

Negotiating Pipeline Rights-of-Way in Pennsylvania

Background

Surging natural gas production in the Marcellus and Utica shale formations have ushered in a wave of pipeline development projects designed to increase takeaway capacity out of the Appalachian basin. As a result, communities throughout the Commonwealth are experiencing an intense level of natural gas pipeline development. As of the writing of this publication (August 2015) approximately 3,000 miles of interstate natural gas pipeline are being proposed in the region, with construction reaching into ten states. Combined, the proposed projects would have the ability to move an additional 16.8 billion cubic feet of natural gas per day plus 120,000 barrels per day of natural gas liquids out of the Marcellus. Six of the proposed projects would originate in Pennsylvania's northern Marcellus production area and seven, including two liquids pipelines, would originate in the western Pennsylvania, Ohio, and West Virginia tri-state area (see map on p. 2). Most of these projects are expected to be completed and operational by 2017–2018.

What Is a Pipeline Right-of-Way?

A pipeline right-of-way is a strip of land over and around natural gas pipelines where some of the property owner's legal rights have been granted to a pipeline operator. A right-of-way agreement between the pipeline company and the property owner is also called an easement

and is usually filed in the county Register and Recorders Office with property deeds. Rights-of-way and easements provide a permanent, limited interest in the land that enables the pipeline company to install, operate, test, inspect, alter, repair, maintain, replace, and protect one or more pipelines within the designated easement. The agreement may vary the rights and widths of the right-of-way, but, generally, the pipeline company's rights-of-way extend 25 feet from each side of a pipeline unless special conditions exist. These easements can be both permanent and temporary, with temporary easements granting the pipeline company additional space for construction.

