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Pipeline Regulation and the PennEast Pipeline

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Introduction

The pipeline infrastructure that carries natural gas from the Marcellus Shale through Pennsylvania is insufficient as rapid development of the state's natural gas stores takes place. There are not enough pipelines to ship the natural gas to markets, and pressure to develop this network is mounting. An expedited process to approve pipelines through pre-filing, where paperwork for pipeline approval is started early, is helping to ensure this rapid development. This could mean taking on more risk in terms of safety and the environment.

While hydraulic fracturing is only available in parts of the state of Pennsylvania, the networks of pipelines transporting the gas are likely to impact every county in the state. Resources from the Marcellus Shale will be pumping through newly constructed pipelines within proximity to cities, churches, and schools, such as Lehigh University and throughout the Lehigh Valley. In 2015 alone, 12 applications for pipelines coursing through Pennsylvania have been sent into the Federal Energy Regulatory Commission or FERC, while 31 pipeline projects in PA over the past five years have been approved by the agency ("Approved Pipelines", 2015; "Major Pipeline", 2015).

The ultimate decision on most pipelines comes from FERC. Holding the hefty privilege of deciding for the American people if a pipeline is necessary, their responsibilities include reviewing pipeline applications and their environmental impacts. Although Environmental Impact Statements (EIS) are thorough accounts compiled by multiple government agencies, they tend to lack enough evidence to challenge the development of pipelines. FERC rarely denies pipeline applications based on environmental impacts, as they're in the business of administering pipeline certificates to those proposals that follow their regulations (Northey, 2014).

The future of the PennEast pipeline, set to run through Bethlehem, PA, will soon be decided on by FERC. If approved, Northampton and Lehigh Counties will be tied into the network of areas affected by the fracking boom and its subsequent impacts. An opportunity for communities inclined to challenge the construction of the pipeline still exists.

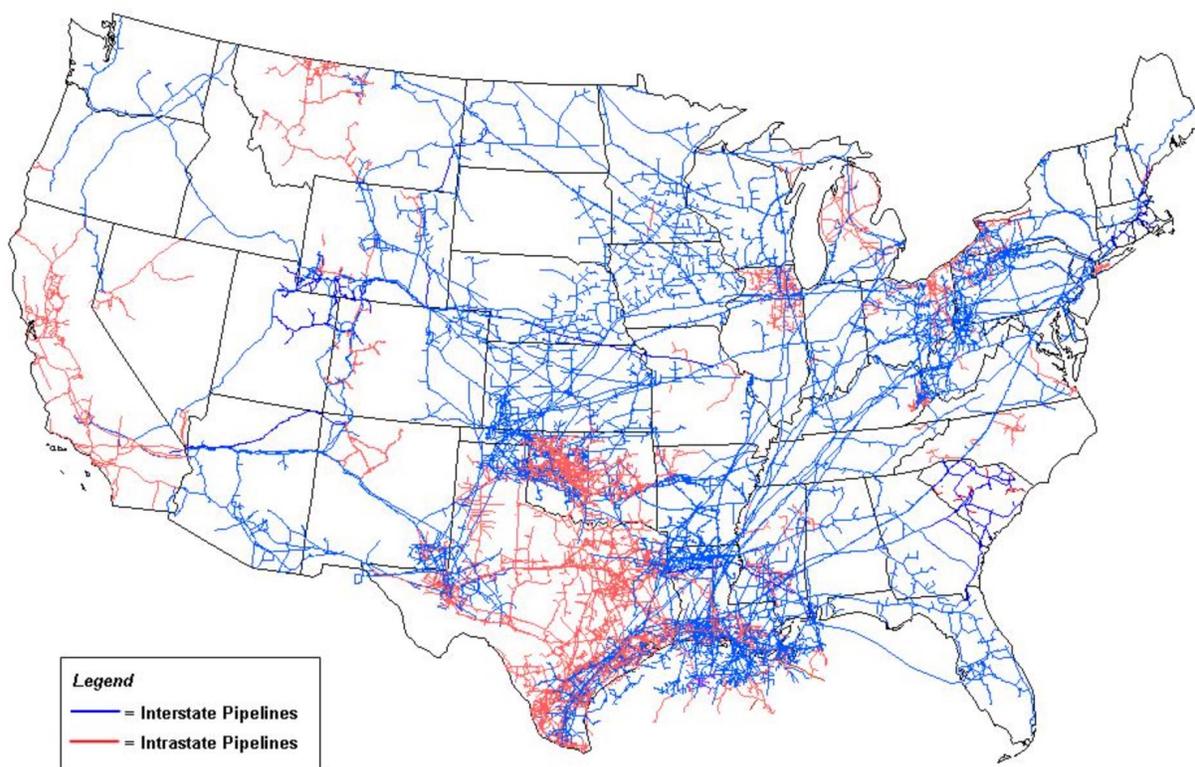
Pipeline Regulation

There are serious implications behind rapid development of pipeline infrastructure when the pipeline regulatory framework is, a majority of the times, in the hands of one agency. This paper will discuss the current situation of pipelines in Pennsylvania and how many more miles of pipelines are expected. I will discuss how pipeline infrastructure in the state is lagging behind and how pressure on the state to get gas to markets means a responsible and strong regulatory framework is needed. The questions being considered are who exactly is responsible for making sure the public and the environment are safe from pipeline accidents and who has the influence to hinder pipeline development. A closer look into the PennEast pipeline will highlight how government agencies and public opinion are influencing this pipeline's approval.

Background

Since all pipelines are not created equal, pipelines are often defined, for purposes of regulation, by what they carry and where they go. Determining how many pipelines exist in the country is a surprising struggle as certain pipelines, rural gathering lines for example, are not accounted for. This is even more surprising when almost a third of U.S. energy demand is fuel transported through pipelines (Castaneda, 2004). However, documented pipelines weave an extensive web across the country, and within the state of Pennsylvania, as seen in the maps below.

