandchild, foster child, and similar relationships.

Four-Wheel Drive: See Type of Drive.

Front-Wheel Drive: See Type of Drive.

Fuel Consumption: See Vehicle Fuel Consumption.

Fuel Economy: See Miles per Gallon.

Fuel Expenditures: See Vehicle Fuel Expenditures.

Fuel Injection: A fuel delivery system whereby gasoline is pumped to one or more fuel injectors under high pressure. The fuel injectors are valves that, at the appropriate times, open to allow fuel to be sprayed or atomized into a throttle bore or into the intake manifold ports. The fuel injectors are usually solenoid operated valves under the control of the vehicle's on-board computer (thus the term "electronic fuel injection"). The efficiency of fuel-injection systems is less temperature dependent than carburetor systems. Diesel engines always use injectors. See Carburetor and Diesel Fuel Systems.

Fuel: Any material substance that can be consumed to supply heat or power. Included are petroleum, coal, and natural gas (the fossil fuels), and other consumable materials, such as uranium, biomass, and hydrogen.

Fuel ethanol (CH₃-CH₂OH): An anhydrous denatured aliphatic alcohol intended for gasoline blending as described in the definition of oxygenates. It is also used in high concentrations to produce E85. See E85, ethanol, and oxygenates.

Fuel Type: See Type of Vehicle Fuel Purchased.

Full Service: See Type of Primary Service.

GPMR (Gallons per Mile Ratio): See Miles-per-Gallon (mpg) Shortfall.

Gasohol: A fuel used in motor vehicles that is a blend of finished motor gasoline (leaded or unleaded) and alcohol (generally ethanol, but sometimes methanol), limited to 10 percent alcohol by volume. See Gasoline.

Gasoline: A complex mixture of relatively volatile hydrocarbons, with or without small quantities of additives, obtained by blending appropriate refinery streams to form a fuel suitable for use in spark ignition engines. Motor gasoline includes both leaded or unleaded grades of finished motor gasoline, blending components, and gasohol.

Hispanic Descent: This, as the question on origin, was self-determined by the respondent. See Origin.

Hot-Deck Imputation: A statistical procedure for deriving a probable response to a questionnaire item concerning a household or vehicle, where no response was given during the survey. To perform the procedure, the households or vehicles are sorted by variables related to the missing item. Thus, a series of "sort categories" are formed, which are internally homogeneous with respect to the sort variables. Within each category, households or vehicles for which the questionnaire item is not missing are randomly selected to serve as "donors" to supply values for the missing item of "recipient" households or vehicles.

Household: A family, an individual, or a group of up to nine unrelated persons occupying the same housing unit at the time of the interview. "Occupy" means the housing unit was the person's usual or permanent place of residence at the time of the first field contact. The household includes babies, lodgers, boarders, employed persons who live in the housing unit, and persons who usually live in the household but are away traveling or in a hospital. The household does not include persons who are normally members of the household but who were away from home as college students or members of the armed forces at the time of the contact. The household does not include persons temporarily visiting with the household if they have a place of residence elsewhere, persons who take their meals with the household but usually lodge or sleep elsewhere, domestic employees or other persons employed by the household who do not sleep in the same housing unit, or persons who are former members of the household, but have since become inmates of correction or penal institutions, mental institutions, homes for the aged or needy, homes or hospitals for the chronically ill or handicapped, nursing homes, convents or monasteries, or other places in which residents may remain for long periods of time. By definition, the number of households is the same as the number of occupied housing units. The number of households for a subgroup or table cell is estimated by summing the survey weights over all sample households in that subgroup.

Householder: The person (or one of the people) in whose name the home is owned or rented. If there is no lease or similar agreement, or if the person who owns the home or pays the rent does not live in the housing unit, the householder is the person responsible for paying the household bills, or whoever is generally in charge. Note that "household" in the NHTS corresponds to the contact person for interview purposes.