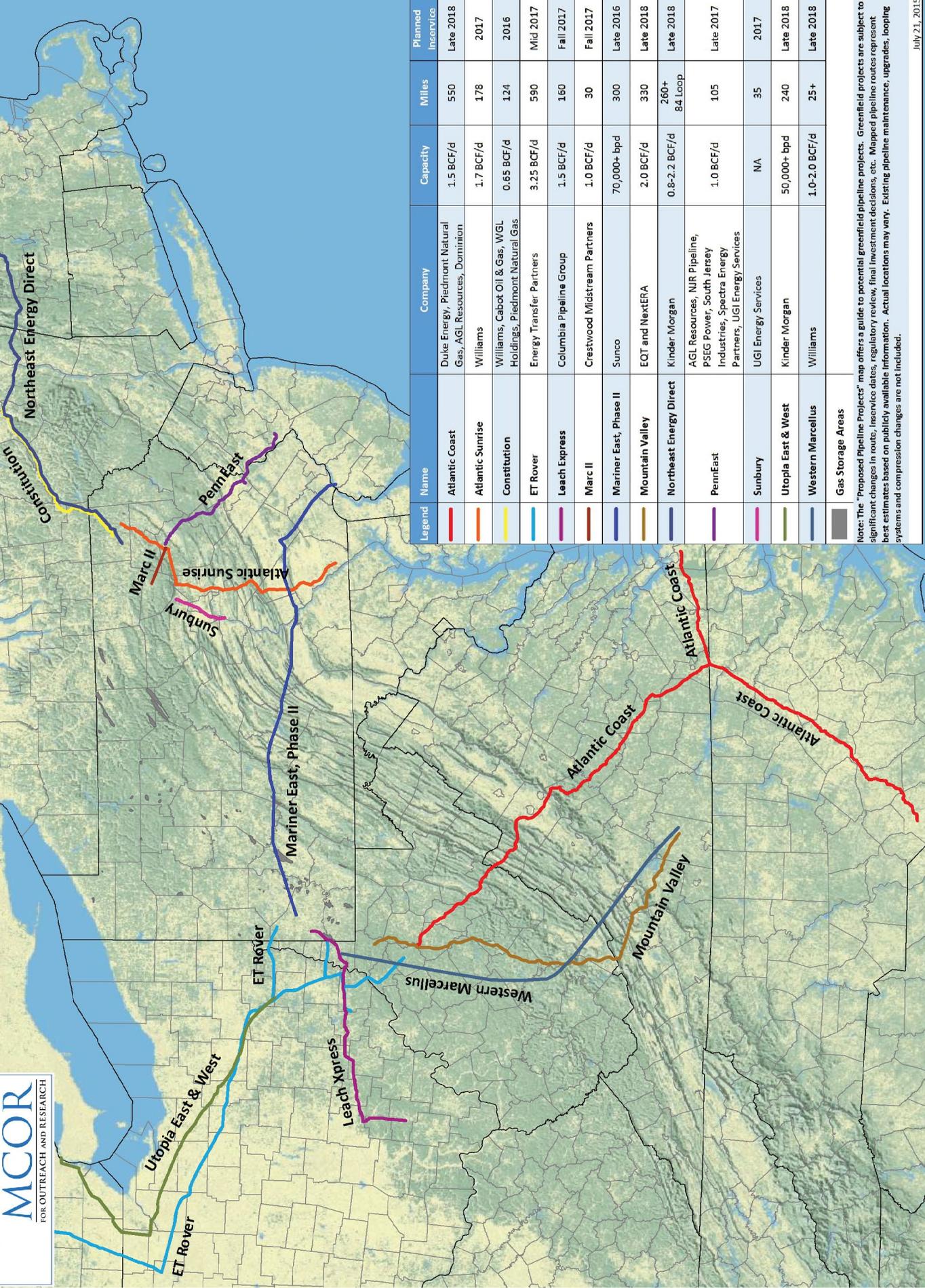
Types of Gas Pipelines

Essentially, three major types of pipelines occur along the transportation route: gathering lines, the interstate pipeline, and the distribution system. Gathering lines are small-diameter pipelines (6–20 inches) that move natural gas from the wellhead to a natural gas processing facility or an interconnection with a larger mainline pipeline.

Transmission pipelines are wide-diameter (20–48 inches), long-distance pipelines that transport natural gas from producing areas to market areas. Interstate pipelines carry natural gas across state boundaries—in some cases, clear across the country.



Proposed "Greenfield" Pipeline Projects



Legend	Name	Company	Capacity	Miles	Planned In-service
—	Atlantic Coast	Duke Energy, Piedmont Natural Gas, AGL Resources, Dominion	1.5 BCF/d	550	Late 2018
—	Atlantic Sunrise	Williams	1.7 BCF/d	178	2017
—	Constitution	Williams, Cabot Oil & Gas, WGL Holdings, Piedmont Natural Gas	0.65 BCF/d	124	2016
—	ET Rover	Energy Transfer Partners	3.25 BCF/d	590	Mid 2017
—	Leach Express	Columbia Pipeline Group	1.5 BCF/d	160	Fall 2017
—	Marc II	Crestwood Midstream Partners	1.0 BCF/d	30	Fall 2017
—	Mariner East, Phase II	Sunco	70,000+ bpd	300	Late 2016
—	Mountain Valley	EQT and NextERA	2.0 BCF/d	330	Late 2018
—	Northeast Energy Direct	Kinder Morgan	0.8-2.2 BCF/d	260+ 84 Loop	Late 2018
—	PennEast	AGL Resources, NJR Pipeline, PSEG Power, South Jersey Industries, Spectra Energy Partners, UGI Energy Services	1.0 BCF/d	105	Late 2017
—	Sunbury	UGI Energy Services	NA	35	2017
—	Utopia East & West	Kinder Morgan	50,000+ bpd	240	Late 2018
—	Western Marcellus	Williams	1.0-2.0 BCF/d	25+	Late 2018
■	Gas Storage Areas				

Note: The "Proposed Pipeline Projects" map offers a guide to potential greenfield pipeline projects. Greenfield projects are subject to significant changes in route, in-service dates, regulatory review, final investment decisions, etc. Mapped pipeline routes represent best estimates based on publicly available information. Actual locations may vary. Existing pipeline maintenance, upgrades, looping systems and compression changes are not included.

Intrastate natural gas pipelines operate within state borders and link natural gas producers to local markets and the interstate pipeline network. Although an intrastate pipeline system is defined as one that operates totally within a state, an intrastate pipeline company may have operations in more than one state. As long as these operations are separate—that is, they do not physically interconnect—they are considered intrastate and are not jurisdictional to the Federal Energy Regulatory Commission (FERC).

The type of pipeline—whether it's a gathering line or interstate transmission line—placed on a landowner's property influences the amount of surface disturbance (i.e., larger areas are disturbed when installing larger diameter pipelines) and determines whether eminent domain is possible and who provides regulatory oversight.

Natural Gas Liquids Pipelines

Natural gas production in parts of the Appalachian basin, especially in western Pennsylvania, Ohio, and West Virginia, are rich in natural gas liquids such as ethane, propane, and butane. These liquids are generally separated from the natural gas stream and shipped in dedicated natural gas liquids pipelines. Within the federal regulatory framework, natural gas liquids pipelines fall under the Interstate Commerce Act and are regulated the same as oil pipelines. This means that proposed gas liquids pipelines do not go through the FERC review process and, importantly, do not receive federal eminent domain authority.

