

THE GAS MARKET IN EUROPE IN 2021: NOT ONLY TECHNICAL SUPPLY PROBLEMS...

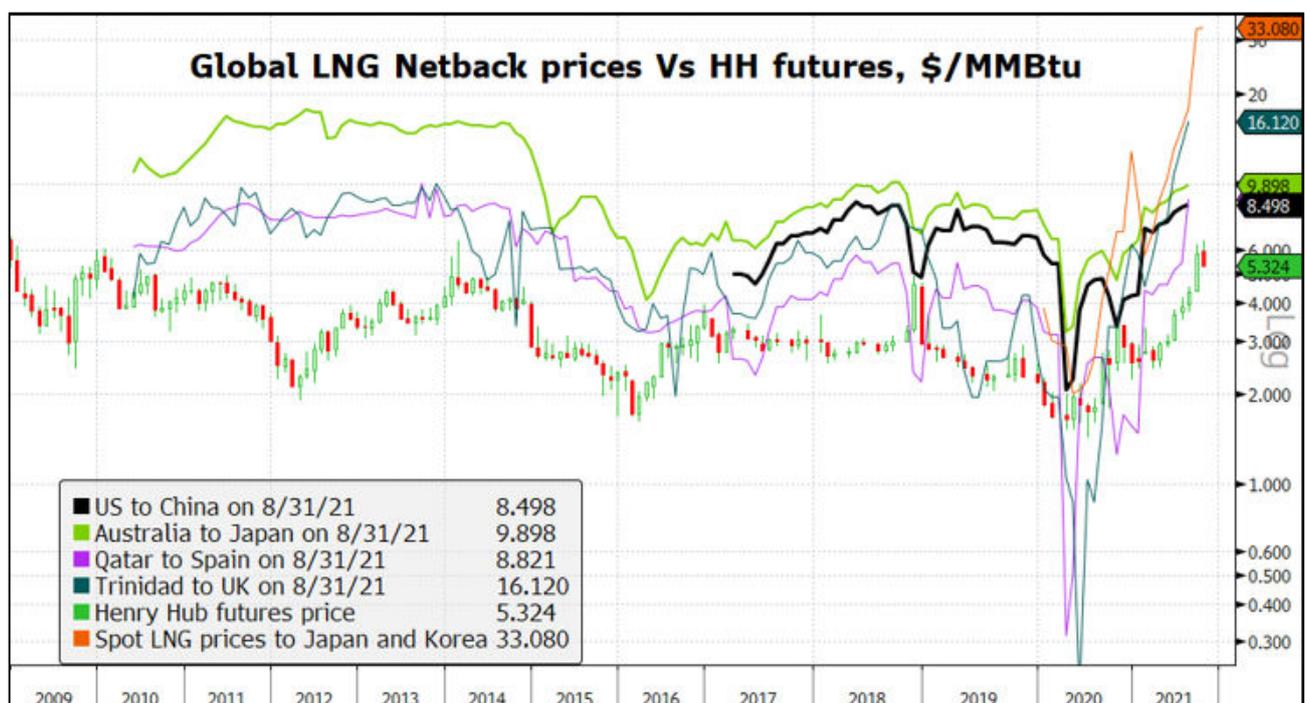
12.10.2021

1. What has happened with EU gas market (and in less extent globally) in 2021, which lead to 100%+ increase in natural gas prices? We should, first of all, focus on the natural factors and the mostly non-professional reaction of the EU regulators (and the governments of some countries) on the problem, raised in the current year.

