

# GEWIJZIGDE ENERGIECONTEXT DOOR OORLOG OEKRAÏNE

Hoorzitting Vlaams Parlement – 20 April 2022 – Prof. Thijs Van de Graaf

# BELANGRIJKSTE PUNTEN

- De context is niet zo nieuw. We hebben een paar ‘wake-up calls’ gemist voor 24 februari.
- Qua bevoorradingszekerheid moet de belangrijkste disruptie nog komen. De effecten zullen langdurig zijn.
- België is goed geplaatst om aanvoerverstoringen op te vangen, maar is niet immuun voor prijsshocks.
- Overstappen op andere leveranciers voor olie en gas brengt risico's mee. Beter inzetten op verminderen van vraag naar olie en gas.

# 'NIEUWE' CONTEXT



# RUSSISCH GAS ALS WAPEN ≠ NIET NIEUW

Date	Country affected	Event	Geopolitical rationale	Economic rationale
1993	Ukraine	25 per cent cut in gas supply	Pressure to send nuclear weapons back to Russia	Non-payments by Kiev
January 2003	Latvia	Cut-off of oil supply to Ventspils export terminal	Effort to gain control of Ventspils Nafta/ Assert control over oil export routes	Tariffs at export terminal considered too high
February 2004	Belarus	100 per cent cut in gas supply for 30 hours	Pressure to get ownership of Beltransgaz	Failure to pay for past gas deliveries
Late 2005	Belarus	Significant gas discount to USD 46.68 per tcm	Carrot to get access to Beltransgaz	undisclosed
January 2006	Ukraine	Gas supply disruption	Punishment of pro-Western Viktor Yuschenko for seeking closer ties to EU & NATO	Outstanding debt and pricing dispute, after gas contract expiration
July 29, 2006	Lithuania	Russia's Transneft stops oil supplies through pipeline feeding Mazeikiu refinery.	Punishment after Mazeikiu Nafta refinery is sold to Polish PKN Orlen	Technical problem
2006	Moldova	Gas price increase	Political signalling in wake of Ukraine crisis	Failure to pay debts
2006	Armenia	Gas price increase	Purchase of Armenia-Iran gas pipeline & foreclose alternative suppliers	Adaptation to market-based pricing
March 2008	Ukraine	Gas supply cut by 25-50%	Return of Yulia Tymoshenko as prime minister in December 2007	Outstanding debt
July 2008	Czech Republic	Oil supply drop	Punishment for signing agreement on US anti-missile radar system	Technical problem
December 2008-January 2009	Ukraine	Gas supply cut	Punishment for President Yuschenko's support for Georgia in 2008 war.	Breakdown of talks over past payments and future pricing
2011	Belarus	Purchase of Beltransgaz	Control over key transit pipelines	Collateral for gas debt
July 2013	Kyrgyzstan	Purchase of Kyrgyzgaz	Consolidate Russia's geopolitical influence in Kyrgyzstan	Cancellation of Kyrgyzgaz' debt
August-December 2013	Armenia	Gas price increase, followed by gas discount	Convince Armenia to join Eurasian Economic Union	undisclosed

September/October 2014	Poland, Slovakia and Germany	Gas supply drop on Yamal-Europe pipeline & Brotherhood pipeline	Increase pressure in run-up to new EU sanctions	Effort to stop re-export of Russian gas to Ukraine through Poland & Slovakia
November 2015	Ukraine	Gas supply cut	conflict in Ukraine	Failure to pay in advance for next shipment of gas. Reversal of previous discounts
February 2016	Venezuela	Rosneft increases stake in Petromonagas to 40%	Extend Russian influence in South America, and support for anti-US regime.	Access to new oil assets
Late 2016-early 2017	Belarus	Gas price increase	Pressure for Belarus' opening up to EU	undisclosed
2017	Venezuela	Rosneft loans to PDVSA	Increase Russia's foothold in South America	Access to new oil assets
Early 2017	Turkmenistan	Block Turkmen exports to Russia	Isolate potential competitor	Disagreement over pricing
2020 (date of expected completion)	Ukraine	Nord Stream 2 & Turkish Stream pipeline	Punishing neighbour that has fallen out of favour & increase pressure on central and eastern Europe	Avoid transit risk

## Select examples of Russia's use of energy coercion

Korteweg, R. (2018). Energy as a tool of foreign policy of authoritarian states, in particular Russia. European Parliament, Department for External Relations.

# OORLOG BEGON NIET IN 2022, MAAR IN 2014

## EU plans to reduce Russian energy dependence

EURACTIV.com

Mar 21, 2014



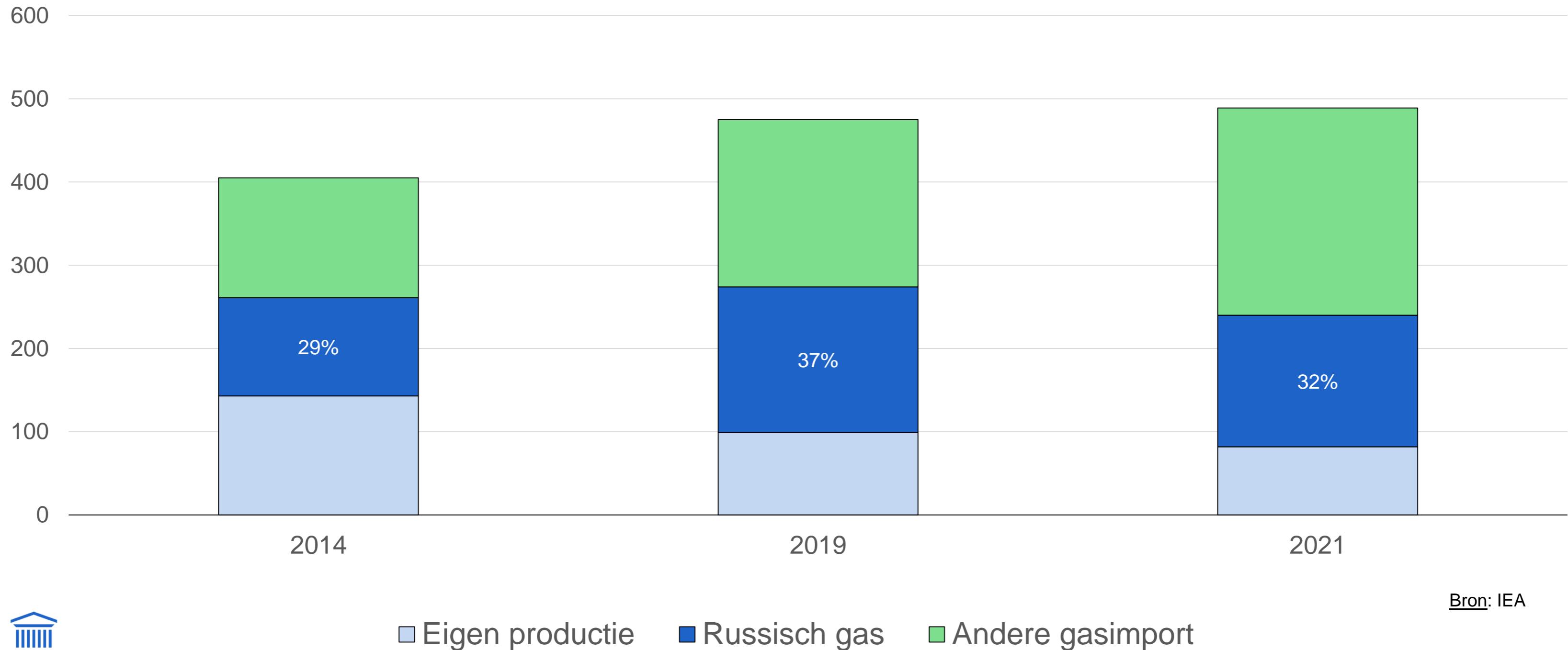
## G7 wants to end dependence on Russian gas

EURACTIV with Reuters

May 7, 2014

# AFHANKELIJKHEID RUSSISCH GAS NA 2014

Samenstelling gasverbruik EU + UK (bcm)



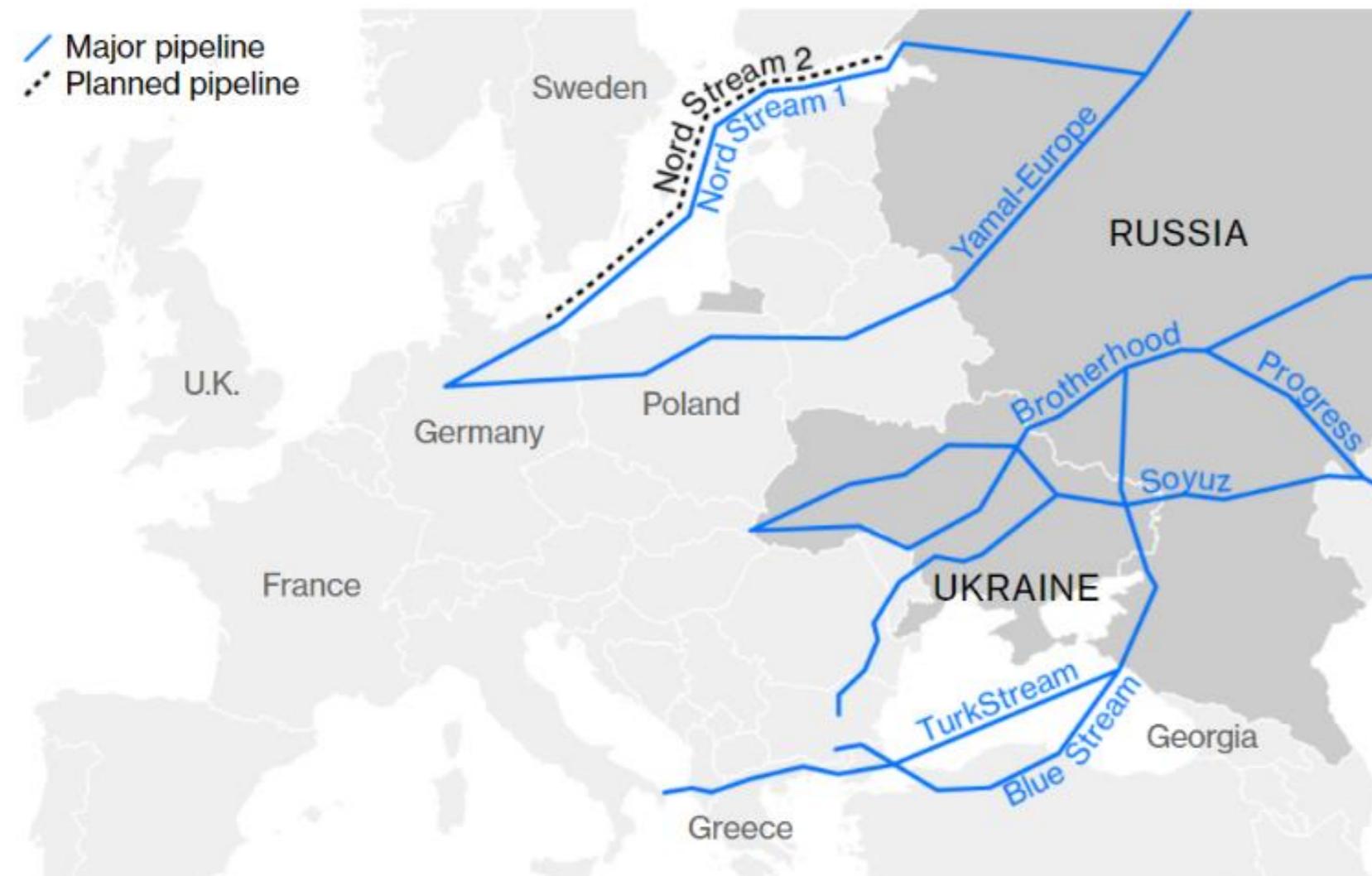
Bron: IEA

# 2015-2017: NORDSTREAM 2



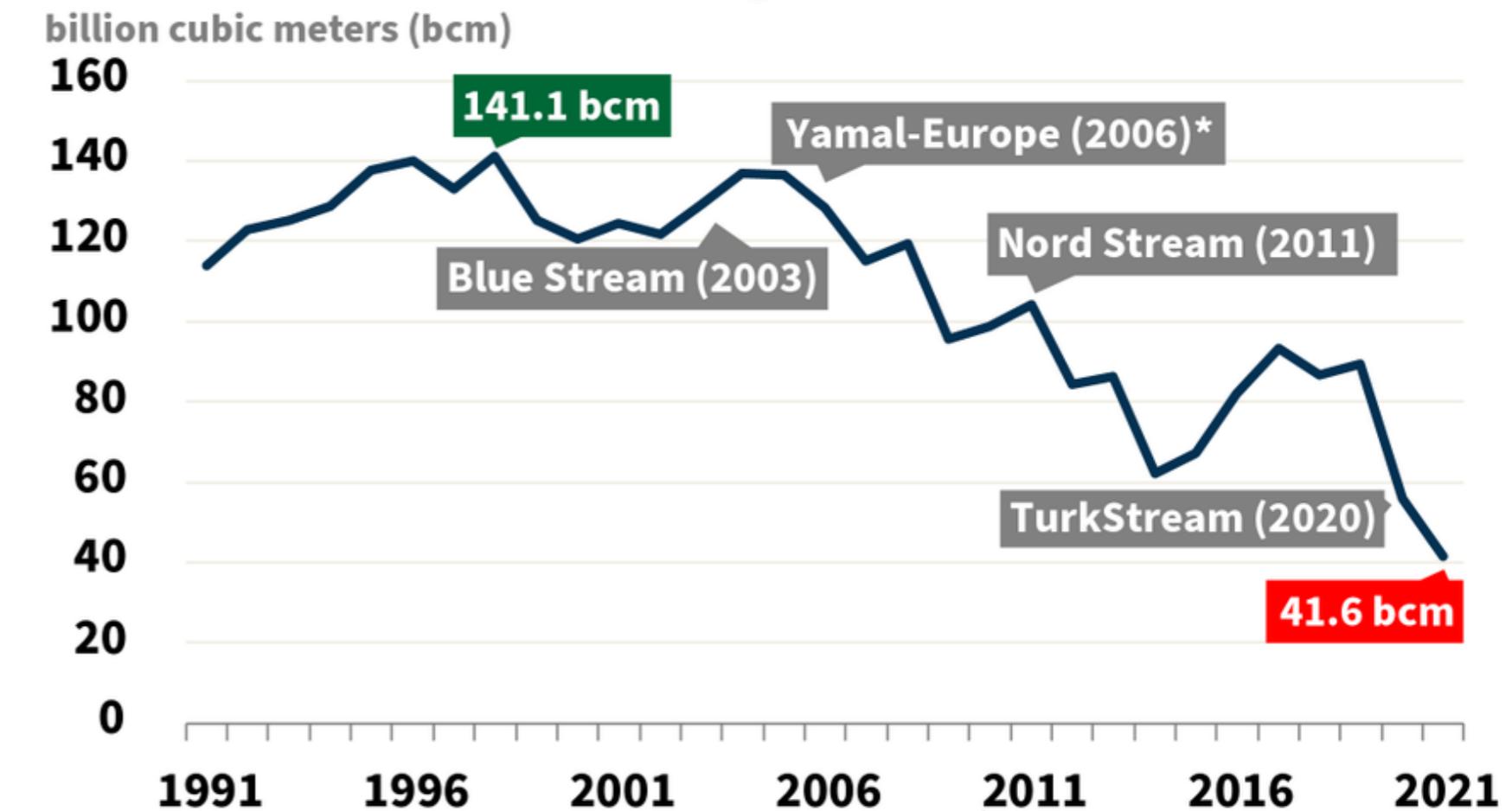
April 2017: Nord Stream 2 AG signed financing agreements for the Nord Stream 2 pipeline project with ENGIE, OMV, Shell, Uniper and Wintershall.

