Why it Makes Sense for Europe to Embrace Nord Stream 2?

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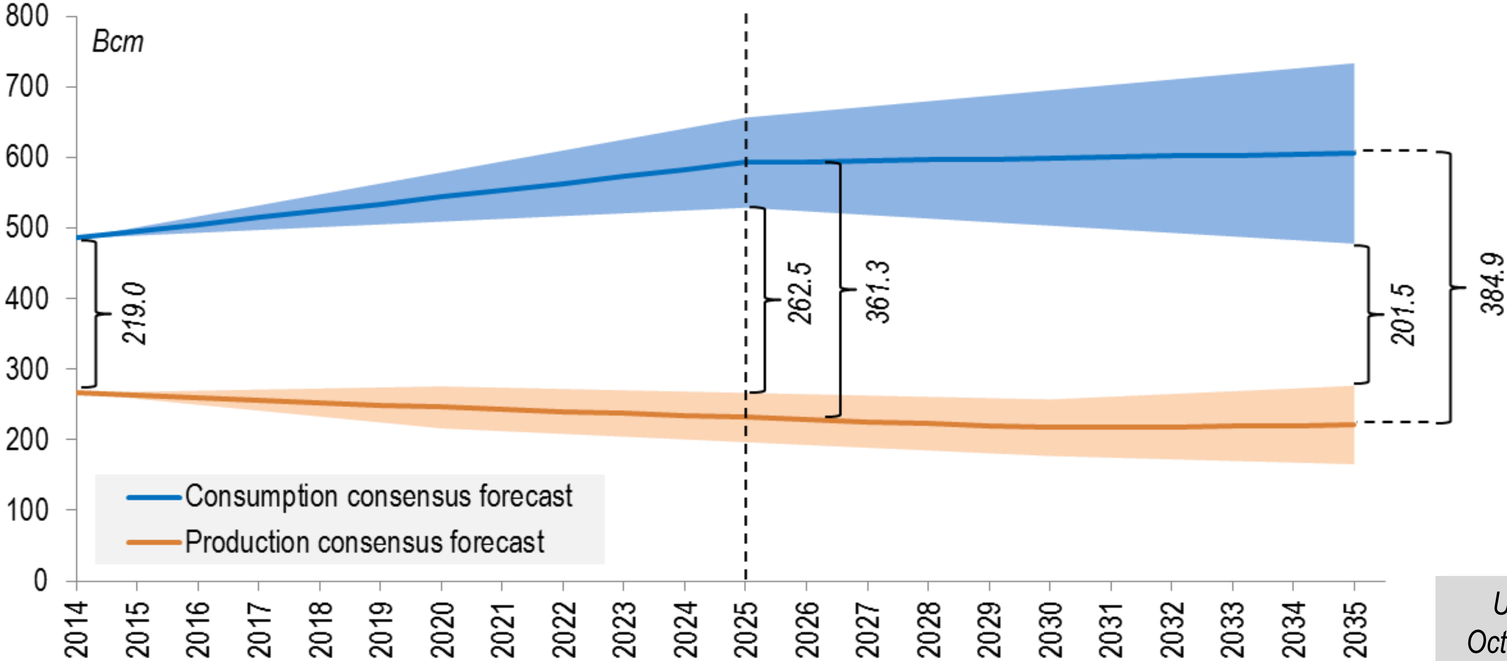
Reason #1 for North Stream 2: Bypass Ukraine as an Unreliable Transit Country

The Economist, Nov 28th 2015:
"UKRAINIAN nationalist saboteurs blew up transformers and cut power lines to Crimea on November 21st in an attempt to punish Russia... Crimea relies on Ukraine for nearly all its electricity, and most of its **2 mln residents have been plunged into darkness**, dependent on emergency generators and candles".

Source: The Economist

Deliveries of Russian gas to Europe were disrupted twice: in 2006 and 2009. In both cases, the European Commission responded by saying that it did not take sides in the conflict. In fact, the EU provided moral support to the Ukrainian transit blackmail of Russia in 2009.

Reason #2 for North Stream 2: Growing Gap between Demand and Indigenous Production



