

Last Week at a Glance

Week 3, 2023



BRENT M+1

84.46 \$/bbl

Oil prices rose on a weekly basis amid hopes of improving China's demand and fading US inflation.

Outlook:
(Horizon 1 week)



GAS TTF Y+1

62.00 €/MWh

TTF year-ahead price continued to dive amid milder weather forecasts, more wind generation and strong supply.

Outlook:
(Horizon 1 week)



POWER GE Y+1

168.51 €/MWh

The German year-ahead power price decreased last week following weakness in the gas market.

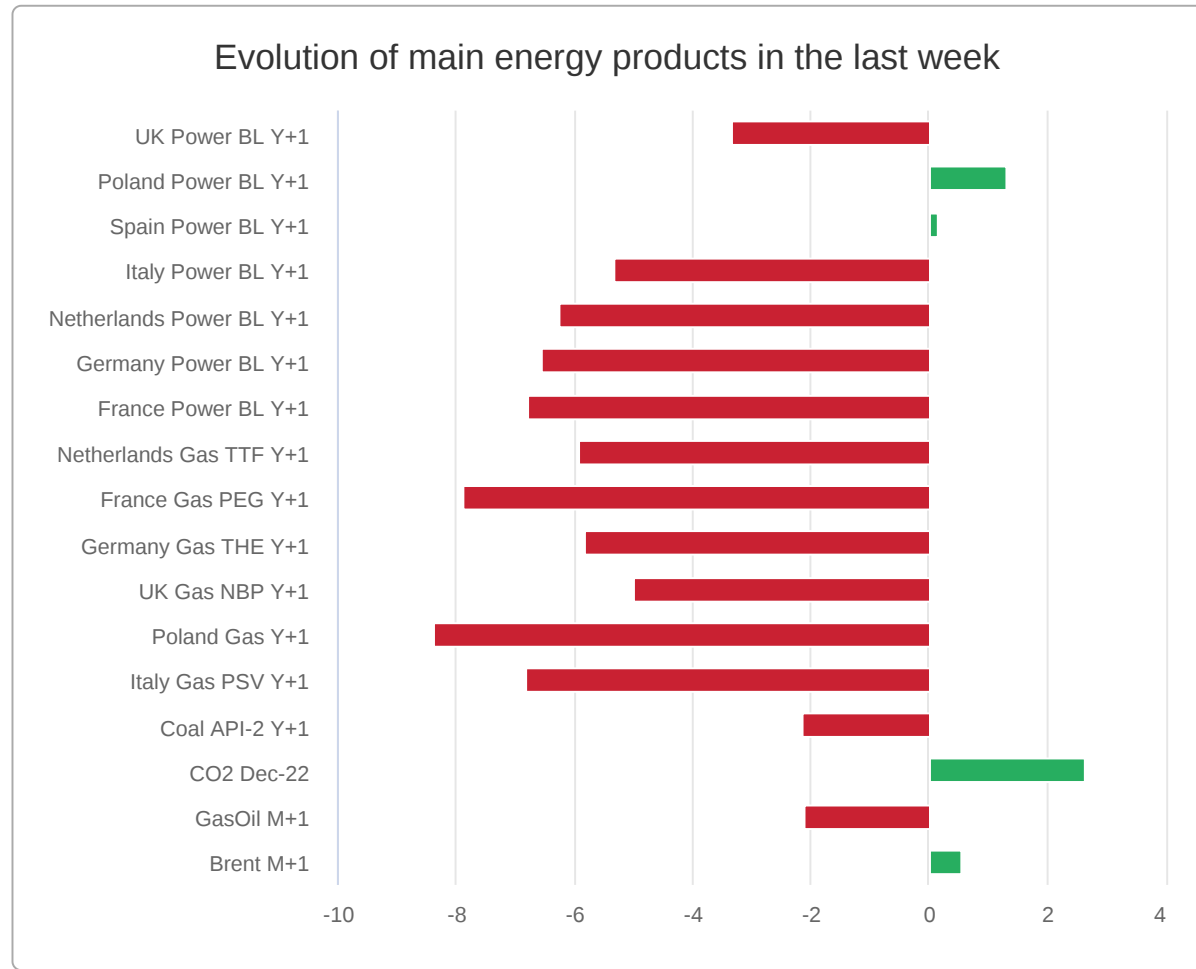
Outlook:
(Horizon 1 week)



Highlights

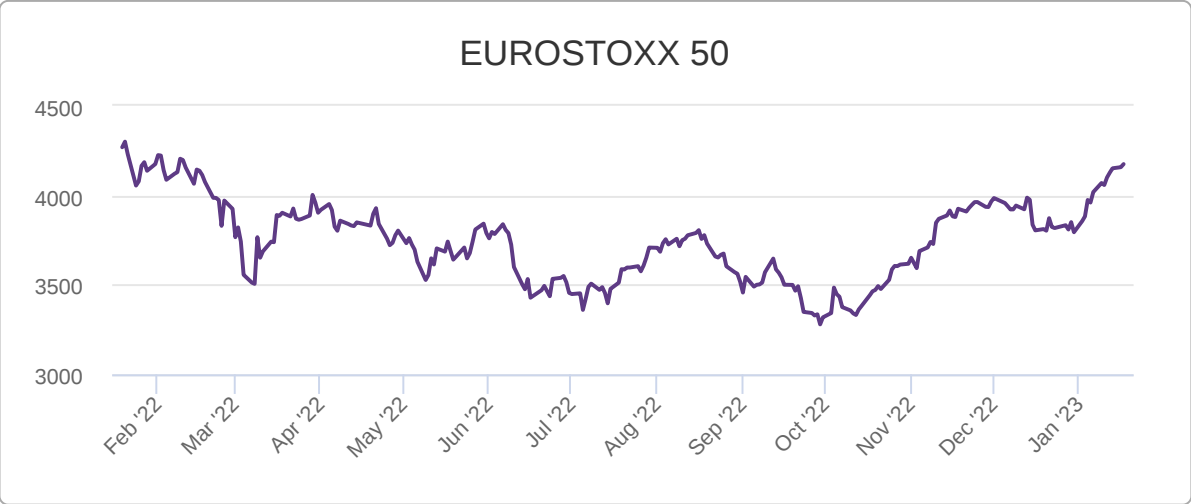
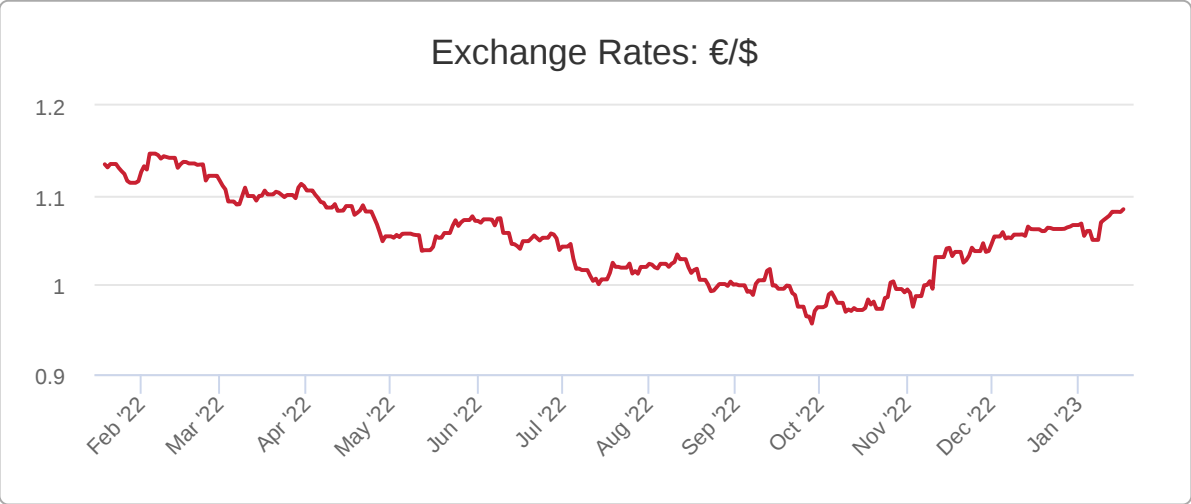
| EVOLUTION OF MAIN ENERGY PRODUCTS IN THE LAST WEEK | |
|--|------------|
| UK Power BL Y+1 | ▼ (-3.34%) |
| Poland Power BL Y+1 | ▲ (1.3%) |
| Spain Power BL Y+1 | ▲ (0.14%) |
| Italy Power BL Y+1 | ▼ (-5.32%) |
| Netherlands Power BL Y+1 | ▼ (-6.26%) |
| Germany Power BL Y+1 | ▼ (-6.54%) |
| France Power BL Y+1 | ▼ (-6.77%) |
| Netherlands Gas TTF Y+1 | ▼ (-5.92%) |
| France Gas PEG Y+1 | ▼ (-7.89%) |
| Germany Gas THE Y+1 | ▼ (-5.83%) |
| UK Gas NBP Y+1 | ▼ (-5%) |
| Poland Gas Y+1 | ▼ (-8.37%) |
| Italy Gas PSV Y+1 | ▼ (-6.81%) |
| Coal API-2 Y+1 | ▼ (-2.15%) |
| CO2 Dec-22 | ▲ (2.65%) |
| GasOil M+1 | ▼ (-2.12%) |
| Brent M+1 | ▲ (0.56%) |

