Centre Energie - Centre for Energy

Russia’s gas sector:

recent developments and domestic and foreign perspective

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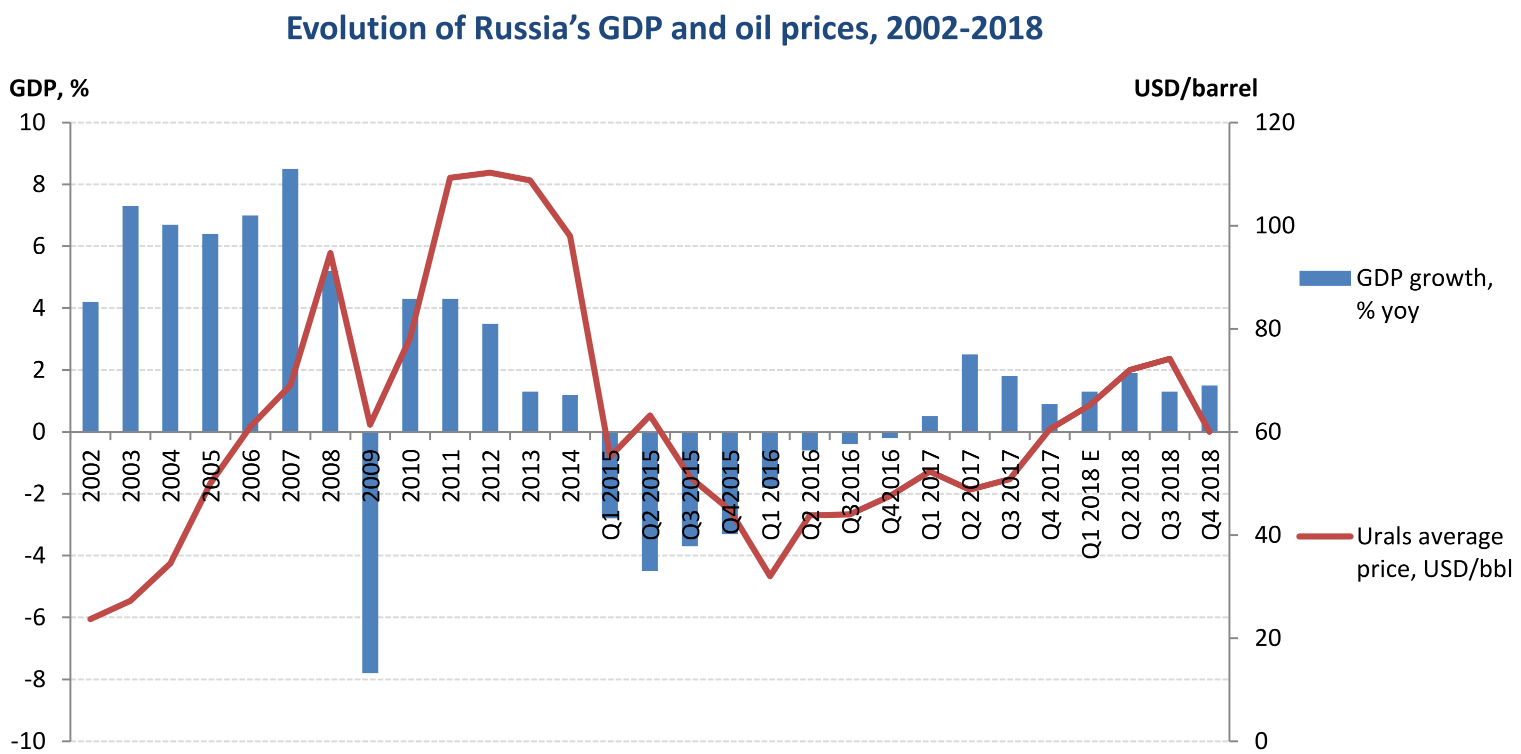
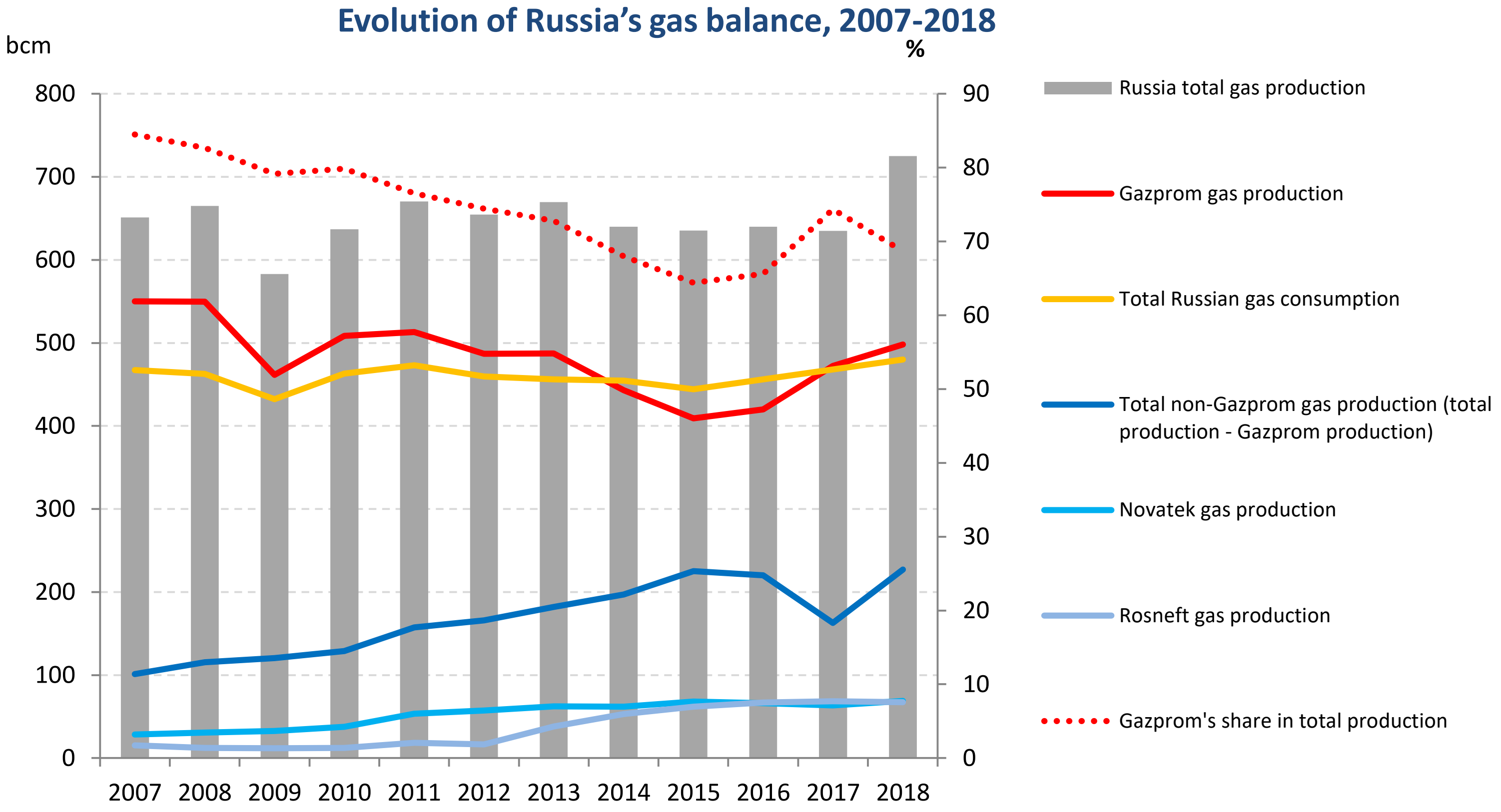
Fondation Tuck, 01/04/2019

