Overview

Williams is in the preliminary stages of developing an expansion of its Transco pipeline to connect natural gas producing regions in northern Pennsylvania to markets in the Mid-Atlantic and southeastern states by 2017. The proposed Atlantic Sunrise Project would include expanding the existing Transco transmission pipeline by adding new pipeline infrastructure in Pennsylvania, as well as modifying some existing Transco facilities in Pennsylvania and other states (Maryland, Virginia, North Carolina, South Carolina), to allow gas to flow from north to south. Since the Transco pipeline was initially installed in the 1950s, gas has traditionally flowed from south to north.

Initial ground surveys (environmental, cultural and civil surveys) for the Atlantic Sunrise Project are scheduled to begin in May 2014. These surveys enable the company to gather important information to make informed decisions when determining the location of the proposed pipeline facilities.

Regulatory

Before Williams can modify or construct any new pipeline facilities, the company must obtain a Certificate of Public Convenience and Necessity from the Federal Energy Regulatory Commission (FERC), in addition to various other permits. Williams expects to file a formal application with FERC for the Atlantic Sunrise project in early 2015.

To that end, Williams requested in April 2014 that FERC initiate an environmental review of the Atlantic Sunrise project before the company files its certificate application (Docket No. PF14-8). This formal process, which is known as FERC pre-filing, is designed to solicit early input from citizens, governmental entities and other interested parties to identify and address issues associated with potential facility locations during the design stage of a proposed project.

Environmental Evaluation

FERC will prepare an environmental evaluation using information included in Williams' Certificate Application, supplemental information that may be provided by Williams upon request, information assembled by FERC staff, as well as information provided by state and federal agencies and the public. The evaluation will describe the proposed project and alternatives, as well as identify existing environmental conditions and potential impacts from the project. The evaluation also will indicate what mitigation measures, construction procedures, and routing could be included in the project to eliminate or reduce impacts.

Project Scope

Williams has identified a preliminary project scope for the Atlantic Sunrise project, however, the current alignment is preliminary and subject to change as a result of additional survey information, environmental analysis, or changing customer needs, as well as input from citizens, local officials and other interested parties. Currently, the preliminary project design includes a total of approximately 178 miles of new greenfield pipe (Central Penn Line), two new pipeline segments (loops) located along the existing Transco pipeline which total about 15 miles (Grugal Loop and Unily Loop), two and half miles of existing pipeline replacement, two new compressor facilities in Pennsylvania, and other facility additions or modifications in six states.
Project Designed to Flow Gas Bi-directionally

When the Transco pipeline was initially constructed, it was designed to connect abundant natural gas supplies along the Gulf Coast with East Coast markets. However, in recent years the natural gas supply landscape has shifted and today, the Marcellus supply area has eclipsed the Gulf Coast as the Transco pipeline’s most prolific natural gas production area. In 2012, Transco transported about 225 million cubic feet per day of gas supply from the Marcellus. In 2014, that number has climbed to 3.5 billion cubic feet per day. In response to this shift, the multibillion-dollar Atlantic Sunrise project will fundamentally change the flow of natural gas on the Transco pipeline system, allowing gas to flow bi-directionally so that customers like public utilities, power generators and industrial natural gas users along the Eastern Seaboard can have access to economically-priced Marcellus shale natural gas supply.

Selecting Facility Locations

In developing the pipeline project, engineers attempt to balance environmental and landowner considerations with the engineering requirements for safely constructing a transmission pipeline. These factors include geography, environmental concerns, co-location with other linear development and constructability.

The pipeline company must evaluate a number of environmental factors, including potential impacts on residents, threatened and endangered species, wetlands, water bodies, groundwater, fish, vegetation, wildlife, cultural resources, geology, soils, land use, air and noise quality. Pipeline companies are strongly encouraged by regulators to consider routes along existing corridors, such as pipeline rights of way, roadways, utility corridors, railroad corridors and other easements. After analyzing maps, aerial photos, environmental reports and other available data, pipeline engineers establish a preliminary route or location for the new facilities, as well as location alternatives. For the Atlantic Sunrise Project, approximately 40% of the new greenfield pipeline facilities are proposed to be collocated within or adjacent to existing utility rights of way, while 100% of the proposed pipeline loops will be placed parallel to Transco’s existing right of way.

Public Meetings

Williams will formally introduce the project to interested parties during a series of public workshops that will be conducted in the project area. These workshops, also known as “open houses,” are open to the public and are designed to provide all interested parties an opportunity to meet project personnel, review maps, learn more about the regulatory process, ask questions and share feedback.

<table>
<thead>
<tr>
<th>Preliminary Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring 2014 Field surveys begin</td>
</tr>
<tr>
<td>Spring 2014 FERC pre-filing process begins</td>
</tr>
<tr>
<td>Late spring 2014 Open houses and informational meetings</td>
</tr>
<tr>
<td>Early 2015 Submit 7(c) application to FERC</td>
</tr>
<tr>
<td>Summer 2016 Anticipated construction start</td>
</tr>
<tr>
<td>Second half of 2017 Target in service</td>
</tr>
</tbody>
</table>
Transcontinental Gas Pipe Line Company, LLC proposes to expand its current interstate natural gas pipeline system connecting the Zick facilities in Susquehanna County, Pennsylvania and Marcellus Shale area to south flow the natural gas to markets in the Mid-Atlantic and Southern U.S. All together, the project will include approximately 178.54 miles of greenfield pipeline, 14.45 miles of looping, 2.52 miles of replacement, two new greenfield compressor stations, and new and up-rated facility modifications across the project area.