% Change Current Week vs Week-1



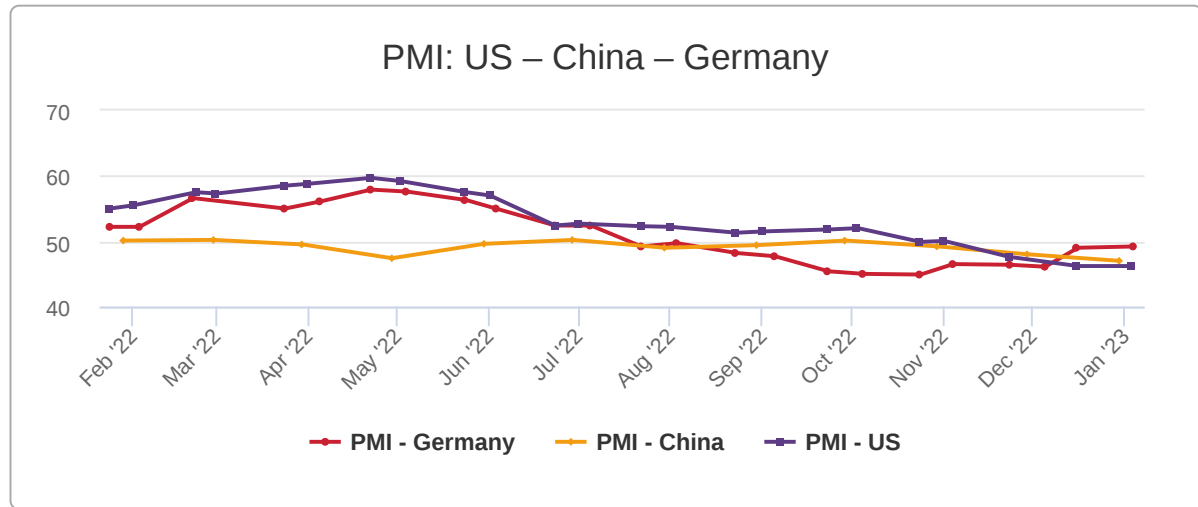
General Overview

✓ The EUR/USD exchange rate gained ground on a weekly basis amid healthy Treasury yields and a pause in the US Dollar recovery. Hawkish commentary from ECB continues to support the Euro ahead of ZEW.



✓ The purchasing managers index is a composite indicator of a country's manufacturing activity. It takes into account order intake, production, employment, shipments and stocks in the manufacturing sector.

- PMI < 50: contraction in the activity
- PMI > 50: expansion in the activity



Oil

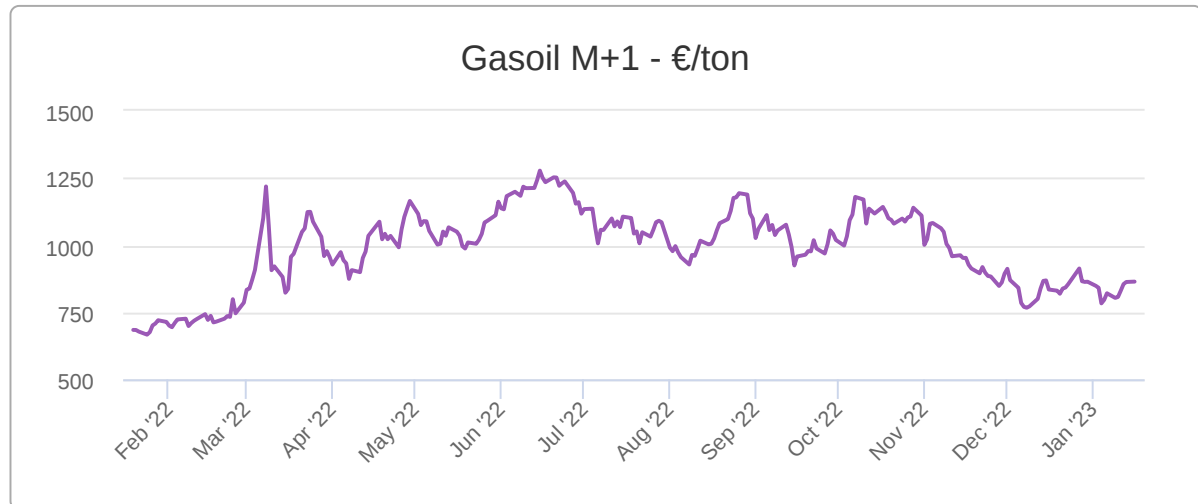
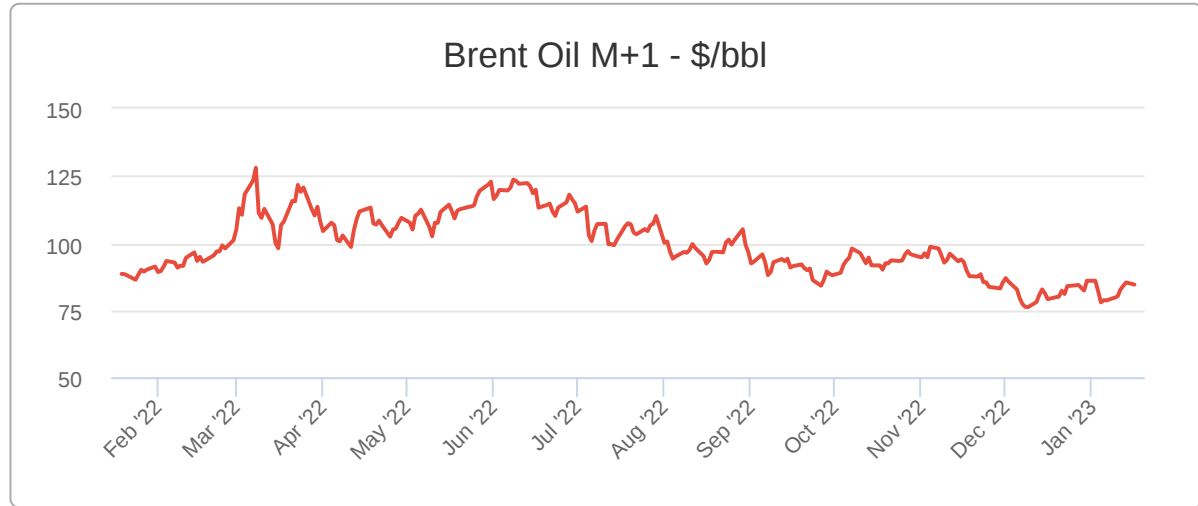
✓ Oil prices increased last week amid hopes of improving China's demand and signs of easing inflation in the US, but economic concerns were continuing to weigh on the market.

