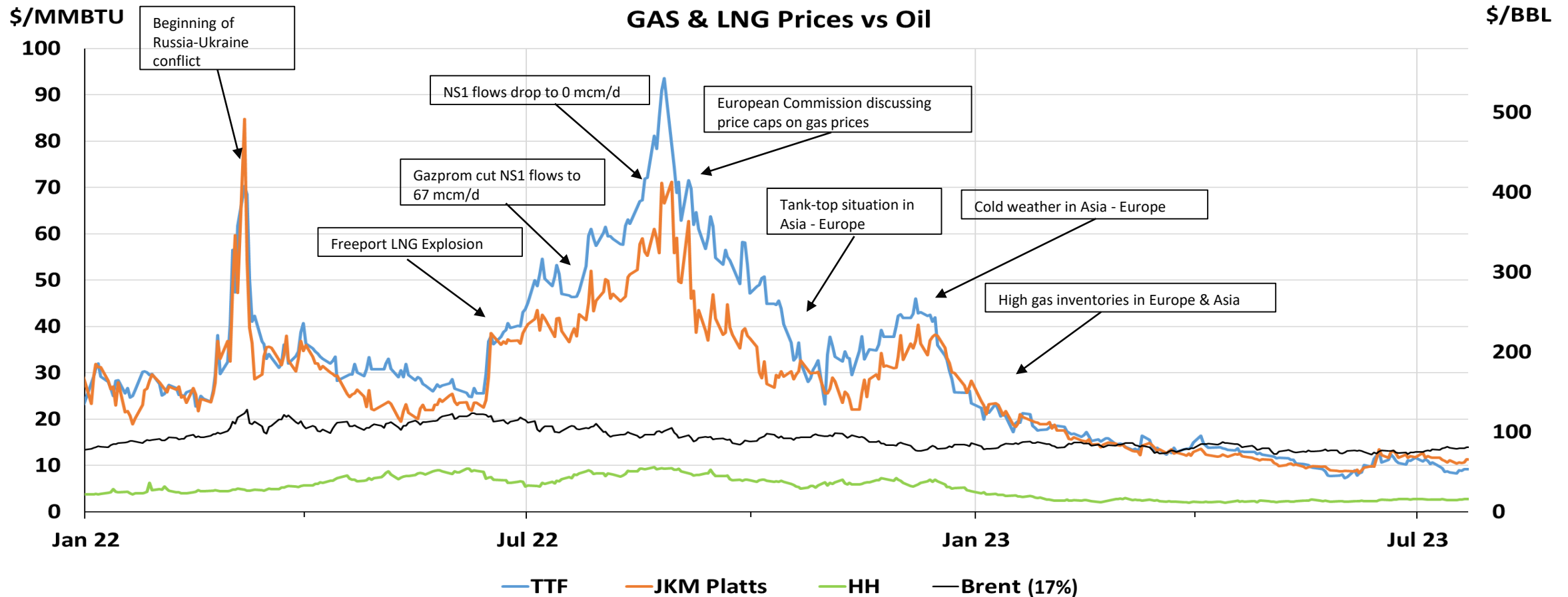


Illiquidity in the LNG Market & Disconnection of the Gas Indexes

Patrick DUGAS

Vice President LNG Trading
TotalEnergies

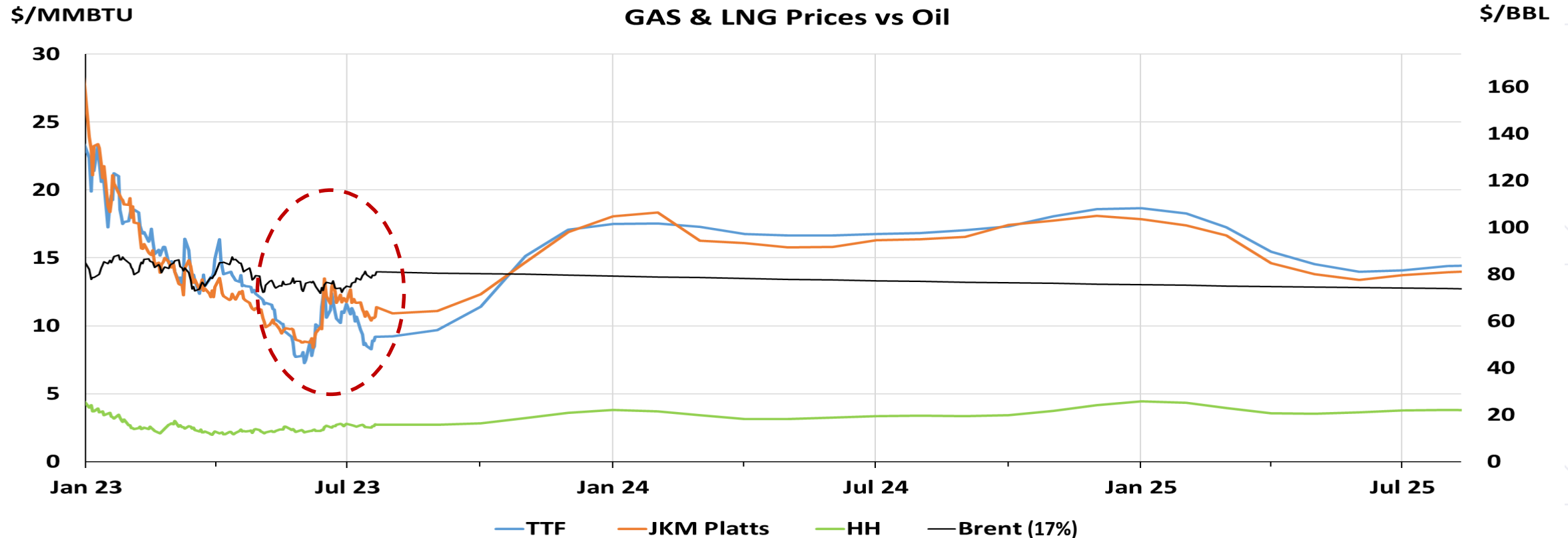
Global Gas Prices Continued Sliding in Summer-23, Hitting 2 Year Lows



After months of high prices and high volatility, gas prices return below oil parity on the prompt...

