

The road ahead for petrochemicals: Opportunities and challenges

APIC 2025

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May 15, 2025

Agenda

Demand and potential impact of tariffs

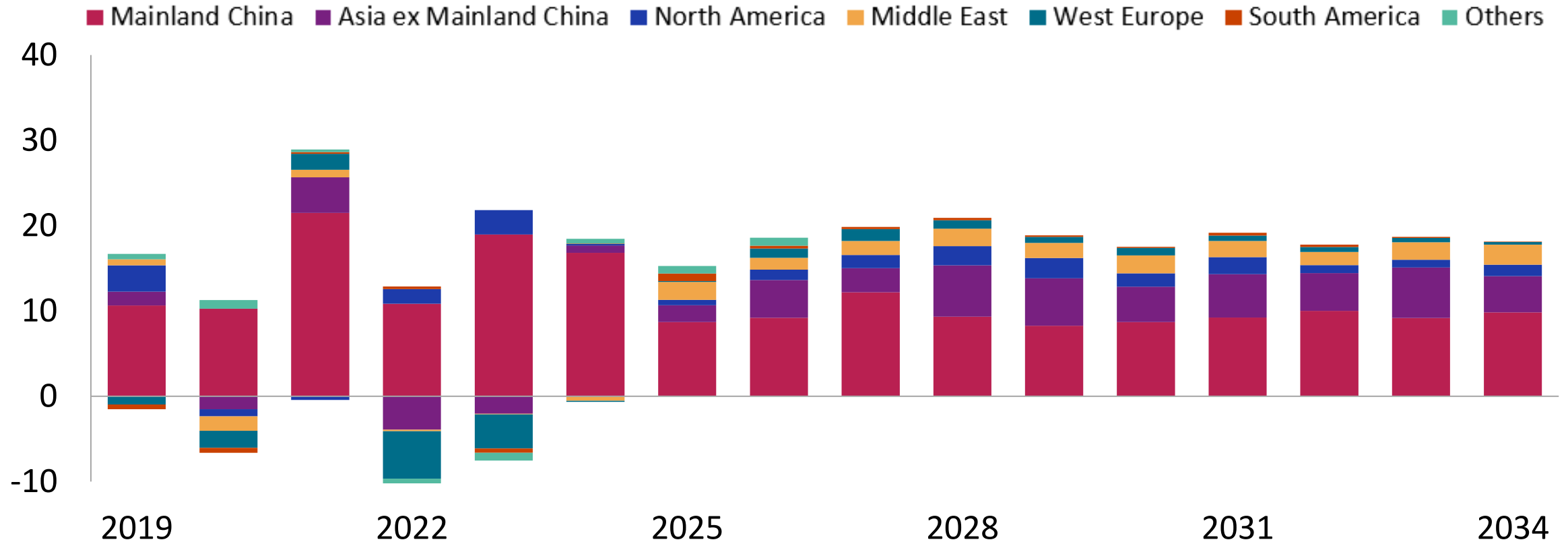
Overcapacity and the path to recovery

Trade and market opportunities



Chemical demand will continue to grow, driven by consumer consumption

World base chemical demand growth by region (MMt)



Apr 2025
Base chemicals includes ethylene, propylene, paraxylene, benzene, chlorine and methanol
Source: S&P Global Commodity Insights.

Polymer recycle volumes continue to grow but insufficient to cap virgin polymer growth

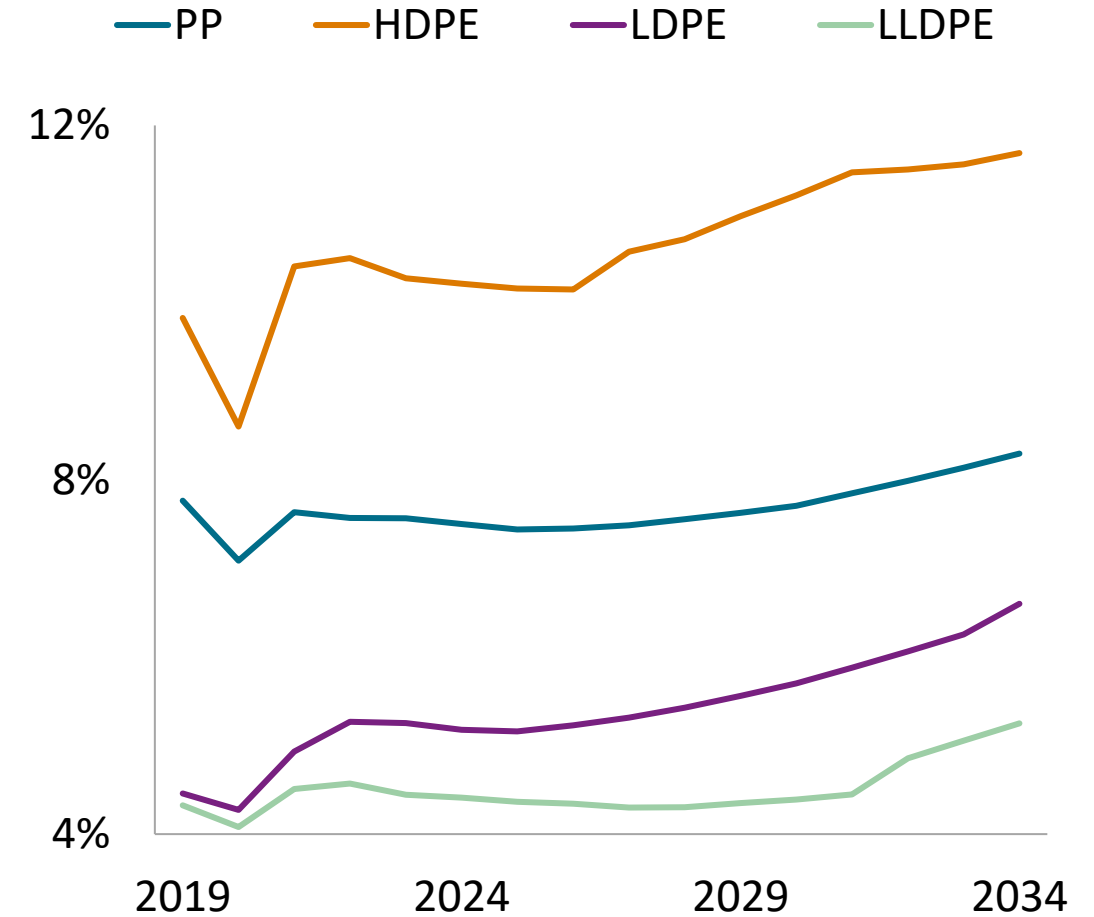
Circularity: significant regional variation with Europe leading the way

