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S&P Global

Commodity Insights

Global Polyolefins Outlook

A Challenging Road to Recovery

Bangkok, APIC 2025

May 16th, 2025

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Three things we're watching...

1

Are aggressive **rationalizations** or project cancellations or delays going to materialize?

2

How will industries in the US and ROW respond to President **Trump's** adversarial policies, and how will **China** stimulate domestic demand?

3

Appetite for **circularity & decarbonization** by new governments
Taking power globally

Agenda

Polyolefins Long-Term Growth Outlook

Current Oversupply and Margin Challenges

Emerging Market, Trade and Tariff Wars

Key Takeaways



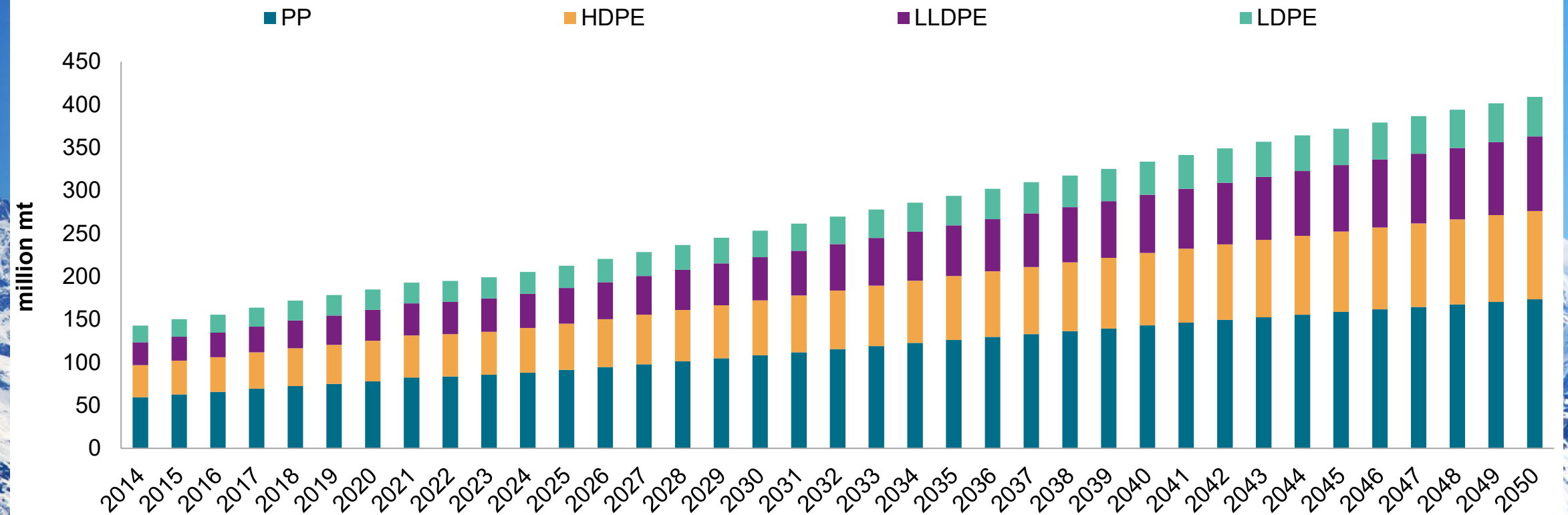


Polyolefins Long-Term Growth Outlook

Virgin polyolefins demand is anticipated to experience sustained growth despite downturns and environmental challenges

No peak polyolefins in next 25 years

Global PE and PP Demand



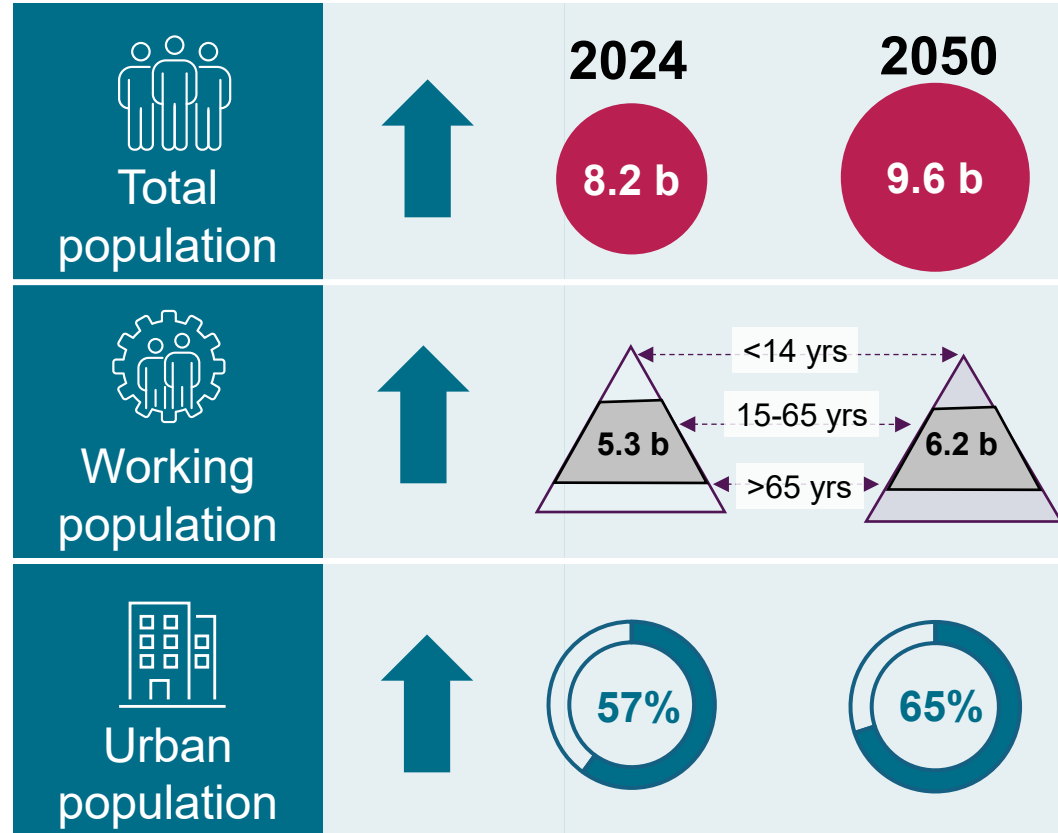
Source: S&P Global Commodity Insights.

