

LNG: Global Supply, US Demand

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There is an old saying in Washington, D.C. that all politics is local. Historically, in the United States, that could be said of natural gas as well. At least, we would have said all natural gas is domestic. But over the past several years, the US has seen a dramatic shift in its natural gas supply sources, driven by an ever-increasing demand for the clean-burning, environmentally-friendly fuel. As the demand for natural gas began to outstrip the domestic supply, Canada became an attractive source of natural gas for the US market. But, as we start the new year, it is becoming increasingly clear that Canada will not be in a position to increase its imports to the United States sufficiently to meet growing demand. Hence, the growing popularity of liquefied natural gas (LNG).

As the United States focuses more on LNG as it looks to meet its future natural gas needs, it is incumbent on those in the US gas markets to understand that LNG is a globally traded commodity, and thus, attention must be beyond the parochial domestic natural gas markets to the global market for LNG. By so doing, it is readily apparent that natural gas is in high demand worldwide. The United States Energy Information Administration (EIA), in its International Energy Outlook 2006, notes: 'Natural gas consumption worldwide increases at an average rate of 2.4 per cent annually from 2003 to 2030.'

Natural gas growth rate

In key regional gas markets such as Japan, Korea and Taiwan, North America, Russia, and Europe, natural gas consumption is

expected to rise. Of those regions, Europe is expected to see the largest growth, projected at 2.0 per cent per year to 2030.

Even though such a growth rate is respectable, it pales in comparison to China and India. Recognising that natural gas is a minor part of the overall fuel mix in those countries, the EIA predicts that annual natural gas consumption will grow in China by 6.8 per cent and in India by 5.9 per cent. The EIA further estimates that natural gas imports will constitute more than 40 per cent of the natural gas demand in those countries by 2030.

So, what does that have to do with the United States natural gas market? The United States has a large and growing demand for natural gas. In fact, it is projected by the EIA that US consumption will outpace its production so that by the year 2030, there will be a 21 per cent gap between supply and demand. That gap already exists today because the domestic gas supplies can no longer meet the ever-increasing demand due to flat to declining productivity in its existing gas production areas and government policy that restricts access to new supplies in the United States. In addition, US natural gas imports from Canada by pipeline are facing similar flat to declining productivity, and thus contributing to the gap. Even if the US uses all of the domestic gas supplies available, including new supplies from Alaska and the deepwater Gulf of Mexico, it will have to import gas from Canada and in the form of LNG in order to meet demand. That means the US will have to compete globally for an increasing share of the LNG market in the years to come.



Dominion Cove Point, LNG, LP regasification terminal in Cove Point, Maryland.



LNG membrane-type carrier.