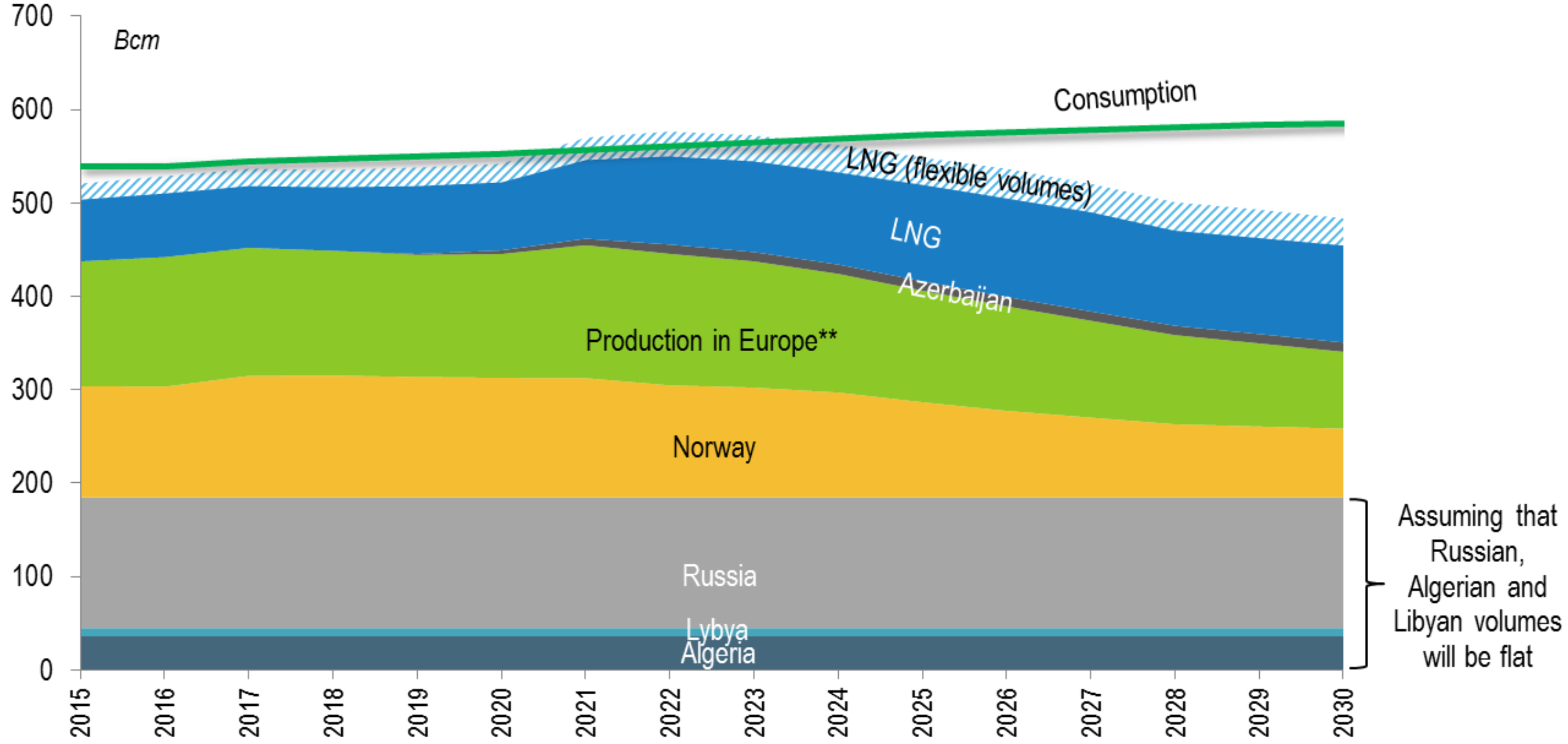
Updated: October 2015

According to consensus based on forecasts of the world leading research centers, gap between demand and indigenous production in Europe will reach 360 bcm in 2025 and 385 bcm in 2035 compared to 220 bcm in 2014. Additional imports demand is estimated to reach 140 bcm and 165 bcm in 2025, and in 2035 respectively.

Wood MacKenzie.

Note: Gap is a difference between the consensus forecasts for demand and indigenous production. Definition of European countries slightly differs from one forecast to another. Forecasts and scenarios are restated to make them comparable on the annual growth rates basis.

ENTSOG's Forecast Points to Emergence of Uncontracted Demand by 2022-2025*



Niche for additional deliveries to Europe could emerge in 2022-2025

Source: ENTSOG, Gazprom Export, GTS, IHS

** Europe – countries of European Far Abroad incl. Baltic States and excl. Turkey*
*** Taking into account updated forecast of Dutch production by Gasunie Transport Services (GTS)*

Where Europe Sources its Gas From: Deliveries by Major Exporting Countries in 1-3Q of 2015

Deliveries by Major Exporters

Bcm

	1-3Q 2014	1-3Q 2015	Changes	Changes, %
Gazprom JSC	114.2	115.4	1.2	1.0%
Algeria (incl. LNG)	24.6	21.8	-2.8	-11.5%
Qatar	17.9	19.9	2.0	11.0%
Iran	6.8	6.5	-0.3	-4.5%
Libya (incl. LNG)	4.8	5.7	0.9	19.2%

Deliveries by Major Indigenous Producers

Bcm

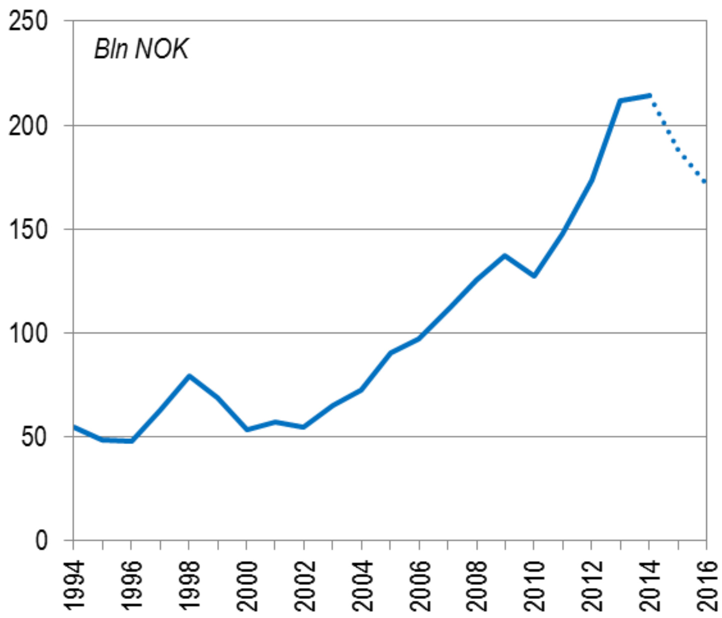
	1-3Q2014	1-3Q2015	Changes	Changes, %
Norway*	82.4	90.2	7.8	9.4%
Netherlands	43.3	37.2	-6.1	-14.1%
United Kingdom	30.6	32.2	1,6	5.2%

