EVERETT MARINE TERMINAL: BACKGROUND

Q. What is natural gas and what are its uses?

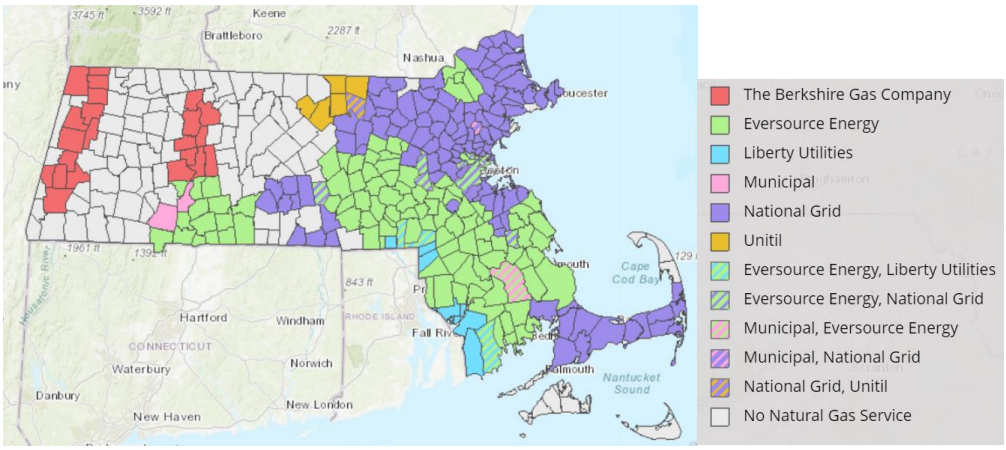
Natural gas is a naturally occurring fossil fuel energy source. It contains many different compounds. The largest component of natural gas is methane (CH4), which is a potent greenhouse gas. Natural gas also contains smaller amounts of natural gas liquids (NGLs, which are also hydrocarbon gas liquids), and nonhydrocarbon gases, such as carbon dioxide and water vapor. When combusted, natural gas produces water and carbon dioxide, which is typically emitted into the atmosphere.

Natural gas is used to provide heating for residences and businesses, as an input into industrial processes, and as a fuel source to generate electricity, among other uses. In Massachusetts, approximately 51% of residences use natural gas for heating; similarly, today, 55% of electricity consumed by Massachusetts electric customers is produced by facilities using natural gas.

Q. From whom do end use customers in Massachusetts get natural gas?

Natural gas is provided to end use customers by natural gas local distribution companies (LDCs). Massachusetts has five investor-owned LDCs: Eversource (which operates as NStar and Eversource Gas Company of Massachusetts); National Grid (which operates as Boston Gas and Colonial Gas); Unitil (which operates as Fitchburg Gas and Electric Light Company); Berkshire Gas Company (which is owned by Avangrid); and Liberty Utilities. There are also four municipally owned gas companies across Massachusetts: Holyoke Gas and Electric Department; Middleborough Gas and Electric Department; Wakefield Municipal Light Department; and Westfield Gas and Electric Light Department.

According to the U.S. Energy Information Administration's (EIA's) most recent data, in 2022, there were approximately 1,790,150 residential gas consumers, 164,450 commercial gas consumers, and 11,820 industrial gas consumers in Massachusetts.



EVERETT MARINE TERMINAL: BACKGROUND

Q. How are LDCs regulated and which agency(ies) oversees pipeline safety?

It is the obligation of the LDCs to provide safe and reliable service to their customers – this includes both planning for infrastructure and securing gas supply based on a forecast methodology that is reviewed and approved by the Massachusetts Department of Public Utilities (DPU) after an adjudicatory proceeding. LDCs procure gas supply necessary to ensure adequate supply on the forecasted coldest days of the year (i.e., peak demand days). LDCs are regulated by the DPU which, among other functions, reviews the investments of each LDC and reviews and approves rates charged to customers.