Household Composition: The configuration of the household members including number of children, number of household members, and age of household members. For this report, households were divided into households with children and households without children. Within the households with children, a further division was made depending on the age of the oldest child. Within households without children, a further division was made depending on the number

of adults and then within that category, the age of the households. See Household, Householder, and Housing Unit.

Household Size: Number of individuals occupying a housing unit. See Household, and Housing Unit.

Housing Unit: A structure or part of a structure where a household lives. It has direct access from the outside of the building, either directly or through a common hall. Housing units do not include group quarters such as prisons or nursing homes where 10 or more unrelated persons live. Hotel and motel rooms are considered housing units if occupied as the usual or permanent place of residence.

Imputation: A group of statistical techniques for estimating probable responses to questionnaire items concerning households or vehicles, where no responses or poor quality responses were given during the survey. The three most common techniques employed in this survey were "hot-deck," "regression," and "predictive mean matching." See Hot-Deck Imputation, Cold-Deck Imputation, Predictive Mean Matching, and Regression Imputation.

Intermediate-Grade Gasoline: An increasingly common grade of unleaded gasoline with an octane rating intermediate between "regular" and "premium." Octane boosters are added to gasoline to control engine pre-ignition or "knocking" by slowing combustion rates. See Regular-Grade Gasoline and Premium-Grade Gasoline.

In-Use Miles per Gallon (mpg): A mpg value that was adjusted for seasonality and annual miles traveled.

Jeep-like Vehicle: These vehicles are now referred to as sport-utility. See Sport-Utility Vehicle.

Joule (J): The meter-kilogram-second unit of work or energy, equal to the work done by a force of one newton when its point of application moves through a distance of one meter in the direction of the force; equivalent to 10⁷ ergs and one watt-second. A petajoule (PJ) is 10¹⁵ Joules.

Large Van: See Van.

Leaded Gasoline: A fuel that contains more than 0.05 gram of lead per gallon or more than 0.005 gram of phosphorus per gallon. See Gasoline and Unleaded Gasoline.

Liters: See Engine Size.

Light-duty vehicles: Vehicles weighing less than 8,500 lbs (include automobiles, motorcycles, and light trucks).

Light trucks: All single unit two-axle, four-tire trucks, including pickup trucks, sports utility vehicles, vans, motor homes, etc. This is the Department of Transportation definition. The Energy Information defined light truck as all trucks weighing 8,500 pounds or less.

Lundberg Survey Inc. Price Series: See Price.

Mean: The simple arithmetic average for a population; that is, the sum of all the values in a population divided by the size of the population. For this report, population means are estimated by computing the weighted sum of the sample values, then dividing by the sum of the sample weights. The mean is, thus, an aggregate ratio whose denominator is the total number of households or vehicles. See Ratio Estimate.

Methanol (CH₃OH): A light, volatile alcohol eligible for gasoline blending.

Methanol blend: Mixtures containing 85 percent or more (or such other percentage, but not less than 70 percent) by volume of methanol with gasoline. Pure methanol is considered an "other alternative fuel."

Metropolitan: See Urban.

Metropolitan Statistical Area (MSA): Areas defined by the U.S. Office of Management and Budget in 1992. An MSA is (1) a county or group of contiguous counties that contain at least one city of 50,000 inhabitants or more, or (2) an urbanized area of at least 50,000 inhabitants and a total MSA population of at least 100,000 (75,000 in New England). The contiguous counties are included in an MSA if, according to certain criteria, they are essentially metropolitan in character and are socially and economically integrated with the central city. In New England, MSAs consist of towns and cities, rather than counties. (See Urban, Central City, Suburban, and Rural.)

Metropolitan Status: Refers to the geographic location of the households in relationship to MSA's. See Metropolitan, Nonmetropolitan, and Central City.