Russia's economy is stagnating, cautious budget but can public spending foster sustainable growth?



Source: IMF

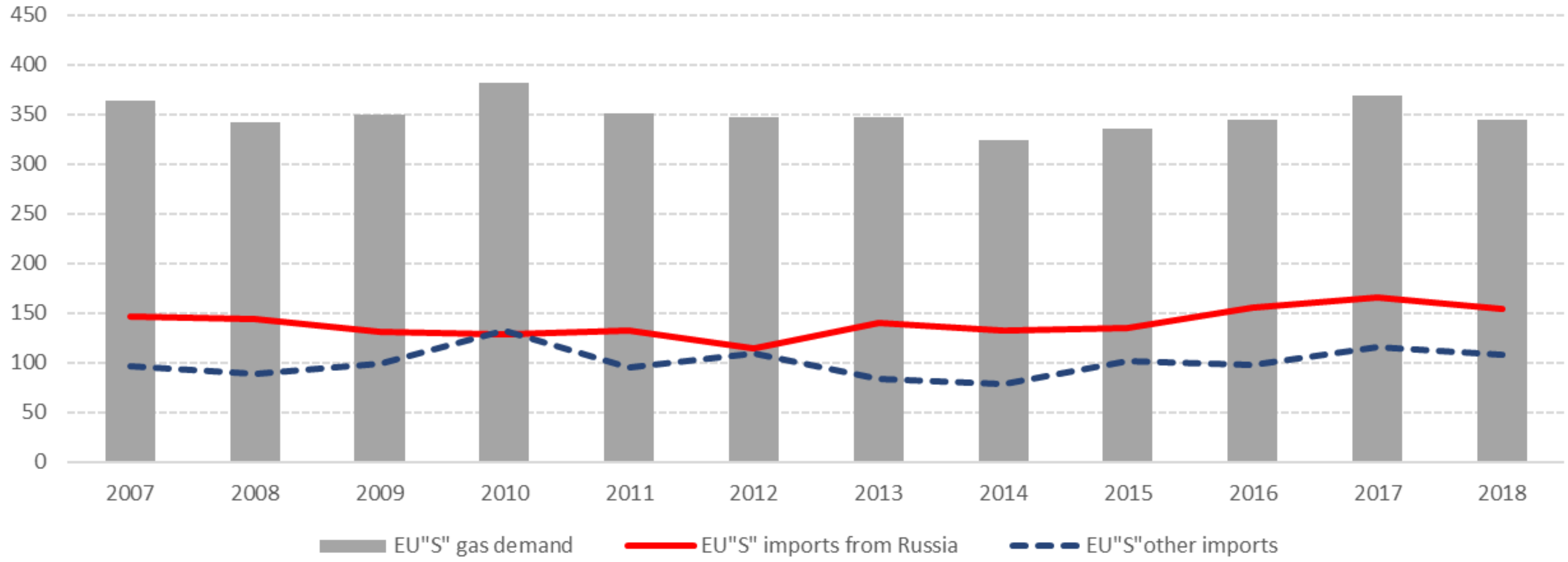
Russia's gas sector bounces back, Gazprom runs Bovanenkoe at full capacity



Source: IMF

Gazprom’s push for volumes has benefitted itself, Naftogaz with robust transit volumes and EU industry buyers

