

## IENE International Workshop

### Session II: Global and Regional LNG market perspective

#### Presentation by Max Vauthier, Managing Director, LNG Value Ltd

The global LNG market has significantly changed in the last three years and is due to experience a further upheaval in the following years. In order to discuss this evolution, we can analyse separately three distinct periods, ie:

- 2014 to 2016
- 2017 to 2020
- Post 2020

#### Period 2014 to 2016

During the past 3 years, which have followed the Fukushima exceptional period, the main (partly correlated ) drivers have been: 1/ the steep drop in the price of crude oil, impacting prices of LNG via long-term oil-indexed contracts, and 2/ the emergence of US shale gas which has reversed US LNG imports into US LNG exports.

As a result, the global and regional LNG prices have been pushed to low levels. Considering also the collapse of LNG freight rates which have facilitated inter-basin trading, LNG regional prices have tended to converge to parity at these low levels, with some discrepancies due to seasonal demand variations and other region-specific factors.

Meanwhile, the rapid de-correlation between oil and gas hub prices has led many oil-indexed long-term LNG contracts to diverge from market pricing. Furthermore, the introduction of new untested price references such as Henry Hub have taken time to be accepted by major buyers. This has led to a stall in the signature of new long-term contracts worldwide and the rapid increase of spot/short term contracts (up to a level of about 30% of total trade), also facilitated by an over- confidence among many buyers that high LNG availability and low prices were there to stay for a long period of time.

The consequence of this situation has been the rise of: a/ global LNG traders who took advantage of short term trades and arbitrage, and b/ global LNG portfolio players who are in a position to take part of the risks resulting from short to medium term contracts and from different price indexations.

Purchase pools have also been created in this period (such as JERA in Japan) in an effort to get better long term commercial terms from producers.

Conversely, ship owners have pooled their fleets (such as in the “Cool Pool”) in order to try to generate higher revenues in the spot/short term market.

From an investment standpoint, the stall in signature of long term supply contracts (especially towards the end of the period) and corresponding reduction in finance collaterals, has led to very few new project FIDs being concluded, both for liquefaction and receiving terminals. New orders for LNG carriers have also been dramatically reduced. The only area of major growth has been in the FSRU/FSU segment which appealed to emerging countries as a quick (and temporary) fix to their mainly seasonal power shortages, taking also advantage of low spot prices.

The existing regasification capacity in Europe has been very under-utilized (at levels below 20%), giving to LNG producers a false sense of security for access to European markets (most of this capacity is in fact committed long-term by users who are not prepared to relinquish it to third parties). An interesting development however has been the increasing utilization of European LNG terminals for commercial purposes (re-loading of cargoes, commercial LNG storage, additional stations / berths for loading of trucks and small LNG feeder vessels / bunkering barges).

### Period 2017-2020

This period will be driven mainly by: a/ the full impact of liquefaction plants coming on-stream mainly in the US and Australia, a significant portion of which have no pre-determined market / customers, and b/ political and geopolitical factors. The latter have emerged recently and are a new factor in global LNG trades. Examples are the recent spat between Qatar and Arab Gulf countries, the priority given in Australia to domestic gas requirements versus LNG exports, the bilateral agreements negotiated between the US on one side and China, India, Korea on the other side. These can have a profound effect on trade routes and can disrupt the balance and convergence of inter-basin and inter-region prices seen in the previous period.

Overall, the excess LNG supply is expected to continue and deepen as demand will not be able yet to catch up with increased supply. This will accelerate discussions for a renegotiation and “clearing” of previous long term contracts

(even before their natural expiration) and conversion into new medium-term flexible and gas-Hub indexed contracts. This period will also see the emergence of new regional LNG Hubs based on existing gas Hubs (eg: US Gulf) or on stand-alone LNG Hubs in places such as Singapore and the Middle East. The increasing liquidity on these Hubs will greatly facilitate the signature of medium to long term LNG supply contracts. Also, there will be a “streamlining” of trade routes as destination clauses are gradually removed by producers and buyers, and deviations become more common.

Meanwhile, spot/short term trading is expected to continue unabated, enhanced also by the political/geopolitical instability and re-routing of cargoes. New traders could also emerge in the global LNG markets, including in particular the National Oil Companies (NOCs) such as Qatar and mid-stream infrastructure developers and shipping companies.

A gradual recovery in Final Investment Decisions for new liquefaction could take place in that period thanks to buyer’s requirement for less reliance on volatile short term markets and acceptance of new contractual terms and Hub/price references (acceptable from a project financing standpoint). This will be the case in particular in Africa for certain large and medium-sized FLNG projects, which however would reach the market only by the mid 2020’s.

Overall, this period could be particularly disruptive for global LNG markets, with high price volatility and actions dictated by the objective of gaining market share. This could potentially lead to a price war and investment decisions based on non-economical criteria. Equally, this period will be transformative as it will clear the past arrangements between producers and buyers and pave the way for alternative contractual schemes authorizing new investments along the LNG chain.

### Period post-2020

Although it is difficult to make predictions for that period, the current trends provide us however certain clues as to what that period could look like.

The main driver of that period will probably come from the full impact of gas price competitiveness and environmental policies, leading to a significant growth in consumption in the power, transport and industrial sectors as gas

displaces coal and liquid fuels. The other driver will be the increased transparency and liquidity of the LNG market resulting from the development of regional gas/LNG Hubs and the increased role of Exchanges around these Hubs for price discovery and spot/futures trading.

As a result, a better convergence of global LNG prices could be achieved, together with the co-existence of regional distribution gas/LNG Hubs. In that period, we could see the emergence of new players in regional LNG distribution and bunkering.

The stabilization of the market and enhanced transparency and liquidity of the LNG markets will allow the financing and construction of new projects to meet the additional demand. On the production side, projects could be focused on the development of mid-scale Floating LNG for stranded gas reserves, while on the receiving terminals a shift could take place towards permanent mid-scale onshore terminals (to the detriment of temporary FSRUS/FSUs ) and satellite / bunkering terminals for regional/local distribution.

### East Med regional market

During the past few years (period 2014 to 2016), the East Med region has been very active on two fronts: a/ exploration, which has already yielded major results and remains promising for additional discoveries, and b/ the signature and early construction of new regional and transit gas infrastructure such as the TAP and the expansion of the Revythoussa LNG terminal.

These drivers should continue in the period 2017 to 2020, with the confirmation of gas reserves and production from previous discoveries in Cyprus, Israel and Egypt particularly and the possible FID and construction of new infrastructure (new LNG terminals in Alexandroupolis and Krk, IGB, reinforcement of national gas networks and inter-connections in the Balkans region, LNG distribution / logistical chains, etc). While gas exploration /production will be led mainly by IOCs, infrastructure projects will be mainly driven by governmental bilateral or multilateral/regional agreements and will be funded to a great extent by EU funds.

With important pre-requisites (large LNG production center, important gas consuming region, significant regional, transit and distribution infrastructure ), the East Med region as a whole could become post-2020 one of the major

gas/LNG Hub. This will however be dependant on the political will of the nations to cooperate in developing jointly this important asset. In order to weigh on the global markets, it will be necessary to have both the infrastructure and trading tools ready by 2020 in order to be concurrent with developments in other parts of the world. Alternatively, the region could be left to the influence of other major regional LNG Hubs which would be ready by that time.

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