„ Das europäische Energie-Dilemma“

Daniel Gros

CEPS

Wien 7, Juni, 2022

FIW Trade Talks

High energy prices and the economy: root causes and policy options

Main points:

- Direct impact of war on economy and energy markets limited given that no sanctions so far (only ‘self-sanctioning’).
- Indirect impact via expectations difficult to measure. But should be low for crude oil.
- Potentially much larger price effect for gas. But largest price increase before war, little movement after. Unclear whether gas is storable commodity.
- Narrative key for proper policy response.

Indirect consequences of war: energy

Narratives matter: What is the reason for high energy prices?

- War = High energy prices (?)
- Two reasons to doubt:
- Price action
- Impact on supply/demand balance a priori not large (except for gas)

Impact of war on energy prices

Not war itself since Russian production unaffected and Ukraine only consumer of gas/crude and its consumption is down.

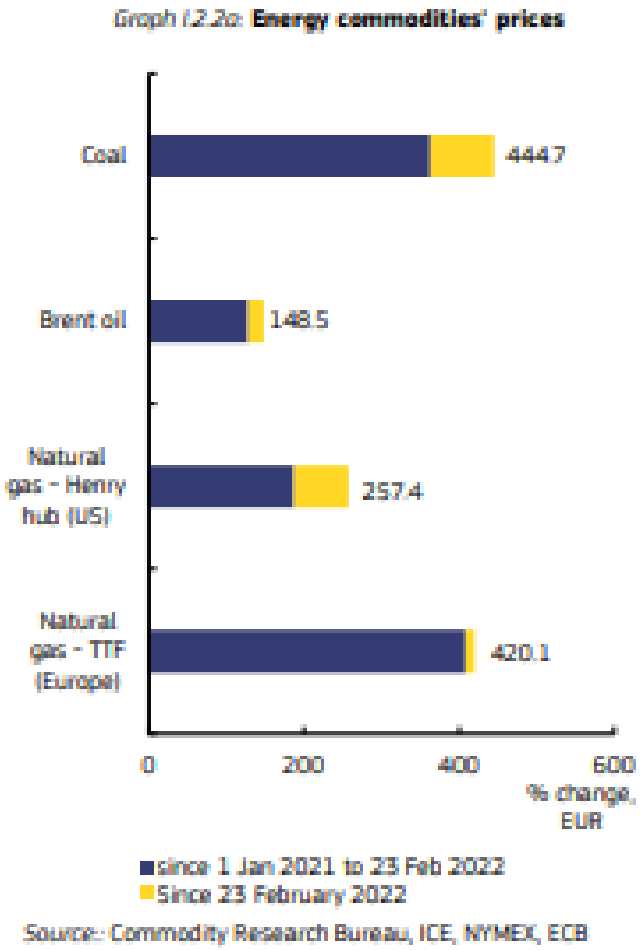
Sanctions?

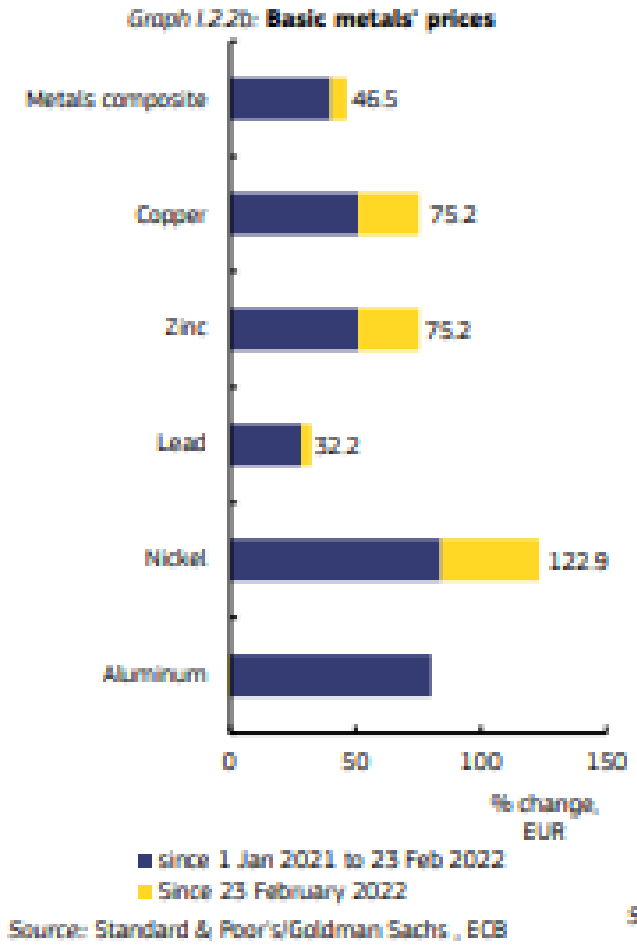
Russia produces 10 % of global crude oil, of which ½ is exported. Assuming exports fall by 25 % (difficulties to find tankers, insure them, etc.) then global supply is down by 1,25 % (< Kuwait, Brazil or Iran).