Scope
The Project is currently contracted to provide 1,700,000 dekatherms/day of additional natural gas transportation capacity by installing greenfield pipeline estimating approximately 56.35 miles of 30-inch pipeline from Susquehanna County, PA to Columbia County, PA, and approximately 122.19 miles of 42-inch pipeline from Columbia County, PA to Lancaster County, PA. The project will include one 42-inch pipeline loop located in Lycoming County, PA, one 36-inch pipeline in Clinton County, PA, and 2.52 miles of 30-inch pipeline replacement would be constructed in Prince William County, Virginia. The project has a targeted in-service date of July 1, 2017.

Pipeline Facility
- **Central Penn Line North**: 56.35 miles of 30-inch pipe in Susquehanna County (Lenox Townships), Wyoming County (Nicholson, Clinton, Overfield, Falls, Eaton, Northmoreland, Monroe Townships), Luzerne County (Dallas, Lehman, Lake, Ross, Fairmount Townships) and Columbia County (Sugarloaf Township), PA.
- **Central Penn Line South**: 122.19 miles of 42-inch pipe in Columbia County (Sugarloaf, Jackson, Greenwood, Orange, Mt Pleasant, Hemlock, Montour, Franklin, Cleveland Townships), Northumberland County (Ralpho, Coal, East Cameron Townships), Schuylkill County (Eldred, Hegins, Frailey, Tremont, Pine Grove Townships), Lebanon County (Union, East Hanover, North Annville, Annville, South Annville, South Londonderry Townships), Lancaster County (Mount Joy, East Donegal, West Hempfield, Manor, Conestoga, Martic, Drumore Townships), PA.
- **Grugan Loop**: 5.45 miles of 36-inch E Loop from MP L177.29 to MP L171.84 in Clinton County (Gallagher Township), PA.
- **Unity Loop**: 9.00 miles of 42-inch D Loop from MP L128.87 to MP L119.87, in Lycoming County (Jordan, Franklin, and Penn Township), PA.
- **A & B lines Replacement (Virginia Replacement)**: 2.52 miles of 30-inch A Line and 2 miles of 30-inch B Line between Station 185 and the 180-20 valve site will be replaced in Prince William (Gainesville and Brentsville Districts), VA.

Compressor Facilities
The project also includes some modifications to the existing compressor stations.
- Greenfield Station 605 in Susquehanna County (Lenox Township), PA
  - Construct a Greenfield compressor station around MP 53.9 for 1,300# discharge with 2 x 15,000HP electric compressor packages
- Greenfield Station 610 in Columbia County (Hemlock Township), PA
• Construct a Greenfield compressor station around MP 100.5 with 2 x 20,000HP electric compressor packages
  • Station 520 in Lycoming County (Mifflin Township), PA
    • Replace Compressor #6 & 7 internal wheels to accommodate new flow parameters
    • Modify Compressor #8 aero assemblies to accommodate new flow parameters
  • Station 517 in Columbia County (Jackson Township), PA
    • Add 1 ea. Solar Mars 100S (16,000 ISO HP ea.) with 3 bays of cooling and one scrubber
  • Regulator Station in Lancaster County (Drumore County), PA
    • Construct a Regulator Station at Transco MP 1682.65
  • Station 190 in Howard County (West Friendship District), MD
    • Modify valves and yard piping for southflow compression
    • Add 1 X 25,000HP electric compressor unit
  • Station 185 in Prince William County (Gainesville District), VA
    • Modify valves and yard piping for southflow compression
  • Station 170 in Appomattox County (Falling River District), VA
    • Modify valves, yard piping, for southflow compression
  • Station 160 in Rockingham County (New Bethel Township), NC
    • Valves and yard piping, and regulation for southflow compression
  • Station 150 in Iredell Count (Davidson Township), NC
    • Modify valves and yard piping for southflow compression
    • Re-located Iredell lateral backpressure regulator
  • Station 145 in Cleveland (Cleveland Township), NC
    • Modify valves and yard piping for southflow compression

Other Facilities
The project also includes the following facility modifications along the Transco Mainline system in Pennsylvania, North Carolina, and South Carolina:
  • Zick Station, Susquehanna County (Lenox Township), PA
    • Construct Receipt Meter Station
  • Owego Station, Susquehanna County (Lenox, Township), PA
    • Construct Receipt Meter Station
  • Springville Interconnect in Wyoming County (Northmoreland Township), PA
    • Construct interconnect at Springville pipeline crossing
  • Regulator Station in Luzerne County (Lehman Township), PA
    • Regulator station at Transco tie-in at Leidy MP L92.70
  • Regulator Station at Transco tie-in at Leidy MP L113.75 in Columbia County (Sugarloaf Township), PA
  • Install supplemental Odorization from Station 140 to Station 160
    • Odor masking / de-odorization of valves at valve sites for venting 11 valve sites
    • Odor masking / de-odorization of valves at 4 compressor stations (145, 150, 155 and 160)
    • Odor Detection and Supplemental odorization at 41 meter stations

Regulatory Process
Interstate natural gas pipelines are regulated by the Federal Energy Regulatory Commission (FERC). As such, FERC requires pipeline operators to obtain a federal Certificate of Public Convenience and Necessity, in addition to various state and local permits, before any pipeline facilities can be built.
The shipper’s Service Agreement (required under the precedent agreement) must be fully executed prior to commencing construction. The precedent agreement (Paragraph 2(a)) requires the shippers to execute such agreement “within 30 days after the date Transco files with the FERC an acceptance of the FERC Authorization”.

