

Impacts of EU sanctions and Russia's energy war on the EU economy

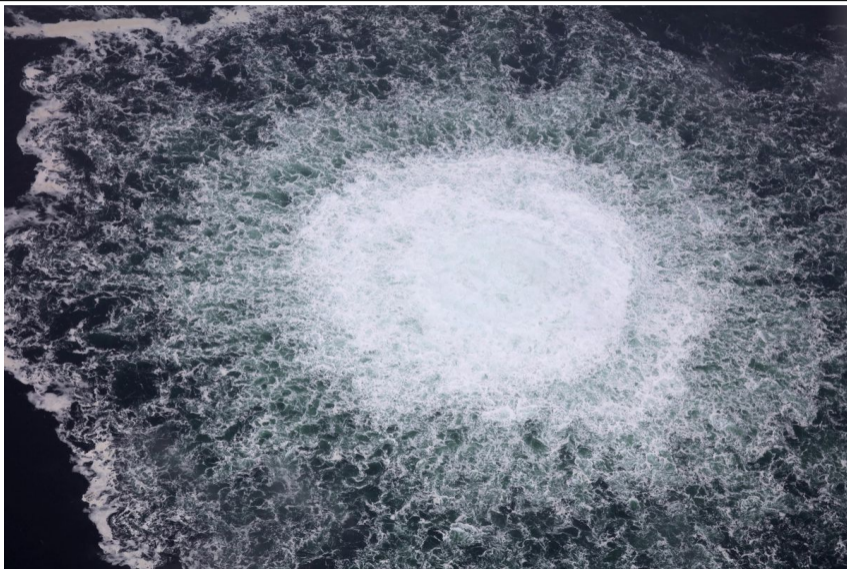
Benjamin Moll
London School of Economics

European Parliament

Main message

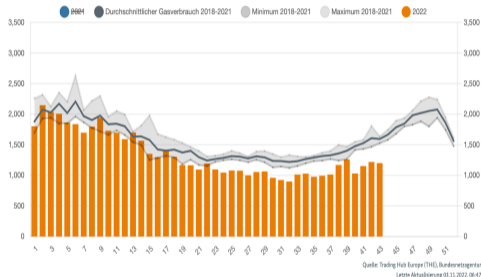
- Situation is serious, economic costs of energy war are real
 - gas cut-off is particularly serious
- But: EU economy is **withstanding** and **adapting**
 - price mechanism doing its job
 - shortages/rationing looking increasingly unlikely
 - expect recessions in some member countries, but mild ones
- This presentation: focus on particular country = **Germany**
 - particularly reliant on Russian energy imports
 - e.g. before war, Russia supplied 55% (!) of gas consumption

What my presentation is about

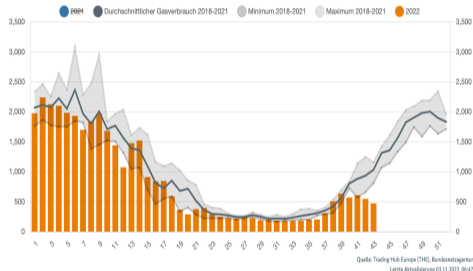


Large drops in gas consumption by firms and households

Gasverbrauch Industriekunden in GWh/Tag, wöchentlicher Mittelwert



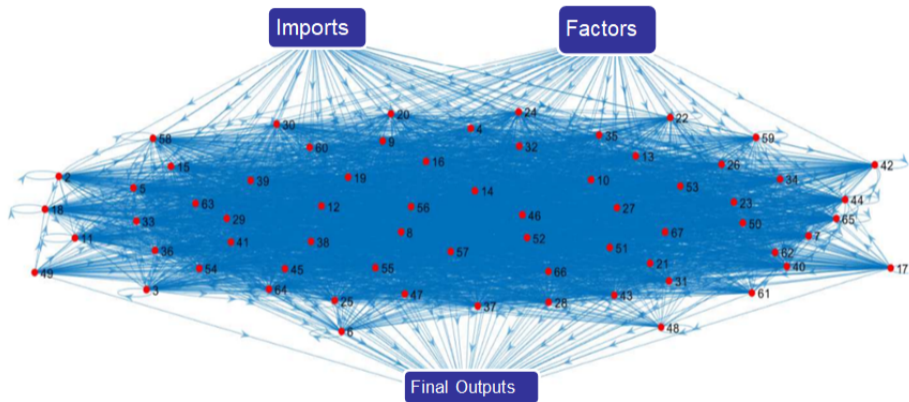
Gasverbrauch der Haushalts- und Gewerbekunden in GWh/Tag, wöchentlicher Mittelwert



Last week: industry –25%, overall –37%

Source: https://www.bundesnetzagentur.de/DE/Fachthemen/ElektrizitaetundGas/Versorgungssicherheit/aktuelle_gasversorgung/start.html

The worry with industry: “cascading effects”



