The Competitiveness of the European Chemical Industry

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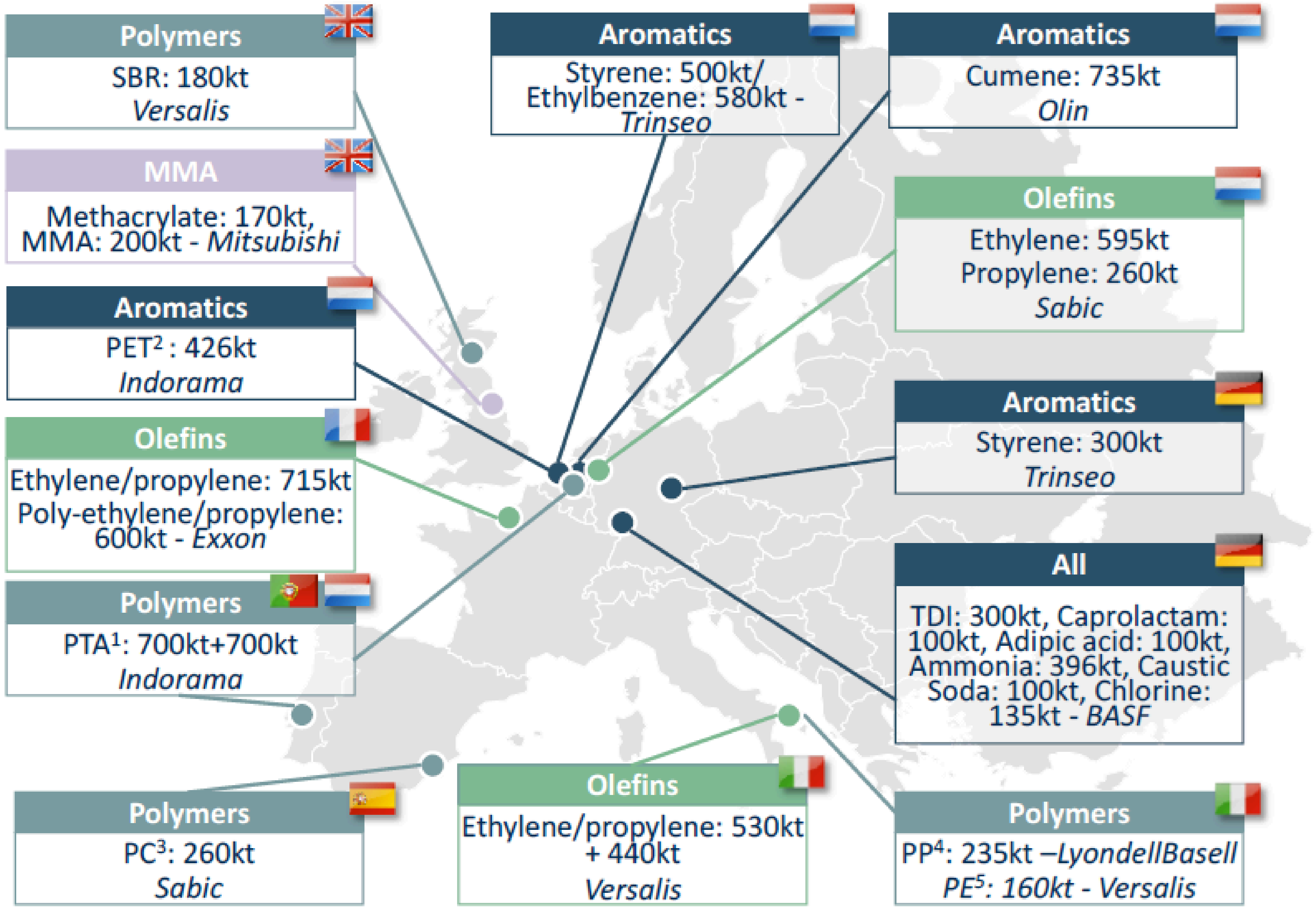
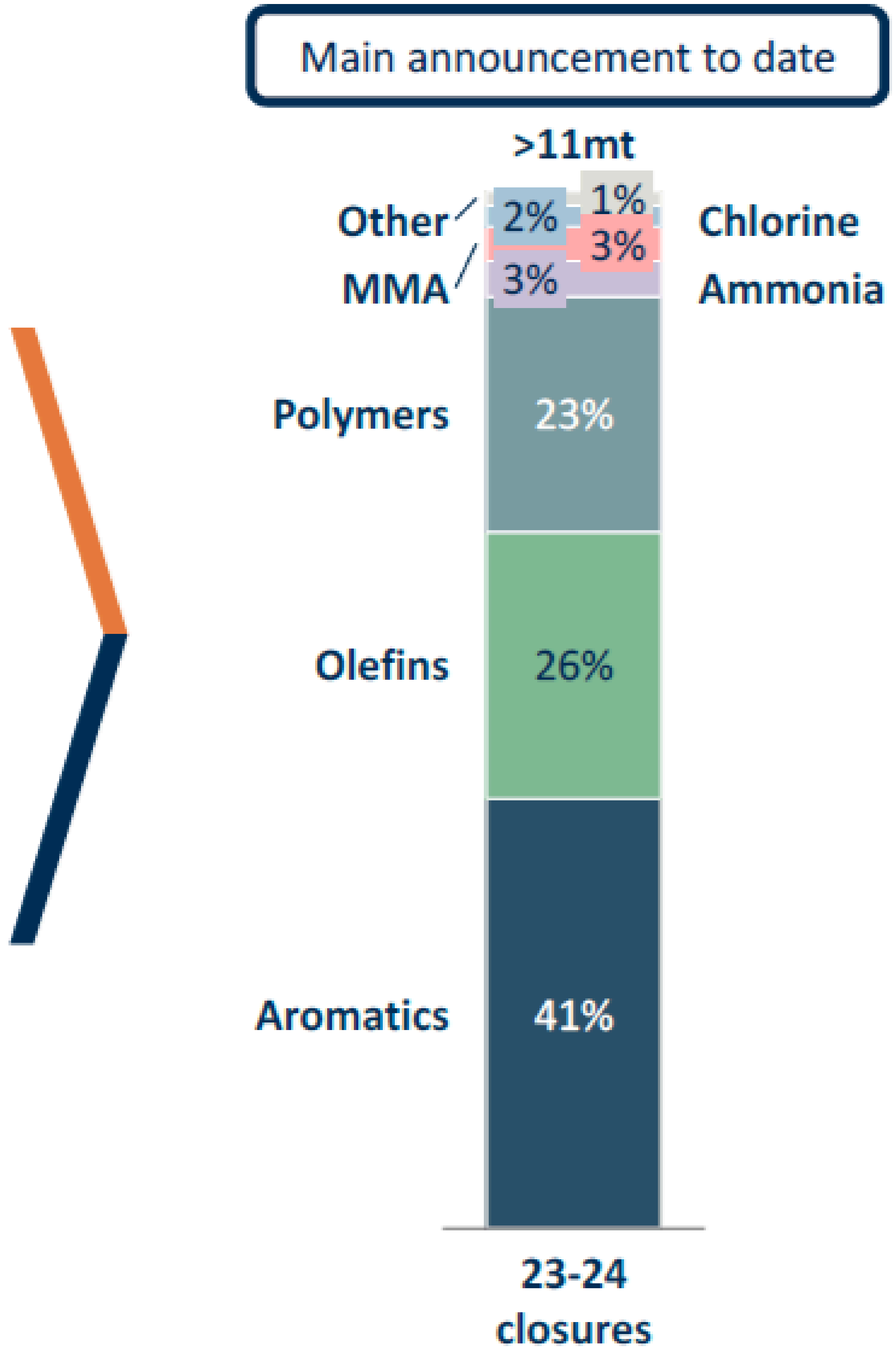
Main European capacity closure announcements