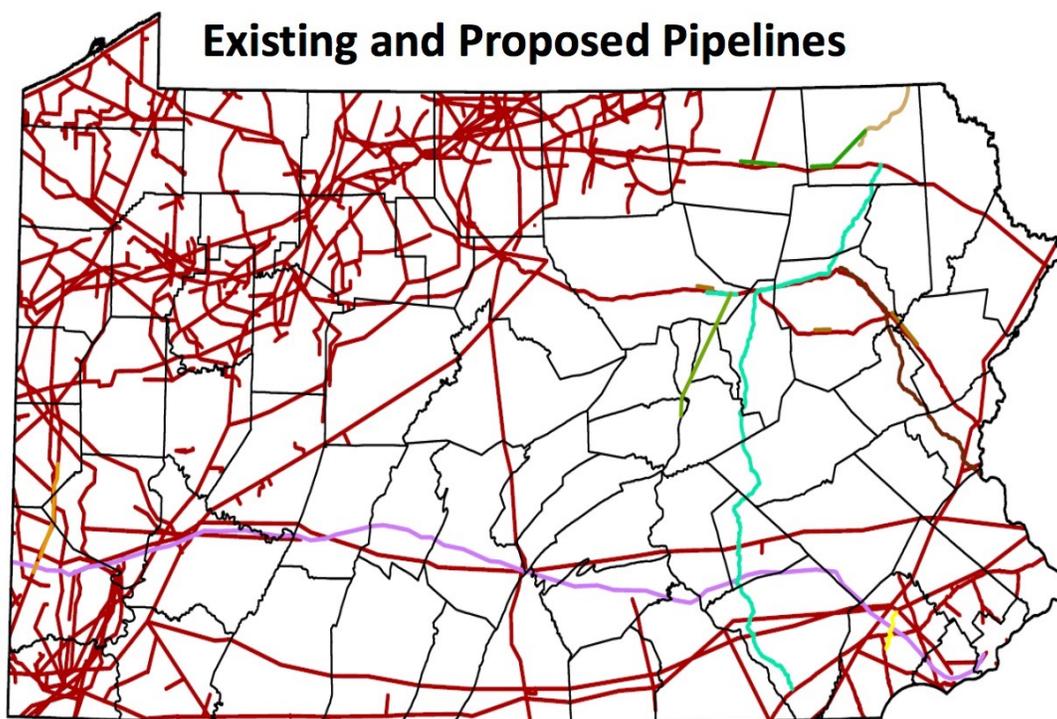
U.S. Natural Gas Pipeline Network, 2009



Source: Energy Information Administration, Office of Oil & Gas, Natural Gas Division, Gas Transportation Information System

*Retrieved from: http://www.eia.gov/pub/oil_gas/natural_gas/analysis_publications/ngpipeline/ngpipelines_map.html

The United States has nearly 305,000 miles of interstate and intrastate transmission gas pipelines (“About U.S.,” n.d.). That is enough natural gas pipelines to wrap around the world 12 times over. Interstate pipelines cross state borders and intrastate pipelines stay within state bounds. Transmission gas pipelines are just one of three categories of pipelines used to transport natural gas. The other two types of gas pipelines are gathering lines and distribution lines. Gathering lines move natural gas from the site of gas extraction to larger pipelines, called transmission lines, which carry the gas over long distances. Distribution lines are smaller and connect transmission lines directly to consumers.



Note: Map is generated from ArcGIS Online and the lines are approximations and generalizations.

According to the Office of Pipeline Safety, Pennsylvania is home to some 57,885 miles of gas pipelines (Pless, 2011). While the majority of the pipelines accounted for in Pennsylvania are distribution lines, the number of gathering lines in the state is not completely known. Gathering lines are plentiful, but most are located in rural areas where hydraulic fracturing is taking place and are not regulated. The federal agency in charge of safety regulation of pipelines, the Pipeline and Hazardous Materials Safety Administration (PHMSA) gives the state Public Utility Commission (PUC) authority to regulate safety measures for gathering lines in the state. The PUC estimates 12,000 miles of these unregulated gathering pipelines exist in rural areas in Pennsylvania (“Your guide”, n.d.). This report will focus on the development and regulations of interstate transmission lines in Pennsylvania including the proposed interstate PennEast pipeline.

Pipeline Build-Out in Pennsylvania

Intensified natural gas extraction in the Marcellus Shale means more supplies needing to get to markets. Some 4,600 miles of interstate transmission gas pipelines are expected to appear in Pennsylvania within three years (“Your guide”, n.d.). The Nature Conservancy expects an even larger build-out of 25,000 miles of new pipelines to emerge over the next decade (Johnson, Gagnolet, Ralls, and Stevens, 2011). The importance of pipeline infrastructure is growing with the enormous increase in natural gas supplies accessed by new drilling techniques.

Pennsylvania is the second largest producer of natural gas in the country, but insufficient pipelines are hampering the extent of domestic gas resources. While thousands of fracturing well pads have been drilled to extract natural gas, the pipelines that connect them to the market are

not there. A third of the wells drilled since 2004 have not been tapped due to this lack of pipeline infrastructure. An implication of this pipeline build-out is rapid clearing of 300,000 acres of forest, roughly one percent of the total area in the state (“Governor’s Infrastructure”, 2015). A part of the reason that pressure for new pipelines exists is because of the country’s domestic energy plan that prioritizes development of domestic energy resources. Natural gas is considered a cleaner fuel and domestic resources mean less reliance of foreign sources, so expanding this natural gas resource from well-head to consumer has been set as a priority by the government.

