
Russia-Ukraine War, Inflation and Recession: Quo Vadis Germany and EU ?

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1. Russia-Ukraine war and energy crisis: A German perspective
2. Inflation and recession: Current developments and outlook
3. Policy challenges: What is to be done and what is likely to happen

I. Russia-Ukraine War and Energy Crisis: A German perspective

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Russia-Ukraine war and „Zeitenwende“ in Germany

Areas of Russian military control in Ukraine



Source: Institute for the Study of War (21:00 GMT, 21 September)



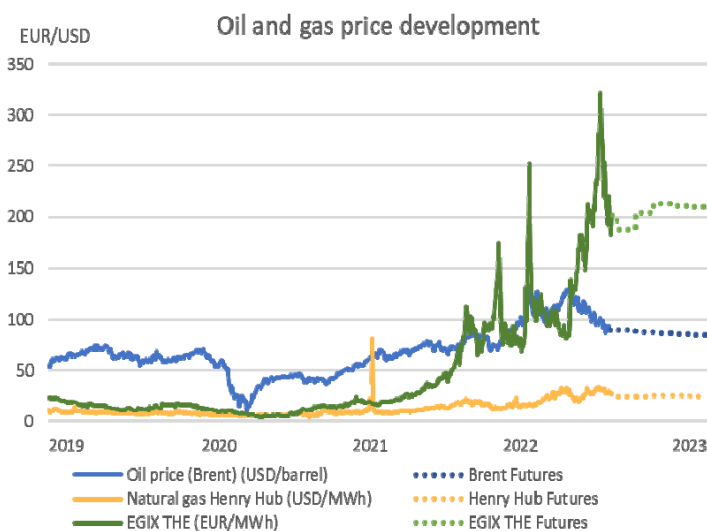
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Russia-Ukraine war and „Zeitenwende“ in Germany

- Departure from long-held beliefs & practices that were based on „our history“ and „von deutschem Boden soll nie wieder Krieg ausgehen“ incl. insistence not to provide German weapons directly nor via third countries into conflict zones.
- Strong support for sending troops to Eastern European NATO countries, but lacking capabilities of armed forces.
- Strong support for economic sanctions risking a cut-off of Russian energy deliveries. But no immediate import embargo.
- **Defense:** Goal of (re-)building very capable, highly modernized and technically advanced armed forces that can reliably protect us. Special financing vehicle on the scale of 100 bln Euro in the 2022 budget and spend 2% of GDP on defense in the future. (drones, new fighter jets, modern tanks).
- **Energy security:** goal to achieve independence from Russian energy imports, focus on renewable energy, LNG imports, temporary use of coal, measures to save energy, various support packages for households and businesses.

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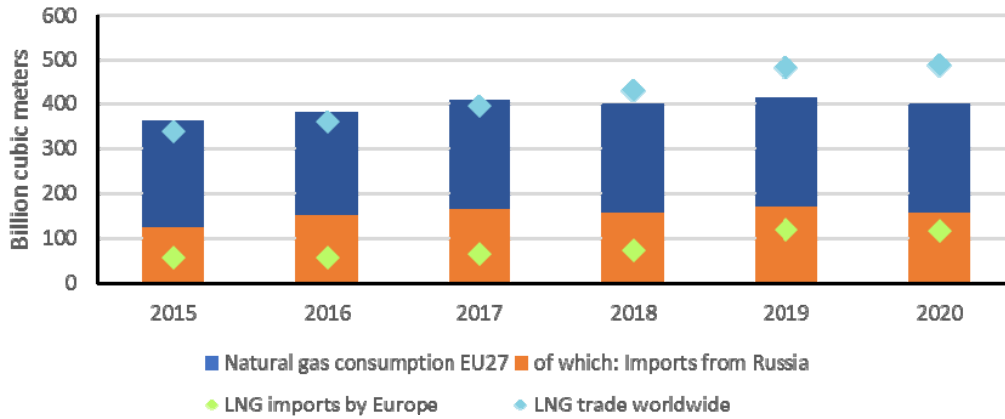
Energy crisis - natural gas tied to pipelines



