Your project's docket number

FEDERAL ENERGY REGULATORY COMMISSION
OFFICE OF ENERGY PROJECTS

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Washington, DC 20426
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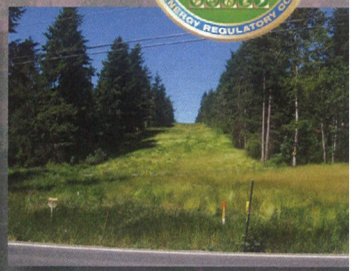
WWW.FERC.GOV/INDUSTRIES/GAS.ASP

AN INTERSTATE NATURAL GAS FACILITY ON MY LAND?

WHAT DO I NEED TO KNOW?

FEDERAL ENERGY REGULATORY COMMISSION



WASHINGTON, DC WWW.FERC.GOV

An Interstate Natural Gas Facility on My Land?

What do I Need to know?

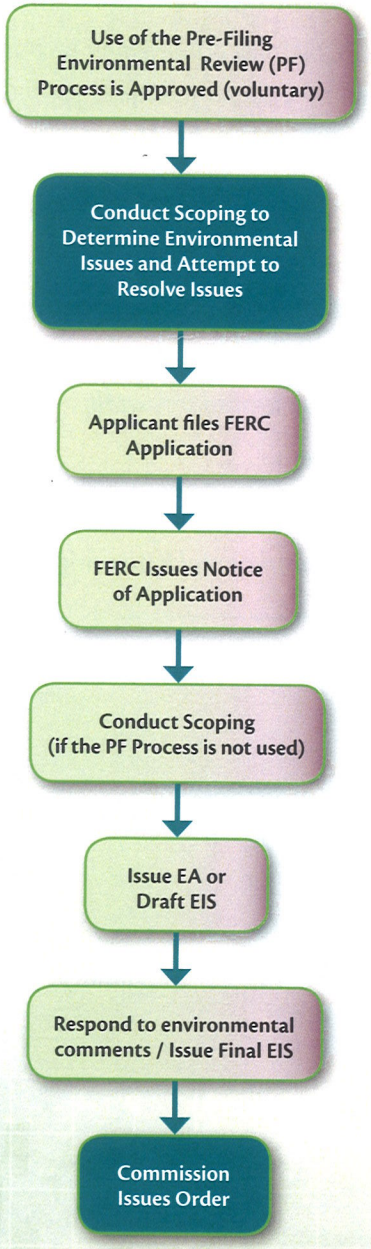
The Federal Energy Regulatory Commission is charged by Congress with evaluating whether interstate natural gas pipeline projects proposed by private companies should be approved. The Federal government does not propose, construct, operate, or own such projects. The Commission's determination whether to approve such a project may affect you if your land is where a natural gas pipeline, other facilities, or underground storage fields might be located.

We want you to know:

- *How the Commission's procedures work;*
- *What rights you have;*
- *How the location of a pipeline or other facilities is decided; and*
- *What safety and environmental issues might be involved.*

Federal Energy Regulatory Commission
Updated August 2013

PROCESS FOR NATURAL GAS CERTIFICATES



Contents

Background....4
How the Process Begins....5
Key Issues Involving Location of the Project....8
Pipeline Installation Sequence....11
Pipeline Construction....12
Abandonment....14
Storage Fields....15
LNG Facilities....20
Compressor Stations....20
The Responsibilities of Gas Companies....22
Important Safety Issues....25
Further Environmental Issues....26
Additional Information....27
Glossary of Terms....28

Background

The Commission approves the location, construction and operation of interstate pipelines, facilities and storage fields involved in moving natural gas across state boundaries. The Commission also approves the abandonment of these facilities.

Interstate pipelines crisscross the United States, moving nearly a quarter of the nation's energy long distances to markets in the 48 contiguous states, and are vital to the economy. Although pipelines generally are buried underground, they may have associated facilities that are above-ground such as taps, valves, metering stations, interconnection, pig launchers, pig receivers, or compressor stations. A natural gas storage field includes subsurface gas storage rights and there may be storage field pipelines and gas wells associated with the storage rights. A Pipeline Glossary is provided at the end of this brochure to help you understand some of the technical terms that are associated with pipeline construction and above-ground facilities.

If a proposed pipeline route is on, or abuts your land, you will probably first learn of this from the natural gas company as it plans and studies the route during either the Commission's voluntary Pre-filing Process or in the application development process. Once a company files an application requesting the Commission to issue a certificate authorizing the construction of a pipeline project, the company will mail you a copy of this brochure and other information within three days of the Commission issuing a Notice of Application. The Commission's staff will prepare an environmental study of the proposal; either an Environmental Impact Statement or an Environmental Assessment, depending on the scope of the project. For major construction projects, local media may be notified and public meetings may be held. You will have an opportunity to express your views and to have them considered. You will also have the opportunity to learn the views of other interested parties. The Commission may approve the project, with or without modifications, or reject it. If it is approved and you fail to reach an easement agreement with the company, access to and compensation for use of your land will be determined by a court.

Understandably, the location of pipelines and other facilities may be of concern to landowners. The Commission's process for assessing pipeline applications is open and public, and designed to keep all parties informed.

