



7 July 2023

Banco de España-CEMFI-UIMP Conference on the Spanish Economy

What happened last year?

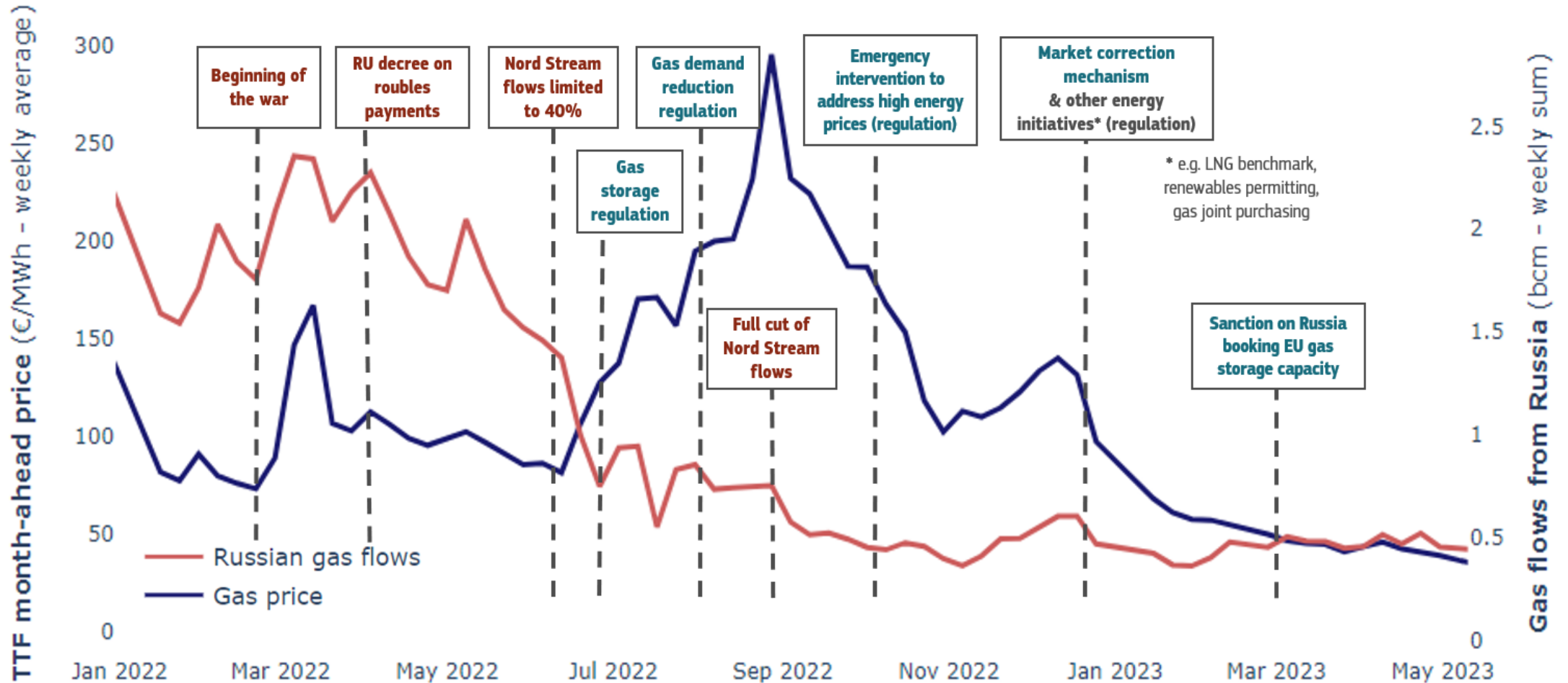
State of play on the recent energy crisis
& perspectives for next winter

