



ACER



European Union Agency for the Cooperation
of Energy Regulators

Key developments in EU gas wholesale markets

2023 Market Monitoring Report

27 June 2023

Report in PowerPoint format

ACER monitoring helps Europe's energy goals



ACER monitors the functioning of the internal gas market. This provides guidance and evidence on how gas markets can perform more efficiently and benefit consumers.

Throughout 2023, ACER publishes a series of overviews, covering specific aspects of the Gas Wholesale Market:

- **January and March:** [Preliminary](#) and [Final](#) Market Correction Mechanism Effects Assessment Reports;
- **June:** Key developments in EU gas wholesale markets;
- **September:** European gas market trends and price drivers;
- **November:** 2023 Synthesis and Recommendations for gas;
- **November-December:** Analysis of LNG market developments.

Key recent market developments: What is in it?



The document provides an overview of **EU wholesale gas markets trends in 2022 and the first half of 2023.**

Specifically, it addresses:

- Gas prices evolution and drivers;
- Gas consumption and its components;
- Gas supply trends;
- Gas infrastructure utilisation.



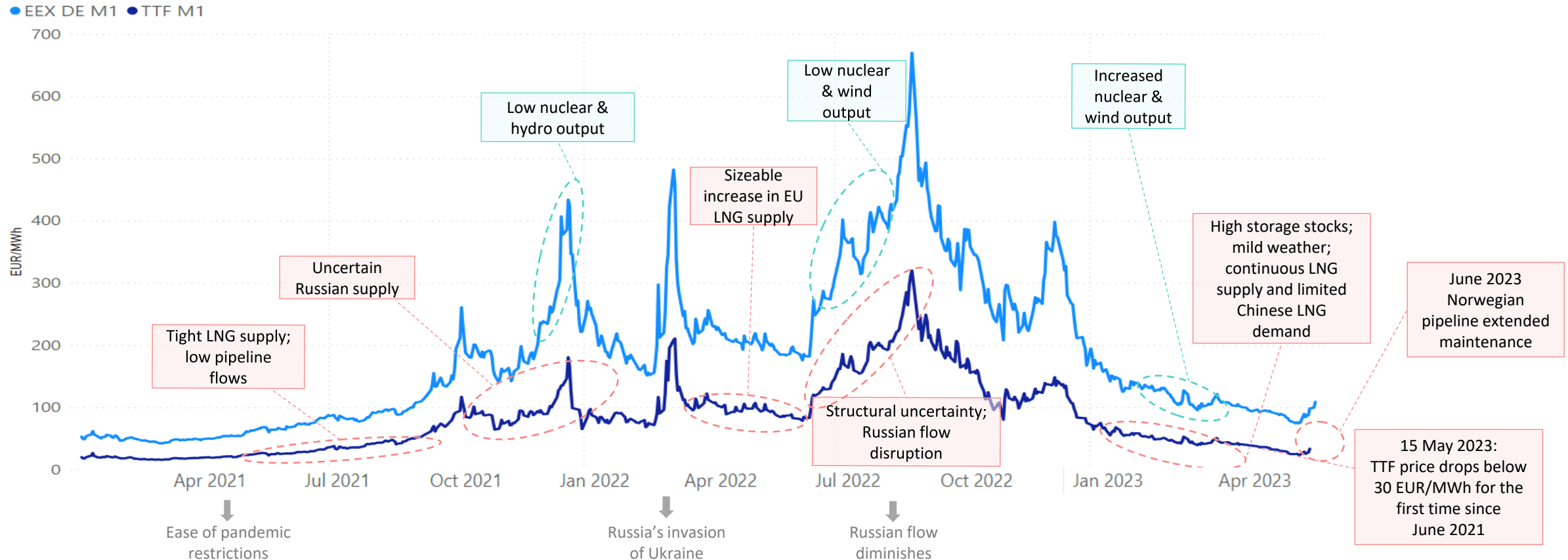
Dive into ACER dynamic chart to explore the evolution of prices, demand and supply.

Check out other ACER dashboards on EU internal energy market monitoring.

Recent gas price developments

Prices have fallen substantially since end-2022 ...

Electricity & natural gas price evolution, January 2021 – June 2023 (Month Ahead, EUR/MWh)



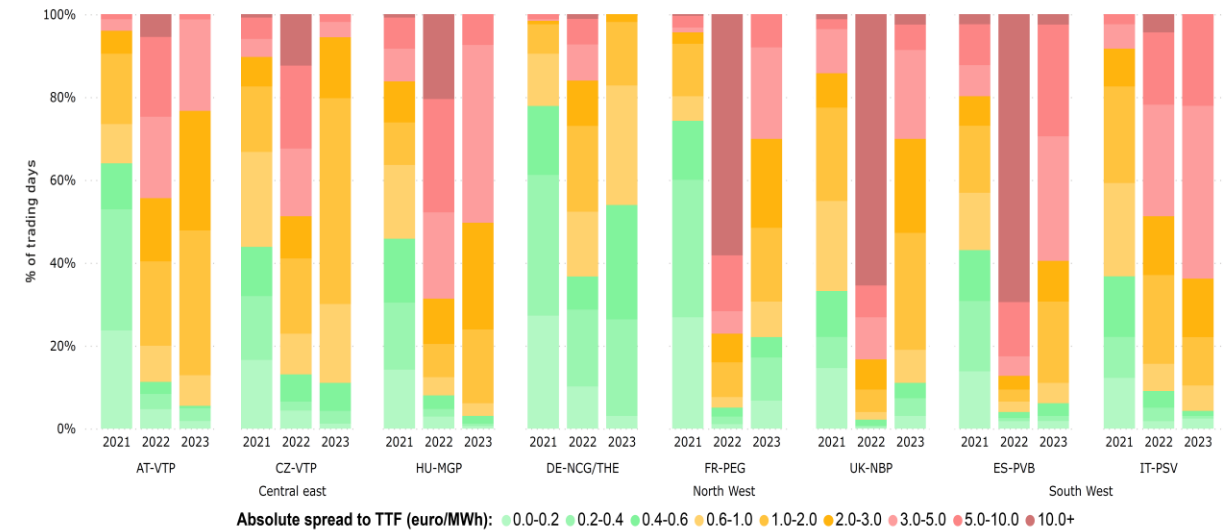
An improved demand-supply balance has driven energy prices further down during the last months. However, supply is overall still tight, making prices exposed to unexpected developments. Asian LNG demand remains an important factor for EU gas prices going forward.