Pipeline Infrastructure Task Force

In response to the rapidly expanding market for natural gas and the subsequent pressure to build new pipelines, Pennsylvania Governor Tom Wolf commissioned a Pipeline Infrastructure Task Force (PITF) in May, 2015 (Sheriden, 2015). Leading the task force, John Quigley, Secretary for the Pennsylvania Department of Environmental Protection (DEP), is tasked with crafting a set of suggestions for more responsible pipeline infrastructure. The task force is composed of 48 members divided into 12 working groups which include areas of environmental protection, pipeline safety, public participation, agriculture, and local governance. An additional 101 experts, industry professionals, and government workers are contributing their expertise. The task force’s approach is to engage a range of stakeholders for collaboration on creating a more effective pipeline system that balances environmental protection with economic opportunity (“Governor’s Pipeline”, 2015). Wolf has requested the task force deliver a report to his office in the beginning of 2016 with a set of suggestions.

The projected increase in pipelines may mean more stringent safety regulations are needed. From 2000-2009, Pennsylvania saw over \$70 million in property damage from pipelines, a total of 10 fatalities, and 117 significant incidents involving pipelines (Pless, 2011). A recent draft report from PITF in November 2015 cited 184 recommendations for improving pipeline regulations. As key stakeholders, the group was tasked with identifying best practices in their respective areas for safe and environmentally sound pipeline infrastructure. Quigley anticipates the feasibility of these recommendations will be considered for implementation once the final report is submitted (Skrapitz, 2015, November 11). The task force is working on being transparent, so much of their work can be found online including the most recent draft report, video recordings of meetings, and PowerPoint presentation presented to the group (“Governor’s Pipeline”, 2015). A presentation by Quigley pointed out his mission is to find the balance between all stakeholders and the win-win scenarios between all those impacted. This includes gathering insight from a variety of communities, landowners, cultural and historical advocates, and the economic sectors of agriculture, timber, and outdoor recreation (Quigley, 2015).

While the PITF is trying to engage entities that hold stakes in the development of pipelines, opponents argue whether the question is being asked if pipelines are even necessary. Some citizens charge that there is not enough citizen involvement in the PITF and it is premised on the wrong assumption that pipelines are even wanted.

Regulations

A major challenge to pipeline infrastructure is that no single authority has oversight on development. Regulations that govern pipelines are split between state and federal agencies

depending on where they are located and what they carry. Focusing on natural gas transportation through pipelines in Pennsylvania, there are separate categories of regulations that can govern intrastate and interstate pipelines.

Intrastate pipelines, limited to the boundaries within a given state, account for roughly 29 percent of the total miles of natural gas pipelines in the U.S. (“Intrastate”, n.d.) Regulation of intrastate pipelines is the responsibility of state agencies. However, state regulations are decentralized, which means a number of agencies become involved instead of one agency overseeing pipeline development. This complicates understanding who is responsible because each pipeline is different and has a different set of regulatory requirements according to their location.

Generally, regulations can be broken down into two categories, construction and operation. Intrastate construction regulators include state EPA or DEP depending on where the pipeline is. For example, the DEP would be involved and would issue permits if the pipeline crossed waterways or would impact endangered species. Different agencies may have to provide permits before construction can begin, such as the Pennsylvania Department of Transportation, Game Commission or Historic Museum Commission. The chart below is an example of some of the different permits and approvals needed for the construction of the Constitution Pipeline

Sample of Permits needed in PA for the Constitution Pipeline

Anticipated Permits / Approvals

Permits, Licenses, Approvals, and Certificates Required for Construction, Operation, and Maintenance of the Constitution Pipeline Project	
Federal	
Permit/Approval	Administering Agency
Certificate of Public Convenience and Necessity	Federal Energy Regulatory Commission
PASPGP-4 CWA Section 404 Individual or Nationwide Permits (NY & Buffalo)	Army Corps of Engineers Baltimore District
	Army Corps of Engineers New York District
	Army Corps of Engineers Buffalo District
Consultation	USFWS Pennsylvania Field Office USFWS New York Field Office
Surface Water Withdrawal / Consumptive Use Permits	Susquehanna River Basin Commission
Pennsylvania State	
Permit/Approval	Administering Agency
CWA 401 Water Quality Certification	PADEP Northeast Regional Office Bureau of Watershed Management
Chapter 105 Water Obstruction and Encroachment Permits	
CWA Section 402 NPDES – Hydrostatic Test Water Discharge General Permit (PAG 10) or Individual Permit	PADEP Northeast Regional Office Bureau of Water Quality Protection
CWA Section 402 NPDES Chapter 102 Erosion and Sediment Control General Permit (ESGPP-1) for Construction Activities	PADEP Bureau of Watershed Management and Bureau of Oil and Gas Management
Submerged Land License Agreement	PADEP Bureau of Waterways Engineering
Highway Occupancy Permit	PennDOT
Clearance (Rare Species)	PA DCNR
Clearance (Rare Species)	PA Fish and Boat Commission
Clearance (Rare Species)	PA Game Commission
Blasting Permit	PA Fish and Boat Commission
Clearance (Cultural Resources)	PA Historic Museum Commission
Pennsylvania Local and County	
Permit/Approval	Administering Agency
Erosion & Sedimentation Control Plan Review	Susquehanna County Conservation Districts

*Retrieved from: <http://files.dep.state.pa.us/ProgramIntegration/PITF/Meetings/11-18-15/Governor%27s%20Pipeline%20Infrastructure%20Task%20Force%20DRAFT%20Report.pdf>

Project in Pennsylvania. These clearances may include water quality certification, erosion and sediment control permits, rare species clearances, or submerged land license agreement.