This brochure generally explains the Commission's certificate process and addresses some of the basic concerns of landowners. The Commission's Office of External Affairs at 1-866-208-3372 will be happy to answer any further questions about the procedures involved.

How the Process Begins

Q: How will I first hear about proposed facility construction?

A: If you are located in the vicinity of the project you may first learn of it through newspaper notices. If you are an owner of property that may be affected by the project, you will probably first hear of it from the natural gas company as it collects the environmental information or conducts surveys required for the Commission application. The company may ask you for permission to access your land to conduct civil and environmental surveys. It is also possible that the company will contact you to discuss obtaining an easement prior to filing the application. In the case of a compressor station or other above-ground facility, the company will often offer to purchase, or obtain an option to purchase, the property for the station or facility. This usually occurs prior to the filing of the application.

For a storage field, rights on certain parcels of land may only involve subsurface storage rights. The company will also notify you of the filing of the application with the Commission.

Q: How can I obtain more details about the company's application?

A: A copy of the company's application can be obtained from the company, although the company is not obligated to provide voluminous material or material that is difficult to reproduce. You may also obtain a copy for a nominal copying charge from the Commission's Public Reference Room. Call 202-502-8371 for details. The application may also be obtained through the Commission's Web site, **www.ferc.gov**, using the "**eLibrary**" link and the project's docket number. User assistance is available at 1-866-208-3676. Within three days of assignment of a docket number, the application will also be available in at least one location in each county in which the facility is located.

Note that in some cases you will not be able to view or print copies of large-scale maps or similar information about the location of the project from the Commission's Web site. However, the Web site will provide instructions for obtaining the material.

Q: How do I make my views known?

A: You may contact the natural gas company through the contact person listed in the notification letter you receive from the company.

There are two ways to make your views known to the Commission: first, if you want the Commission to consider your views on the various environmental issues involved in the location of the facility, you can do so by simply writing a letter. When submitting a letter to the Secretary of the Commission, you should identify the project's docket number in order for the comment to be successfully entered into the record on the eLibrary system.

There are several steps in the Commission's environmental review process. The Commission affords you the opportunity to comment at various stages in this process. Details are available from the Commission's Office of External Affairs at 1-866-208-3372. Check the Commission's Web site for details on filing electronically. By filing comments, your views will be considered and addressed in the environmental documents or a final order. Additionally, you will be placed on a mailing list to receive environmental documents in the case. You can also use eRegistration and eSubscription (see **www.ferc.gov**) to keep track of individual proceedings at FERC. Users with an eRegistration account may subscribe to specific dockets and receive email notification when a document is added to eLibrary for the subscribed docket.

Q: What is an intervenor?

A: You may file to become what is known as an intervenor. You may obtain instructions on how to do this from the Office of External Affairs or on our Web site at *http://www.ferc.gov/help/how-to/intervene.asp*. Becoming an intervenor is not complicated and gives you official rights. As an intervenor, you will receive the applicant's filings and other Commission documents related to the case and materials filed by other interested parties. You will also be able to file briefs, appear at hearings and be heard by the courts if you choose to appeal the Commission's final ruling. ***However, along with these rights come responsibilities. As an intervenor, you will be obligated to mail copies of what you file with the Commission to all the other parties at the time of filing. In major cases, there may be hundreds of parties.*** You may file to become an intervenor by sending a request to intervene by mail or overnight services to:

Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, DC 20426

We prefer that comments or requests for intervention be submitted electronically through the Commission's Web site (www.ferc.gov). If you submit comments or requests through eFiling or eComment, there is no need to send paper copies. However, if you submit a request for intervention through the mail, you should include 14 copies of your request.

You must normally file for intervenor status within 21 days of our notice of the application in the Federal Register, although the Commission may accept late intervention if good reasons are given. Visit the Federal Register at *http://www.gpoaccess.gov/fr/index.html*. You may also file for intervenor status for the purposes of addressing environmental issues during the comment period for a draft environmental impact statement.

Please note: "PF" dockets are assigned to projects that are in the pre-filing or planning stage. There is no provision for becoming an intervenor in PF dockets. However, once the pre-filing stage has been completed and an application has been filed, you may file for intervenor status.

CUSTOMER ASSISTANCE

For further assistance and public inquiries, please contact:
Office of External Affairs
1-202-502-8004 1-866-208-3372 (Toll-free)
customer@ferc.gov

For assistance with ferc.gov or eFiling, please contact:
FERC Online Technical Support
1-202-502-6652 1-866-208-3676 (Toll-free)
ferconlinesupport@ferc.gov

For materials and copying assistance, please contact:
Public Reference Room
1-202-502-8371 1-866-208-3676 (Toll-free)
public.referenceroom@ferc.gov

YOUR PROJECT'S DOCKET NUMBER

Key Issues Involving Location of the Project

Q: How is the pipeline route, compressor station or storage field location selected?

A: The natural gas company proposes the route or location, which is then examined by the Commission. The company must study alternative routes or locations to avoid or minimize damage to the environment. The Commission, intervenors, or any commenter may also suggest alternatives and modifications to reduce the effects on buildings, fences, crops, water supplies, soil, vegetation, wildlife, air quality, noise, safety, landowner interests and more. The Commission staff's Alternatives analysis will consider whether the pipeline can be placed near or within an existing pipeline, power line, highway or railroad right-of-way. Storage fields are usually located in depleted oil or natural gas production fields or in salt deposits. Therefore, their location is fixed by geologic conditions. However, the facilities needed to develop and use a storage field can be moved to some extent.