... while hub price convergence is improving

**Day-ahead convergence between TTF and selected EU hubs
January 2022 – June 2023 (EUR/MWh)**



**Day-ahead convergence between TTF and selected EU hubs
2021 – 2023 (% of trading days and price ranges)**

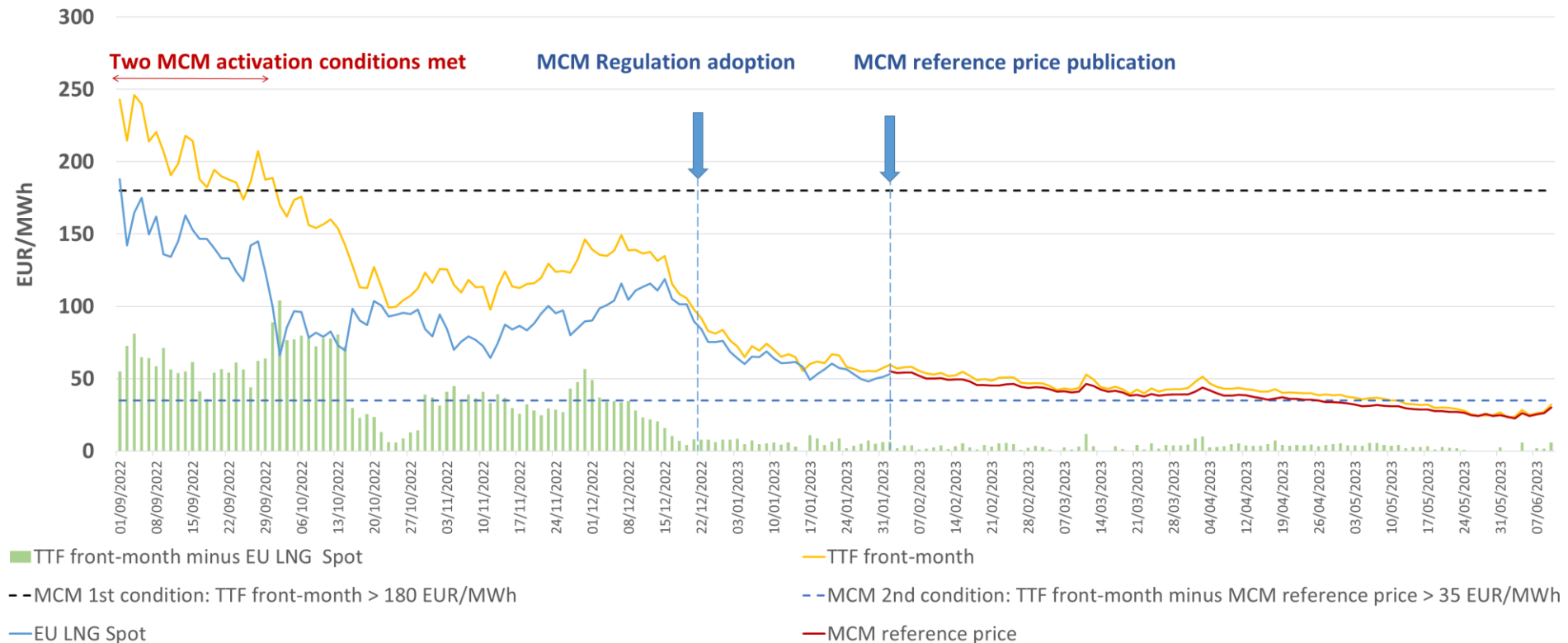


The significant price spreads observed between some European hubs during the summer of 2022, to a large extent driven by different levels of access of gas hubs to the LNG market, have reverted to close to pre-crisis levels.

The improving price convergence is indicative of reduced gas demand and increased availability of LNG import capacity.

The gas prices drop makes MCM¹ activation unlikely

Front-month TTF, EU LNG spot and MCM reference price evolution, September 2022 – June 2023 (EUR/MWh)

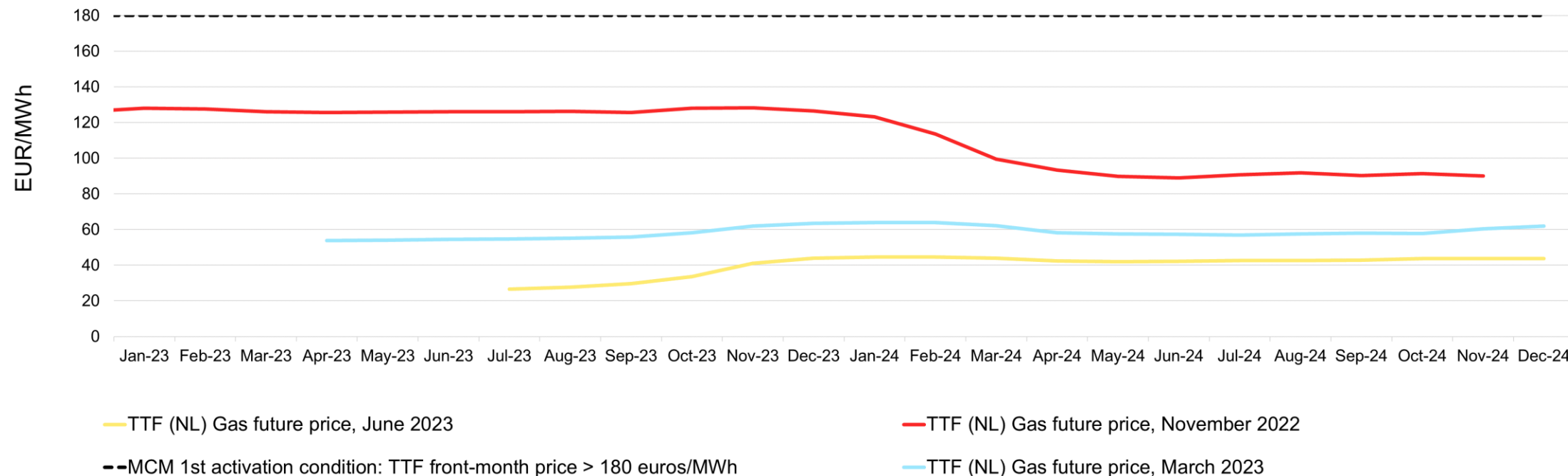


MCM activation thresholds are far from current price levels.

Gas prices at the LNG cargoes continue to remain lower than hub prices, which reflect the cost of gas supplied within the system.

While gas price expectations are flattening

Two-year evolution of TTF future prices – products traded in November 2022 and March and June 2023 (EUR/MWh)

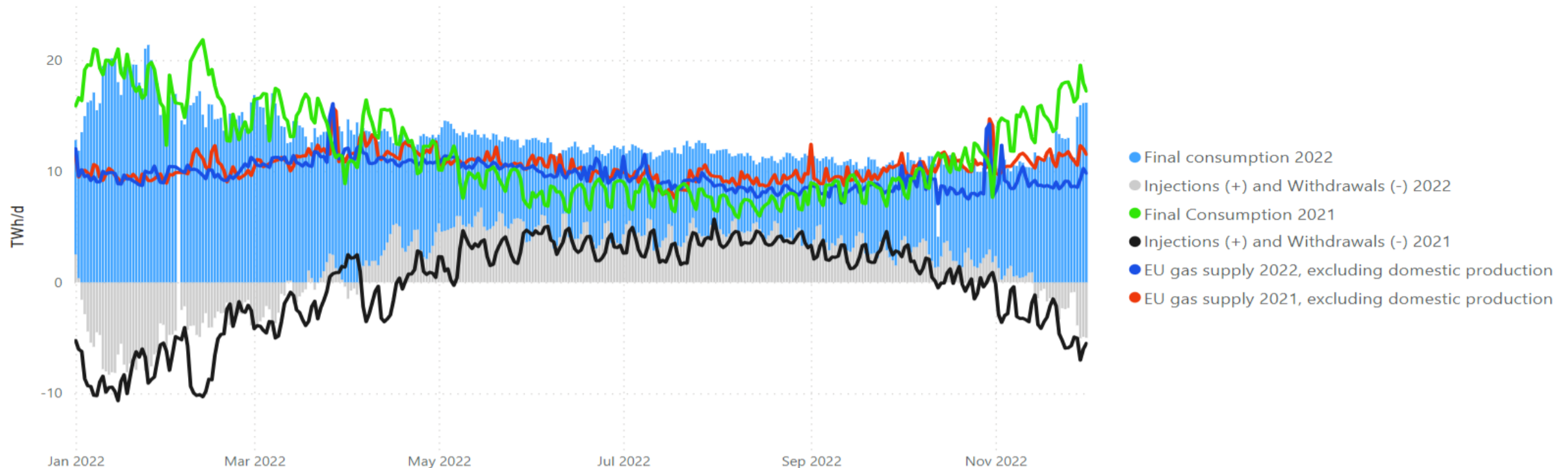


The prices of gas futures further fell in May and June 2023, anticipating an improved supply-demand balance. However, they remain 1.5 times higher than the average of the preceding five-years (i.e., 20 to 25 EUR/MWh). This is primarily because a reinforced global competition for LNG sources has potential to exert upward pressure on prices.