# RUSLAND OMZEILT OEKRAÏNE



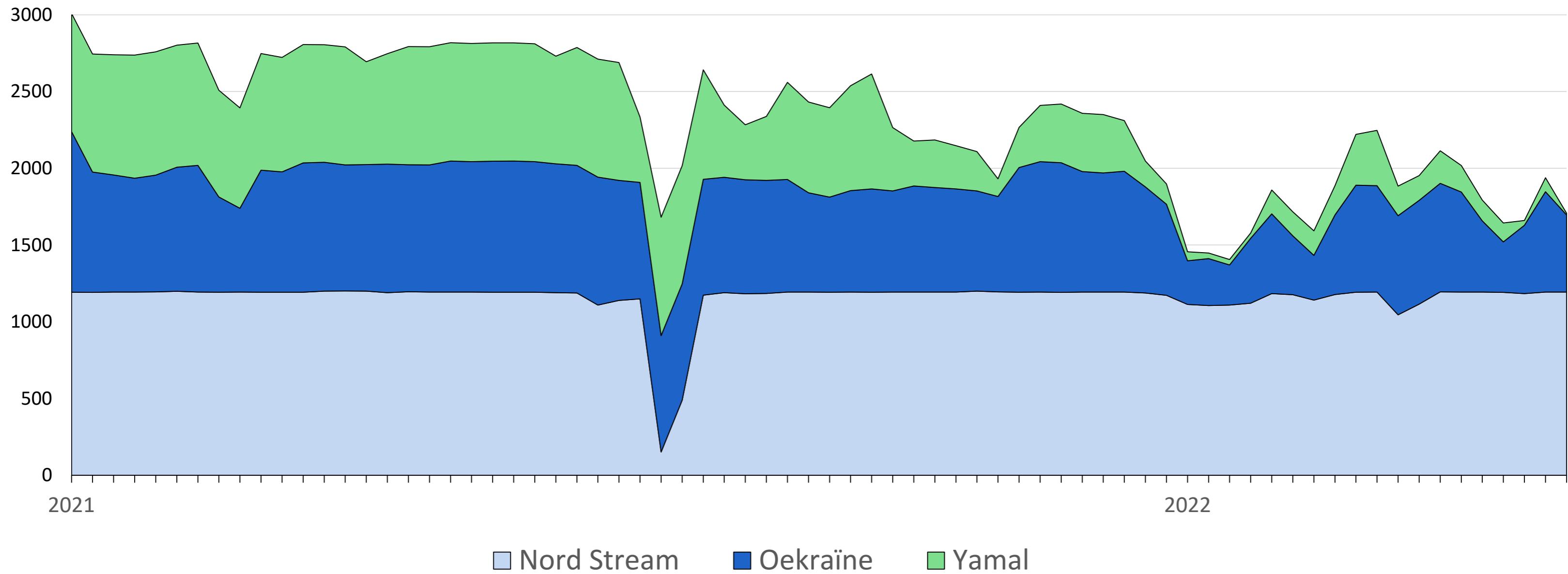
Bron: Bloomberg

## Natural Gas Transit through Ukraine



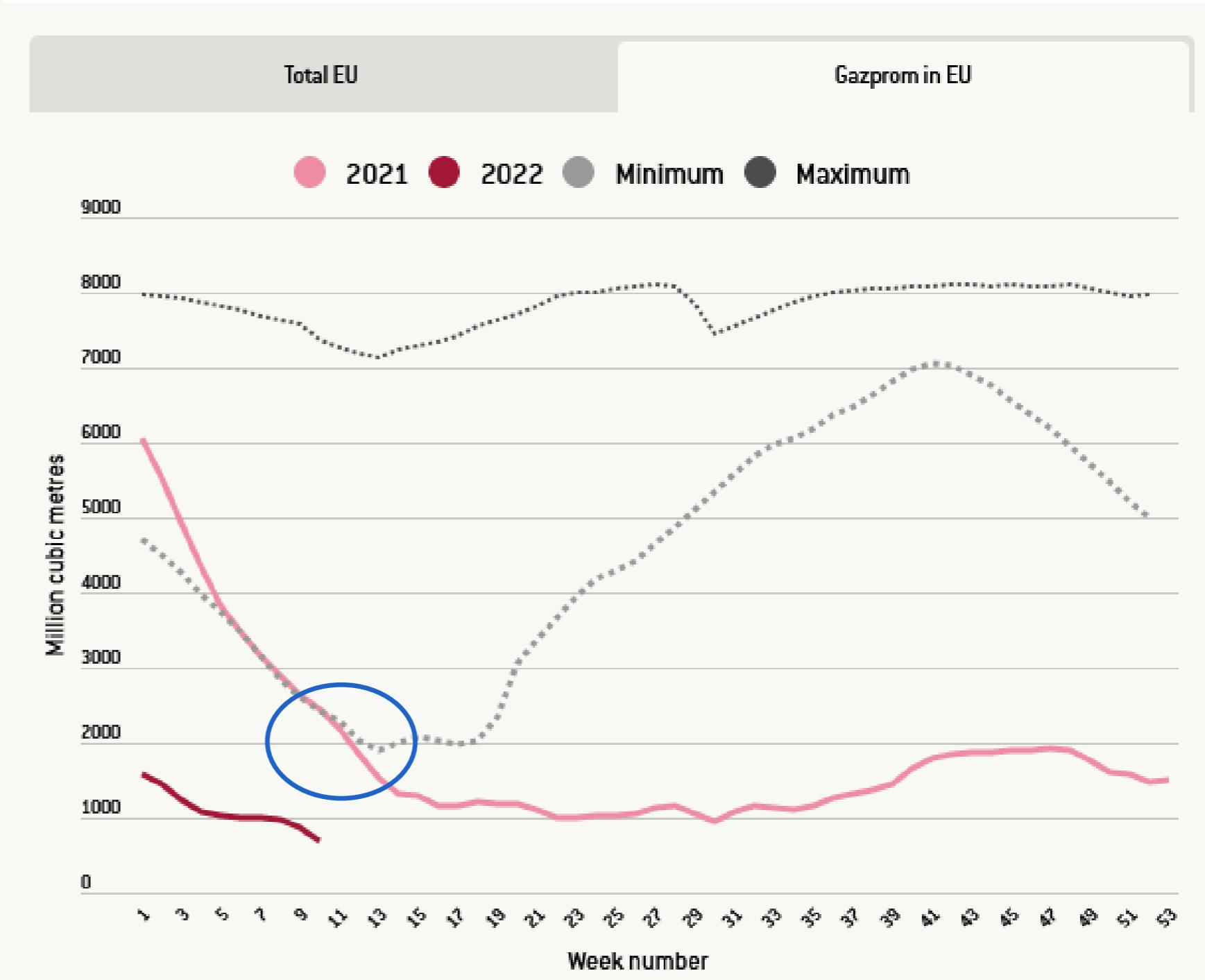
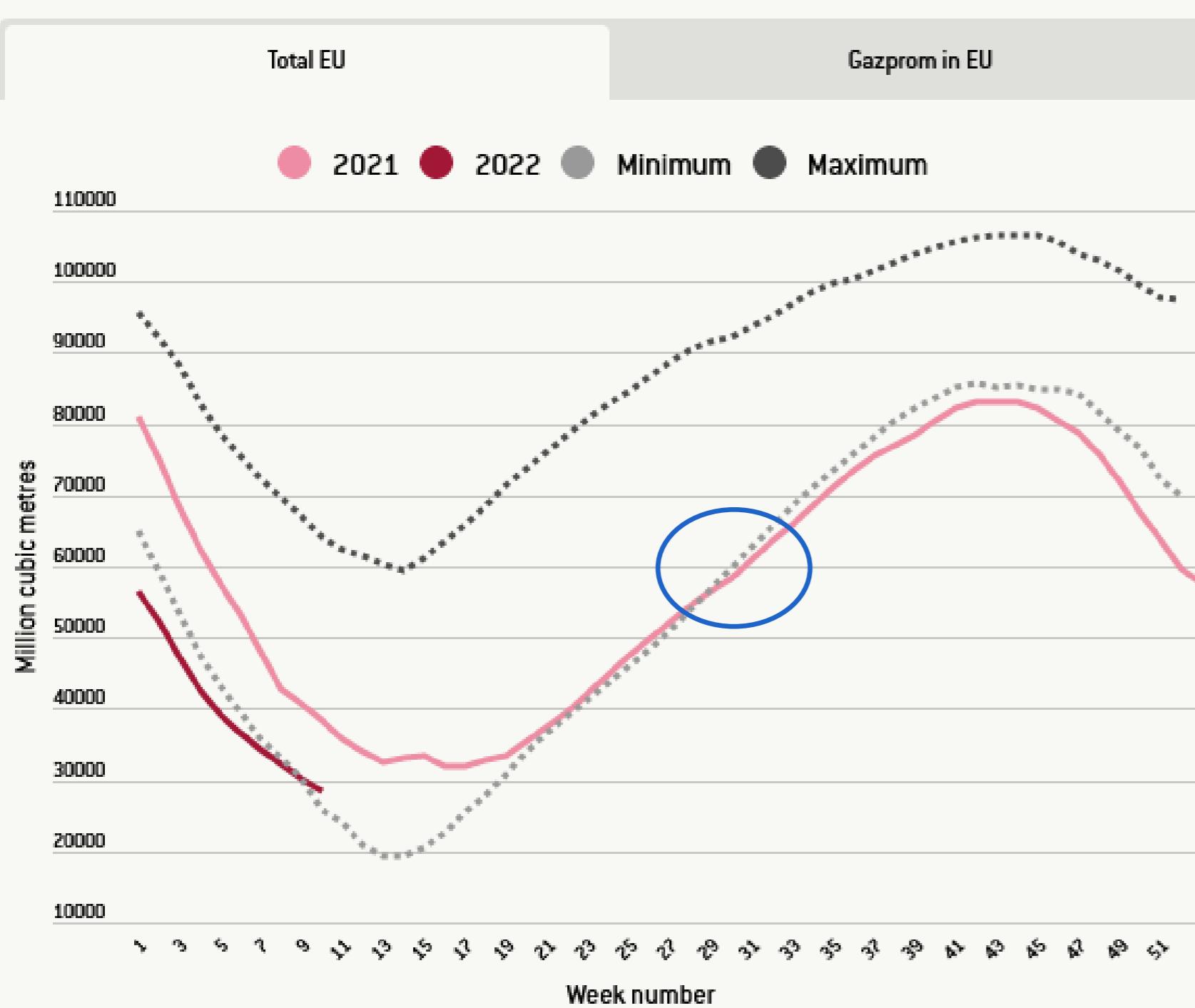
# 2021: ‘ARTIFICIËLE KRAPTE’ (IEA)

Russische gasexporten via pijpleiding (mcm/week)



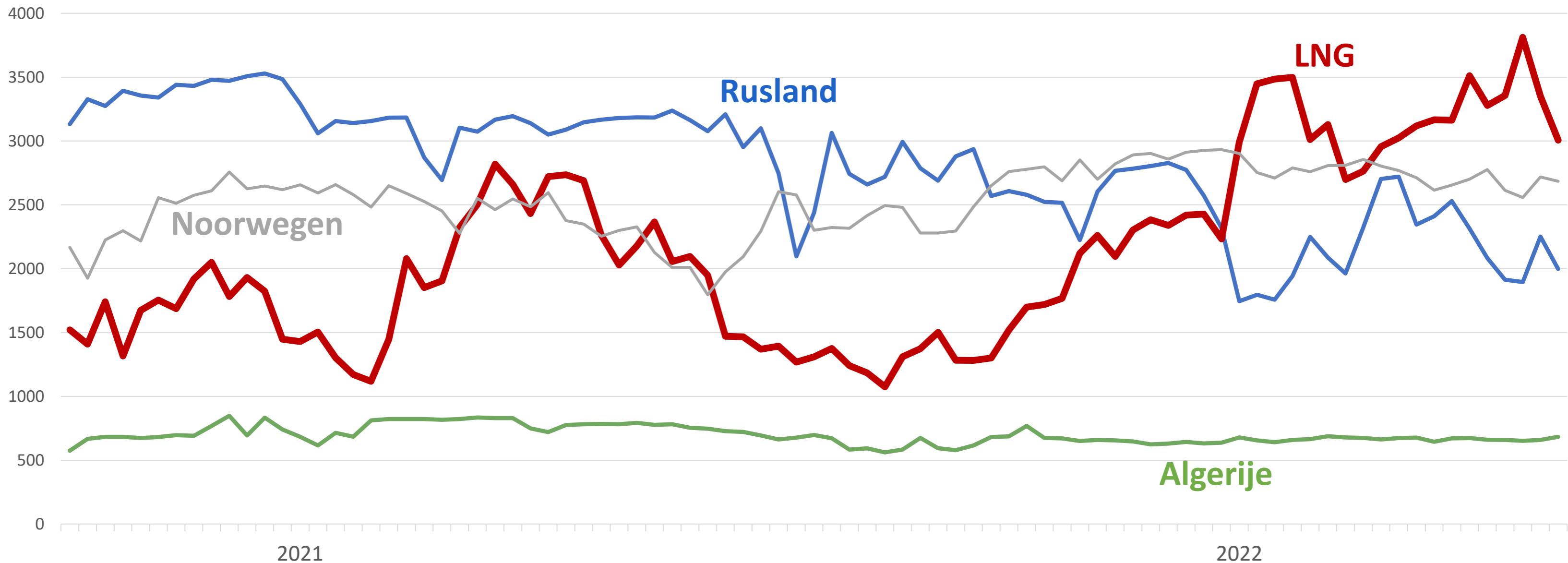
Bron: Bruegel

# + ONVOLDOENDE OPSLAG



# DEZE WINTER GERED DOOR LNG ...

Aardgasimport in EU-27 (mcm/week)

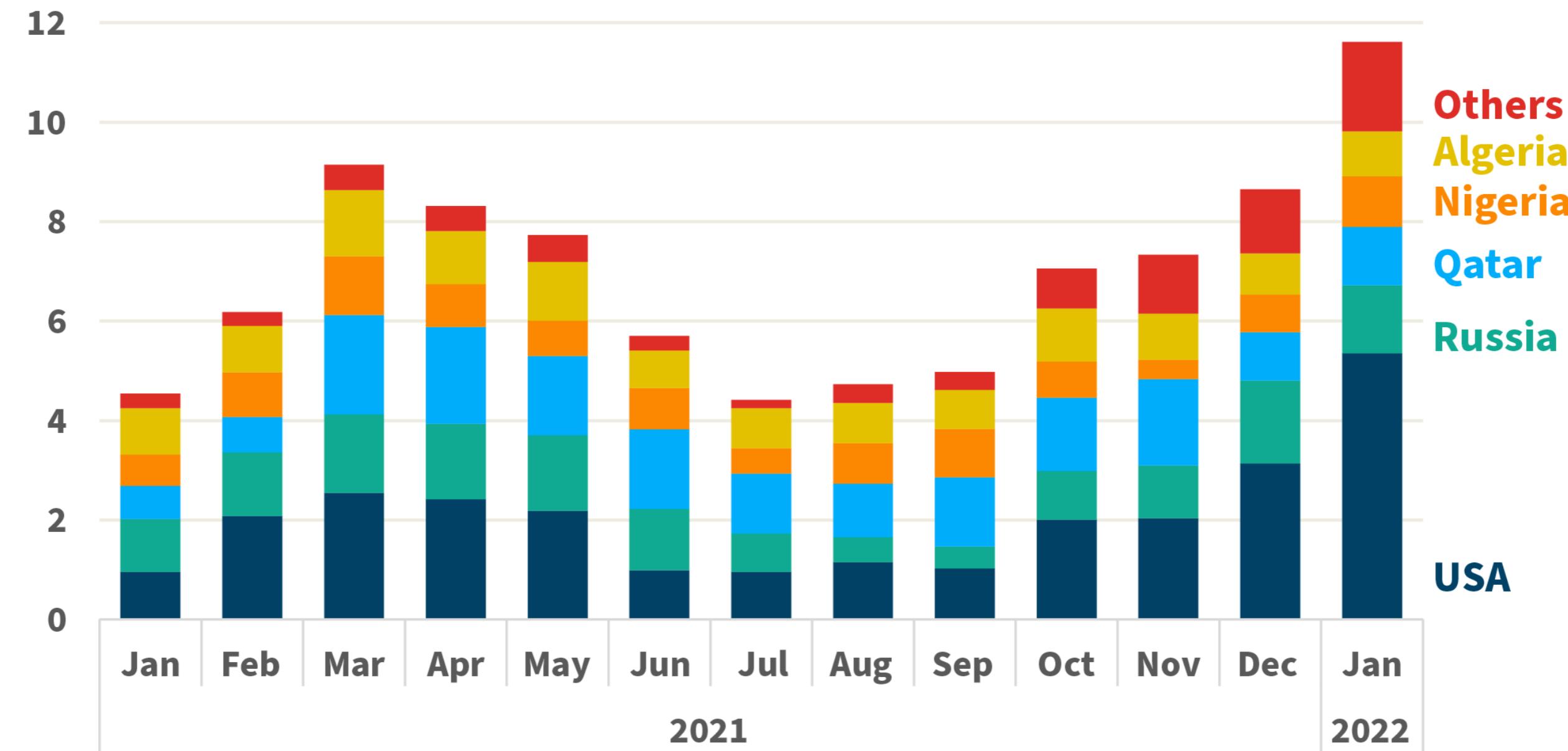


Bron: Bruegel

# ... MEER BEPAALD: AMERIKAANS LNG

## European LNG imports by source

million tons of LNG



Source: Kpler LNG Service (data downloaded on February 1, 2022).

