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Acid Rain Definition: Acid rain is a term used to describe several ways that acidic compounds fall out of the atmosphere, causing a variety of ground-level environmental effects. These effects include damage to forests and soils, fish and other living things, and human health. Acid rain also reduces how clearly we can see through the air, an effect called visibility reduction. Sulfur dioxide and nitrogen oxides are the primary causes of acid rain. In the United States, about two-thirds of all sulfur dioxide and one-quarter of all nitrogen oxides come from electric power generation that relies on burning fossil fuels like coal. Acid rain occurs when these gases react in the atmosphere with water, oxygen, and other chemicals to form various acidic compounds. These acidic compounds fall to the earth as acidic rain, fog, and snow, or as dry deposited gases and particles that can be blown to the ground by the wind. In fact, prevailing winds can blow the compounds that cause acid rain across state and national borders, and sometimes over hundreds of miles.
Annual Consumption Definition: Annual consumption refers to the amount of electricity used by a consumer in one year and is typically measured in kilowatt-hours (kWh). This information can be acquired from your electricity bill or by contacting your energy provider.
Arsenic Definition: Arsenic is a highly poisonous semi-metallic element. According to a 1999 study by the National Academy of Sciences, arsenic can cause bladder, lung, and skin cancer and may cause kidney and liver cancer. The study also found that arsenic harms the central and peripheral nervous systems, as well as heart and blood vessels, and causes serious skin problems. It also may cause birth defects and reproductive problems. These health impacts are caused when arsenic contaminates drinking water supplies. It enters water supplies either from natural deposits in the earth or from industrial and agricultural pollution.
Carbon Dioxide

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Definition: A naturally occurring gas, and also a by-product of burning fossil fuels and biomass, as well as land-use changes and other industrial processes. It is the principal anthropogenic greenhouse gas that affects the earth's radiative balance. It is the reference gas against which other greenhouse gases are measured and therefore has a Global Warming Potential (GWP) of 1.
Carbon Monoxide Definition: Carbon monoxide is colorless, odorless gas resulting from the incomplete combustion of hydrocarbon fuels. Carbon monoxide interferes with blood's ability to carry oxygen to the body's tissues and results in numerous adverse health effects.
Climate Change Definition: Climate change refers to any significant change in measures of climate (such as temperature, precipitation, or wind) lasting for an extended period (decades or longer). Climate change may result from: Natural factors, such as changes in the sun's intensity or slow changes in the earth's orbit around the sun; Natural processes within the climate system (e.g. changes in ocean circulation); Human activities that change the atmosphere's composition (e.g., through burning fossil fuels) and the land surface (e.g., deforestation, reforestation, urbanization, desertification, etc.)
Coal Definition: Coal is formed from plant and animal matter that has been subjected to geologic heat and pressure, transformed over millions of years into hard black solids. Because coal is a readily available resource in the United States, coal power plants provide about half of the nation's electricity. However, coal-fired power plants generally cause more pollution per unit of electricity than any other fuel. Most coal plants are required to have several pollution control devices to reduce the amount of pollutants that are released into the air from burning the coal. These controls have played an important role in cleaning up air quality in many areas of the

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country.
Combined Heat and Power Definition: Combined heat and power (CHP), also known as cogeneration, is an efficient, clean, and reliable approach to generating power and thermal energy from a single fuel source. CHP is not a specific technology but an application of technologies to meet an energy user's needs. CHP systems achieve typical effective electric efficiencies of 50 to 80 percent - a dramatic improvement over the average efficiency of separate heat and power. Since CHP is highly efficient, it reduces traditional air pollutants and carbon dioxide, the leading greenhouse gas associated with climate change. Visit EPA's Combined Heat and Power Partnership web site for additional information.
Commercial Energy Customer Definition: A commercial energy customer refers to non-industrial customers occupying retail space or office buildings.
Competitive Markets Definition: Until recently, most consumers received generation, transmission, and distribution services from one local utility company. As a regulated monopoly, the utility was given an exclusive franchise to provide electricity to consumers in any particular community. Rates were set, and consumers had little choice but to pay that rate. In recent years, however, many states have restructured their electricity industry and are now allowing consumers to choose from among competing electricity suppliers.
Dioxins Definition: Dioxins are man-made chemical compounds that enter the air through fuel and waste emissions, including motor vehicle exhaust fumes and garbage incineration. Skin rashes, liver damage, weight loss, and a reduction in the effectiveness of the immune

