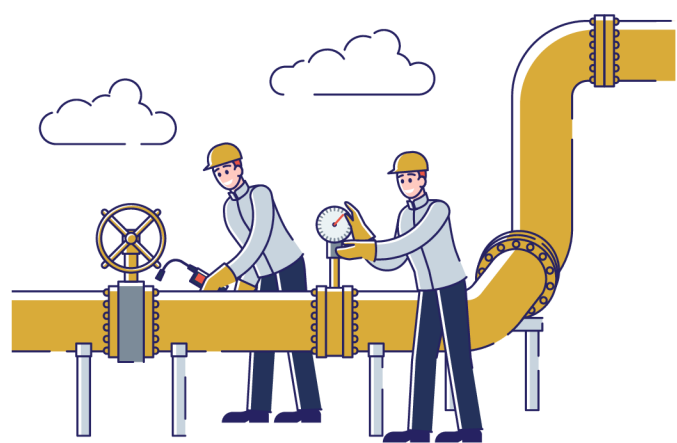


Midstream Pipelines

What Is It?

Midstream pipelines, also known as transmission pipelines, are used to transport, oil, natural gas, and other hydrocarbons between production (upstream) and distribution or refining facilities (downstream).



What are they made of?

Midstream pipelines are typically made of high-strength carbon steel, which is durable, corrosion-resistant (often with protective coatings), and capable of withstanding the high pressures required to transport oil, natural gas, and other hydrocarbons over long distances.

What Does It Cost?

The cost of constructing a new midstream pipeline varies significantly based on factors such as pipeline diameter, terrain, labor, materials, and regional considerations. For onshore natural gas pipelines in the U.S., it can cost more than \$7 million per mile.



How Does It Work?

1. Crude oil, natural gas, or refined products are collected from production sites or upstream facilities.
2. Impurities like water, sulfur, or natural gas liquids (NGLs) are removed, and the product is conditioned for transport.
3. The product is moved into the pipeline. Compressors or pumps maintain the pressure as the product moves along the pipeline, ensuring safety and flow.
4. The product flows through long-distance pipelines to arrive at storage or distribution hubs.
5. Pipelines transport the product to refineries, terminals, or local utilities for further processing or consumption. Product may also be stored in tanks or underground reservoirs for future use and distribution.
6. Pipeline operations are continuously monitored for safety, pressure, and leaks using advanced sensors. Mandatory inspections are required at set intervals.

Space



There are millions of miles of Midstream pipelines in the U.S. Midstream pipelines themselves vary in diameter between 10 and 48 inches. Many pipelines are underground, but the compressor stations and other facilities take up millions of acres nationwide.

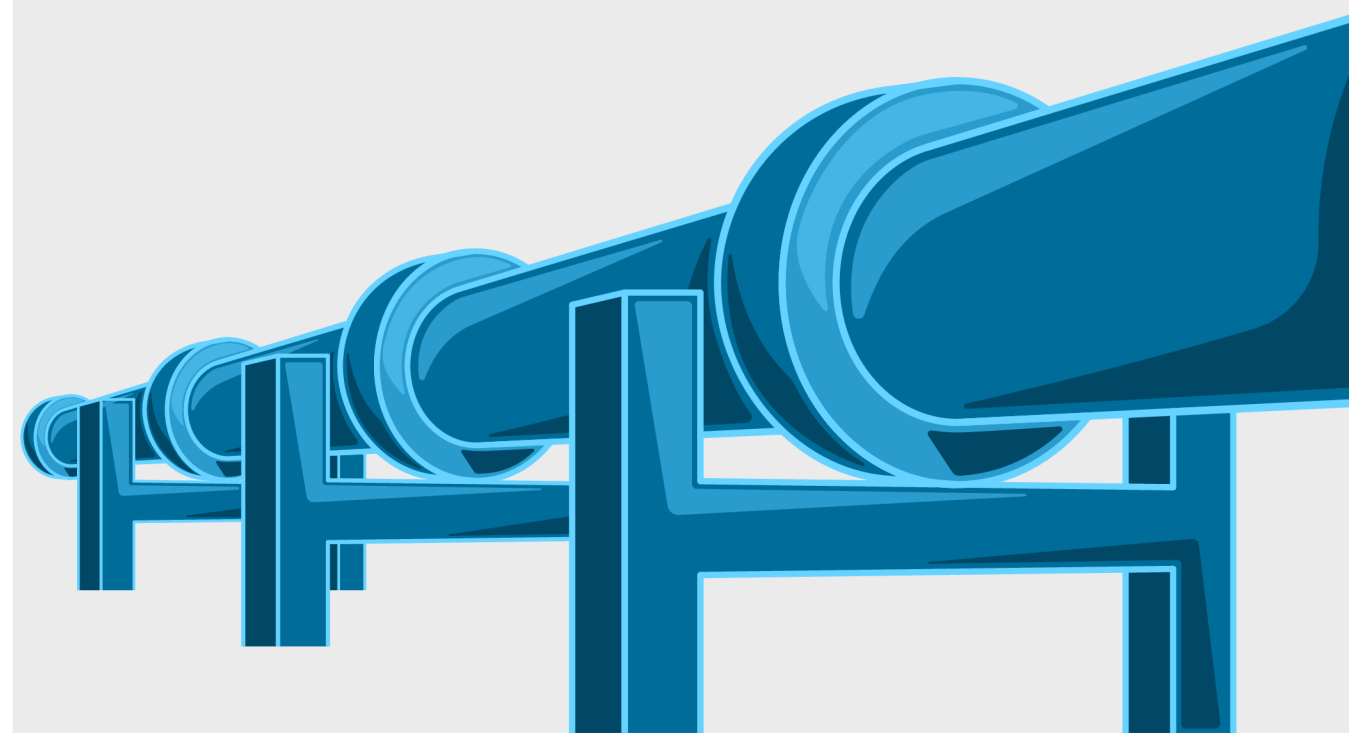
Point

- Midstream pipelines are the most cost-effective way to transport large volumes of oil and gas.
- Pipelines have a lower incident rate compared to other transportation methods like trucks or trains.
- Pipeline projects create jobs and boost local economies.
- Underground pipelines preserve surface land for agriculture or development.
- Pipelines can be expanded to meet increasing production capacities.



Counterpoint

- Initial construction and maintenance are very expensive and time consuming processes.
- Rare leaks or spills can be high in volume and severely damage ecosystems and water sources.
- Land acquisition during construction often leads to disputes with property owners.
- Pipelines require easements for maintenance and upkeep, meaning land uses may still be restricted.
- Retrofitting old pipelines can be costly and time consuming. Most pipelines in the U.S. are over 50 years old.



Did You Know?

There are over half a million miles of midstream transmission pipelines moving natural gas, crude and refined petroleum products, CO₂, and other liquids and gases across the nation daily.

What's Next?

With fluctuating demand for oil and gas, midstream companies are diversifying their infrastructure to accommodate new energy sources and global market dynamics.