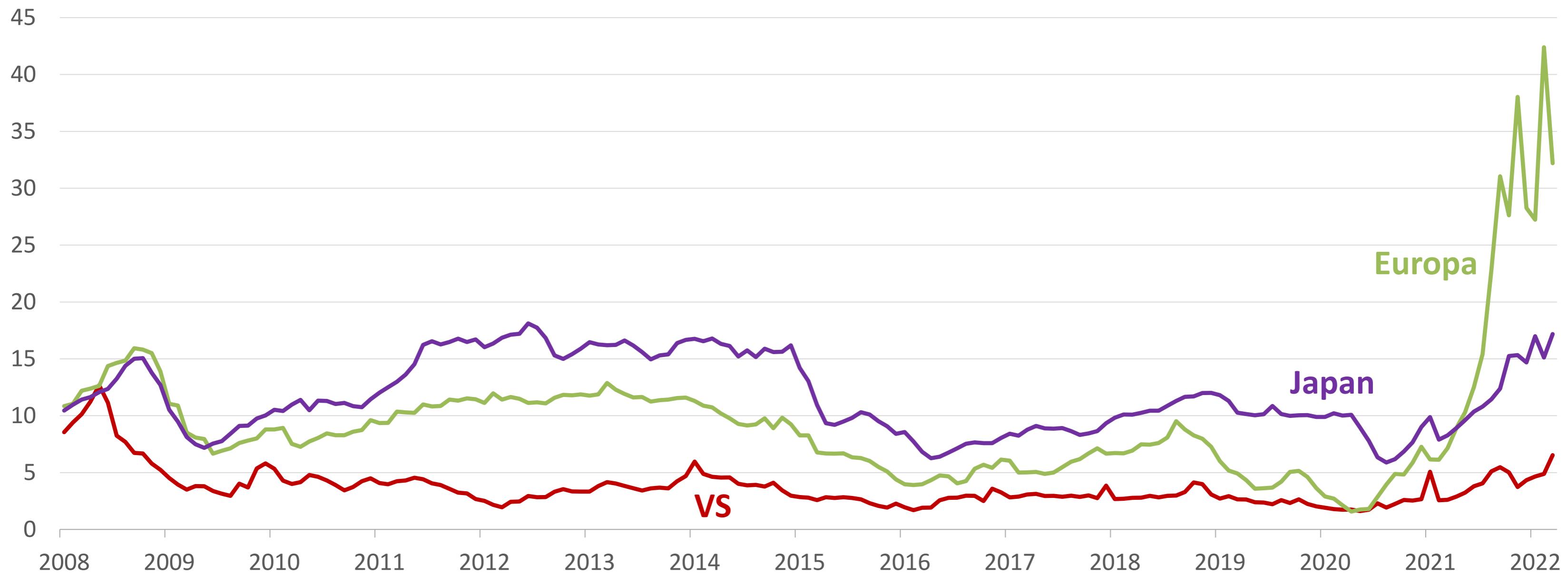
Bron: @ntsafo

# IMPACT INVASIE



# GASPRIJS BREEKT ALLE RECORDS IN '21-'22

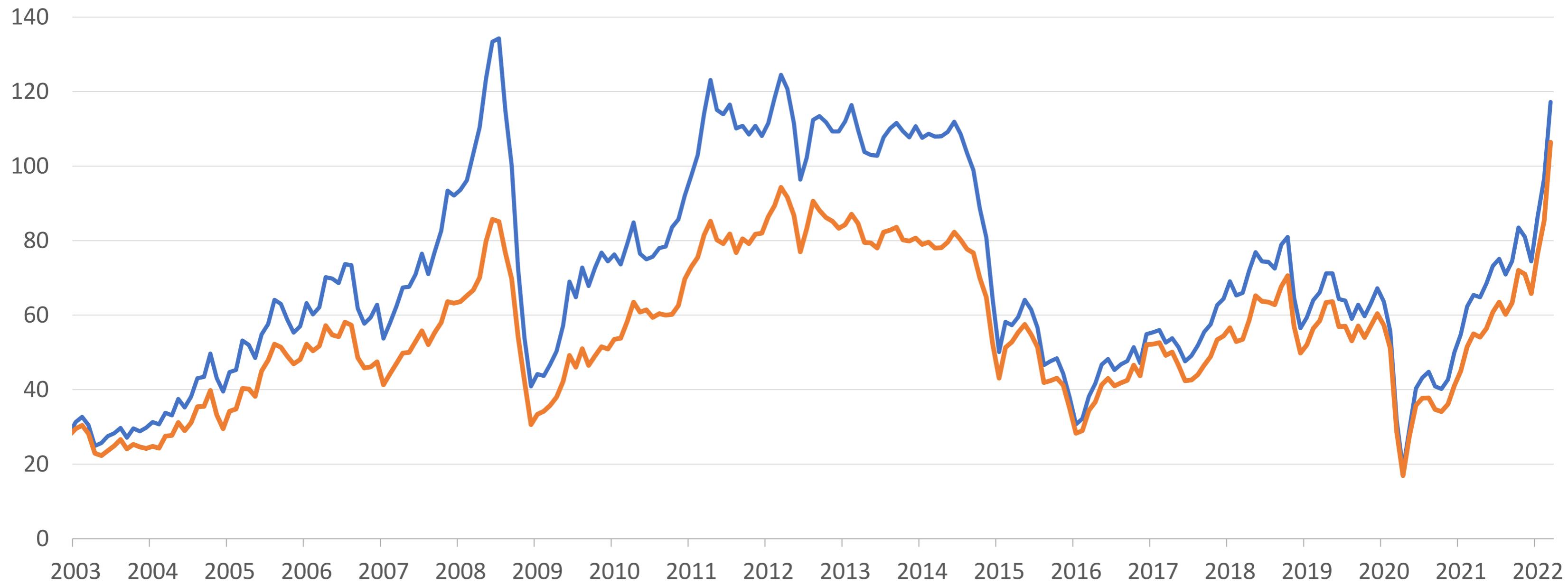
Aardgasprijzen (maandelijks, US\$/mmbtu)



Bron: Wereldbank

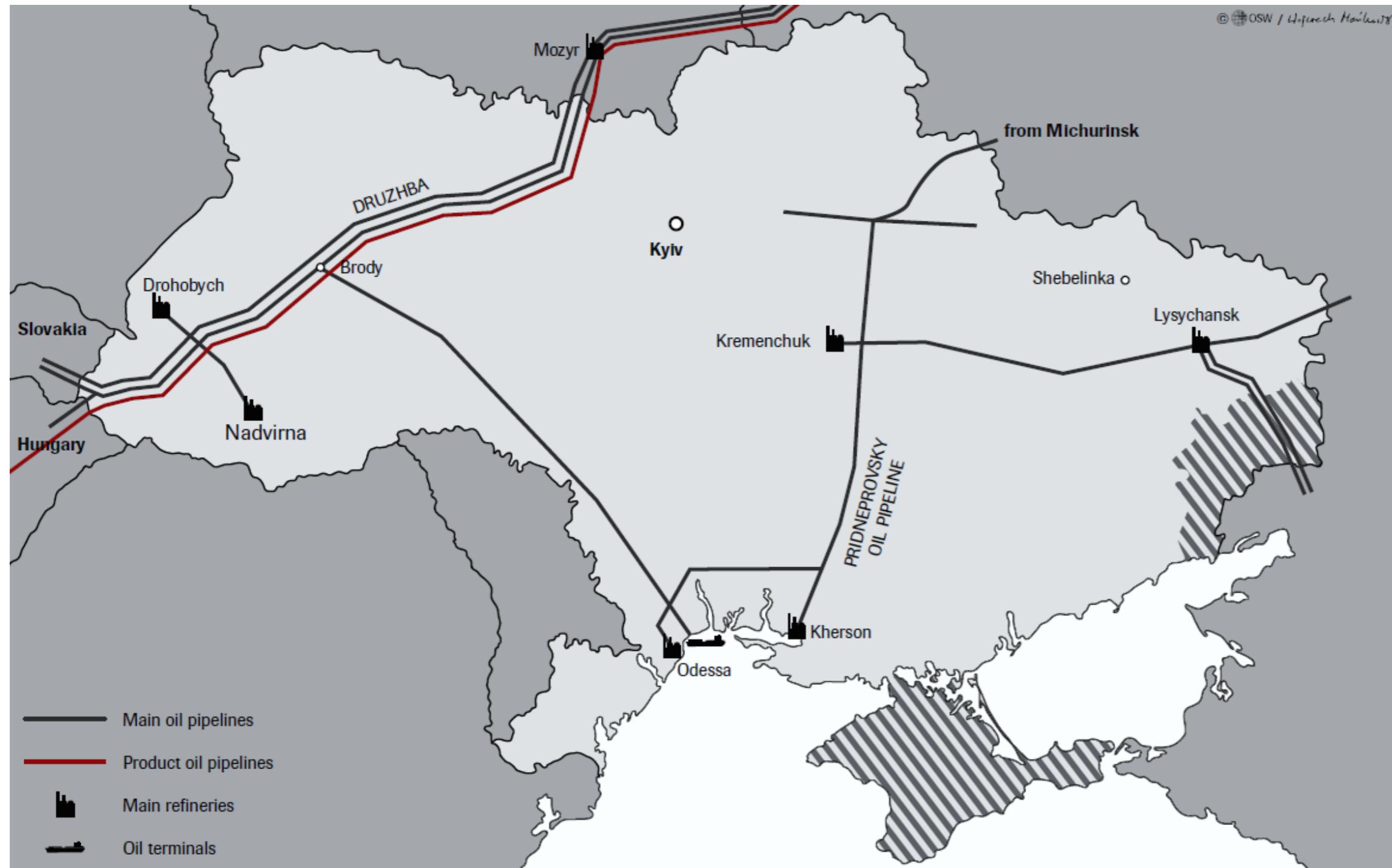
# HOOGSTE OLIEPRIJS OOIT (IN €)

Prijs per vat ruwe aardolie (Brent), in **dollar** en in **euro**



Bron: INSEE

# DISRUPTIES – OLIE INFRASTRUCTUUR



Olie opslagtanks, Odessa, 3 april 2022



Kremenchuk raffinaderij, 12 mei 2022

# DISRUPTIES – GAS INFRASTRUCTUUR



05/10/2022

## The actions of the occupiers led to the suspension of gas transit through the Sokhranivka DHW

The GTS of Ukraine (OGTSU) operator announces the occurrence of force majeure, which makes it impossible to continue transporting gas through the Sokhranivka DHW and the Novopskov Border Compressor Station (CS) located in the occupied territories. Novopskov is the first compressor station of the Ukrainian GTS in Luhansk region, through which almost a third of gas (up to 32.6 million cubic meters per day) is transited from Russia to Europe.

As a result of the Russian Federation's military aggression against Ukraine, a number of GTS facilities are located in the territory controlled by Russian troops and the occupation administration. Currently, OGTSU cannot carry out operational and technological control over the Novopskov COP and other assets located in these territories. Moreover, the intervention of the occupying forces in technological processes, changes in the modes of operation of GTS facilities, including unauthorized withdrawal of gas from the transit stream, endangered the stability and safety of the entire Ukrainian gas transportation system.

These actions under the current transit contract are force majeure (force majeure) circumstances that make it impossible to fulfill obligations at the connection point of GVS "Sokhranivka", as well as the border compressor station "Novopskov", which are not currently controlled by OGTSU.

Taking into account the above, the OGTSU informs that from 07:00 on May 11, 2022, gas will not be accepted into the GTS of Ukraine at the physical point of the Sokhranivka connection. In order to fulfill the transit obligations to European partners in full and in accordance with the terms of the agreement, it is possible to temporarily transfer unavailable capacity from the physical point

# SANCTIES



Oil



## Import ban on Russian crude, refined products



US expected to seek alternatives to heavy Russian feedstocks in South America, Canada. UK diesel imports will be key to watch under phased-in ban

## Pledge to reduce oil reliance further



G7 leaders promised to cut imports in countries without formal bans. Europe is particularly dependent, with Russia supplying about 2.7 million b/d of crude to the region

## Restrictions on investment in energy sector



Follows BP, Shell, ExxonMobil, other IOCs exiting Russian upstream, new trading bans

## Financial sanctions on energy trading



Russian banks disconnected from SWIFT, may slow energy trading. Bank sanctions further complicate payments for Russian energy

## Foreign investment restrictions on 13 Russian-owned firms



Includes oil producer and refiner Gazprom Neft, gas producer Gazprom, and pipeline operator Transneft

## Key people sanctioned

Igor Sechin (CEO, Rosneft), Nikolai Tokarev (Chairman, Transneft)



Natural gas



## Nord Stream 2 pipeline halted



Prevents 55 Bcm/yr of Russian gas flowing into Germany and European markets. Berlin turns to LNG terminals as alternative

## Russia responds with ruble payment demand



Russian President orders Gazprom to switch European gas supply contracts to ruble-based pricing

## Phase out of Russian gas imports to boost energy security



EU imported 155 Bcm of Russian gas in 2021, with Russian pipeline deliveries accounting for around one third of the market for non-native supply

## Key people sanctioned

Alexei Miller (CEO, Gazprom), Gennady Timchenko (investor, Novatek)

Bron: S&P Global Commodity Insights, 28 March 2022

# RUSSISCHE TEGENZETTEN

Nieuw decreet: RU  
eist betaling in  
roebel

1 april

27 april  
Gaskraan dicht  
naar PL en BG

Gaskraan dicht  
naar Gazprom  
Germania

11 mei

20/21 mei ?  
Gaskraan dicht  
naar FI ?

Quid:

- Denemarken?
- Kroatië?
- Slovenië, ...?