Q: How do natural gas companies obtain a right-of-way?

A: The company negotiates a right-of-way easement and compensation for the easement with each landowner. Landowners may be paid for loss of certain uses of the land during and after construction, loss of any other resources, and any damage to property. If the Commission approves the project and no agreement with the landowner is reached, the company may acquire the easement under eminent domain (a right given to the company by statute to take private land for Commission-authorized use) with a court determining compensation.

Q: Who pays taxes on the right-of-way?

A: The landowner pays taxes on the right-of-way unless a local taxing authority grants relief. The company simply has an easement across a portion of the land.

Q: How large is the right-of-way and how is it maintained?

A: It is generally 75 to 100 feet wide during construction, although extra space is usually required at road or stream crossings or because of soil conditions.

The permanent right-of-way is usually about 50 feet wide. Routine mowing or cutting of vegetation is done no more than once every three years. A ten-foot-wide corridor, centered on the pipeline, may be mowed or cut more frequently to facilitate periodic surveys and inspections. In cropland and residential areas the right-of-way is maintained by the landowner consistent with the presence of a pipeline.

Q: How large is a compressor station or storage field?

A: Usually the natural gas company purchases ten to forty acres for a compressor station, of which about five acres are actually used for construction. A storage field could encompass many hundreds or even thousands of acres, depending on the geologic structure. Storage fields also frequently include a buffer zone or protection area forming a halo of some hundreds of acres surrounding the storage field itself.

Compressor Station

Q: Must the company comply with local, county and state laws and zoning ordinances?

A: Generally, yes. If there is a conflict, however, between these requirements and what the Commission requires; the Commission requirement prevails.

Q: How close can I build to the facilities?

A: For a pipeline this depends on the terms of the easement agreement. But build is usually allowed up to the edge of the right-of-way.

For a compressor station, the site is usually owned by the company. If you own property adjacent to the site, you may build on it.

For storage fields, unless there are surface facilities or pipelines, you may build anywhere on the surface. If you or someone else wishes to drill wells which would penetrate the storage formation, you must coordinate that activity with the company, and usually the state authority regulating well drilling.

Q: What about bushes, trees, fences, driveways and so forth?

A: Trees with roots that may damage the pipeline or its coating and other obstructions that prevent observation from aircraft during maintenance are usually not allowed. Driveways and other improvements without foundations are normally allowed. All improvements are subject to the terms of the easement and are subject to negotiation as long as the pipeline maintenance and safety are not affected.

Q. How long will the right-of-way be there?

A: Part of it is temporary and will be restored immediately after construction. The permanent right-of-way will remain until the Commission determines it can be abandoned by the pipeline company. This can be 20 to 50 years or more.

Q. In general, will I still be able to use the right-of-way?

A: The easement agreement will specify restricted uses on or across the right-of-way and any types of uses for which the company's permission must be sought. The continuation of past agricultural uses and practices on or across the right-of-way would be permitted. Buildings and large trees are usually not allowed. Special uses or activities that might have an impact on pipeline design (such as planned logging roads or drain tiles) should be negotiated with the pipeline company to minimize future conflicts.

Q: To what depth would the pipeline be buried underground?

A: The depth of cover for natural gas pipelines is regulated by the Pipeline and Hazardous Materials Safety Administration, within the U.S. Department of Transportation. In normal soil conditions, the minimum required is 30-36 inches between the top of the pipeline and the land surface. Additional cover is provided at road and waterbody crossings, while less cover (a minimum of 18 inches) is required in consolidated rock. In special cases, the pipeline could be buried deeper (48 – 60 inches) where agricultural practices or other issues warrant additional cover.

Pipeline

Q: What if I have problems with erosion or other issues during restoration and/or maintenance of the right-of-way?

A: The landowner should first contact the natural gas company to address and resolve the issue. If the landowner is not satisfied that the problem has been adequately addressed, he or she can contact the Commission's Dispute Resolution Division Helpline at (877) 337-2237 or send an email to ferc.adr@ferc.gov.

Pipeline Installation Sequence

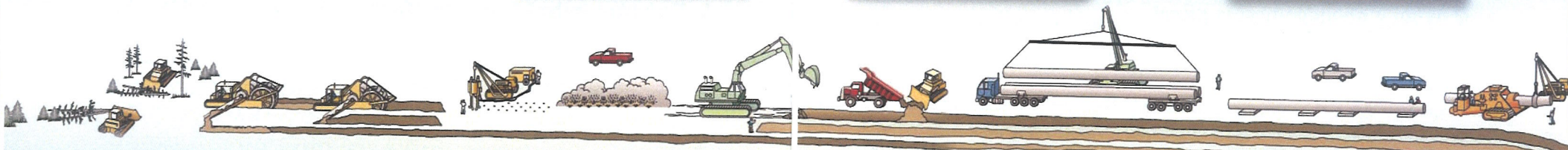
After a company has received authorization from FERC as well as all necessary permits, and has an easement on a property, construction would proceed as follows:

1) The civil survey (and any uncompleted environmental surveys) would be completed and the construction right-of-way would be marked/staked for the clearing crew.
2) The clearing crew would remove any trees or brush within the right-of-way that would interfere with construction.
3) Temporary erosion control devices would be installed as required.
4) Next, the right-of-way would be graded.
5) Topsoil would be separated from subsoil in agricultural/residential areas (or in other areas requested during the easement negotiations).
6) Heavy equipment, such as backhoes or trenching machines, would then dig the trench. In areas where bedrock is near the surface, blasting may be required.
7) The pipe would be delivered to the right-of-way in segments (called joints).
8) The pipe would be bent to fit the trench and welded together. All welds would be tested prior to placing the pipe in the trench.
9) The trench would be back filled and if topsoil was removed it would be returned.
10) Construction debris would be removed.
11) The right-of-way would be regraded, seeded, and temporary and permanent erosion control devices would be installed.
12) After the right-of-way has revegetated the temporary erosion control devices would be removed.
13) Prior to gas flowing, the pipeline would be pressure tested (normally with water) to ensure it does not leak.

Pipeline Construction

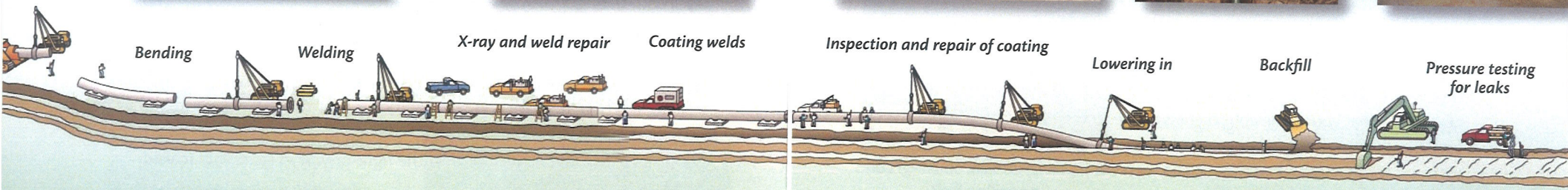
A graphic representation of the pipeline installation sequence.

Moving assembly line (graphic not to scale)

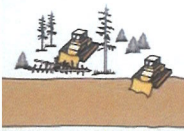


Clearing and grading — *Ditching (rock-free)* — *Ditching (rock)* — *Padding ditch bottom* — *Stringing*

continued below



Bending — *Welding* — *X-ray and weld repair* — *Coating welds* — *Inspection and repair of coating* — *Lowering in* — *Backfill* — *Pressure testing for leaks*

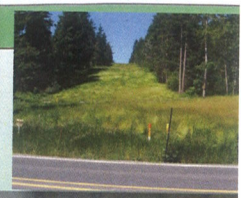


Cleanup

Restoring residential area

Reseeding the right-of-way

Restored right-of-way



Abandonment

Q: What is abandonment in place?

A: A pipeline company may request authorization for a pipeline to be "abandoned in place." In this case, the pipeline is physically separated from its source of gas and is no longer maintained. The pipeline is sealed at both ends and left in the ground. A company may revert the easement back to the affected property owners; in certain cases where multiple pipelines exist in the same corridor, the company may continue to hold the easements and maintain the right-of-way according to its vegetation maintenance practices.

Q: Can the pipeline be used after abandonment?

A: In some cases a pipeline company may ask to abandon a pipeline for use as a natural gas transportation line, but reserve the right to convert that line to another use, such as the transportation of crude oil or other petroleum products. Easements agreements affected by conversion transactions may transfer to the new operator.

Q: If the pipeline is being abandoned will it be removed from my property?

A: The Commission may decide there are environmental or other conditions that should determine the disposition of the pipeline. If not, the easement agreement that you or previous owners of the land signed may stipulate whether the pipeline is to be removed. You may also come to some agreement with the company on what they will do with the pipeline. Usually, above-ground facilities are removed.

Q: If a company abandons a pipeline, can it keep an easement on my property?

A: It depends on the terms of the easement agreement and may be subject to negotiation between the landowner and the pipeline company. If there is more than one pipeline, the pipeline company will keep the easement.

Q: Will I be notified if abandonment is proposed?

A: You will probably be notified by the company if it proposes to relinquish the easement as part of the abandonment and the easement is not being transferred to another company. Otherwise, you may be notified by the Commission as part of the environmental analysis of the project.

Storage Fields

Q: What will happen to my property if a storage field is located beneath it?

Well drilling rig

A: Possibly nothing, since the storage field itself is usually thousands of feet beneath the ground surface. Wells are needed to inject and withdraw the stored natural gas or to monitor field conditions (observation wells). The wells require a surface site of roughly one acre for drilling and less than one tenth of an acre for the surface wellhead piping and other facilities.

If there are no facilities to be constructed on your property, the company will only need the storage rights to the geologic formation in which the natural gas would be stored. This is also the case for any property within any designated "buffer zone" or "protective area" around the actual storage field.

Q: Why is storage important?