Once a pipeline is in operation, in PA, the Department of Transportation is responsible for safety and security regulations for intrastate pipelines. This is typically handled through the

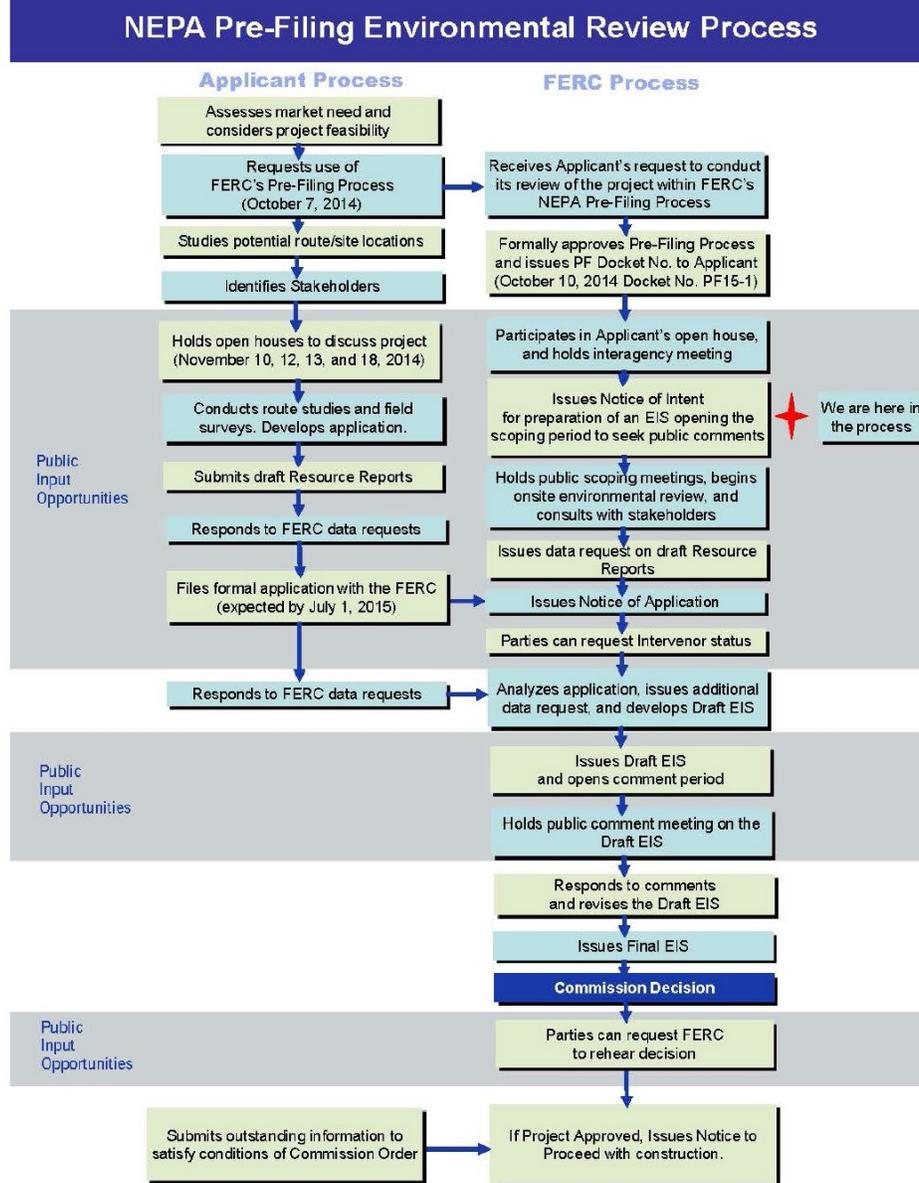
Public Utility Commission (PUC) who must inspect and monitor operations. In Pennsylvania Act 127, known as “The Pipeline Act,” all classifications of pipelines may be regulated by the state PUC except for the exempted Class 1 gathering lines (“Act 127”, n.d.). Class 1 gathering lines are those that are located in the most rural areas, with less than 10 buildings located within 220 yards of a pipeline (“Regulation”, 2013). This act developed a registry of all pipelines by documenting location, miles, sizes, pressures, and operators. However, Class 1 gathering lines remain unregulated, with no standards for construction or safety needing to be met (“Regulation”, 2013).

Interstate pipeline safety regulations follow the same procedure as intrastate pipelines as the state PUC takes on all pipeline safety regulations. However, the pre-operation and construction regulations for interstate pipelines are much different.

The major difference with interstate pipelines is that there is a single agency responsible for the decision for a pipeline’s construction. The Federal Energy Regulatory Commission (FERC), the government agency developed in 1977 under the Department of Energy Organization Act, has jurisdiction over regulating interstate pipelines (“The Market”, 2013). Section 7 of the Natural Gas Act tasks FERC with reviewing pipeline infrastructure applications and issuing certificates of public necessity and convenience for interstate pipeline construction (“FERC”, 2013). A major source of contention over FERC’s power is that once a certificate of necessity and convenience is issued, the pipeline company has the right to eminent domain, where the government has the right to expropriate private property for public use with compensation to the owner.

Before FERC issues a certificate they must assess the environmental impacts of the proposed pipeline and they must discover and address the public’s concerns over said pipeline. The National Environmental Policy Act (NEPA) requires FERC to put together an Environmental Impact Statement (EIS) or an Environmental Assessment (EA), depending on which way the company chooses to file. An expedited ‘pre-filing’ option is available for

NEPA Pre-Filing Process Flow Chart



*Retrieved from: http://www.hopewelltpw.org/penn_east/FERC_Notice_of_Intent_EIS_011315.pdf

companies willing to engage stakeholders early on in the process in hopes of a quicker formal application process. However, this can mean instead of a thorough EIS, a cursory EA is drafted. Environmental impacts of pipeline construction, operation, and maintenance on things like soil, water sources, wildlife, and cultural resources must be discussed in order to avoid damage and define alternatives in the pipeline's route (Rigney, 2015).

