

# Successful EU adaptation

Gas Market Update – Gasdagarna 2023

May 2023



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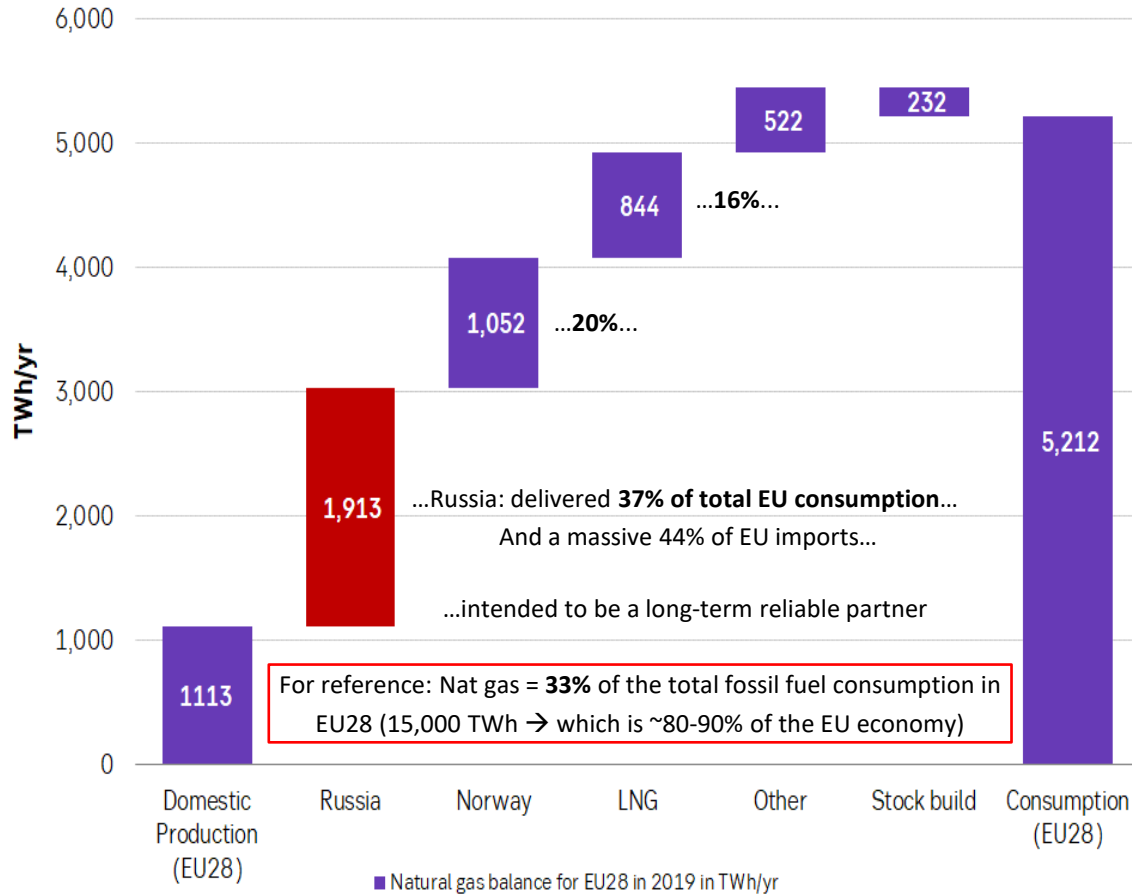


**2022/23: RE-ARCHITECTING “ENERGY EUROPE”**

2023: OUTLOOK

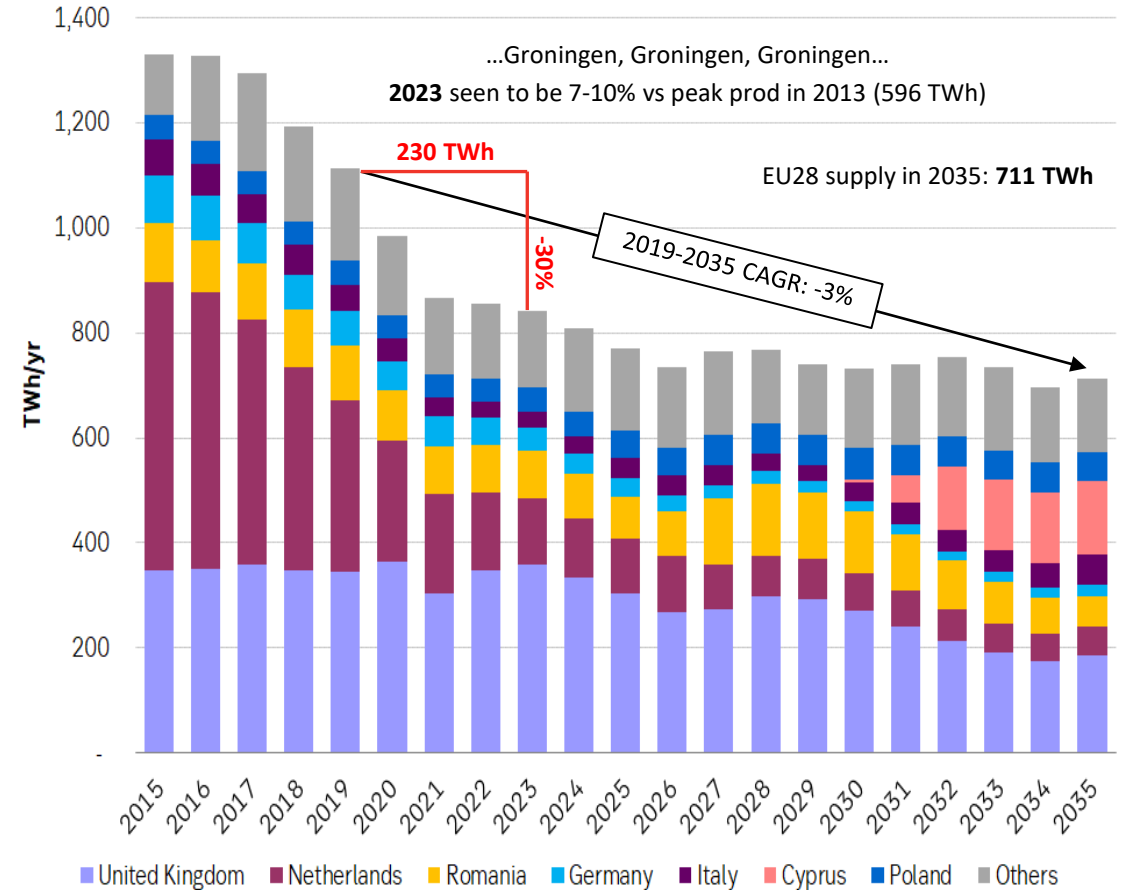
# The EU had an “intolerable” import dependence on Russian nat gas

EU28 nat gas balance – 2019 (TWh/yr)



Source: SEB, Eurostat

EU28 domestic nat gas supply (TWh/yr)

