Gas supply in the face of the energy crisis in Europe

Alvaro Baillo – Deputy Head Natural Gas Axpo Iberia

November 2022

Gas security of supply is not something new

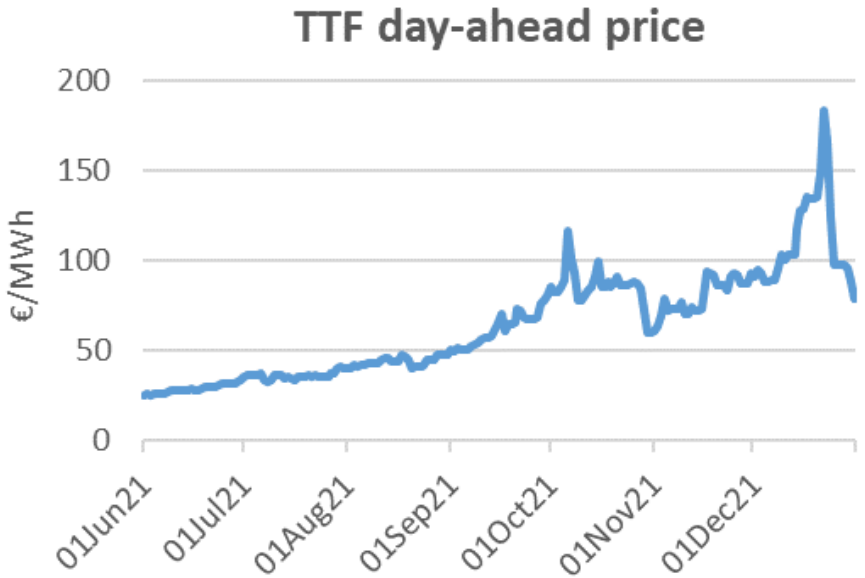
What would one purchase on the eve of a strict lockdown due to a pandemic?

Timeline of EU reaction to the energy crisis (I)(1)

The early stage: Q4'21

22 Sep 2021	Energy ministers call on Commission to analyse energy price surge
21 Oct 2021	EU leaders tackle energy price surge
26 Oct 2021	Energy Council addresses rising energy prices
8 Nov 2021	Eurogroup discusses energy prices
2 Dec 2021	EU ministers address energy price surge
16 Dec 2021	European Council discusses energy price hike

- **Tension in the European gas market already evident in Q4'21**, with the price of TTF spiking above 180 €/MWh in late December
- **Companies** start to take measures to **avoid cash outflows due to margin calls**
- **EU "discussing the energy price surge"**: no clear strategy to address the underlying problem: **potential disruptions in gas supply**



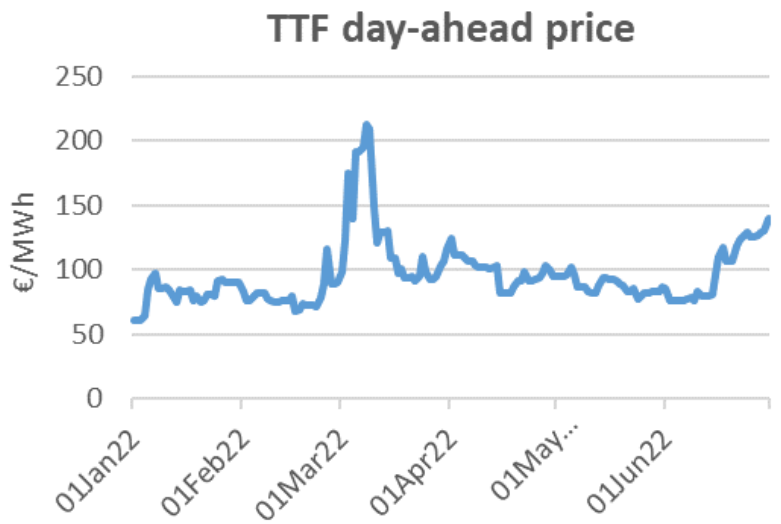
(1) Source: www.consilium.europa.eu/en/policies/energy-prices-and-security-of-supply/timeline-energy-prices-and-security-of-supply/

Timeline of EU reaction to the energy crisis (II)(1)

First half of 2022: EU reacts

24 Feb 2022	EU leaders call for emergency measures on energy
28 Feb 2022	Energy ministers discuss energy market situation following Ukraine crisis
11 Mar 2022	EU leaders agree on how to reduce energy dependencies
2 May 2022	Energy ministers discuss gas supply following Gazprom's delivery suspension
19 May 2022	Gas storage: Council and Parliament reach a provisional agreement
27 Jun 2022	Regulation on gas storage adopted and REPower EU plan drafted

- Russia's invasion of Ukraine is unacceptable for the EU, but **Russia is the EU's main supplier of fossil fuels**: 54% of coal, 43% of gas, 29% of oil
- **The EU finally reacts**, and starts to **prepare for the coming winter**, requiring member states to fill gas underground storage facilities to 80% by Nov 1st
- Prices steadily rise at the end of Q2'22 as companies and governments increase LNG imports



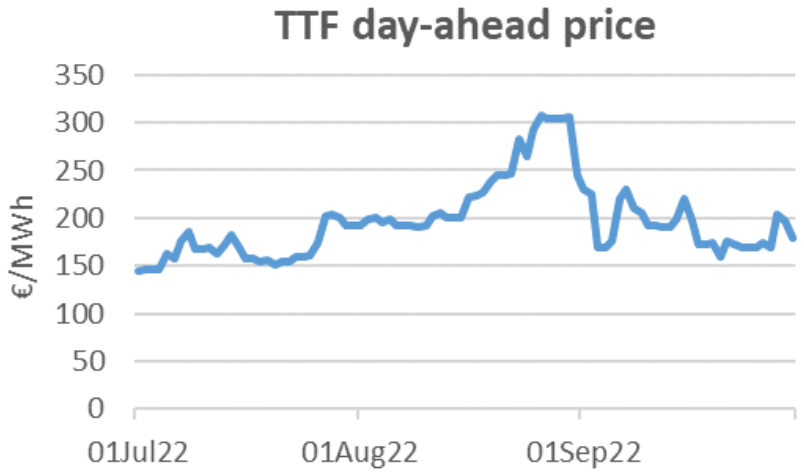
(1) Source: www.consilium.europa.eu/en/policies/energy-prices-and-security-of-supply/timeline-energy-prices-and-security-of-supply/

