

GLOSSARY

CAUTION: THESE AREN'T LEGAL DEFINITIONS

The legal definition of these terms may vary! These definitions are provided as an aid to understanding the LNG guide only. When making legal arguments, refer to the relevant law (statute / regulation / guidance) to confirm these definitions apply.

Approved jurisdictional determination (AJD) – a document provided by the Army Corps stating the presence or absence of “waters of the United States” on a parcel or a written statement and map identifying the limits of “waters of the United States” on a parcel. This information is used during the permitting process to compute impacts, compensatory mitigation requirements, and other resource protection measures. Used in **404 permitting**.

Aquatic resources – a natural resource that wholly or partially contains water including, but not limited to wetlands, rivers, streams, lakes, channelized waterbodies or estuarine waterbodies. Not all aquatic resources fall within the Army Corps’ jurisdiction, which covers only waters of the United States. Used in **404 permitting**.

Arbitrary and capricious – A shorthand for the standard of review that a court uses when deciding if a permitting agency has complied with its obligations when permitting a project. This standard originates in Administrative Procedures Act § 706. It is a deferential standard that usually results in the court upholding an agency’s decision unless an advocate can show that the agency’s decision does not have a reasonable basis or adequate consideration of the law or facts. A few ways to show arbitrary and capricious behavior could include: showing that the agency failed to consider a relevant issue / facts raised in comments that it should have addressed; showing that the agency considered something it was prohibited from considering by law; or showing that it interpreted its regulations in a contradictory manner when compared to previous decisions. It can be difficult to show that an agency’s actions are arbitrary and capricious, but it is not impossible to do so.

Air Dispersion Modeling – Computer modeling used to estimate the concentration of an air pollutant in the ambient air as a result of new emissions and from existing sources; Air Dispersion Modeling is required as part of the Prevention of Significant Deterioration permitting process to assess impacts of a new or modified source on the National Ambient Air Quality Standards. Air dispersion modeling is also sometimes required by states to assess the impacts of Toxic Air Pollutants. Used in **Clean Air Act Permitting**.

Area of potential effects (APE) - the geographic area within which the project may cause direct and/or indirect effects (including physical, visual, vibratory, or audible effects) to the character or use of historic properties. This includes all areas of construction, such as rights-of-way, compressor stations, meter stations, staging areas, extra work spaces, storage yards, communication sites, access roads, and other ancillary facilities. Used in **NEPA reviews**.

Area Source – An Area Source is a ‘minor’ source of Hazardous Air Pollutants, i.e. a source whose Potential to Emit Hazardous Air Pollutants is less than the Major Source Thresholds for Hazardous

Air Pollutants (25 tons per year for total Hazardous Air Pollutants and 10 tons per year for any single Hazardous Air Pollutant). See 42 U.S.C. § 7412(a)(2). Used in **Clean Air Act Permitting**.

Attainment Area – An Attainment Area is any area (often a county or parish) that EPA has designated as meeting the National Ambient Air Quality Standards for a given Criteria Pollutant. Note that an area may be in Attainment for certain Criteria Pollutants but Nonattainment for others. Used in **Clean Air Act Permitting**.

Best available control technology (BACT) – BACT is the air pollution control technology requirement for new or modified sources subject to Prevention of Significant Deterioration (i.e. Major NSR Sources located in Attainment Areas). Despite its name, BACT is not truly a particular control technology, but instead a short-term emission limit based on the use of a given control technology or operating practice. BACT is defined at 40 C.F.R. § 52.21(b)(12), but in short BACT is meant to be an emission limit based on the best-controlled (i.e. lowest emitting) similar source, unless the proposed facility can demonstrate that the control technology would not be technically feasible or would result in excessively burdensome energy, environmental, and economic impacts and other costs. Used in **Clean Air Act Permitting**.

