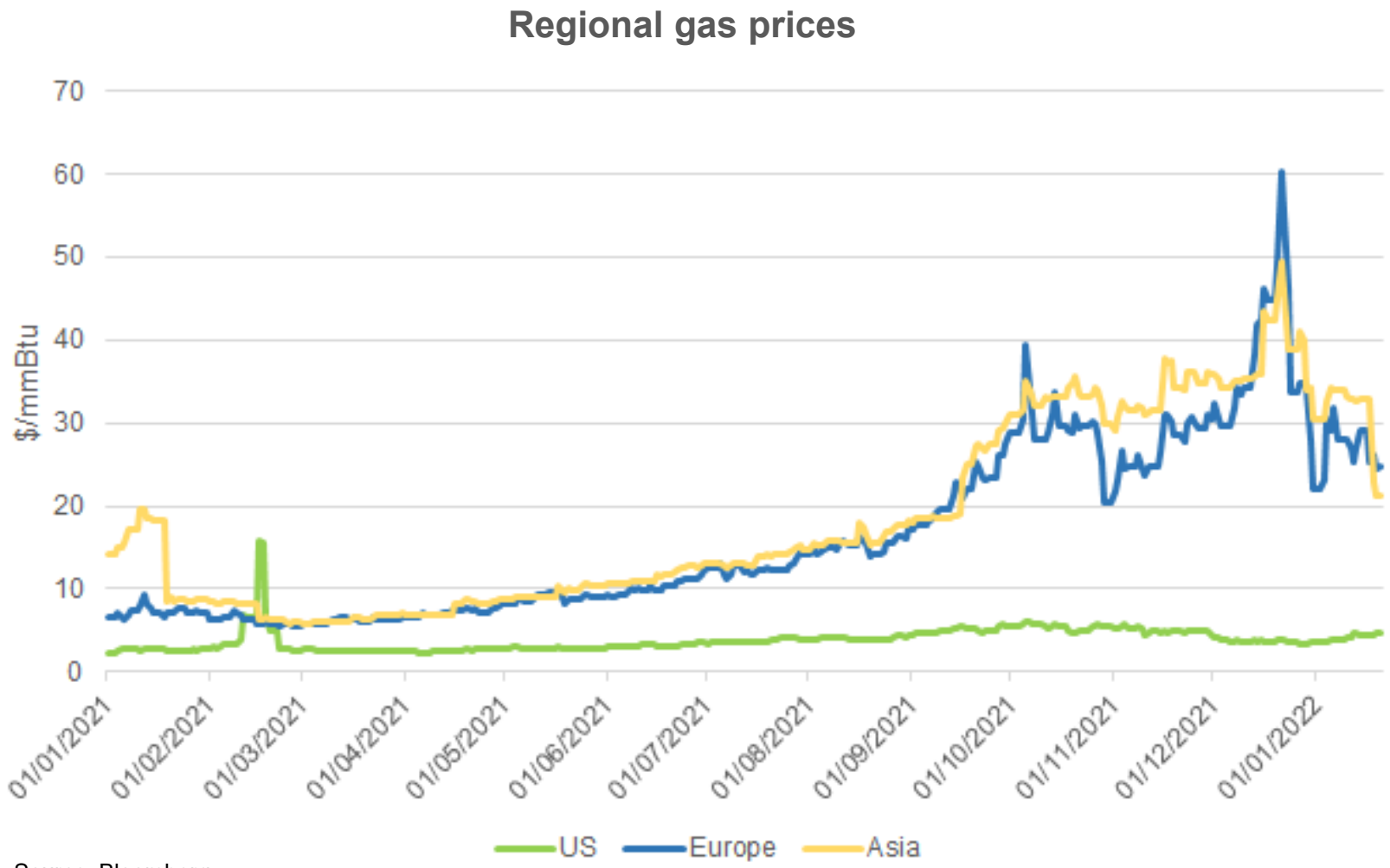
COLUMBIA | SIPA
Center on Global Energy Policy

La crise de l'énergie en Europe
Pourquoi les prix flambent?

Anne-Sophie Corbeau
7 Février 2022

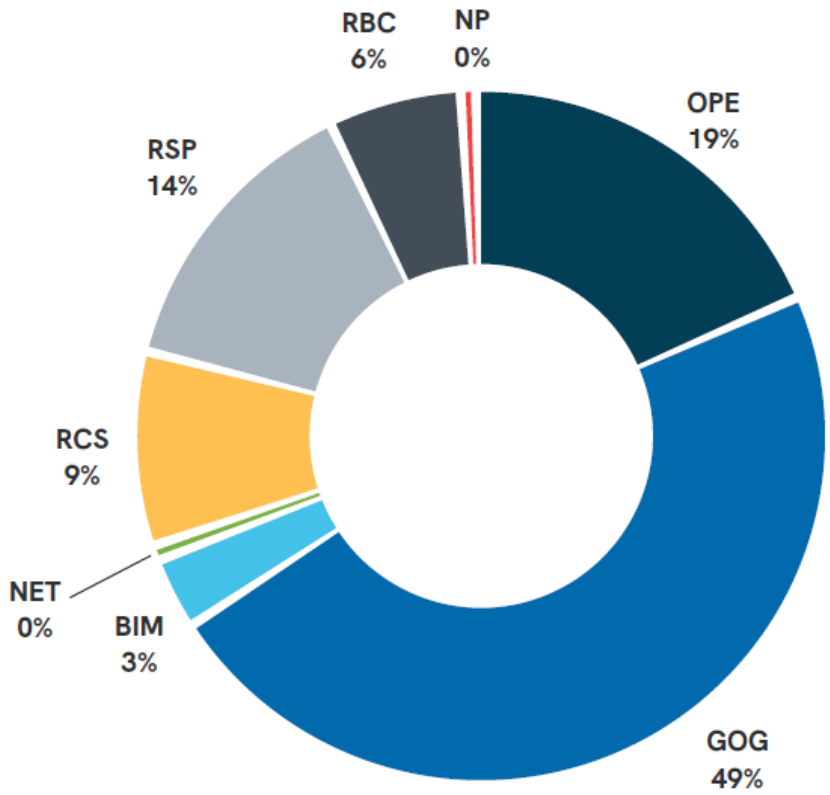
A year of volatility for European and Asian gas spot prices



