

War and its consequences

cernoch@mail.muni.cz

Both sides miscalculated

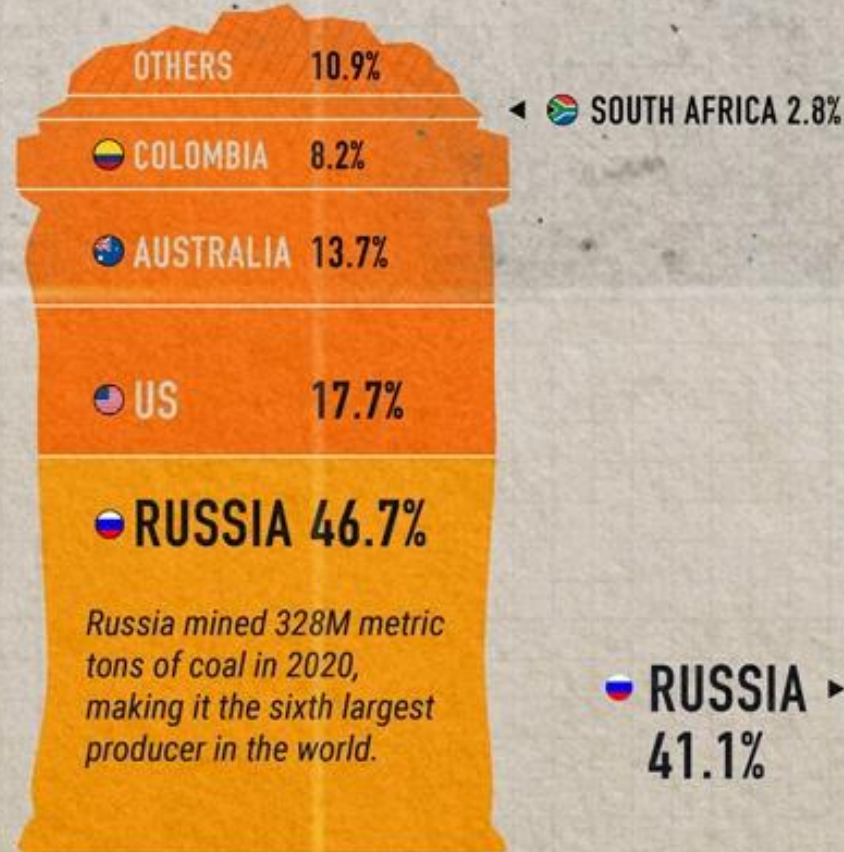
- Economic interdependence.
- Russia as a manageable actor.
- Existing instruments sufficient for a (limited) crisis.
- „In the 21st century, great wars are no longer fought“.
- It worked before, it'll work now.
- It will be over fast.
- EU is too energy dependent.
- Special Russian-German relationship.

EU IMPORTS

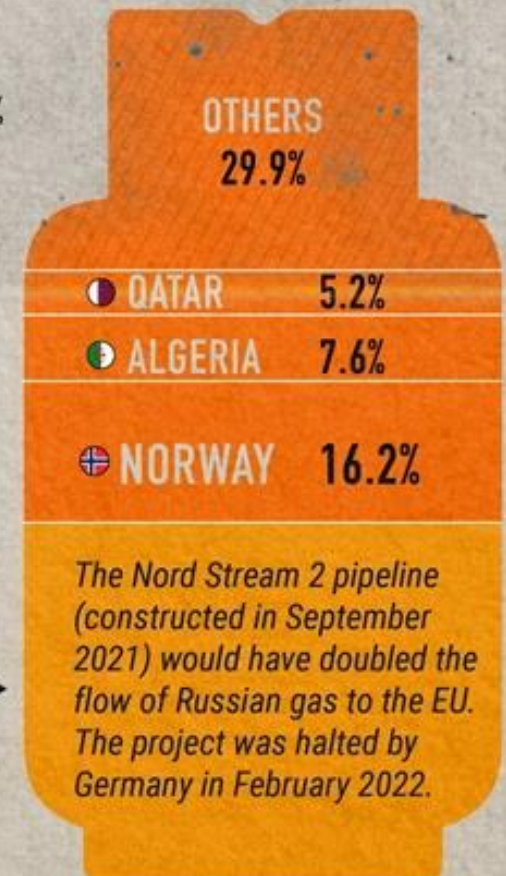
CRUDE OIL



SOLID FUEL (COAL)