Biological assessment – The result of an informal consultation between a permitting agency and Fish & Wildlife Services (for terrestrial species) or the National Marine Fisheries Service (for marine species), a document that describes the listed species and critical habitat that may be affected by a project, reports the results of the site surveys that were conducted to identify the species and habitat, analyzes the effects of the proposed project and the project alternatives on these species and habitat, and proposes mitigation that would eliminate or minimize these potential impacts. Flaws in a biological assessment may make a permit invalid. Used in **NEPA reviews**.

Biological opinion – the document that states the opinion of the U.S. Fish & Wildlife Service or the National Marine Fisheries Services as to whether or not a Federal action is likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat. A more scrutinizing review than a biological assessment. Flaws in a biological opinion may make a permit invalid. Used in **NEPA reviews**.

Comment – A way to officially raise concerns about a project during a permitting process. Each agency has its own rules about how and when to file a valid comment. Issues raised in comments usually must be addressed by the permitting agency during the permitting process. Often, an issue must have been raised in a comment for it to be raised as an issue in court litigation. But commentors do not get to litigate a permit in court unless they also have intervened.

Comment period – The times during the permitting process that the public can officially raise concerns about a permit or proposed permit with the permitting agency. The comment period is usually defined in a public notice, but can be extended by the agency on its own behalf or after an extension request has been made by an agency, the public, or the applicant. A comment period may expire quickly—in as little as 10 days—or may extend months. An agency might decline to consider comments that are filed outside of the comment period.

Compensatory mitigation – the restoration (re-establishment or rehabilitation), establishment (creation), enhancement, and/or in certain circumstances preservation of aquatic resources for the

purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved. Used in **404 permitting**.

Cultural resources – any prehistoric or historic site, district, object, cultural feature, building or structure, cultural landscape, or traditional cultural property (including artifacts, records, and related material remains). The project sponsor identifies all cultural resources in the area of potential effects, and agencies and consulting parties consult to determine if any qualify as historic properties. Used in NEPA reviews.

Cumulative Impact - the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over time. Used in **NEPA reviews, FERC, DOE, and 404 permitting**.

Criteria pollutant – Criteria Pollutants are the six common air pollutants for which EPA has established National Ambient Air Quality Standards: Ozone (regulated as Volatile Organic Compounds and Nitrogen Oxides, as these are Ozone precursors), Particulate Matter, Sulfur Dioxide, Nitrogen Dioxide, Carbon Monoxide, and Lead. Used in **Clean Air Act Permitting**.

Direct impact – impacts directly caused by the project that occur simultaneously and at the same place as the action. For example, a direct effect of construction may be the felling of trees and leveling of the land where the terminal is to be built, destroying habitat or cultural resources. Used in **NEPA reviews, FERC, DOE, and 404 permitting**.

Emission Factor – An emission factor is the rate an air pollutant is emitted per unit of production, throughput, combustion, or other measurable, planned activity. A simple example would be that for every ton of coal burned in a power plant, the plant emits nine pounds of NOx; the emission factor here would be expressed as 9 lb/ton. If a planned coal power plant intends to burn 1 million tons of coal per year, that emission factor would indicate the plant will emit 9 million pounds of NOx (9 * 1,000,000 = 9,000,000), or 4,500 tons of NOx per year. Used in **Clean Air Act Permitting**.

Formaldehyde – Formaldehyde (often abbreviated HCHO based on its chemical formula) is both a Hazardous Air Pollutant and a Volatile Organic Compound. Formaldehyde is typically the highest-emitted Hazardous Air Pollutant at LNG facilities. It is a known human carcinogen and also causes irritation to the lungs, throat, and eyes; it is especially harmful for those with asthma. Used in **Clean Air Act Permitting**.

Fugitive Emissions – Fugitive (air) emissions are defined as “those emissions which could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening.” 40 C.F.R. § 52.21(b)(20). Fugitive emissions are contrasted with point sources, and are typically emitted at LNG facilities from leaking infrastructure and some venting activities. Used in **Clean Air Act Permitting**.