Miles per Gallon (mpg): A measure of vehicle fuel economy. Miles per gallon (mpg) as presented in this report represents "fleet miles per gallon." For each subgroup or "table cell," mpg is computed as the ratio of the total number of miles traveled by all vehicles in the subgroup to the total number of gallons consumed.

Mini-Service Pumps: See Type of Primary Service.

Minivan: New type of small van that first appeared with that designation in 1984. Any of the smaller vans built on an automobile-type frame. Earlier models such as the Volkswagen van are now included in this category.

Model Year: As determined by the manufacturer, the model year is the year that appears in the vehicle identification number. For the NHTS, model year values were reported directly by respondents.

Motor Fuel Consumption: See Vehicle Fuel Consumption.

Motor Fuel Expenditures: See Vehicle Fuel Expenditures.

mpg: See Miles per Gallon.

Miles-per-Gallon (mpg) Shortfall: The difference between actual on-road mpg and EPA laboratory test mpg. Miles-per-gallon (mpg) shortfall is expressed as gallons-per-mile ratio (GPMR).

MSA: See Metropolitan Statistical Area (MSA).

National Household Travel Survey (NHTS): A survey of the nation's inventory of daily and long-distance travel. The survey includes demographic characteristics of households, people, vehicles, and detailed information on daily and longer-distance travel for all purposes by all modes. NHTS survey data are collected from a sample of U.S. households and expanded to provide national estimates of trips and miles by travel mode, trip purpose, and a host of household attributes.

The daily travel surveys were conducted in 1969, 1977, 1983, 1990 and 1995. This data series provides a rich source of detailed information on personal travel patterns in the U.S. Longer-distance travel was collected in 1977 and 1995. The 2001 NHTS collects both daily and longer-distance trips in one survey.

No. 1 diesel fuel: A light distillate fuel oil that has distillation temperatures of 550 degrees Fahrenheit at the 90-percent point and meets the specifications defined in ASTM Specification D 975. It is used in high-speed diesel engines, such as those in city buses and similar vehicles. See No. 1 distillate below.

No. 1 distillate: A light petroleum distillate that can be used as either a diesel fuel (see No. 1 diesel fuel above) or a fuel oil (see No. 1 fuel oil (below)).

No. 1 fuel oil: A light distillate fuel oil that has distillation temperatures of 400 degrees Fahrenheit at the 10-percent recovery point and 550 degrees Fahrenheit at the 90-percent point and meets the specifications defined in ASTM Specification D 396. It is used primarily as fuel for portable outdoor stoves and portable outdoor heaters.

No. 2 diesel fuel: A fuel that has distillation temperatures of 500 degrees Fahrenheit at the 10-percent recovery point and 640 degrees Fahrenheit at the 90-percent recovery point and meets the specifications defined in ASTM Specification D 975. It is used in high-speed diesel engines, such as those in railroad locomotives, trucks, and automobiles.

No. 2 distillate: A petroleum distillate that can be used as either a diesel fuel (see No. 2 diesel fuel above) or a fuel oil (see No. 2 fuel oil below).

No. 2 fuel oil (heating oil): A distillate fuel oil that has distillation temperatures of 400 degrees Fahrenheit at the 10-percent recovery point and 640 degrees Fahrenheit at the 90-percent recovery point and meets the specifications defined in ASTM Specification D 396. It is used in atomizing type burners for domestic heating or for moderate capacity commercial/industrial burner units.

No. 2 fuel oil and No. 2 diesel sold to consumers for all other end uses: Those consumers who purchase fuel oil or diesel fuel for their own use including: commercial/institutional buildings (including apartment buildings), manufacturing and nonmanufacturing establishments, farms (including farm houses), motor vehicles, commercial or private boats, military,

governments, electric utilities, railroads, construction, logging or any other nonresidential end-use purpose.

No. 2 fuel oil sold to private homes for heating: Private household customers who purchase fuel oil for the specific purpose of heating their home, water heating, cooking, etc., excluding farm houses, farming and apartment buildings.