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DG ENER

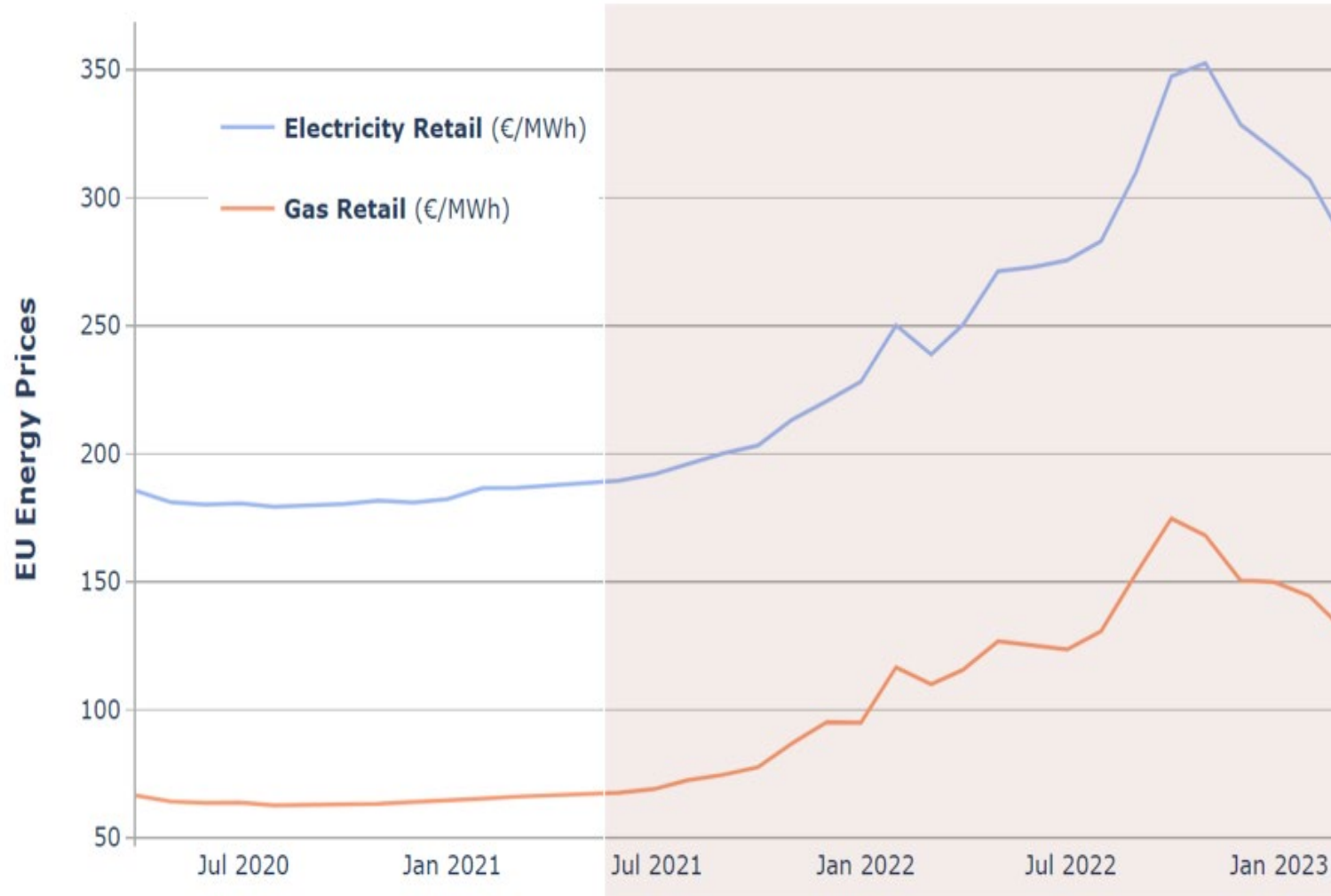
European Commission

2021-2022 energy crisis not related to the green transition: a (Russian) natural gas crisis...



