

**Cripps Sears & Partners in Partnership with Tellurian Inc.  
LNG Leaders Forum – London – November 2018**

Introductory comments that this is the 6<sup>th</sup> edition of this event, the first being in March 2016 and there is an air of optimism in the LNG markets where we are seeing consistent gas prices at levels that are creating opportunity for action, strong charter rates and new markets for LNG being opened up by the FSRU segment – which is now the 4<sup>th</sup> largest LNG market. There are of course some complications being created by Sino/US trade relationships and we should take care to observe that a high oil price flatters everything – let's not be deluded that it is here to stay, cycles are an inevitable constant.

**Affordable Energy**

Supply constraints and a (too) high gas price will destroy demand and push the generation mix back in favour of coal (except where non-price drivers are relevant e.g. China and social cost of pollution). There is a tipping point. For example, India appears to have a \$8 price at delivery point ceiling. It is also noted that the great opportunity in India is challenged by an attitude of entitlement rather than a market fundamental led negotiation, the way LNG is bought and sold is different.

**Sino/US trade**

In summary – tariffs on steel and tariffs on imported LNG into China. Interestingly in the recent US mid term elections, trade war was not a campaigning issue. Democrats are not challenging on this as ultimately it is so far appearing to benefit the US.

The brinkmanship that has so far characterised the trade war has reached an end, there are no more tariffs that can be sensibly applied and the view at this roundtable was that the time has now come for both countries to now figure out how they will move forward under the new tariffs. The market is developed enough that they will adjust. It is however having some direct impact on US sellers, particularly those targeting Chinese buyers to reach Final Investment Decision. Interestingly it was observed that although the view round this table has been that this is an issue of decreasing importance, this was a big topic at the recent Singapore Energy Week.

That said – the failed takeover of Unocal by CNOOC took a while for the Chinese to come to terms with, how quickly with the Chinese open their arms again on this. We have also seen the reaction of the Qataris who have become more creative in contracts and pricing, which may also affect US projects.

**Russia**

Relationships with Russia seemingly at an all-time low and challenges with Nordstream 2, it is amazing that LNG is not getting more airtime as an alternate supplier of gas to Europe.

Is the reality that Russia is still seen as a primary gas supplier to Europe. For example, the development of an LNG import terminal in Germany, is this window dressing to satisfy the public and international politics, the reality being that Germany will continue to rely on Gazprom gas.

Russia is increasingly looking at LNG exports and gas export to China. Is Europe building regas terminals as a counter negotiation tool. Look at Poland who have taken an active decision to build regas capacity and secure alternate gas contracts (the difference being that almost 100% of domestic gas comes from one supplier. Could we ever see Uniper and RWE working together? Add in politicians more interested in getting re elected than committing to gas or coal and renewables. At the moment, market forces are driving LNG to Europe rather than any long-term commitment.

## Pricing and Contracts

JKM has become established as a pricing reference, but it is not bankable on its own. There are fundamental issues with how it is formed and requires more transparency to become a genuine trusted index. At the moment, there are question marks on how the underlying mechanism may be at risk of influence.

Until 5 years ago, contracts were priced on Brent and negotiated on a long-term basis. However unlike in oil, LNG costs are fundamentally different because of the early capital intensity at the front end. The lender view is based on two elements: 1) is there underlying physical liquidity? Yes, and increasing. 2) Do economics of the project on a forecast work? Fundamentally buyers do not want to take that risk, nor do banks so the market is inevitably becoming the domain of the majors/portfolio players, the big are getting bigger.

If buyers do not want to back projects, they will inevitably be at the mercy of the portfolio players. Be careful what you wish for.

## New wave of FIDs

As we have seen the first non-expansion FIDs this year for a while, we look ahead to the next wave of projects with optimism. However, there is some trepidation in relation to EPC contracting capability. The credit worthiness of EPC companies has dropped significantly however they have a key responsibility in the next phase of construction. Freeport and Cameron have both had major construction issues. The continued focus on LNG price to secure contracts is ignoring the competence/creditworthiness of the EPC contractor.

The challenging market conditions has led to a scenario where there are no providers of lump sum turn key solutions, the collections of providers are creating issues. Is LNG artificially priced, as the reality is that due to EPC issues LNG is more expensive?

## Environment

The undeniable strength of the renewable and lower carbon agenda gives LNG an opportunity to compete more strongly. Based on baseload power generation coming from coal or oil, there is a clear case for LNG. As a fuel is also better than the alternatives, but LNG must be careful that it is not selling itself as a solution for greenhouse gas emissions where it will lose credibility.

There is also a major concern on methane emissions. There is plenty of concerned rhetoric, but no interest in monitoring methane emissions on leakage, pipeline, valves, loading etc. Even where it is monitored, figures are not published. Companies seem reticent to even investigate as they do not want to know the numbers. Heads firmly in the sand.

Before we get to methane emissions, there may be an even larger threat to the industry and that is the potential legislation to ban fracked gas in North West Europe.

Vehicle use is also changing, and the maritime market is facing impending change with IMO 2020 regulations. Gaslog are completing on a project to move away from high sulphur fuel oil. All new vessels are being fitted with engines that can run on LNG, however they are not being fitted with cryo storage capability yet. It is clear that the industry will not retrofit with LNG engines. Ultimately price and economics are driving fuel switch behaviours.

As it stands, current conversion and new build vessels are in the cruise and ferry sector which represents less than 20% of the marine fuel market. The big cargo box ship markets are not ordering new builds due to current vessel oversupply and with no retrofit motivation, it is likely they will move to scrubbers.