Hazardous Air Pollutants (HAPs) – Hazardous Air Pollutants are pollutants listed by Congress or EPA as especially toxic and/or carcinogenic even in small quantities, and are not regulated as Criteria Pollutants (other than lead, which is both a Criteria Pollutant and a HAP). HAPs are regulated under the National Emissions Standards for Hazardous Air Pollutants as well as the Clean Air Act’s

Maximum Achievable Control Technology standards. See 42 U.S.C. § 7412. Used in **Clean Air Act Permitting**.

Indirect impact – impacts caused by the project that are reasonably foreseeable at the time of the action but may occur later or at a distance. Used in **NEPA reviews, FERC, DOE, and 404 permitting**.

Intervening – an act an advocate must take to preserve the right to litigate an agency's permitting decision. Each agency sets its own rules on how and when intervention must happen. Intervention is usually done by filing a short motion with the permitting agency and often does not require the advocate to file comments at the same time. An agency might not explicitly confirm that you have fully complied with the steps needed to intervene so it is important to follow its rules on intervention. The intervention period is often stated in a public notice about the project, but can be extend by the agency. It sometimes overlaps with the comment period. Intervening is distinct from commenting or protesting a project.

Jurisdiction – whether an agency or court has power over an issue. The jurisdiction of agencies and courts is set by statute. For example, the Natural Gas Act defines which courts have jurisdiction over permit appeals; the Clean Water Act triggers the Army Corps' permitting authority only when certain aquatic resources are present. Raising issues to an agency that has no jurisdiction to consider them may result in those issues being ignored, so it is important to target the correct agency. However, which agency has jurisdiction over an issue can be unclear and may need to be litigated. In general, it is better to raise an issue with as many agencies that might have jurisdiction even if their jurisdiction is questionable, rather than forfeit the issue entirely. In terms of court jurisdictions, failure to file a lawsuit in the right jurisdiction can be more expensive and time consuming than targeting the correct jurisdiction. In the worst case it may cause you to forfeit your ability to challenge the permit.

Litigate – in the context of LNG permitting, to bring a lawsuit against the administrative agency that issues permits in court. Most LNG-related lawsuits are brought in federal appeals court because of the Natural Gas Act.

LNG terminal – as defined by 15 USC § 717a(11), includes all gas facilities located onshore or in State waters that are used to receive, unload, load, store, transport, gasify, liquefy, or process natural gas that is imported to the United States from a foreign country, exported to a foreign country from the United States, or transported in interstate commerce by waterborne vessel, but does not include waterborne vessels used to deliver natural gas to or from any such facility; or any pipeline or storage facility subject to FERC's jurisdiction under 15 USC § 717f. Used in **FERC and DOE permitting**.

Lowest Achievable Emission Rate (LAER) – This is the control technology requirements for Major Nonattainment New Source Review. For example, if a Major Source of Sulfur Dioxide is to be located in an area that is Nonattainment for Sulfur Dioxide, the source must apply comply with Lowest Achievable Emission Rate. This is similar to BACT except that there is no consideration of environmental, economic, or energy costs; if a similar source has demonstrated the lowest emission rate, a new source must meet that same emission rate unless very exceptional circumstances apply. Used in **Clean Air Act Permitting**.

Major Source – A Major Source is a source whose Potential to Emit air pollutants exceeds particular thresholds set out by various Clean Air Act requirements. For example, under Major New Source Review, the Major Source Threshold applicable to LNG facilities will be 250 tons per year of any

Criteria Pollutant (or associated precursor); if a facility's potential particulate matter emissions are 250 tons per year or greater, it is a Major Source for purposes of New Source Review. Note that there are also Major Sources under Title V (potential emissions of Criteria Pollutants greater than 100 tpy or is major for Hazardous Air Pollutants) and Major Sources of Hazardous Air Pollutants (potential emissions of Hazardous Air Pollutants greater than 25 tpy total or 10 tpy for any individual Hazardous Air Pollutant). Used in **Clean Air Act Permitting**.

