

Summary

The 10 biggest issues in the LNG industry in the first half of 2013

Hiroshi Hashimoto, Seishi Fukuoka,
Hiroyuki Sueishi, Masashi Okamura, Shigekazu Horiike
Gas Group, Fossil Fuels and Electric Power Industry Unit
The Institute of Energy Economics, Japan

While the first half of 2013 witnessed the stubbornly expensive LNG prices burdening Japanese buyers and the nation's economy as a whole, progresses were also observed in terms of medium- to long-term LNG procurement, including a non-FTA export approval to an LNG export project from the United States, as well as several brand-new LNG export projects elsewhere around the world. In addition, starting up of operation of several LNG receiving terminals in various countries also contributed to the ongoing structural changes of the global LNG markets. These structural changes were also reflected in statistical figures revealed in the first half of 2013.

This paper outlines the following developments:

1. Freeport LNG is awarded a non-FTA export license;
2. Stubbornly expensive LNG prices continue squeezing Japanese economy and importing companies;
3. LNG trades in the world shrunk by 2% in 2012, while the natural gas market expanded by 2%;
4. LNG projects advance on the Pacific Coast of Canada;
5. Russia looks increasingly likely to liberalise its LNG exports to accommodate more new export projects;
6. Cost pressure on land-based projects and advancing FLNG in Australia;
7. Egypt, Nigeria, and Norway see reducing LNG production while Algeria and Angola start operating new production plants;
8. An LNG project advances in Mozambique;
9. New terminals start receiving LNG in Singapore, Malaysia, Israel and India; and
10. Brazil, Argentina and Mexico increase short-term LNG purchases.

contact: report@tky.ieej.or.jp

The 10 biggest issues in the LNG industry in the first half of 2013

Hiroshi Hashimoto, Seishi Fukuoka,
Hiroyuki Sueishi, Masashi Okamura, Shigekazu Horiike
Gas Group, Fossil Fuels and Electric Power Industry Unit
The Institute of Energy Economics, Japan

Introduction

While the first half of 2013 witnessed the stubbornly expensive LNG prices burdening Japanese buyers and the nation's economy as a whole, progresses were also observed in terms of medium- to long-term LNG procurement, including a non-FTA export approval to an LNG export project from the United States, as well as several brand-new LNG export projects elsewhere around the world. In addition, starting up of operation of several LNG receiving terminals in various countries also contributed to the ongoing structural changes of the global LNG markets. These structural changes were also reflected in statistical figures revealed in the first half of 2013.

This paper outlines the following developments:

1. Freeport LNG is awarded a non-FTA export license;
2. Stubbornly expensive LNG prices continue squeezing Japanese economy and importing companies;
3. LNG trades in the world shrunk by 2% in 2012, while the natural gas market expanded by 2%;
4. LNG projects advance on the Pacific Coast of Canada;
5. Russia looks increasingly likely to liberalise its LNG exports to accommodate more new export projects;
6. Cost pressure on land-based projects and advancing FLNG in Australia;
7. Egypt, Nigeria, and Norway see reducing LNG production while Algeria and Angola start operating new production plants;
8. An LNG project advances in Mozambique;
9. New terminals start receiving LNG in Singapore, Malaysia, Israel and India; and
10. Brazil, Argentina and Mexico increase short-term LNG purchases.

1. Freeport LNG is awarded a non-FTA export license

The Department of Energy of the United States on 19 May granted Freeport LNG a licence to export LNG from its planned LNG liquefaction facilities in Texas on the Gulf of Mexico to those countries without Free-Trade Agreements (FTAs) with the United States. Chubu Electric Power and Osaka Gas plan to lift 2.2 million tonnes per year apiece of LNG from the project beginning in 2017 through liquefaction tolling arrangements. The non-FTA export approval was only the second from the lower-48 of the United States after the Sabine Pass project in Louisiana was granted its approval two years ago. Following the Freeport's thumbs-up, the remaining projects are also eagerly waiting for the DOE's pending approvals.

Among them, the Cameron project in Louisiana, also on the Gulf of Mexico, Mitsui and Co., Mitsubishi Corp., and GDF Suez each signed up a 4 million-tonne-per-year liquefaction tolling agreement and accepted equity participation by the three clients in May¹. Tokyo Electric Power agreed to purchase 800,000 tonnes per year of LNG from the project through Mitsui and Mitsubishi in February.

At the Dominion Cove Point LNG project planned in the Eastern state of Maryland, Sumitomo Corp. of Japan and Gail of India each signed up a liquefaction capacity of 2.3 million tonnes per year in April. In turn Sumitomo signed Heads of Agreements (HoAs) with Tokyo Gas and Kansai Electric Power for sales of 1.4 million tonnes and 800,000 tonnes per year, respectively.

LNG imports from the United States are expected to result in lower procurement prices, diversification of pricing, and improved positions in various negotiations, as well as enhanced energy supply security. On the other hand, Japanese companies should carefully analyse and overcome risk factors accompanied with new procurement sources and new procurement models.

