Testimony before the European Affairs Committee
House of Lords, UK Parliament

The European energy crisis and the future of the UK-EU relations in the field of energy and climate

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Presenting joint research with Georg Zachmann, Giovanni Sgaravatti, Ben McWilliams, Conall Heussaff, Cecilia Trasi, and Levi Severson
Europe has defeated Putin’s energy blackmail…

Russia cut 80% of its gas supplies to Europe...

…but Europe managed to refill its storages

Figure 1: EU + UK Natural Gas Imports [by source]

Figure 5: EU Gas Storage

Source: ENTSO-E, https://transparency.entsoe.eu/#/map
Source: AGSI: https://agsi.giec.eu/#/
…notwithstanding its “perfect storm” on energy
How has Europe managed to do so?

**LNG**
Y-o-y increase by 70%

**Demand reduction**
Y-o-y reduction of 10%

A bit of luck, finally
Weather so far warmer than usual

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**Figure 1. EU + UK Natural Gas Imports (by source)**

- LNG: Y-o-y increase by 70%
- Demand reduction: Y-o-y reduction of 10%
- A bit of luck, finally: Weather so far warmer than usual

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**EU27 Natural Gas Demand, Jan-Oct 2022 vs 2019-21**

- Household and Industry: -13%
- Power: -10%
- Total: -10%
All of this came at a high cost, with important fiscal implications.

TTF evolution
Increase vs Jan 2021 ranged x3.5 to 18

Since Sept 2021, European governments earmarked and allocated €674 billion to tackle high energy prices, of which €97 billion by UK.
Europe is not out of the woods. 2023 might be even more challenging than 2022.

Key elements of uncertainty

- Fate of remaining Russian gas supplies
- French nuclear developments
- China’s LNG demand outlook (see chart)
- Weather (winter & summer)
- Type of demand reduction

Growth in EU LNG Imports Mirrors Decline in China’s LNG Imports

[Chart showing LNG imports growth from 2016 to 2022 for EU and China, with actual imports and growth rates indicated.]

Source: Kpler LNG Service. Data to October 31, 2022.
Europe’s 2023 energy security starts now: Key to focus on demand reduction

Demand reduction remains a top priority: different scenarios for EU gas storage

- Average Demand and Residual Russian Flows
- Average Demand without Russian Flows
- 10% Demand Reduction with Residual Russian Flows
- 10% Demand Reduction without Russian Flows
Europe’s 2023 energy security starts now: Key to deliver the new FSRUs

Additional regassification capacity in EU-27 and the UK
From LNG infrastructure coming online in 2022 Q4 -2024 Q4, in bcm/year

Source: Bruegel on publicly available data.
Note: The new EEMS Energy Terminal that has become operational in 2022 Q3 is included in the baseline. Natural gas amounts coming online in 2023 and 2024 due to LNG infrastructure developments is grouped in regions: Baltics (Estonia and Latvia), Germany, Poland, Southern Europe (Croatia, Cyprus, Greece and Italy) and Western Europe (Belgium, France and Netherlands).
Europe’s 2023 energy security starts now: Key to unleash green alternatives
UK-EU energy relations: short-term issues

- Maintaining cross-border trade. While the UK is currently providing a lifeline to NW Europe, that could swiftly change.
- The cost of the UK government’s price cap is directly proportional to wholesale market prices which are influenced by demand (and subsidies) in NW Europe.
- Cooperation on demand reduction. Lessons from Europe on how to sensibly inform citizens about low impact tools for reducing demand (and bills).
- Consequences of EU’s entrance into LNG markets (with joint purchasing) and the new competition.
UK-EU energy relations: short-term issues

UK Electricity Cross Border Exchange in GWh, 2022 YTD

- **Net Exporting**: FR (blue), BE (red), NL (yellow)
- **Net Importing**: FR (blue), BE (red), NL (yellow)

Source: Entso-e
UK-EU energy & climate relations: longer-term issues

- Post-Brexit institutional arrangements:
  - Inclusion in the EU ETS
  - Effects of the EU CBAM on UK
  - Strengthening cross-border electricity and gas trade with the continent
  - Potential hydrogen trade (export) into the continent, under which conditions will (potentially blue) hydrogen be considered as low-carbon?

- North Sea energy cooperation, rapid push for renewables.

- Cooperation on climate change mitigation.
Thank you!

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