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# Industrial wood pellets market update

Overview of current market and a short-term outlook

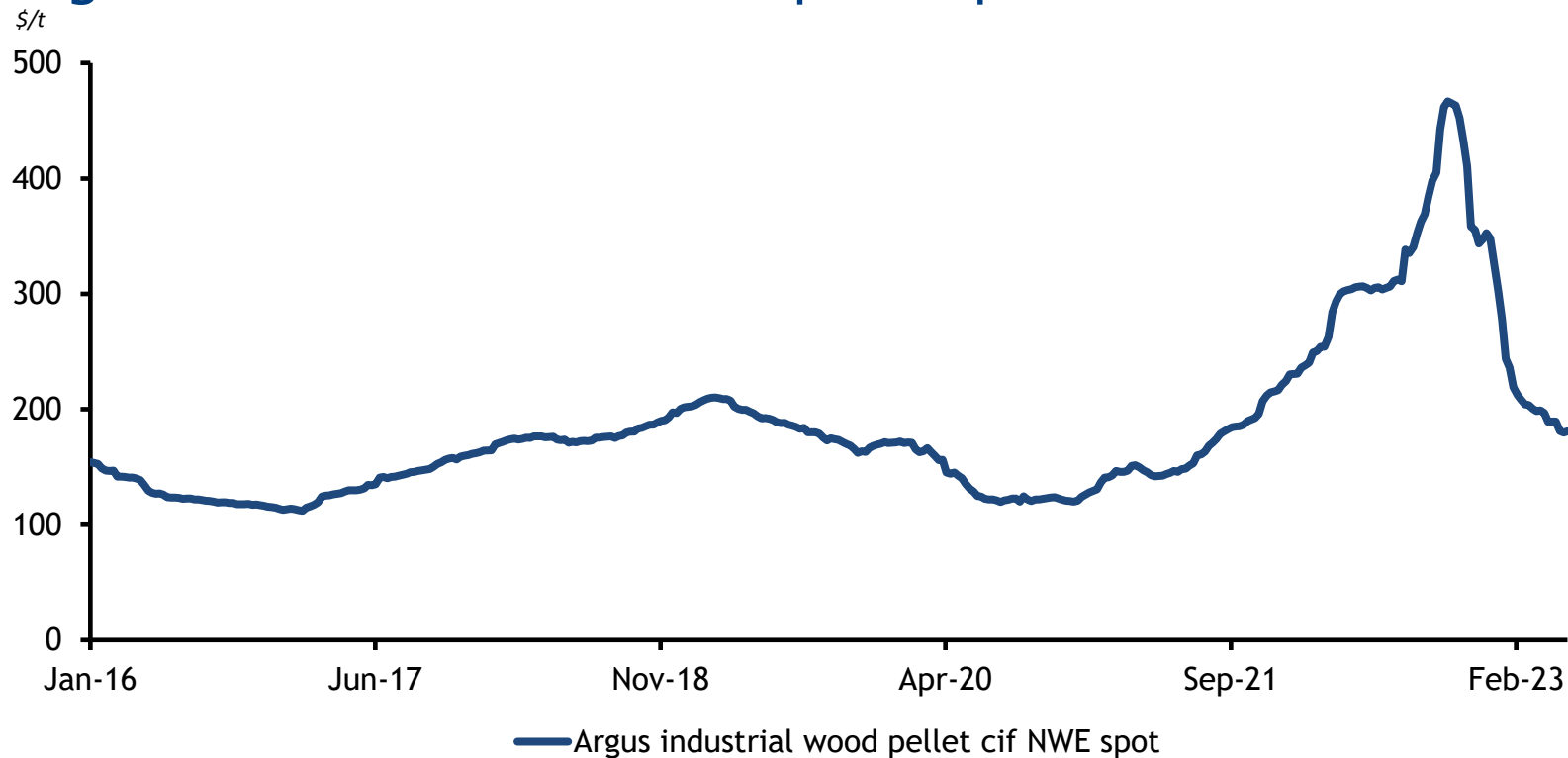
London  
Erisa Senerdem  
12 May 2023



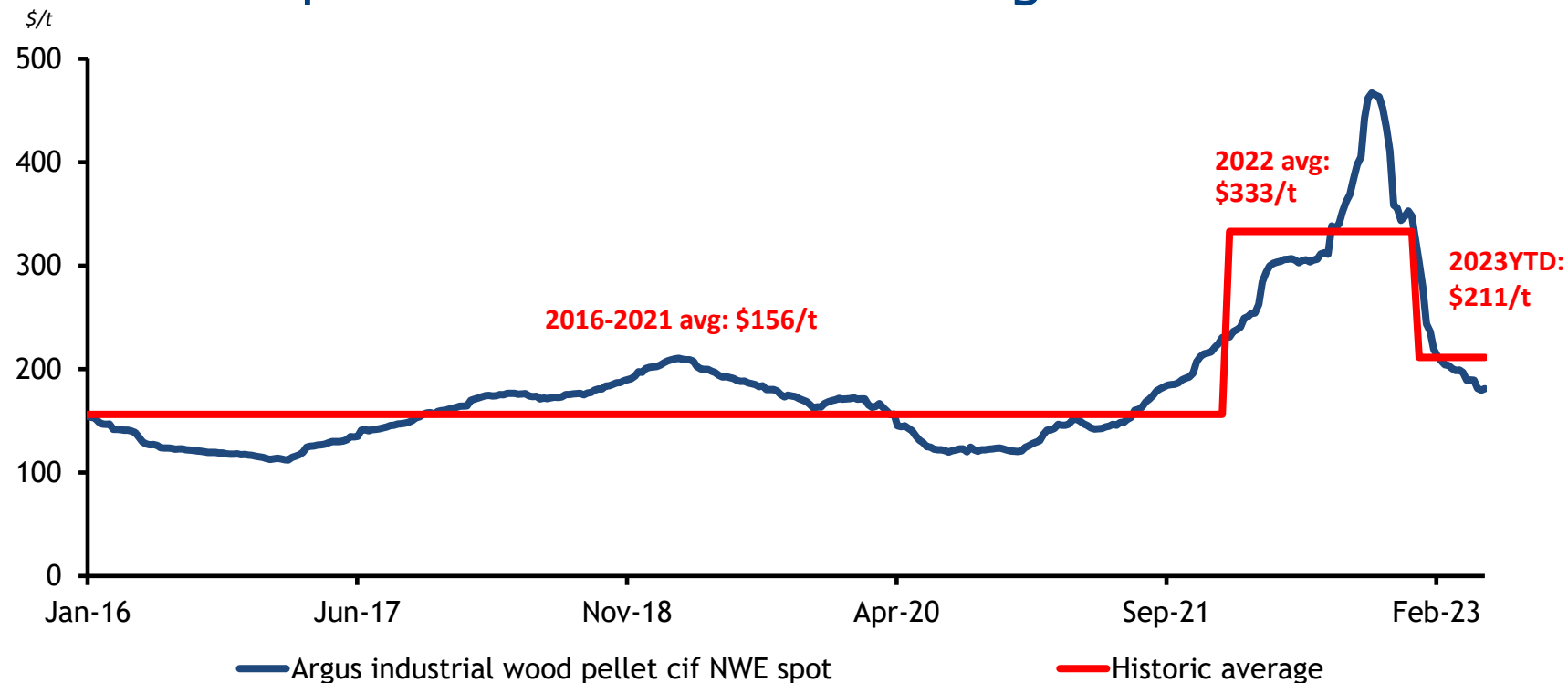
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# Argus cif NWE industrial w pellet price at 22-month low

