10: GLOSSARY

A-WEIGHTED DECIBELS

Most sounds consist of a broad range of sound frequencies. Because the human ear is not equally sensitive to all frequencies, several frequency-weighting schemes have been used to develop composite decibel scales that approximate the way the human ear responds to sound levels. The "A-weighted" decibel scale (dBA) is the most widely used for this purpose.

ADMINISTRATIVE LAW JUDGE (ALJ)

An administrative law judge presides over evidentiary hearings for a CPUC or FERC application (hearings are required for many, but not all, applications) and writes a proposed decision after all interested parties have been given the opportunity to present their views. The CPUC or FERC commissioners may adopt all or part of the proposed decision, amend or modify the proposed decision, or set aside the proposed decision and prepare their own decision.

ALLUVIUM

A sedimentary formation composed of clay, sand, gravel, and other materials moved and deposited by running water usually in areas where velocity decreases and sediment settles out.

AMBIENT AIR QUALITY

The existing or background air quality in a given community.

AMBIENT SOUND

The all-encompassing sound associated with a given community site, usually a composite of sounds from many sources, near and far, with no particular sound being dominant.

ANADROMOUS

Pertaining to the migration patterns of certain fish. Fish that hatch from eggs in freshwater, migrate to salt water where they spend most of their adult lives, and spawn back to freshwater to reproduce and lay eggs.

AQUIFER

A water-bearing bed or stratum of permeable rock, sand, or gravel located below the surface of the earth and capable of yielding water to wells or springs.

ARTIFACT

A portable object found in archaeological contexts that is the result of human manufacture or modification.

BACKBONE TRANSMISSION SYSTEM

The Backbone Transmission System, formerly referred to as Lines 300, 400 and 401, is used to transport gas from PG&E's interconnection with interstate pipelines, other local distribution companies, and California gas fields to PG&E's local transmission and distribution system.

BEST AVAILABLE CONTROL TECHNOLOGY (BACT)

An emission limitation based on the maximum degree of emission reduction (considering energy, environmental, and economic impacts) achievable through the application of production processes and available methods, systems, and techniques. BACT does not permit emissions in excess of those allowed under any applicable Clean Air Act provisions. Use of the BACT concept is allowable on a case-by-case basis for major new or modified emissions sources in attainment areas and applies to each regulated pollutant.

BEDROCK

A solid rock stratum that underlies gravel, soil, or other superficial material.

BERM

A mound or wall of earth usually used in diverting flooding and landslides.

BLOCK VALVE

A pipeline valve designed to prevent the flow of gas in either direction. May be remotely or manually operated.

BORE

A hole drilled into the earth, such as a well.

BUNDLED GAS SERVICE

A gas service in which gas supply, interstate and intrastate transportation, distribution and storage services all are provided for one price. Core customers receive bundled gas service unless they join a core transport group; noncore customers may choose such service by selecting core subscription service.

CALIFORNIA PUBLIC UTILITIES COMMISSION (CPUC)

The state agency that regulates the rates and services of natural gas, electric, water, steam, pipeline, sewer, telephone, cellular and radio telephone, and telegraph utilities as well as trucking, railroad, airline, moving and privately-owned bus companies.

CAPACITY

A measure of the amount of gas that a pipeline is rated to transport. For example, the capacity of PG&E's Line 300 is 1,140 million cubic feet per day (MMcf/d), Line 400 is 1,040 MMcf/d, and Line 401 is 850 Mmcf/d.

CAPACITY CONSTRAINT

A restriction or limitation at any point on PG&E's system which affects acceptance, movement, or subsequent redelivery of natural gas. PG&E is the sole judge of whether it has sufficient capacity to deliver gas to customers.

CAPACITY FACTOR

The percentage of gas transported along a pipeline with respect to the rated capacity of the system. For example, if a pipeline transports 80 MMcf/d and has a rated capacity of 100 MMcf/d, then the capacity factor is 80 percent.

CATHODIC PROTECTION

A technique used to prevent corrosion of a pipeline by passing a current through it.

CHECK VALVE

A pipeline valve designed to automatically prevent the backflow of gas.

CITYGATE

Any point at which a backbone transmission system connects to a distribution system.