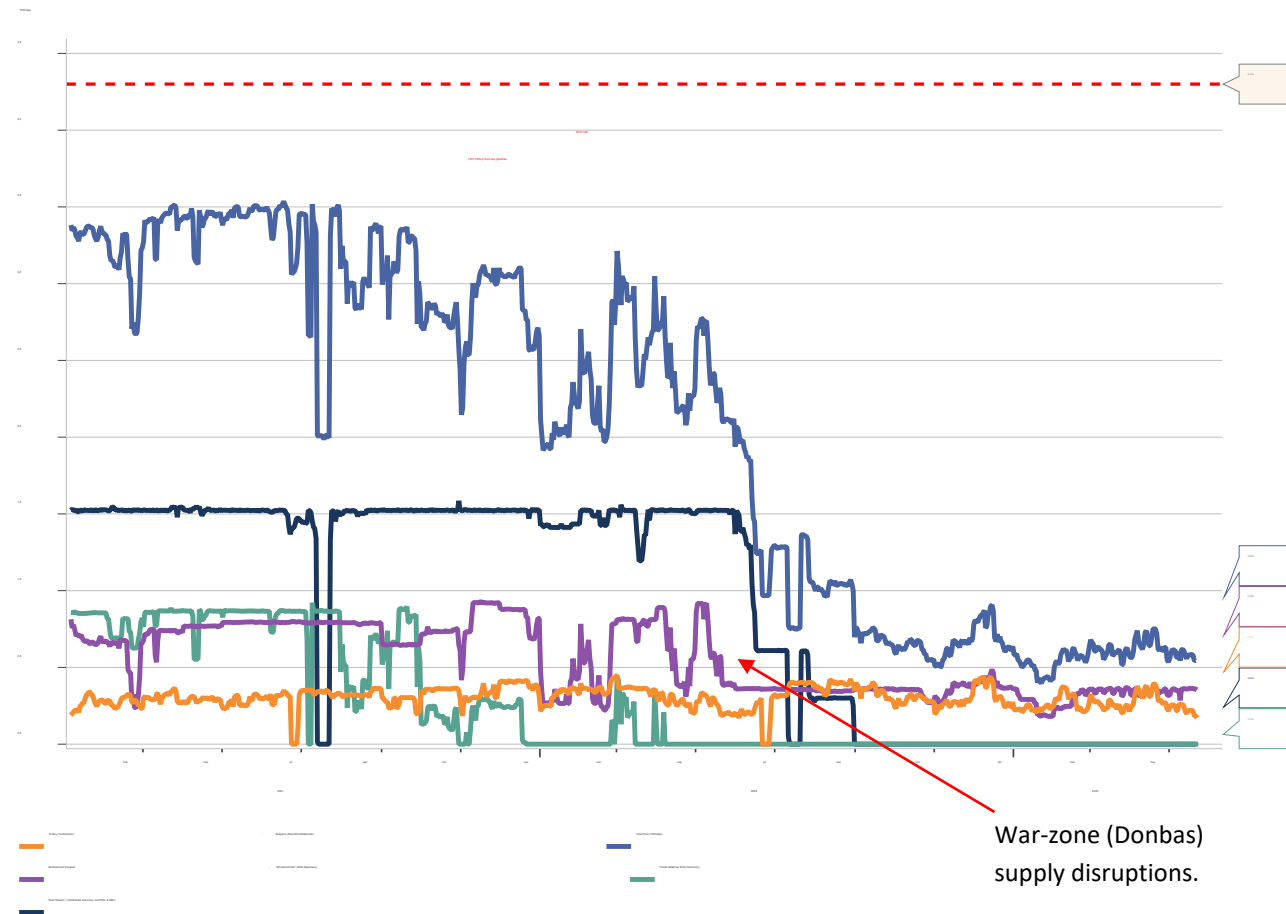


Source: SEB, Rystad Energy, BNEF

# Bearish pressure despite an 80% reduction in key pipelines

...Weaponizing energy has “failed” – markets always finds a way! is Russia’s “gas-card” played out?....

## Status for Key Russian pipelines to Europe (TWh/day)



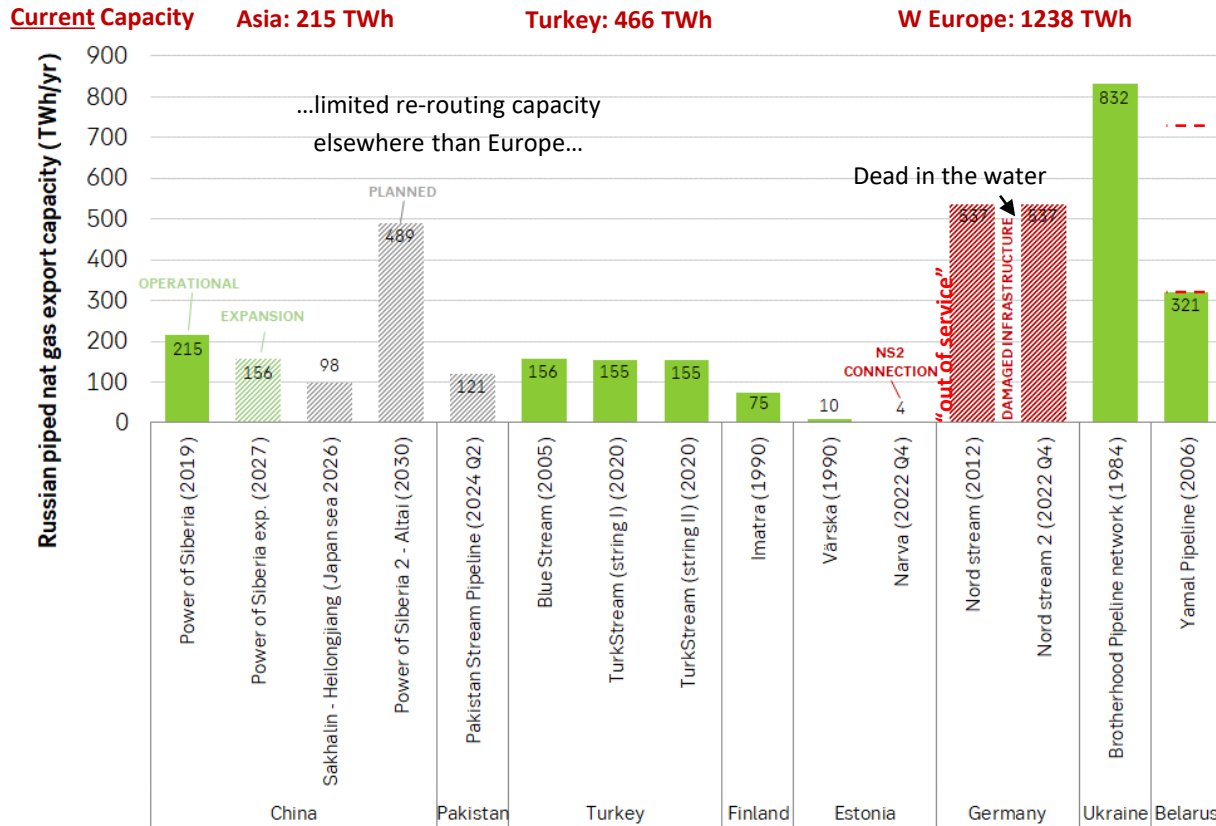
with NS1 “dead”, attention is focused on potential disruptions via Ukraine's Sudzha transit point, the only remaining route of Russian gas to Europe besides Turkstream... transit agreement until Dec 2024.

NS1: a decline by 60%, then 80% (maintenance issues). Currently equally dead as NS2 (sabotage)

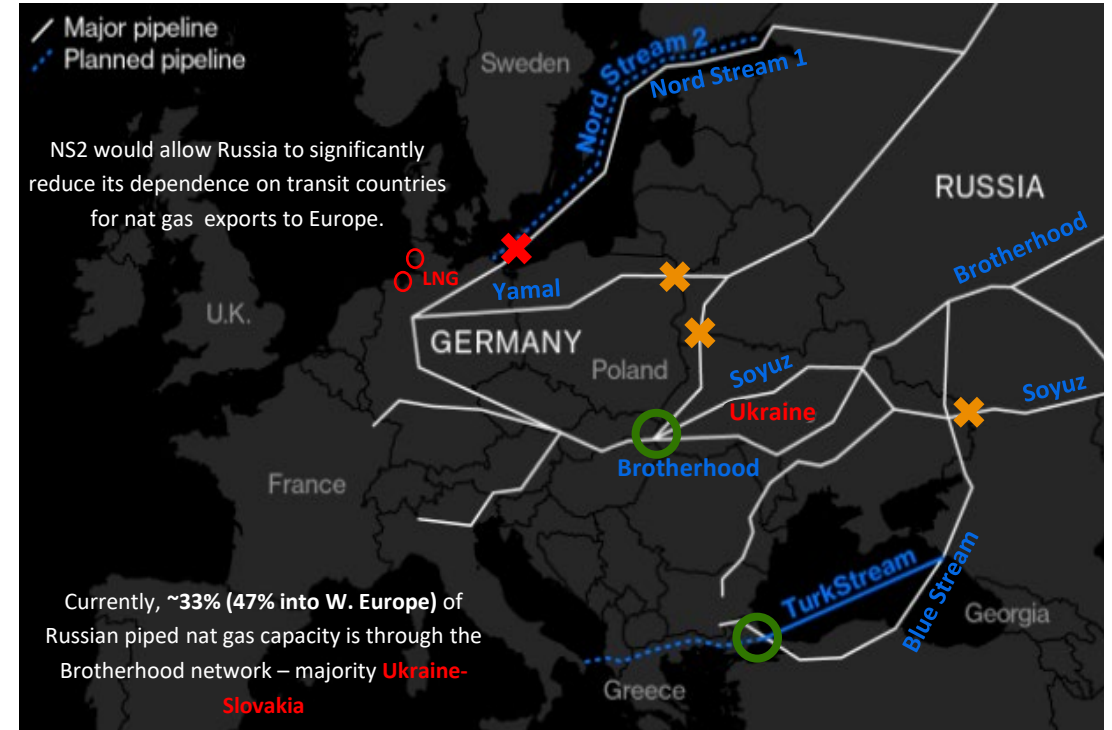
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# Russia: a giant natural gas squid with wide-reaching tentacles

Russian nat gas pipeline export capacity in detail (TWh/yr)



Russian nat gas pipeline network – an overview



Summing up: Russia (Q1-22) has a pipeline Export Capacity (if fully utilized) of ~2,613 TWh.

