

EU Gas Supply After Nord Stream 2

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"Ignorance Is Strength" George Orwell

"Concentration Is Diversification" V. Putin

"Reduction Is Expansion" Gazprom

"Replacement Is Not Replacement" NS2AG



NS2 Reduces Russian Gas Export Capacity

Gazprom CEO A. Miller on the liquidation of pipelines at the Russian-Ukrainian border:

- “I mean that, **due to the expansion of the northern corridor** and the changes in the configuration of gas supplies to consumers within Russia, some facilities in the central corridor are no longer needed. Meanwhile, Gazprom incurs semi-fixed operating costs for the maintenance of those facilities. The Company has now launched an **optimization program** for gas transmission capacities in the central corridor, which provides for the **decommissioning** of almost 4,300 kilometers of single-string trunklines and 62 compressor shops with a total installed capacity of over 3 GW by 2020. As for the gas transit capacities that we will have in the central corridor toward Ukraine by 2020, they will amount to **10–15 billion cubic meters per year** after the optimization program is completed.”

Source: <https://www.gazprom.com/press/news/miller-journal/2016/277026/>

"Optimization" Plan of Gazprom

+55 bcma

-130 bcma

Gazprom cuts export capacity because EU needs more Russian gas?

No Ukrainian Transit After NS2



Collateral damage – end of transit business of Slovakian Eustream, a EU transit operator.

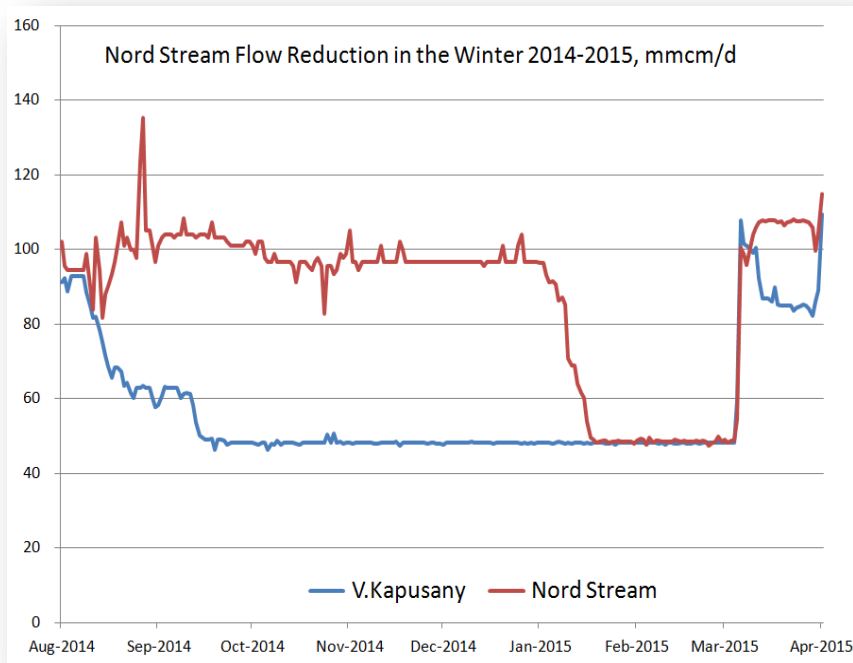
- “There won’t be any transit through Ukraine in future. Even if the Sun and the Moon switch places”.

<http://www.gazprom.com/f/posts/14/618809/transcript-press-conference-2015-06-09-en.pdf>

Security of Supply

Nord Stream tap game of January-March 2015

“Risk-Free” Gas Flow in Jan-Mar-2015



Sources: [NEL](#), [OPAL](#), [Eustream](#)

<http://en.kremlin.ru/events/president/news/45869>

- When Putin got angry by reverse gas sales from the EU to Ukraine, he ordered Gazprom to reduce daily flow of NS1 by 50% (instead of arbitration).
- The failed attempt to stop the reverse flow to Ukraine resulted in a loss of \$5.5 bn of Gazprom's revenue and fines of \$400 million.
- "Punishment" for "bad behavior" was more important than the loss of \$6 bn and the reputation of Nord Stream.
 - There is no mutual interdependence.
- With NS2 in place, gas security of more than half of the EU would depend on "good behavior" of Germany.
 - Yamal-Europe, NS1 and NS2 can deliver to German border over 145 bcm of gas.