Timeline of EU reaction to the energy crisis (III)(1)

Q3'22: store and save gas for winter

26 Jul 2022	Member states commit to reducing gas demand by 15% next winter
5 Aug 2022	Council adopts regulation on reducing gas demand by 15%
9 Sep 2022	Ministers review progress on winter preparedness
30 Sep 2022	Council agrees on emergency measures to reduce energy prices

- In addition to EU's measures, European governments take swift measures to **reduce dependence on Russian gas** and **increase their import LNGs**
- Particularly, **Germany orders 5 FSRUs** with the aim of covering one third of its gas demand
- **Efforts are channelled through private companies** that have the required market and technical expertise
- As Russian gas imports decline, **LNG imports surge** and **gas is pumped into underground storages at a fast pace**, driving gas prices above 300 €/MWh



(1) Source: www.consilium.europa.eu/en/policies/energy-prices-and-security-of-supply/timeline-energy-prices-and-security-of-supply/

Response to the energy crisis at all levels

Reaction of the EU

- **No material reaction until Russia's invasion of Ukraine**, maybe hoping that Russia would follow the advice of European leaderships?
- **After the invasion, dramatic change in the EU stance**, with a clear reaction against the invasion and identifying **energy security of supply as a major risk**
- **First priority: prepare for next winter** with targets in terms of gas storage (Nov 1st deadline) and gas demand reduction

Reaction of member states

- **Germany's reaction probably the most visible, e.g.:**
  - **5 FSRUs contracted** for winter and onshore regasification projects launched
  - **Gazprom's underground storage facilities seized** and filled at full speed
  - **Bail out and nationalization of energy companies** whose default would compromise even more Germany's security of supply
- Additionally, many member states have provided **relief to companies and households** in an attempt **to shield them from high energy prices**