The Economist

(Wellicht) rekening geopend  
bij Gazprombank:



18.05.2022

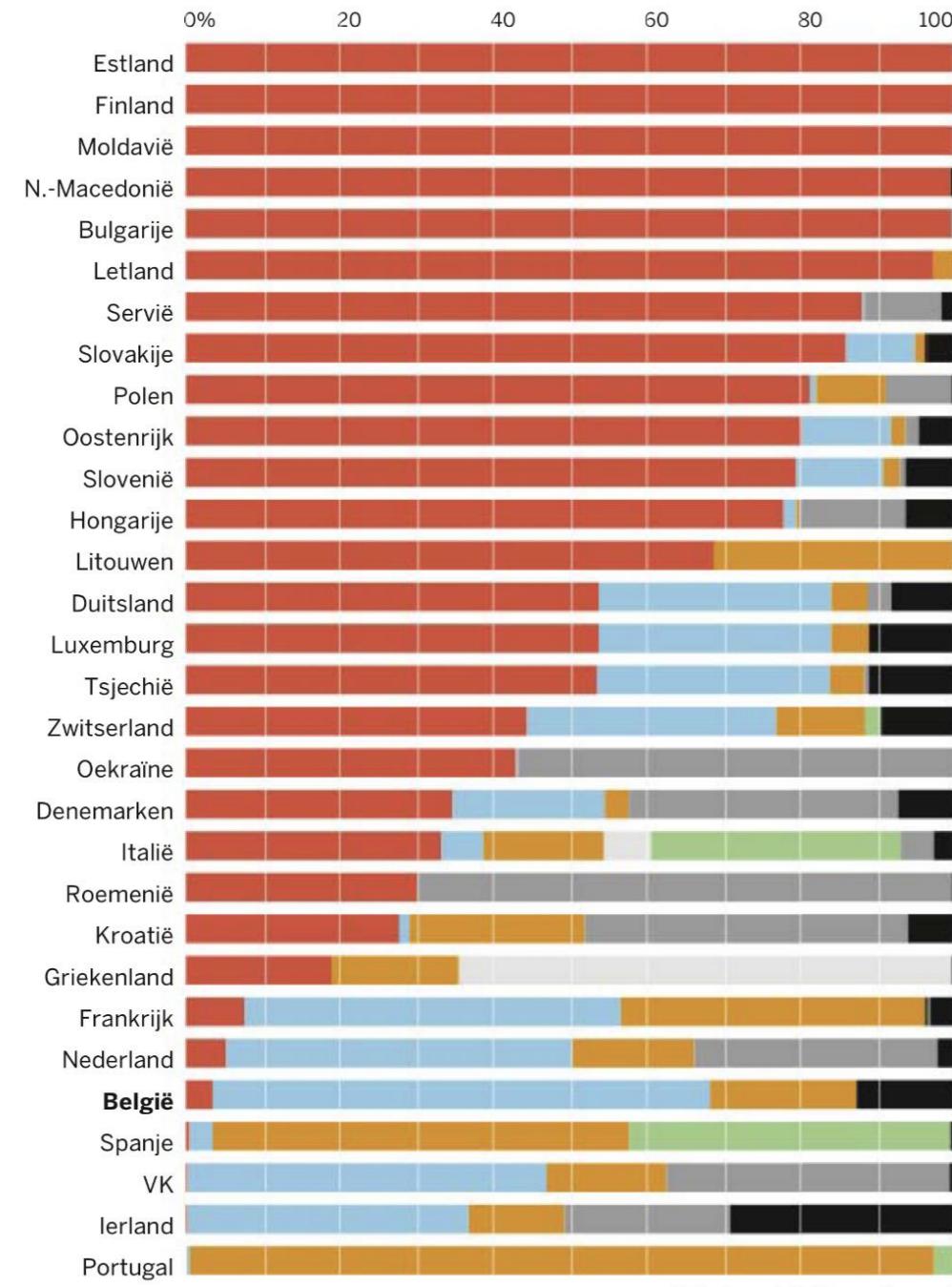
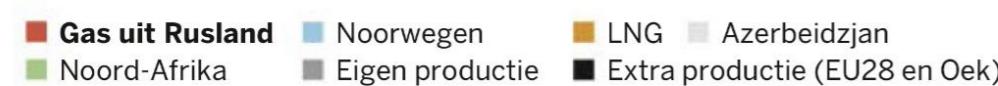
**Gasum considers that natural gas  
imports from Russia could end this  
week**

Gasum considers there to be a real risk of the natural gas supplies under the company's gas supply contract ending and that it is likely that imports of natural gas from Russia to Finland will cease either late on Friday, May 20 or on Saturday, May 21, 2022. Gasum has not received any information about the matter from Gazprom Export or from the Russian transmission operator.

# WEDERZIJDSE AFHANKELIJKHEID

## Hoe afhankelijk is Europa van Russisch gas?

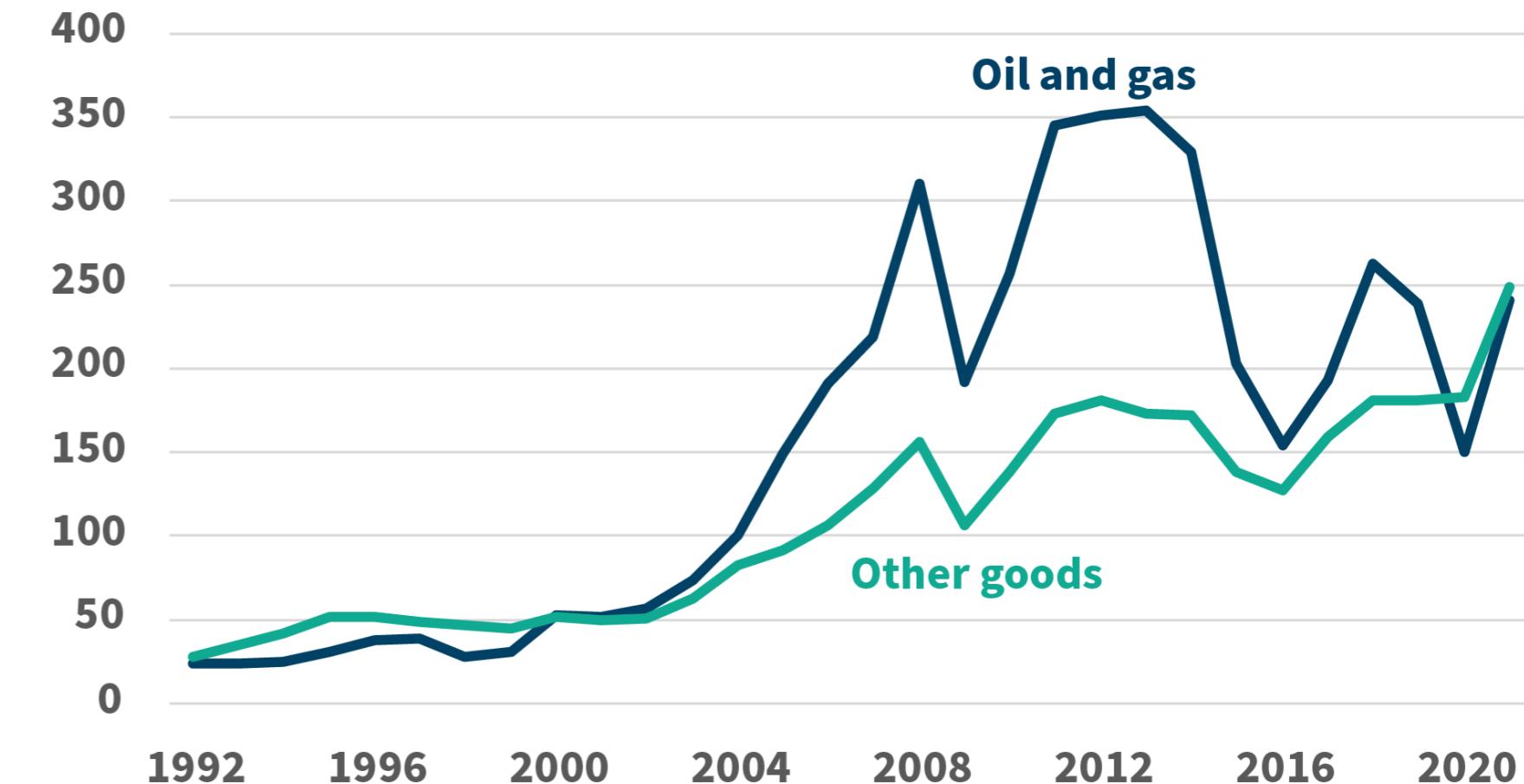
Aandeel in totale gasimport per land



## Hoe afhankelijk is Rusland van olie en gasexportinkomsten?

### Russia Hydrocarbon and Other Goods Exports

billion U.S. dollars

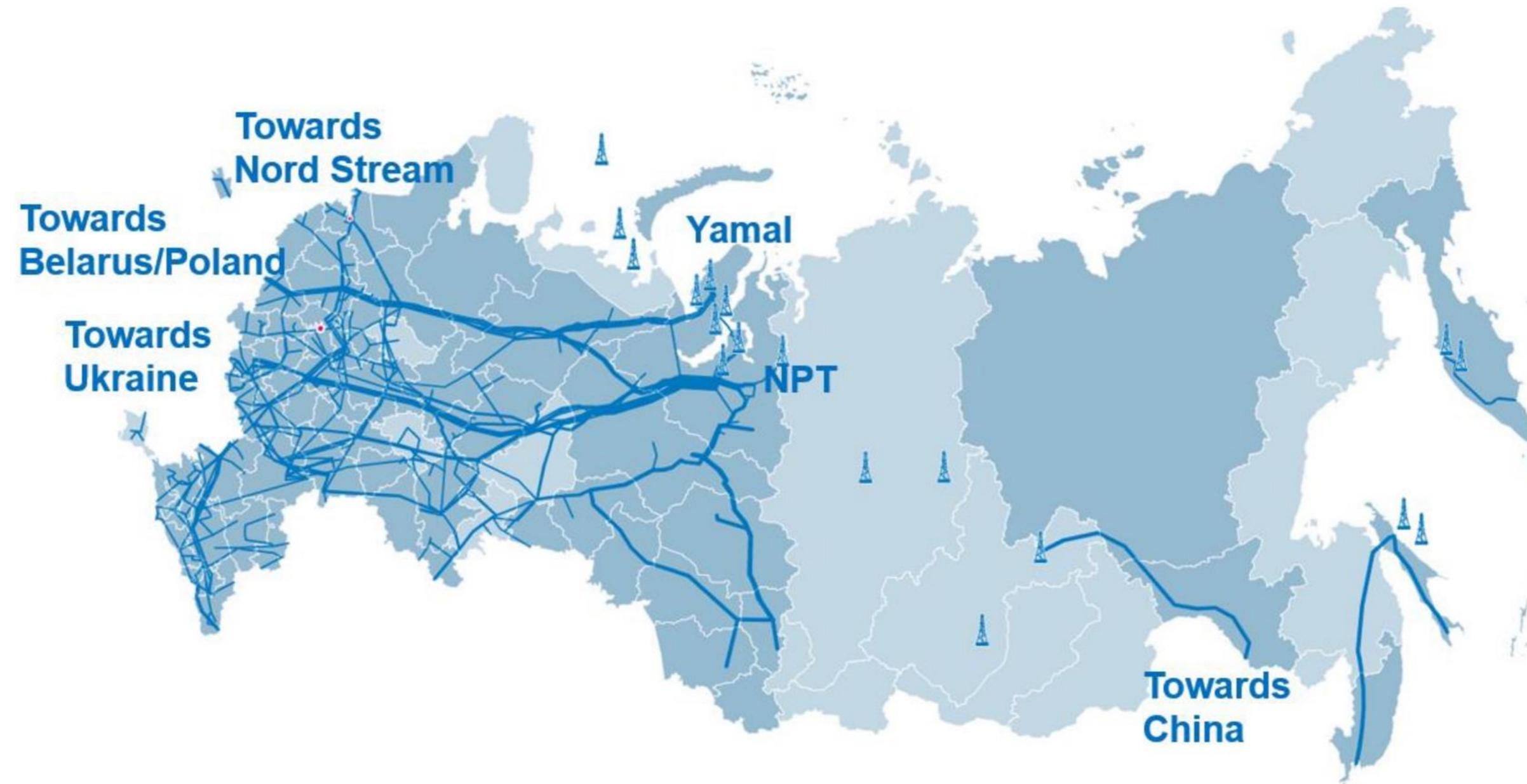


Source: Bank of Russia, Balance of Payments of the Russian Federation (Analytical Presentation).  
Data for 2021 are estimates.

Bron: @ntsafos

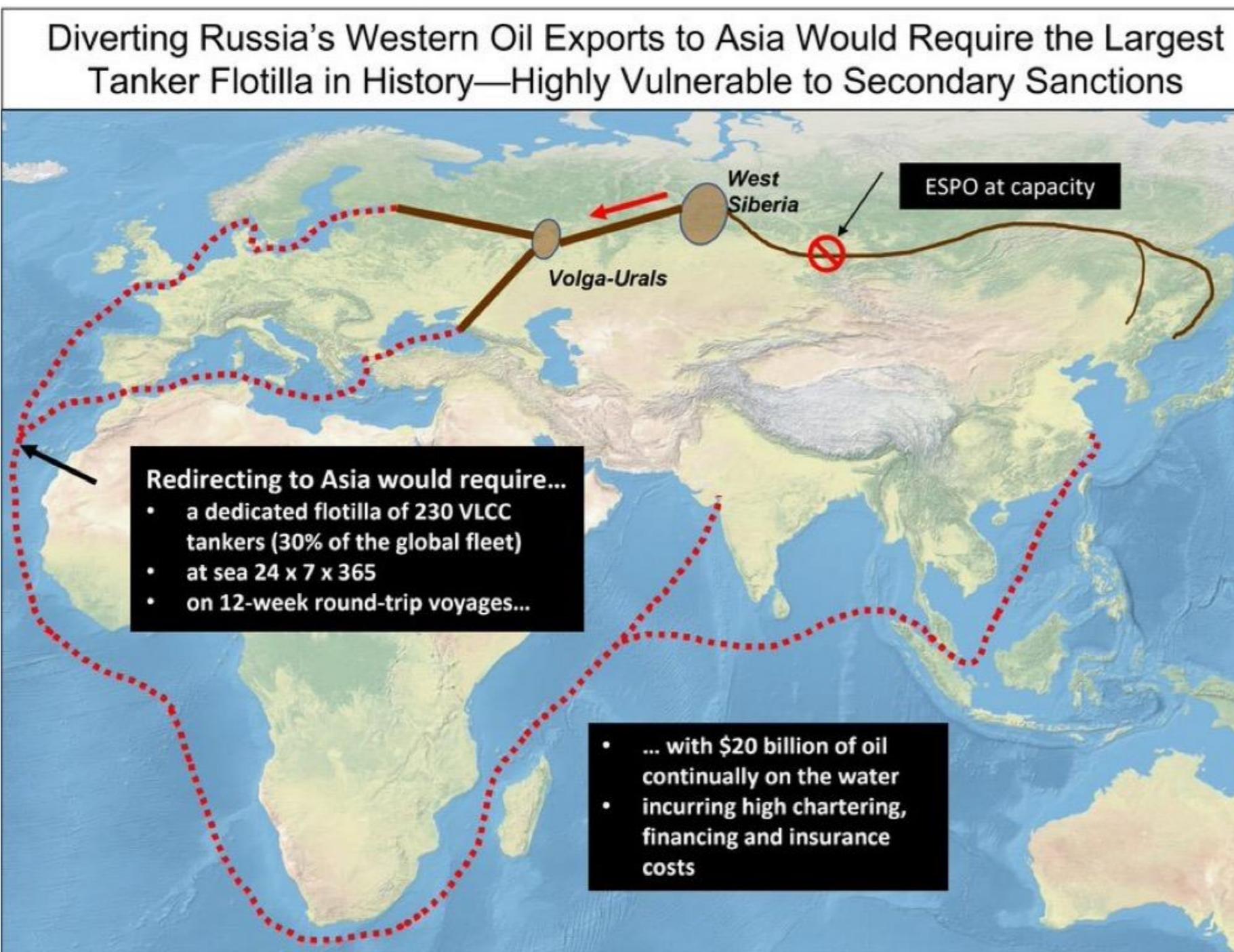
# GASHANDEL HERORIËNTEREN VRAAGT TIJD

Figure 17: Russian gas pipeline infrastructure



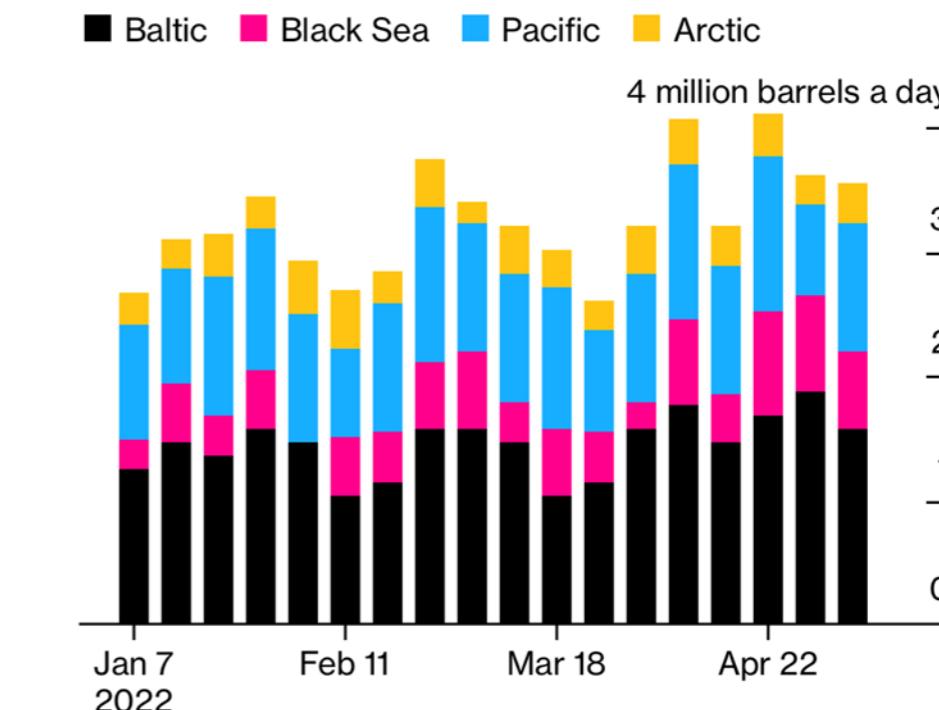
Source: OIES

# OLIE-EXPORT HERLEGGEN = EXTRA KOSTEN



## Crude Flows

Russia has a heavy reliance on seaborne crude flows



Source: Vessel tracking data monitored by Bloomberg

Bloomberg

Meeste Russische aardolie wordt geëxporteerd via havens in Baltische en Zwarte Zee.