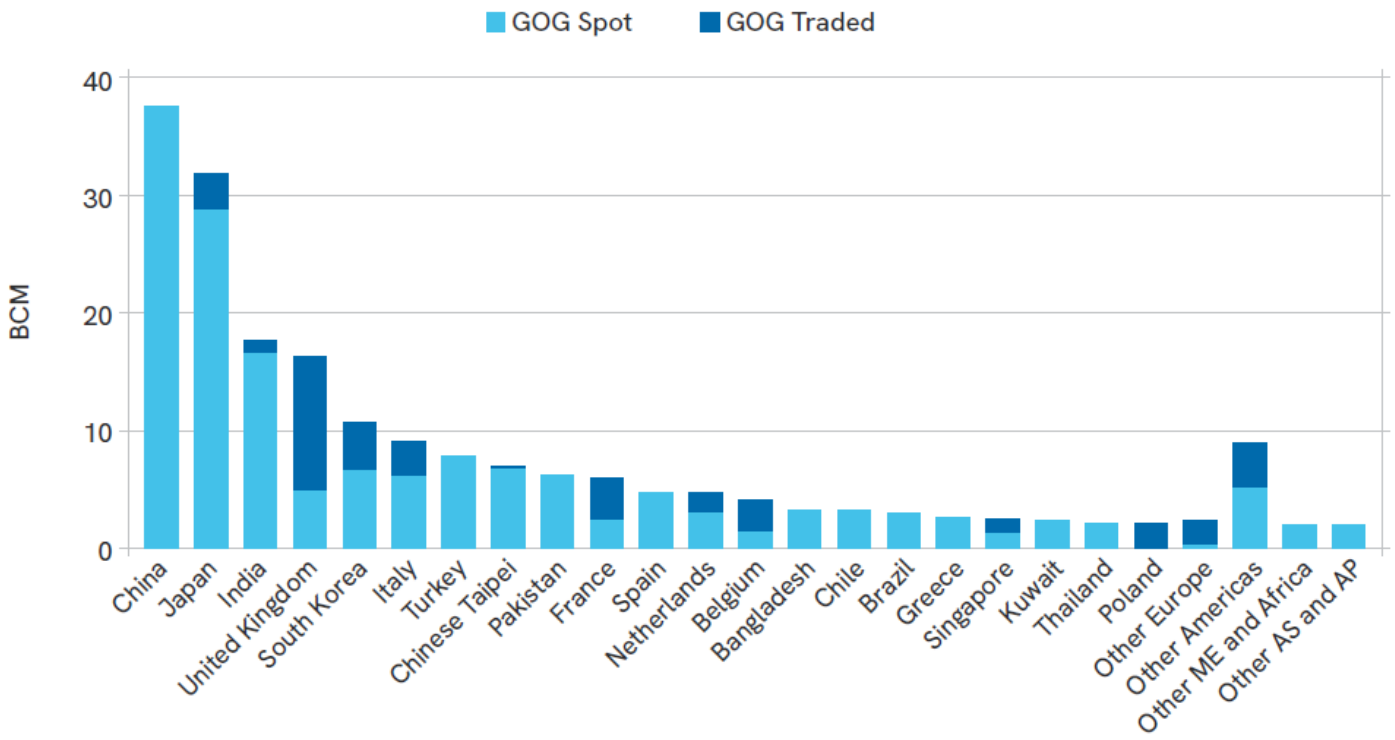
Source: Bloomberg.

Not everybody has been impacted the same way

Gas price formation, 2020



Spot LNG trade, 2020



Source: IGU wholesale gas price survey 2021.

How did we get there?