COLD TEMPERATURE YEAR

Statistically determined, extremely cold design-temperature conditions, based on long-term recorded weather data.

COMPRESSION FACILITIES

The machinery used to increase the pressure of gas in a pipeline system for transportation or injection.

COMPRESSORS

Equipment which pressurizes gas to keep it moving through pipelines.

CORE CUSTOMERS

Residential and small commercial gas customers who require utility gas service.

CULVERT

A tranverse drain or waterway (as under a road, railroad, or canal).

CURTAILMENT

Temporary suspension, partial or complete, of gas deliveries to a customer or customers because of a projected or actual supply or pipeline-capacity constraint.

CUSHION GAS

A volume of gas which is required in underground storage field operations to maintain minimum field pressure. This cushion gas (or base gas) is not available for withdrawal so long as the storage site is being actively operated.

DECATHERM (DTH)

The approximate heat content of 1,000 cubic feet (Mcf) of gas; ten therms.

DEHYDRATOR

An individual unit of natural gas processing equipment that removes water vapor by bubbling natural gas through a glycol contactor, which absorbs water vapor.

DELIVERABILITY

The volume of natural gas per day that a well, gas field, storage reservoir, pipeline, or distribution system can supply.

DEWATERING

The process of pumping water out of an excavation to allow construction.

DIRECTIONAL DRILLING

Method used to drill under rivers and major sloughs.

DISTRIBUTION SYSTEM

This portion of the PG&E system, which includes local transmission, extends from the Citygate to the customer's premises.

DOGGR

California Division of Oil, Gas, and Geothermal Resources (DOGGR) regulates drilling, production, injection, and gas storage operations in accordance with Title 14, Chapter 4 of the California Code of Regulations.

ELECTRIC LOG

A record of subsurface materials encountered in a bore that is based on the electrical conductivity of the materials.

END-USERS

End-users are the ultimate consumers of natural gas. They include residential, commercial, industrial, wholesale, cogeneration, enhanced oil recovery, and utility electric generation customers.

ENVIRONMENT

The physical conditions in the project vicinity that will be affected by a proposed project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historical or aesthetic significance. The area involved shall be the area in which significant effects would occur either directly or indirectly as a result of the project. The environment includes both natural and man-made conditions.

EXCHANGE

Delivery of gas by one party to another and the delivery of an equivalent quantity by the second party to the first. Such transactions usually involve different points of delivery and may or may not be concurrent.

FAULT

A fracture or fracture zone along which there has been displacement of the sides relative to one another.

FEDERAL ENERGY REGULATORY COMMISSION (FERC)

A federal executive agency responsible for regulating the activities of key portions of the nation's natural gas utilities, electric utilities, natural gas pipeline transportation utilities, and hydroelectric power producers.

FIELD PIPELINE

Field pipelines consist of collection and distribution pipelines running from the well pads to the separation facility and a pipeline from the separation facility to the compressor.

FILL

Something that fills-material used to fill a receptacle, cavity, passage, or low place.

GAS DISTRIBUTION LINE

A gas pipeline, normally operating at pressures of 60 pounds per square inch or less, which brings gas from the high pressure transmission lines to the customer.

GAS FIELD

A naturally occurring accumulation of gases in geologically enclosed spaces, such a permeable material covered by cap rock.

GAS TRANSMISSION

A gas pipeline, normally operating at pressures greater than 60 pounds per square inch, transporting gas from transmission lines or gas production/processing facilities to lower pressure distribution systems. PG&E's gas transmission system consists of three primary intrastate pipelines (Lines 300, 400 and 401), which receive gas from the interstate pipelines at the California border and transport it to PG&E's distribution and/or storage system and other regional transmission lines.

GAS INDUSTRY RESTRUCTURING IN CALIFORNIA

A long-term regulatory process, initiated in the mid-1980s by the California Public Utilities Commission, to change the fundamental structure of the state's natural gas industry. The new structure among other things now allows gas customers to procure their own gas.

GROUNDWATER

Nonsaline and saline water beneath the natural surface of the ground, whether or not flowing through known and definite channels, that supplies recharge to surface water.