Up to October 2024

kt, mt, %, 2023-2024, up to October 2024, non-exhaustive list





Sources: Companies website, S&P, Chemical Week, Advancy

- **Over 11 million tons of capacity have already been announced to be closed for 2023-2024, affecting 21 major sites**

Main European capacity closures announcements

Up to October 2025

23 MT closed or under review for shutdown or sale since 2022 (8.5%of 2021 capacity)

*<u>*Capacities of plants in brackets next to product in '000 tonnes/year</u>*

Last updated 08 October 2025

Belgium
Belgotex Internation Nyobe - Nylon (40) - Intends to close
Celanese Mechelen - Engineered materials - Closed in Sep 2024
TotalEnergies Antwerp - Ethylene (550), Propylene (230) - To close by end of 2027
Dow Tertre - Polyether Polyols (55) - To close by end of Q1 2026

Czechia
Spolana Neratowice - Capro (48), PVC (135) - To close in H1 2025

France
ARLANXEO Elastomeres - PBR (100), SBR (40) - To cease operations
ExxonMobil Gravenchon - Ethylene (425), Propylene (290), LLDPE (1,011) - Closed in 2024
LyondellBasell Berre - BD (80), Ethylene (465), LDPE (320), PP (350), Propylene (255) - Sale agreement to German investment group AEQUITA
Solvay Salindres - Trifluoroacetic acid & fluorinated derivatives - To close by Oct 2025
Vencorex Pont-de-Claix - Caustic Soda (133), Chlorine (119) - Discontinued production in H1 2025
Arkema Jarrie - Caustic Soda (83), Chlorine (74) - Forced to cease operations

Germany
BASF Ludwigshafen - Ammonia (430), Capro (95), Cyclohexanone (95), Cyclohexanol, Soda Ash, TDI (300), Adipic Acid (202) - Units to close, with additional €1bn in cost savings
Celanese Uentrop - PAM Resins 6+66 (108) - Closed in Feb 2024
Dow Bohlen - Ethylene (610) - To shutdown in Q4 2027
Dow Schkopau - Caustic soda (280), Chlorine (250), EDC (530), Methylene chloride (25), VCM (330) - To shutdown in Q4 2027
Huntsman Moers - MA (45) - To close by end of Q2 2025
INEOS Inovyn Rheinberg - Caustic Soda (201), Chlorine (180), ECH (52)- *To close chlor-alkali, allylics & ECH capacity*
INEOS Oxide Dormagen - Propylene Oxide (210), Propylene Glycols (120) - Shut since Sept 2025
INEOS Phenol Gladbeck - Acetone (403), Phenol (650) - To permanently stop production
LyondellBasell Muenchmuenster - Ethylene (300), HDPE (320), Propylene (190) - Sale agreement to German investment group AEQUITA
Oxxynova Luelsdorf - DMT (240) - Closed in Dec 2022
Sasol Marl - Alkylphenol (60) - Mothballing underperforming assets
Shell Wesseling - PX (160), OX (70) - Closed in 2023
Trinseo Stade - PC (80) - Closed in 2024
Venator Duisburg - TIO2 (50) - Stopped production due to commercial reasons