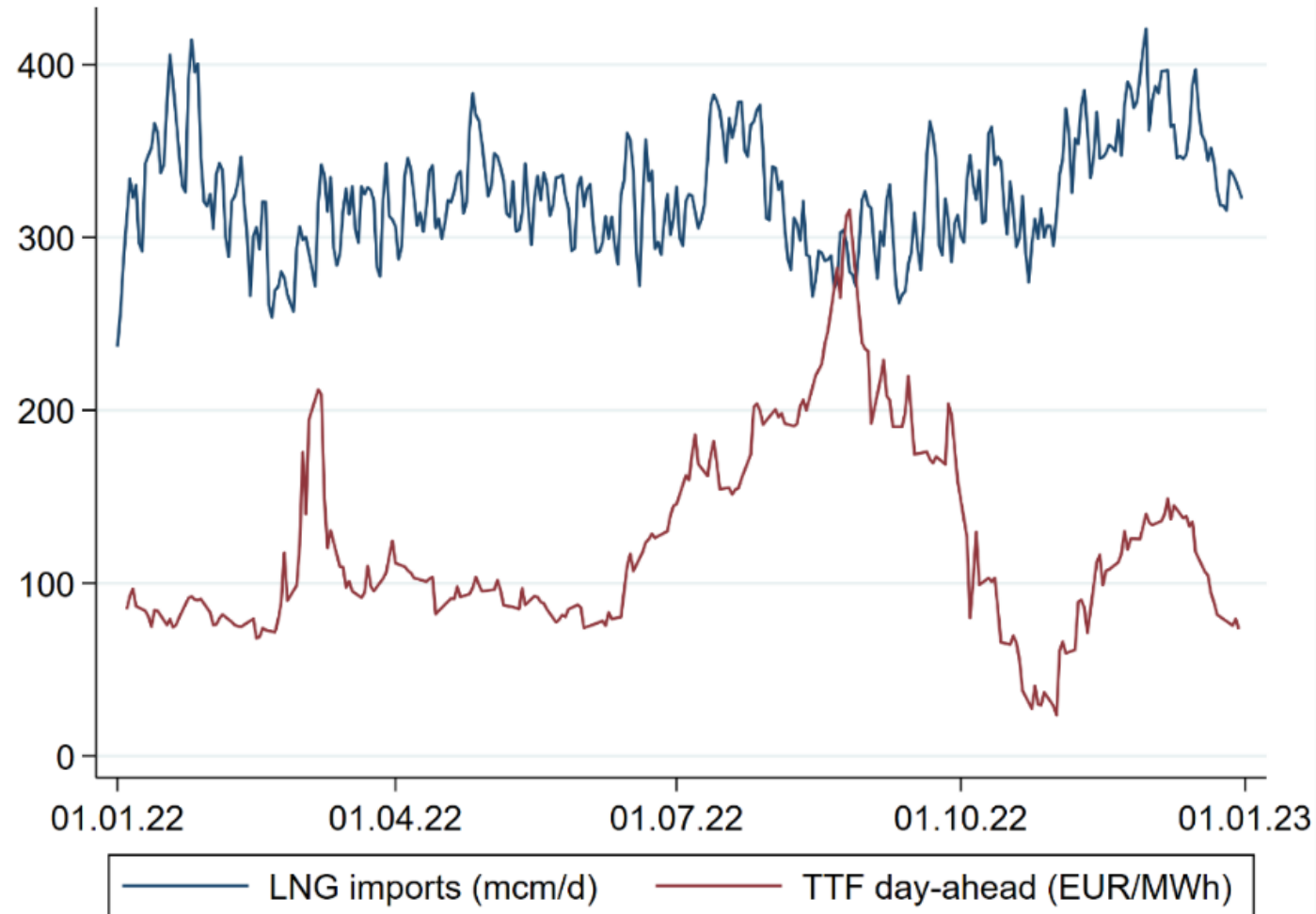
Source: ENER/CET based on S&P Global Platts and ENTSO-G Transparency Platform

...translating into high electricity prices



Source: European Commission based on VaasaETT

Summer 2022: fear of shortages met with a temporarily infrastructure constraint



Source: ENER Chief Economist Team based on ENTSO-G and Platts

Decisive EU policy action and market rebalancing

Similar spikes as those experienced in the summer of 2022 less probable this year all things being equal:

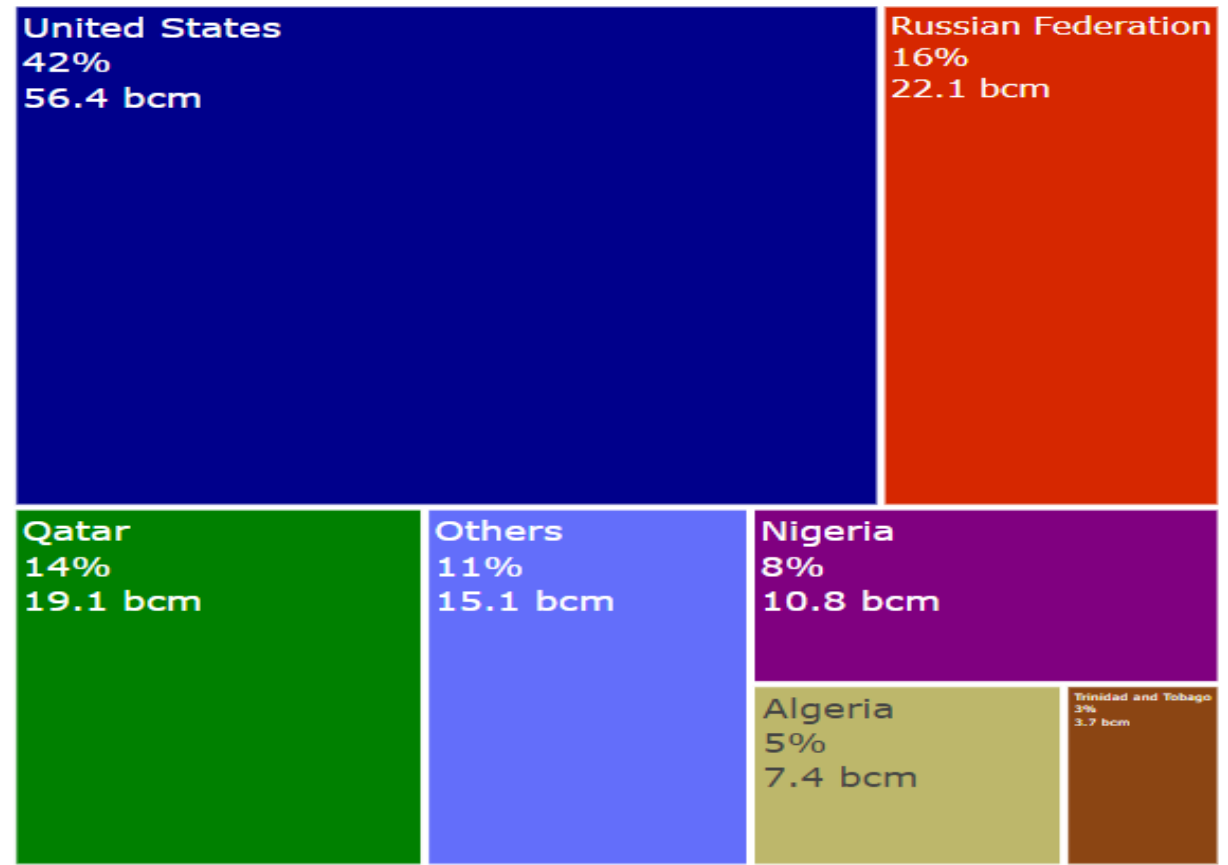
- 1. High storage levels:** 68.6% at 1st of June 2023 versus 49.0% on average on the same day during the reference years (2016-2021) – on track to be filled by the end of august
- 2. Natural gas demand reduction:** 18% reduction until march 2023 (part of it structural)
- 3. More infrastructure added to remove bottlenecks:** 30bcm additional regasification capacity + 56GW renewables in 2023
- 4. Lower possibility for Russia to weaponise energy markets:** from 45% of total EU natural gas imports at the start of the war to less than 10% now
- 5. Less uncertainty:** no fear of shortages – EU premium market

LNG imports increased from 80 bcm in 2021 to 135 bcm in 2022 (+66% increase)

