

**6th World LNG Series
Asia Pacific Summit
Wednesday 24 September 2014**

The changing LNG Demand and Supply Outlook
Jérôme Ferrier
President IGU

Allocated title: 15 minutes

The Hon. Nixon Philip Duban, MP, *Minister for Petroleum and Energy, Papua New Guinea*;
Mr Seah Moon Ming, *Executive Director & Group CEO, Pavilion Energy, Singapore*;
Ms Pat Roberts, *Associate Director Gas, CWC Group Ltd*;
Mr Jonty Shepard, *COO LNG, BP*;
Mr Stephan Roeper, *Vice President LNG Marketing, Exxon Mobil Asia Pacific Pte. Ltd*;
Mr James Mac Taggart, *General Manager New Markets Asia and MENA, Shell*;
Mr Philip Olivier, *President GDF Suez LNG*;
Distinguished Panellists and Delegates;
Ladies and Gentlemen:

It is a great honour and privilege for the *International Gas Union* and his President to have been invited to present the views of the organization on the dynamics of global LNG markets at the opening plenary session of the *Asia Pacific Summit*, within the *6th World LNG Series of CWC*, in the beautiful and successful city-state of Singapore.

IGU is representing the worldwide gas industry, with 83 member countries, among which 14 nations of the Asia Pacific region, and covers 95 % of the natural gas and LNG global market. This conference is an event of outstanding importance for IGU, since Asia has overtaken Europe as the world's largest gas importer, accounting for 46 % of global LNG trade. We should also remind that Singapore shelters Southeast Asia's largest LNG terminal, with a capacity of 6 million metric tons per year, with a further expansion of its facilities planned to 9 million tons by 2017.

The Jurong Island LNG terminal, which commenced operations in May 2013, is the only terminal in Asia that can reload cargoes from storage, thus supporting the emergence of Singapore as a major Asian LNG trading hub and marketplace. The *International Energy Agency*, in a report issued in 2013, mentions Singapore, with its unique location between producers such as Indonesia, Malaysia, Australia, the Middle East countries and consumers such as China, India, Japan, Korea and Thailand, as best placed to become a

major regional LNG hub, adding this new activity to its present role as an oil-trading centre.

Slide 1

Global natural gas demand is expected to increase by 20 % over 2013-2019, with Asia, primarily China, growing the fastest, while European demand is expected to stay below 2010 levels. Global gas demand grows by 500 Bcm over the period, which is equivalent to EU's natural gas consumption in 2013.

Slide 2

The demand in Asia-Pacific gains almost 200 Bcm between 2013 and 2018, China becoming the largest gas consumer in the region and almost doubling its consumption between 2010 and 2018.

Slide 3

Under IEA's most recent scenario, Asia Pacific is keeping its position as main LNG importer to the end of the decade, while Europe's LNG imports move downwards in the next couple of years before recovering. Other regions play a limited role in terms of LNG imports, but they can add upward pressure on prices when markets are already tight, which is presently the case and is expected to remain such until the end of this decade.

Slide 4

Twelve LNG projects are under construction representing over 130 Bcm per year. However, recent history shows that LNG liquefaction plants are often running behind schedule.

Slide 5

LNG currently massively dominates natural gas trade in Asia Pacific, pipeline trade, although in constant increase, not exceeding 18 % of trade supplies in 2017. Therefore, Asia Pacific's role in the dynamics of LNG markets is clearly an essential factor.

Slide 6

LNG market has tightened since 2011, as Asian demand growth is outpacing supply. Global LNG shipments have reached a plateau since 2011, pending the new supplies expected mainly from Australia. This tight supply situation will inevitably impact on the trend in LNG prices.

Slide 7

However, the North American shale gas boom has substantially changed the landscape, shifting from an LNG import play to an LNG export one. The current North American LNG cost, valued with gas feedstock at Henry Hub (HH) prices, presents a significant discount to oil indexed LNG prices, driving Asian buyers to seek some exposure to non-oil price indexation. In early 2012, Indian and Korean buyers agreed to purchase a total of 12 Bcm per year from the US Gulf Coast, starting by 2015/2016. Several Japanese trading houses and utilities followed by entering three US LNG export projects, namely Cameron LNG, Cove Point LNG and Freeport LNG, adding up over 20 Bcm per year.