Greece
Polisan Hellas Volos - PET (84) - Down for commercial reasons since Q4 2024, up for sale

Italy
Eni Brindisi - Ethylene (468), Propylene (255) - Announced closure in Oct 2024
Eni Priolo - Ethylene (490), Propylene (250) - Production to close from July 2025
Eni Ragusa- LDPE (151) - Announced closure in Oct 2024
LyondellBasell Brindisi - PP (260) - Under review
Sasol Augusta - Linear Alkylbenzene (220) - Mothballing underperforming assets
Trinseo Rho - MMA (90) - To permanently close as part of "strategic plans"

The Netherlands
Dow Terneuzen - Ethylene (680), Propylene (340) - To idle in Q2 2025 until conditions improve
Indorama Ventures Rotterdam - PET (426), PTA (700) - Closed from Jul 2024
LyondellBasell Maasvlakte - Propylene Oxide (315), Styrene (680) - Joint venture shutdown
SABIC Geleen - Ethylene (575), Propylene (325) - Permanently shut in April 2024
Shell Pernis - MEK (90) - To permanently close in H1 2025
Trinseo Terneuzen - Ethylbenzene (730), Styrene (500) - Closed in 2023
Tronox Botlek - TiO2 (90) - Idled in March 2025
Vynova Beek - PVC (225) - To cease production activities by November 2025
Westlake Pernis - ECH (90), Epoxy Resins (100), BPA (100) - To close in 2025

Poland
Orlen Plock - Acetone (34), Phenol (55) - To be decomissioned at end of 2025

Portugal
Indorama Ventures Sines - PTA (700) - Mothballed since Oct 2023

Slovakia
Fortischem Novaky - PVC (90) - To close some capacity in early 2025

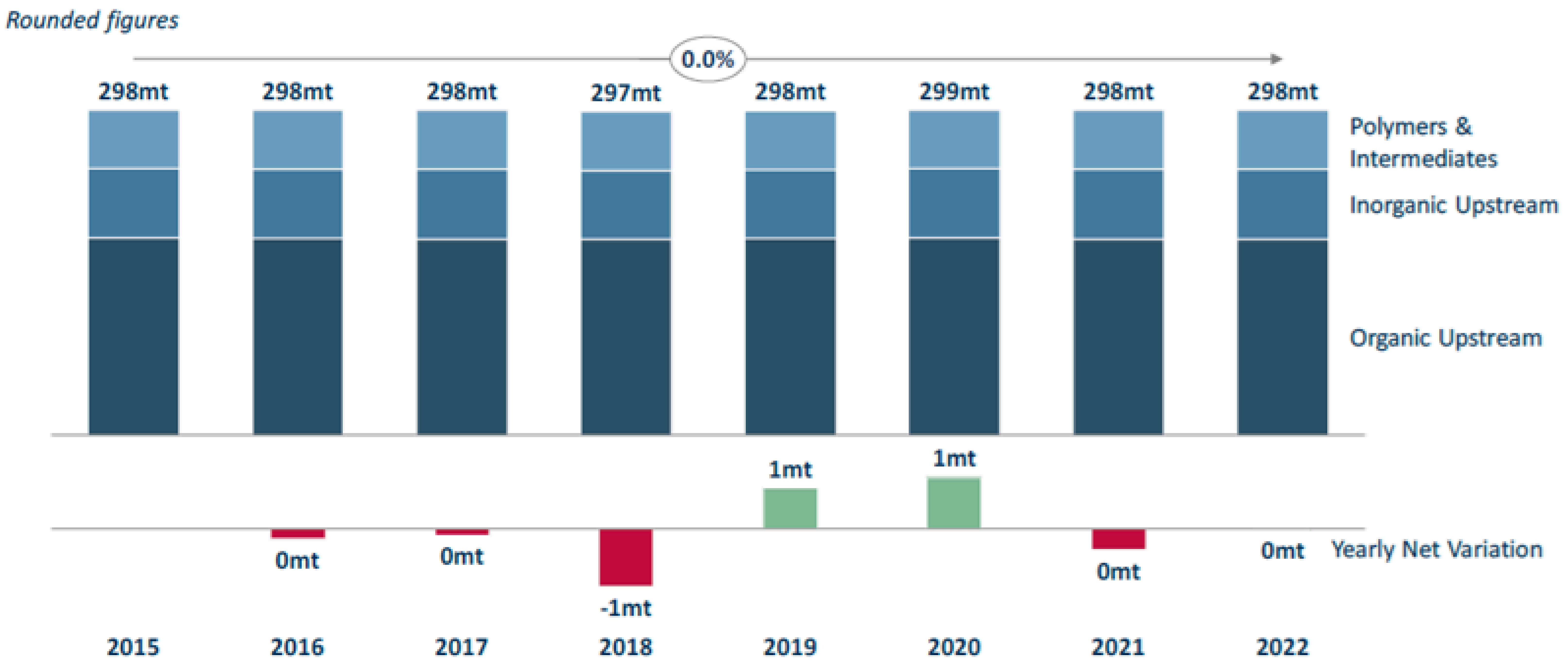
Spain
Cepsa Huelva - CX (180) - Closed by end of 2023
LyondellBasell Tarragona - PP (390) - Sale agreement to German investment group AEQUITA
SABIC Cartagena - PC (130) - Permanently suspended one of its sites

