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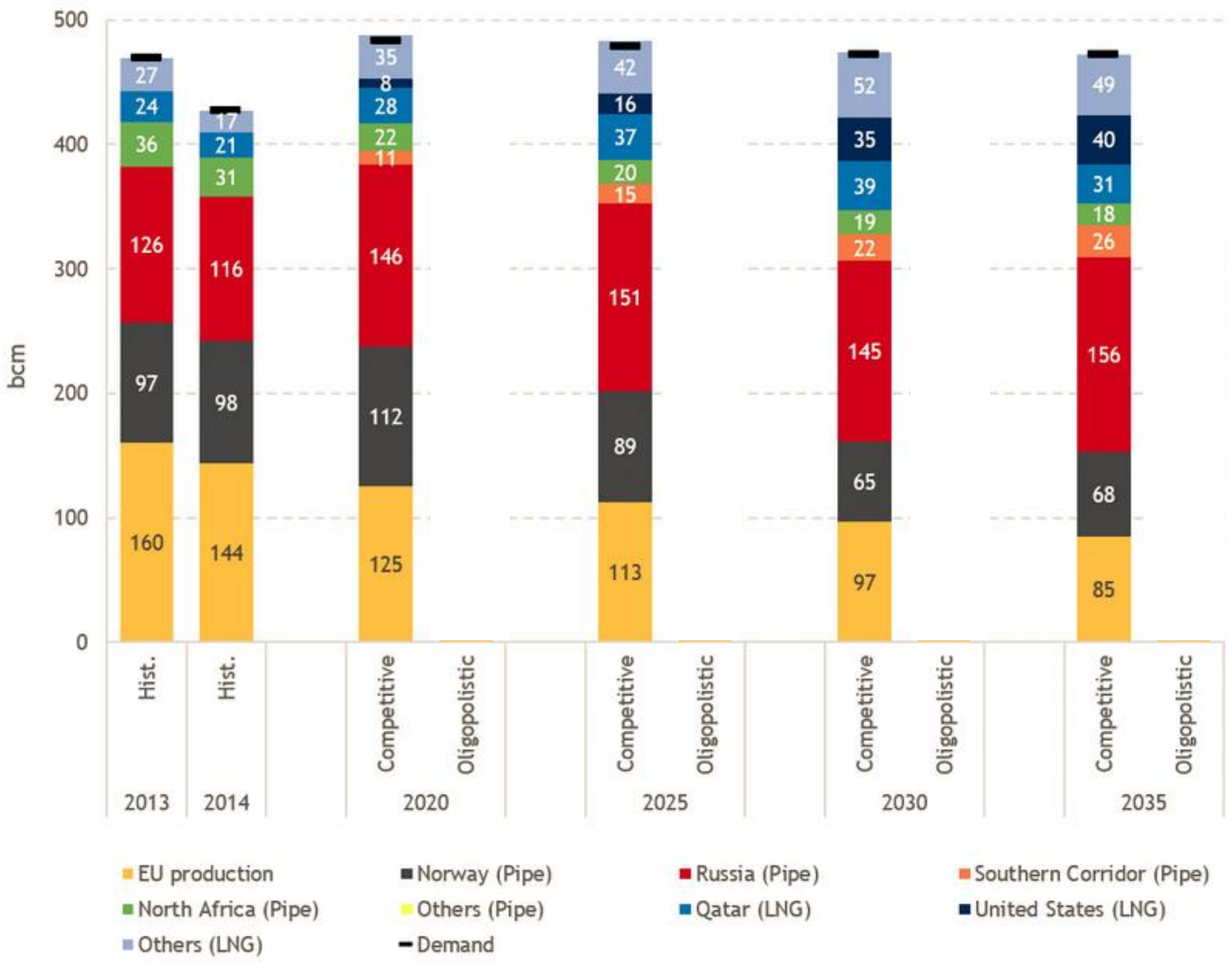
Options for gas supply diversification for the EU and Germany in the next two decades