Recent gas demand, supply and flow developments

Rising LNG imports and lower demand have largely offset the loss in Russian flows (1/3)

Overview of daily EU final consumption and storage net positions relative to EU daily gas imports¹, 2021 – 2022 (TWh/day)



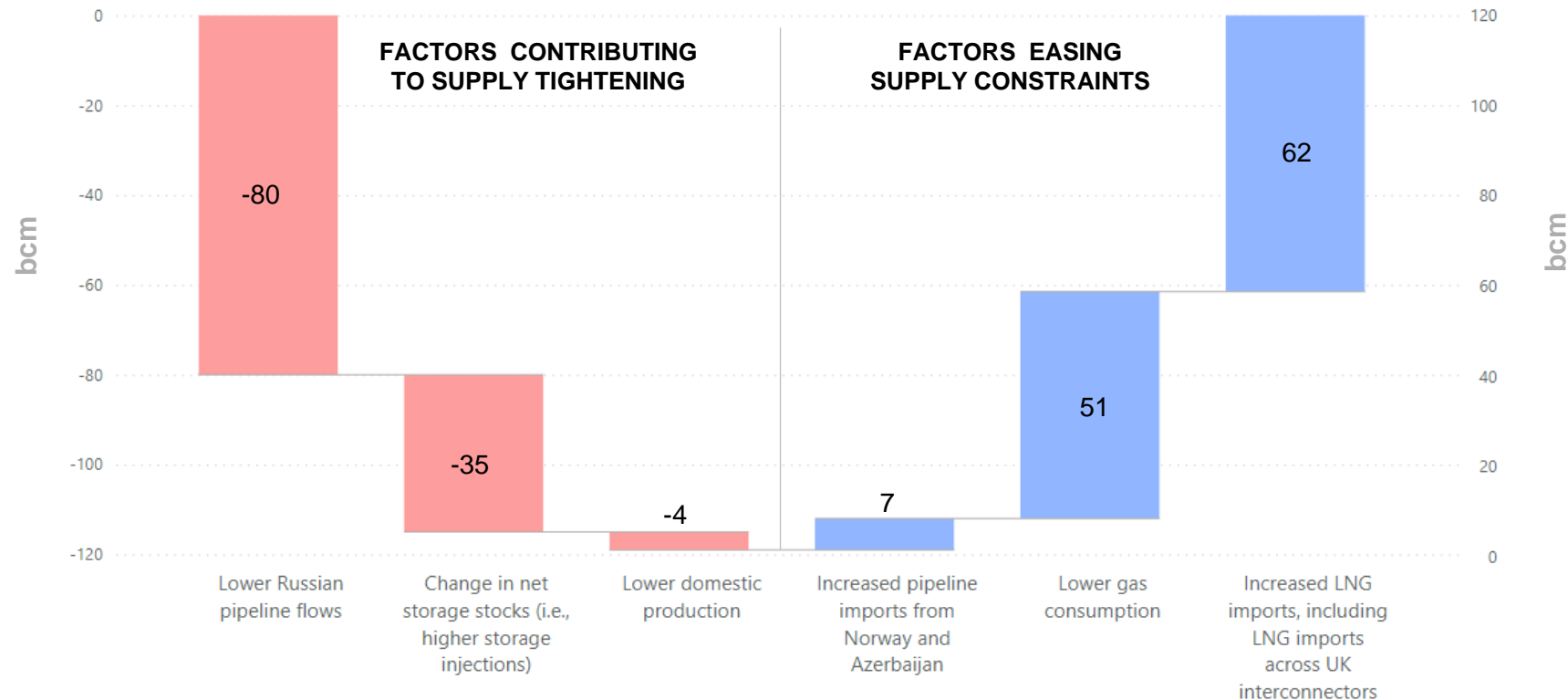
The extreme price rises in 2022 must be attributed primarily to the Russian supply shock. However, demand for gas was rather resilient, moved upwards by large storage injections, and caused prices to clear at record high levels.

Source: ACER calculation based ENTSG TP, THE, Enagas, GIE and Platts.

¹Note, the demand and the net balance of storage stocks daily match total supply. However, the figure does not include domestic production what explains the gap. There might be also certain data irregularities due to different reporting sources.

Rising LNG imports and lower demand have largely offset the loss in Russian flows (2/3)

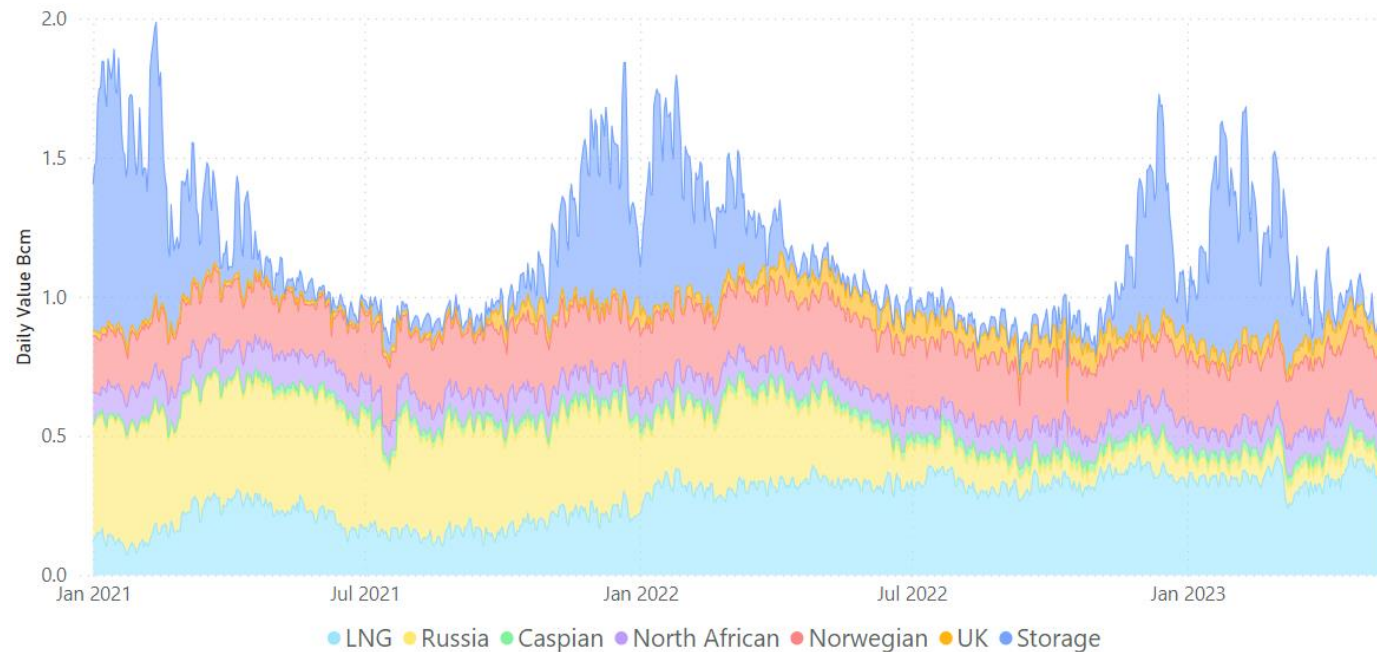
Estimated¹ EU gas supply and demand differences in 2022 in comparison to 2021 (bcm)



The extreme price rises in 2022 must be attributed primarily to the Russian supply shock. However, demand for gas was rather resilient, moved upwards by large storage injections, and caused prices to clear at record high levels.