2. Stubbornly expensive LNG prices continue squeezing Japanese economy and importing companies

Japan paid JPY 6.2 trillion for LNG imports in the fiscal year 2012 (April 2012 - March 2013), a whopping 75% jump from the fiscal 2010. In addition to the much greater volume of nearly 87 million tonnes of imports, more expensive unit prices at USD 16.65 per million Btu on average contributed greatly to the surge in paid amount. To make matters worse, the weaker

¹ Mitsubishi Corp. holds the equity through a joint venture with NYK.

Japanese currency since the end of the calendar year 2012 increased the Japanese yen denominated paid amount during the first half of 2013. The monthly realised average unit prices for April and May were consecutive record-high JPY 82,474 and JPY 85,269 per tonne, respectively.

Eight out of ten electric power companies, except Hokuriku and Okinawa, suffered net losses in the fiscal 2012, amounting to JPY 1.6 trillion in total for the second year in a row, severely bit by the burdens to run thermal power generation capacity to replace lost nuclear power.

Several electric power companies have applied for their retail rate increase for their regulated market segments to reflect the higher power generation costs and changes in power generation mix. Some of the applications have already been approved by the central government, taking account into future reduced LNG procurement costs for the first time in such rate cases.

3. LNG trades in the world shrunk by 2% in 2012, while the natural gas market expanded by 2%

LNG trades in the world decreased by 2% in 2012². While Japan, other Asian economies, and South America increased LNG imports, Europe witnessed smaller overall gas demand due to tardy economic recovery and some LNG producing countries exported less LNG.

On the other hand, the global natural gas market grew only by 2% year-on-year, compared to an average annual 2.7% growth during the past ten years³. Gas production grew in the United States, South America, Norway, Africa, the Middle East, and Australia, although shrunk in the former Soviet Union.

4. LNG projects advance on the Pacific Coast of Canada

Several LNG exporting projects are advancing on the Pacific Coast of Canada, with an eye on sales to the Asia Pacific region.

LNG Canada, promoted by Shell (40%), Mitsubishi Corp., Korea Gas Corp. (Kogas), and PetroChina (20% each), was granted an LNG export license by Canada's National Energy Board (NEB) in February. The project plans to start initially with capacity of 12 million tonnes per year, with potential to

² 236 million tonnes, "2012 The LNG Industry" GIIGNL, March 2013, and 314.1 bcm, "The 2012 Natural Gas Year in Review - CEDIGAZ," April 30, 2013

³ 3,427 bcm, "Medium-Term Gas Market Report (MTGMR)", International Energy Agency (IEA), 20 June 2013, and 3348.7 bcm, "The 2012 Natural Gas Year in Review - CEDIGAZ," April 30, 2013

expand to 24 million tonnes per year .

Petronas welcomed Japan Petroleum Exploration (Japex) to its Pacific Northwest LNG as a 10% partner in March and advanced to a FEED study of an export plant of potential 12 million tonnes per year in May.

Kitimat LNG was joined by Chevron as the operating and 50% partner in December 2012, with Apache owning the remaining 50%. The project plans to start with 5 million tonnes per year initially, with an eye to doubling the capacity eventually.

BG applied for environmental approvals to build its Prince Rupert LNG project from Canadian federal and British Columbia governments in May, followed by an export authorisation application to the NEB in June. The company envisages initial LNG exports in 2021 from two trains out of eventual three trains with 21 million tonnes per year capacity in total.

ExxonMobil and its Canadian affiliate Imperial Oil made an application to the NEB to export LNG from their WCC LNG project, with an eventual capacity of 30 million tonnes per year. The companies want to start the first train as early as 2021.

As Canada lost much of pipeline gas sales to the United States due to increasing domestic gas production in the southern neighbour, the Asian LNG markets are targeted as replacing outlets of Canadian natural gas. Although its West Coast has relative advantages over the Gulf and East Coasts of the United States in terms of transportation distances to the markets, the Canadian projects have their specific challenges of costs incurred by needs of infrastructure accompanied with their nature as greenfield projects, as well as lagged marketing activities.

5. Russia looks increasingly likely to liberalise its LNG exports to accommodate more new export projects

As of today, Gazprom has enjoyed an exclusive right to export natural gas from Russia. However, signs of possible liberalisation of exports of natural gas, specifically of LNG, have been recently apparent.

Rosneft, in cooperation with ExxonMobil, has potential LNG projects based on gas reserves of the Sakhalin-1 fields and Arctic resources. Rosneft in June signed Heads of Agreements (HoAs) with Marubeni and Sakhalin Oil and Gas Development (SODECO) to sell LNG under long-term deals. Novatek is reportedly talking with Chinese and Indian companies on their possible

participation in and offtake from its Yamal LNG project. In June China National Petroleum Corp. (CNPC) signed a cooperation agreement with Novatek to purchase 3 million tonnes per year of LNG from the project and to acquire a 20% equity stake in it. Both Rosneft and Novatek are lobbying their own natural gas exporting rights, with influential politicians in Russia now frequently commenting on the issue.

