



Challenges and opportunities in Asia's future LNG pricing

At a major turning point

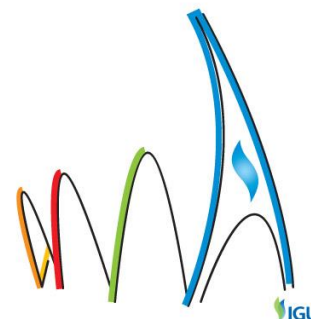
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Background

The global LNG industry is relatively young, just celebrating its 50 year anniversary in October 2014. Thus it is quite natural for it to continue changing its shape and evolving.

In the past the global LNG market has doubled its size every ten years - from 50 million tonnes in 1990, 100 million tonnes in 2000, and 220 million tonnes in 2010. Now it is expected to have 400 million tonnes per year by 2020.

The latest phase of expansion, starting in the 51st year of the industry, is expected to be unprecedented. We also saw huge expansion of the industry from 2009 to 2011. And it was also unprecedented at that time and the expansion caused a lot of changes.

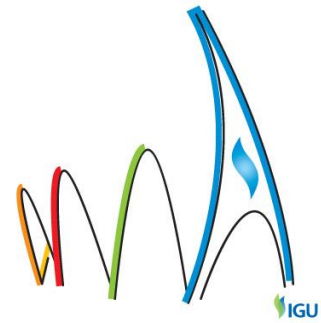
During the latest phase of expansion, significant transformation in trading patterns is expected. This phase is even more unprecedented as two production centres are expected to increase presence: Australia and the United States. This is also expected to bring about another layer of flexibility and liquidity into the market.

In this always evolving industry, it has been often difficult to predict the future. Players act based on some specific perspectives and assumptions, and they often lead to unintended consequences.

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Just ten years ago many people thought that the United States would be short of gas and importing a lot of LNG. But the expectation of higher gas prices over there encouraged huge domestic gas production, not only LNG production projects around the world targeting the United States.

Then during the past year we saw declining oil prices, partly caused by expansion of liquid production in the United States, which in turn was caused by expectation of widening gaps between dry gas and oil prices.

While some people may expect an amply supplied LNG market for some years to come, others may be worried about slowing investment leading to supply shortage years later.

At the beginning of 2015, the LNG industry was already facing another new set of challenges caused by the declining oil and gas prices.

In the short-term, while lower prices mean smaller revenues for sellers, they offer some relieves to LNG buyers, especially in North Asia, who have suffered financial pains from expensive LNG prices in the past five years or so, in both contract and spot and short-term purchases. The lower prices may also encourage those potential buyers who have been hesitant to decide to introduce LNG because of expensive prices.

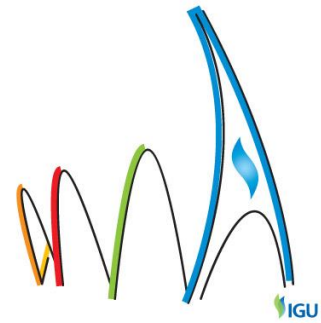
At the same time, the relatively rapid change in pricing environment has made it more difficult for buyers to establish procurement strategies than in the past, as they may find it more difficult to predict future pricing environment.

Japanese and Asian LNG long-term contract prices have been linked with crude oil prices for decades. It is because oil was considered to be the main competing fuel against LNG and there was not, and has not been, a better indicator to represent the general energy market trend in the region. The linkage was in general accepted as a reasonable practice until

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around 2008 although the percentages of linkage had been contentious issues in price negotiations between LNG sellers and buyers from time to time.

Since 2008, however, in the wake of rapid increase of gas production in the United States, price gaps between Asia and North America have been widened and so apparent, especially after the 2011 nuclear crisis in Japan. Many LNG buyers have realized that it would be structurally very difficult to reduce the gaps if they continue relying mostly on the linkage.

General public, especially in Japan, are also now well aware of high costs of LNG, as electricity prices have been raised for both residential and industrial uses, although there have been some misunderstandings that LNG has been expensive because it is LNG - if gas had been supplied via seaborne pipeline it would have been even more expensive in the past.

In order to keep energy prices affordable and maintain industrial competitiveness, every possible measure should be taken, including energy savings and boosting renewable energy capacity, as well as (re)starting nuclear reactors which are confirmed safe (according to the new safety standard, in case of Japan).