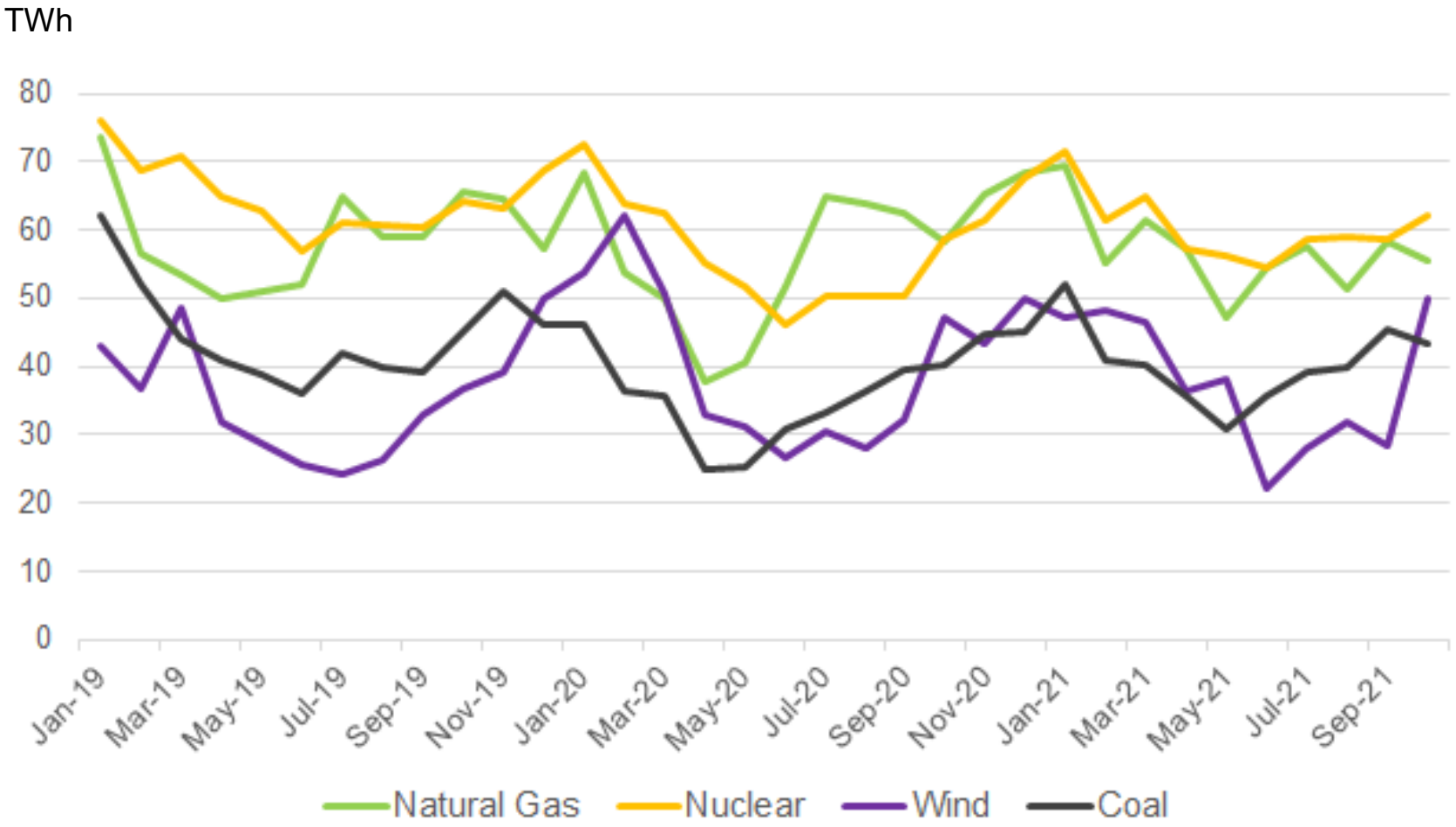
- A strong economic rebound
- Lower than expected renewable generation (droughts in Brazil & China; lower wind in Europe)
- Colder winters (in January 2021 in NE Asia, long winter 2020/21 in Europe); hot summers
- A combination of high coal prices and carbon prices pushing natural gas switching prices upwards in the power sector
  - Coal prices went up to ~$250/t in October 2021 before halving
  - Carbon prices have steadily increased up to ~€91/tonne in 2021 (~€96/tonne on Feb 4, 2022)

DEMAND

- Many LNG supply issues (delayed maintenance, fire, supply shortages)
- Lower than expected deliveries from Russia due to
  - Very high withdrawals from storage during Winter 2020/21 in Russia due to cold weather
  - Tense geopolitical situation around Nord Stream 2 and Ukraine
  - Lower deliveries through Ukraine and Belarus since late December 2021
  - Absence of sales on the ESP since October 2021

SUPPLY

Nuclear and wind underperforming (OECD Europe)



Wind generation (Jan-Oct)

+18% 2020 vs 2019

-5% 2021 vs 2020

Nuclear generation (Jan-Oct)

