How LNG Supply Additions Could Affect Gas Prices in Europe?

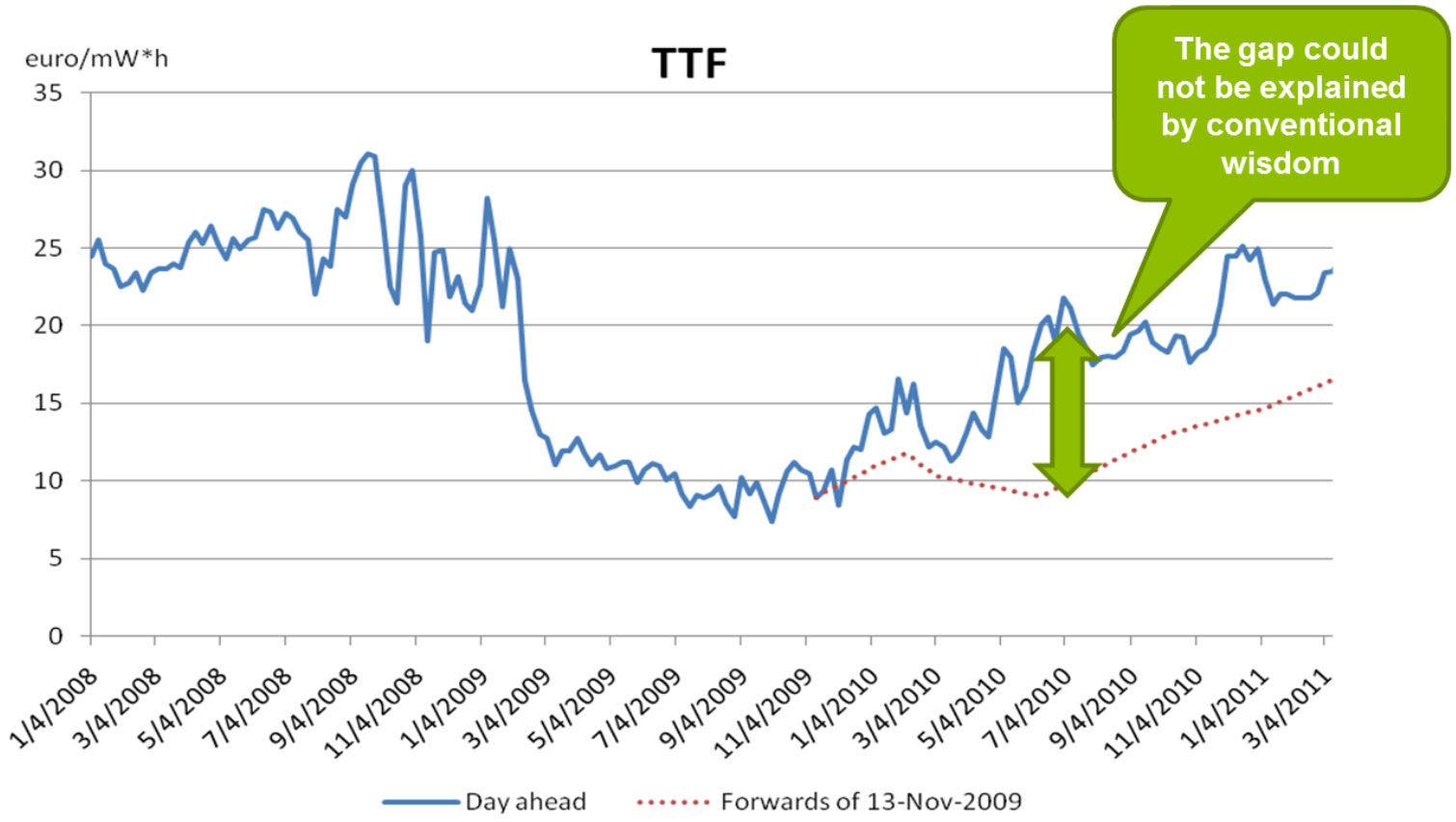
Sergei Komlev
Head of Contract Structuring and Price Formation Directorate
Gazprom Export*

C5, Gas and LNG Supply Contracts Forum
Berlin, June 20, 2018

*Views expressed in this presentation are the author's sole responsibility and do not necessarily represent that of Gazprom Export

According to Conventional Wisdom, Doubling of Global LNG Capacity Should Bring European Gas Prices Down, but…

Historic Precedent of the Opposite Outcome: Ignoring Dependence of Hub Prices on Oil Indexes and Overestimation of LNG Glut Impact Have Let to Hefty Losses for Traders/Midstreamers in 2010



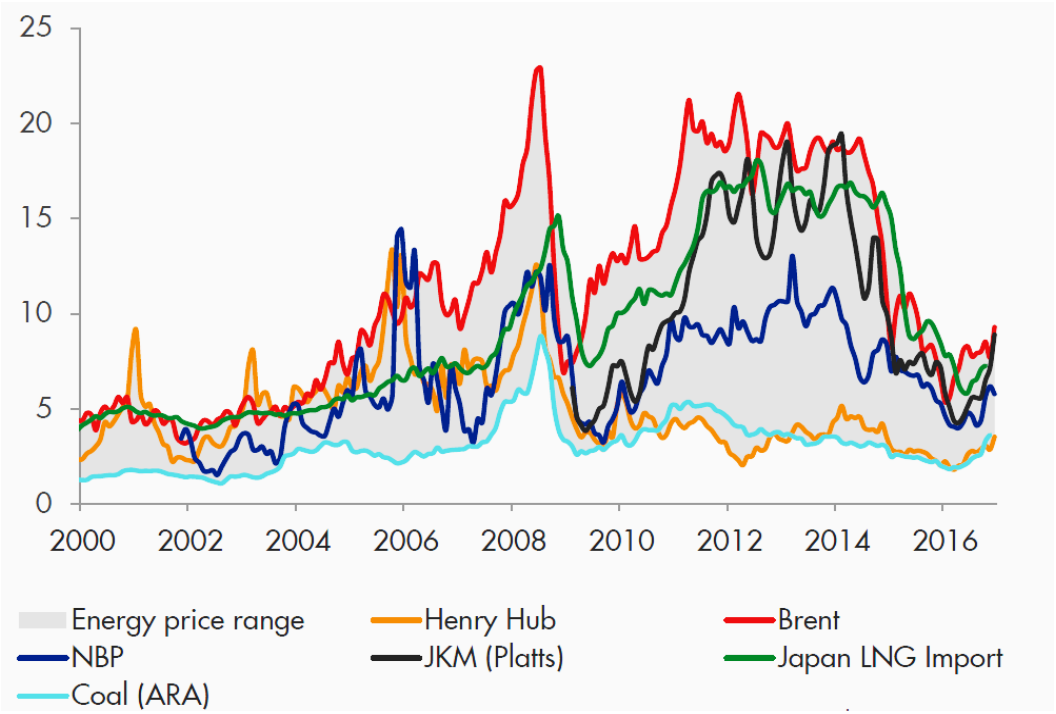
Unique Nature of Natural Gas as Commodity Needs to be Taken into Consideration in Assessing LNG Glut Effects on Hub Prices

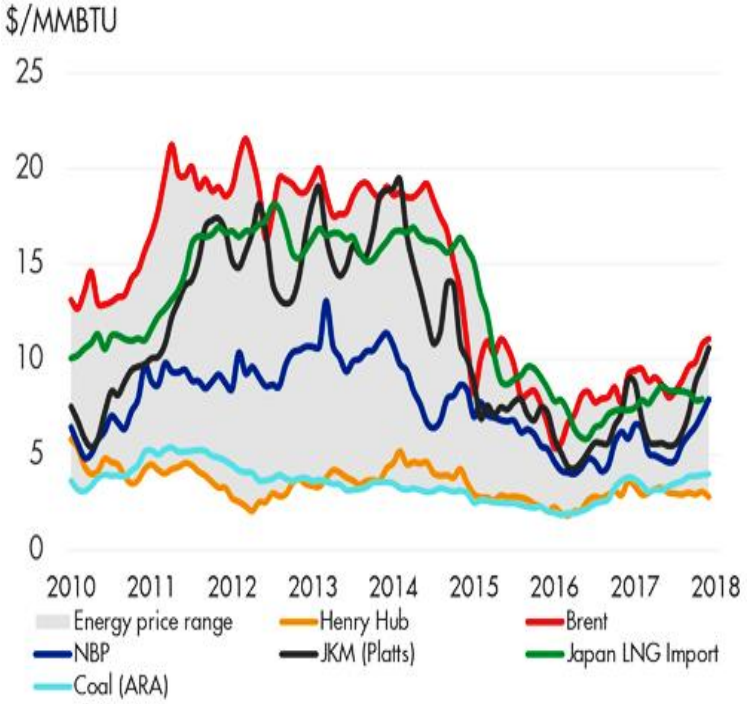
There are three main features of natural gas as a commodity which make it one of the kind:

1. **Market prices of natural gas are set up by two forms of competition – gas-on-substitute (inter-fuel) and gas-on-gas competition. No other global commodity is characterized by this duality.**
2. **LTCs play a leading role in the global natural gas supply and here to stay for years ahead, while a move to exchange-based pricing in other commodities is associated with elimination of the long-term contact arrangements or their radical transformation.**
3. **Simultaneously functioning different pricing mechanisms in natural gas have direct effect on hub price, making it a hybrid product both on macro and micro level.**

Assessment of these specific characters of natural gas as a commodity represents not only an academic interest but has sensible practical business-related implications.