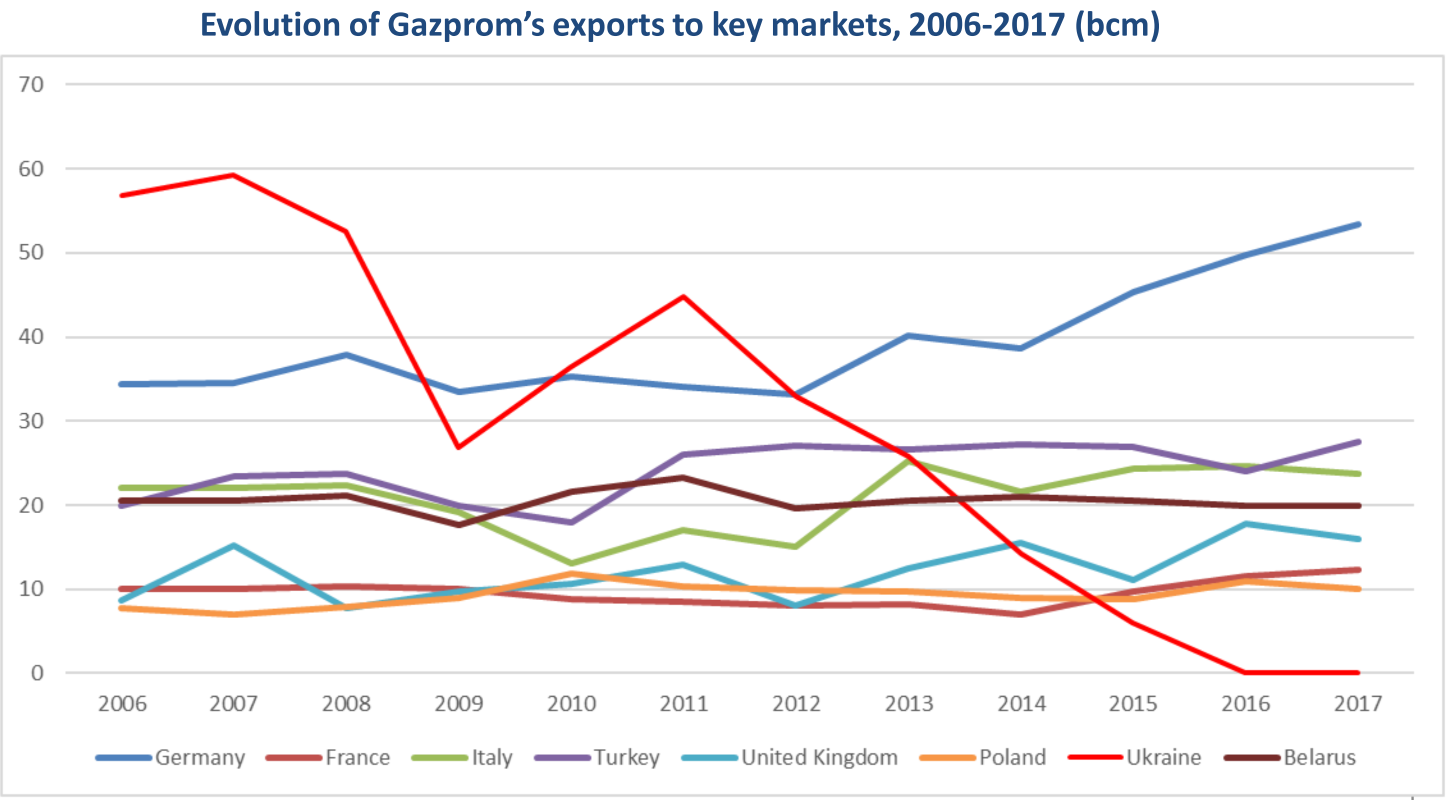
Gazprom’s exports to EU -S - zone* and comparison with other import sources, 2007-2018 (bcm)



Source: Ifri, Gazprom, Platts

Russian gas can remain strong and grow further in the EU S zone if Gazprom so wants and can… Yamal LNG will add Russian gas volumes to European markets

Gazprom's exports to Europe rising amidst falling domestic production and uptick of demand