2021 - 80.4 bcm



2022 - 134.7 bcm



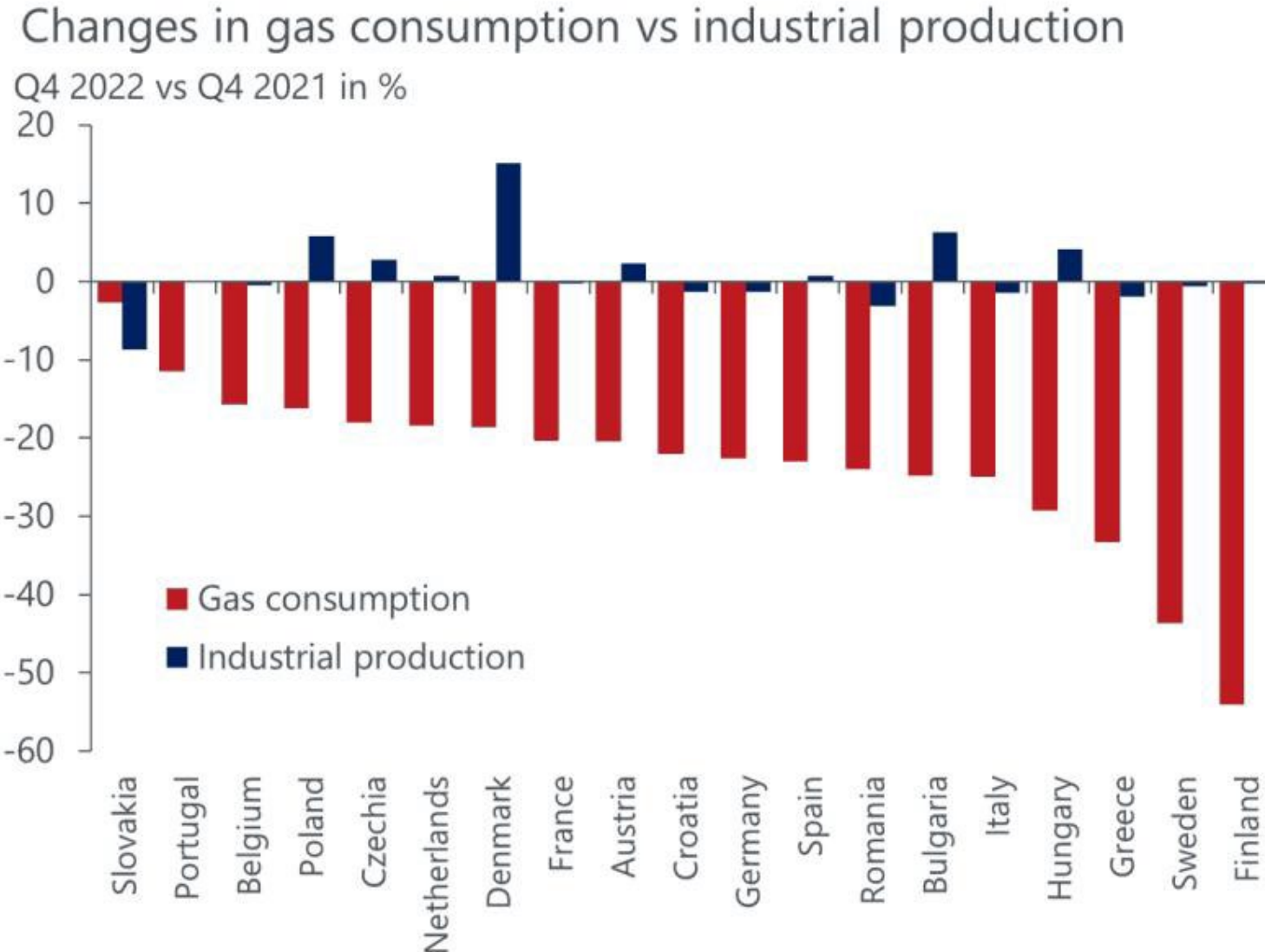
New EU gas infrastructure projects (2022-24)



New LNG importing terminal projects (around 30 bcm/year) are helping EU to secure alternative supply and bring prices down

- **8 new FSRU:** 3 in operation (20.5 bcm/y) and 5 to be commissioned (25 bcm/y)
- **4 new LNG terminals:** 1 in operation (0.13 bcm/y) and 3 to be commissioned (23.3 bcm/y)
- 1 LNG expansion in operation and 1 LNG expansion to be commissioned (1.5 bcm/y)
- **4 new pipeline** projects in operation
- **TOTAL added capacity via FSRU and LNG:**
 - 20.6 bcm/y in operation
 - 49.8 bcm/y to be commissioned

Gas demand reduction is possible









Source: Oxford Economics/Eurostat

Lessons learned from the crisis

1. Expanding installed capacity of **renewable energy sources can help limit prices spikes** by minimising the role of gas in electricity generation...**but it will take time for very dramatic effects and will vary between countries.**
2. The **pass-through from wholesale to retail energy prices differs significantly across Member States** driven, among others, by taxation, contract indexation, public support, etc.
3. In the context of a turbulent market, **natural gas futures have proven not to be an accurate predictor of future price developments.**