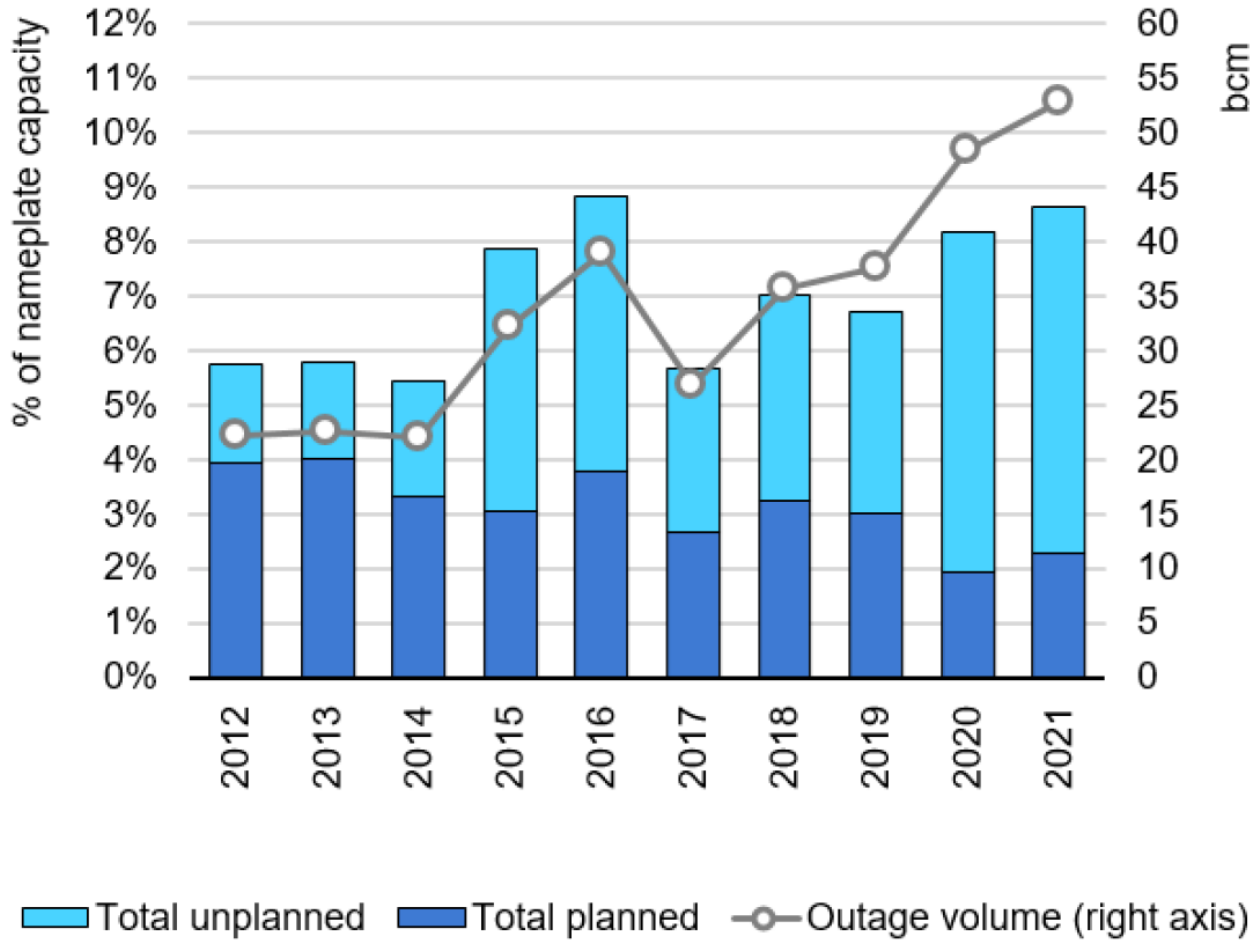
-7% 2021 vs 2019

Coal is coming back

+16% 2021 vs 2020

Source: IEA (MES)

A high number of LNG supply issues



Unplanned maintenance on top of planned maintenance

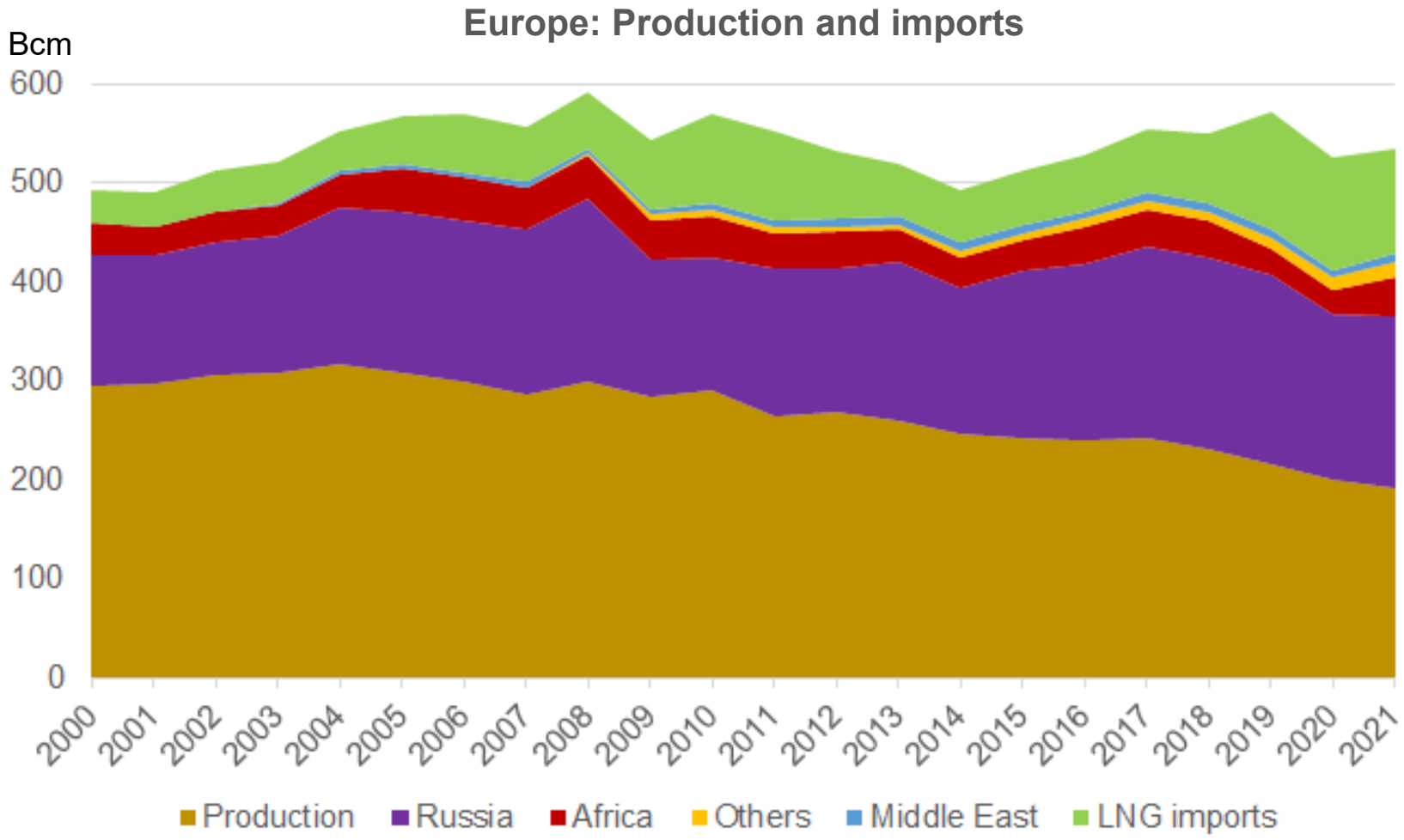
- Issues with gas supply in Trinidad, Malaysia, Nigeria
- Facilities not operating: Snøhvit (since October 2020), Prelude FLNG (since December 2021)
- Various issues: Peru LNG, Equatorial Guinea, Gorgon LNG (Australia), Skikda (Algeria), Sakhalin (Russia), US Gulf Coast

Source: IEA.