Simon Schulte | Brussels | 21/02/2017

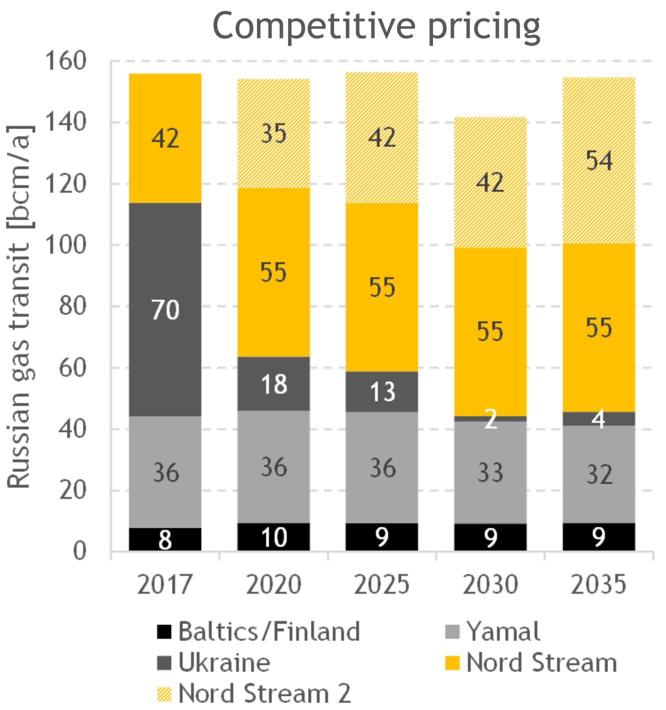
Russian pricing strategy proves to be crucial for the future EU gas supply mix

- EU gas supply mix is about to change substantially over the next 20 years
- Domestic European gas supply is about to decline from 57% to 32%
- Russia will strengthen its position as the EU's number one gas supply country
- Market share of LNG imports increase from 9% to 25%
- If Russia wants to fill the European supply gap, it has to pursue a competitive pricing strategy
- In contrast, a Russian oligopoly strategy triggers strong competition by LNG and the Southern Gas Corridor
- Well-equipped gas infrastructure proves to be a strategic advantage for the EU



EU Gas supply in three scenarios from 2020 to 2035

If Russia opts for a competitive pricing strategy, Nord Stream 2 is economical

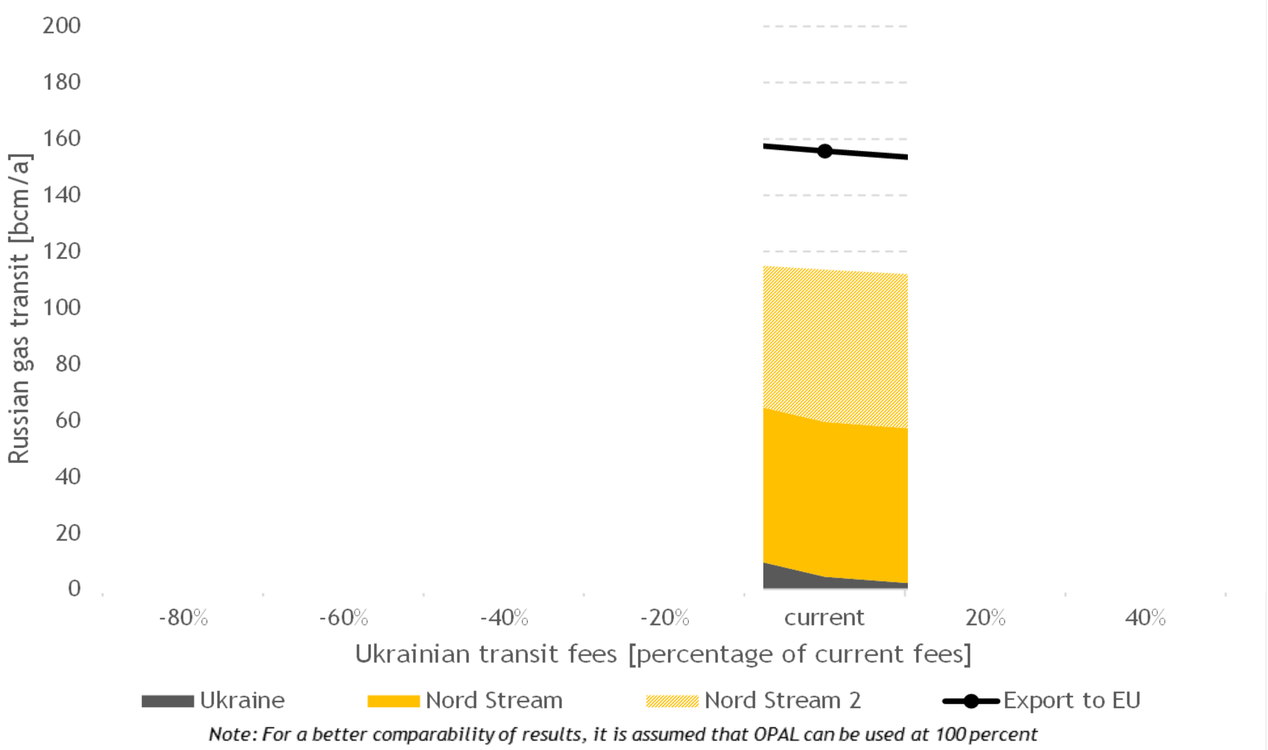


Russian transport route utilisation in the competitive pricing scenario (left)