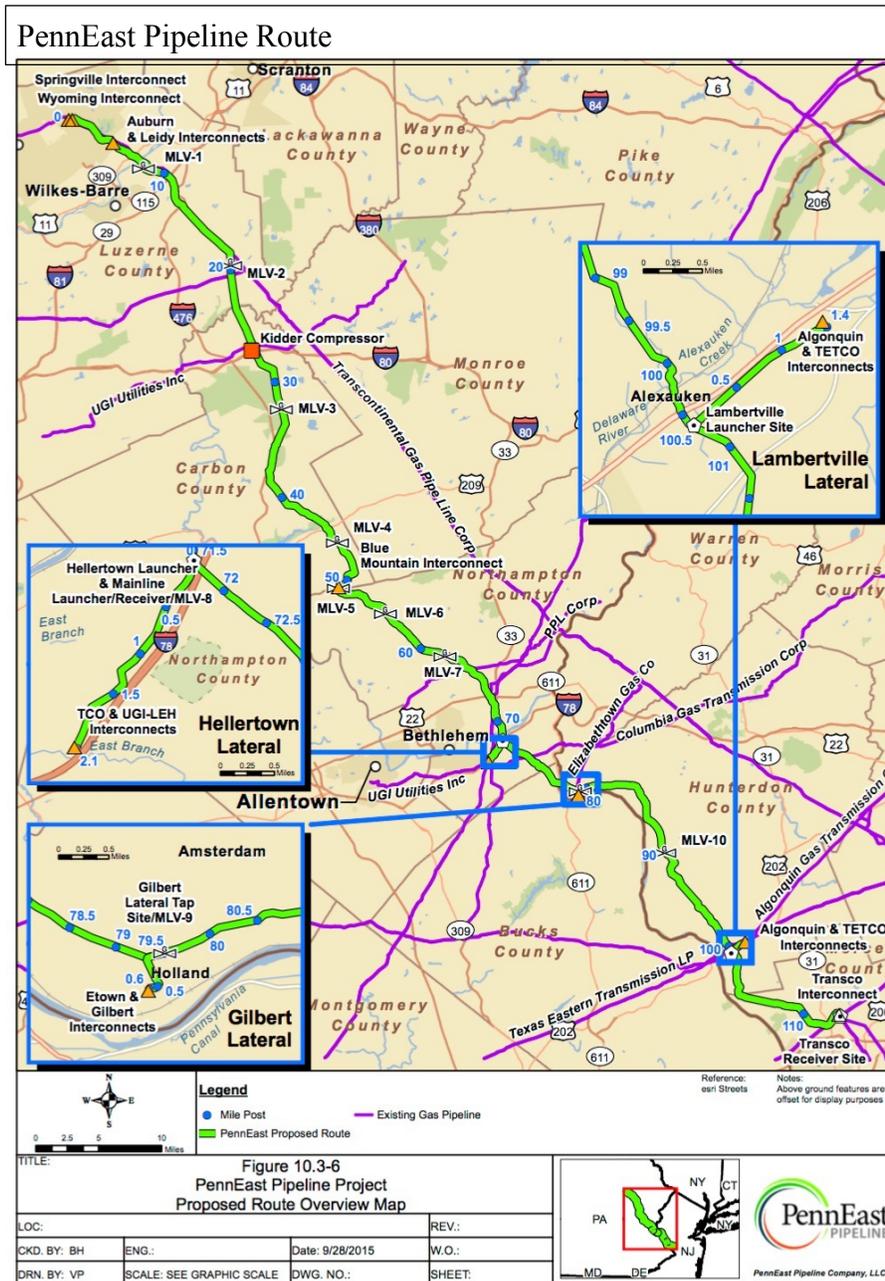
Depending on where the pipeline's proposed route, a number of government agencies may have a stake in the development and are required to contribute to FERC's environmental

analysis. Some of these agencies are the National Oceanic and Atmospheric Administration, the Bureau of Land Management, the Department of Interior, the Advisory Council on Historic Preservation, and the Army Corps of Engineers, to name a few. FERC is further required to satisfy the requirements and recommendations of the National Historic Preservation Act, the Clean Water Act, the Rivers and Harbors Act, in addition to others that are contingent on where the pipeline is planned (Rigney, 2015).

PennEast Pipeline

A portion of a newly proposed pipeline is expected to run near Bethlehem's drinking water resources in the Pocono Mountains. The PennEast Pipeline Company, a partnership of six energy companies, has submitted a formal application to FERC for a proposed 118-mile pipeline that would start in Luzerne County, PA and make its way to Mercer County, NJ. Hundreds of comments were sent to FERC on the PennEast proposal from the pre-filing stage beginning in October 2014 through their formal application submission in September 2015. More than 1,500 parties filed as intervenors, requesting a formal role in proceedings with privileges of appearing at hearings and participating in appeals (Skrapitz, 2015, November 3).

Proposed PennEast Pipeline Route



*Retrieved from: http://penneastpipeline.com/maps/150925_overview.pdf

The formal application closed the first round of public comment, but a second round will begin once FERC completes a draft EIS, expected in early 2016. Tetra Tech, a private contracting firm will prepare the EIS under FERC’s supervision. The EIS is paid for by PennEast (Kraus, 2014). But according to some environmental groups, there is a conflict of interest as Tetra Tech reaps profits from oil and gas industries in addition to serving the Marcellus Shale Coalition, an advocacy group for fracking (Bresswein, 2015).

This isn't the only controversy over the way FERC does business, and more voices are sounding the alarm for a transparent democratic process. One controversial matter is the "rubber stamp" approach FERC takes on evaluating pipeline proposals, as reviews of EIS's rarely take precedence over the economic benefits and most pipelines are approved despite environmental risks. Another point of contention is the "tolling order", essentially a delay FERC issues to extend their decision on appeals which have lasted until pipelines being contested were already in the ground (Phillips, 2015). Most alarming is FERC's approval of pipeline segments, instead of reviewing the pipeline in its entirety like it did in the case of the Tennessee Gas Pipeline, which was found to have violated federal law (Colaneri, 2014).

The issue with looking over cumulative effects is what is triggering most citizens to speak up, which leaves the question of how a network of drilled well-pads and pipelines will impact the state as a whole. Citizens are suspicious of FERC evading adequate environmental review and as many as 2,800 users are subscribed for updates on the Stop the PennEast Pipeline page on Facebook. It will be interesting to see how FERC evaluates the PennEast EIS as environmentalists warn of the potential impacts. The current pipeline pathway traverses 60 bodies of water, 33 wetland areas, several archeological sites and agricultural buildings, as well as conservation and protected areas (Kraus, 2014).