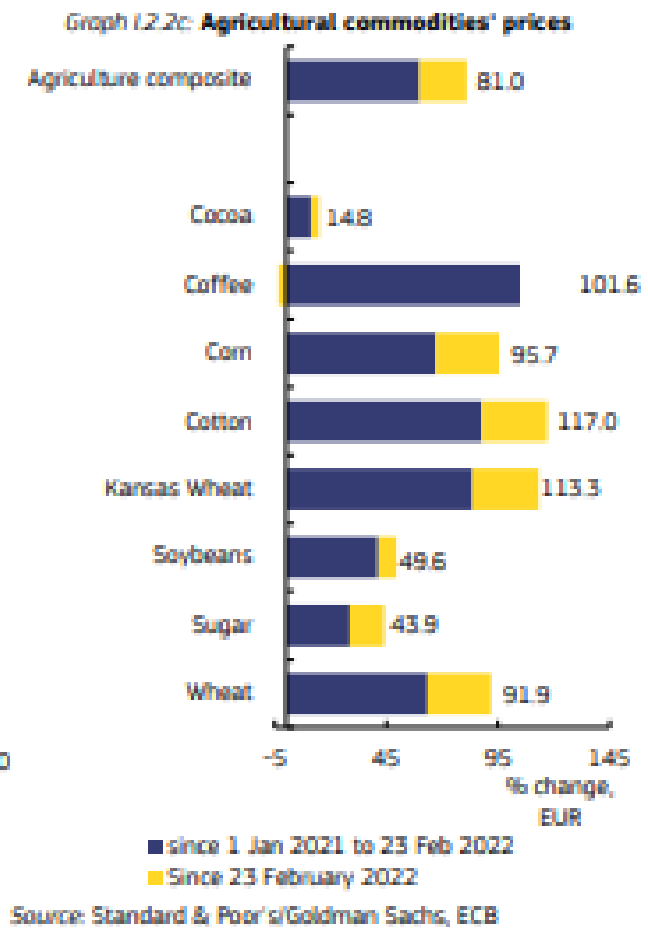
Impact on prices? With sum of supply and demand elasticity 0,2-0,3(?) would justify a price increase of 6 %.

For natural gas, the shortfall could be 12 % of the relevant market, justifying a much larger price increase.

