THE LNG OVERSUPPLY THAT NEVER OCCURRED: THE GLOBAL CONSUMPTION OF 42 MTA OF QATARGAS LNG

Mr. Marcellus Catalano, Sr. Analyst, LNG Marketing
Qatargas Operating Company Ltd.

Abstract

Qatargas' first mega-train reached plateau production in 2009 and the last mega-train was completed in early 2011. During this time, the world experienced a historically significant economic recession, while new sources of Liquefied Natural Gas (LNG) supply entered the market. Several market participants were of the opinion that the LNG industry would be entering a period of oversupply. Looking back approximately one year, the facts are very different. The question to be asked is: What happened?

To start, dynamic market interactions between Asia, Europe and the Americas provided for complex trade patterns and an adjustment to traditional regional LNG pricing regimes. The interaction between pipeline gas and LNG also created an interesting turn of events in both Europe and the United States. The European Union's interest in energy security along with a reduction in CO2 emissions also altered the market. Then, Japan experienced a devastating earthquake resulting in an immediate need for energy supply. Lastly, but equally as important, China picked up the pace of LNG demand growth.

These significant events came at a time when Qatargas was initiating deliveries under its long term LNG supply contracts. While Qatari LNG projects were developed on the principle of long term relationships with key partners, they were designed with the flexibility to adapt to dynamic market changes. Thus, adapting to the changes in the United States, Europe and Asia is exactly what Qatargas did by optimizing its LNG portfolio.

Qatargas has developed internal processes and systems to enable it to maximize shareholder value through the optimization of its supply contracts. Based on contractual flexibility built into agreements, Qatargas has facilitated key buyers by delivering on a spot, mid-term and long-term basis through diversions. Overall, LNG demand was stronger than expected as regional events and policies started to create a global ranking of demand. Asia with the least alternatives led demand for LNG followed closely by Europe. The United States, originally expected to be flooded with LNG by some market participants ended up becoming an unused market of last resort, attracting very little LNG. In conclusion, the LNG market quickly absorbed Qatargas' 42 MTA of LNG and there are few new supply projects in the near term. What appeared to be a possible time of LNG over supply has turned into a market hungry for LNG with a LNG shortage arriving in the not so distant future.

The Development Years

Overview since Last World Gas Conference

Since the last World Gas Conference in Argentina in 2009, the LNG industry has changed significantly and Qatargas has been busy developing and operating its new LNG mega-trains [7.8 MTA]. Described as the Qatargas development years, these consist of a timeline of activities from 2008 through 2010 when Qatargas started each of its new mega-trains and its respective new business ventures. Throughout that same time period, the world LNG markets responded to the political and economic changes of the recent recession and regional price swings impacted by changes in supply and demand as well as world events.

Qatargas 2, train 4, was the first new mega-train to become operational with the first cargo of LNG loaded in March of 2009. With shareholders consisting of Qatar Petroleum, Exxon Mobil and Total, Qatargas 2 (QG2) LNG was headed to the South Hook receiving terminal in the United Kingdom (UK) but with an unpredictable response from the UK market. In a market that had traditionally received small volumes of LNG imports *(See Figure 1),* Qatargas was planning on supplying up to 15.6 MTA of LNG into the UK market. Market concerns regarding price swings and over supply were all heavily discussed and debated. Simultaneously, Qatargas focused on understanding its long term portfolio and comparing possible new diversion opportunities as supplier diversion rights were defined in all the new business ventures. QG2, train 5, started in September 2009 completing the development of the Qatargas 2 business venture. In the end, the long term nature of the LNG business maintained a balance in the UK market and the Qatargas 2 business venture was off to a successful start.

