LOUISIANA'S ROLE IN LNG EXPORTS

by
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Ever since the fracking of natural gas in the Haynesville Shale and other mammoth natural gas shale plays within the United States, and the onset of the lower natural gas prices that followed, natural gas has been thought of as a resource that could transform energy, not just in the United States, but also the world. The abundance of natural gas locked beneath the ground in the United States instantly moved the country from contemplating about importing natural gas to how to use and export the resources available in Louisiana and the United States. Liquefied Natural Gas (LNG) projects, which up to that time focused on importing, were reconsidered, and plans were made to retrofit facilities for export to take advantage of the plethora of natural gas discovered in the United States.

LNG has been used for decades throughout the world, but mainly in resource poor areas. Two of the world's largest importers, Japan and South Korea, have limited hydrocarbon resources and depend on imports for the vast majority of their energy needs. Both countries are resource poor and represent about half of all LNG demand throughout the world.[1] Other major importers of LNG include Taiwan, France, the United Kingdom, and Spain. In previous decades, countries that supplied LNG tended to be resource rich in natural gas, allowing an ample supply to export LNG to countries that had a net energy need. Historically, the major LNG exporters have been Qatar, Malaysia, Australia, and Indonesia, with Trinidad and Tobago supplying much of the demand in the Western Hemisphere.

Cheniere Energy is the highest profile international exporter of LNG in the United States. Originally conceived of as an LNG importing company, Cheniere Energy was quick to realize, the abundance of natural gas in the United States could be a game changer, and in 2008, in the midst of the fracking boom where prices of natural gas plummeted from over $13 in the summer of 2008 to below $3 in 2009, the company decided to reinvent itself as an exporting facility. Realizing the global opportunities of shipping LNG all over the world, the company saw an opportunity to exploit the margins that LNG exporters enjoy. Already possessing the proper permits for importing LNG into Louisiana facilitated the transformation from purely being an importer to becoming a major exporter of LNG in the United States. Also, with the vast quantities of natural gas being both discovered and fracked, the importation of LNG would no longer be economically viable.

Fast forward 7 years of permitting and construction, Cheniere was ready to liquefy the natural gas and ship. Cheniere Energy exported their first LNG shipment February 2016, sending 3.44 Bcf of natural gas to Brazil.[2] From that first shipment to the beginning of August 2016, Cheniere has shipped out 16 full LNG vessels from its Sabine Pass terminal. Cheniere's first shipment of LNG passed through the Panama Canal at the end of July 2016, the shipping time to cross the Pacific has now been reduced by 43%. Previously, shipping LNG (or any good) from a Gulf port to Asia added around 20 days and 6,000 nautical miles to the trip.[3] With the deepening of the Panama Canal, the ability to reach Pacific harbors

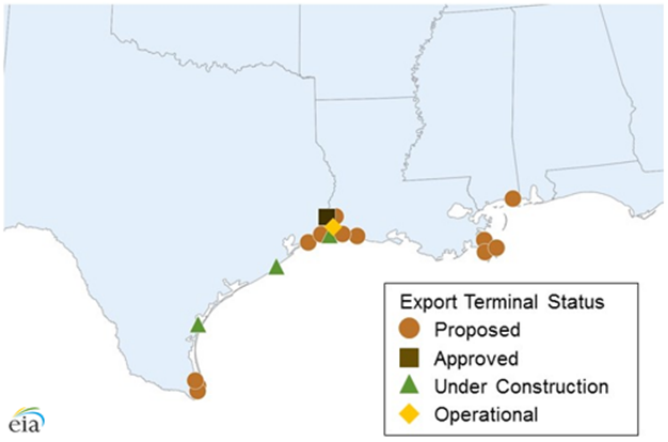
[1] http://www.bp.com/en/global/corporate/about-bp/energy-economics/energy-outlook.html
[2] http://blogs.platts.com/2016/07/28/panama-canal-us-lng-asia/
[3] http://blogs.platts.com/2016/07/28/panama-canal-us-lng-asia/

is not only cheaper, with both time saved and fuel expended, but it also allows larger shipments of LNG to cross the seas to markets that were previously less economically viable prior to the deepening.

One aspect rarely mentioned is that, with additional LNG exports, LNG has the ability to provide cleaner energy to emerging economies, which would otherwise use coal. Countries, such as India, China, and smaller emerging economies, some of which are not energy rich, now have options when building the energy infrastructure of their nations. Where in the past coal was the cheap alternative for powering the countries, LNG has the potential to revolutionize the emerging markets with cleaner burning natural gas. One gallon of LNG has the BTU equivalent of 82.6 cubic feet of natural gas, or roughly 12.1 gallons per million BTU.

Louisiana is a major player in LNG exportation in the United States. Currently, there are six additional LNG export projects that have gained approval by the Federal Energy Regulatory Commission (FERC), all located in the greater Lake Charles area, with more proposed in both Southwest and Southeast Louisiana.[4] The proximity to the Gulf of Mexico, and its global shipping lanes, coupled with the natural gas infrastructure already in place, makes this area extremely viable with regards to LNG facilities. The deepening of the Panama Canal just enhances the capability of the area to supply LNG, not just to South America, Eastern Africa, and Europe in a reasonable time frame, but adds to the viability of exporting across the Pacific to Asian countries, which already have a high demand for LNG.

LNG export terminals along the U.S. Gulf of Mexico



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[4] http://www.ferc.gov/industries/gas/indus-act/lng/lng-approved.pdf