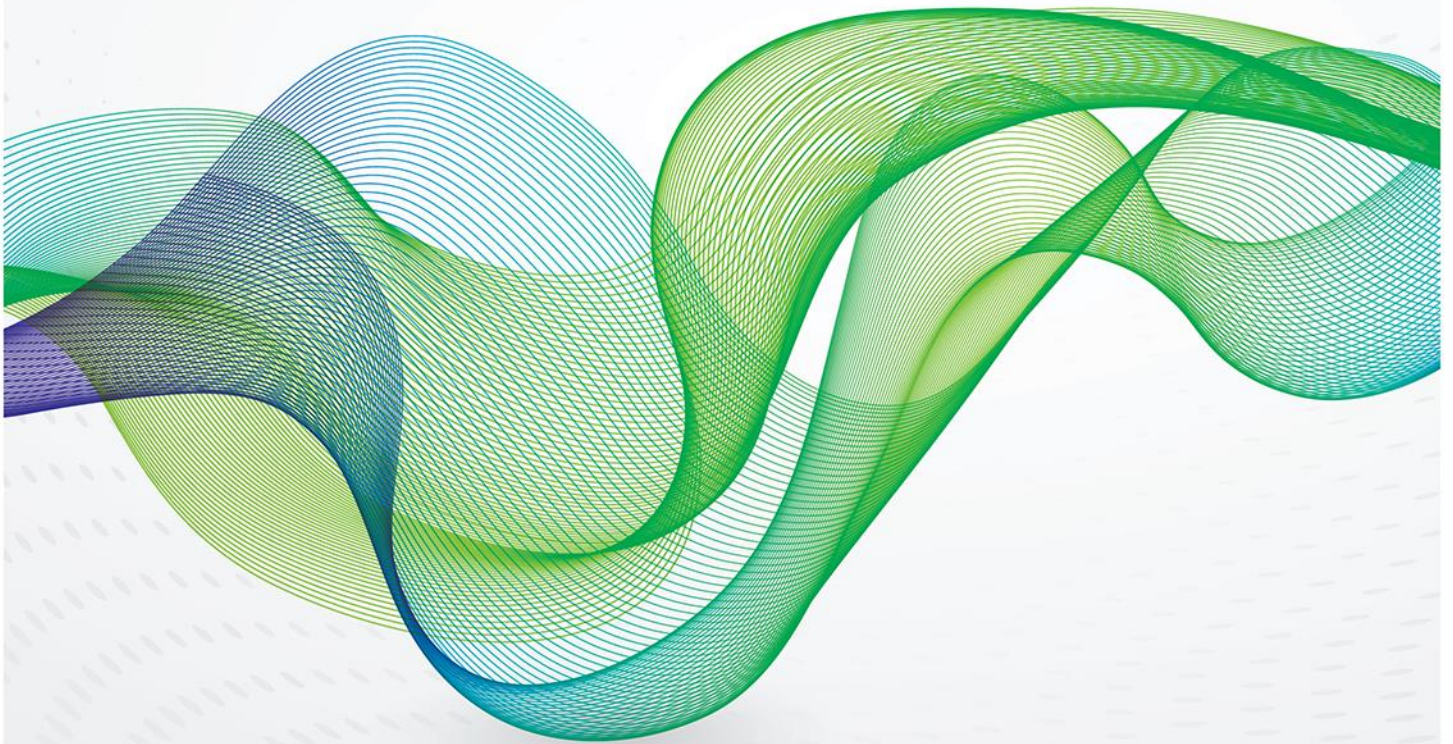


June 2017

# Qatar LNG: New trading patterns but no cause for alarm



## Background

As described in a recent Comment<sup>1</sup> the severing of diplomatic ties with Qatar by Saudi Arabia, the UAE, Bahrain and Egypt, amid accusations of supporting extremism have prompted many to ponder the impact on oil and gas markets. Some of the main conclusions reached, relating to gas, were:

- that the countries listed above who customarily receive Qatari LNG cargoes (UAE and Egypt) may reduce Qatari LNG imports although this is far from certain;
- it is expected that exports of gas from Qatar to the UAE via the Dolphin pipeline will continue, however in the unexpected scenario of reduced gas pipeline flows to the UAE, this could have more serious impact on LNG markets, though against a background of rapidly growing global LNG supply, the impact will be short-lived.

This Comment examines these issues in more detail and seeks to illuminate the ongoing likely impact on gas markets.