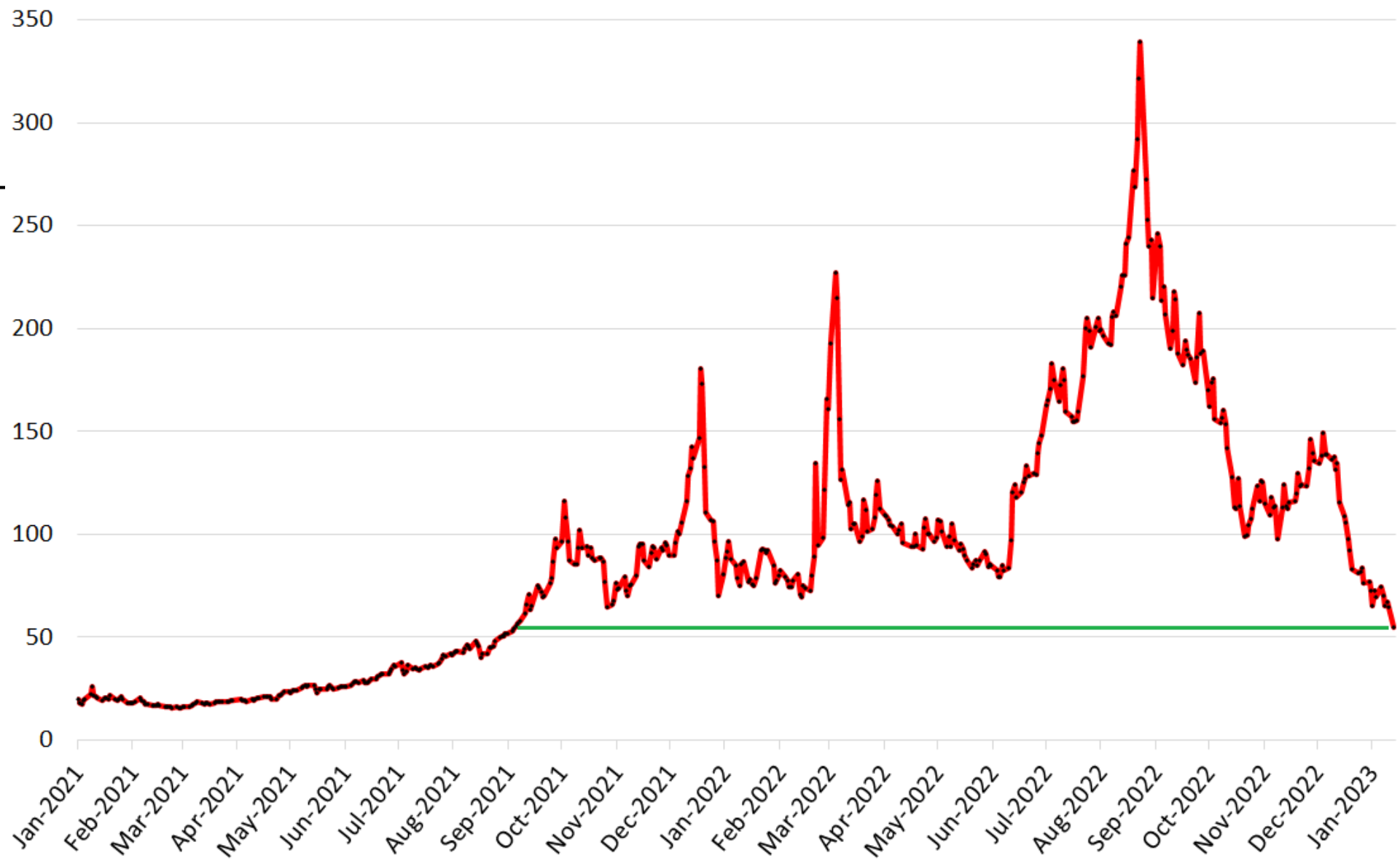


NATURAL GAS



Natural Gas Futures, ICE Dutch TTF

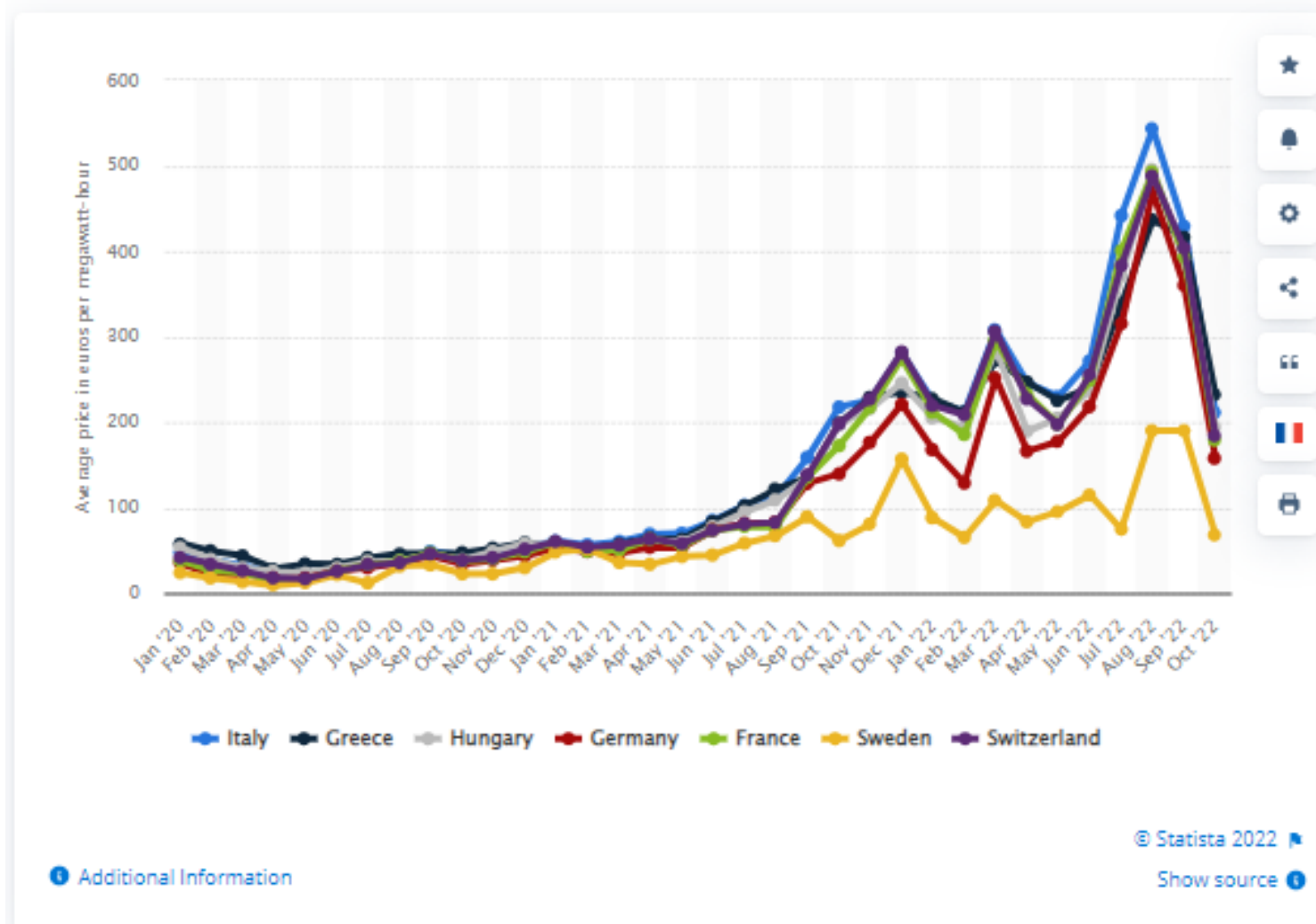