Competition with Other Carbons Locks Natural Gas in Price Envelope

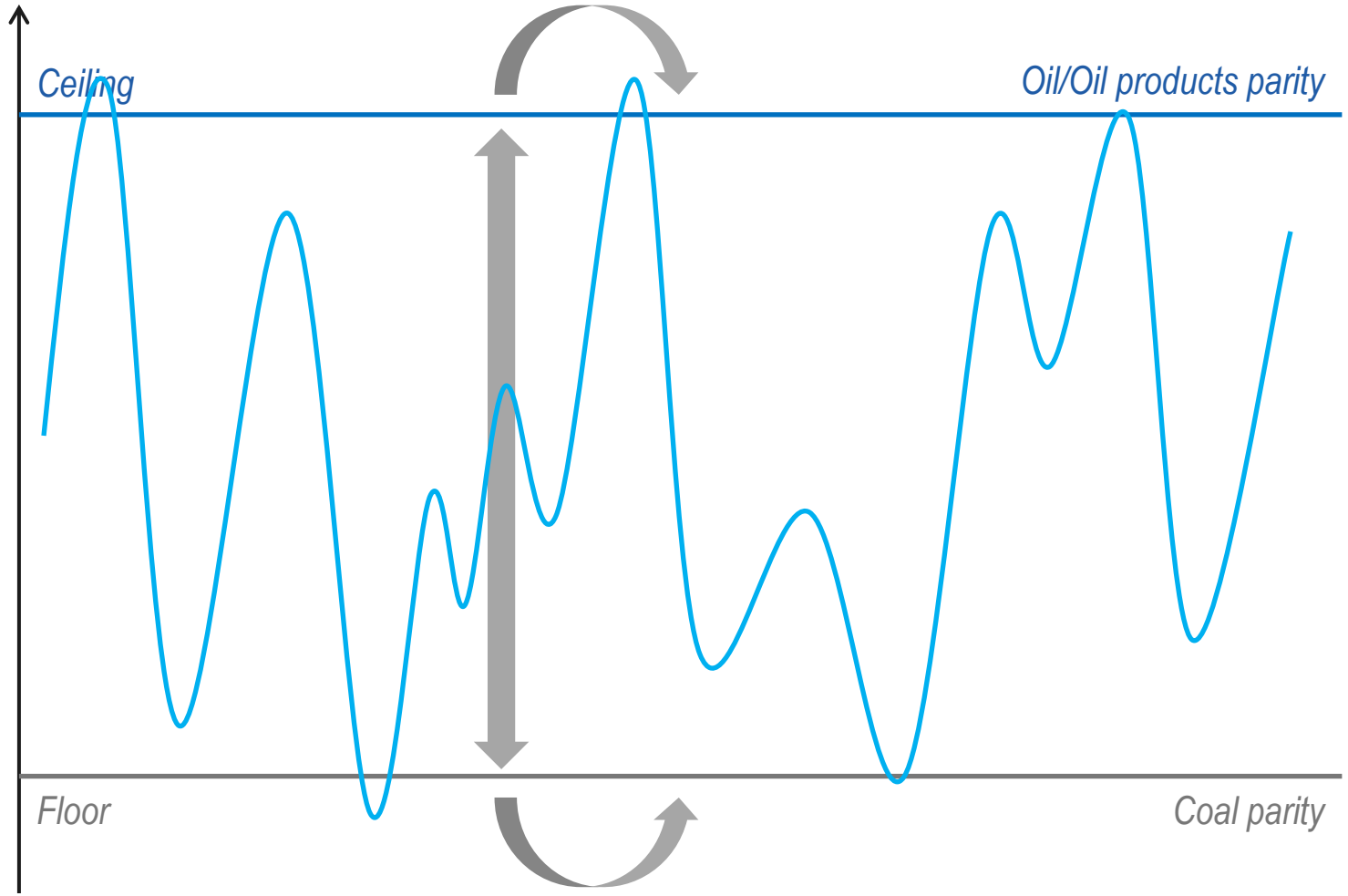




Global natural gas prices irrespective of their inter-regional differences firmly sit within a price envelop set up by oil (ceiling) and coal (floor), see grey area in the Charts.