Waste collection and sorting infrastructure is the bottleneck

Advanced recycling will impact feedstock balances

Substantial investment in base chemicals and virgin polymers required 2030-2050 to meet demand growth

Mechanically recycled global polyolefins supply



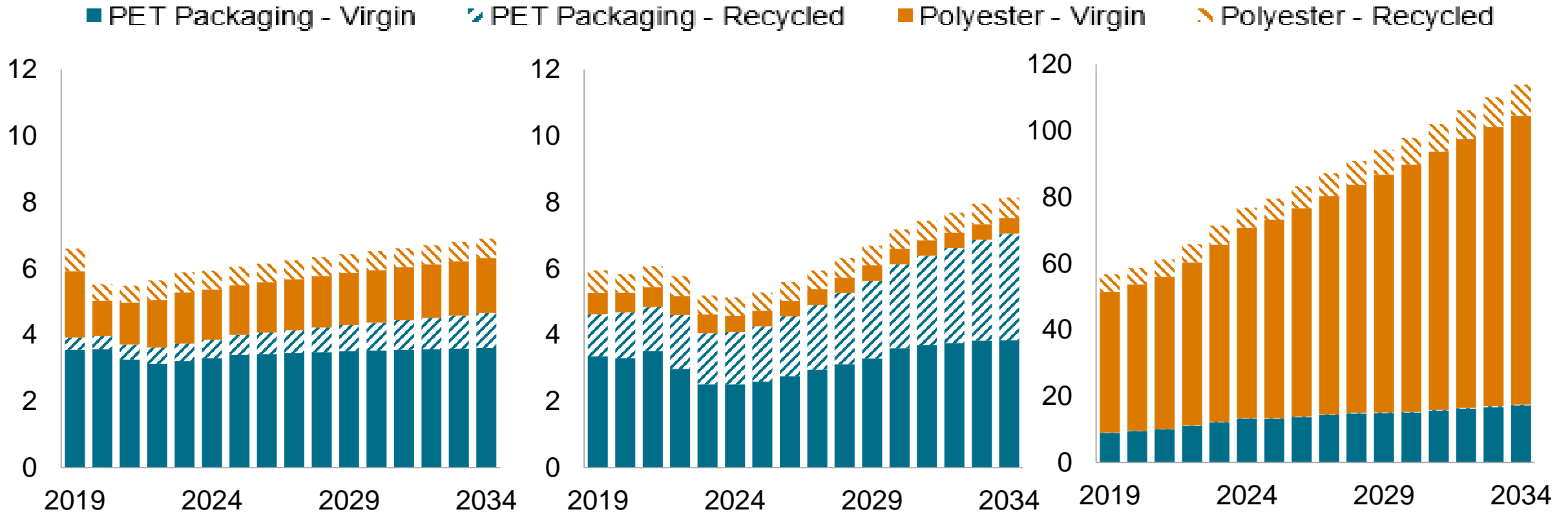
Apr 2025
Source: S&P Global Commodity Insights.

Regional PET resin supply shows the difference in approaches to recycling

N. American PET resin supply (MMt)

European PET resin supply (MMt)

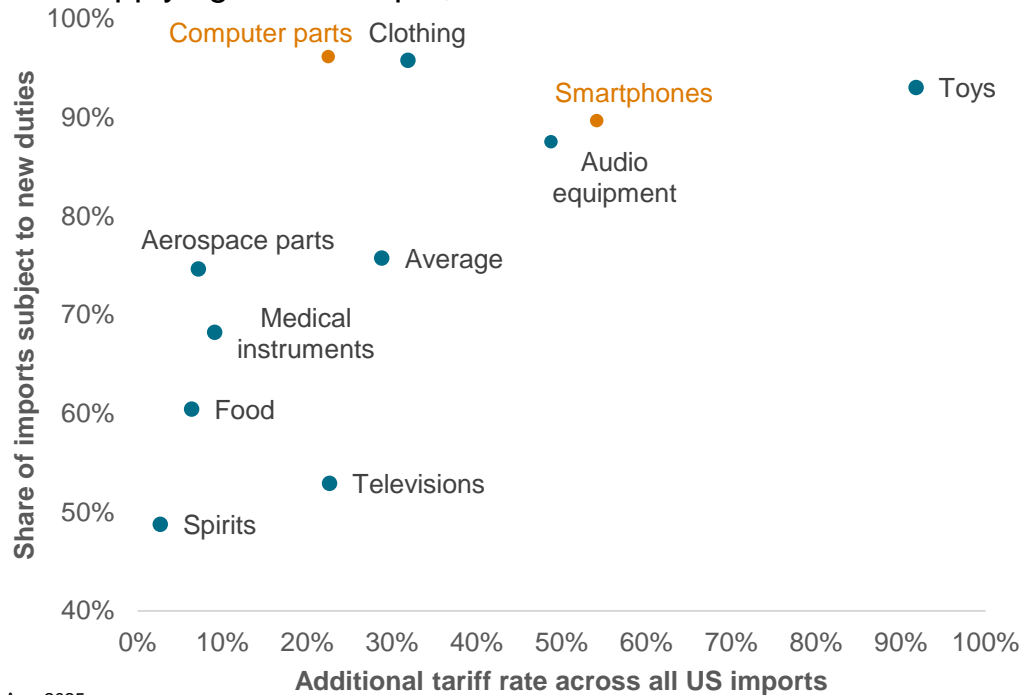
China PET resin supply (MMt)