The main reasons for the temporary shortage and the huge gas price jump in 2021 were the following:

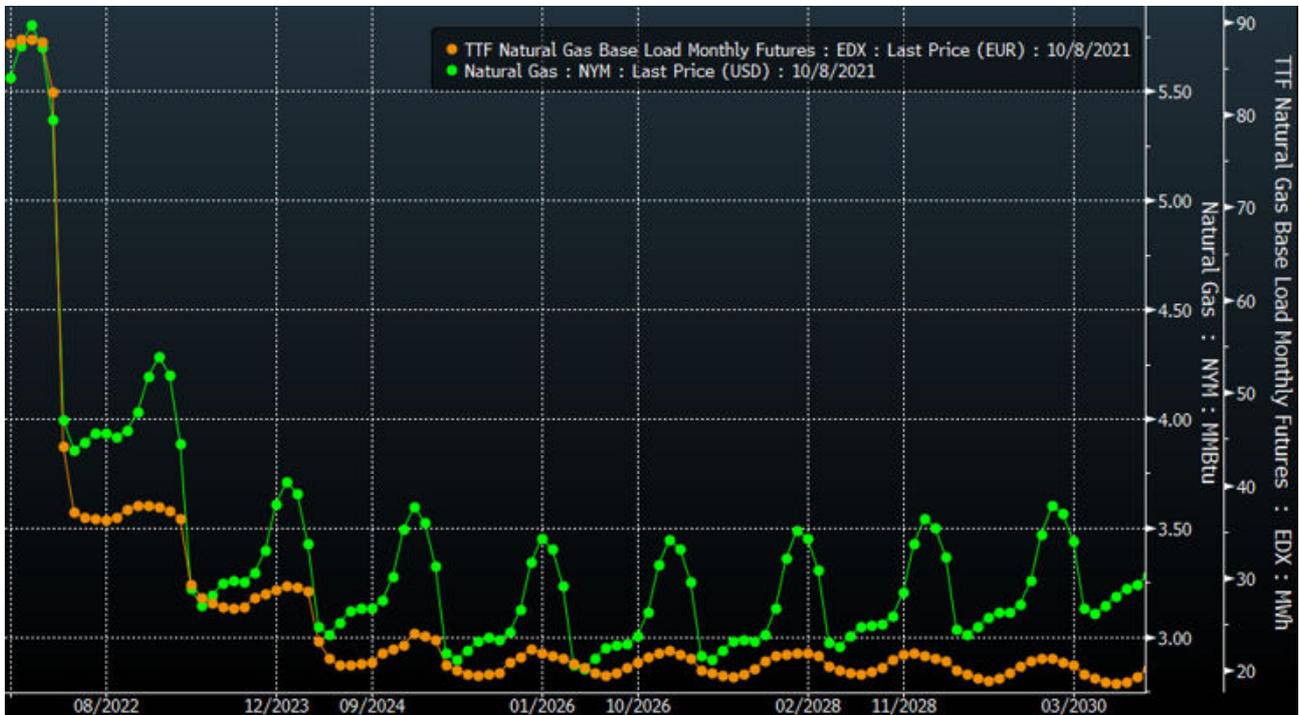
(1) **Abnormal weather** (hot summer => high demand for air conditioning; expectations for another cold winter => high demand for restocking before heating season starts). COVID-19 induced work-at-home has also resulted in higher household demand for electricity and home air conditioning that was much less energy efficient than large scale in offices.

(2) **Competition of the EU with Asia over the limited (yet) supply of LNG** – China has bought more than 80% of additional LNG shipments this year. Europe has been fighting with Gazprom for many years to change its long-term “take-or-pay” (oil based) formula for spot and LNG based pricing. Now EU has to pay the price as 85% of Gazprom shipments are quoted against EU hub prices.