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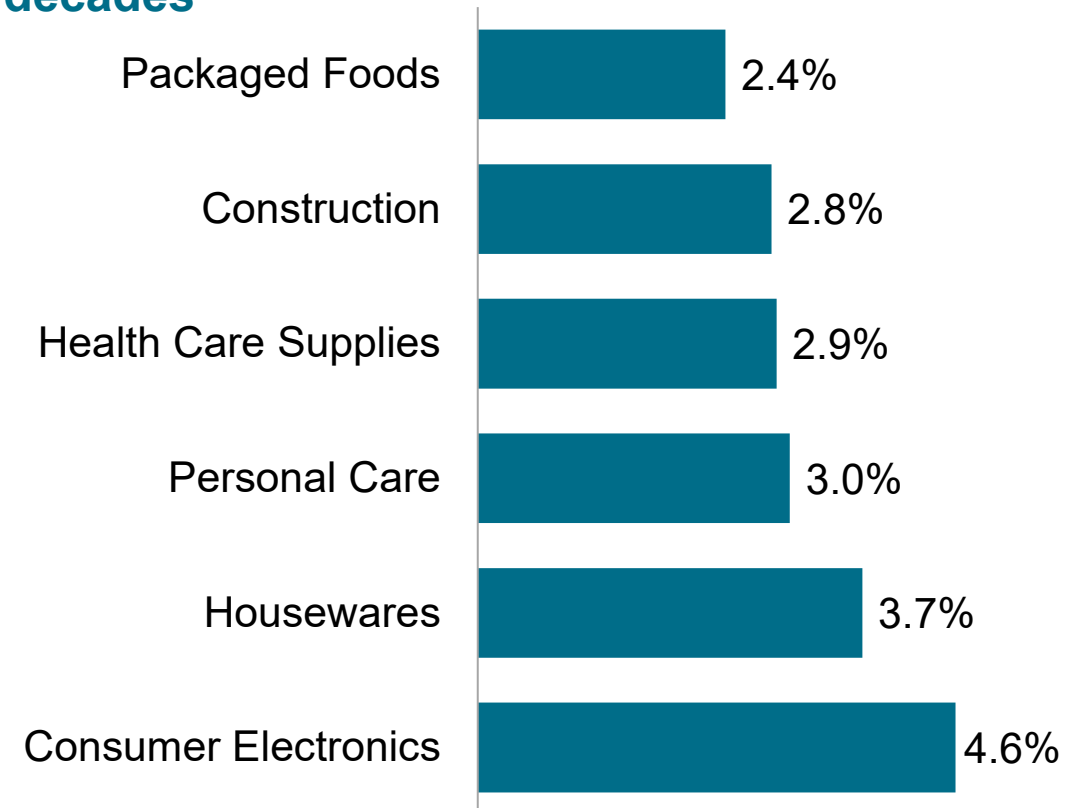
Demographic trends and end-use industries remain key drivers of (virgin) polyolefin demand over the next two decades

Emerging Markets and Durable Applications are the Primary Contributors to Demand Growth

Demographics



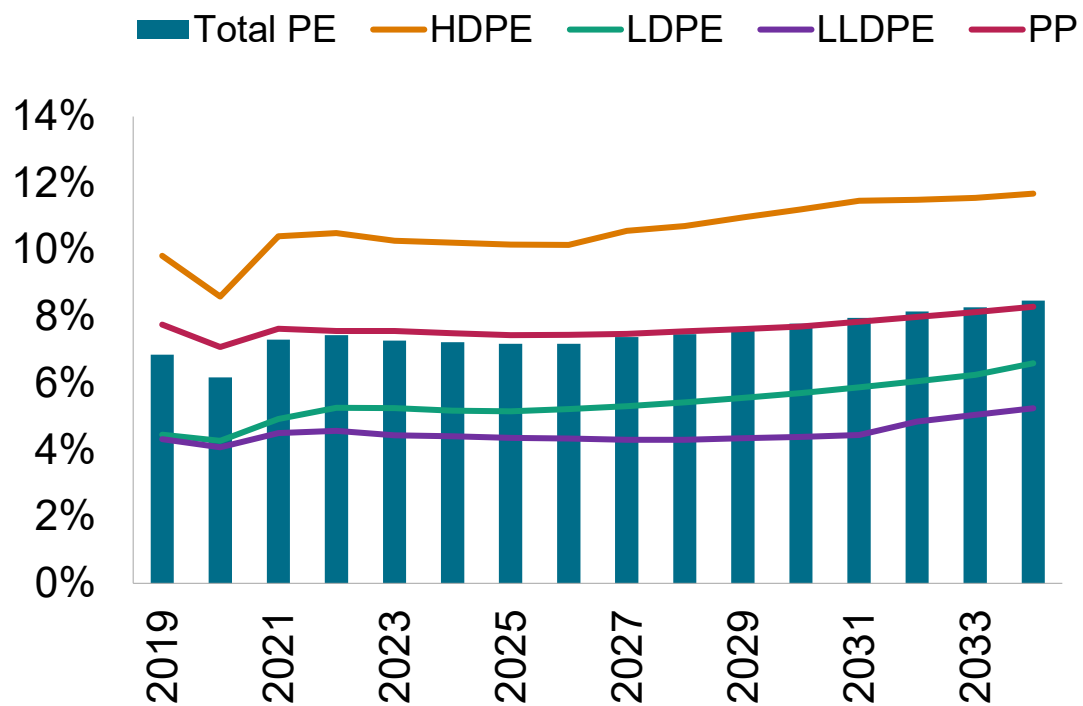
Sector outlook – growth (CAGR) next 2 decades



Polyolefin offer consumers value through their convenience, hygiene, durability, versatility, and affordability.

