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JAPAN: DE-REGULATION, THE JAPAN FAIR TRADE COMMISSION AND TAKE OR PAY DISPUTES

1. INTRODUCTION

Historically, the Japanese gas and electricity markets could best be described as a collection of regional monopolies, each with its own energy champion (the “**Japanese Incumbents**”). In more recent times, the Japanese Government has determined that both the electricity and gas markets should be de-regulated and open to competition, and this process is accelerating.

In other jurisdictions (the US and the UK being excellent examples), de-regulation of the gas market has typically led to significant pain for the relevant incumbents, and in most cases, multiple arbitrations and disputes as the incumbents, having lost significant market share, seek to avoid making Take or Pay payments for gas that they no longer need.

Turning our attention to Japan, will the Japanese Incumbents lose significant market share and be forced into disputes with their LNG suppliers to resolve Take or Pay issues or will Japan manage an orderly transition to a competitive market? This paper looks at the potential impact of de-regulation on the Japanese gas market, the risks facing the Japanese Incumbents and some of the tools available to help them mitigate their potential exposure.

2. BACKGROUND FACTS

In Japan, 63%ⁱ of imported LNG is used for electricity generation. In 2016, which was the first year of full de-regulation of the Japanese retail electricity market, new entrants leapt to a 9.2% market share. In 2020, legal unbundling of the power transmission and distribution sector must take place. This will require the Japanese Incumbents to spin off their transmission and distribution businesses into separate legal entities, but it will not entail ownership separation. Therefore, the power transmission and distribution businesses spun off by the Japanese Incumbents are likely to remain under the control of the Japanese Incumbents as wholly owned subsidiaries. However, certain controls on conduct will be imposed, including measures to prohibit companies operating transmission and distribution businesses from entering

into certain types of agreements with affiliates which operate in the electricity retail business which are non-arm's length or that may limit fair competition.

As a result of amendments in 2015 to the Gas Business Act, de-regulation of the Japanese retail gas market commenced in April 2017 (although regulated tariffs have been maintained for small-lot users, which are to be subsequently de-regulated, depending on the status of competition in the market over a transition period) and a system for greater third party access to LNG import terminals was introduced. However, the rules concerning such third party access to LNG import terminals remain to be announced. The final phase of the de-regulation, to be implemented in 2022, is the legal unbundling of the pipeline networks of the Japanese Incumbents. Even with such legal unbundling of the pipeline systems, there may be some practical constraints on third parties seeking access, due to the fragmented pipeline infrastructure in Japan. Although there are various interconnection points, there is no national transmission system in Japan, but instead various regional networks which developed around LNG import terminals, based on the longstanding regional monopolies which had existed. Another factor which may affect the new entrants entering the market is the uncertain outlook for gas demand, pending more clarity as to when and how many nuclear power stations will restart.

To date, only five of 44 nuclear reactors throughout Japan have recommenced operations for power generation.ⁱⁱ If restarts continue to take place at the current schedule, the Institute of Energy Economics, Japan (“**IEEJ**”) predicts that ten units could be restarted by the end of 2018, generating up to 65.6 TWh of nuclear power and representing a 7% share of the country's power generation mix. In a high-case scenario, IEEJ estimates a total of 17 units being restarted by the end of 2018, generating 99 TWh of nuclear power representing an increase of more than 3% to 10.6% share of the country's power generation.ⁱⁱⁱ Assuming all else being equal, this would likely displace an estimated 6.4 MT to 10.8 MTPA of LNG generated power.

Nuclear power was one of the key policy issues ahead of the 22nd October Lower House election, with Tokyo Gov. Yuriko Koike stating in a news conference that her new party (Kibo no To) would aim to phase it out by 2030. In contrast, Prime Minister Shinzo Abe and his ruling Liberal Democratic Party view nuclear power as a stable source of energy and for some time have wanted to put more of the nation's idled reactors back online with current targets calling for an energy mix in which nuclear power accounts for 22% of the country's power generation mix, with liquefied natural gas at 27%, coal at 26%, and renewable energy at 22-24%.^{iv} The comprehensive Lower House election victory by the Liberal Democratic Party could result in it claiming to have a renewed mandate to restart the nuclear power plants, although vocal opposition from local governments and other local groups will remain as significant challenges to be addressed by the Liberal Democratic Party led government.

Currently, the LNG JKM Platts spot price is between (US\$1.68 - US\$2.04/mmBtu) lower (25.8 – 31.4% lower) than the average long-term LNG import price for Japan. This gives new entrants, who are buying short-term/spot cargoes a very significant price advantage in the downstream gas market compared to the Japanese Incumbents who are tied to long-term LNG purchases.