€ per megawatt-hour



Source: Investing.com

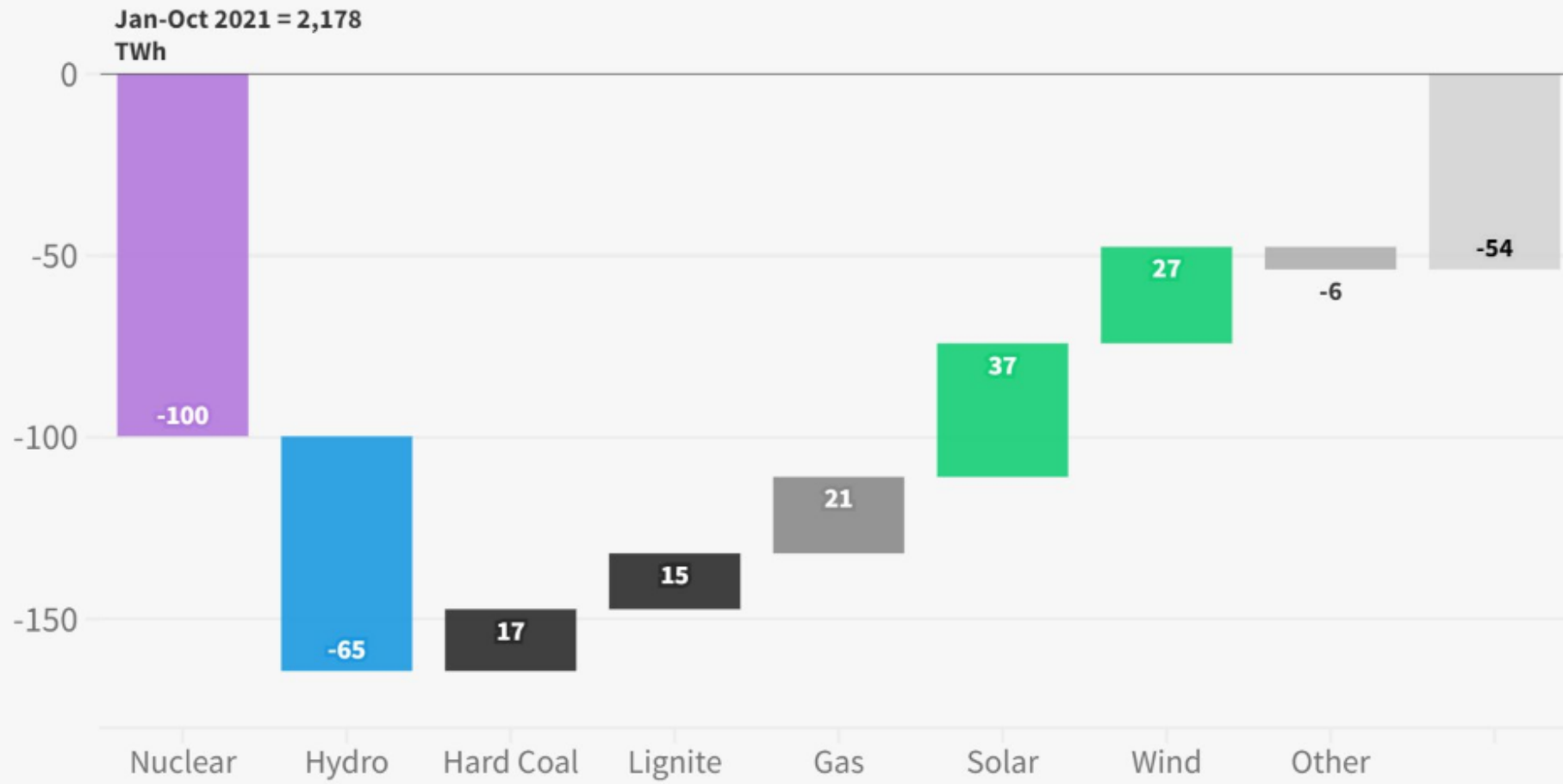
WOLFSTREET.com

Average monthly electricity wholesale prices, €/MWh



Europe saw a large deficit of nuclear and hydro power in 2022; it was replaced with coal, gas, solar and wind.