HAZARDOUS MATERIAL

A substance that, because of its potential for corrosivity, toxicity, ignitability, chemical reactivity, or explosiveness, may cause injury to persons or damage property.

HAZARDOUS WASTE

A substance or combination of substances which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness; or (2) pose a substantial present of potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed (California Code of Regulations, Title 22).

HOT TEMPERATURE YEAR

Statistically determined extremely hot design-temperature conditions, based on long-term recorded weather data.

HUB (ALSO KNOWN AS MARKET CENTER)

An intersection of several pipelines on a pipeline grid where buyers and sellers can make or take delivery of gas. Two major hubs which affect the California market are the AECO-C hub in eastern Alberta (run by Alberta Energy Company) and the Henry Hub in Louisiana (which is the point used by the New York Mercantile Exchange for pricing natural gas futures).

HYDROSTATIC TESTING

A method used for leak testing of oil and gas pipelines before they are put into operation. Water is pumped into isolated pipeline segments, and then, with the use of high-pressure test pumps, the pressure in the segments is raised to a high pressure, such a 1,850 pounds per square inch. A test duration of 8 hours is required.

INCREMENTAL PRICING

A pricing structure under which the additional costs associated with a project are recovered only from the project's customers (as opposed to rolled-in) pricing. Currently, Line 401 rates are based on incremental pricing.

INJECTION WELL

A well used to inject gas into the storage formation.

INTERCONNECT FACILITIES

Pipe fittings and valves used to connect a project pipeline to an existing natural gas distribution system.

INTERRUPTIBLE CAPACITY

The capacity of a pipeline system in excess of firm capacity. Interruptible (as-available) capacity may vary from day to day depending on the operation conditions, e.g., loads pressures, and ambient temperatures, and the availability of facilities and equipment, such as compressor units.

INTERSTATE PIPELINE COMPANY

A federally regulated company that transports and/or sells natural gas across state lines. PGT, Transwestern, and El Paso Natural Gas Company are interstate pipeline companies.

LINE-PACKING

A method used for providing short-term gas storage in which natural gas is compressed in transmission lines, providing additional amounts of gas to meet limited peak demands.

LIQUEFACTION

A condition where soil strength is greatly reduced because of water pressure buildup, especially in saturated sandy soils that are subject to compaction remolding triggered by earthquake vibrations.

LIQUEFIED NATURAL GAS (LNG)

Natural gas that has been liquefied by chilling. Natural gas is liquefied to reduce its volume and thereby facilitate bulk storage and transport (600 cubic feet of natural gas=1 cubic foot of liquefied natural gas).

LOCAL TRANSMISSION SYSTEM

The pipeline used to accept gas from the backbone transmission system and transport it to the distribution system.

MARGINAL COST

The change in total costs resulting from the delivery of one additional therm of gas to a customer on the utility system, referred to as "volumetric cost."

MARKETERS

Marketers generally purchase gas supplies from producers and then resell them to end-users. Marketers add value and make a profit by saving producers and end-users the trouble of finding each other, arranging transportation and storage, and sometimes by arranging financing or assumption of price risk. Marketers also sometimes market a specific producer's gas without taking title in return for a marketing fee. Numerous marketers currently serve the California market.

NATURAL GAS ACT (NGA) OF 1938

Federal legislation that established regulatory control over companies engaged in the interstate sale and transmission of natural gas.

NATURAL GAS PIPELINE SYSTEM MINIMUM OPERATING REQUIREMENTS

System requirements that must be met in order to provide uninterrupted natural gas service. The two minimum requirements are that the system must operate within a certain pressure and flowrate range, and that, on average, gas supply must equal demand.

NATURAL GAS POLICY ACT OF 1978

Federal legislation that provided for a gradual deregulation of wellhead gas prices and encouraged the development of new natural gas supplies.

NATURAL GAS PROCESSING

The purification of natural gas to meet specifications for use. Natural gas processing includes removing liquids, solids, and vapors; absorbing impurities; and odorizing.

NATURAL GAS STORAGE

A means of providing a reserve of natural gas supplies to meet the seasonal demands of natural gas customers.

NATURAL GAS TRANSPORTATION SYSTEM

The pipeline transportation system used to accept, transport, and distribute natural gas.