Source: Bloomberg, NYMEX

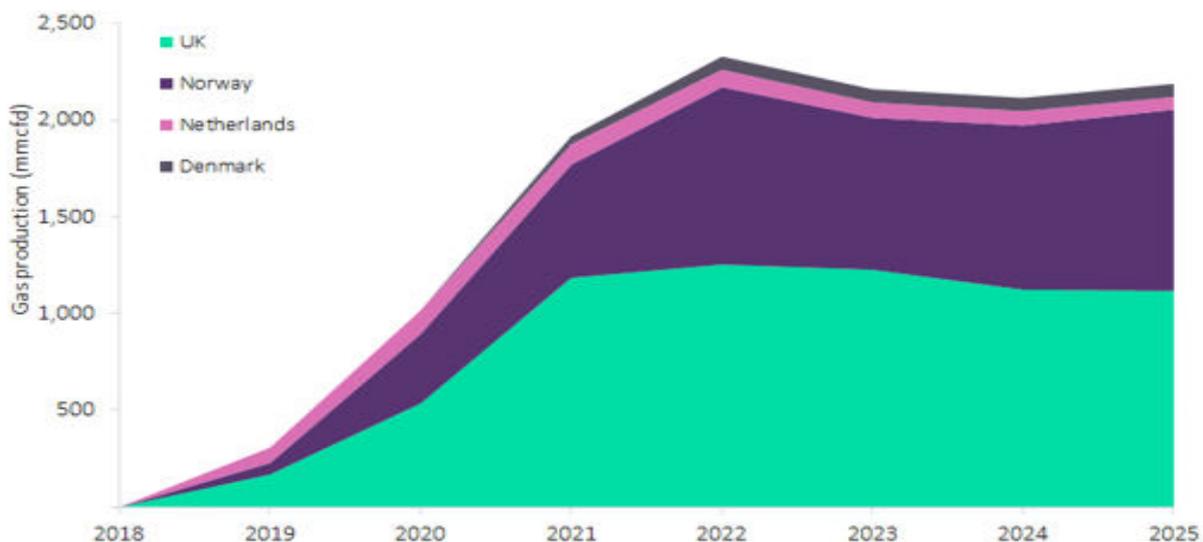
(3) **Speculation activity in TTF market in Europe.** As Russian Energy Minister Mr. Novak predictably claimed this factor as the most important one behind the recent gas price jump above USD 1000 in Europe. It can be seen both in the much higher open interest in futures contracts on the TTF and more steep backwardation in the term structure of European futures market Vs the US one – Jan 2022 futures costs 57% more than Jan 2023 futures Vs just 26% discount in the US Henry Hub futures.



Source: Bloomberg, NYMEX, TTF

Even the largest commodity traders found themselves in trouble¹ – they were asked to place additional funds to avoid margin calls as their cumulative hedge book grew up to \$30 bln. in notional of short positions in TTF.

(4) **Constrained domestic (North Sea) supply** (see the chart), as production is



flattening out after COVID.

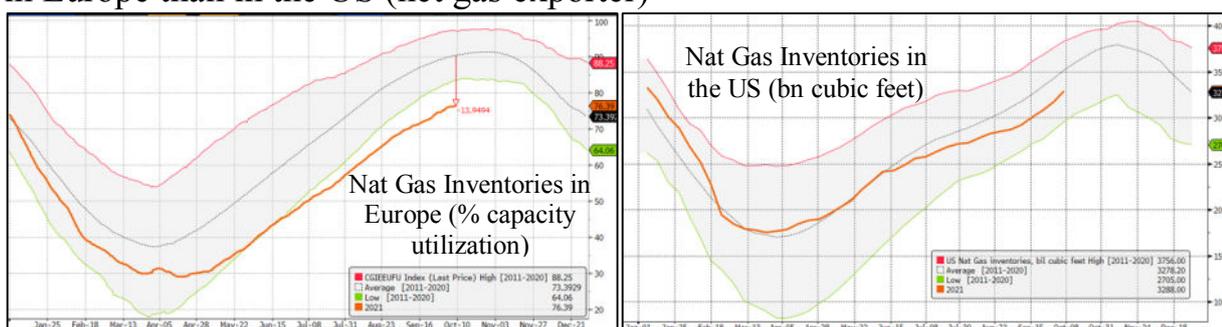
Source: Bloomberg

(5) The “green (ESG) push” (let’s recall “Shell” loss in Hague Court and the Netherland decision to close its largest gas field Groningen three years earlier²) have reduced CapEx over the last couple of years. The same “green push” over the last decade in Germany resulted in almost nullification of nuclear power generation. It’s been further multiplied by the 3 times jump in CO2 pricing over the last year that resulted in significant coal-to-gas substitution in the whole EU.