United Kingdom
CF Fertilisers Billingham - Ammonia and other ferts - Closed in 2023
Dow Barry - Methyl Chloride (60) and basics siloxanes - To shutdown in mid 2026
INEOS Grangemouth - Ethanol (310) - Permanent closure confirmed
LyondellBasell Carrington - PP (210) - Under review
Mitsubishi Chemical Billingham - MMA (200) - Permanently closed in H1 2023
Versalis Grangemouth - SBR (60), Polybutadiene (80) - Closed in April 2024
SABIC Wilton - Ethylene (500), Propylene (415) - To close permanently

Source: ICIS, Oct 2025

Capacity variation in Europe compared to current capacity closures

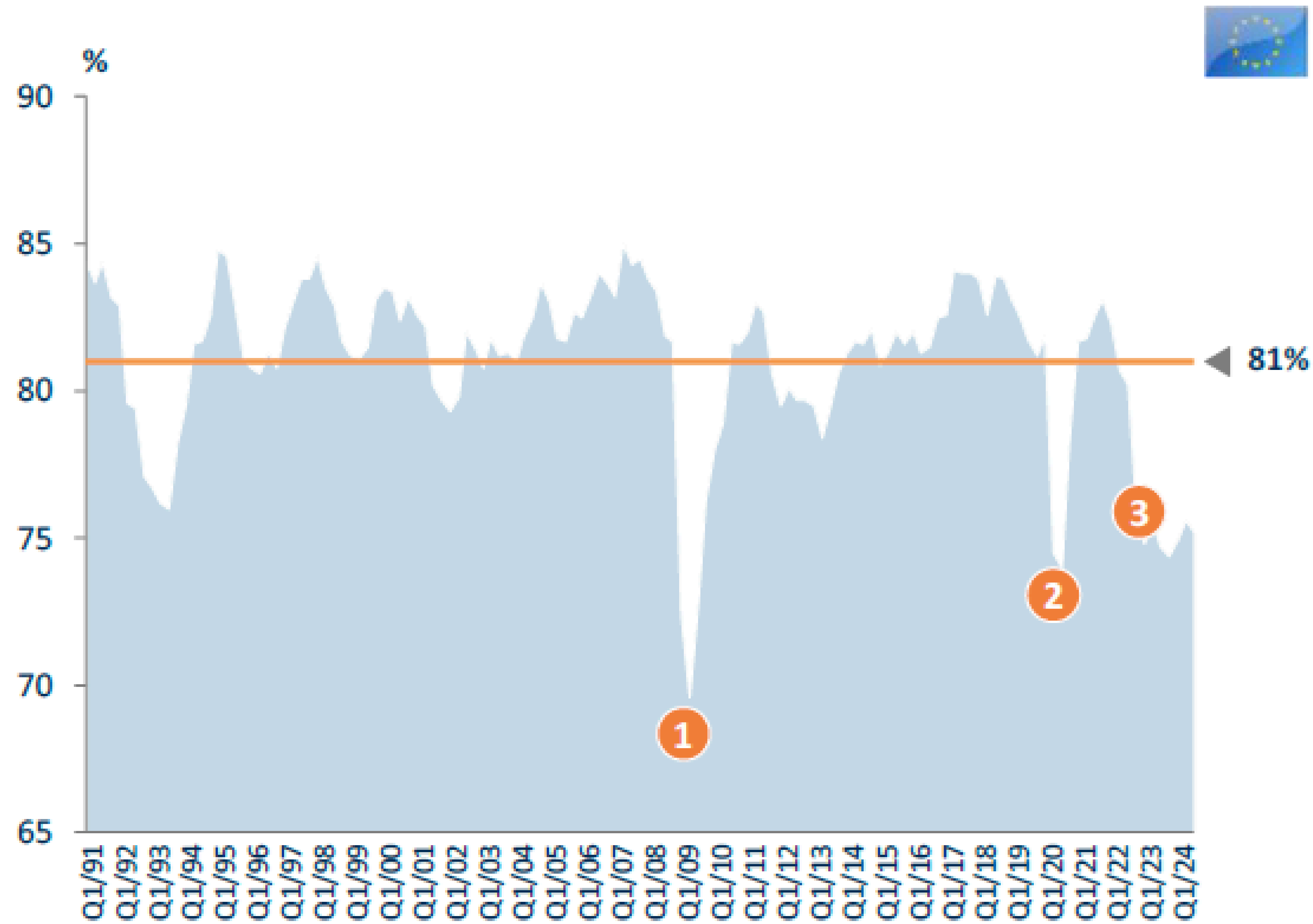
mt, 2015-22, Europe, top 35 chemicals in volumes