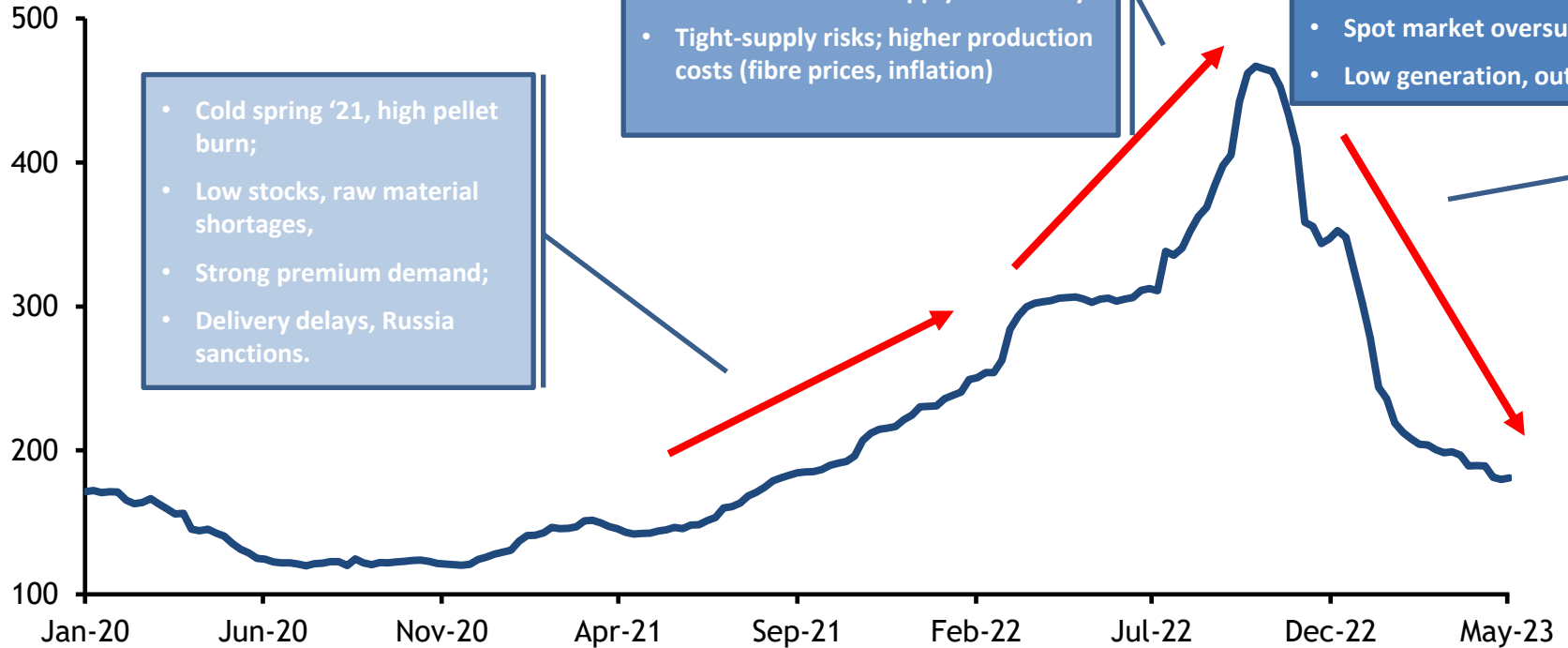


# Cif NWE spot above historic averages

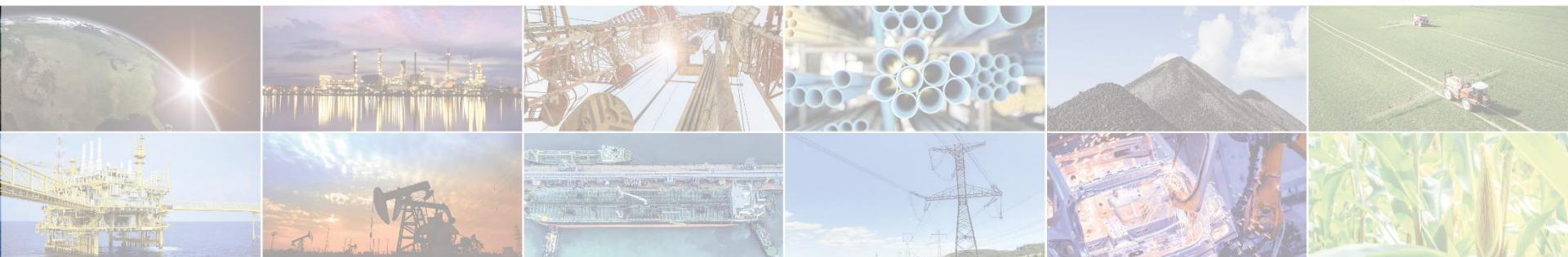


# Key market drivers

\$/t



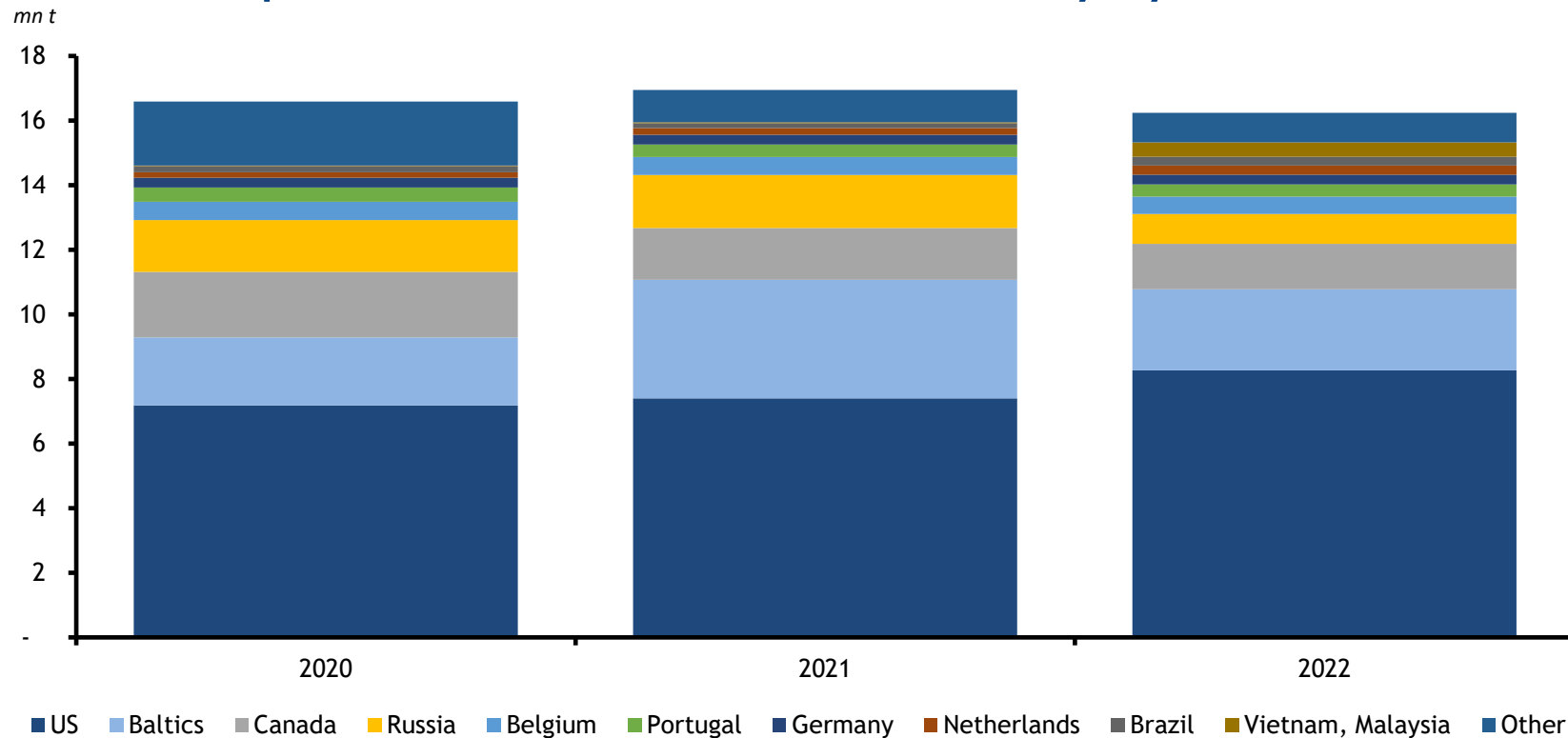
# Supply shock



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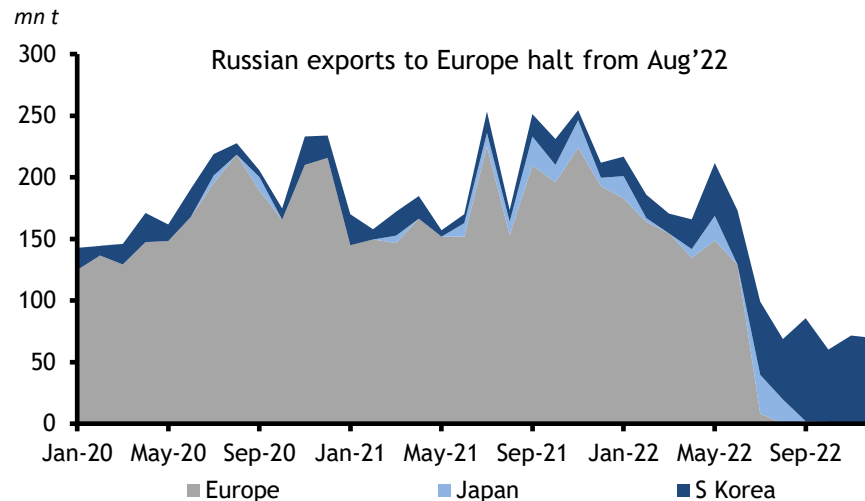
# Pellet exports to NWE down 713kt yoy in 2022



Source: customs data

# Supply shock, rising costs

- Covid-related supply chain disruptions – 1Q22
- Russia supply shock
  - Baltic producers hit hardest
  - Raw material availability deficit
- Higher raw material costs: fibre
- Higher production costs: fuel/power/labour/equipment
- Long-term contracts with Asia rising; Asian market also tight