US tariffs could have a significant impact on consumer goods trade flows

Consumer goods face largest tariff rate increases

Change in average US import duty rates due to reciprocal tariff rates applying from 14 April, 2025



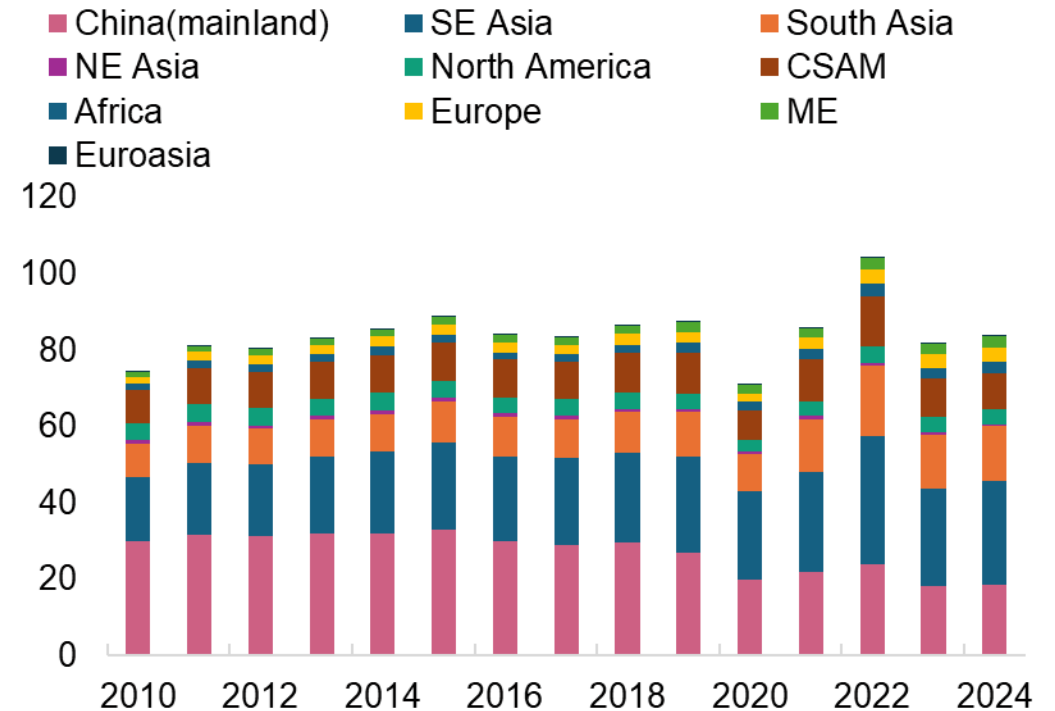
Apr. 2025.

Source: S&P Global Market Intelligence

Smart phones and computer parts exempted on Apr. 12, 2025.

US wearing and apparel imports by region

2024 US\$ billion

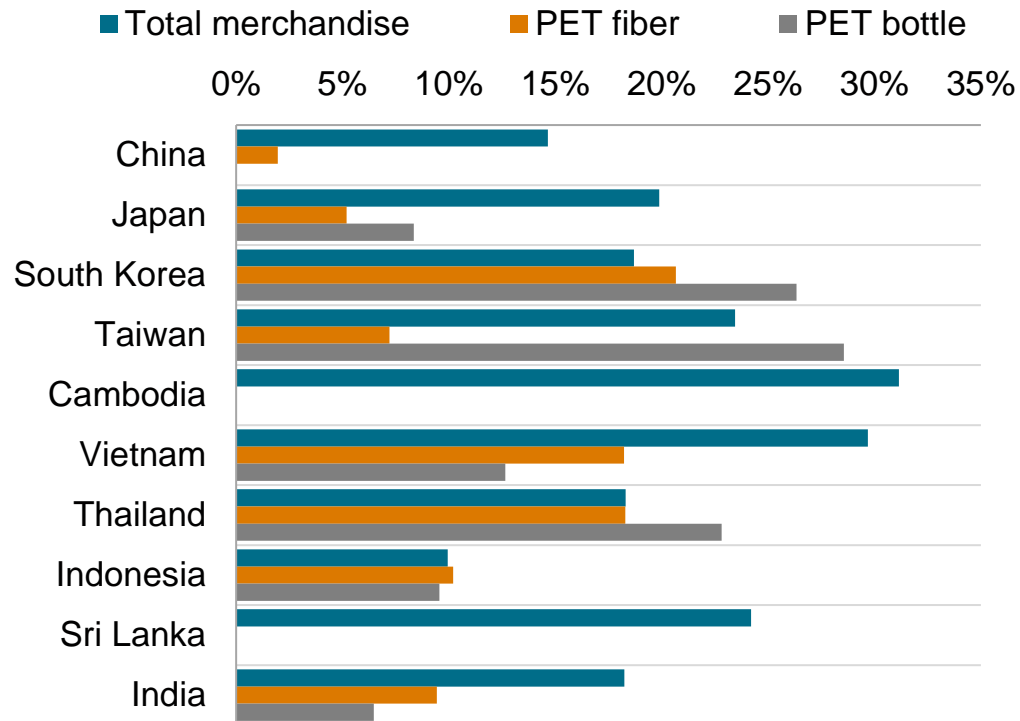


Data compiled April, 2025.