The DPU also has oversight of the LDC's operation of the intrastate pipeline system in the Commonwealth, including development and enforcement of pipeline safety rules and regulations. The DPU is charged with implementing federal regulations as promulgated by the Pipeline Hazardous Materials Safety Administration (PHMSA). The PHMSA regulations serve as minimum safety standards. The DPU can implement safety standards more stringent than PHMSA's, after a regulatory proceeding and with approval from PHMSA.

Q. In what form can natural gas be delivered?

Natural gas can be delivered in a few different forms depending on infrastructure and needs. Pipeline delivery is the most common method; gas flows through an extensive network of underground pipelines at various pressures, moving it efficiently from production sites to end-use customers. This is typically done in its gaseous state (also known as vapor). The current natural gas pipeline network does not have enough capacity to deliver sufficient natural gas to the northeast during peak demand days.

Because the northeast is pipeline constrained, the region also relies on liquified natural gas, or LNG, to meet demand. LNG is natural gas that has been cooled to a liquid state at extremely low temperatures, reducing its volume and making it suitable for transport via specialized LNG tanker ships or trucks. According to EIA, on peak demand days, imported LNG can contribute up to 35% of New England's natural gas supply.

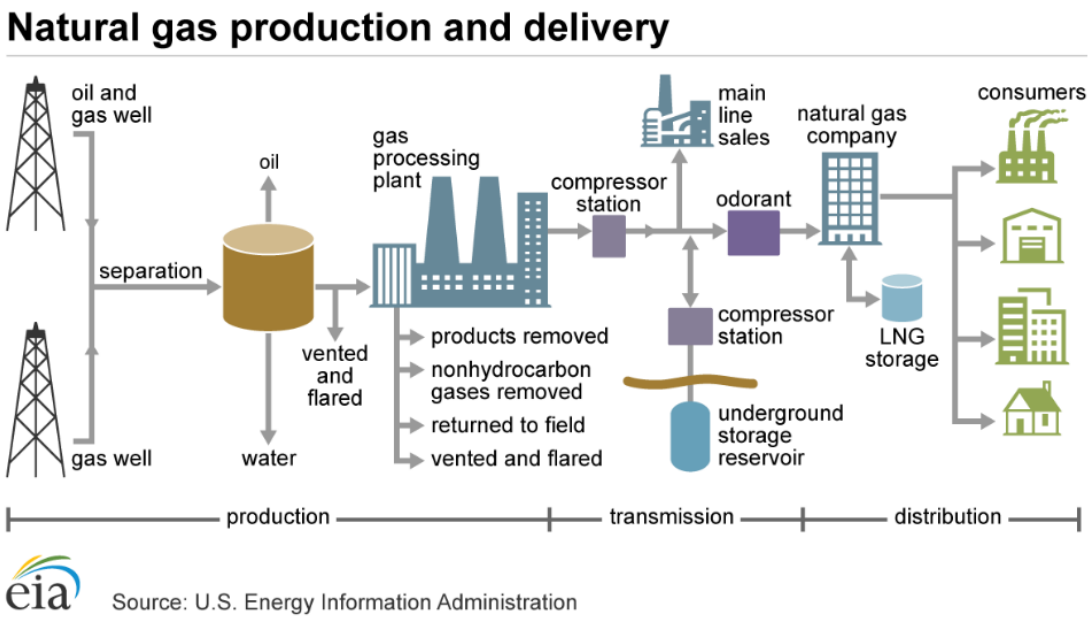
Natural gas can also be delivered as compressed natural gas (CNG). CNG is compressed to a fraction of its volume and typically transported via high-pressure cylinders on trucks. CNG is often used for smaller-scale delivery or as a fuel for vehicles in areas where pipelines or LNG infrastructure are unavailable.

Q. How does the natural gas pipeline system work?

The natural gas delivery system transports gas from gas wells to customers who use natural gas in their homes and businesses.

Each component of the system plays a role in the delivery of natural gas to customers, including the transmission and local distribution pipeline network. For example, gas enters the mainline pipeline system from gas gathering and processing facilities for transportation to a local distribution system. This transmission network moves large quantities of gas over long distances and operates at high pressures typically between 600 and 1,000 psi. The transmission network includes multiple compressor stations that raise gas pressures to propel the gas through the pipes. In some cases, very large customers, such as power plants, are served directly from the transmission system.

