

# Styrene as supply wave subsides

A 10-year outlook at global supply-demand fundamentals, shifting trade dynamics and opportunities

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# Agenda

Post-supply wave: What's next

The rise of South Asia

The economics of traditional exporters

Summary



# Post-supply wave: What's next?

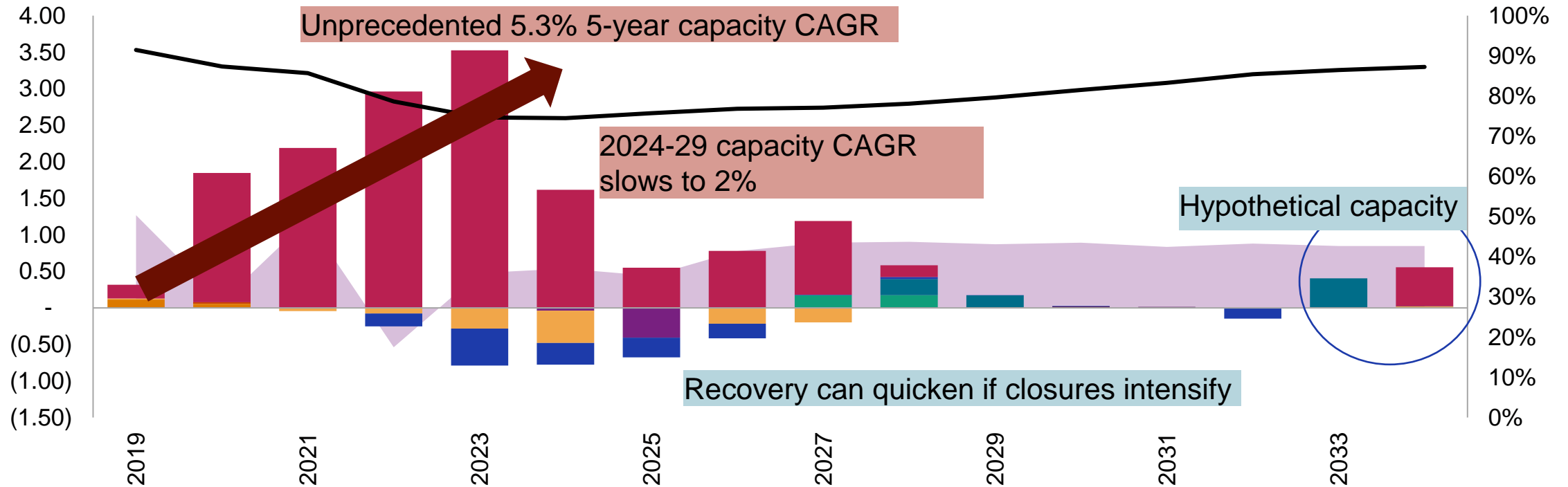


# Historical capacity growth in styrene driven by Mainland China to slow down

Global capacity to peak at 45 mn mt in 2024, rationalization to continue in short term

## SM capacity vs demand increase

(million mt)



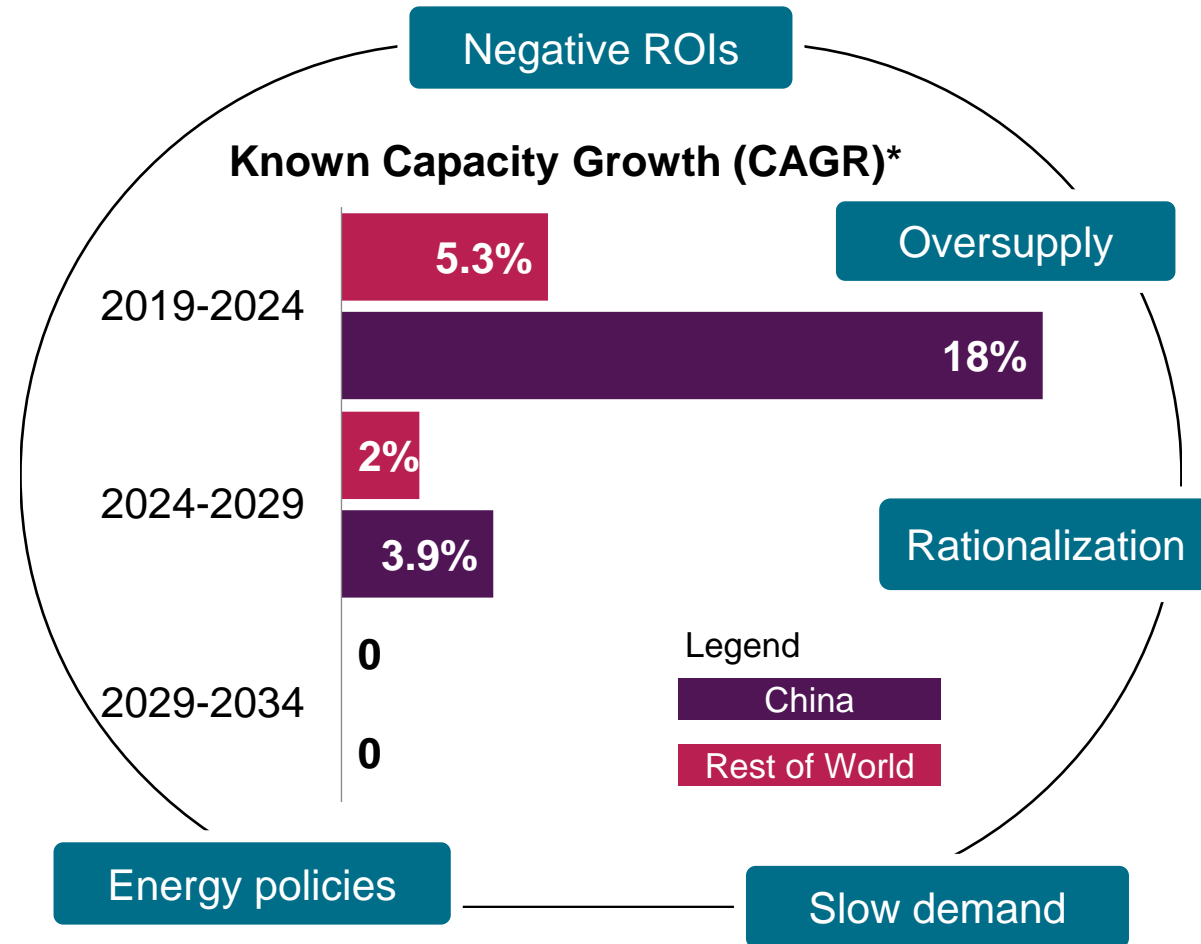
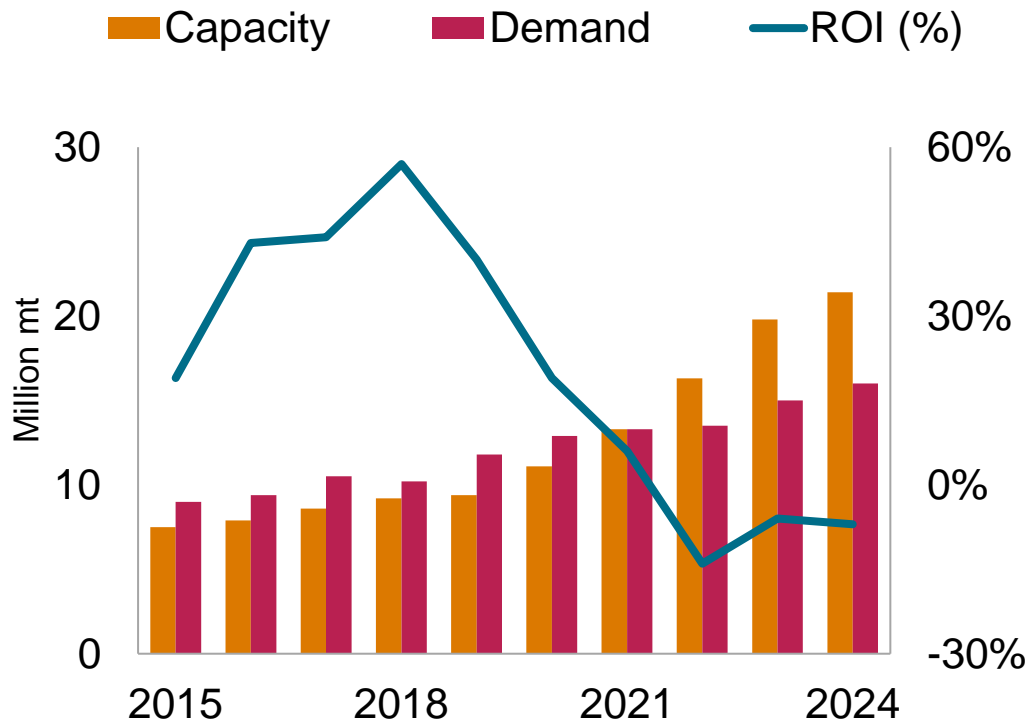
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# Post-capacity surge, Mainland China styrene suffers negative ROI