In 2030: ~3,032 TWh (neglecting PoS expansion – 2023 and NS2 – 2022)...

...in comparison, the Russian LNG export capacity for 2022 is moderately 366 TWh... But this will be more than 2X already from 2027 at 777 TWh.

Source: SEB, Rystad Energy, Eurostat, Entsog

Source: SEB, Agency for Cooperation of Energy Regulators, BNEF



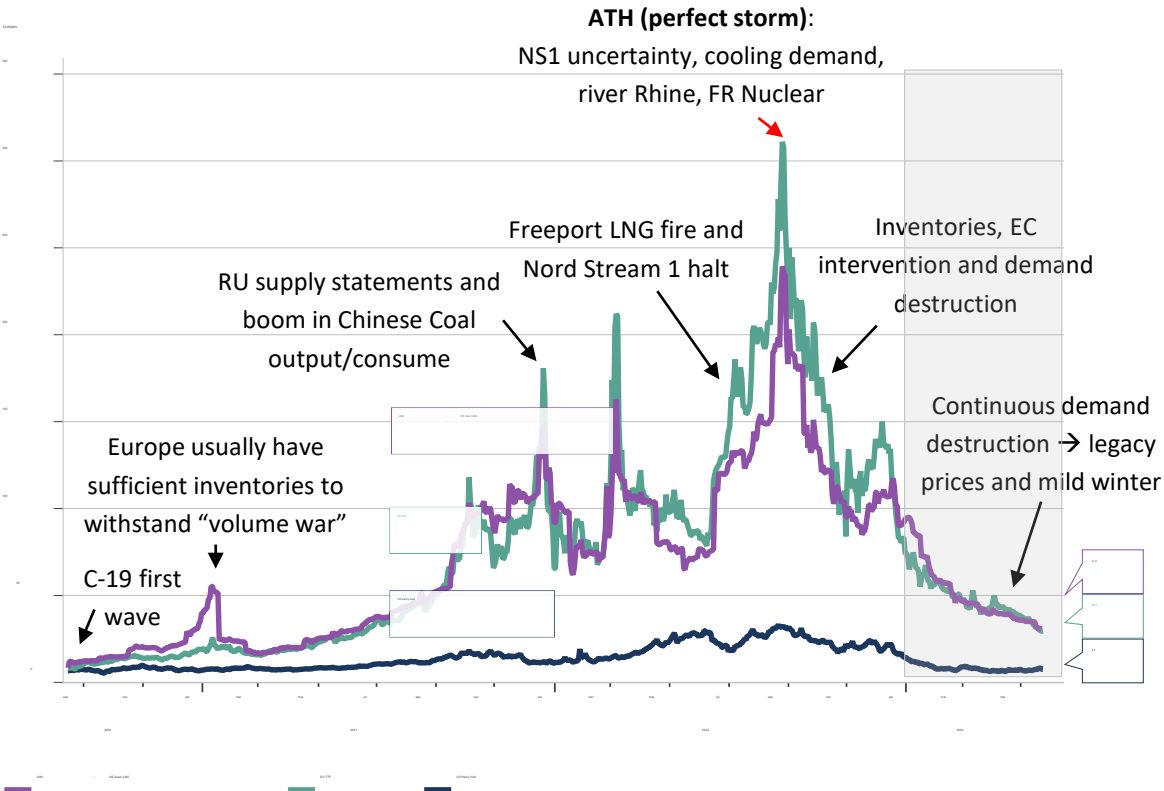
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**2023: OUTLOOK**

# Prices back to pre-war levels in the wake of global demand destruction

...after witnessing a turmoil: winter-risk, invasion-risk, war-premium, supply disruptions etc. ...

## Front-month: international Nat Gas prices (EUR/MWh)



Source: SEB, Bloomberg

## EU TTF Spot (Day Ahead) dictates the fwd prices in uncertain times (EUR/MWh)



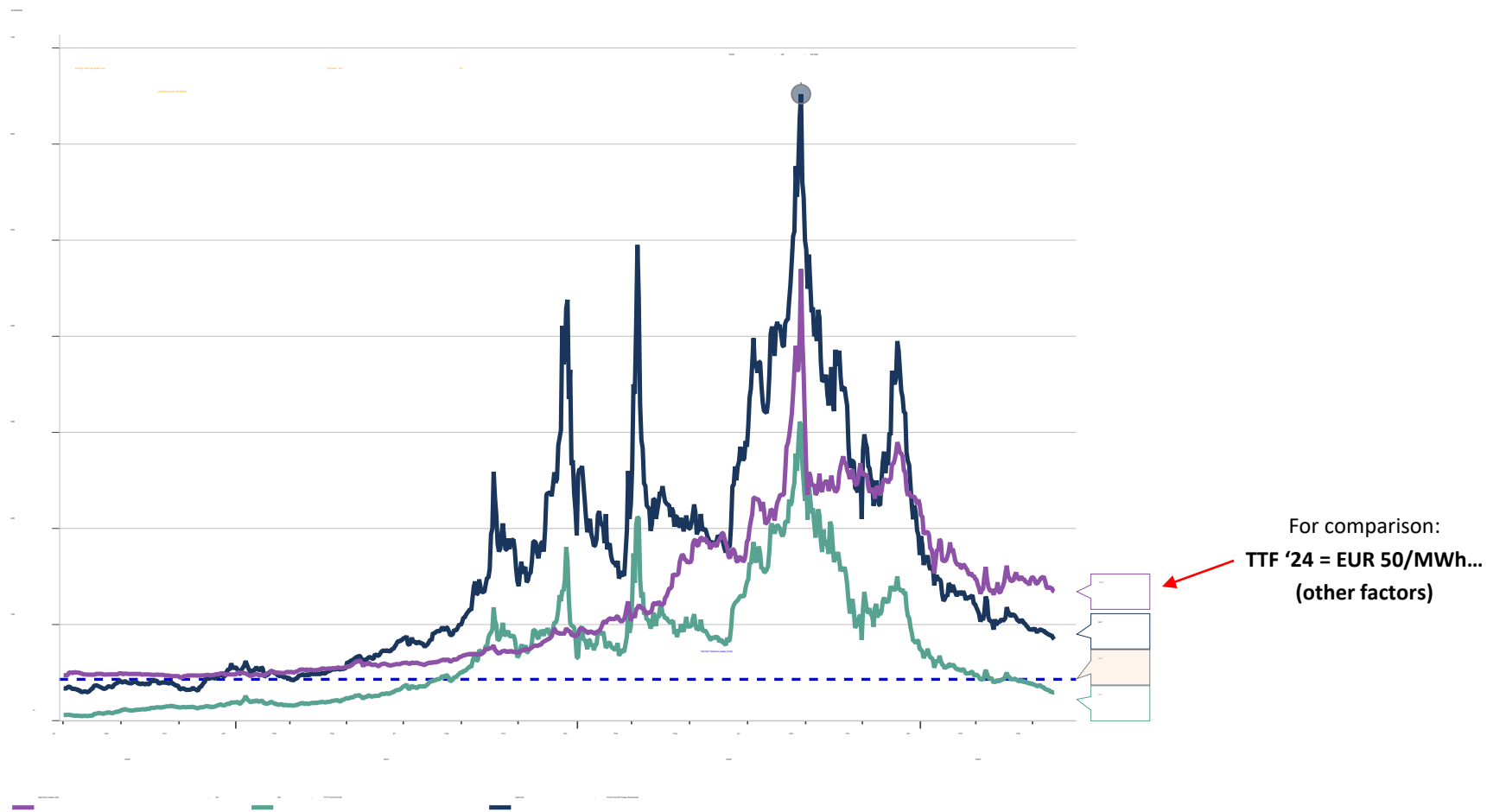
Source: SEB, Bloomberg

Spot dictates forwards: *no one dare to say anything about the market*

# Obvious lag in German power: power markets remain tight

...Nat gas → remains the marginal cost of German baseload power, which is priced at EUR 134.3/MWh for Cal-24....