Tight gas balances lead to prices overreacting to any small disruptions

Winter contango is wide & gas prices remain well above oil parity



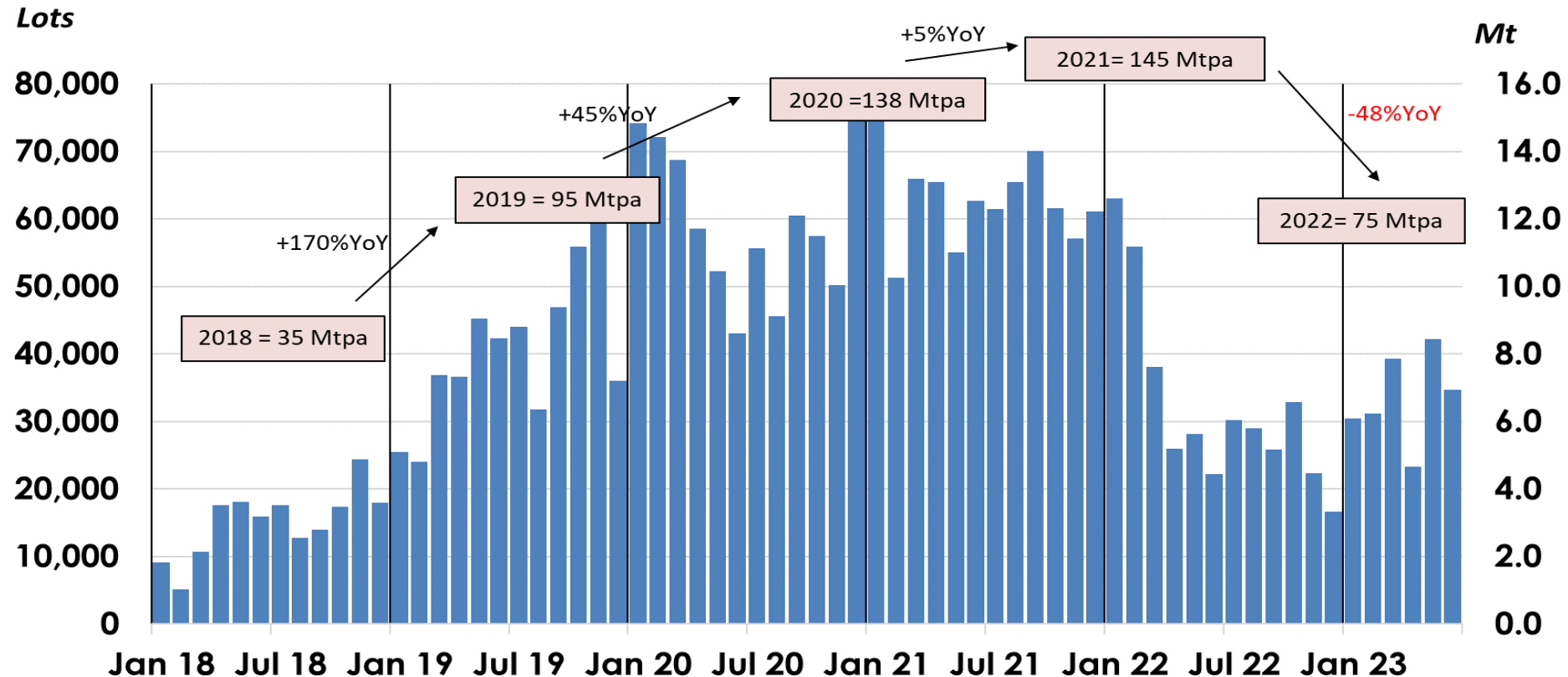
NOTE: Forward prices as of end-July

Any unexpected events on the supply or demand side can bring us back to high prices environment as residual flexibility within the system is very limited

JKM Traded Volumes returned to growth since May-23 when prices approached 10 \$/MMBTU

Lots (1 lot = 10,000 MMBtu/month)

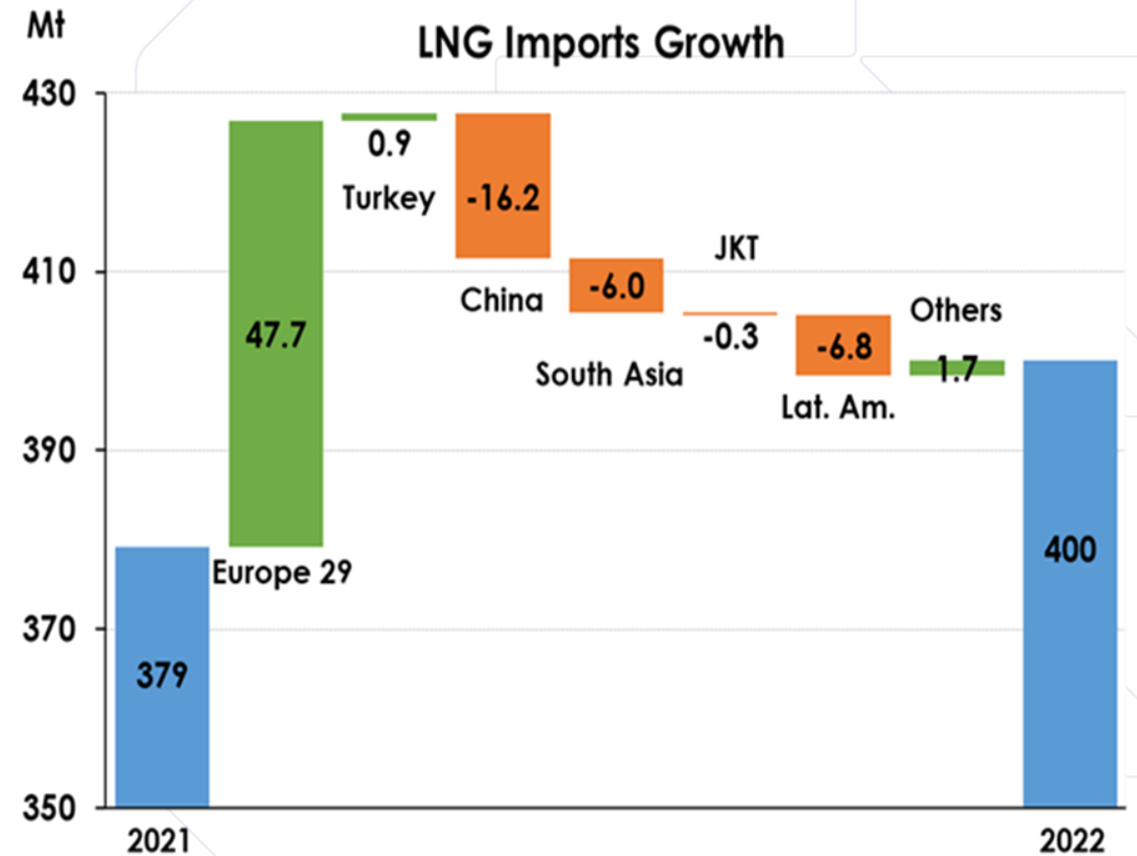
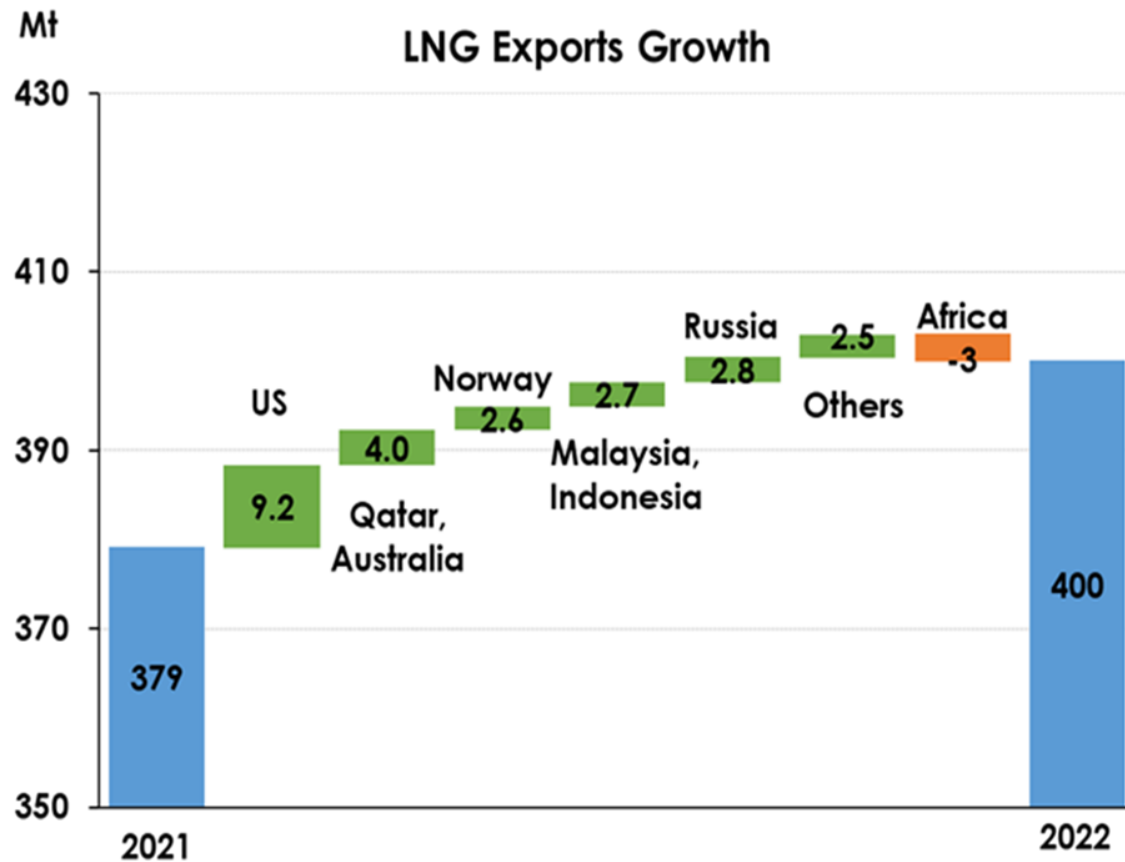
JKM Traded Volumes



