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EUROPEAN GAS INDUSTRY'S FUTURE PITS U.S. VS. RUSSIA

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ABOUT KALLANISH

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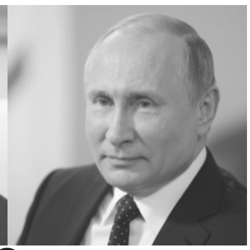
Where will Europe source most of its growing natural gas needs from? Russia - as it makes more economic sense; U.S. - as there's 75% idle LNG import capacity; or various sources as diversity is key to affordability and supply security.



EUROPEAN GAS INDUSTRY'S FUTURE PITS U.S. VS. RUSSIA

By Gabriela Farhangi, Editor - Global Energy Markets, Kallanish Energy News

A new world order in natural gas is emerging, with U.S. liquefied natural gas (LNG) helping to accelerate a shift towards a more flexible, liquid, global market.

Such a transformation is starting to have an impact on the European gas market, not just the global gas and LNG industry. Thus, it seems appropriate at the start of the four-day Gastech 2018 conference, to analyze the outlook for the European gas industry amid the global expansion of LNG.

The million-dollar question about the future of European gas and LNG markets revolves around three major players: Trump, Juncker and Putin -- I mean, the U.S., Europe and Russia.

Europe's import dependency to surge

According to the European Network of Transmission System Operators for Gas (ENTSOG), indigenous European natural gas production is forecast to decline by 40% by 2030. The early shut-in of Europe's largest gas field, Groningen, by 2030, will erase roughly 18% of the European domestic gas production by 2025, Wood Mackenzie estimates.

While production is in decline, demand is increasing. Marketed as the "clean fossil fuel," gas will be crucial in the energy transition, bridging the move away from "dirty fossil fuels" such as coal and crude oil, toward cleaner energy sources, such as renewables.

The share of gas in the European energy mix is expected to grow from the current 24%, to 27% by 2040, while production is set to slump by 60% by 2040, according to BP.

The phaseout of coal and carbon pricing policies across the region will continue to support gas demand, with particular growth to come from the power sector. To meet such demand, Europe's import needs will rise to 390 billion cubic meters per year (Bcm/y) in 2040, the International Energy Agency forecast. ▶

> *Having averaged 51% import dependency (in Europe) in the last decade, we forecast an increase to 69% by 2025. Or, to put it another way, 77 Bcm/y of additional gas imports vs. 2017 levels – roughly the size of the German gas market.*
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> Murray Douglas, Wood Mackenzie's research director, European gas.

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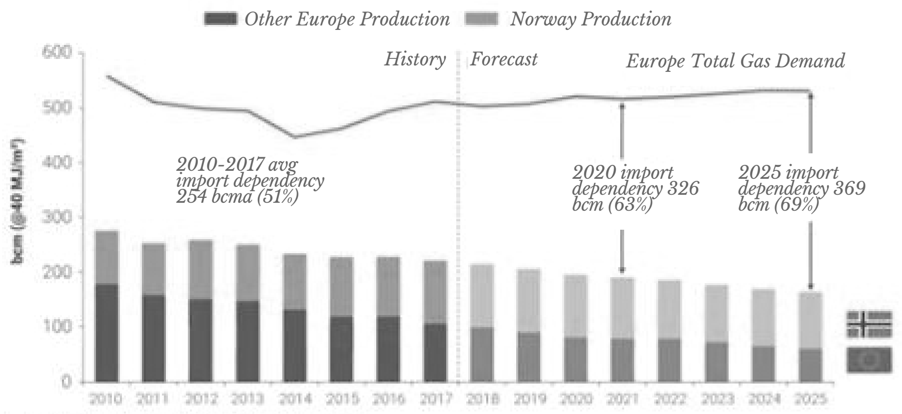
EUROPE GAS SUPPLY-DEMAND BALANCE



Source: Wood Mackenzie

The pipeline bypasses the Ukrainian gas transit route and will lower Moscow's dependence on Kiev's traditional route to Europe.