### Proposed Schedule

<table>
<thead>
<tr>
<th>YEAR</th>
<th>QUARTER</th>
<th>MILESTONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>2nd quarter</td>
<td>FERC Pre-filing</td>
</tr>
<tr>
<td>2015</td>
<td>2nd quarter</td>
<td>FERC Filing</td>
</tr>
<tr>
<td>2016</td>
<td>3rd quarter</td>
<td>Proposed Compressor and Pipeline Construction Start</td>
</tr>
<tr>
<td>2017</td>
<td>3rd quarter</td>
<td>In-Service</td>
</tr>
</tbody>
</table>

**More Information**

www.williams.com/atlanticsunrise | pipelineexpansion@williams.com | 866-455-9103
PRE-FILING ENVIRONMENTAL REVIEW PROCESS

Applicant Process
- Assesses market need and considers project feasibility
- Studies potential site locations
- Identifies Stakeholders
- Requests use of FERC's Pre-Filing Process

Holds open house to discuss project

Files formal application with the FERC

FERC Process
- Receives Applicant's request to conduct its review of the project within FERC's NEPA Pre-Filing Process
- Formally approves Pre-Filing Process, issues PF Docket No. to Applicant, and begins project review

Participants in Applicant's open house

Issues Notice of Intent for Preparation of an EA/EIS. Opens NEPA scoping period to seek public comments on the project.

Holds NEPA scoping meeting(s) and site visit in the project area. Consults with interested agencies.

Receives formal application from Applicant

FIS
- Issues Preliminary Draft EIS to cooperating agencies for review
- Issues Draft EIS and opens comment period
- Holds meeting(s) in the project area to hear public comments on the Draft EIS
- Responds to comments and revises the Draft EIS
- Issues Final EIS
- Approves or denies project

EA
- Issues Preliminary Draft EA to cooperating agencies for review
- Issues EA and opens comment period
- Responds to comments received on EA in Commission Order
- Approves or denies project

Public Input Opportunities

May construct and operate the project, only after obtaining Clean Water Act, Coastal Zone Management Act, and Clean Air Act permits.

(Approved)

Applicant and/or Public can ask FERC to rehear case or refer to FERC Administrative Law Judge

(Approved)

Applicant and/or Paries can take FERC to Court

Public Input Opportunities
About Williams
Williams (NYSE:WMB) is one of the leading energy infrastructure companies in North America. It owns an interest in or operates more than 15,000 miles of interstate natural gas pipelines, transporting 14% of the nation's natural gas.

Williams operates the Transco pipeline, a 10,200-mile natural gas transportation system that extends from South Texas to New York City. Transco’s deliveries account for 8% of the natural gas consumed in the U.S.

Service to Pennsylvania
The Transco pipeline has reliably served Pennsylvania for more than 60 years, providing service to major local distribution companies such as Philadelphia Gas Works, PECO Energy, Columbia Gas, and UGI. The Transco pipeline operates more than 1,000 miles of transmission pipeline in Pennsylvania, delivering approximately 30% of the total gas Pennsylvania consumed in 2013.

Midstream Operations
Williams has a significant presence in Pennsylvania, operating more than 2,200 miles of midstream pipe. Williams' midstream assets in Pennsylvania include Laurel Mountain Midstream LLC, Three Rivers Midstream LLC, Williams Field Services, Laser Northeast Gathering Company LLC and Williams Gathering & Processing.

Williams' Operational Statistics in Pennsylvania

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employees</td>
<td>553</td>
</tr>
<tr>
<td>2013 Gross Wages</td>
<td>$63 million</td>
</tr>
<tr>
<td>2013 Gas Deliveries</td>
<td>670 Bcf</td>
</tr>
<tr>
<td>Miles of Pipe</td>
<td>3,298 (includes regulated &amp; unregulated gas transmission and gathering)</td>
</tr>
<tr>
<td>2013 Assets</td>
<td>$2.07 billion</td>
</tr>
<tr>
<td>2013 Property Taxes Paid</td>
<td>$475,000</td>
</tr>
</tbody>
</table>
One of three interstate natural gas pipelines operated by Williams, the Transco pipeline is an approximately 10,000-mile pipeline system that transports natural gas from supply areas along the Gulf Coast, Mid-Continent and Appalachia to markets in the southeastern and northeastern United States.

**WHAT WE DO**

The Transco system is comprised of up to five pipelines that generally run parallel to one another. The steel pipes range in size from 6-48 inches in diameter. The pipeline originates in Jim Wells County, Texas (South Texas) and terminates in New York City.

Transco transports natural gas, specifically methane. This methane shipped through Transco is delivered to a variety of customers, including local distribution companies, large commercial and industrial users and electric power plants.

Transco delivers about 8 percent of the natural gas consumed in the U.S.

**BACKGROUND**

When the Transco pipeline was placed into service, it was hailed as the longest pipeline in the world and the largest single-project construction venture ever attempted. The first gas delivery was made on Dec. 6, 1950, to Danville, a small tobacco and mill town in southern Virginia.

The original Transco mainline system was placed into service in 1949. The installation dates for segments of the mainline system range from 1949 to the present, with major construction completed in 1949, 1954, 1960, 1975 and 1980.