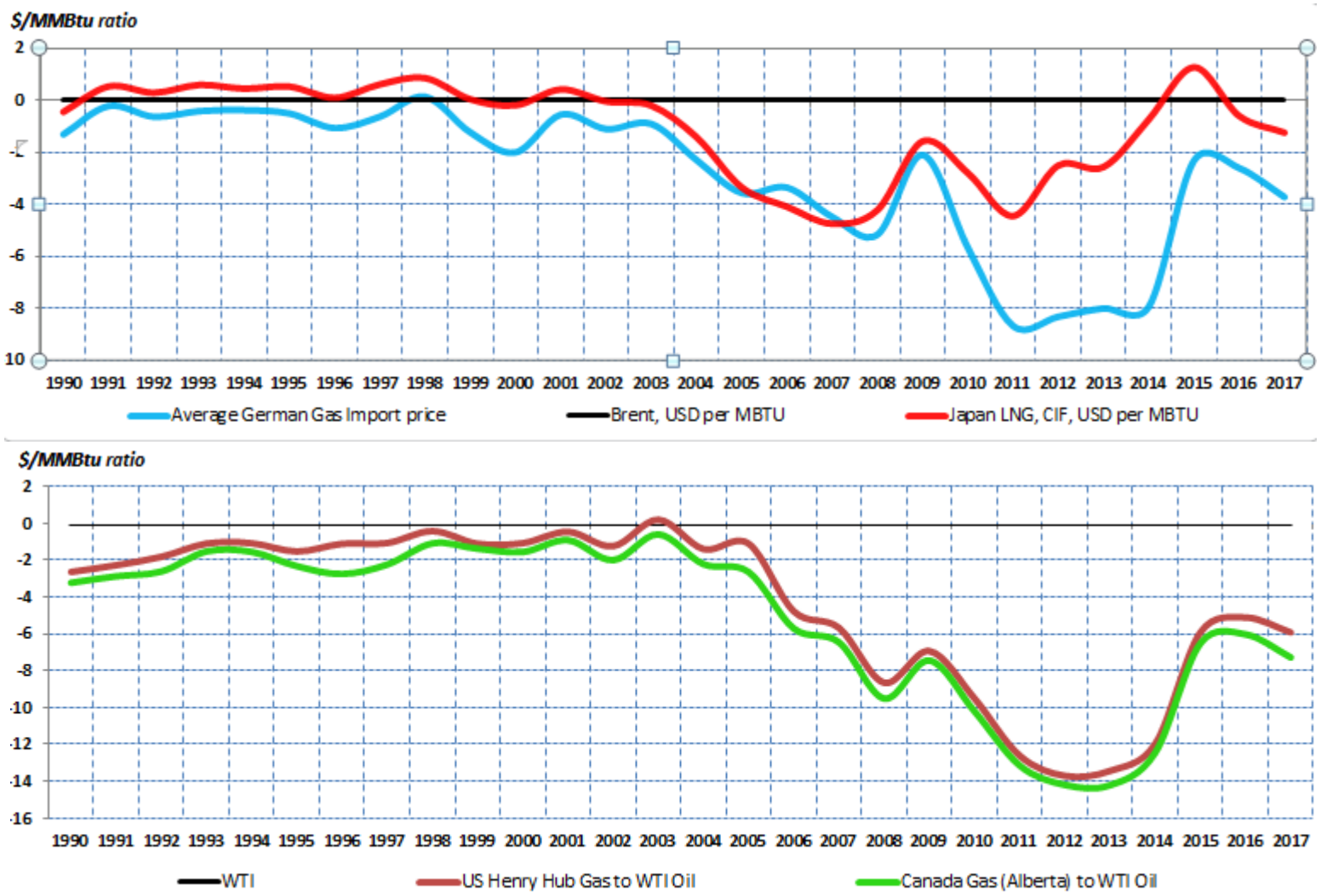
Source: Shell

Inter-fuel Competition Makes Hub Prices Rangebound



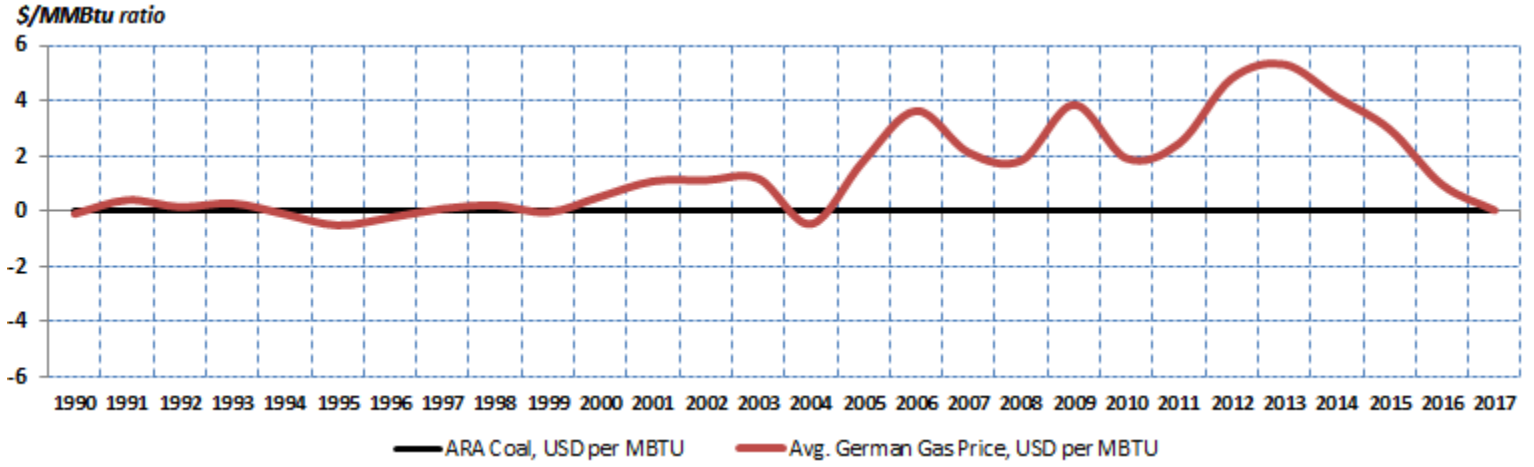
Source: Gazprom Export

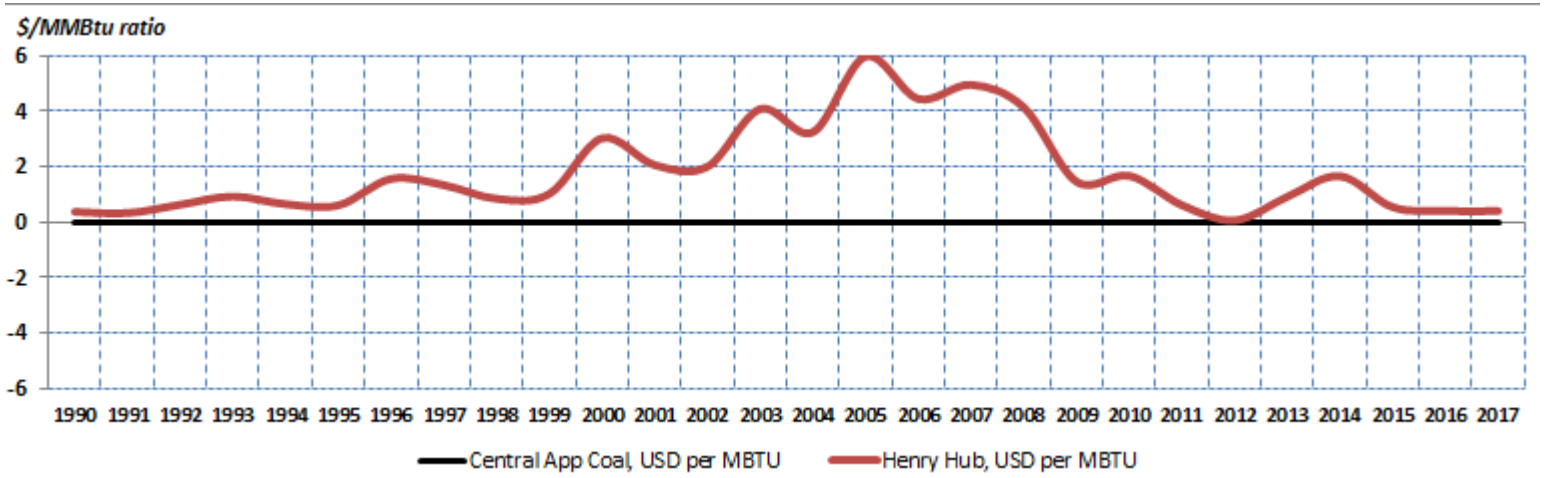
Inter-fuel Competition at Work: Oil Price Sets Resistance Level for Natural Gas Prices



Source: BP, Gazprom Export

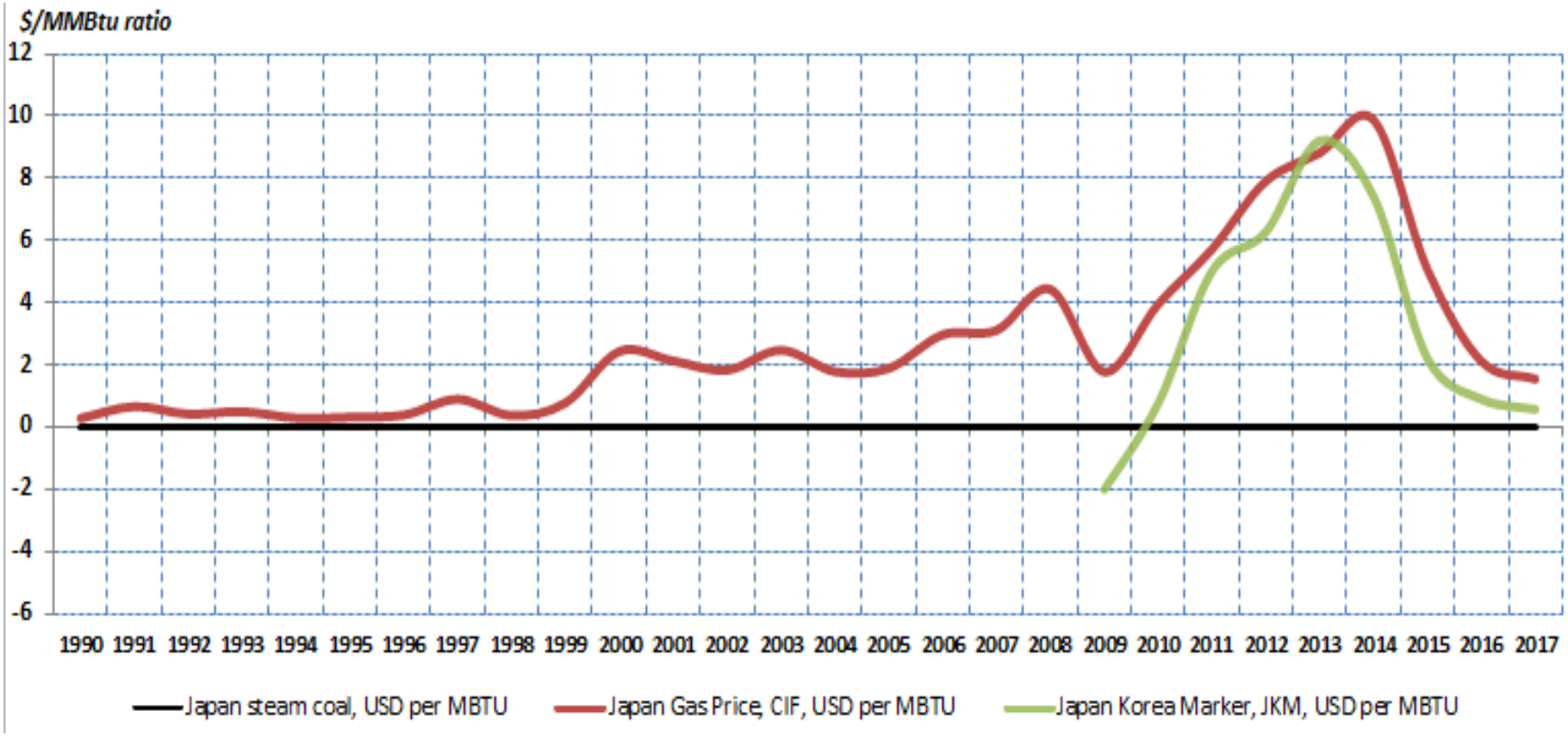
Inter-fuel Competition at Work: Coal Price Sets Support Level for Natural Gas Prices in Europe and US





