Perspectives of EU Gas Markets and Implications for EU-Ukraine-Russia

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1. Key trends from the past ten years: looking back into the EU gas market, 2007-2017
The evolution of natural gas demand points to a defensive position, yet with a twist in 2015

Evolution of selected economic and energy indicators in the EU, base 100, year 2007
+ 230 GW renewables haven’t pushed gas fired power generation, high gas prices have lowered demand

Following cold weather, low hydro, problems with nuclear and UK coal phase out, and stronger GDP growth, gas fired power generation has bounced back since 2015
UK coal phase out: 80% coal generation decrease only leads to 30% gas generation increase as renewables pick up
2. The next ten years: what matters until 2030 for gas in the EU « S »* zone?

*EU « S » zone = selection of markets based on EU-28 minus Spain + Portugal + Ireland + UK
Latest energy and gas market developments

• World on a > 3°C track, climate tensions growing, CO2 emissions rising, climate leadership crumbling
• Higher oil and gas prices
• China’s gas imports booming
• New wave of LNG export projects coming
• Russia set to become a leading LNG player
• Start of EU-Ukraine-Russia gas discussions while TurkStream and Nord Stream 2 are making progress and while Ukrainian TSO is being Europeanized
• EU gas market see demand rebound
• Continued fall in deployment costs of offshore wind, but especially onshore wind and solar
• EU focusing on 2050 strategy
EU’S expected to phase out 65% of coal fired power generation by 2030, raising gas demand by 20 bcm/y

Electricity generation from coal sources (% of total) in 2011

Electricity generation from coal sources (% of total) in 2016

Source: Ifri based on IEA Electricity Information 2017, Romanian Energy Regulatory Authority, based on 2015 data for Croatia and Bulgaria.
The forthcoming hybrid carbon pricing will reduce emissions, and prices rise towards 2030, challenging natural gas

EU ETS settlement prices, May-17 to Sept-18 (€/tCO₂)

- EUA prices at 7 years high
- Above 20€/ton since mid-August
- The best-performing « commodity » in 2018

Source: European Energy Exchange, Market Data, 06.09.18
Groningen fallout widens import gap until 2025, yet biomethane + H2O slightly compensate NG production fall

Development of EU biogas and biomethane plants over past years

Source: European Biogas Association

Evolution of EU «S» net gas imports and production, 2007-2030e (bcm)

Source: Ifri

EU"S" green gas production reaches 22 bcm in 2030, from 2 bcm/y currently, and helps to push gas use in the transport sector from 2 bcm/y to 25 bcm/y by 2030
3. Evolution of EU « S »* gas balance and implications for Russia and Ukraine until 2030

* EU « S » zone = selection based on EU-28 minus Spain + Portugal + Ireland + UK
Gazprom’s push for volumes has benefitted Gazprom, Naftogaz and EU industry buyers

Gazprom’s exports to EU S zone and comparison with other import sources, 2007-2017 (bcm)

Source: Ifri, Gazprom, Platts

Gazprom and Russian gas can remain strong and grow further in the EU S zone if they so want…
Can Russian gas exports be diminished by competition from other suppliers in the period 2020-2030?

- **Norway**: NO (resources)
- **Algeria**: NO (resources)
- **Libya**: NO
- **Iran/Turkmenistan** by pipeline: NO (sanctions, resources, costs)
- **Azerbaijan**: + 10 bcm/y (politics and resources)
- **East Med**: 20 bcm/y > 2025
- **LNG**: only if...
  - Hub prices in the EU rise, if Asia premium lower, making Europe attractive and reducing demand growth in emerging economies
  - No geopolitical disruption in the Middle East
  - China’s import growth slows, and if RU pipe exports grow
  - Japan restarts nuclear, reduces its LNG imports
  - Another LNG export wave comes from the US (but trade war has negative implications) + Russia (Arctic 2, Sakhalin-2) or pipeline (Altaï)+ East Africa + Canada for China
  - If Germany builds LNG import terminals
Demand and import outlook to 2030: Russian pipeline exports to remain robust until 2023, then declining back to 2015 level.

EU S gas demand seen steady until 2026 around 2016 levels following the partial coal/nuclear exits, before declining progressively with the transition; imported gas peaks at +40 bcm in 2024 versus 2015.
Gazprom’s pipeline gas share in the EU S zone to remain robust

Evolution of Gazprom’s market share in the EU S zone gas balance, 2007-2030e (%)

Gazprom is expected to continue strengthening its market share in EU S countries as their production declines while Gazprom still faces strong competition, such as in Germany if it commissions a LNG terminal.
UA transit: better years in 2020-2025, fall to 0 in all scenarios

Evolution of gas transit via Ukraine in different scenarios assuming NS2 is built, 2020-2030 (bcm)

Source: Ifri