A: Underground natural gas storage can be used to balance the load requirements of gas users. Storage fields are the warehouses that provide a ready supply of natural gas to serve the market during periods of high demand. For example, in the Midwest and the Mid-Atlantic regions, natural gas is primarily used during the winter because many homes are heated by natural gas. To accommodate this load profile, natural gas is injected into storage fields

during the warmer months (April - October), and withdrawn in the colder months (November - March). However, since the 1980s, most new power generation equipment has been fired by natural gas, which has created summer peaking requirements for natural gas to accommodate air conditioning loads in many areas of the country. Storage helps to meet peak demand requirements both in winter and in summer.

Q: What types of facilities are associated with storage?

A: Most natural gas storage facilities in the U.S. consist of underground formations, combined with above-ground equipment. These facilities include wells (injection/withdrawal and observation, water supply, water disposal), wellhead valve assemblies, gathering lines (field lines, headers), metering and compression facilities, dehydration units, generators or transformers, associated electric equipment, roads, sheds/buildings and pipeline pigging facilities. A list of natural gas facilities that fall under FERC jurisdiction is available on the agency's Web site at *http://www.ferc.gov/industries/gas/indus-act/storage/fields-by-owner.pdf*. Natural gas storage facilities that are owned and operated by natural gas distribution systems and used to deliver gas to their customers fall under the authority of state regulatory agencies.

Q: Are there different types of underground storage fields?

A: Most storage of natural gas takes advantage of natural geologic formations (reservoirs). There are three types of underground storage fields: (1) depleted oil and/or gas fields, (2) aquifers, and (3) salt caverns.

Depleted Oil and/or Gas Fields: Most of the natural gas storage in the United States consists of naturally-occurring oil or gas reservoirs that have been depleted through production. These consist of porous and permeable underground rock formations (usually 1,000 to 5,000 feet thick) that are confined by impermeable rock barriers and identified by a single natural pressure. Typically, this type of field has one injection/withdrawal cycle each year – gas is injected in summer and withdrawn in winter. This type of storage facility is normally used for long term or seasonal system supply, although in some instances it is used for peak day deliveries. These formations contain volumes of gas that are permanently stored in the field (called cushion or base gas) that help to maintain the underground pressure required to operate the field. Storage gas is then added to the field. In field storage the base gas is generally about 50% of the total reservoir capacity.

Aquifer Storage Fields: This type of storage field uses a permeable rock formation containing water, called an "aquifer." The nature of the water in the aquifer may vary from fresh water to saturated brine. An aquifer would have a high cushion gas requirement, generally between 50% and 80%, as the water in the portion of the reservoir being used for storage must be displaced constantly. They also have high deliverability rates but are limited to one injection/withdrawal cycle each year.

Salt Cavern Storage: This type of storage field uses caverns that are leached or mined out of underground salt deposits (salt domes or bedded salt formations). Salt caverns usually operate with about 20% to 30% cushion gas and the remaining capacity as working gas. Working gas can be recycled more than once per year (some up to 10 – 12 times per year), the injection and withdrawal rates being limited only by the capability of the surface facilities. Salt cavern storage has high deliverability and injection capabilities and is usually used for peak deliverability purposes, daily or even hourly. Most of the naturally-occurring salt caverns in the United States lie closer to the producer region—in Louisiana, Texas, and the Gulf Coast.

For more detailed information about natural gas storage, visit these Web sites:

- FERC Staff Report on Underground Natural Gas Storage
  http://www.ferc.gov/EventCalendar/Files/20041020081349-final-gs-report.pdf
- EIA: Basics of Underground Natural Gas Storage
  http://www.eia.doe.gov/pub/oil_gas/natural_gas/analysis_publications/storagebasics/storagebasics.html
- NaturalGas.org: Storage of Natural Gas
  http://www.naturalgas.org/naturalgas/storage.asp
- The Energy Information Administration (EIA)
  http://www.eia.doe.gov/oil_gas/natural_gas/info_glance/natural_gas.html

Q: How are storage field boundaries determined?

A: Boundaries are determined by the geologic characteristics of the formation in which the gas will be stored. Most also have buffer zones surrounding the portion of the reservoir to limit migration of the stored gas and to protect the integrity of the field.

Q: *Can companies use the ground under my property without paying for it? Am I required to sign an easement?*

A: A company that owns/operates a storage field cannot use the underground portion of storage facilities without either owning mineral rights or having some form of agreement with the owner of the mineral rights. Compensation for that use will come as a result of the property/mineral rights conveyed to the company by the current owner or attached to the deed from a previous property owner. Those property/mineral rights, depending on the facts of the particular situation, will most likely be in the form of a storage lease or an easement agreement.

A FERC certificate is not required in order for a company to negotiate the acquisition of a storage lease or easement. However, if FERC has issued a certificate approving the creation of a new storage field (or expansion of an existing field), that indicates that the agency has concluded that the storage field is needed and is in the public interest. In accordance with the Natural Gas Act (a law passed by the United States Congress in 1938), the FERC certificate gives the company the right to ask a state or federal court to award the needed property rights to the company where voluntary good faith negotiation has failed.

If the owner of the property/mineral rights and the company do not reach an agreement, the company can go to court to obtain the necessary rights through eminent domain. In such cases, the court will determine the amount that the company must pay to the owner of these rights. Similarly, if the storage field operations affect the surface property through construction of facilities or by reserving access rights, the company must also reach an agreement with the owner of the surface rights or go to court to obtain any necessary property rights through eminent domain. The court will determine the amount that the company must pay the owner of the surface rights. The state or federal court procedure is known as condemnation (or the exercise of eminent domain).