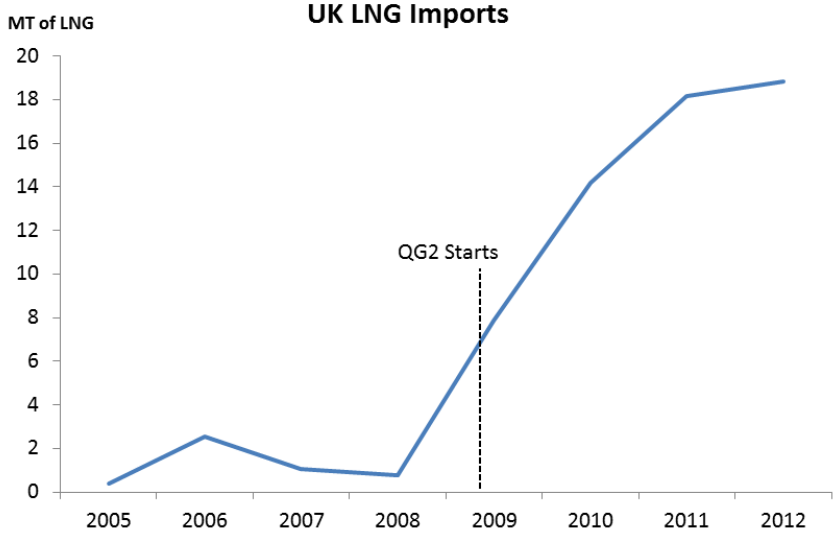
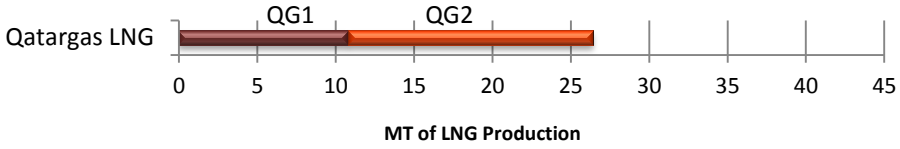


Figure 1. Source: Industry Reports & Qatargas



The development years continued to bring new opportunities as well as new challenges to Qatargas 3. The shareholders of Qatargas 3 (QG3), Qatar Petroleum and ConocoPhillips, were committed to its long term agreement of supplying the Golden Pass terminal in the United States (US). However, the US was experiencing a continued decline in natural gas prices. The recent unconventional gas discoveries provided the US with ample supplies of natural gas and thus LNG imports were no longer needed in the near term. *See Figure 2.* Qatargas 3, train 6, loaded its first LNG cargo in November 2010.

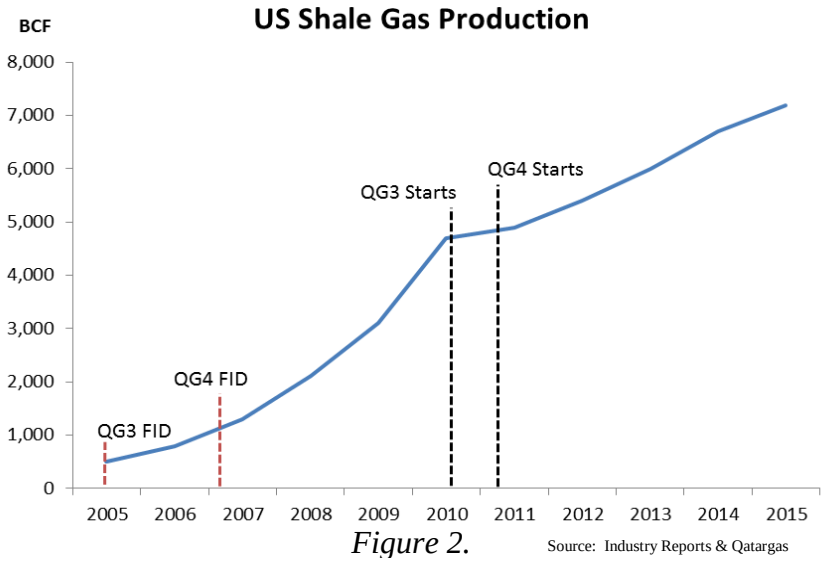
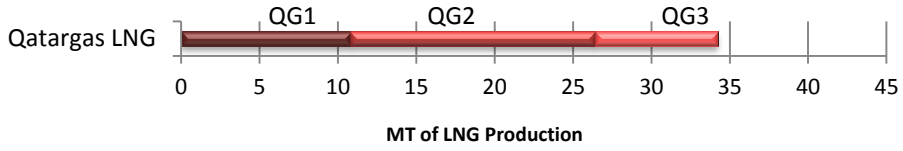
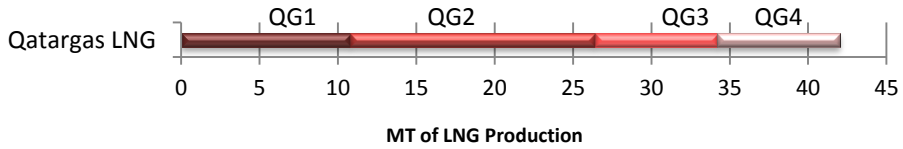


Figure 2. Source: Industry Reports & Qatargas



The last of Qatargas' mega-trains, train 7, Qatargas 4 (QG4) loaded its first LNG in February of 2011. The shareholders of Qatargas 4, Qatar Petroleum and Shell, were also committed to supplying the Elba Island terminal in the US for the long term. However, in light of the new unconventional gas supplies in the US, changes needed to be considered for QG4. Thankfully, Qatargas contracts allow for flexibility and thus new diversion opportunities were developed.