Source: S&P Global [Division].

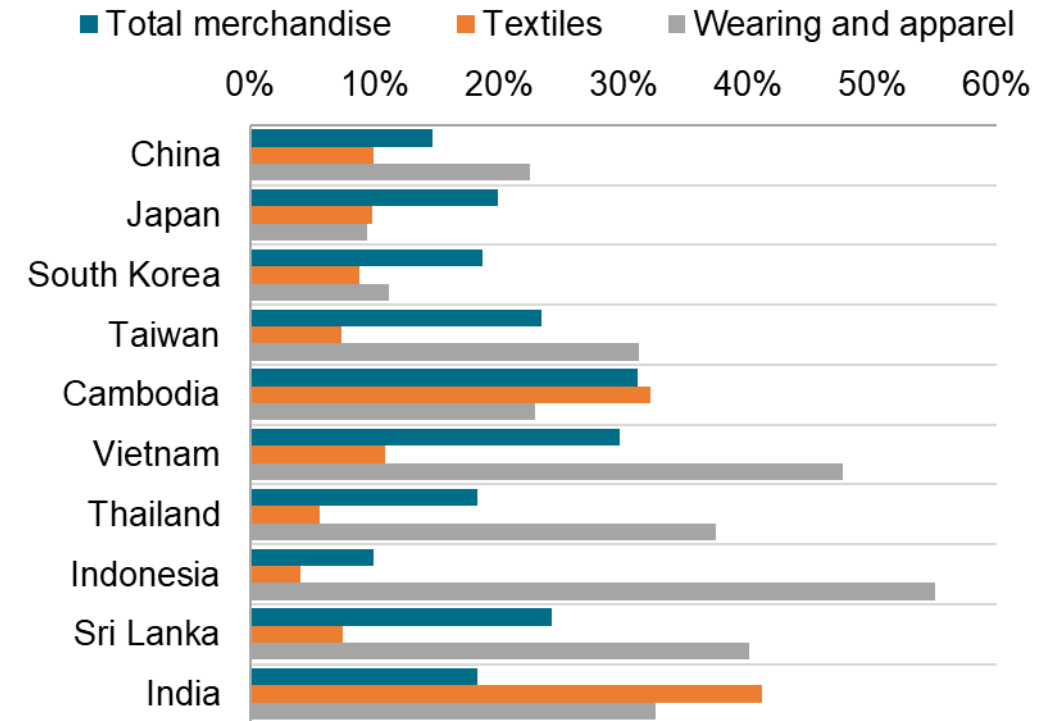
Asia is a major supplier to the US for apparel and polyester; difficult to diversify

Share of national export values heading to US (2024 data)



Data compiled April, 2025.
Source: S&P Global Market Intelligence.

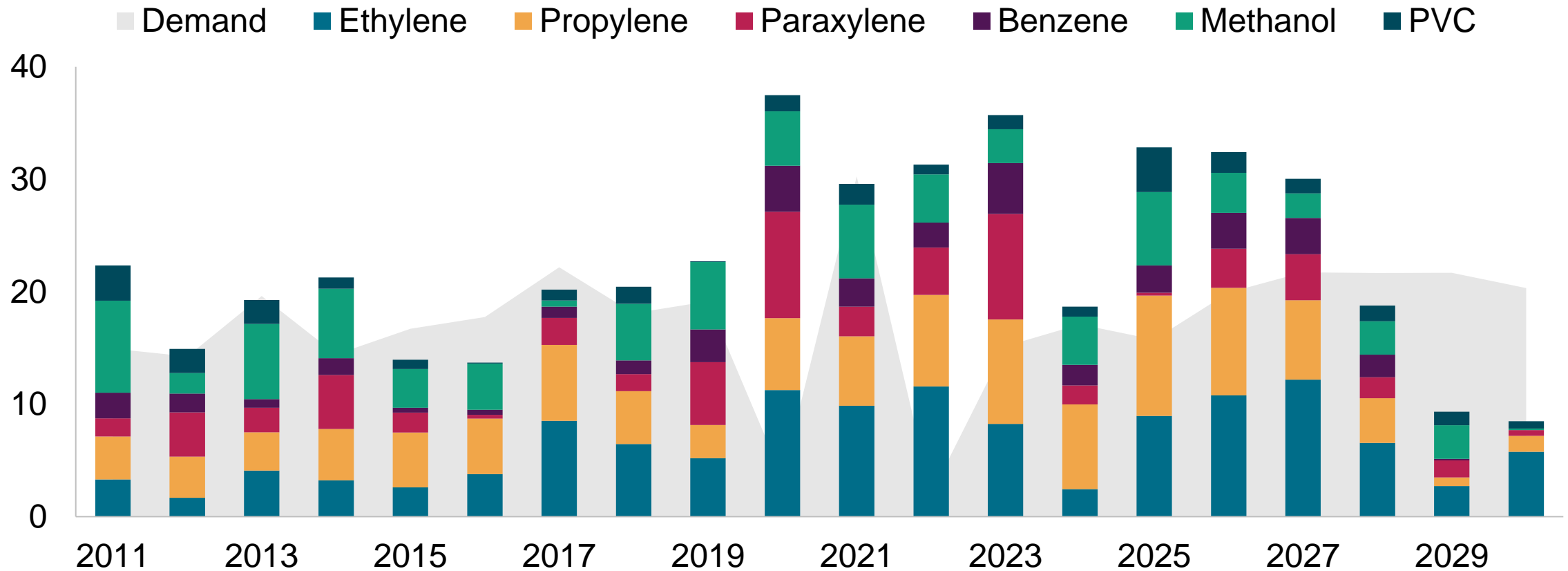
Share of national export values heading to US (2024 data)



Data compiled April, 2025.
Source: S&P Global Market Intelligence.