Front-month German Power price vs. European Nat Gas - TTF (EUR/MWh)



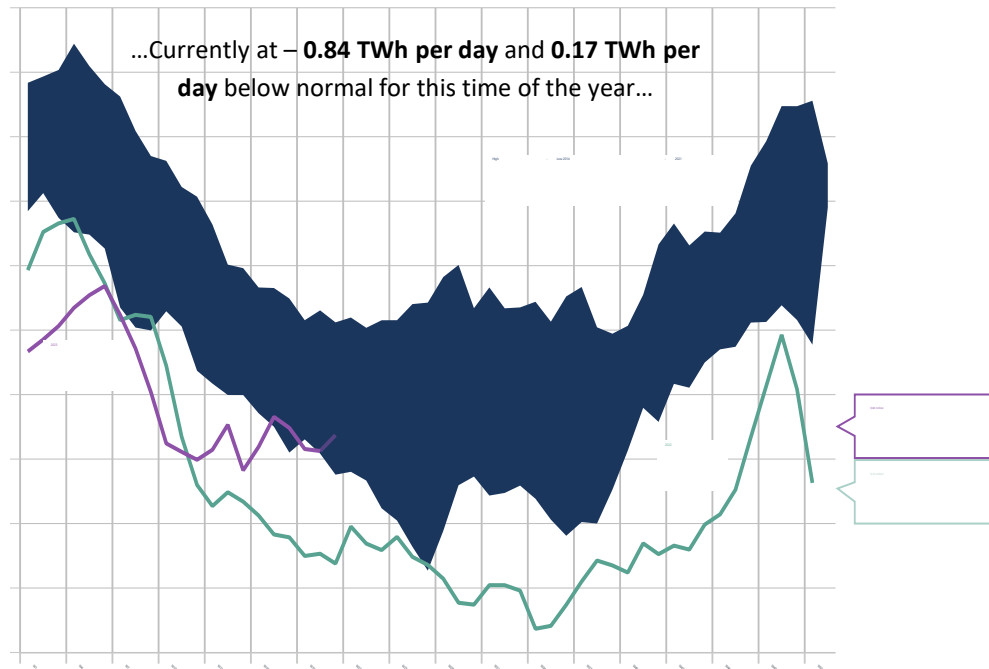
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# Double whammy in global nuclear maintenance

...French Nuclear close to historic lows → likely remain a “long-term” issue... **boosting gas-for-power demand in the EU**

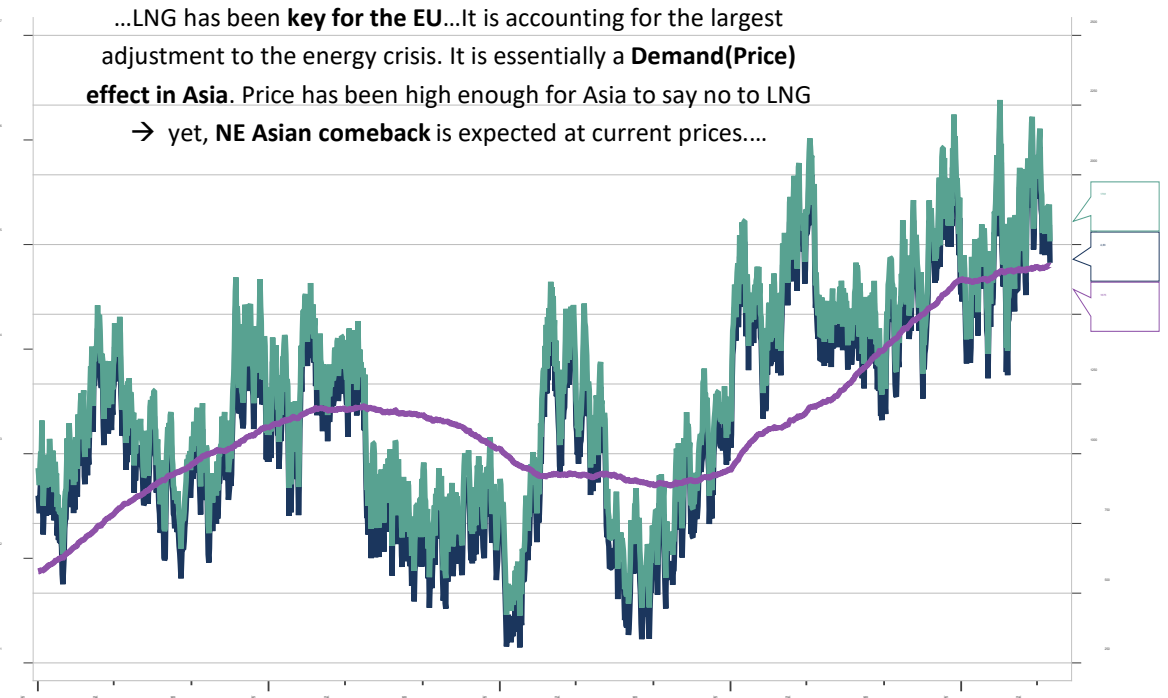
## French Nuclear electricity production (Gigawatts)



— — ■

Source: SEB, Macrobond, Bloomberg

## European LNG imports (TWh/day and TWh/year)



— — ■

Source: SEB, Bloomberg, ENTSOG

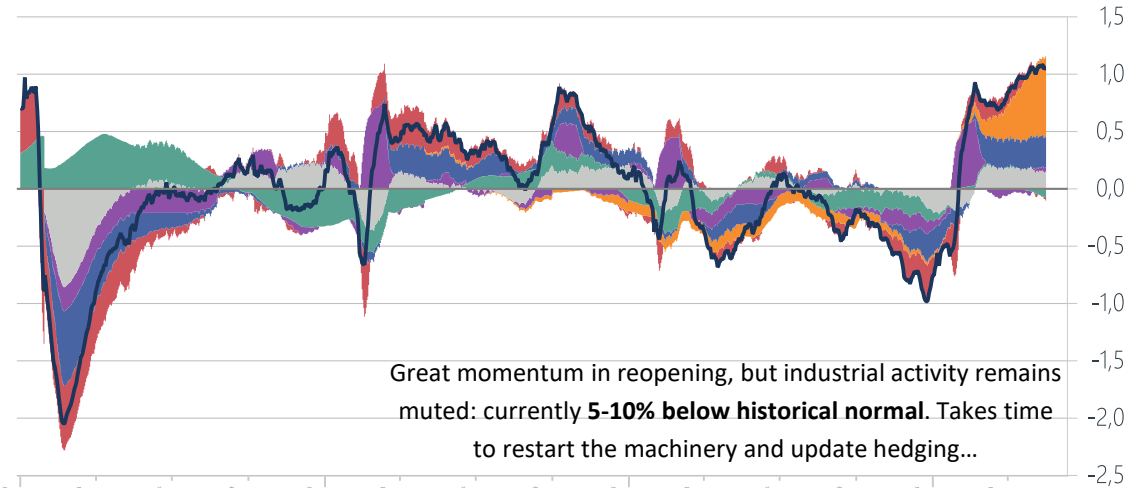
# China – heading for normalization?

... Strong Chinese numbers: we have also seen significant improvement in Chinese credit demand... → Yet, muted LNG imports(!)

## China reopening composite index (Z-score 2020 – dev from historical mean)

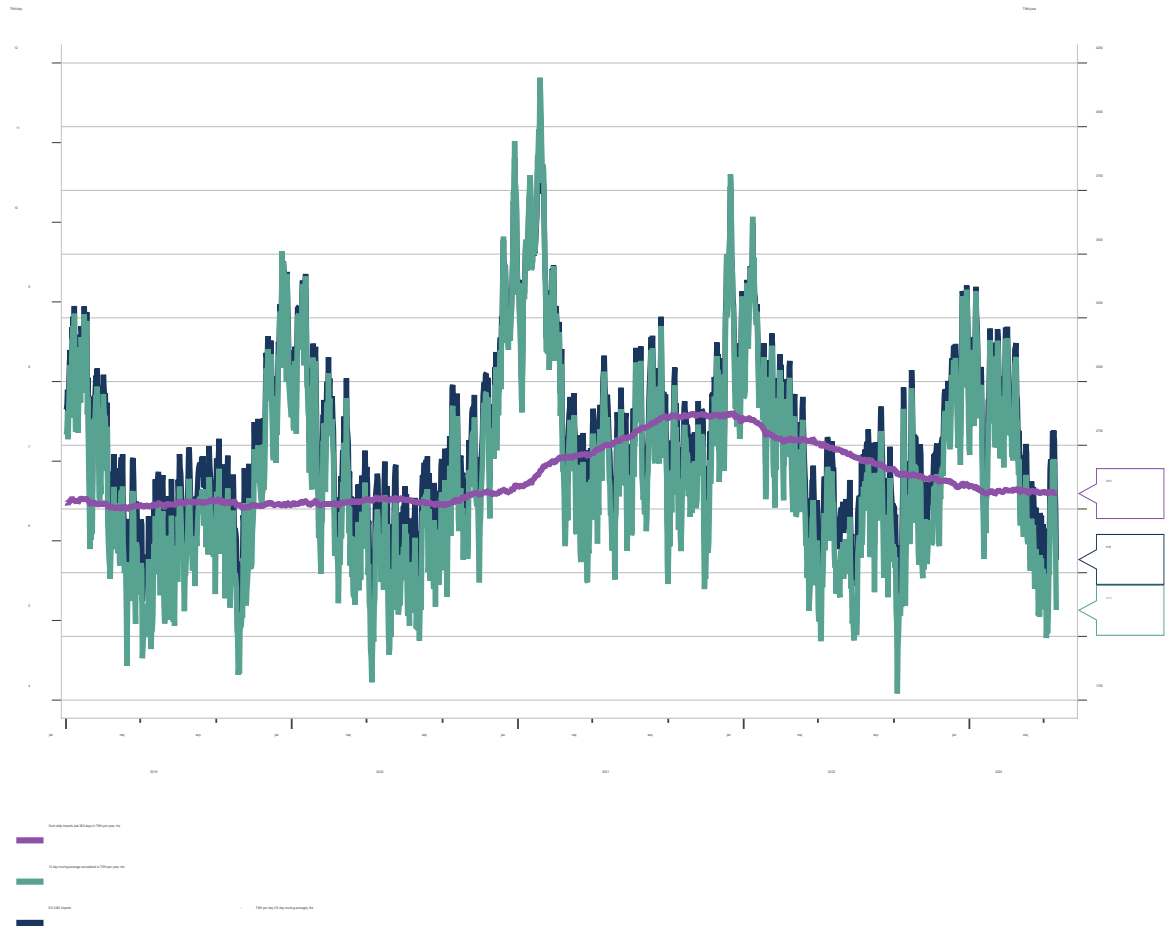
The composite index is built using various alternative daily datasets (roads & ports congestion, subway traffic, international flights, box office and economic activity index). The chart measures the z-score: or deviation from the historical mean (zero)

