

GLOSSARY

API Gravity: An arbitrary scale expressing the gravity or density of liquid petroleum products. The higher the API gravity, the lighter the compound. Light crudes generally exceed 38 degrees API and heavy crudes are commonly labeled as all crudes with an API gravity of 22 degrees or below. Intermediate crudes fall in the range of 22 degrees to 38 degrees API gravity.

Asphalt: A dark-brown to black cement-like material containing bitumens as the predominant constituents obtained by petroleum processing.

Associated Dissolved (Natural Gas): Volume of natural gas that occurs in crude oil reservoirs either as free gas (associated) or as gas in solution with crude oil (dissolved).

Average Daily Production: The ratio of the total production at a mining operation to the total number of production days worked at the operation.

Average Production per Miner per Day: The product of the average production per miner per hour at a mining operation and the average length of a production shift at the operation.

Average Production per Miner per Hour: The ratio of the total production at a mining operation to the total direct labor hours worked at the operation.

Aviation Gasoline (Finished): All special grades of gasoline for use in aviation reciprocating engines.

Balancing Item / Adjustment: The difference between the sum of the components of natural gas supply and the sum of the components of natural gas disposition. These differences may be due to quantities lost or 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; 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.

Barrel (Bbl): A fluid measure equal to 42 U.S. gallons.

Barrels per Stream Day: The maximum number of barrels of input that a distillation facility can process within a 24-hour period when running at full capacity under optimal crude and product slate conditions with no allowance for downtime.

Biomass: Organic nonfossil material of biological origin constituting a renewable energy source.

Bituminous Coal: Bituminous coal or soft coal is the most common coal. It is dense, black, often with well-defined bands of bright and dull material. Its moisture content usually is less than 20 percent. The heating value ranges from 19 to 30 million Btu per ton and averages about 23 million Btu per ton. The ignition temperature ranges from about 700 to almost 900 degrees Fahrenheit. It is used for generating electricity, making coke, space heating and supplying heat for industrial use.

Btu (British Thermal Unit): The amount of heat needed to raise the temperature of 1 pound of water by 1 degree Fahrenheit at or near 39.2 F. The Btu is a convenient measure by which to compare the energy content of various fuels.

Butane: A normally gaseous, paraffinic hydrocarbon (C₄H₁₀) extracted from natural gas or refinery gas streams. It is used primarily for blending into high-octane gasoline, for residential and commercial heating and for industrial purposes, especially the manufacture of chemicals and synthetic rubber.

Butylene: An olefinic hydrocarbon (C₄H₈) recovered from refinery processes.

Capacity: The amount of electric power delivered or required by which a generator, turbine, transformer, transmission circuit station or system is rated by the manufacturer (see Nameplate capacity).

Catalyst Coke: In many catalytic operations (e.g., catalytic cracking), carbon is deposited on the catalyst, thus deactivating the catalyst. The catalyst is reactivated by burning off the carbon, which is used as a fuel in the refining process. This carbon or coke is not recoverable in a concentrated form.

Catalytic Cracking: A refining process that consists of using a catalyst and heat to break down the heavier and more complex hydrocarbon molecules into lighter and simpler molecules.

Catalytic Hydrocracking: A refining process that uses hydrogen and catalysts with relatively low temperatures and high pressures for converting middle boiling or residual material to high octane gasoline, reformer charge stock, jet fuel, and /or high grade fuel oil. The process uses one or more catalysts, depending on product output, and can handle high sulfur feedstocks without prior desulfurization.

Catalytic Hydrotreating: A refining process for treating petroleum fractions from atmospheric or vacuum distillation units (e.g., naphthas, middle distillates, reformer feeds, residual fuel oil, and heavy gas oil) and other petroleum (e.g., cat cracked naphtha, coker naphtha, gas oil, etc.) in the presence of catalysts and substantial quantities of hydrogen. Hydrotreating includes desulfurization, removal of substances (e.g., nitrogen compounds) that deactivate catalysts, conversion of olefins to paraffins to reduce gum formation in gasoline, and other processes to upgrade the quality of the fractions.