Throughout the development years Qatargas adjusted to the market however maintained its long term view of the industry. In doing such, as the markets changed, Qatargas sought diversion opportunities that would create lasting relationships based Qatargas' reliability and safety. *See Figure 3.* With the additional supplies of QG2, QG3 and QG4, Qatargas was able to meet the needs of potential new and existing customers. Qatargas signed its first new short term SPA in 2008 to supply additional volumes to Japan for 5 years. Additionally, Qatargas signed its first two long term SPAs with China (CNOOC & PetroChina) for 25 years followed shortly after in 2009 with another long term SPA with Poland. By 2010, the US market seemed to lack any short term possibilities and Qatargas signed its first short term SPA with Canada (Repsol), followed shortly after, by a new Middle East short term SPA with Dubai for 10 years. With all three of the new Qatargas ventures becoming operational, and several new contracts signed, focus on the future optimization of the Qatargas portfolio became the new priority.

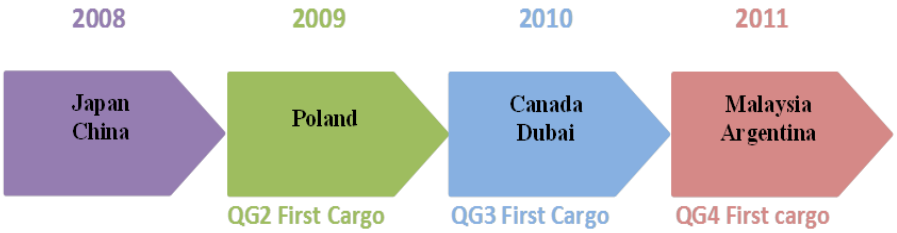


Figure 3. Source: Qatargas

Full Production: Expected LNG Market Oversupply

The year of 2011 brought many unforeseen changes in the LNG markets. Previously, it was presumed by many in the industry to be a year of over supply as the Qatargas trains reached full production. The Asian markets started the year slow with expected Japanese demand to remain flat at best. Furthermore, China's demand while strong was being limited by the development of its regasification infrastructure. *See Figure 4.* The Spanish market,

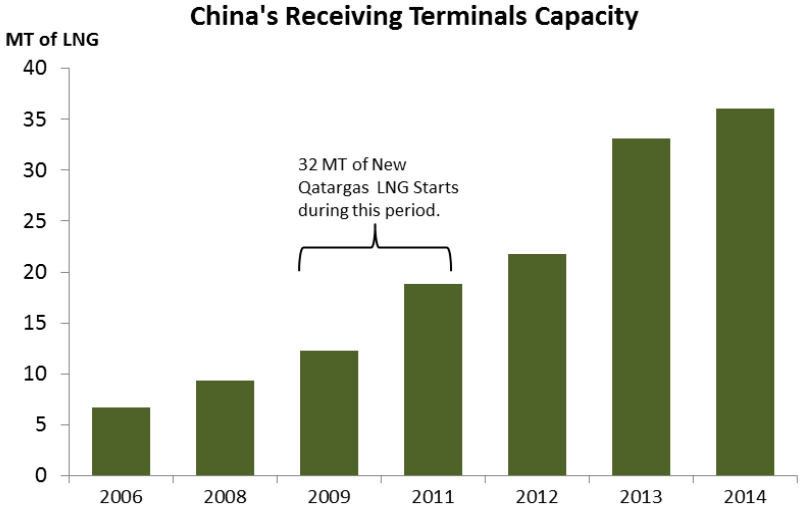


Figure 4. Source: Industry Reports & Qatargas

traditionally the largest LNG market in Europe, slowed and started to become oversupplied partly due to the new Medgas pipeline. A continued global economic recession, high oil prices and low US gas prices did not create an image of opportunity for the LNG industry or Qatargas. An oversupply of LNG seemed imminent

What changed?