The impact of the war: most price action before







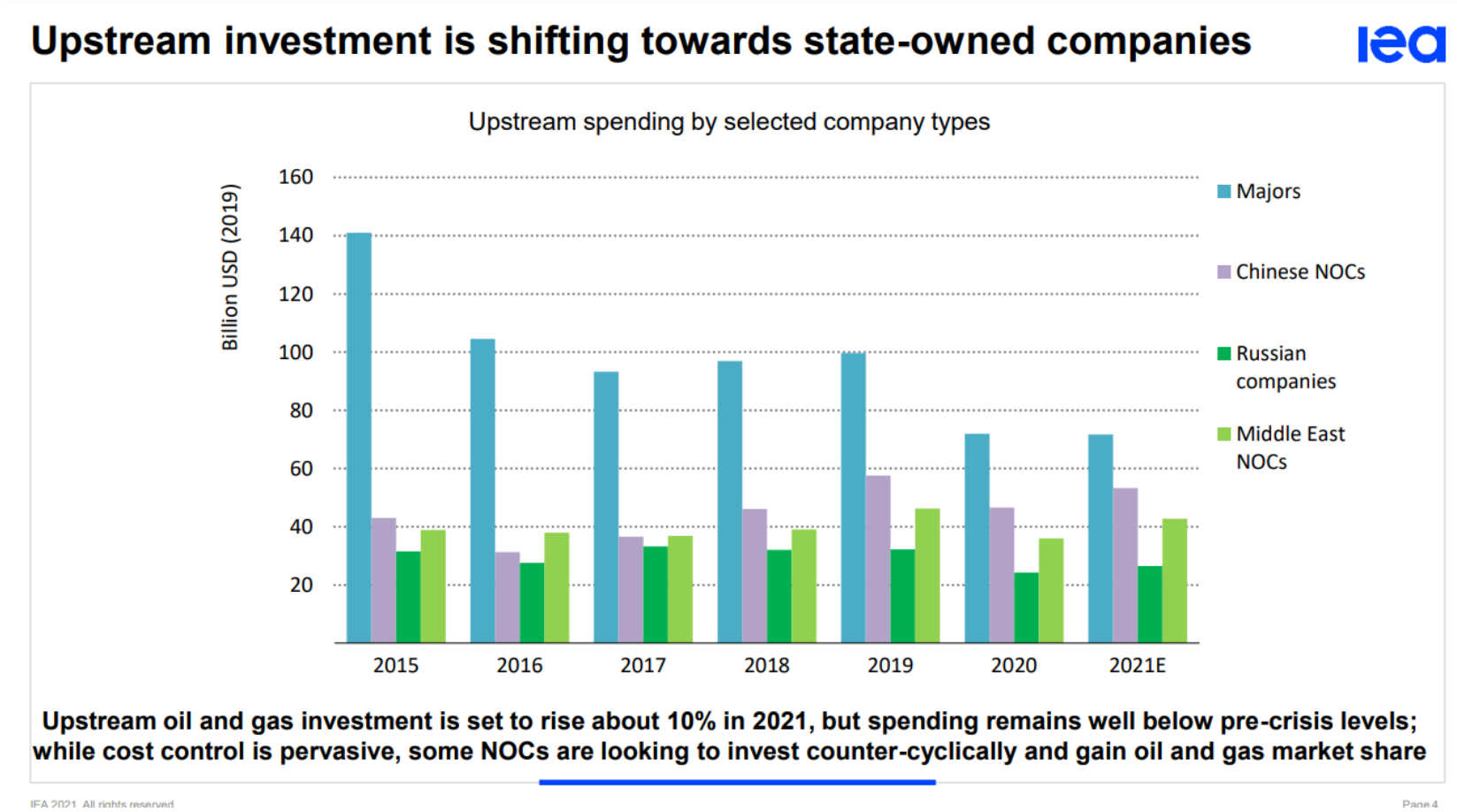
Narratives matter: What is the reason for high energy prices?

War or too little investment?

If low investment because of low prices (hog cycle) or ESG investing: in this case the scarcity of hydrocarbons was aim of policy with little reason have price caps and difficult to justify support for energy intensive industries.

If war+sanctions: difficult to refuse price caps and generous compensation to consumers and enterprises also maybe temporary.