** Including pipeline and LNG supply of Norway to the European market, but not supply to Asia and America*

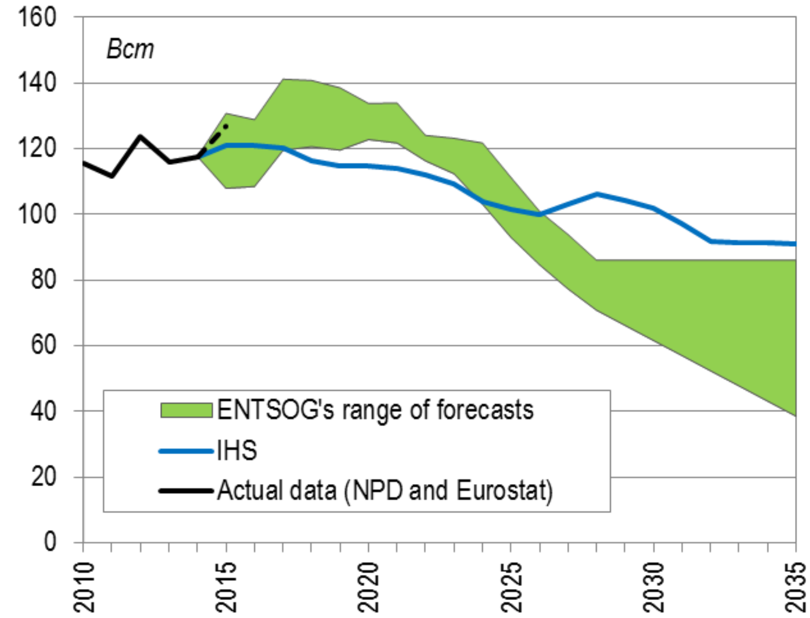
Source: Bloomberg, IEA, Eurostat, National Statistical Agencies, Estimates by Gazprom Export LLC as of October 2015

Norwegian Natural Gas Production: Declining Curve

O&G Companies operating in Norway cut investments in extraction and pipeline infrastructure



According to the forecasts, Norway's production will be falling



Norway's petroleum and energy minister, Tord Lien: "Our aim is to convey a clear message to the European buyers. We expect the signals emerging from their systems – which are more politically controlled than here in a number of EU countries – to confirm that this commodity will have a substantial role."

