

Letters to the Editor

LNG Trading: Overview and Challenges

Dear Editor,

I found the article by Wietfield and Fenzl to be a comprehensive and thoughtful overview of the LNG industry. However, I was somewhat surprised that they did not explain a major change that has been developing in the structure of LNG trading.

The traditional long-term contract commonly linked a specific supply source with a specific customer, often utilising dedicated tankers. It could thus be described as a 'fixed destination contract'. It was clearly ill-suited to an emerging world in which destination flexibility permits shippers to divert cargoes to those markets with the strongest prices. The resulting flexibility enables the price arbitrage, which now transmits price signals between gas market regions.

The authors do discuss the emergence of short-term trading and its role in price arbitrage, but they do not even mention 'self-contracting' or 'supplier aggregation'. This new pattern is becoming an even greater source of destination flexibility, particularly in the Atlantic Basin. In traditional long-term contracting, the old adage, 'The buyer takes the volume risk and the seller takes the price risk' led to take-or-pay obligations for buyers and price escalation clauses for the sellers. The authors mention the oil price linkage in contracts – JCC in Northeast Asia and oil products on the European Continent. But by lumping the gas market indicators – Henry Hub and NBP – with the oil escalators, they fail to differentiate between the way these two types of price escalators actually function.

In the liberalised gas markets of North America and the UK, gas-to-gas competition is supposed to set gas prices and prices are frequently decoupled from oil price levels. In these markets, commodity trading has

largely replaced long-term contracting for domestically produced gas. It is increasingly difficult to find customers in these liberalised markets who can commit to the volume obligation without protecting themselves with a gas market price indicator, such as Henry Hub or the NBP. But since buyers can so easily resell unwanted volumes without loss in a liquid trading market, their risk is reduced. Risk has migrated upstream to the sellers. The response of sellers has been to take the contractual obligation on themselves – self contracting – and market directly to ultimate customers.

Nigeria's Bonny project illustrates the difference in the two approaches. Trains 1, 2 and 3 were traditional contracts between the joint venture, NLNG, and European customers. But both Shell and Total, venture partners in NLNG, have contracted for volumes from the venture out of Trains 4 and 5 and are free to take their equity LNG wherever they see fit. This, like short-term trading, is destination-flexible and facilitates price arbitrage. My estimates suggest that self-contracting is at least as large as short-term trading.

Yours Sincerely,
James T. Jensen
Jensen Associates

Dear Editor,

I enjoyed the article 'LNG Trading: Overview and Challenges' in the February 2009 issue but would like to add a couple of important points.

On LNG supply it should be noted that we are currently at the start of a significant ramp-up in global LNG supply with some 120 billion cubic metres per annum (bcma) of liquefaction capacity coming on stream over the next three years. This compared with LNG supply for 2008 of some 240 bcma, is a 50 percent increase in LNG availability and represents some

20 percent of Europe's current annual natural gas consumption.

At the time these LNG projects achieved financial approval (circa 2004) the expectation was that the regional natural gas markets of North America, Europe and Asia Pacific would remain 'tight' for the foreseeable future, i.e. demand growth for LNG imports was safely assumed.

Two factors have challenged that assumption. Firstly the ongoing global economic downturn has reduced expectations of demand growth for gas in the industrial and residential and commercial sectors. Secondly the unexpected but highly successful exploitation of 'unconventional' gas in North America has reduced expectations of LNG import requirements in that market.

However, once an LNG project is completed its effective short-run marginal costs are very low – in large part due to the contractual segmentation of the supply chain. The costs saved by 'shutting-in' LNG supply may indeed be confined to the variable operating costs of the upstream field.

The question of 'where all this new LNG will go' has a number of dimensions. Clearly it will compete with other sources of natural gas and probably with other fuels.

The most accessible markets for new 'flexible' LNG will be North America and the UK as re-gasification capacity is in place and, given the nature of these liberalised markets, LNG can be sold without a contract with intermediaries or end users. As prices are lowered here, one might expect a higher cost domestic gas production to be shut-in. It is noted that in North America the number of operational gas drilling rigs has fallen by 40 percent since October 2008. A price floor may be provided by the displacement of coal in the power generation sector, however due to the nature of the North American power sector regulatory framework the physical scale of substitution may be

less than might be imagined.