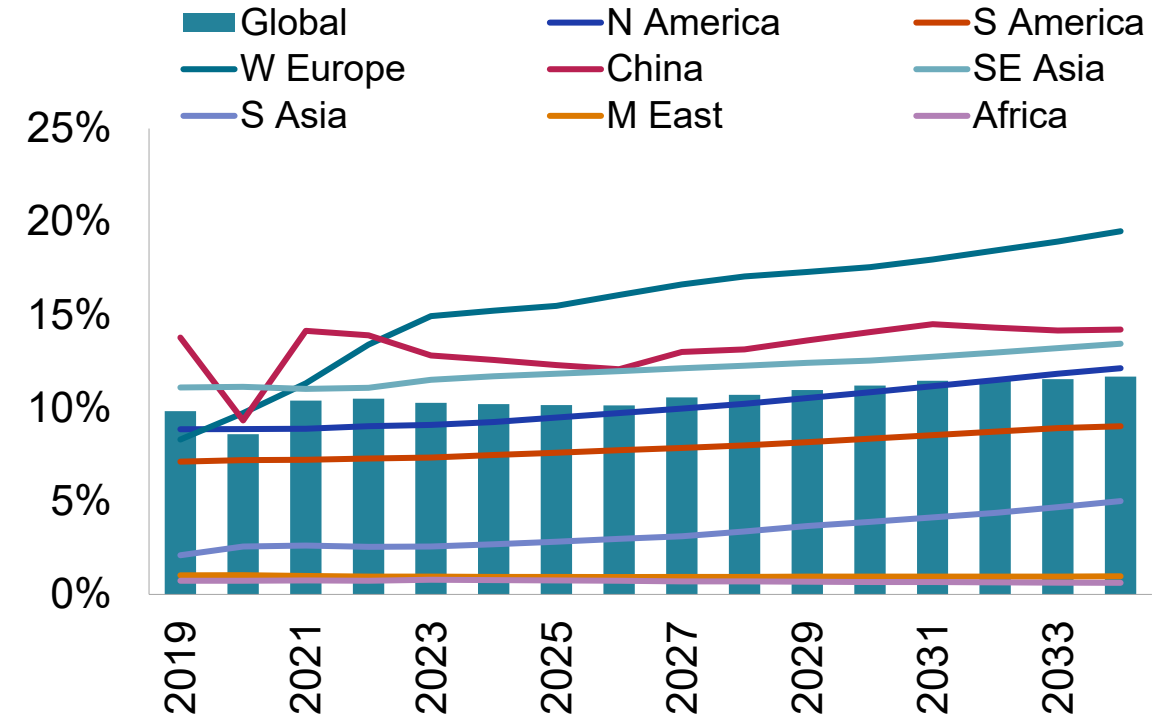
Recycle rates vary substantially by Polyolefins type dictated by end-uses; high variability in global regions too, with Europe leading the way

Global Recycled PE Demand by PE Type (%)



Source: S&P Global Commodity Insights

HDPE Recycle Rates by Global Region (%)



Source: S&P Global Commodity Insights

Recycle rates have slowed — circularity needs regulation to provide next growth spurt!

The current political environment risks impacting the momentum observed in recent years on plastic regulations

UN Environment Program INC Plastic

2-year process ended on December 24

No agreement reached among parties

Expectations for new set of discussions to continue in 2025

Multilateral agreement unlikely

Country Legislation

2024 national elections at a peak
- Half the world population
- 8 of 10 most populous countries

Conservative / nationalist parties ahead in most countries

Some delays or withdrawals already enacted on environmental targets, lead by new US administration

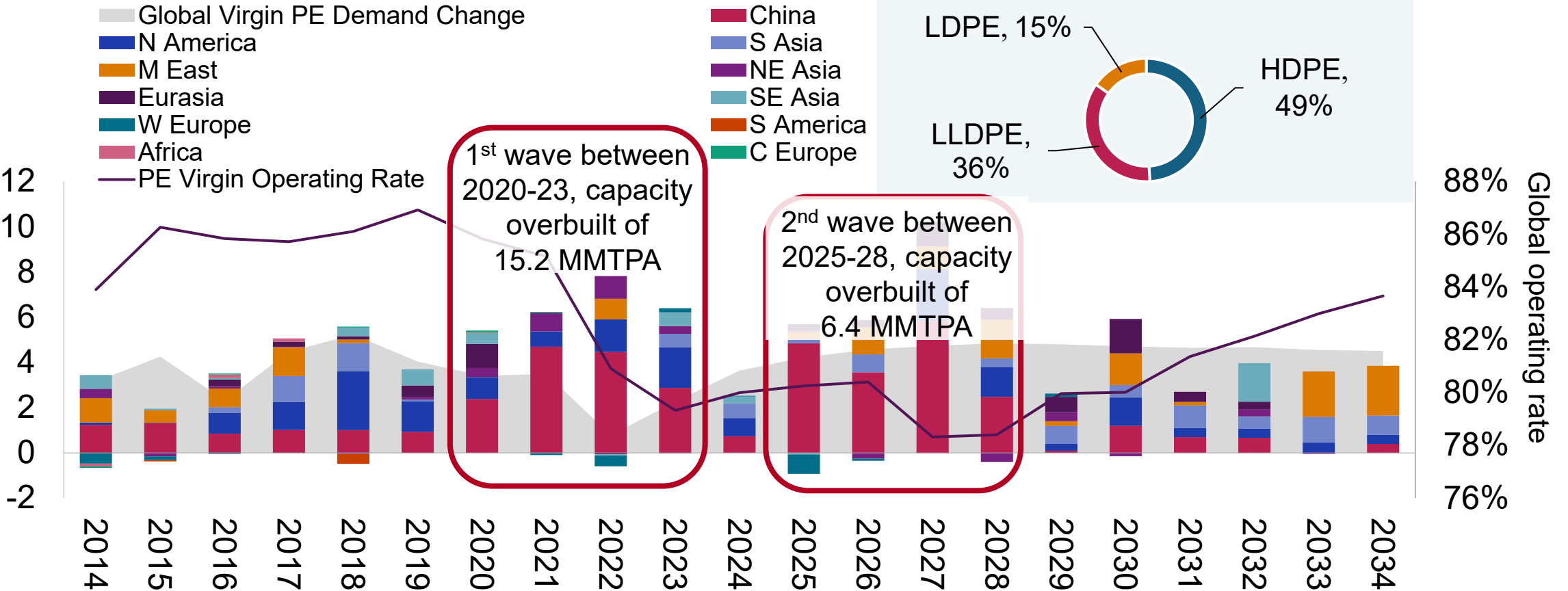
Limited progress or potential abrogation of plastic regulations likely



Current Oversupply and Margin Challenges

Global PE entrenched in a downcycle, with a 2nd wave of excess capacity coming
 China responsible for 59% of new capacity; North America and Middle East with 17% and 9% respectively