## Qatari LNG - Diversified Trade Patterns

Table 1 shows the destination of Qatar's LNG exports in 2016 in BCMA. The 106 BCMA of Qatari LNG exports are well diversified by country and region and represented 30.4% of global LNG supply. This percentage will decline to 21% over the next five years as new supply comes on stream from the US, Australia and Russia. UAE and Egypt imported 1.3 and 6.4 BCM of Qatari LNG respectively in 2016. UAE also imported 2.9 BCMA from Australia, Trinidad and Tobago and other suppliers; Egypt also imported 3.7 BCM from non - Qatari sources. This is important context. In 2016 28.5% of all LNG trade-flows were governed by spot or short-term contract and, from the above, Egypt and UAE are already well versed in participating in the short-term LNG market to meet their requirements. If these two importers were to curtail their imports of Qatari LNG this would likely be a process by which volumes from other suppliers was increased over time on a spot or short-term contract basis. Qatar, well skilled and acquainted with all regional markets, would merely sell its volumes into different markets. The impact on the global LNG market would not be noticeable due to the rapid response of cargo diversions resulting in no net delivered volume reduction for any importer.

**Table 1: Qatari LNG Exports 2016**

Europe Region		Asia		Middle East	
Belgium	2.4	Japan	16.2	Kuwait	2.1
France	0.7	South Korea	15.8	Dubai	1.3
Greece	0.0	Taiwan	8.5	Egypt	6.4
Italy	5.5	China	6.8	Jordan	0.6
Netherlands	0.5	India	15.2		
Poland	1.0	Thailand	4.0	<b>Sub-Total</b>	<b>10.4</b>
Portugal	0.5	Malaysia	0.1		
Spain	2.7	Singapore	0.9		
Turkey	0.9	Pakistan	2.8		
UK	9.7				
<b>Sub-Total</b>	<b>23.8</b>	<b>Sub-Total</b>	<b>70.4</b>		
South & Central America		North America			
Argentina	1.0	USA	0.0		
Brazil	0.7	Mexico	0.0		
Chile	0.1	Canada	0.0		
<b>Sub-Total</b>	<b>1.7</b>	<b>Sub-Total</b>	<b>0.0</b>		
<b>Total Qatar LNG Exports</b>		<b>106.3</b>			
<b>Total Global LNG Exports</b>		<b>350.0</b>			

Source: GIIGNL, [http://www.giignl.org/sites/default/files/PUBLIC\\_AREA/Publications/giignl\\_2017\\_report\\_0.pdf](http://www.giignl.org/sites/default/files/PUBLIC_AREA/Publications/giignl_2017_report_0.pdf)

<sup>1</sup> 'Feud Between Brothers: the GCC rift and implications for oil and gas markets', Bassam Fattouh, OIES and Bill Farren-Price, Petroleum Policy Intelligence, <https://www.oxfordenergy.org/publications/feud-brothers-gcc-rift-implications-oil-gas-markets/>

## Dolphin Line - Impact on Abu Dhabi and Oman LNG Exports

The (unlikely) cessation of flows through the Dolphin pipeline between Qatar and UAE (with an overflow volume to Oman) would, on the face of it result in significant disruption to the UAE. Such a move to use gas as a 'weapon' would harm Qatar's reputation as a reliable supplier and both UAE and Oman (which has not cut diplomatic ties with Qatar) would see damage to their reputations as reliable LNG suppliers if this act forces them to cut their LNG supplies. In 2015 the Dolphin Pipeline flow was 17.7 BCMA from Qatar to UAE with 2.1 BCMA flowing on to Oman<sup>2</sup>. Table 2 shows how this loss might be accommodated by UAE.

**Table 2: Impact of Dolphin Pipeline Supply Loss (BCMA)**

<b>UAE Dolphin Pipeline Supply loss</b>	<b>17.7</b>
<b>Met by:</b>	
Reduced exports to Oman (Lower Omani LNG Exports)	2.1
Increased UAE LNG imports	7.7
Reduced UAE LNG Exports	7.9
<b>Sub-Total</b>	<b>17.7</b>

Source: GIIGNL and BP Statistical Review 2016

In the first instance the loss of the 17.7 BCMA of Dolphin pipeline supply would curtail the 2.1 BCMA of gas exported on to Oman, reducing its LNG exports accordingly. Abu Dhabi's LNG exports could be curtailed (7.9 BCMA in 2016). Recipients of Abu Dhabi LNG in 2016 were India, Japan and Singapore – all able to switch LNG supplier countries. In terms of imports, UAE has a total regas capacity of 13.4 BCMA. In 2016 it used 4.2 BCMA of this. Increasing imports to 11.9 BCMA would bring in additional 7.7 BCMA of LNG as shown in Table 2.

Table 3 shows an estimate of the financial impact of the cessation of Dolphin Pipeline supply. An estimated average price for Dolphin gas imported by the UAE in 2017 is \$ 1.61/mmbtu<sup>3</sup>. On an annual basis, Qatar would lose sales revenue of \$1.04 billion. UAE, required to import additional LNG and forego LNG exports (at an assumed price of \$5.50/mmbtu)<sup>4</sup>, would lose \$2.21 bn (more if some of its LNG exports were oil indexed at prices higher than spot prices), and Oman would lose LNG export revenues of at least \$0.42 bn.