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Importance of Russian gas imports for EU and Germany

Russia's share of European natural gas imports at around 40%

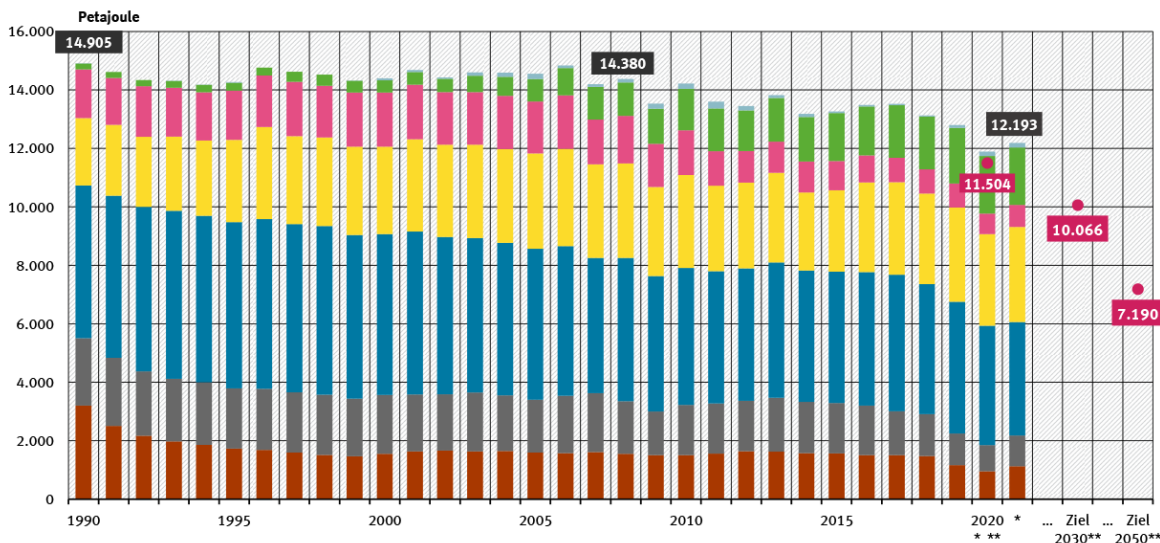


Germany prior to crisis:

- about 55% of gas imported from Russia

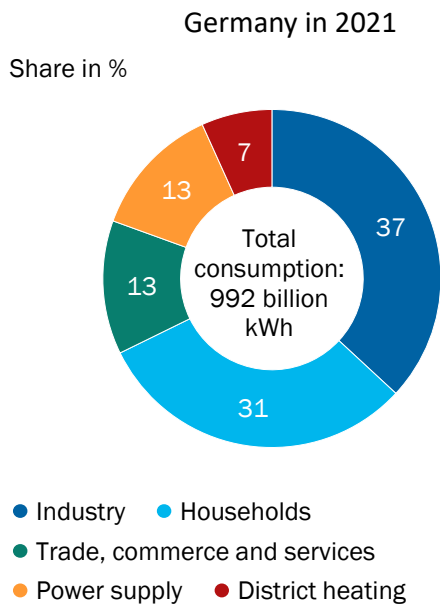
- also about 50% of hard coal and 30% of oil