Macro-economic factors, like the record money supply in EU and the growing financial markets bubble (with all the well known arguments about the “low inflation” in Eurozone), also were the reasons of the exchange price jump for the such easily manipulated commodity, as gas).

Lower generation of wind farms (not so windy weather in September) was also an unexpected factor for EU, but it was much less, than the others above listed.

(6) **Low level of inventories** on the both sides of Atlantic but situation is much worse in Europe than in the US (net gas exporter)



Source: NYMEX, TTF

2. The “**Russian factor**” was important in the gas supply to EU, but not the most important in pricing. With all the traditional suspicious attitude to the Gazprom (and general “Kremlin”) policy description, as “anti-Ukrainian”, “anti-East-European”, etc., we have to take into consideration two important reasons, why Gazprom couldn’t raise supply immediately, even if EU asked to do it in September-October. The gas flow from Russia (Gazprom mostly) to EU was at record high and overall gas production in Russia over the 3 quarters of 2021 was 12% and 2.6% higher than year ago and in 2019. But it was not adequate, as two main domestic forces were and mostly still are in play:

(1) Putin’s administration pre-election **request to refill domestic storage in Russia** to more than adequate levels before heating season starts on the 1st of November. This factor is going to be less and less relevant in 4Q2021. Harsh weather conditions could easily outweigh this factor but recent forecast from NOAA³ is for a 70-80%

² <https://www.gasunie.nl/en/news/recommendations-gts-to-the-minister-definitive-closure-groningen-is-possible-more-than-three-years-earlier-than-planned>

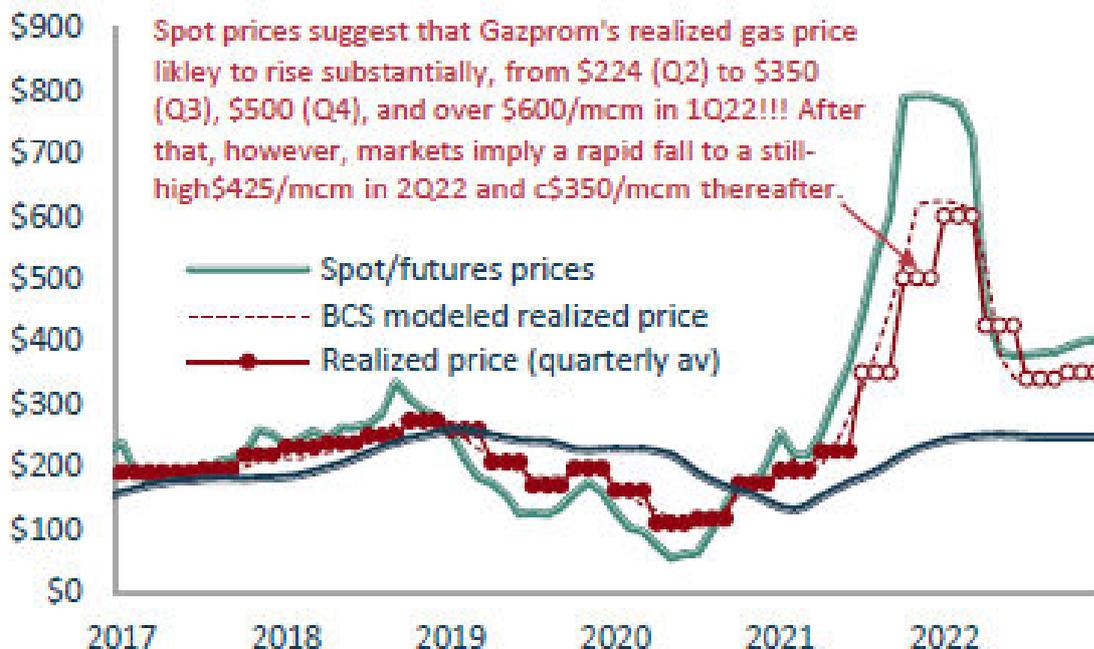
³ https://www.cpc.ncep.noaa.gov/products/analysis_monitoring/enso_advisory/ensodisc.shtml