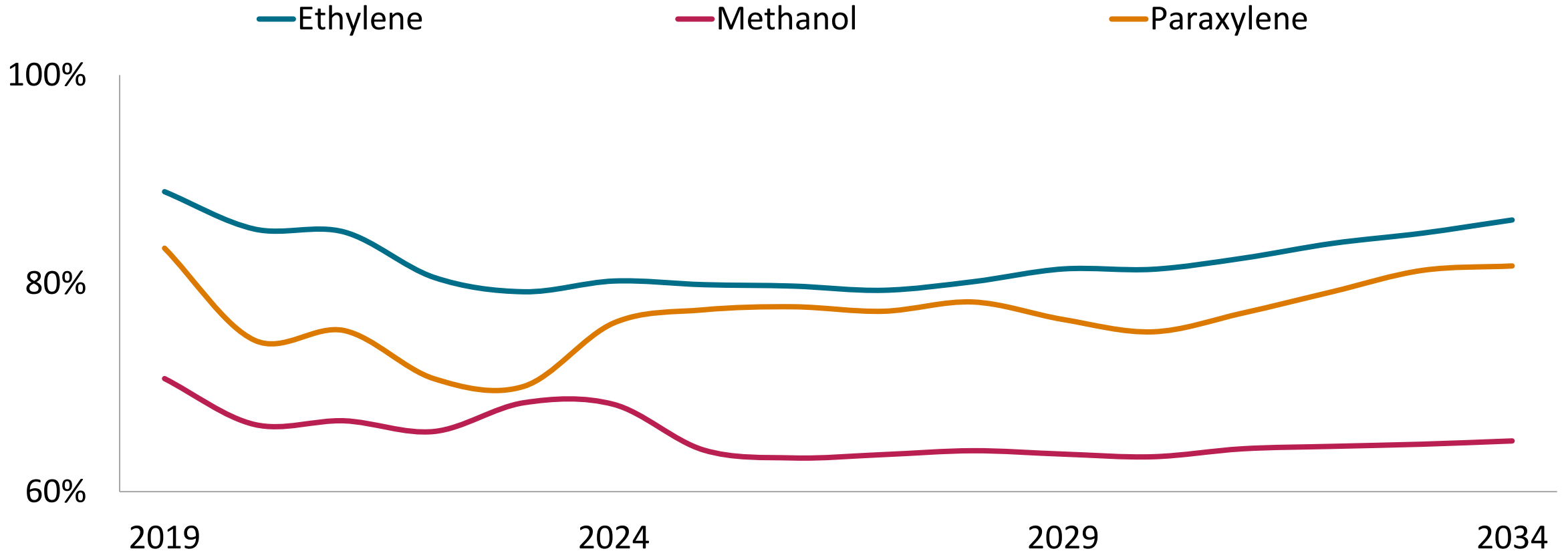
Capacity is being added across all value chains

Global annual nameplate capacity change (MMt)



Low operating rates have led to low margins, but effective operating rates are key

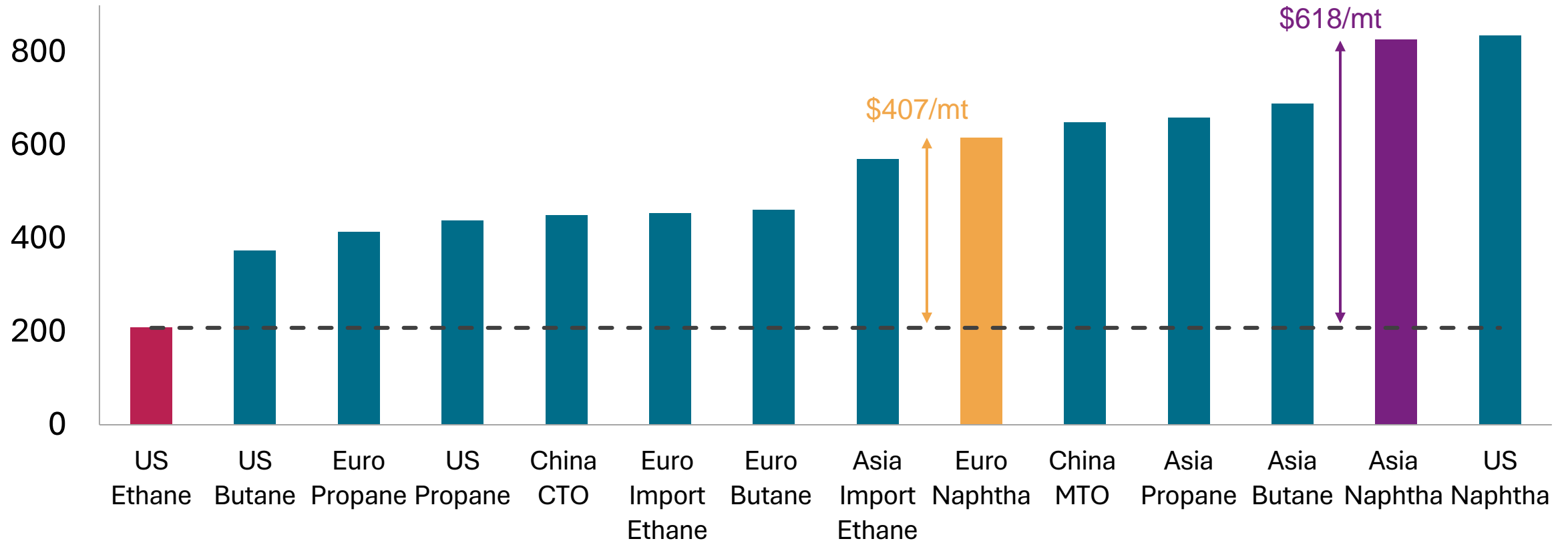
Global nameplate capacity operating rates



Apr, 2025
Source: S&P Global Commodity Insights.