In continental Europe the prospect of competition between LNG pricing at the margin off Henry Hub and oil-indexed long-term contract pipeline imports is a real one. This would become a significant issue were new entrants able to access sufficient market share to leave incumbents unable to sell-on their pipeline import 'take or pay' contractual volumes. It was this situation in the UK gas market in the 1990s which was key to undermining the status quo and to the establishment of a liberalised traded market. Will this play out in continental Europe?

What is at stake here is the preservation of the oil-indexation framework much cherished by supplier countries and importing incumbents despite the fact that with true burner tip competition between gas and oil products very much a feature of a by-gone era, there is little if any rational justification for its perpetuation. Depending on the envisaged duration of the LNG supply surge and the economic downturn, it might be expected that oil indexation will continue but only with a degree of painful compromise on take-or-pay enforcement.

Looking at the shape of the longer-term LNG supply outlook the situation may well repeat itself post 2015 when Australia and Nigeria together create a second supply wave.

Howard Rogers
Senior Research Fellow, OIES

Sir

I read with interest the article on LNG Trading by Axel Wietfeld and Niels Fenzl. The intensification of the global recession since the article was written brings the issues further into focus as a short-term surplus in gas markets becomes ever clearer.

The global natural gas industry is now suffering from a 'triple whammy': a sharp and untimely reduction in gas demand caused by the global recession; growth in North American gas

supply brought about by the unexpected and sudden emergence of shale gas; and the long anticipated surge in global LNG supply. As a consequence a global gas supply bubble has emerged.

Is this the seismic shock that is required to bring change to the LNG business model and accelerate a move toward a more freely-traded spot market? Or, on the contrary, does this push us back toward the tried and tested formula of rigid bilateral long-term contracts – a rush to safety? Neither the evidence nor logic point in a single direction, but we can suggest the following:

The value of dedicated markets is returning. In a world of surplus and poor economic performance, those players who can offer LNG sellers secure identifiable market demand and who are creditworthy are once again of high value. Open supply portfolios of LNG look less attractive in a long market.

Both producers and buyers will find their portfolios out-of-balance. The decline in gas demand means that some buyers will find themselves long; some producers will find they hold excess supply. The imbalance between portfolios will precipitate more trading, at least among the traditional core players.

The value of the LNG midstream is eroding. Surplus capacity in shipping, re-gasification, possibly even liquefaction, will lead to downward pressure on the valuation of these assets. For example, LNG spot charter rates have halved and re-gasification options in the Gulf of Mexico are said to be widely available.

The rationale for entry into the LNG midstream as a business in its own right is much reduced – where is the advantage in controlling shipping or re-gasification? A rapid move toward global price convergence has undermined the concept of portfolio optimisation. With abundant spare re-gasification and shipping capacity, the concept that re-gasification provided a value proposition – or at least a competitive advantage – in accessing supply is losing its force (with some

exceptions, to be sure). It therefore makes little sense for producers to invest additional capital in the midstream unless essential to support upstream development. For most producers, the midstream was usually a means to an end, the monetisation of gas, and not an end in itself.

The financial crisis will require greater direct equity investment and less leverage. Under these circumstances, E&P companies will need to release capital from lower return segments in the chain – read midstream gas assets – in order to focus on the higher return of upstream production.

Few institutional players – either sellers or buyers – have an interest in a radical shift to a short-term traded market, so they will look to ride out the short-term storm. Whether they succeed will depend, in large measure, on the length of the recession. Hold on to your hats!

Michael Stoppard
Managing Director, CERA

European Union Energy Policy

Dear Editor,

Key points made in David Buchan and Giacomo Luciani's articles on EU energy policy have been magnificently illustrated during the weeks after their publication, in particular by the choice of projects for the Commission's Euros 4bn stimulus package.