Catalytic Reforming: A refining process using controlled heat and pressure with catalysts to rearrange certain hydrocarbon molecules, thereby converting paraffinic and naphthenic type hydrocarbons (e.g., low octane gasoline boiling range fractions) into petrochemical feedstocks and higher octane stocks suitable for blending into finished gasoline. Catalytic reforming is reported in two categories. They are: 1) Low Pressure: A processing unit operating at less than 225 pounds per square inch gauge (PSIG) measured at the outlet separator. 2) High pressure: A processing unit operating at either equal to or greater than 225 pounds per square inch gauge (PSIG) measured at the outlet separator.

Catalyst Petroleum Coke: The carbonaceous residue that is deposited on and deactivates the catalyst used in many catalytic operations (e.g. catalytic cracking). Carbon is deposited on the catalyst, thus deactivating the catalyst. The catalyst is reactivated by burning off the carbon, which is used as a fuel in the refinery process. That carbon or coke is not recoverable in a concentrated form.

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.

Coal Bed Methane: Methane is generated during coal formation and is contained in the coal microstructure. Typical recovery entails pumping water out of the coal to allow the gas to escape. Methane is the principal component of natural gas. Coal bed methane can be added to natural gas pipelines without any special treatment.

Coal Coke: The strong, porous, residue consisting of carbon and mineral ash that is formed when the volatile constituents of bituminous coal are driven off by heat in the absence of, or in a limited supply of air. It is used primarily in blast furnaces for smelting ores, especially iron ore.

Coke Plants: Plants where coal is carbonized in slot or beehive ovens for the manufacture of coke.

Coal Production: The sum of sales, mine consumption, issues to miners, and issues to coke, briquetting, and other ancillary plants at mines. Production data include quantities extracted from surface and underground mines, and normally exclude wastes removed at mines or associated reparation plants.

Coal Stocks: Coal quantities that are held in storage for future use and disposition.

Commercial Sector: Non-manufacturing business establishments, including hotels, motels, restaurants, wholesale businesses, retail stores, laundries and other service enterprises; health, social and educational institutions; and federal, state and local governments. Streetlights, pumps, bridges and public services also are included.

Condensate: (See Lease Condensate).

Cord of Wood: A cord of wood measures 4 feet by 4 feet by 8 feet, or 128 cubic feet.

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.

Crude Oil Average Domestic First Purchase Price: 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; after February 1976, the price represents an average of actual first purchase prices. This price is frequently called the wellhead price.

Crude Oil Production: The volume of crude oil produced from oil reservoirs during given periods of time. The amount of such production for a given period is measured as volumes delivered from lease storage tanks (i.e., the point of custody transfer) to pipelines, trucks, or other media for transport to refineries or terminals with adjustments for (1) net differences between opening and closing lease inventories, and (2) basic sediment and water (BS&W).

Crude Oil Refinery Input: Total crude oil (including lease condensate) input to crude oil distillation units and other processing units.

Crude Oil Sold: An equity (not custody) transaction involving an arms-length transfer of ownership of crude oil associated with the physical removal of the crude oil from a property (lease). It occurs at the time and place of ownership transfer where the crude oil volume sold is measured and recorded on a run ticket or other similar physical evidence of purchase.

Crude Oil Stocks: Stocks of crude oil and lease condensate held at refineries.

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 60 degrees F.

Decommissioning: Retirement of a nuclear facility, including decontamination and/or dismantlement.

Degree-Days, Cooling: A measure of how warm a location is over a period of time relative to a base temperature, most commonly specified as 65 degrees F. The measure is computed for each day by subtracting the base temperature (65 degrees) from the average of the day's high and low temperature, with negative values set equal to zero. Each day's cooling degree-days are summed to create a cooling degree-day measure for a specific reference period. Cooling degree-days are used in energy analysis as an indicator of air conditioning energy requirements or use.

Degree-Days, Heating: A Measure of how cold a location is over a period of time relative to a base temperature, most commonly specified as 65 degrees F. 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 specific reference period. Heating degree-days are used in energy analysis as an indicator of space heating energy requirements or use.