Before tariffs, US ethane had held an advantage vs naphtha for several years

Global ethylene variable COP – March 2025 (\$/mt)

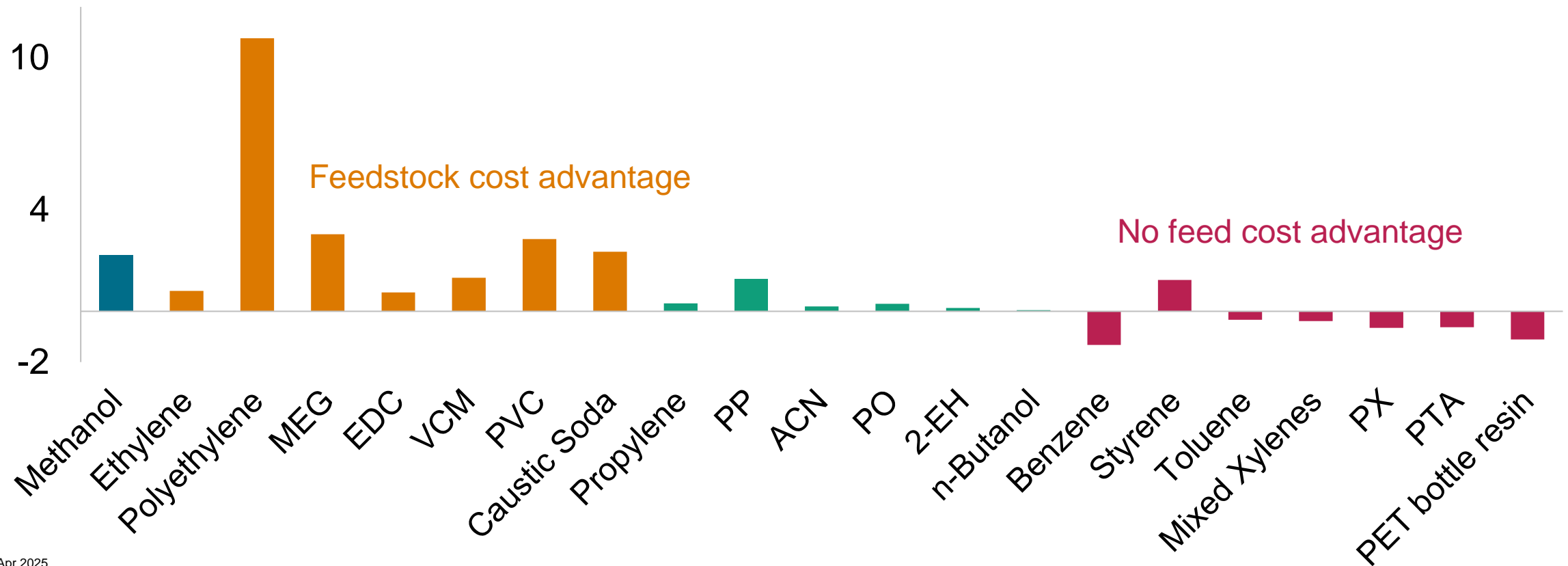


Source: S&P Commodity Insights; Data Compiled March 12th 2025

Ethylene variable COP = feedstock – co-products + (variable costs)

US leverages feedstock cost advantage to support export trade in methanol and light olefin derivatives

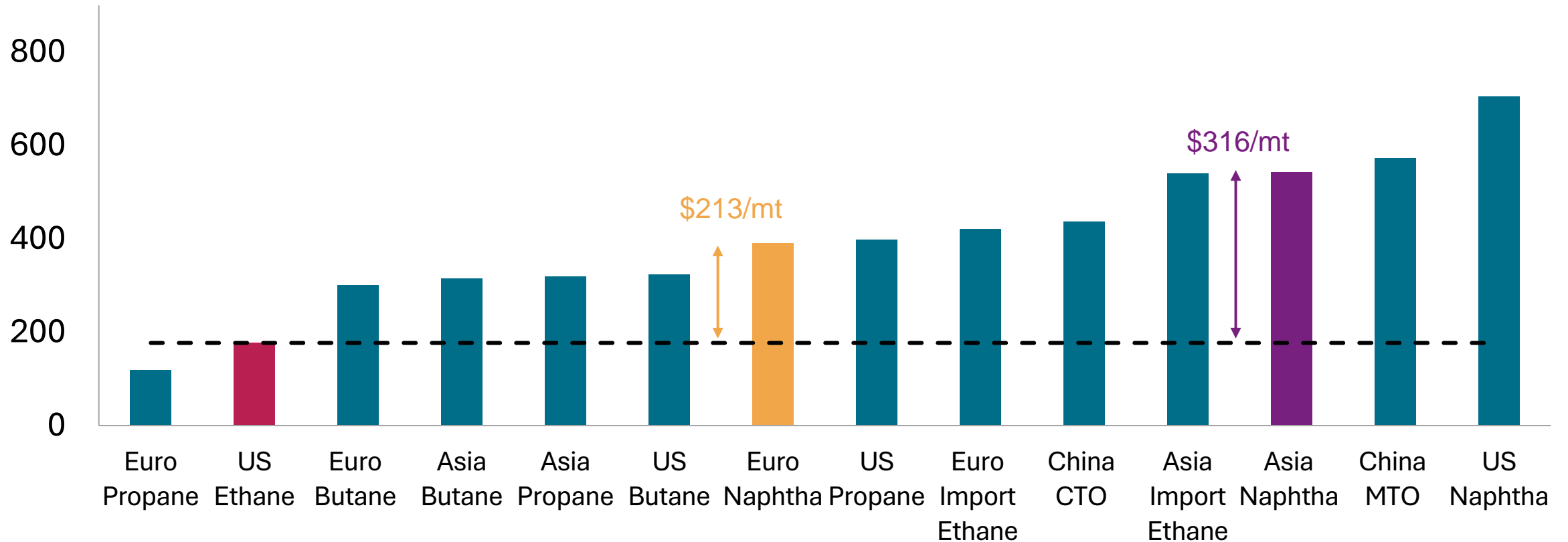
US net trade 2024 (million tons)