EVERETT MARINE TERMINAL: BACKGROUND



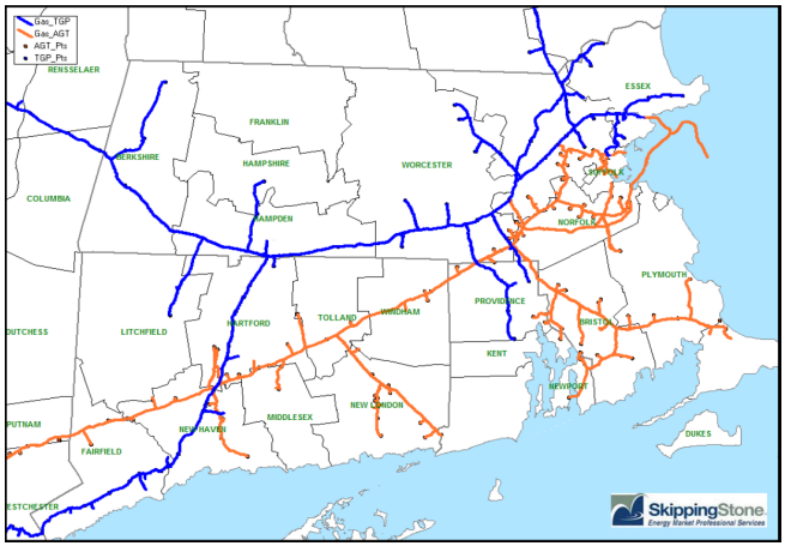
At various points along the delivery system, gas may be stored, including in underground storage facilities, depending on a region's geology, above-ground tanks and LNG facilities, which may also receive supplies from trucks or tanker ships (as is the case for the Everett Marine Terminal (EMT)). Gas storage is commonly located off of a mainline transmission facility, but it may also be located off of local distribution lines (like EMT). Since the 1960s, due to the geological limitations within New England, above-ground LNG storage tanks and facilities have been the region's preferred method of natural gas storage.

From the transmission network, natural gas enters the distribution system. The distribution system moves gas to end-use customers. Pressure within the distribution pipe is controlled by devices called regulators, which increase and reduce pressure as needed. The distribution system is typically operated at pressures ranging from 60psi to 99psi. The last part of the distribution system is the service pipe that delivers gas to a customer and the service meter. The flow of gas is measured at multiple points in the delivery system by meters.

Q. Where does New England get its natural gas?

New England does not produce natural gas; instead, it imports it from other locations. The primary natural gas delivery systems into New England are the interstate pipeline systems regulated by the Federal Energy Regulatory Commission (FERC) and owned by the Tennessee Gas Pipeline L.L.C. (Tennessee) and Algonquin Gas Transmission Company, LLC (Algonquin), depicted in the below figure as blue and orange lines, respectively. These pipelines flow natural gas from New York through Connecticut or Western Massachusetts to Eastern Massachusetts and Cape Cod, with Massachusetts at the end of this supply chain.

EVERETT MARINE TERMINAL: BACKGROUND



The Tennessee and Algonquin gas transmission pipelines bring natural gas produced in other parts of the United States (e.g., the Marcellus Shale in Pennsylvania) to New England. Natural gas transmission pipelines from Canada, not depicted in the above figure, also deliver natural gas into the region and Massachusetts, specifically. The gas provided through these transmission pipelines is produced in Canada or imported through the St. John LNG Terminal (formerly named Canaport) in Saint John, Canada, which is approximately 400 miles from Boston.

LNG can be imported and received by EMT by LNG tanker ship. The LNG received at EMT can be delivered to customers either by reloading LNG onto trucks, some of which is transported to other LNG facilities owned by LDCs in the Commonwealth, or by re-gasification – turning it into vapor and injecting that vapor into major transmission pipelines and the National Grid gas distribution system. The LNG supply market is a global market, and supplies may come from a variety of foreign and domestic sources; typically the LNG delivered into EMT is from Trinidad and Tobago.