In 2016, Japan imported 83 MT of LNG, of which 15 MT (18%) was on a short term or spot basis.^v

3. DE-REGULATION OF GAS MARKETS – ANALOGY FOR JAPAN

While no two markets are identical, there remain a number of similarities between the current Japanese market and the UK gas market during its de-regulation in the 1990s:

- (i) each has a closed “island” market with no interconnection to other gas markets;

- (ii) prior to the market de-regulation, the incumbents were fully integrated gas companies operating regional monopolies (although, in the case of the UK, British Gas was a single monopoly, which facilitated a more rapid opening of the market following third party access being given to the infrastructure);
- (iii) each incumbent supplies to a range of industrial and domestic customers who pay different prices;
- (iv) the incumbents have a “social obligation” to ensure supplies during times of peak demand (typically during harsh winter periods, when domestic heating demand spikes);
- (v) the majority of gas supply was on long-term Take or Pay contracts; and
- (vi) gas and electricity de-regulation was conducted simultaneously in both markets.

Accordingly, analysing the de-regulation process in the UK gas market may give some useful indications as to what could happen in the Japanese gas market over the next few years.

3.1 Unbundling

In the UK scenario, competition in the gas market did not fully take off until British Gas was broken into three entities:

- (i) Exploration and Production (owning upstream oil and gas assets);
- (ii) Gas Retail (buying gas on a long- and short-term basis and retailing such gas to industrial and domestic consumers); and
- (iii) Transmission and Distribution (with Transco owning and operating the onshore gas transmission and distribution system on an open access basis for all shippers).

Prior to such break up, British Gas was able to cross subsidise different parts of the gas value chain to ensure it could compete in the market, and most importantly, use technical and operational arguments to frustrate the ability of new entrants to physically access the transmission system. Fundamentally, it was the development of Transco, and the imposition of the requirement for it to operate on a fully open access basis, fairly and equally for all customers (with a separate profit and loss account), that enabled the gas market in the UK to liberalise.

3.2 Incumbent’s Loss of Market Share

In 1992, British Gas supplied 70% of the Firm Industrial Market (high gas price industrial customers). However, by 1995, their market share had fallen to 10%. In 1994, British Gas supplied 90% of the Interruptible Industrial Market. Again, by 1995, British Gas’ market share had fallen to 10%.^{vi}

Within three years of the unbundling of Transco, British Gas had lost 33% of its domestic retail customer base to its competitors.^{vii} In all segments of the gas market, British Gas saw rapid, major losses of market share. The economic effect of this on British Gas was significant: the 1995 accounts show that £650 million had been paid for Take or Pay in the previous year and in 1996 British Gas had write-offs of between £740 million to £990 million to compete with lower gas spot prices.^{viii}

British Gas was impacted in three significant ways:

- (i) new entrants targeted high value markets first;
- (ii) it was left over-supplied with gas and incurred significant Take or Pay obligations; and
- (iii) its weighted average cost of gas (“WACOG”) was significantly higher than the spot prices available to its competitors, which meant it was chalking up losses on many of its gas sales (while simultaneously losing high value markets).

Given the combination of rules for the implementation of the third party access regime for LNG import terminals are still being awaited, the delay of the commencement of third party access to the pipeline system until 2022, and Japan’s fragmented pipeline infrastructure, it is possible that the Japanese Incumbents will have more time to adjust to and mitigate the impact of de-regulation.

3.3 Pipeline vs. LNG Supply

One big difference between the UK and Japanese gas market is that the former is supplied by pipeline gas and the latter is supplied solely by LNG.

Typically, a British Gas long-term gas sales agreement contained a headline Take or Pay level of 80-85%, which could be reduced further through judicial use of maintenance deductions and included firm make-up gas rights. This enabled British Gas to weather a substantial loss in market share before its Take or Pay obligations were triggered and they had certainty that they would get their make-up gas in the future.

In contrast, long-term LNG supplies to Japan typically have a 100% Take or Pay level with very limited rights to exercise Downward Quantity Tolerance (“DQT”) in the region of 5-8% of the Annual Contract Quantity (“ACQ”), with only a reasonable endeavours obligation on the seller to deliver make-up LNG. Consequently, from a Take or Pay perspective, loss of market share for the Japanese Incumbents could be significantly more onerous, unless they can mitigate their over-supply of LNG in different ways.

4. MITIGATION OPTIONS FOR JAPANESE INCUMBENTS

Extrapolation, based on the analyses of the other gas markets which have undergone de-regulation, indicates new entrants may eventually take a significant portion of the Japanese gas market. In addition, the issues faced by the Japanese Incumbents may be further exacerbated if more Japanese nuclear power stations are switched back on in any major way. In light of this potential scenario, how should the Japanese Incumbents manage their LNG supply and their loss of market share in a potentially shrinking gas market?