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system have all been attributed to human exposure to dioxins.
Electricity Supplier Definition: As states restructure their electricity markets, an increasing number of customers will be able to choose from a range of energy suppliers who market different types of power products, including green power from renewable energy. Restructured local utilities offer electricity products generated exclusively from renewable resources or, more frequently, electricity produced from a combination of fossil and renewable resources. In states without restructured electricity markets, local utilities may offer green pricing programs, where customers may elect to have their utility generate a portion of their power from renewable sources.
Energy Efficiency Definition: Energy efficiency refers to products or systems using less energy to do the same or better job than conventional products or systems. Energy efficiency saves energy, saves money on utility bills, and helps protect the environment by reducing the amount of electricity that needs to be generated. When buying or replacing products or appliances for your home, look for the ENERGY STAR® label - the national symbol for energy efficiency.
Fossil Fuels Definition: Fossil fuels are the nation's principal source of electricity. The popularity of these fuels is largely due to their low costs. Fossil fuels come in three major forms-coal, oil, and natural gas. Because fossil fuels are a finite resource and cannot be replenished once they are extracted and burned, they are not considered renewable.
Global Climate Change Definition: Global climate change could result in sea level rises, changes to patterns of precipitation, increased variability in the

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weather, and a variety of other consequences. These changes threaten our health, agriculture, water resources, forests, wildlife, and coastal areas. For more information on the science and impacts of global climate change, visit EPA's Global Warming Web site.
Green Power Definition: Electricity that is generated from renewable energy sources is often referred to as "green power." Green power products can include electricity generated exclusively from renewable resources or, more frequently, electricity produced from a combination of fossil and renewable resources. Also known as "blended" products, these products typically have lower prices than 100 percent renewable products. Customers who take advantage of these options usually pay a premium for having some or all of their electricity produced from renewable resources. To find out more about green power, visit EPA's Green Power Partnership Web site. http://www.epa.gov/greenpower/
Green Power Marketers Definition: Due to increased customer awareness of the environmental implications associated with power generation, a growing number of utilities and other types of energy service providers have begun offering green power products. The term "green power marketers" usually refers to energy providers operating in states that permit retail competition in the electricity markets. In states that do not allow this retail competition, many utilities have begun offering green power options under what are typically referred to as green pricing programs. To find out what power marketers offer green power products in your area and if your utility offers a green pricing program, visit the Green Power Locator.
Green Power Purchasing Definition: Green power can be purchased nationwide from several sources. Green power marketers offer green power products to consumers in deregulated markets-such as New Jersey, Pennsylvania, and New England. In states that do not allow retail competition in the electricity markets, many utilities offer renewable energy products through green pricing programs. In addition, all

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competition in the electricity markets, many utilities offer renewable energy products through green pricing programs. In addition, all customers nationwide have the opportunity to buy renewable energy and stimulate the development of renewable generation sources through renewable energy certificates. Finally, customers can choose to install on-site renewable generation, such as solar panels. To find out more about green power purchasing, visit EPA's Green Power Partnership Web site.
Green Pricing Definition: Green pricing refers to an optional utility service that allows customers of traditional utilities support a greater level of utility investment in renewable energy by paying a premium on their electric bill to cover any above-market costs of acquiring renewable energy resources. To find out if your utility offers a green pricing program, refer to the Green Power Locator.
Ground-level Ozone Definition: Ground-level ozone is formed by a chemical reaction between volatile organic compounds and oxides of nitrogen in the presence of sunlight. Ozone concentrations can reach unhealthful levels when the weather is hot and sunny with little or no wind. High concentrations of ozone near ground level are harmful to people, animals, crops, and other materials.
Haze Definition: Haze consists of sufficient smoke, dust, moisture, and vapor suspended in air to impair visibility. The term regional haze means haze that impairs visibility in all directions over a large area.
Industrial Air Pollution Definition: This term refers to the emissions of the following pollutants: sulfur oxides, nitrogen oxides, mercury, and carbon dioxide. These air emissions contribute to such environmental concerns as urban smog; acid deposition; excessive nutrient loads to important

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bodies of water, such as the Chesapeake Bay; haze in national parks and wilderness areas; and global climate change.
Industrial Energy Customer Definition: Industrial energy customers include businesses involved in manufacturing or industrial processing.
(Large) Hydroelectric Power Definition: The process of generating electricity by harnessing the power of moving water is called hydroelectricity. Hydroelectric power (hydropower) is generated by forcing water that is flowing downstream, often from behind a dam, through a hydraulic turbine that is connected to a generator. The water exits the turbine and is returned to the stream or riverbed. Much of the hydroelectricity in the United States is generated at large facilities and in the Pacific Northwest, where it meets about two-thirds of the electricity demand. In the U. S., hydroelectricity contributes about 10 percent of the total electricity supply.
Line Losses Definition: The amount of energy lost during transmission and distribution of electricity, including unaccounted for uses.
Mercury/Mercury Compounds Definition: Mercury is a toxic heavy metal that is a byproduct of thermo combustion of fossil fuels, especially coal. Mercury and compounds containing mercury can accumulate in the environment and are highly toxic to humans and animals if inhaled or swallowed. Exposure can permanently damage the brain, kidneys, and fetuses.
Methane Definition: A hydrocarbon that is a greenhouse gas with a global warming potential most recently estimated at 23 times that of carbon