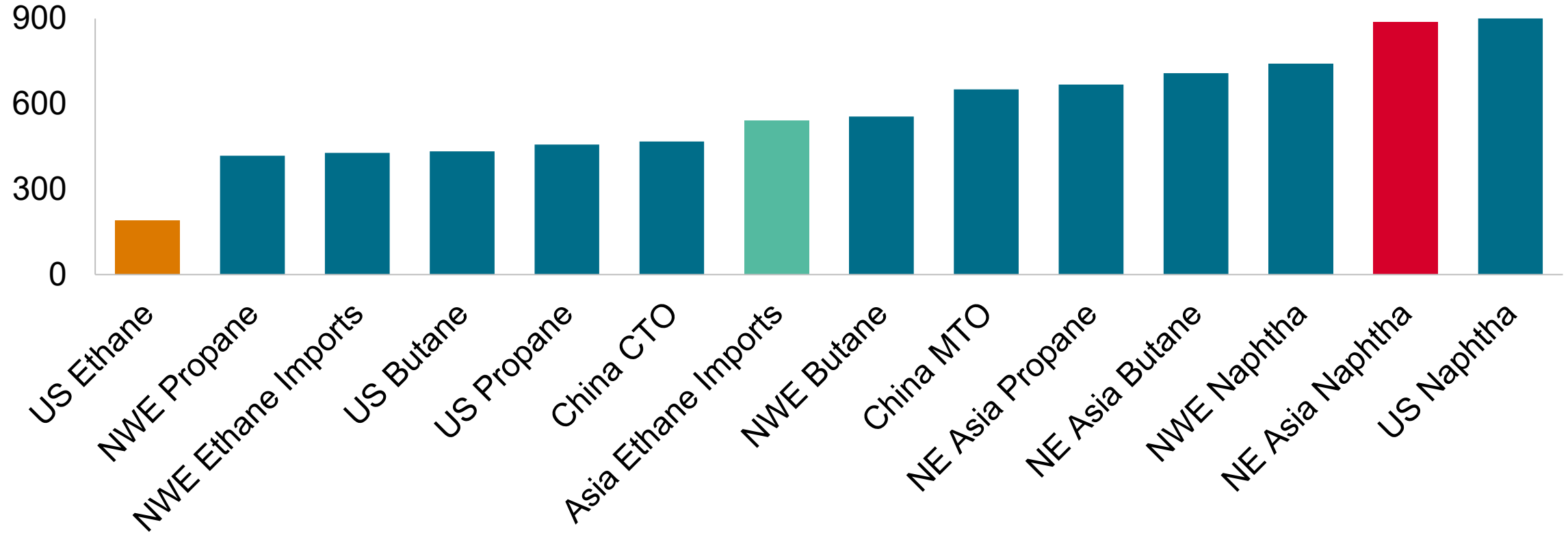
World : PE capacity growth by region (mmt)



Source: S&P Global Commodity Insights

Ethylene cost divergence: US (& Middle East) ethane crackers enjoy a substantial variable cost advantage over naphtha crackers in Asia

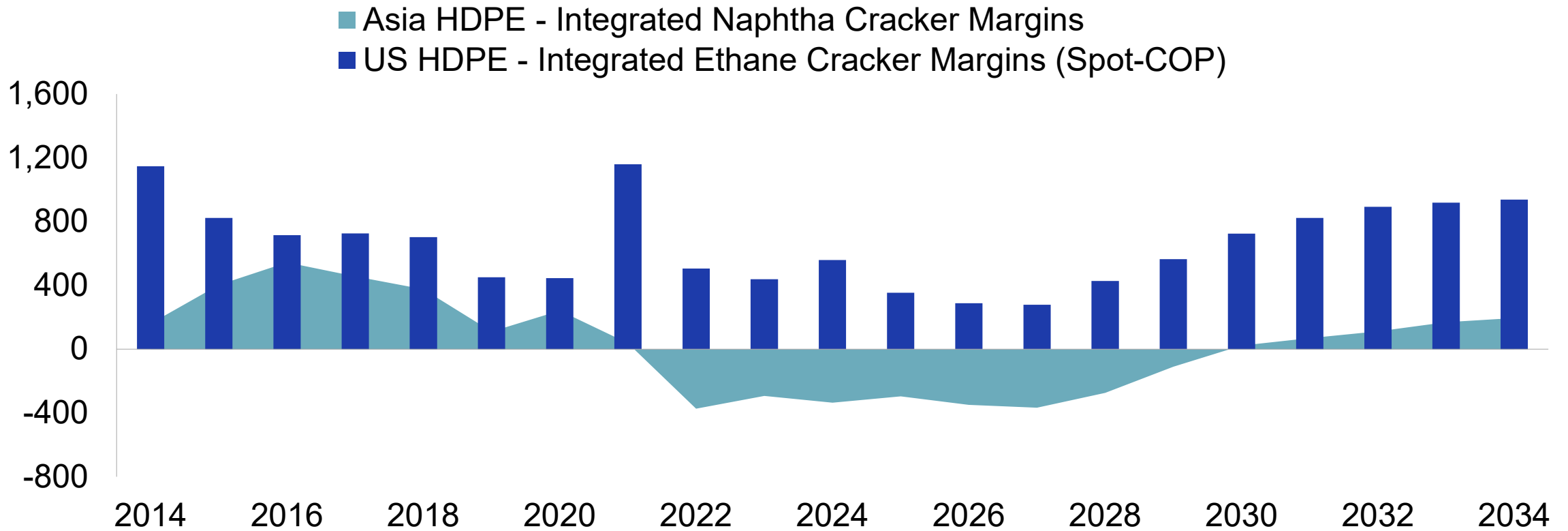
Net feed & variable cost of production (\$/Ton – 19 Feb 2025)



Data compiled 5 Mar 2025
Source: S&P Global Commodity Insights




Surplus capacity and weaker demand growth have driven regional profits lower; Asia naphtha-based assets registering negative margins

Integrated HDPE Cash Margin Trends (\$/mt)



Source: S&P Global Commodity Insights.

When is the recovery going to occur? - Polyethylene market recovery scenarios

Pessimistic case 	S&P Global base case 	Faster recovery 
<ul style="list-style-type: none"> • No further rationalization outside of what has been currently announced • Un-do “speculative rationalization” included in the base case 	<ul style="list-style-type: none"> • Includes 6.5 million of rationalized capacity between 2025 and 2027 • Approximately 3 million of 6.5 million have been announced • No project cancellations • Flurry of consolidation and asset portfolio review announcements in 2025, provide optimism 	<ul style="list-style-type: none"> • Regional SMEs rationalize 2nd-tier of rationalization candidates. • Rationalization of under-utilized assets with rates below 25% in last 3-5 years. • Some new China capacity is not built. Some RCIS capacity further delayed beyond 2032 • ~ 11.5 million mt of capacity taken out.