Q. What happens to the gas delivery system and end use customers if there is a loss of pressure in the natural gas delivery system?

Natural gas is delivered directly to homes and businesses through distribution pipelines. The pressure of the gas in these pipelines must be regulated to ensure that it is delivered safely and efficiently. If there is a loss of pressure in a natural gas delivery system, it can have several immediate impacts on both the system and end-use customers. Such impacts can include:

- **Flow Disruption**: Natural gas delivery systems rely on consistent pressure to ensure the smooth flow of gas. A loss of pressure can disrupt the movement of gas through pipelines, potentially leading to a complete stoppage in certain areas.
- **Increased Risk of Low Pressure**: System low pressures can result in equipment not operating to specification including the closing of protection devices (i.e., “slam shut”) in the field, which protects customers from low pressure issues by closing sources of gas and improving safety to customers.
- **Compressor Station Impacts**: In high pressure transmissions systems, compressor stations help maintain gas pressure throughout the pipeline network. A loss of compressor equipment functionality could result in pressure drops to an LDC’s distribution system.
- **Loss of Service**: End-use customers (residential, commercial, or industrial) rely on stable gas pressure for appliances and equipment (e.g., furnaces, water heaters, and stoves) to function. A pressure drop can result in loss of gas supply, leaving customers without heat, hot water, cooking capabilities, or commercial/industrial processes.

- **Appliance Malfunctions**: Gas appliances are designed to operate within specific pressure ranges. If the pressure falls too low, appliances may fail to operate properly or may shut down automatically due to built-in safety mechanisms.
- **Pilot Light Extinguishment**: In appliances with standing pilot lights, such as older gas furnaces or stoves, a loss of pressure could cause the pilot light to go out, increasing the risk of gas buildup if the system pressure increases back to a normal state.
- **Carbon Monoxide Risk**: Malfunctioning appliances from improper gas flow can lead to incomplete combustion, which may produce dangerous levels of carbon monoxide (CO), an odorless, toxic gas.

Because of the safety concerns raised by some of the impacts above, restoration of service to gas customers after an interruption requires a safety check of all end-use appliances. As a result, the service restoration process requires access to customer premises by trained LDC technicians.

Q. What are the implications of Massachusetts being at the end of the gas transmission systems?

The New England region is at the end of transmission pipeline systems and is therefore the last to receive natural gas from the systems. Due to these capacity constraints, and limited pipeline capacity additions, Massachusetts is the most heavily impacted by natural gas shortages (e.g., during cold winter period when the country is using high volumes of natural gas to heat its buildings and generate electricity) and/or by disruptions on the natural gas transmission network feeding into the Commonwealth. These impacts are realized in two ways: the physical requirements for supply, vapor, and pressure of the local gas delivery system; and the price of natural gas supply and the corresponding price for electricity. EMT provides a supplemental source of natural gas supply during periods of natural gas shortages to mitigate impact on the physical requirement of the system and meet customer demand.

Q. What is the Everett Marine Terminal (EMT)?

EMT is an LNG import facility located along the Mystic River in Everett, Massachusetts that is owned and operated by Distrigas of Massachusetts LLC (DOMAC) pursuant to certificate authorization issued by FERC under Natural Gas Act Section 3. DOMAC is a wholly owned subsidiary of Constellation Energy Corporation (Constellation Energy). Since October 1, 2018, Constellation LNG is the Constellation entity responsible for purchasing LNG and is the importer of record for LNG purchases that are delivered to EMT.

EMT supports the energy needs of Massachusetts and the broader New England region, including critical supply and peak demand support to the Massachusetts and New England gas system. For example, on a peak winter day, EMT can provide up to 10% of the New England's gas needs.

EMT has been in continuous operation since construction in 1971 and is one of the longest continuously operating facilities of its kind in the country. It is the only facility in New England that can import LNG, store it, and re-vaporize it for local use, that connects to both the Tennessee and Algonquin interstate pipeline systems, as well as the distribution system of Boston Gas (aka, National Grid). EMT has also supplied LNG via truck to nearly all 47 customer-owned LNG storage tanks in New England. Today, EMT and these other facilities can collectively meet as much as 35% of natural gas demand on a peak winter day.