Rising LNG imports and lower demand have largely offset the loss in Russian flows (3/3)

Daily evolution of gas imports by supply route, January 2021 to May 2023 (bcm/day)



Source	% of imports share Jan 2021	% of imports share May 2023	Imports variation 2022 vs 2021
Russian	48%	8%	-55%
LNG	14%	41%	+73%
Norwegian	22%	27%	+9%
Caspian	2%	4%	+40%
North African	12%	11%	-9%
UK*	2%	9%	+200%

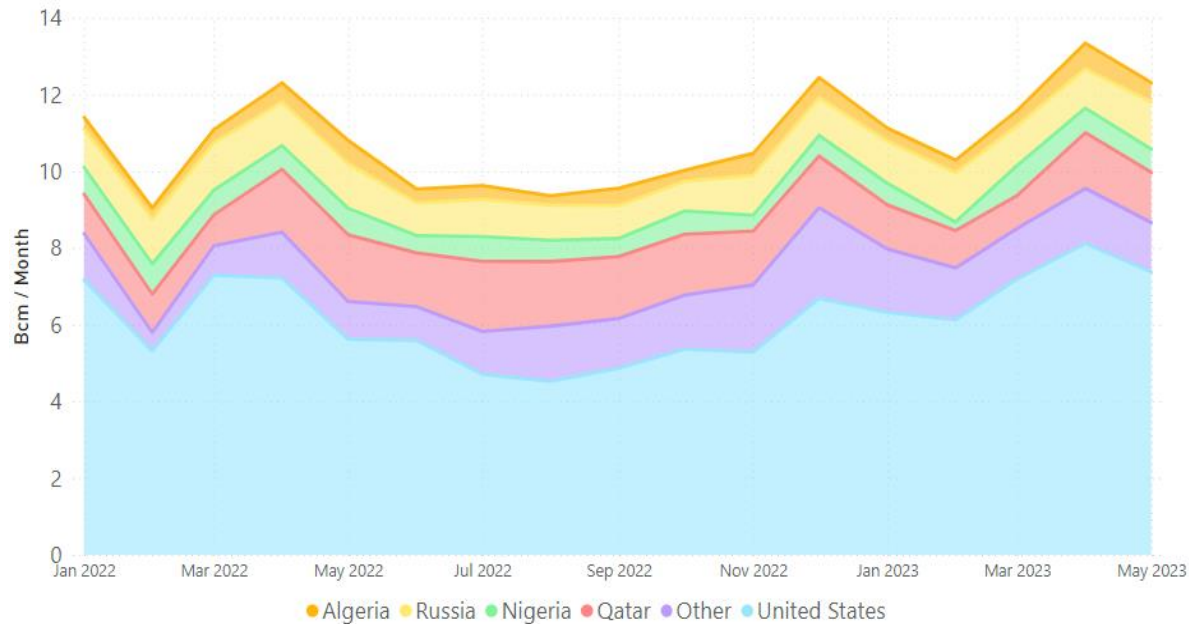
The EU supply breakdown has changed significantly as a result of the severe collapse in Russian flows and the parallel rise in EU LNG imports.

Source: ACER calculation based ENTSOG TP.

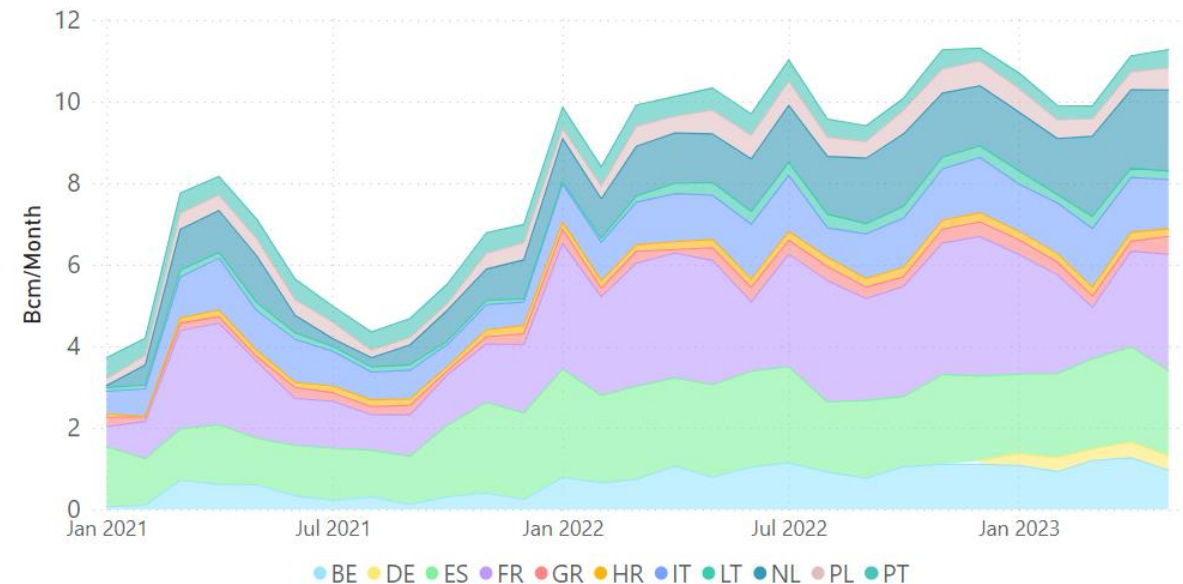
Note: UK imports mainly correspond to LNG downloaded at UK terminals and flown into the EU across the IUK and Bacton interconnectors. External gas imports meet 85% of EU supplies, while domestic production covers for the other 15% approx.

LNG imports keep rising, with US supplies on the lead

Monthly evolution of EU LNG imports by supply origin
January 2022 – May 2023 (bcm/month)



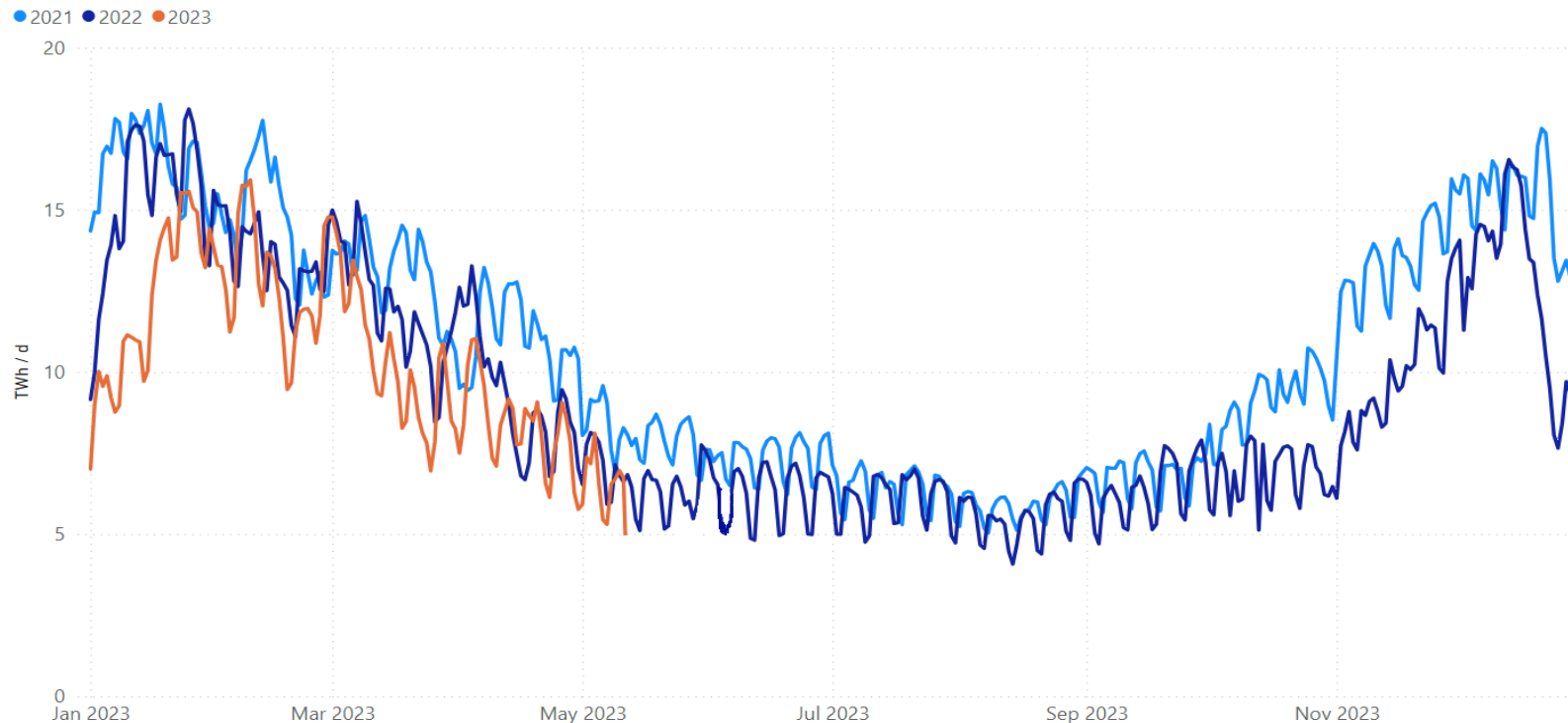
Monthly evolution of EU LNG send-outs by country
January 2021 – May 2023 (bcm/month)



The US is the main EU LNG supplier (52% of LNG supply share), followed by Qatar and Russia. France, Spain, the Netherlands and Italy are the four top EU LNG importers.