Change in EU-27 electricity generation for Jan-Oct, 2022 vs 2021 (terawatt hours)



Source: Ember monthly electricity data
Other includes bioenergy, other renewables and other fossil fuels

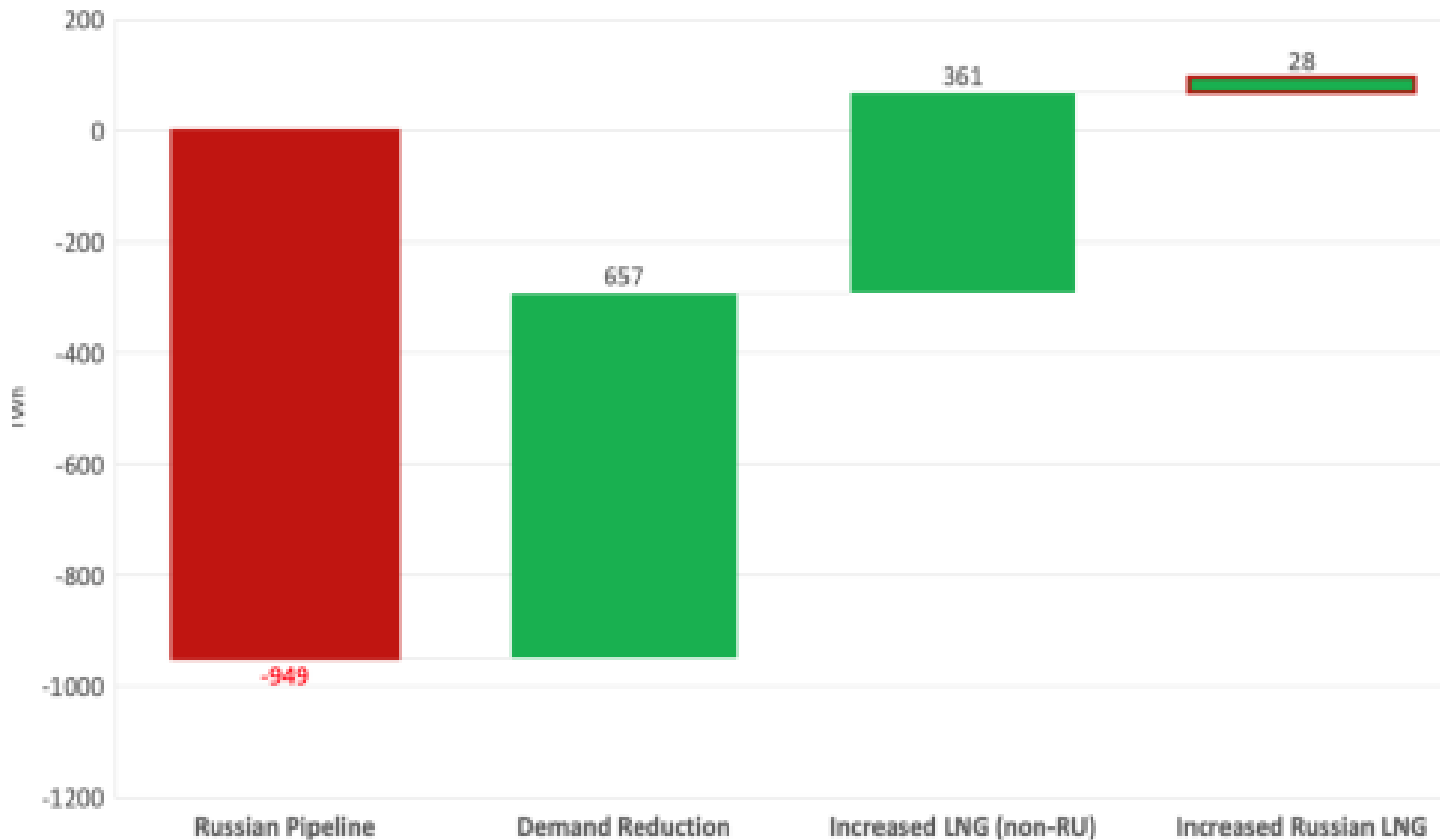
Crisis management

- Import embargo on Russian coal (starting in April 2022), seaborne crude oil (from Dec 2022) and refined petroleum products (from Feb 2023).
- Oil price cap (USD 60) from Dec 2022 – crude oil, petroleum oils and oils from bituminous minerals
- Mandatory power (during peaks) and natural gas (15%) savings, cap on excess revenues from inframarginal electricity producers (EUR 180), 25% windfall tax (oil and gas companies), national measures to shield households and industry (relaxed State Aid rules).
- Natural gas price cap.

Imminent danger averted

- EU survived the winter 2022/2023.
- Russian pipeline exports dropped from 40% to less than 10% of the EU's gas supply post-invasion.
- The EU offset Russia's gas cuts through reduced domestic demand and increased LNG imports, mainly from the US.
- Russia is still the EU's significant gas supplier, providing 16% of LNG and 7% of total gas imports.
- The EU can forgo Russian LNG, but must maintain a 15% reduction in gas demand and secure alternatives, especially for the Iberian peninsula.