*High volatility erased almost 3 years of growth in the JKM paper market.
As prices normalize market participants increase their trading activity*

2022 LNG Deliveries increased to 400Mt, +21Mt YoY

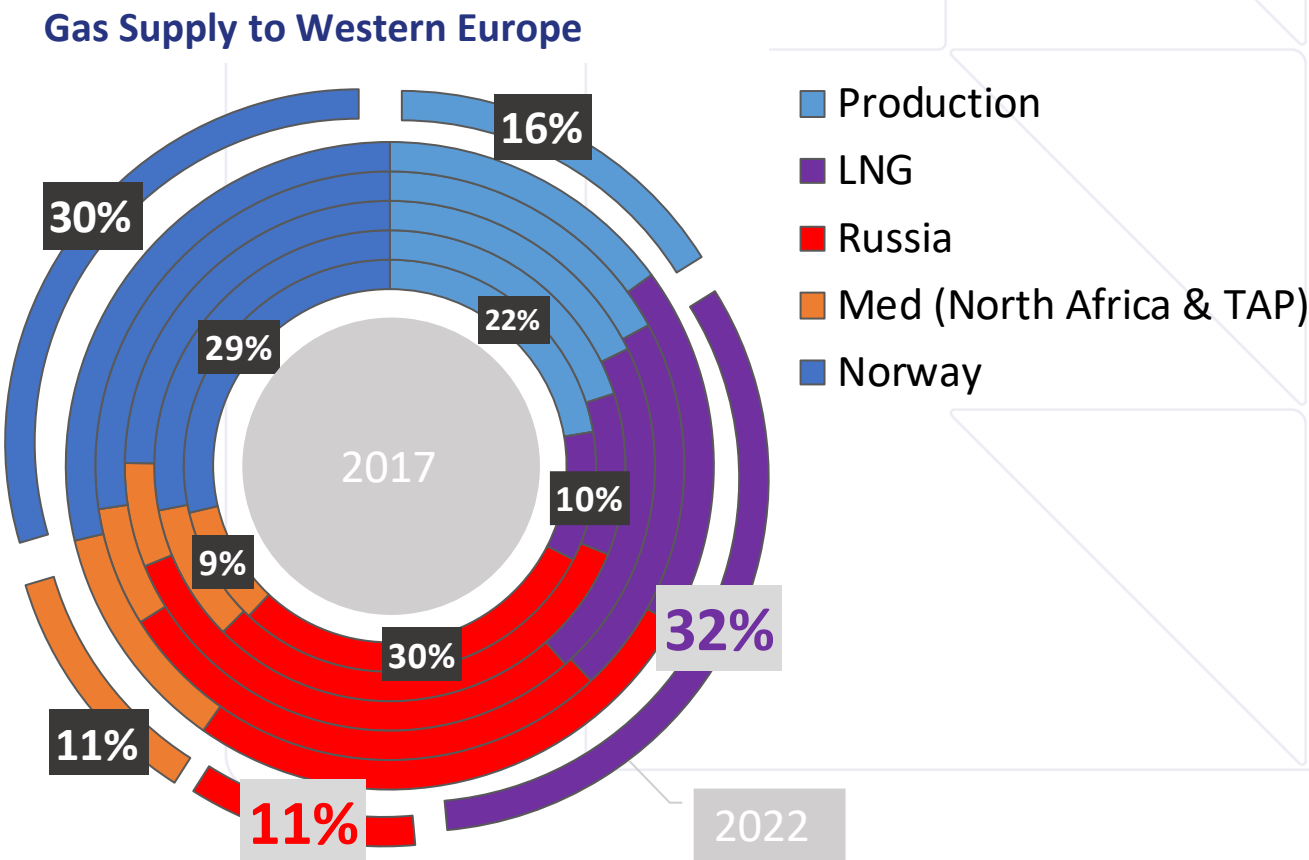
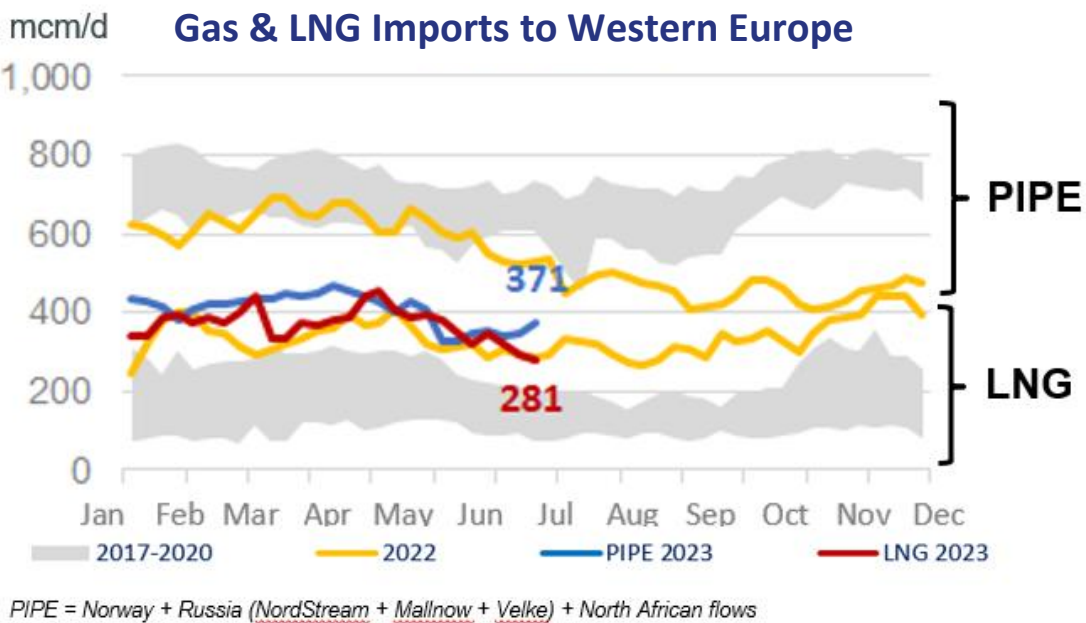
Volumes from Asia were redirected to Europe on better economics