Z-score since 2020



Source: SEB, Macrobond, BNEF

## NE Asia (China, S. Korea, and Japan) LNG imports (TWh/day and TWh/year)

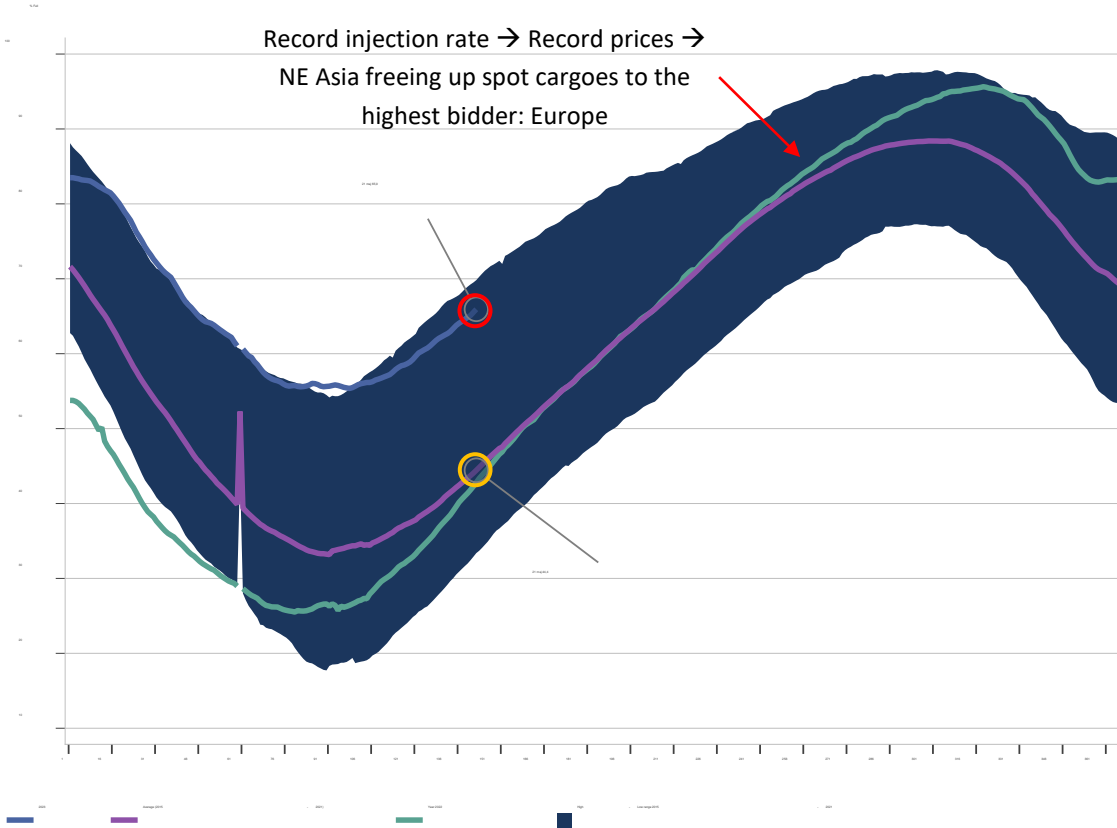


Source: SEB, Bloomberg, AHQY LNG

# EU nat gas inventories outpacing the 5-year average (+22%)

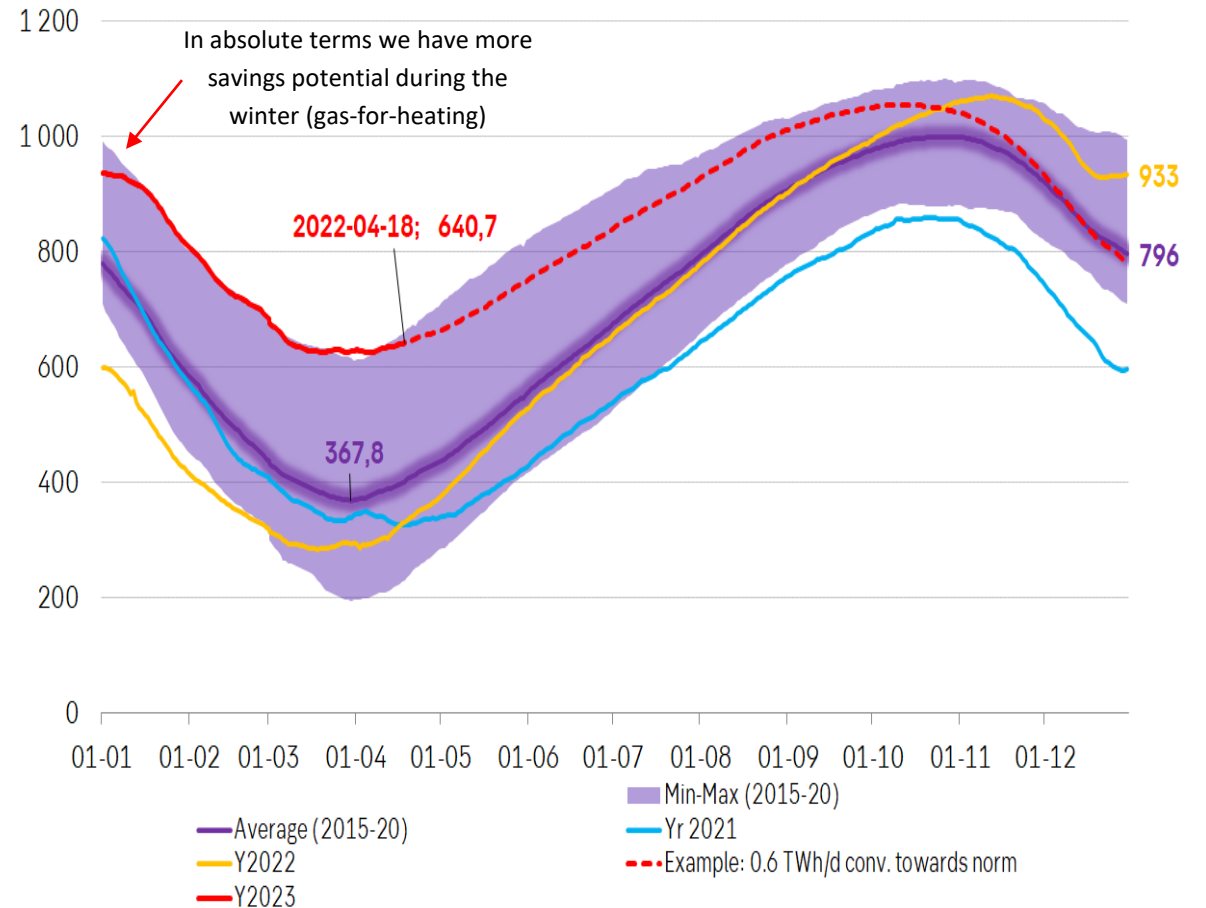
Yet, inventories with normal draw-down to winter 2023/24 extrapolation = reality check(!) down the road

European nat gas inventories in %



Source: SEB, Bloomberg

European nat gas inventories forecast (TWh)