To mitigate the LNG over-supply, the Japanese Incumbents may need to either reduce their LNG purchase obligations to match their demand or reduce their LNG WACOG in order to be as competitive as possible in the gas market (probably both). Further, depending on the extent of their loss of market share, each Japanese Incumbent may seek to rely on one or more of the following mitigants:

- (i) **Reduce Short-Term and Spot Purchases:** The data for 2016 shows that 18% of the LNG delivered to Japanese buyers was bought on a short-term/spot basis and a majority of such purchases must have been executed by the Japanese Incumbents. By cutting back on spot purchases, the Japanese Incumbents will reduce their likelihood of incurring Take or Pay payments under their long-term contracts. However, as spot prices are currently lower than the prices in their long-term contracts, this will increase their WACOG and

make the Japanese Incumbents less competitive in the downstream market as compared to the new entrants who will be purchasing LNG at the lower spot price.

- (ii) **Exercise DQT Rights:** The Japanese Incumbents can seek to exercise their maximum DQT under their respective long-term LNG agreements to reduce the volume of LNG which they are required to purchase.
- (iii) **Request for Price Review:** If a Japanese Incumbent can decrease its WACOG, it will be able to compete more effectively in the gas market and is therefore likely to lose less market share. If the relevant LNG SPA includes a price review clause, then it is quite likely that a price review will be called for. However, the sellers of LNG to these Japanese Incumbents are unlikely to quickly agree to the lowering of prices and therefore these price reviews may need a dispute resolution process to be resolved. The time required to resolve any price review disputes will have market timing implications for the Japanese Incumbents.
- (iv) **Lower Prices:** Similarly, a Japanese Incumbent can attempt to negotiate for lower prices with its LNG sellers under its long-term LNG agreements to reduce its WACOG. However, in an environment of historically low LNG prices, it is unlikely that LNG sellers will be willing to reduce their LNG prices further without some other form of compensation (e.g. additional future LNG sales volumes) and the time required to negotiate a revised price will also have market timing implications for the Japanese Incumbents. However, it is anticipated that securing price reductions for existing long-term LNG SPAs will form a key element of any negotiation to extend or replace other long term LNG SPAs that are nearing expiry.
- (v) **Lower ACQs or Increase DQT:** If the Japanese Incumbents are able to negotiate with their respective LNG sellers for a reduced ACQ or a right to exercise an increased volume of DQT, this will aid in relieving their exposure in relation to Take or Pay payments. Unfortunately, in the existing market where there is an oversupply of LNG, sellers are unlikely to agree to a reduction of their sales volumes unless they are compensated in some way other way (e.g. additional future LNG sales volumes). Again, it is anticipated that securing greater DQT flexibility for existing long-term LNG SPAs will form a key element of any negotiation to extend or replace other long term LNG SPAs that are nearing expiry.
- (vi) **Implementation of Unbundling:** The Japanese Incumbents control the LNG import and distribution networks in each of their regions. In most markets which have experienced de-regulation, the speed with which new entrants acquire market share usually hinges on how quickly this “natural monopoly infrastructure” becomes accessible to third parties. This unbundling process is complex and can be significantly slowed with the incumbent raising technical, operational, commercial and legal issues that must be resolved prior to the liberalisation of the market. This process could result in the Japanese Incumbents having additional time, even after the implementation of the legal unbundling of the distribution infrastructure (in 2020 for the power transmission and distribution sector and in 2022 for the gas pipeline sector) to manage their LNG supply portfolios and to reduce their exposure to Take or Pay issues.
- (vii) **Exercise Diversion Rights:** While many of the long-term LNG contracts entered into with Japanese buyers have limited or no diversion rights, the recent ruling by the Japan Fair Trade Commission (the “**JFTC**”) determined that restrictions on diversions are, by their nature, anti-competitive and therefore illegal (see our article on the [JFTC Survey of LNG Trades](#) for further details).

In light of the JFTC Ruling, the Japanese Incumbents are likely to be emboldened to exercise diversion rights (whether granted under their LNG supply contract or assumed in compliance with the JFTC ruling) to move volumes of LNG out of the Japanese market to other areas where there is growing demand (e.g. China, India

and emerging Asian countries). Bearing in mind the limited rights to Make-up LNG under most of the long-term LNG contracts entered into by the Japanese Incumbents and the potential time delay before Make-up LNG is taken, sometimes it may even be more economically viable for the Japanese Incumbents to sell these diverted cargoes at a loss rather than to make the payments due under their Take or Pay obligations and then take the risk surrounding the receipt of the corresponding Make-up LNG.