Europe turned from being the last resort market to a premium market

European Gas Supply: LNG first source of Supply in 2022

As Russia turned off the tap progressively

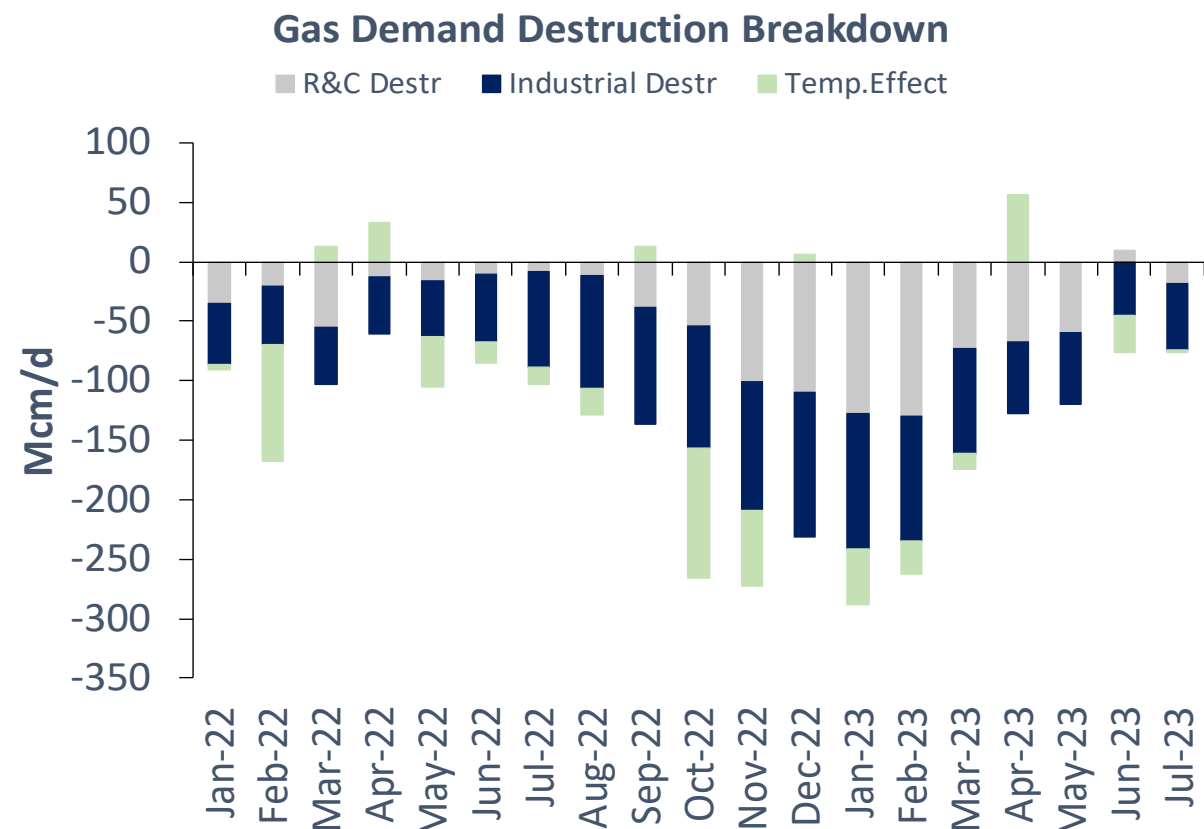
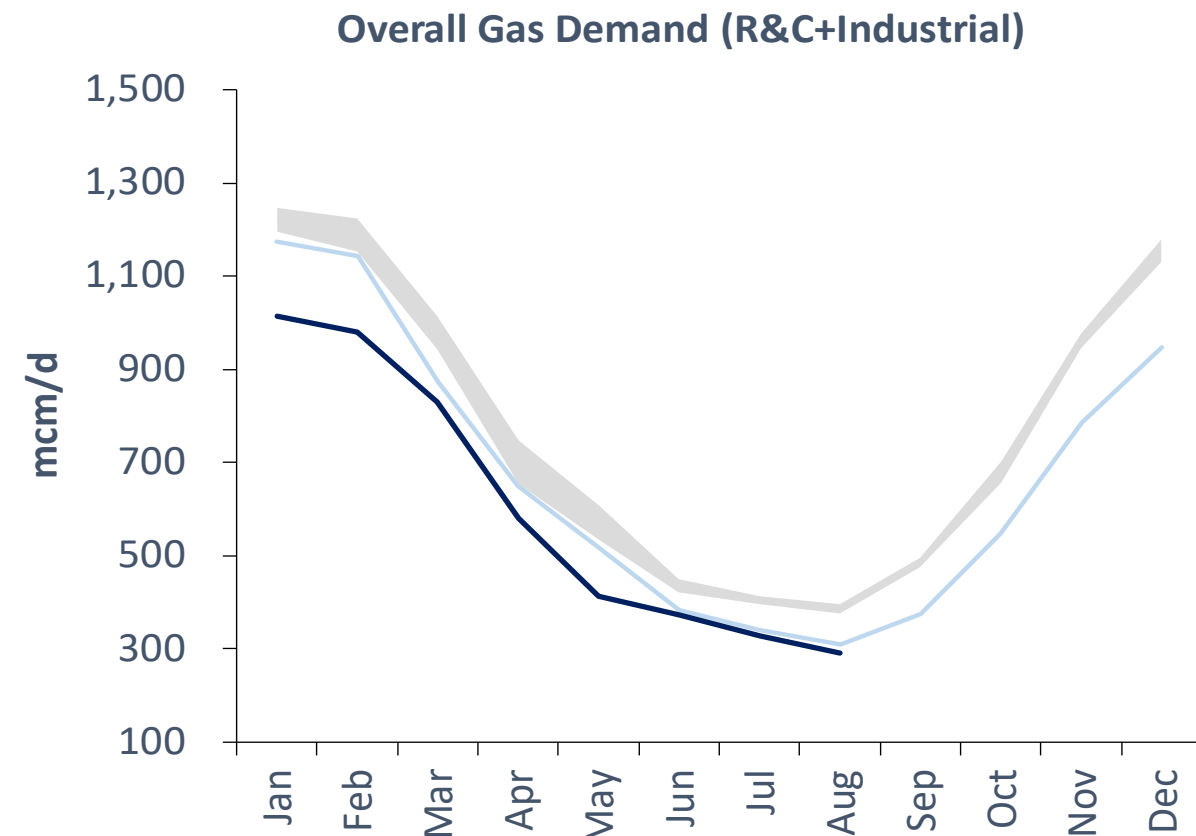