Q: *How far from my home can a storage facility be located? If the company is just using the area under my land, do they require access to my land?*

A: The storage reservoir itself is underground and does not require surface facilities on every property within the storage field boundaries. However,

Underground storage

the company may need to construct and operate facilities on the surface, including injection and withdrawal wells to get the gas into and out of the subsurface rock formations, well lines that connect those wells to other pipelines in the storage field, compressor stations to pump the gas, and facilities that are used to clean and monitor the interior of certain underground pipelines. Where surface facilities are needed, the storage lease or easement agreements developed between the landowner and the storage facility operator usually indicate minimum spacing of the facilities with respect to existing structures, like your home.

In most cases, if the company does not have any surface facilities on your property, the company would not need access to your property. However, the company may need access to your land to check the integrity of a pipeline crossing your property or to monitor the effects of previously abandoned facilities (such as an old gas well) or facilities owned by another company to insure that those facilities do not interfere with the company's storage operations. Because the need for access cannot be predicted, the storage lease or easement agreement typically references the right of the company to enter your property when needed. The company should inform the property owner when its employees plan to enter the property.

Q: *Is all storage in the U.S. under the jurisdiction of the Federal Energy Regulatory Commission?*

A: No. Only natural gas storage that is used in interstate commerce is under FERC jurisdiction. There are approximately 500 existing underground natural gas storage facilities in the United States. Of those facilities, approximately 50% are under FERC jurisdiction, and the remaining are under state and/or local jurisdiction or are privately owned and unregulated.

LNG Facilities

Natural gas can also be converted to liquefied natural gas (LNG) and stored in above-ground tanks. Facilities for making LNG are used by many gas distribution companies for short-term peaking requirements, and are regulated under state authority. However, The Commission regulates a small number of similar facilities that are connected to interstate natural gas pipelines.

The United States also has several large LNG terminals, which include large LNG storage tanks as part of their operations. Traditionally, imported LNG is regasified before it enters the system of interstate natural gas pipelines for delivery to consumers. The Gulf Coast area has the country's highest concentration of existing and planned LNG terminals. In this region, salt caverns and depleted reservoirs also may be used as gas storage.

The growing production of natural gas in the United States from shale deposits has led to rising interest in developing liquefaction facilities for the export of natural gas to other countries. In this case, some LNG terminals would be used to export gas. Domestic natural gas would arrive at an LNG terminal via pipeline in a gaseous state, then liquefied and placed on LNG vessels for delivery to international consumers. While the Commission has the responsibility to evaluate and authorize LNG facilities, any company that exports natural gas also must receive an export license from the U.S. Department of Energy.

Compressor Stations

Q: What is a compressor station?

A: Compressor stations house natural gas fired engines, turbines or electric motors that drive compressors to compress, or pump, natural gas to move it through the system. They are located strategically along a pipeline route. Compressor stations associated with interstate natural gas pipeline systems are regulated by FERC. Compressors also are used by producers in gathering facilities that are not regulated by FERC.

Electric motor-driven compressors are very clean, and emit no particulate matter or pollutants. Natural gas-fired engines and turbines burn a portion of

the natural gas in the pipeline and would emit pollutants. Air emissions are regulated by the U.S. Environmental Protection Agency and state permitting authorities. These regulations are applicable to any source that emits or has the potential to emit any air contaminants, as defined in the Clean Air Act. Companies are required to obtain these federal permits, as applicable.

Q: How noisy is a compressor station?

A: The noise attributable to a new compressor station, compression added to an existing station, or any modification, upgrade or update of an existing station, must not exceed a day-night average noise level of 55 decibels at any pre-existing noise-sensitive areas such as schools, hospitals or residences. Companies perform noise surveys during initial operation of the approved facilities and report the results to FERC to document compliance.

Q: Can compressor stations cause vibration at my home?

A: Vibration is caused by direct vibration or by low-frequency noise emitted from a compressor station. This is similar to what happens when noise from a speaker causes the floor to shake or when a helicopter flying overhead causes a window to rattle.

Compressor station

Companies are required to comply with FERC's rule at 18CFR 380.12(k)(4)(v)(B) to ensure that there is no increase in perceptible vibration from the operation of the compressor station.

Q: How much noise is permitted from drilling activities?

A: Directional drilling is sometimes used to install underground pipeline through sensitive areas. Drilling is also used to install vertical wells at storage facilities. Drilling should be conducted with the goal of keeping noise impacts at noise-sensitive areas below a day-night level of 55 decibels. States may have their own noise level requirements for construction sites.

Q; Will the compressor station affect my air quality?

A: Numerous federal and state air quality rules and permits may apply to each compressor station. FERC will identify the required permits and regulations for each compressor station. We also identify the impacts on local and regional air quality from construction and operation of each compressor station.

Q: Are there special safety or fire issues associated with compressor stations?

A: All interstate natural gas facilities, including compressor stations, are required to comply with the U.S. Department of Transportation's Minimum Safety Standards. Compressor stations are constructed with many safety systems, such as gas and fire detection systems and emergency shutdown equipment. These systems are designed to ensure that in the event of an accident, the compressor station would be safely shut down with minimal risk to the public.