Capacity doubled over 5 years but growth slows from 2027

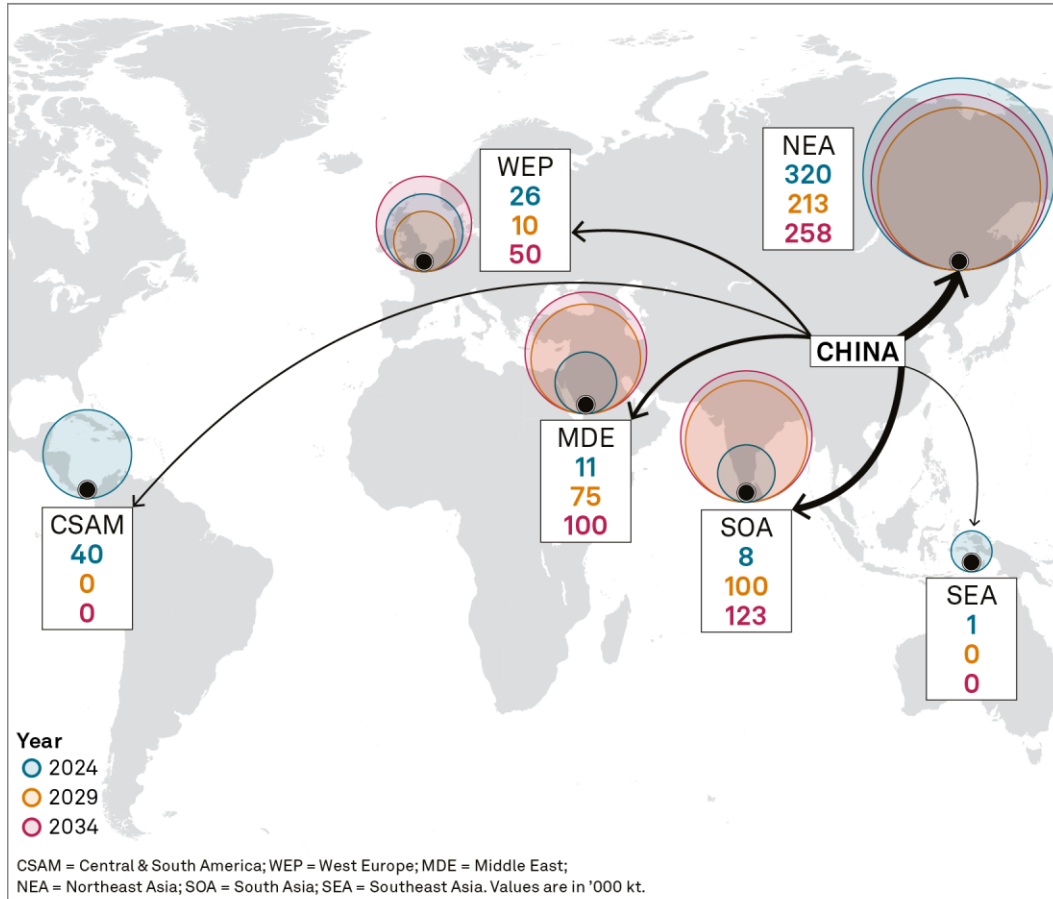
## China Styrene ROI Plummets with Capacity Surge



Data compiled Feb, 2025.  
Source: S&P Global Commodity Insights.

# Mainland China to keep exporting styrene, intense competition persists

## China's styrene exports, 2024–34



Data compiled February 2025.

Source: S&P Global Commodity Insights: IC-250442-01.

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Exported to 6 regions in 2024