The first sign of opportunity within the industry started to develop in Northern Europe early in the year. European concern over security of supply and future CO_2 emissions started driving demand for LNG spot cargos. Trade was picking up. Qatargas continued to develop its portfolio optimization capabilities and early in 2011 signed another short term SPA with the UK (Centrica). Furthermore, LNG demand started rising in emerging markets where Qatargas signed another short term SPA with India and Kuwait (Shell). The year 2011 started to appear to be not as bad as it was expected.

On March 11, 2011 a large earthquake and subsequent tsunami struck Japan. The devastation caused by this catastrophe shocked the world. Qatargas has had a long history with Japan who are our anchor Buyers and thus within days sent Japan its support and committed to supply additional LNG to meet Japan's immediate energy needs. The impact of this event changed the course of 2011 for the LNG industry and changed the availability of LNG supply to the rest of the world. *See figure 5*. Throughout 2011 Qatargas signed multiple new short term SPAs with Japanese customers including Chubu Electric, Tohoku Electric and TEPCO.

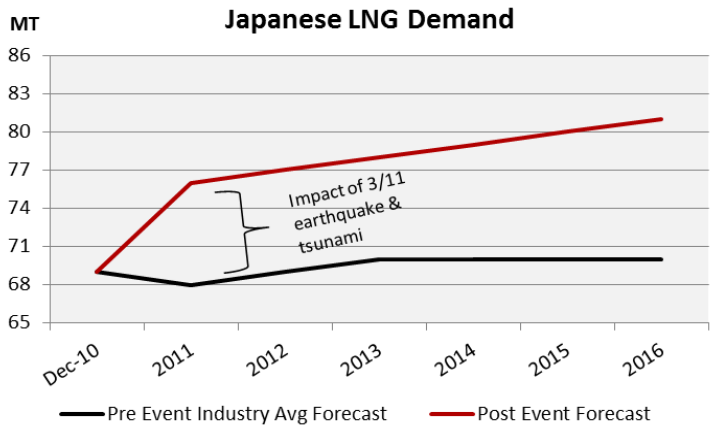


Figure 5. Source: Industry Reports & Qatargas

As 2011 continued post tsunami, the world markets responded to the immediate shortfall of LNG and demand was sought from many different regions of the world. Qatargas supplied LNG to a new customer in Greece, the Netherland's Gate Terminal and supplied a commissioning cargo to Thailand. The spot market was stronger than ever. As the industry started to realize the long term impact of this event on Japan and the LNG industry, existing and potential consumers started to reassess their long term LNG requirements. The need to secure reliable LNG supply in the near term was quickly disappearing. With very few new LNG supply projects in the next few years, and the delay of Russian LNG projects, the attention quickly focused on Qatar and Qatargas' new supply ventures. LNG demand grew in unexpected markets including South America and the Middle East. *See Figure 6.* Rather than wait until the market got tighter, several buyers quickly signed HOA agreements for longer term future supply. Qatargas signed new HOAs with PETRONAS and Argentina. As the year came to a close, the industry realized there existed a much tighter supply and demand balance and a strong interest in securing long term Qatargas LNG.