Western Europe or EU10: UK, France, Belgium, Netherlands, Germany, Check Republic, Slovakia, Austria, Italy, Spain

LNG is on track to remain the top supply source of the European gas market in 2023

Demand destruction: crucial contribution to the European gas balance

Mild winter weather added to high prices destroying demand even further

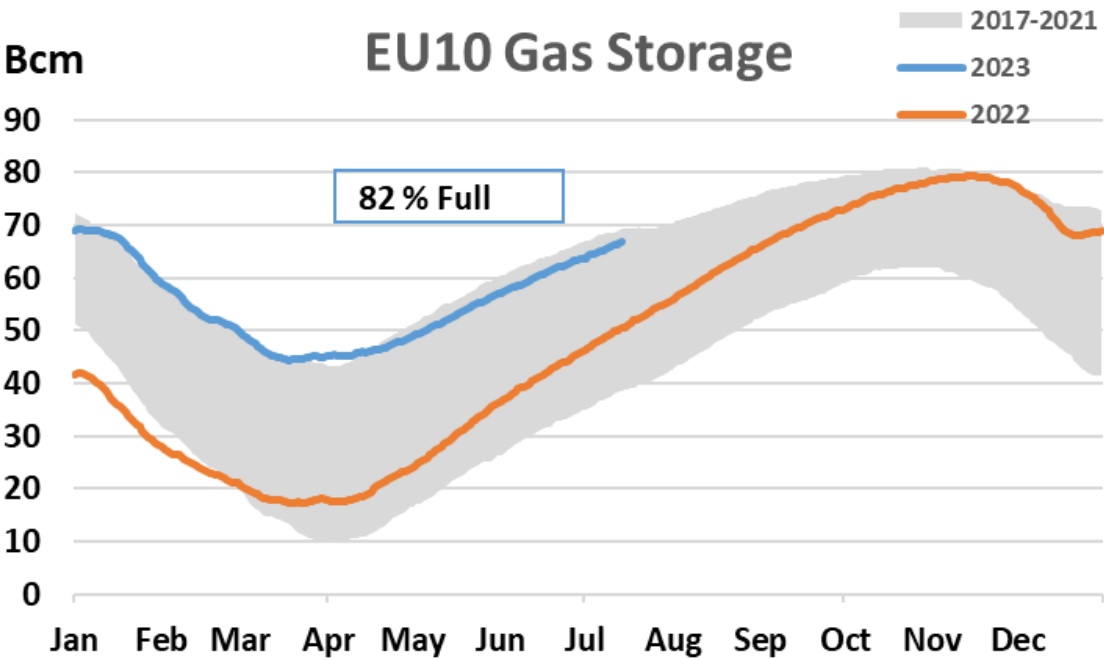
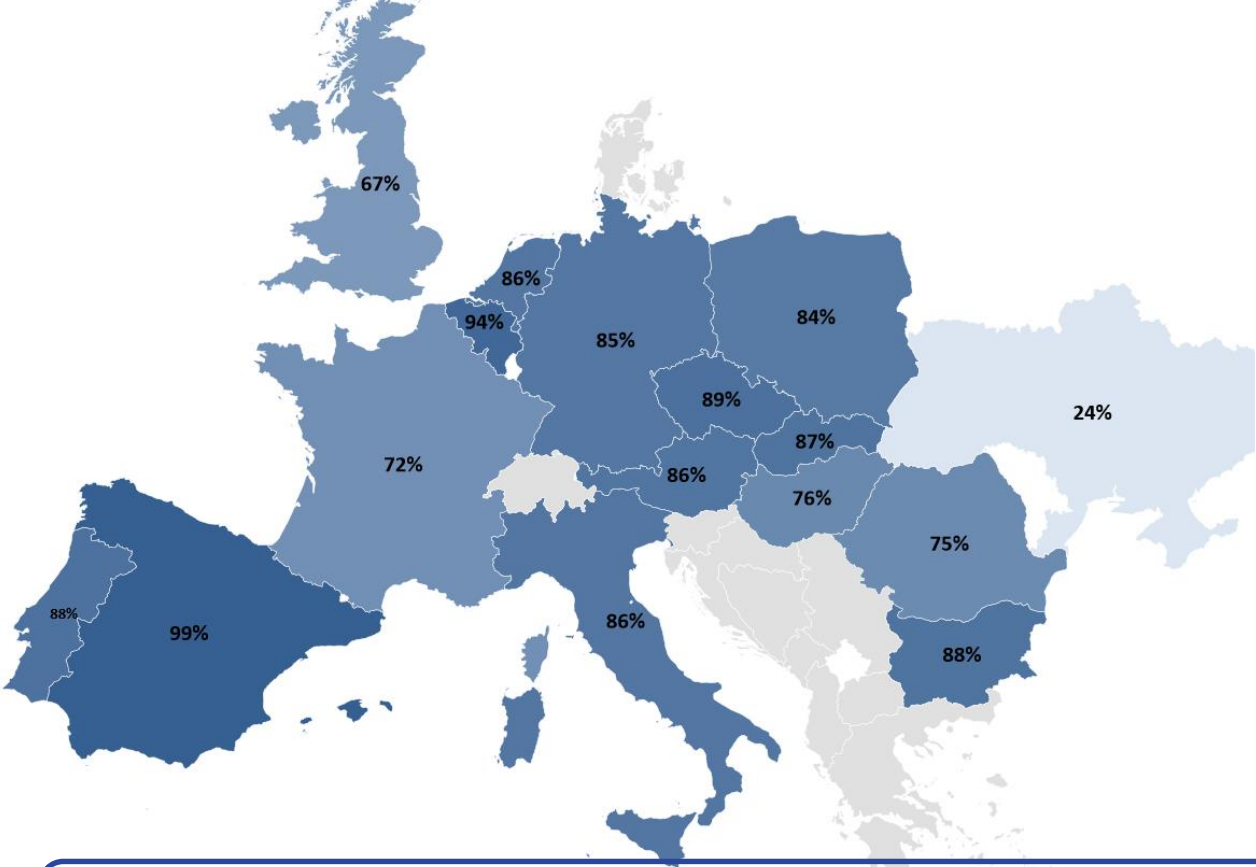