Germany: Primary energy consumption by source – importance of gas and oil

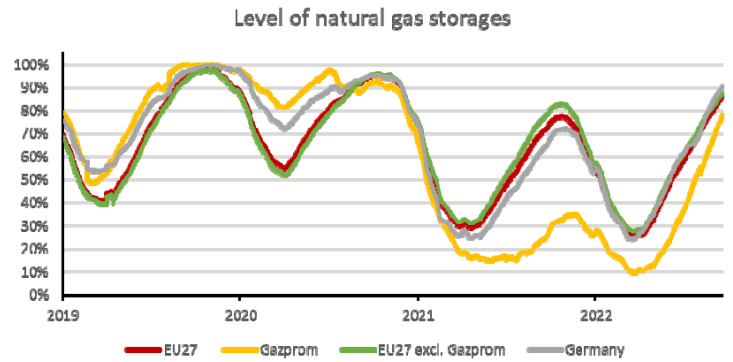


- Renewables
- Nuclear
- Gas
- Oil
- Hard coal
- Lignite coal
- Other

How natural gas is used



Storage run down in winter

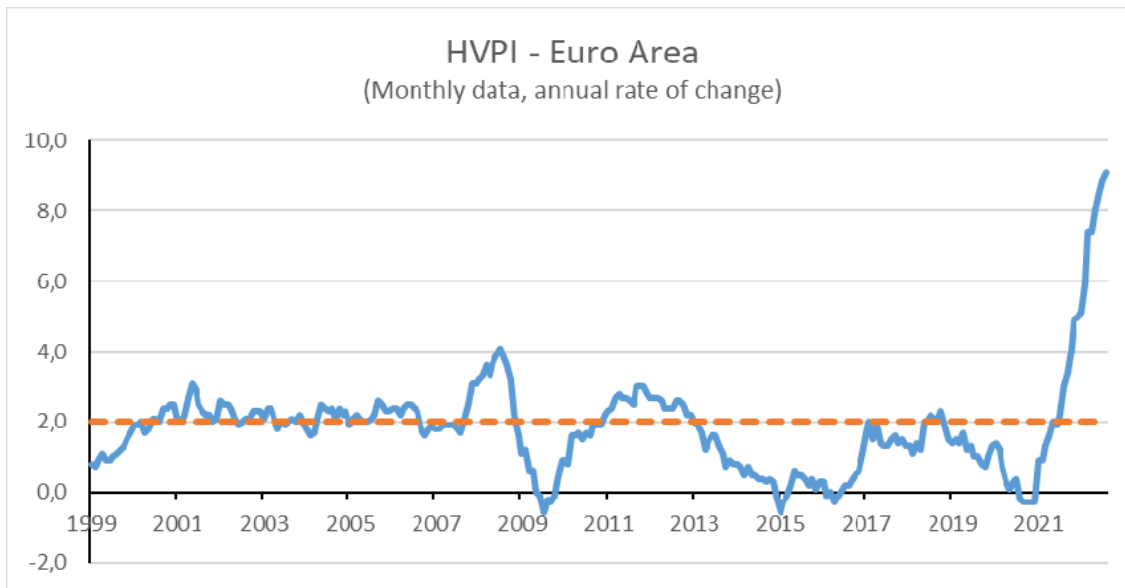


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II. Inflation and recession: Current developments and outlook