Demonstrated Coal Reserves: The sum of coal in both measured and indicated resource categories of reliability that represents 100 percent of the coal in these categories in-place as of a certain date. Includes beds of bituminous coal and anthracite 28 or more inches thick and beds of subbituminous coal 60 or more inches thick that occurs at depths to 1,000 feet. Includes beds of lignite 60 or more inches thick that can be surface mined. Represents that portion of the identified coal resource from which reserves are calculated.

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 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.

Distillate Fuel Oil: A general classification for one of the petroleum fractions produced in conventional distillation operations. It is used primarily for space heating, on- and off-highway diesel engine fuel (including railroad engine fuel and fuel for agricultural machinery), and electric power generation. Included are products known as No. 1, No. 2 and No. 4 fuel oils and No. 1, No. 2 and No. 4 diesel fuels.

Dry Well: An exploratory or development well found to be incapable of producing either oil or gas in sufficient quantities to justify completion as a commercial oil or gas well.

Dry Natural Gas Production: Marketed production less extraction loss, lease and plant fuel use.

Electricity: A form of energy characterized by the presence and motion of elementary charged particles generated by friction, induction, or chemical change.

Electric Utility: A corporation, person, agency, authority or other entity that owns or operates facilities for the generation, transmission, distribution or sale of electricity primarily for use by the public.

Electric Utility Sector: Privately and publicly owned establishments that generate electricity primarily for use by the public.

Electricity Generation: Net electricity (gross electricity output measured at the generator terminals, minus power plant use) generated at electric utilities. Excludes industrial electricity generation.

End User: A firm or individual that purchases products for its own consumption and not for resale (i.e., an ultimate consumer).

End-Use Sectors: The residential, commercial, industrial, transportation and electric utility 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 Information Administration (EIA): An independent agency within the U.S. Department of Energy that develops surveys, collects energy data, and does analytical and modeling analyses of energy issues. The Agency must satisfy 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.

Extension / Exploratory Well: A well drilled to find and produce oil or gas in an unproved area; to find a new reservoir in a field previously found to be producing oil or gas in another reservoir; or to extend the limit of a known oil or gas reservoir.

Extraction Loss: The reduction in volume of natural gas resulting from the removal of natural gas liquid constituents at natural gas processing plants.

Fee Lands: Lands where the ownership is privately held.

Field: An area consisting of a single reservoir or multiple reservoirs all grouped on or related to the same individual geological structural feature. There may be two or more reservoirs in a field that are separated vertically by intervening impervious strata or laterally by local geologic barriers or by both.

Flared: The volume of natural gas burned in flares on the lease 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 that 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.

Forward Cost: The operating and capital costs still to be incurred in the production of uranium from in-place reserves. By using forward costing, estimates of reserves for ore deposits in differing geological settings and status of development can be aggregated and reported for selected cost categories. Included are costs for labor, materials, power and fuel, royalties, payroll taxes, insurance and applicable general and administrative costs. Excluded from forward cost estimates are prior expenditures, if any, incurred for property acquisition, exploration, mine development and mill construction as well as income taxes, profit and the cost of money. Forward costs are neither the full costs of production nor the market price at which the uranium, when produced, might be sold.

Fossil Fuel: Any naturally occurring organic fuel, such as coal, crude oil and natural gas.

Fossil Fuel 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: 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 Oil: A liquid petroleum product less volatile than gasoline, used as an energy source. Fuel oil includes distillate fuel oil (No. 1, No. 2, and No. 4), and residual fuel oil (No. 5 and No. 6).

Gas Plant Operator: Any firm, including a gas plant owner that operates a gas plant and keeps the gas plant records.

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 typically classified as oil wells.)

Geothermal Energy (as used at electric utilities): Hot water or steam, extracted from geothermal reservoirs in the earth's crust, which is supplied to steam turbines at electric utilities that drive generators to produce electricity.

Gigawatt (GW): One billion watts.

Gigawatthour (GWh): One billion watthours.

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.

Gross Production: Full well stream volume, including all natural gas plant liquids and non-hydrocarbon gases, but excluding lease condensate. Also includes amounts delivered as royalty payments or consumed in field operations.