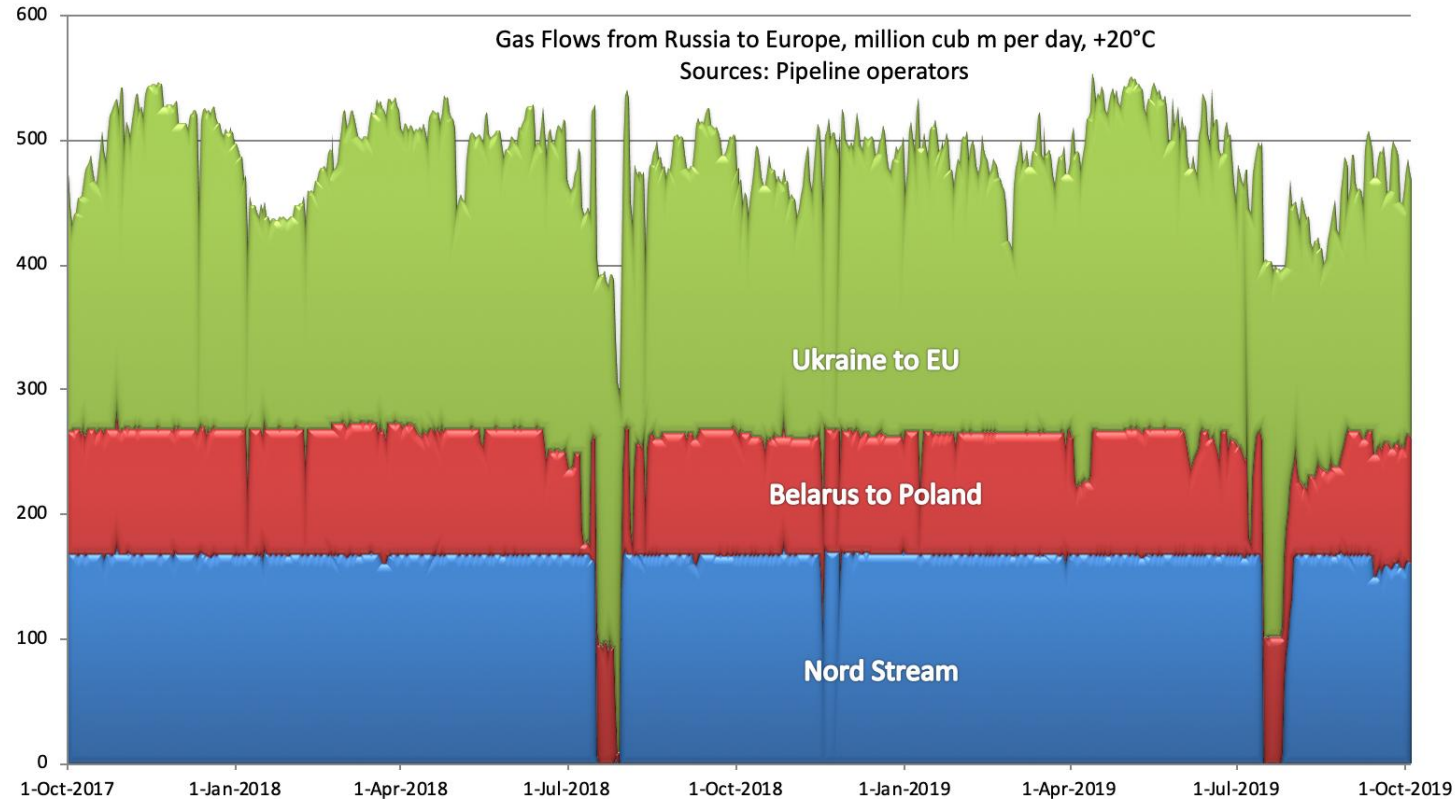
Reliability the Gazprom Way

Gazprom CEO A. Miller on the role of gas tap:

- “Firstly – we can shift gas volumes to other markets and, secondly, we can take a little break and wait. This is our competitive advantage, I mean our ability to wait, and we will wait if we are forced to do so.”