Right of Condemnation or Eminent Domain

In Pennsylvania, eminent domain or right of condemnation generally only applies to interstate transmission lines, or lines moving gas longer distances between two or more states. In other states the power of eminent domain may be given to all intrastate gathering and distribution pipeline companies.

Individual gathering lines (pipelines running between well sites,

compressor units, and metering stations) are not subject to eminent domain in Pennsylvania, and the pipeline operator must negotiate easements with each individual landowner along the pipeline route.

A provision in Pennsylvania law does allow operators of a "public utility" to use eminent domain to secure pipeline easements. In the event of an eminent domain proceeding, the landowner will be compensated by the court or regulatory authority at a fair market value for the easement. According to U.S. Title 15, Chapter 2, Section 15.0201, a public utility is defined as a public corporation, company, person, association, authority, or enterprise fund that owns, operates, or controls a plant or equipment within the territory for the production or delivery of power in any form, water, or telegraph or telephone services to another person, corporation, company, or association.

Regulatory Oversight

Major interstate pipelines and pipelines within Pennsylvania are under the jurisdiction of federal or state regulatory agencies. In 2011, the Pennsylvania legislature passed Act 127 (the Gas and Hazardous Liquids Pipelines Act) expanding the Pennsylvania Public Utility Commissions (PUC) authority to include non-public utility natural gas gathering lines. Specifically, the PUC now has the authority to enforce federal pipeline safety laws as they relate to natural gas gathering lines within the Commonwealth. Act 127 also requires the PUC to maintain a registry of pipeline operators within Pennsylvania and recover the costs of enforcement by yearly assessments on pipeline operators.

The Pennsylvania Department of Environmental Protection (DEP) provides oversight of certain aspects of pipeline development in the Commonwealth via environmental protection laws that include the Clean Streams Law and the Dam Safety and Encroachments Act.

FERC has authority over the location, construction, and operation of interstate pipelines. The FERC review process for new interstate

pipelines includes an environmental assessment, review of route alternatives, and interfacing with landowners and the public. FERC also regulates the abandonment of interstate pipelines and sets rates that carriers charge for interstate transmission of natural gas.

Once federally regulated, interstate natural gas pipelines become operational, safety is regulated, monitored, and enforced by the U.S. Department of Transportation (DOT, www.dot.gov). Within DOT, the Pipeline and Hazardous Materials Safety Administration (PHMSA) is responsible for enforcing proper design, construction, operation, maintenance, testing, and inspection standards.

Pipeline Construction

After a pipeline operator obtains the required permits and satisfies the regulatory requirements, construction of the pipeline may begin. Surveying of the intended route is completed, both aerial and land based, to ensure that no surprises pop up during actual assembly of the pipeline.

Installing a pipeline is much like an assembly line process, with sections of the pipeline being completed in stages. First, the path of the pipeline is cleared of trees, boulders, brush, and anything else that may prohibit the construction. Once the pipeline's path has been cleared sufficiently to allow construction equipment to gain access, topsoil (the A or Ap horizon) from both the permanent and temporary easement is removed and stockpiled along the edge of the temporary easement, taking steps to avoid compaction during removal and stockpiling. On agricultural land where clearing is not necessary, topsoil removal is the first construction activity. Sections of pipes are then laid out along the intended path—a process called "stringing" the pipe. These pipe sections are typically from 40 to 80 feet long and are specific to their destination—that is, certain areas have different requirements for coating material and pipe thickness.

After the pipe is in place, trenches are dug alongside the laid-out pipe. These trenches are typically 5 to 6 feet deep. In certain areas, however, including road crossings and bodies of water, the pipe is buried deeper. Soil from trenching is stockpiled separately from the topsoil stockpiles, again taking steps to avoid compaction. Once the trenches are dug, the pipe is assembled and contoured. This includes welding the sections of pipe together into one continuous pipeline and bending it slightly, if needed, to fit the contour of the pipeline's path. Coating is applied to the ends of the pipes (the coating applied at a coating mill typically leaves the ends of the pipe clean, so as not to interfere with welding), and the entire coating of the pipe is inspected to ensure that it is free from defects.