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Euro area inflation

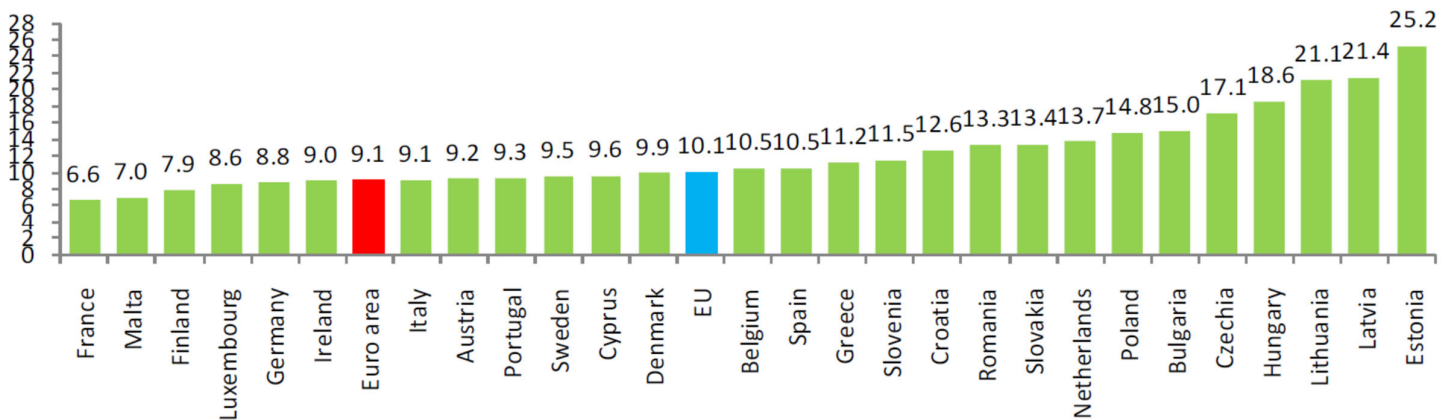


August
Inflation
9.1%

Excl. Energie
5,8%

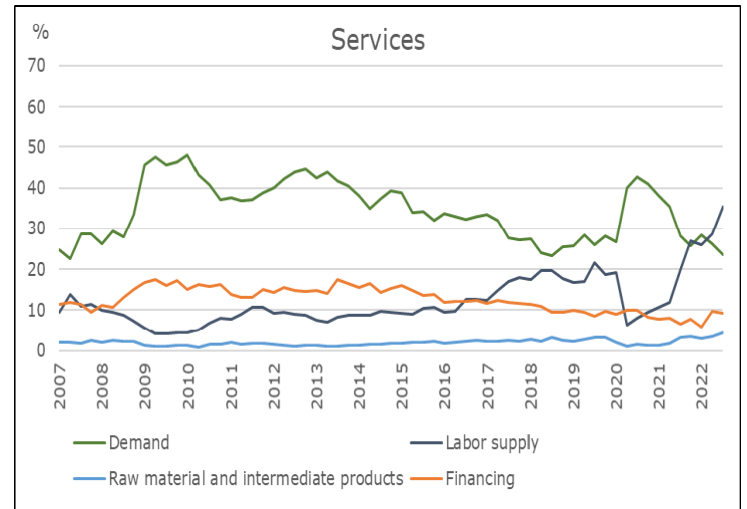
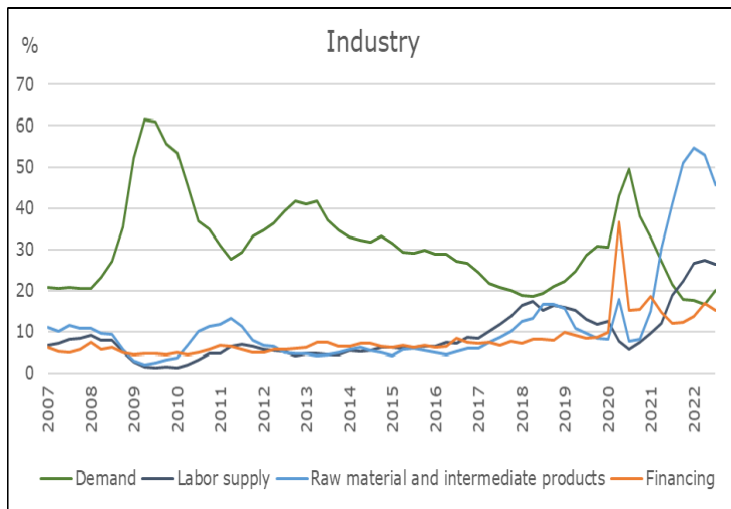
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Inflation rates between 7 und 25%