Source: SEB, Bloomberg

# Gas-for-power margins better than for coal for the first time since July 2021

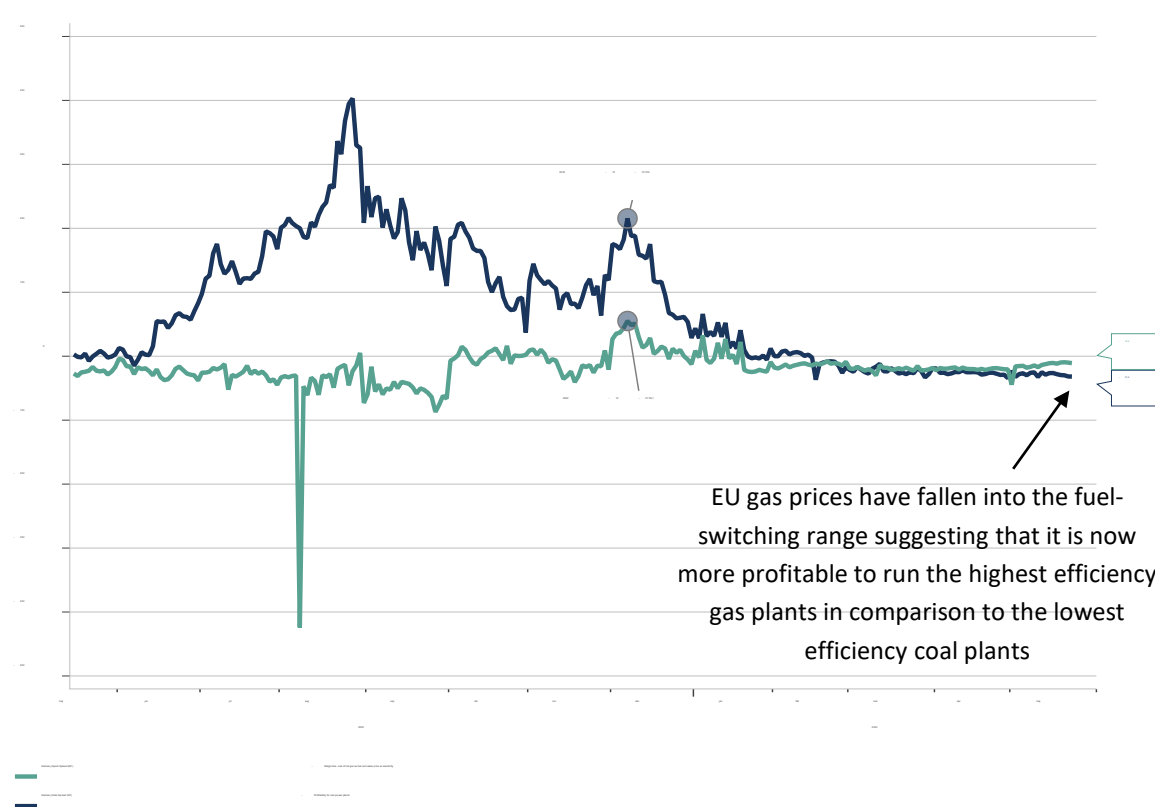
Global energy convergence → JKM approaching the longer-term oil price (Q124) → “historical comfortable spot-purchase level” = increased thirst for LNG in NE Asia...

EU TTF versus Japanese LNG winter 2024 (EUR/MWh)



Source: SEB, Bloomberg

Profitability of Gas-Power plants versus Coal in Germany. M1 (EUR/MWh)



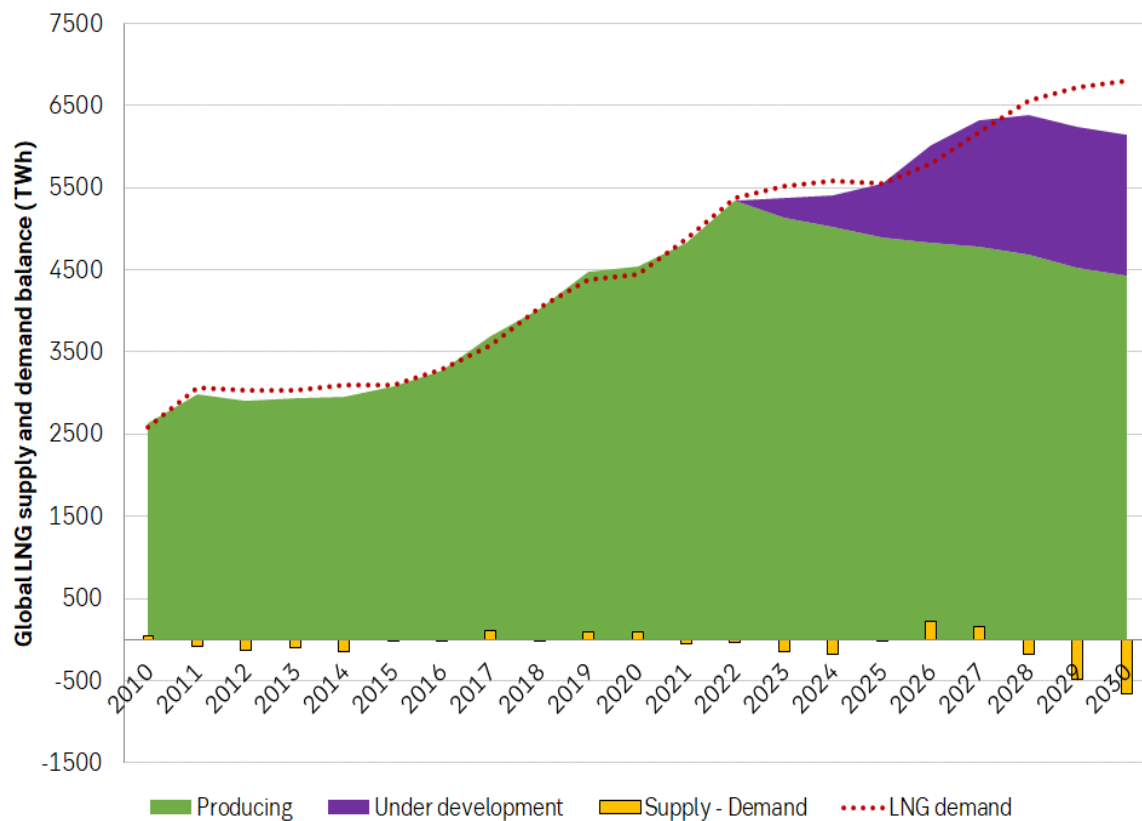
Source: SEB, Bloomberg

...Likely triggering increased gas-for-power demand →  
lifting parts of the demand destruction...

# Higher for longer! – EU nat gas at EUR 40-50/MWh likely new norm...

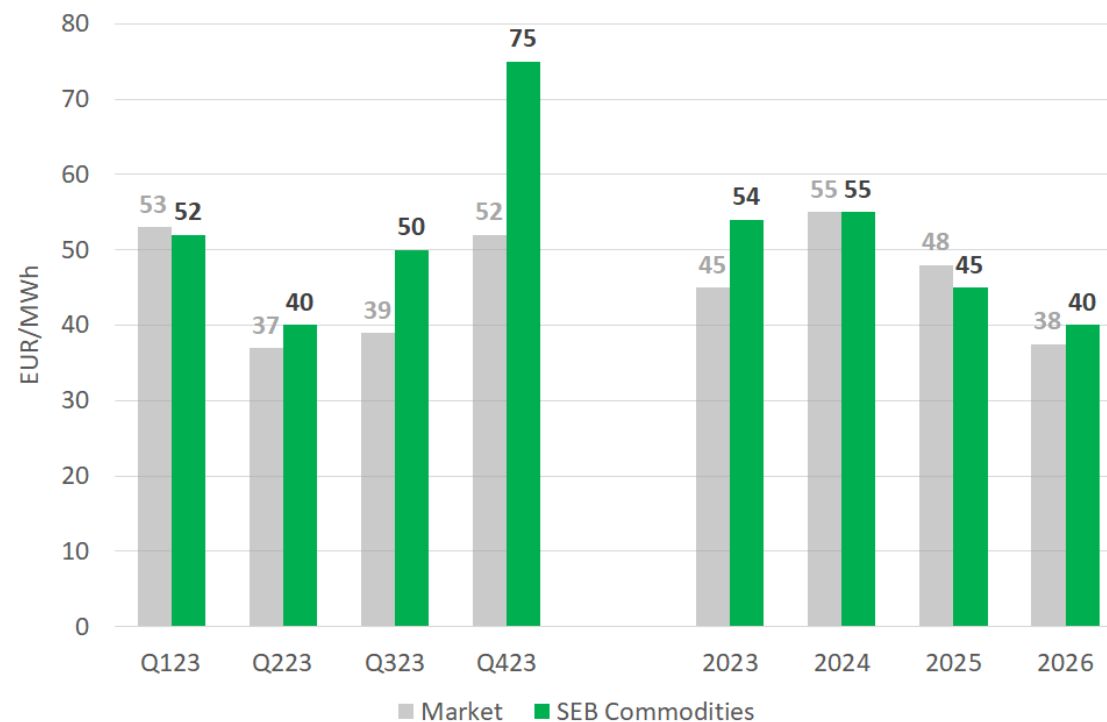
US LNG exports are likely to flourish as energy costs in the EU and the US are miles apart → strong business case of transporting energy/natural gas from the US to the EU.