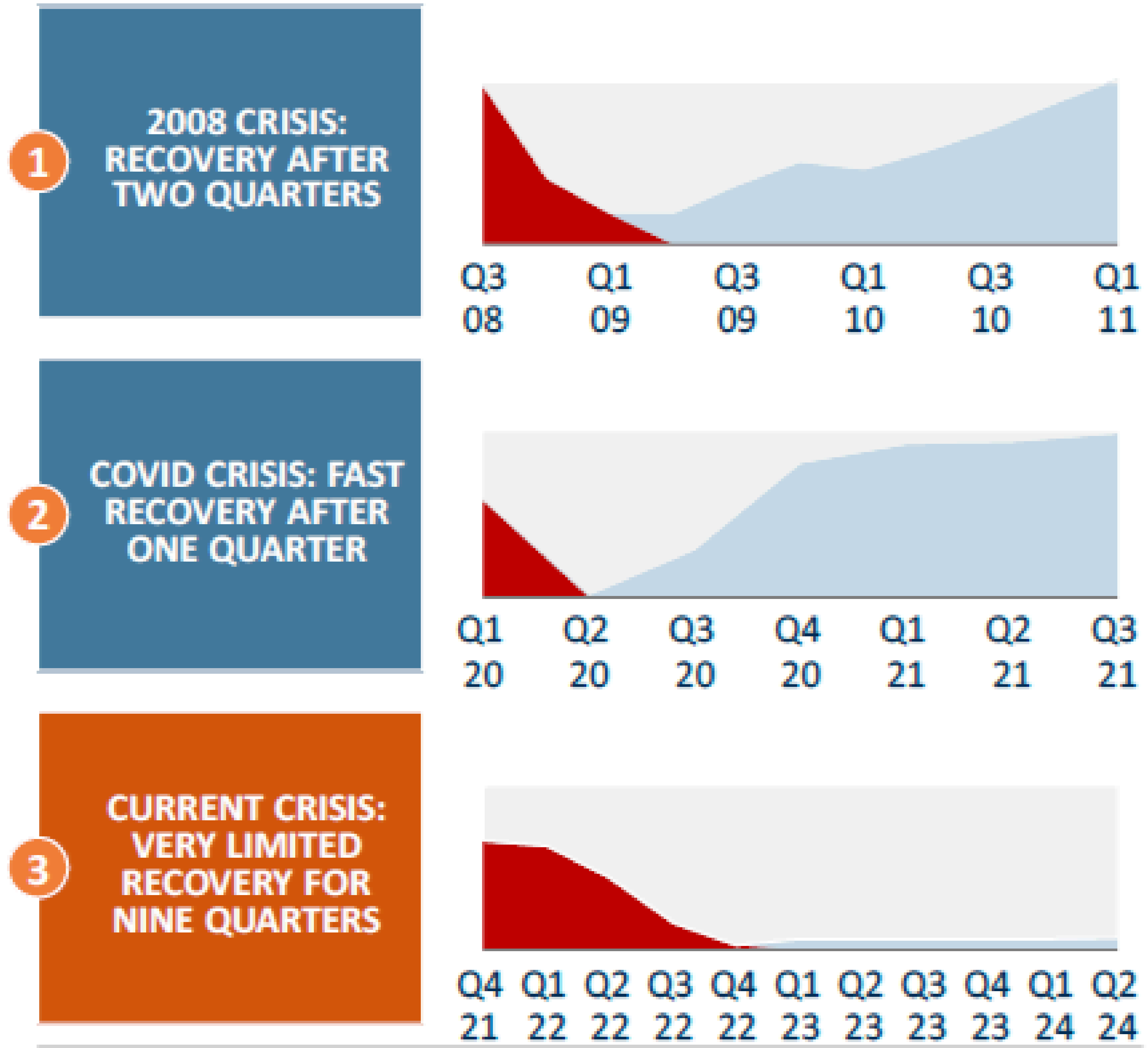
- **The 23 mt of capacity closures are well above the annual variations that have occurred in recent years, by a factor of 23.**