Europe got exactly the gas system it wanted

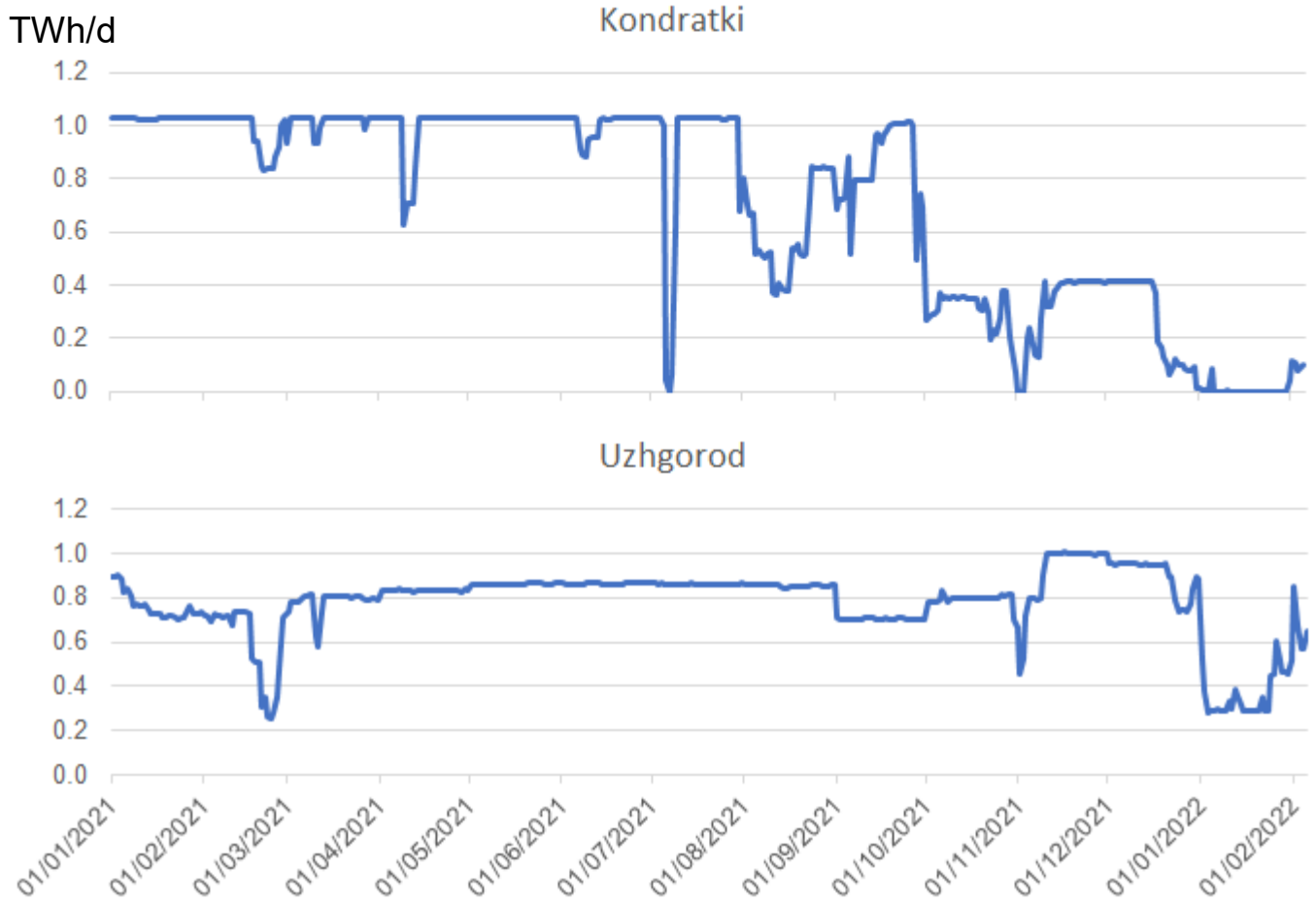
- Over the past two decades, Europe has implemented market reforms (Directives) to move to a system where prices are set by supply/demand
- This was accelerated by the 2008-09 crisis: as oil-linked gas prices were significantly higher than spot prices, European buyers pushed for a switch to spot prices in their contracts
- There was an implicit trust in flexible, liquid and transparent LNG markets to save the day
  - Especially after a few years of oversupply
  - But Europe competes with Asia (which commits to LNG through LT contracts), occasionally with L. America
  - If markets are tight, this flexibility comes at a cost
- For the past decade, Europe was winning as spot prices were cheaper than the previous oil-linked gas prices but not in 2021, and probably not in 2022
- Gas provides flexibility in the power sector – but little thought has been given on how to deal with extreme changes

Europe remains dependent on Russian gas and is the balancing market for global LNG



