IGU

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Overlooking 15 years of gas deregulation in the EU: consequences on security of supply, infrastructures and pricing
Jérôme Ferrier
President of IGU

Allocated time: 30 minutes

Mr. Alfred CHAN, *Managing Director, the Hong Kong & China Gas Co. Ltd*
Mr. ZHANG Guobao, *Former Vice Chairman of the National Development and Reform Commission (NDRC), China*
Mr. John DEUTCH, *Emeritus Professor MIT, former Undersecretary of U.S. Department of Energy, member of the National Petroleum council and the Secretary of Energy Advisory Board U.S.*

Distinguished Panelists and Delegates
Ladies and Gentlemen

It is a great honor and privilege for the *International Gas Union* and his President to have been invited to present the views of the organization on at the first keynote session of the GASEX 2014 conference, in the beautiful and vibrant city of Hong Kong.

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IGU is representing the worldwide gas industry, with 91 member countries, among which 14 nations of the Asia Pacific region, and covers 98 % 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. Furthermore, as presented just before me by its Managing Director Alfred CHAN, The *Honk Kong & China Gas Company* stands as a perfect illustration of the theme of the conference, namely "*Advancing the Gas Value Chain ".*

With a pipeline network of more than 3500 km and supplying more than 1.8 million customers in Hong Kong, the company has moved into the gas business in mainland since 1994. The company has now a large series of diversified activities, including piped city-gas projects, upstream and midstream developments, natural gas filling stations, as well as new energy exploration and utilization ventures, across 22 provinces, municipalities and autonomous regions throughout the country.

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I have been requested to speak about the ongoing deregulation process of the EU gas market and its consequences on three main issues, which are the security of supply, investments in infrastructures and pricing of gas and LNG. This is a complex subject, but it may be of interest for assessing future changes in the organization n of the gas markets in Asia, since both Europe and Asia are highly dependent upon natural gas and LNG imported resources for their development, and therefore share comparable constraints and opportunities.

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Prior to the deregulation of the EU energy markets, the gas industry was largely based on a contractual scheme ensuring the apportionment of risks between an oligopoly of producers and a small number of national utilities, each of them holding a monopoly on their respective national markets.

This organization allowed for an efficient and well-balanced mitigation of the risks inherent to the financing of investments and the bi-lateral contractual commitments required at all levels of the gas chain:

- The *"volume"* risk was entirely born by the utilities. However, buyers had an excellent visibility on their own market's growth potential, since they stood in a monopolistic position, the only competitors being alternative sources of energy, essentially petroleum products and electricity.

- The *"price"* risk was entirely born by the sellers, who committed themselves to deliver natural gas on each market at competitive pricing conditions, by reference to a basket of alternative energies. Such pricing conditions took into account transportation costs between the supply point of gas at EU's border and the delivery point to final markets. The composition of the reference basket - and therefore gas prices and indexation - was periodically updated to take into account the changes in the environmental regulation, and the emergence of new petroleum products with low and very low sulfur content.

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As the export prices for gas were based on the oil-related competitive conditions on each of the final markets, the export prices at the border were netted back by subtracting the cost of shipping the gas; in other terms, the longer the distance, the lower the border price. The system, also named as *"Netback pricing"*, formed the core of the *Take-or-pay* contracts, which included *Destination clauses* that were imperative to ensure that gas with a lower export price at the border destined for more distant markets could not be used *to* undercut higher-priced gas on markets closer to the source.

This system was adopted for all long-term contracts with Russia, Norway, Algeria and other exporting countries whether for pipeline gas or under LNG form. In post-war Europe, it was a *"win-win"* play: on the one hand, exporters could diversify their pattern of outlets while remaining competitive on each of them; on the other hand, importers could also diversify geographically and strategically their supply sources, at equivalent pricing conditions, notwithstanding their respective remoteness.

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The introduction of competition on gas markets through deregulation was intended to substitute a pricing based on offer and demand – or *gas-to-gas*- to the historical system in which the price of natural gas was tied to petroleum products prices.

Deregulation has resulted in the deletion of national monopolies for the importation and commercialization of natural gas. Only natural gas transportation and distribution,, which are considered as *"natural monopolies,"* remain as monopolistic activities, and are heavily regulated.