In terms of LNG procurement, buyers should try to obtain reasonably lower prices for both long-term contract deals and short-term and spot LNG transactions.

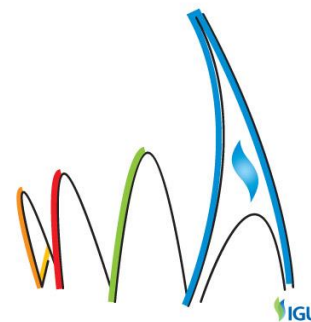
While majority of LNG is traded under long-term contracts, spot and short-term cargoes are playing a more important role in recent years.

Some information service companies have provided spot price assessments. Those have not established as reliable price benchmarks yet, as the market is not yet liquid enough. As actual transactions are still not so many and companies do not make transaction details disclosed, the assessments are mostly based on notified offers and bids.

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However, they can still be viewed as some indications of market sentiments. In 2014 it was expensive, hitting 20 dollars per million Btu in February. One year later in 2015 it was less than 7 dollars.

Growth of short-term trades is accompanied with the growth of the overall market, as well as diversification of sources and markets. More than 60 million tonnes or 1/4 of the total LNG is traded under short-term arrangements.

Aim

The buyers in the region have been trying to obtain better terms and conditions in LNG procurement, by diversifying their supply sources, contract terms - including both long-term and short-term contracts - and pricing methodologies.

They also want to improve restrictive clauses in traditional sale contracts to make procurement more flexible so that they can be more resilient in the more variable market environment in the wake of anticipated more market opening policies.

This flexibility is expected not only to mitigate risks of downstream market fluctuation but also enhance opportunities to bring upside benefits to LNG buyers in the international LNG market.

This could also be good for LNG sellers as this could provide with them expand greater LNG markets as a whole than otherwise.

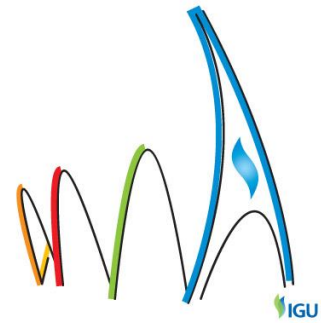
Methods

Around the turn of the century some utility buyers from Japan started considering minority equity participation in the upstream, liquefaction and ocean transportation segments of the LNG value chain.

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They initially started modest investment into those segments. After seeing more proliferation of LNG production projects in the Asia Pacific region, some buyers have become more proactive in equity participation. And this has not been confined to Japanese players, but also included LNG buyers in other countries.

In most cases Japanese players' equity participation is accompanied by project financing deals organized by the Japan Bank for International Corporation (JBIC) and biggest commercial banks, leading to stable and competitive capitals employed.

Because LNG projects have been capital intensive and needed several years to construct, even after several years of conceptual and planning stages, long-term reliable sources of financing have been very important.

Several such project financing deals were concluded in 2014 for LNG projects, which were major factors of those project sanctions.

In addition to those familiar names in this business some new financial institutions are entering LNG project financings. Appetite from those Japanese banks is expected to be strong in the years to come. The loans provided by private banks are insured by Nippon Export and Investment Insurance (NEXI). Those financing arrangements ensure stable project development.

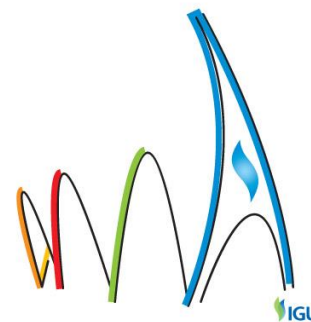
For those volumes allocated in proportion with equity participation, buyer-partners have certain degree of discretion in pricing the commodity. This type of flexibility is expected to have positive influence on other portions from the same project, as well as trends in the industry as a whole.

Another important aspect of changing trends in recent years has been a pursuit of introduction of different indices in LNG pricing - notably Henry Hub and other North American ones.

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Some indirect impacts had been briefly felt even before the recent wave of LNG export projects in the United States (notably regulatory approvals and project activities in 2014), as some volumes of LNG originally proposed to be sold into the United States had been diverted to the Asian markets - some of them were priced at a discount to the Henry Hub at their FOB points with additional transportation elements.