Countries such as Ukraine and Poland are fierce opponents of the project, while Germany and Austria are supporters. The economic and political debate of Nord Stream 2 has stalled at the European Commission; at times Europe is trying to promote a single gas market and increase its diversity of supply.

As the role of gas evolves, a narrow approach to gas security, focusing on gas as a stand-alone fuel in an individual region, is no longer appropriate, the IEA suggested. Despite a global gas market, diversification of supply sources and transport routes, as well as sufficient and effective interconnectivity, remain indispensable.

Misconceptions no longer appropriate

"It is, unfortunately, correct, and has undoubtedly also severely damaged the reputation of natural gas at large, that gas supplies have in the past been misused as a political weapon," said Wolfgang Peters, managing director at Gas Value Chain. "However, the so-called Putin-Phobia is no longer appropriate."

"The once bilateral physical dependency regarding the supply of natural gas has transformed itself towards a functionality of price signals which leaves no room anymore for political power games," the gas expert tells Kallanish Energy. ▶

Although the so-called Southern Corridor, designed to bring Azeri gas from the Shah Deniz Phase 2 project, is a new source of supply to Europe, there remain challenges concerning other feeder pipes in southern Europe. Imports will need to rise, despite Russian exports reaching 200 Bcm/y.

Russian gas supply more politicized

Russia has historically been the largest gas supplier to Europe, with a roughly 35% market share, while Norway supplies around 23% of the region's demand. Other major supplies come from the Middle East and North Africa in the form of LNG.

However, the growing problem for Russian pipeline gas has become more political than ever after the annexation of Crimea in 2014. Concerns the Russian monopoly is taking away the independence of certain European countries, and political blackmail continues to make headlines. The most recent controversial project is the construction of the Nord Stream 2 gas pipeline from Russia to Germany.

The Gazprom-led project, backed by five European firms (Engie, OMV, Shell, Uniper and Wintershall), is planned to carry 55 Bcm/y of gas via the Baltic Sea.

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Peters believes political blackmail is "obsolete" in a world of destination-flexible LNG responding to price signals, with the EU availing of "redundant import capacity." Such optionality creates a ceiling for the maximum achievable price of pipeline gas in the European trading markets and is the most powerful shield against exposure to political blackmail, he added.

LNG revolution changes global gas trade

In addition to the shale gas tidal wave, a second natural gas revolution is in play. The burgeoning growth in LNG production and demand, soon will overtake piped gas in global trade.
In 2016, of the 706 Bcm of gas traded globally, 39% of the volume was LNG. In 2040, from an estimated 1,230 Bcm of gas traded, some 59% will be LNG, according to the IEA.

> *LNG accounts for almost 90% of the projected growth in long-distance gas trade to 2040: with few exceptions, most notably the route that opens up between Russia and China, as major new pipelines struggle in a world that prizes the optionality of LNG*
>
> ---
> *IEA*

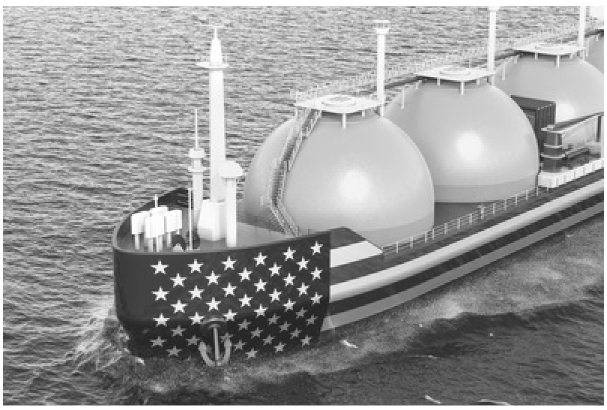
There is more LNG supply being developed than Asian demand can absorb, and that mismatch is where Europe is expected to play a significant role -- absorbing a large proportion of this new supply.