Gas consumption remains low...

Comparison of EU final daily demand evolution, 2021 – 2023 (TWh/day)

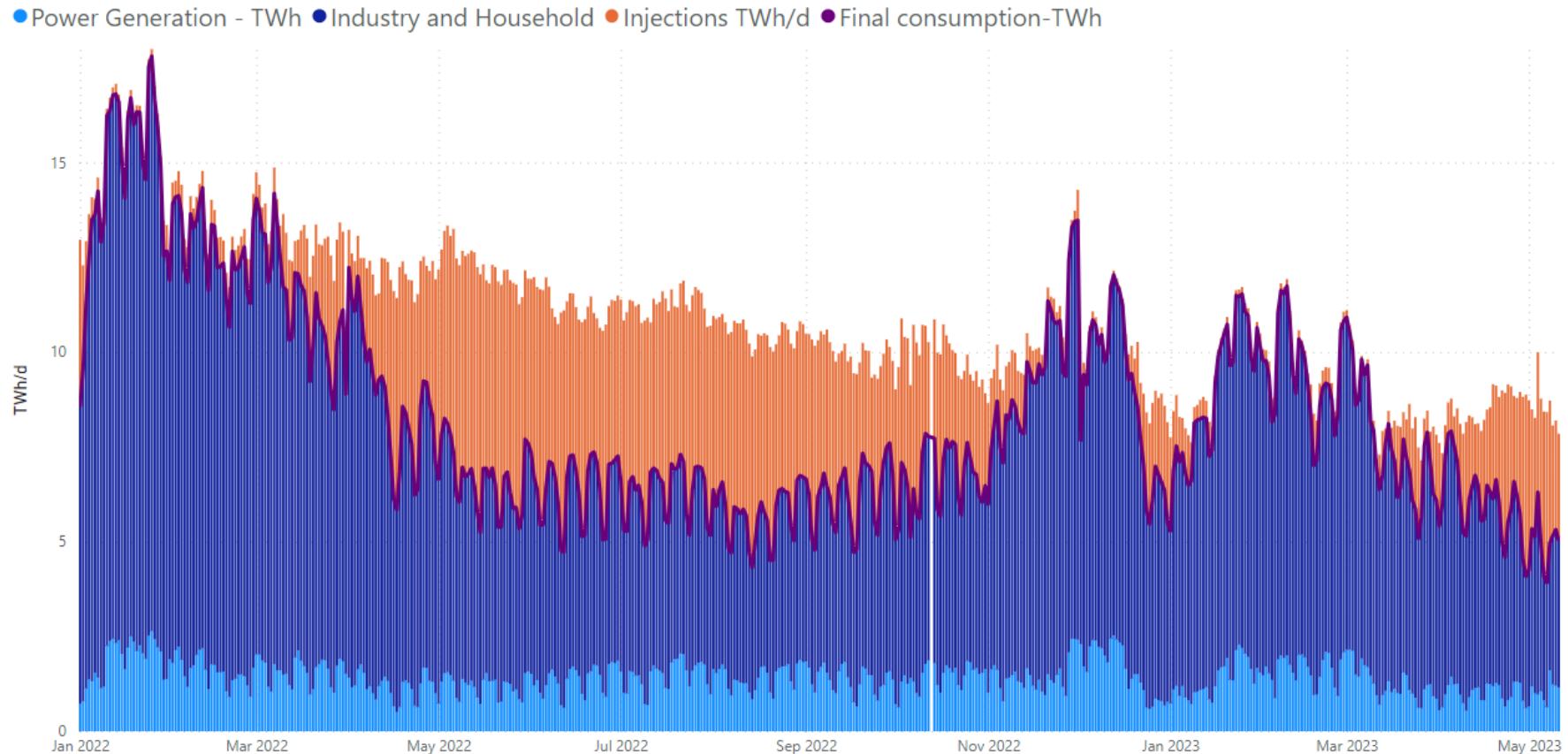


2021 EU Demand	4430 TWh
2022 EU Demand	3842 TWh
Demand drop 2022 - 2021	- 13.2%
Demand drop until May 2023 YTD	- 20.5%

Final EU gas consumption has fallen in 2023 by 20.5% year-to-date. Lower consumption was driven by warmer weather, subdued industrial consumption (result of high prices and previous efficiency investments) and lower gas-fired power generation (due to increased renewable and nuclear production and lower electricity consumption). Structural and non-structural elements¹ differently contribute to this result per Member State.

...with industries accounting for the largest reduction

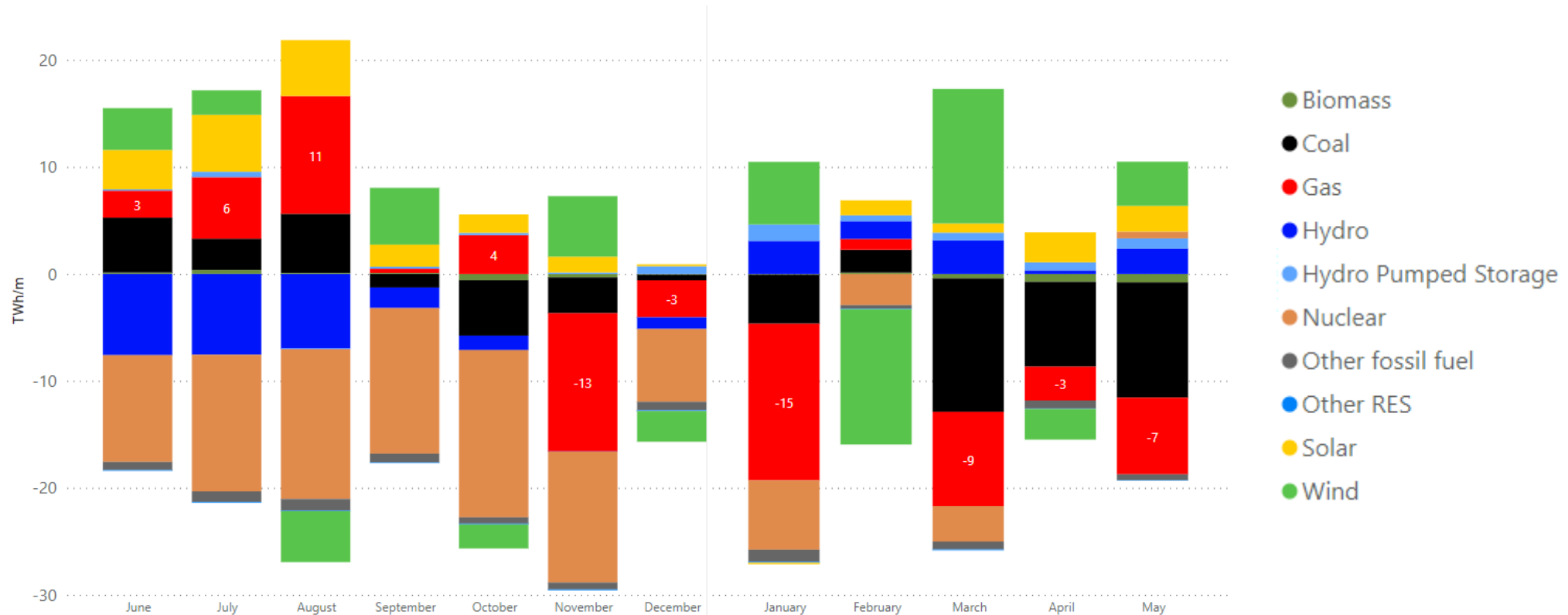
EU gas final consumption breakdown per demand component, January 2022 to May 2023 (TWh/day)



The seasonal nature of households' demand results in pronounced fluctuations in final gas consumption across the year. However, summer storage injection flatten the demand curve.