Price pressures: sequence and policy choices matter

<p>Changes in commodities and the energy mix, if no cheap and stable access to:</p> <ul style="list-style-type: none">• Critical raw materials• Diminishing volumes of fossil fuels setting electricity prices during the transition	
<p>Changes in overall demand and consumption patterns, including:</p> <ul style="list-style-type: none">• Demand-response and self-consumption• A higher capital expenditure with lower operating costs	
<p>Increase in the share of renewables in the electricity generation coupled with demand response, storage and higher level of interconnections, but not before 2030/2035.</p>	
<p>Replacement of the capital stock and infrastructure (incl. skilled workforce) - about €487bn /year in the energy system alone</p>	
<p>Carbon prices and taxation</p>	
<p>Uncertainty and higher risk premiums</p>	

Thank you

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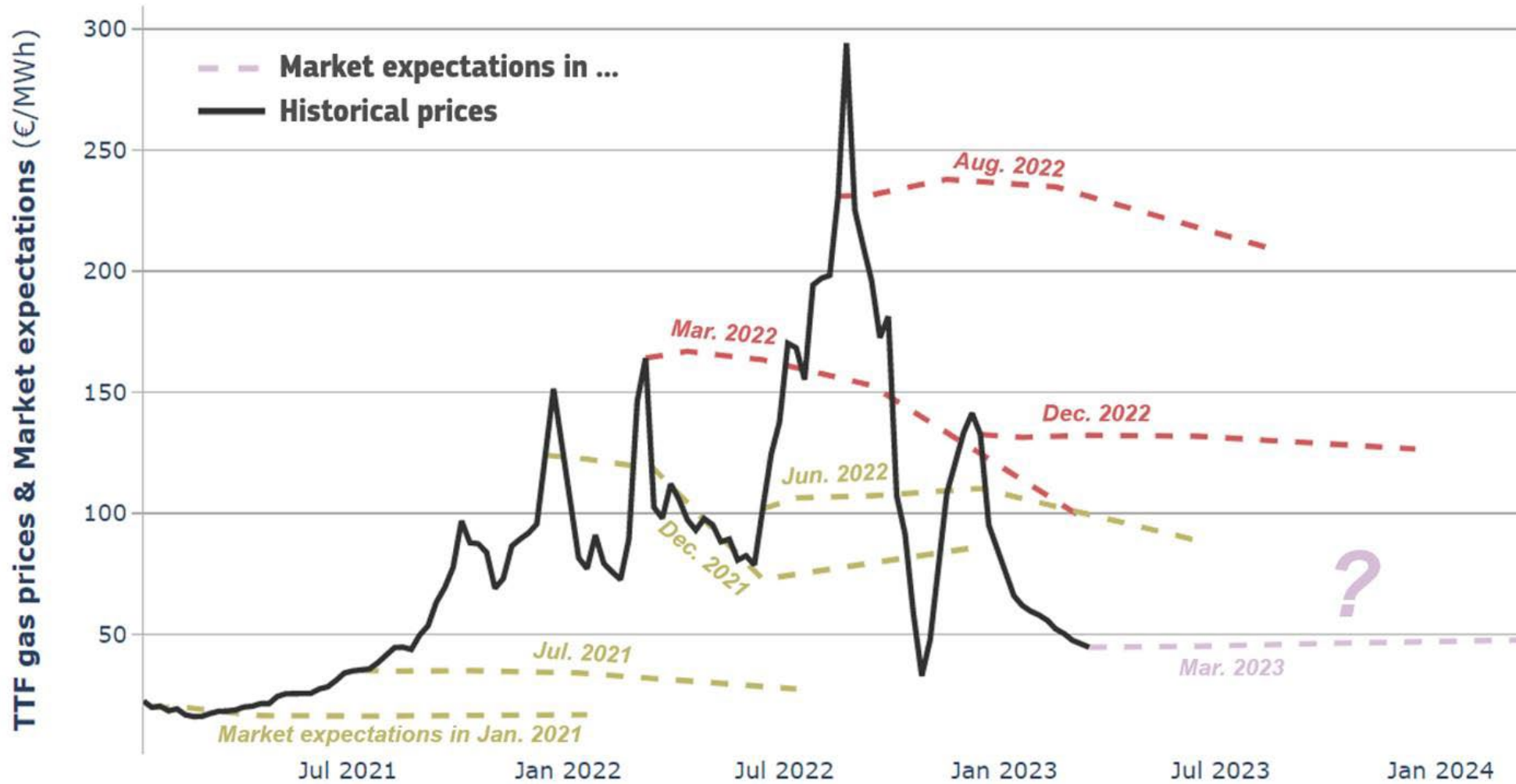


