Pipelines 101: A Quick Reference Guide

New proposed pipeline projects have sparked widespread opposition from environmental groups, Native American tribes, local landowners, farmers and civic associations. A labyrinth of oil and gas pipelines carves 2.9 million miles through the United States. Some of the pipelines stay within one state while others cross state lines, carrying natural gas, crude oil and other petroleum liquids.¹ This maze of pipes is governed by a complex set of rules and regulations. Both federal and state officials have oversight of the safety of existing pipelines as well as approving or rejecting proposed pipelines, but the agencies that have jurisdiction vary based on the pipeline's characteristics.



Types of Pipelines

The Content of the Pipes: *Gas vs. Hazardous Liquids (Oil) Pipelines:* Gas pipelines transport natural gas.² Natural gas contains primarily methane and smaller amounts of other hydrocarbons, including natural gas liquids (ethane, propane, butane, isobutene and pentanes).³ These NGLs are separated out and transported in hazardous liquids pipelines, which also can carry petroleum or petroleum products, including crude oil, home heating oil, gasoline and jet fuel. The remaining gas, mostly methane, is cleansed of any impurities and shipped in gas pipelines.⁴

The Purpose of the Pipes: *Gathering vs. Transmission vs. Distribution:* The shorter gathering pipelines connect oil and gas wells to processing facilities that either refine the product or connect it to a transmission line.⁵ There are an estimated 240,000 miles of these smaller gathering pipelines.⁶ Transmission pipelines are often hundreds of miles long, and they carry oil or gas to large-volume users, including refineries (for crude oil), or to distribution pipelines (for natural gas only). Distribution pipelines branch off from transmission pipelines and bring natural gas to consumers.⁷

The Geography of the Pipes: *Inside State Borders (Intrastate Pipelines) vs. Across State Lines (Interstate Pipelines):* States have authority to approve and oversee intrastate pipelines that operate within a single state, including some





gathering pipelines.⁸ State public service commissions, utility commissions or regulators, commerce commissions and, in Texas, the railroad commission have oversight of pipelines within state boundaries.⁹ Interstate pipelines generally carry gas or oil long distances and across state lines.¹⁰

Who Regulates the Safety of Pipelines?

The U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHSMA) has primary safety oversight of all oil and gas pipelines. It performs pipeline inspections, investigates accidents and is tasked with ensuring that pipelines follow federal safety regulations. State regulators can enforce safety rules and spearhead inspections, but state regulators must adhere to PHMSA's safety standards.¹¹ PHMSA does not have authority to approve pipeline projects, routes or construction permits or to issue operating permits.¹²

Who Approves New Pipeline Projects?

The authority to approve new pipelines and their routes depends on what the pipeline transports (oil or gas) and where the pipeline travels. Many local, state and federal regulators can impact the route, rights of way and construction permitting. Generally, states have authority over proposed projects entirely within their borders, but the federal government has more authority over interstate gas pipelines that cross state lines.¹³ Federal agencies become involved in intrastate pipeline approvals if the project could impact federally protected resources.¹⁴

Several federal regulators have some authority to approve or reject pipeline projects, routes and construction within their specific jurisdictions. Pipeline routes, construction or dredging requires specific approval if the proposed pipeline impairs waterways (U.S. Army Corps of Engineers and U.S. Environmental Protection Agency¹⁵), encroaches on coastal zones (National Oceanic and Atmospheric Administration¹⁶), crosses federal land that may threaten "public health or safety or the environment" (U.S. Department of the Interior¹⁷), requires tribal consent for rights of way on Native American lands (U.S. Bureau of Indian Affairs¹⁸) or crosses international borders (U.S. Department of State¹⁹).