Conclusion

While it is apparent that FERC routinely approves pipelines to satisfy current energy needs and bolster the transport of domestic gas to market, they may be neglecting their responsibility of making critical reviews of pipeline applications. What makes FERC an appropriate agency to review EIS's is still unclear, but they still have final authority in issuing certificates for interstate pipeline. For a resident in the area of the proposed PennEast pipeline, involvement in public meetings, filing as an intervener, and submitting comments to FERC may be the best way to have a voice in the matter.

Interview with Karen Feridun

Karen Feridun is the founder of Berks Gas Truth, a grassroots organization calling for a ban on fracking and related infrastructure. She is also the founder of 350 Berks and Lehigh Climate Action Group as well as a former board member of the Mid-Atlantic Renewable Energy Association. She promotes sustainable energy alternatives while fighting against natural gas extraction. Her advocating and work on the subject of pipelines has contributed to the defeat of the Commonwealth Pipeline and proposed Gas-to-Liquids facility in Berks County. She also worked to fine Texas Eastern after it underreported what happened when one of their compressor stations blew up. Karen is currently working on stopping the PennEast, Mariner East, Columbia East Side Expansion pipelines and the two Ember Clear proposed natural gas power plants.

1. Are there enough regulations for pipelines? Why or why not?

No, there's no such thing as enough regulation for pipelines. There are a lot of ways to answer this – pointing to inadequacies in the regulations themselves or the confused mess or the lack of enforcement of the regulations that are on the books, but those are problems that could conceivably be solved. In the end, however, the thing that can't be solved is climate change. Every reputable climate scientist is telling us to leave 80% of all fossil fuels in the ground. New research from Drs. Robert Howarth and Anthony Ingraffea at Cornell shows that methane is more of a contributor to climate change than originally believed. Natural gas is not a bridge fuel,

it turns out. Therefore, we need to stop fracking and stop investing in infrastructure that will encourage continued drilling.

2. Is pipeline regulation, how it is set up today, effective in your opinion? How might it be better?

No, it's a joke. Currently, the PA DEP is leading a Pipeline and Infrastructure Task Force with the aim of "building public acceptance" of pipelines and drilling, so says our environment secretary, not the commerce secretary. As I said earlier, we need to stop fossil fuel extraction and consumption, so there's no getting this right, but, in the short term, as people are being injured, killed, or put at risk, the regulations are not there to even provide minimal protection. Many miles of pipeline are unregulated, many are, but the regulations aren't enforced. And Pennsylvania is trying to build public acceptance of this mess. By the way, I was at the task force meeting the other day where they were discussing the recommendations that had been put out in a draft report. The industry was balking, even though 92% of the non-governmental members of the task force are from the industry. The only guy who applied to be on it who even resembles me in the role I play was invited to be on a working group of the task force and was promptly disinvited a couple of days later when they found out who he was (even though he'd made no secret of it). They're also stupid in Harrisburg.

3. What impacts do pipelines have on the communities? What about fracking?

There are truly too many to list. To provide a few, pipelines put communities at risk of failures like the one in Allentown a few years ago that took out a city block and killed seven people, I believe. Traditionally, the kind of pipeline incidents we heard about were those that occurred on distribution lines, the much thinner pipes that deliver gas to homes and businesses. That's what happened in Allentown. I think it was a 4-inch pipeline. Interstate lines can be 42 inches in diameter, if not larger. Contrary to what people tend to think, those big pipelines run right through personal properties and communities. In 2010, the big transmission lines were responsible for more of the "significant incidents" than distribution lines for the first time ever. Significant incidents are those that cause damage to property, injury or death.

On a more typical day, the pipelines can corrode and develop leaks. Their presence can lower property values for homes directly affected and even homes that are close by. Pipelines leak a fair amount of toxins. Compressors emit toxins as part of normal operations. The blow-down I fought here wasn't going to be investigated by DEP because the emissions the company reported matched the amount that would be released in a typical venting. In those cases, they don't do anything. The numbers they reported were 61 tons of Volatile Organic Compounds. I'm certain they reported the numbers they did because they knew that numbers consistent with a typical venting would go unpunished. Exposure to those toxins causes a wide variety of illnesses, from headaches to some forms of cancer.

4. What is the best thing a community member can do to get involved with pipeline issues and why?

If someone is affected by a pipeline, the single best first step is to refuse to sign a survey agreement. We have a 70% refusal rate on the New Jersey side of the PennEast pipeline route and are building up the number on the Pennsylvania side, thanks to some volunteers working in their communities to explain that people can, not just deny, but rescind permission. What everyone can do, whether they're directly affected, is to get involved in the many community groups fighting the pipeline. There are groups up and down the PennEast route

people can get involved with. The groups do lots of local organizing, doing educational forums, posting yard signs and billboards, tabling at community events, getting petitions signed and staging protests.

And what everyone should do, even if they can't get deeply involved, is comment on the FERC docket for the project to express their opposition. Stoppenneast.org is our website. You can get a ton of information there.