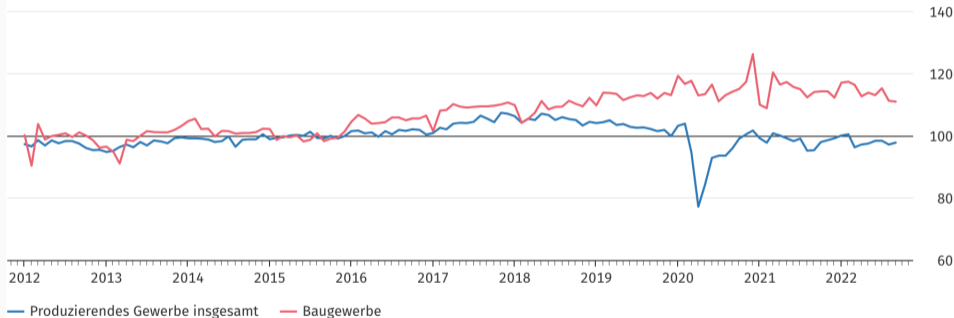
Benchmark: no adaptation \Rightarrow total production drops one-for-one with gas usage

- if true, should have seen a 20-30% drop in industrial production

So far only very small drop in industrial production

Produktion für das Produzierende Gewerbe

Index 2015 = 100; Kalender- und saisonbereinigt (X13 JDemetra+)



© Statistisches Bundesamt (Destatis), 2022

Source:

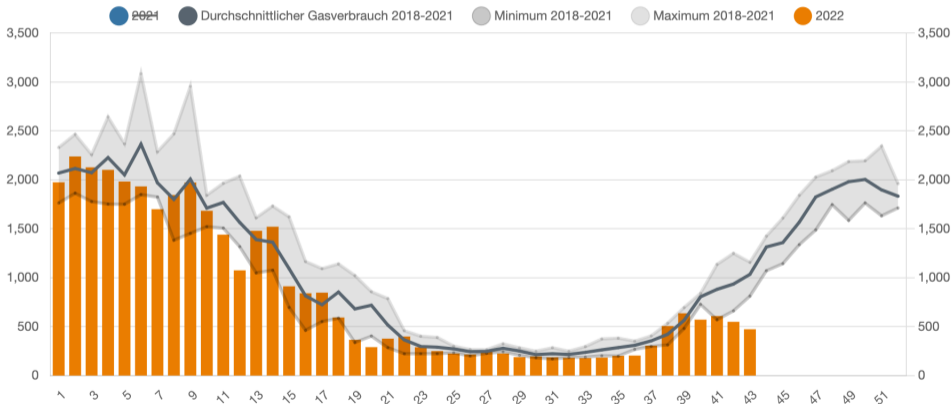
https://www.destatis.de/DE/Presse/Pressemitteilungen/2022/11/PD22_466_421.html

How so? Substitution along supply chain

- Paper on my website: “How it can be done”
 - **BASF**²⁰ “in Ludwigshafen can replace [with] heating oil about 15 percent of the natural gas needed for electricity and steam generation.” Gas for electricity and steam generation accounted for about half of the gas consumed in Ludwigshafen in 2021.²¹ **BASF** is also substituting in ammonia production. The company has reduced the production of ammonia at its Ludwigshafen site because of high gas prices and supplemented it with purchases: “this substitution via the world market [is] relatively easy.”²² The company can substitute some by producing ammonia in the U.S. instead of at the Ludwigshafen site.²³ This is a good example of substitution through imports, which we emphasized in our earlier study, in this case even within the same company. A study by Stiewe et al. (2022) examines German fertilizer production, for which **ammonia** is an important precursor, which in turn is produced with gas. The study concludes “that increased ammonia imports have caused domestic fertilizer production to remain remarkably stable.” Consistent with these examples, data from Oxford Economics show that chemical imports have surged in recent months.²⁴
 - Glass manufacturer **Wiegand Glas** will be able to “heat its furnaces with light fuel oil in the future instead of only natural gas as before.”²⁵
 - Car manufacturer **Mercedes-Benz** sees a reduction potential for natural gas of 50% in Germany “if regional pooling is made possible.” “For example, at the Sindelfingen site [...] the paint shop can be operated in emergency mode without gas supply.”²⁶
 - Car manufacturer **Audi** says it can get by with 20 percent less gas. Only about 10 percent of normal gas demand, the company says, is “the minimum amount of gas needed.”²⁷
 - Screw manufacturer **Würth** is in the process of converting furnaces that harden the material of screws from gas to electricity.²⁸ At around one million euros per furnace,

Gas consumption by households: too early to tell but ...

Gasverbrauch der Haushalts- und Gewerbekunden in GWh/Tag, wöchentlicher Mittelwert



Quelle: Trading Hub Europe (THE), Bundesnetzagentur
Letzte Aktualisierung 03.11.2022, 06:47

Household demand reduction in winter will be critical

- Absolutely crucial to **support households**, especially economically weaker ones, in the face of rising energy prices
- Should be done by means of transfers that are **not directly tied to energy consumption** and that **preserve incentives** for reducing gas demand
- Promising proposal by German “gas commission”

Falling demand \Rightarrow falling prices



Source: <https://www.theice.com/products/27996665/Dutch-TTF-Gas-Futures/data?marketId=5460494&span=2>

Conclusion

- EU economy is **withstanding** and **adapting**
 - key driver: demand reduction
 - aside: full gas storage not enough, a bit of a distraction
- Household demand reduction in winter will be critical
 - key: alleviate hardship but without destroying incentives
 - example of good policy: proposal by German “gas commission”