# DAT GELDT OOK VOOR EUROPA ...

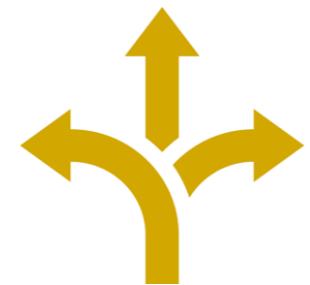


Hongarije/Slovakije kregen uitstel tot eind 2024 in voorstel Commissie maar liggen dwars

# IMPORTHEFFING BETER DAN EMBARGO?



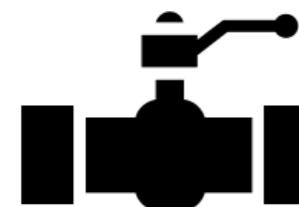
↑ Politieke haalbaarheid (unan. vs. QMV?)



Flexibel instrument: mogelijkheid tot differentiatie (vb. pijpleiding vs. seaborne of crude vs. product) en bijsturing



Minder risico op ↑ RU exportinkomsten (door ↑ prijzen).  
Tariefinkomsten kunnen pijn voor EU en/of Oekraïne verzachten



Geen ‘alles-of-niets’ optie: ↓ kans op Russische vergelding



# SITUATIE BELGIË

# GASIMPORT EN -TRANSIT

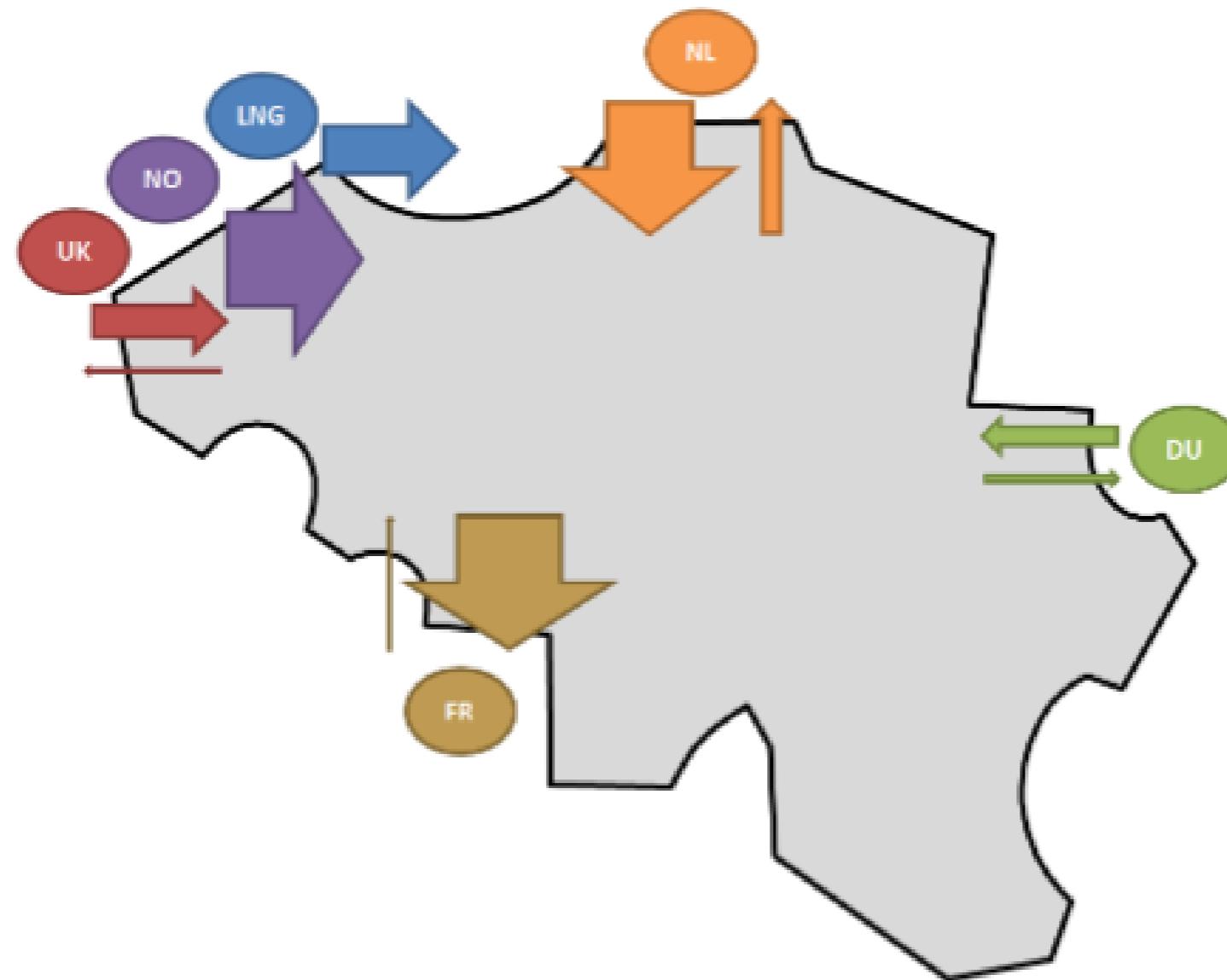
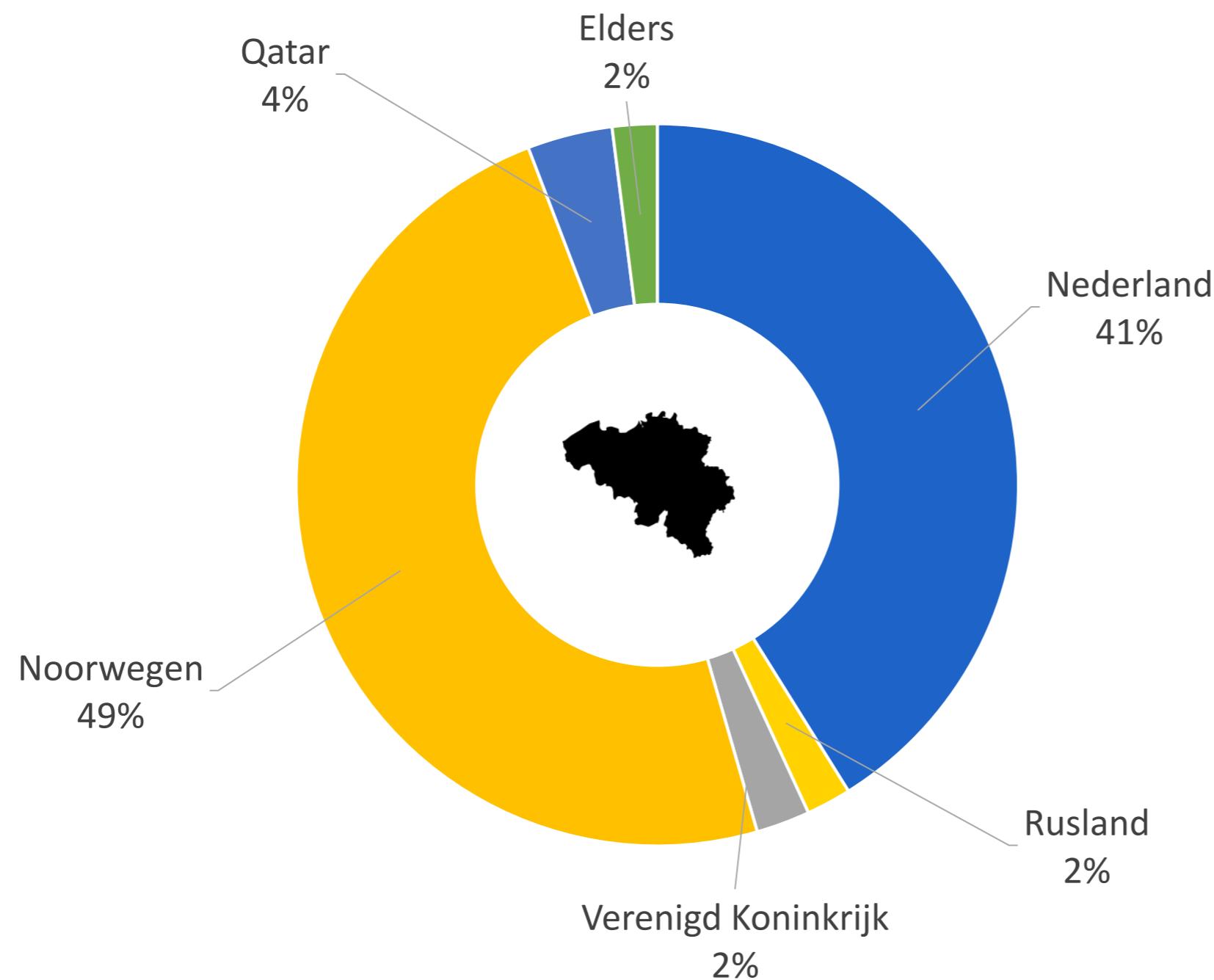