The Responsibilities of Gas Companies

Q: Must companies post bonds to guarantee performance?

A: No, but the Commission inspects the right-of-way during and after construction to ensure that the terms of its certificate have been met.

Q: Can the pipeline company come on my land without my permission?

A: State or local trespass laws prevail until a certificate is issued by the Commission. Some states have laws that allow a company to get access to property for survey purposes. Procedures vary by state. Once a certificate is issued or an easement/survey agreement or court order is obtained, the company may come onto your land. Usually the company will notify you in advance.

Q: When can they start to build?

A: Construction cannot commence until the Commission issues a certificate, the company accepts it, the company receives all other relevant permits and authorizations, and the company complies with environmental conditions attached to the certificate. For most large pipelines, the time from filing an application to approval ranges from one year to two years. Once a certificate is issued, construction may start within a few weeks of the company having completed any outstanding studies or having met other preconditions set by the Commission.

Q: Why would the company approach me about an easement before the project is approved?

A: Because of planning and lead time, the company may try to obtain easement agreements in advance. Also, a company must conduct environmental studies before it files an application with the Commission. For these studies to be as complete as possible, the company will try to obtain access to all of the proposed right-of-way. If Commission approval is ultimately denied, or the route changes, the initial easement agreement with the landowner is usually void (depending on the wording of the right-of-way or access contract). Further, disputes over the wording of an easement agreement are subject to state law.

Valve

Q: Can the company place more than one pipeline on my property? Can the pipeline and the easement be used for anything other than natural gas?

A: The Commission grants a certificate and states that eminent domain may only be used for the proposed pipeline and related facilities in the exact location described and only for the transportation of natural gas. If the company wishes to install another natural gas pipeline under Commission jurisdiction, it must obtain additional approval from the Commission. Other utilities may wish to use an adjacent or overlapping easement, but they would have to obtain approval from you or from another permitting authority that can grant eminent domain (usually the state). Of course, you may agree to other uses.

Q: Can the company construct above-ground facilities on the right-of-way?

A: Yes, if they have been approved by the Commission. Above-ground facilities, such as valves, pig launchers and pig receivers, are commonly placed in the right-of-way and are strategically placed along the pipeline system for operation and safety purposes.

Q: How close can the pipeline be to other pipelines or utility facilities?

A: Pipelines must be at least a foot from any underground structure and two to three feet below ground. Companies usually want their pipelines to be 25 feet from another pipeline. If space permits, pipelines can be placed in another utility's right-of-way.

Q: Can I receive service from the pipeline?

A: No, not in most cases. Generally speaking, interstate pipelines are operating at pressures incompatible with direct residential use, which is provided by local distribution companies.

Q: Can a pipeline be placed in a river or the ocean?

A: A pipeline can be placed in the ocean or across a river; however, it is usually not acceptable to place one longitudinally down a river or other stream. There are different environmental, cost, design and safety issues associated with construction in a water body.

Q: How soon after construction will the company restore the land?

A: Commission rules require restoration as soon as the trench is backfilled and weather permits.

Q. What authorization allows the pipeline company to use eminent domain?

A: If the Commission authorizes the project and the necessary easements cannot be negotiated, an applicant is granted the right of eminent domain

under section 7(h) of the Natural Gas Act and the procedures set forth under the Federal Rules of Civil Procedure (Rule 71A)). Under these conditions, the landowner could receive compensation as determined by the courts.

Important Safety Issues

Q: Who is responsible for safety?

A: While the Commission has oversight in ensuring that pipeline and above-ground facilities are safely constructed and installed, once the natural gas is flowing in the new system, the U.S. Department of Transportation 's Pipeline and Hazardous Pipeline Materials Safety Administration takes over the responsibility during the operation for the lifetime of the pipeline. The U.S. Department of Transportation is also responsible for setting the federal safety standards for natural gas (and other) pipelines and related facilities. The *Pipeline and Hazardous Materials Safety Administration* can be contacted at 202-366-4595 or at *http://www.phmsa.dot.gov.*

Q: Are pipelines safe?

Safety Inspectors

A: Accidents are rare and usually result from outside forces or unauthorized action by someone other than the pipeline company. The U.S. Department of Transportation enforces strict safety standards and requires safety checks.

Q: Does natural gas smell?

A: Natural gas is odorless. An odorant, which smells like rotten eggs, is generally added for quick leak detection in more populated areas on interstate transmission pipelines and in local distribution pipelines in accordance with U.S. Department of Transportation safety regulations.

Further Environmental Issues

Q: What if my property contains endangered species, wetlands, or archeological sites?

Wetlands

A: Endangered species must be protected from the effects of construction and this could affect the location of the pipeline or other facilities. In the case of wetlands, if proper crossing procedures are used and no alternatives are available, they may be used for a pipeline right-of-way. If an archeological or historic site is eligible for listing in the National Register of Historic Places, impact to it must be minimized. It either will be excavated and studied, or the pipeline will be rerouted to avoid it. Landowners who want them usually are permitted to keep any artifacts after they are properly studied, subject to state law.