Gas-fired power generation is declining

EU electricity generation year-on-year changes per production technology
Comparing June 2022 to May 2023 with the same period on the previous year (TWh/m)



Gas-fired power generation started to drop in November 2022 in view of improving renewable and nuclear production and lower electricity consumption¹. Low gas prices (together with high ETS prices) are making coal to gas switching profitable in more days. Gas-fired power generation has dropped by 7% in 2023 YTD.

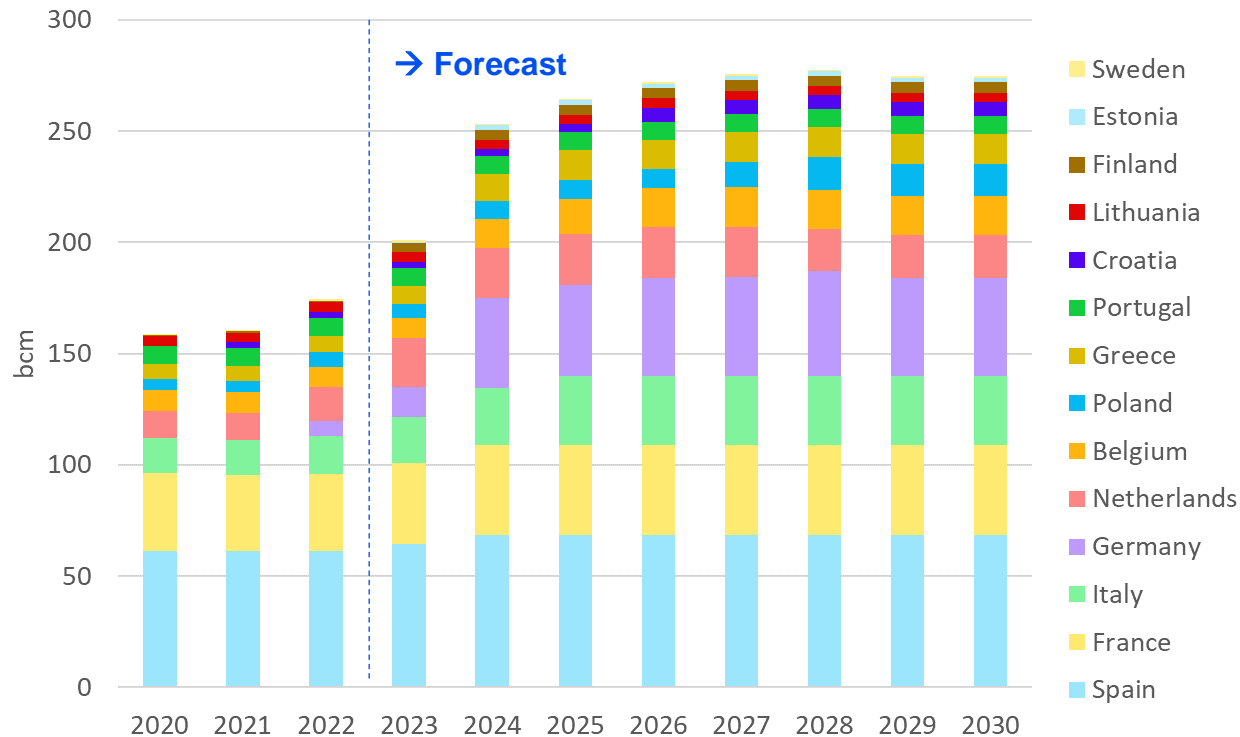
Source: ACER calculations based on ENSTO-E Transparency Platform.

¹Note: As gas and coal generators tend to meet marginal demand, they drop first when total demand goes down.

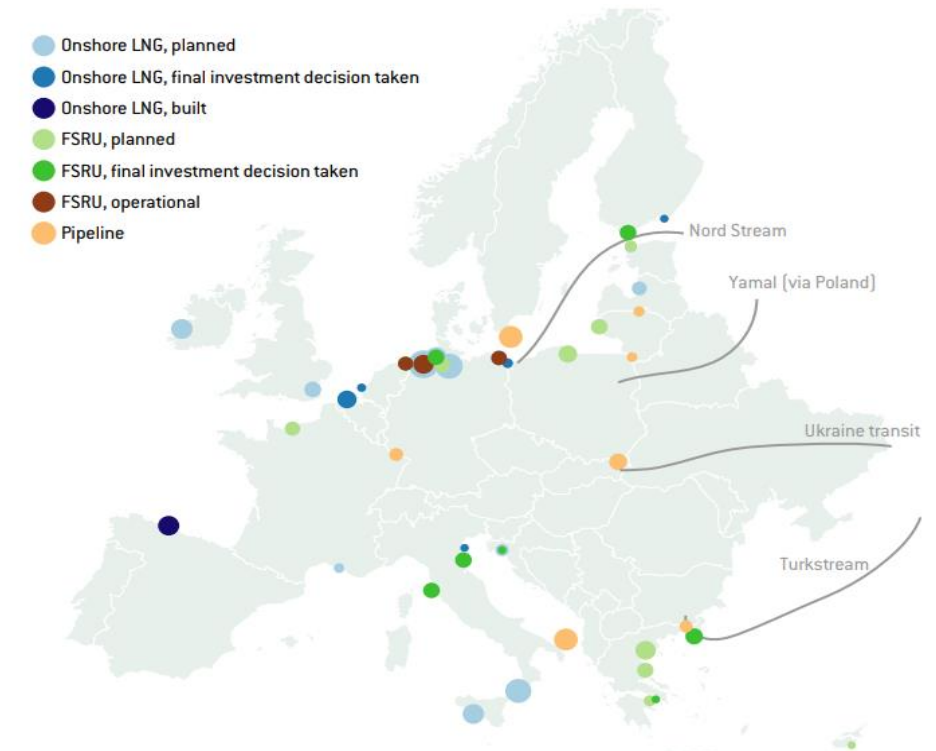
Recent gas infrastructure developments

Past ‘LNG receiving bottlenecks’ have improved

Regasification capacity by import market and estimated start date
2020 to 2030 (bcm)



Overview of new EU LNG planned capacity, October 2022



More LNG terminals are coming online, with 15 bcm of extra capacity in 2022 and 27 bcm more targeted until December 2023. Quicker planning, permitting and building for what normally takes several years has already had a positive impact.

Lower demand and new investments are easing supply bottlenecks

Overview of the utilisation ratio at selected EU IPs
January 2018 – May 2023 (% of firm technical capacity)

Interconnection Point	Direction	Average utilisation 2018-2021	Average utilisation 2022	Average utilisation 2023
Bacton (BBL)	NL to UK	25%	63%	38%
Bacton (BBL)	UK to NL	11%	1%	0%
Baumgarten	AT to SK	0%	0%	0%
Baumgarten	SK to AT	61%	34%	15%
Mosonmagyaróvár	AT to HU	61%	61%	54%
Mosonmagyaróvár	HU to AT		0%	0%
Tarvisio (IT) / Arnoldstein (AT)	IT to AT	0%	3%	11%
Tarvisio (IT) / Arnoldstein (AT)	AT to IT	67%	25%	13%
VIP France - Germany	FR to DE		44%	34%
VIP France - Germany	DE to FR	45%	14%	0%
VIP Oberkappel	AT to DE	10%	5%	1%
VIP Oberkappel	DE to AT	52%	79%	65%
VIP PIRINEOS	ES to FR	3%	32%	55%
VIP PIRINEOS	FR to ES	51%	20%	8%
VIP THE-ZTP	DE to BE		0%	0%
VIP THE-ZTP	BE to DE		138%	130%
VIP TTF-THE-H	DE to NL		0%	0%
VIP TTF-THE-H	NL to DE		47%	54%
VIP-BENE	NL to BE	5%	0%	0%
VIP-BENE	BE to NL	24%	79%	66%
VIRTUALYS	FR to BE	3%	271%	219%
VIRTUALYS	BE to FR	26%	0%	3%
Zeebrugge IZT	UK to BE	18%	71%	70%
Zeebrugge IZT	BE to UK	11%	0%	0%

Interconnection points flowing gas into North-West Europe from a West to East direction remain the most utilised in relative terms.