**OPERATIONS**

- System design capacity: 9.6 billion cubic feet per day
- Seasonal storage: 200 billion cubic feet
- Annual throughput: 2,408 trillion British thermal units (Btu)
- Supply areas: Gulf Coast, Mid-Continent and Appalachia
- Market areas: Southeast, Mid-Continent, Northwest
- Miles of pipeline: Approximately 10,000
- Compressor stations: 52
- Horsepower: 1,353,580

**FIELD DIVISION LOCATIONS**

- **Cypress Division**
  12501 Veterans Memorial
  Houston, Texas 77014

- **Atlanta Division**
  1600 Executive Drive South
  Decatur, Ga. 30096

- **Charlotteville Division**
  345 Greenbrier Drive
  Charlottesville, Va. 22901

- **Princeton Division**
  99 Farber Rd.
  Princeton, N.J. 08540

- **Palmetto Division**
  1905 Intermodal Circle
  Suite 310
  Palmetto, FL 34221
A COMPANY COMMITTED TO SAFETY

Williams is committed to operating its facilities in a safe and reliable manner to protect the public, the environment and employees. An important part of Williams’ comprehensive safety program is its Integrity Management Plan, which identifies supplemental safety procedures that take place in areas that meet certain criteria of high population density, areas that contain populations of impaired mobility such as schools and hospitals; and areas where people congregate, such as church facilities, ball fields and parks.

HIGH STANDARDS

Interstate pipelines are regulated by the U.S. Department of Transportation’s Office of Pipeline Safety, which imposes a broad range of construction and operations standards. Williams has its own high standards for pipeline design, material specifications, construction, maintenance and testing. These standards, which must be met before a pipeline can be placed into service, include:

> At steel rolling mills, where pipe is fabricated, pipeline representatives carefully inspect the pipe to ensure quality meets or exceeds both federal and industry-wide standards.

> Protective coatings and other corrosion control techniques are used to help prevent corrosion of the pipeline and its facilities.

> During construction, pipeline representatives carefully inspect the fabrication and construction of the pipeline. Welds linking the joints of the pipeline are checked to test their integrity.

> Once the pipeline is in the ground and before it is placed into service, it is pressure-tested with water or inert gas in excess of its operating pressure to verify it can withstand high pressure.

> In accordance with federal law, aboveground pipeline markers are used to alert the public of the presence of one or more pipelines within an easement. These markers, which contain the name of the pipeline operator and emergency contact information, are usually located near roads, rail, highways, water crossings and curbs.

> Once the pipeline is placed in the ground, Williams installs a system called cathodic protection, which, along with the pipe’s protective coating, is designed to prevent corrosion.

> To help protect against third-party damage, which is the leading cause of pipeline incidents, regular inspections by motor vehicles and low-flying patrol aircraft keep a watchful eye on the pipeline routes and adjacent areas.

> Williams actively supports the nationwide One-Call system.

> Pipeline maintenance crews perform facility inspections, check for construction activity in the vicinity of the pipeline, and maintain the pipelines and their rights of way. Heavily populated areas are inspected and patrolled more frequently.

> Pipelines undergo periodic maintenance inspections, including leak surveys and valve and safety device inspections. An Internet computerized inspection device known as a “smart pig” is also utilized to periodically examine the pipe’s condition.

> Local Williams’ representatives meet with local emergency response officials, excavation contractors, landowners and local community leaders to educate them about pipeline operation and emergency response procedures.

> Safety information regarding our operations is distributed annually to landowners, residents and businesses located near our facilities.

> Williams’ pipelines are continuously monitored 24 hours a day, 365 days a year through its Gas Control center.
AN INTRODUCTION TO NATURAL GAS

Natural gas is the cleanest burning fossil fuel used for power generation today. As demand for energy increases, expanded use of natural gas can help improve air quality across the country, especially when used to replace more polluting energy sources.

FUEL OF CHOICE

The environmental advantages of natural gas have made it the smart energy choice and part of the solution to reducing greenhouse gas emissions. As the cleanest burning fossil fuel, it emits fewer pollutants than either coal or oil. It is also efficient, flexible, plentiful and domestic.

Today, Americans use about 22 trillion cubic feet of gas per year, which is about 25 percent of the energy consumed in the United States.

NATURAL GAS 101

Natural gas is made up of hydrocarbon gases, primarily methane. It is usually found deep below the earth's surface, often with deposits of oil, and is removed by wells that are drilled to access the petroleum deposits. After it reaches the surface, the gas is separated from any oil or water that may have been present in the petroleum deposit. It is then processed to remove impurities, other gases such as propane and butane, and any remaining water or water vapor.

THE INTERSTATE GAS PIPELINE SYSTEM

Natural gas is transported in an underground system of large-diameter pipes. The pipeline transportation system, the "Interstate highway" for natural gas, consists of 220,000 miles of high-strength steel pipe six to 48 inches in diameter. It moves huge amounts of natural gas thousands of miles from producing regions to local natural gas utilities and sometimes directly to large users of natural gas. The force that propels the gas is its pressure, which gradually dissipates as it travels through the pipeline. A series of compressor stations are positioned along the pipeline's path every 40 to 100 miles. Each station has a number of large compressors that increase the pressure of the gas to push it to the next station along the line.

NATURAL GAS CONSUMERS

There are five main groups of natural gas users:

> Residential users: use natural gas in their homes to fuel furnaces and appliances such as stoves, water heaters and clothes dryers.

> Commercial users: use natural gas in businesses such as restaurants, hotels and hospitals.

> Industrial users: use natural gas for heating processes and as a fuel for the generation of steam.

> Electric utilities: use natural gas to generate electricity.

> Natural gas pipeline companies: use natural gas as a fuel to run compressor units.

ENVIRONMENTALLY PREFERRED

![Carbon Emissions by Fuel Type](image)

INDUSTRY SECTORS

Four industry segments coordinate to bring natural gas from producing wells to more than 60 million North American consumers.