Q: Environmental studies were mentioned earlier. How do they work?

A: A Notice of Intent (NOI) to prepare an environmental assessment (EA) or an environmental impact statement (EIS) is issued for most major proposals. It is sent to federal, state and local agencies, local media and libraries, environmental groups, and the affected owners of any land that would be crossed. For some major projects the NOI may announce a schedule of public meetings along the proposed route. The NOI seeks comments from interested parties on the scope of the environmental document, and the comments must be submitted to the Commission, normally within 30 days. After the comment period, the Commission staff will prepare an EA or a Draft EIS outlining its findings and recommendations. For major proposals, further comments are sought during 45 days allotted for review of a Draft EIS or 30 days in the case of an EA. These comments are addressed in the Final EIS or the final order granting or denying the application.

Additional Information

FOR ADDITIONAL INFORMATION, CONTACT:

Federal Energy Regulatory Commission
Office of External Affairs
888 First Street NE, Washington, DC 20426
Toll Free: 1-866-208-3372
E-mail: *customer@ferc.gov*
www.ferc.gov

Dispute Resolution Division Helpline
Toll Free: 1-877-337-2237
E-mail: *ferc.adr@ferc.gov*

Other related FERC documents you may find helpful are listed below. These are available on our web site.

The following can be found at:
http://www.ferc.gov/industries/gas/enviro/guidelines.asp

- Guidelines for Reporting On Cultural Resources Investigations
- Handbook for Using Third-party Contractors to Prepare Environmental Assessments & Environmental Impact Statements (EIS)
- Upland Erosion Control, Revegetation and Maintenance Plan
- Wetland and Waterbody Construction and Mitigation Procedures

http://www.ferc.gov/for-citizens/citizen-guides.asp

- Your Guide to Electronic Information at FERC
- An Interstate Natural Gas Facility on my Land
- Blanket Certificate Program: Notice to landowners

Glossary of Terms

Glossary of Terms supplied courtesy of the Pipeline and Hazardous Materials Safety Administration and FERC staff. For further information, please consult the PHMSA web site at *http://www.phmsa.dot.gov.*

COMPRESSOR STATIONS

Compressor Stations are facilities located along a natural gas pipeline that house and protect compressors. Compressors are used to compress (or pump) the gas to move it through the system. Compressor stations are strategically placed along the pipeline to boost the system pressure to maintain required flow rates.

EASEMENT

An easement is an acquired privilege or right, such as a right-of-way, afforded a person or company to make limited use of another person's or company's real property. For example, the municipal water company may have an easement across your property for the purpose of installing and maintaining a water line. Similarly, oil and natural gas pipeline companies acquire easements from property owners to establish rights-of-way for construction and operation of their pipelines.

GATHERING LINE

Pipelines, generally small in diameter, used to transport oil or gas from the well to a processing facility or a mainline pipeline. Gathering facilities, which can include the gathering lines and compressor stations associated with gathering, are not regulated by the Federal Energy Regulatory Commission.

Fracking rig

HYDRAULIC FRACTURING

Also called "fracking," this refers to a process of fracturing rock using a pressurized liquid. This is usually water mixed with sand and chemicals, injected deep within the ground through a piped well bore. This technique is commonly used to produce natural gas or oil from shale, tight or coal seam formations.

LATERAL

A lateral is a segment of a pipeline that branches off the main or transmission line to transport the product to a termination point, such as a tank farm or a metering station.

LAUNCHER

A launcher is a pipeline component that is used for inserting an inline inspection tool, cleaning pig, or other device into a pressurized pipeline. After performing its task, the tool or pig is removed via receiver.

LIQUEFACTION

Liquefaction refers to the process of converting natural gas (methane) to a liquid to facilitate transportation or storage. This process requires removing impurities and cooling the methane to -260°F.

LOOP

A loop is a segment of pipeline installed adjacent to an existing pipeline and connected to it at both ends. A loop allows more gas to be moved through the system.

Metering and Regulating Station

METERING AND REGULATING (M&R) STATIONS

Metering and regulating stations are installations containing equipment to measure the amount of gas entering or leaving a pipeline system and, sometimes, to regulate gas pressure.

PIG

A pig, also known as a "smart" pig, is a generic term signifying any independent, self-contained device, tool, or vehicle that is inserted into and moves through the interior of a pipeline for inspecting, dimensioning, or cleaning. These tools are commonly referred to as "pigs" because of the occasional squealing noises that can be heard as they travel through the pipe.

RECEIVERS

A pipeline component used for removing an inline inspection tool, cleaning pig, or other device from a pressurized pipeline. The device is inserted into the pipeline via a launcher.

RIGHTS-OF-WAY (ROW)

A right-of-way is a defined strip of land on which an operator has the rights to construct, operate, and/or maintain a pipeline. A ROW may be owned outright by the operator or an easement may be acquired for specific use of the ROW.

TRENCH

A trench is a long narrow ditch dug into the ground and embanked with its own soil. They are used for concealment and protection of pipeline. Trenches are usually dug by a backhoe or by a specialized digging machine.

Pipeline in trench

VALVE

A valve is a mechanical device installed in a pipeline and used to control the flow of gas or liquid.

See *http://www.phmsa.dot.gov* for additional pipeline-related terminology definitions.