Maximum Achievable Control Technology (MACT) – This is the air pollution control technology required for Major Sources of Hazardous Air Pollutants, typically implemented as part of the National Emission Standards for Hazardous Air Pollutants. See 42 U.S.C. § 7412(d)(3). For Major Sources of Hazardous Air Pollutants for which no NESHAP standard has been promulgated, MACT shall be determined by the permitting authority on a case-by-case basis. 40 C.F.R. § 63.40 et seq. Used in **Clean Air Act Permitting**.

Minor New Source Review – Minor Sources of Criteria Pollutants are governed by Minor New Source Review, typically through a permit program. Requirements will vary by state. Used in **Clean Air Act Permitting**.

National Ambient Air Quality Standards (NAAQS) – EPA-established standards for the allowable concentration in the air for the six Criteria Pollutants. Areas meeting the NAAQS are called Attainment Areas; areas not meeting the NAAQS are called Nonattainment Areas. Used in **Clean Air Act Permitting**.

National Emission Standards for Hazardous Air Pollutants (NESHAP) – National Emission Standards for Hazardous Air Pollutants, found at 40 C.F.R. § 63, are the technology-based emissions and performance standards set by EPA for Hazardous Air Pollutants. As to LNG facilities, several NESHAPs are applicable, for instance, stationary combustion turbines are subject to a NESHAP (40 CFR 63, Subpart YYYY). Standards promulgated after 1990 are referred to as “Maximum Achievable Control Technology” or “MACT” standards. Used in **Clean Air Act Permitting**.

New Source Performance Standards (NSPS) – New Source Performance Standards, found at 40 C.F.R. § 60, are the technology-based emissions and performance standards set by EPA for Criteria Pollutants. For instance, and of relevance to LNG facilities, all new stationary combustion turbines must meet the NSPS emission limits for criteria pollutants like Particulate Matter as set out in Subpart KKKK of the NSPS rules (40 C.F.R. § 60.4300). Used in **Clean Air Act Permitting**.

New Source Review (NSR) – New Source Review are the Clean Air Act provisions applicable to new or modified Major Sources of Criteria Pollutants. If a new Major Source is located in an Attainment Area, the applicable New Source Review requirements are the Prevention of Significant Deterioration requirements (40 C.F.R. § 52.21). If the Major Source will be located in a Nonattainment Area for a given pollutant, and will emit that pollutant, Nonattainment New Source Review will be required for that pollutant. Used in **Clean Air Act Permitting**.

Nonattainment New Source Review (NNSR) – If a Major Source will be located in a Nonattainment Area and will emit the corresponding Nonattainment pollutant (or precursor, such as NOx in an Ozone Nonattainment Area), it must be permitted under Nonattainment New Source Review. This requires use of control technology pursuant to Lowest Achievable Emission Rate requirements and the

requirement to offset new emissions with enforceable reductions from other sources in the area. Used in **Clean Air Act Permitting**.

Ozone – Ozone, specifically ground-level Ozone, is a key contribution to smog and harmful to humans, especially the elderly, the young, or individuals with lung conditions such as Asthma. Ground-level Ozone is formed through the reaction of NOx, VOCs, and sunlight. Ozone is a Criteria Pollutant. Used in **Clean Air Act Permitting**.

Potential to Emit (PTE) – Potential to Emit is a legally defined calculation of the maximum emissions of a source, after taking into account control technology and enforceable permit conditions. See 40 C.F.R. § 52.21(b)(4). For instance, if a source has the physical capability to operate continuously for an entire year, the Potential to Emit calculation must assume full-time operations, unless an enforceable permit condition restricts the hours of operation. Potential to Emit is used to assess whether sources a Major or Minor sources under New Source Review, Title V, and NESHAP. Used in **Clean Air Act Permitting**.