EU gas balance, 1st April 2022 – 31st March 2023 compared with the previous year

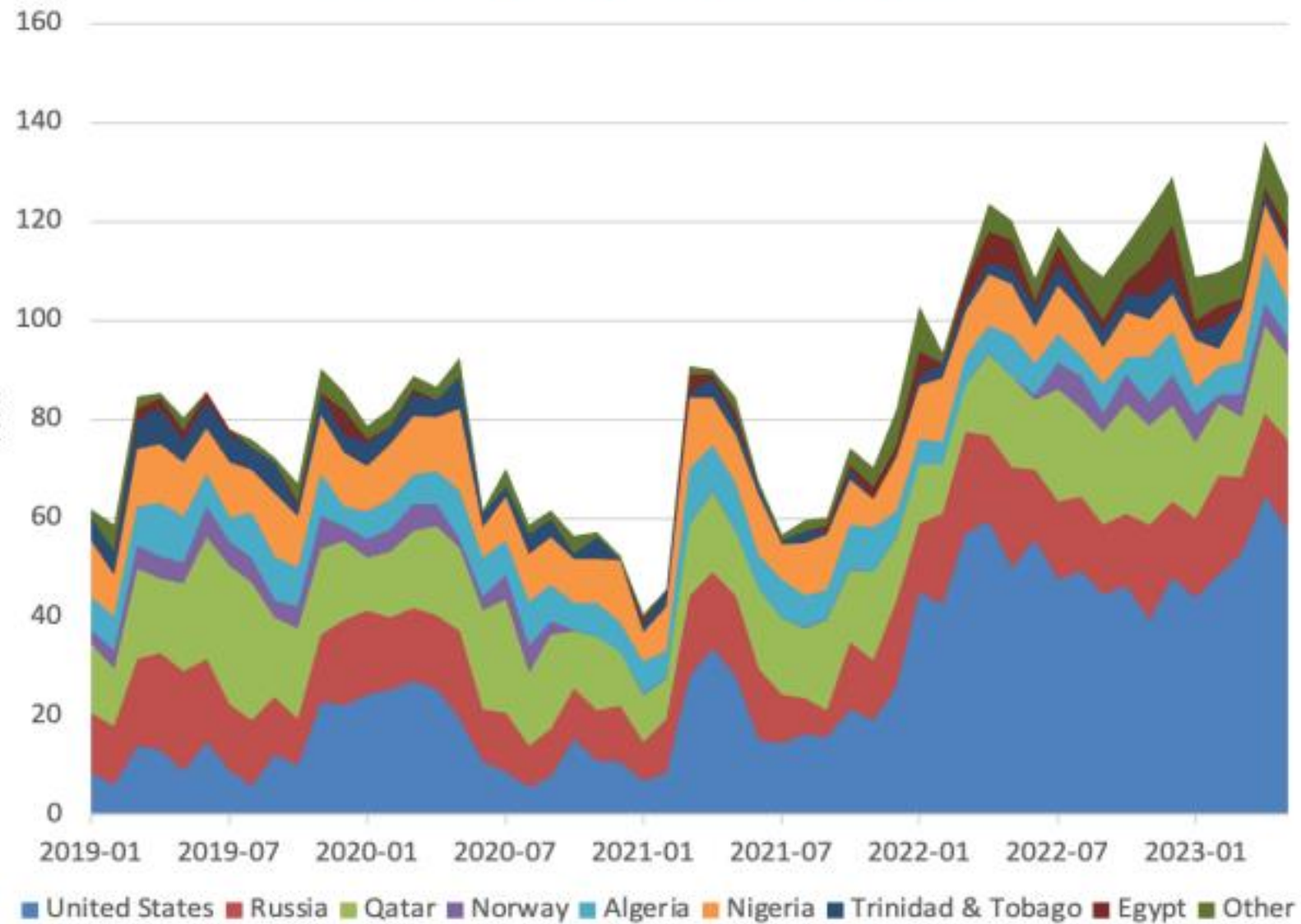


Source: Bruegel

Gas security of supply provided by (US) LNG

- US LNG imports are vital for the EU's gas balance without Russian pipeline gas.
- US LNG constitutes 50% of the EU's total LNG imports, about 20% of its total gas imports.
- US LNG will continue to be crucial, especially if Russian LNG and/or pipeline gas are further reduced.

EU LNG imports by source country (TWh)

