

Glossary

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| A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X |
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Acid Gas Removal Unit is a process unit that separates hydrogen sulfide and/or carbon dioxide contaminants from sour natural gas using liquid or solid absorbents or membrane separators.

Adipic Acid Production facilities are facilities that use oxidation to produce adipic acid. Adipic acid is a white crystalline solid used in the manufacture of synthetic fibers, plastics, coatings, urethane foams, elastomers, and synthetic lubricants. Commercially, it is the most important of the aliphatic dicarboxylic acids, which are used to manufacture polyesters.

Aluminum Production facilities are facilities that manufacture primary aluminum using the Hall-Héroult manufacturing process. Aluminum is a light-weight, malleable, and corrosion-resistant metal that is used in many manufactured products, including aircraft, automobiles, bicycles, and kitchen utensils.

Ammonia Manufacturing facilities are facilities that produce ammonia either by steam reforming or gasification of a hydrocarbon feedstock. Ammonia is a major industrial chemical that is mainly used as fertilizer, directly applied as anhydrous ammonia, or further processed into urea, ammonium nitrates, ammonium phosphates, and other nitrogen compounds. Ammonia also is used to produce plastics, synthetic fibers and resins, and explosives.

[Back to Top](#)

Basin is a geologic province as defined by the American Association of Petroleum Geologists (AAPG) Geologic Note: AAPG-CSD Geologic Provinces Code Map: AAPG Bulletin, Prepared by Richard F. Meyer, Laure G. Wallace, and Fred J. Wagner, Jr., Volume 75, Number 10 (October 1991) and the Alaska Geological Province Boundary Map, Compiled by the American Association of Petroleum Geologists Committee on Statistics of Drilling in Cooperation with the USGS, 1978.

Biogenic CO₂ is carbon dioxide generated by burning biomass in combustion units which is emitted into the atmosphere.

[Back to Top](#)

Carbon Dioxide (CO₂) is a naturally occurring gas and is 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 of 1.

Catalytic cracking unit is refinery process unit in which petroleum derivatives are continuously charged and hydrocarbon molecules in the presence of a catalyst are fractured into smaller molecules, or react with a contact material suspended in a fluidized bed to improve feedstock quality for additional processing and the catalyst or contact material is continuously regenerated by burning off coke and other deposits.

Census Block Group is a defined by the Census Bureau that usually has in the range of 600-3000 people living in it. The US is divided into more than 200,000 block groups

Climate Change is 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); and
- 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.)

CO₂e (Carbon Dioxide Equivalent) is a metric measure used to compare the emissions from various greenhouse gases based upon their global warming potential (GWP). The carbon dioxide equivalent for a gas is derived by multiplying the tons of the gas by the associated GWP.

$$\text{CO}_2\text{e} = (\text{tons of a gas}) * (\text{GWP of the gas})$$

Compressor is a machine that raises the pressure of a natural gas or CO₂ by drawing in low pressure natural gas or CO₂ and discharging significantly higher pressure natural gas or CO₂.

[Back to Top](#)

Delayed Coking Unit is a refinery process unit in which high molecular weight petroleum derivatives are thermally cracked and petroleum coke is produced in a series of closed, batch system reactors. A delayed coking unit consists of the coke drums and ancillary equipment associated with a single fractionator.

Demographic Index is an average of these two indicators: **Percent Low-Income:** The percent of a census blocks group's population in households where the household income is less than or equal to twice the federal "poverty level" and **Percent People of Color:** The percent of individuals in a census block group who list their racial status as a race other than white alone and/or list their ethnicity as Hispanic or Latino. That is, all people other than non-Hispanic white-alone individuals. The word "alone" in this case indicates that the person is of a single race, not multiracial. The formula is as follows: Demographic Index = (% people of color + % low-income)

Direct emitters are facilities that combust fuels or otherwise put GHGs into the atmosphere directly from their facility. An example of this is a power plant that burns coal or natural gas and emits carbon dioxide directly into the atmosphere.