Once the pipe is welded, bent, and coated, it can be lowered into the previously dug trenches. This is done with specialized tracked construction equipment acting in tandem to lift the pipe relatively uniformly and lower it into the trench. After the pipe has been lowered into the ground, the trench is filled in carefully to ensure that the pipe and its coating do not incur damage. The last step in pipeline construction is the hydrostatic test, which consists of filling the pipe with water at pressures higher than will be needed for natural gas transportation, through the entire length of the pipe. This serves as a test to ensure that the pipeline is strong enough and absent of any leaks or fissures before natural gas is pumped through the pipeline.

Laying pipe across streams or rivers can be accomplished in one of two ways. Open-cut crossing involves the digging of trenches on the floor of the river to house the pipe. When this is done, the pipe itself is usually fitted with a concrete casing, which both ensures that the pipe stays on the bottom of the river, and adds an extra protective coating to prevent any natural gas leaks into the water. Alternately, a form of directional drilling may be employed in which a "tunnel"

is drilled under the river through which the pipe may be passed.

Once the pipeline has been installed and covered, efforts are taken to restore the pipeline's pathway to its original state, or to mitigate for any environmental or other impacts that may have occurred during the construction process. This often includes replacing topsoil, fences, and anything else (including removing debris and reseeding) that may have been removed or disturbed during the construction process. Significant soil compaction often results from pipeline construction equipment traffic in the easement and excavation and replacement of soil. This can result in reduced crop yields on agricultural soils and reduced tree growth on forested soils for several years. Steps should be taken to minimize soil compaction throughout the construction process and to mitigate compaction during restoration. Such steps include using only low-ground-pressure construction equipment and ceasing operations when soils are wet and most susceptible to compactive forces. After replacement of subsoil material in the trench and grading of the easement, the entire area should be deep ripped to a depth of 16 inches to loosen the exposed subsoil. On

agricultural soils any rocks pulled to the surface during ripping should be collected and removed. The stockpiled topsoil should then be replaced over the easement, again taking steps to avoid compaction. The replaced topsoil should then be loosened by deep ripping to a depth of 16 inches, and, on agricultural soils, any rocks brought to the surface should be collected and removed. Recovery of full productivity of agricultural soils can sometimes be accelerated by incorporating compost or manure in the topsoil.

Pipeline Inspection and Safety

In order to ensure the efficient and safe operation of natural gas pipelines, pipeline operators routinely inspect their pipelines for corrosion and defects. This is done through the use of equipment known as pigs. Pigs are robotic devices that are propelled down pipelines to evaluate the interior of the pipe. Pigs can test pipe thickness and roundness, check for signs of corrosion, and detect leaks and other defects along the interior of the pipeline that may either impede the flow of gas or pose a safety risk for the operation of the pipeline. Sending a pig down a pipeline is fittingly known as "pigging" the pipeline.



In addition to inspection with pigs, a number of safety precautions and procedures are in place to minimize the risk of accidents. A few of the safety precautions associated with natural gas pipelines include:

- **Aerial patrols:** Planes are used to ensure that no construction activities are taking place too close to the route of the pipeline, particularly in residential areas. Unauthorized construction and digging is the primary threat to pipeline safety.
- **Leak detection:** Natural gas detecting equipment is periodically used by pipeline personnel on the surface to check for leaks. This is especially important in areas where the natural gas is not odorized.
- **Gas sampling:** Routine sampling of the natural gas in pipelines ensures its quality and may also indicate corrosion of the interior of the pipeline or the influx of contaminants.
- **Preventive maintenance:** This involves the testing of valves and the removal of surface impediments to pipeline inspection.
- **Emergency response:** Most pipeline companies have emergency response teams that train for the possibility of a wide range of potential accidents and emergencies.

Pipeline Identification

Pipeline markers are located along the path of a gas pipeline. These markers identify the general location of the pipeline and list the products transported, the operator's name, and the emergency contact number. Pipeline markers do not identify the exact location of the pipeline, so it is critical that landowners contact the One Call System prior to any excavation near the pipeline easement. In Pennsylvania, dial 811 (i.e., "call before you dig") for the Pennsylvania One Call System. This is also why landowners should insist in their negotiations with pipeline companies that the landowner receive an "as-built" survey showing the precise location of the as-constructed pipeline within a stated period immediately following the completion of pipeline construction.