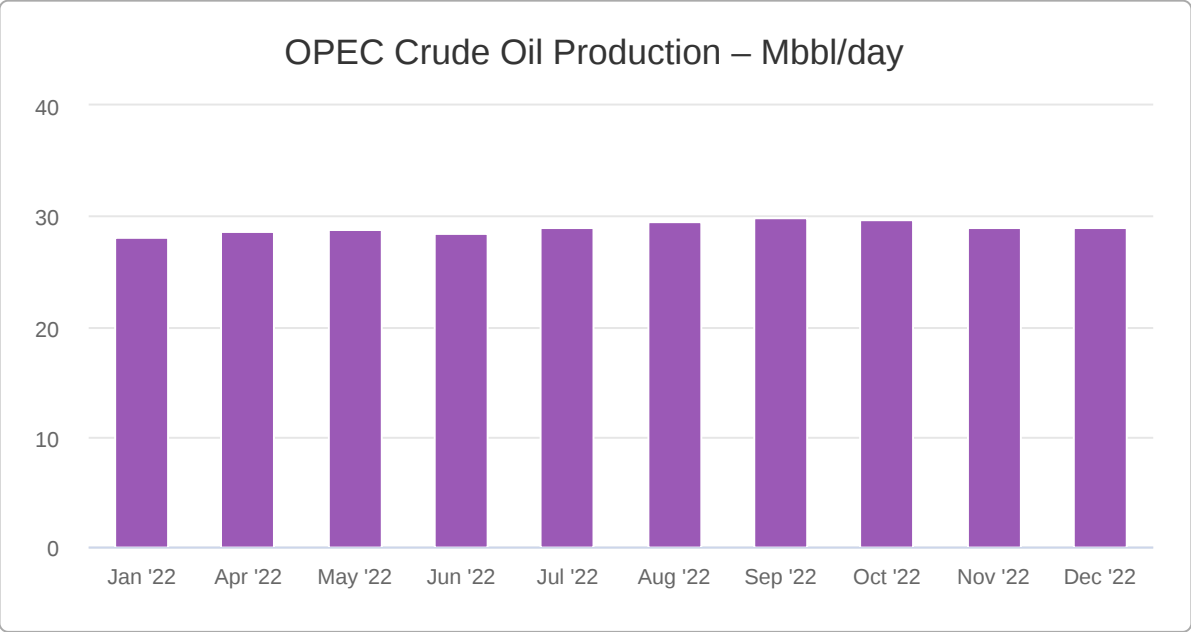
The World Economic Forum's annual meeting began one day ago with warnings of global recession, aided by signs of stronger Russian supply. Seaborne crude exports soared by 30% to 3.8m.

Due to sanctions over Russia's war in Ukraine, the EU and G7 would try to cap the price of Russia's petroleum exports starting in February.

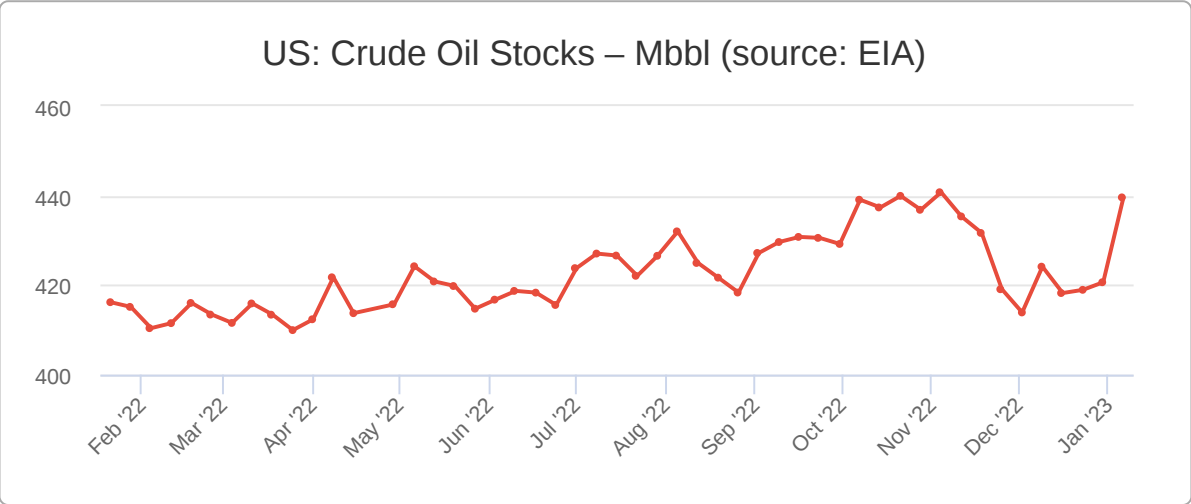
In the near term the oil market remains strong and healthy.

The International Energy Agency's report will be released on Wednesday, while Opec is due to deliver its monthly report on the oil market today.





✓ The US drilling rig count rose five units to 623 in the week ended Jan. 13, according to the Baker Hughes rig count data released on Friday.



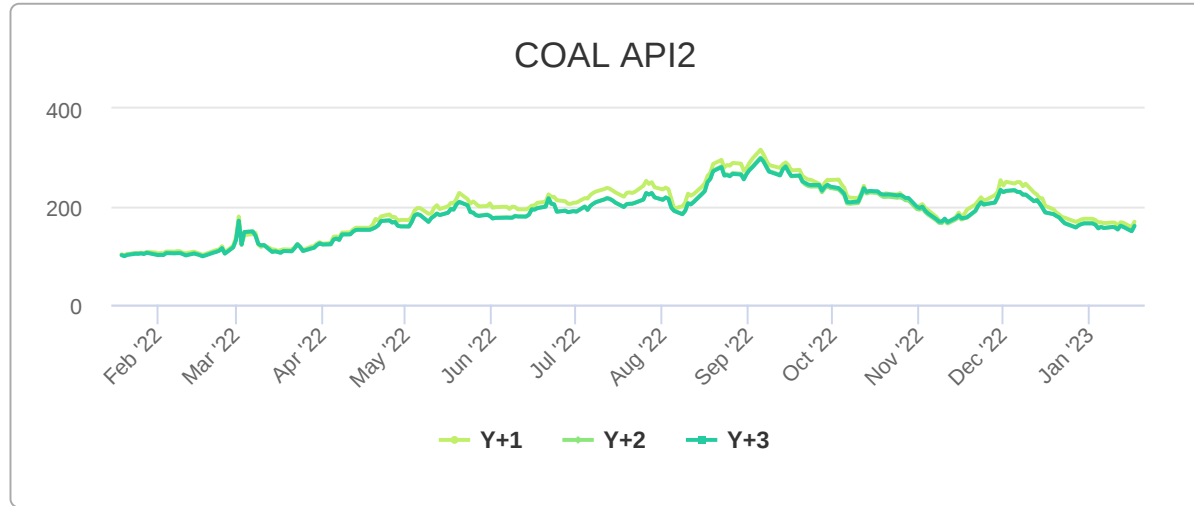
Coal & CO2

- ✓ European coal prices fell to new 11-months low as a result of an oversupply on the market and weak demand.

No cargoes delivery for ARA have been noted this year so far - via leading broker Global Coal.

According to DBX forecasts, coal imports by countries in northwest Europe were tentatively projected equal to 4 million tonnes this month, a slight decrease from December's 4 million tonnes.

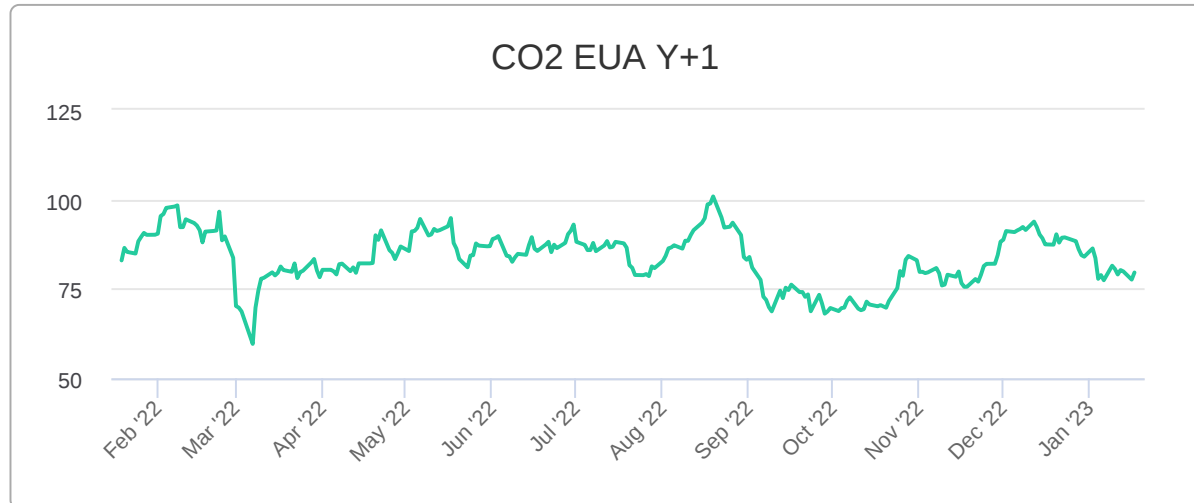
According to Montel calculations, coal inventories at the four major dry bulk import terminals in Amsterdam, Rotterdam, and Antwerp have been hovering at over 6 million tonnes since early December, compared to the 2022 average of 5.2 million tonnes.



