

# Macro Watch

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## Gas price higher, but not back to summer 2022 peak

- ▶ **Bigger European gas buffers limit the risk of shortages**
- ▶ **The gap in gas supply left by Russia has largely been filled by other gas suppliers**
- ▶ **The LNG regassification challenge is largely solved**
- ▶ **Share of renewables in power supply is increasing fast and energy consumption has fallen**
- ▶ **In our base case we see gas prices staying higher than before the energy crisis**
- ▶ **But even in a negative scenario we do not expect prices to return to the peak of last years' crisis**

### Introduction

The energy crisis triggered by the Russian invasion to Ukraine hit the European economy very hard last year. Surging gas prices following the halt of Russian supplies to the continent increased energy bills to unprecedented levels, raised inflationary pressures and curbed purchasing power. In this note we aim to reevaluate the situation for the upcoming winter. We will revisit the factors that lead to the crisis, along with changes that took place meanwhile, in order to infer the outlook for energy prices for the upcoming winter.

All in all we think the risk of another price spike next winter is rather limited, even if this winter turns out colder than the previous one. Changes in various areas are making Europe less vulnerable. However, we do take into account that gas prices will be at structurally higher levels in the coming years compared to the period before the Russian invasion of Ukraine. Moreover, we note that European gas prices have become more sensitive to fluctuations in global gas supply and demand.

For the longer-term health of the European economy, it is necessary to stick to the course set by the REpowerEU plan: reduce energy consumption; generate more renewable energy; maintain high levels of storage; and minimise vulnerability to energy supply disruptions by maintaining sufficient supplies and becoming less dependent on gas from Russia. These goals are largely in line with Europe's climate ambitions. In this light, then, there is not so much a change in energy transition policies. Rather, it is accelerating its implementation.

### Prelude to last years' sudden gas price spike

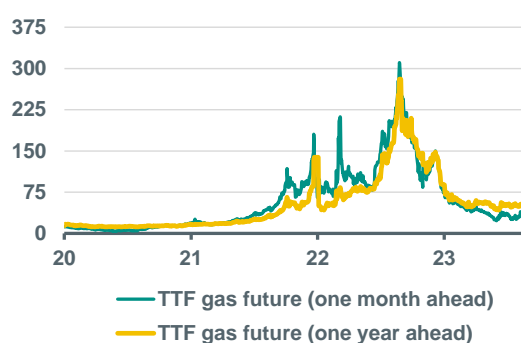
Gas should have played a bridging role in Europe's transition to a long-term sustainable energy supply. European countries were therefore betting heavily on this energy carrier as a transition fuel due its relatively low emissions. In doing so, they relied heavily on Russia, which became the main supplier. At its peak, Russia provided more than half of European gas imports, or roughly 40 percent of consumption. But when Russia invaded Ukraine last year, Europe realised that its dependence on Russia was a strategic mistake. Gas supplies no longer appeared guaranteed.

Europe was suddenly forced to hastily replenish its gas buffer. This was to avoid rationing gas for businesses and households. These gas purchases drove up gas prices. Last summer, the TTF gas future price peaked at almost 311 euros per megawatt hour, a multiple of what had previously been common. Then, fortunately, gas prices fell back to more bearable levels. What helped was that winter turned out to be relatively warm and China was still in a lockdown, so gas demand was lower.

Thanks to a series of measures and investments Europe has become less vulnerable to gas supply challenges than in early 2022 thanks to a series of measures. The REpowerEU plan is raising gas storage capacity, diversifying gas supplies with a bigger role for Liquefied Natural Gas (LNG), and increasing the share of renewable power in the electricity mix along with supporting clean fuels such as hydrogen. Accordingly, the risk of European countries again facing similar gas prices as in summer 2022 is small, even in the event of a cold winter, or a strong recovery of the Chinese economy.

### Gas price spikes after Russian invasion

EUR/MWh

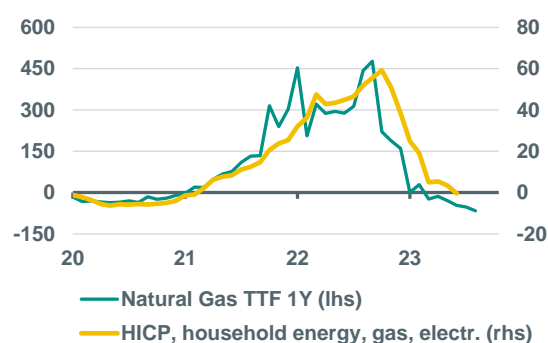


Source: Bloomberg, ABN AMRO Group Economics

### Price spike feeds into energy inflation component

% yoy

% yoy



Source: Refinitiv, ABN AMRO Group Economics

## Bigger gas buffers limit the danger of gas shortage

A spearhead of European strategy is to preventing gas shortages. This requires having sufficient buffers. Currently, as illustrated in the figure above, gas storage capacity in Europe is already 87% filled. Which puts the fill rate at the upper end of the 2015-2020 range. This gives comfort for the coming winter. The inventory rates to be maintained during the year are even set by law in Germany, which states that until 2025 and possibly even 2027, stocks should be filled by 85% in October, 95% in November and 40% in February.