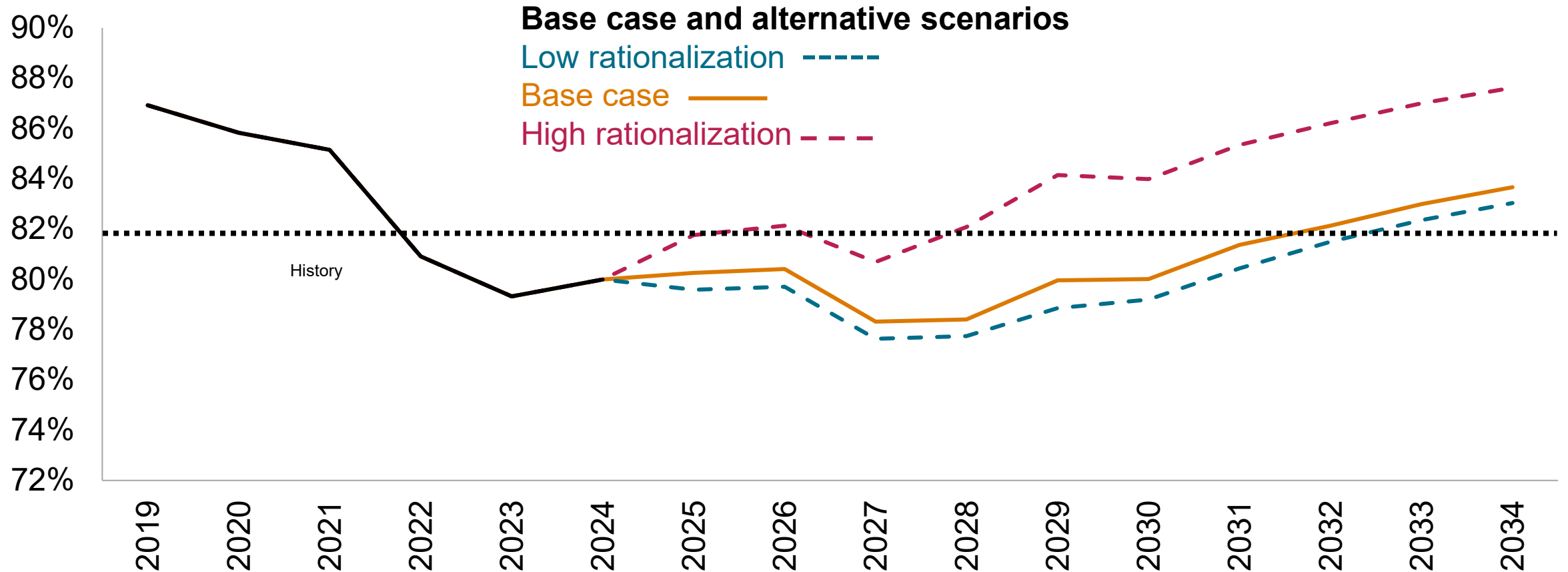
Increasing rationalization 

Time to stop playing the waiting game!

Inaction can extend current margin downcycle beyond the end of the decade

Aggressive rationalization would still take a few years for recovery

PE Operating Rate Scenario (%)



Source: S&P Global Commodity Insights

The Big 3 Make Strategic Decisions to Navigate Energy Transition

Interestingly, All Are Expanding Their Petrochemical Capacities



Shale Gas Dynamo

- Capitalize on shale gas for C1 & C2 chemical production
- Market & profit driven investment and technological innovation
- Enhance competitive exports



Hydrocarbon Resource Strategist

- Leverage oil & gas resource to access higher-value market
- Expand and diversify downstream operations
- Ensure stable oil placement



Self-Sufficiency Champion

- Benefit from access to a vast domestic market
- Enjoy lowest capex per ton & strive for self-sufficiency
- Implement industry policy to decarbonize, elevate value chains and close tech. gap

United States, Saudi Arabia and China pursue petrochemical expansion amidst oversupply, motivated by a combination of strategic, economic, and competitive factors

Strategic Shift to Petrochemicals Amid Peak Transportation Fuel Demand

- Declining Transportation Fuel Demand
- Petrochemicals as a Growth Market

Capacity Expansion Persists Despite Oversupply

- Long-Term Investment Horizons: betting on long-term demand growth, enduring short-term oversupply to secure market share
- Geopolitical and Economic Ambitions
- State-Driven Strategies in China and Middle East
- “Future-proof” crude oil to chemical (COTC) complexes for competitiveness

Challenges and Risks of Continued Expansion

- Prolonged Oversupply
- Trade Tensions



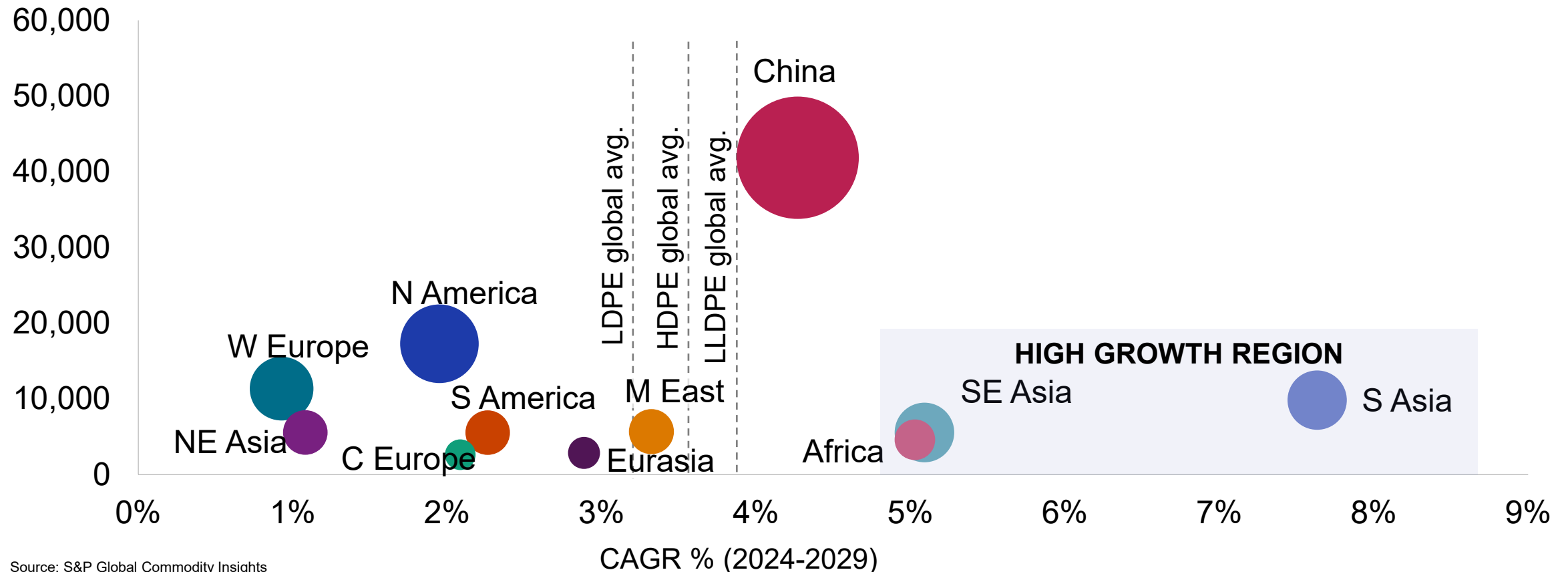


Emerging Market, Trade and Tariff Wars

Asia drives global polyethylene demand

South and Southeast Asia show the highest demand growth rates. While China's growth has slowed, it remains the largest individual market.