Gathering and Processing

Natural gas is a commodity produced by major oil and gas companies and independent gas producers and traded in a competitive market. During the production phase, gas producers use advanced technology to locate and drill for gas reserves. Gas is pumped from wells into gathering lines. Gathering operations bring natural gas to processing plants that remove moisture and impurities from the gas stream, and to separate liquid byproducts.

Power

Marketing companies act independently from gas pipeline companies, and serve as sales agents or brokers, purchasing gas from producers, selling gas and arranging transportation for large consumers and local gas distribution companies.

Transportation and Storage

Interstate natural gas pipelines are transportation companies, like railroads or trucking companies. They do not own the commodity they carry in their pipelines or store in their underground facilities. Their job is to move natural gas from producing areas to market areas under contract to gas buyers. Buyers such as local gas distribution companies and marketers resell the natural gas to their customers. Others transport directly to industrial and electric generation facilities. The Federal Energy Regulatory Commission sets transportation and storage rates charged by pipeline companies; however, the FERC requires pipelines to operate “open access” systems that allow any shipper to request gas transportation on any pipeline.

Local Distribution

If you have gas service in your home, your meter reader works for a local distribution company (LDC), LDCs contract for gas supplies and for interstate pipeline transportation to bring natural gas to their own “city gates,” where they deliver gas to homes, businesses and industrial plants served by their own distribution pipelines. State public service authorities regulate these distribution companies and their sales.

To help ensure reliable service, local natural gas companies can store natural gas underground for use during peak demand, such as cold days. In some cases, the storage is within the local distribution system. In most cases, large volume underground storage facilities are connected to the interstate pipeline network. On average, underground storage accounts for about 20 percent of the natural gas consumed each winter.
NATURAL GAS: THE LNG JOURNEY TO YOUR HOME

Williams’ pipelines are part of a vast pipeline transmission system sometimes referred to as the "interstate highway" for natural gas. It consists of more than 220,000 miles of high-strength steel pipe moving large amounts of natural gas thousands of miles from producing regions to market.

NATURAL GAS

You probably already know that natural gas is the fastest-growing energy source because it is clean-burning, efficient and abundant.

But did you know that nearly all of the natural gas consumed in the United States is transported from gas wells to gas users through thousands of miles of high-strength steel pipelines?

Pipelines exist almost everywhere throughout the United States, transporting the energy to heat homes, generate electricity, cook food and much more. In your community, Williams operates a natural gas pipeline known as the Transco pipeline, transporting natural gas from the Gulf Coast to markets throughout the southeastern and northeastern United States.

THE JOURNEY FROM WELLHEAD TO BURNERTIP

Natural gas is found in large deposits in the Gulf of Mexico, in addition to 23 other states. Exploring for natural gas means drilling thousands of feet, or even miles, into the earth. Once a deposit is found, the natural gas is brought to the surface where it is cleaned and made ready for transportation through pipelines.

1. Gathering lines bring gas from offshore and onshore wells to a processing plant.

2. At the processing plant, moisture and impurities are removed from the gas stream; natural gas liquid by-products (butane, propane, natural gasoline) are extracted and sold separately.

3. Compressor stations move gas through interstate pipelines to utilities or other direct-purchase customers, maintaining gas pressure and flow.

4. Some gas is stored during the summer in porous underground rock formations or depleted oil and gas reservoirs so it is quickly available at times of peak demand, such as severe winter weather.

5. Compressed to an average of 300 to 1400 pounds per square inch, gas moves through the pipeline at about 15 miles an hour.

6. At the "city gate," usually located at the edge of a town or city, gas is metered to determine the quantity delivered to the local utility. The pressure is also reduced and in some locations, an odorant is added to the gas to help consumers identify gas in the atmosphere.
FREQUENTLY ASKED QUESTIONS FOR LANDOWNERS

Williams' Transco pipeline system has been quietly and safely delivering natural gas in your community for many years. Williams takes great pride in the relationships we've established with the many landowners and communities with whom we co-exist. It is our goal to maintain a good relationship with all of our neighbors, working with them in a fair and responsive manner.

QUESTIONS AND ANSWERS

Has the location of the new pipeline facilities been determined?
Williams has identified a preliminary project route. However, the current route is preliminary and subject to change. Federal regulations require that the pipeline company conduct numerous studies and analyze a number of alternatives. Williams is committed to working with communities, property owners and other interested stakeholders to identify and evaluate potential locations that minimize the impact on the community and the environment.

Will I be notified if the pipeline is going to affect my property?
Yes. Landowners whose property may be affected by the proposed route will receive a letter and/or a personal contact from a Williams land representative notifying them of the various surveys that will take place on their property. Additionally, all potentially affected landowners will receive a packet of information from the FERC and from Williams advising that their property may be affected by the pipeline project.

How long does the process take?
Depending on the size of the pipeline project, the federal review and time needed for pipeline construction can vary.

What is the purpose of pipeline surveys?
Ground surveys are a preliminary first step in gathering critical information that can be used in developing a pipeline proposal. The process of conducting these surveys involves several steps. Generally, each property will be visited by various specialists in land, engineering and environmental sciences. These visits or may not be concurrent visits but should not last longer than one or two days each. Some properties may need to be revisited to obtain additional data.

All information collected will be used to help us determine the location of the proposed pipeline facilities. Nothing will be removed from your property without your permission. Vehicular traffic will be confined to existing roads and access ways. After the survey teams are finished, you may see survey stakes and/or ribbon tied to fences or vegetation. These markers are necessary to maintain a line of sight for the areas that have been surveyed. In areas where brush or tall grass is encountered, crews may need to cut some of this vegetation to maintain the line of sight. Some minor surface disturbance may be required with hand tools to collect soil samples. Our survey crews will take every precaution to ensure no damage to your property or disruption of your daily activities will occur.