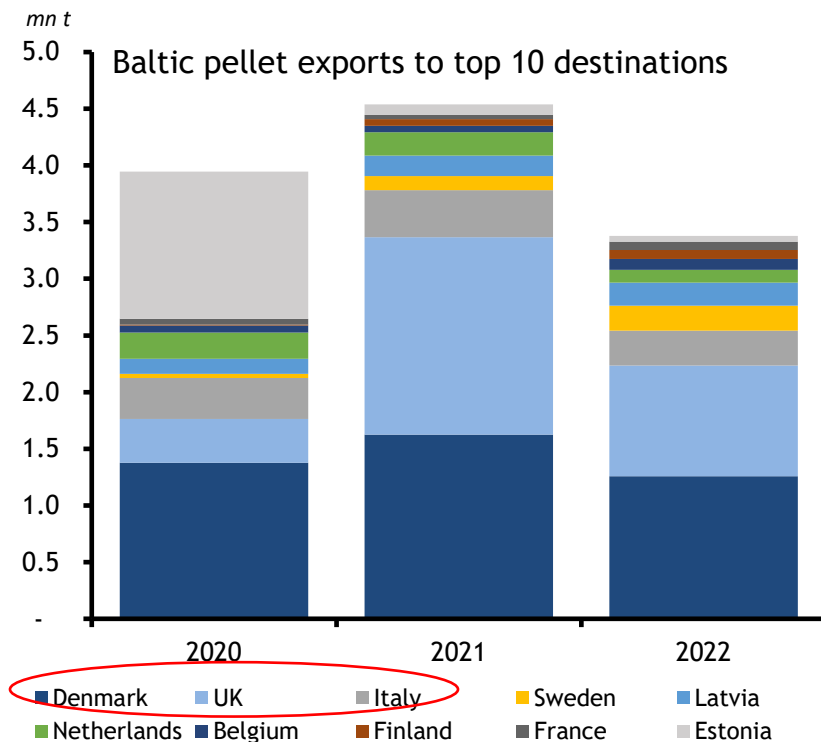
	2020	2021	2022	YOY '22-'21
Europe	2,048	2,112	926	- 1,187
Japan	17	106	99	- 7
S Korea	185	169	554	385
Total	2,251	2,388	1,579	- 809

Unit: '000t

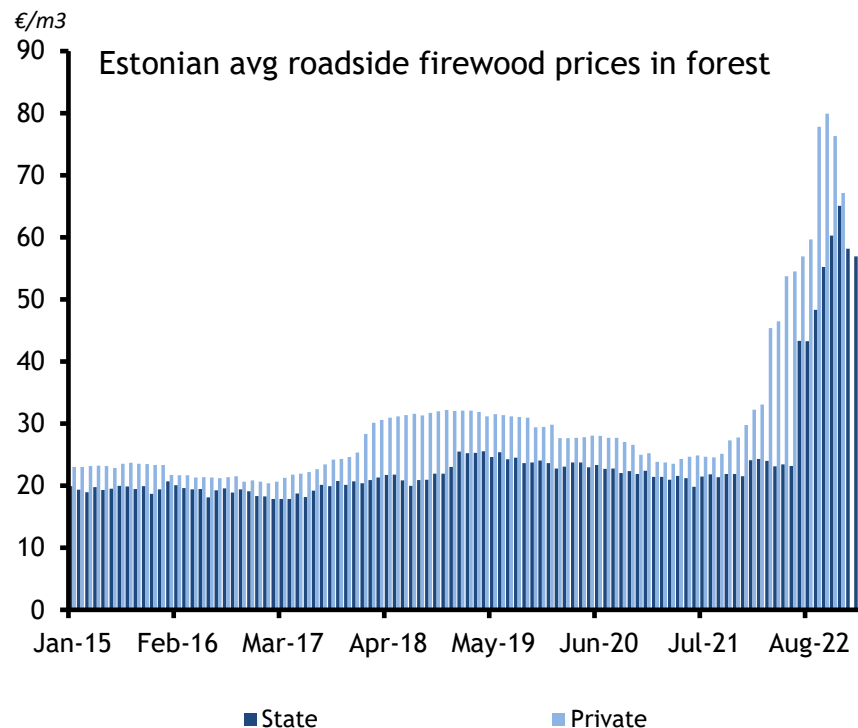
Source: Russian customs

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# Baltic exports most hit by the war