*Weather corrected data. Data includes: UK, France, Belgium, Netherlands, Germany, Italy & Spain
** R&C: Residential & Commercial

Industrial demand may take some time before recovering.
Low summer '23 prices didn't stimulate any significant improvement

Western Europe Storage: Inventories at 82% Fullness before the end of July

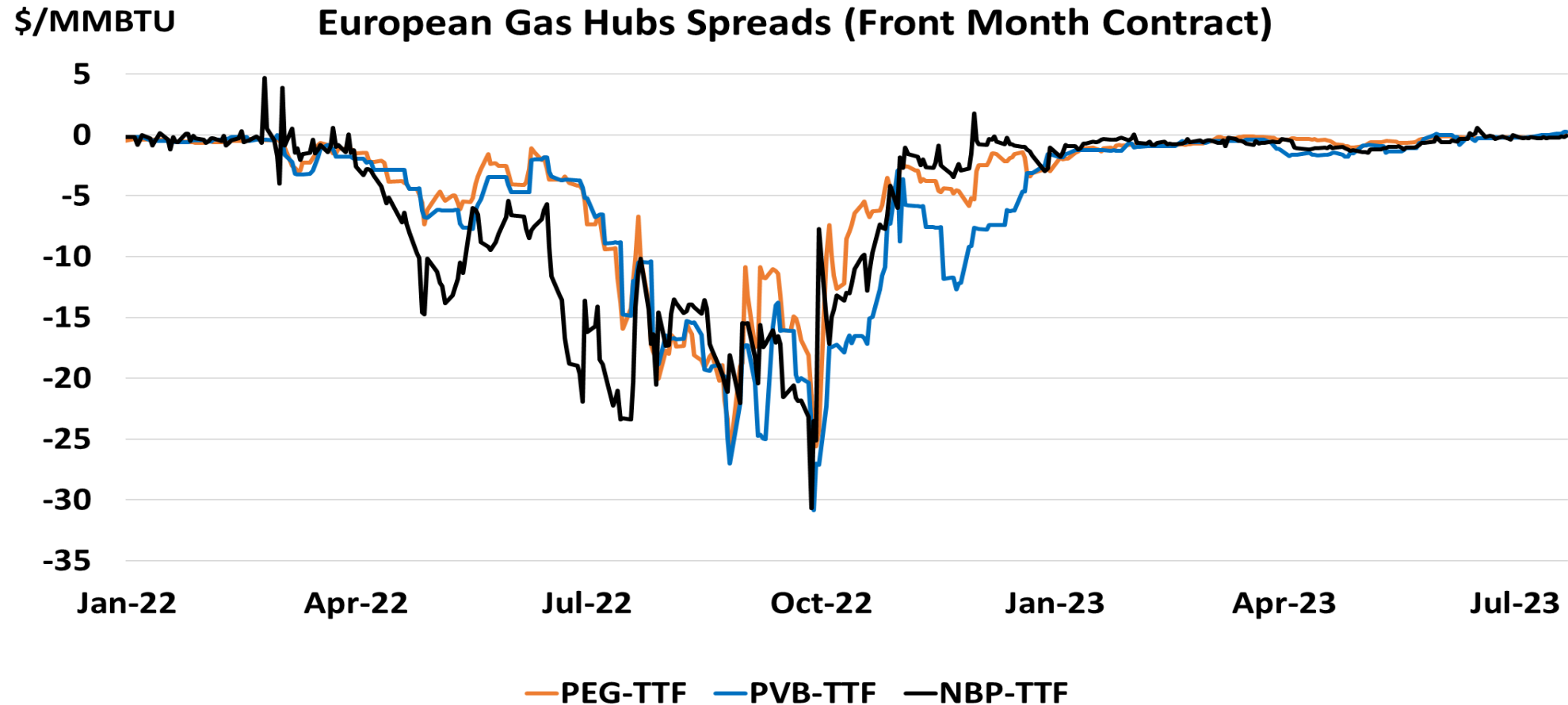
Gas Storage Fullness by country



Western Europe or EU10: UK, France, Belgium, Netherlands, Germany, Check Republic, Slovakia, Austria, Italy, Spain

European Gas inventories are very healthy, EU commission's 90% target to be easily achieved way ahead of the 1st Nov timeline

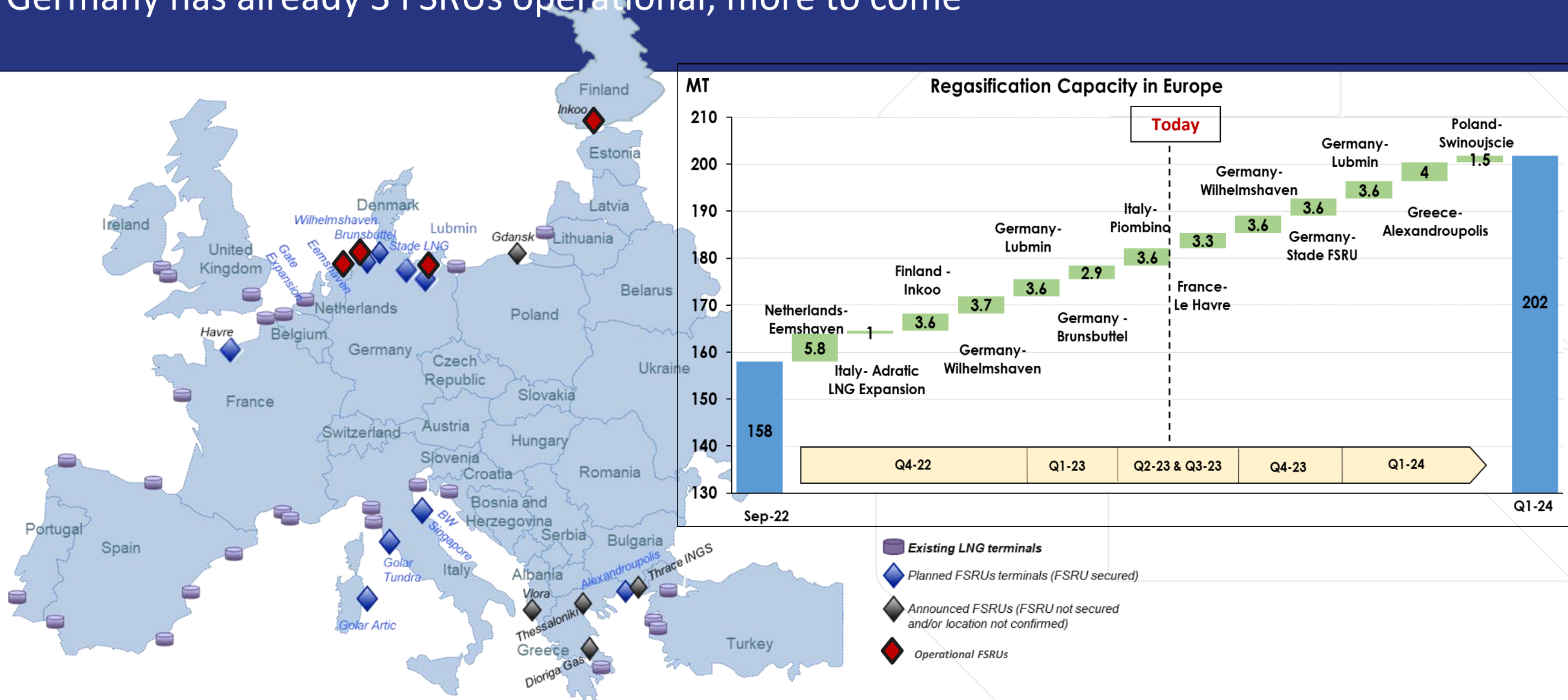
European Gas Hubs Price Disconnection Was Due To Imbalanced LNG & Gas Supply Within the European Market