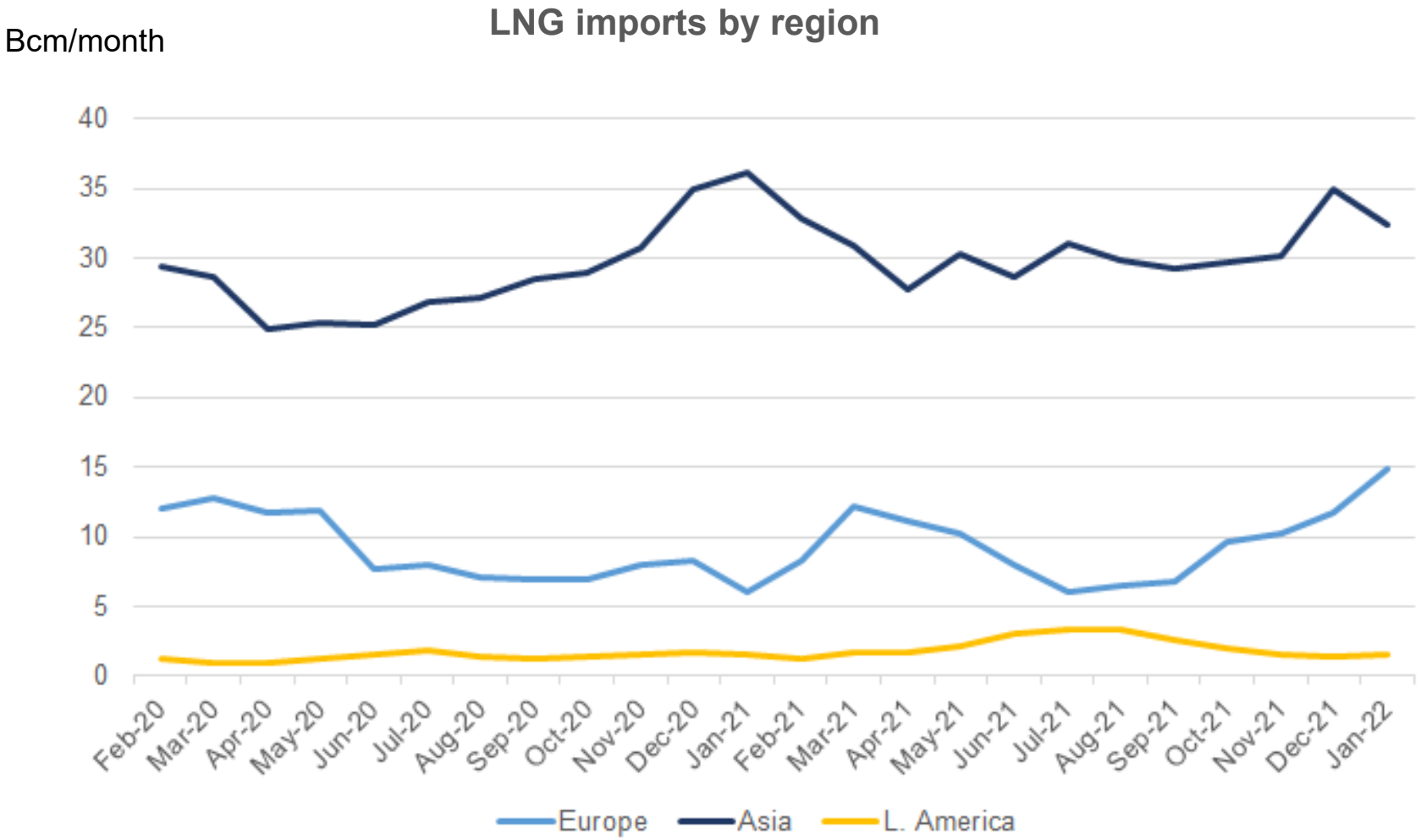
Sources: bp Statistical Review, IEA.
Notes: 2021 estimated based on various sources. Imports represent total imports, exports of LNG (Norway) and pipeline gas to Ukraine are not included.

Flows through Ukraine and Belarus have been low



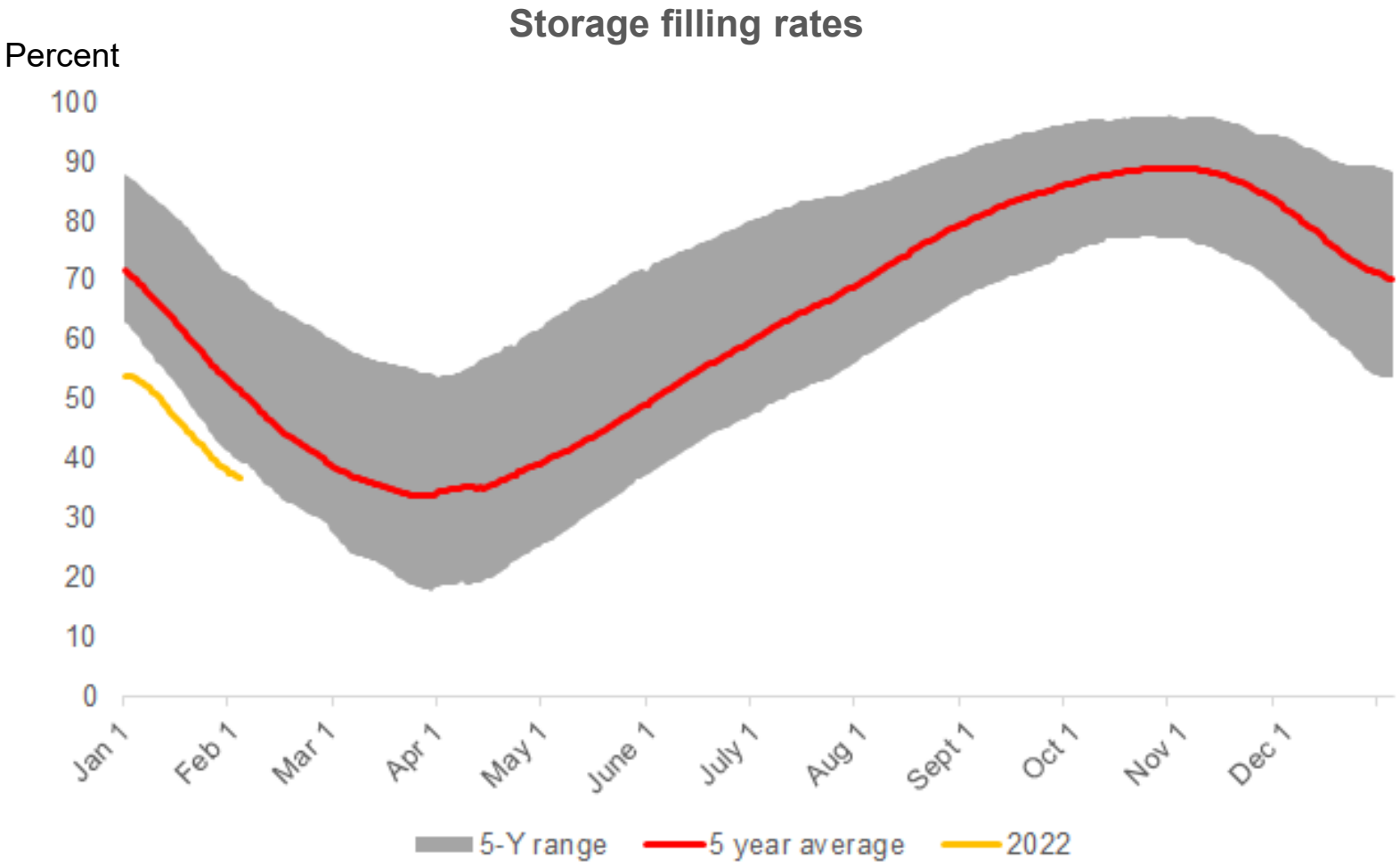
Sources: ENTSOG, Physical flows, Gaz-system, Eustream