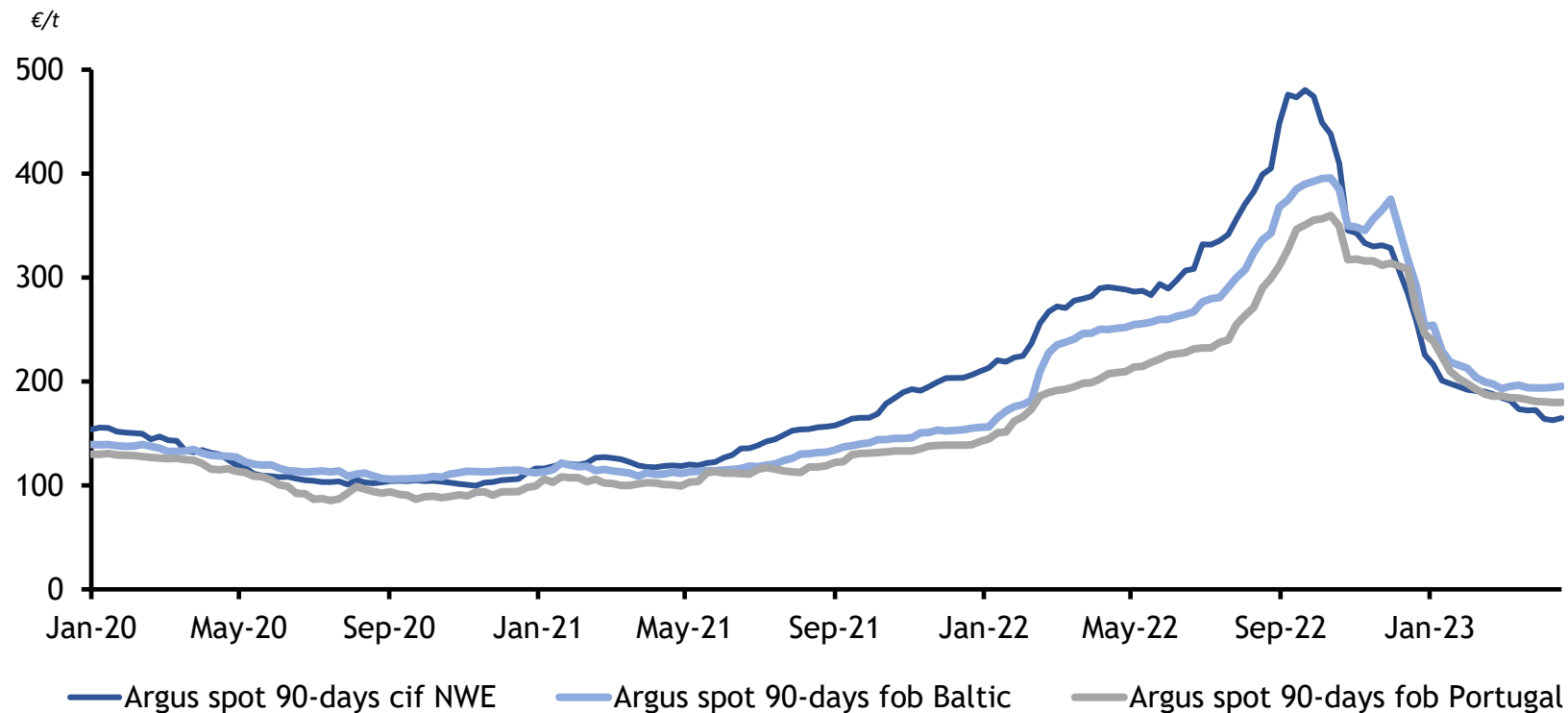
Source: customs data



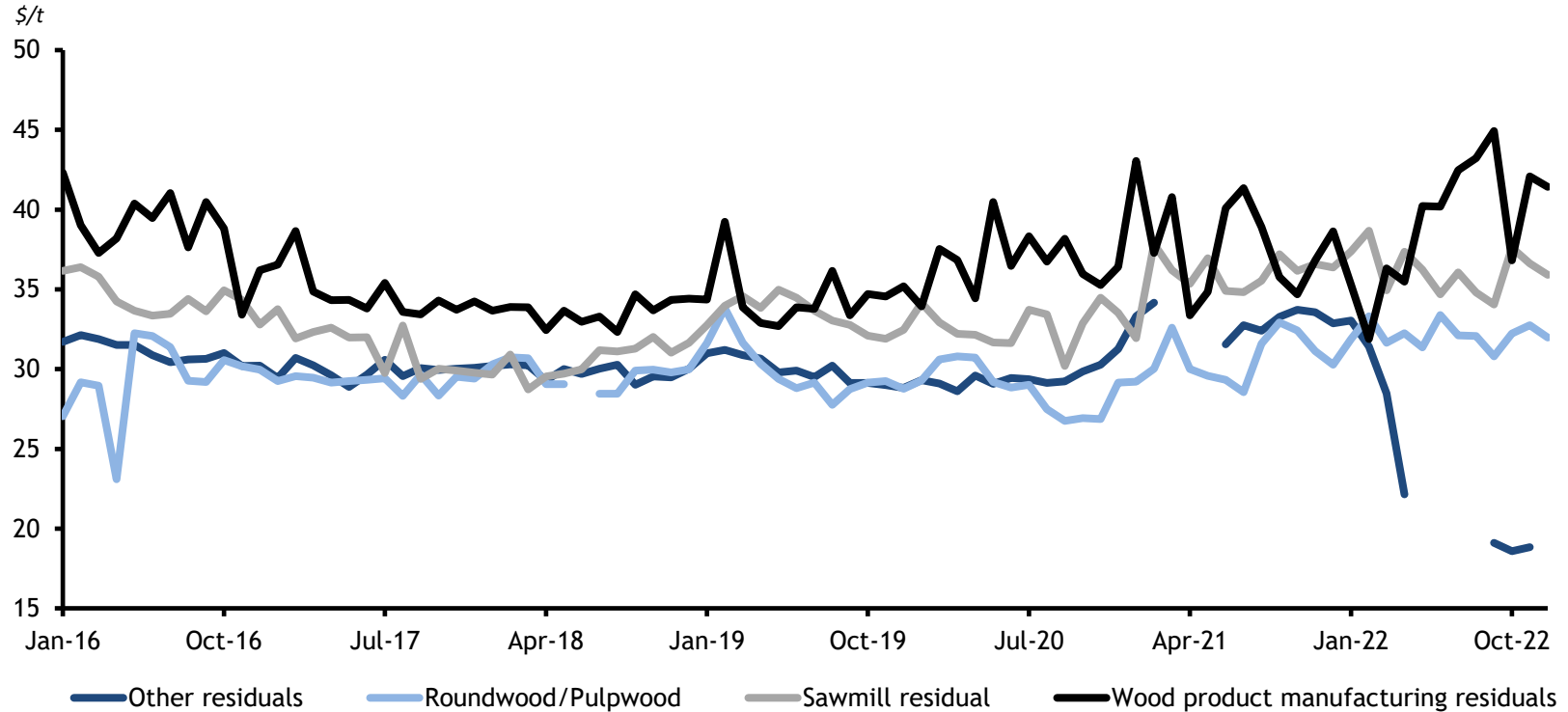
Source: RMK, Erametsakeskus



# Fob Baltic at a premium over cif NWE

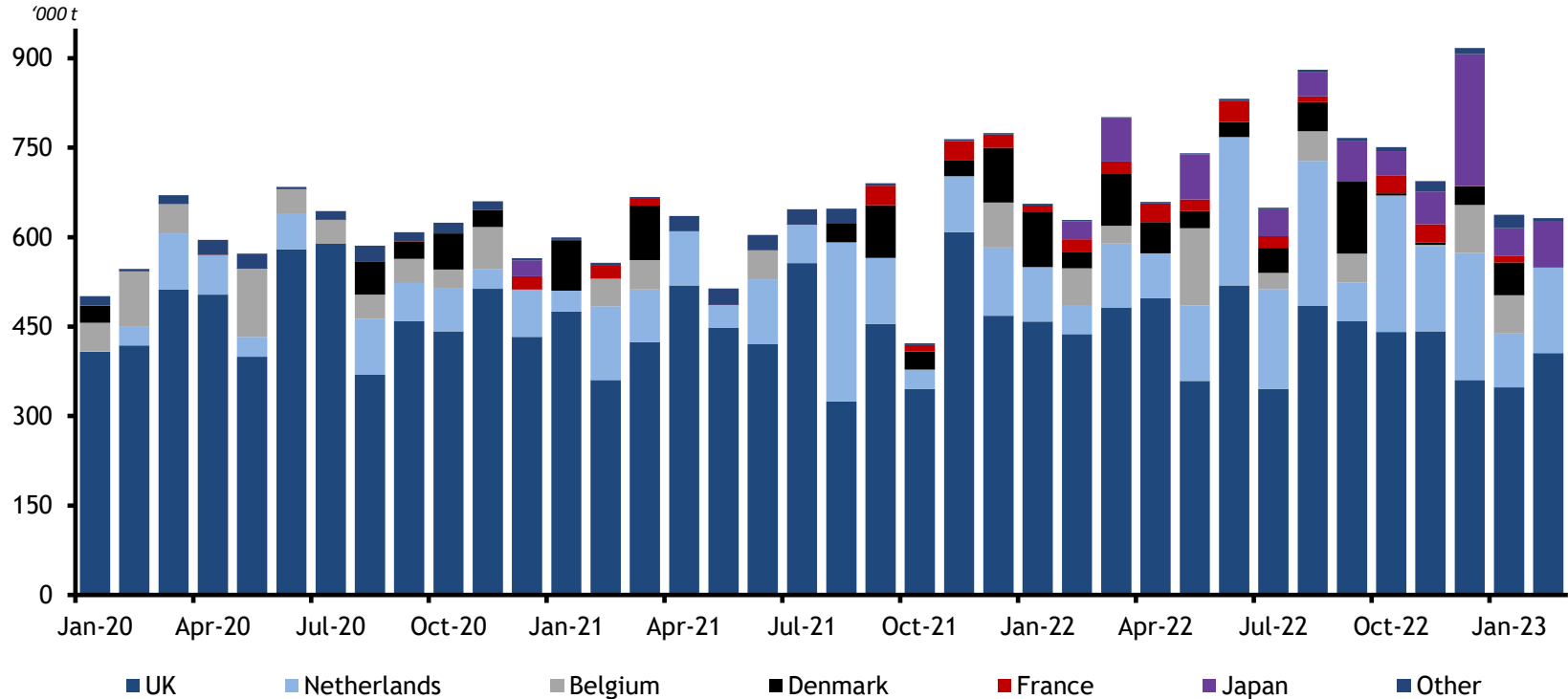


# US raw material costs more stable



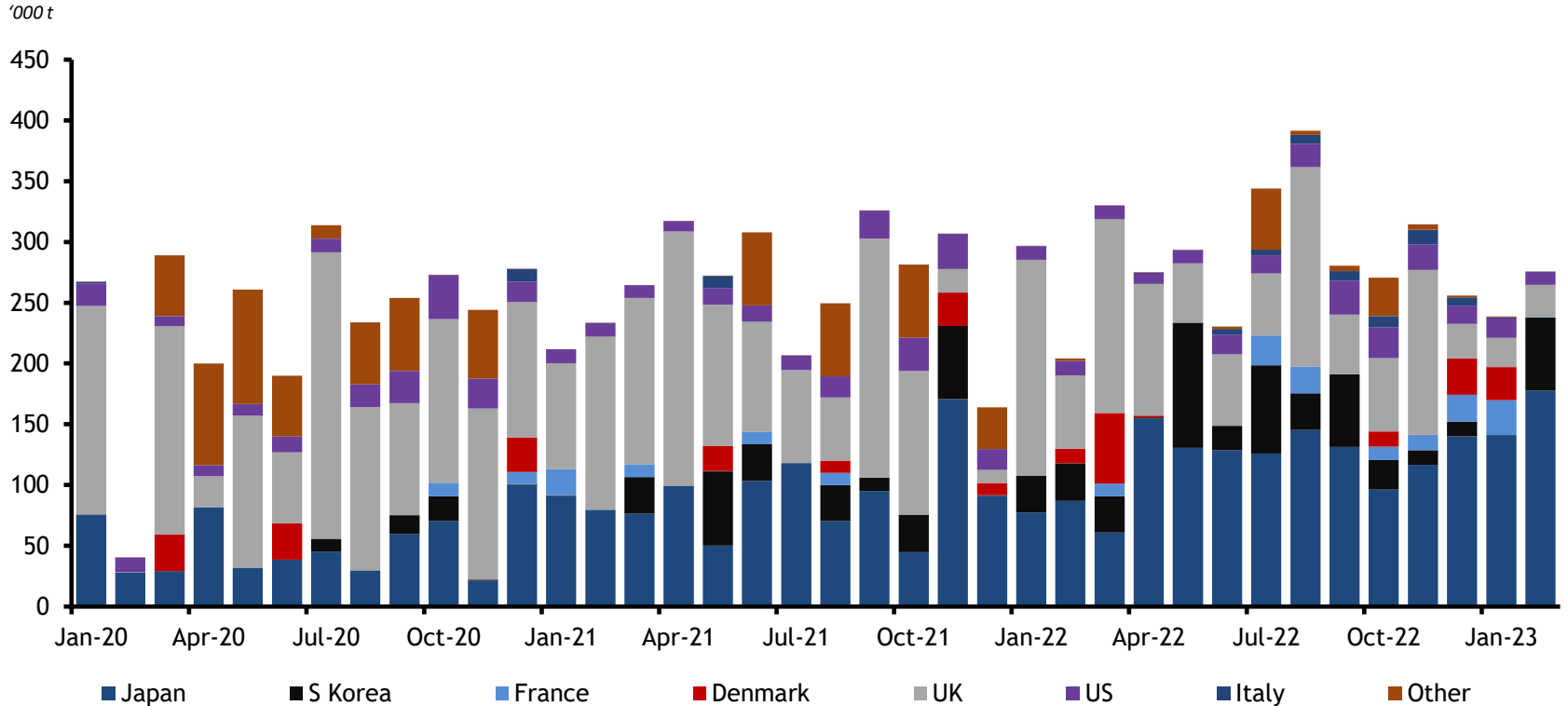
Source: US EIA

# US steps in to replace RU supply to Europe



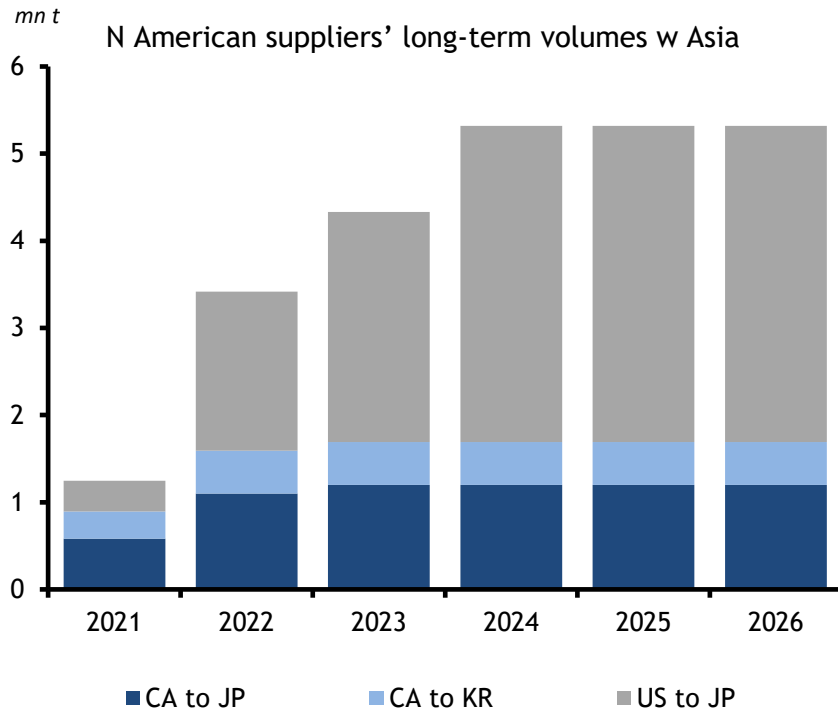
Source: Customs data - USTIC