Export partners to consolidate in future

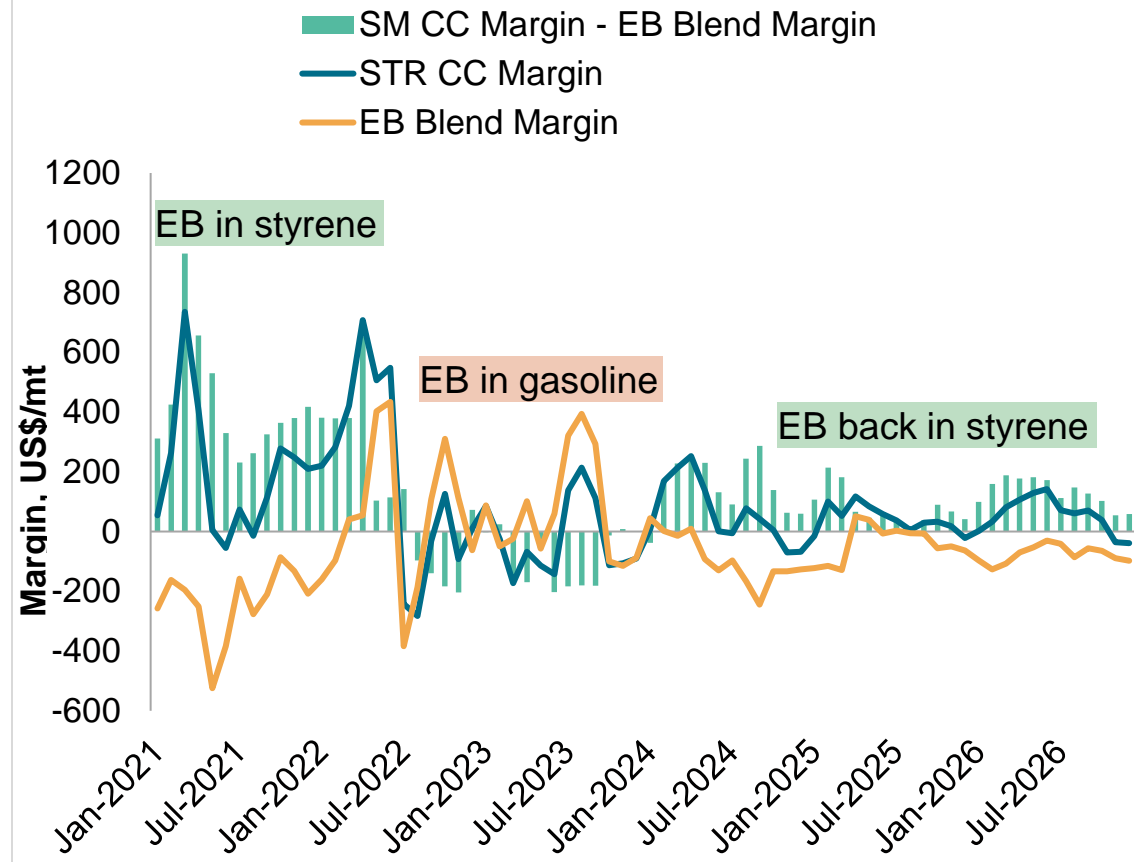
Increase exports to Turkey, South Asia

Opportunistic exports to Europe

Return to domestic demand in future

# Ethylbenzene (EB) no longer economically viable as gasoline blend stock

## SM cash margin vs EB blend margin - monthly (US\$/mt)

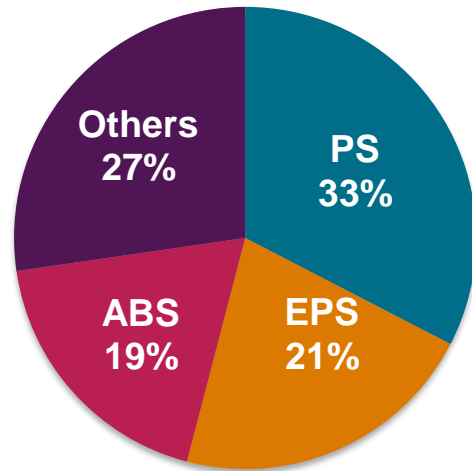


Date Compiled February 2025  
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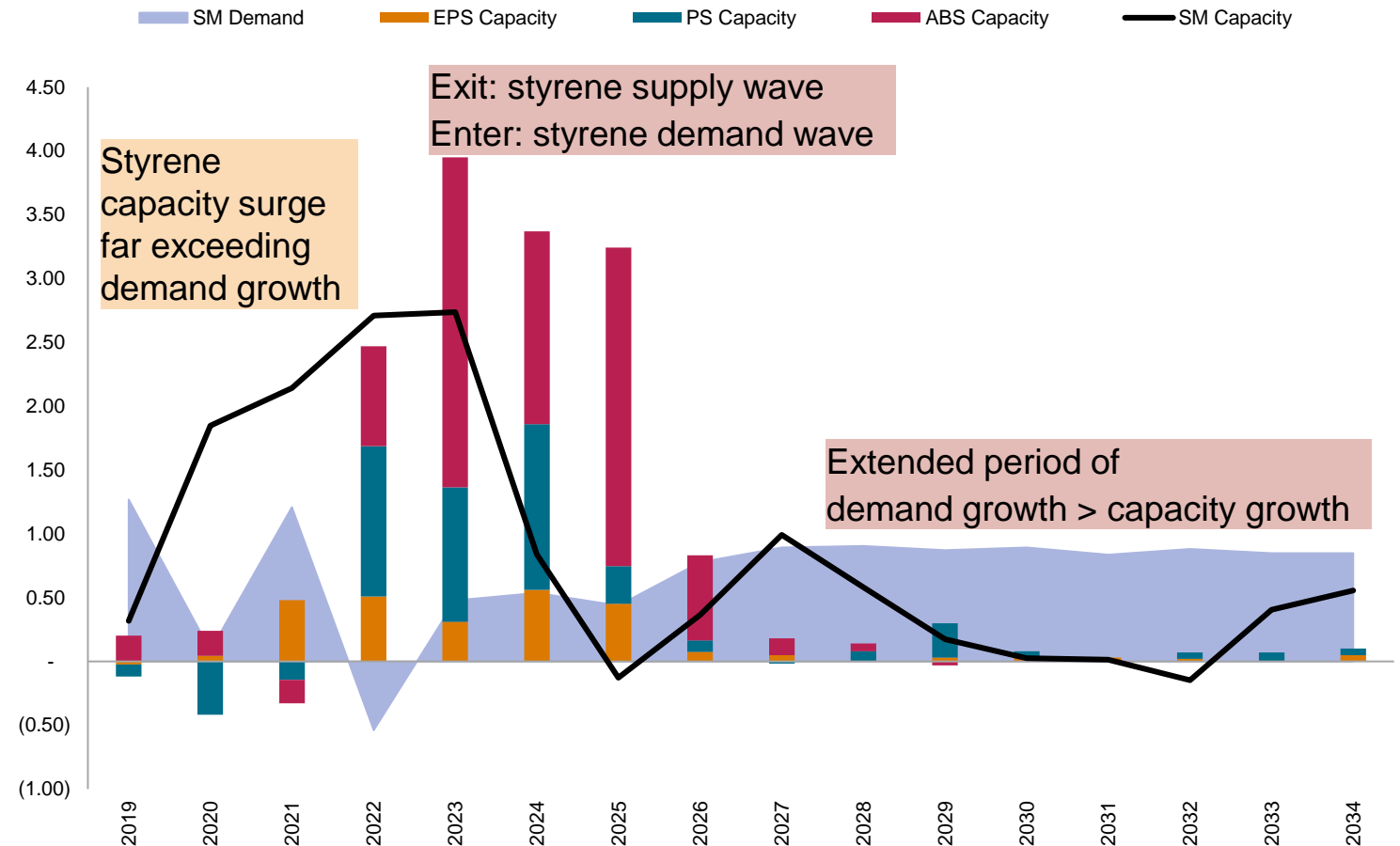