European chemicals utilisation rate

EU27, %, 2008 – Q2 2024



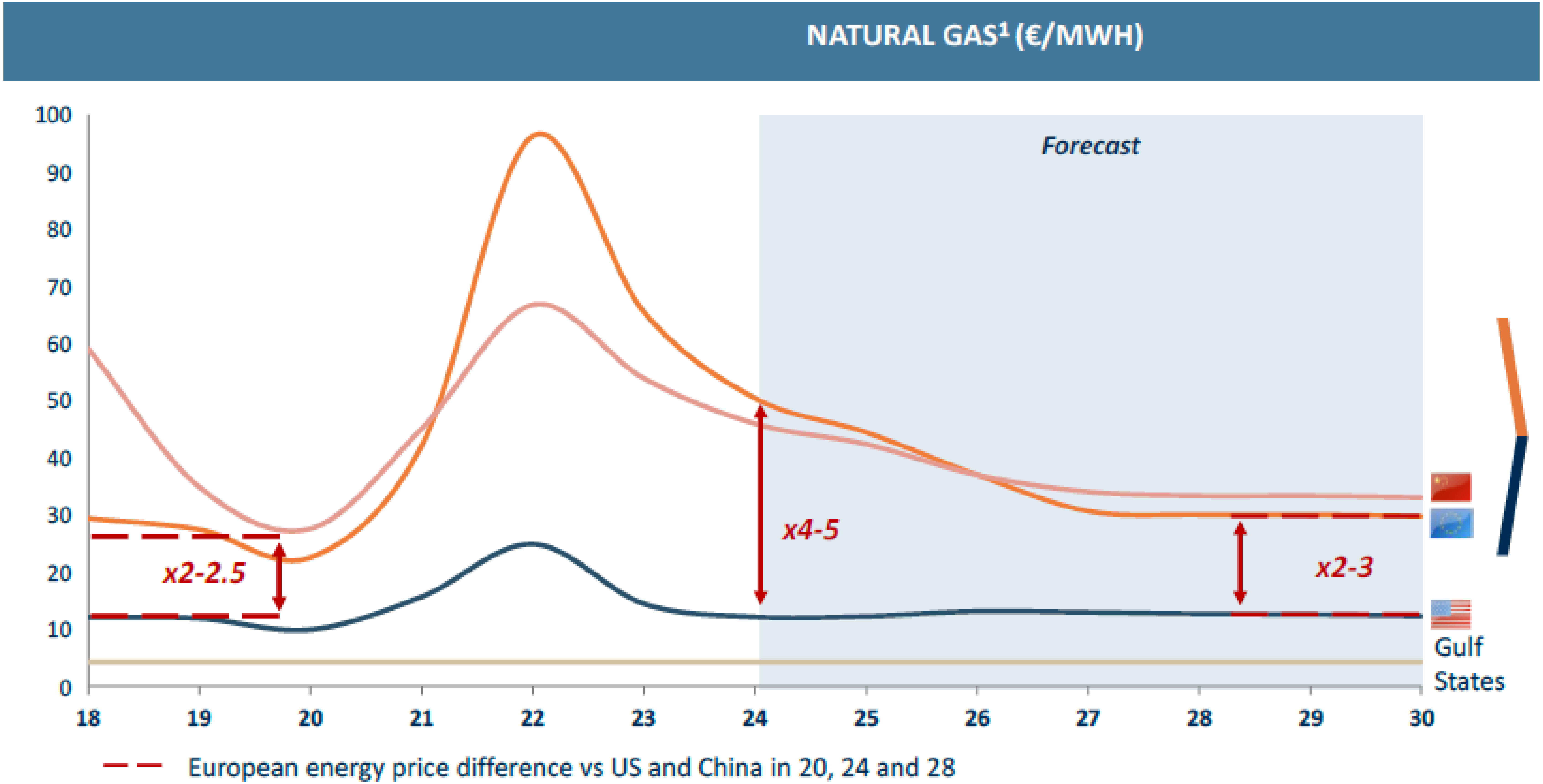
2008-2011, 2020-2021, 2021- 2023



Sources: CEFIC, Advancy analysis

- **The trend of global excess in capacity results in the low utilisation rate of the EU Chemical industry, at only 75% for the past nine quarters. The depth and duration of the slowdown is unprecedented.**

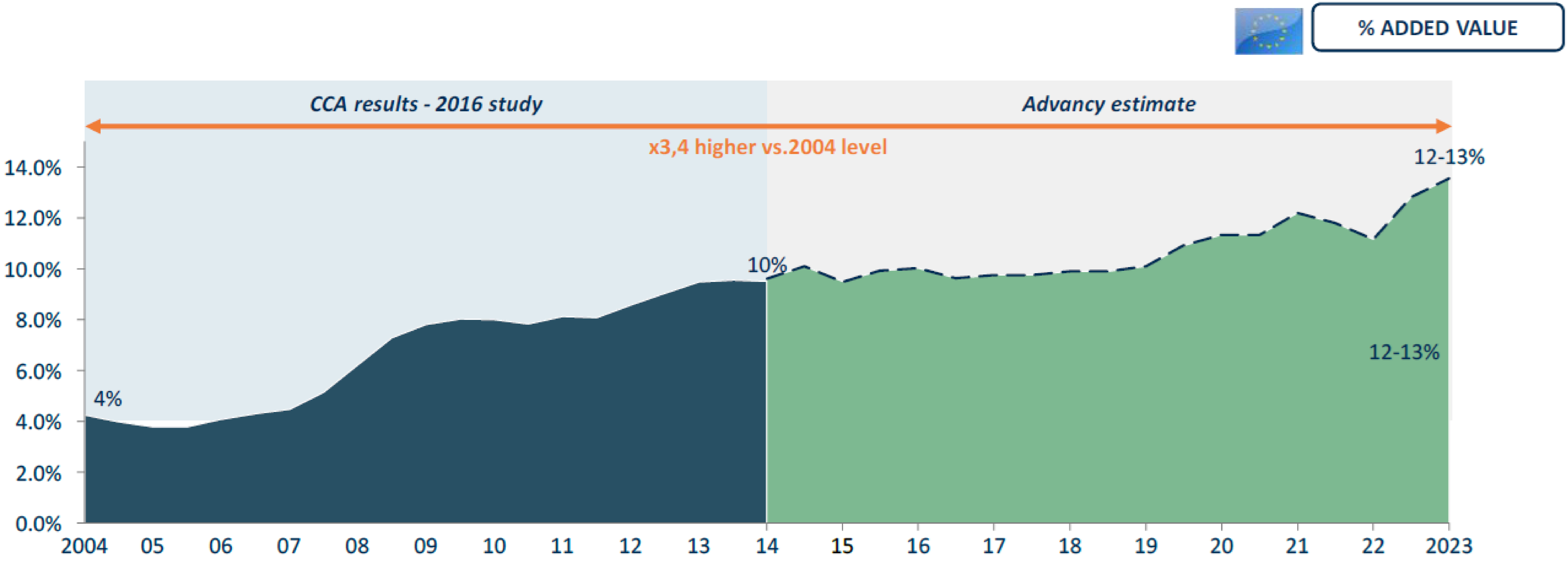
2018-2024E-2030, €/MWH, €/T



- **Natural Gas prices were 4-5 times higher than in the USA in 2024 compared to 2-2.5 times in the period 2010-2020. The gap is forecast to remain 2-3 higher, given current European energy framework and policy.**