Buffer management works better once European countries show solidarity and assist each other in case of shortages. This is only possible if it is easy to move gas within Europe and national shortages can be supplemented by stocks from other countries. Thanks to investments in European gas infrastructure done last year, European countries are now better able to jointly bypass periods of shortages.

The renewed buffer policy comes at a cost though. First, the sudden buying spree temporarily contributed to the spike in gas prices last year. As a result, Trading Hub Europe, which is responsible for maintaining Germany's gas stocks, is now stuck with stocks, the costs of which are above current market rates. The impending loss, as stipulated by law, may be passed on by Trading Hub Europe to regional utility companies and thereafter to end customers. Secondly, holding a stockpile that is higher on average through the year entails additional costs. Buffers provide security. But an 'insurance premium' is payable on this insurance.

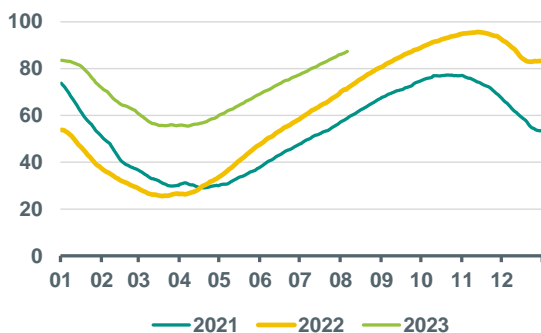
## Regassification challenge is largely solved

In the absence of gas pipelines from the new suppliers, gas mostly reaches Europe in liquified form (LNG) nowadays. Before LNG can be readily available to the end customer, additional, more costly processing is needed. Just after the Russian invasion, the capacity for regassification was lacking. This problem has now been largely remedied. For instance, by the end of this year, Germany has twice as many offshore regasification stations as at the beginning of this year and plans to build an onshore terminal to replace some of this offshore capacity. The onshore terminal, due for completion in 2026/27, is designed to also be suitable for electrolysis of hydrogen, which could become an important energy carrier in the future. In this way, Germany tries to avoid being stuck with gas for a long time, which would be difficult to reconcile with Germany's climate goals.

LNG makes Europe less dependent on Russia and offers more security of supply. Violent price fluctuations are then less likely. At the same time, the liquefied gas market is an international market affected by global events, both on the demand and supply side. Just recently, prices rebounded because of potential strikes at gas companies in Australia. Although Europe hardly buys any gas from Australia, the threat that Asian countries would start competing with gas demand from Europe was enough reason for European gas prices to rise.

### Gas storage levels in EU are rapidly increasing

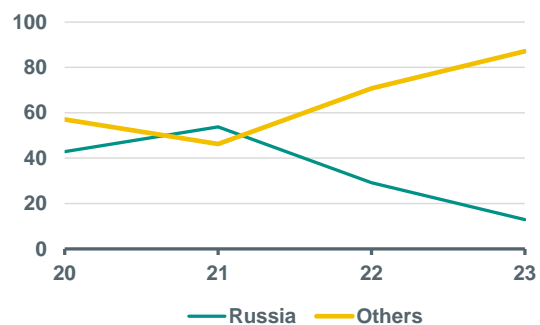
Percentage of storage capacity



Source: AGSI, ABN AMRO Group Economics

### EU has reduced its dependency on Russian gas

Percentage of gas imports



Source: European Commission, ABN AMRO Group Economics

## Share of renewables in power supply is increasing fast

Besides diversification of gas suppliers, Europe has committed to investing in renewables. Investments in solar and wind power contribute to energy security for Europe by becoming more independent and self-sufficient in the long term. Moreover, investments in renewables contribute to climate ambitions. A double win.

Because of the high energy prices and improved efficiency of solar panels and wind turbines, the private sector is very interested in this type of investments. Total investments in the period 2021-2023 should be able to generate as much as EUR 100 bn in savings, according to IEA. In the Netherlands, the share of renewables in the energy mix has risen to more than a sixth of the total. With all projects planned, Spain, Germany and Ireland are even on track to reach a 40 per cent share by 2024. These investments in renewables will enable further reductions in gas consumption.