- Demand for investment in Nord Stream 2 depends strongly on Russian future pricing strategy
- Oligopolistic pricing: Assuming Russia’s oligopolistic pricing strategy, not even one string of Nord Stream 2 will be fully utilized
- Due to high transit fees, gas transits through Ukraine decline in both scenarios

The profitability of Nord Stream 2 depends on Ukrainian transit fees

„Competitive pricing scenario"



Utilisation of Russian Transit Routes with respect to different Ukrainian transit fees in 2035

- Ukraine could decrease the profitability of the Nord Stream 2 by lowering its transit tariffs, which would also allow increasing its own transit volumes
- By decreasing its tariffs, for instance by 60 percent compared to the 2016 level, Nord Stream 2 would not be needed anymore and Ukraine would transit more than 70 bcm to the EU

Conclusion and main findings of the economic analysis

- Strong strategic position for the EU despite declining domestic gas production
- Pricing strategy (competitive/oligopolistic) by Gazprom is crucial for the future supply mix and gas prices
- Nord Stream 2 is economically rational for Gazprom, if opting for a competitive pricing strategy
- Lower transit fees via Ukraine could deterioate the business case for Nord Stream 2
- If Nord Stream 2 is banned, Gazprom becomes vulnerable against Ukrainian transit route market power
- Without an expansion of Nord Stream 2, Russia/Gazprom has a stronger incentive to pursue an oligopoly strategy

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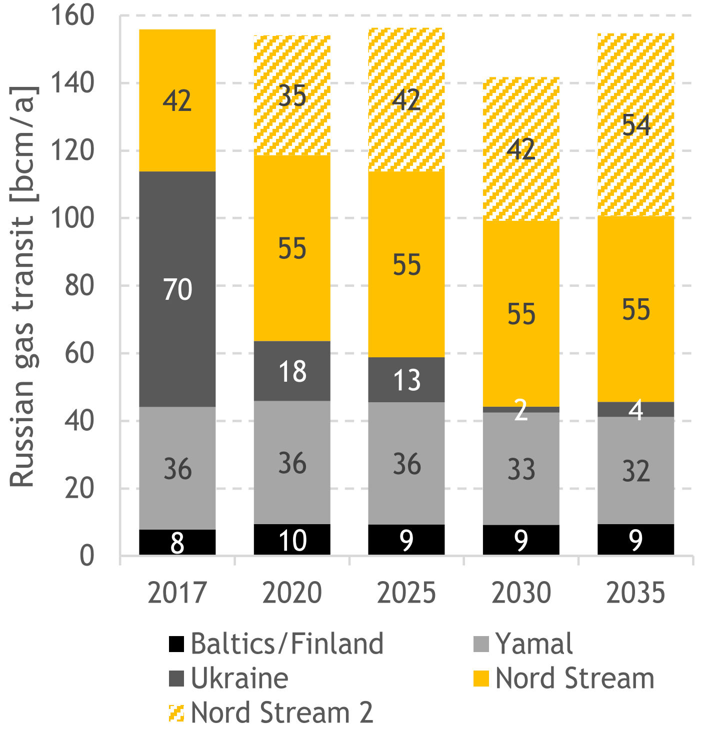
Back-up

Without an expansion of Nord Stream 2, Ukraine benefits from higher transit volumes

Competitive scenario

Nord Stream 2 possible

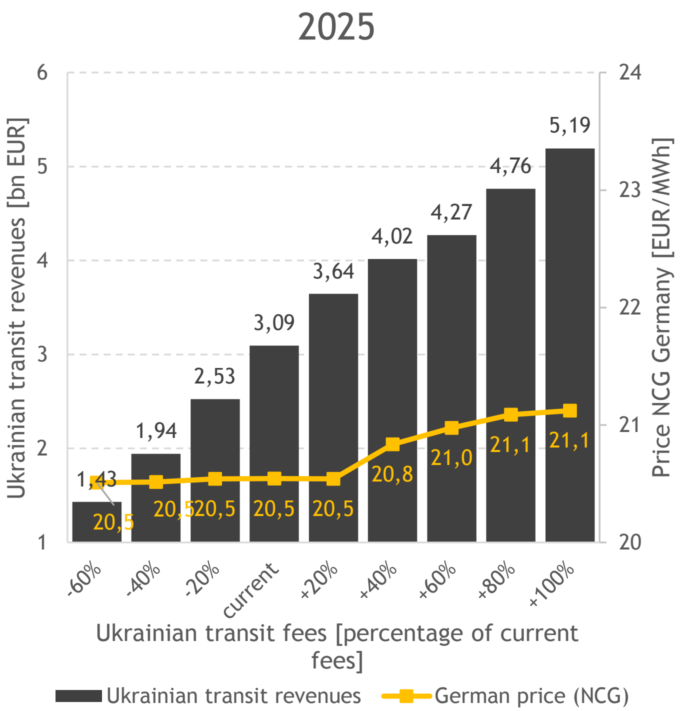
Nord Stream 2 not possible



Pipeline utilisation in the “Gas on Sale” scenario with Nord Stream 2 (left) and without Nord Stream 2 (right)