Source: ENTSOG, Eurostat, IHS, NPD, Norway Statistics

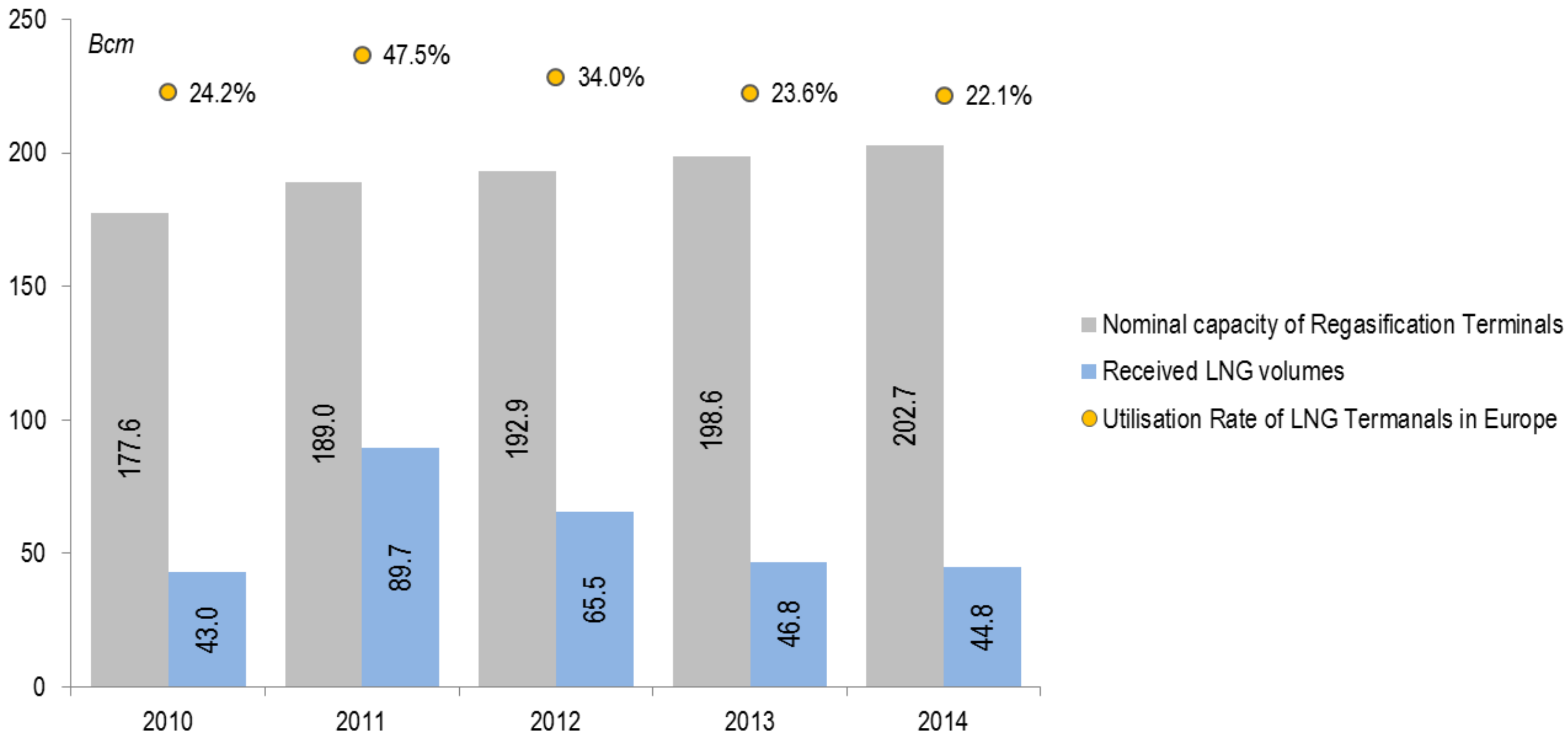
LNG Deliveries to Europe by Country

Bcm

	1-3Q 2014	1-3Q 2015	Changes	Changes, %
Qatar	17.9	19.9	2.0	11.0%
Algeria	10.7	9.6	-1.2	-11.4%
Nigeria	4.3	5.2	1.0	22.9%
Norway	1.7	2.2	0.5	28.0
Trinidad and Tobago	2.3	1.4	-0.9	-39.8%
Peru	0.9	1.1	0.2	-18.3%
Yemen	0.0	0.1	0.1	
Oman	0.0	0.1	0.1	
Equatorial Guinea	0.1	0.0	-0.1	-100.0%
Total	**38.0**	**39.6**	**1.5**	**4.0%**

Source: Bloomberg, Estimates by Gazprom Export LLC

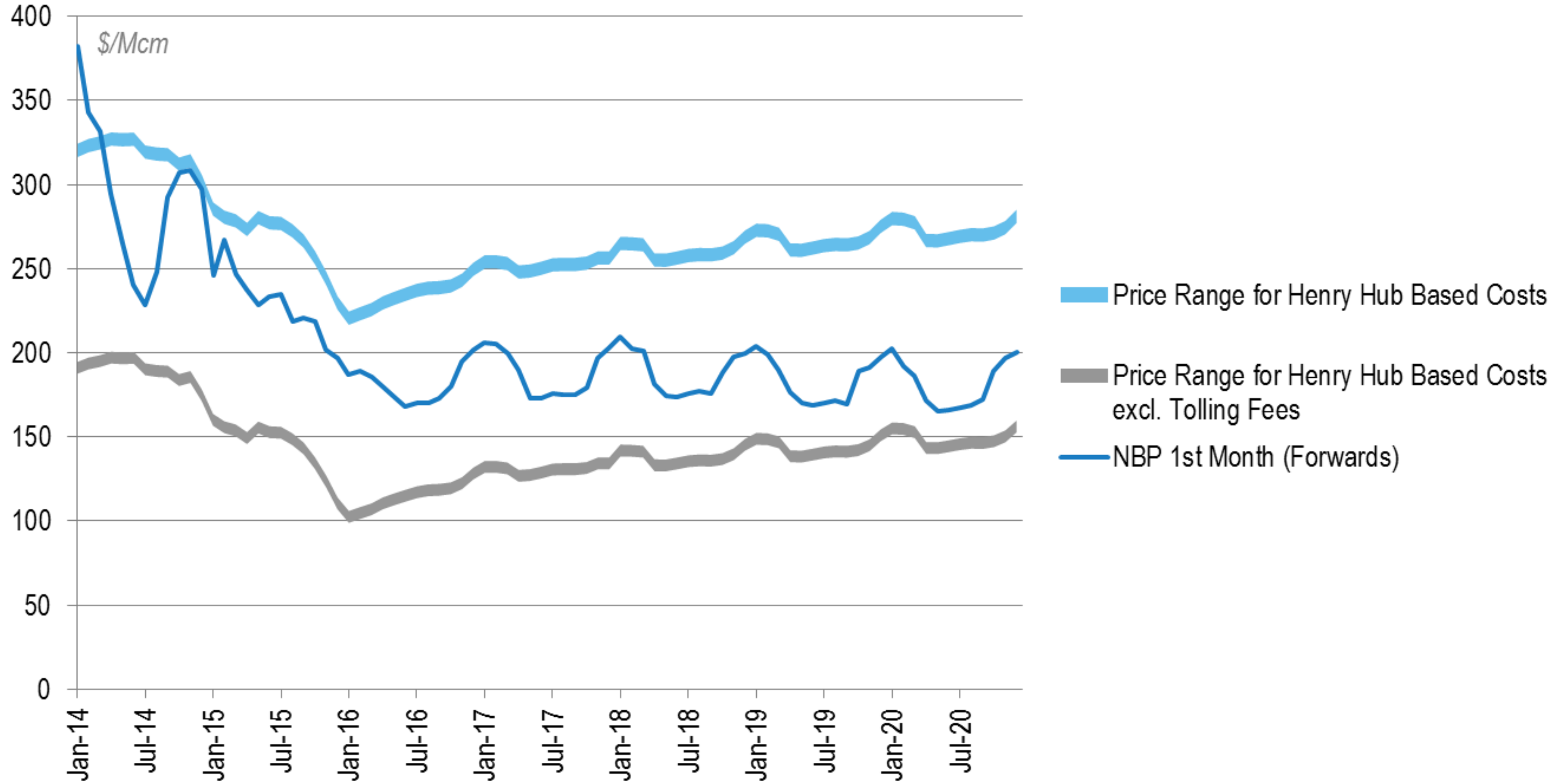
Utilization Rate of European LNG Terminals