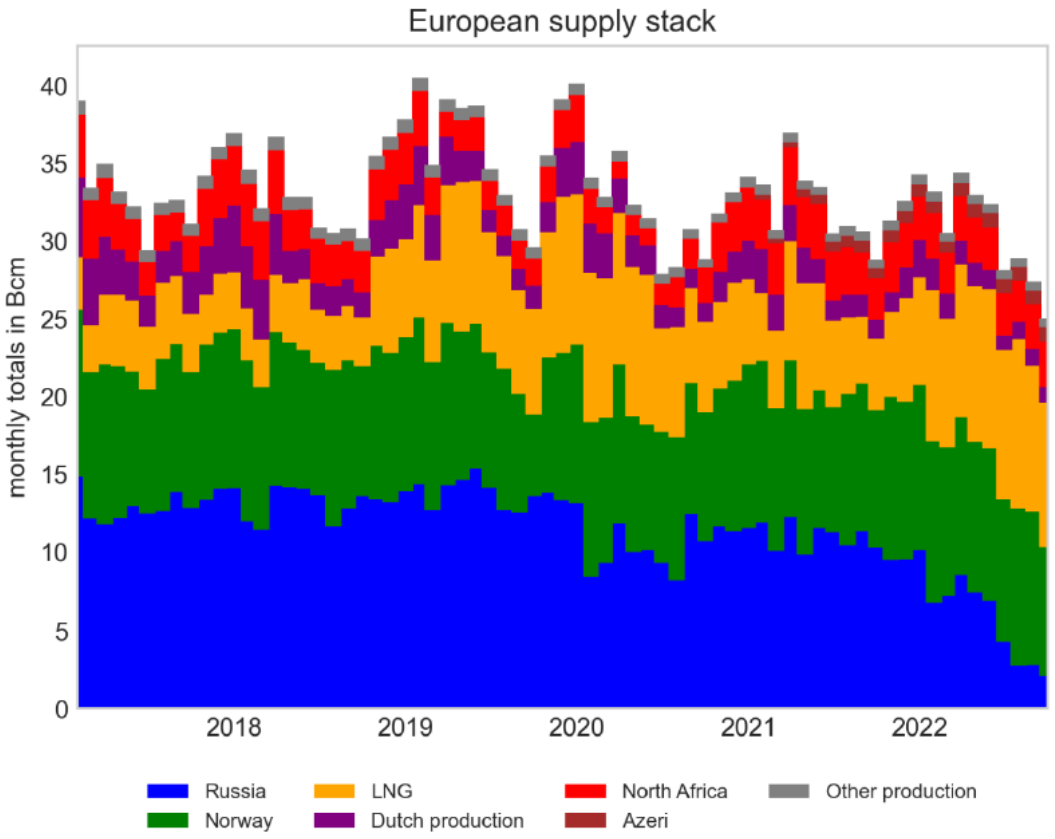
Reaction of companies and individuals

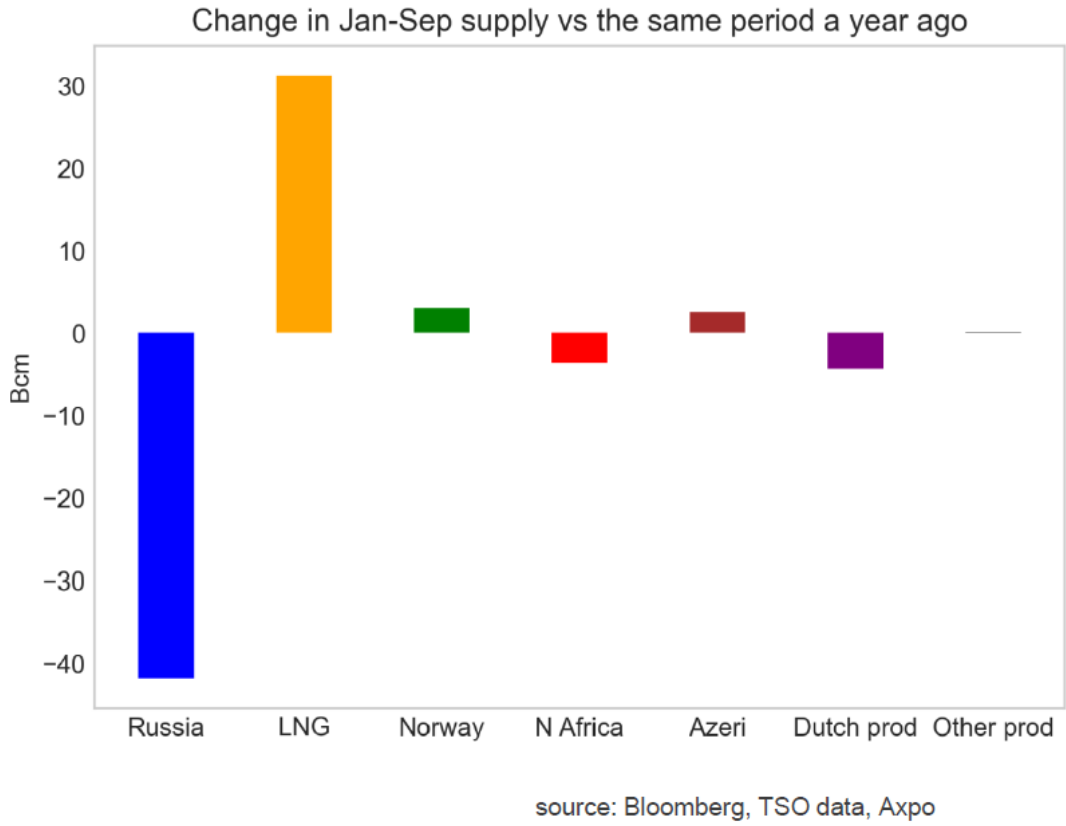
- **High gas prices** in Europe have attracted **unprecedented imports of LNG by private companies** facilitating the storage of gas for winter
- **Industrial and domestic demand** have experienced **double-digit reductions** throughout Europe as a response to **high gas prices**

(1) Source: www.consilium.europa.eu/en/policies/energy-prices-and-security-of-supply/timeline-energy-prices-and-security-of-supply/

Increase of LNG imports to Europe in 2022

Russian gas is substituted with LNG, small gains from other suppliers

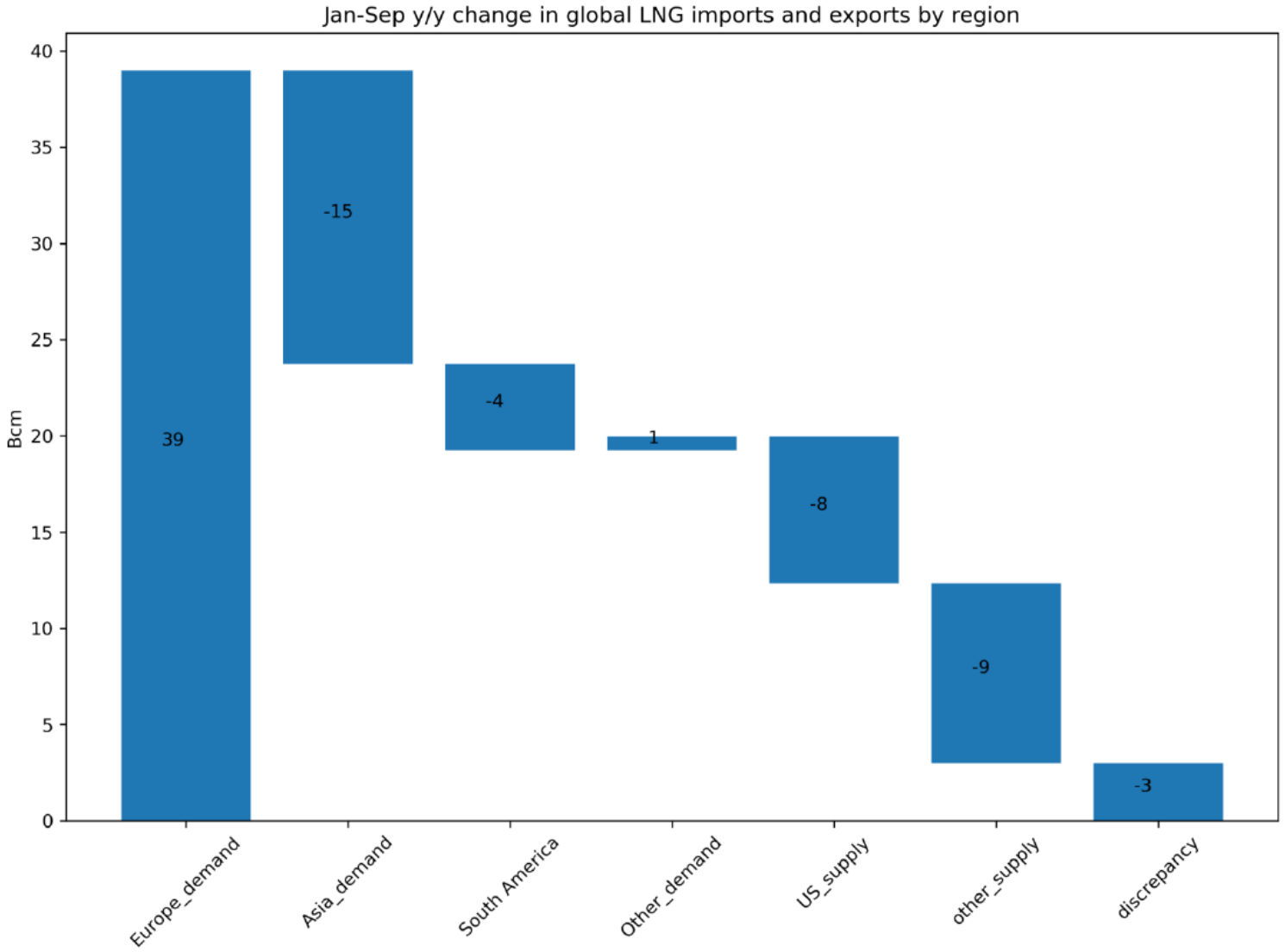




source: Bloomberg, TSO data, Axpo

Source: Axpo, Alex Pashley, "European gas outlook"