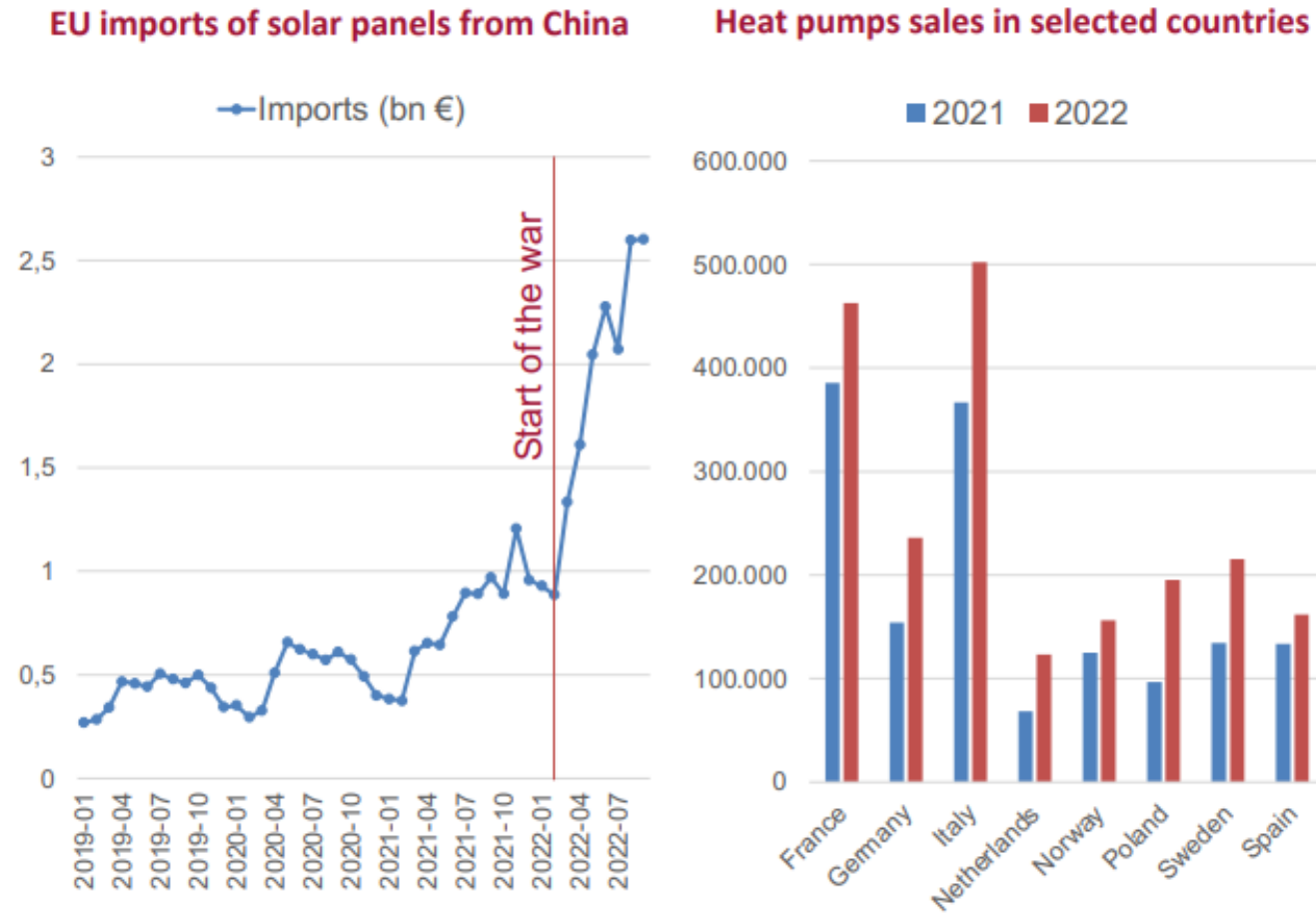


Source: Bruegel

Energy crisis accelerated transition

- High energy prices significantly boosted green alternatives, with solar panels up by 25% and heat pumps by 48% year-over-year.
- EU and national policies are reinforcing this shift towards renewable energy.
- The REPowerEU initiative aims for 45% of final energy consumption from RES by 2030 (up from 22% currently), focusing (not only) on streamlining permitting processes.

Energy crisis accelerated transition



Source: Bruegel

REPowerEU (May 2022)

- Common purchases of gas, LNG and hydrogen via the EU Energy Platform.
- New energy partnerships with reliable suppliers, including future cooperation on renewables and low carbon gases.
- Rapid roll out of solar and wind energy projects combined with renewable hydrogen deployment to save around 50 bcm of gas imports.
- Increase the production of biomethane to save 17 bcm of gas imports.
- Approval of first EU-wide hydrogen projects by the summer.
- An EU Save Energy Communication with recommendations for how citizens and businesses can save around 13 bcm of gas imports.
- Fill gas storage to 80% of capacity by 1 November 2022.
- EU-coordination demand reduction plans in case of gas supply disruption.

REPowerEU

- New national REPowerEU Plans under the modified Recovery and Resilience Fund – to support investment and reforms worth €300 billion.
- Boosting industrial decarbonisation with €3 billion of frontloaded projects under the Innovation Fund.
- Faster permitting of renewables.