Since December 2021: LNG to the rescue



Source: Bloomberg, Data for the month of January 2022 prorated as of 20 January.

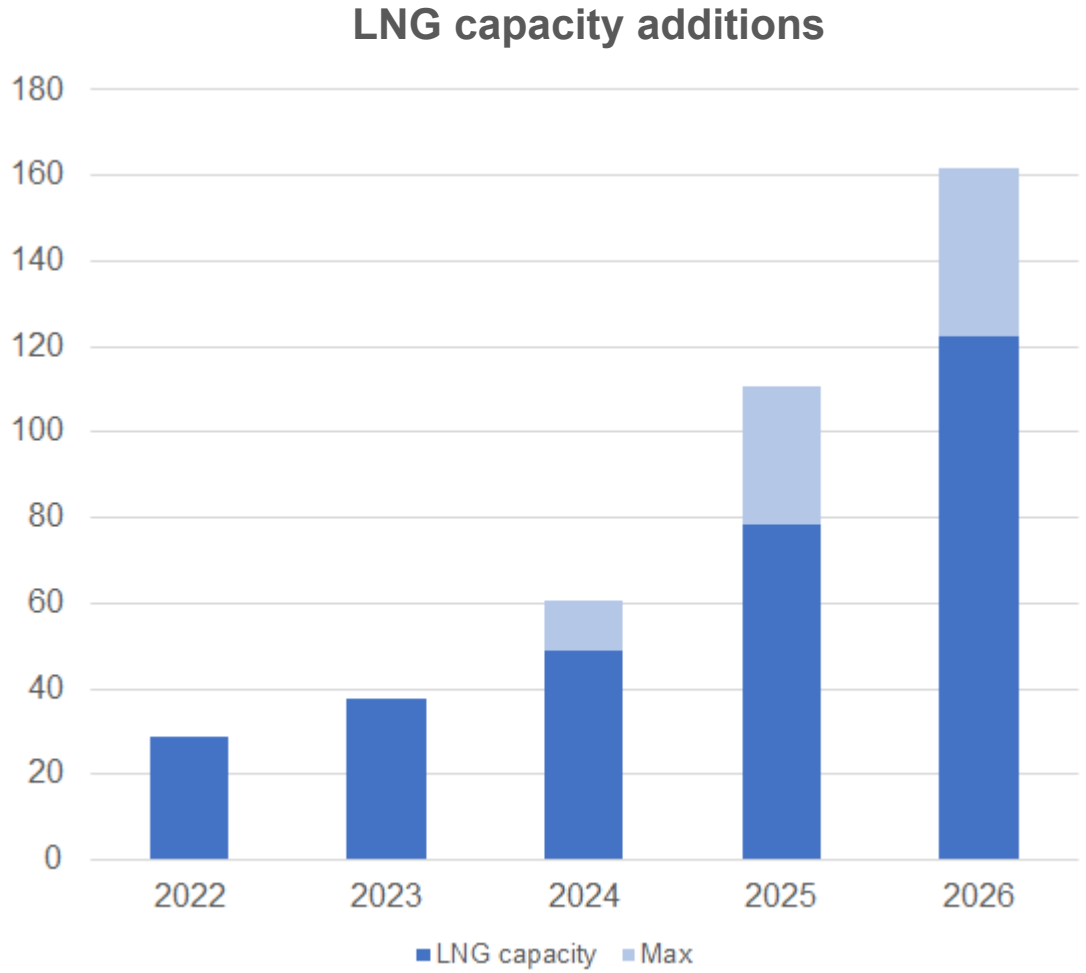
But gas storage levels are still well below the 5-year range