What is an easement?
An easement is a limited right to use the land for specific purposes. Should Williams need to acquire a new easement, Williams will compensate the landowner for the right to construct, operate and maintain an underground pipeline (and, in limited cases, aboveground equipment related to the pipeline such as valves, and cathodic protection sites).

What size will the easement be?
The amount of land required for the easement will vary on each tract of land depending on a number of factors. A Williams land agent will discuss the land requirements with the landowner during the easement negotiations. Typically, we will need an additional 25 feet of permanent easement for operation and maintenance of the pipeline. The total width of the construction workspace will vary depending on such factors as topography, soil conditions and regulatory requirements. Generally, approximately 85 to 125 feet of workspace will be required to construct the pipeline. In certain locations, a portion of the workspace may overlap (continued on back)
continued from front)

the existing right of way. All temporary workspace will revert to the landowner upon completion of construction, with no restrictions.

What will the presence of the pipeline do to my property values?
Historically speaking, natural gas pipeline easements have had little or no effect on property values.

What if I don’t want the pipeline on my land? Can you take my land?
This is always a very sensitive issue and we assure you that it is not our desire or intent to obtain an easement from the landowner through the right of eminent domain, often referred to as “condemnation.” Do we have the right to condemn for an easement? Generally, once the FERC issues a Certificate of Public Convenience and Necessity for a project, the company may, by virtue of the authority granted in the United States Natural Gas Act, seek authority from the court to obtain the limited rights necessary to construct, operate and maintain a pipeline. Contrary to the condemnation process that the landowner might experience for a highway, park or other public structure, your land would not be “taken” from you. The courts would merely grant the right for Williams to construct, operate and maintain the pipeline. The landowner would retain ownership and surface rights of the land as if an easement were granted. The courts would determine fair market value, again based on the accepted appraisal practices discussed above.

Am I going to see bulldozers and pickup trucks driving all over my land?
All construction activities will be restricted to the right of way and temporary workspace areas granted during the negotiations. Only those private roads agreed to in advance will be used by the construction crews.

How will the pipeline affect land drainage?
The right of way will be graded after construction to allow normal water drainage. All drainages will be returned to their original patterns. The right of way may be terraced, seeded, mulched or otherwise stabilized to prevent erosion.

What precautions will be taken to prevent the subsoil from mixing with the topsoil?
On improved lands, topsoil will be excavated and segregated into separate stockpiles to allow for the re-establishment of the original soil profile. In agricultural fields, hayfields or other fields used for crops, the top 12 inches of topsoil will be segregated into a separate stockpile. In places with less than 12 inches, all of the topsoil will be removed and stored separately. Once construction is complete, the subsoil will be placed into the trench first, followed by the topsoil.

What do I do if I find you’ve broken my water line or cut my cable or telephone line?
You will be provided with the names and numbers of Williams personnel that you can contact in the event of such a mishap. It’s rare, but not impossible. Be sure you point out the location of any underground utilities or structures to your land agent prior to construction to minimize the potential for disruption. To insure all issues and problems are properly and promptly addressed, we prefer you deal directly with a Williams employee and not the contractor doing the construction, if possible.

I’d like to get some gas from Transco. How do I do that?
The existing Transco pipeline is used for transporting natural gas to market areas where it can be distributed by local gas utility companies or used as fuel in power generation facilities. Contact your local gas utility company to ask about natural gas service.

Will I still own my land? Can I still use it?
It is important to note that an easement does not transfer title of the land to Williams; it merely grants the right to use the land for the specific purposes stated in the easement agreement. After construction of the pipeline, most use of the surface of the land will be permitted, including farming activities such as crop production or raising livestock.
SELECTING FACILITY LOCATIONS

The process of siting natural gas pipeline facilities is comprised of many variables. Federal regulations require that the pipeline company conduct numerous studies and analyze a number of alternatives before filing an application with the Federal Energy Regulatory Commission.

SITING FACILITIES

Pipeline engineers use computer modeling to identify what new pipeline facilities will be required to deliver the additional supply requested by customers. Increasing natural gas deliveries can be accomplished through one or a combination of the following:

- Increasing horsepower at pipeline compressor stations;
- Replacing existing pipeline with larger pipeline; and/or
- Building new pipeline, either next to existing pipes (a process called looping), or in an area where pipelines do not currently exist.

After analyzing maps, aerial photos, environmental reports and other available data, pipeline engineers establish a preliminary route or location for the new facilities, as well as alternate locations. Pipeline companies are strongly encouraged by federal regulators to consider routes along existing corridors, such as:

- Pipeline rights of way
- Roadways
- Utility corridors
- Railroad corridors
- Other easements

The pipeline company must evaluate a number of environmental factors, including potential impacts on:

- Residents
- Threatened and endangered species
- Wetlands, water bodies and groundwater
- Fish, vegetation and other wildlife
- Cultural resources
- Geology
- Soils
- Land use
- Air and noise quality

Williams is committed to working with communities, property owners and other interested stakeholders to identify and evaluate potential locations that minimize the impact on the community and the environment. Early involvement from communities will help Williams identify and address issues related to project design or siting.
WHAT IS A COMPRESSOR STATION?

Compressor stations, sometimes called pumping stations, are the "engines" that power an interstate natural gas pipeline. As the name implies, the compressor station compresses the natural gas, to push the gas through the pipeline.