# Canadian exports to Asia up



Source: Customs data

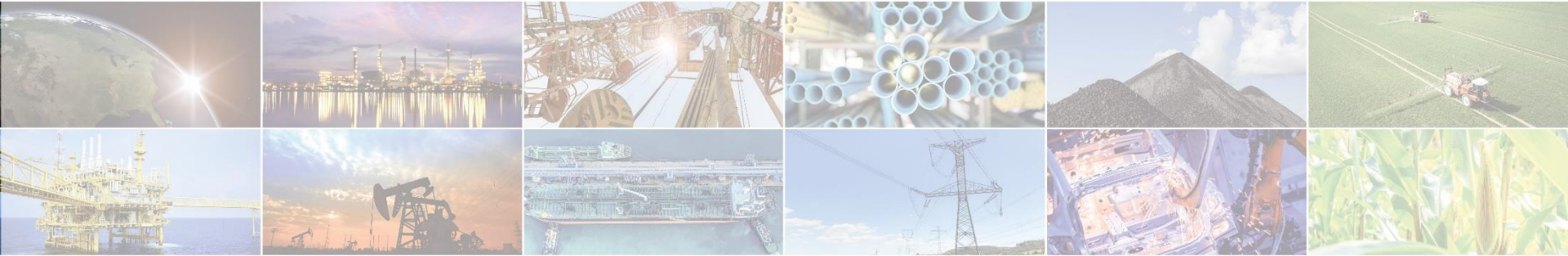
# Long term agreements with Asian buyers



Source: Argus



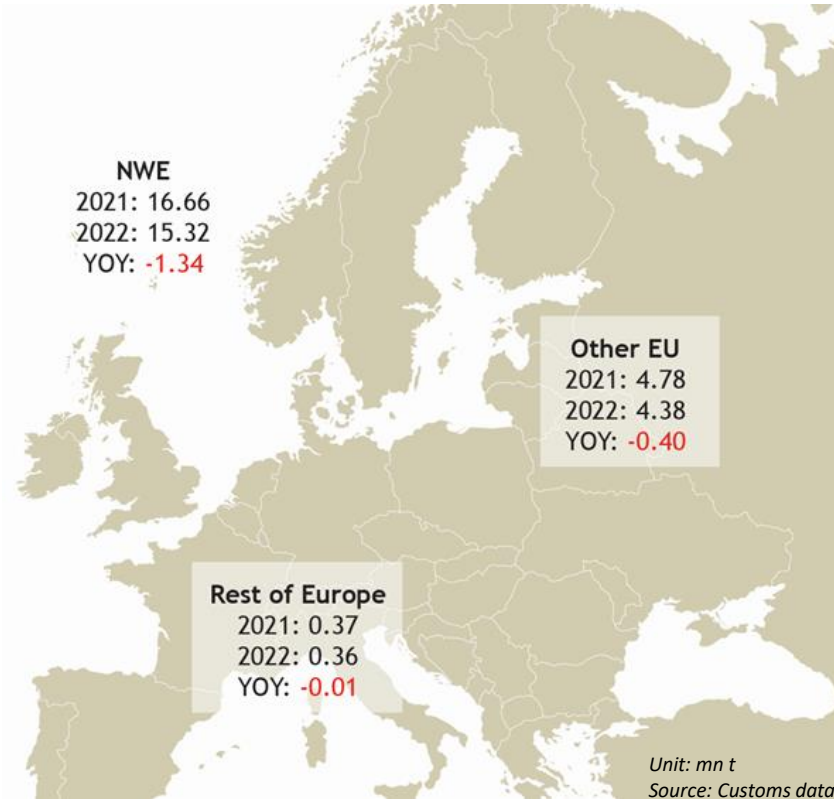
# Overall demand dropped in 2022



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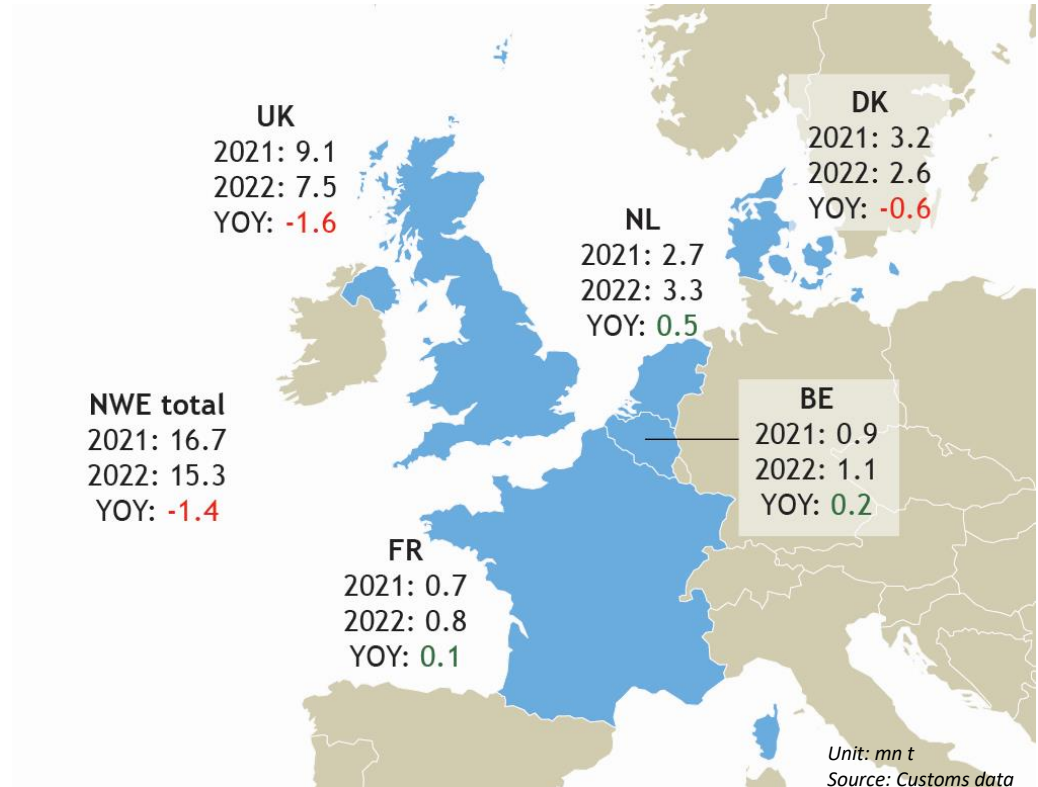
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# Demand: European 2022 imports down by 1.8mn t yoy