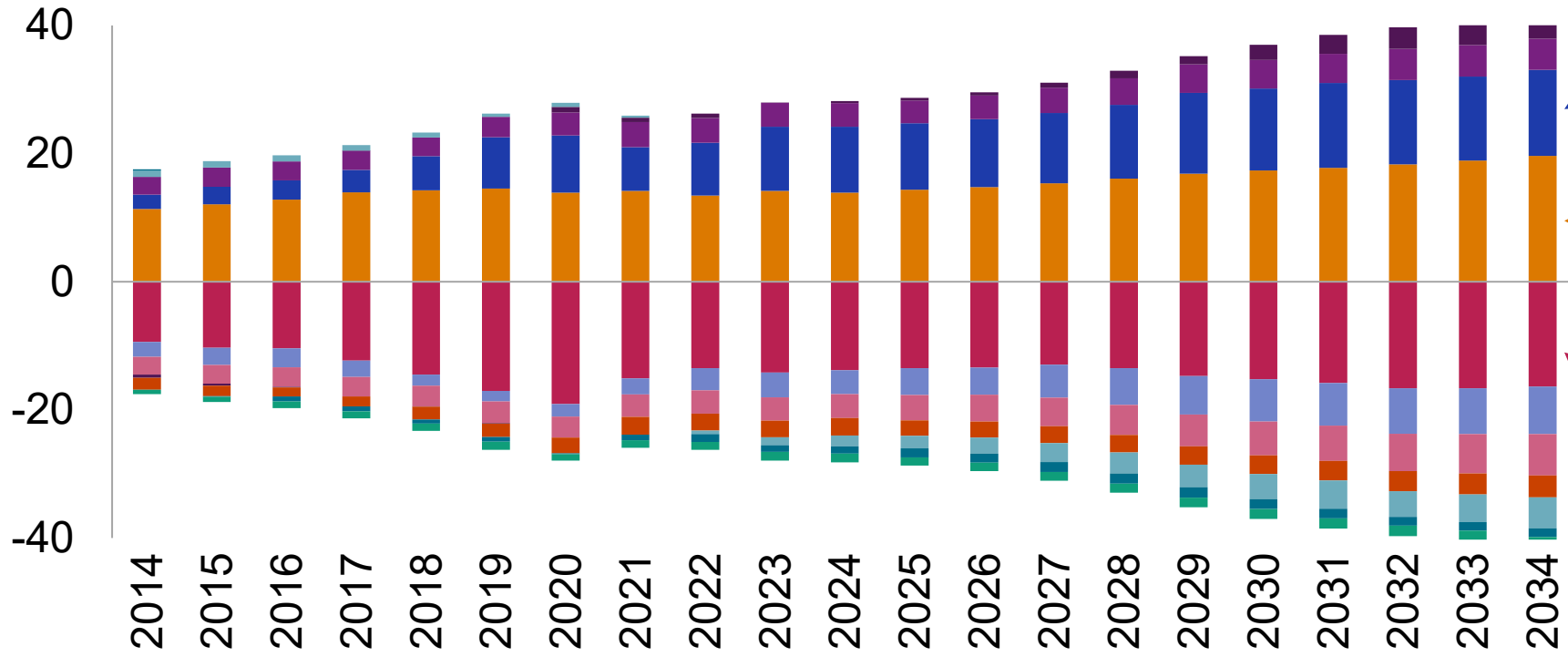
Polyethylene global demand (kt)



Source: S&P Global Commodity Insights

Middle East & North America continue as largest exporters of polyethylene; China remains largest importer

Total PE net trade by region (MMT)



2024 N America net trade accounts for 37% of production, while total exports are 58% of production

2024 Middle East net trade accounts for 71% of production, while total exports are 82%

China's self-sufficiency is 67%, projected to increase to 71% by 2026

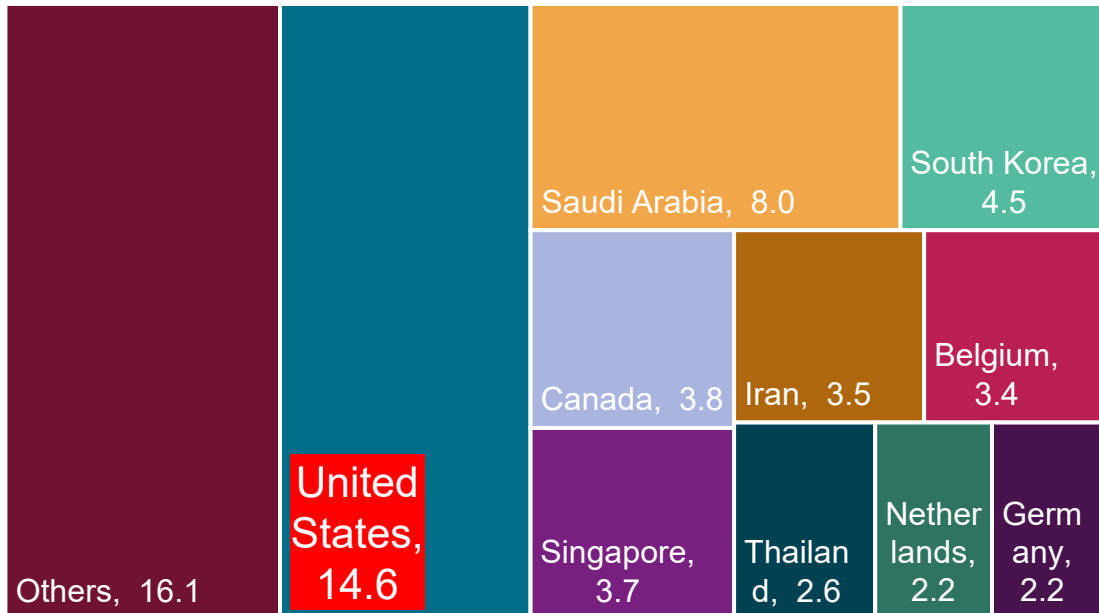
Source: S&P Global Commodity Insights.

Global Polyethylene Export & Import Landscape in 2024

Interestingly, China is the largest importer, whereas the US holds the title of the biggest exporter. Global polyethylene trade flow had to be reshaped due to tariff conflict between the US and China.