# Styrene supply wave exits, demand wave enters ABS fastest growing with next 5-year CAGR at 4% globally

Styrene Demand Split – 2024



Styrenics incremental capacity vs demand growth rates

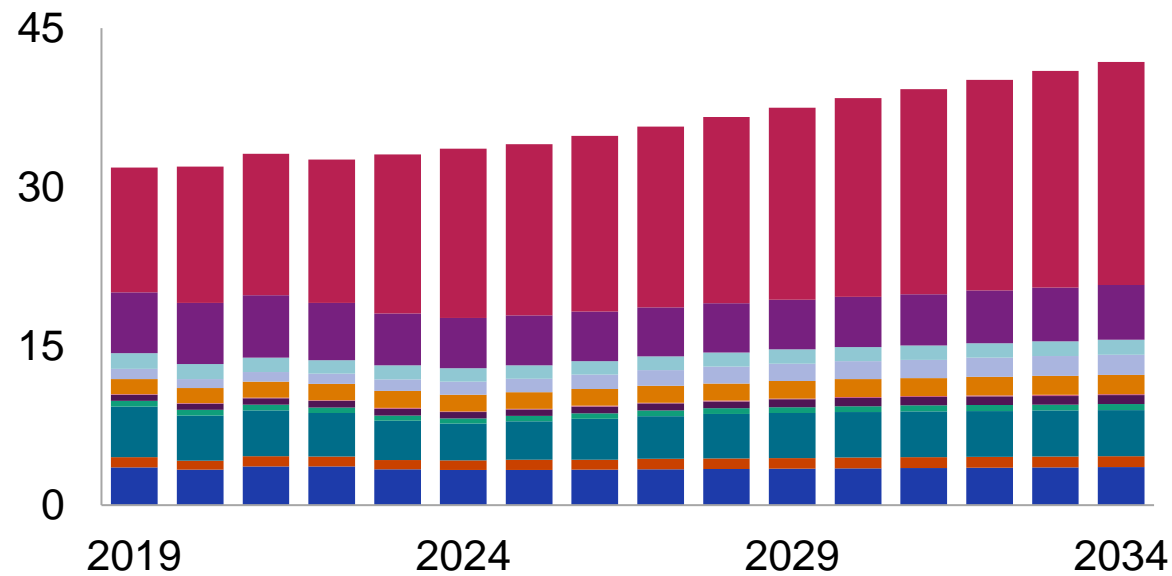


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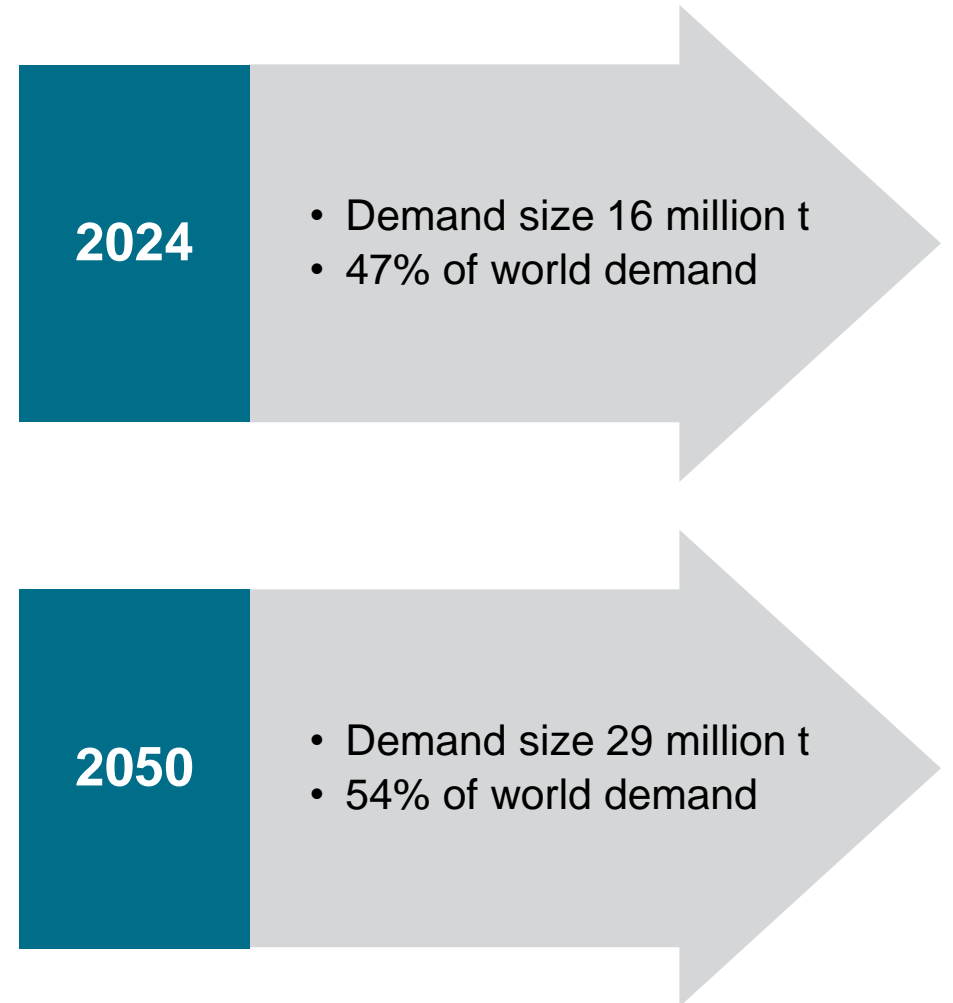
# China to revert to import reliance from 2030

Due to increasing domestic demand, lack of new investments

## World Demand by Region (Mmt)

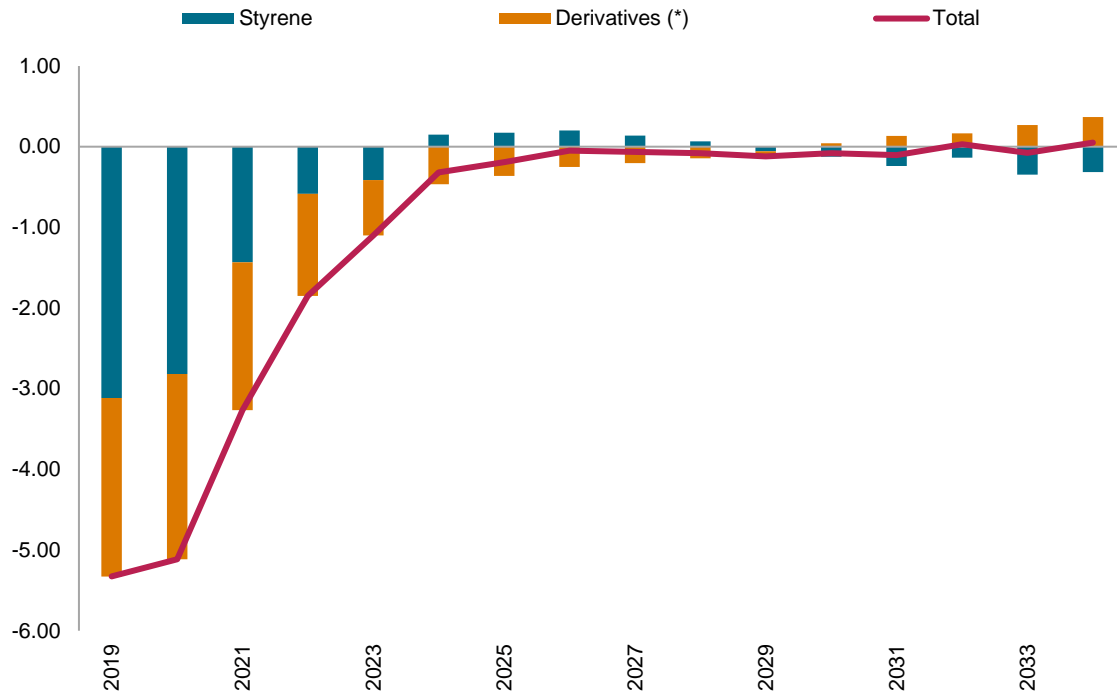


Data compiled Feb, 2025.  
Source: S&P Global Commodity Insights.



# China styrenics odyssey: Largest styrenics importer > small styrene exports, derivative imports shrink > small styrene imports, small derivative exports

## China Styrene Net trade (Mmt)



Data compiled April, 2025

Source: S&P Global Commodity Insights.