The volatility of European gas spreads caused the dryness of the market's liquidity. Spreads normalized in 2023 on the back of regas capacities additions

Gas Spreads Normalized Amid Regas Capacity Additions

Germany has already 3 FSRUs operational, more to come

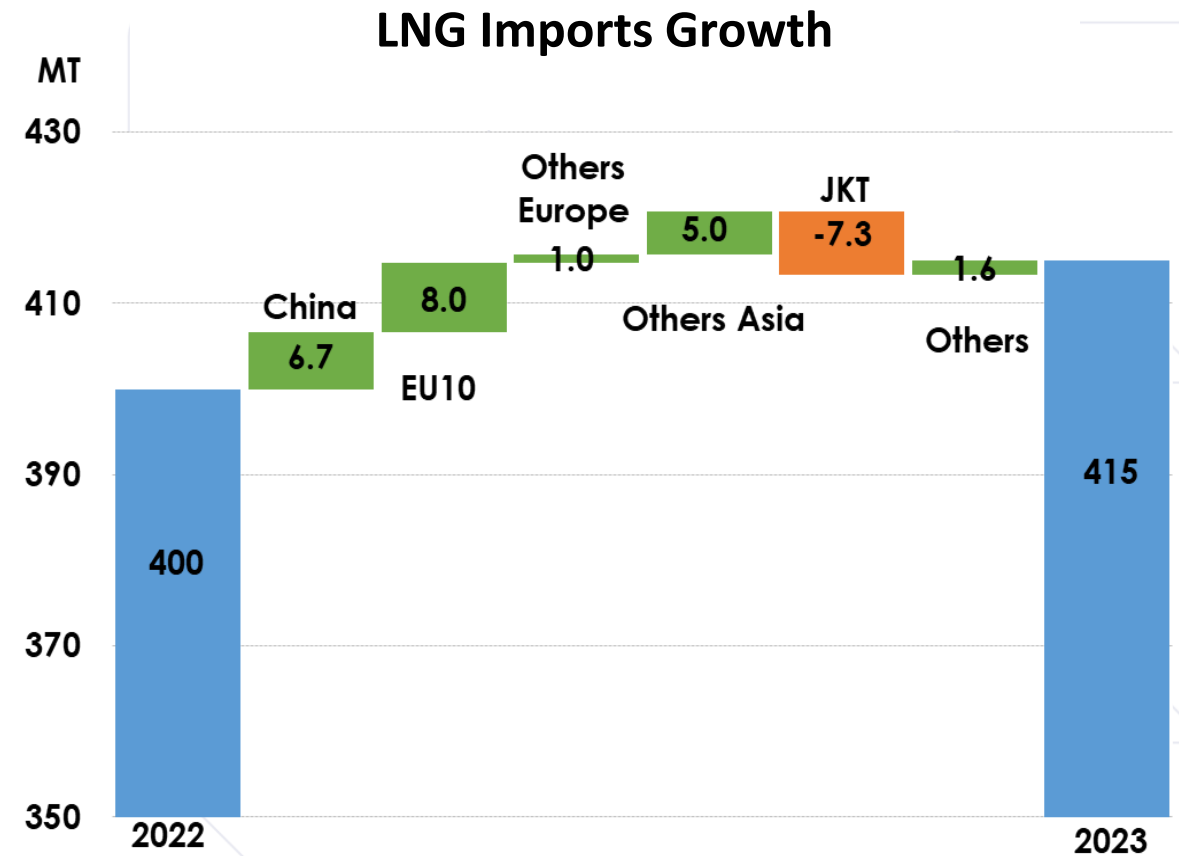
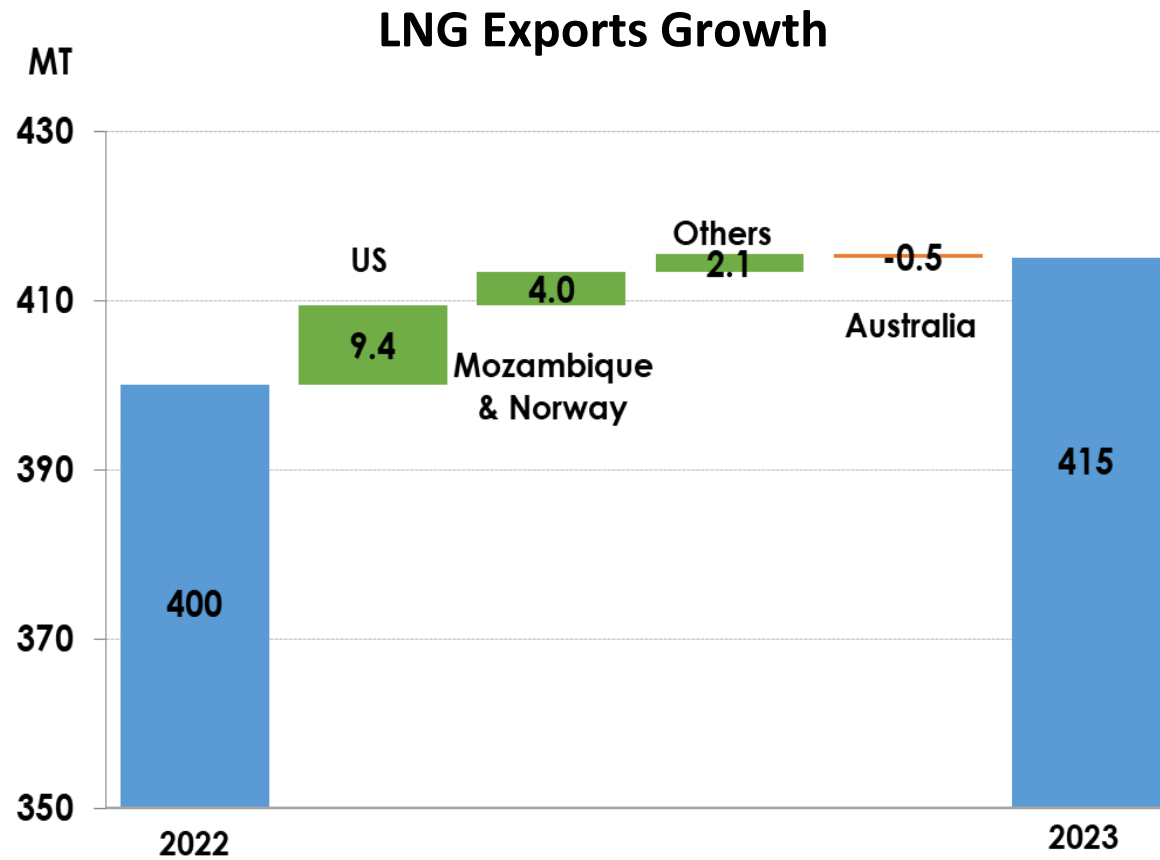