Source: BP, Gazprom Export

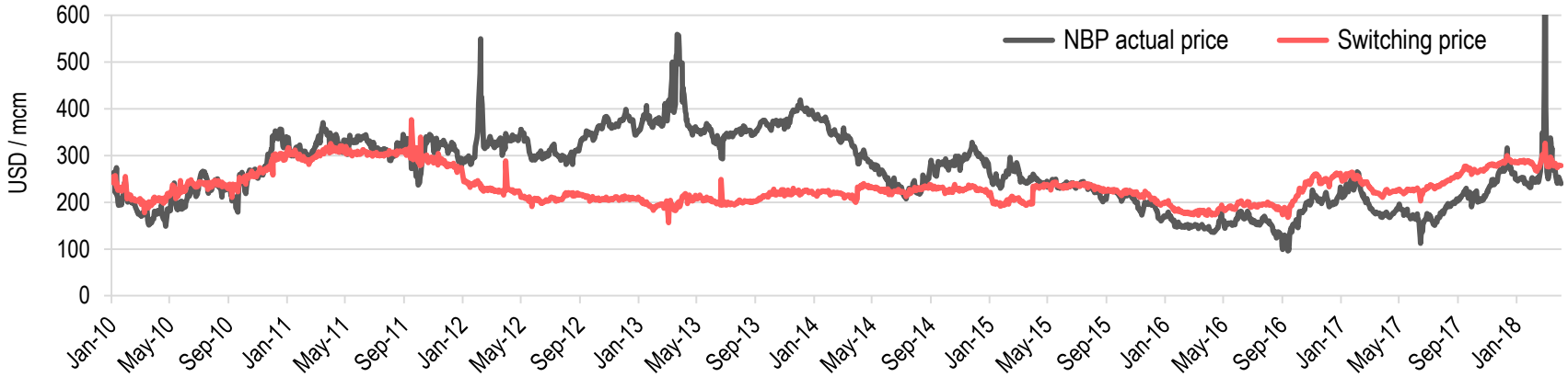
… and Asia



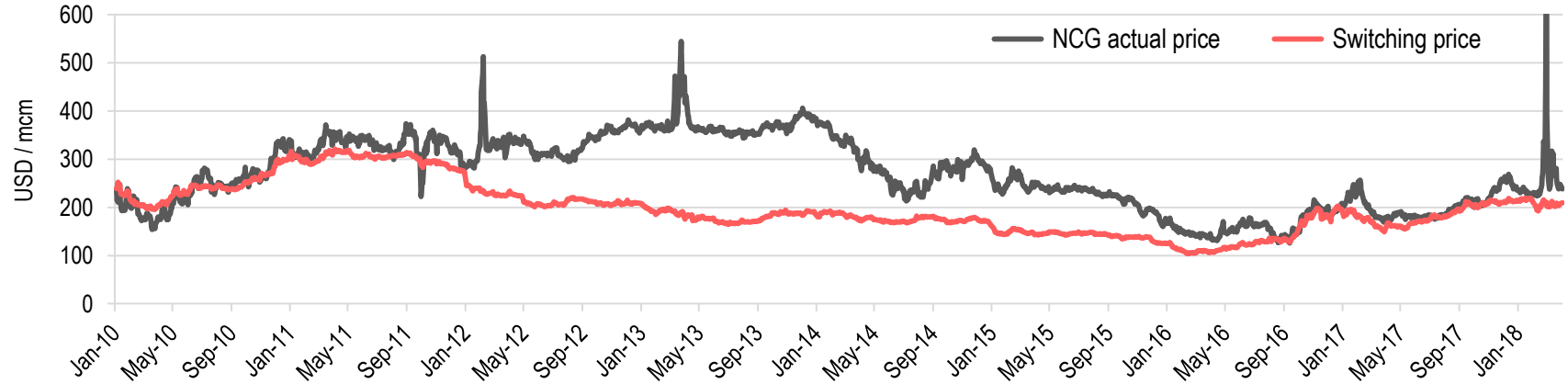
Source: BP, Gazprom Export

Special Arrangements are Required for Gas to Outcompete Coal

NBP* compared to UK coal-to-gas switching price



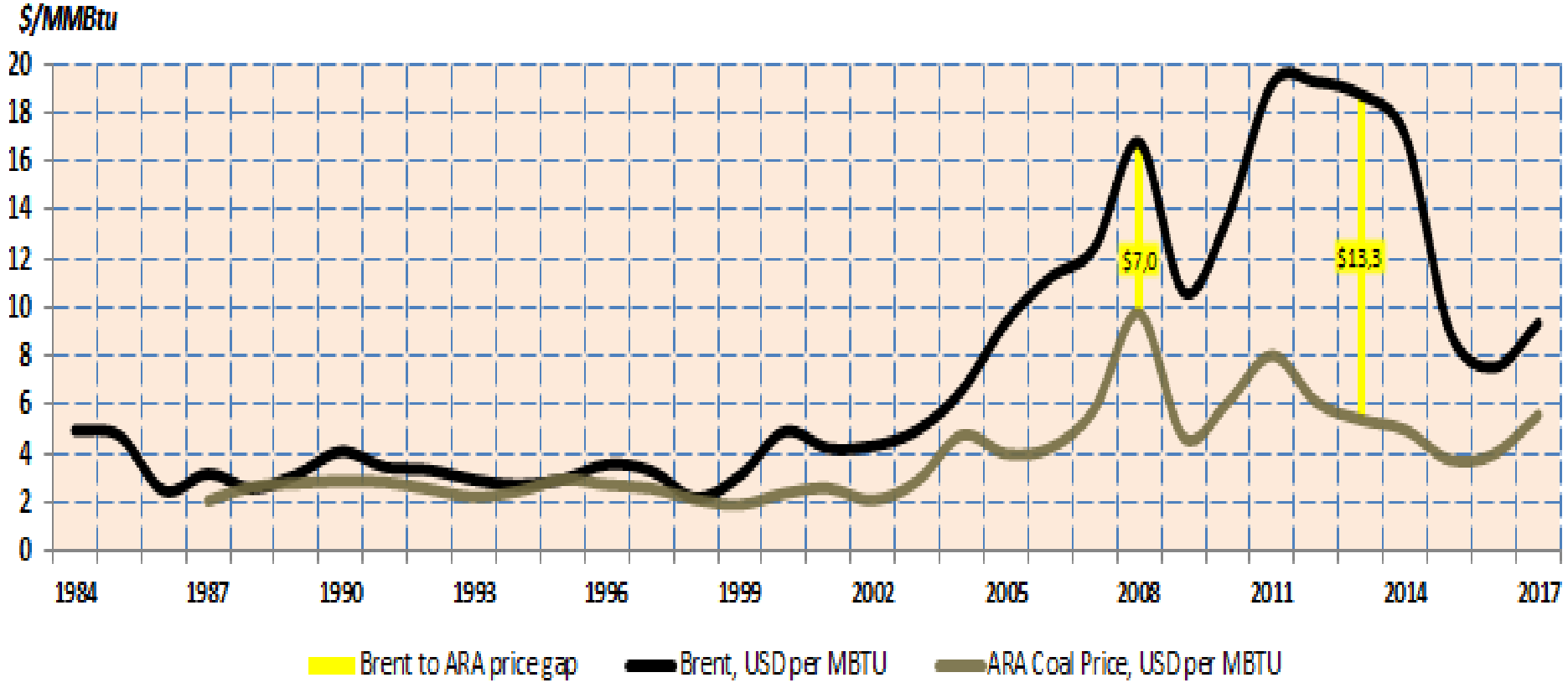
NCG** compared to German coal-to-gas switching price



Sources: Argus, Platts, IEA **NBP day-ahead **NCG day-ahead*

Inter-fuel Competition at Work: Gas Price Corridor Width

Gas Price Corridor Width is Determined Mainly by Oil Price Volatility
and Stretched from Nearly Zero in 1988, 1995 and 1998 to 13 USD/MMBTU in 2013



Source: BP, Gazprom Export

European Gas Has not Lost it Dependence on Oil, Although Indirect Dependence via LTC is Now Less Pronounced