However, in the long run, the increased reliance on renewables will make the European gas market more sensitive to weather conditions. For example, a collapse in wind power generation in the event of low wind blows would drive gas prices up. The fluctuation of gas prices will be dampened if the increase of renewables is accompanied by an expansion of battery storage capacity. Since 2020 European investments in power storage rose from EUR 1.5 bn to EUR 6 bn.

## Much progress is made in saving gas consumption

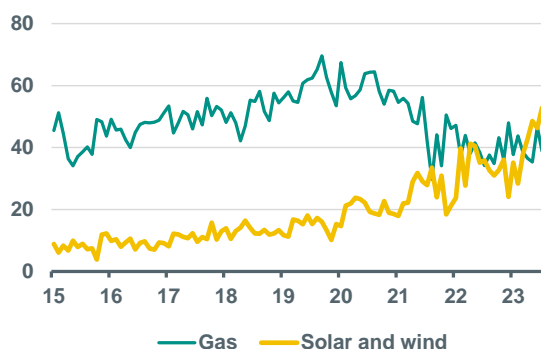
Europe also tried to tackle its gas problem from the demand side by saving energy. The European Union set itself the target of reducing gas consumption by 15% in the period from August 2022 to April 2023 compared to the average consumption level in the previous five years. Latest data indicate that this target has been more than met. In the first quarter of this year, gas consumption was 18% lower than in the reference period. 13% less gas was needed to generate energy, partly due to the growing availability of solar and wind power. For households and businesses, energy consumption was as much as 19% lower. These successes led the European Union to decide to extend the energy-saving programme.

Saving energy requires behavioural adjustment of households, which is difficult. But last year much has been achieved in this respect. Partly because of the threat of high energy bills, campaigns to raise awareness by turning down the thermostat one degree, showering for shorter periods, using LED bulbs and replacing old appliances for more efficient ones resonated well. In addition, energy savings were achieved by insulating houses and installing heat pumps on a large scale. The wide availability of subsidies sometimes gave the decisive push in this respect. Given the average energy label of the housing stock, there is still much to be gained.

The preparedness of companies to save energy and switch to more sustainable energy sources also turned out high. In response to the price shock companies adjusted their production methods, for instance by moving energy-intensive activities to more efficient production sites. This improved the energy efficiency of the economy as a whole, which requires less and less energy to produce a unit of GDP. A key reason for the improvements is that business continuity was tested by energy availability, thus promoting attention for the topic of saving energy. In addition, high gas prices made it clear that energy consumption can be a decisive factor for competitiveness. Notable is that apart from a few energy-intensive products such as fertilisers, steel and aluminium, the gas savings affected production less than expected.

### Renewables are replacing gas in the Netherlands

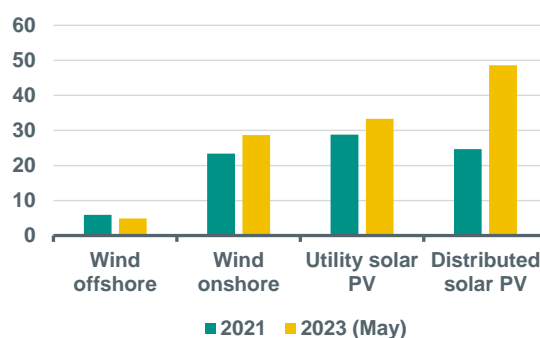
Percentage share in power generation



Source: Ember, ABN AMRO Group Economics

### EU's renewable capacity is increasing swiftly

Unit: GW



Source: IEA, ABN AMRO Group Economics

## There are possible black swans for gas prices

In short, Europe has made much progress last year. The gap left by the decline in gas imported from Russia has been largely filled by other suppliers. Gas buffers are ample. So ample, that LNG tankers are sometimes turned away to Asia to serve customers there. Furthermore, the amount of energy generated from solar and wind has risen steadily, and gas consumption has fallen as energy is used much more efficiently.

Despite the massive progress Europe has made, there is no guarantee that gas prices will remain low. After all, Russia is still responsible for an eighth of the European Union's imports. Should Moscow suddenly decide to turn off the gas tap, Europe will indeed have a problem. Europe was fortunate last year that gas demand from Asia was relatively low due to lockdown measures in China. With China's economy recovering, demand is rising again. Finally, gas demand last winter was

as much as 7% lower than in the previous five years due to relatively mild temperatures. Assuming more normal winter temperatures, gas demand will be higher in the coming winter. By themselves, these concerns are justified.