5. Are there any other resources you could tell me about?

Carolyn Elefant is an attorney we (Berks Gas Truth) work with down in D.C. She represents communities fighting pipelines, serves on the board of the Pipeline Safety Coalition, and is a former FERC employee. She wrote a great guide that should help you, although she is not an activist fighting to stop pipelines. Her guide advises people to agree to surveying, for instance, because she points out that a landowner can get valuable information about his or her property to use in a lawsuit down the road. There's nothing wrong with that, provided it's a thorough survey, but, tactically, it's better to refuse up front so that the company can't get enough agreements to get the go ahead from FERC. Access to properties is required to conduct environmental reviews. It can slow down a project so much that the company walks away. If the project moves forward, the landowner can always agree to the survey down the road. Having said that, it's an excellent guide with a great chart on page 17 that should be particularly helpful. <http://lawofficesofcarolynelefant.com/wp-content/uploads/2010/06/FINALTAGguide.pdf>

6. Is there anything else I didn't cover that you might like to expand on or bring up?

Just wanted to mention that one huge problem of pipelines is the ROWs or construction right of ways that need to be maintained. Construction rights of way are quite wide, but temporary. Their temporary status doesn't help much once trees have been cleared, but something can grow back over time. The permanent right of way that needs to be maintained is now much wider than it was in years past. Putting a permanent right of way through a forest creates two canopies where the once was one, disrupting the forest habitat. That's just an example of the type of impact pipelines can have on natural resources. There are many. Communities fighting lines like the PennEast get very involved in protecting local resources and species as well as protecting their neighborhoods. The Commonwealth was going to run through the Hopewell Big Woods, the largest unbroken woodland in the southeast part of the state. The communities in that fight organized around protecting the Woods more than their own homes.

Five Most Important Players on Pipelines

1. Federal Energy Regulatory Commission (FERC)

The independent agency charged with regulating interstate pipelines, FERC, has the final say in issuing certificates for pipeline siting and construction. The Commission, as they are, also regulates the transportation of natural gas in interstate commerce, storage facilities and other issues relating to siting, construction, and abandonment of pipeline facilities.

FERC is also responsible for following the National Environmental Protection Act guidelines for creating and reviewing Environmental Impact Statements for new construction of pipelines. Applications for pipelines sent to FERC require coordination with government agencies related to the environment. <http://www.ferc.gov>

2. Pipeline Hazardous Materials Safety Administration (PHMSA)

Within the U.S. Department of Transportation is the Pipeline Hazardous Materials Safety Administration, the agency responsible for regulating safety, security, and monitoring of

interstate pipelines once they are in operation. The Office of Pipeline Safety, acting through PHMSA, is the office that enforces federal regulations on safety on the ground.

The PHMSA must monitor and work closely with pipeline companies to ensure safety regulations are being met. This is done through routine inspections. The agency also enforces communication requirements for pipeline operators to inform the public on pipeline safety issues. The agency collects data on pipeline incidents, working to form a safer network of pipelines. This agency is important because they are the leading agency keeping the public safe from pipeline disasters and informing the public on pipeline issues. <http://phmsa.dot.gov>

3. Pipeline Infrastructure Task Force (PITF)

With rapid pipeline development expected in Pennsylvania, this task force and its 50 members are leading the way to a safer, more reliable system to pipeline construction. Covering 12 topic areas, including areas like agriculture, they are creating suggestions for pipeline regulation improvement for the state to implement. Their recommendations may change the face of pipeline regulation for a state looking to install tens of thousands of pipelines in the next few years.

Most importantly, this group is making their work transparent to the public by uploading documents presented at meetings, videos of the meetings themselves, and sharing the recommendations early on for public input.

<http://www.dep.pa.gov/Business/ProgramIntegration/PipelineTaskForce/Pages/default.aspx#.VmSO1IQbM-I>

4. PennEast Pipeline LLC

A conglomerate of six energy companies, awaiting an evaluation of their proposed pipeline's impact on the environment, PennEast is a key entity in the pipeline construction boom in Pennsylvania. Their proposed pipeline travels across state lines to distant markets with hopes of contributing to securing domestic energy resources.

PennEast pipeline has the potential to bring economic benefits, however, an EIS will determine whether it is appropriate in an environmental context. The success of this pipeline may determine how other pipeline companies approach FERC and interact with communities

involved. <http://penneastpipeline.com>

5. Concerned Citizens Against the Pipeline

A civil society group eager to battle the interests of pipeline companies, specifically the PennEast proposal, may have the power to stall progress long enough for the company to cancel their plans. The group is the main advocate against the PennEast pipeline and their efforts are to inform the public about the negative impacts of the pipeline.

Active on different sites of social media, the group has taken to calling people in the area to action against the pipeline through filing comments with FERC and applying as interveners. Their actions are contributing to the outcome of where the pipeline lays and possibly if the pipeline is to be developed. <http://www.stoppenneast.org>

Six Go-To Websites on Pipelines

1. The Morning Call - <http://www.ncsl.org/research/energy/state-gas-pipelines-natural-gas-as-an-expanding.aspx>

A local newspaper in Bethlehem, PA, has written many articles on the developments of the PennEast pipeline. The articles include balanced reporting with interviews from local citizens and representatives from professional organizations. Touching on local concerns, this source

keeps up-to-date accounts of new information pertaining to the PennEast pipeline to alert the public.

2. StateImpact - <https://stateimpact.npr.org/pennsylvania/?s=pipelines>

This is a source with in-depth, investigative articles about pipeline issues in Pennsylvania. Focused on guiding readers to a stronger understanding of policy and structure on pipelines, many links are embedded to provide further information. Taking on a state-wide approach to the issue of pipelines, it includes general information as well as state specific rules and regulations.

3. Energy Information Administration (EIA) -

https://www.eia.gov/pub/oil_gas/natural_gas/analysis_publications/ngpipeline/index.html

This database website with information, analysis, and statistics on natural gas pipelines is a great place to learn about the national situation of pipelines. Informative maps, graphs, and charts document things like the number of pipelines in each state, accounts of pipeline accidents, and the national network of pipelines. This site has the most information on pipelines without navigating to other webpages I've found. This source also breaks down select states playing a more prominent role in pipeline development.

4. PA DEP -

<http://www.dep.pa.gov/Business/ProgramIntegration/PipelineTaskForce/Pages/Meeting-Agendas.aspx#.VICCUYQbM-I>

The Pennsylvania Department of Environmental Protection provides ample information to the public on state regulations regarding pipelines. Their site also includes the documents, presentations, and meetings of the Pipeline Infrastructure Task Force. Trying to make sense of the decentralized nature of state pipeline responsibilities, this site has the most comprehensive information on statewide pipeline agendas.