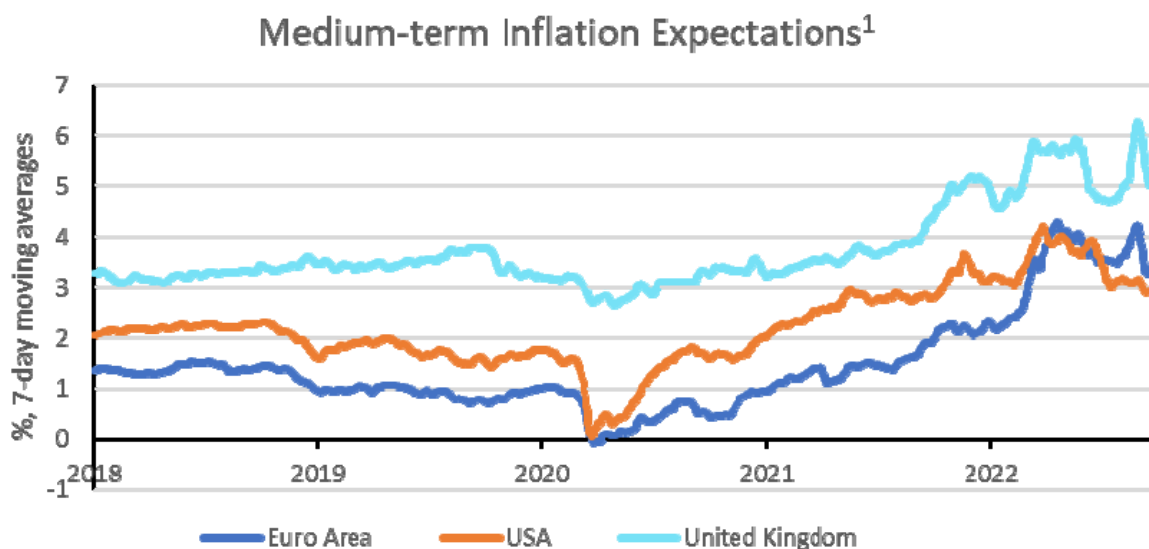
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Euro area survey: Shortage of raw material and intermediate products as well as labor force remains



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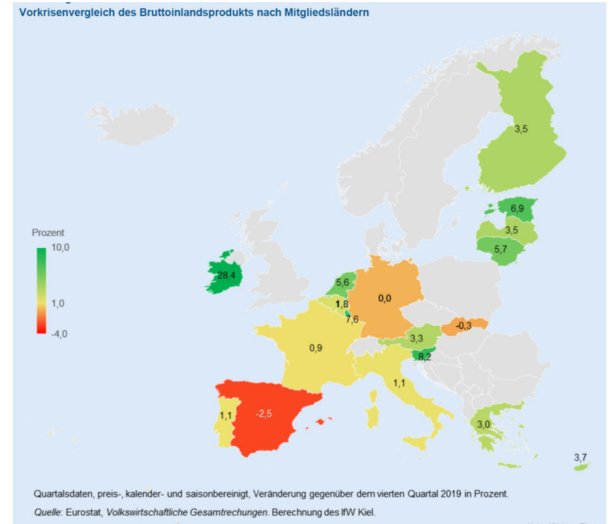
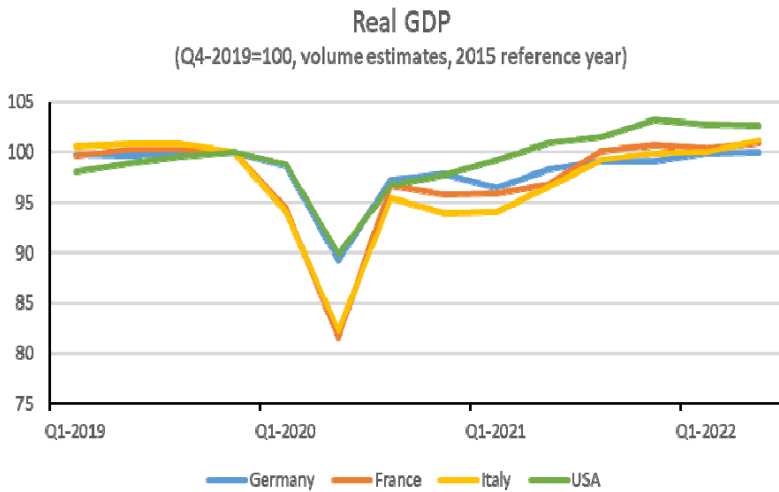
Market-based inflation expectations for the next three years have risen substantially