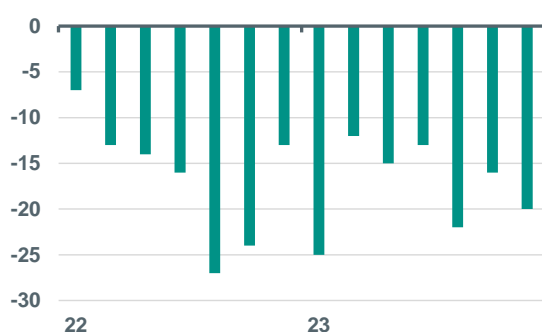
There are however caveats to these concerns. First, it is not in Russia's interest to further restrict exports as long as there is no gas pipeline to China, and given that northern Russian LNG ports are poorly accessible in winter. Second, the latest data from China do not suggest a strong rebound in the economy; on the contrary, the economy continues to languish (see our latest publication on China's economy). It suffers from problems in the construction sector and weak demand from abroad. Government stimulus measures have had little effect so far. Third, the hot summer did not cause a price shock this year, despite the increased demand for energy-intensive cooling associated with heat waves.

### But we also see mitigating factors

Not to mention any windfalls. For instance, last year's struggles with gas supplies came at a very unfortunate time. For a start, France's nuclear plants were operating at a low level as maintenance work was being carried out. Now that these are largely behind us, France's nuclear plants can once again supply more energy. Traditionally, these plants run mostly on uranium from Niger. Since the military coup in Niamey, their supply is less assured. However, this need not cause immediate problems, as France has spread the risks in recent years by increasingly sourcing uranium from other countries.

#### EU manages to curtail gas demand substantially

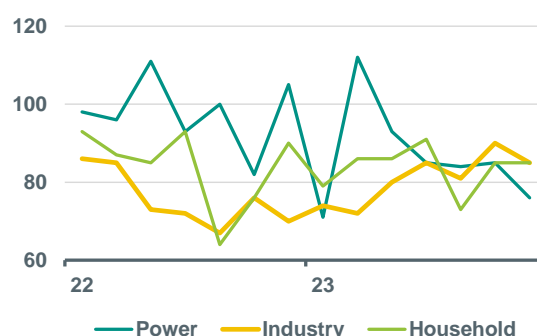
Percentage of 2019-2021 average



Source: Bruegel, ABN AMRO Group Economics

#### All sectors in EU are cutting gas demand

Percentage of 2019-2021 average



Source: Bruegel, ABN AMRO Group Economics

Another potential tailwind for energy supply comes from hydropower. The series of hot summers meant that water levels were low in Europe last year. As a result, hydropower generated a fifth less energy than usual. Periods of drought and heavy rainfall this summer show that climate change is also taking its toll this year. But, assuming weather conditions normalise somewhat, hydropower generation is likely to see a further recovery, which could partially offset any additional gas demand due to a colder winter.

Finally, some countries have also resorted to a less desirable alternative from a climate perspective: coal. After the problems with gas supplies from Russia, some European countries decided to keep coal plants open longer than previously planned. This was a relatively simple measure, given the production capacity was already there. There are several reliable producers, so security of supply is guaranteed. And its price is relatively low. Still, it would be unwise to stick with this stopgap measure for long. It is bad for the environment and would damage the international credibility of Europe's climate ambitions. Other countries could point to this as justification for less ambitious climate goals than they would otherwise have.

### Our expectations for gas prices in the base case and the negative scenario

All things considered, we think gas prices will be higher next winter than in the years prior to the energy crisis. With Russia largely out of the supply picture, the gas market is tighter than before. Moreover, precautionary measures in the form of higher buffers also means additional costs and a higher average price level. We assume a TTF average year ahead price of

55 EUR/MWh for the second half of 2023 and 60 EUR/MWh for 2024. Furthermore, LNG has gained a larger share in the overall gas mix. This means that gas prices are more sensitive to global changes in supply and demand. Prices may therefore fluctuate more frequently than prior to the crisis, as we have seen in the past year, when maintenance of gas plants in Norway and the US led to short-term price fluctuations. But on a global market the amplitude of price fluctuations will turn out smaller

In a negative scenario where Russia halts all remaining exports to Europe, our estimates put the TTF year ahead average price at 110 EUR/MWh in 2023 and 150 EUR/MWh in 2024 (around 100-150 percent higher than in our base case). The higher level of gas prices will prop up inflation, albeit to a limited extent. As a rule of thumb a rise in gas prices of 10% raises total HICP inflation by around 0.1pp. This would hit household purchasing power and put a brake on consumption growth. However, the burden of higher gas prices will be shared more evenly. While gas price ceilings and subsidies are about to expire, government support will probably be more focussed on low income households living in houses with a low energy label. Energy-intensive companies and sectors facing foreign competitors with access to cheaper energy sources will also suffer from higher gas prices, which could also lower economic growth somewhat.

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