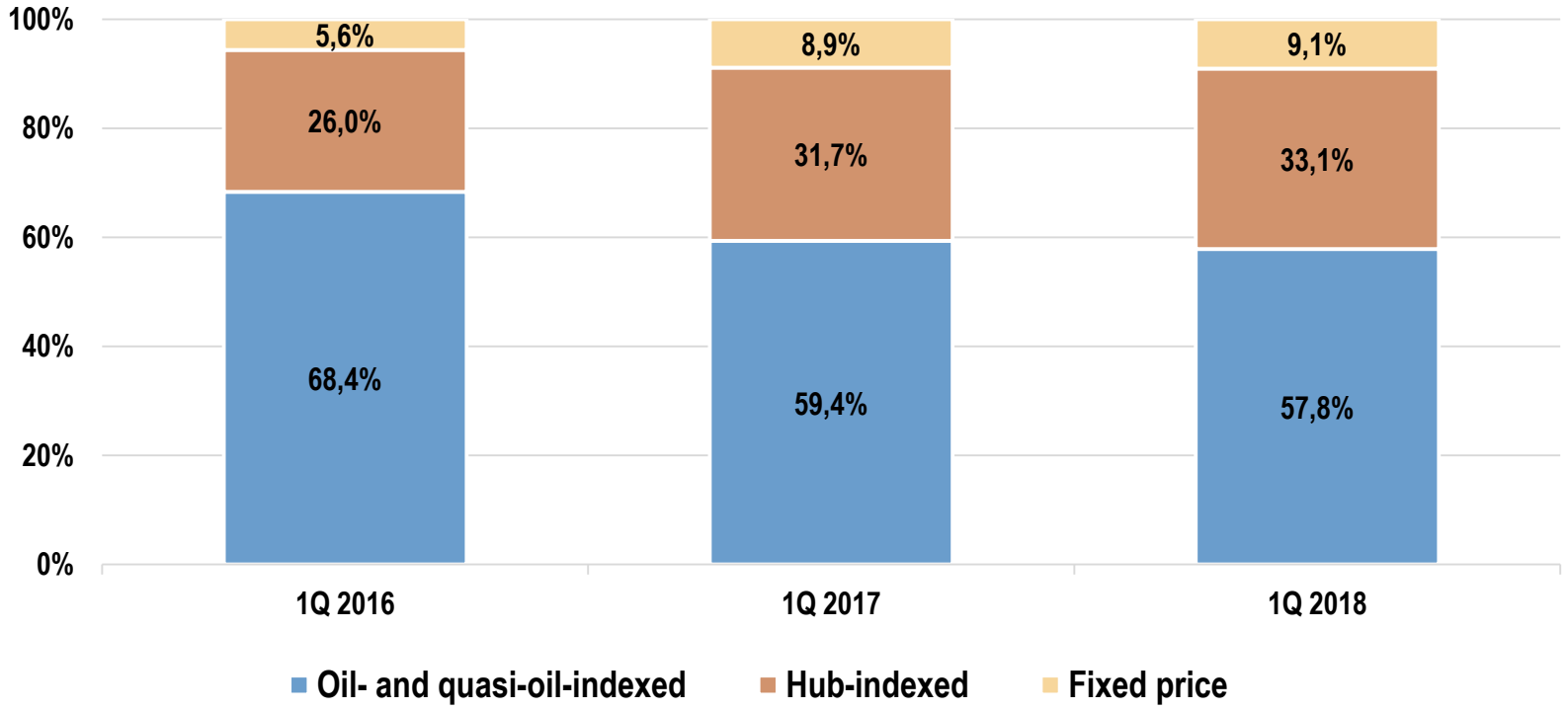
Correlation ratio	2009-2017	2009-2013	2014-2017	2016-2017
Brent - TTF*	84,3%	82,9%	80,7%	84,4%
Brent - TTF 3M	81,8%	77,5%	80,6%	74,0%
Brent - TTF 6M	76,3%	63,5%	83,0%	35,7%
Brent - TTF 9M	70,7%	48,7%	85,4%	-5,0%
Brent 3M - TTF	86,2%	84,8%	83,6%	84,0%
Brent 6M - TTF	88,7%	89,8%	85,9%	77,0%
Brent 9M - TTF	88,7%	91,1%	86,1%	72,2%
Brent +3M - TTF	86,9%	86,7%	84,3%	-
Brent +6M - TTF	81,2%	77,8%	82,0%	-
Brent +9M - TTF	65,0%	50,4%	75,2%	-
CIF ARA - TTF	63,2%	42,6%	67,9%	87,4%
CIF ARA - TTF 3M	58,8%	38,5%	58,5%	78,3%
CIF ARA - TTF 6M	51,5%	27,4%	48,6%	48,3%
CIF ARA - TTF 9M	44,4%	12,8%	44,5%	10,2%

* Hereinafter TTF Month Ahead

Source: Gazprom Export

Oil Indexes Retain Their Dominant Position in European Pricing

When Quasi-Oil Indexed Contracts are Taken into Consideration, Oil Indexes Retain Their Dominant Position in European Prices*

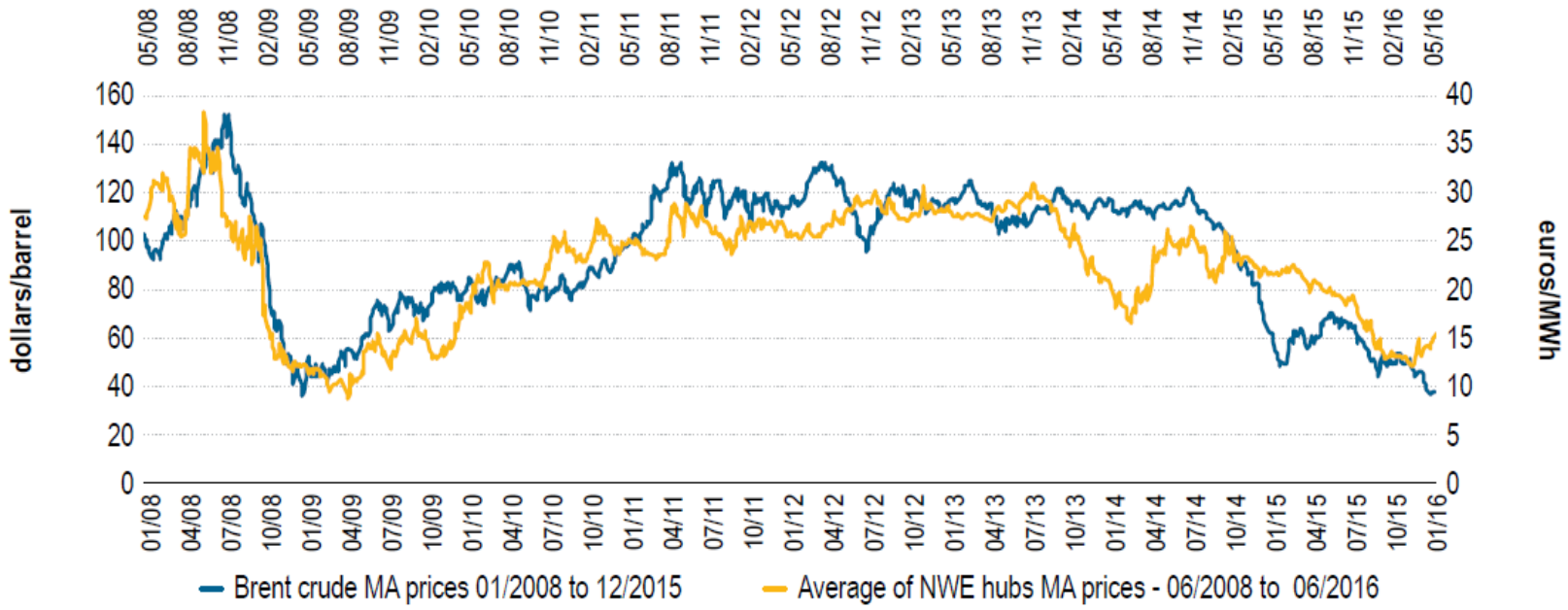


** Norway is considered as an internal supplier*
Source: IEA, «Gazprom export» LLC assessment

ACER Report: Correlation between Oil and Gas Still High due to Existence of LTCs

Long-term contracts… provide as well orientation for hub price formation, so there is a close interdependence between sources (ACER 2017 Report, P. 34)

Figure 20: Oil and gas hubs price evolution in Europe – 2008–2015



Source: Platts (2015) and ACER calculations.

Note: A six-month forward-lag is used for gas in the comparison with oil prices, which is the usual practice in the indexation formulas of gas long-term contracts.

Do All Exchange Traded Goods Correlate with Commodity Super Cycle?