No. 4 fuel oil: A distillate fuel oil made by blending distillate fuel oil and residual fuel oil stocks. It conforms with ASTM Specification D 396 or Federal Specification VV-F-815C and is used extensively in industrial plants and in commercial burner installations that are not equipped with preheating facilities. It also includes No. 4 diesel fuel used for low- and medium-speed diesel engines and conforms to ASTM Specification D 975.

No. 5 and no. 6 fuel oil sold directly to the ultimate consumer: Includes ships, mines, smelters, manufacturing plants, electric utilities, drilling, railroad.

No. 5 and no. 6 fuel oil sold to refiners or other dealers who will resale the product: Includes all volumes of No. 5 and No. 6 fuel oil purchased by a trade or business with the intent of reselling the product to the ultimate consumers.

Nonattainment area: Any area that does not meet the national primary or secondary ambient air quality standard established by the Environmental Protection Agency for designated pollutants, such as carbon monoxide and ozone.

Nonmetropolitan: Households not located within MSAs as defined by the U.S. Office of Management and Budget. See Metropolitan Statistical Area (MSA).

Number of Cylinders: In a reciprocating engine, a cylinder is the chamber in which combustion of fuel occurs and the piston moves, ultimately delivering power to the wheels. Common engine configurations include 4, 6, and 8 cylinders. Generally, the more cylinders a vehicle has, the greater the amount of engine power it has. However, more cylinders often result in less fuel economy. See Engine Size.

Number of Households: The total number of households in the United States that are represented by the sample households. In this report, most statistics are shown for the number of households with vehicles, which is a subset of the total number of households.

Number of Vehicles: See Vehicle and Vehicle Stock.

Occupied Housing Unit: A unit someone was living in as his or her usual or permanent place of residence when the first field contact was made. See Housing Unit.

On-Road Miles per Gallon (mpg): A composite mpg that was adjusted to account for the difference between the test value and the fuel economy actually obtained on the road.

Origin: The primary ethnic background of the person considered to be the householder as self-determined by the respondent. Origin of householder was collected in the 1993 RECS. Each respondent was asked, "Which of the groups on this exhibit best describes the householder?" The groups included: white, black or Negro, American Indian, Alaskan native, Asian, and Pacific

Islander. The word "race" was not used in either the questionnaire or the instructions. See Hispanic Descent.

Outside Central City: See Central City.

Oxygenated gasoline: 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. See Nonattainment area. 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.

Oxygenated gasoline (includes Gasohol): Finished motor gasoline, other than reformulated gasoline, having an oxygen content of 2.7 percent or higher by weight. Includes gasohol. Note: Oxygenated gasoline excludes oxygenated fuels program reformulated gasoline (OPRG) and reformulated gasoline blendstock for oxygenate blending (RBOB).

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.

Passenger Car: See Vehicle and Automobile.

Pickup Truck: Includes compact and full-size pickup trucks. See Vehicle.

Poverty: Low-income classifications to which certain households are assigned based on the household's annual income reported in the NHTS. "Below 100 percent of poverty" encompasses a group of households with incomes below the poverty level as defined by the Bureau of the Census. "Below 125 percent of poverty" includes a group of households with incomes below 125 percent of the poverty level. These groups of the poor and near-poor represent alternative levels for defining poverty. The definitions of "poor" are based on the number of family members in the household and the income of the entire family.

Premium-Grade Gasoline: A grade of unleaded gasoline with a high octane rating, (approximately 92) designed to minimize preignition or engine "knocking" by slowing combustion rates. See Regular-Grade Gasoline and Intermediate-Grade Gasoline.

Price: The dollar amount per gallon of fuel purchased.

Quadrillion: The number 1,000,000,000,000,000 or 10e15.

Ratio Estimate: The ratio of two population aggregates (totals). For example, "average miles traveled per vehicle" is the ratio of total miles driven by all vehicles, over the total number of vehicles, within any subgroup or "table cell." In this report, there are two types of ratio estimates: those computed using aggregates for vehicles and those computed using aggregates for households. See Mean.