Figure 21: Allocations at border points in 2019



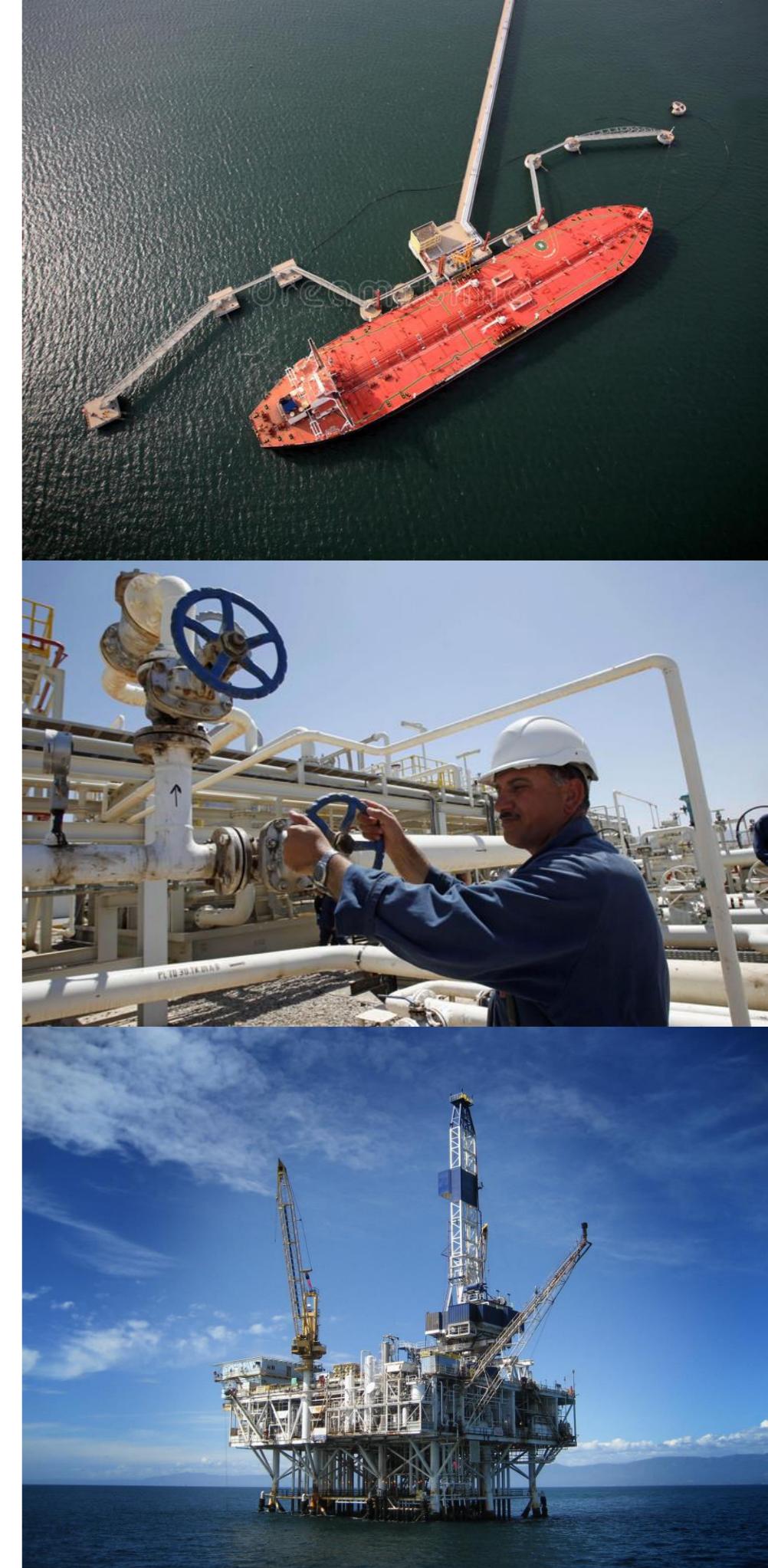
Figure 36: Zeebrugge LNG Terminal

# GASIMPORT

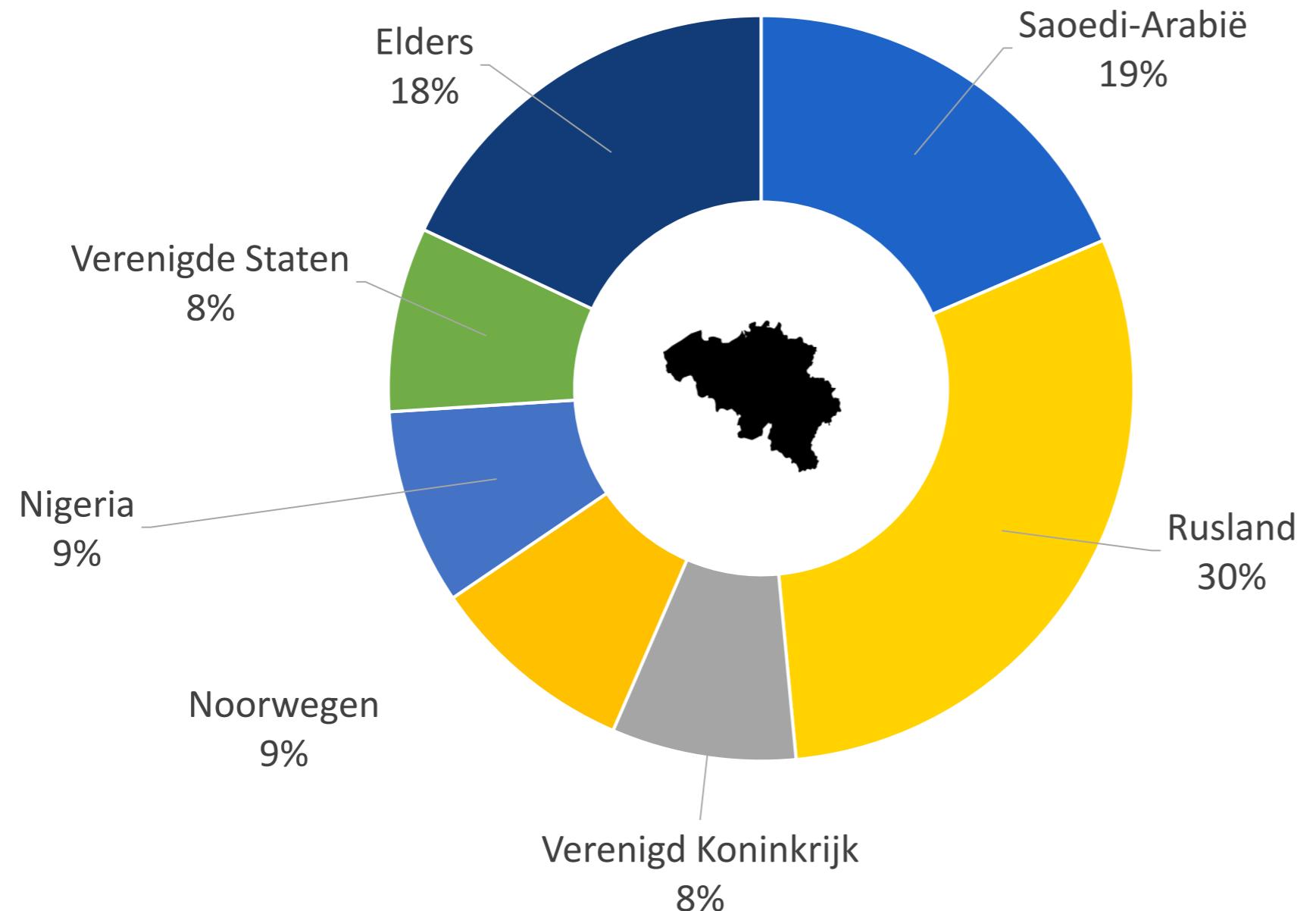


(2020)

Bron: Fod Econ.

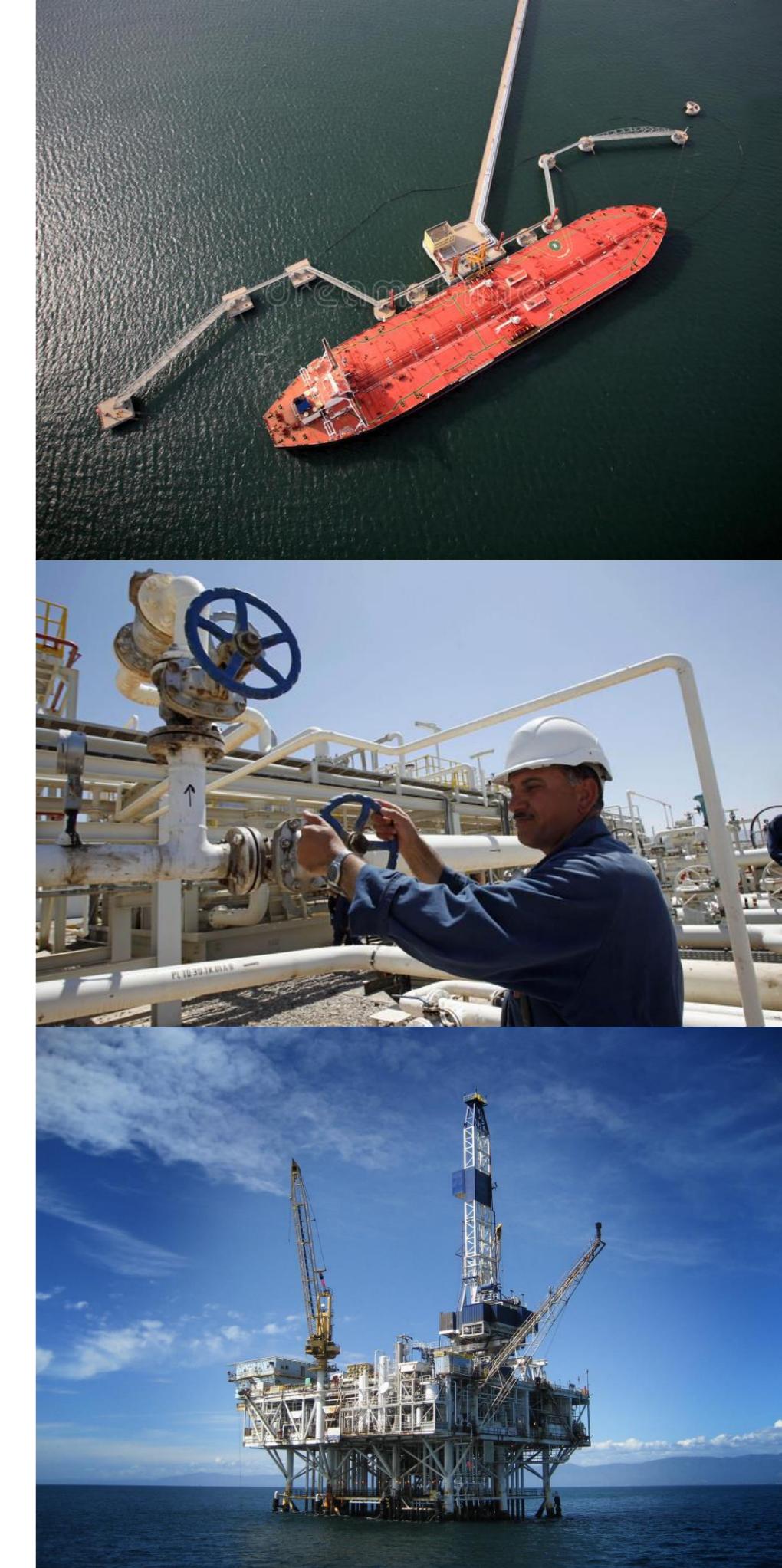


# OLIE-IMPORT



(2020)

Bron: Fod Econ.



# BELANGRIJKE ROL HAVENS

Ten largest ports by value of Russian fossil fuel shipments in the first two months of the invasion (values in mln EUR)

port	country	coal	crude oil	LNG	oil products	total
Rotterdam	Netherlands	4	1011	0	535	1549
Maasvlakte	Netherlands	87	837	237	80	1241
Trieste	Italy	21	769	0	205	996
Yeosu	South Korea	12	876	0	106	994
Gdansk	Poland	1	580	0	169	751
Zeebrugge	Belgium	0	0	717	0	717
Antwerpen	Belgium	2	152	0	447	600
Körfez	Turkey	0	357	0	206	563
Nemrut Bay	Turkey	0	483	0	6	488
Port Said	Egypt	0	482	0	0	482

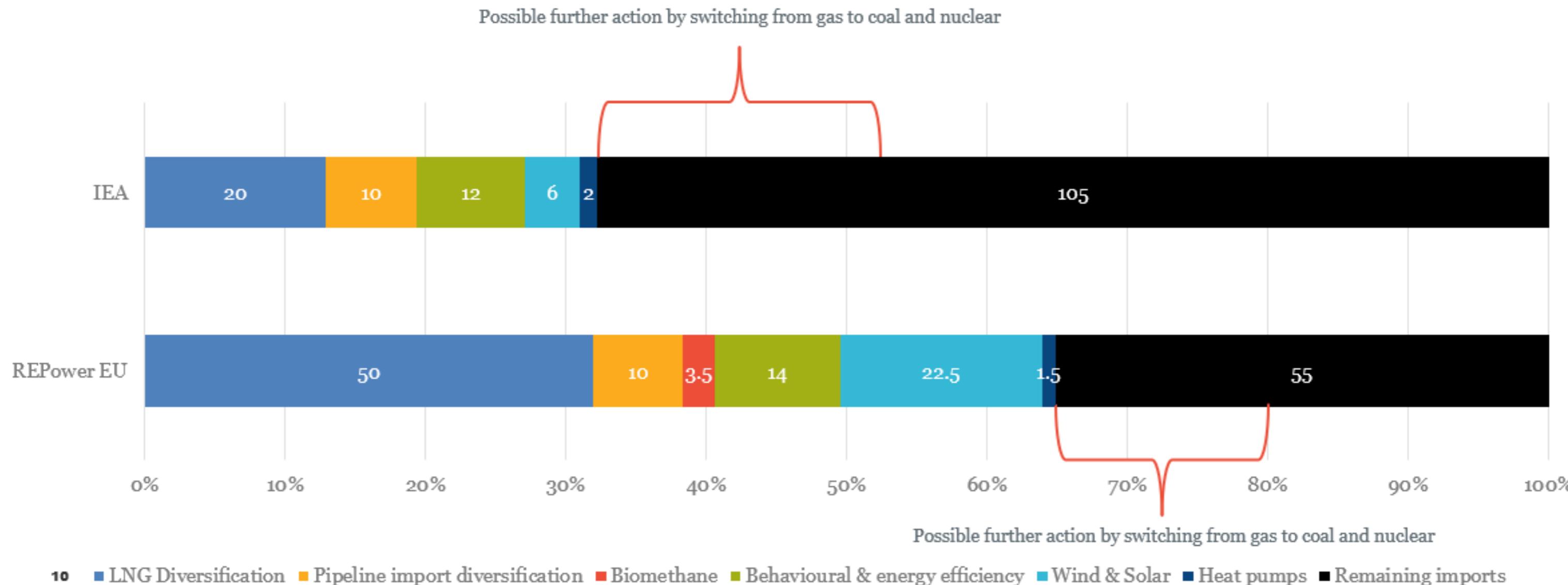
Bron: CREA

# WAT NU?



GHENT  
UNIVERSITY

# REPOWEREU: 2/3 MINDER RUSSISCH GAS

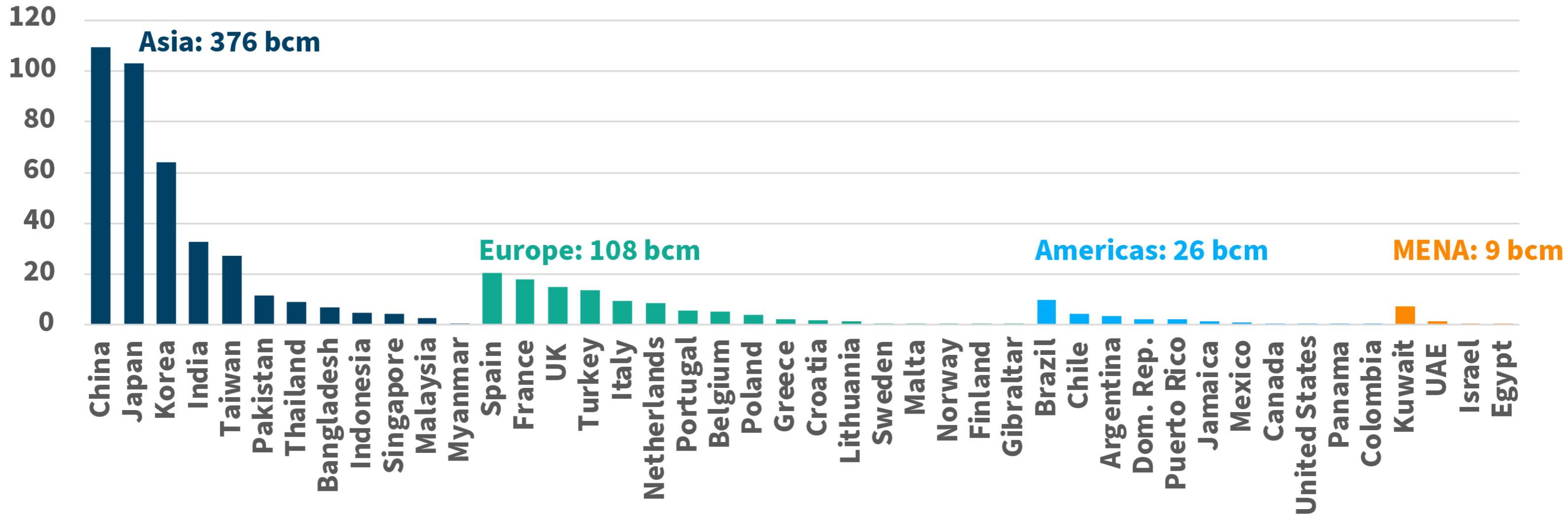


Bron: IEA 10-point plan (3 March 2022), REPowerEU Communication (8 March 2022)

# KAN EUROPA 50 BCM LNG VINDEN?

## World LNG imports by country and region (2021)

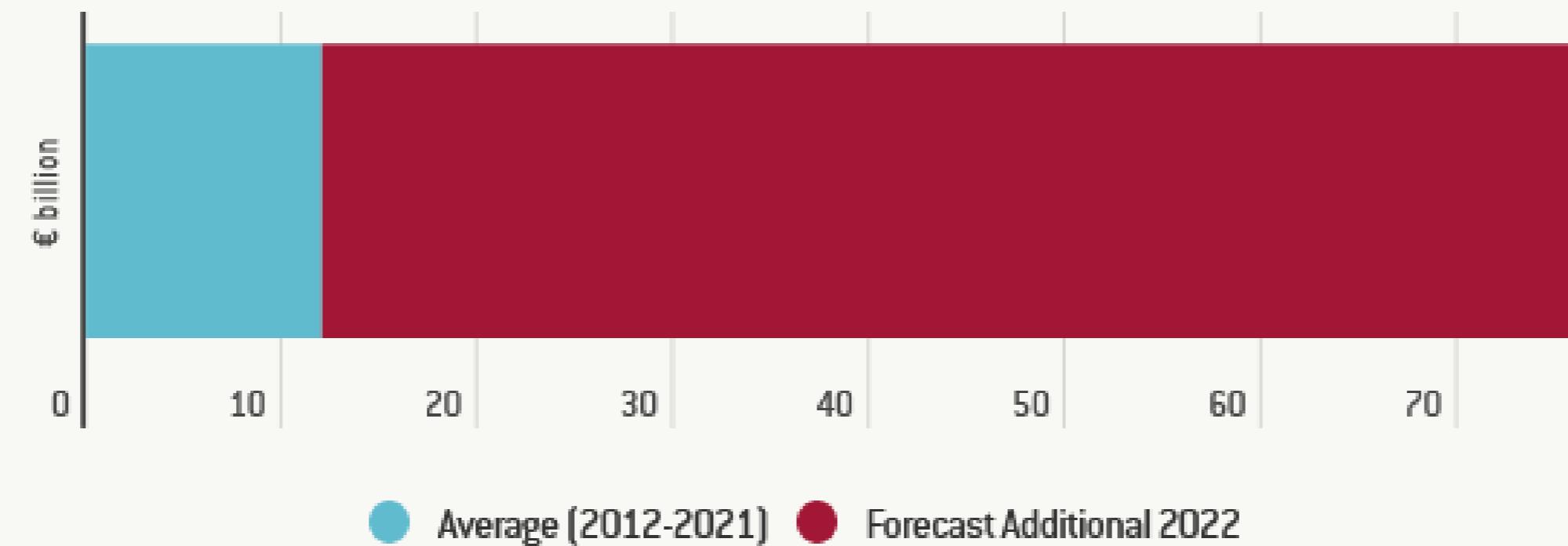
billion cubic meters



Source: Kpler LNG Service

# EN TEGEN WELKE KOST?

**Figure 4: Cost for filling up storage in April-Oct 2022 (€ billion)**



Source: Bruegel based on Bloomberg and AGSI+

Note: estimates are based on TTF historic and forward-looking prices for the period April to October. Taking the 2012-2020 average price (hence excluding 2021) the average cost is 10.1 bln. The 2022 target storage in TWh is set at 1000 TWh (vs the 2012-2021 average of 922 TWh and 1090 TWh obtained by mid-October in 2019).