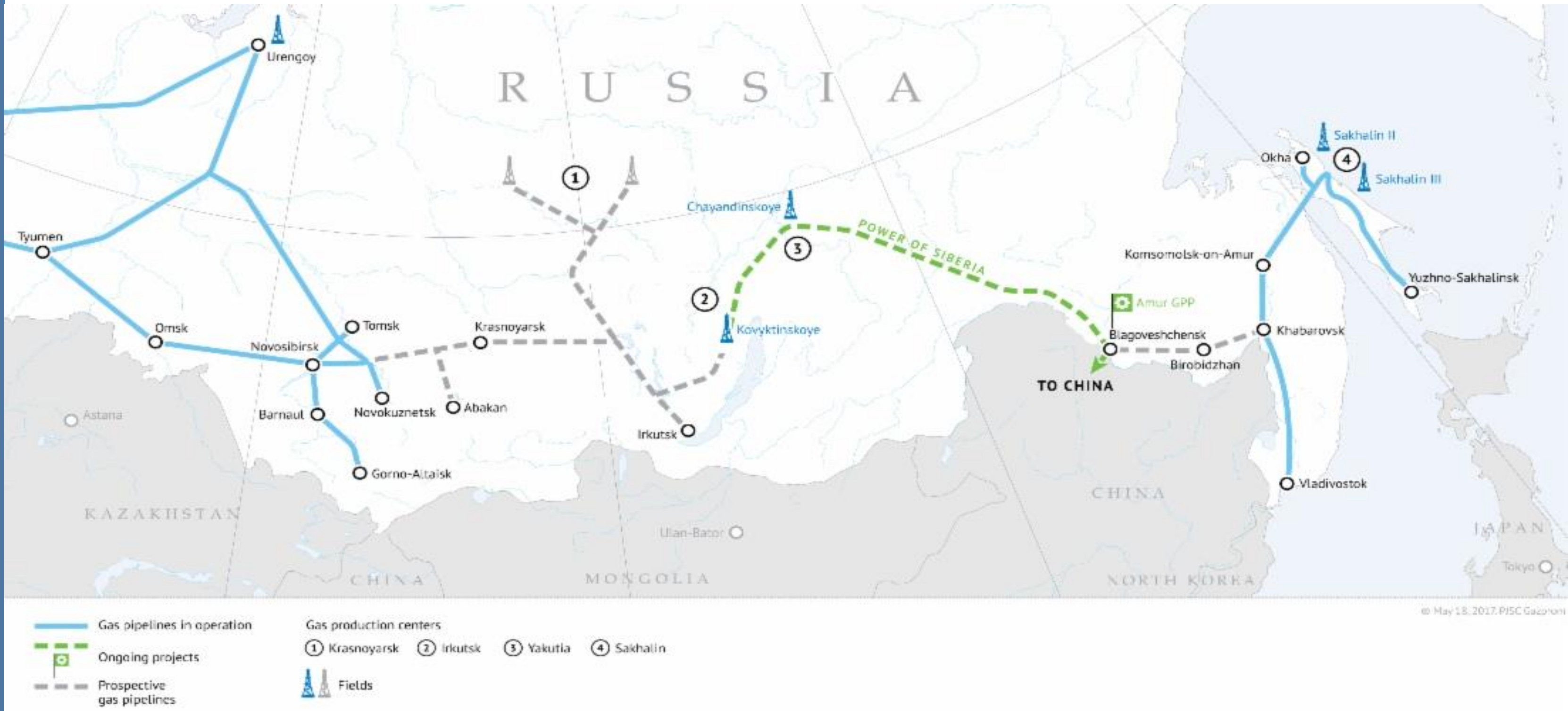
Source: Gazpromexport

Gazprom brings Bovanenkoe to full capacity

Gazprom's new production center and Nord Stream 2 system

Gazprom completing Power of Siberia, aims to double pipeline exports to China

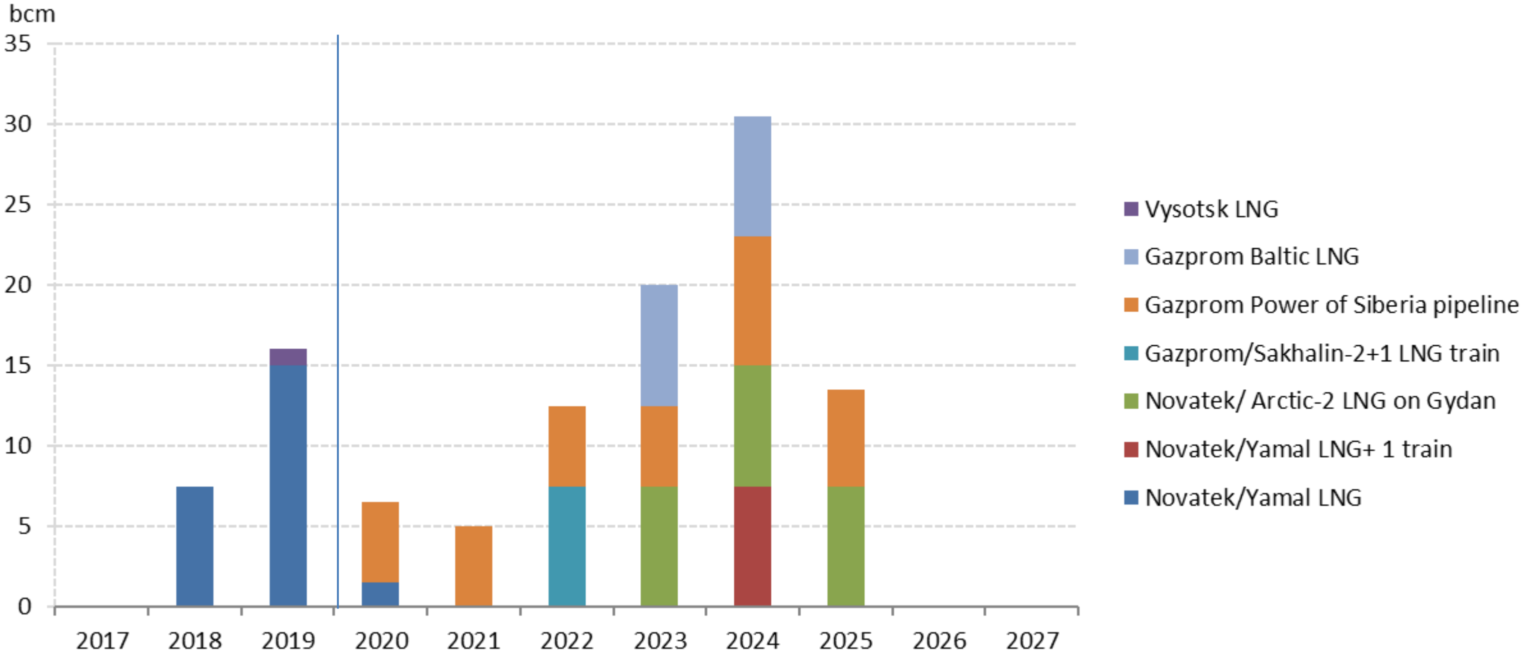
Gazprom's Power of Siberia system



Source: Gazprom

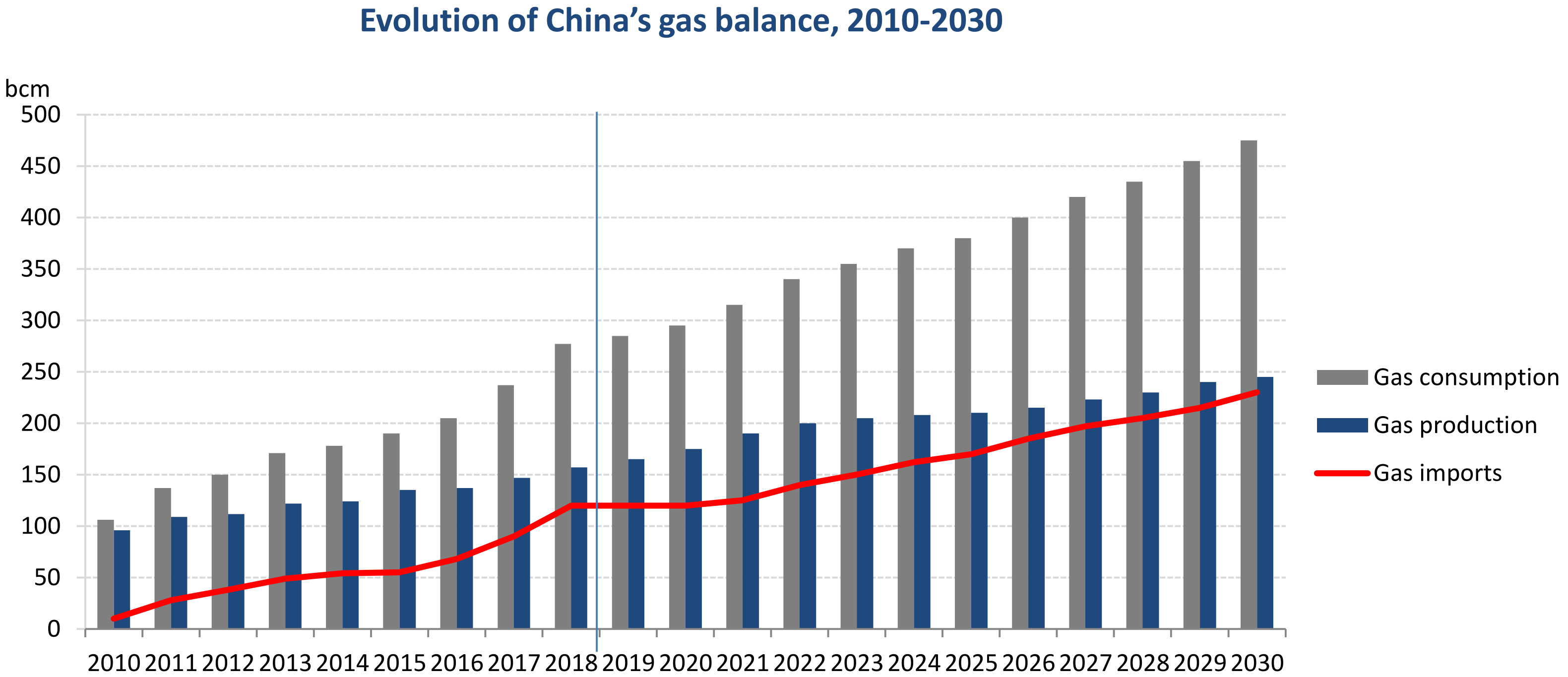
Close to 90 bcm additional export potential can be added in the period 2017-2027, pushing exports close to 280 bcm

Evolution of Russia's export capacity addition (excluding pipelines to Europe), 2007-2018