## Global LNG balance (TWh): Tight market 2023-2024



Source: SEB, Rystad Energy, BNEF, AXS Trade Flows

## European nat gas prices – Market and SEB Forecast (EUR/MWh)



Source: SEB, Bloomberg

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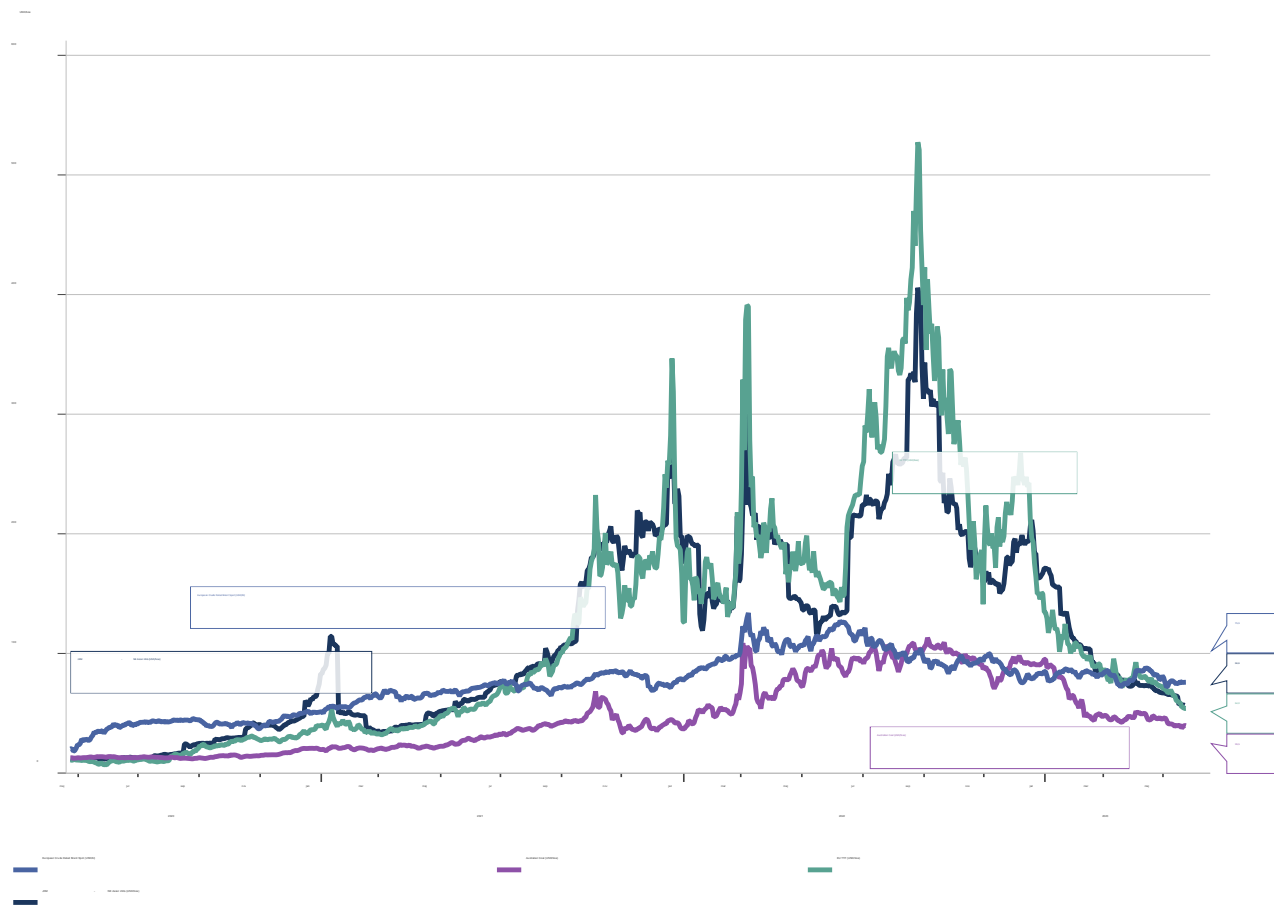
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# “we’ll meet again”

...nat gas prices above oil is not sustainable...global energy convergence → nat gas → below oil again (yet oil likely to climb)

Global energy prices (USD/boe)



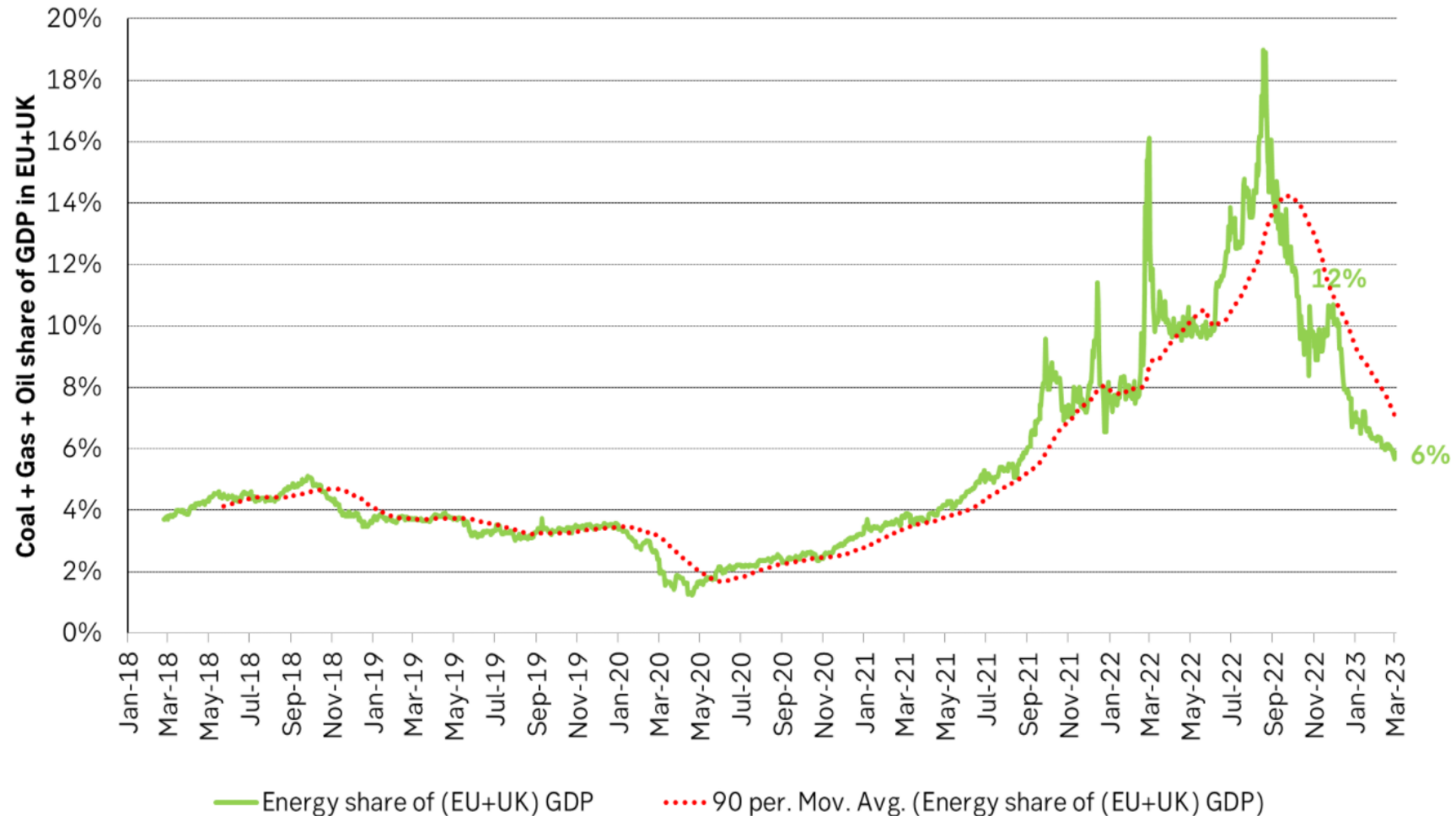
Brent oil, Asian LNG and EU nat gas are all back in parity → towards normalization(?) ... gas is usually/historically 0.6-0.8 of Brent

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# War and energy in Europe: Power 2024 @ 6% of GDP

...Nat gas & power prices in the EU have exploded. Peak touched 19-20% at worst → forced down to 6% → lower activity...