Reason for high energy prices? Lack of investment likely a major cause

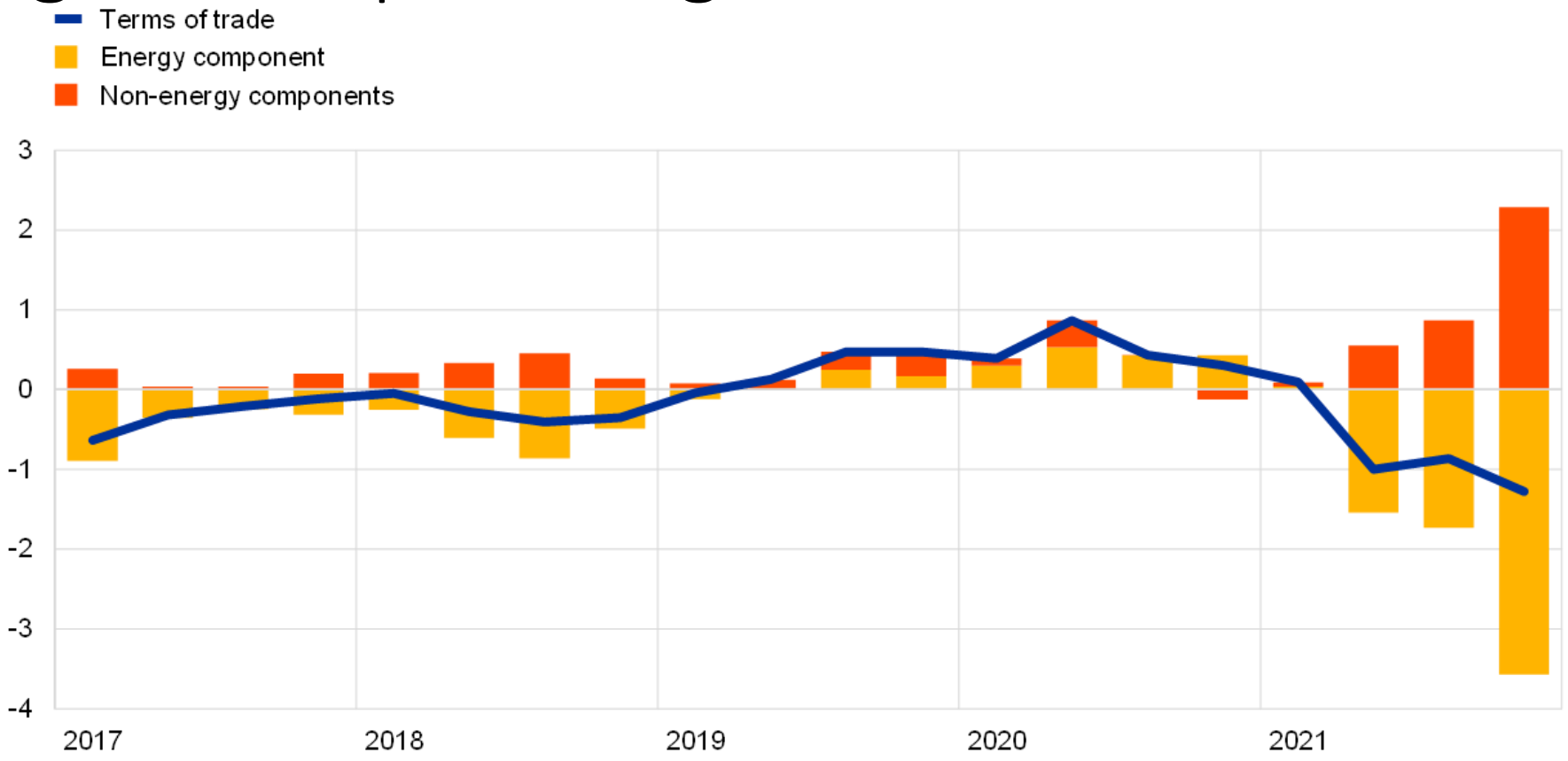


https://iea.blob.core.windows.net/assets/844373fb-d815-457a-b2bd-768fc9de02b0/WorldEnergyInvestmentLaunchPresentation.p

Reality: political pressure to ‘protect’ against high energy prices

- European corporate sector seems to be protected by pricing power. Profits up, see also terms of trade statistics (global pricing power of EA enterprises).
- Households: more difficult, very uneven impact.

The key macroeconomic issue:
How large is terms of trade loss for Europe?
2/3rds mitigated by higher export prices => negative impact on growth limited



Sanctions might be contributor (not sole cause) of high energy prices

- Problem: Nobody willing to be worse off to help Ukraine(?)
- ‘Smart sanctions’ can reduce costs, be sometimes even beneficial – especially for gas:
- Tariff instead of embargo

Special features of gas market

Little spare supply available (for next year).

=> Europe cannot hope on new supplies, need to save equivalent of Russian gas not consumed in Europe.

Russia cannot send piped gas easily elsewhere. New pipelines or new LNG export terminals expensive and need time to build => some bas missing on market.

But import terminals (gasification) much cheaper and quicker to build.

=> Europe has buying (monopsony) power.