Source: <https://www.gazprom.com/press/news/miller-journal/2015/223751/>

Nord Stream Offers No Flexibility

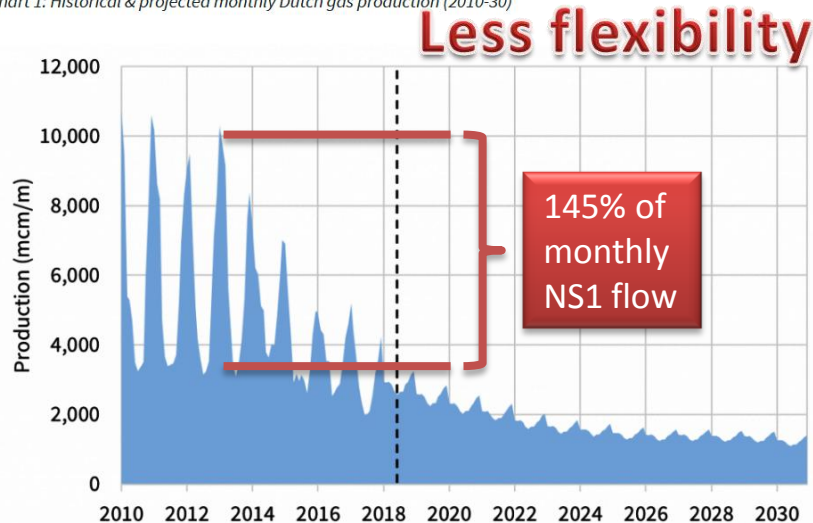


Gazprom plans to replace flexible exports by steady daily flows regardless of the demand.

Replacement for Groningen Needed

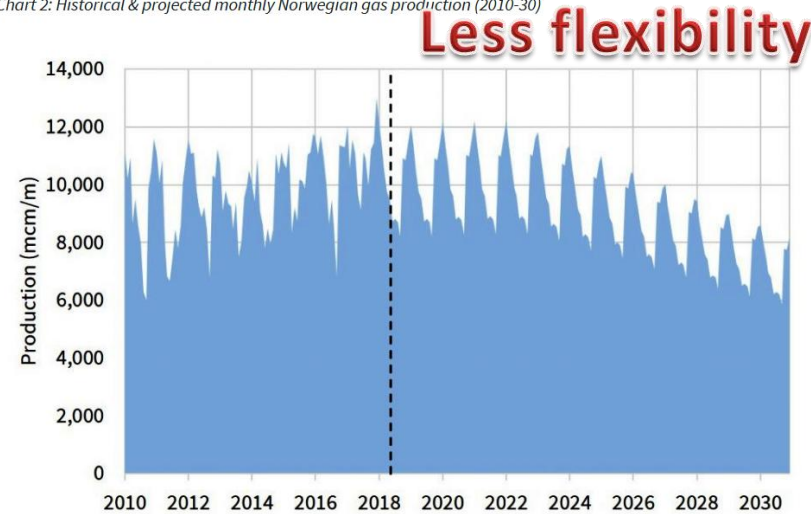
Monthly Dutch gas production, mmcm

Chart 1: Historical & projected monthly Dutch gas production (2010-30)



Monthly Norwegian gas production, mmcm

Chart 2: Historical & projected monthly Norwegian gas production (2010-30)