- ✓ European carbon prices decreased amid warmer weather.

As concerns about supply injections this year weigh on demand in the benchmark December contract, the carbon market has rolled an abnormally large volume of trading into March delivery.

This year, the EEX exchange is expected to auction 593m allowances. However, there will be considerable changes to the auction schedule, and as a result, the supply balance for this year is still very unknown.



Natural Gas

Natural Gas Storage Total EU 28

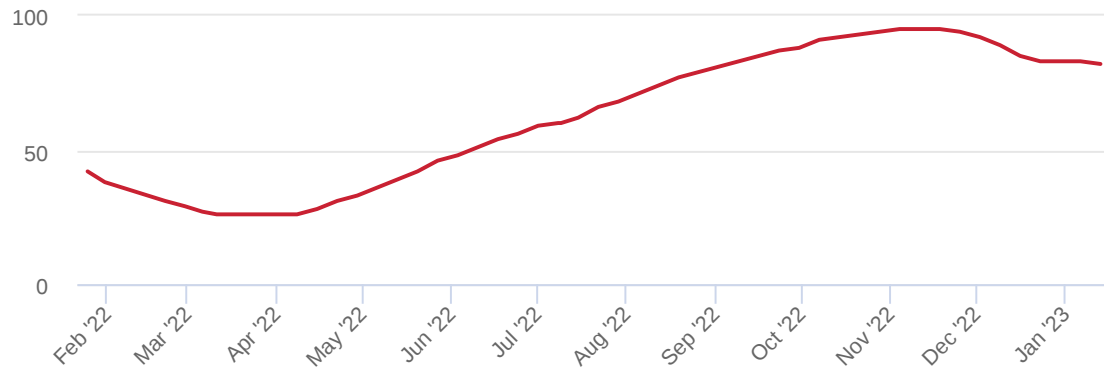
Date: 13.01.2023










Outlook:



Gas Storage Inventory in % (EU)



Natural Gas Storage

| | |
|--|-----|
|  United Kingdom | 98% |
|  Germany | 91% |
|  France | 80% |
|  Spain | 94% |
|  Portugal | 98% |
|  Italy | 80% |
|  Netherlands | 76% |



LNG Storage

LNG Storage Total EU 28

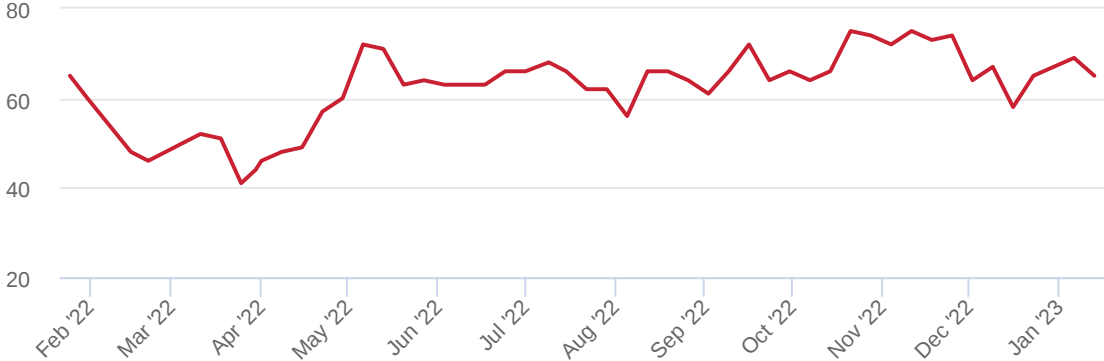
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Outlook:



LNG Storage Inventory in tsd. cubic meter LNG (EU)



LNG Storage

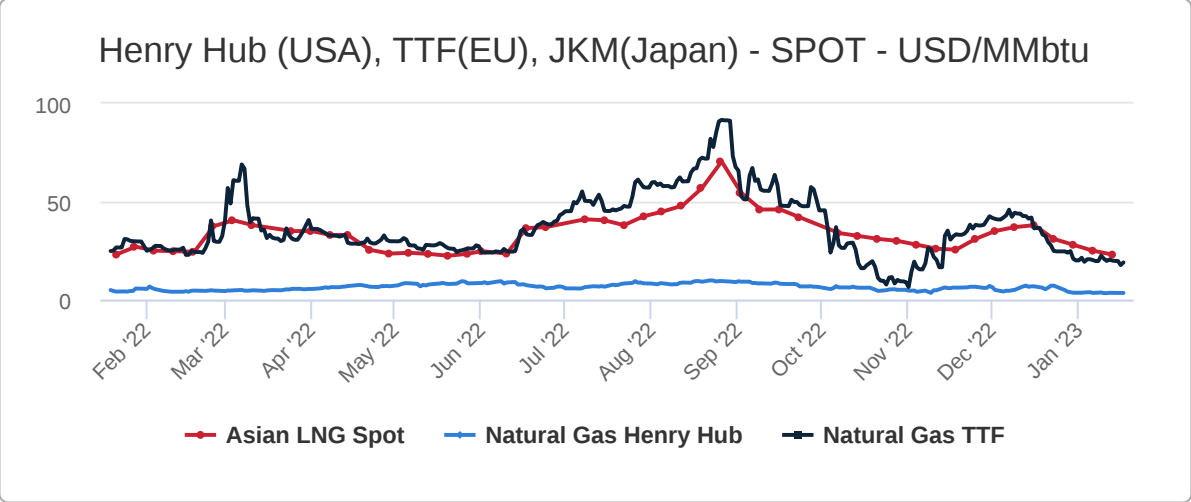
| | |
|--|-----|
|  United Kingdom | 49% |
|  France | 59% |
|  Spain | 74% |
|  Portugal | 75% |
|  Italy | 63% |
|  Netherlands | 47% |



Henry Hub - TTF - JKM

✓ Asian spot liquefied natural gas (LNG) prices decreased for a third consecutive week amid mild weather, ample inventories and pressure due to upcoming Lunar New Year holiday. According to PipeChina West Pipeline Company, the China-Central Asia Gas Pipeline supplied 43.2 billion cubic meters of natural gas to China in 2022. At the moment, the pipeline transports around 100 million cubic meters of natural gas per day.

Meanwhile, US gas prices tumbled amid healthy production. In fact, U.S. gas inventories ended 2022 substantially below the seasonal normal. But a record cold temperatures at the close of the year caused a severe depletion that has obscured a wider move towards inventory accumulation since the beginning of September. For the majority of the past four months, production has increased more quickly than consumption and exports, leading stockpiles to build up.



TTF

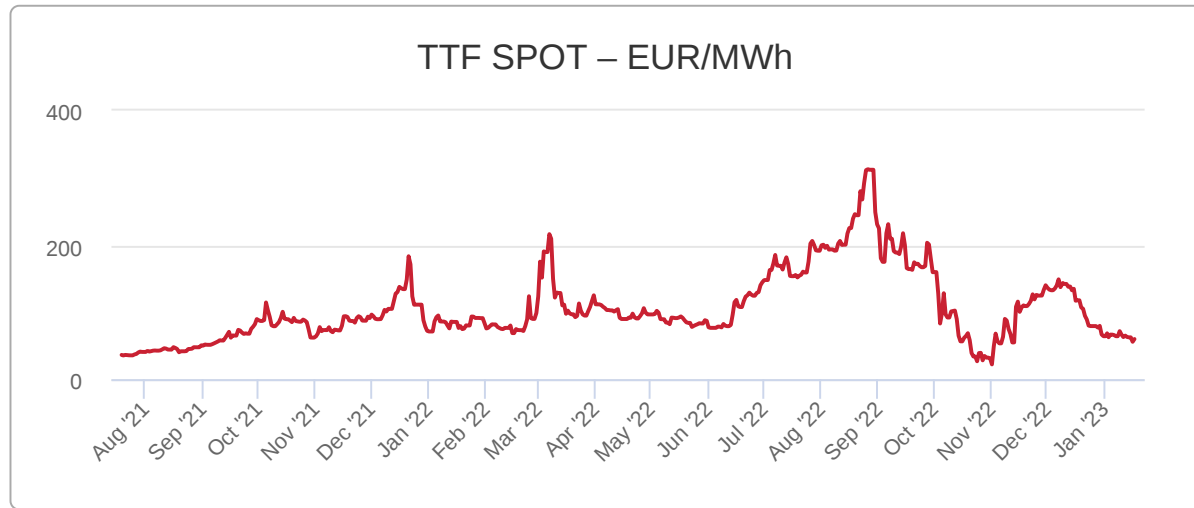
| MARKET AVERAGE | PERIOD | PRICE €/MWh |
|----------------|-------------|-------------|
| Month M-12 | January 22 | 83.8 |
| Month M-1 | December 22 | 112.7 |
| Month M | January 23 | 64.1 |
| Current Year | 2023 | 64.1 |
| Year Y-1 | 2022 | 121.1 |

✓ TTF spot price plummeted amid strong wind generation.