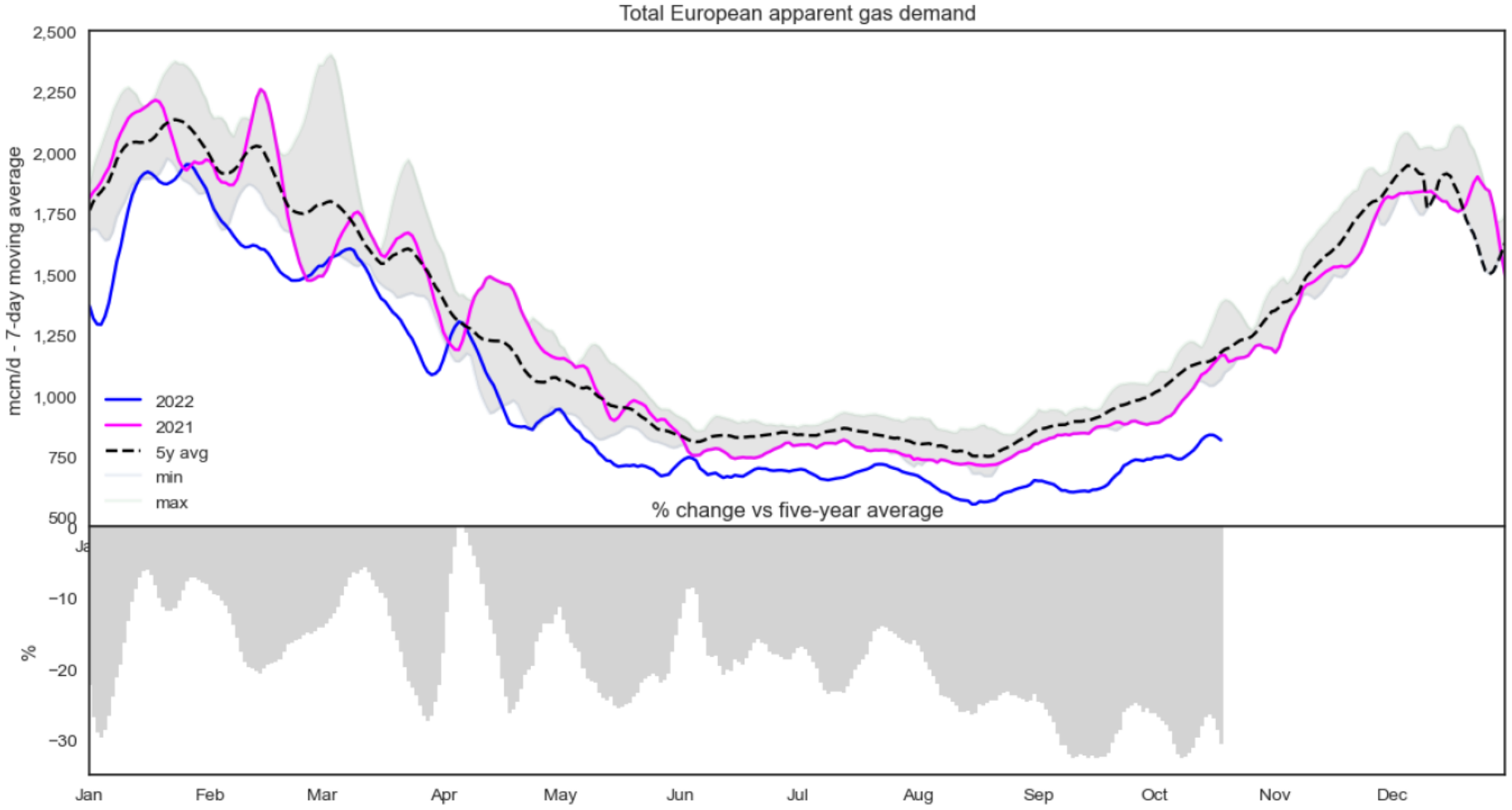
Lower Asian demand free up LNG for EU



source: Kpler, Axpo

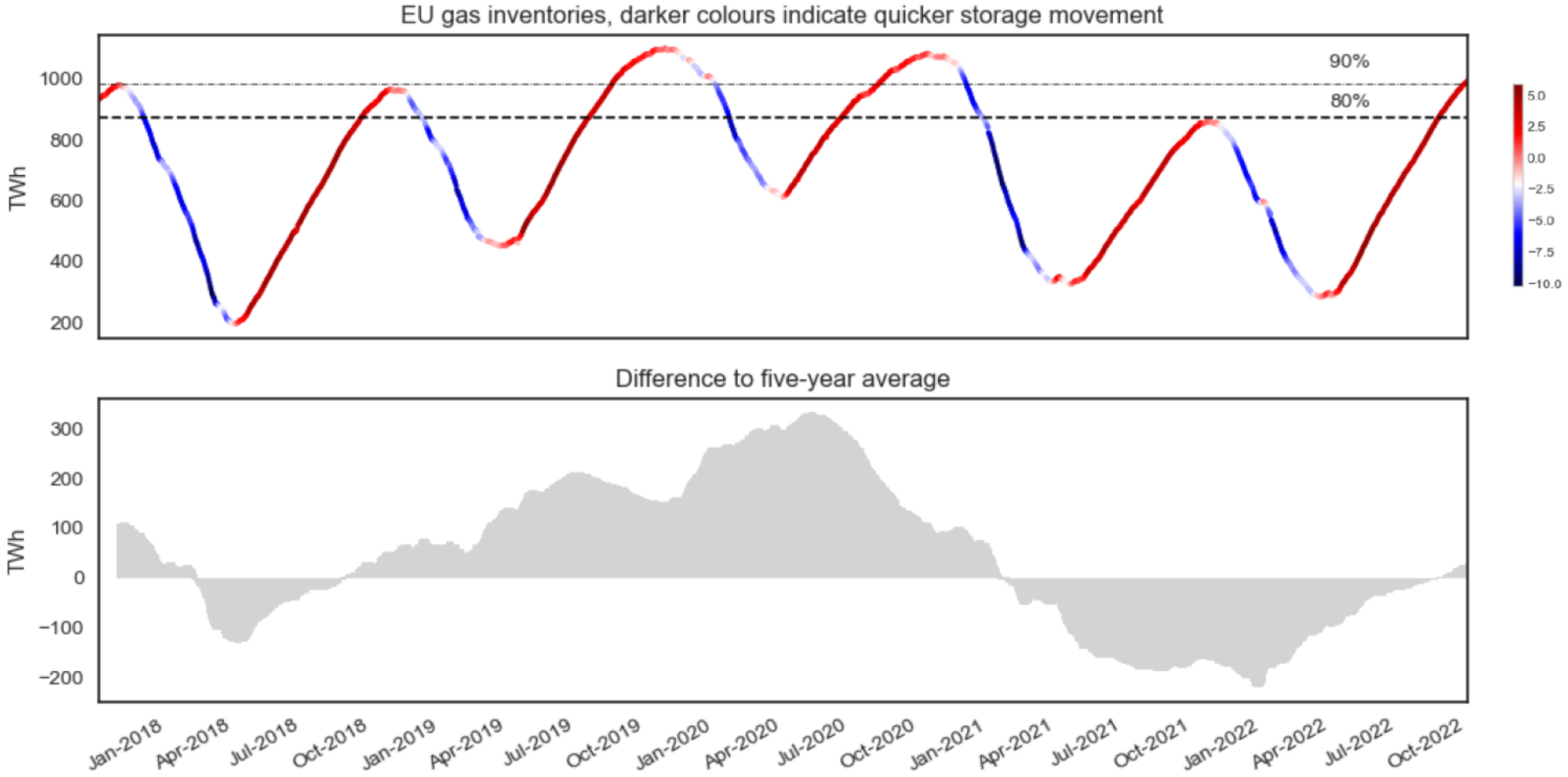
Source: Axpo, Alex Pashley, "European gas outlook"