# DIVERSIFICATIE = PROBLEEMVERSCHUIVING?

Alternative suppliers*	Potential supply increase	Barriers and limitations	Political risks	Freedom House Index
Norway	<a href="#">9-10 bcm</a> (in 2022)	<ul style="list-style-type: none"> <li>Existing fields nearly at max. capacity and expected to decline in next decade</li> </ul>	<ul style="list-style-type: none"> <li>Political opposition to developing new gas reserves</li> </ul>	100 (#2)
Algeria	<a href="#">9 bcm</a> (2023-2024)	<ul style="list-style-type: none"> <li>Gas exports suffering from years of underinvestment and growing domestic gas demands</li> </ul>	<ul style="list-style-type: none"> <li>Transit via Morocco halted in Nov. 2021 due to political dispute over Western Sahara</li> <li>Threatens to cut gas supplies to Spain if it re-exports to Morocco</li> <li>Close ally of Russia (major arms deals)</li> </ul>	32 (#144)
Azerbaijan	<a href="#">2.5 bcm</a> (2022)	<ul style="list-style-type: none"> <li>TAP/TANAP capacity needs expansion and new fields need to be developed</li> </ul>	<ul style="list-style-type: none"> <li>Sep-Nov 2020: Nagorno-Karabakh war with Armenia</li> <li>April 2022: sales to Turkey halted</li> </ul>	9 (#180)
Qatar	unclear	<ul style="list-style-type: none"> <li>Most of its production is sold under LT-contracts to Asia</li> </ul>	<ul style="list-style-type: none"> <li>Demands long-term contracts (min. 20 years)</li> <li>Insists on destination clauses and oil indexation</li> </ul>	25 (#153)
Israel	unclear	<ul style="list-style-type: none"> <li>No gas export infrastructure to EU</li> </ul>	<ul style="list-style-type: none"> <li>EastMed gas pipeline project (with Greece and Cyprus) has created tensions with Turkey</li> </ul>	76 (#77)
Egypt	unclear	<ul style="list-style-type: none"> <li>Most of its LNG is sold under LT contracts to China</li> </ul>	<ul style="list-style-type: none"> <li>Same as above</li> </ul>	18 (#165)
Nigeria	unclear	<ul style="list-style-type: none"> <li>Gas production hampered by lack of investment</li> </ul>	<ul style="list-style-type: none"> <li>Proposed trans-Saharan gas pipeline through Niger raises transit risk</li> <li>Waste and corruption in the fossil fuel industry</li> </ul>	43 (#129)
Mozambique	unclear	<ul style="list-style-type: none"> <li>Total LNG export project on hold since Islamist attack in April 2021</li> </ul>	<ul style="list-style-type: none"> <li>Fragile security situation</li> </ul>	43 (#128)

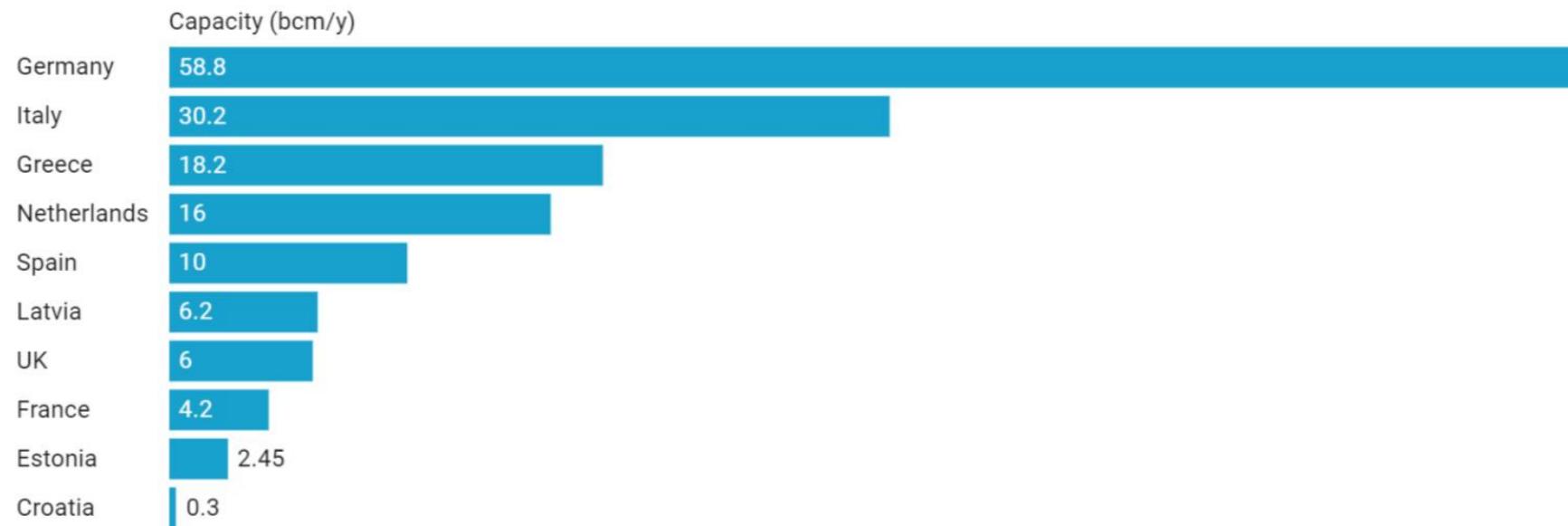


# LNG RUSH EN GEVAAR OP LOCK-IN

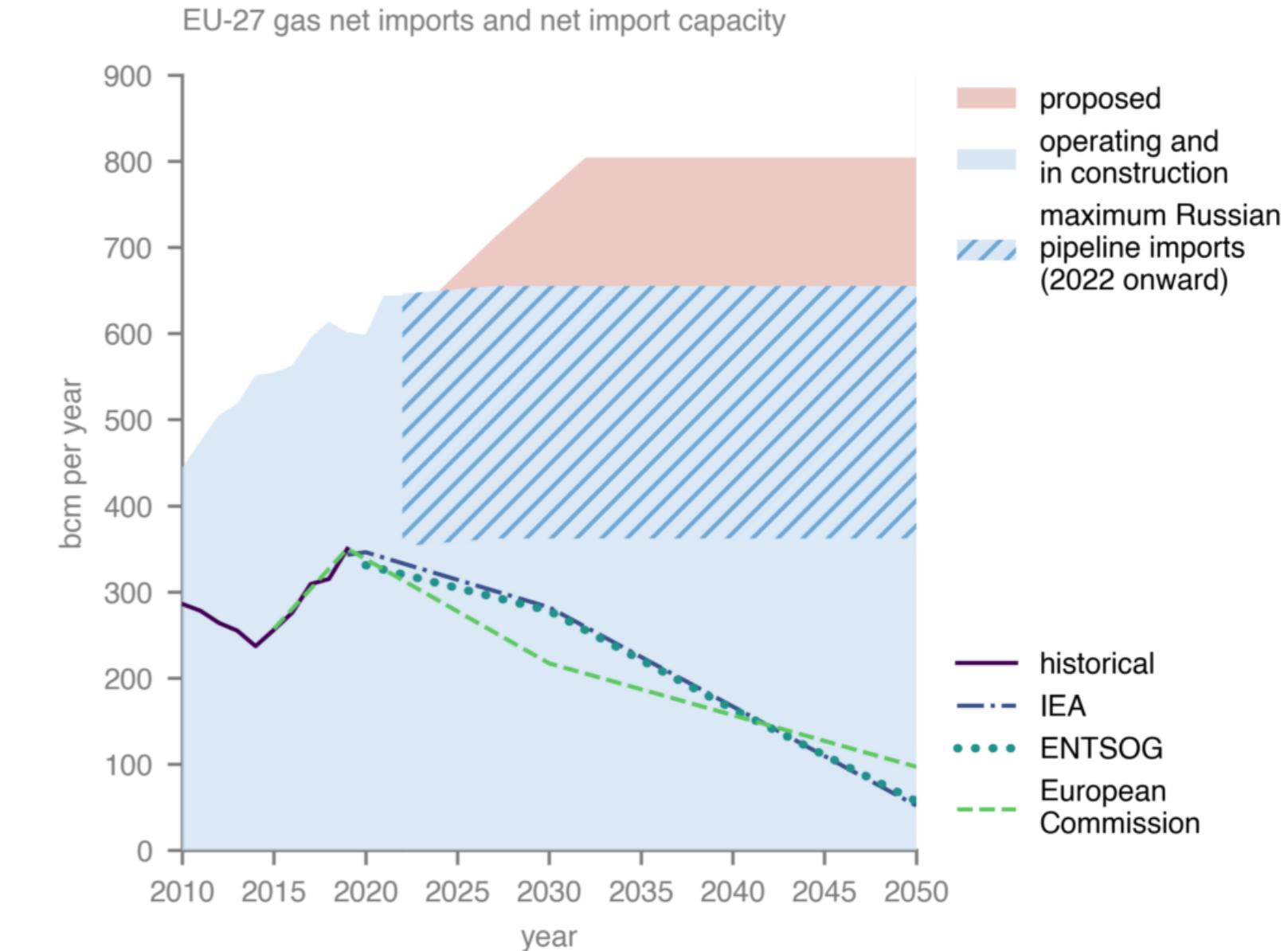
- 26 LNG projects announced, proposed or under construction since Feb.
- Will raise import capacity by at least 152 bcm/y.  
(On top of pre-existing excess capacity)

## Europe's LNG rush

Breakdown of announced boosts to LNG import terminal capacity, including expansions of operating terminals



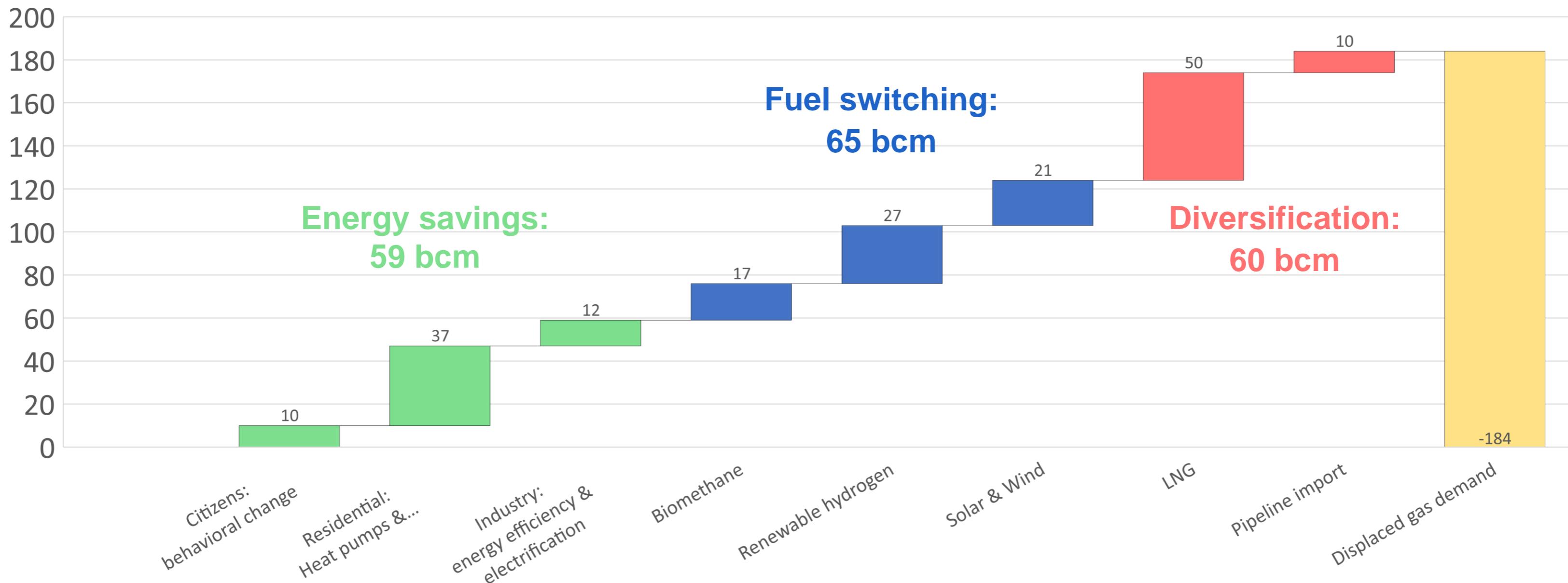
As of May 16, 2022, not all newly announced projects have confirmed their planned capacity volumes, including a proposed FSRU terminal in Estonia with expected capacity of ~2.5 bcm/y.



Bron: Global Energy Monitor, European Gas Crisis Tracker  
<https://globalenergymonitor.org/report/europe-gas-tracker-2022/>

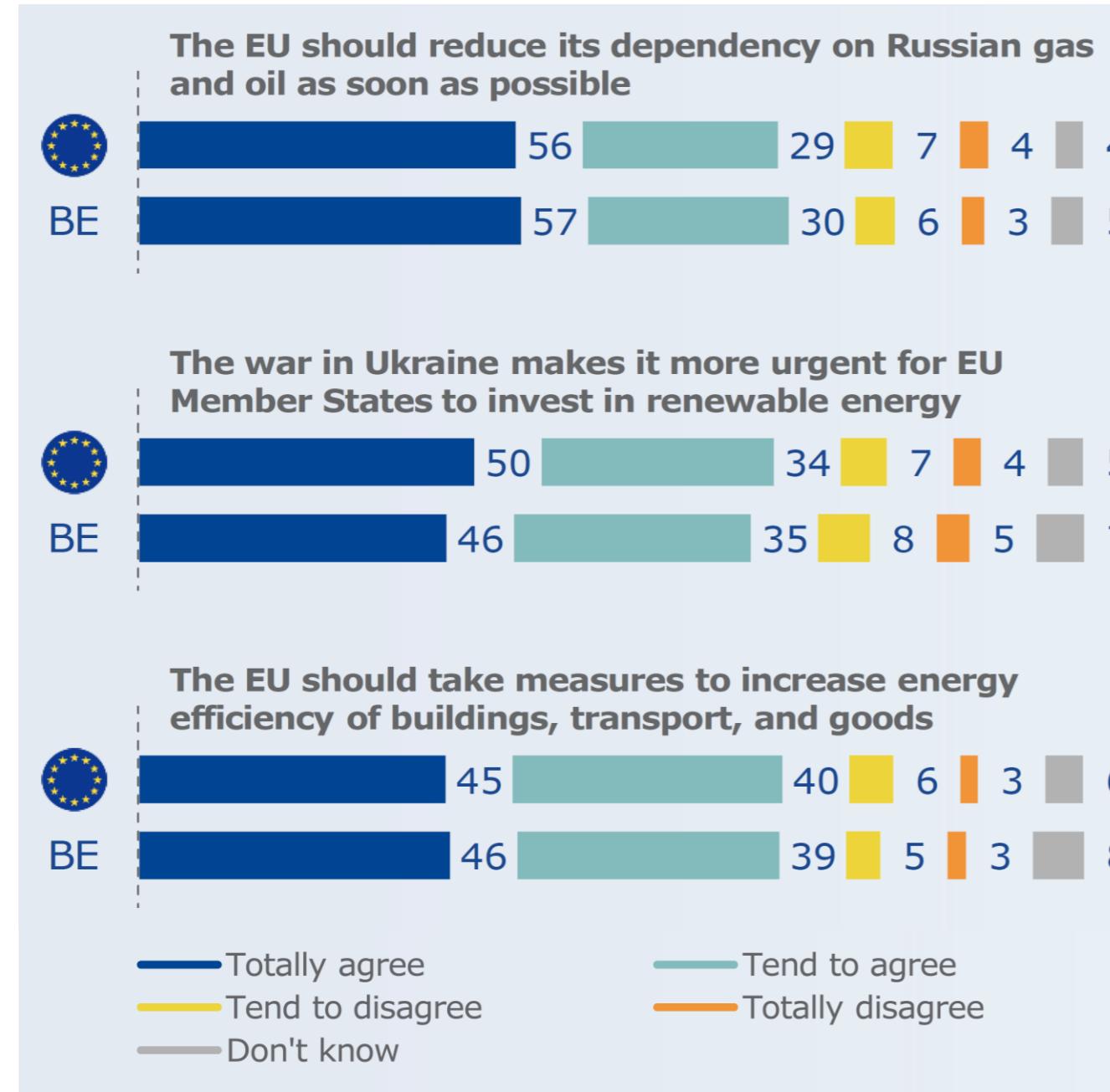
# SAVINGS + RENEWABLES >> DIVERSIFICATIE