[Back to Top](#)

EAFS (Electric Arc Furnace) is a furnace that produces molten alloy metal and heats the charge materials with electric arcs from carbon electrodes.

Exporter is any person, company or organization of record that transfers for sale or for other benefit, domestic products from the United States to another country or to an affiliate in another country, excluding any such transfers on behalf of the United States military or military purposes including foreign military sales under the Arms Export Control Act. An exporter is not the entity merely transporting the domestic products, rather an exporter is the entity deriving the principal benefit from the transaction.

[Back to Top](#)

Flare is a combustion device, whether at ground level or elevated, that uses an open flame to burn combustible gases with combustion air provided by uncontrolled ambient air around the flame.

Fluid coking unit is one or more refinery process units in which high molecular weight petroleum derivatives are thermally cracked and petroleum coke is continuously produced in a fluidized bed system. The fluid coking unit includes equipment for controlling air pollutant emissions and for heat recovery on the fluid coking burner exhaust vent.

Fluorinated greenhouse (GHG) gas means sulfur hexafluoride (SF₆), nitrogen trifluoride (NF₃), and any fluorocarbon except for ozone-depleting substances that are regulated under 40 CFR part 82 and substances with vapor pressures of less than 1 mm of Hg absolute at 25 degrees C. With these exceptions, "fluorinated GHG" includes but is not limited to any hydrofluorocarbon, any perfluorocarbon, any fully fluorinated linear, branched or cyclic alkane, ether, tertiary amine or aminoether, any perfluoropolyether, and any hydrofluoropolyether.

Fractionator (see Natural Gas Liquids Fractionators).

FRS ID (Facility Registry System Identification) is a facility identification number. The Facility Registry System is a centrally managed EPA database that identifies facilities, sites or places subject to environmental regulations or of environmental interest across various EPA programs.

Fuel Type is an aspect of the data filter that allow the user to filter on fuel type to limit the search to combustion emissions (from coal, natural gas, petroleum product, or other fuels), process emissions, or use of carbonates.

Fully fluorinated greenhouse gases (GHGs) are fluorinated GHGs that contain only single bonds and in which all available valence locations are filled by fluorine atoms. This includes but is not limited to: Saturated perfluorocarbons; SF₆; NF₃; SF₅CF₃; fully fluorinated linear, branched, and cyclic alkanes; fully fluorinated ethers; fully fluorinated tertiary amines; fully fluorinated aminoethers; and perfluoropolyethers. For electronics manufacturing, "fluorinated GHGs" in this definition includes fluorinated heat transfer fluids as defined in §98.98. Fully fluorinated GHGs are the longest-lived, most potent GHGs. Their atmospheric lifetimes range from 500 to 50,000 years and their GWPs range from 6,000 to 23,000. Once released, they are essentially permanent additions to the atmosphere.

[Back to Top](#)

Gas collection system is a system of pipes used to collect landfill gas from different locations in the landfill by means of a fan or similar mechanical draft equipment to a single location for treatment (thermal destruction) or use. A single landfill may have multiple gas collection systems. Landfill gas collection systems do not include "passive" systems, whereby landfill gas flows naturally to the surface of the landfill where an opening or pipe (vent) is installed to allow for natural gas flow.

GHG Emissions are the release of a greenhouse gas (GHG) into the atmosphere.

Glass Production facilities are facilities that manufacture glass (including flat, container, or pressed and blown glass) or wool fiberglass using one or more continuous glass melting furnaces.

Global Warming Potential (GWP) is the cumulative radiative forcing effects of a gas over a time horizon resulting from the emission of a unit mass of gas relative to a reference gas. The GWP-weighted emissions of direct greenhouse gases are presented in terms of equivalent emissions of carbon dioxide (CO₂e).