Price-induced demand destruction: energy saved



Source: Axpo, Alex Pashley, "European gas outlook"

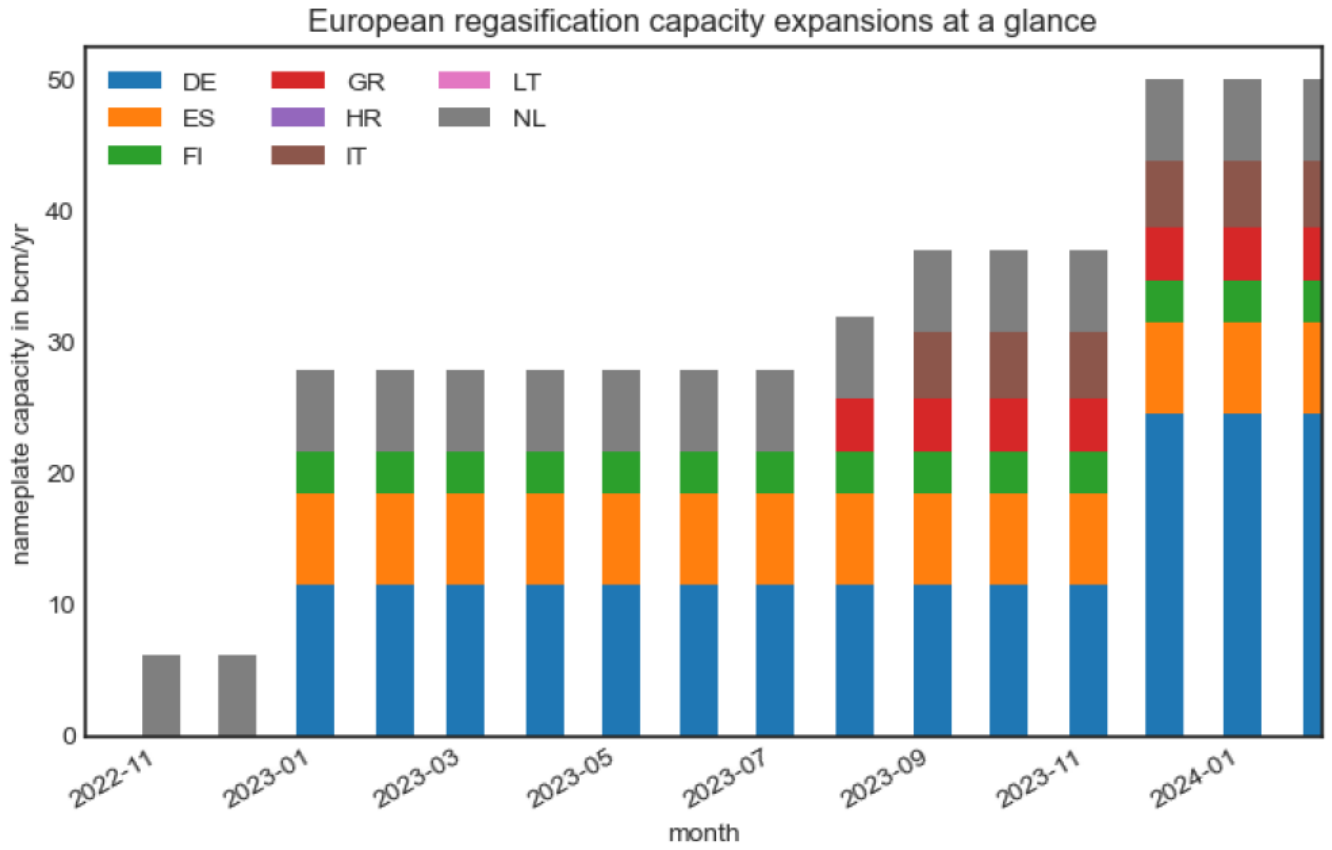
EU gas storage 80% target met 2 months early