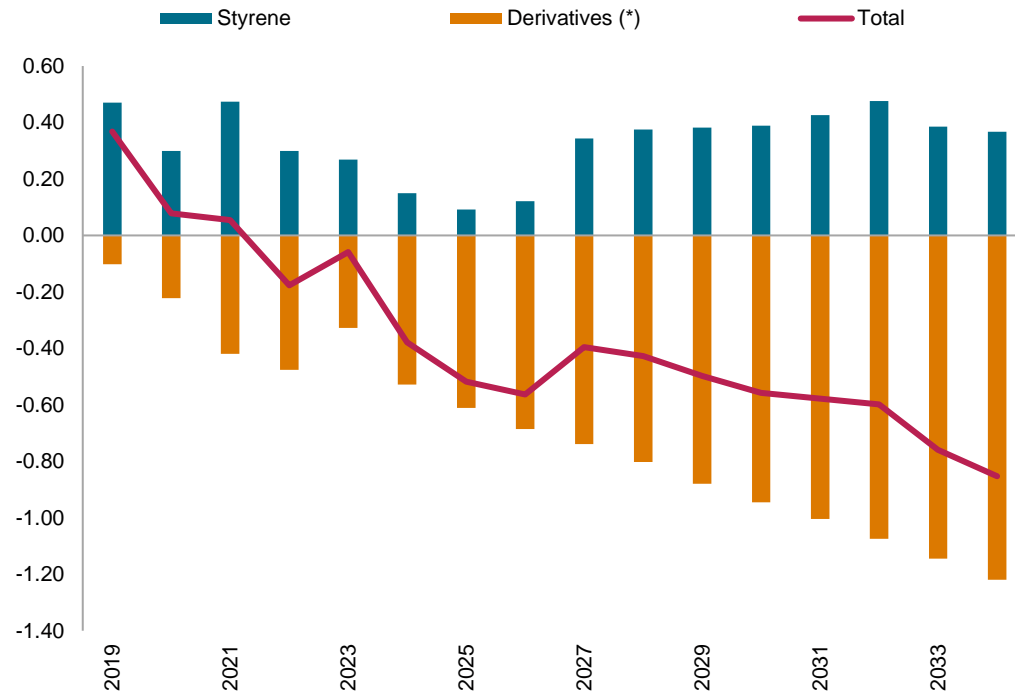
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(\*) Derivatives based on PS, EPS and ABS only

# Southeast Asia to import derivatives than invest in styrene derivative plants

## Southeast Asia Styrene Net trade (Mmt)



Data compiled April, 2025

Source: S&P Global Commodity Insights.

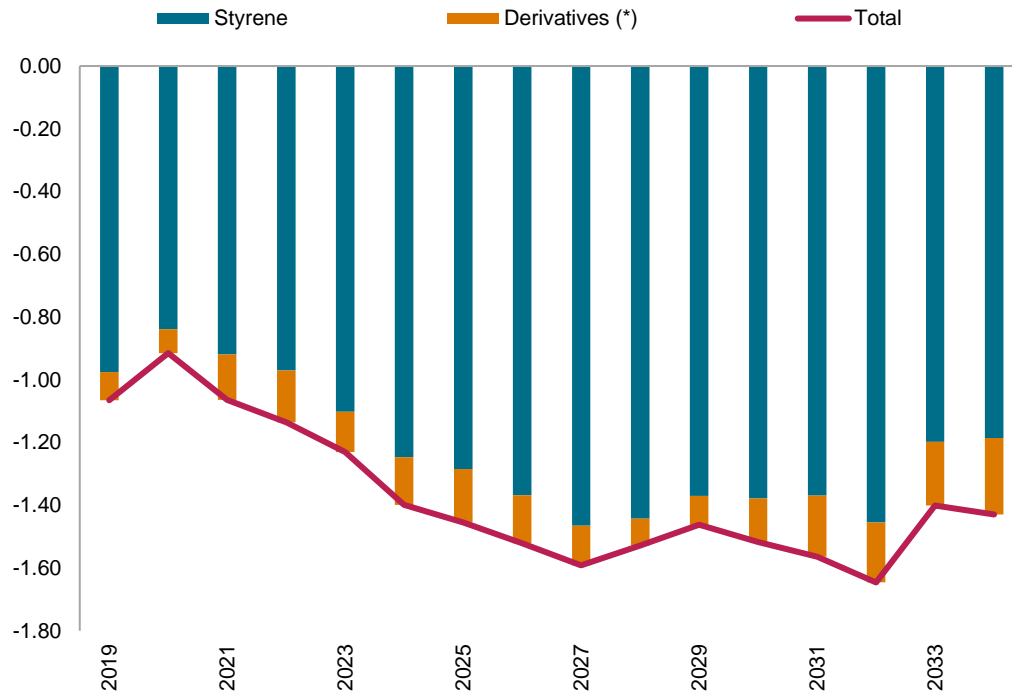
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(\*) Derivatives based on PS, EPS and ABS only



# South Asia continues growing as total net styrenics importer

## South Asia Styrene net trade (Mmt)



Data compiled April, 2025

Source: S&P Global Commodity Insights.

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(\*) Derivatives based on PS, EPS and ABS only



# The rise of South Asia



# South Asia's remarkable styrene import trajectory

## South Asia

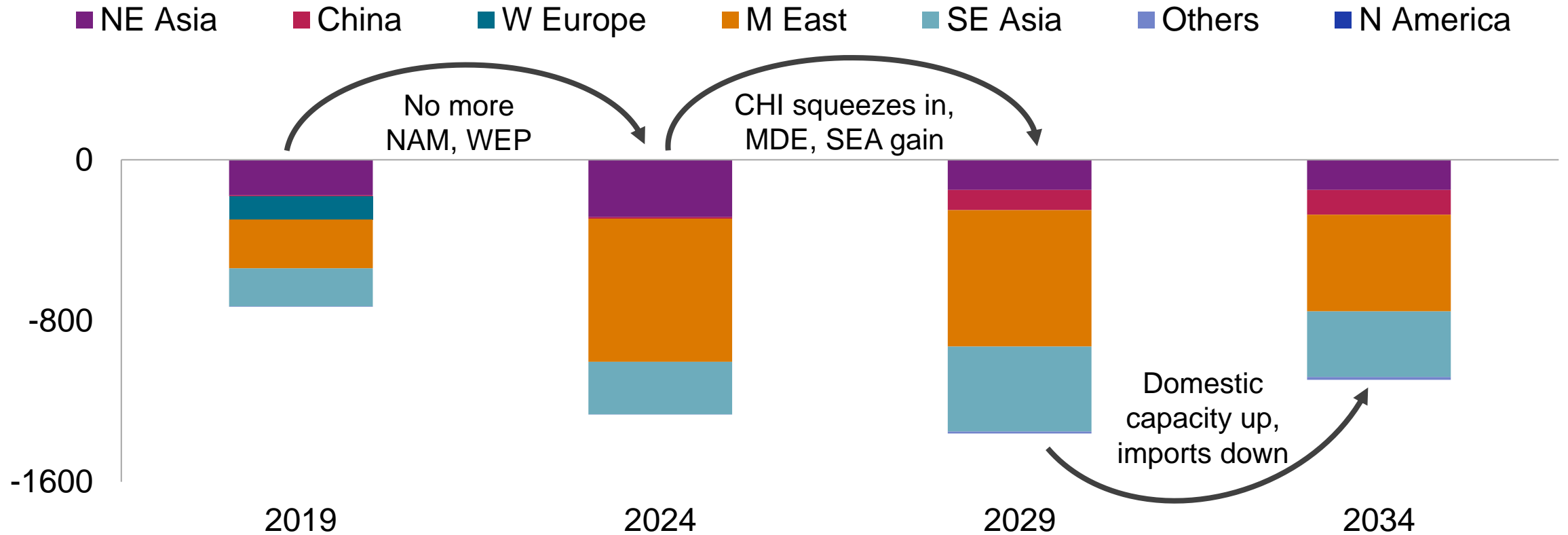
- Supply purely from imports
- World's fastest 10-year GDP growth rate: 5.7%
- World's most populous region
- Demand growth far outpaces capacity growth

## Supply shift

- Absorbs volumes displaced by China
- 2019-2024: Import growth 5.3%
- 2022: World's largest importer
- Imports almost 1.5 Mmt towards 2030