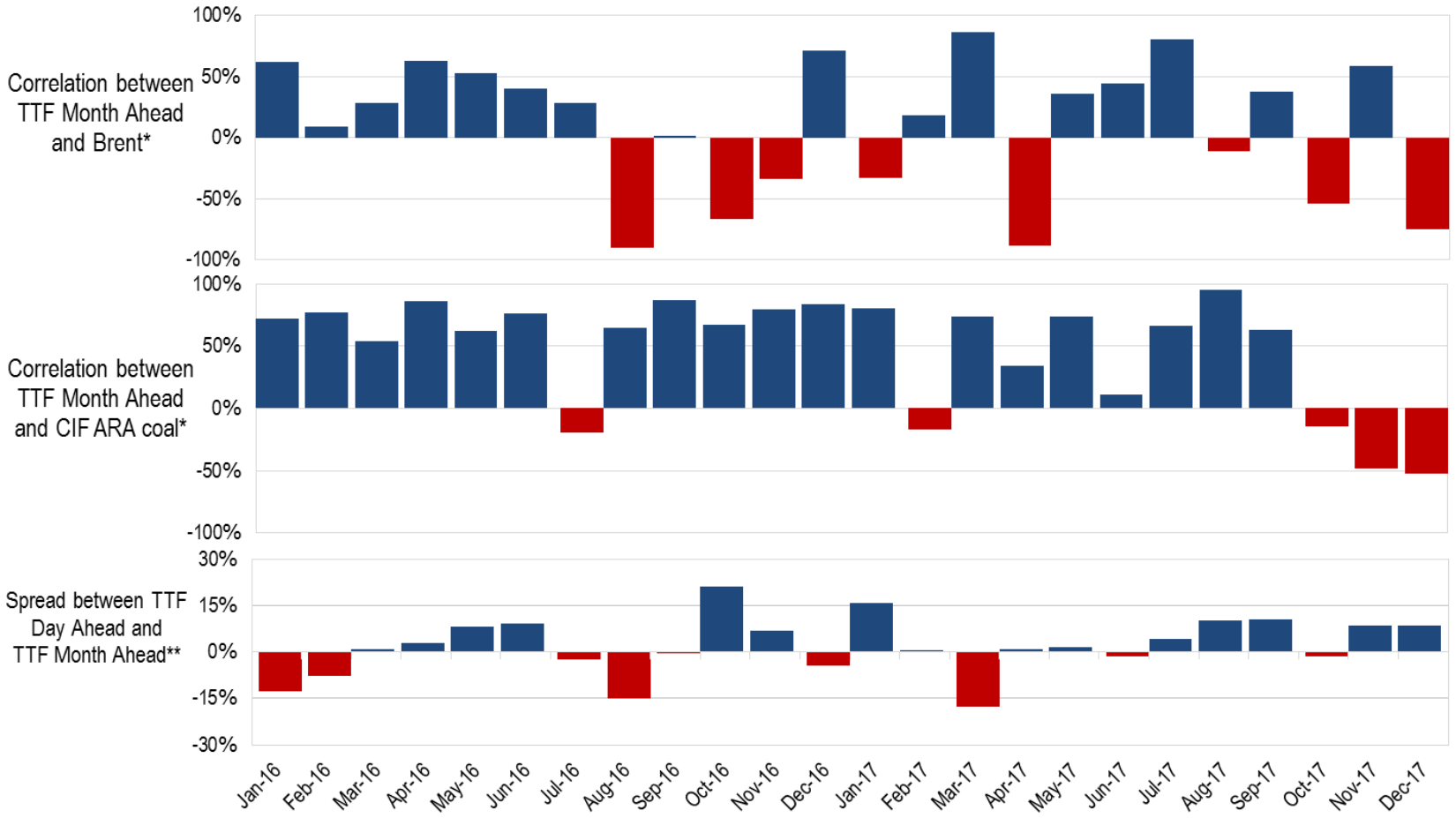
All Exchange Traded Goods Have Strong Correlation with Oil due to Commodity Super Cycle: Not a Sound Explanation

	Beef	Meat, sheep	Meat, chicken	Swine (pork)	Banana, Europe	Orange Juice	Natural gas, Europe
1990-2016	75%	88%	72%	38%	76%	76%	92%
1995-2016	77%	86%	66%	53%	75%	71%	90%
2000-2016	67%	81%	51%	68%	67%	58%	86%
2005-2016	38%	68%	3%	62%	28%	30%	70%
2010-2016	7%	78%	-54%	67%	-6%	19%	91%

Despite commonalities in price behavior over the last 25 years, commodities by few exceptions had a strong momentum of their own after the 2008 crisis

Source: based on IMF and WB data (monthly)

Although Correlation of Gas Prices with Coal Price Increased Positive Price Spreads Between DA and MA Prices Point to Emerging Gas Deficit



** At the basis of daily quotes ** Quotes with delivery in the same month are used*

Source: Gazprom Export

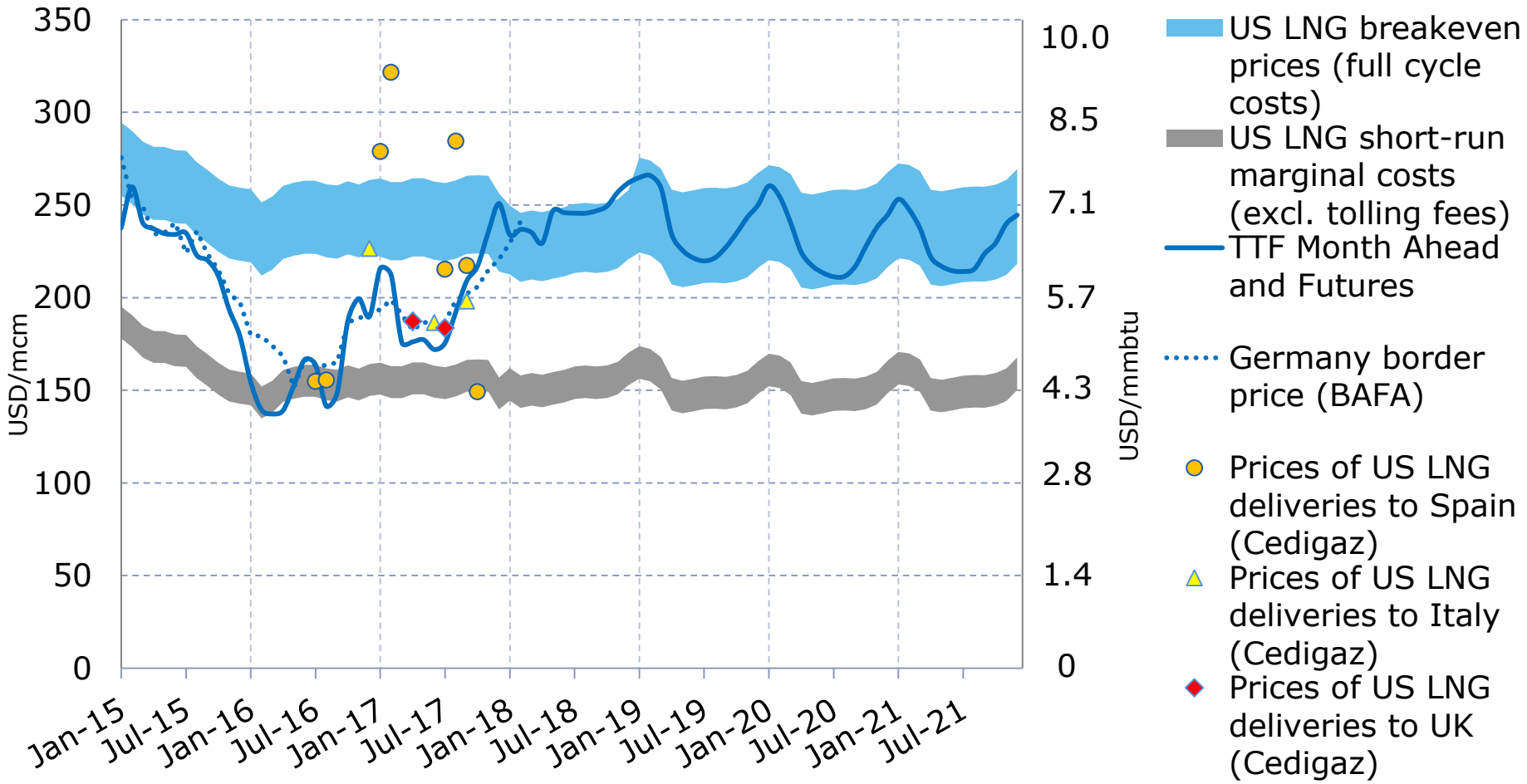
LNG Deliveries to the European Market in Q1 2018 were Down