Buchan's observations about the 'astoundingly complacent Gas Security Directive of 2004' and how 'many member states dozed on', after the 2006 and 2007 interruptions of Russian gas supplies only serve to highlight crucial weaknesses in EU energy policy making: member states have fundamentally different levels of vulnerability; some of the most vulnerable countries are not European

Union members – or even Energy Community Treaty signatories.

The Gas Security Directive is a toothless document because that was what the current member states and their gas industries wanted. As Buchan notes, it was adopted the month before ten new member states joined, before Bulgaria and Romania were even in accession negotiations and before the Energy Community Treaty was even thought of. The impact of the January 2009 crisis on the old member states was negligible and even positive – their gas companies were able to sell gas from their storages at high prices, safe in the knowledge (because they knew that oil prices had fallen) that they would be able to buy gas back at lower prices later in 2009. Countries such as Italy learned much from the 2006 crisis and subsequently spent substantial sums on storage and interconnection. The most severe impact on the crisis was on new member states (Bulgaria and Romania) and non-member states (Bosnia, Serbia) which, even if they had been concerned about the potential impact, had no funds to make the necessary investments.

Having recognised that the problems were concentrated in south east Europe, and understood that the parlous state of the Ukrainian economy meant that such events could easily recur, it might have been expected that Brussels would concentrate available funds on the problem region. Sadly, the stimulus package shows otherwise. After considerable infighting from the initial distribution (detailed in Luciani's article), the outcome is shown in the table below. Following the most serious gas security crisis – and one of the most serious energy security crises ever experienced – in Europe, gas interconnection, storage and diversity measures received Euros 1.4bn out of a total of 4bn. Even more extraordinary, projects in the countries in central and eastern Europe which had been most seriously affected by the crisis received a total of Euros 310 million. By comparison, the reinforcement of the network on the Africa-Spain-France axis received 200 million as did a new Franco-Belgian

<i>PROJECT TYPE</i>	<i>Budget (Million Euros)</i>	<i>LOCATION</i>
Electricity interconnectors	910	
Small Island projects	15	
Offshore wind projects	565	
Carbon capture and storage projects	1050	
Gas Interconnectors	1440	
<i>Including:</i>	200	Nabucco pipeline
	100	ITGI Italy-Greece
	150	Poland-Denmark-Sweden
	80	Poland LNG
	30	Slovakia-Hungary
	40	Slovenia
	45	Bulgaria-Greece
	30	Romania-Hungary
	35	Czech Republic storage
	80	13 (mostly) new member states
	20	reverse flow infrastructure
	20	Slovakia-Poland
	20	Hungary-Croatia
	10	Bulgaria-Romania
	200	Africa-Spain-France
	120	Italy-Spain GALSI
	45	Spain
	35	Germany-Belgium-UK
	200	France Belgium

Source: Council of the European Union, *Presidency compromise proposal for financing of the infrastructure projects put forward by the Commission as part of the EERP*, Brussels 7848/1/09, 20 March 2009.

interconnector. While there is certainly a case for spending money on these projects, should they really have had a higher priority than increased spending in Central-Eastern Europe? And while there is also a case for spending money on Scanled (Poland, Denmark, Sweden), Nabucco and GALSI, could these projects not have waited a little, while more urgently needed interconnections were prioritised? Even more controversially, could more funds have been taken away from other spending categories on grounds of urgency?

Of course we all know the answer to these questions: every member state 'had to get something', and Commission policy had to be seen to be addressing the different elements in the 20/20/20 policy framework. But geographical and policy evenhandedness has surely been the enemy of urgent action on security of supply. An opportunity has been missed to demonstrate 'solidarity' with non-member states such as Serbia and Bosnia by spending on urgently needed gas interconnections.

This kind of decision-making leads to cynicism, particularly in new member states, about the balance of priorities in EU energy policy. It may also create some embarrassment if there is another Russia-Ukraine crisis over the next year – an event that (unfortunately) cannot be ruled out. In this event, Buchan's benchmark of a 'D' for EU performance on security of supply may appear overly generous.

Jonathan Stern
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