NONCORE CUSTOMERS

Large customers who have alternative fuel capability, such as large commercial, industrial, cogeneration, wholesale, and utility electric generation customers.

ODORIZER

A natural gas processing unit that adds a mercaptan sulfur odor to all natural gas as a safety measure, allowing detection if a leak occurs. Unprocessed natural gas is usually odorless.

ON-SYSTEM STORAGE FACILITY

An entity, acknowledged by the CPUC as providing storage services within California, which is physically connected to the PG&E pipeline transmission system with facilities dedicated to the transmission, injection and withdrawal of gas supply. The storage facility either has an interconnection and a storage operating agreement with PG&E or it belongs to PG&E.

OPEN SEASON

A specific period in which customers may elect a certain type of service. Open seasons are held for firm transportation service, for core-subscription service and for noncore storage service.

ORDER 436

An Order issued by FERC in 1985 mandating open-access transportation, i.e., that pipelines must transport gas on a first-come, first-served basis for any local distribution company or shipper requesting service, to the extent that capacity is available.

ORDER 500

An Order issued by FERC in 1987 confirming the provisions of Order 436, and providing the mechanism for recovery of the take-or-pay costs for interstate pipelines.

ORDER 636

An Order issued by FERC in 1992 laying out the final blueprint for the gas industry restructuring. It provided for, among other things, the unbundling of gas sales and transport services, implementation of capacity brokering, recovery of transition costs, and changes in transportation rate design.

ORIGINAL BACKBONE TRANSMISSION SYSTEM

Those portions of the Backbone Transmission System which are not part of or allocated to the Pipeline Expansion facilities. This system is used to transport gas from PG&E's interconnection with interstate pipelines, other local distribution companies, and the California gas fields to PG&E's local transmission and distribution systems.

PERENNIAL

Present at all seasons of the year.

PM10

Particulate matter of less than 10 microns.

PRIME FARMLAND

As designated by the Farmland Mapping and Monitoring Program, prime farmland is the land with the best combination of physical and chemical features able to sustain long-term production of agricultural crops.

PRODUCERS

Producers, also known as E&P (Exploration and Production) firms, explore for gas reservoirs, drill wells, and produce gas. Often larger producers also market their gas directly to end-users. Others rely on aggregators or marketers to make the connection with end-users. Numerous producers are active in the California market.

REAMER

A drilling tool for enlarging a bored well or for making the borehole circular when the drill has failed to do so.

RECHARGE

The process by which water is added to a zone of saturation, usually by percolation from the soil surface.

RIGHT-OF-WAY

The right to pass over property owned by another. The strip of land over which facilities such as roadways, railroads, pipelines, or powerlines are built.

RIPARIAN AREA

The green interface or zone that links the upland terrestrial zone to the deep water aquatic zone of a freshwater resource. The riparian area is highly productive and provides a functional link between aquatic and terrestrial ecosystems.

SEISMICITY

The process or phenomenon of earth movements.

SEISMIC REFRACTION LINE

A method of geotechnical investigation in which vibrations are used to determine the location and properties of subsurface formations.

SENSITIVE PLANT COMMUNITY

A plant community that has been identified by the US Fish and Wildlife Service, California Department of Fish and Game, or the California Native Plant Society that is rare, endangered, threatened, or of limited extent.

SEPARATOR

A natural gas processing unit that removes solids and liquids, such as sand, water and condensate, usually by reducing the velocity of the gas and allowing the force of gravity to settle out the heavier constituents.

SHRINKAGE

The amount of gas used by a pipeline and the lost and unaccounted for supply, both of which are a function of moving gas for a shipper.

SPECIAL-STATUS SPECIES

Plant and wildlife species that are federally listed, proposed for listing, or candidates for listing as rare, threatened, or endangered under the federal or California Endangered Species Act.

SPOT GAS MARKET

An open market for natural gas characterized by short-term purchase agreements for a delivery period of one month or less.

STORAGE

A means of maintaining a reserve of natural gas supplies to meet seasonal gas demands. Storage plays a key role in managing pipeline resources efficiently and in matching gas supplies with demand levels. Long-term storage needs are met by injecting compressed gas into depleted oil and gas reservoirs. PG&E has three such gas storage facilities -- Los Medanos near Concord, McDonald Island near Stockton, and Pleasant Creek near Sacramento.