1 - Inflation expectations of market participants over the next 3 years

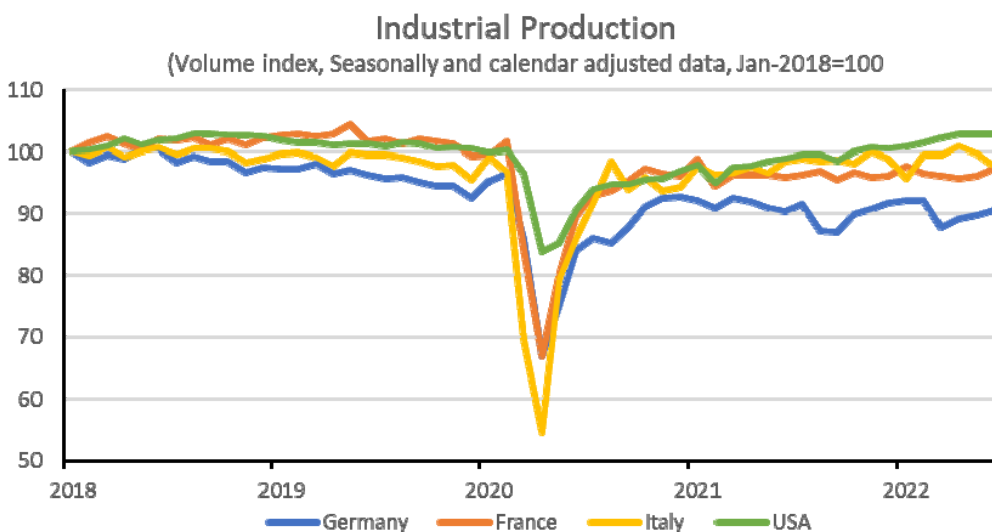
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Where Germany stands: GDP in comparison



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Where Germany stands: Industrial production by comparison



Natural gas important in chemical industry, (fertilizer), steel and iron production, glass, paper, ...

So far output in chemical Industry down 9% in 2022

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German economy – recession (ahead)

- GDP for winter 21/22 revised up 0,8%. Stagnation in spring (0,1%).
- Inflation has eaten up additional savings from corona period
- DIHK survey: July 25, 16% of industrial companies have reduced or plan to reduce production (32% of energy intensive companies)
- BDI survey September, 10% of SME's have reduced or stopped production, 25% plan to shift production partially abroad (U.S, Canada, etc)
- Orders in July 13,6% lower relative to July 21

GDP growth forecasts (%)	2022	2023	2024
GCEE (March 30)	1,8	3,6	
IfW (Sep)	1,4	-0,7	1,7
ifo (Sep)	1,6	-0,3	1,8
DEKA (Sep)	1,6	-1,6	
DB (Sep)	1,0	-3,5	1,0

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II. What needs to be done and what is likely to be done

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Monetary policy: ECB behind the curve, core inflation likely to persist