Heat Content of a Quantity of Fuel, Gross: The total amount of heat released when a fuel is burned. Coal, crude oil, and natural gas all include chemical compounds of carbon and hydrogen. When those fuels are burned, the carbon and hydrogen combine with oxygen in the air to produce carbon dioxide and water. Some of the energy released in burning goes into transforming the water into steam and is usually lost. The amount of heat spent in transforming the water into steam is counted as part of gross heat content but is not counted as part of the net heat content. It is also referred to as the higher heating value. Btu conversion factors in the publication typically represent gross heat content.

Heat Content of a Quantity of Fuel, Net: The amount of usable heat released when a fuel is burned under conditions similar to those in which it is normally used. Also referred to as the lower heating value.

Heavy Oil: The fuel oils remaining after the lighter oils have been distilled off during the refining process. Except for start-up and flame stabilization, virtually all petroleum used in steam-electric plants is heavy oil.

Home Heating Oil: No. 2 fuel oil for use in atomizing burners for domestic space heating or for moderate capacity commercial/industrial burner units.

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: Electricity generated by an electric power plant whose turbines are driven by falling water.

Hypothetical Resources (coal): Undiscovered coal resources in beds that may reasonably be expected to exist in known mining districts under known geologic conditions. In general, hypothetical resources are in broad areas of coalfields where points of observation are absent and evidence is from distant outcrops, drill holes, or wells. Exploration that confirms their existence and better defines their quantity and quality would permit their reclassification as identified resources. Quantitative estimates are based on a broad knowledge of the geologic character of coalbed or region. Measurements of coal thickness are more than 6 miles apart. The assumption of continuity of coalbed is supported only by geologic evidence.

Identified Resources: Coal deposits whose location, rank, quality, and quantity are known from geologic evidence supported by engineering measurements. Included are beds of bituminous coal and anthracite (14 or more inches thick) and beds of subbituminous coal and lignite (30 or more inches thick) that occur at depths to 6,000 feet. The existence and quantity of these beds have been delineated within specified degrees of geologic assurance as measured, indicated, or inferred. Also included are thinner and/or deeper beds that presently are being mined or for which there is evidence that they could be mined commercially.

Implicit Price Deflator: The implicit price deflator, published by the U.S. Department of Commerce, Bureau of Economic Analysis, is used to convert nominal figures to real figures.

Industrial Sector: Manufacturing, construction, mining, agriculture, fishing and forestry establishments.

Injections (Natural Gas): Natural gas injected into storage reservoirs.

Interdepartmental Service: Electricity supplied to departments of the electric utility company other than the electric generating department.

Interstate Movement of Natural Gas (Deliveries): The physical transfer of natural gas from Utah production, processing, transportation, storage and/or distribution facilities to facilities in other states.

Interstate Movement of Natural Gas (Receipts): Natural gas that is physically transferred from production, processing, transportation, storage and/or distribution facilities in other states to facilities in Utah.

Investor-Owned Utility: A class of utility that is publicly traded and organized as a tax-paying business, usually financed by the sale of securities in the capital market. It is regulated and authorized to achieve an allowed rate of return.

Isobutane: A normally gaseous branch-chain hydrocarbon. It is a colorless paraffinic gas that boils at a temperature of 10.9 degrees F. It is extracted from natural gas or refinery gas streams.

Isobutylene: An olefinic hydrocarbon recovered from refinery processes or petrochemical processes.

Isopentane: A saturated branch-chain hydrocarbon obtained by fractionation of natural gasoline or isomerization of normal pentane.

Jet Fuel: Includes both naphtha-type and kerosene-type jet fuel meeting standards for use in aircraft turbine engines or meeting ASTM Specification D1655. Although most jet fuel is used in aircraft, some is used for other purposes such as fuel for turbines to produce electricity.

Jet Fuel, Kerosene-Type: A kerosene-based product with a maximum distillation temperature of 400 degrees F at the 10 percent recovery point and a final maximum boiling point of 572 degrees F. It is used 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 degrees F. It is used by the military for turbojet and turboprop engines.

Kerosene: A petroleum distillate that has a maximum distillation temperature of 401 degrees F at the 10 percent recovery point, a final boiling point of 572 degrees F and a maximum flash point of 100 degrees 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 and is suitable for use as an illuminant when burned in wick lamps.