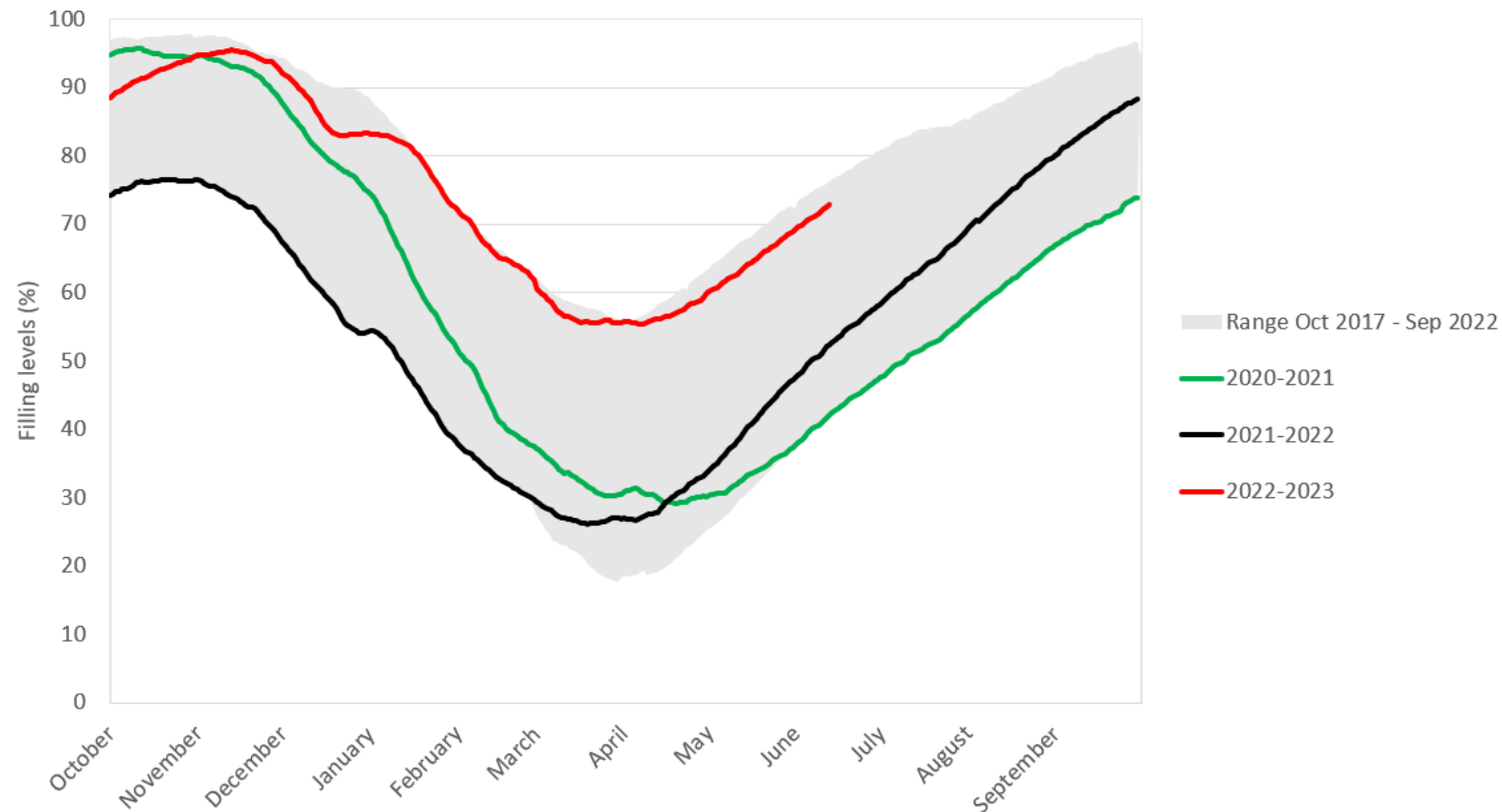
Overview of the utilisation ratio in EU LNG terminals
January 2018 – May 2023 (% of firm send-out capacity)

Terminal	Country	Average utilisation 2018-2021	Average utilisation 2022	Average utilisation 2023
Zeebrugge LNG Terminal	BE	29%	61%	72%
Wilhelmshaven LNG Terminal 1 (FSRU)	DE		35%	76%
Barcelona LNG Terminal	ES	23%	23%	18%
Bilbao LNG Terminal	ES	60%	76%	86%
Cartagena LNG Terminal	ES	16%	37%	31%
Huelva LNG Terminal	ES	33%	39%	46%
Mugardos LNG Terminal	ES	42%	55%	74%
Sagunto LNG Terminal	ES	16%	46%	37%
Dunkerque LNG Terminal	FR	25%	75%	68%
Fos Cavaou LNG Terminal	FR	48%	92%	71%
Fos Tonkin LNG Terminal	FR	49%	51%	49%
Montoir de Bretagne LNG Terminal	FR	53%	86%	66%
Revythoussa LNG Terminal	GR	27%	39%	48%
Krk LNG Terminal (FSRU)	HR	60%	87%	89%
FSRU OLT Offshore LNG Toscana	IT	41%	65%	69%
Panigaglia LNG Terminal	IT	42%	54%	86%
Porto Levante LNG Terminal	IT	91%	89%	88%
FSRU Independence	LT	37%	72%	75%
EemsEnergy LNG Terminal	NL		43%	58%
Rotterdam Gate Terminal	NL	41%	92%	93%
Świnoujście LNG Terminal	PL	61%	80%	81%
Sines LNG Terminal	PT	77%	82%	68%

EU LNG terminals remain highly used.
The additional capacity added at several North-West European are expected to gradually result in enhanced flexibility.

Gas stocks are high and on track to meet targets

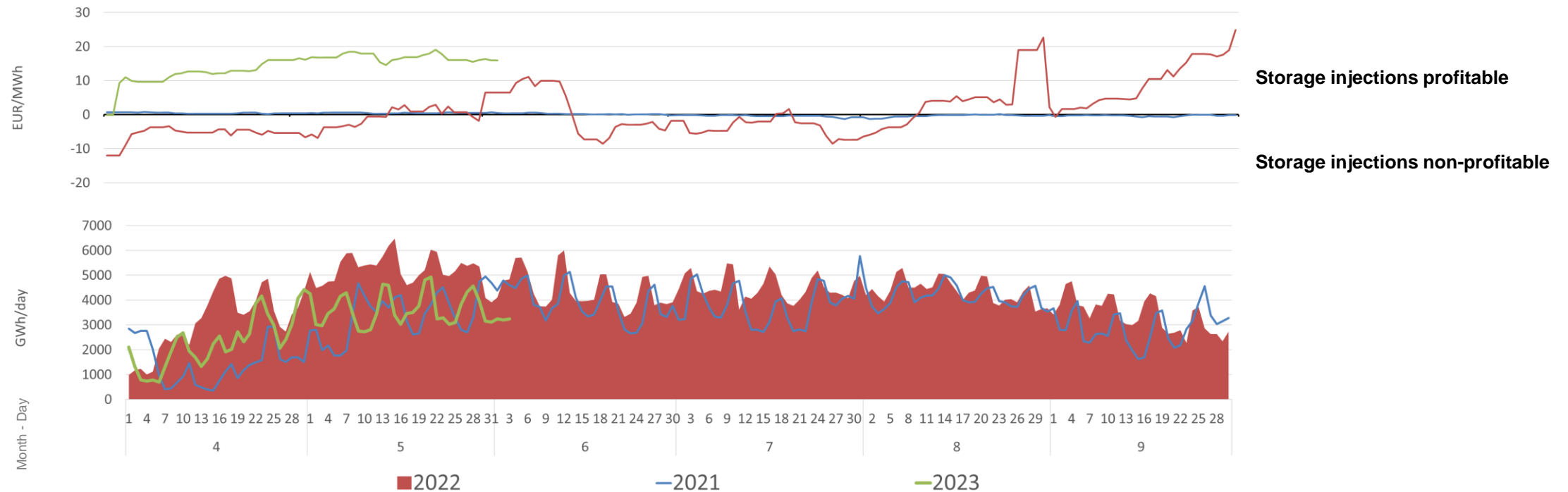
EU gas storage levels evolution, 2017 – 2023 (% of total capacity)



Storage filling levels are significantly above last years' average and have contributed to driving prices down. Stocks are above 70% in mid- June and on track to meet the 90% target in November, thus alleviating price competition for injections during the rest of summer.