SEPATING THE GAS

When the natural gas enters the compressor station, it flows through separators used to remove solids and liquids from the natural gas in the pipeline. These separators are provided mainly to protect the compressor from any small debris that has entered the pipeline during construction and water from integrity testing. It should be noted that except for the small amount of debris and liquids captured to protect the compressors, and the natural gas needed to run the compressor station, all the natural gas that enters a compressor station leaves it again through the pipeline.

After going through the separators, the natural gas is then compressed by a centrifugal or reciprocating compressor.

TYPE OF COMPRESSORS

Simplistically, a centrifugal compressor works like a fan; each fan is called an impeller, and there may be one, or several, impellers in a series, depending on how much pressure is needed.

A reciprocating compressor, on the other hand, is made up of one or several pistons configured much like an engine block. Deciding between which type of compressor to use is based on the flow rate through the compressor, as well as the amount of pressure needed.

The compressor is driven by a gas turbine, electric motor or reciprocating engine.

A gas turbine is very similar to a jet engine found on an airplane except that instead of using the thrust to push the airplane, the jet turns a large fan to spin or rotate the compressor. An electric motor is a larger version of the electric motors you see every day, just as the reciprocating engine is similar to your car engine, just larger. The gas turbine and reciprocating engines typically use natural gas from the pipeline, where the electric motor uses power from an electric transmission line.

Selection of this piece of equipment is based on air quality, available power and the type of compressor selected. Typically, electric motors are used when air quality is an issue. Gas turbines are used when electric power is not readily available. Reciprocating engines are used when smaller compressors are needed.

THE AUTOMATION SYSTEM

Most compressor stations are automated so that the compressors can be started, controlled and stopped from a central control location regardless of the weather conditions, time of day, or day of the week. The automation system also acts to protect the equipment, facility, and surrounding area in the event that the equipment is not operating as it was intended. The operators of the system continuously monitor and adjust the mix of compressors that are running to maximize efficiency, as well as keep detailed operating data on each compressor station. The control center also can remotely operate cut-off valves along the pipeline system.

Pipeline companies install compressor stations along their pipelines, typically one every 40 to 100 miles. The size and the number of compressors varies, based on the diameter of the pipe and the volume of gas to be moved. Nevertheless, the basic components of a station are similar.
ACQUIRING EASEMENTS OR RIGHTS OF WAY

As natural gas demand grows, expanding existing facilities or building new facilities is necessary. Sections of pipeline may be replaced or installation of new compressor facilities may occur. If you are affected by either of these situations, a Williams representative will meet with you to make certain the job is performed with the least possible impact to you or the environment.

STEPS FOR ACQUIRING EASEMENTS (RIGHT OF WAY):

Upfront Information
In most cases, Williams’ representatives begin the process by contacting each landowner prior to surveying and staking the preliminary route for environmental, engineering and construction evaluations. The goal is for all landowners to understand all proposed features of the pipeline, including the alignment, underground depth, pipe size, temporary and permanent width of the easement, and aboveground equipment prior to construction. Special needs such as temporary fencing, reseeding requirements and avoidance will be discussed on an individual basis.

Fair Compensation to Landowners
Williams is committed to dealing fairly with each landowner and paying each landowner for two things:

> A fair value, based upon market value principles and number of acres needed, for the privilege of establishing a permanent easement across his or her land. Williams will obtain a permanent easement, but the landowner retains ownership and use of the land.

> Damages to crops, grazing lands, timber or any structures directly caused by the construction and maintenance of the pipeline. Construction damages will be paid on the area affected by the actual construction. The settlement for damages to crops either can be paid in advance, based on records of local yields or can be paid after construction, based on the actual crop losses.

Prompt Payment to Landowners
After the conditions and the amount of compensation for an easement are reached, and the easement agreement is executed, a check will be issued to the landowner.

Advance Notice of Construction Activities
Williams’ representatives will advise the landowner and tenant (if applicable) regarding the actual timing of construction as far in advance as possible. This allows the landowner or tenant to schedule farming or other activities in ways that minimize problems for both parties.

Landowner Still Retains Ownership of Land
The easement only gives Williams the right to construct, maintain and operate a pipeline. Use of the land, with certain limitations, can remain the same as before construction.

Williams’ land representatives will be available before, during and after the project to discuss any special concerns you may have.
HOW YOU MAY CONTINUE TO USE THE RIGHT OF WAY

Williams is committed to ensuring the safe operation of our Transco pipeline system. To prevent accidents from happening, it is important that we work with our landowners to form a partnership for safety. Accidents can occur when individuals or third-party contractors are not aware of the pipeline’s location.

UNDERSTANDING THE RESTRICTIONS

Landowners retain ownership of the land and may use the surface with limited restrictions. The following information is provided to assist you in understanding those restrictions.

Excavation, Tunneling and Boring
Excavation is not allowed within Williams’ right of way without a Williams representative present. All excavation work within two feet of the pipeline must be performed by hand, directly above and under Williams’ pipelines, with a Williams representative present, who will determine the safe digging distance.

Aboveground Structures
To provide for adequate maintenance and operation of Williams’ facilities, aboveground structures are prohibited within Williams’ right of way.

Roads, Streets and Driveways
A preliminary engineering review will be performed for all roads, streets, driveways, etc., proposed on Williams’ right of way. A pipeline inspection prior to construction may be necessary.

Disposal Systems
Septic tanks, liquid disposal systems, and hazardous waste disposal systems are not allowed on the rights of way. This includes discharge from sewage disposal systems, the discharge of any hydrocarbon substance, the discharge or disposal of any regulated waste, or any other discharge that may prove damaging or corrosive to Williams’ facilities.