- (viii) **Develop New Markets:** Currently, the abundance of LNG and corresponding low LNG prices has encouraged many new buyers to emerge and new LNG markets to arise, particularly in the LNG to power sector. China, India and other developing countries have been forecast to import more than 50% of all LNG by 2022 and the number of LNG importing countries, which has already risen from five in 2005 to 39 in 2016, is envisaged to reach 48 by 2022.^{ix} However, many of the new buyers in these countries lack capital and LNG industry experience and are therefore seeking overseas investors and lenders to help develop their projects. Many of the Japanese Incumbents (who are highly experienced in the LNG industry and have access to capital) have been actively seeking new Asian LNG import opportunities, with projects underway or being assessed in Bangladesh, Indonesia, Pakistan, Thailand, Myanmar and Sri Lanka. Further, to support these developments the Japanese Government has recently announced^x a US\$10 billion fund to assist with the development of LNG infrastructure in Asia. The Japan Bank for International Cooperation (“**JBIC**”) will be a key institution for the implementation of the initiative. In addition, insurance provided by Nippon Export and Investment Insurance (“**NEXI**”), will be important. Notably, NEXI will provide insurance for projects where no LNG is destined for Japan and has recently announced that it is prepared to provide insurance cover for sub-sovereign debt, which could be particularly important given that the governments of newly emerging importing countries are becoming less willing to provide government guarantees in respect of the obligations of government owned entities.^{xi}

By participating in the development of LNG import terminals, gas fired power plants and associated facilities to help meet rising energy demand in the emerging markets (facilitated by the initiatives offered by JBIC and NEXI) there will be opportunities for the Japanese Incumbents to seek to exercise diversion rights under their LNG contracts to supply these new markets with LNG that previously had been destined for Japan.

5. FUTURE SPECULATION

If the Japanese Incumbents suffer a significant loss of market share to new entrants, they will need to try to reduce their WACOG and to lessen their LNG purchase obligations to remain competitive. The impact of the deregulation process may be compounded for the Japanese Incumbents if there is a substantial restart of the nuclear power stations throughout Japan.

Faced with these market issues, the Japanese Incumbents will need to consider various simultaneous mitigation strategies including:

- (i) replacing expiring long term LNG SPAs with increased reliance on short-term markets to manage their supply portfolios;
- (ii) vigorously pursuing downward price reviews whenever the opportunity arises;
- (iii) seeking improved DQT flexibility and lower prices in existing long-term LNG SPAs when negotiating for extensions or replacements of other long-term LNG SPAs that expire in the near term;

- (iv) actively seeking diversion opportunities (even if this is not permitted under their long-term LNG SPAs, on the basis of the JFTC ruling) combined with creating alternative LNG demand, such as by investing in LNG import terminals and LNG to power projects in emerging countries with increasing energy demand; and
- (v) utilising an aggressive management strategy to reduce Take or Pay commitments.

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ⁱ 2015 statistics available here: http://www.iberglobal.com/files/2017/japon_eia.pdf

ⁱⁱ As at August 2017, five Japanese reactors – Sendai units 1 and 2; Takahama units 3 and 4; and Ikata unit 3 – have been restarted under new safety regulations. Another 19 reactors have applied to restart. The IEEJ notes that an additional seven units have met the safety standards and are being prepared for restart. (<http://www.world-nuclear-news.org/NP-Japan-to-benefit-from-reactor-restarts-says-IEEJ-0308174.html>)

ⁱⁱⁱ <http://www.world-nuclear-news.org/NP-Japan-to-benefit-from-reactor-restarts-says-IEEJ-0308174.html>

^{iv} <https://www.japantimes.co.jp/news/2017/09/30/national/politics-diplomacy/nuclear-energy-policy-emerges-key-difference-abe-koike/#.WeV3XFuCzDA>

^v GIIGNL Report.

^{vi} Today's Glut and Yesterday's Contracts: The British Gas Predicament (M Stoppard, Oxford Institute for Energy Studies).

^{vii} British Gas Case Study (Peter Crush, March 2002).

^{viii} Today's Glut and Yesterday's Contracts: The British Gas Predicament (M Stoppard, Oxford Institute for Energy Studies).

^{ix} Dr. Faith Birol, (IEA) at the LNG Producer-Consumer Conference in Tokyo on 18 October 2017.

^x Announcement by Mr. Hiroshige Seko, Minister of Economy, Trade and Industry at the LNG Producer-Consumer Conference in Tokyo on 18 October 2017.

^{xi} Announcement by Mr. Kohei Okada, Managing Executive Officer of NEXI at the LNG Producer-Consumer Conference in Tokyo on 18 October 2017