European LNG infrastructure is under-utilized

Source: GIIGNL

Full Costs* of LNG Deliveries from North America to UK

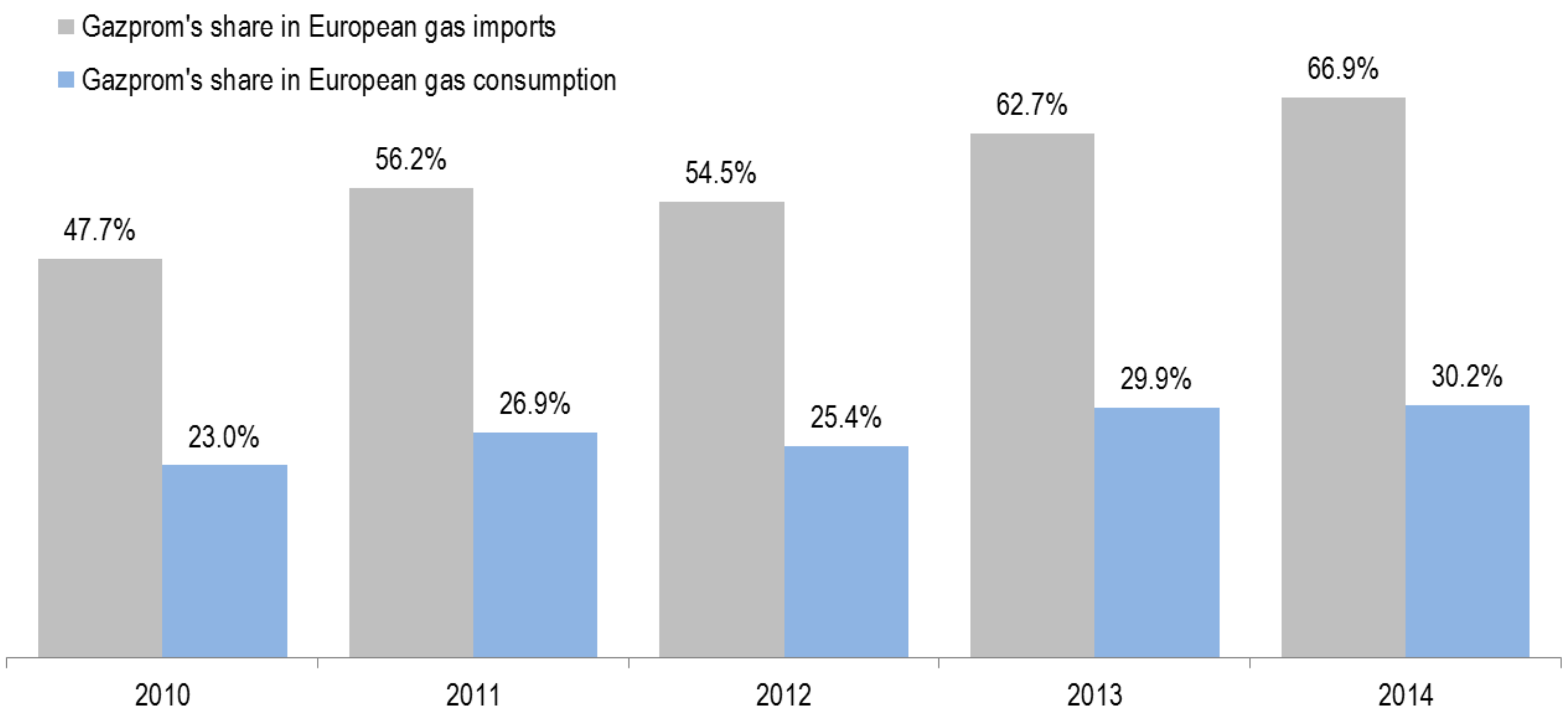


** The price includes transportation from Henry Hub to Lake Charles, LA, liquefaction, transport, and regasification in the U.K.*
West coast: Cameron, Corpus Christi, Freeport & Sabine Pass; East coast: Cove Point