Top 10 Exporters (million mt)

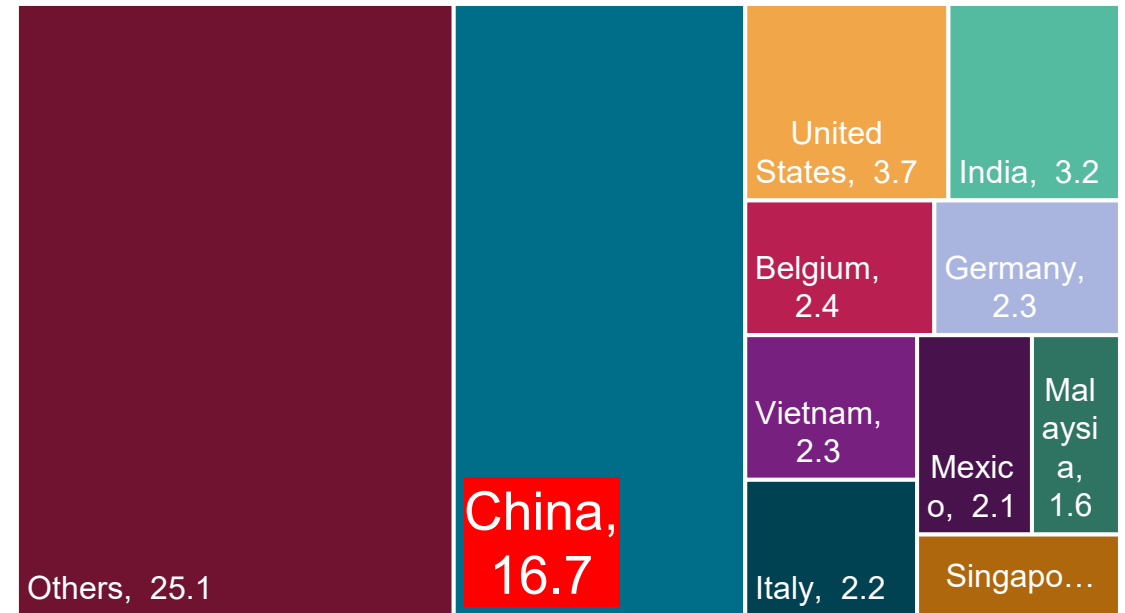
- United States ■ Saudi Arabia ■ Singapore ■ South Korea
- Belgium ■ Canada ■ Thailand ■ Iran
- Germany ■ Netherlands ■ Others



Data compiled Apr. 09, 2025.
 Source: S&P Global Commodity Insights.
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Top 10 Importer (million mt)

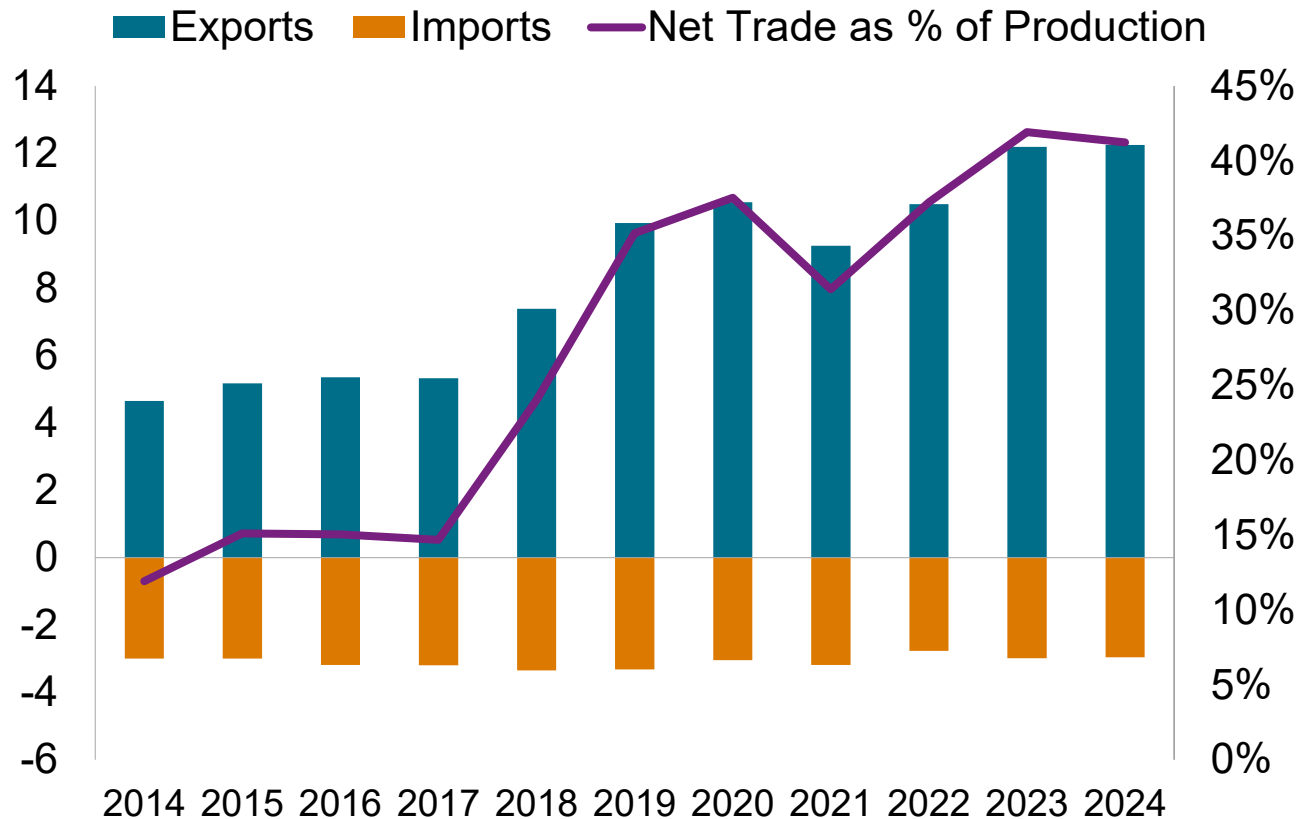
- China ■ United States ■ Vietnam ■ India
- Belgium ■ Germany ■ Italy ■ Singapore
- Mexico ■ Malaysia ■ Others



Data compiled Apr. 09, 2025.
 Source: S&P Global Commodity Insights.
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US largest polyethylene export markets are China, Mexico, and Canada! – the three countries initially targeted by President Trump’s tariff policy

USA PE Net Trade (MMT)