Water Impoundment
To provide adequate maintenance and operation of Williams’ facilities, the impoundment of water on rights of way is not allowed. Temporary soil erosion and sediment control devices and storm water detention basins/traps will be reviewed on a case-by-case basis.

Blasting
Explosive detonations in the vicinity of Williams’ facilities are not permitted without prior analysis and written approval from Williams, and a Williams representative must be on site during the blasting. To determine if the detonation will be detrimental to the safety of Williams’ facilities, certain information must be submitted to Williams for evaluation and approval at least two weeks prior to the proposed date of the blasting activity.

Landscaping
Landscaping in the vicinity of Williams’ facilities is limited to lawn and low-growing (less than five feet tall at maturity), shallow-rooted shrubbery. Planting of shrubbery is not permitted closer than five feet on either side of each pipeline. Trees are not permitted.

Pipeline Markers
Installation of pipeline markers is mandated by federal law to assist in identifying the location of pipeline facilities. Landowners should ensure that all temporary and permanent pipeline markers installed by Williams are protected and maintained at all times during construction. Permanent markers damaged or removed by landowners will be replaced by Williams at the landowner’s expense. Work will not be allowed to commence until sufficient pipeline markers are in place.

Williams
One Williams Center
Tulsa, OK 74124

© 2019 The Williams Companies, Inc. All rights reserved - EU150030

(800) WILLIAMS | www.williams.com

Ingenuity takes energy.
POST-CONSTRUCTION RESTORATION

The final step in the construction process is to restore the right of way and easement land as closely as possible to its original condition. Williams’ construction procedures include videotaping and photo-documenting the existing right of way before construction begins. These practices are used to ensure that post-construction restoration results in the return of temporarily disturbed areas to pre-construction conditions.

Depending on the requirements of the project, this restoration process typically involves such things as replacing topsoil, removing large rocks that may have been brought to the surface, completing any final repairs to irrigation systems or drain tiles, spreading lime or fertilizer, restoring fences, etc.

The restoration crew carefully grades the right of way. In hilly areas, the crew installs erosion prevention measures such as interceptor dikes, which are small earthen mounds constructed across the right of way to divert water.

The restoration crew also installs riprap, consisting of stones or timbers, along streams and wetlands to stabilize soils. As a final measure, the crew may plant seed and mulch the construction right of way, to ensure the foliage and grassland is restored as close as possible to its original condition.

RURAL

1. Survey
2. Site Preparation
3. Excavation
4. Pipe Installation
5. Backfill
6. Regrading and Reseeding
Private and public property such as fences, gates, driveways and roads disturbed by pipeline construction will be restored to their original or better condition.

These details will be established during the easement negotiations with each landowner.
INFORMATION FOR AGRICULTURAL LANDOWNERS

Williams wants farmers to be aware of the pipeline construction process and the mitigation techniques that will be incorporated to address the issues specific to farmers and the important industry they represent. It is important to note that all mitigation techniques used throughout the project will be completed by, and at the expense of, Williams.

PROTECTING YOUR LAND

As the people most familiar with the property, farmland owners and operators are in the best position to share useful information with the construction engineers, surveyors and land representatives during project planning. Examples of the information that will assist Williams in protecting your land include: drainage patterns, intensive tile drain systems, grassed waterways, location of water lines, developed springs or livestock watering facilities, soil type and topsoil thickness among others. Some of this information can be found in the farm conservation plan, in the County Soil Survey or from the local technician at the County Soil and Water Conservation District.

TOPSOIL PRESERVATION

The first essential part of right-of-way clearing in farmland areas involves removing the topsoil from the right of way. If the topsoil is not fully removed prior to construction, it may be damaged by the pipeline work, due to rutting, compaction, and the inversion and mixing of the soil layers. To avoid this, the topsoil is stripped and stored safely. It must be segregated and stockpiled away from the pipeline trench, the excavated spoil, the pipe assembly area and the traffic zone. The full thickness of the topsoil zone is typically 12 inches.

PROTECTING DRAINAGE AND IRRIGATION

Prior to construction, Williams will work with you to locate existing drain tiles and irrigation systems. The company will also work with you and local soil conservation authorities to determine the location of future drain tiles that may be installed. The information we learn will be used to develop specific procedures for constructing in drain tile areas. These procedures will also address how the company plans to maintain irrigation systems during construction and, in the event that drain tiles or irrigation systems are damaged, how the company intends to facilitate repairs. Williams will retain qualified drain tile specialists to conduct any necessary repairs in a prompt and careful manner. In areas where drain tiles exist or are planned, Williams will ensure that the depth of cover above the pipeline is sufficient to avoid interference with drain tile systems. Williams will check all drain tile systems within the area of disturbance to check for potential damage. If any tiles are damaged, they will be repaired to their original or better condition by a qualified drain tile specialist.

COORDINATING WITH APPROPRIATE AGENCIES

Williams will work to coordinate with appropriate local, state and federal agencies any construction and restoration measures specifically involving affected farmlands. This will include working with local soil conservation authorities or land management agencies to address erosion control and revegetation. The company will also work with appropriate agencies to create specific procedures to prevent the introduction or spread of noxious weeds or soil pests resulting from pipeline construction.

RESTORATION

As soon as backfill operations are complete, Williams will commence cleanup and restoration activities, including completing final grading and topsoil replacement. The environmental inspector will oversee that the restoration of contours and topsoil are returned to their original condition. Williams will conduct follow-up inspections of all disturbed areas after the first and second growing seasons to ensure the success of revegetations. Revegetation in agricultural areas shall be considered successful if crop yields are similar to adjacent undisturbed portions of the same field.