Full costs of LNG deliveries from the USA are higher than NBP forward prices

Source: Bloomberg, Wood Mackenzie

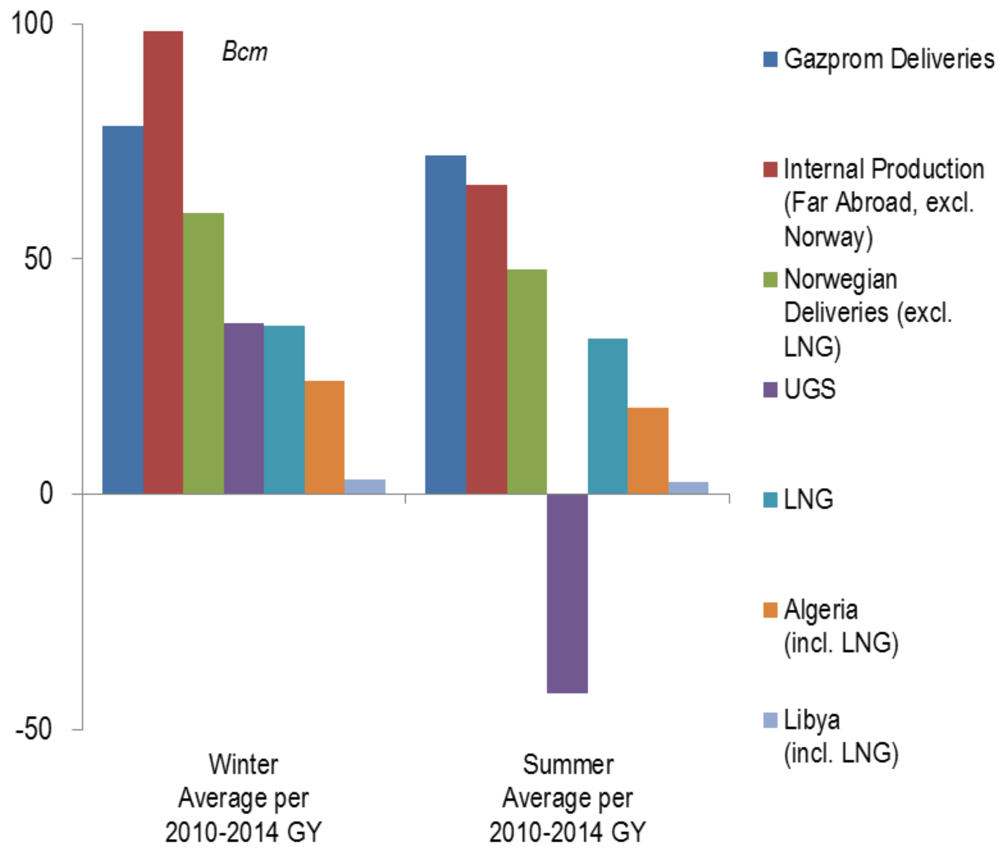
Gazprom is the Major Supplier of Natural Gas to Europe