Greenhouse Gas is any gas that absorbs infrared radiation in the atmosphere. Greenhouse gases include, but are not limited to, water vapor, [carbon dioxide](#) (CO₂), [methane](#) (CH₄), [nitrous oxide](#) (N₂O), chlorofluorocarbons (CFCs), [hydrochlorofluorocarbons](#) (HCFCs), ozone (O₃), and [fluorinated GHGs](#) such as hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), [nitrogen trifluoride](#) (NF₃) and [sulfur hexafluoride](#) (SF₆).

[Back to Top](#)

HFC-23 is a type of hydrofluorocarbon (HFC) and a greenhouse gas. HFC-23 is emitted as a by-product during the production of HCFC-22 (a refrigerant and chemical feedstock) and during the production of other HFCs. HFC-23 is also used in and emitted during electronics manufacturing. HFC-23 has a global warming potential of 14,800.

HFC-32 is a type of hydrofluorocarbon (HFC) and a greenhouse gas. HFC-32 is used and emitted as a refrigerant. HFC-32 is also emitted during production of HFCs. HFC-32 has a global warming potential of 675.

HFC-125 is a type of hydrofluorocarbon (HFC) and a greenhouse gas. HFC-125 is used and emitted as a refrigerant and from other applications. HFC-125 is also emitted during production of HFCs. HFC-125 has a global warming potential of 3,500.

HFC-134a is a type of hydrofluorocarbon (HFC) and a greenhouse gas. HFC-134a is used and emitted from various applications including as a refrigerant from motor vehicle air conditioners and other air-conditioning and refrigeration applications. HFC-134a is also emitted during production of HFCs. HFC-134a has a global warming potential of 1,430.

HFC-143a is a type of hydrofluorocarbon (HFC) and a greenhouse gas. HFC-143a is used and emitted as a refrigerant. HFC-143a is also emitted during production of HFCs. HFC-143a has a global warming potential of 4,470.

Hydrofluorocarbons (HFCs) are compounds that contain only hydrogen, fluorine, and carbon atoms. They are used as alternatives to ozone depleting substances in serving many industrial, commercial, and personal needs. HFCs are also emitted as by-products of industrial processes and are used in manufacturing. They do not significantly deplete the stratospheric ozone layer, but saturated HFCs (HFCs with only single bonds) are powerful greenhouse gases. Some important HFCs include: [HFC-23](#) , [HFC-32](#) , [HFC-134a](#), [HFC-125](#) and [HFC-143a](#).

Hydrogen Production facilities are facilities that produce hydrogen by reforming, gasification, oxidation, reaction, or other transformation of feedstock, and that sell the hydrogen as a product.

[Back to Top](#)

Importer is any person, company, or organization of record that for any reason brings a product into the United States from a foreign country, excluding introduction into U.S. jurisdiction exclusively for United States military purposes. An importer is the person, company, or organization primarily liable for the payment of any duties on the merchandise or an authorized agent acting on their behalf.

[Back to Top](#)

[Back to Top](#)

Lead Production facilities are facilities that produce lead using primary and secondary lead smelters. A primary lead smelter produces lead metal from lead sulfide ore concentrates. A secondary lead smelter recycles lead-bearing scrap materials (including but not limited to lead-acid batteries) by smelting into elemental lead or lead alloys. Lead is a metal used to produce various products such as batteries, ammunition, construction materials, electrical components and accessories, and vehicle parts.

Lime Manufacturing facilities are facilities with kilns that produces a lime product from limestone or dolomite by means of calcination. Lime is an important manufactured product with many industrial, chemical, and environmental applications. Its major uses are in steel making, flue gas desulfurization (FGD) systems at coal-fired electric power plants, construction, and water purification.

Local Distribution Companies (LDCs) are companies that own or operate distribution pipelines that physically deliver natural gas to end users. Local Distribution Companies are regulated as separate operating companies by state public utility commissions or operate as independent municipally owned distribution systems. Companies that operate interstate or intrastate pipelines are not part of this source category.

[#Back to Top](#)

Methane (CH₄) is a hydrocarbon and a greenhouse gas. 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 of methane used by the Greenhouse Gas Reporting Program is 25.