	Q1 2017	Q1 2018	change (*bcm*)	change (%)
Qatar	5.1	4.9	-0.2	-3.9%
Nigeria	3.5	3.7	0.2	5.7%
Algeria	4.0	3.7	-0.3	-7.5%
Russia (Novatek)	0.0	0.8	0.8	
Norway	1.3	0.8	-0.5	-38.5%
Trinidad and Tobago	0.2	0.7	0.5	250.0%
Peru	1.0	0.4	-0.6	-60.0%
USA	0.8	0.4	-0.4	-50.0%
Angola	0.3	0.1	-0.2	-66.7%
Equatorial Guinea	0.2	0.1	-0.1	-50.0%
Dominican Republic	0.1	0.0	-0.1	-100.0%
Lithuania (re-export)	0.0	0.0	0.0	-100.0%
TOTAL	**16.4**	**15.7**	**-0.7**	**-4.3%**

Despite growing gas demand in 1Q 2018 (+0.9 bcm or +0.5%) LNG deliveries to the European market fell in 1Q 2018, being attracted by other markets with higher margins

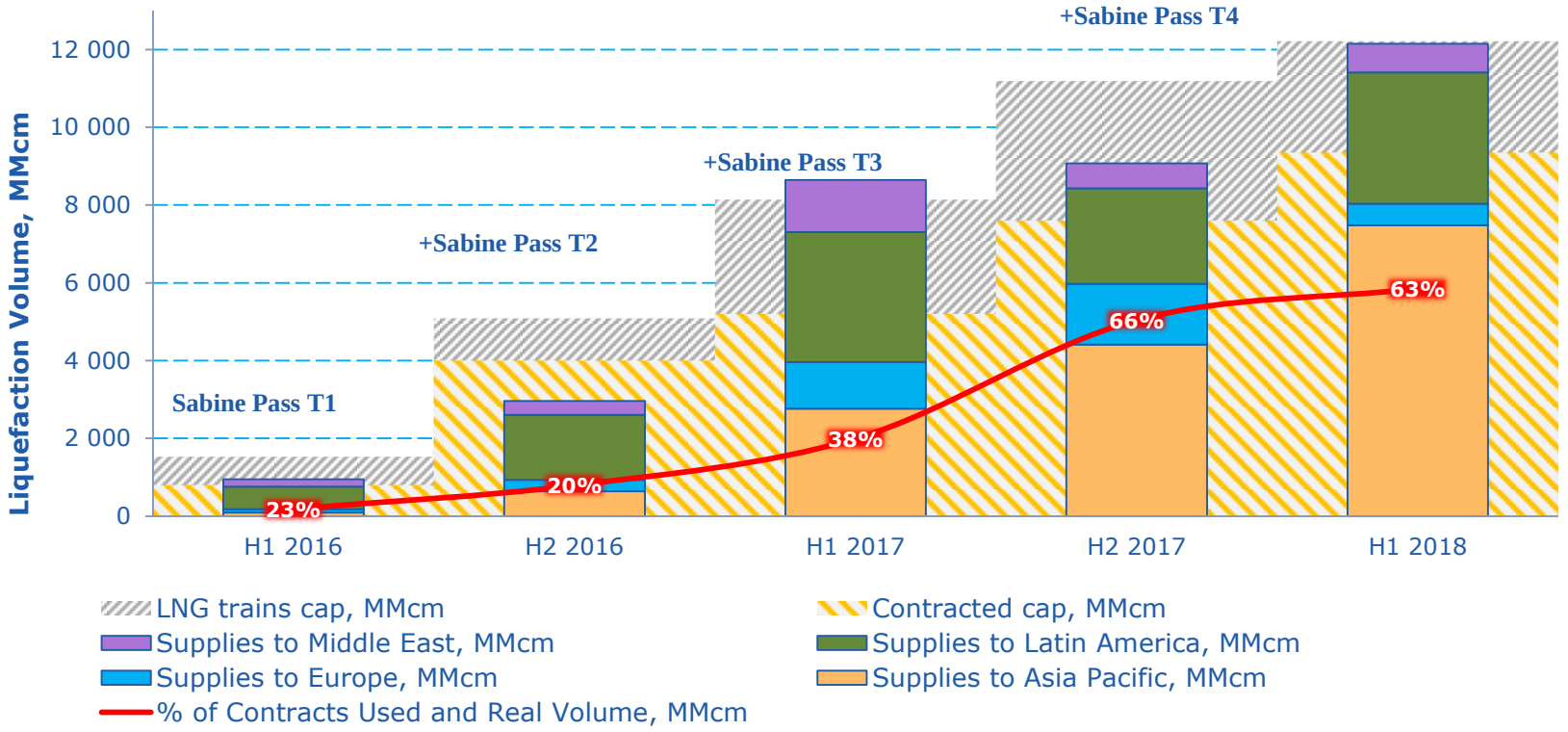
Source: IEA, ENTSOG

LNG Ignores European Gas Market Even Though Deliveries are Breakeven at Current Prices on Full Cost Basis



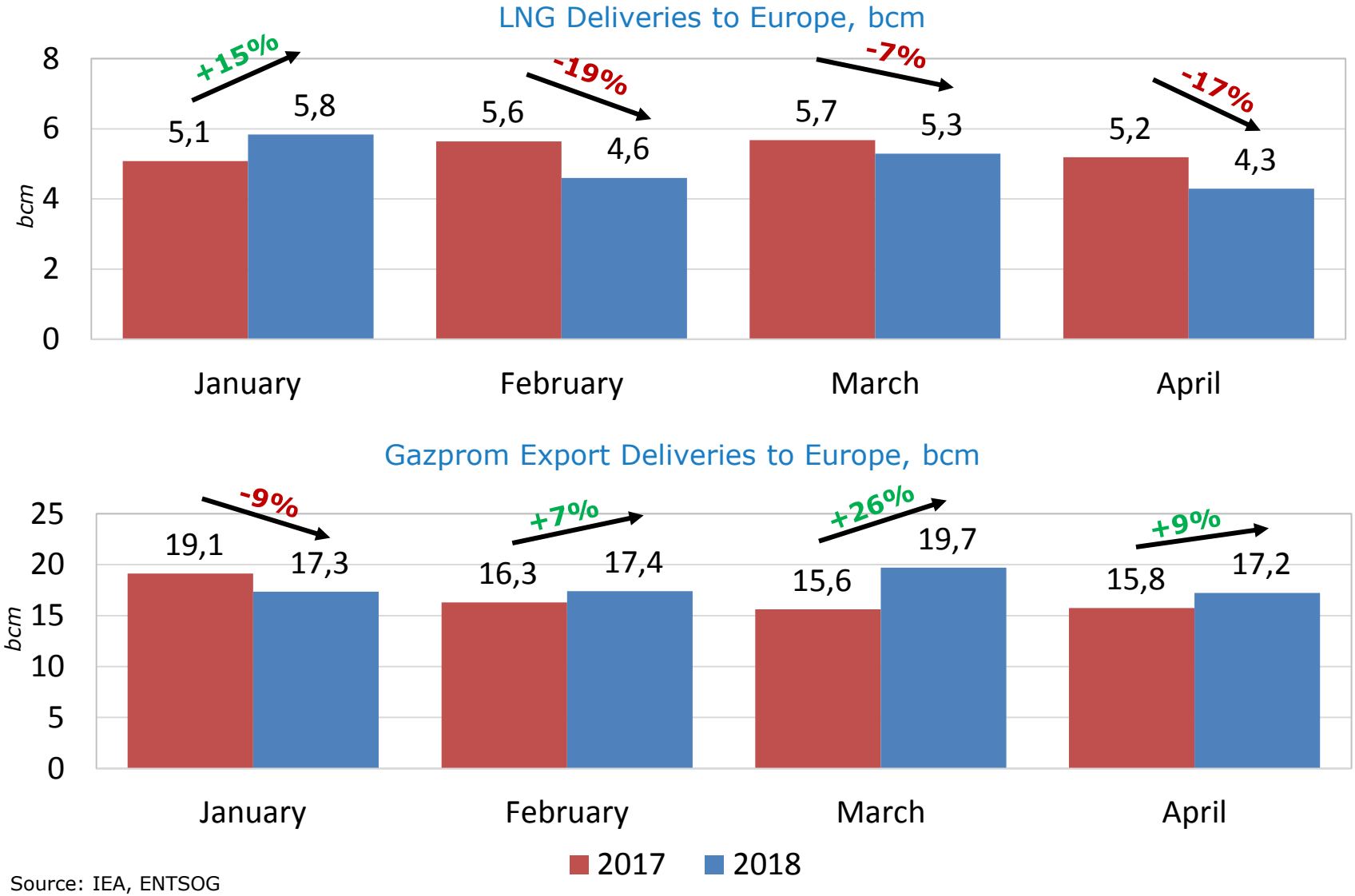
Source: Bloomberg, Cedigaz, IHS
*Calculated on the basis of Henry Hub Futures prices, P = HH * 115% + X*
where X – costs of liquefaction, shipping to Europe, regasification