Apr 2025
Source: S&P Global Commodity Insights

After April 2nd a decline in oil prices meant the US ethane advantage reduced

Global ethylene variable COP – April 9 2025 (\$/mt)



Source: S&P Commodity Insights; Data Compiled April 9th 2025

$$\text{Ethylene variable COP} = \text{feedstock} - \text{co-products} + (\text{variable costs})$$

Europe is bearing the brunt of capacity rationalisation, but cannot foot the whole bill

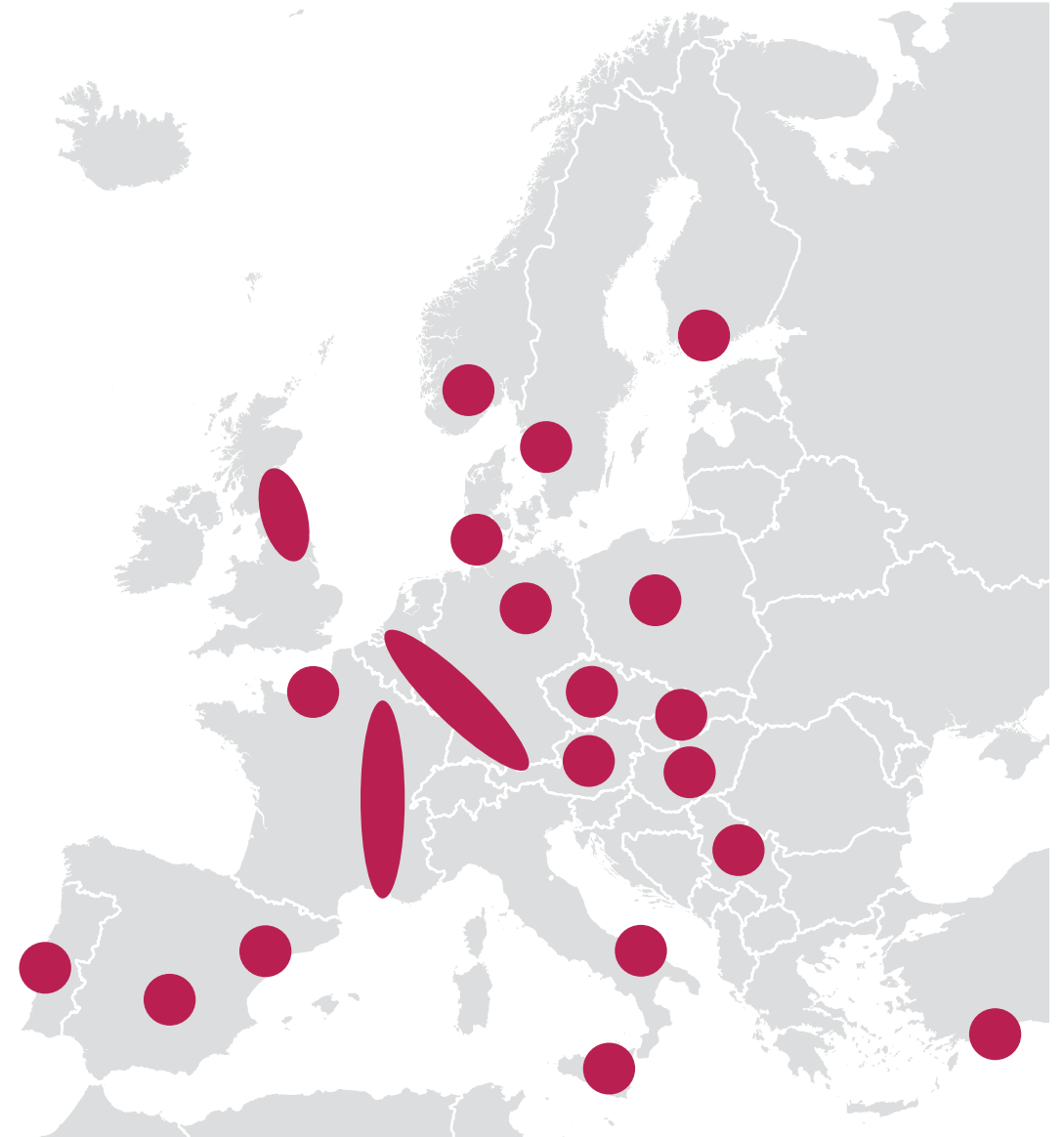
Half of European crackers are in isolated clusters