Kilowatt (kW): One thousand watts.

Kilowatthour (kWh): One thousand watthours.

Lease and Plant Fuel: Natural gas used in lease operations, as gas processing plant fuel and as gas used to operate pumps for repressuring or lifting operations.

Lease Condensate: A liquid recovered from natural gas in lease or field separation facilities. Lease condensate consists primarily of pentanes and heavier hydrocarbons but does not include products recovered at natural gas processing plants or facilities. Generally, it is blended with crude oil for refining.

Lease Use: Natural gas used in lease operations for gas lift and reinjection into oil or gas formations for pressure maintenance and cycling purposes.

Light Oil: No. 1 and No. 2 fuel oils, kerosene and jet fuel used as fuel at electric utility plants for the generation of electricity; the term light oil is applied only to fuel consumed by the electric utility sector. For the years 1970 through 1979, any fuel oil consumed by internal combustion and gas turbine plants is assumed to be light oil. For the years 1980 forward, only No. 1 and No. 2 fuel oils, kerosene and jet fuel consumed at electric utility plants are reported as light oil.

Lignite: The lowest rank of coal. Often referred to as brown coal, it is 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 ton on a moist, mineral-matter-free basis.

Liquefied Natural Gas (LNG): Natural gas that has been liquefied by reducing its temperature to minus 260 F at atmospheric pressure.

Liquefied Petroleum Gases (LPG): Ethane, propane, normal butane, ethane-propane mixtures, propane-butane mixtures and isobutane produced at natural gas processing plants, including plants that fractionate raw natural gas plant liquids. LPG also includes liquified refinery gases: ethylene, propylene, butylene and isobutylene produced from crude oil at refineries.

Longwall Mining: A cutting machine is pulled back and forth across a panel of coal 300 to 600 feet wide and up to one mile long, with broken coal moved on a conveyor. This is done under movable roof supports that are advanced as the coal is cut. In a mined out area, the roof is allowed to fall as the mining advances.

Lubricants: Substances used to reduce friction between bearing surfaces. Petroleum lubricants may be produced either from distillates or residues. Lubricants include all grades of lubricating oils from spindle oil to cylinder oil and those used in greases.

Marketed Production (Natural Gas): Gross withdrawals less gas used for repressuring, quantities vented and flared and non-hydrocarbon gases removed in treating or processing operations. Includes all quantities of gas used in field and processing operations.

Mcf: One thousand cubic feet.

Megawatt (MW): One million watts.

Megawatthour (MWh): One million watthours.

Methane: A colorless, flammable, odorless, hydrocarbon gas (CH₄) that is the principal constituent of natural gas. It is also an important source of hydrogen in various industrial processes.

Mine Capacity: The maximum amount of coal that can be produced annually at a mining operation.

Mothballed: Refers to an industrial facility that is shutdown but maintained regularly or kept in a state of repair so as to be available for future operations.

Motor Gasoline Blending Components: Pool gasoline. Gasoline needing no processing other than blending is included in this category.

Motor Gasoline: A complex mixture of relatively volatile hydrocarbons, with or without small quantities of additives, that has been blended to form a fuel suitable for use in spark-ignition engines. Motor gasoline, as given in ASTM Specification D439 or Federal Specification VV-G-1690B, includes a range of temperatures from 122 F to 158 F at the 10 percent recovery point and from 365 to 374 F at the 90 percent recovery point. The Reid Vapor Pressure ranges from 9 to 15 psi. Motor gasoline includes finished leaded gasoline, finished unleaded gasoline and gasohol. Blendstock is excluded until blending has been completed. Alcohol that is to be used in the blending of gasohol also is excluded.

Municipal Utility: A city, county, irrigation district, drainage district or a political subdivision or agency of a state competent under the laws thereof to carry on the business of developing, generating, transmitting or distributing power.

Nameplate Capacity: The full-load continuous rating of a generator, prime mover or other electrical equipment under specified conditions as designated by the manufacturer. Installed nameplate capacity is usually indicated on a nameplate attached physically to the equipment.

Naphtha: A generic term applied to a petroleum fraction with an approximate boiling range between 122 and 400 degrees F.