Source: Ifri, based on company data

Russia and China, as well as Russia and Saudi Arabia, increasingly influencing global oil and gas prices



China's gas market will become as large as the EU gas market by 2030, yet trade tensions and economic hurdles could revigorate coal to gas and coal to liquids projects

Source: Ifri, IHS CERA, IEA

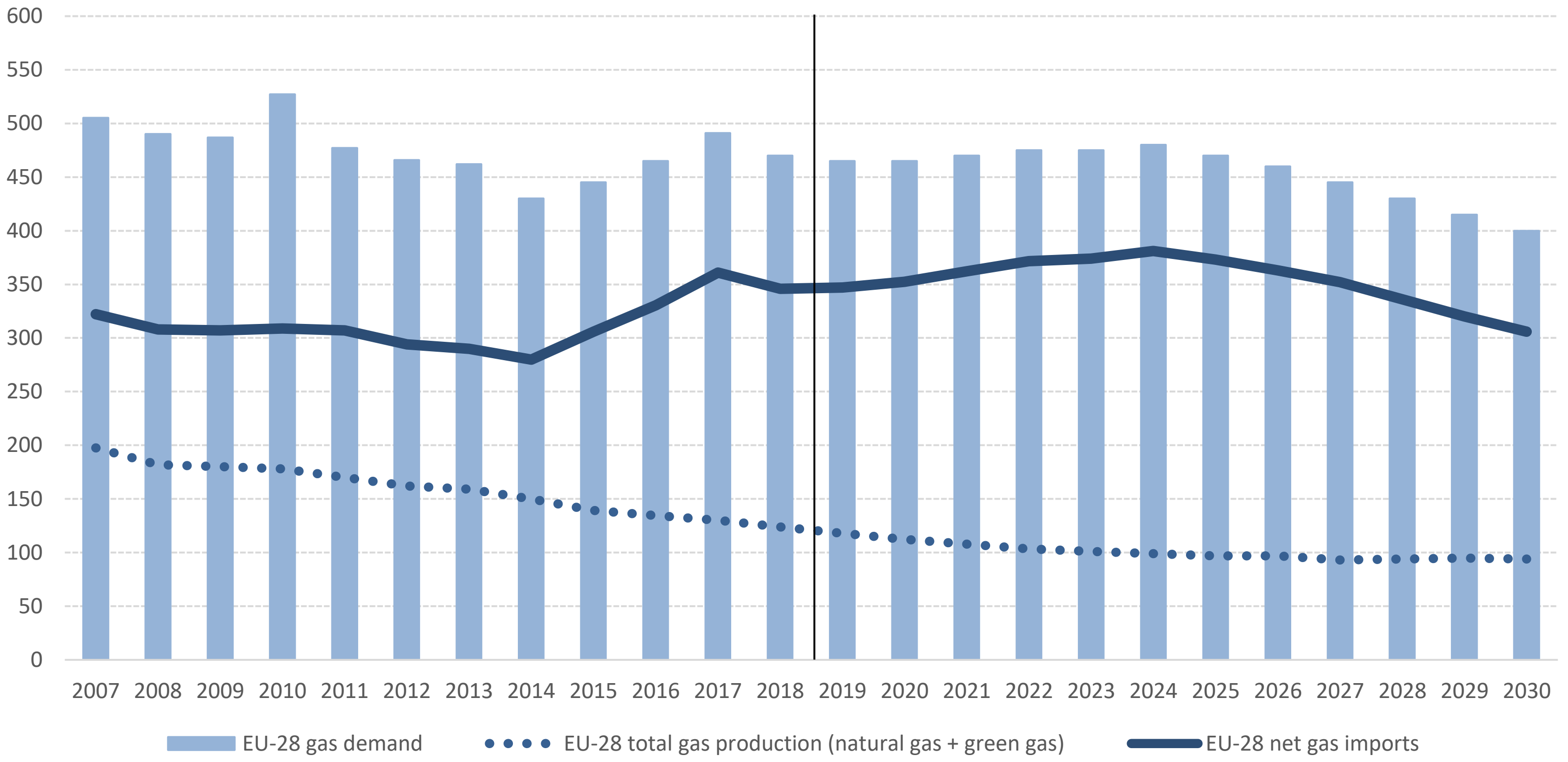
Egypt turns into gas hub, Noor & Calypso discoveries can unlock Leviathan phase 2 + Aphrodite + Exxon's Glaucus-1