On the other hand Gazprom reached a basic agreement with five Japanese companies to construct an LNG exporting plant in the Vladivostok area.

With dimming prospects of increasing pipeline gas sales from Russia to Europe, the three Russian companies are expected to intensify LNG marketing campaigns in Asia.

6. Cost pressure on land-based projects and advancing FLNG in Australia

While in 2012 in Australia, which is expected to become the main source of incremental LNG supply in the Asia Pacific region from 2014 and 2015, multiple LNG projects made upward revisions of their overall project cost estimates during their construction, in April 2013 Woodside revealed that plans of land-based facilities at James Price Point for the Browse LNG development is no longer economically viable. Floating LNG production is now widely viewed as a preferred alternative development.

ExxonMobil, who along with BHP plans to develop the Scarborough field off the coast of Western Australia, submitted its development plan to the Australian Federal government based on a floating liquefaction vessel of 7 million tonnes per year.

7. Egypt, Nigeria, and Norway see reducing LNG production while Algeria and Angola start operating new production plants

As a result of quickly increasing energy demand and lagging development of gas fields and declining overall gas production in the country, Egypt does not have enough gas to run its two LNG export plants at full capacity. The Damietta plant has stopped LNG production since December 2012, while the Idku plant is running at 50% of its nameplate capacity.

Although state-run Egas has a stopgap plan to import LNG at a Red Sea location, it could no-way come online by the peak electricity demand period of

the summer 2013 with a slow-moving tender process for floating LNG receiving facilities.

With this background the Egyptian government has revealed that it is negotiating emergency gas-LNG swap deals with Qatar. As part of them, the Qataris agreed to provide five cargoes for free to Egypt during the peak demand period in summer 2013.

Nigeria LNG enforced force majeure on its LNG exports twice - from the beginning of February to the middle of April and from the middle of May to the beginning of June - as feedgas pipelines were sabotaged. During those occasions operational rates of the LNG plant were down by 20% - 25%. Combined with sluggish overall gas demand in Europe, the reduced output in Nigeria apparently contributed to the 35% year-on-year decline of LNG deliveries to Europe during the first four months of the year.

Norway's Snøhvit LNG export plant delayed its restart after its maintenance outage since the end of January from the end of February to the end of April due to unexpected troubles, followed by another unplanned outage for two weeks from the end of May.

Also in the first half of 2013 in the Atlantic region, two new liquefaction facilities - the Skikda new train in Algeria and the Angola LNG plant - entered into commissioning phases.

8. An LNG project advances in Mozambique

The East African country of Mozambique is expected to become a next major LNG supply source after North America. Three parallel front-end engineering and design (FEED) studies for an LNG plant have been underway since the beginning of 2013, conducted by three engineering groups and commissioned jointly by two consortia developing the offshore Areas 1 and 4 expected to supply gas to the LNG plant.

Following PTT's entry into the Area 1 in August 2012, CNPC agreed with Eni to indirectly participate in the Area 4 in March 2013. As such, further changes in shareholdings may be on the card as some existing partners may be selling down stakes. The project is targeting to start exporting its first phase of 10 million tonnes per year as early as in 2018, with a final investment decision (FID) to be made at the end of 2013 or the beginning of 2014. However, the project may be expanding to a 50 million tonnes per year complex in the future.

9. New terminals start receiving LNG in Singapore, Malaysia, Israel and India

The four major gas markets in Southeast Asia all have started operations of their respective LNG receiving terminals with commissioning cargoes received in March in Singapore and in April in Malaysia, following Thailand and Indonesia earlier. As Malaysia is one of the largest LNG producing countries along with Indonesia, more dynamic flows of the commodity are expected in the future depending on changing balances of supply and demand in the region.

Israel, a country that has discovered significant gas reserves offshore in the East Mediterranean Ocean that can eventually be fed into an LNG export project, for now received its first LNG cargo in January at its floating storage and regasification unit (FSRU). In the same month GAIL of India started operation at its Dabhol LNG receiving terminal, the nation's third, as the country does not see as much gas production as previously expected from fields offshore east coast of the country.

10. Brazil, Argentina and Mexico increase short-term LNG purchases

While Brazil and Argentina increased spot LNG purchases to meet their growing gas demand from January to March, attracting nearly all spare cargoes in the Atlantic basin, spot purchases in Asia in the period were largely muted.

In April, Mexico's CFE (Comisión Federal de Electricidad, public power authority) issued a tender to procure 31 LNG cargoes to be delivered to the Manzanillo receiving terminal on the Pacific Coast through 2014. Although no volumes were awarded in the initial tender, CFE eventually secured 17 cargoes to be delivered in 2013 and 12 in 2014, in conjunction with Pemex (Petróleos Mexicanos, state oil company).

contact: report@tky.iej.or.jp