“Europe offers liquidity and has regasification capacity available, while other markets will take time to develop,” noted Wood Mackenzie’s senior research analyst Lucy Cullen. “Rising European imports will come from legacy suppliers in the Atlantic and Middle East, displaced from the Pacific by new, more proximate supply. It will also come from new supply in the Atlantic, most notably the U.S.”

U.S. becomes No. 1

By the mid-2020s, the U.S. will overtake Qatar as the world’s largest LNG supplier. U.S. President Trump is making sure Europe weans itself off the Russian gas monopoly, opening its doors to U.S. LNG. Cheap Permian and Marcellus Shale gas create a competitive advantage compared to many conventional gas projects. Some LNG contracts are already marketed as distinctly Henry Hub, influencing oil-linked LNG pricing.

“In time, a quarter of all cargoes on the high seas will be Henry Hub-derived, FOB with no destination clauses. This will dramatically increase liquidity in LNG trading and the effect on global LNG pricing will be profound,” noted Simon Flowers, chief analyst at Wood Mackenzie. ▶



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European LNG infrastructure

In July, the European Union and the U.S. agreed to work towards facilitating more U.S. gas shipments to Europe, with EU Commission President Jean-Claude Juncker saying the bloc would build more terminals to import LNG.

“We agreed to strengthening our strategic cooperation with respect to energy,” Trump said in a press conference with Juncker.

The European Union wants to import more liquefied natural gas, LNG, from the U.S. and they’re going to be a very very big buyer. We’re going to make it much easier for them, but they’re going to be a massive buyer of LNG.

President Trump

On a more generalist address, Juncker said there currently are 14 LNG infrastructure projects under consideration, which are set to increase the continent’s capacity by 15 Bcm/y by 2021. These projects, however, still need the approval of the individual financing programs.

The "deal" was announced to cool down trade tariffs tensions between the EU and the States and doesn’t provide any specific commitment by the parties.

“Trump doesn't have a state-owned LNG (nor soybean) sales facility and Juncker doesn't hold an EU-owned LNG buying facility. It is all about shrewd commercial operators going for the highest achievable netback,” highlighted Peters.

The EU already has 210 Bcm/y of regasification capacity in 28 large-scale LNG import terminals in 13 countries. However, roughly 75% of this capacity is idle – which raises questions as to whether there’s a need for additional infrastructure.

According to Gas Infrastructure Europe (GIE), as of Dec. 2017, there are 5 Bcm/y of capacity under construction and 129 Bcm/y planned for the EU. Most of the operational import capacity is onshore in Spain (69Bcm/y), the UK (48Bcm/y) and France (34Bcm/y).

“Admittedly not all of the 28 terminals are geographically located such that they would benefit Europe in its entirety. For example, Spain is traditionally ‘LNG country’ with a multitude of terminals but, unfortunately, still not sufficiently interconnected with the other markets of the European continent,” noted Peters.

“Nonetheless, about half of the terminal capacity would be capable of absorbing LNG supplies attracted - in case of a price spike -, which would also benefit the Eastern European gas markets directly,” he added. ▶

75

% of EU’s LNG import terminals capacity is idle

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Russia, U.S. dynamics critical to European pricing

Despite estimates, uncertainty is the only certainty regarding the growth in Europe's LNG import volumes. It's subject to the vagaries of the global market, the pace of supply growth and the development of new markets. It also depends on Russia's piped gas exports to Europe.

"Should Russia withdraw gas from the European market, and avoid competition by making way for rising LNG imports, then prices will, to some extent, be protected," said Cullen, noting Russia did this in 2009-11 when Qatar grew its LNG export capacity.

"However, should Russia seek to protect its market share in Europe, then Russian pipe gas and rising LNG imports will compete and European prices will be lower. And if prices in Europe are sufficiently low, they may not cover the cost of exporting U.S. LNG to Europe, forcing underutilization of some U.S. LNG capacity when alternative markets cannot be found," she added.