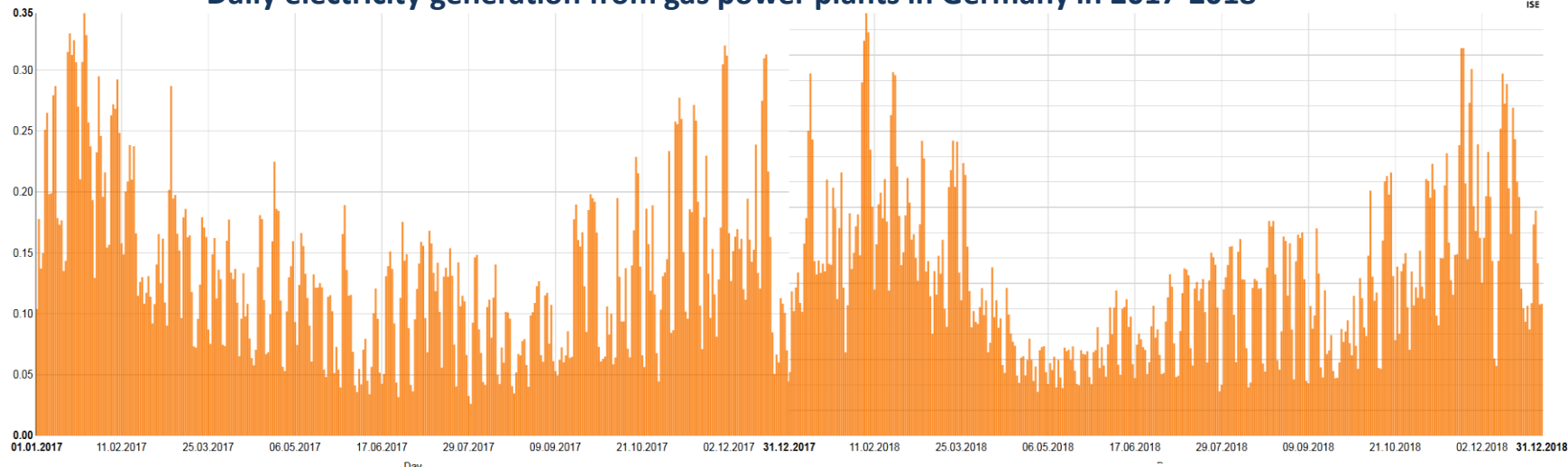
- Norwegian seasonal flexibility has played a key role in 'backfilling' the loss of Rough storage in the UK. That has reduced seasonal profile of flows to the Continent. – [Timera Energy](#), "European production flex is declining fast".
- Europe needs flexible Ukrainian route of gas supply or huge new gas storage facilities.

Balancing Role of Gas with Renewable Energy

- Consumers want to receive gas when they need it.
 - More on weekdays and less on weekends; more in the winter and less in the summer.
- Gas infrastructure should be able to respond to short term swings in supply/demand balance (e.g. low wind conditions, cold snap).