STORAGE INVENTORY

The direct use of local distribution company's gas storage facilities by noncore customers and gas marketers-brokers. PG&E stores the gas which the customer/marketer-broker has purchased for future use.

STORAGE INJECTION

Quantities of gas delivered into storage facilities for later use by storage customers.

STORAGE WITHDRAWAL

Quantities of gas delivered from storage facilities for use by storage customers.

SUBSIDENCE

A lowering, falling, or sinking, of the ground surface, usually related to withdrawal of groundwater, oxidation of organic soil materials, or erosion.

SYSTEM CAPACITY OR NORMAL SYSTEM CAPACITY

(operational definition) The physical limitation of the system (pipelines and storage) to pass or flow gas to end-users.

SYSTEM UTILIZATION OR NOMINAL SYSTEM CAPACITY

(operational definition) The use of system capacity or nominal system capacity at less than 100-percent utilization.

TAKE

In general, killing of, damage to, or harassment of individuals of a protected species. Under the California Fish and Game Code, "take" is defined to mean possession. Under the federal Endangered Species Act, the definition includes the following activities, which are prohibited with regard to special-status species: harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or any attempt to engage in any of these specifically enumerated activities. Under the Endangered Species Act, therefore, harassment and harm have been extended to include activities that affect habitat that supports listed species.

THERM

An amount of thermal energy equal to 100,000 British thermal units. Ten therms equal one decatherm (also spelled dekatherm; abbreviated Dth). One therm equals approximately 100 cubic feet of gas; 10 therms or 1 Dth equal approximately 1,000 cubic feet (Mcf).

THREATENED SPECIES

A species that, although not presently threatened with extinction, is likely to become endangered in the foreseeable future in the absence of special protection and management efforts.

THROUGHPUT

The total of all natural gas volume moved through a pipeline system, including sales, company use, storage, transportation and exchange.

TRANSMISSION PATHS

Transmission rates are differentiated by path, reflecting facilities used to provide service. Each service on each transmission path requires the execution of a separate exhibit.

- Redwood to on-system
- Redwood to off-system
- Baja to on-system
- Baja to off-system
- Silverado to on-system
- Silverado to off-system
- Mission to on-system
- Mission to off-system

TRANSMISSION PIPELINE

A high-pressure, high-capacity pipeline that conveys materials from their point of origin or a storage facility to the load center, where the gas is distributed.

TRANSPORTATION GAS

Nonutility-owned gas transported for another party under contractual agreement.

UNBUNDLED GAS TRANSPORTATION SERVICE

A legal term that relates to independent ownership of the storage, transmission, and local distribution of natural gas. Gas service which includes only gas transmission, distribution or storage services. No gas procurement service is offered. This service is available to noncore customers and to core customers who are participating in the Core Gas Transportation Program.

VERNAL POOL

A vernal pool is a seasonally flooded topographic depression where water ponds because of limitations to surface or subsurface drainage

VERNAL SWALE

A vernal swale is a broad, shallow, seasonally wet area that primarily conveys water during and shortly after rain events. Surface runoff collects in swales, wetting and saturating the soil for short periods.

WATER INJECTION

The process of reinjecting produced water back into the formation that it was withdrawn from.

WELL HEAD

The aboveground valves and connections of a well.

WELL LOG

The geologic record of the materials that were drilled through when a well was developed.

WELL PAD

A level area that is prepared to facilitate the drilling of a well.

WETLAND

Areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas.

WILLIAMSON ACT

The California Land Conservation Act (Williamson Act) enables counties and cities to designate agricultural preserves (Williamson Act lands) and offer preferential taxation to

agricultural landowners based on the income-producing value of their property in agricultural use rather than on its assessed market value. In return for the preferential tax rate, the landowner is required to sign a contract with the county or city agreeing not to develop the land for a minimum period.

WORKING GAS

A volume of gas present in an underground storage field which is available for withdrawal, although not all of the working gas may be utilized in a given year due to cycle volume constraints. This volume is in addition to the cushion gas volume.