Demand and supply

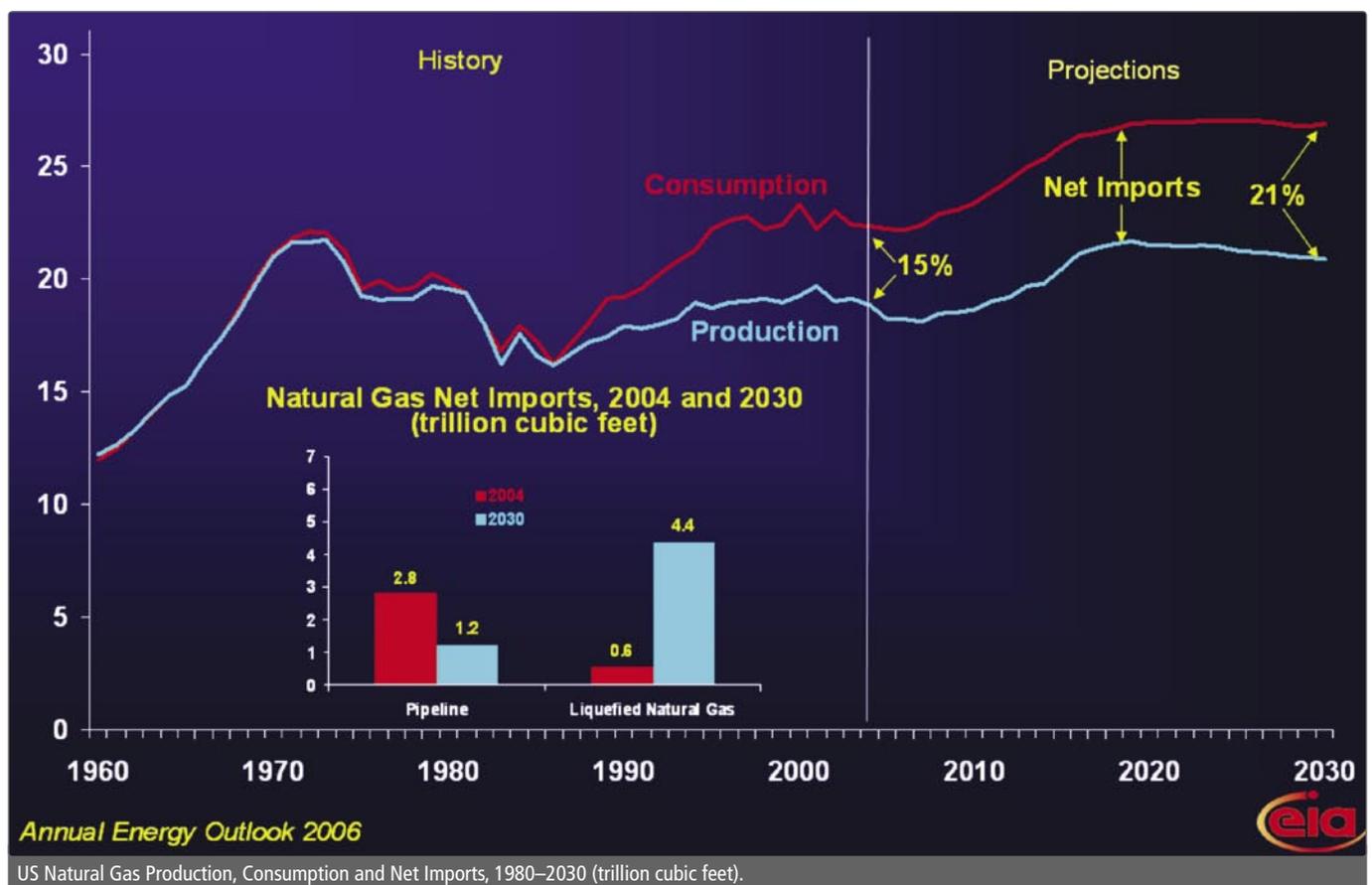
Historically, the Atlantic Basin has been the source of most of the LNG coming into the US. In 2006, the United States received LNG from Algeria, Nigeria, Trinidad and Tobago, and Egypt. The US Department of Energy's Office of Fossil Energy reported that Trinidad and Tobago's exports of LNG to the United States represented approximately 68 per cent of the total LNG imports into the US. Egypt was second at 20 per cent, with Nigeria and Algeria rounding out the field at approximately eight per cent and four per cent respectively. New and expanded LNG liquefaction plants under construction in Algeria, Nigeria, Qatar, and Equatorial Guinea will add to the global supply of LNG. However, some of the projects have been slow to start-up due to escalating costs affecting the energy industry and from construction delays. In any event, it is expected some of these new supplies of LNG will come on-line during 2007 and 2008.

On the demand side, competition for LNG has been keen among Atlantic Basin countries other than the US, namely the United Kingdom, Spain, France, and Belgium. Consequently, in 2006 the United States accounted for approximately 22 per cent of the Atlantic Basin consumption, with Europe taking nearly all of the remaining volumes. Indeed, Europe is expected to consume over two trillion cubic feet of gas in the form of LNG for the year. However, the EIA predicts that the US will see year-over-year increases for 2007 and 2008 by 34.5 per cent and 38.5 per cent respectively. EIA attributes these increases to expansions in LNG supply worldwide, as well as softening demand for LNG in consumer markets elsewhere.