Source: Axpo, Alex Pashley, "European gas outlook"

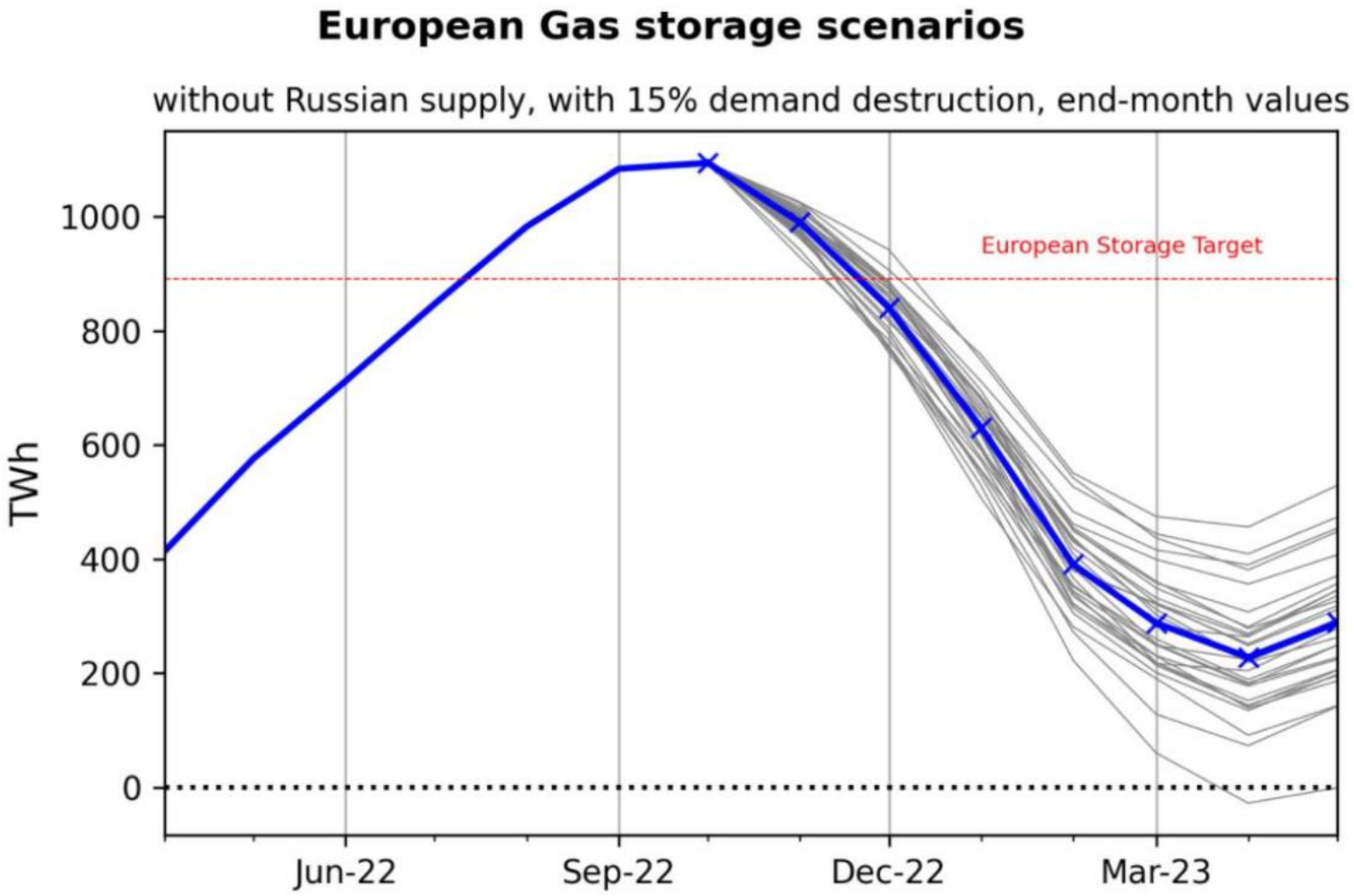
New LNG terminals coming

- Start up of German terminals Brunsbuettel , Wilhelmshaven expected late Dec, early Jan critical for Q1
- Quick commissioning of Eemshaven FSRU in Netherlands grounds for some confidence