RePowerEU plan (besparing in bcm)



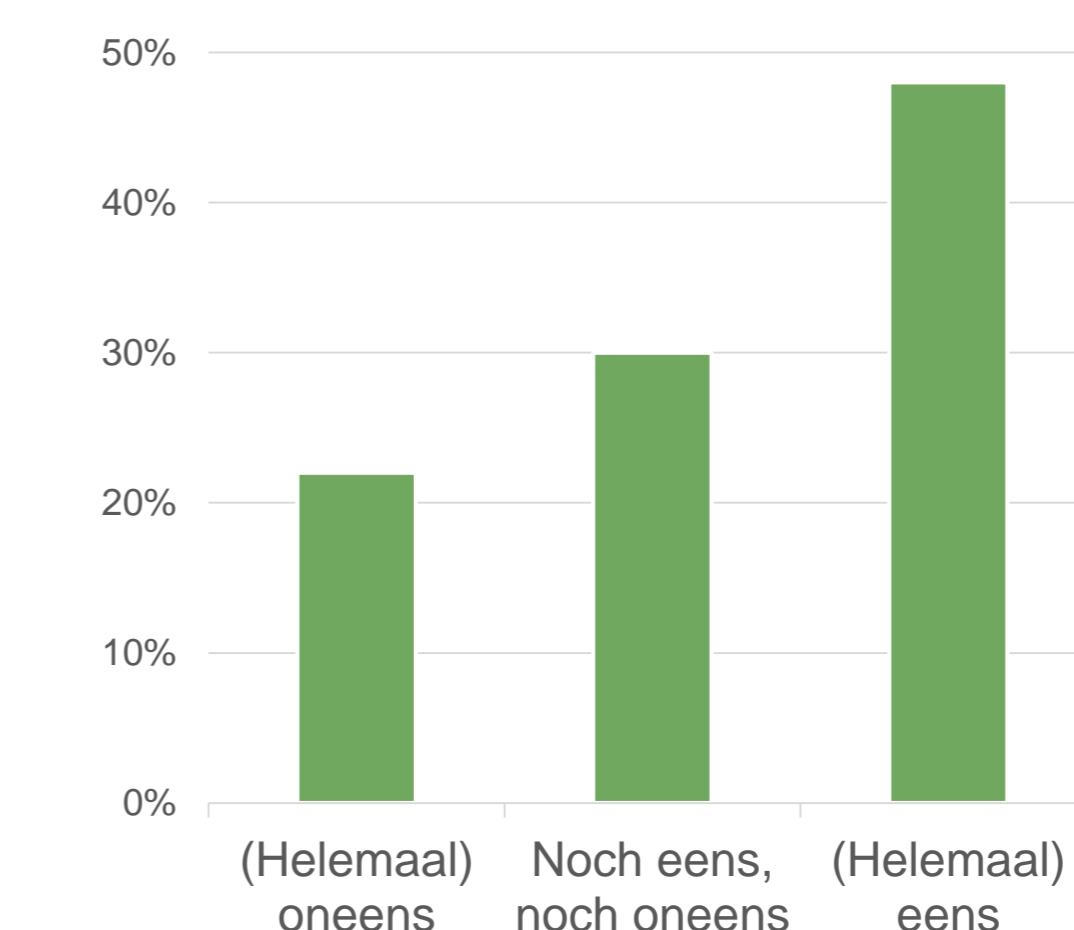
Bron: RePowerEU plan - Annex

# DRAAGVLAK VOOR ACTIE IS GROOT



Bron: Flash Eurobarometer 506  
Afgenoem tussen 13 en 20 april  
bij 26.066 Europeanen

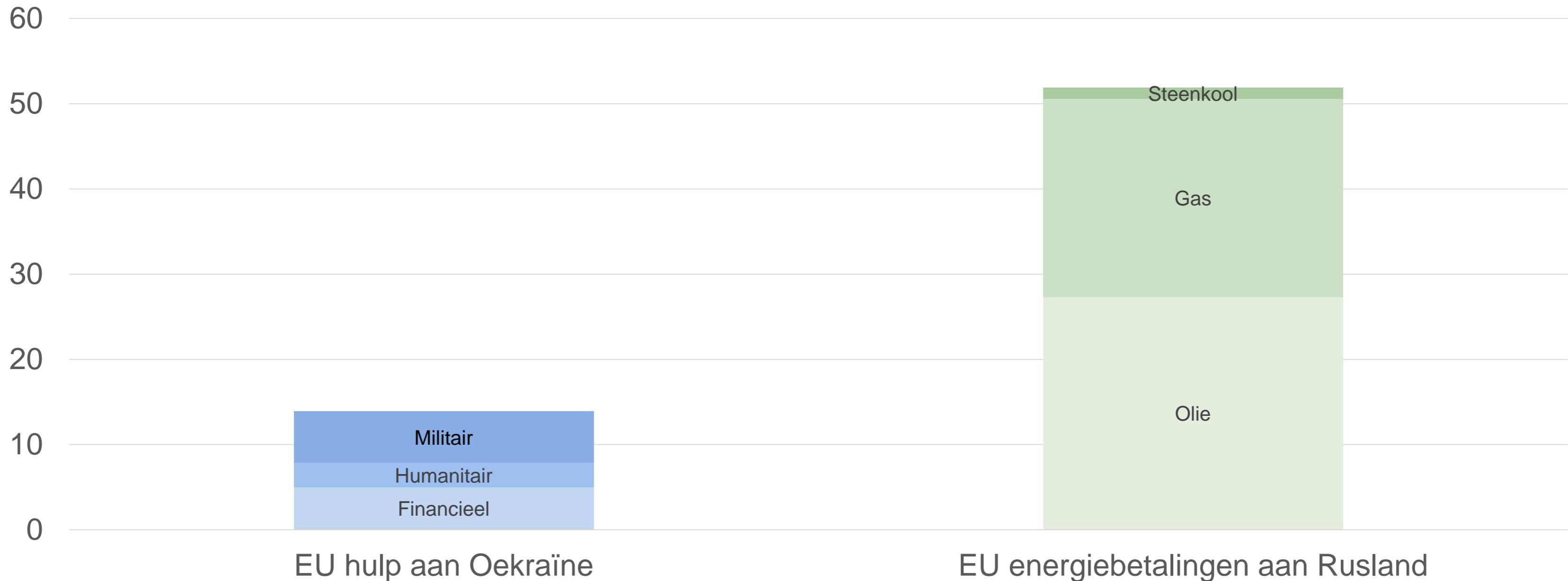
Russisch gas of olie weigeren in te voeren, ook als dat tot problemen met onze energiebevoorrading of hogere energieprijzen leidt.



Bron: De Stemming (UA en VUB)  
Afgenoem tussen 14 en 31 maart  
bij 2.064 Vlamingen

# EU GEEFT 4X MEER AAN DAN AAN

Financiële transfers vanuit EU naar Oekraïne en Rusland (miljard euro)



Bron: ifw-kiel.de/ukrainetracker

Commitments from Jan. 24 to May 10, 2022.

Includes bilateral commitments to Ukraine. Does not include private donations, support for refugees outside of Ukraine, and aid by international organisations.

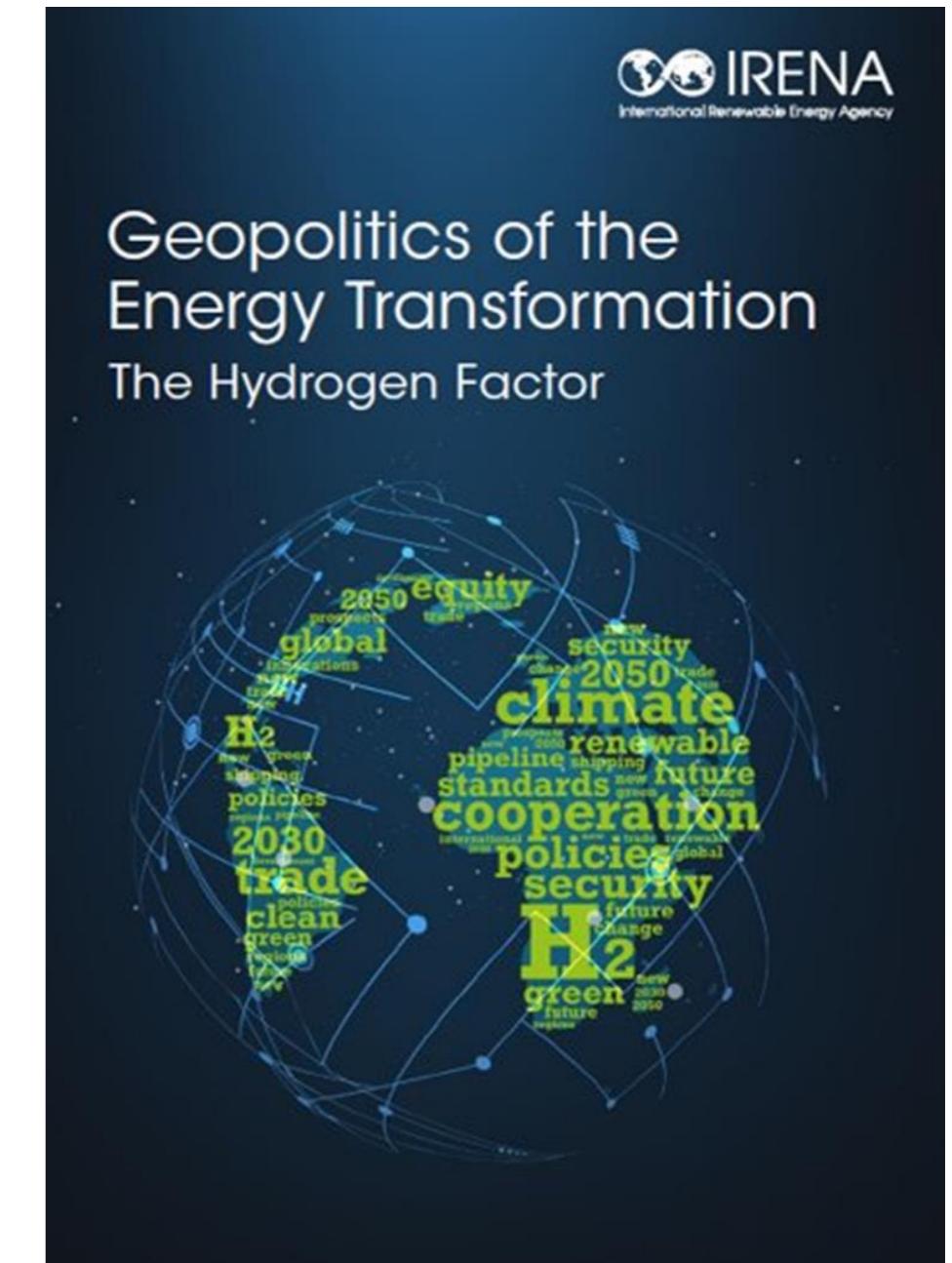
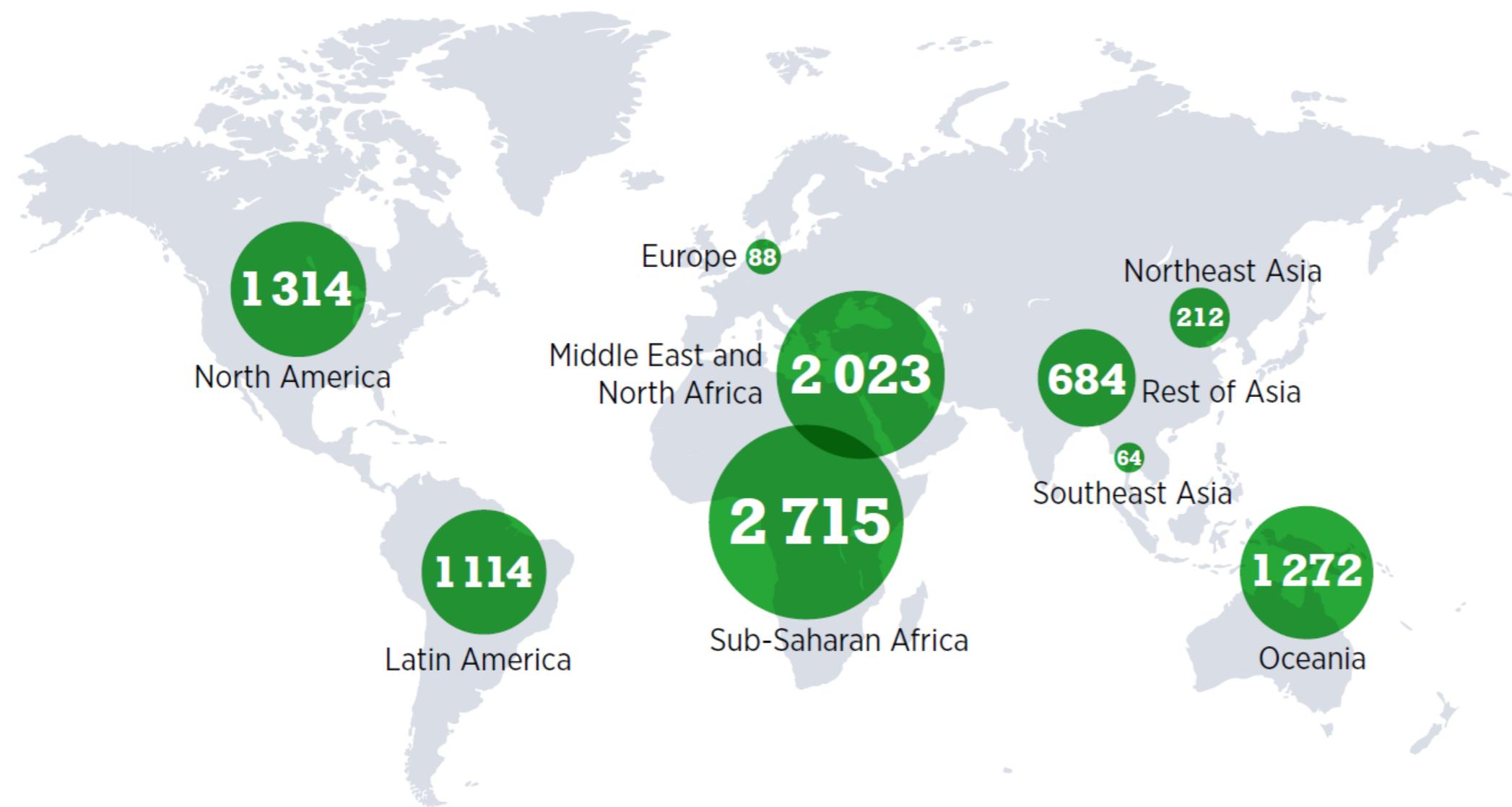
Bron: energyandcleanair.org/financing-putins-war/

Payments from Feb. 24 to May 18, 2022.

Covers seaborne, pipeline and railway shipments of crude oil, oil products, natural gas, LNG and coal.

# NIEUWE AFHANKELIJKHEDEN?

Technical potential for producing green hydrogen under USD 1.5/kg by 2050, in EJ



Thank you!

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