Energy share of (EU+UK) GDP (%)

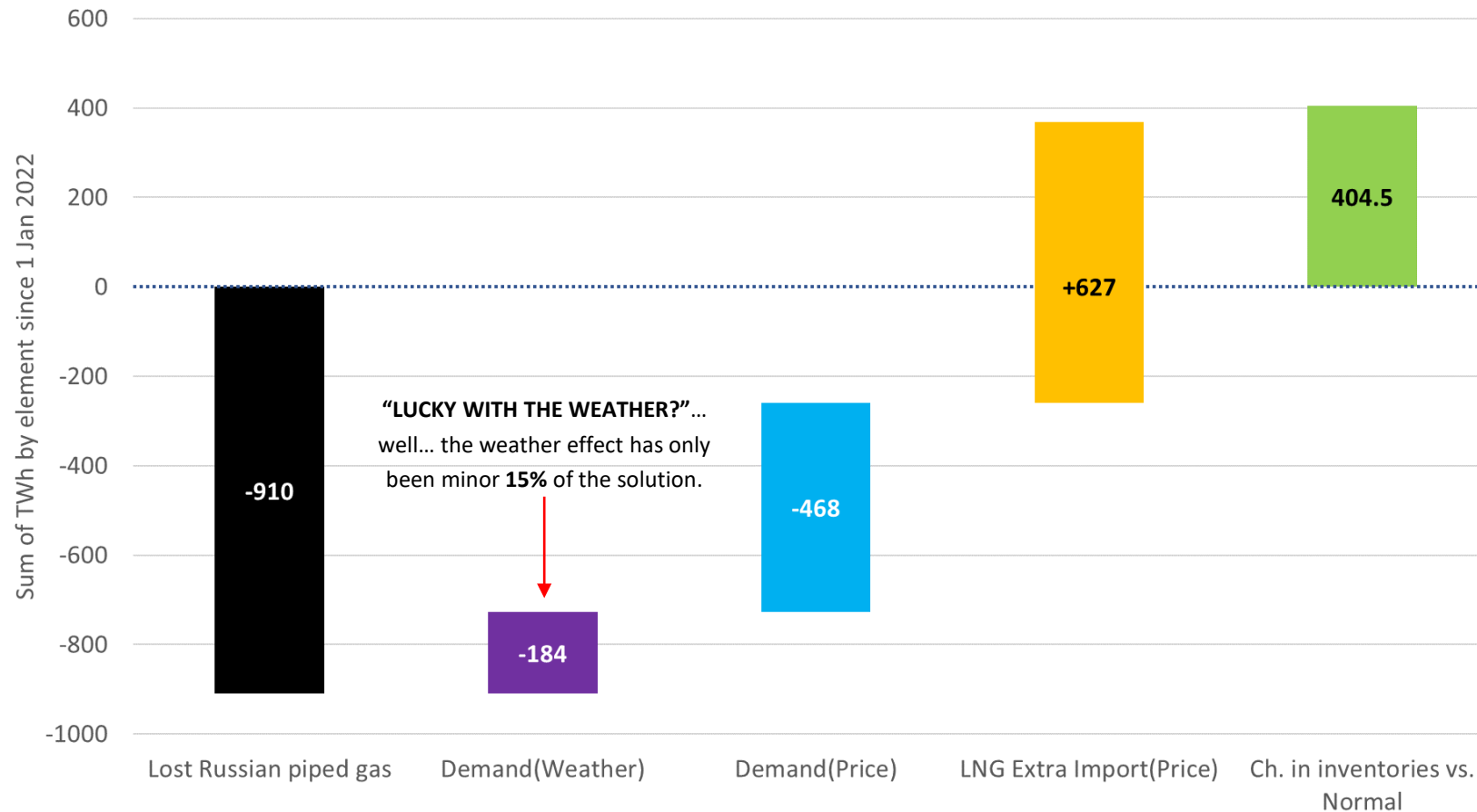




# Summary of cumulative changes since 1 Jan 2022

Rise in inventories vs. normal of +396 TWh since 1 Jan matches with losses and gains → **404.5 TWh** overshoot... Key = high prices

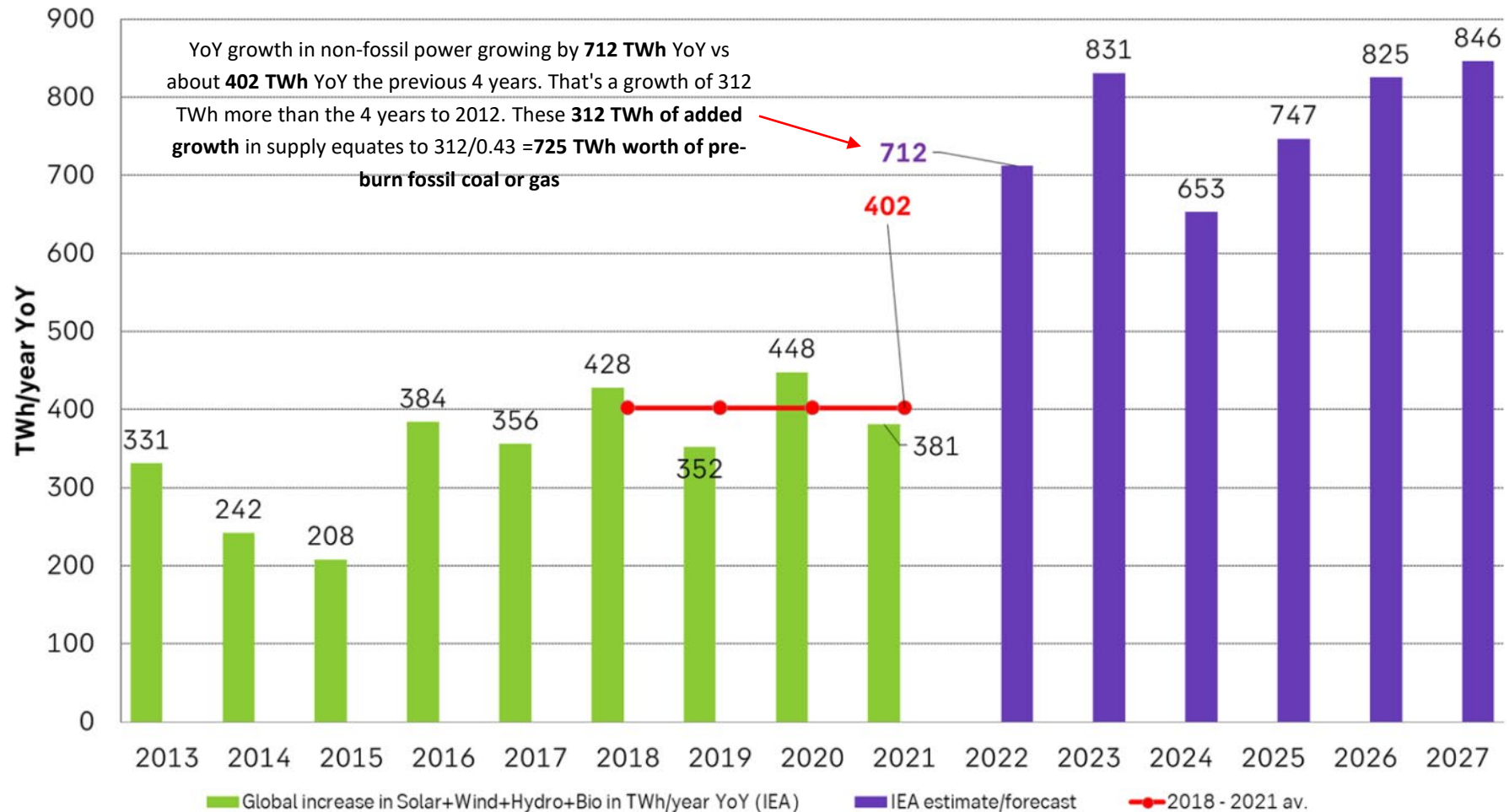
## European adaption from 1 Jan 2022 to 1 Feb 2023 by element (TWh)



# EU adaption have been exceptional! But how was it possible?

How could EU manage energy crisis so well? Likely connected to **big jump** in new installations of non-fossil power... NE Asia = good?

Global increase in Solar+Wind+Hydro+Bio in TWh/year YoY (IEA estimate and forecast)



Source: SEB, Bloomberg