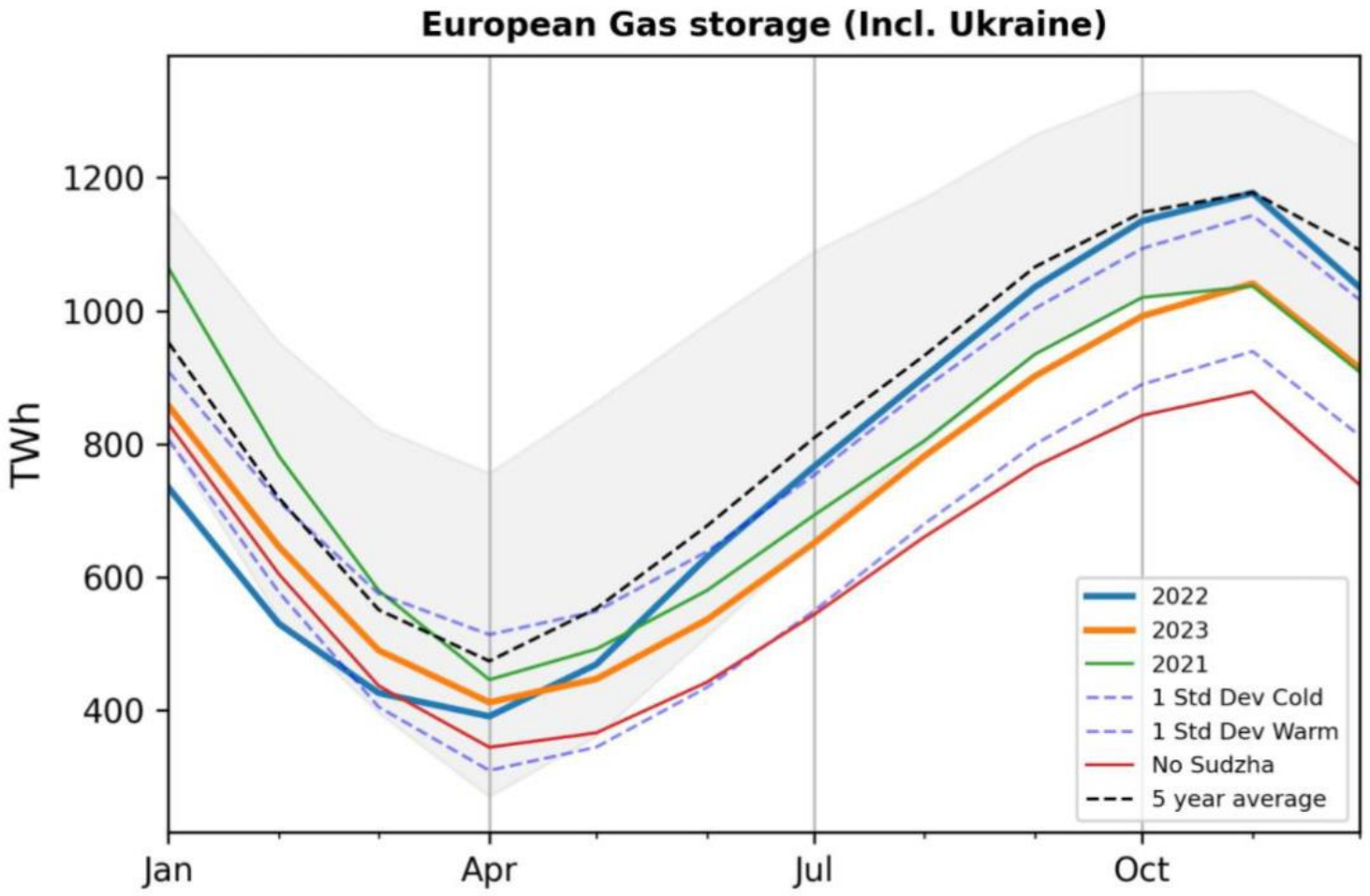
Source: Axpo, Alex Pashley, "European gas outlook"

Europe unlikely to run out of storage this winter



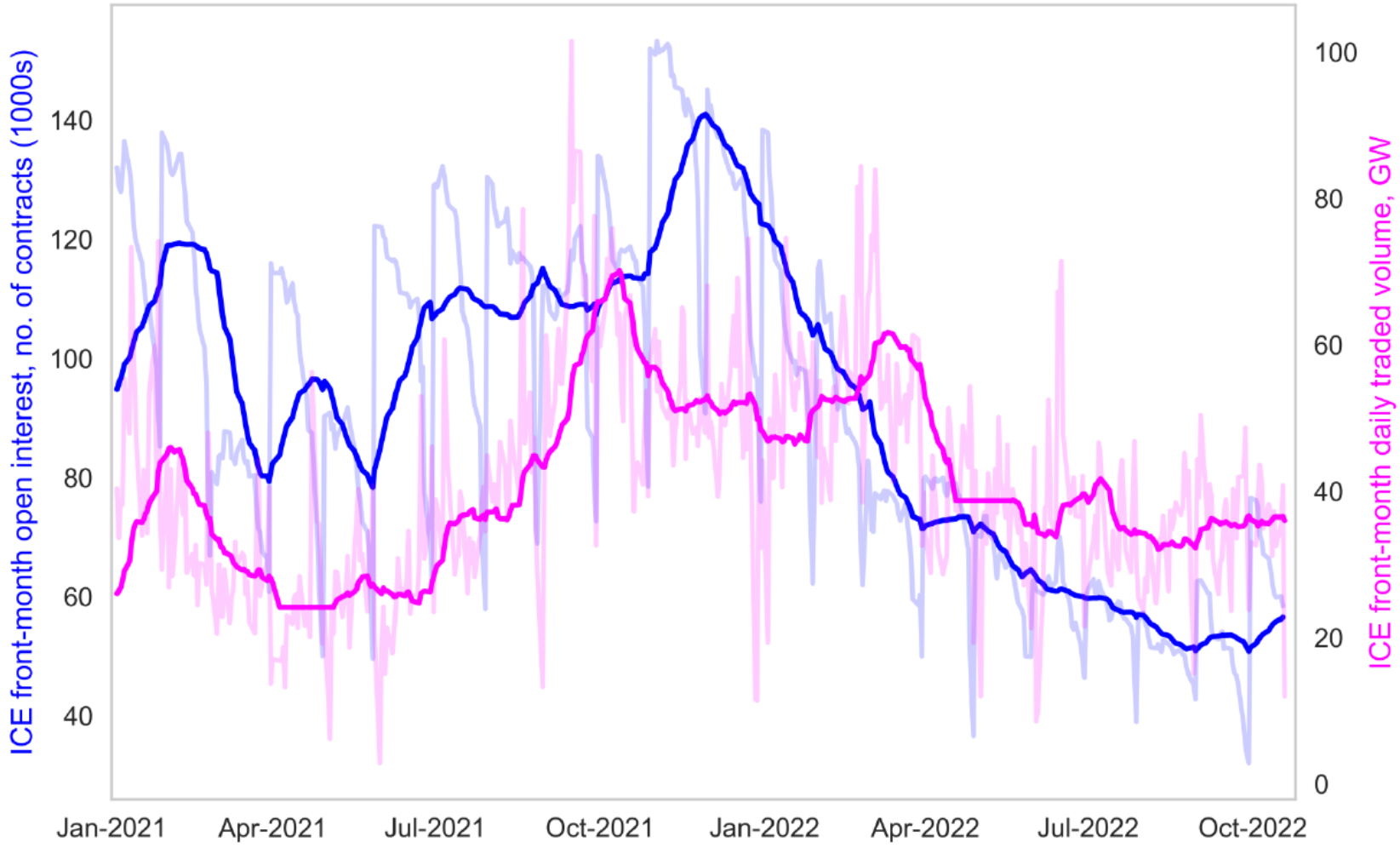
Source: Axpo, Alex Pashley, "European gas outlook"