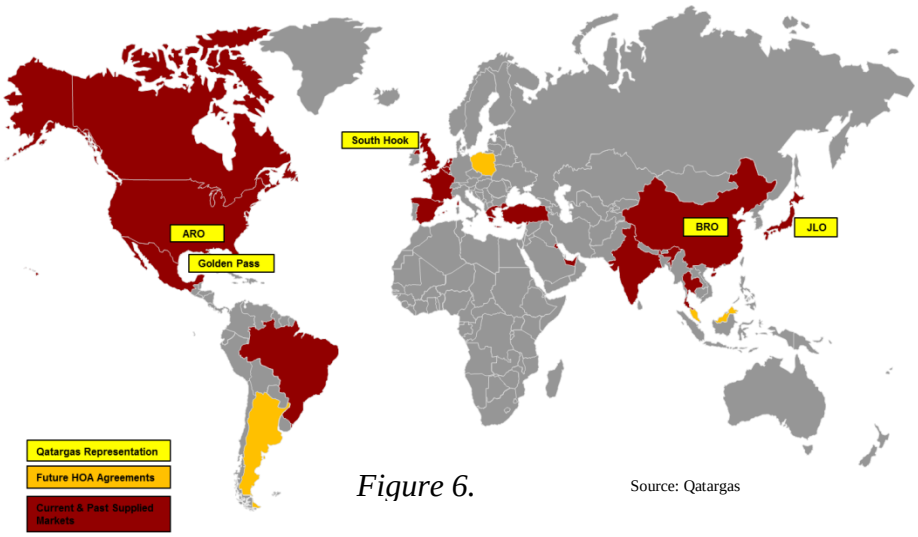
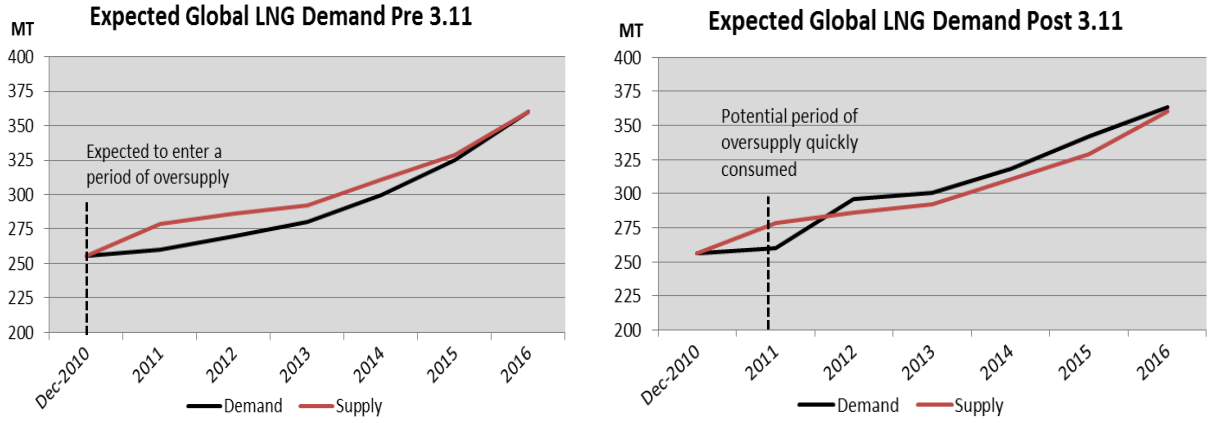


Figure 6. Source: Qatargas

Conclusion

The years of 2012 and beyond are still to be determined. However, what appears to have occurred in the LNG industry is a ranking of the global gas markets based on highest need, Asia & Middle East, Europe & South America, North America, and lastly, the US. In the US, shale gas has transformed the market and it will soon be exporting LNG. One must question whether shale gas can be developed elsewhere in the world and the impact it can have on global LNG markets. In reviewing China's potential, it is clear from government policy and already robust growth that gas demand is on the rise. Furthermore, this will most likely be supported further by a growing concern over pollution in China. With the rapid growth of regasification infrastructure in China, it is very likely that the industry will see much future demand for LNG. The Japanese market was deeply impacted in 2011 in regards to its future nuclear aspirations. Looking forward one must presume that a change of policy will occur and that a shift to alternative power sources will take place. When trying to determine the likely combination of oil, natural gas and other possibilities, it is highly likely that there

will be an increase in almost all alternative sources over the next few years based on the future probability of lower nuclear power reliance. While Japan's future nuclear plans are still to be determined, Germany has already determined to eliminate nuclear from its energy mix. Thus, the impact on global LNG demand forecasts can already be seen. *See Figures 7 & 8.*



Figures 7 & 8.

Source: Industry Reports & Qatargas

While the economic markets of Europe and the US remain an uncertainly for the near future, the emerging markets of the Middle East and South America seem to be acting quickly to secure their future energy needs. The Middle East in particular is growing rapidly and its swelling population is driving demand for additional power. The opportunity for LNG to support this growth is an ideal opportunity for regional LNG suppliers. So in conclusion, with each market propelled by its own policies, concerns, and events and little new LNG to meet its demand, supply will continue to tighten and prices will rise. Qatargas is the world's largest LNG supplier with a track record of reliability and operational safety. With a flexible portfolio, the largest LNG shipping fleet and access to markets around the world, Qatargas will continue to supply its customers and continue to seek new opportunities that will secure future energy needs for the next generation of energy consumers.