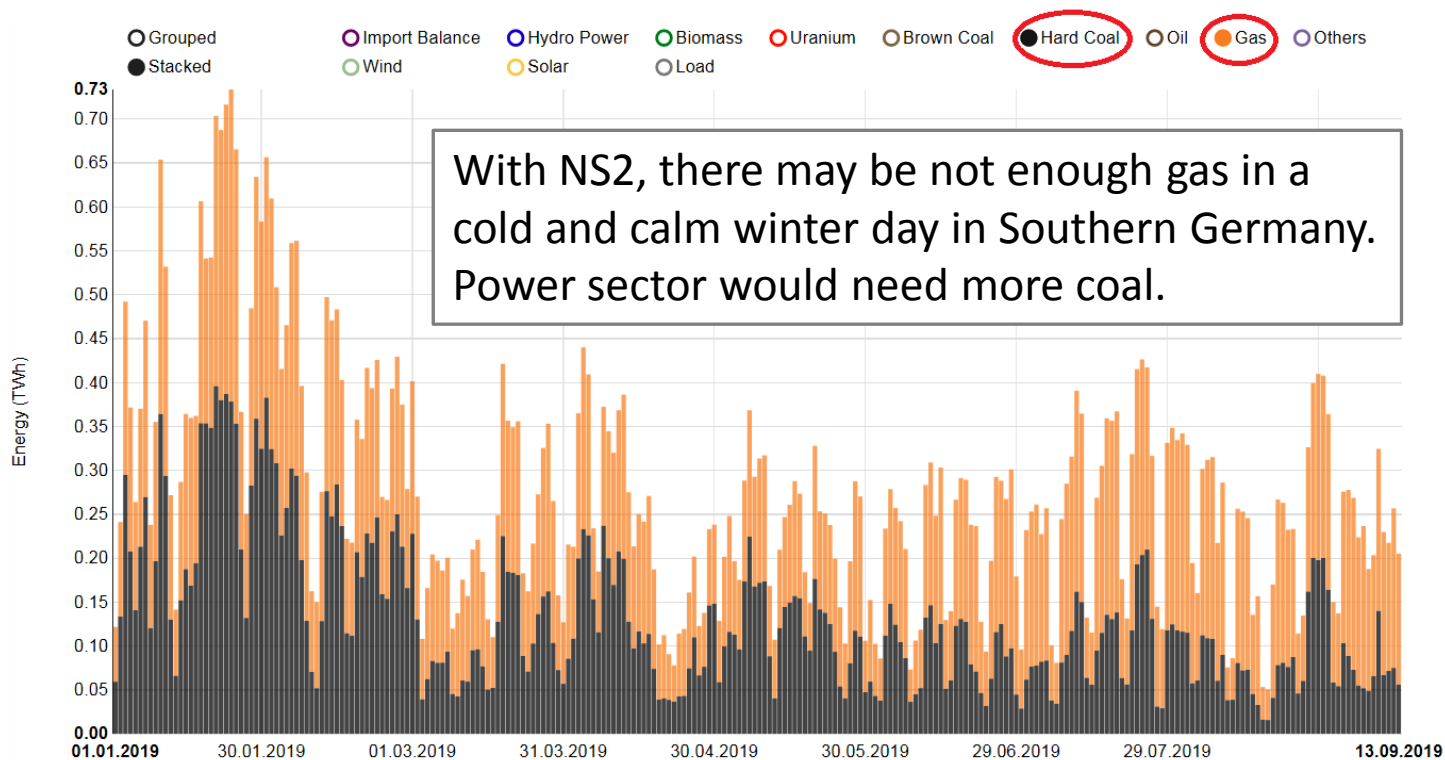
Daily electricity generation from gas power plants in Germany in 2017-2018