The profitability of storage injections has risen in 2023

Overview of month-ahead prices minus winter-season prices across the summer of 2021, 2022 and 2023 and daily storage injections
EUR/MWh and GWh/day

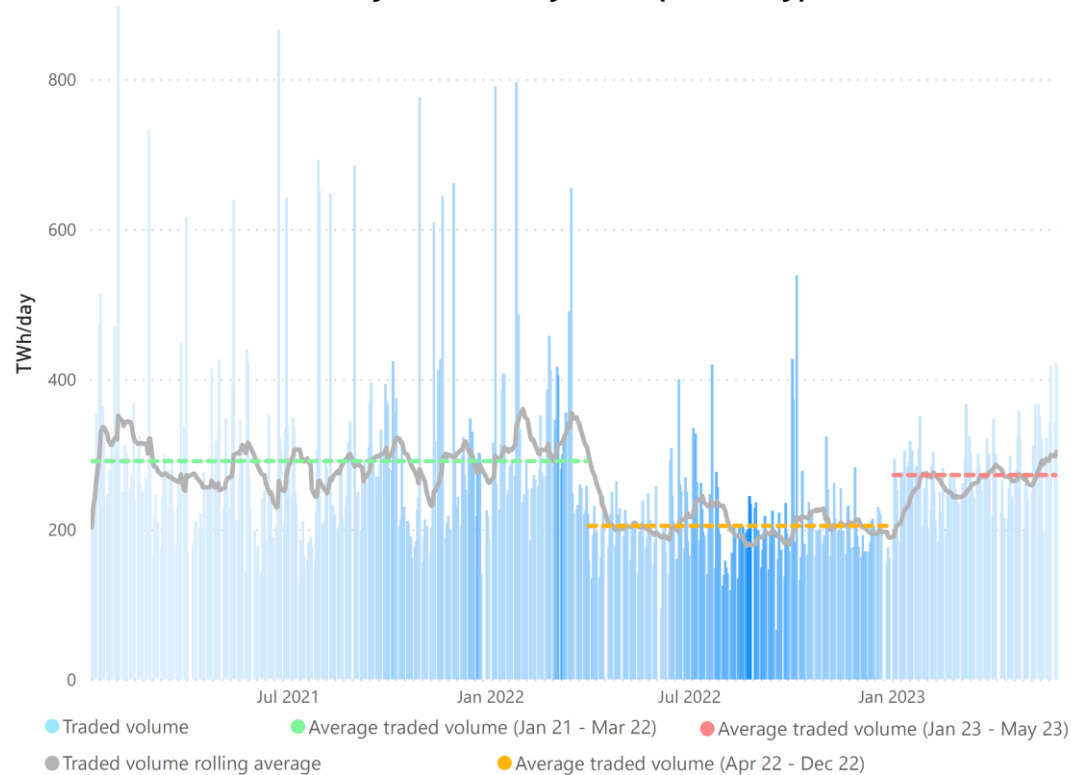


When the price differential between winter and summer months¹ is above storage operation costs, an incentive is created to inject gas volumes in summer months to release them in winter. However, throughout Q2 2022, above average injections were largely backed by financial support measures amid non-profitable summer-winter spreads, due to the critical need to reinforce security of supply ahead of winter.

Recent gas trading developments

Trading activity is recovering amid a stabler outlook

**Exchange and brokered traded volumes at the EU VTPs
January 2021 – May 2023 (TWh/day)**



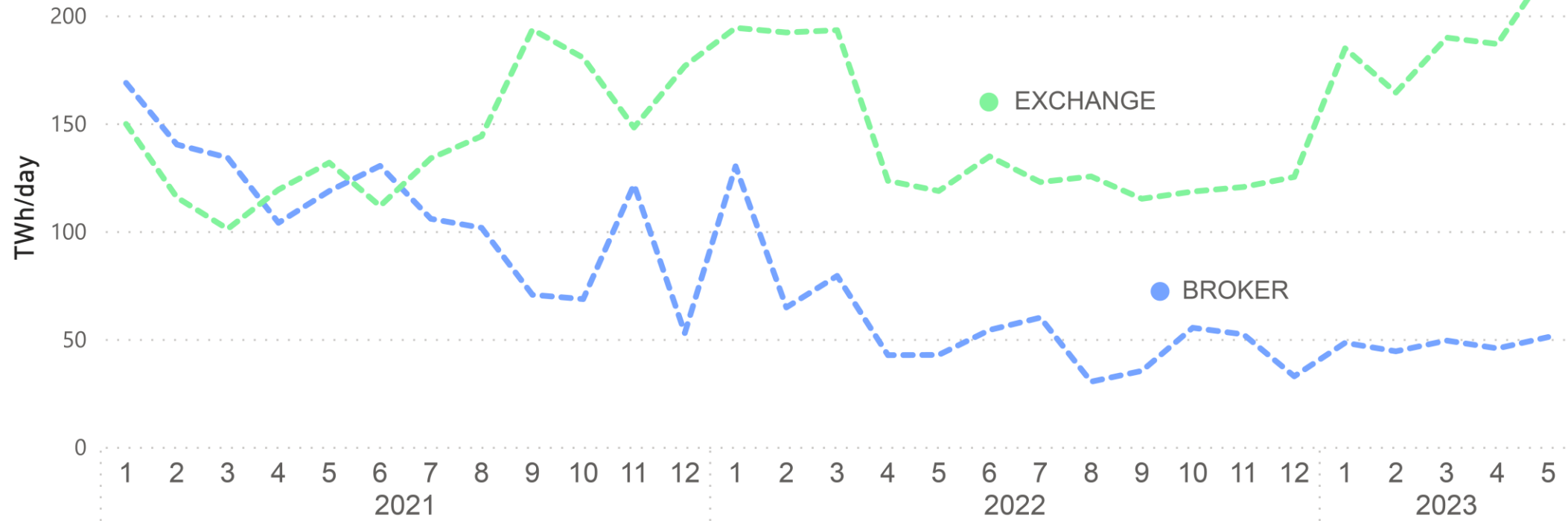
**TTF and other EU VTPs traded volumes comparison
January 2021 – May 2023 (TWh/day)**



Trading activity returned in 2023 YTD in comparison to the second half of 2022. Growth has been concentrated at the Dutch TTF. The rise is associated with a stabler demand-supply outlook and a more favourable gas trading environment (e.g., lower relative and absolute margin requirements).

Liquidity remains higher at exchanges

Comparison of exchange and brokered traded volumes at the TTF, January 2021 – May 2023 (TWh/day)



While exchange traded volumes growth is more robust¹, broker traded volumes at over-the-counter markets have only recovered modestly and remain substantially below the levels observed before the energy crisis.

Source: ACER based on REMIT data.

¹Note: The growth in total traded volumes has been particularly relevant in TTF in the month of May 2023.



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