East Mediterranean gas infrastructure and projects

Source: Ifri

Outlook to 2030: demand overall flat until 2025, before progressively & slowly declining

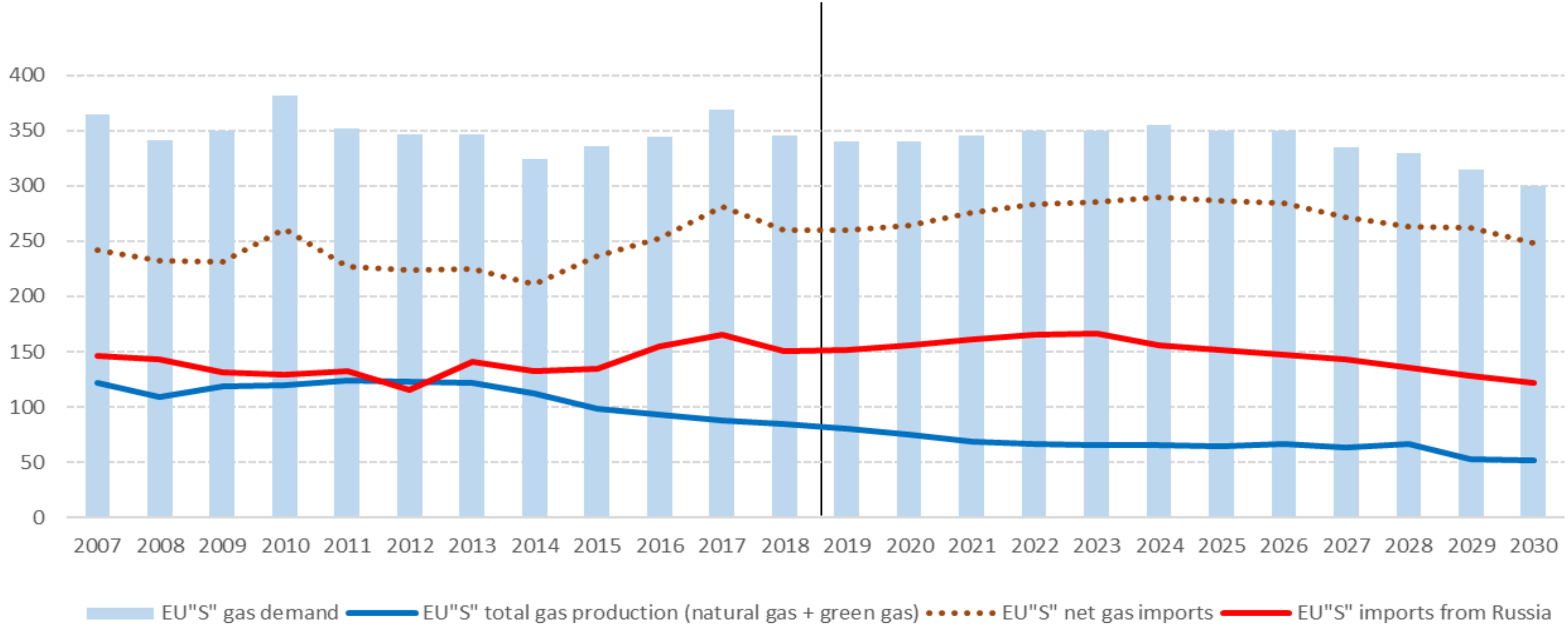
Evolution and estimate of EU-28 gas balance, 2007-2030 (bcm)



Source: Ifri

Demand and import outlook to 2030: Russian pipeline exports robust until 2023, then declining to 2015 level

Evolution of EU S gas balances, selection of indicators, 2007-2030e (bcm)



Source: Ifri

EU S gas demand seen steady until 2026 around 2016 levels following the partial coal/nuclear exits in DE, before declining progressively as the transition deepens. Gas import levels increase yet at moderate pace.

Outlook uncertainties (1/2)

Stronger EU gas demand:

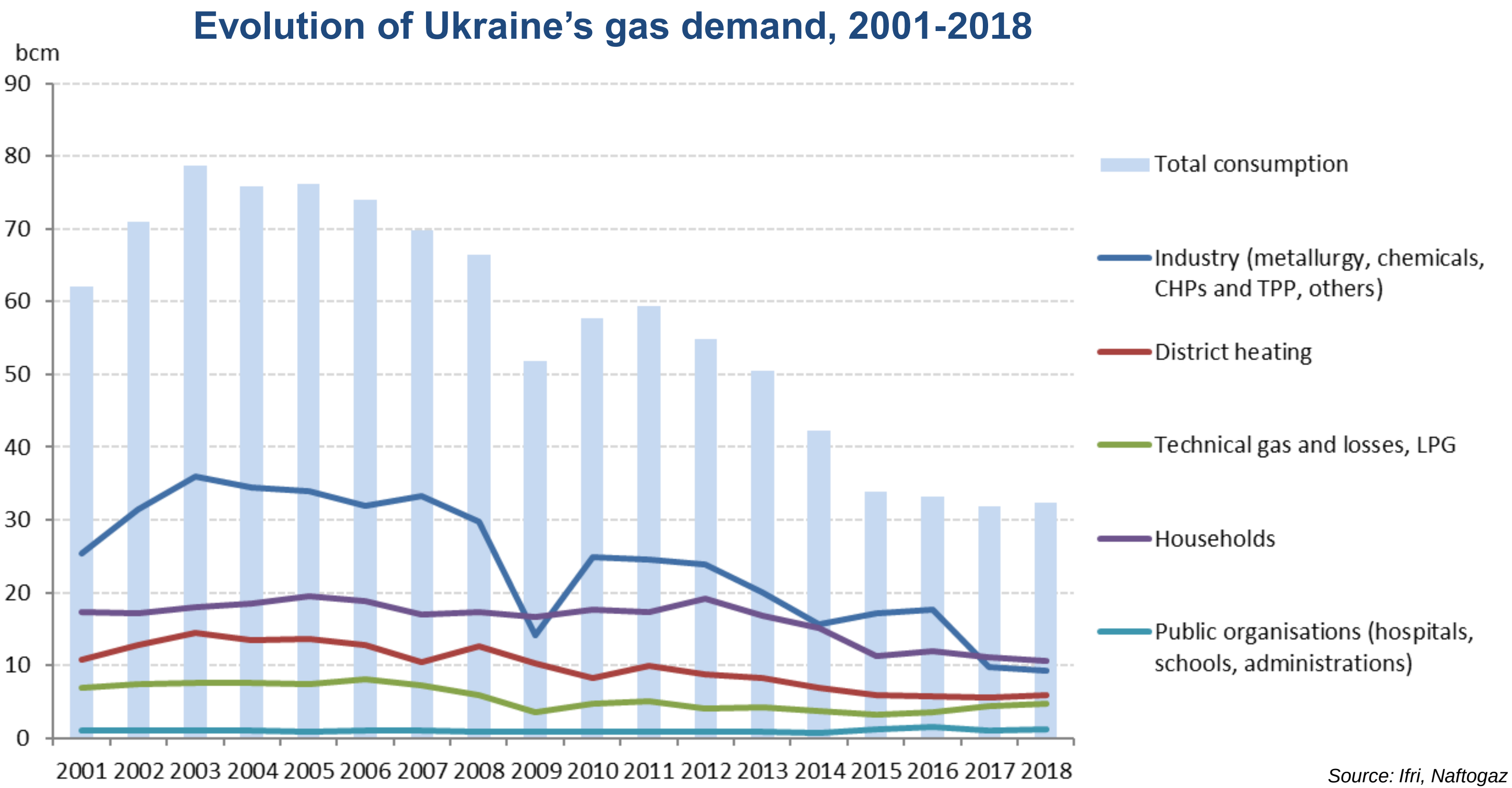
- Global economic slow-down + China slowing on gas expansion, leading to a global LNG glut, low prices which help push gas for power generation
- Producers decide to cut prices and opt for a volume based strategy, credibly reduce their methane emissions, start greening natural gas
- France, Belgium, Poland, UK do not build new nuclear reactors beyond those in construction & limited life time expansion
- Delays in energy efficiency efforts and slow down in renewables deployment due to costs, lacking interconnections and acceptance challenges
- Stronger extreme weather conditions strengthen peak system loads, number of cooling degree days and reinforce the role of CCGTs and gas storages for electricity supply security
- Climate change leads to lower hydro availability and a stronger call for gas-fired power generation

Outlook uncertainties (1/2)

Weaker EU gas demand:

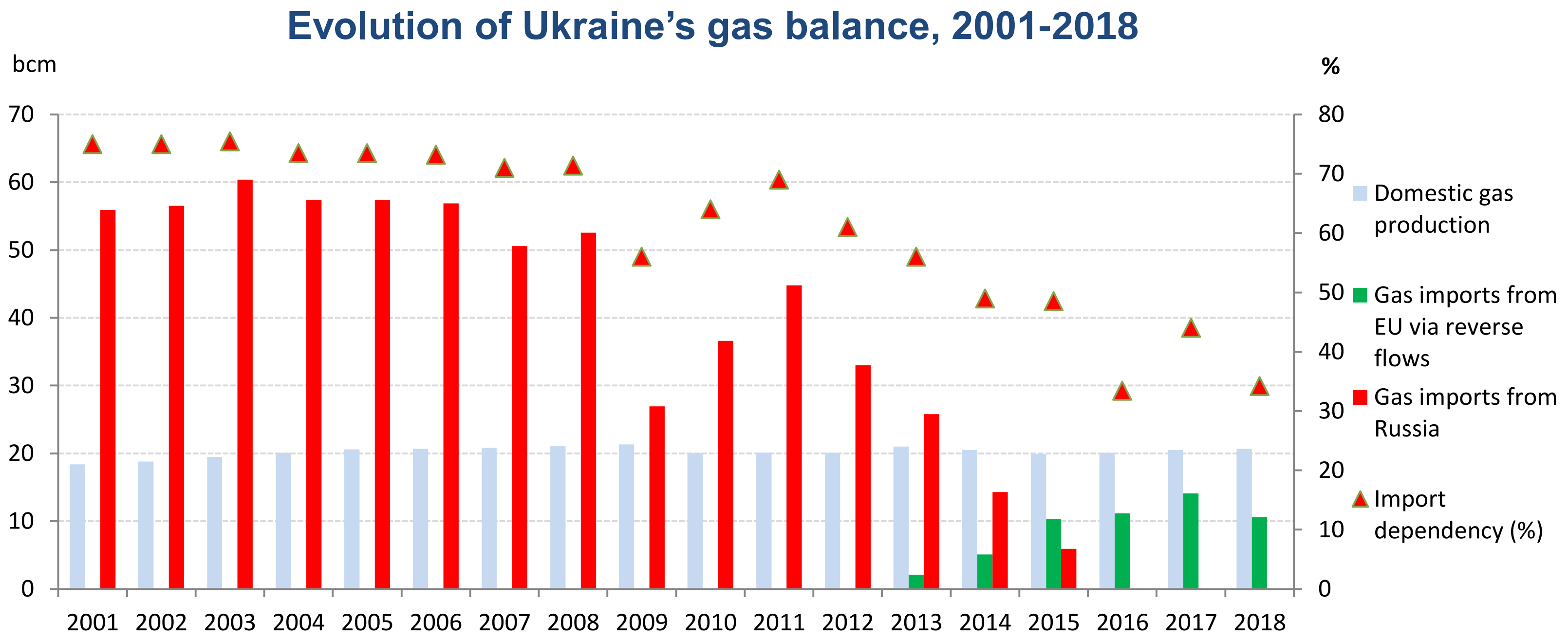
- Russia-Ukraine gas crisis in January 2020: surge in gas prices, gas becoming a toxic fuel
- Gas prices continue to rise in the EU as pipeline exporters cut back on volumes, Asian price premium continues to rise
- Global geopolitical crisis affecting one large LNG exporter or trade route, leading to a surge in prices
- Methane emissions from natural gas are not addressed rapidly enough
- Breakthrough in small modular nuclear reactors
- Breakthrough in electricity storage technologies and demand side management systems
- Low GDP growth in Europe and low industrial production
- Climate change leads to milder winters & less heating degree days
- Coal phase out is pushed back
- Nuclear new builds and life time expansion