The Kpler data revealed 47 additional ships with a combined capacity of 4.3 billion cubic meters in transit or waiting to unload, however the ultimate destinations and volumes may alter.

In total 7.8 billion cubic meters (bcm) of imports have been made so far this month, which is about 19% less than the same period in December.

Although cooler temperatures are anticipated this week, gas use has been restrained so far this year due to the mild and windy weather that has reduced demand for heating and gas-fired power.



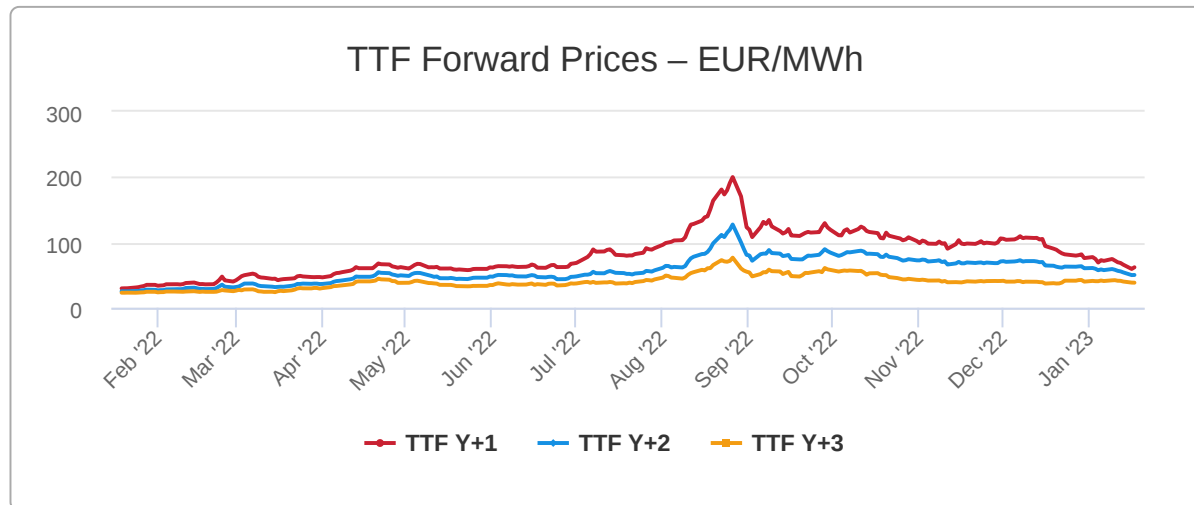
| SPREAD €/MWh | 12-MONTH MOVING AVERAGE | LAST WEEK AVERAGE |
|----------------|-------------------------|-------------------|
| TTF Y+2 vs Y+1 | -24 | -10.6 |
| TTF Y+3 vs Y+1 | -41.4 | -22.2 |

✓ TTF gas prices fell to a 16-months low amid milder weather forecasts, more wind generation and strong supply.

According to released data by the London Energy Brokers' Association, traded gas volumes in European brokered markets fell by 35% year over year in 2022, driven mostly by sharp declines on the Dutch TTF hub.

In comparison to the 24,790 TWh of gas produced in 2021, 16,085 TWh of gas were produced in 2022.

In summary - TTF volumes decreased by 41% to 11,511 TWh.

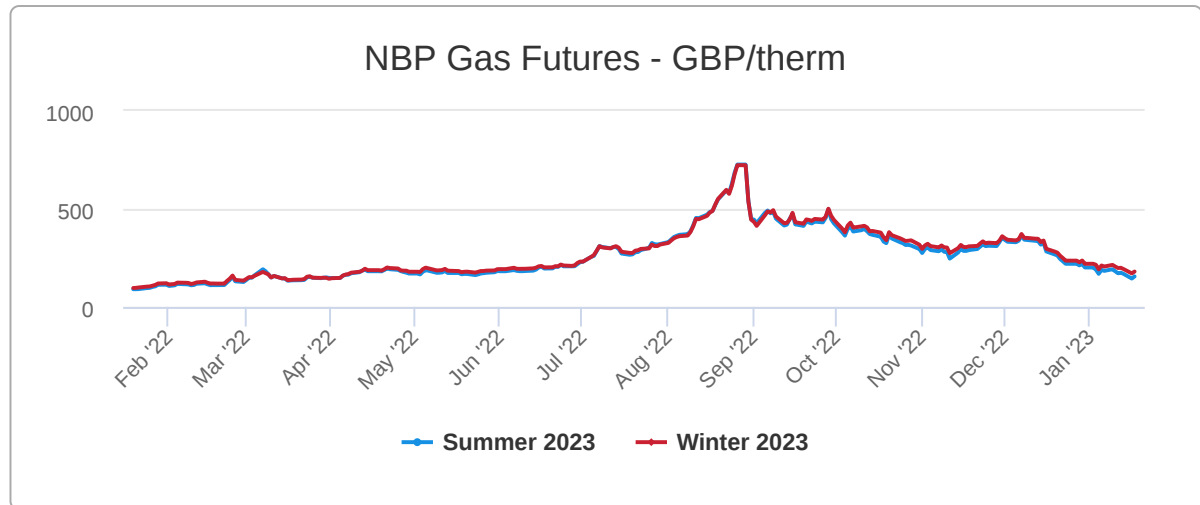
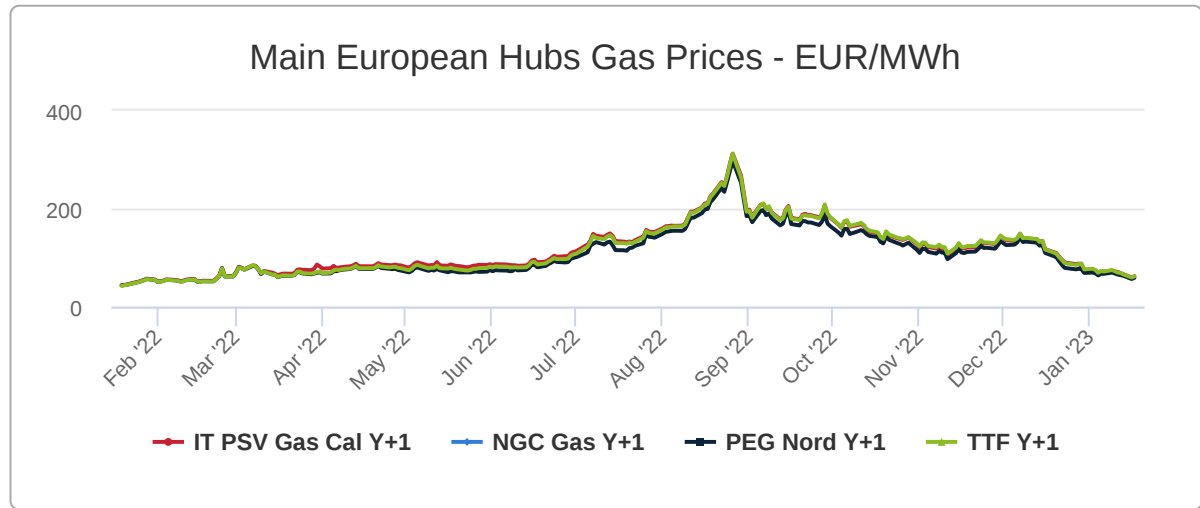


European Gas

| Spread vs TTF | 12-Month moving average | Last Week average |
|---------------|-------------------------|-------------------|
| PSV (IT) | 2 | 0.2 |
| TRF (FR) | 0 | -8.7 |
| NCG (GE) | -7 | -3.1 |

✓ European natural gas prices dropped even more from their lowest point in 16 months, as supply remained abundant, and demand was restrained despite reduced pricing.

In an effort to assist nations in replenishing storage and avert a supply shortage next winter, the European Commission wants EU nations to begin purchasing gas collectively "well before summer."