# Competition for South Asia styrene market intensifies, exporters fight for space

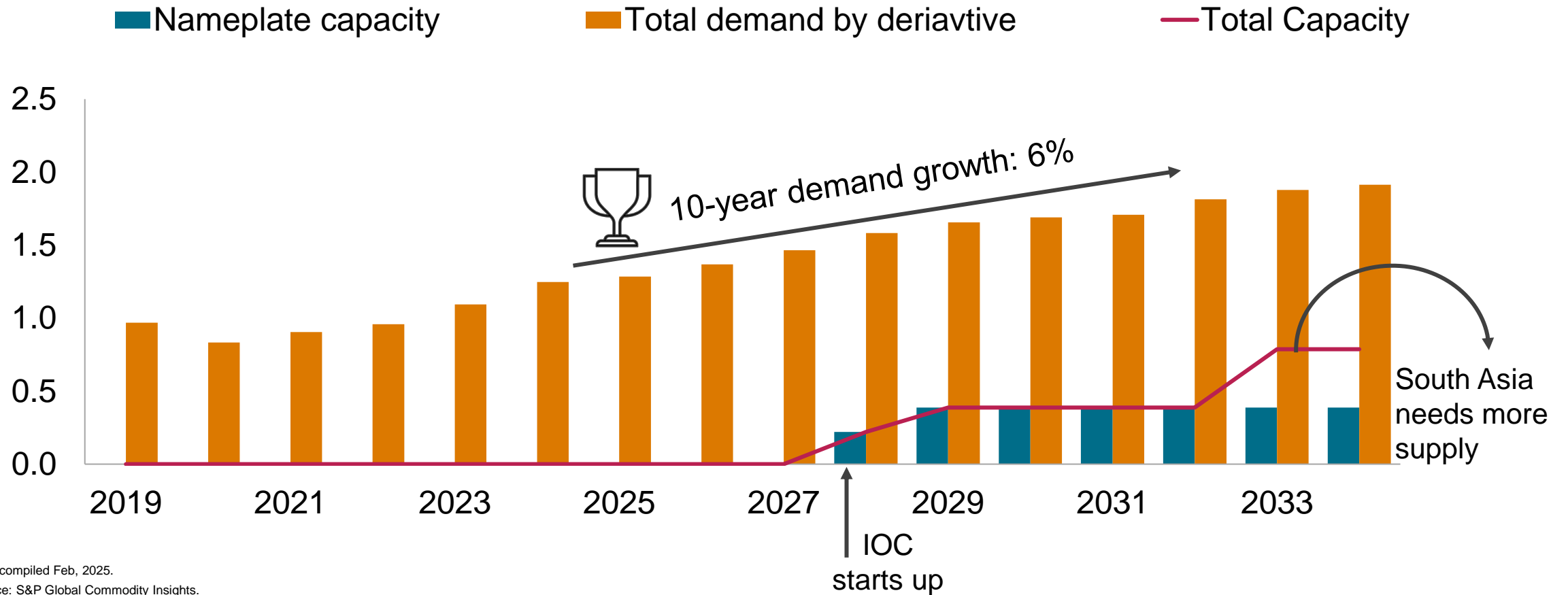
## S Asia Styrene Imports (thousand mt)



Data compiled Feb, 2025.  
Source: S&P Global Commodity Insights.

# South Asia styrene fastest demand growth in the world

## South Asia Styrene Supply and Demand (Mmt)

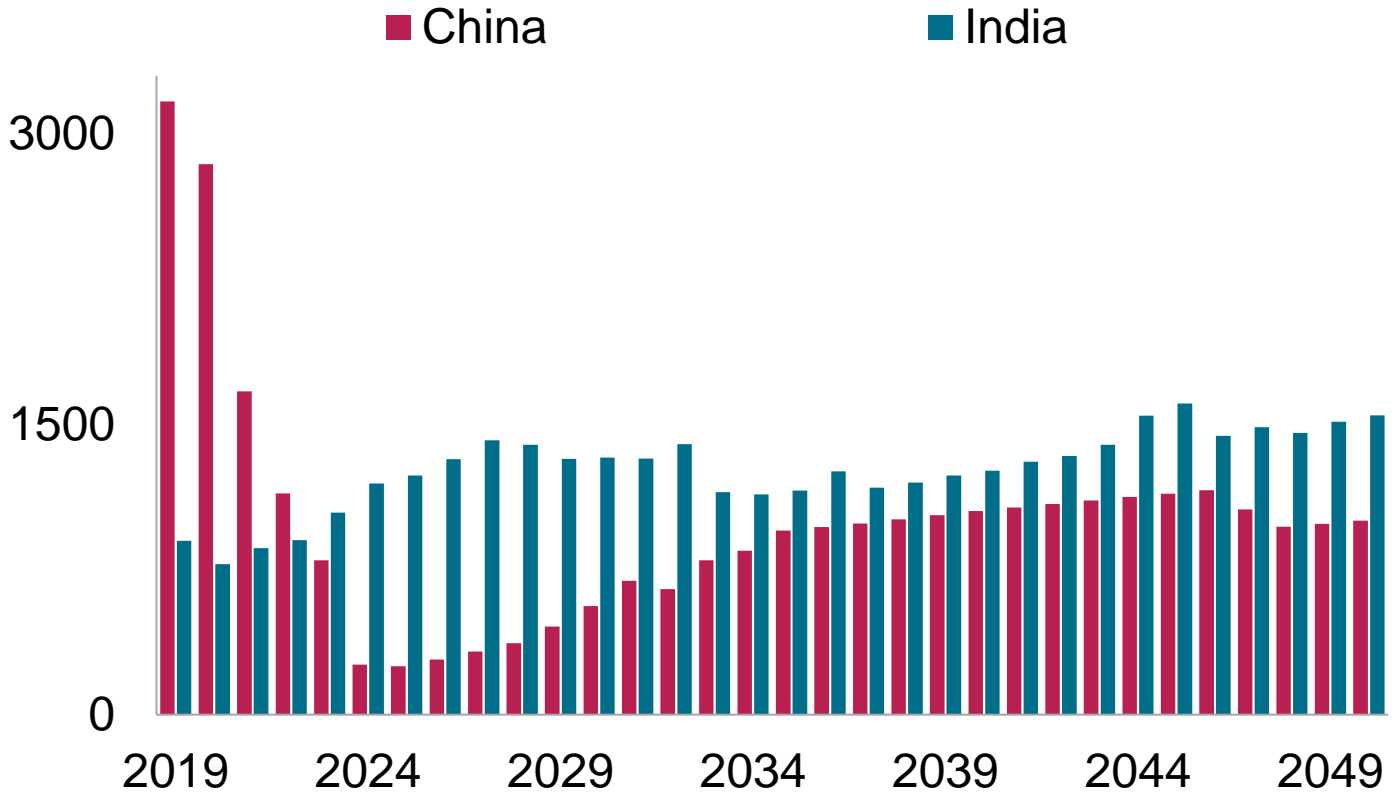


Data compiled Feb, 2025.   
 Source: S&P Global Commodity Insights.

# India's styrene imports to continue surpassing China's

Trade to be India-centric in future

## China Gross Imports vs India Gross Imports



Data compiled Feb, 2025.  
Source: S&P Global Commodity Insights.