Whenever any federal agency takes action or makes a determination on a pipeline, the agency is required to consider the environmental impact under the National Environmental Policy Act (NEPA). The lead agency with jurisdiction over the pipeline must perform an Environmental Assessment (EA), and if the environmental impacts appear significant, it also must complete an Environmental Impact Statement (EIS) and respond to public comments.²⁰ But there are loopholes, and sometimes a lead agency, such as the Federal Energy Regulatory Commission (FERC) or the Army Corps of Engineers, will perform only an EA avoiding both a comprehensive NEPA review and a more stringent EIS for the entire pipeline — by dividing the pipeline review into multiple parts (known as segmentation).²¹ The agency also could decide that a pipeline will not "individually or cumulatively have a significant effect on the human environment," thus avoiding the requirement to produce an EA or EIS altogether.²²

The public and other relevant parties can participate, submit comments and objections, and demand that the pipeline route circumvent historical or cultural sites and environmental resources. For example, if the pipeline path runs through or near threatened or endangered species and/or their habitats, the U.S. Fish and Wildlife Service can request that the pipeline be rerouted.²³ To date, no pipelines have been blocked because of EA or EIS findings of adverse environmental impacts.

States generally administer water permits for pipeline construction and operation. States also may require other environmental permits or conditions to protect resources, as well as consultation on state historical preservation issues. Local governments may require zoning laws or soil and erosion plans.²⁴ **Oil Pipelines:** No comprehensive federal permitting or siting (pipeline route) laws exist for interstate liquids pipelines.²⁵ For each state that an oil pipeline crosses, local and/or state pipeline authorities (local legislature, governor or utility commission), as well as environmental regulators, oversee proposed permitting and siting.²⁶ States also can authorize pipeline companies to use "eminent domain" to access or seize private land to construct and maintain the pipeline. The government has the right to seize private property for public purposes (such as roadways or parklands) under eminent domain with "just compensation."²⁷

States delegate eminent domain authority to local communities, quasi-public entities and even certain private companies (such as energy utilities).²⁸ In 2016, Georgia and South Carolina enacted moratoriums that prevented companies from using eminent domain for pipeline routes.²⁹ But unlike interstate gas pipelines (below), the federal government does not grant oil pipelines authority to exercise eminent domain, so these pipelines must receive local approval for proposed routes.³⁰

Interstate Gas Pipelines: Federal regulators have near-unilateral authority to approve proposed interstate natural gas pipelines, while state authorities have a smaller role in permitting and approving the pipeline routes. Under the Natural Gas Act, FERC has the final authority to approve or reject natural gas pipelines that cross state borders.³¹ FERC can grant a "certificate of public convenience and necessity" to a pipeline company if it finds that "the public benefits [...] outweigh any adverse effects."³² Once a proposed project receives FERC approval, the company has the right to exercise eminent domain and to seize private property to construct and maintain the pipeline.³³



FERC purportedly considers the proposed pipeline's route, construction and operation when determining whether or not to grant approval.³⁴ In order to issue a pipeline certificate, FERC is supposed to evaluate the environmental impact of the proposed pipeline on ecosystems, watersheds and geography, among other considerations.³⁵ In practice, this review primarily affects minor route considerations (where a pipeline crosses a waterway, for example) but not whether FERC approves the pipeline itself.

Once a pipeline company files a formal application and FERC issues the notice of application, parties may submit comments and formally intervene.³⁶ But despite substantial environmental concerns and widespread public opposition to many recent proposed pipeline projects, FERC has yet to reject a pipeline for environmental reasons and rejected only a single application over the past three decades,³⁷ a liquefied natural gas export facility/pipeline project in Oregon. FERC rejected it in part because the project failed to demonstrate a public need (the gas was not intended for U.S. consumers) and because there was "little or no evidence of need" for the pipeline, which would require substantial land seizures through eminent domain.³⁸ The Trump administration has suggested that it might revisit this FERC rejection.³⁹

Conclusion

Federal and state authorities must stop rubber stamping new proposed pipelines that damage the environment, threaten local communities and let oil and gas companies seize landowners' property for private gain. Act now to join our fight over fossil fuel infrastructure and to stop the Keystone XL Pipeline: **fwwat.ch/2sdHMSI**

Endnotes

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