chance of “La Nina” during the Northern Hemisphere winter 2021-22 (and it’s often La Nina coincides with negative natural gas performance⁴).

(2) **Gazprom monopoly over the Russian pipeline export** flows despite an aggressive push from Rosneft and Lukoil to let them fill the pipe. Mr. Sechin (CEO of Rosneft) merely repeating the offer of providing 10 bcm in agency sales to Gazprom and the Minister of Energy confirming that the Government was studying such an option. So it could be used in case of harsh winter in Europe. But now it is exacerbated by the EU energy directive that forbid Gazprom to fill the whole 100% of “North-Stream-2” pipeline - it can only fill the 50% quota and the remaining 50% should be allocated to the independent companies that is still forbidden under the Russian law (and it’s not easy to change after the tens of years of traditional policy of Gazprom export monopoly).

The “**Ukrainian factor**” could become the reason for short-term jump of gas price in EU in winter 2021-2022. The current price is already too high for the industry and consumers in extremely weak Ukrainian economy. Russia is reducing the export through the old Ukrainian pipelines (to Hungary, Austria – probably to almost zero) and it could be minus 3 mln USD (or more) for the Ukrainian GDP in a year. EU may have to land (to grant) money to Ukraine for buying the gas above the initial plans.

Figure 3: Gazprom’s export price should jump in 3Q-4Q
Gazprom’s realized European export price vs. hub, oil prices (\$/mcm)



Source: FSUE Argus, ThomsonReuters Refinitiv, Gazprom, BCS

⁴ <https://www.cmegroup.com/education/files/el-nino-and-natural-gas-weather-fueled-volatility.pdf>

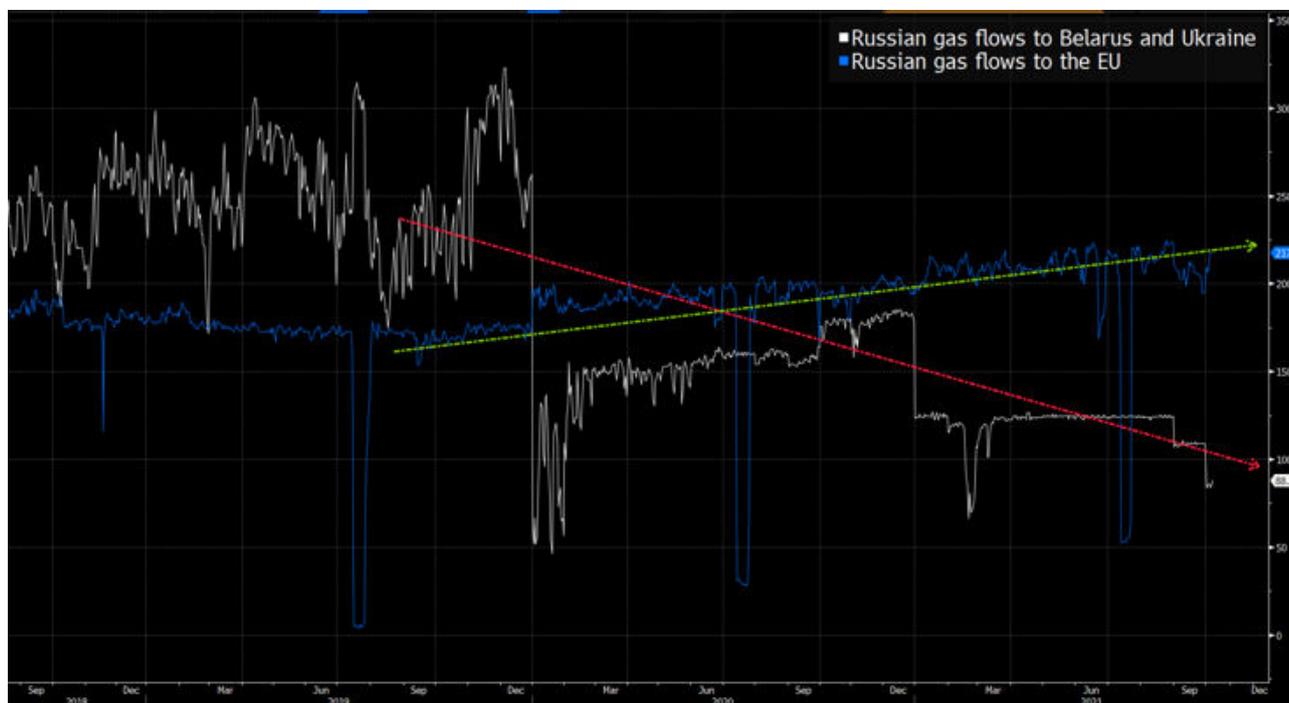
3. What could be the next stage of the European gas market development?