5. National Conference of State Legislatures - <http://www.ncsl.org/research/energy/state-gas-pipelines-natural-gas-as-an-expanding.aspx>

This website includes an overview of pipelines, their regulations, classifications, and differences between state and federal actions. Gathering information from other websites, for which there are embedded links to further information, it includes their own analysis and key findings. This site handles interstate versus intrastate pipelines and their associated regulations as well. This site uses and reports statistics from PHMSA in a clear and meaningful way.

6. Constitution Pipeline - <http://constitutionpipeline.com>

The Constitution Pipeline website provides information on the projected pipeline leading from Pennsylvania into New York but also has a thorough network of information for all stakeholders and concerned citizens. It provides a background on a variety of issues that would pertain to landowners, those interested in regulation, construction, and safety. Their website also features updates on pipeline developments, informational videos including roundtable discussions and an extensive FAQ section.

References

About U.S. Natural Gas Pipelines - Transporting Natural Gas. (n.d.). Retrieved from http://www.eia.gov/pub/oil_gas/natural_gas/analysis?publications/ngpipeline/index.html

- Approved Pipeline Projects (2009-Present). (2015, October 8). FERC - Federal Energy Regulatory Commission. Retrieved from <http://www.ferc.gov/industries/gas/indus-act/pipelines/approved-projects.asp>
- Act 127 (Pipeline Act).(n.d.). Pennsylvania Public Utility Commission. Retrieved from http://www.puc.state.pa.us/filing_resources/issues_laws_regulations/act_127_pipeline_act.aspx
- Bresswein, K. (2015, March 30). PennEast Pipeline environmental impact contractor questioned. Retrieved from http://www.lehighvalleylive.com/breaking-news/index.ssf/2015/03/penneast_pipeline_environmenta.html
- Castaneda, C. (2004). History Beneath the Surface: Natural Gas Pipelines and the National Historic Preservation Act. *The Public Historian*, 26(1), 105-122. Retrieved from <http://www.jstor.org/stable/10.1525/tph.2004.26.1.105>
- Colaneri, K. (2014, June 6). Court rules federal regulators must consider cumulative impacts of pipeline project. Retrieved from <https://stateimpact.npr.org/pennsylvania/2014/06/06/court-rules-federal-regulators-must-consider-cumulative-impacts-of-pipeline-project/>
- FERC. (2013). Pipeline Safety Coalition. Retrieved from <http://www.pcoalition.org/pages/ferc>
- Governor's Pipeline Infrastructure Task Force (PITF) Report. (2015, November 1). Retrieved from [http://files.dep.state.pa.us/ProgramIntegration/PITF/Meetings/11-18-15/Governor's Pipeline Infrastructure Task Force DRAFT Report.pdf](http://files.dep.state.pa.us/ProgramIntegration/PITF/Meetings/11-18-15/Governor's_Pipeline_Infrastructure_Task_Force_DRAFT_Report.pdf)
- Intrastate Natural Gas Pipeline Segment. (n.d.). U.S. Energy Information Administration. Retrieved from https://www.eia.gov/pub/oil_gas/natural_gas/analysis_publications/ngpipeline/intrastate.html
- Johnson, N., Gagnolet, T., Ralls, R., & Stevens, J. (2011, December 16). Natural Gas Pipelines. Retrieved from <http://www.nature.org/ourinitiatives/regions/northamerica/unitedstates/pennsylvania/ng-pipelines.pdf>
- Kraus, S. (2014, October 9). PennEast files documents with detailed route of proposed pipeline. *The Morning Call*. Retrieved from: <http://www.mcall.com/news/local/mc-penneast-pipeline-details-20141008-story.html>.
- Major Pipeline Projects Pending (Onshore). (2015, October 8). FERC - Federal Energy <http://www.ferc.gov/industries/gas/indus-act/pipelines/pending-projects.asp>
- Northey, H. (2014, November 3). ENERGY POLICY: FERC faces heightened scrutiny as gas projects proliferate. Retrieved from <http://www.eenews.net/stories/1060008283>

- Phillips, S. (2015, October 20). Lawyers say FERC hinders appeals on pipeline projects. Retrieved from <https://stateimpact.npr.org/pennsylvania/2015/10/20/lawyers-say-ferc-hinders-appeals-on-pipeline-projects/>
- Pless, Jacquelyn. (2011, March). Making State Gas Pipelines Safe and Reliable: An Assessment of State Policy. Retrieved from <http://www.ncsl.org/research/energy/state-gas-pipelines.aspx>
- Quigley, J. (2015, July 22). The case for smart planning in pipeline infrastructure development. Retrieved from <http://files.dep.state.pa.us/ProgramIntegration/PITF/Meetings/7-22-15/Smart%20Planning%20Presentation%20PITF%207-22-15.pdf>
- Regulation & Safety Issues. (2013, July 6). Connection for Oil Gas Environment in the Northern Tier Inc. Retrieved from <http://cogentpa.org/regulation-safety-issues/>
- Rigney, M. (2015). Clogging The Pipeline: Exploring the D.C. Circuit's Improper Segmentation Analysis in Delaware Riverkeeper Network v. FERC and its Implications for the United States' Domestic Natural Gas Production. *American University Law Review*, 64(6), 1465-1502. Retrieved from <http://search.proquest.com/docview/1719903802?accountid=12043>
- Skrapitz, E. (2015, November 3). 1,500 file to intervene in pipeline. *Times News*. Retrieved from <http://www.tnonline.com/2015/nov/03/1500-file-intervene-pipeline>
- Skrapitz, E. (2015, November 11). Pipeline infrastructure task force releases draft. Retrieved from <http://citizensvoice.com/news/pipeline-infrastructure-task-force-releases-draft-1.1969695>
- The Market Under Regulation. (2013, September 20). NaturalGas.org. Retrieved from <http://naturalgas.org/regulation/market/>
- Your Guide to Pipelines. (n.d.). NPR. Retrieved from <https://stateimpact.npr.org/pennsylvania/tag/pipelines/>