German Power

| MARKET AVERAGE | PERIOD | PRICE €/MWH |
|----------------|-------------|-------------|
| Month M-12 | January 22 | 169.9 |
| Month M-1 | December 22 | 239.4 |
| Month M | January 23 | 95.9 |
| Current Year | 2023 | 95.9 |
| Year Y-1 | 2022 | 235.3 |

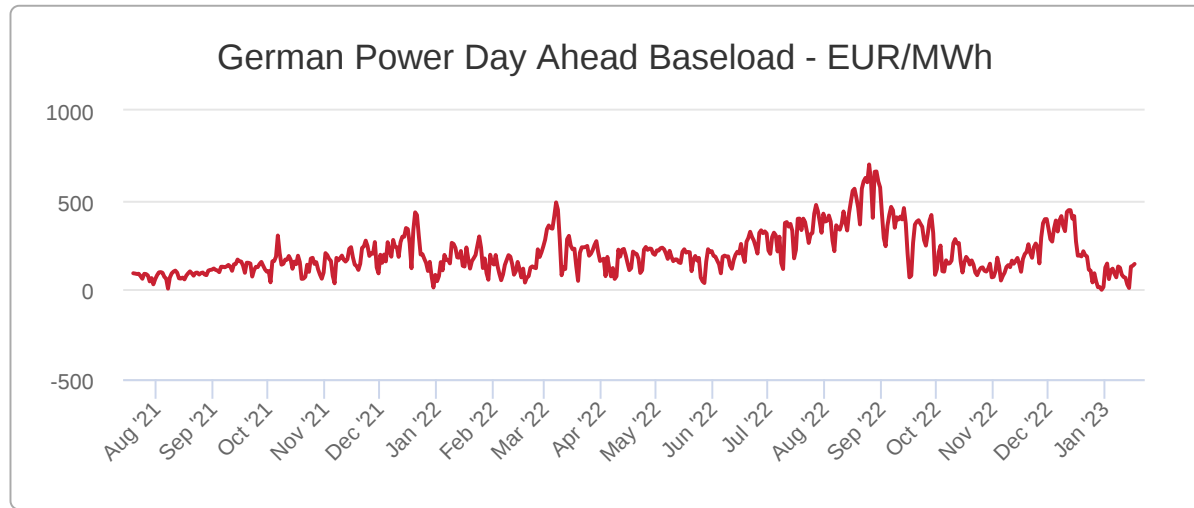
✓ The German day-ahead power price rose as forecasts pointed to plunging wind production.

LNG terminals are opening and there is still huge amount of LNG arriving despite decreasing costs.

According to projections compiled by Montel, the daily average wind power generation was expected to decrease by half to 11.7 GW.

The peak solar generation was predicted to decrease by 4.6 GW to 7.7 GW, and the average output would decrease by 0.9 GW to about 1.6 GW.

According to Montel's Energy Quantified, residual load, or the amount of demand not met by solar and wind energy, should increase by 13.5 GW to 47.6 GW, or 4.3 GW over normal.

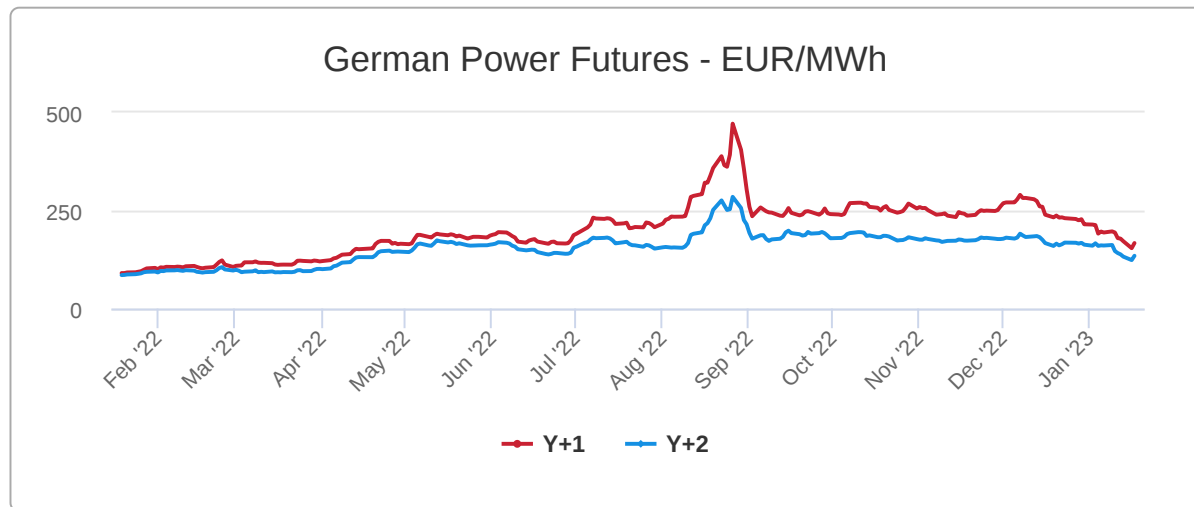


| SPREAD €/MWH | 12-MONTH MOVING AVERAGE | LAST WEEK AVERAGE |
|------------------|-------------------------|-------------------|
| GE BL Y+2 vs Y+1 | -46.8 | -31.5 |
| GE BL Y+3 vs Y+1 | -67.9 | -44.6 |

✓ German power futures prices fell to a 10-month low, following weakness in the gas market.

Germany's energy minister Robert Habeck, announced that the country's government is exploring changing the structure of its electricity market to ensure that customer costs are reasonable as part of its plan to move away from fossil fuels.

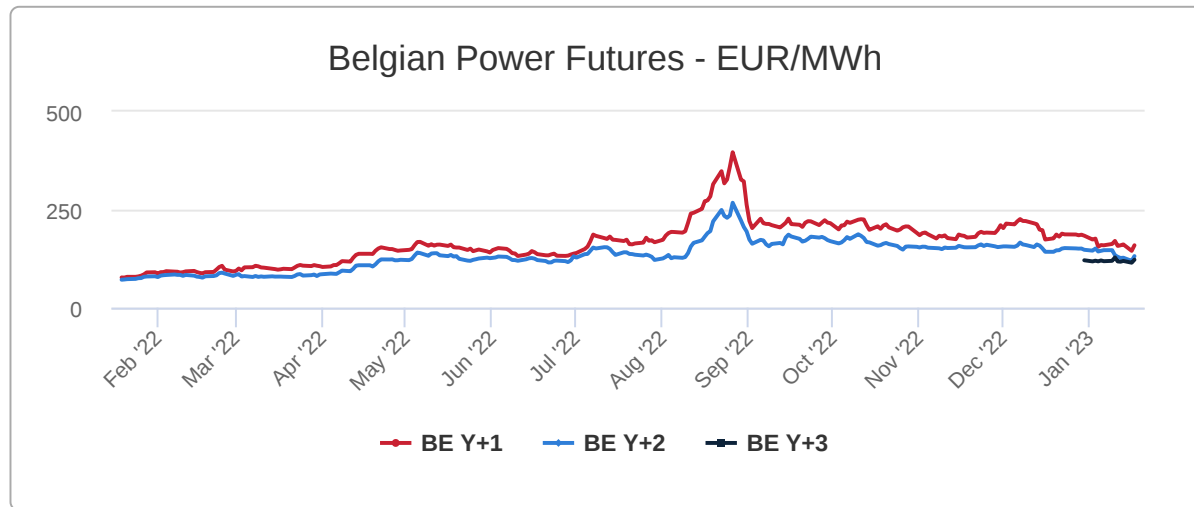
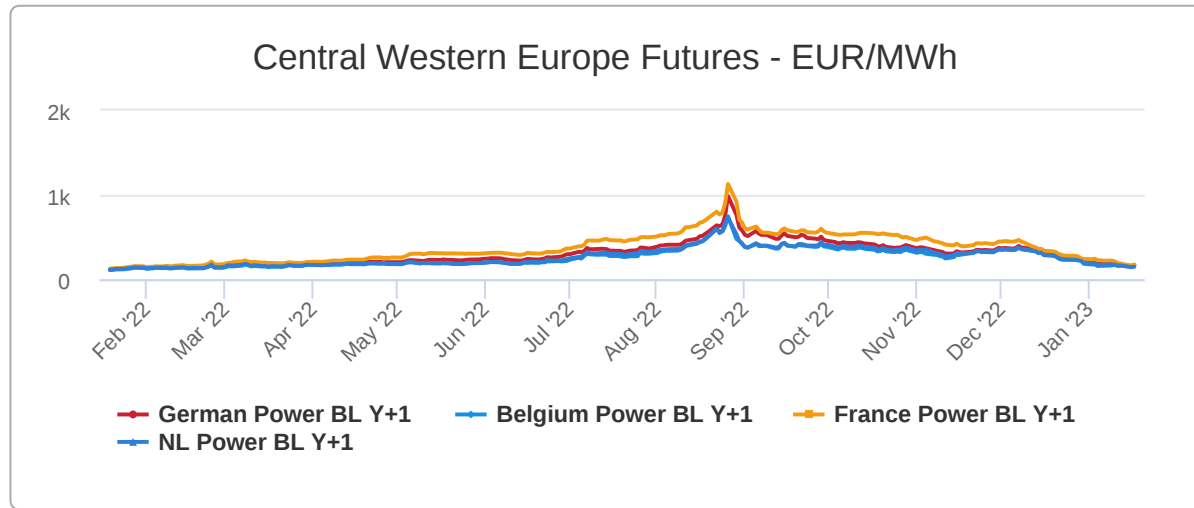
Energy minister stated that a group of industry professionals will meet in February to discuss market redesigns. Any redesign would need to include incentives for the development and operation of gas-powered power plants, especially in light of the country's goal to phase out coal and nuclear power generation.