# The economics of traditional exporters



# Traditional styrene exporters endured intensified competition

From 2019 to 2024:



- No longer exports to China, NE Asia and S Asia
- Domestic exports fell 30%
- Exports to C & S America fell 20%
- Exports to W Europe fell 40%
- Exports to Turkey up 120%



- Exports to W Europe up 126%
- Domestic exports up 14%
- Exports to S Asia up 250%
- Exports to China fell 90%
- Exports to NE Asia fell 50%
- Exports to SE Asia fell 40%

# Traditional exporters turned importers

2019-2024

## West Europe

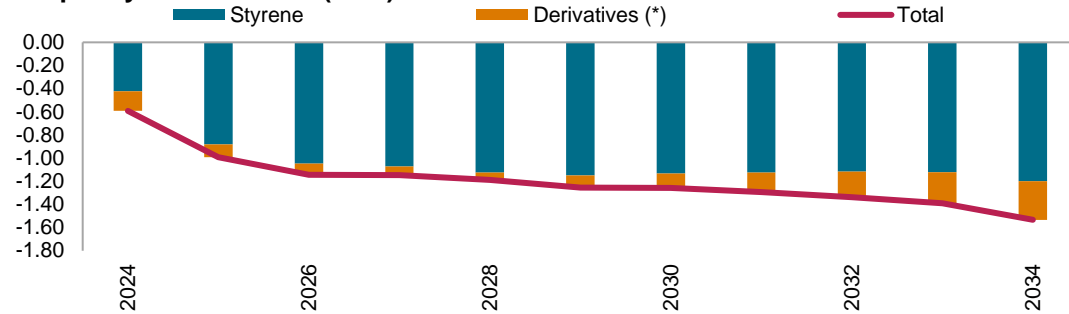
- Turned net importer from 2022
- No longer exports to M. China
- Started importing from M. China since 2022
- No longer exports to SOA
- Imports from MDE up 125%

## Northeast Asia

- Turned net importer in 2023
- Exports to M. China fell 94%
- Domestic exports increased 30%
- Started exporting to WEP from 2022
- Exports to SOA up 60%
- Imports from MDE up 300%
- Imports from M. China up 1300%

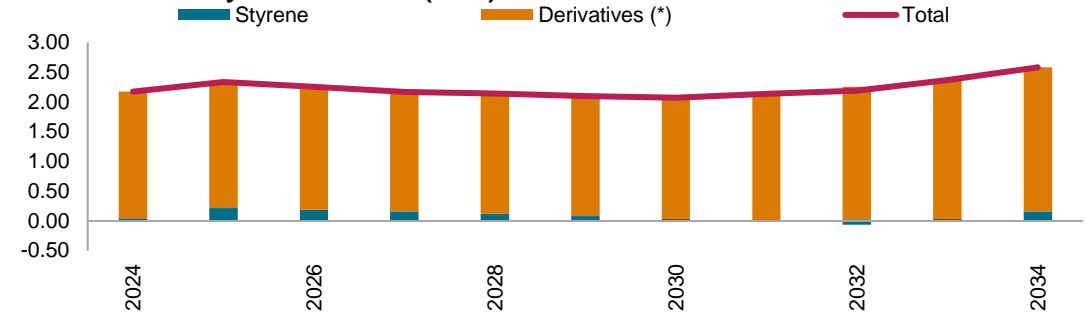
# Europe flips from net exports to imports of styrenics; NEA balanced on styrene trade, exporter of derivatives; N. Am + M. East still major net styrene exporters

Europe Styrene net trade (Mmt)



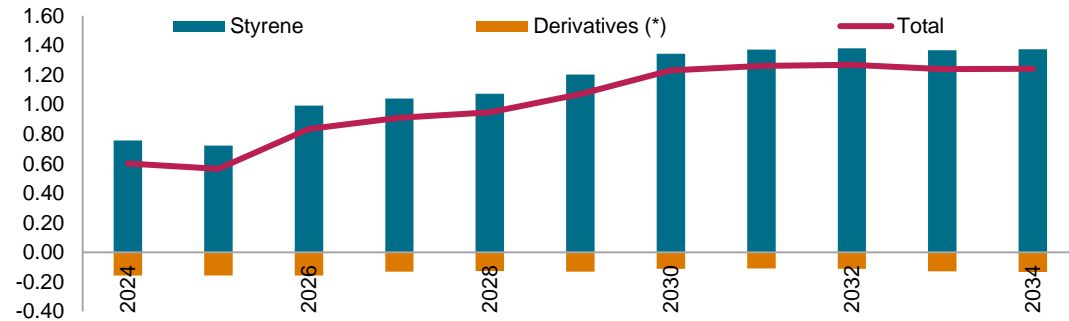
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Northeast Asia Styrene net trade (Mmt)



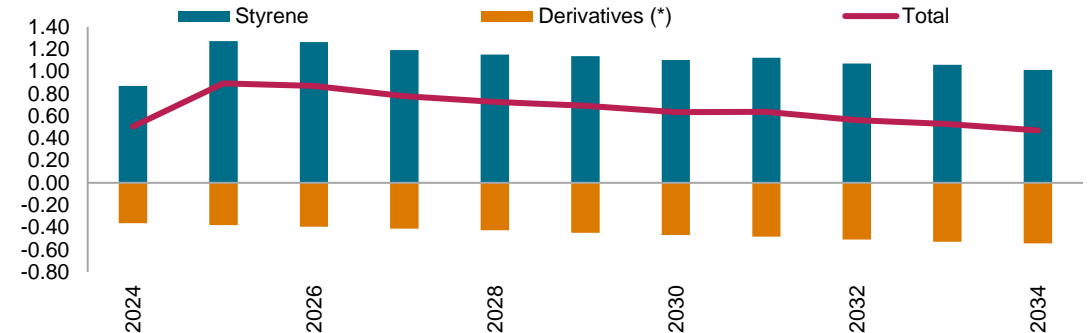
Data compiled April, 2025.  
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North America Styrene net trade (Mmt)



Data compiled April, 2025.  
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Middle East and Africa Styrene net trade (Mmt)