Fraunhofer
ISE



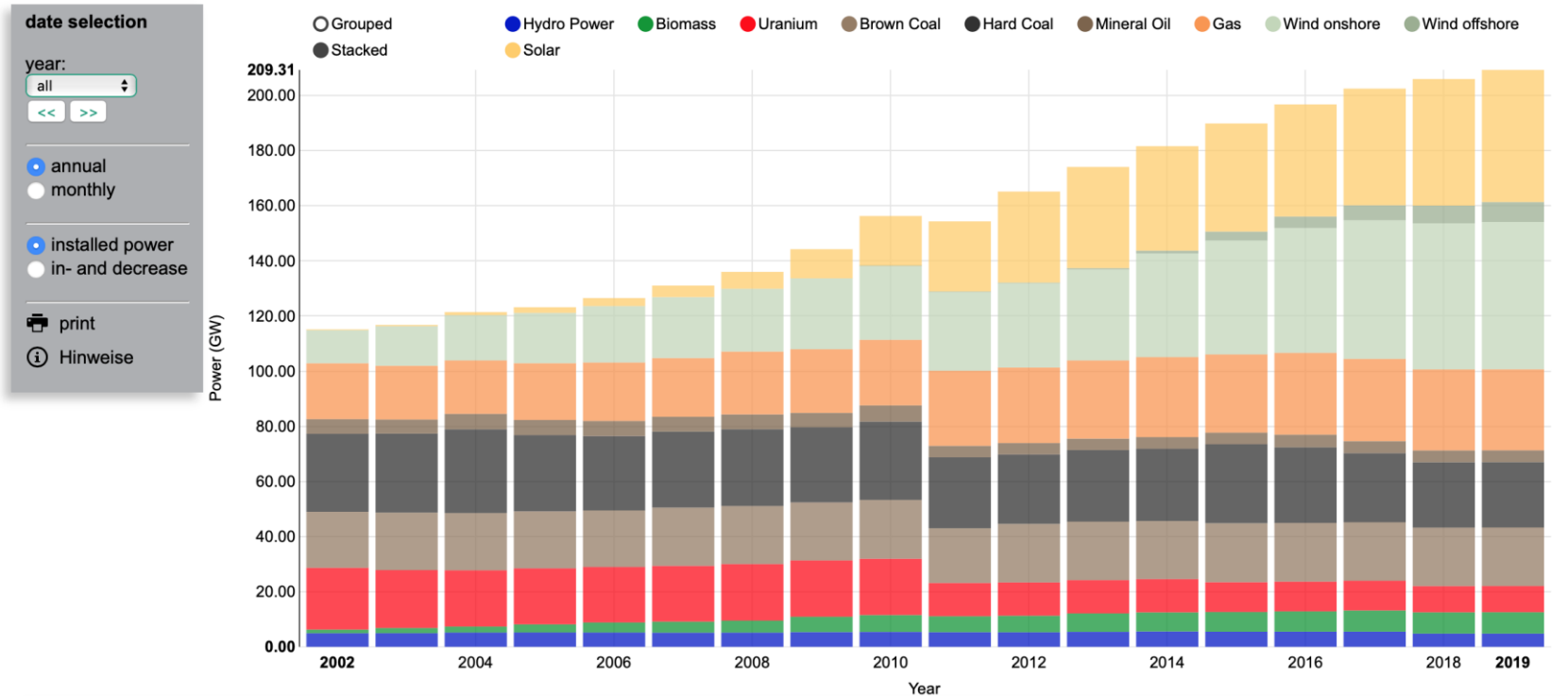
Fuel for Peak Power Generation

Daily electricity generation in Germany in 2019



Replacing Uranium and Coal

Net installed electricity generation capacity in Germany



Datasource: AGEE, BMWi, Bundesnetzagentur
Last update: 01 Oct 2019 00:41

Source: Fraunhofer ISE

NS2 Not Needed from the Capacity Standpoint

Unless Gazprom needs an excuse for the liquidation of Ukrainian pipelines



2019 GAZPROM
INVESTOR DAY

GAZPROM'S EXPORT ROUTES

Ukraine spare capacity ~50 bcma

CAPACITY UTILIZATION OF MAIN ROUTES FOR GAS SUPPLIES TO EUROPE IN 2018¹



Gazprom transport routes demonstrated high level of capacity utilization in 2018

Utilization rate of the competing routes was at the same level or even declined

Utilization rate of LNG terminals in Europe increased from 29% in 2017 to 31% in 2018 as a result of increased LNG deliveries

Gazprom officially reports no violations of the transit contract by Naftogaz.

¹ Deliveries under the contracts of Gazprom Export LLC

² Capacity remains unclear due to lack of accurate data on current state of the Ukrainian pipeline system