Natural Gas: A mixture of hydrocarbons (principally methane) and small quantities of various non-hydrocarbons existing in the gaseous phase or in solution with crude oil in underground reservoirs.

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. Dry natural gas is also known as consumer-grade natural gas. The parameters for measurement are cubic feet at 60 degrees F 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 withdraws of natural gas from production reservoirs, less gas used for reservoir repressuring; nonhydrocarbon gases removed in treating and processing operation; and quantities vented and flared.

Natural Gas Plant Liquids (NGPL): Those hydrocarbons in natural gas that are separated as liquids from the gas. Natural gas liquids include natural gas plant liquids (primarily ethane, propane, butane and isobutane produced at natural gas processing plants) and lease condensate (primarily pentanes plus produced from natural gas at lease separators and field facilities).

Natural Gas Processing Plant: A facility designed (1) to achieve recovery of natural gas liquids from the stream of natural gas that may or may not have been processed through the lease separators and field facilities and (2) to control the quality of the gas to be marketed. Cycling plants are classified as gas processing plants.

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.

Net Electricity Consumption: Consumption of electricity computed as generation, plus imports, minus exports, minus transmission and distribution losses.

Net Energy Consumption: Total energy use excluding electrical system energy losses.

Net Generation: Gross generation less plant use, measured at the high-voltage terminals of the station's step-up transformer.

Net Interstate Sales of Electricity: The difference between the sum of electricity sales and losses within a state and the total amount of electricity generated within the state. A positive number indicates that more electricity (including associated losses) came into the state than went out of the state during the year. Conversely, a negative number indicates that more electricity (including associated losses) went out of the state than came into the state.

New Field Wildcat: An exploratory well drilled in an unproven area, located at a considerable distance outside the limits of producing wells.

Nominal Dollars: A measure used to express nominal price.

Nominal Mining Capacity: The design amount of ore per day a mill can process, usually expressed in tons per day.

Nominal U₃O₈ Production Capacity: The design amount of "yellowcake" a mill can produce, usually expressed in tons per day.

Non-Associated (Natural Gas): Natural gas not in contact with significant quantities of crude oil in a reservoir.

Nuclear Electric Power Plant: Electricity generated by the use of the thermal energy released from the fission of nuclear fuel in a reactor.

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.

Operable Refinery Capacity (Barrels per Calendar Day): The maximum number of barrels of input that can be processed in an atmospheric distillation facility during a 24-hour period after making allowances for: (1) the capability of downstream facilities to absorb the output of crude oil of a given refinery. (2) The reduction of capacity for scheduled downtime such as routine inspection, mechanical problems, maintenance, repairs and turnaround. (3) The reduction of capacity for unscheduled downtime such as mechanical problems, repairs and slowdowns.

Operable Refinery Capacity (Barrels per Stream Day): Maximum number of barrels of input that can be processed in an atmospheric distillation facility during a 24-hour period of operation.

Operators (Oil/Gas Well): Entity responsible for the day-to-day operation of one or more crude oil or natural gas wells.

Original Principal Reserves: The sum of all the coal existing in the measured reserve (based on adequate exploration and development data within one-half mile of a control point); indicated reserve (based on geologic measurement within one-and-one-half mile of a control point) and inferred reserve (based on geologic inference within three miles of a control point) in beds of subbituminous coal 4 feet or more in thickness occurring at depths of 3,000 feet or less; and prior to initial mining.

Original Recoverable Reserves: The minable portion of the original principal reserve, using the methods of mining available in the area at the time of data determination.

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.

Pentanes Plus: A mixture of hydrocarbons, mostly pentanes and heavier, extracted from natural gas. Includes isopentane, natural gasoline, and plant condensate.

Petroleum: A generic term applied to oil and oil products in all forms, such as crude oil, lease condensate, unfinished oils, petroleum products, natural gas plant liquids and non-hydrocarbon compounds blended into finished petroleum products.

Petroleum Coke: A solid residue that is the final product of the condensation process in cracking. This product is reported as marketable or catalyst coke.

Petroleum Consumption: The sum of all refined petroleum products supplied. For each refined petroleum product, the amount supplied is calculated by adding production and imports, then subtracting changes in primary stocks (net withdrawals are a plus quantity and net additions are a minus quantity) and exports.