MT_CO₂e (Metric Tons of Carbon Dioxide equivalent) is a common international measurement for the quantity of greenhouse gas emissions. A metric ton is equal to 2,205 lbs or 1.1 short tons.

MMT_CO₂e (Million Metric Tons of Carbon Dioxide equivalent) is a common international measurement for the quantity of greenhouse gas emissions. A million metric ton is equal to 1,000,000 metric tons.

[Back to Top](#)

NAICS code is the North American Industry Classification System (NAICS) code. It is a six-digit code that represents the product, activity, or service at a facility or supplier. The codes are listed in the Federal Register and defined in "North American Industrial Classification System Manual" available from the U.S. Department of Commerce at <http://www.census.gov/eos/www/naics/>

Natural Gas Liquids Fractionators are installations that fractionate natural gas liquids into their constituent liquid products (ethane, propane, normal butane, isobutane, or pentanes plus) for supply to downstream facilities.

Nitric Acid Production facilities are facilities that use one or more trains to produce weak nitric acid (30 to 70 percent in strength) through the catalytic oxidation of ammonia. Nitric acid is an inorganic chemical that is used in the manufacture of nitrogen-based fertilizers, adipic acid, and explosives. Nitric acid is also used for metal etching and processing of ferrous metals.

Nitrogen trifluoride (NF₃) is a fully fluorinated GHG that is used in and emitted from electronics manufacturing. NF₃ has an atmospheric lifetime of 500 years and a GWP of 17,200.

Nitrous Oxide (N₂O) is a powerful greenhouse gas. Major sources of nitrous oxide include soil cultivation practices, especially the use of commercial and organic fertilizers, fossil fuel combustion, nitric acid production, and biomass burning. The global warming potential of nitrous oxide used by the Greenhouse Gas Reporting Program is 298.

[Back to Top](#)

Percentile is a way to see how local residents compare to everyone else in the United States. Instead of just showing numbers out of context “The national percentile tells you *what percent of the US population has an equal or lower value.*”

Perfluorocarbons (PFCs) are a group of man-made chemicals composed of carbon and fluorine only. PFCs are primarily emitted from industrial processes. In some cases, they are inputs into these processes; in others, they are by-products. PFCs do not harm the stratospheric ozone layer, but saturated PFCs (PFCs with only single bonds) are powerful greenhouse gases with very long atmospheric lifetimes. Some important PFCs include: [Perfluoroethane](#) and [Perfluoromethane](#).

Perfluoroethane (C₂F₆, PFC-116) is a type of perfluorocarbon (PFC) and a greenhouse gas. Perfluoroethane is emitted as a by-product during aluminum production and is used in and emitted during electronics production. It is also emitted during production of fluorinated GHGs. Perfluoroethane has an atmospheric lifetime of 10,000 years and a GWP of 12,200.

Perfluoromethane (CF₄, PFC-14) is a type of perfluorocarbon (PFC) and a greenhouse gas. Perfluoromethane is emitted as a by-product during aluminum production and is used in and emitted during electronics production. It is also emitted during production of fluorinated GHGs. Perfluoromethane has an atmospheric lifetime of 50,000 years and a GWP of 7,390.

Petroleum and Natural Gas Systems includes the following industry segments:

- Onshore petroleum and natural gas production
- Offshore petroleum and natural gas production
- Onshore natural gas processing plants
- Onshore natural gas transmission compression
- Underground natural gas storage
- Liquefied natural gas (LNG) storage
- Liquefied natural gas import and export equipment
- Natural gas distribution

Phosphoric Acid Production facilities are facilities that produce phosphoric acid using a wet-process phosphoric acid process line in which phosphate rock is reacted with acid. Phosphoric acid is a chemical product derived from phosphate rock and is integral to the production of phosphate fertilizers.

Process Vent is a gas stream that is discharged through a conveyance to the atmosphere either directly or after passing through a control device. The gas stream originates from a unit operation and contains or has the potential to contain GHGs generated in the process.