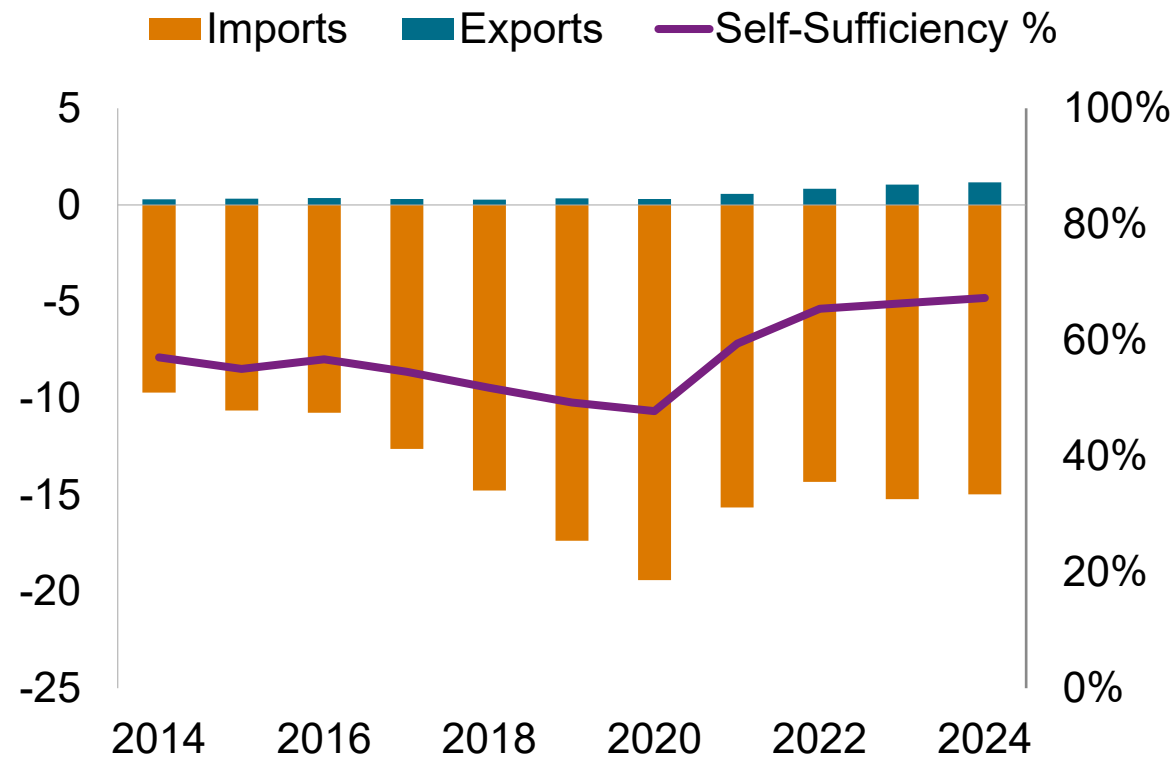


2024 US Exports	
China	17%
Mexico	13%
Brazil	11%
Canada	7%
Belgium	7%
Malaysia	4%
Others	42%

2024 US Imports	
Canada	88%
Mexico	5%
Sweden	2%
Korea, South	2%
Germany	1%
Others	3%

China imports declined but have flattened out and will begin to increase again!
 US was China's largest PE exporter in 2024.

China PE Net Trade (MMT)



2024 China Exports

Vietnam	10%
Bangladesh	8%
Russia	6%
Philippines	6%
Ghana	3%
Indonesia	3%
Other	63%

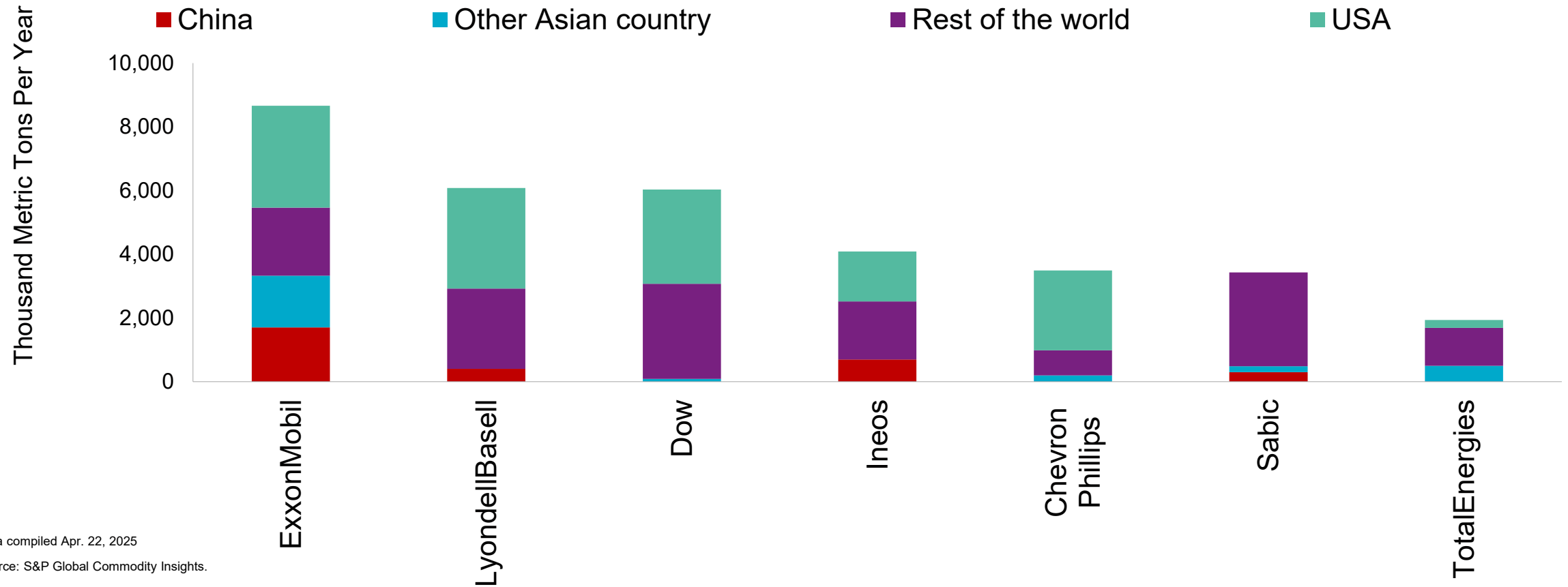
2024 China Imports

United States	17%
Saudi Arabia	16%
United Arab Emirates	15%
South Korea	10%
Iran	9%
Singapore	7%
Other	27%

The strategic positioning of polyethylene assets may allow some multinationals to more effectively navigate the US-China tariff war than others

Strategic location becomes competitive advantages

PE capacities of major producers across regions in 2025



Data compiled Apr. 22, 2025

Source: S&P Global Commodity Insights.

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Three takeaways and a message



Demand for virgin polyolefins is expected to continue growing despite market downturns and environmental challenges

Polyolefin industry is in a prolonged downcycle with weak/negative margins; A rapid recovery appears unlikely.

Asia continues to be the global demand center. Export markets will remain very competitive, and very volatile due to Trump's tariff war

Polyolefin: survival of the fittest
It is not the strongest of the species that survives, nor the most intelligent, but the one most responsive to change