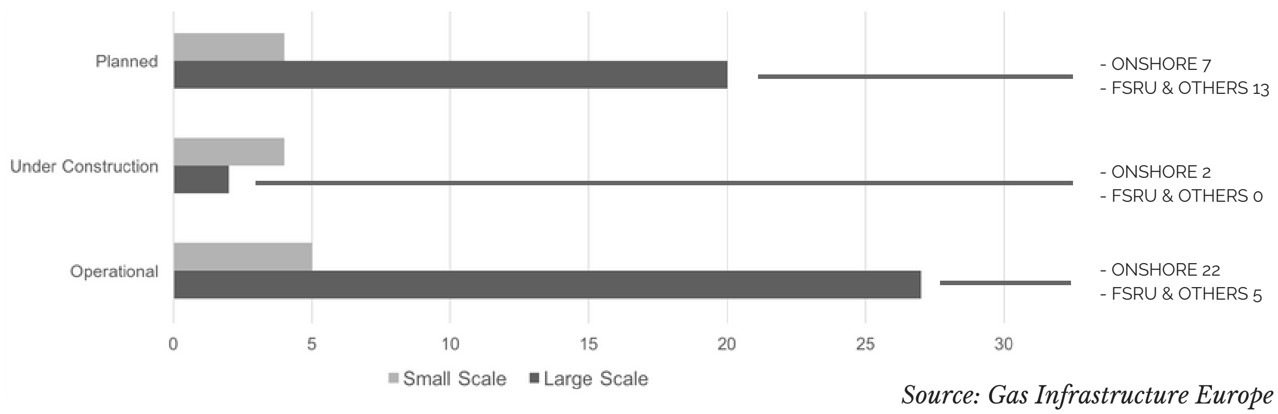
So far, Gazprom has voiced its confidence in continuing to reach record high sales to Europe despite the threat posed by imports of U.S. LNG. It hasn't, suggested it would withdraw gas from Europe. ▶

ANNUAL REGASIFICATION CAPACITY OF LARGE-SCALE LNG TERMINALS PER COUNTRY IN BCM/Y

	Operational	Under Const.	Planned
Belgium	9	-	-
Croatia	-	-	6
Estonia	-	-	5
Finland	-	-	-
France	34	-	11
Germany	-	-	4
Greece	5	2	6
Ireland	-	-	3
Italy	15	-	8
Latvia	-	-	5
Lithuania	4	-	-
Malta	1	-	2
Netherlands	12	-	4
Poland	5	-	11
Portugal	8	-	
Spain	69	3	5
Sweden	1	-	1
UK	48	-	17
Total EU 28	210	5	87
Albania	-	-	8
Norway	-	-	-
Russia	-	-	3
Turkey	17	-	21
Ukraine	-	-	10
Total Europe	227	5	129

Source: Gas Infrastructure Europe (GIE)

NUMBER OF LNG IMPORT TERMINALS PER TYPE IN EUROPE



Source: Gas Infrastructure Europe (GIE)

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"There are prospects and the prospects are related to falling domestic gas production in Europe, while gas demand is rising," deputy CEO Alexander Medvedev said in June. "Gazprom has all the capacity to supply gas to Europe in the amount Europe needs."

Proximity, existing infrastructure and low price are often cited by Gazprom as its advantages in Europe, while downplaying the competition LNG would raise.

Hard to predict a winner

It's hard to predict who will win the battle for the supply of gas to the European market – Trump or Putin. In the end, it may be Juncker that becomes the winner having both pipe gas and LNG supply meeting Europe's domestic demand and helping balance global markets through arbitrage.

Around 30,000 upstream, midstream and downstream professionals, as well as government officials and policy makers will gather at the Gastech conference to discuss the dynamics of the global gas and LNG market.

Discussions and opinions presented along the event will give us a bit more perspective of the challenges and opportunities lying ahead. Come visit Kallanish Energy at stand L113. ■