Rear-Wheel Drive: See Type of Drive.

RECS: See Residential Energy Consumption Survey (RECS).

Regression Imputation: A statistical technique for predicting the value of a numerical variable that is missing. The technique involves developing a regression equation that predicts the value of the missing variable based upon variables that are not missing or have already been imputed.

Regular-Grade Gasoline: A grade of unleaded gasoline with a lower octane rating (approximately 87) than other grades. Octane boosters are added to gasoline to control engine pre-ignition or "knocking" by slowing combustion rates. See Intermediate-Grade Gasoline and Premium-Grade Gasoline.

Relative Standard Error: See RSE (Relative Standard Error).

Residential: Occupied housing units, including mobile homes, single-family housing units (attached and detached), and apartments. The definition of "occupied housing units" is the same as that used by the U.S. Bureau of the Census. See Household and Housing Unit.

Residential Energy Consumption Survey (RECS): A national multistage probability sample survey conducted by the Energy Consumption Division of the Energy Information Administration. The RECS provides baseline information on how households in the United States use energy.

RSE (Relative Standard Error): A measure of the reliability or precision of a survey statistic. Variability occurs in survey statistics because the different samples that could be drawn would each produce different values for the survey statistics. The RSE is a measure of precision on a percentage scale. The RSE is defined as the standard error of a survey estimate, divided by the survey estimate and multiplied by 100. (Standard error is the square root of the variance.) For example, an RSE of 50 percent means that the standard error is half as large as the survey estimate.

Rural: Households not located within Metropolitan Statistical Areas as defined by the U.S. Office of Management and Budget. See Metropolitan Statistical Area and Urban Status.

Self-Service or Mini-Service: See Type of Primary Service.

Shortfall: See Miles-per-Gallon (mpg) Shortfall.

Sport-Utility Vehicle: Includes light trucks that are similar to jeeps. Other common terms for these vehicles are sport-utility, special purpose, utility or off-the-road vehicles. They may have a four- or two-wheel drive. See Vehicle.

Suburban: Those parts of the MSA that are not designated as central city. Suburban areas are referred to as "outside central city." See Metropolitan Statistical Area.

Transmission Type: The householder was asked if each vehicle had an automatic or manual shift transmission. The transmission is the part of a vehicle that transmits motive force from the engine to the wheels, usually by means of gears for different speeds using either a hydraulic "torque-converter" (automatic) or clutch assembly (manual). On front wheel drive cars, the transmission is often called a "transaxle." Fuel economy is usually higher with manual

transmissions than automatic transmissions, although newer automatic transmissions are narrowing the difference.

Transportation Energy Expenditures: See Vehicle Fuel Expenditures and Combined Household Energy Expenditures.

Type of Drive: Refers to which wheels the engine power is delivered to, the so-called "drive wheels." Rear-wheel drive, has drive wheels on the rear of the vehicle. Front-wheel drive, a newer technology, has drive wheels on the front of the vehicle. Four-wheel drive uses all four wheels as drive wheels, and is found mostly on sport-utility vehicles and trucks, though it is becoming increasingly more common on station wagons and vans.

Type of Fuel System: See Carburetor, Fuel-Injection, and Diesel Fuel Systems.

Type of Vehicle Fuel Purchased: The predominant type of fuel purchased during survey period, which was assigned by EIA because NHTS did not collect this information.. Data categories are gasoline motor fuel, diesel motor fuel, electric, and natural gas, excluding propane because NHTSA's CAFE program does not track these vehicles. See Gasoline, Gasohol, Unleaded Gasoline, Leaded Gasoline, Regular-Grade Gasoline, Intermediate-Grade Gasoline, and Premium- Grade Gasoline.

