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Thanks to technological advancements such as horizontal drilling and hydraulic fracturing, the United States is awash in natural gas. In fact, domestic production of natural gas has increased by nearly 20% since 2009, fueling tremendous economic growth domestically and, thus, propelling the United States to be named the world's largest producer of natural gas.

Historically, natural gas has traded as a domestic commodity, primarily due to insufficient technology and infrastructure to export large supplies of natural gas. However, with demand for energy increasing on a global stage and price for fuel increasing internationally, natural gas may become a global commodity traded as Liquefied Natural Gas

What is Liquefied Natural Gas (LNG) and How does it Work?

In order to export natural gas, it must undergo a liquefaction process that makes it easier to store and transport. First, the natural gas is contained in what are essentially large refrigerators, at a temperature of minus 160 degrees Celsius, until it becomes a liquid.

Liquefied natural gas has a volume 600 times less than that of natural gas in its regular state. Therefore, 600 times more gas can be transported. "Every dollar of natural gas in domestic manufacturing creates upwards of \$8 of added value in the overall economy — far more than exporting its fuel."

From there, the gas must remain at the same temperature as it is shipped by methane tankers. With only 150 LNG tankers in existence today, it's no wonder natural gas has remained primarily a domestic commodity.

When the tanker arrives at its destination, it stops at what is known as a re-gasification terminal. The terminal slowly warms up the gas to just above 0 degrees Celsius and the finished product is then sent through a distribution network to the consumer.

The LNG process is very expensive and, as a result, can more than double the original market price of the gas. An example was given in an article of The Wall Street Journal demonstrating that if the market price for natural gas in the U.S. sold for \$4 per thousand cubic feet (mcf), the equivalent cost for the same natural gas would be \$10.40 in Japan after an additional costs of \$6.40 to liquefy, transport and re-gasify.

Despite the additional costs associated with LNG exportation, this process is being encouraged internationally by countries such as Europe and Asia who currently pay \$14.00 or more per mcf of gas.

An ongoing debate regarding whether or not the United States should export this valuable natural resource has intensified in recent months with critics arguing whether the benefits to the American economy outweigh the drawbacks.

There are several positive effects that exporting natural gas can have for the United States. Leslie Palti-Guzman, an analyst with the global-energy and natural resources consulting group, Eurasia, stated in a debate "It could increase GDP, create jobs, reverse account deficits as well as reduce international energy prices...giving Washington a key geostrategic opportunity to reposition itself in the Asia-Pacific and away from the Middle East, giving us the opportunity to help key allies."

On the other side of the argument, although there is profit to be made domestically through exporting natural gas, the decrease in local supply will increase the price that American homes and businesses pay for natural gas.

Due to the surplus of natural gas in the U.S., consumers' energy bills have decreased and manufacturers' production costs have been cut dramatically in recent years. Manufacturing company Dow Chemical stated: "Every dollar of natural gas in domestic manufacturing creates upwards of \$8 of added value in the overall economy- far more than exporting its fuel."

There is little doubt that the shale gas boom has helped economic recovery efforts in the United States. What needs to be determined is the future role of the United States in the international energy industry.

Many people feel that it's no longer a question whether the U.S. will export natural gas or not, but a matter of how much we should allow to be exported. Stay tuned... this debate is sure to heat up over the next several years.

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