

# **Power Industry Dictionary**

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# Preface

Power Industry Dictionary promises a quick reference to a broad spectrum of industry terms and phrases. We worked to include both traditional and alternative generation technologies, including terms pertaining to fuels, such as coal, gas, nuclear, wind, water, solar, diesel, and others. Terms used in generation, transmission, and distribution can be found here, along with common business and billing language and terms related to the major governmental and industry regulations. Environmental terms and phrases relevant to the electric power industry are also included. Terms relating to current industry trends and technologies, such as distribution automation, SCADA systems, and demand-side management are also defined.

The terms and phrases in the Power Industry Dictionary were compiled from a wide variety of sources in an attempt to meet the diverse needs of industry professionals.

We give a special thank you to the staff at the Energy Information Administration, who were both pleasant to work with and extremely helpful. Also, thank you to the staffs of the PennWell power industry magazines, including: Power Engineering, Power Engineering International, Electric Light & Power, Independent Energy, and Power Delivery Product News.

As a convenience, additional reference material is located in the back of this volume, including an assortment of conversion tables, a table of the chemical elements and their associated symbols and weights, and a contact list of prominent industry organizations complete with World Wide Web addresses when available.

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# A

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**Abatement**

Amount which pollution can be reduced.

**Abrasion**

Removal of surface material from any solid through friction with another solid, liquid, gas, or combination.

**Absolute**

Also called the Kelvin scale. 1: A chemical substance that is relatively free of impurities. 2: A temperature scale used in scientific and engineering research.

**Absolute expansion**

True expansion of a liquid with changing temperature.

**Absolute pressure**

1: Gauge pressure plus barometric pressure. 2: Pressure more than the absolute zero value of pressure which theoretically is in empty space. 3: Pressure with reference to absolute zero or vacuum states.

**Absolute temperature**

The temperature in Celsius degrees relative to absolute zero (Kelvin) or in Fahrenheit degrees relative to absolute zero.

**Absolute vacuum**

Also called a perfect vacuum. Completely empty of matter.

**Absolute zero**

The lowest temperature theoretically possible. At absolute zero, the motion of the particles slows to zero. It is noted as 0 degrees Kelvin, minus 273.15 degrees Celsius, or minus 459.69 degrees Fahrenheit.

**Absorb**

Literally, to suck up. The penetration of a solid substance by a liquid as by capillary, osmotic, solvent, or chemical action.

**Absorbed dose**

Energy imparted to matter by ionizing radiation per unit mass of irradiated material, measured in rads.

**Absorber**

Any material that absorbs or diminishes the intensity of ionizing radiation. Neutron absorbers, like boron, hafnium, and cadmium, are used in control rods for nuclear reactors. Concrete and steel absorb gamma rays and neutrons in reactor shields.

## Power Industry Dictionary

### **Average revenue per kilowatt-hour**

The average revenue per kilowatt-hour of electricity sold by sector and geographic area is calculated by dividing the total monthly revenue by the corresponding total monthly sales for each sector and geographic area.

### **Average stream flow**

The rate, usually expressed in cubic feet per second, at which water passes a given point in a stream over a set period of time.

### **Average water conditions**

1: Also called average hydro. In hydroelectric generation, precipitation and run-off conditions which approximate the mean amount and distribution of a long time frame, usually not exceeding 50 years. 2: The amount and distribution of precipitation within a drainage basin and the run-off conditions present as determined by reviewing the area water supply records over a long period of time.

### **Average-cost pricing**

Pricing designed to recover total costs of the system to make total revenues, including rate of return, equal total costs. Total costs are based on costs recorded in books of account and forecast to be recorded in such accounts.

### **Aviation gasoline**

All special grades of gasoline for use in aviation reciprocating engines. Excludes blending components, which are blended or compounded into finished aviation gasoline.

### **Aviation gasoline blending components**

Naphthas used for blending or compounding into finished aviation gasoline. Excludes oxygenates such as alcohols and ethers, butane, and pentanes.

### **Aviation gasoline, finished**

All special grades of gasoline for use in aviation reciprocating engines. Excludes blending components that will be used in blending or compounding into finished aviation gasoline.

### **Avogadro's constant**

The number of molecules contained in one mole or the gram-molecular weight of a substance. Avogadro's constant is equal to  $6.023 \times 10^{23}$ .

### **Avoided cost**

As noted in the Public Utility Regulatory Policies Act, generation costs which are avoided by purchasing capacity or electricity from a qualifying facility or other source. Generally these are construction costs for new facilities or expansions which are avoided by purchasing

**Cable**

An insulated conductor made of several wires twisted together.

**Calcination**

A process in which a material is heated to a high temperature without fusing, so that hydrates, carbonates, or other compounds are decomposed and the volatile material is expelled.

**Calcium sulfate**

A white crystalline salt, insoluble in water.

**Calcium sulfite**

A white powder, soluble in dilute sulfuric acid.

**Calibration gas**

The volatile organic compound used to adjust the instrument meter reading to a known value. The calibration gas is usually the reference compound at a concentration approximately equal to the leak definition concentration.

**Calibration precision**

The degree of agreement between measurements of the same known value, expressed as the relative percentage of the average difference between the meter readings and the known concentration.

**Canadian deuterium-uranium reactor**

Uses heavy water or deuterium oxide rather than light water as the coolant and moderator. Deuterium is an isotope of hydrogen that has a different neutron absorption spectrum from that of ordinary hydrogen. In a deuterium-oxide-moderated reactor, fuel made from natural uranium can sustain a chain reaction. Abbreviated CANDU.

**Candela**

The standard unit of luminous intensity. One candela is equal to one lumen per steradian.

**Capability**

The maximum load that a generating unit, generating station, or other electrical apparatus can carry under specified conditions for a given time without exceeding approved limits of temperature and stress.

**Capability margin**

The difference between net system capability and system peak load. Nationally, it is the difference between aggregate net system capability and the sum of system peak loads without allowance for time diversity