Ukraine’s gas demand halved in five years



Source: Ifri, Naftogaz

Ukraine: gas import revolution since 2013, production in slight increase with a significant but costly upward potential

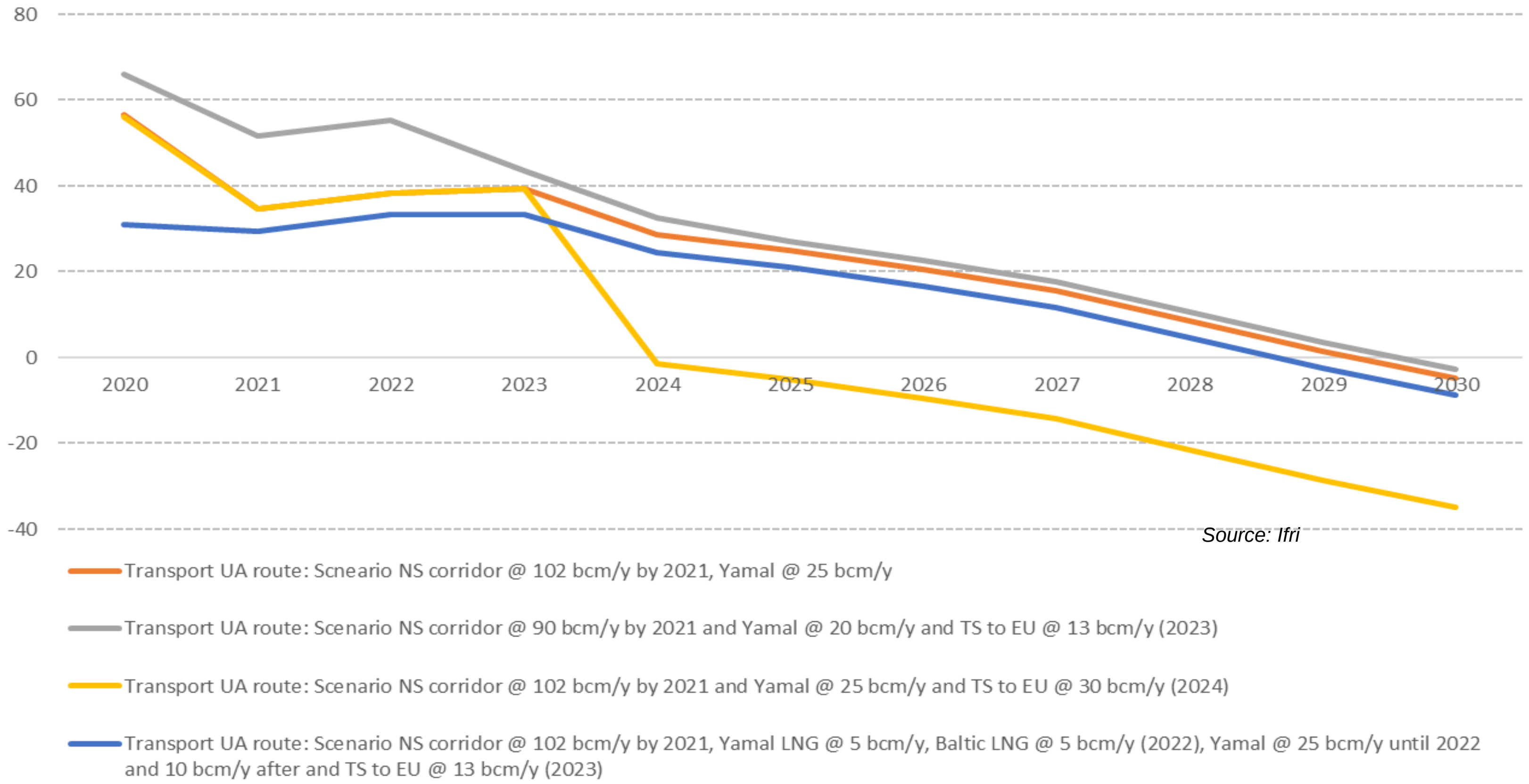


Source: Ifri, Gazprom, Naftogaz, Ukrstat

Ukraine has successfully developed reverse flow imports and reduced its imports, stopped importing from Gazprom.

Ukraine transit: fall to 0 in all scenarios, but with variations, especially if Nord Stream 2 is not fully loaded

Evolution of gas transit via Ukraine in different scenarios, 2020-2030 (bcm)



Strategic issues for the December 2019 gas negotiations: avoiding miscalculations

- NS2/Turk-Stream
- Assessment of respective gains and losses in a crisis scenario
- RU-UA S&P agreement (duration, take or pay, price, currency, payment conditions)
- Transport tariffs, ship or pay level, flexibility, duration
- Politics in UA and EU and geopolitics between RU/UA/USA-EU
- Arbitration proceedings
- External pressures or facilitations
- Enforcement guarantees

Source: *Ifri*

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