Source: GIE data

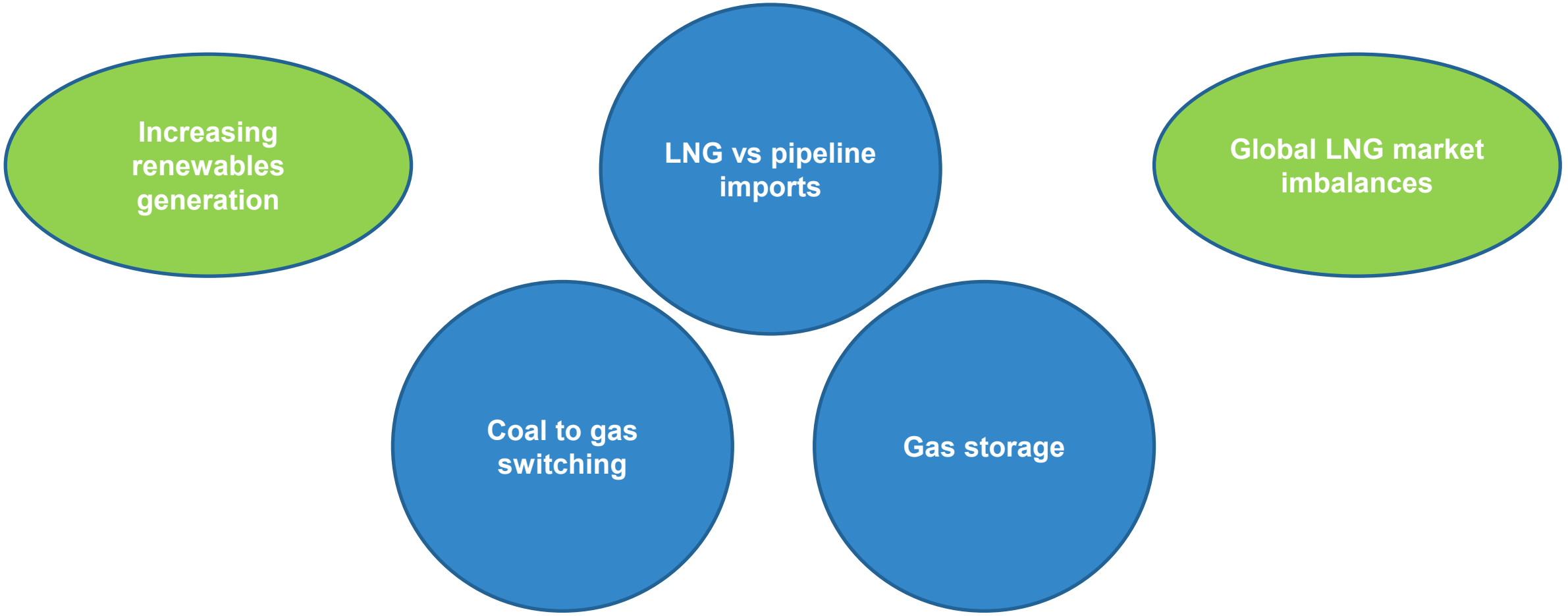
Beyond this spring, gas prices are likely to remain elevated

- Level of European storage in April 2022 and starting date of Nord Stream 2 determine the level of tightness
- Additions of LNG export capacity are reduced over 2022-24
  - Significant uncertainty over the timing of projects over 2025-26
- Chinese buyers have been contracting **a lot** in 2021 (~30 mtpa)
- Potential for gas/LNG demand being affected by high gas prices in the long term



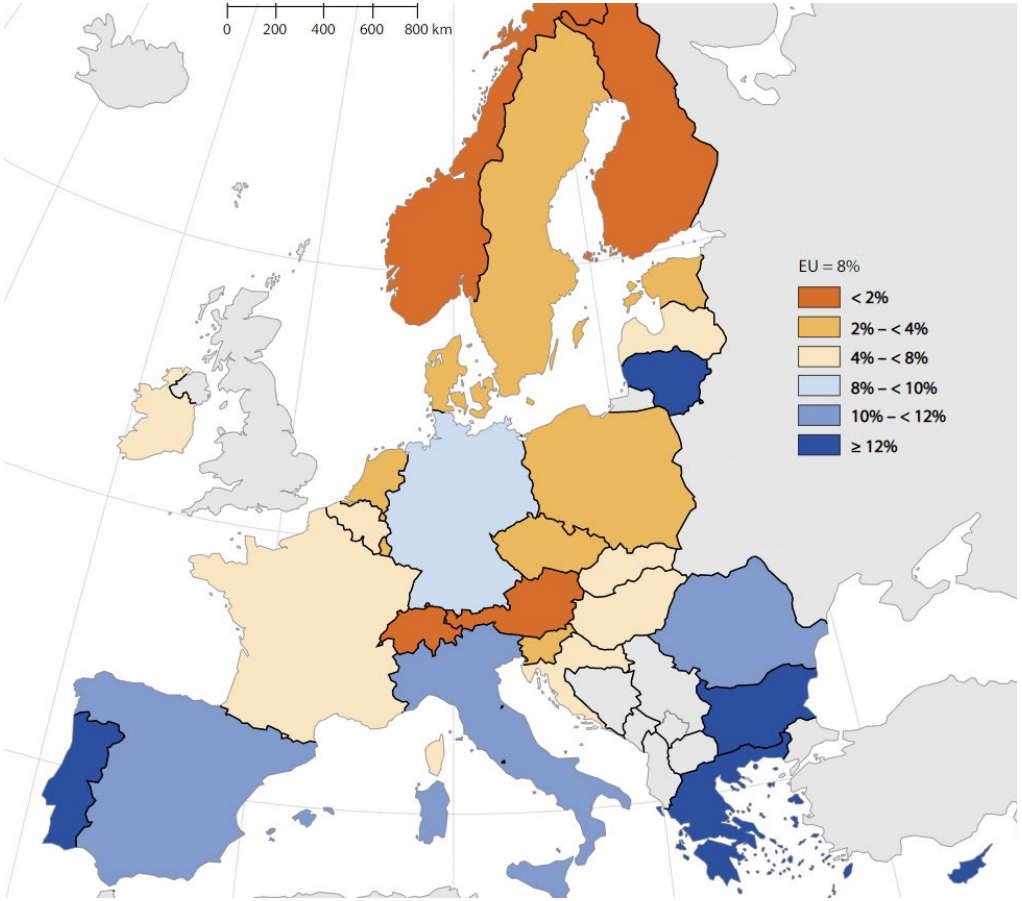
Source: press releases, author's assessment

Less flexibility will expose Europe to more volatility



Energy poverty: likely to become a growing issue

Inability to keep home adequately warm, 2020 (% of the population)



Source: Eurostat.
Note: Czechia, France, Netherlands, Poland, Slovakia: provisional data; Ireland, Italy, Latvia: 2019 data

Thank You

COLUMBIA | SIPA
Center on Global Energy Policy