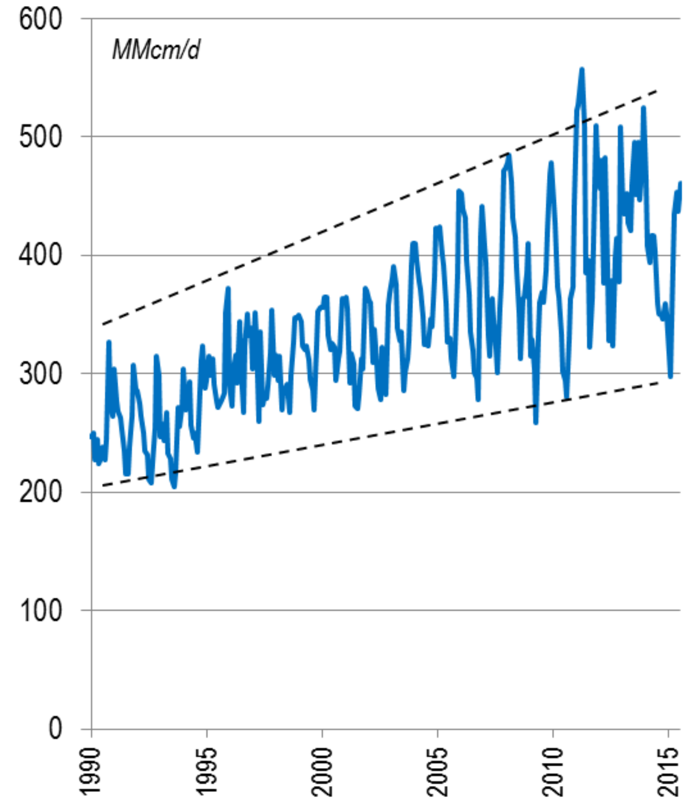


EU is squaring the circle trying to decrease dependence on Russia

Source: Gazprom Export

Gazprom is the Major Provider of Daily Supply Flexibility to Europe

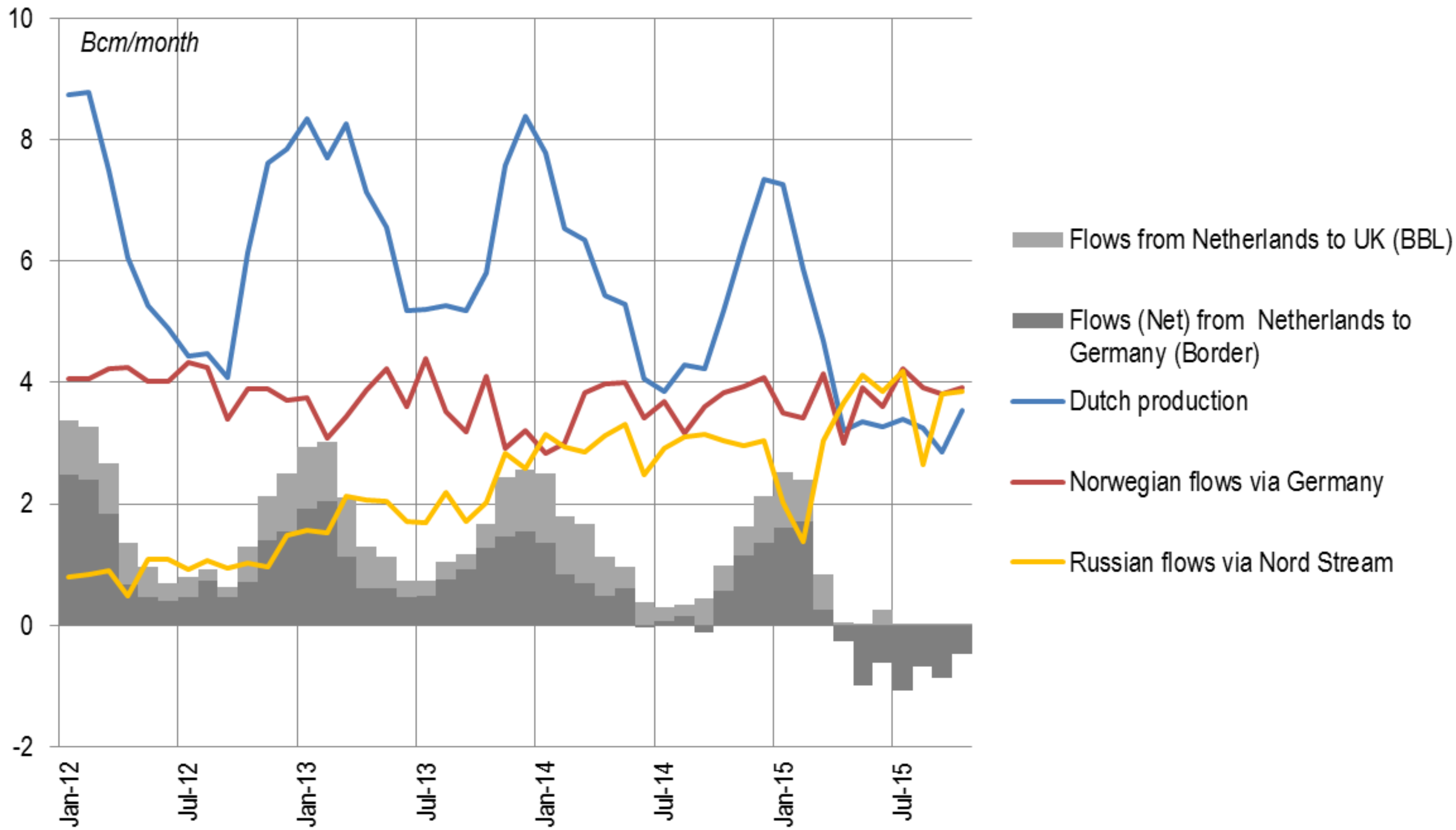




Though seasonal flexibility comes on the annual basis from indigenous production and the UGSs, Gazprom is the major supplier of daily flexibility with average seasonal daily deviation nearly doubling from 1990 to 2014 GYs from 80 to 150 mmcm/d

Source: Eurostat, IEA, GIE

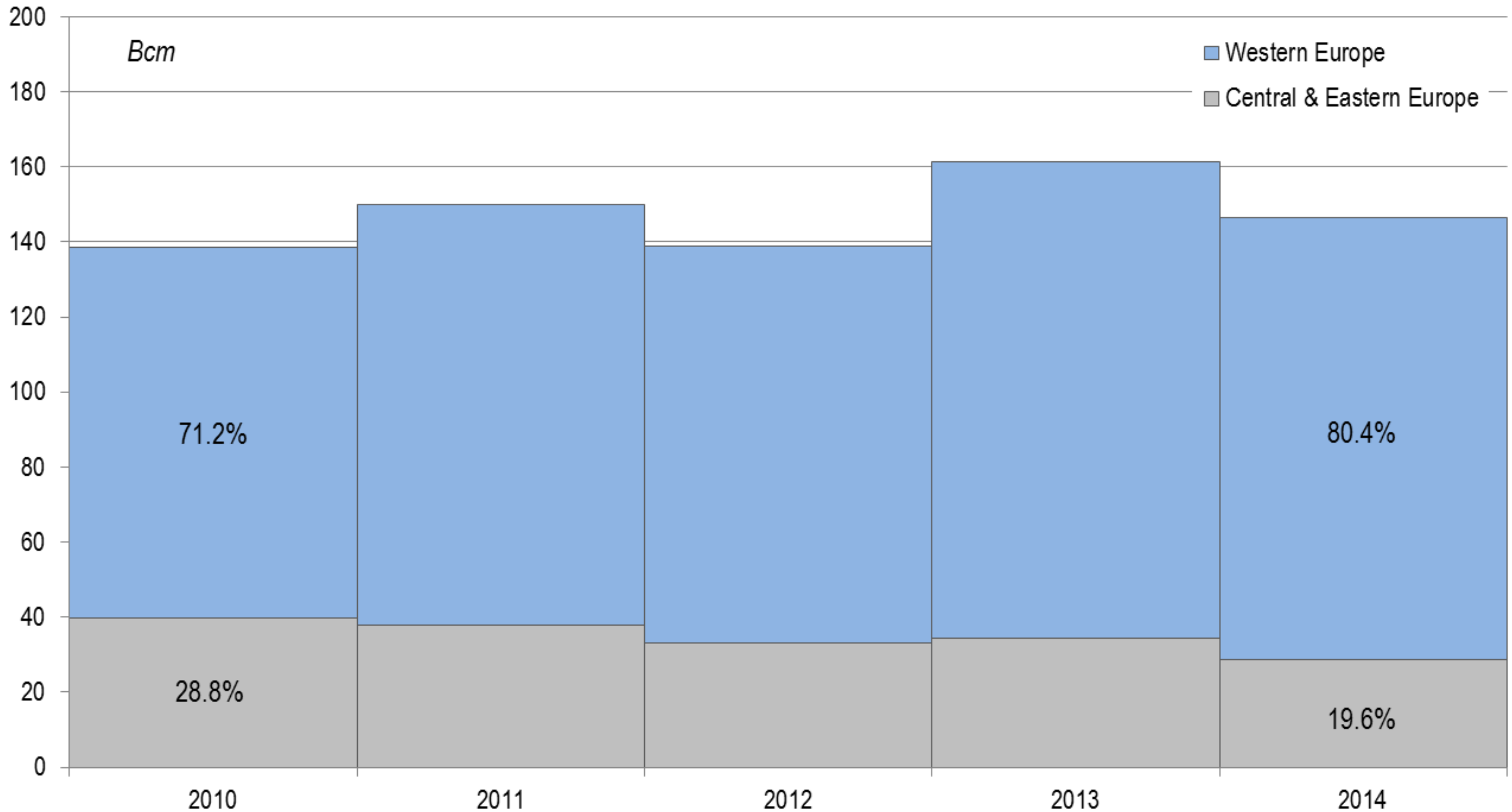
Complementary Role of Russian Supplies: Decrease of Dutch Production Changed Direction of Gas Flows