Integration Asia-Europe key for understanding gas (and cost of potential embargo)

Three numbers:

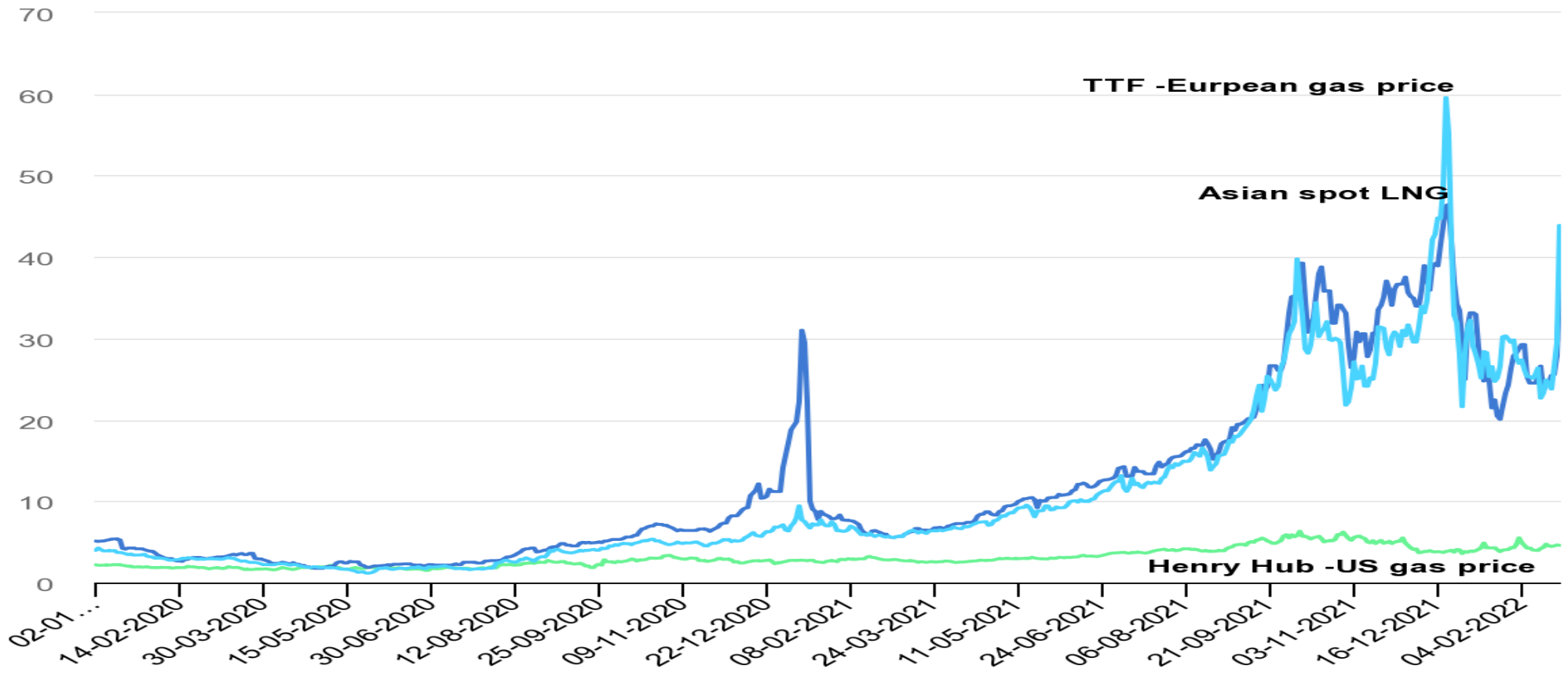
1. EU imports from Russia: 140 bcm
2. EU market 450 bcm.
3. Asian market 800 bcm.

$\Rightarrow$EU+Asia market size: 1250

$\Rightarrow$Need only 12 % reduction in demand in combined market to make up for missing Russian gas even if supply is totally inelastic.

$\Rightarrow$Other implication: it does not matter whether US LNG goes to Europe or Asia.

Asia and Europe one integrated market, US an island (limited export capacity)



What to do about gas?
How to encourage a switch away from Russia?

High gas prices reduce demand for gas, but how to get European consumers to switch away from Russia?

Need price mechanism, i.e. tariff. At present price of gas is the same whether from Russia or elsewhere.

Some tariff would be beneficial for EU anyway (standard optimal tariff argument).

But prohibitive tariff not ‘optimal’ (in short run).

https://www.ceps.eu/ceps-publications/optimal-tariff-versus-optimal-sanction/

Key results from standard model of tariff on foreign monopolistic supplier

Domestic price increases by one half of tariff.

Revenues of foreign monopolist diminishes with square of tariff.

Optimum tariff approximately 30 % of ‘cutoff’ price, result in halving of Gazprom revenues.

Optimum sanction (to reduce Russian revenues at 1:1 cost for EU) leads to a tariff of is 60 %, with a reduction in Gazprom profits to one fourth of free trade level.