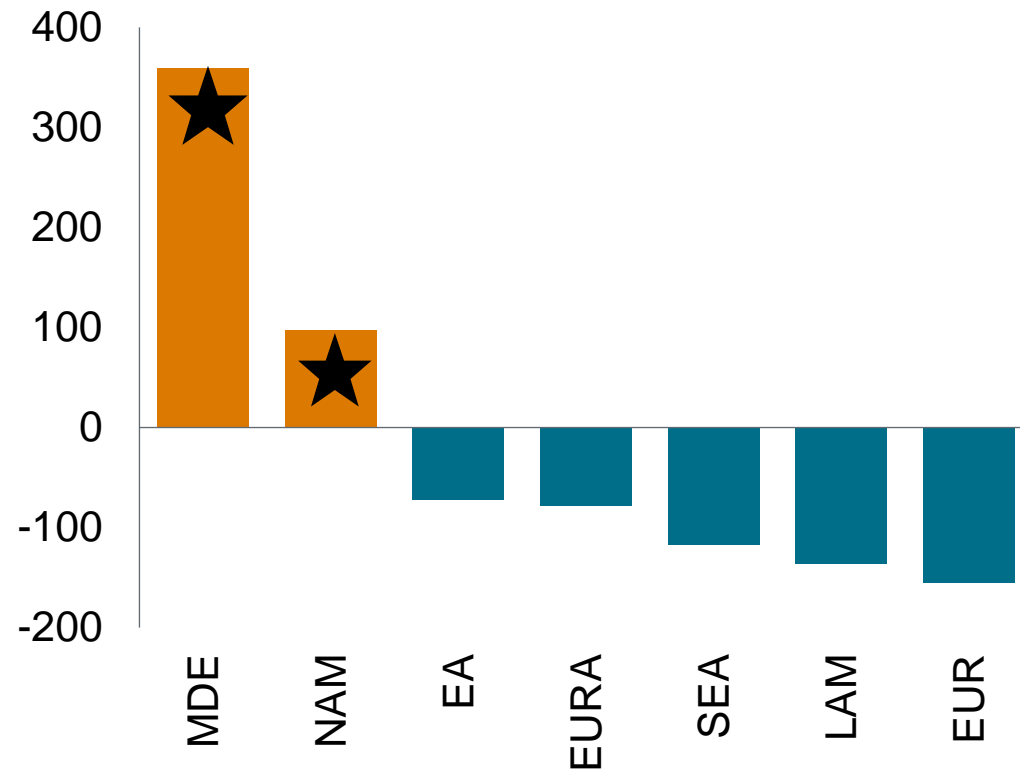


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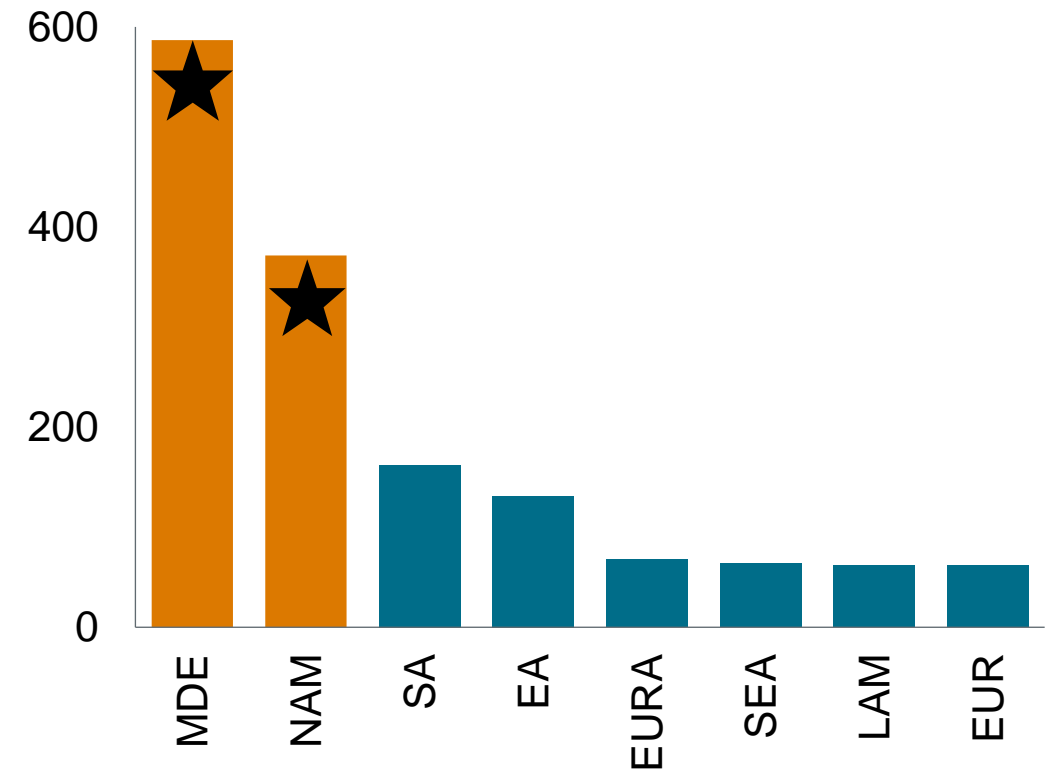
# Middle East, US: margin wins support high styrene operating rates

(Price Basis = User Entered, Cost Basis = Plant Gate, Operating Rate Basis = Base Case, Integration Basis = On, Process = All)

### Cash Margin By Region for 2024 (\$/MT)



### Cash Margin By Region for 2034 (\$/MT)



Source: S&P Global Commodity Insights

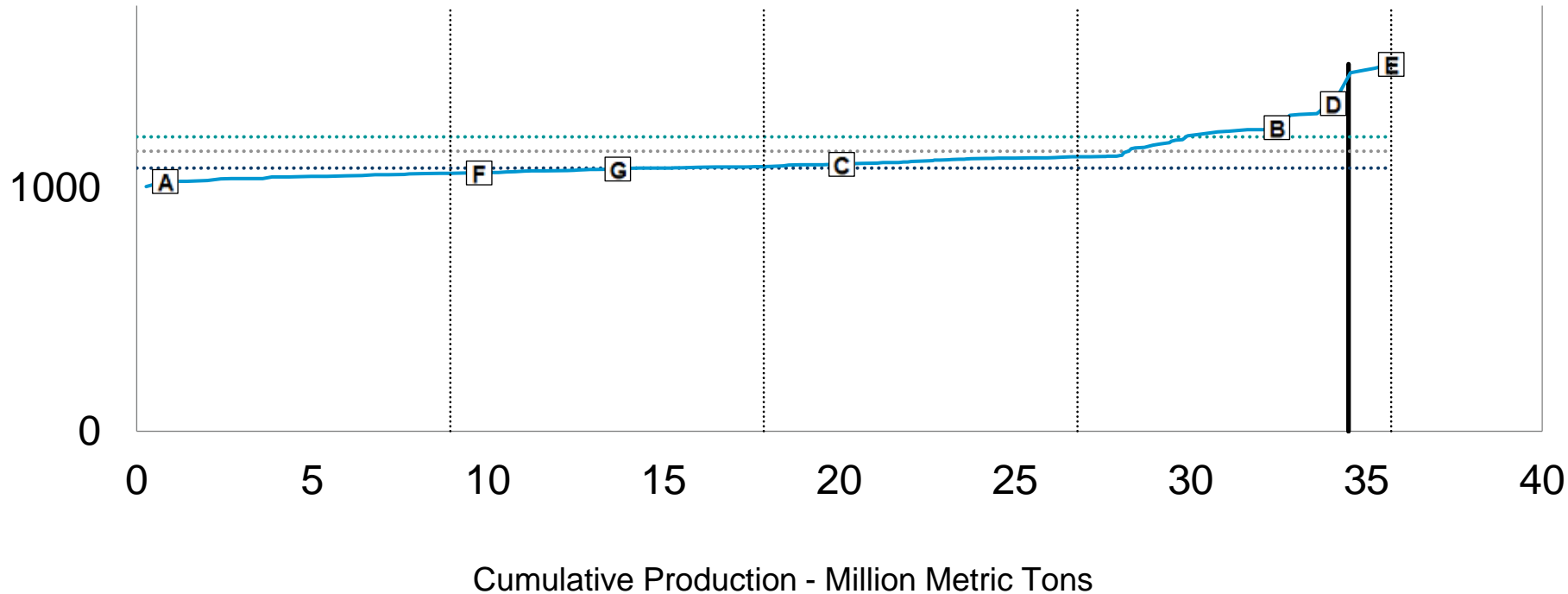
Source: S&P Global Commodity Insights

# Size, integration, location, age vital for styrene survival

## World Cost Curve: Styrene monomer (\$/Metric Ton)

— Demand    ..... US Price    ..... W Europe Price    ..... China Price    — 2025

Cost Basis = Plant Gate, Operating Rate Basis = Base Case  
Integration Basis = Off



- A: New, large integrated plant in China
- B: Old, small, non-integrated plant in China
- F: Typical plant in Middle East
- G: Typical plant in US
- C: Cracker-based plant in NEA
- D: POSM plant in NEA
- E: POSM plant in WEP

Source: S&P Global Commodity Insights

# Summary

China to return to net importer

South Asia remains world's largest importer

China and South Asia demand to drive styrene growth

More regions turn to net importer

Middle East and US cost advantage to support steady supply

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