# UK, DK see largest drop in 2022

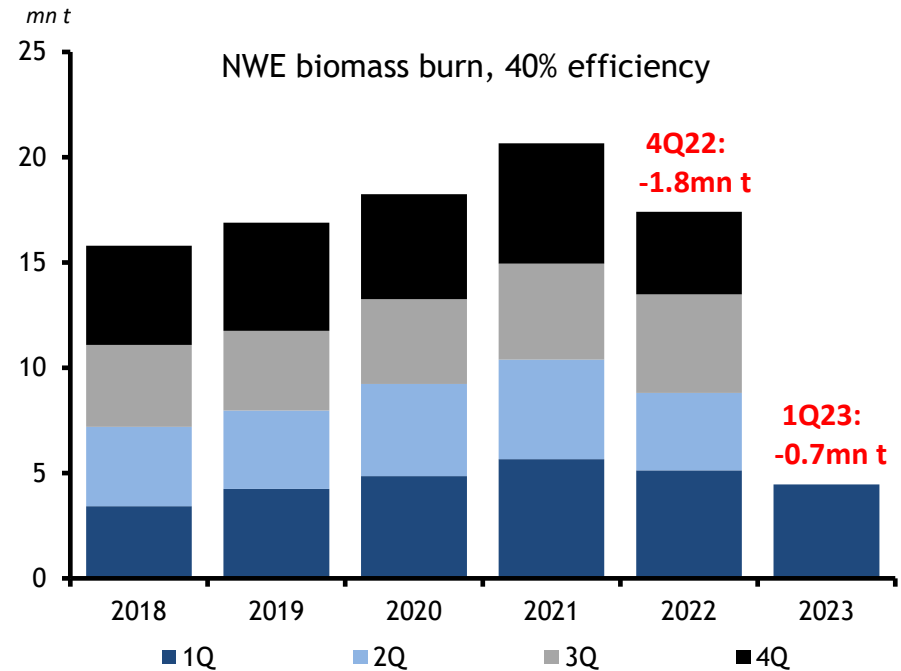
- Lower generation in summer, to save for winter
- Lower UK generation
- Fire at Danish CHP plant's silo
- Weaker residential consumption





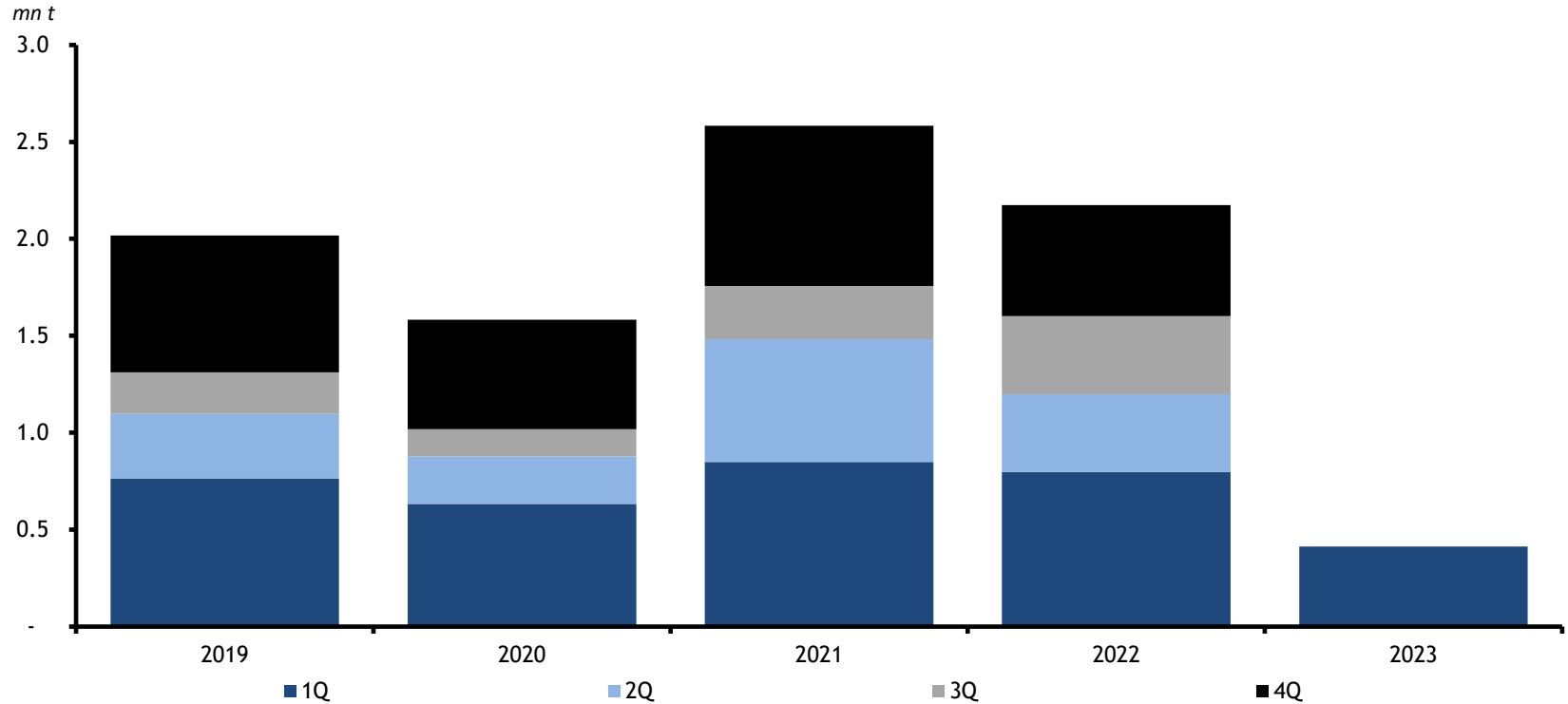
# Power sector demand slumps in winter '22-23

- **1Q22:** delivery delays, outages
- **Summer '22:** outages, stocking, lower CfD output
- **Winter '22-23:**
  - Unusually warm weather
  - Energy savings
  - Demand destruction
  - Fire at 380MW Studstrup 3 plant's silo in late Sep
  - Lower CfD output in UK

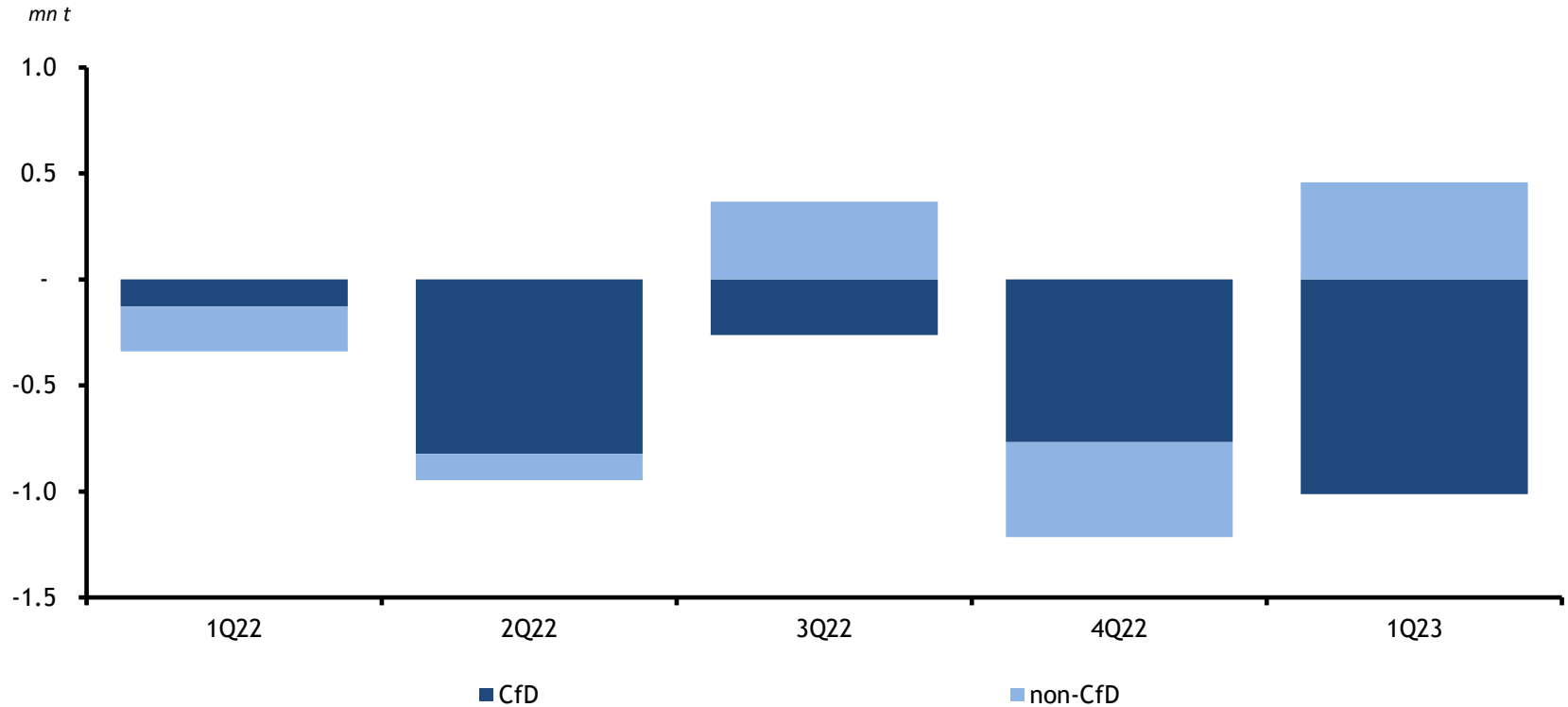


Note: Dutch generation assumed flat yoy in Jan-Feb '23. Data includes wood chips and other forms of biomass. Unit in mn t of wood pellet equivalent.  
Source: National Grid, CBS, Entsoe, Argus calculations.