Regulatory costs evolution in Europe

% of added value, 04-23, EU27

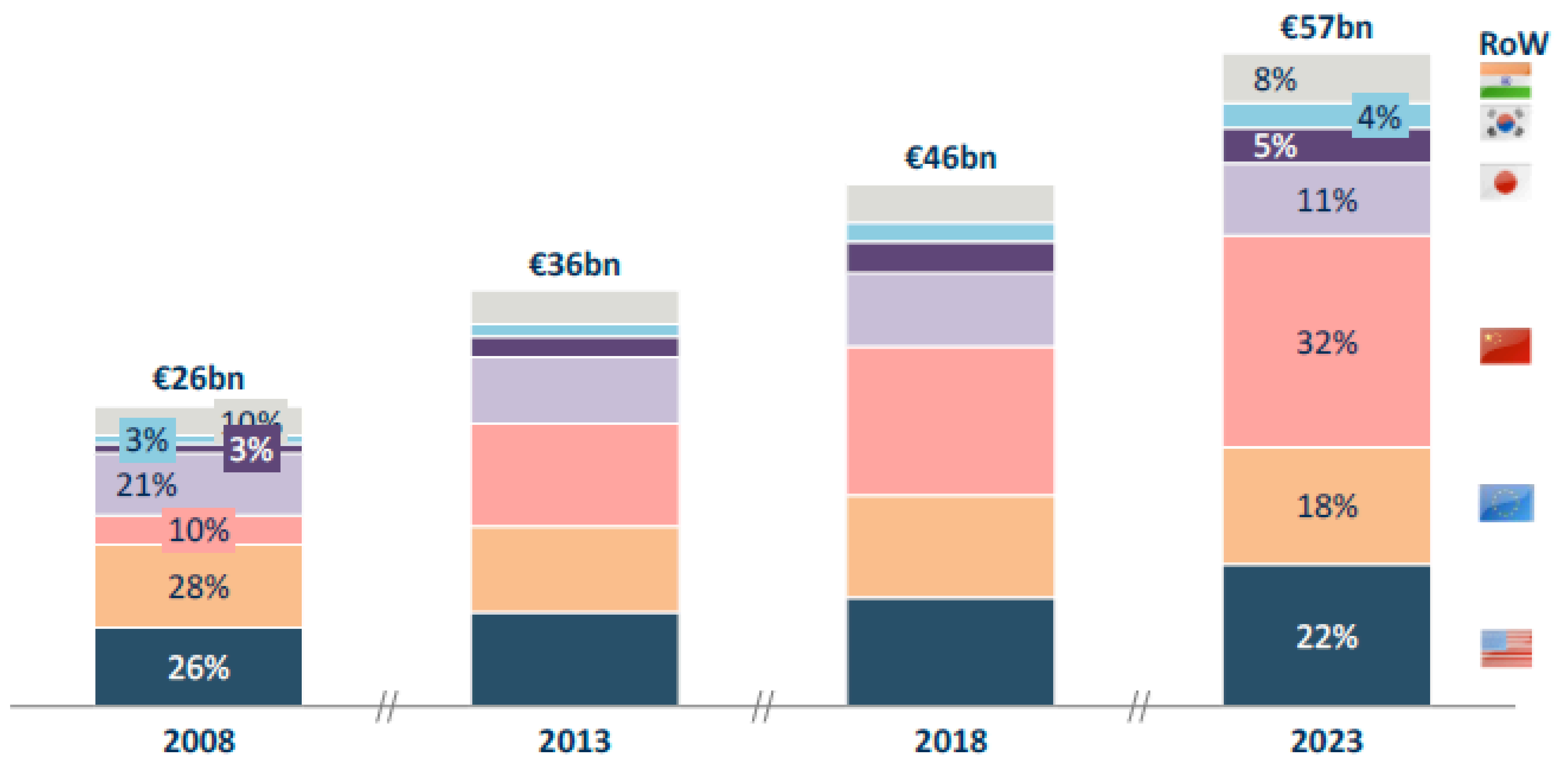


Sources: Cefic, UNPRI, Advancy analysis

- **Since 2014, regulatory costs have continued to rise and are now estimated to be around 12-13% of total added value which is up to 2 times greater than R&D expenditure in % of added value.**

Evolution of R&D spending in chemicals by region

2008-23, €bn, %, Global, R&D

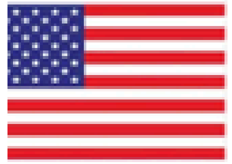
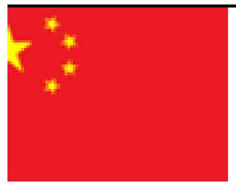


CATEGORIES	DELTA 08-13	DELTA 13-23	Δ VS SALES
RoW	-2pts	+0pt	-17pts
India	+0pt	+1pt	+1pt
South Korea	+2pts	+0pt	+3pts
Japan	-5pts	-5pts	+8pts
China	+15pts	+8pts	-11pts
USA	-4pts	-1pt	+10pts
Europe	-7pts	-3pts	+5pts

Note: (1) Delta between % R&D spending vs. % Sales / Sources: Cefic, Advancy analysis

- **Over the last 15 years, the EU's share of global R&D spending in chemicals has lost ground reaching about 18% in 2023 (28% in 2008).**

Overview of competitiveness drivers by region

	Energy	Environmentand and regulatory costs	Labour costs & productivity	Logistics costs	Capital costs & investment	Subsidies & tax policies	Innovation	Human capital	Supply/demand ecosystem	Policy framework	% Sha on wo chemi sales
	-2	-1	-1	+2	+1	-1	+2	+2	+1	-1	12.6
	+2	0	-2	+1	+2	+2	+2	+2	+2	+1	11.2
	+1	+1	+1	+2	+1	+2	+1	+1	+2	+1	43.7
GULF STATES	+2	+2	+1	+1	+1	+2	-1	-2	-1	+1	8
	-1	0	-1	+1	0	-1	+2	+2	0	0	2.8
	-1	0	0	+1	0	0	+2	+2	0	0	2.6
	-1	+2	+2	0	-1	0	0	0	0	0	2.6