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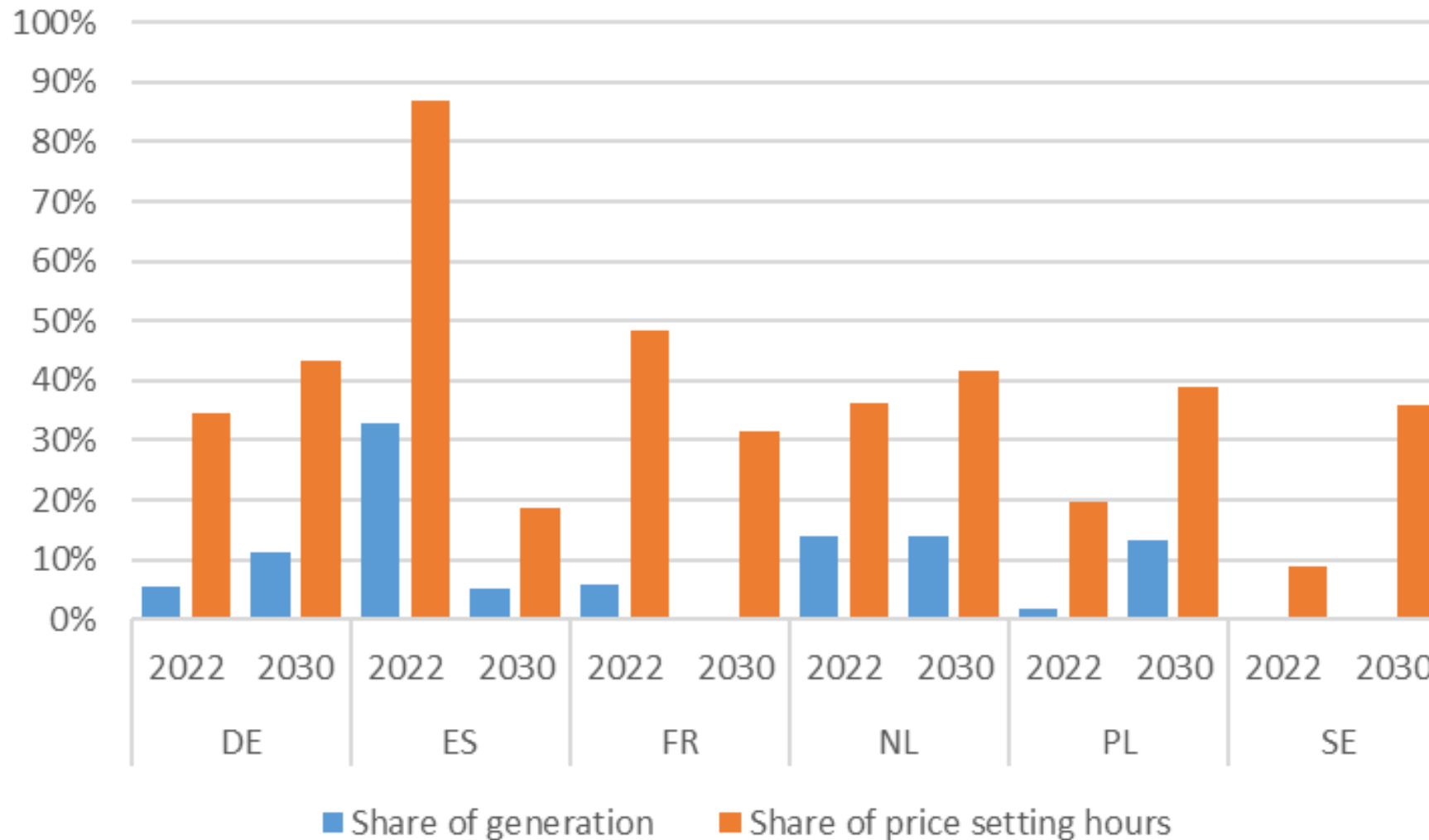


Historical natural gas prices vs futures



Source: DG ENER Chief Economist Team based on BNEF

Fossil fuels still expected to set electricity prices during a significant number of hours in 2030



Source: DG ENER Chief Economist Team based on METIS model