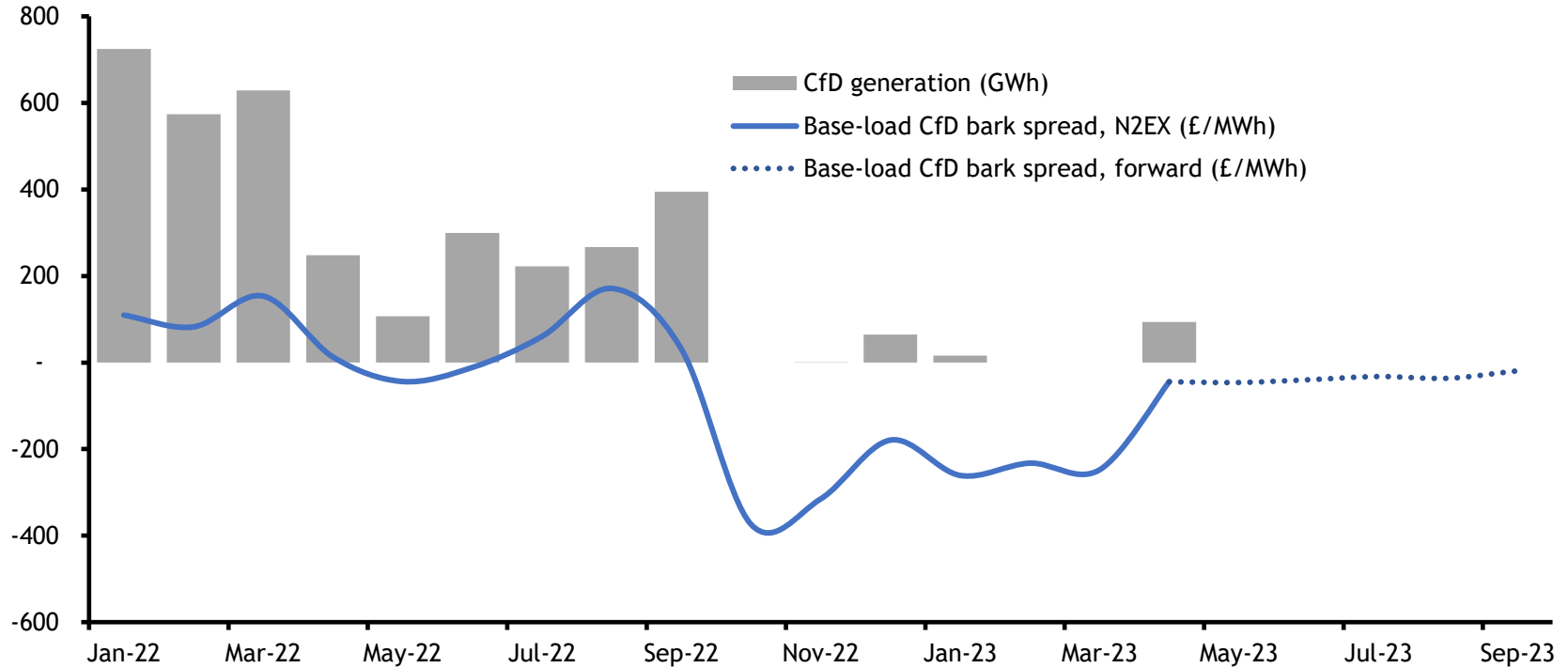
# Danish biomass-fired power output lower



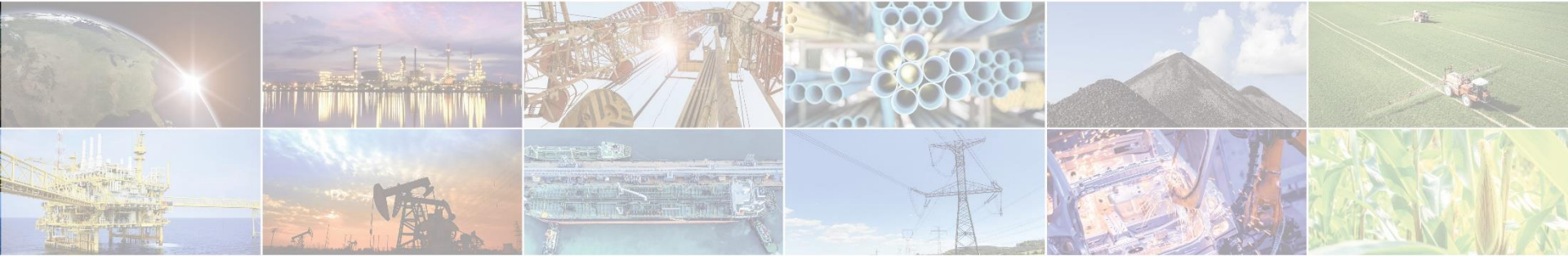
# UK generation continues to drop: yoy changes



# Pellet CfD units' generation vs operating margins



# Near term outlook: pellets and other gen. fuels



# Market drivers to watch

- Summer: high inventories, planned outages, MGT start up?
- Coal vs pellets
- Power/heating demand in winter 2023-24, CfDs
  
- Pellet production costs
- Outages in the Baltics?
- Supply structurally short
- Competition from Asia for NA pellets
  - Long-term contracts
  - Certification suspension
  
- Generation fuel prices

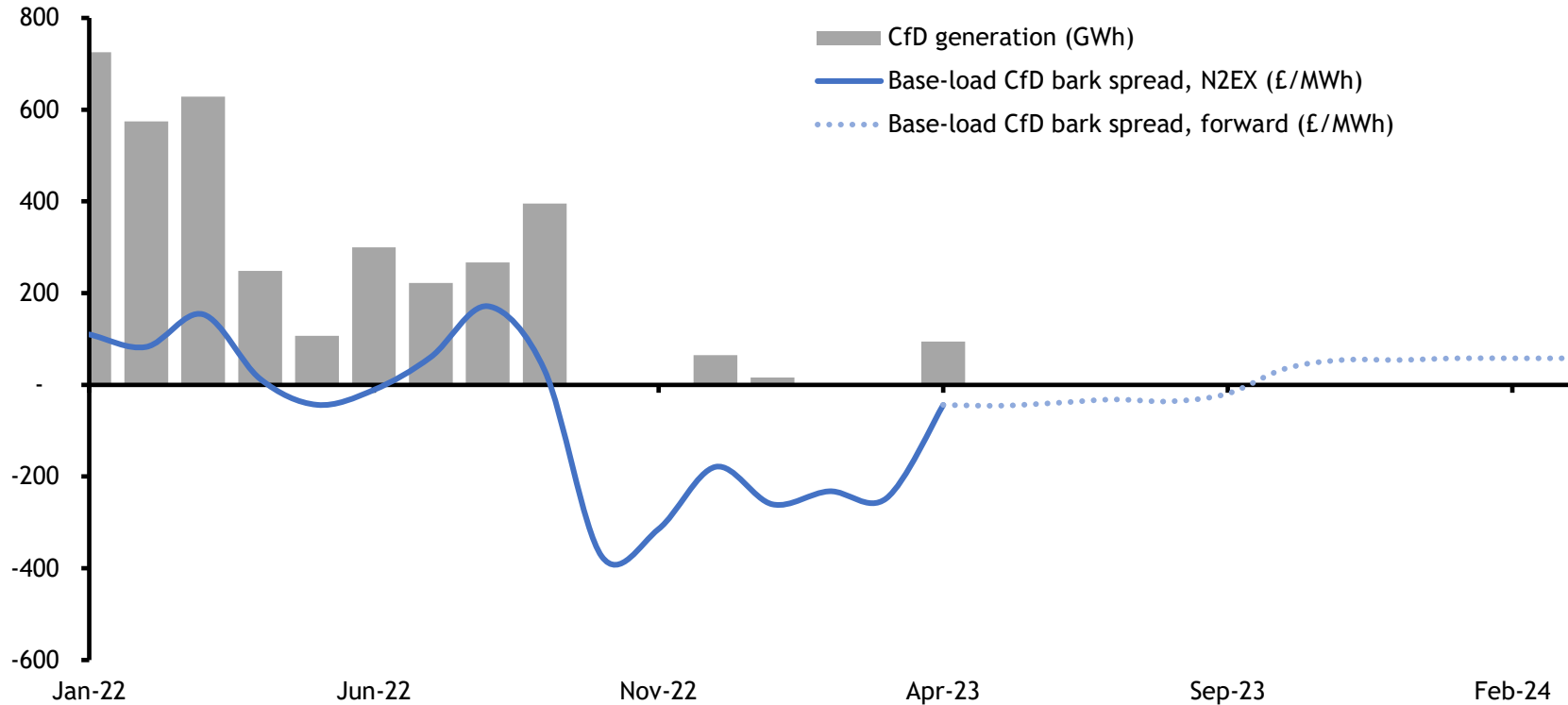
# Scheduled outages pare generation in summer 2023

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Total capacity offline 2023</b>	<b>1,033</b>	<b>1,106</b>	<b>1,597</b>	<b>1,116</b>	<b>1,825</b>	<b>2,311</b>	<b>1,870</b>	<b>772</b>	<b>645</b>
<b>Total capacity offline 2022</b>	<b>-</b>	<b>133</b>	<b>133</b>	<b>400</b>	<b>948</b>	<b>1,973</b>	<b>1,262</b>	<b>1,960</b>	<b>1,903</b>

*Unit: MW*  
*Source: Remit data*

Belgium's 205MW Rodenhuize 4 plant closed since March 2023.