Right-of-Way Maintenance

Pipeline operators will regularly conduct aerial and ground inspections to check right-of-way conditions, test for leaks, install and maintain pipeline markers, and clear brush that restricts access to the right-of-way or visibility during inspections. Rights-of-way are kept clear of trees, brush, and other obstructions so the pipeline operator can safely operate, inspect, maintain, and repair its pipelines. The easement usually provides for ingress and egress rights to the pipeline company. This can create problems for landowners who keep cattle, horses, and other animals on land across which an easement runs if the pipeline company comes onto the easement without prior notice and without care to keep all gates shut at all times except for entering and leaving the property.

Property Use Restrictions

If you are negotiating a right-of-way easement on your property, you should be aware of the pipeline operator's guidelines for property use and construction near natural gas pipelines and equipment. Generally, property owners are prohibited from installing any structures, storing anything that could be an obstruction, or planting trees or shrubs within the right-of-way. Unauthorized building or planting in the pipeline right-of-way is known as right-of-way encroachment.

Normal gardening and agricultural activities are generally acceptable. However, you should never dig or construct anything within the easement without first having a pipeline representative mark the pipeline, stake the right-of-way, and explain the company's construction guidelines. Activity on the pipeline easement can also create additional dangers if the pipeline trench has not been properly compacted, fully refilled, and depth of covering maintained at the required thickness.

Negotiating a Right-of-Way Agreement

Easement agreements are formal legal agreements granting the op-

erator long-term use of the right-of-way. A change in ownership of the property does not alter the easement agreement, especially if the easement agreement or a memorandum of the easement agreement is filed on record. Because easement agreements are legally binding contracts, landowners are encouraged to have the contract reviewed by an attorney who is knowledgeable in Pennsylvania oil and gas law and experienced in reviewing right-of-way agreements before entering into any contract. Experienced oil and gas lawyers can also be immensely helpful in the negotiation of the easement agreement.

Many aspects of a pipeline easement are negotiable. Typically, a pipeline representative will present the landowner with a preprinted agreement. This document can serve as a starting point for a two-way negotiation, or it can be fully accepted or rejected by the landowner. You can make changes to the easement by creating an addendum that is approved by both parties. Most easements are negotiated by an independent contractor, generally known in the industry as a "landman" (regardless of the person's gender). Having this third-party independent contractor involved can complicate and confuse the communication with the pipeline company that will be the owner of the easement rights.

Below is a sampling of considerations that may be included in a pipeline agreement or addressed with an addendum:

- Width of the permanent easement and time line for completion of construction
- Definition of the terms and width of any temporary construction easement
- Identification of any independent contractors and subcontractors that the pipeline company will use and make the pipeline company responsible and liable for all acts on your property by independent contractors and subcontractors
- Requirement of the pipeline company to indemnify the land-



owner from the acts and omissions of the independent contractors and subcontractors as well as those of the pipeline company

- Requirement of the pipeline company to pay property tax roll-back penalties associated with pipeline development on your property
- Definition and limitations of access to both permanent and temporary easements
- Payments for trees, crops, etc., damaged during the installation of the pipeline
- Reseeding of easements and what types of grasses and other improvements, including the amount of time following completion of construction for surface restoration to be completed
- Identification of all stream crossings, statement of methods of stream crossings, and requirement for restoration of stream crossings after construction
- Specification of the “double-ditch” method of topsoil removal during construction so that the topsoil can be placed back on the surface (not at the bottom of the trench) during site restoration
- Requirement that the landowner be provided an “as-constructed”

survey of the easement with an official seal by the surveyor within a stated period of time following completion of construction

- Replacement or installation of fencing and gates (with materials specification), including which gates will have locks and the kinds of the locks to be used
- Limitation of the number of keys or number of people with lock combinations
- Identification of an actual person at the pipeline company who will be landowner’s contact, with immediate notice to the landowner when this person is replaced (Require the pipeline company to give 30 days’ notice to landowner of any such change in contact person or related contact information.)
- Definition of access postconstruction to the easement with specific method and location of all access roads and methods
- Prohibition or limitation of surface appurtenances to the pipeline
- Requirement of minimum depth of soil from surface to top of buried pipeline and requirement that this minimum depth be maintained at all times