Type of Primary Service: The dominant type of service the respondent uses at the service station. Response categories include "full-service pumps," "self- or mini-service pumps," or "both equally." Mini-service is provided when attendants pump the vehicle fuel but do not provide any other service, such as checking the tire pressure.

Urban: Urban refers to a group of households located within Metropolitan Statistical Areas (MSAs) as defined by the U.S. Office of Management and Budget. For this report, urban is composed of central city and suburban areas. An MSA is (1) a county or group of contiguous counties that contain at least one city of 50,000 inhabitants or more, or (2) an urbanized area of at least 50,000 inhabitants and a total MSA population of at least 100,000 (75,000 in New England). The contiguous counties are included in an MSA if, according to certain criteria, they are essentially metropolitan in character and are socially and economically integrated with the central city. In New England, MSAs consist of towns and cities rather than counties. (See Central City, Suburban, and Rural.)

Unleaded Gasoline: Contains not more than 0.05 gram of lead per gallon and not more than 0.005 gram of phosphorus per gallon. Premium, regular and intermediate grades are included, depending on the octane rating. See Gasoline, Leaded Gasoline, Regular-Grade Gasoline, Intermediate-Grade Gasoline, and Premium-Grade Gasoline.

Van: Includes large vans. Generally, the distinction between large vans and minivans is made by the respondents' answers to "Type of Vehicle" question.

Vehicle: For this past EIA transportation reports, vehicles were any motorized vehicles used by U.S. households for personal transportation. Excluded were: motorcycles, mopeds, large trucks, and buses. Included were: automobiles, station wagons, passenger vans, cargo vans, motor homes, pickup trucks, and sport-utility or similar vehicles. In order to be included, vehicles must be: (1) owned by members of the household; (2) company cars not owned by household members but regularly available to household members for their personal use and are ordinarily kept at

home; or (3) rented or leased for 1 month or more. See Vehicle Stock, Vehicles Used on the Job, Automobile, Minivans, Vans, Pickup Trucks, and Sport-Utility Vehicles.

Vehicle Acquisition: The number of vehicles a household acquires or obtains during the survey year. The average number of vehicles in the stock is computed using these data. See Vehicle Disposition.

Vehicle Disposition: The number of vehicles a household disposes of during the survey year. Disposed vehicles include those sold, traded, or the owner moved out of the household. The average number of vehicles in the stock is computed using these data. See Vehicle Acquisition.

Vehicle Fuel Consumption: Vehicle fuel consumption is computed as the vehicle-miles traveled divided by the fuel economy reported in miles per gallon (mpg). For the 2001 NHTS, vehicle fuel consumption was derived from the actual vehicle mileage collected in the NHTS and the assigned mpg values were obtained from the EPA certification files and adjusted for on-road, in-use driving.

Vehicle Fuel Economy: See Miles per Gallon (mpg).

Vehicle Fuel Expenditures: The cost, including taxes, of the gasoline, gasohol or diesel fuel added to the vehicle's tank. Expenditures do not include the cost of oil or other items that may have been purchased at the same time as the vehicle fuel.

Vehicle Identification Number (VIN): A set of codes, usually alpha-numeric characters, assigned to a vehicle at the factory and inscribed on the vehicle. When decoded, the VIN provides vehicle characteristics. The VIN was used in EIA's RTECS to help match vehicles to the EPA certification file for calculating miles-per-gallon values; however, NHTS did not collect VINS to limit respondent burden. See Environmental Protection Agency (EPA) Certification Files.

Vehicle-Miles Traveled (VMT): The number of miles traveled nationally by sampled vehicles for a period of 1 year. VMT was calculated using (1) a regression method developed by Oak Ridge National Laboratories, Center for Transportation Analysis (2) two odometer readings or, (3) for vehicles with less than two odometer readings, imputed using a regression estimate. See Average Vehicle-Miles Traveled.

VIN: See Vehicle Identification Number.

VMT: See Vehicle-Miles Traveled.