Pulp and Paper Manufacturing facilities are facilities that produce market pulp (i.e., stand-alone pulp facilities), manufacture pulp and paper (i.e., integrated mills), produce paper products from purchased pulp, produce secondary fiber from recycled paper, convert paper into paperboard products (e.g., containers), or operate coating and laminating processes.

[Back to Top](#)

Refineries are facilities that produce gasoline, gasoline blending stocks, naphtha, kerosene, distillate fuel oils, residual fuel oils, lubricants, or asphalt (bitumen) by the distillation of petroleum or the redistillation, cracking, or reforming of unfinished petroleum derivatives.

[Back to Top](#)

Silicon Carbide Production facilities are facilities that manufacture silicon carbide from silica sand or quartz and petroleum coke. Silicon carbide is primarily an industrial abrasive. Applications of silicon carbide include semiconductors, body armor, and the manufacture of Moissanite, a diamond substitute.

Soda Ash Manufacturing facilities are facilities that produces soda ash by calcining trona, calcining sodium sesquicarbonate, or by using a liquid alkaline feedstock process that directly produces carbon dioxide (CO₂). Soda ash (sodium carbonate, Na₂CO₃) is a raw material utilized in numerous industries including glass manufacturing, pulp and paper production, and soap manufacturing.

Sulfur hexafluoride (SF₆) is a fully fluorinated GHG that is used in and emitted from a number of applications. These include uses as an electrical insulator and arc-quenching medium in electrical transmission and distribution equipment, as a device etching and chamber cleaning agent in electronics manufacturing, and as a cover gas to prevent oxidation during magnesium production and processing. The most potent GHG known, SF₆ has an atmospheric lifetime of 3,200 years and a GWP of 22,800.

Suppliers are those entities that supply products into the economy which if combusted, released or oxidized emit greenhouse gases into the atmosphere. These fuels and industrial gases are not emitted from the supplier facility but instead distributed throughout the country and used. An example of this is gasoline, which is sold in the U.S. and primarily burned in cars throughout the country. The majority of GHG emissions associated with the transportation, residential and commercial sectors are accounted for by these suppliers.

[Back to Top](#)

Titanium Dioxide Production facilities are facilities that use the chloride process to produce titanium dioxide. Titanium Dioxide (TiO₂) is a metal oxide commonly used as a white pigment in paint manufacturing, paper, plastics, rubber, ceramics, fabrics, floor covering, printing ink, and other applications.

Transmission-Distribution (T-D) Transfer Station is a metering-regulating station where a local distribution company takes part or all of the natural gas from a transmission pipeline and puts it into a distribution pipeline.

[Back to Top](#)

Waelz Kiln is an inclined rotary kiln in which zinc-containing materials are charged together with a carbon reducing agent (e.g., petroleum coke, metallurgical coke, or anthracite coal).

[Back to Top](#)

Zinc Production facilities are facilities with zinc smelters and secondary zinc recycling facilities. Zinc is a metal used as corrosion-protection coating on steel (galvanized metal), as die castings, as an alloying metal with copper to make brass, and as chemical compounds in rubber, ceramics, paints, and agriculture.

[Back to Top](#)

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COMING SOON

Producer
Sector
Subsector
Alternate Emission Monitoring Methods
Simplified reporting (C)
Abatement technology (E/V)
Smelter technology (F)
CO2 capture (G/P/S)
Operating kilns (H)
Nitric acid trains (V)
Asphalt Blowing Units (Y)
Coke Calcining Units (Y)
Traditional Fluid Coking Units (Y)
Catalytic Reforming Units (Y)
Electrothermic furnaces (GG)
Biomass based (PP)
GHG Quantities
Power Plants
Iron and Steel
Food Processing
Oil and Natural Gas
Ethanol Production
Government and Commercial
Military
Commercial
Universities
Hospitals
Petroleum Product Suppliers
Industrial Gas Suppliers
Suppliers of CO2
Sulfur Recovery Unit (Y)
Wet- process phosphoric acid process lines (Z) Chloride process lines (Z)