- Termination of the lease automatically by nonuse of installed pipeline for a stated number of days
- Definition of “abandonment” of the pipeline as a termination-of-easement event and requirement of the pipeline company to remove all abandoned pipelines
- Requirement of prior landowner consent for any assignment of the easement to another party
- Limitation of the easement to one pipeline of a stated diameter, with no right to install additional pipelines and no right to increase the diameter of the pipeline
- Definition of substances that can be transported in the pipeline (e.g., salt water can be as environmentally dangerous as can unscented natural gas)
- Requirement of the same post-construction restoration of surface for pipeline repairs as for original construction
- Right to seek surface damages for pipeline repairs as for the initial pipeline installation
- Confirmation whether gas to be transported will be scented or unscented
- Permanent and temporary easements by metes and bounds descriptions and with official surveys, preconstruction and post-construction (as-built survey)
- Alternative dispute resolution method that provides the cheapest, quickest, and least burdensome way to resolve conflicts between landowner and the pipeline company
- Surface uses, if any, by the landowner that will be prohibited in the easement and statement of these limitations in the easement
- Scope of the easement specified so that the pipeline operator is limited in its activities on your property

Value of Rights-of-Way

Payments to landowners for granting right-of-way easements can be quite variable between pipeline operators, type of pipeline, and from location to location. Most pay-

ments for gathering lines involve a set dollar amount per linear foot (or per "rod," which is 16.5 feet). In Pennsylvania, easement agreements for gathering lines have ranged from less than \$5.00 to more than \$25.00 per linear foot. Payments to landowners for interstate transmission pipelines are generally based on a value per disturbed acre and can be highly variable based on the prevailing property values in the area.

Easement payments may include restitution for damages to timber, crops, etc., or damages may be paid over and above the quoted value per foot or per acre. It's important for the landowner to know exactly what is being offered and whether this offer includes damages. Some pipeline operators will also offer a "signing bonus" (a fixed dollar amount for signing an easement agreement) in addition to the payment per linear foot. Be sure to get the amount and terms of payments in writing before signing an easement agreement. Many pipeline companies use "bank drafts" that may look like a negotiable check but often will have

stated conditions and limitations that prevent release of funds to the easement grantor. Study bank drafts carefully for all stated conditions and limitations on payment of the agreed funds.

Reporting Taxes on Pipeline Easement Income

Income from pipeline easements is taxed as a capital gain. Permanent pipelines may affect or reduce the land area available for other uses. If you have basis in the property, and the pipeline easement payment is less than the basis allocated to the affected part of your land, you simply reduce your basis and do not have any taxable income. If the payment is equal to or more than the basis of the affected part of your land, reduce the basis to zero and the rest, if any, is gain from a sale.

Surface damages (e.g., from damage to crops or timber) separate from the negotiated easement payment may occur. These damage payments are treated as ordinary income and should not affect your basis.

Extension's Role

Penn State Extension provides educational resources for landowners and other stakeholders about Marcellus shale and the natural gas leasing and exploration process. County extension offices may host an educational workshop, discuss leasing arrangements, or refer you to regulatory or legal specialists.

Although extension educators cannot provide legal advice, they can provide additional insights about leasing and right-of-way considerations.

For more information about Marcellus shale, natural gas development, leasing and pipeline rights-of-way, visit extension.psu.edu/naturalgas.

Resources

Federal Energy Regulatory Commission, www.ferc.gov

Natural Gas Supply Association, www.naturalgas.org

Penn State Extension Natural Gas website, extension.psu.edu/naturalgas

Pennsylvania Department of Environmental Protection's Bureau of Oil and Gas Management

Pennsylvania Public Utilities Commission, www.puc.pa.gov

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Put Our Experience to Work for Your Community

The Penn State Extension Marcellus Education Team strives to bring you accurate, up-to-date information on natural gas exploration and drilling in Pennsylvania. Learn about your rights and choices as a landowner, a businessperson, a local official, or a concerned citizen. Discover the resources available to you.

Visit naturalgas.psu.edu.

Penn State Extension

Penn State Extension has a special mission—to enable individuals, families, communities, agriculture, businesses, industries, and organizations to make informed decisions. Through a system of county-based offices, we extend technical expertise and practical, how-to education based on land-grant university research to help Pennsylvanians address important issues, solve problems, and create a better quality of life. From improving agriculture and building stronger communities, to developing skills with today's youth, we are dedicated to giving Pennsylvanians the means to grow, achieve, compete, go farther, and do more. Learn what extension can do for you. Contact your county extension office or visit extension.psu.edu.

The Agricultural Law Resource and Reference Center

The Agricultural Law Resource and Reference Center is a collaboration between Penn State's Dickinson School of Law and Penn State's College of Agricultural Sciences. Located at both the University Park and Carlisle facilities and funded in part by the Pennsylvania Department of Agriculture, the center is designed to provide the highest-quality educational programs, information, and materials to those involved or interested in agricultural law and policy.

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