Preliminary jurisdictional determination (PJD) – during the Army Corps' permitting process, when the question of which waterbodies are jurisdictional is set aside voluntarily by the applicant to expedite review of its project during the permit process. A PJD is not a legally binding determination of whether the aquatic resources on site are jurisdictional. For purposes of computation of impacts, compensatory mitigation requirements, and other resource protection measures, a permit decision made on the basis of a PJD treats all aquatic resources that would be affected in any way by the permitted activity on the site as jurisdictional aquatic resources, even if they are not. Used in **404 permitting**.

Prevention of Significant Deterioration (PSD) – Prevention of Significant Deterioration is the set of permitting requirements for a new or modified Major Source in an Attainment Area. PSD requires the use of the Best Available Control Technology and a demonstration via Air Dispersion Modeling that the source's emissions will not cause or contribute to an exceedance of the National Ambient Air Quality Standards. Used in **Clean Air Act Permitting**.

Protest – A protest is a type of response that the public or anyone else can file in a DOE proceeding for an application to import or export gas. It does not grant the protesting party the same rights that an intervenor has (e.g., to litigate the approved application in court) but it does convert the proceeding into a contested proceeding, meaning that more communications between the applicant and DOE must be on the record. Unlike a comment, which is simply filed with FERC, a protest must be served (officially sent) to the applicant by the protestor. Used in **DOE permitting**.

Public interest – a term used in a variety of permitting situations, often one that is fairly open to agency discretion to define. In FERC permitting, a LNG facility is to be authorized unless FERC finds that the terminal “will not be consistent with the public interest” It is a less strict standard than the permitting standard for interstate gas pipelines that feed LNG facilities, which requires “public convenience and necessity.” In 404 permitting, an explicit list of 21 public interest factors must be considered before a 404 permit issues. Anything that may affect the public interest is generally fair game to raise in comments, even if a court ultimately may decide it does not matter when reviewing the agency’s permitting decision. Used in **FERC and 404 permitting**.

Public convenience and necessity – the standard of review a pipeline used for a LNG facility must meet to receive a certificate under the Natural Gas Act. Like the standard review for a facility, it requires FERC to balance the public benefits of a project against the adverse consequences. It requires additional analysis by FERC as to whether the project is needed. The term is not defined in the statute and fairly open to agency discretion to define.

Regulated pipeline – to be regulated by FERC, the pipeline transporting gas to the LNG facility must cross interstate lines. For export facilities, only once the gas is processed by the LNG facility does it become liquified.

Regulations – Rules that are written by administrative agencies (like FERC, DOE, the Army Corps of Engineers, EPA) to interpret the statutes passed by Congress. Examples include the 404(b)(1) Guidelines. Regulations provide more detail on how an agency complies with a statute (e.g., during permitting) and should be subject to a public notice and comment period before becoming final. Courts typically defer to an agency's interpretation of its own regulations when deciding whether an agency has committed an error during the permitting process.

Scoping comments – a comment period unique to FERC's permitting process for large projects, this is an opportunity for agencies, tribes, developers, advocates and other interested persons to comment on the scope of review that FERC should conduct, given the proposed project. It is an opportunity to help FERC identify information that it should solicit from the applicant during the permitting process and NEPA review. Advocates can use this opportunity to raise issues that are site-specific that the applicant or FERC might not be aware of or otherwise pay attention to, such as the existence of unique cultural resources, or specific uses of the shipping channels and land by neighboring communities that might be impacted. Scoping is also useful to identify possible indirect and cumulative impacts that should be addressed in NEPA documents. Scoping comments do not take a position on the merits of a project or permit; such merits-related comments should be filed during the regular comment period. Used in **FERC permitting**.

Services – the benefits that human populations receive from functions that occur in ecosystems. Used in **404 permitting**.