The prices for industry in EU are already 70-100% higher in 2021 and for the population in many EU countries were raised 40-50% recently. It'll hit cost of production, consumption and will lead to higher inflation in 4Q 2021 and in the next year. Could the price jump higher or it should retreat another 20-25% after the first week of October highs?

Short-term there would still be a risk of further up and downs in European pricing as winter is approaching, but that is more likely that we've already passed the top/ The reasons are the following:

(1) The inventories restocking cycle in most Northern Hemisphere countries will be finished to the early days of November;

(2) Russia will slowly increase its export over the "Nord Stream-2" (especially if it get so needed postponement of that 100% Gazprom limit (it's CEO has already stated that company could have export 5.6 bncf over the "Nord Stream-2" this year if no political and regulatory burdens to be applied to its activity (probably not, as the new government in Germany can use more pragmatic approach to Gazprom: to make the Russian supplier even more dependent of the German gas demand and logistics.) Moreover Gazprom is going to spend \$6-7 bln for the 3rd train of Ust-Luga LNG terminal that will increase its capacity by 30% to 19.5 mm ton. This terminal will ship first LNG in 2024 and will be very profitable for Gazprom as LNG is free from Russian 30% export duty.



Source: Gazprom

Besides the step-by-step reduction of the "Russian factor" importance, the new EU governments could be more pragmatic and make some steps back in the "green push"

in the EU. More pragmatic approach to the regulation of “CO2 factor” could increase fossil fuel production and import. The EU bureaucracy will not change “green” rhetoric, but they will do nothing against the European (and probably US) oil and gas companies. May be they will focus on CO2 tariffs for Asian/Russian raw materials exporters to EU.

Overall, it could end up returning prices toward more acceptable range say USD 400-\$500 that is still elevated and inflationary.

Longer-term situation (2022) is closer to oil bubble in 2008 - there will be a lot of substitution investments into the solar, wind, geothermal energy production but also better relationship with “not so pretty politically” gas countries such Russia, Qatar and Iran with renewal of long-term contracts at better terms for Gasprom and other Russian gas producers. Anyway, the prices will drop significantly over the next 3-5 years back to historical norm of \$300-350 (possibly higher, depending on inflation). In term of LNG market there going to be a tug of war between higher production in top-3 countries (Qatar, Australia and the US) and coal-to-gas substitution and the pace of electric cars adoption