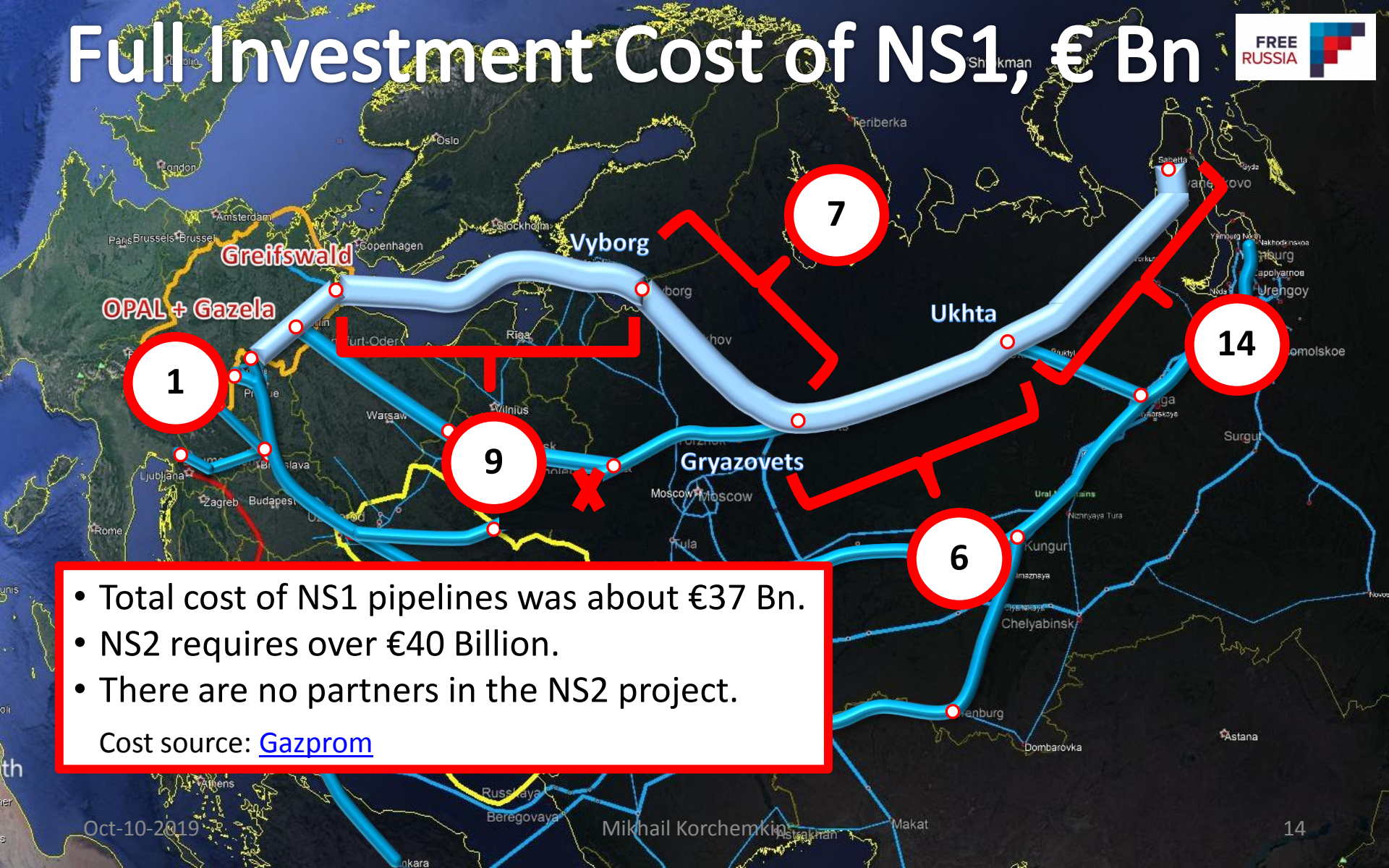
³ Pipeline exports

⁴ Including LNG trading between European countries and capacity of FSRUs

Source: ENTSOG, Bloomberg, IHS Markit

Full Investment Cost of NS1, € Bn

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- Total cost of NS1 pipelines was about €37 Bn.
- NS2 requires over €40 Billion.
- There are no partners in the NS2 project.

Cost source: [Gazprom](#)

Too Good to Be True

Background to NSP2AG's investment in the EU

3. NSP2AG is a company incorporated in Zug, Switzerland.
4. Since it was established in 2015, NSP2AG has been engaged in the planning and construction of the Nord Stream 2 Pipeline, a pipeline which is being built in order to transport natural gas from Ust-Luga in Russia to Lubmin in Germany via the Baltic Sea.
5. NSP2AG is the owner and operator of the entire pipeline.
6. This pipeline, once operational, will significantly expand European gas supply capacity. It is anticipated that EU wholesale gas prices will be up to 13 percent lower by 2020 due to the additional gas which Nord Stream 2 will be able to make available to the European market.

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- [NS2AG letter](#) to the EC promises additional gas and lower prices in the EU.
- Shareholders of Gazprom paid over €40 Bn to reduce the revenue ☹
- Where the additional gas would come from after the "Optimization Program"?

Commercial Project for Contractors

- Putin's friends are the obvious beneficiaries of NS1 and NS2.
- [Sberbank Report](#) May 2018.
 - We discover that Gazprom's decisions make perfect sense if the company is assumed to be run for the benefit of its contractors, not for commercial profit.
 - The Power of Siberia, Nord Stream2 and Turkish Stream are all deeply value-destructive projects.
- The report was withdrawn and the analyst fired.



"Yes, these people are my friends and I'm proud to have such friends. They are true patriots and their business is oriented towards Russia."

[V. Putin](#) on Messrs A.Rotenberg & G.Timchenko.