Nominal rate

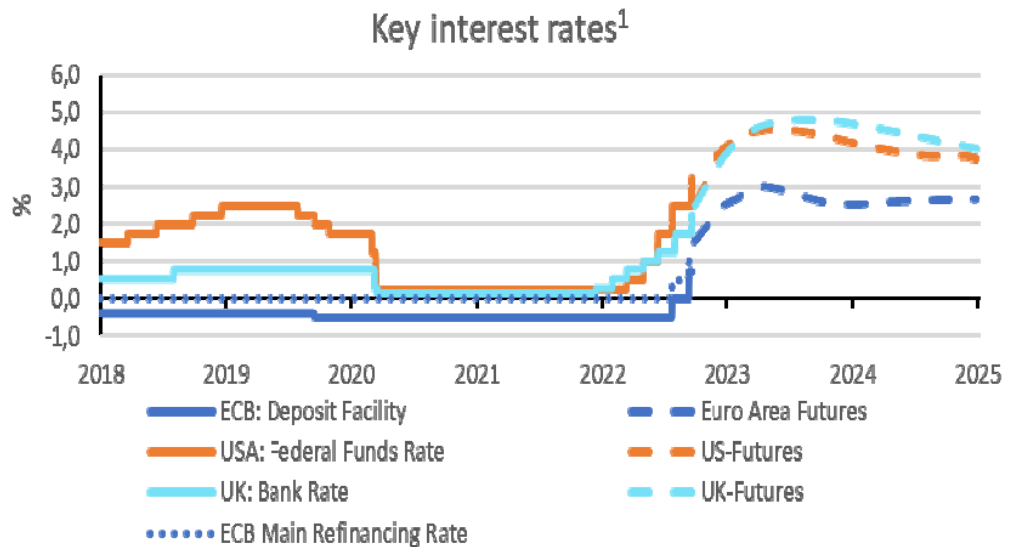
July 0%

Sep 0,75%

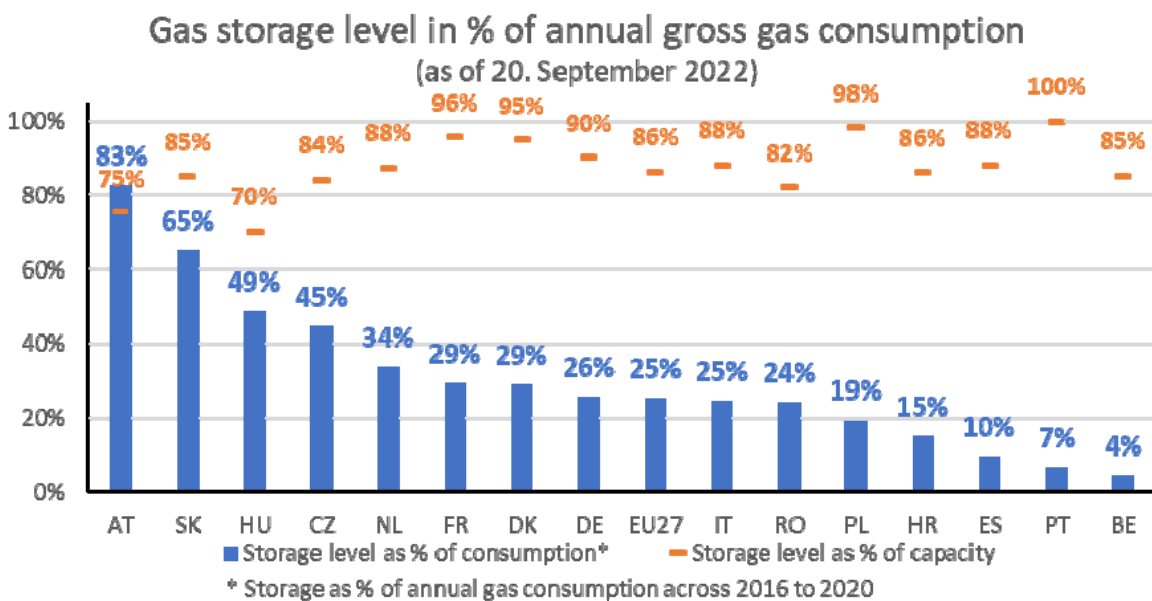
Inflation 9,1%

Ex. Energy 5,8%

Real rate remains negative for a while.



Energy security: Gas storage has been filled, but only covers part of winter use (in Germany 2 to 2 ½ months)



Warnings being realized, reactions yet insufficient

GCEE; March 31, 2022: delivery stop of natural gas may cause double-digit inflation and recession.

German government as well as other EU governments aim to encourage reduction of gas use via high prices and suggestions how to use less, but also by limiting pass-through of high prices and paying financial transfers to households and companies

→ **contradictory effects on gas consumption and inflation**

German economy gas usage:

By September gas consumption has declined by 20% relative to 5-year average due to reduction in industrial use primarily. By contrast 85% of household consumption takes place from Oct to March.

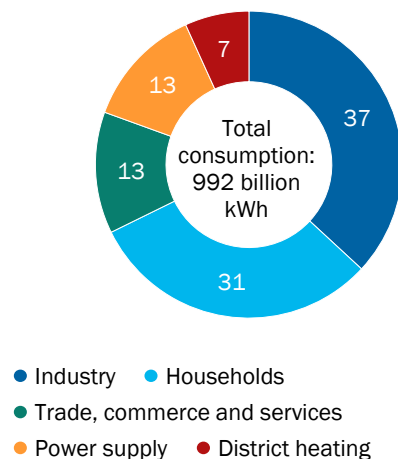
Simulations suggest that even with decline of 20% in winter gas storage depleted by March/April. But how are they re-filled for next winter?

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Government: How could natural gas use be reduced and/or substituted

Private households and the industry were major consumers of natural gas in Germany in 2021

Share in %



Demand side:

- Reduction in demand for natural gas in response to higher prices.
- Action to increase energy efficiency.