Domestic welfare is still higher than under free trade.

Potential revenues for EU of 30 bn euro.

Key take-away: use price mechanism

Tariff approach can also be used for crude oil, but with lower tariff rate since substitution easier – 10 %(?).

Basic idea the same: Russian producers of oil incur higher costs and accepting lower prices trying to sell elsewhere (India?).

They can accept these costs or pay a tariff to the EU.

What is better for the EU (and Ukraine)?

Potential revenues from tariff on crude oil imports from Russia also important 10-20 bn euro (?).

Price mechanism can also be used to support low-income households

Instead of a lump-sum payment an ‘energy savings subsidy’:

Consumers would get subsidy (say 2-4 cents per kWh of gas) used less than last heating season (adjusted for heat degree days).

N.b. Price subsidies are of course counterproductive – whether for households or industry. (Spain: lower price for gas (subsidized by government) used in electricity production, Germany “garantierter Industriestrompreis”.)

Conclusions

‘War’ is used as a reason to justify ‘price mitigation’.

Wrong on several accounts:

Direct impact of war on economy limited.

High energy/commodity prices result of underinvestment in past, contribution of war/sanctions limited.

Under ‘smart sanctions’ (tariffs) Russia pays (enough to finance compensation to consumers).

Use price mechanism to achieve reduction in consumption

Supporting material

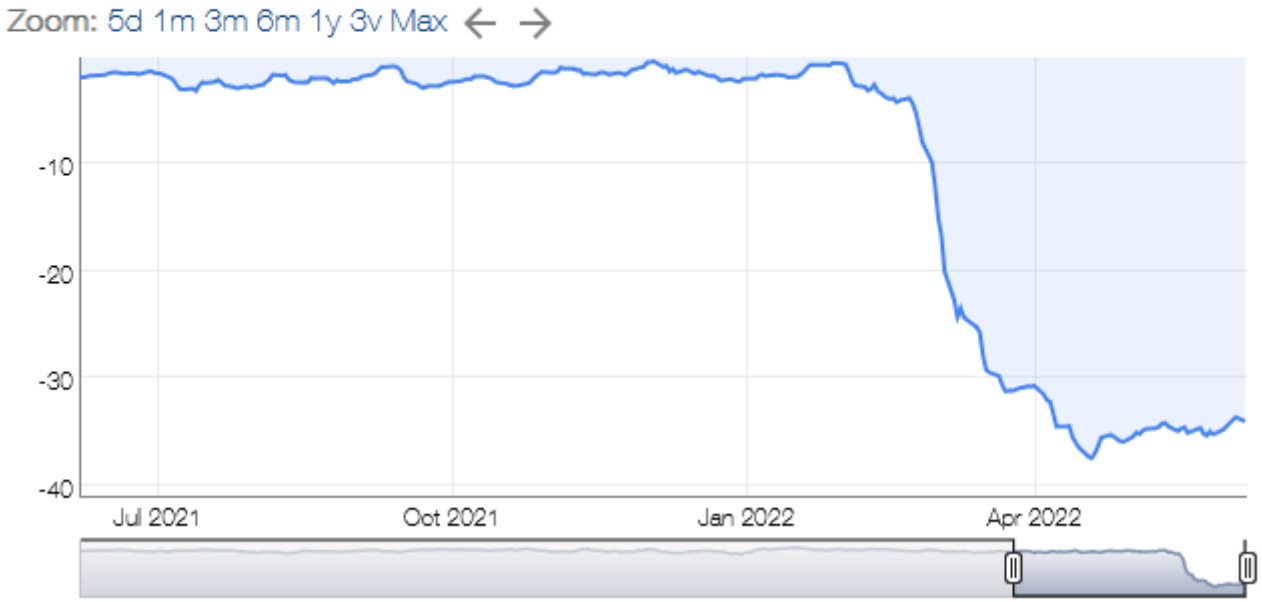
1. Ural-Brent differential
2. Gas prices, Europe spot TTF
3. Industrial prices, domestic and international markets

Urals-Brent price difference

https://www.neste.com/investors/market-data/urals-brent-price-difference

USD/bbl, data updated daily.

Daily figure is based on last five (5) days rolling average.



Gas price explosion before war

European producers have pricing power, more at home than abroad

https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Industrial_producer_price_index_overview