The equivalent of about ~10% of the global LNG traded will be added in European FSRU capacities

LNG Market to increase by ~15 Mt in 2023

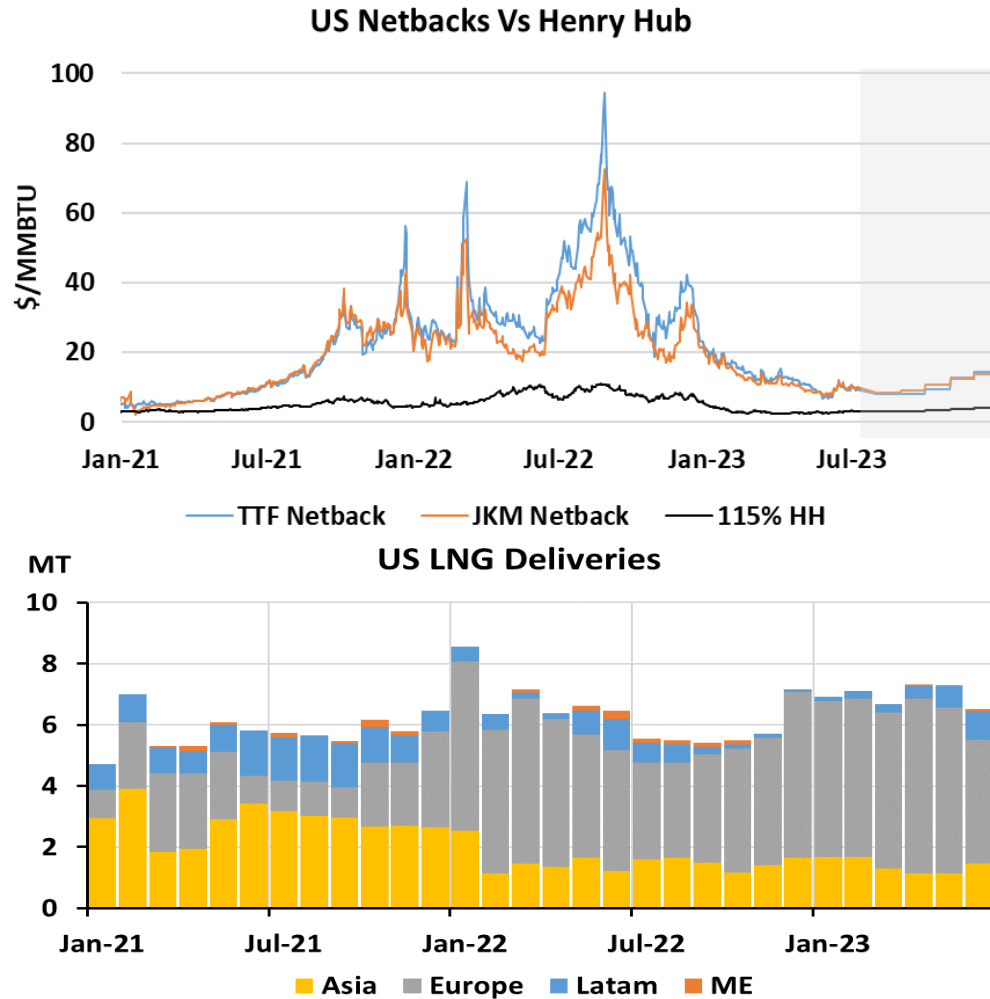
US to remain the biggest source of supply growth

Price sensitive buyers did not resume sizeable spot LNG purchases yet

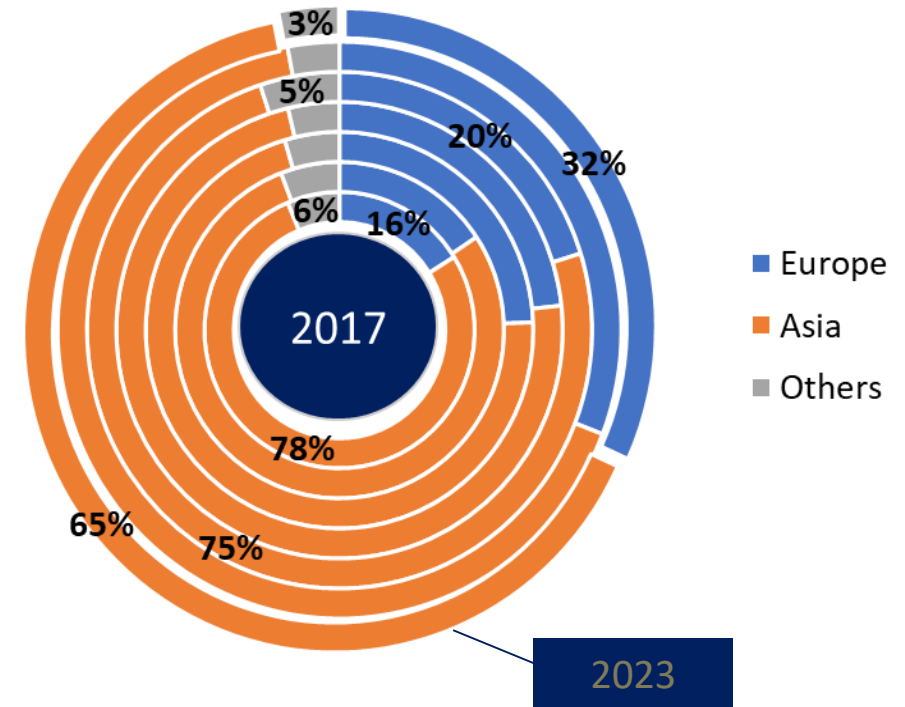


The US has been the balancing market on the supply side

Volumes swing from the Pacific to the Atlantic depending on the JKM-TTF spread



Global LNG Demand By Region (2017-2023)



The US confirmed as balancing LNG producer while Europe keeps increasing its share on the global LNG market



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Thanks for your attention