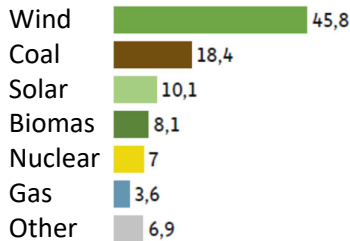
Supply side:

- LNG Imports
- Own gas extraction (extractable potential 800 bln cbm, Russian imports 2020, 56 bln cbm)
- Renewable energy expansion
- More coal-based power production and prolongation of nuclear power in electricity production

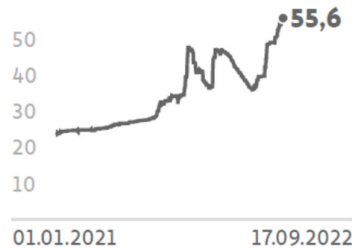
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Germany electricity production: Coal is back

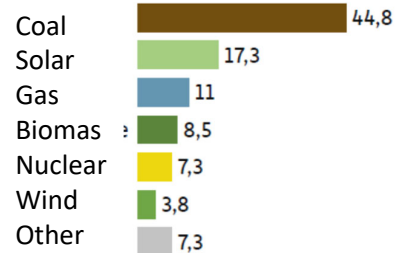
Electricity mix in %
September 16



Electricity price
in cent per kWh



Electricity mix in %
September 21



German potential for shale gas and shale oil

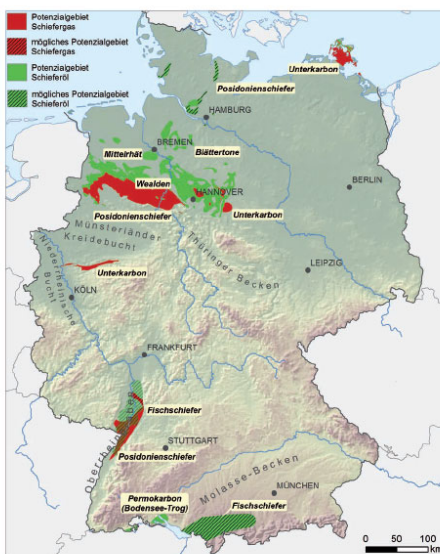


Abbildung 2.3-2: Übersicht der Potenzialgebiete: Gebiete mit Schieferöl (grüne Flächen) und Schiefergaspotential (rote Flächen) mit Angabe der jeweiligen Tongesteinsformationen; ockerfarbene Flächen: Gebiete mit möglichem Schieferöl- oder Schiefergaspotential; innerhalb dieser Flächen besetzt Potenzial nur für einen kleineren Teilbereich, welcher nicht genauer lokalisiert ist.

2016 report of Federal Institute for Geosciences and Natural Resources

- Conventional gas extraction <10% of consumption and declining.
- Fracking of shale gas offers possibility to reduce dependence on imports
- Extractable gas in dense clay rock (deeper than 1000m) between 320 bln cbm and 2030 bln cbn (average 800 bln cbm).

2020/21 Expert commission „Fracking“ for German parliament reports that environmental risks (water, earth quakes, emissions) can be minimized with available technologies.

Signal needed to expand energy supply to offer perspectives for industry in Germany & successful cooperation in EU

- Extend all nuclear power plants (up to 6) for 5 to 10 years (Belgium prolonged for 10 years till 2035). Climate-friendly!
- Expand coal-based electricity production. Happening, but only until April 2023 for now. Results in higher emissions if more certificates supplied.
- Accelerate build-up of renewables. Requires expanding net infrastructure and develop imports based on hydrogen and ammonia. trade-offs with other environmental goals (nature preservation, land use).
- As long as storage problem of renewables is not solved, climate protection won't work without nuclear power or natural gas. Innovations and solutions needed before making goals more ambitious.
- Expand natural gas extraction in Germany by starting fracking (currently prohibited). Potential to reduce prices, improve energy security and provide a perspective for private sector investment in German industry.
 - More climate friendly than LNG imports.

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