- Investments in an integrated and adapted gas and electricity infrastructure network.
- Raising the EU-wide target on efficiency for 2030 from 9% to 13%
- Increase the European renewables target for 2030 from 40% to 45%
- New EU proposals to ensure industry has access to critical raw materials.
- To increase energy efficiency in the transport sector.
- A hydrogen accelerator to build 17.5 GW by 2025 of electrolysers to fuel EU industry with homegrown production of 10 million tonnes renewable hydrogen.
- A modern regulatory framework for hydrogen.

Technological winners?

- Windmills of Freedom
- Nuclear power plants

Now what? The long-term issues

- What about IEM? How to strike a balance between ensuring security and market functioning (see price interventions, RES support, nuclear support, common gas purchasing platform...electricity market reform)
- Who will pay the security premium?
- Can the EU survive high energy prices forever?
- Will the EU's position as 'climate change champion' survive?
- How to navigate a de-globalizing world?
- What role does the EU want (or will be forced) to play in the world? In energy, in economics, militarily, in mitigating climate change?

CBAM adopted

- The EU's Carbon Border Adjustment Mechanism (CBAM) pilot phase, from October 2023 to December 2025, initially requires reporting greenhouse gas emissions in imports of certain goods like cement and steel, without payments.
- From January 2026, the permanent CBAM system requires EU importers to declare annual imports and their emissions, purchasing corresponding CBAM certificates linked to EU ETS allowance prices.