Several structural measures taken to deregulate and introduce competition on the gas markets, have resulted in a quite substantial reshaping of EU's gas chain, with two main consequences:

- The link between sellers and buyers under the *take-or-pay* contracts has been significantly altered, since the producer no longer has a guarantee that the buyer will cover the volume risks and the buyer has lost the benefit of *netback pricing*, since the producer has the faculty to sell on the highest bidding markets;

- The uncertainty on both the origin and the volumes of natural gas flows in large pipelines shipping gas from producing countries and in LNG terminals, fostered by the termination of *Destination clauses*, has created a need for greater capacity in the transportation networks and LNG facilities, with an over-capacity reaching circa 100 to 150% of the EU's market requirements.

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At this stage, the deregulation of markets and the *gas-to-gas* competition appear to have been quite favorable to EU consumers. One might, however, ask whether the lower price levels that have prevailed on the EU market places since 2008, is the result of the market deregulation or rather, is attributable to the "gas bubble" generated by a massive use of cheap imported coal in substitution to natural gas for power generation in the EU and to the economic downturn climate in Europe.

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Market deregulation can, therefore, be said to raise two fundamental questions, the answer to which will remains uncertain for quite some time:

- How will countries that depend massively on imports for their natural gas and LNG supply - official forecast assuming a 70% dependency for Europe in 2030- manage to secure their supply, in light of the weakening of the ties between suppliers and consumers and the strains placed on investment financing by the increased volume and price risks throughout the gas chain?

- Will the long-term benefits of *gas-to-gas* competition prove sufficient to outweigh the additional costs for the industry created by the variability and uncertainty of flows throughout the natural gas supply chain?

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Regarding security of supply, it is obvious that the suppression of *destination clauses* has triggered arbitration by LNG producers in favor of the premium Asian markets that offer higher prices than EU markets. The price differential has remained within a range of 5 to 7 UD $/MM Btu during the past three years.

Thus, the balance between pipeline gas and LNG in the EU supply mix has been significantly modified, a situation that entails potential geopolitical risks, for instance in the light of the crisis between Russia and Ukraine.

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The important volume of unused capacity in EU's LNG terminals should in theory constitute a back up in the event of a disruption of pipeline has supply; however, due to the relative shortness of LNG spot cargos available during the winter season, it might be rather difficult to re-route LNG towards Europe at a short notice.

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The EU deregulated gas model rests upon a series of balancing zones with *entry-exit* tariff systems allowing for the creation of virtual trading points. In each of the balancing zones, a series of investments have been developed on the gas grid to ensure a reliable gas delivery to the final consumers notwithstanding the uncertainties in the gas flows.

The *Gas Target Model* (GTM) set forth by the EU Commission for 2015, has required the development of cross border pipeline infrastructures, with a view to promoting the flow of bundled transmission capacities between balancing zones, each of them having a volume of physical consumption in excess of 20 Bcm/year. The full fledge GTM should be achieved by the end of 2015, governed by a set of common operational rules encompassed in a *European Network Code.*

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A review of the bulk gas prices that have been prevailing in the EU during the 2009 to 2014 period evidences that spot prices are some 12 to 15 % lower than those of the long-term oil related prices of *take-or-pay* contracts.

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A comparison between the US and EU structure of the gas supply and demand sides evidences a much higher concentration of actors in EU’s case. This entails a higher risk of lack of transparency or market manipulation, which is another area of concern for EU authorities. The REMIT regulation introduced in 2011 aims at mitigating such risks by:

- defining market abuse, in the form of market manipulation, and insider trading, in wholesale energy markets;

- establishing a new framework for the monitoring of wholesale energy markets to detect and deter market manipulation and insider trading.

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Altogether, the comparison between the EU and US gas markets, althouh quite comparable in terms of physical consumption, evidences that Europe has still a long way to go before reaching the same level of traded volumes, wich means that significant progress have to be made on EU'side in terms of lisuidity on the market places.

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From EU's experience,IGU thinks that it will take more than a decade for Asia to develop a regional *as-on-gas* market pricing mechanism. You have noticed 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.

I am aware that everything goes faster in Asia than in the rest of the world, but it may also take some years for Asian hubs and market places to gain full trust of Asian gas stakeholders – both sellers and buyers- to a degree where they will feel comfortable using market pricing as a benchmark for long term LNG and pipeline supplies. According to the *Oxford Institute for Energy Studies*, the transition process may last until the first years of the next decade.

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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 gas 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 and pipeline supplies to the hungry Asian markets. However, IGU thinks that at this point in time, it is in the interest of Asian countries to drive their own deregulation process having in mind a feedback from the EU's experience.

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Once again, I would like to thank the organizers of the GASEX 2014 conference for having allowed me to present on this interesting theme 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.