As Contract Obligations are not Fully Met, Costs for Spot LNG Volumes Could be Subsidized



Source: IHS, Gazprom Export

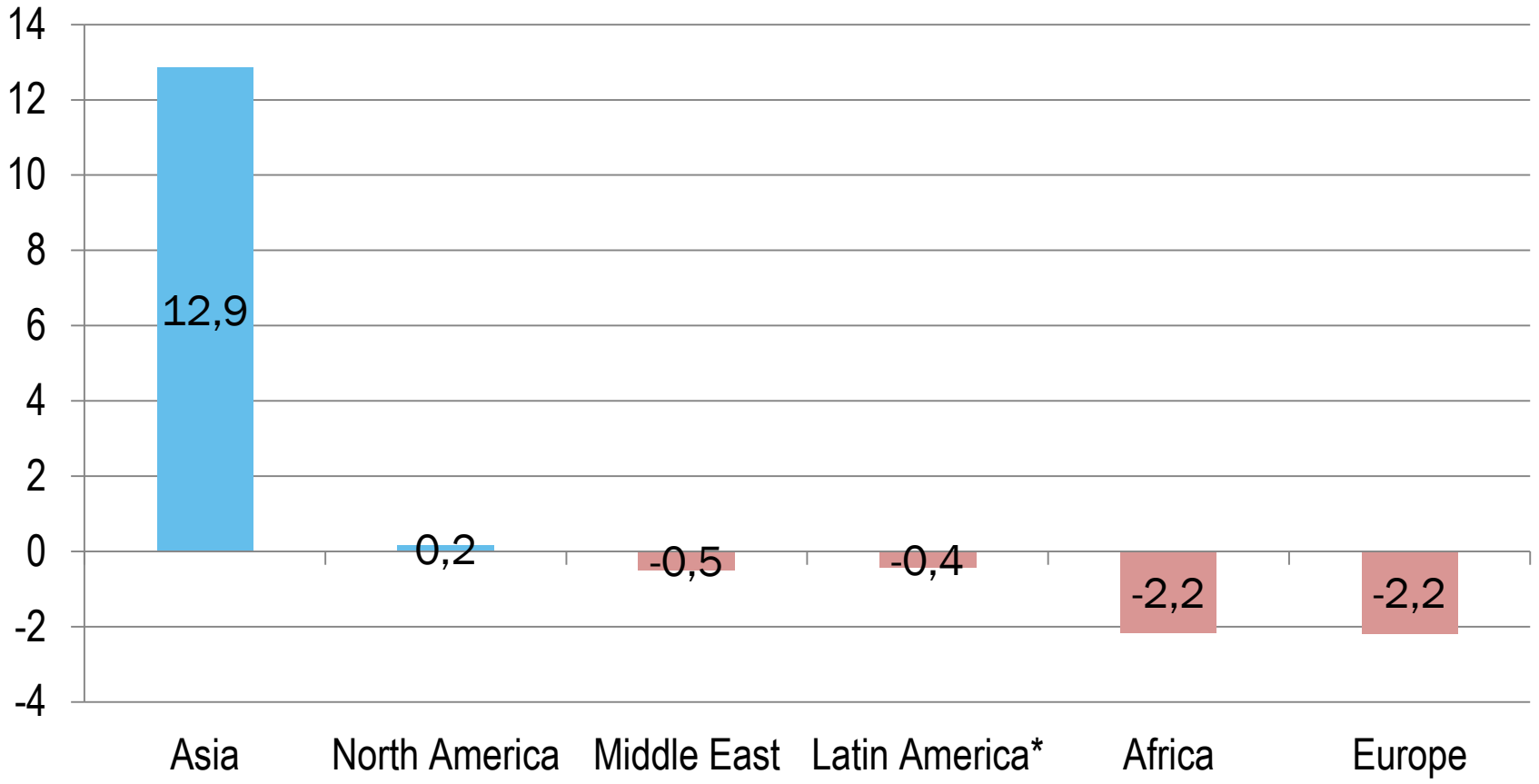
LNG Ignored Demand Hikes in Europe in January-April 2018 Despite Associated Price Hikes



Source: IEA, ENTSOG

Incremental Demand For LNG in January-April 2018 Came From Asia

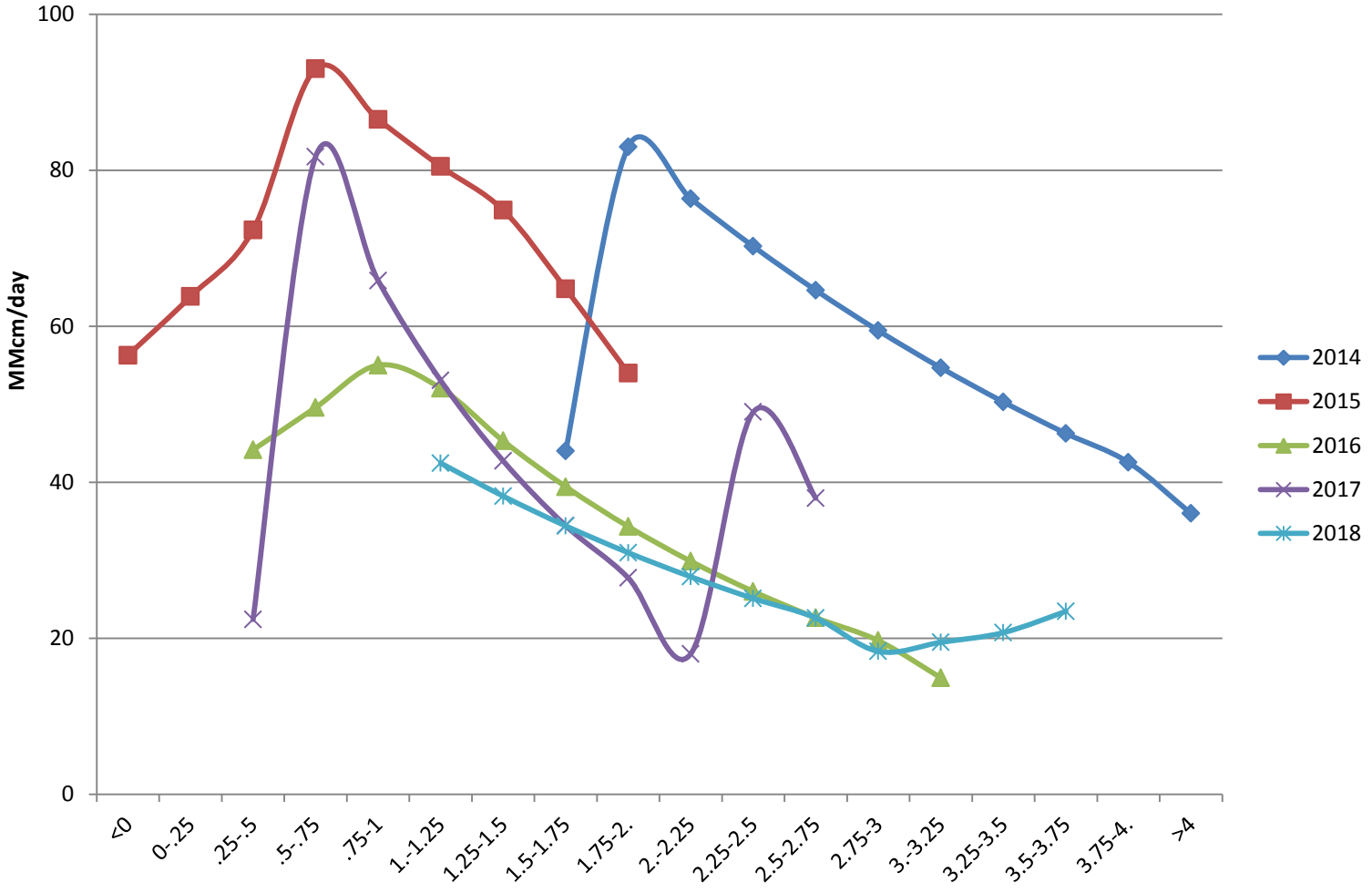
Net LNG Demand Increase in Jan-Apr 2018 vs. Jan-Apr 2017



Source: IHS Markit

** Excluding Mexico*

Year-by-Year North-West Europe Receives Less LNG for Same Size of Asian Premium



**Monthly averages*
Asian premium is JKM-NBP spread
Source: Bloomberg, IHS Markit, Interfax-GGA, Platts



THANK YOU FOR YOUR ATTENTION!