Russian gas flows via Nord Stream replace lowering Dutch production

Source: ENTSOG, GTS, NEL, OPAL, PIRA

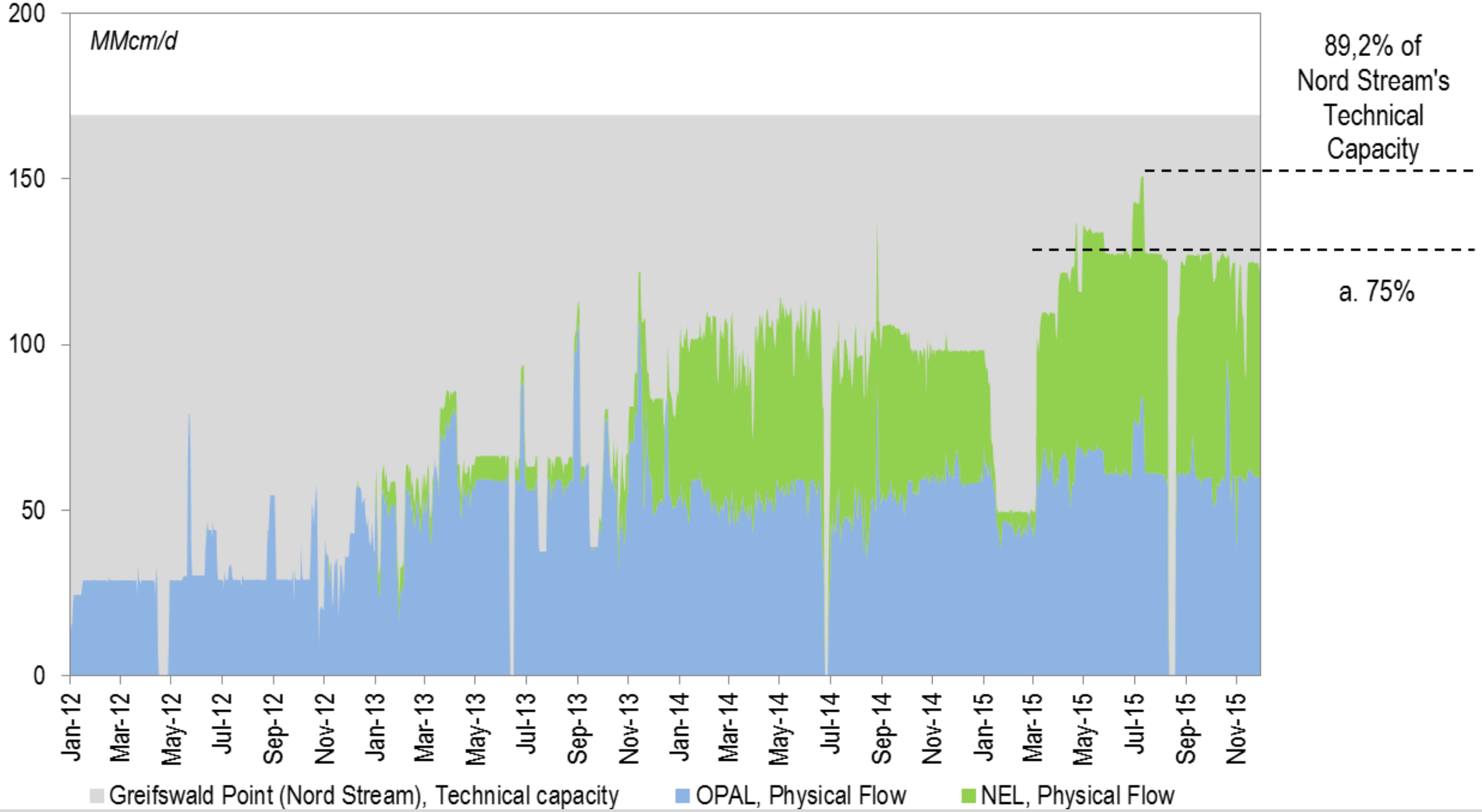
Share of Deliveries to North West Europe is on the Rise



Russian deliveries to Western Europe is growing

Source: Gazprom Export

Utilization Rate of Nord Stream 1 Capacity Increased Considerably



Russian gas flows via Nord Stream reached 89.2% of its capacity in mid-2015

Source: ENTSOG, OPAL, NEL

THANK YOU FOR YOUR ATTENTION!