Central Western Europe

| SPREAD VS GE POWER | 12-MONTH MOVING AVERAGE | LAST WEEK AVERAGE |
|--------------------|-------------------------|-------------------|
| BE | -45.7 | -10 |
| FR | 67.8 | 6 |
| NL | -36.5 | -16.5 |

- ✓ Following Russia's special military operation in Ukraine, Belgium's government decided to reevaluate its plans to phase out nuclear power by 2025, which would have required a greater reliance on natural gas. Without a nuclear extension, Belgium's electrical network operator had warned of severe energy shortages in the winter of 2026–2027. According to data from the World Nuclear Association, Belgium's six operational nuclear reactors have a combined capacity of around 5 gigawatts and produce about half of the country's electricity. Also, Belgium agreed has agreed to extend the life by 10 years of unit 4 at the Doel NPP and unit 3 at the Tihange NPP.



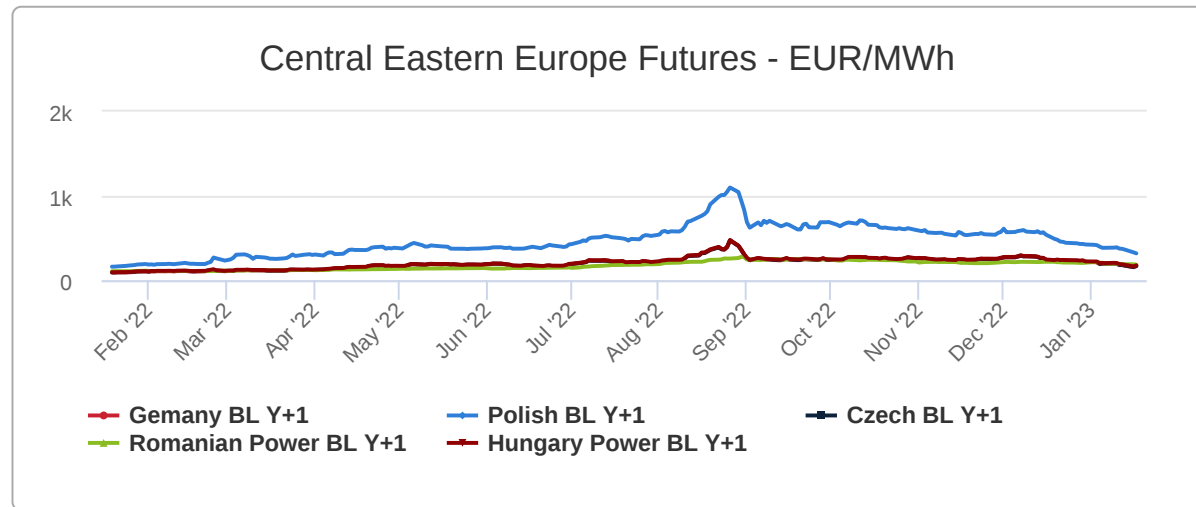
Central Eastern Europe

| SPREAD VS GE POWER | 12-MONTH MOVING AVERAGE | LAST WEEK AVERAGE |
|------------------------|-------------------------|-------------------|
| Polish BL Y+1 | 264.9 | 163.8 |
| Czech BL Y+1 | 2.1 | 1.9 |
| Romanian Power BL Y+1 | -25.4 | 25.5 |
| Hungarian Power BL Y+1 | 6 | 9.5 |

- ✓ More than 100 hectares of forest in Romania's Gorj region could be cut down to make room for a lignite mine. The government of Romania is acting once again in violation of its EU commitments by doing a U-turn on decarbonization procedures.

According to a recent research from the Energy Policy Group, a jointly created energy island in the Black Sea between Romania and Bulgaria would ease the installation of multi-gigawatt offshore wind power while avoiding grid issues that both nations deal with in this regard.

Hungary's prime minister stated that the European Union's sanctions on Russia due to the Ukraine war are a mistake and should be ended. However, the outcomes of Hungary's contentious government survey on EU sanctions against Russia, which were made public over the weekend, were rejected by the European Commission on Monday (16 January).

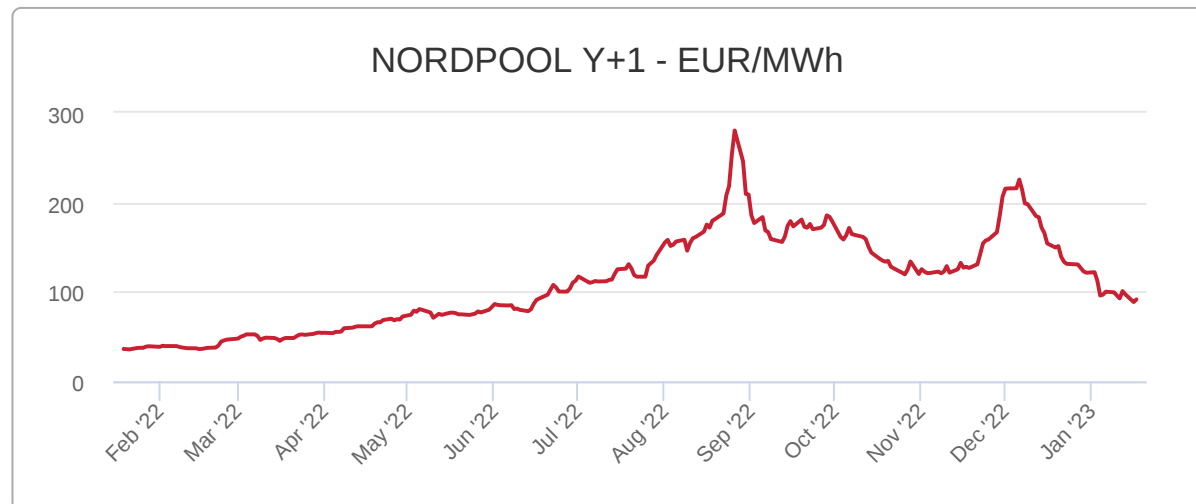
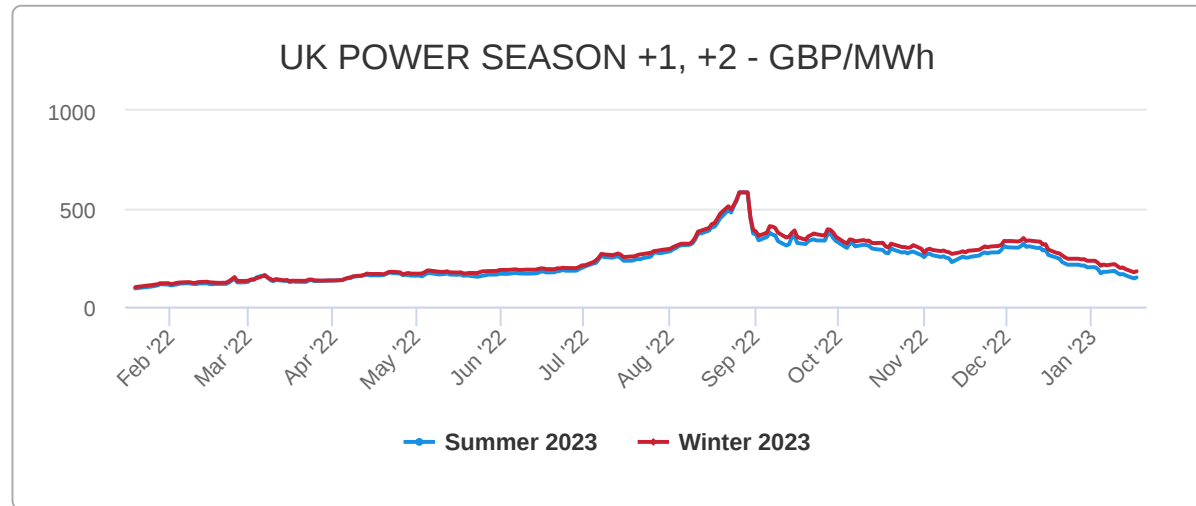