Special aquatic sites – a subset of waters of the United States that are large or small areas possessing special ecological characteristics of productivity, habitat, wildlife protection, or other important and easily disrupted ecological values. Special aquatic sites include wetlands, sanctuaries and refuges, mud flats, vegetated shallows, coral reefs, and riffle and pool complexes. These sites are generally recognized as significantly influencing or positively contributing to the overall environmental health of the entire ecosystem and receive special attention under EPA's Section 404(b)(1) guidelines. Used in **404 permitting**.

State Implementation Plan (SIP) – The State Implementation Plan is the set of state regulations (and sometimes statutes) that are approved by EPA to ensure a state is meets the NAAQS (or takes necessary steps towards achievement). SIPs will set forth Major New Source Review Requirements and other regulations implemented by the state to meet the NAAQS. Note that SIPs typically will not include regulations regarding HAPs or Title V. Used in **Clean Air Act Permitting**.

Statutes – Laws that are passed by Congress. Examples include the Clean Water Act, Natural Gas Act, Administrative Procedures Act, and National Environmental Policy Act. A clear violation of a

statute during the permitting process can be grounds for overturning an issued permit. If a statute is silent or ambiguous regarding the issue in question, a court may defer to the interpretation of the statute used by the administrative agency charged with interpreting that statute.

Synthetic Minor Source – A Synthetic Minor Source is a source that would otherwise be a Major Source (for New Source Review, Title V, and/or NESHAP) and require Major Source permitting under the applicable requirements, but that has sought and received enforceable permit limits (known as “synthetic minor limits”) that reduce potential emissions to below the Major Source threshold. For example, if a source that would be major if it operated 365 days per year but minor if it only operates 200 days has requested an enforceable permit limit allowing only 200 days of operation per year, and thus is not a Major Source, it is called a Synthetic Minor Source. Used in **Clean Air Act Permitting**.

Title V (and Title V Operating Permits) – Congress passed Title V of the Clean Air Act in 1990 to help fight widespread non-compliance with the Clean Air Act. Title V’s purpose is to simplify enforcement and promote compliance by requiring each major stationary air pollution source (and certain smaller sources) to obtain an operating permit that identifies all applicable Clean Air Act requirements as well as monitoring, recordkeeping, and compliance certification requirements to assure the source’s compliance with those requirements. A Title V permit also must include an enforcement schedule of compliance for any source that will not be in compliance at the time of permit issuance. Used in **Clean Air Act Permitting**.

Toxic Air Pollutants – Toxic Air Pollutants are largely the same as Hazardous Air Pollutants, but the term Toxic Air Pollutants, or air toxics, typically refers state-level regulatory provisions. Used in **Clean Air Act Permitting**.

Volatile Organic Compounds (VOCs) – Volatile Organic Compounds are a large family of gaseous pollutants that combine with sunlight and NOx to form ground-level Ozone. As such, VOCs are not a Criteria Pollutant but are regulated under New Source Review due to their contribution to the Ozone, which is a Criteria Pollutant. VOCs also include many chemical compounds that are also Hazardous Air Pollutants, such as Formaldehyde and benzene. Unlike many air pollutants discussed in this Guide, VOCs are not primarily the result of combustion (although they are also emitted by combustion sources) but instead are emitted by physical processes and as fugitive emissions. If one pictures a vat of gasoline or turpentine left open to the atmosphere, the odors from that vat are largely VOCs. Used in **Clean Air Act Permitting**.

Waters of the United States – a legal term used in the Clean Water Act to describe features that are subject to Clean Water Act permitting. This term is not defined in the statute, but by regulations. The definition of this term has also been shaped by court opinions and as of the Guide’s publication the definition is in flux. EPA’s website usually maintains the most up-to-date definition of the term. In general, the term includes water bodies that are or have been used in interstate or foreign commerce, wetlands, and some other waters that can be connected to interstate commerce. Used in **401 certifications** and **404 permitting**.