- Without Nord Stream 2 (as well as no new pipeline under the Black Sea), Ukraine still secures a transit of 56 bcm in 2035 (given 2016 tariffs in the competitive scenario)

Without an expansion of Nord Stream 2, Ukraine is able to charge higher tariffs at the disadvantage to Russia and EU

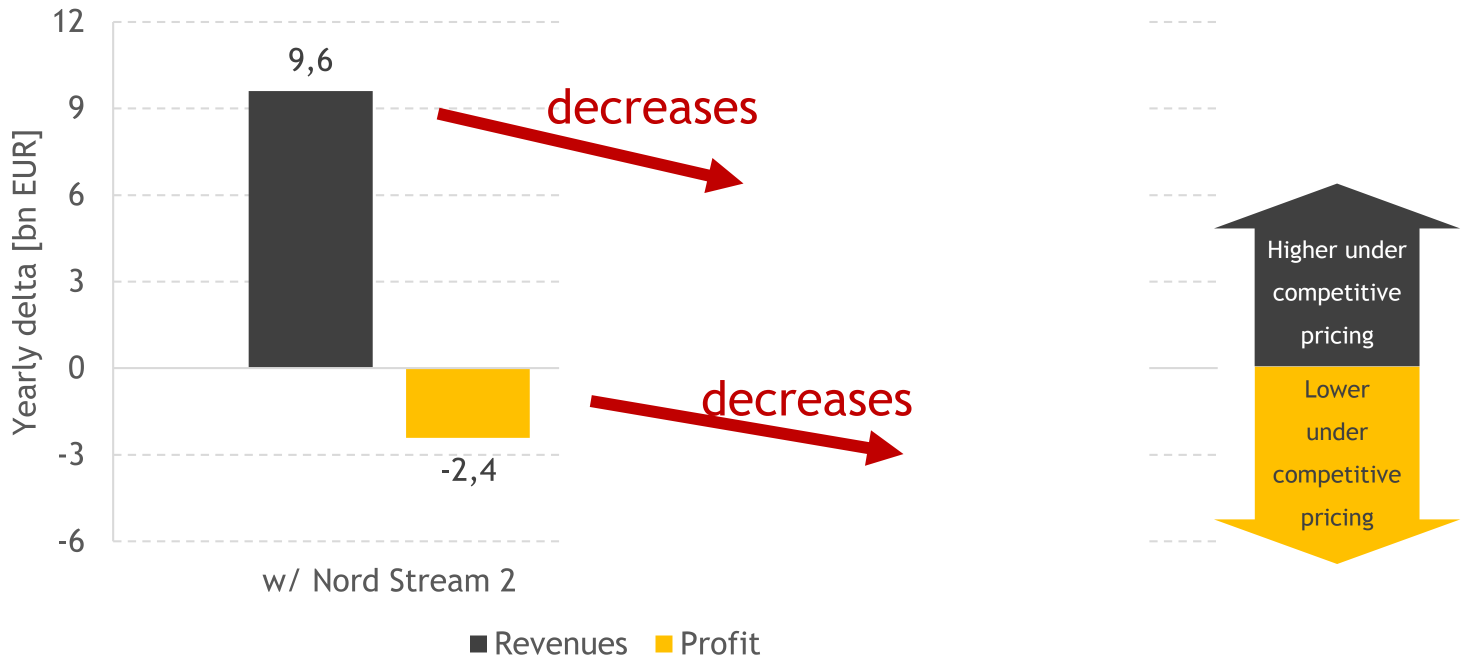


Note: Prices are not inflation-adjusted (EUR 2016)

Transit revenues of Ukraine and German wholesale prices in 2025 (left) and 2035 (right) for different levels of Ukrainian transit fees

- EU's dependence on Ukrainian transit has implications for its gas prices, as they are affected by Ukraine's tariff policy
- If, for example, in 2035, Ukraine raises its transit fees by 60 percent compared to the current fees, European gas prices increase by 0.8 EUR/MWh

Without an expansion of Nord Stream 2, Russia/Gazprom has a stronger incentive to pursue an oligopoly strategy



Wettbewerbliche vs. oligopolistische Preisstrategie:
Durchschnittliches (2020-35) jährliches Delta der Profite und Umsätze Gazproms

- Generally: a competitive pricing strategy leads to higher revenues and a lower profitability.
- If Nord Stream 2 is realized, a competitive strategy preforms better both in terms of revenues and profit than in a situation without Nord Stream 2.
- Without Nord Stream 2 high Ukrainian transit fees would make a competitive pricing strategy less attractive.