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dioxide (CO). Methane is produced through anaerobic (without oxygen) decomposition of waste in landfills, animal digestion, decomposition of animal wastes, production and distribution of natural gas and petroleum, coal production, and incomplete fossil fuel combustion. The global warming potential (GWP) is from the Intergovernmental Panel on Climate Change's (IPCC's) Third Assessment Report (TAR). Acronym: CH
Natural Gas Definition: Underground deposits of gases consisting of 50 to 90 percent methane (Ch3) and small amounts of heavier gaseous hydrocarbon compounds such as propane (CH) and butane (CH).
Nitrogen Oxides Definition: Gases consisting of one molecule of nitrogen and varying numbers of oxygen molecules. Nitrogen oxides are produced in the emissions of vehicle exhausts and from power stations. In the atmosphere, nitrogen oxides can contribute to formation of photochemical ozone (smog), can impair visibility, and have health consequences; they are thus considered pollutants. Acronym: NOX
Nuclear Energy Definition: Nuclear energy originates from the splitting of uranium atoms in a process called fission. At the power plant, the fission process is used to generate heat for producing steam, which is used by a turbine to generate electricity. Because nuclear power plants do not burn fuel, they do not emit air pollutant emissions. All of the nuclear power plants in the United States collectively produce about 2,000 metric tons per year of radioactive waste. Abandoned uranium mines contaminated with high-level radioactive waste can continue to pose radioactive risks for as long as 250,000 years after closure. There are more than 60 nuclear power plants currently in operation in the U.S., which accounts for approximately 20 percent of the country's electricity production. No nuclear

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currently in operation in the U.S., which accounts for approximately 20 percent of the country's electricity production. No nuclear power plants have been built since 1996, mostly due to economic factors and environmental concerns.
Oil Definition: Oil, a liquid fossil fuel, is formed from layers of buried plants and animals that have been subjected to geologic heat and pressure over a long period of time. The energy that the plants and animals originally obtained from the sun is stored in the oil in the form of carbon. In addition to carbon, oil contains elements such as nitrogen, sulfur, mercury, lead, and arsenic. Oil is a nonrenewable resource because it cannot be replenished on a human time frame.
Particulate Matter Definition: Very small pieces of solid or liquid matter, such as particles of soot, dust, fumes, mists, or aerosols. The physical characteristics of particles, and how they combine with other particles, are part of the feedback mechanisms of the atmosphere. Acronym: PM
Renewable Energy Definition: The term renewable energy generally refers to electricity supplied from renewable energy sources, such as wind and solar power, geothermal, hydropower, and various forms of biomass. These energy sources are considered renewable sources because they are continuously replenished on the Earth.
Retail Competition Definition: In states with retail competition, consumers have the opportunity to choose their energy provider and purchase products based on the price or on the source of power supplied to their home or business.

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Small Hydro Definition: In addition to very large hydro plants in the West, the United States has many smaller hydro plants. Like large plants, small-scale hydroelectric systems capture the energy in flowing water and convert it to electricity. Although the potential for small hydroelectric systems depends on the availability of suitable water flow, these systems can provide cheap, clean, reliable electricity where the resource exists.
Smog Definition: Smog is the brownish haze that pollutes our air, particularly over cities in the summertime. Smog can make it difficult for some people to breathe and it greatly reduces how far we can see through the air. The primary component of smog is ozone, a gas that is created when nitrogen oxides react with other chemicals in the atmosphere, especially in strong sunlight.
Sulfur Dioxide Definition: High concentrations of sulfur dioxide affect breathing and may aggravate existing respiratory and cardiovascular disease. Sensitive populations include asthmatics, individuals with bronchitis or emphysema, children, and the elderly. Sulfur dioxide is also a primary contributor to acid rain, which causes acidification of lakes and streams and can damage trees, crops, historic buildings, and statues. In addition, sulfur compounds in the air contribute to visibility impairment in large parts of the country. This is especially noticeable in national parks. Sulfur dioxide is released primarily from burning fuels that contain sulfur (such as coal, oil, and diesel fuel). Stationary sources such as coal- and oil-fired power plants, steel mills, refineries, pulp and paper mills, and nonferrous smelters are the largest releasers.
Utility

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Definition: A utility is a municipal or private business that provides electricity to the public and is subject to governmental regulation.