Assets are typically old and below world-scale

European consumers generally happier to pay a green premium

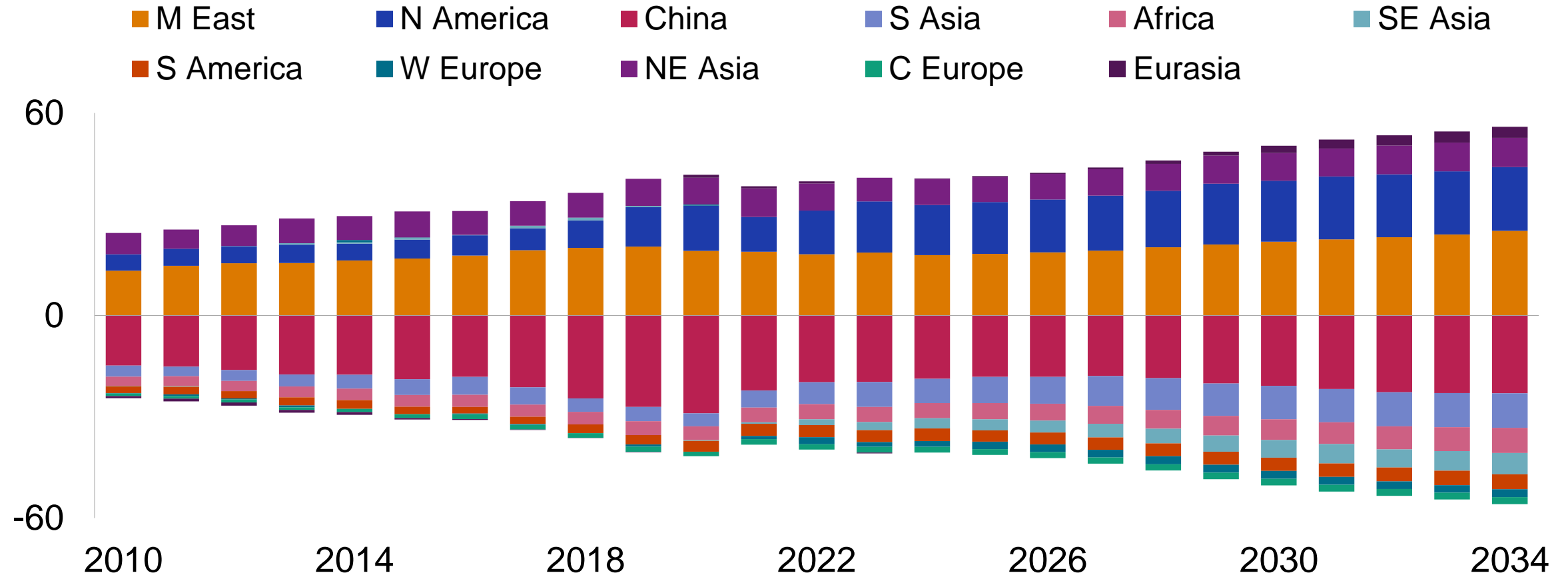
CBAM could inadvertently prolong life of old assets

•Source: S&P Global Commodity insights



Despite the capacity build, Asian ethylene equivalent net imports continue to rise

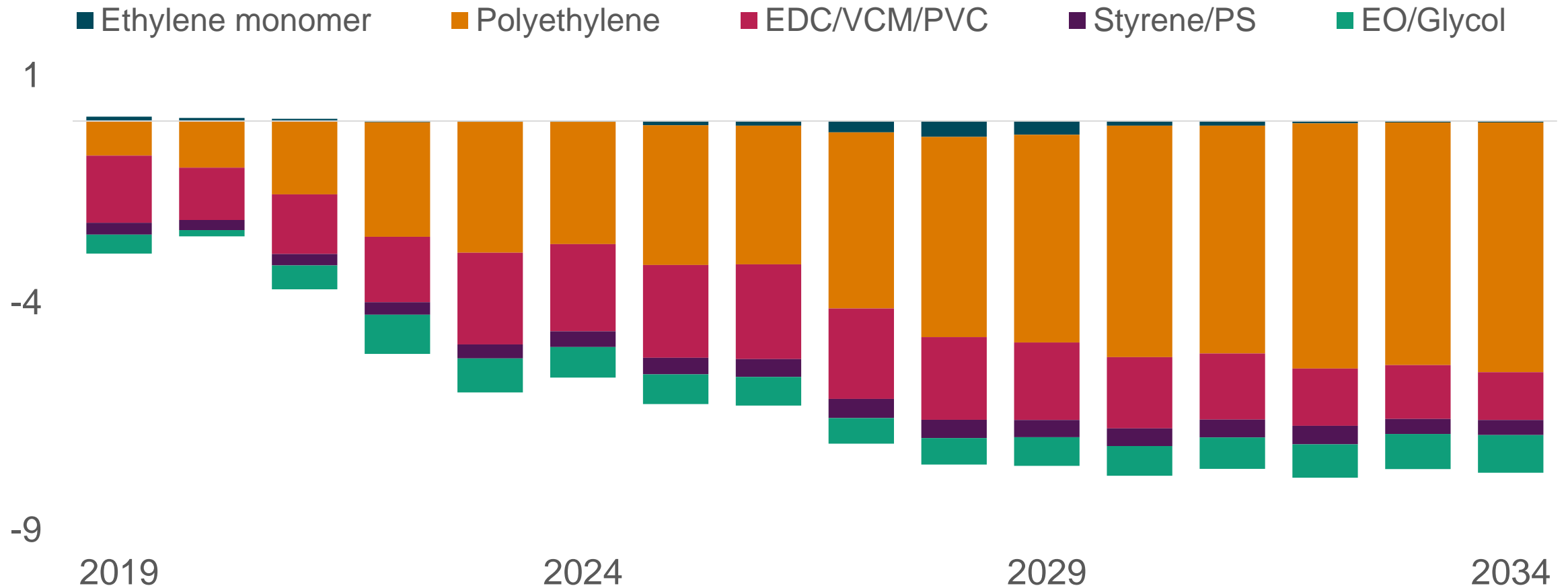
World ethylene net equivalent imports – All derivatives (MMt)



Source: S&P Global Commodity Insights.

India's ethylene derivative deficit is growing as demand growth outstrips supply

India ethylene net equivalent imports (MMt)



A background image of a sunset over a body of water. The sun is low on the horizon, creating a bright orange and yellow glow that reflects on the water's surface. The sky is filled with scattered clouds, some of which are illuminated by the setting sun. The overall scene is peaceful and serene.

Conclusions

Chemical demand set to continue to grow

Tariffs have caused uncertainty and will limit 2025 demand growth

This cycle is longer than previous ones, though rationalization is gaining momentum

Sustainability goals are being pushed back, but still fundamental to investment decisions