Regasification import terminals

Competition in the Pacific Basin is also on the upswing. China and India are joining Japan, Korea and Taiwan as LNG importers. In fact, China is building a network of LNG regasification import terminals along its coastline and in 2006 received from Australia its first shipment of LNG.

In order for the United States to be able to receive increased LNG supplies, it must have the regasification capacity. In anticipation of both US demand for natural gas beyond its ability to supply itself from North American sources, and in the increase in liquefaction supplies, particularly in the Atlantic Basin, a number of regasification terminals are either proposed or under construction. In fact, as of January 18, 2007, 17 onshore regasification facilities have received at least conditional approval from the Federal Energy Regulatory Commission (FERC) and the Maritime Administration (MARAD) has approved three offshore terminals. Additionally, eleven more proposals have been proposed to FERC and eight proposals are pending with MARAD. Certainly, not all of those proposed facilities will be built, nor need to be built. The National Petroleum Council, in its 2003 report entitled 'Balancing Natural Gas Policy,' estimated that the United States would need seven to nine new terminals to meet natural gas demand through the year



US Natural Gas Production, Consumption and Net Imports, 1980–2030 (trillion cubic feet).

2025. Currently, there are four new terminals under construction in the Gulf Coast region of the country. Expansions are either planned or being constructed as well. LNG applicants continue to work with all levels of government and the local communities to advance their projects through the permitting process, construction, and ultimately into operation.

As of year-end 2006, the five existing regasification terminals operating in the United States have a combined deliverability of approximately 5.23 billion cubic feet (bcf) per day. With the additional capacity at new terminals and expansion projects at existing terminals, another 6.4 bcf per day will be available by year-end 2008. LNG imports into the US for the year 2008 are estimated to approximate a little less than three bcf per day. Therefore, sufficient capacity should exist to handle the predicted imports in the short term. However, EIA predicts that US demand for LNG by the year 2030 will reach 12 bcf per day. Factoring in the need for extra capacity operationally speaking, and the likelihood that the

demand for LNG by 2030 and beyond could be higher, there will need to be more regasification capacity in the future. Most of this new regasification capacity is being sited in the Gulf Coast region, where LNG is welcomed. However, efforts to site new terminals in the Northeast and along the West Coast, where new natural gas supplies are needed, are facing significant public opposition.

As the United States emerges as an ever more significant participant in the global LNG trade, it is apparent that competition from other countries will determine how much LNG actually flows to the US. To meet the increasing demand for natural gas, it is important that there be sufficient regasification capacity domestically and in the right locations to accept increasing amounts of imported LNG. The energy industry is confident that there will be sufficient liquefaction capacity globally to allow for a robustly competitive market to deliver clean-burning, environmentally-friendly natural gas to consumers around the world.

ABOUT THE AUTHOR

Bill Cooper, a partner at the law firm of Hunton & Williams LLP, is the Executive Director of the Center for Liquefied Natural Gas (CLNG). Bill has two decades of experience in various aspects of the energy industry, having served in both the public and private sectors. Prior to joining Hunton & Williams, he served as counsel to the US House Energy and Commerce Committee. Earlier in his career, he was general counsel for a natural gas utility company. Bill was a drafter and lead negotiator for the House on several provisions of the energy bills in the 107th and 108th Congresses. In addition, Bill is a frequent speaker on energy and natural gas issues.

ABOUT THE ORGANISATION

The **Center for Liquefied Natural Gas (CLNG)** is a coalition of over 60 LNG producers, shippers, terminal operators and developers, energy trade associations and natural gas consumers. CLNG strives to be a clearinghouse of educational and technical information. It also seeks to facilitate rational issue discussion and the development of public policies that support LNG's increasing contribution toward meeting the nation's energy needs and supporting economic growth.

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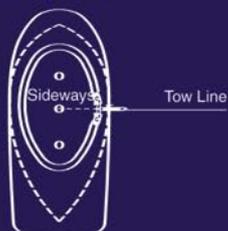
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