**Table 3: Estimated Annual Financial Impact of Cessation of Dolphin Pipeline Supply**

Financial impact of loss of Dolphin Supply:	\$ Billion
<b>Qatar - Loss of revenue (17.7 BCMA at \$1.61/mmbtu)</b>	<b>1.04</b>
UAE - Additional Cost of Increased LNG Imports (at \$5.50 less \$1.61/mmbtu)	1.09
UAE - Loss of LNG Export Revenue less cost of Dolphin Gas (at \$5.50 less 1.61/mmbtu)	1.12
<b>UAE Loss</b>	<b>2.21</b>
<b>Oman - Loss of LNG Exports at \$5.50/mmbtu</b>	<b>0.42</b>

Source: Author's Analysis

<sup>2</sup> BP Statistical Review of World Energy, 2016

<sup>3</sup> See Dargin, J in 'Natural Gas Markets in the Middle east and North Africa, Eds. Bassam Fattouh and Jonathan Stern, OIES 2011, <https://www.oxfordenergy.org/shop/natural-gas-markets-in-the-middle-east-and-north-africa/>

<sup>4</sup> The current LNG spot price.



The next result of this would of course be a loss of 17.7 BCMA of LNG which would otherwise be available for other importing nations. This however should be seen against the current growing global LNG supply as projects in the US, Australia and Russia come on stream. 2017 is expected to see LNG supply growth in excess of 30 BCMA over 2016. In this context the loss of the Dolphin line would be manageable. Europe would receive less LNG than expected and Russian pipeline gas would balance the European gas market.

### Impact of Qatari Tankers not using the Suez Canal

As of the 12<sup>th</sup> June, Qatar had diverted at least two LNG cargoes bound for the UK via the Suez Canal, instead sending them around South Africa with media speculation that the Suez Canal Authority may have hiked up its tolls for large LNG vessels (exclusively owned by Qatar)<sup>5</sup>. The route around the Cape of Africa increases the shipping distance from Qatar to the UK from 6,200 to 12,200 nautical miles<sup>6</sup>. At today's tanker day rate this could increase the transport cost by an estimated \$0.5/mmbtu for Qatar. However Qatar is an LNG producer with extremely low fixed and variable costs and hence is a 'price taker' at NW European gas trading hubs (NBP and TTF). Nevertheless the additional cost could persuade Qatar to re-direct volumes to Asia rather than to European markets. However, there is a limit as to how much volume Qatar could divert to Asia from Europe without crashing the Asian LNG spot price. This would incentivise other exporters of flexible LNG to divert from Asia to Europe. Any short-term reduction of LNG import in Europe would be countered by increased pipeline exports from Russia with limited price impact.

### Conclusions

Qatar is the largest LNG exporter. It had a market share of 30.4% of global LNG in 2016 and this will decline to 21% over the next 5 years. The potential loss of 7.7 BCMA of exports of Qatari LNG to UAE and Egypt is not of concern. Both these importers participate in the LNG spot and short term market and would quickly find alternative suppliers; Qatar would quickly find other markets.

The (unlikely) loss of the Dolphin pipeline supply of (in 2015) 17.7 BCMA would be more serious. The UAE and Oman could cope by decreasing LNG exports and using underutilised UAE LNG import capacity to meet their domestic market requirements (but this could involve significant additional costs – an estimated \$1 bn for Qatar, \$2.2 bn for the UAE and \$0.4 bn for Oman), however this would also reduce LNG supplies to other world importers by 17.7 BCMA. This is less serious against a background of rapidly growing global LNG supply as new projects from the US, Australia and Russia come on stream – in 2017 an additional 30 + BCMA is expected. Any short term impact would be met by increased flows of Russian pipeline gas to Europe.

Routing LNG tankers from Qatar to Europe around the African Cape rather than the Suez Canal could add up to \$0.5/mmbtu to Qatar's transport cost and in the first instance encourage it to divert volumes to Asia. This would however depress Asian LNG spot prices and incentivise other exporters to target Europe rather than Asian spot markets.

---

<sup>5</sup> 'LNG carriers change course as Qatar kerfuffle continues', LNG World Shipping, 12<sup>th</sup> June, [http://www.lngworldshipping.com/news/view,lng-carriers-change-course-as-qatar-kerfuffle-continues\\_48056.htm](http://www.lngworldshipping.com/news/view,lng-carriers-change-course-as-qatar-kerfuffle-continues_48056.htm)

<sup>6</sup> Derived using <http://www.portworld.com/map>