But refilling for next winter will be challenging



Source: Axpo, Alex Pashley, “European gas outlook”

Liquidity shifting from exchanges to OTC



Source: Axpo, Alex Pashley, "European gas outlook"

The cost and risk of providing relief(1)

The theory of relief: the 3 T's

- **In theory**, relief provided by governments to companies and households should comply with the 3 T's: **temporary, targeted, timely**
- **Easier said than done**: high energy prices will last for **years** with a **widespread impact**

What is being done in practice

- **EU governments have pledged more than €550bn** to shield their economies from energy bills. This climbs to **€710bn when including support for utilities**
  - Member states have already spent c. €200bn
  - The EU Commission considers that c. 70% of measures are untargeted
- Providing **generalized relief is against the ECB's efforts to cool consumer prices**
- Some specific figures: Germany ⇨ €200bn, France ⇨ €100bn, Italy ⇨ €75bn

The risk of going too far

- UK has recently shown that **confidence of international investors has its limits**
- 10y ago, the **real estate bubble** put many financial institutions on the verge of bankruptcy and **led to a sovereign debt crisis**, with some state members facing huge credit spreads
  - Having lost the ability to devaluate their currencies, these member states had to undergo several years of high unemployment in order to recover their competitiveness
- **EU institutions, companies and citizens have to adapt to high energy prices** in parallel with high interest rates. **Relief must be limited to the most vulnerable**

(1) Bloomberg, "Spending big and badly shows energy crisis risks for Europe"

The uncertain coming years(1)

Tailwinds in 2022 that are unlikely to persist

- Filling EU storages over the summer of 2022 benefitted from **factors that might not be repeated in 2023**:
  - 30 bcm of **Russian gas supplied to the EU via pipeline**
  - **Lower LNG imports by China** due to economic slowdown and Covid-induced lockdowns
- **Current mild temperatures are delaying the withdrawal from gas storages**, which means more gas available for the rest of the winter or even the next winter

Specific challenges to be faced

- **Global LNG supply** is **expected to increase** by only 20 bcm in 2023, **much less than the** likely additional **reduction in Russian pipeline deliveries**
- **China's LNG imports could rebound next year** to close to their 2021 levels. This would capture over 85% of the expected increase in global LNG supply
- If Russian pipeline gas supplies to the EU cease completely and Chinese LNG imports recover to 2021 levels, **Europe could face a supply-demand gap of 30 bcm during the key summer period for refilling gas storage in 2023**
  - This gap could represent almost half the gas required to fill storage sites to 95% capacity by the start of the 2023-24 heating season

(1) IEA, "Never Too Early to Prepare for Next Winter: Europe's Gas Balance for 2023-2024"

Ideas for discussion (I)

Capping prices = killing the messenger?

- **In 2021**, **high gas prices were the symptom** of a threat to security of supply: **the problem were not high prices but energy dependence on Russia**
- **In 2022, high prices have helped Europe to get ready for winter**, attracting LNG imports and driving a reduction in demand
- The **forward curve is now mostly flat from Jan'23 to Dec'23** showing that the **gas that Europe saves this winter will be available for next winter**

Marginal pricing of power to be revised?

- **The theory behind marginal pricing** (to produce the right power generation capex incentives) **is questionable** if:
  - Investing in nuclear or large hydro is not possible
  - There are bottlenecks to invest on renewables and power grid expansion

The worst may be yet to come

- As tough as 2022 may seem, **the coming years will be more challenging**.
- **EU** must provide a **consistent and coordinated regulatory response** to this challenging crisis, and **avoid unnecessary market intervention**
- **Opportunity to focus efforts** on **accelerate investment on renewables** and in parallel **reinforce conventional energy security of supply**
- The **European gas market has worked**, but has unveiled **deficiencies** in the **energy policy of member states** and in the **risk and financial policy of energy companies**

Ideas for discussion (II)

Energy companies have required support

- Many **European governments** have provided some form of **support to their most relevant energy companies** to mitigate the risk of supply disruptions
  - Companies with Gazprom contracts have suffered huge losses
  - Companies with short positions in exchanges have seen massive cash outflows
- **Are energy companies too relevant to fail?** Is this similar to the financial crisis?

The B/S of energy companies has to be stronger

- As with banks in the financial crisis, the energy crisis has shown that **energy companies were assuming risks that their B/S were not prepared for**, e.g.:
  - **Long-term contracts** with low prices but with **unreliable counterparties**
  - Significant **short positions in exchanges** to hedge long positions in energy markets
- **Energy companies** play a **social role** that makes them **too relevant to fail**
  - Bail-outs or nationalizations not the solution: more private capital is required
- **Path followed by banking sector**: stricter supervision, capital requirements, consolidation


axpo