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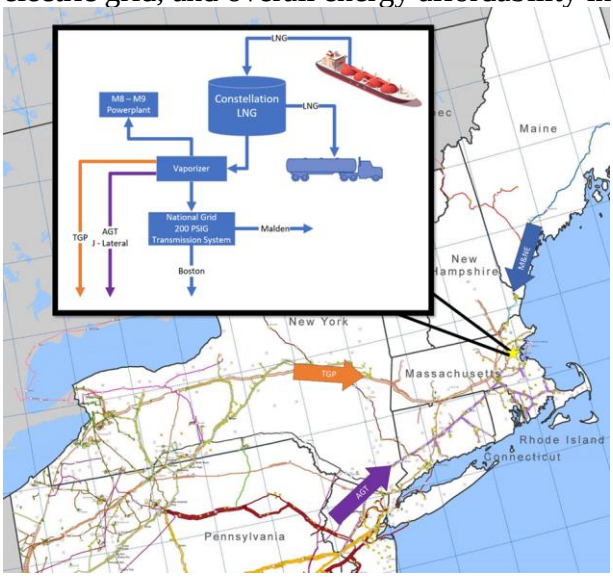
Prior to its closure on May 31, 2024, Constellation's natural gas-fired Mystic Generating Station was served by EMT. Constellation indicated that, without an anchor customer to take the Mystic Generating Station's place, it would be financially challenging for EMT to remain operational and that it would likely be permanently closed without new contracts with committed revenue. Stakeholders, including FERC, expressed concern about the impact the closure of EMT could have on energy reliability, for both the gas system and electric grid, and overall energy affordability in the region.



Q. How many people does EMT employ and where is it located?

EMT employs 60 people at the facility and supports approximately 4,300 other jobs in the natural gas sector in Massachusetts, according to MassCEC. The facility is located in Everett, Massachusetts, which is an Environmental Justice (EJ) community that has long hosted fossil fuel infrastructure, including the Mystic Generating Station and petroleum tanks previously owned and operated by Exxon. EJ communities like Everett continue to bear the burden of fossil fuel infrastructure that supports the reliability of the greater Massachusetts energy system and is customers.

Q. What is the current state of EMT?

Between February 9 and 16, 2024, Eversource, National Grid, and Unitil each filed a petition with the DPU for approval of six-year contracts with Constellation LNG from June 1, 2024 through May 31, 2030, for the sale and purchase of natural gas in either liquid or vapor form from EMT. In their filings, the LDCs asserted that EMT is a necessary reliability and resilience resource that plays a critical role in supplying gas to their customers and maintaining the overall integrity of the gas distribution system in the greater Boston area. Following an adjudicatory proceeding, the DPU issued an order on May 17, 2024 approving the six-year agreements between Constellation LNG and the LDCs.

In approving the agreements, the DPU required the LDCs to include additional information in their Climate Compliance Plan (CCP) filings, which were required as part of Order 20-80-B issued by the DPU on December 6, 2023. In their initial CCP filings, due on April 1, 2025, the LDCs are required to include the following information:

1. Whether, and to what extent, the Agreements [with Constellation] have facilitated the Companies' plans to meet GHG emission reduction goals in compliance with the [*Global Warming Solutions Act*];
2. A description of the Companies' efforts to reduce customer demand for natural gas; and
3. A description of the Companies' efforts to reduce or eliminate their reliance on EMT including but not limited to (i) the costs, feasibility, and timeline of each alternative [to sourcing incremental gas supplies

from EMT] identified; and (ii) a description of how each alternative identified would contribute to GHG emissions reductions. Starting in 2025, the Department requires LDCs to report this information on April 1st of each year through 2030, when the agreements with Constellation LNG expire.

Per a filing made as part of this proceeding, the Office of the Attorney General estimates the total cost to LDC customers of the EMT agreements to be approximately $950 million over the six-year period.