Slide 8

In economic terms, the Asian destination seems more attractive for US LNG producers than the EU's one. For the same 5 to 7 US \$/MMBtu Henry Hub (HH) medium term price assumptions, the break-even price delivered to the natural gas grids is in the range of 9 to 11 US \$/MMBtu for Europe, a price level hardly competitive at NBP and TTF market places conditions, while it is in the range 10 to 14 US \$/MMBtu for Asia, a price quite competitive with oil indexed LNG supplies at current oil prices.

However, LNG exports from North America to the overall Asian markets, even if all sold using gas-togas hub pricing, will not be by itself sufficient to fundamentally impact the oil price linkage in Asia Pacific. Even if we assume that the US LNG exports to Asia could reach a level of 50 Bcm per year in 2025, this volume would only represent 14 % of the total LNG Asian demand. Most of the new LNG supply contribution will come from Australia, accounting for 25 % of the total Asian demand in 2025.

Furthermore, it is likely that the first East African LNG exports contracts, from Mozambique to Asia will be based, at least partially, on traditional oil price indexation, so as to improve the bankability of the new LNG projects and also as, unlike in North America, there is no relevant downstream gas market reference in the export location.

Slide 9

The sharp inflation in the unit cost of liquefaction projects between 2008 and 2014, a period during which oil prices have been stagnating, is hampering the decision-making process of the new grassroots Eastern African and Eastern Mediterranean LNG development projects. Financing these multi-billion Dollars projects will require long term volume commitments from LNG buyers and a fair and equitable pricing reference ensuring both the competitiveness of LNG on the final markets and a sustainable economic outlook for the sellers.

Slide 10

The global intercontinental gas trade market evidences large structural differences between regions in long-term contract pricing mechanisms, which explain wide discrepancies in the delivered prices. Asia remains a predominantly oil-linked LNG market, Continental Europe is a hybrid model with coexistence of indexation on oil-products and hub pricing, while the UK and North America rely fully upon gas-on-gas hub pricing, respectively at NBP and Henry Hub (HH) market places. At the same time, LNG trade remains predominantly long-term in nature, spot cargos accounting only for 28 % of the global LNG trade in 2013, a volume not large enough to foster LNG regional price convergence across the board.

Side 11

As a result, we observe large discrepancies between average delivered prices in LNG importing countries, Asian prices being almost at parity with oil prices while Continental Europe, also much dependent on pipeline gas and LNG imports stands at a halfway between the prices prevailing on the fully self sufficient North American gas markets and those of the Asian markets.

IGU thinks that it will take about a decade for Asia to develop a regional gas-on-gas market pricing mechanism. We should remind that it took almost 15 years to Continental Europe for reaching a hybrid stage of gas pricing, with oil-related long-term contract pricing still representing predominantly the bulk of the supply. The transition from oil related pricing to market pricing in Europe is a staged process, through a succession of renegotiations of take-or-pay contracts between suppliers and buyers, which have already resulted in the inclusion into the pricing formula of a share of market prices –spot and future prices-, close to 50 % in 2014.

Slide 12

IGU thinks that Asia is at the brink of a very interesting and exciting moment in time. Driven by the shale gas revolution in North America, we are seeing growing North American LNG volumes targeting Asia Pacific. The Asia Pacific LNG market is gently becoming a buyer's market, as the prospect for gas demand in Europe is gloom for the long-term. East Africa and Russia will be other new options for LNG hungry Asian markets. However, IGU thinks that the Asian LNG market is only at an early stage of the transition from oil-related to hub pricing of LNG and that, as we have been observing it in Europe, a hybrid pricing mechanism will prevail during the transition.

How quickly spot cargo liquidity will be sufficient to allow for a reliable reference price is still uncertain, both in extent and timeframe. All this suggests that the Asian LNG market is still at the beginning of its transition to gas-on-gas pricing for imported gas and LNG. However, IGU firmly believes that this model shall eventually prevail while we will observe, in parallel, the emergence of a global LNG pricing, thus mirroring the history of the oil market.

Slide 13

Once again, I wish to thank the CWC Group for having allowed me to present on this interesting subject and I would also like to invite you all in Paris in June 2015, for the next *World Gas Congress* of IGU where these important issues and many other gas and LNG matters will be widely debated and reviewed at the highest level of our industry.

