



Liquified Natural Gas Exports

What is LNG?

Liquified natural gas (LNG) is natural gas that has been cooled (-260° Fahrenheit) to a liquid state so that it can be stored or transported across distances where pipelines are not available or feasible. The volume of natural gas as a liquid is about 600 times smaller than its volume in a gaseous state, allowing for much greater efficiency when storing or transporting the product. The most common mode of transportation of LNG is by tanker ships across oceans and other large waterways. After delivery, LNG is converted back to its gaseous state for use by consumers.

What are the benefits of LNG exports?

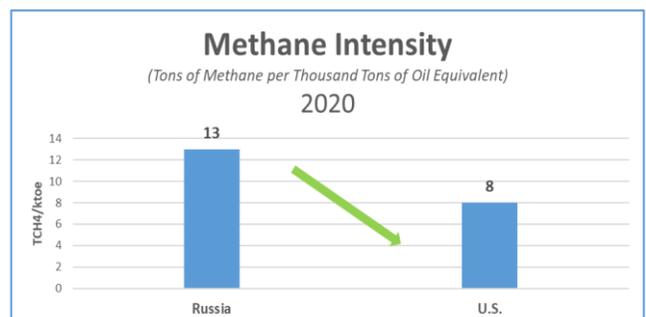
The benefits of LNG exports are many. Like any consumer product, having access to as many markets as possible drives economic activity right here in the U.S. This encourages sustained capital investment at home, which leads to economic expansion and job opportunities.

Exporting LNG also enhances America's national security by reducing our Allies' dependence on countries which have interests contrary to ours. Several



countries, particularly in Asia, have limited domestic energy resources and are dependent on foreign energy imports. Other countries, like those in Eastern Europe, face national insecurity because they are dependent on pipeline deliveries of natural gas from Russia, which uses its energy resources as a means to impose desired foreign policy goals.

Finally, there are significant economic, environmental and emission reduction benefits associated with LNG exports. For example, increasing countries' access to clean, low-cost energy reduces poverty and grows local economies. Environmentally, natural gas produced in the Appalachian basin has the lowest methane intensity of any major producing basin in the country, and the U.S. has among the lowest methane intensities of any producing country in the world.



U.S. LNG often displaces other forms of energy that have greater emissions, and therefore can lead to significant air quality improvements as well as progress toward lowering global climate change-inducing emissions. For example, Russian natural gas has a 65% higher methane intensity than U.S. gas.

Who are the leading export and import countries for LNG?

In 2021, the three largest LNG export countries were Australia, Qatar and the United States, while the three largest import countries were China, Japan and South Korea. In December 2021, the United States became the largest exporter of LNG. European countries increasingly are becoming a destination for U.S. LNG shipments.

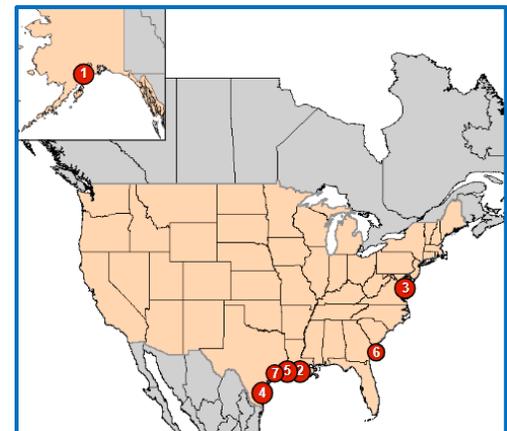
Many of these countries historically have been dependent upon Russian natural gas (delivered via pipeline) and thus subject to threats from Russia of severe disruptions to their energy supplies.

How much LNG is the United States exporting?

According to the U.S. Energy Information Administration (U.S. EIA), the U.S. exported 3.56 trillion cubic feet of natural gas in 2021, which is approximately 10.4% of total U.S. natural gas production. The U.S. EIA estimates that U.S. LNG exports will rise to approximately 4.2 trillion cubic feet in 2022, which is roughly 22% of all LNG exports in the world but still only a fraction of total U.S. natural gas production.

Where are U.S. LNG export facilities located?

According to the Federal Energy Regulatory Commission, there are currently seven existing LNG export terminals in the United States. These facilities are located in Alaska, along the Gulf of Mexico, Georgia and Maryland. Several of these facilities currently are undergoing expansion to increase their export capacity.



Does the United States transport LNG to New England by Ship?

LNG is not sent to New England by ship. Despite the close proximity of New England states and the Marcellus and Utica natural gas fields, pipeline capacity is extremely limited due to efforts by states such as New York and New Jersey to stop necessary infrastructure development. Conversely, because of a federal law known as the Jones Act, it is difficult if not impossible to transport LNG from one port in the United States to another port in New England.

What is the Jones Act?

Officially part of the Merchant Marine Act of 1920, the Jones Act generally requires that goods transported from one U.S. port to another U.S. port must be carried on ships that are U.S. flagged and built, while being operated and crewed by an American company. The rationale for the Jones Act was to preserve U.S. shipbuilding capability and its related jobs. However, over time shipbuilding has largely shifted to overseas countries where they can be built faster and at lower cost. There are no Jones Act-compliant LNG tanker ships currently in service.

How does the Jones Act affect transporting U.S. LNG by ship?

The inability to access portions of the U.S. with pipelines – principally New England – and the inability to ship U.S. LNG to these regions has led to a regional dependence on LNG imports. As a result, consumers in New England may pay six times or more the cost for their natural gas as other U.S. consumers, while also facing potential supply shortages since LNG imports from other nations can be re-routed to other foreign customers at any time. During extreme cold weather events, the lack of adequate natural gas also leads to increased use of fuel oil for electric generation. This leads to a significant regional increase in emissions, such as particulate matter, that affects people’s respiratory health.

Does the U.S. import LNG – and from where?

Yes. While several countries ship LNG to the U.S., by far the largest supplier is Trinidad and Tobago. This small island country in the Caribbean, not far from Venezuela, is responsible for nearly 80% of the LNG imported to the U.S. In years past, New England has also imported LNG that originated in Russia, even though economic sanctions against Russia are supposed to make such imports illegal.



Are LNG exports leading to higher natural gas prices in New England or other regions of the U.S.?

No. New England sits within several hundred miles of some of the cheapest natural gas in the world, yet their higher energy prices are a direct result of poor policy choices that restrict or prohibit pipeline development. Several multi-billion pipeline development projects, which would have delivered billions of cubic feet of natural gas each day to New England, have been canceled due to the unwillingness of state and federal regulatory authorities to approve necessary permits.

The total amount of U.S. natural gas which is exported as LNG is relatively small compared to domestic production. Should the U.S. government prohibit LNG exports, it would lead to higher natural gas prices in New England because the global LNG supply will be even further constrained. The only action which will positively impact the pricing environment in New England and other price-challenged regions is to authorize and build pipelines to transport domestic natural gas in a manner that is both safe and cost-effective.