

THE DEPARTMENT OF ENERGY'S RECOMMENDED EXPANSION OF LNG EXPORTS

by
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On December 28, 2015, the Department of Energy (DOE) released a macroeconomic study on the impacts of increased Liquefied Natural Gas (LNG) exports. With new LNG export capacity coming online in 2016 (Cheniere), and further expansion to the export capability in the future (Magnolia, Sempra, Cameron, Freeport, Sabine), coupled with the greater natural gas production in the U.S. over the last ten years due to refinements in hydraulic fracturing technology, Louisiana has a direct link to supplying Louisiana produced natural gas to the LNG facilities being built along Louisiana and the Gulf Coast.

The DOE report highlights five main points:

1. Increased domestic production needed for expansion of LNG exports.
2. Natural gas prices are based on regional prices rather than global, and with increased exports, it is expected that domestic natural gas prices will increase, closing the U.S. and global price gap for natural gas and LNG.
3. With higher natural gas production in the U.S., it will have an overall net positive for U.S. GDP (\$7-\$21 billion annually).
4. Industries that are energy intensive will feel some pressure with increased natural gas prices.
5. Overall, increasing the allowed export of LNG from the U.S. is a net positive for the country.

Louisiana natural gas production has the opportunity to exploit the proximity of the LNG facilities. With the mature natural gas fields in Southern Louisiana, coupled with the Haynesville Shale natural gas production, Louisiana has the ability to supply the LNG producers with ample regional natural gas, which keeps transportation costs low. In fact, there is infrastructure in place to exploit these fields and get the natural gas to LNG plants via existing pipelines. Utilizing the existing pipelines will help defray some of the costs and also allow new pipelines to overlap in the existing pipelines footprint.

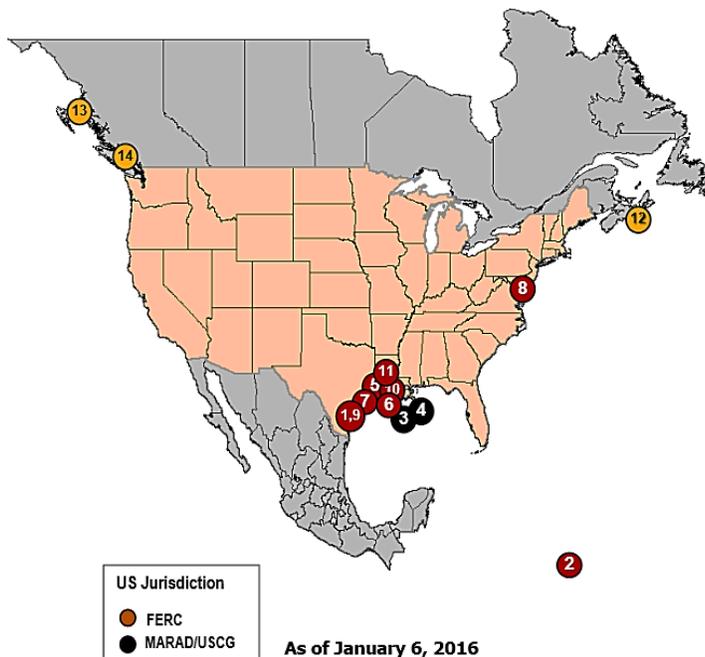
Looking at the LNG/natural gas economics, one would expect the regional price of natural gas to rise, which would help stimulate additional production. It is my estimate that initial production (planned production from the Cheniere plant) will increase prices between three and five percent, based on Henry Hub pricing, with expansion to 20 BCF/day estimated to have a 4-11% increase.¹ Exporting LNG would also have an economic affect globally, decreasing regional prices for natural gas around the globe, eventually reaching equilibrium, much like the oil market. Currently with natural gas, there is a variance of natural gas prices globally, with the United States enjoying some of the lowest global prices and Asian countries with the highest. Local producers will have the opportunity to take advantage of higher natural gas prices in Asia and capitalize on the need for natural gas to supply the LNG facilities.

¹ <http://www.forbes.com/sites/judeclemente/2016/01/10/world-benefits-from-u-s-liquefied-natural-gas-exports/#26dccb6a2b71>

While the increase in the natural gas price will stimulate production, it will also provide an economic benefit to Louisiana and the United States. The DOE estimates that the additional production will increase the U.S. gross domestic product from anywhere between \$7 billion and \$21 billion annually, depending on additional production and prices, and the market can handle an extra 8 billion cubic feet (BCF) per day of LNG exports. This increase could have a negligible effect on industries that rely heavily on natural gas usage, particularly the chemical and power generation industries, due to those higher prices for natural gas.

Increasing the amount of LNG exported from the U.S., particularly the Gulf Coast, is a net positive for both the U.S. and Louisiana. Liquefiers can take advantage of the ample resources in Louisiana, transport Louisiana natural gas to the new liquefaction plants in Southwestern Louisiana, and be capable of receiving economic benefits from the expansion of LNG exports, without disruption in the domestic natural gas market. Increasing LNG exports will also be a job creator for Louisiana, with construction, operation, and production jobs needed to fulfill the global demand for LNG.

North American LNG Import/Export Terminals Approved



Import Terminals

U.S.

APPROVED - UNDER CONSTRUCTION - FERC

1. Corpus Christi, TX: 0.4 Bcfd (Cheniere – Corpus Christi LNG) (CP12-507)

APPROVED – NOT UNDER CONSTRUCTION - FERC

2. Salinas, PR: 0.6 Bcfd (Aguirre Offshore GasPort, LLC) (CP13-193)

APPROVED - NOT UNDER CONSTRUCTION - MARAD/Coast Guard

3. Gulf of Mexico: 1.0 Bcfd (Main Pass McMoRan Exp.)
4. Gulf of Mexico: 1.4 Bcfd (TORP Technology-Bienville LNG)

Export Terminals

U.S.

APPROVED - UNDER CONSTRUCTION - FERC

5. Sabine, LA: 2.76 Bcfd (Cheniere/Sabine Pass LNG) (CP11-72 & CP14-12)
6. Hackberry, LA: 1.7 Bcfd (Sempra-Cameron LNG) (CP13-25)
7. Freeport, TX: 1.8 Bcfd (Freeport LNG Dev/Freeport LNG Expansion/FLNG Liquefaction) (CP12-509)
8. Cove Point, MD: 0.82 Bcfd (Dominion-Cove Point LNG) (CP13-113)
9. Corpus Christi, TX: 2.14 Bcfd (Cheniere – Corpus Christi LNG) (CP12-507)
10. Sabine Pass, LA: 1.40 Bcfd (Sabine Pass Liquefaction) (CP13-552) ★

APPROVED – NOT UNDER CONSTRUCTION - FERC

11. Lake Charles, LA: 2.2 Bcfd (Southern Union – Lake Charles LNG) (CP14-120)

Canada

APPROVED – NOT UNDER CONSTRUCTION

12. Port Hawkesbury, NS: 0.5 Bcfd (Bear Head LNG)
13. Kitimat, BC: 3.23 Bcfd (LNG Canada)
14. Squamish, BC: 0.29 Bcfd (Woodfibre LNG Ltd)

SOURCE: <https://www.ferc.gov/industries/gas/indus-act/lng/lng-approved.pdf>