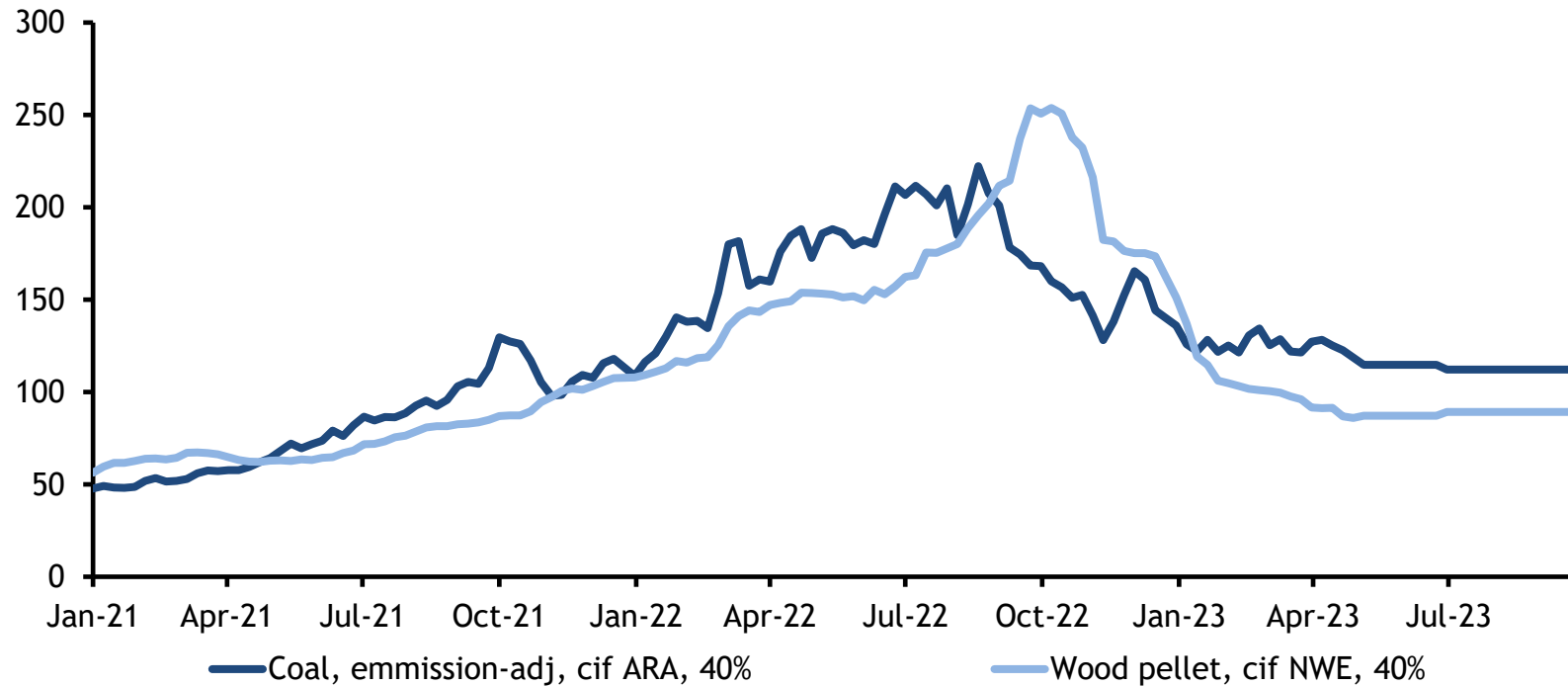
# Early indications: CfD output pick up in winter '23-24?



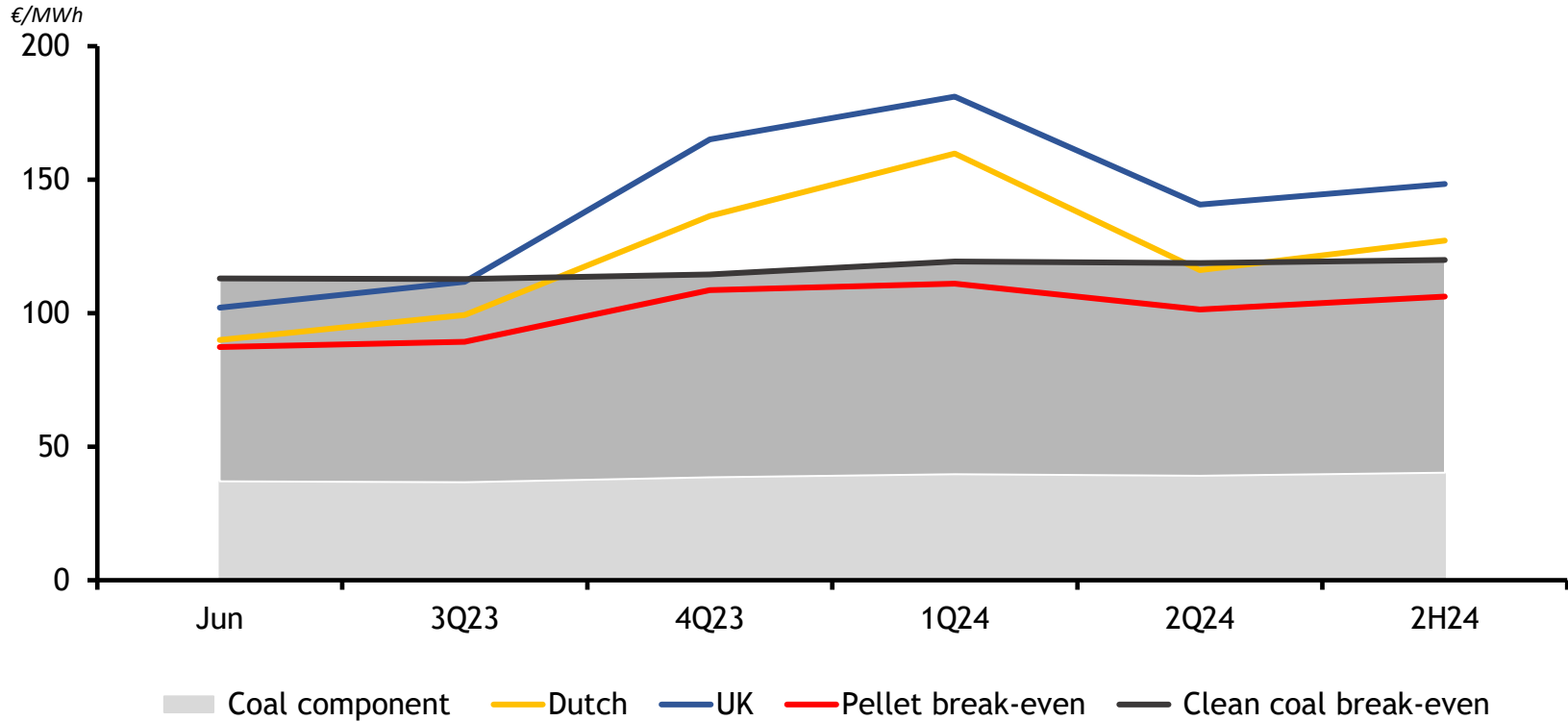


# Dutch co-fired plants: Coal vs pellet break-even power price

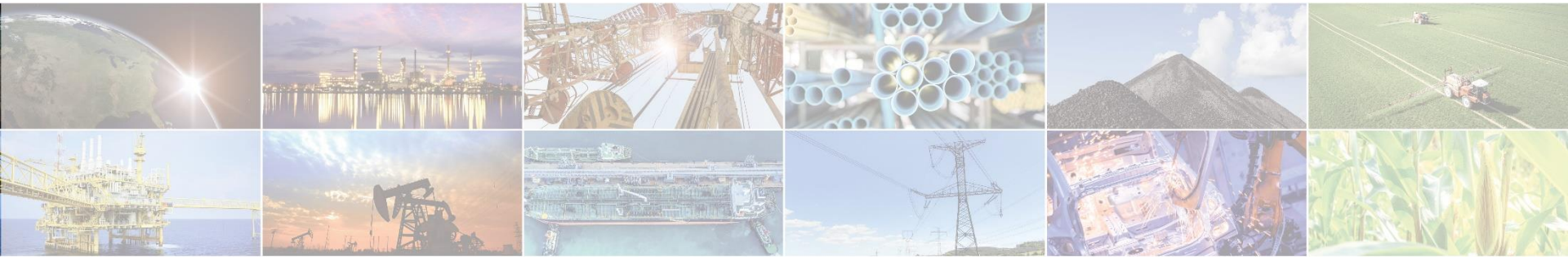
€/MWh



# Forward curve: wood pellets outprice coal



# Concluding thoughts



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## Concluding thoughts

- Near-term market well supplied. Outages to pare consumption. Inventories near capacity.
- The wider generation fuels complex also weak. Pellet more competitive than coal.
- Market remains structurally short. Risks.



Thank you!

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