Photovoltaic and Solar Thermal Energy (as used at electric utilities): Energy radiated by the sun as electromagnetic waves (electromagnetic radiation) that is converted at electric utilities into electricity by means of solar (photovoltaic) cells or concentrating (focusing) collectors.

Pipeline Fuel: Gas consumed in the operation of pipelines, primarily in compressors.

Production, oil and gas: The lifting of oil and gas to the surface and gathering, treating, field processing (as in the case of processing gas to extract liquid hydrocarbons), and field storage. The production function shall normally be regarded as terminating at the outlet valve on the lease or field production storage tank. If unusual physical or operational circumstances exist, it may be more appropriate to regard the production function as terminating at the first point at which oil, gas, or gas liquids are delivered to a main pipeline, a common carrier, a refinery, or a marine terminal.

Propane: A normally gaseous, paraffinic hydrocarbon (C₃H₈). It is extracted from natural gas or refinery gas streams. Propane is used primarily for residential and commercial heating and cooling and also as a fuel for transportation. Industrial uses of propane include use as a petrochemical feedstock.

Proved Reserves: The estimated quantities of natural gas or crude oil that geological and engineering data have demonstrated with reasonable certainty to be recoverable from known crude oil and natural gas reservoirs under current economic and operating conditions.

Public Authorities: Municipalities or other divisions or agencies of state or federal governments using electricity for the purpose of lighting streets, highways, parks and other public places or for traffic or other signal system service.

Real Dollars: These are dollars that have been adjusted for inflation.

Reasonably Assured Reserves: Uranium reserves that occur in known mineral deposits of such size, grade and configuration that there could be recovered within the given production cost ranges with currently proven mining and processing technology.

Recoverable Reserves: That portion of an identified resource from which a usable mineral or energy commodity can be economically extracted or produced. Note that a reserve represents only that portion of the resource that can be recovered.

Renewable Energy: Energy obtained from sources that are essentially inexhaustible (unlike, the fossil fuels of which there is a finite supply). Renewable energy resources include wood, waste, geothermal, wind, photovoltaic and solar thermal energy.

Reserve: That portion of the demonstrated reserve base that is estimated to be recoverable at the time of determination. The reserve is derived by applying a recovery factor to that component of the identified coal resource designated as the demonstrated reserve base.

Reservoir: A porous and permeable underground formation containing an individual and separate natural accumulation of producible hydrocarbons (crude oil and/or natural gas) which is confined by impermeable rock or water barriers and is characterized by a single natural pressure system.

Reservoir Repressuring: The injection of natural gas into oil and gas reservoir formations for pressure maintenance and cycling.

Residual Fuel Oil: The heavier oils that remain after the distillate fuel oils and lighter hydrocarbons are distilled away in refinery operations. 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 and electricity generation.

Residential Sector: All private residences whether occupied or vacant, owned or rented, including single-family homes, multi-family housing units and mobile homes. Secondary homes, such as summer homes also are included. Institutional housing such as school dormitories, hospitals and military barracks generally are not included in the residential sector; they are included in the commercial sector. The SIC code used to classify an establishment as residential is 88 (Household).

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.

Rural Electric Cooperatives: Cooperatives and other non-profit organizations financed in whole or in part by loans made pursuant to the *Rural Electrification Act of 1936* and organized to carry on the business of developing, generating, transmitting or distributing electric power.

Seismic Activity: As used in the exploration for oil and gas, seismic activity refers to the investigation of underground strata by recording and analyzing shock waves set off by explosions detonated in a line of shot holes and picked up by geophones.

Short Ton: A unit of weight equal to 2,000 pounds.

Shut In: Closed temporarily; wells and mines capable of production may be shut in for repair, cleaning, inaccessibility to a market, etc.

Solar Energy: The radiant energy of the sun, which can be converted into other forms of energy, such as heat or electricity.

Solar Thermal Systems: Use concentrated sunlight to generate heat for thermal conversion processes such as electricity generation.

Steam Electric 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.

Special Naphthas: All finished products within the gasoline range, specially refined to a specified flash point and boiling range for use as paint thinners.