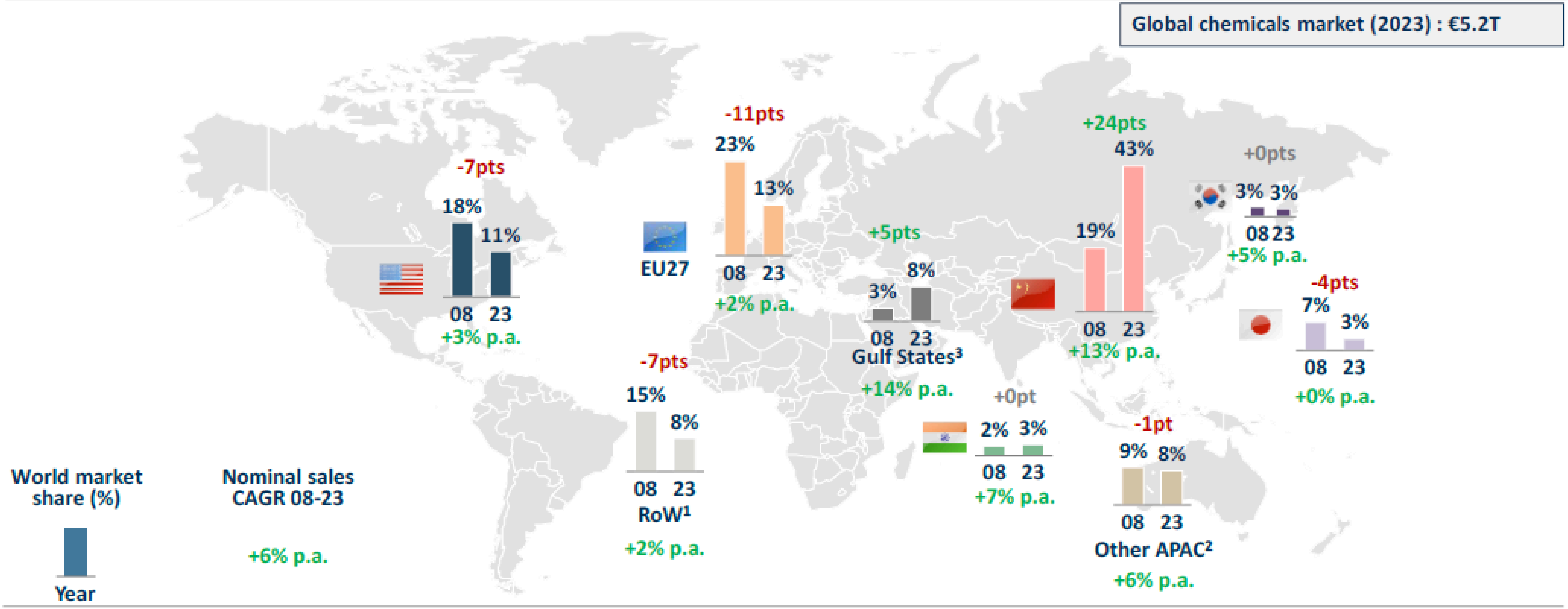
Positive impact ++ → -- *Negative impact*

Differences in energy costs have the strongest impact, with a clear cost gap compared to other regions

Source: Cefic-Advancy Joint Study: The Competitiveness of the European Chemical Industry

Evolution of regional shares of the chemicals market

Nominal sales, market shares in % of sales, sales CAGR in %, 2008-2023, World



Notes: (1) Rest of the world includes: Latin America, Europe outside EU27 including UK and Russia, Africa, Mexico, Canada, 2) Other APAC includes all Asian and Oceanian countries ex. China, India, Japan, South Korea, (3) Including GCC countries, Israel, and Iran

Sources: Cefic 2023, Gulf Petrochemicals & Chemicals Association, Advancy analysis

- **Europe's market share in terms of nominal sales has declined by around 11 percentage points over the past 15 years, from 23.3% to 12.6% between 2008 and 2023.**

European risks and opportunities

The current uncertain situation requires…	…Strengthening competitiveness…	…To better respond to future opportunities in low carbon & circular economy & new technologies
	OPPORTUNITIES — 2 **EUROPE RESTORED COMPETITIVENESS** Boosting European competitiveness represents up to **€15bn of added value preserved and 150-200K direct jobs maintained**	**OPPORTUNITIES** — 3 **EUROPE LEADER IN CIRCULAR & LOW CARBON TECHNOLOGIES** Benefiting from first mover advantages in low carbon, circular economy and more resilient technologies, the European chemical industry can generate additional growth and jobs in Europe
TODAY *2023-24*	***SHORT TERM*** *0-5 Years*	***MID TERM*** *2-10 Years*
RISKS — 1 **11mt announced closures, risk impacting:** ▪ 10k to 20k jobs ▪ 2-4% of EU upstream & polymers ▪ €1.5bn to €2.5bn of added value at risk	**RISKS** — **Without dedicated industrial competitiveness policies and market recovery**, risk of: ▪ 150-200k direct jobs at risk (x3-5 indirect jobs at risk) ▪ **Up to 8% of EU added value** ▪ Up €15bn added value at risk	**RISKS** — **Without a renewed decarbonisation policy, the current Green Deal policy might not be sufficient to support a smooth transition:** ▪ Difficult to pass on costs to customers ▪ High risks of carbon leakage ▪ Supply dependency

Sources: Advancy analysis

- **With a dedicated industrial policy to strengthen its competitiveness, the chemical industry can avoid the risks of additional closures, which can be up to 8% of EU added value, putting 150-200k direct jobs at risk.**

Thank you for your attention!
Σας ευχαριστώ!

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