UK - Nordpool

✓ The North of Scotland will continue to be exempt from rising energy prices, as announced by the UK government, with average savings of £60 to help balance the greater costs of electricity distribution in the area. Along with other UK government programs like the Energy Price Guarantee and Energy Bill Support Scheme, this offers additional savings.

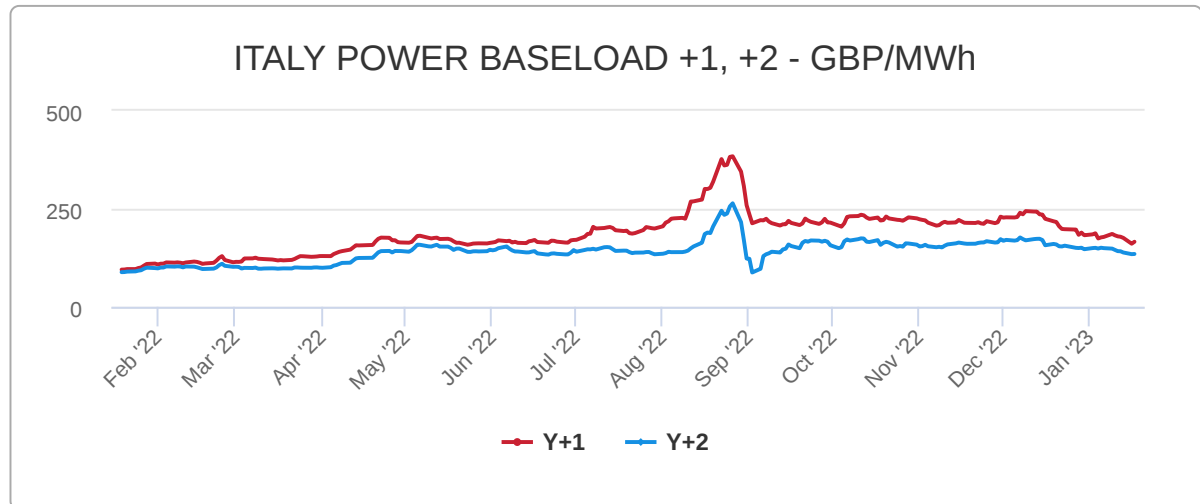
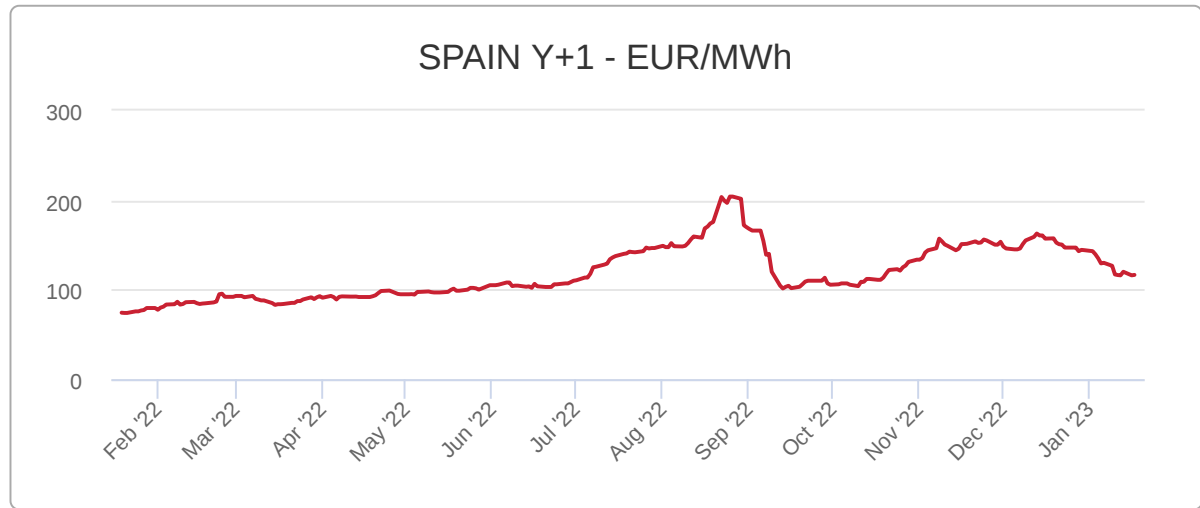
The ongoing Hydro Benefit Replacement Scheme (HBRS) and Common Tariff Obligation (CTO), which is deducted from bills automatically, will offer help totaling £94.9 million.

The governor of the Bank of England claimed that there could be a "rapid" fall in in UK's inflation amid a drop in global energy prices over last weeks but warned that the lack of workers could bring a huge risk amid the cost-of-living crisis.



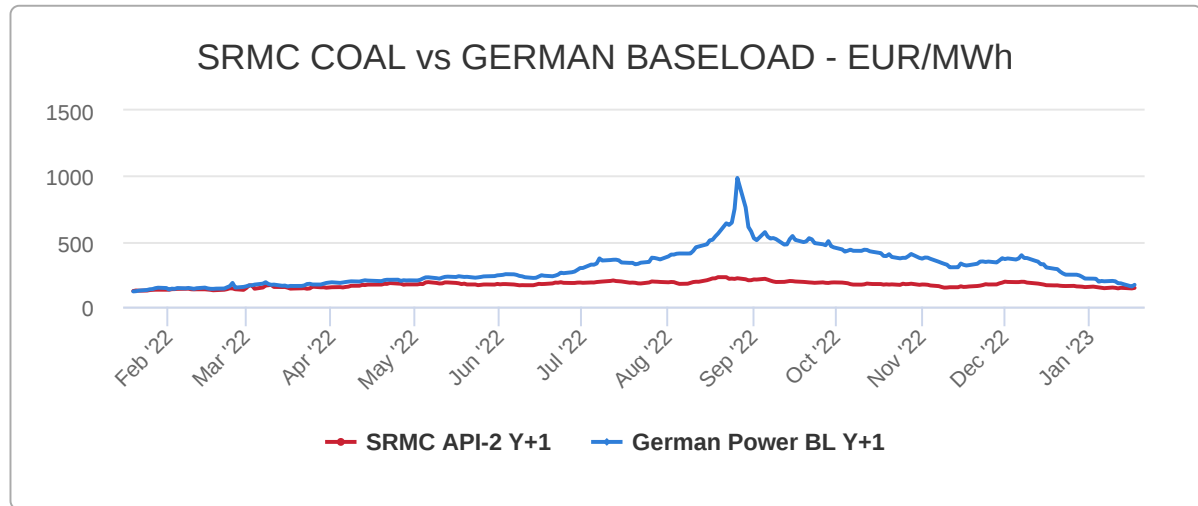
Electricity Spain - Italy

- ✓ According to sources in the energy ministry, Spain wants to decouple the cost of electricity production from gas and to curb windfall profits, therefore it has asked the European Commission for permission to establish pricing for nuclear and hydroelectric power.



Short Range Marginal Cost

| SPREAD SRMC | 12-MONTH MOVING AVERAGE | LAST WEEK AVERAGE |
|--|-------------------------|-------------------|
| Coal API-2 vs German Power Baseload Y+1 | -132.5 | -19 |
| Gas THE Y+1 vs German Power Peakload Y+1 | -284 | -146.2 |



| TECHNICAL ASSUMPTIONS | GAS | COAL |
|-----------------------|-----|------|
| Efficiency Factor | 50% | 36% |
| Management Cost | 3.8 | 4.4 |