But in most cases it was intermediary players that pocketed arbitrage profits and those diverted cargoes did not translate into hugely more competitive prices in the end-use markets in Asia. The cargoes were priced arbitrarily referring to either NBP plus transportation elements or prevailing Asian long-term contract prices, rather than the Henry Hub.

From those LNG export projects in the United States, expected to become online from 2016, several Asian players have made long-term lifting commitments with prices linked to Henry Hub prices, rather than crude oil.

Some commitments have been made in the form of liquefaction tolling arrangements rather than straight-forward sale-and-purchase agreements (SPAs) at the planned plants, meaning that the offtakers are responsible in procuring feedgas and pipeline transportation to the plants as well as ocean transportation of resulting LNG.

From those LNG export projects planned in other countries, Asian LNG buyers also seek diversification in pricing, as well as more flexible terms and conditions.

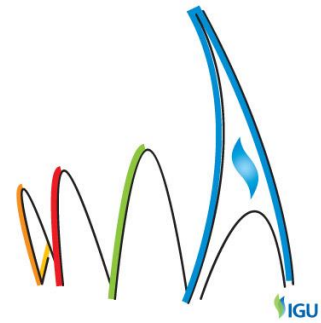
The G7 energy ministers' meeting in May and summit meeting in June 2014 confirmed their further efforts to promote flexible LNG markets, including relaxation of destination clauses and producer-consumer dialogue.

At the annual LNG Producer - Consumer Conference in November 2014 in Tokyo, as well as other international industry conferences - including the Gastech conference in March - the Japanese and other government officials and company representatives also called for greater flexibility in LNG trades.

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Many people in the industry used to say, especially until early 2014, that the LNG market would be tight until 2015. They often fail to distinguish between the global LNG market as a whole and the short-term LNG market. The notion of tightness itself may have had effects to raise negotiated prices. Because of this, the notion of market tightness is part of the structural problem of expensive LNG prices.

Such arguments of tightness of short-term LNG markets, often found in commercial media and sellers' comments, could have given undue supports to such LNG sellers, leading to unrealistically high offering prices.

The overall balance in the LNG market did not show any signs of tightness, even though some supply disruptions are observed from the Atlantic region producers. Lost LNG volumes in European markets in recent years have been more than offset by Russian pipeline gas supply, as well as reduction of overall gas demand.

Some decreasing liquidity of short-term LNG cargoes is sometimes observed leading to seasonal imbalances.

Even though major expansion is expected to begin, the past few years have been quite an unusual time of lower growth for the LNG industry caused by combination of factors of supply disruptions in some Atlantic region sources and more importantly disappeared LNG demand in Europe. Part of this demand destruction in Europe has been also caused by the illusive notion of LNG market tightness and higher prices.

Results

Later in this decade LNG from the United States is expected to start flowing into the Asian LNG markets. There remains uncertainty over whether it would lead to lower prices of LNG in the region, while it is certain that this would bring pricing diversification of LNG.

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When landed prices in Asia for LNG from the United States are expected to be more expensive than oil-linked LNG prices in Asia, some of the American LNG, or the gas before liquefaction, may be diverted to other markets, either in the United States or other LNG/gas consumers.

If persistently lower oil prices are also assumed, there could be a convergence of those LNG prices linked with oil and those determined according to gas indices. Resulting narrower bands of LNG prices and increasing liquidity out of more flexible lifting arrangements from the United States and other supply sources as well could lead to improved transparency and active trading in the Asian LNG markets. This would facilitate development of Asia's own active market places.

Conclusions

In conclusion, in order to mitigate expensive LNG costs, Japanese and Asian LNG players are trying to be more proactive in their procurement activities, notably in equity participation and acquiring volumes with competitive pricing and other conditions. And they should continue doing so. This is expected to lead to Asia's own competitive and transparent market place.

A larger and more flexible LNG market is expected with capacity expanding to 400 million tonnes per year globally by 2020. Demand for the fuel is expected to grow but with significant uncertainty. Therefore greater flexibility is not only expected but is necessary.

Although the market is accompanied with more uncertainty and is expected to be more difficult to manage, the greater market is expected to provide more reward. New reality of lower crude prices and market calls for more competitive LNG prices pose challenges - but they should be overcome through cooperation between parties.

References

"Significant events in the LNG industry in 2014 and their future implications" Hiroshi Hashimoto and Seishi Fukuoka, Institute of Energy Economics, Japan - IEEJ, March 2015