Stocks: Inventories of fuel stored for future use.

Strip (Surface) Mining: A method used on flat terrain to recover coal by mining long strips successively. The material excavated from the strip being mined is deposited in the strip previously mined.

Stripper Well: An oil or gas well that produces at relatively low rates. For oil, stripper production is usually defined as production rates of between 5 and 15 barrels of oil per day. Stripper gas production would generally be anything less than 60 thousand cubic feet per day.

Surface Mine: A coal-producing mine that is usually within a few hundred feet of the surface. Earth above or around the coal (overburden) is removed to expose the coal bed, which is then mined with surface excavation equipment such as draglines, power shovels, bulldozers, loaders and augers. It also may be known as an area, contour, open-pit, strip or auger mine.

Therm: One-hundred thousand British thermal units (Btu).

Transportation Sector: Private and public vehicles that move people and commodities, included are automobiles, trucks, buses, motorcycles, railroads and railways (including streetcars), aircraft, ships, barges and natural gas pipelines.

Underground Mine: A mine where coal is produced by tunneling into the earth to the coalbed, which is then mined with underground mining equipment such as cutting machines and continuous, longwall and shortwall mining machines.

Underground Storage Injections: Gas from extraneous sources put into underground storage reservoirs.

Underground Storage Withdrawals: Gas removed from underground storage reservoirs.

Unfinished Oils: Includes all oils requiring further refinery processing except those requiring only mechanical blending.

Uranium: A heavy, naturally radioactive, metallic element (atomic number 92). Its two principally occurring isotopes are uranium-235 and uranium-238. Uranium-235 is indispensable to the nuclear industry because it is the only isotope existing in nature to any appreciable extent that is fissionable by thermal neutrons. Uranium-238 is also important because it absorbs neutrons to produce a radioactive isotope that subsequently decays to plutonium-239, an isotope that is also fissionable by thermal neutrons.

Uranium Oxide (U₃O₈): Uranium concentrate, a product of the uranium milling process. It is a bright yellow colored powder and is known as "yellowcake".

Vented Gas: Gas released into the air on the lease site or at processing plants.

Watt: The electrical unit of power, the rate of energy transfer equivalent to one ampere flowing under a pressure of 1 volt at unity power factor.

Watt-hour (Wh): An electrical energy unit of measure equal to one watt of power supplied to or taken from an electric circuit steadily for one hour.

Wax: A solid or semi-solid material derived from petroleum distillates or residues by such treatments as chilling, precipitating with a solvent, or de-oiling. It is a light-colored, more-or-less translucent crystalline mass, slightly greasy to the touch, consisting of a mixture of solid hydrocarbons in which the paraffin series predominates. Includes all marketable wax, whether crude scale or fully refined. The three grades included are microcrystalline, crystalline-fully refined, and crystalline-other. The conversion factor is 280 pounds per 42 U.S. gallons per barrel.

Wellhead: The point at which the crude (and/or natural gas) exits the ground. Following historical precedent, the volume and price for crude oil production are labeled as "wellhead," even though the cost and volume are now generally measured at the lease boundary. In the context of domestic crude price data, the term "wellhead" is the generic term used to reference the production site or lease property.

Wellhead Price: Represents the wellhead sales price including charges for natural gas plant liquids subsequently removed from the gas, gathering and compression charges and state production, severance and/or similar charges.

Wind Energy (as used at electric utilities): The kinetic energy of wind converted at electric utilities into mechanical energy by wind turbines (i.e., blades rotating from a hub) that drive generators to produce electricity for distribution.

Wood and Waste (as used at electric utilities): Wood energy (see Wood Energy), garbage, bagasse, sewerage gas and other industrial, agricultural and urban refuse used to generate electricity for distribution.

Wood Energy: Wood and wood products used as fuel. Included are round wood (cord wood), limb wood, wood chips, bark, sawdust, forest residues, charcoal, pulp waste and spent pulping liquor.

Yellowcake: An impure form of U₃O₈, the product of uranium milling.

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Utah Energy Office
Department of Natural Resources

1594 West North Temple, Suite 3610
P.O. Box 146480
Salt Lake City, UT 84114-6480

