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Commodity Insights

Peak Oil

Where are the major economies heading on future consumption of oil and refined products and how will that affect global oil production and prices?

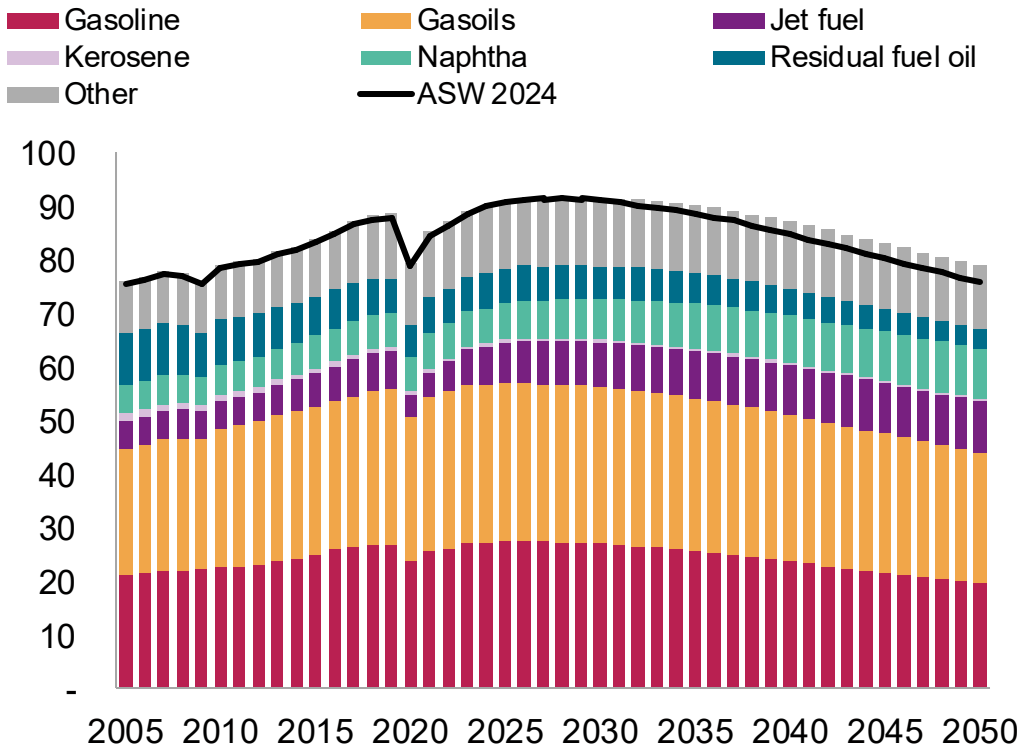
James Simpson, Head of Aviation Research

May 14, 2025

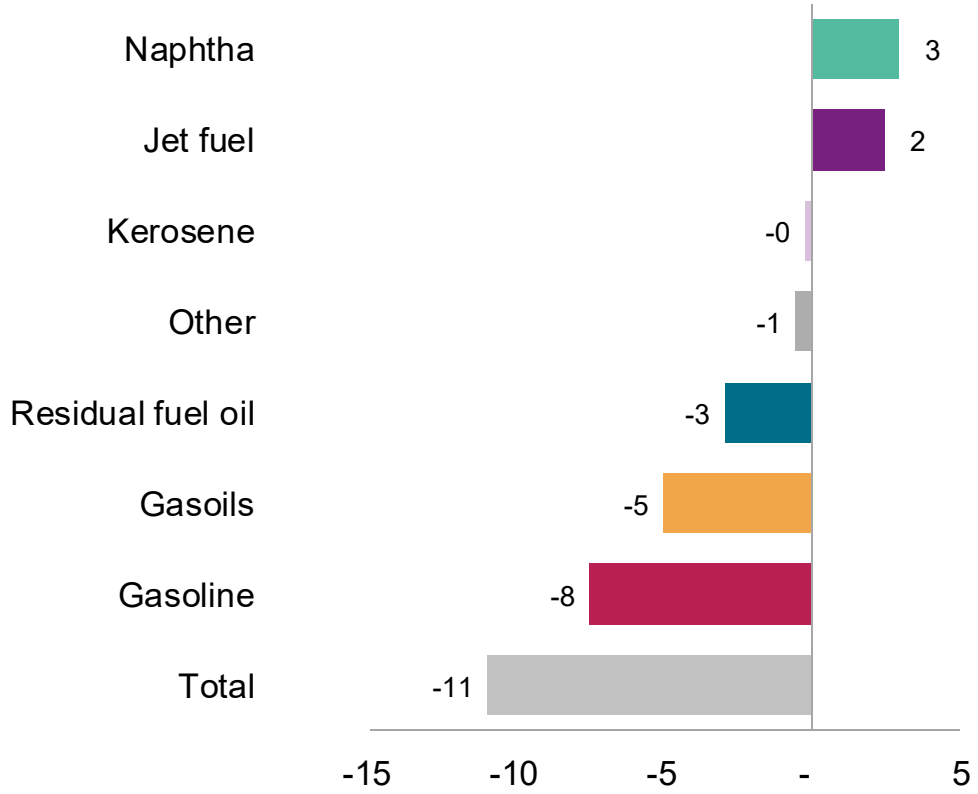
Oil product demand

Peak demand is imminent, as motor fuels are hit by efficiency and substitution

Global demand by product: Global refined products (Million barrels per day)



Global product demand 2050-2024. Million barrels per day.



Data compiled: Apr 16, 2025. Refined product demand is inclusive of biofuels and FT-fuels.
Source: S&P Global Commodity Insights.

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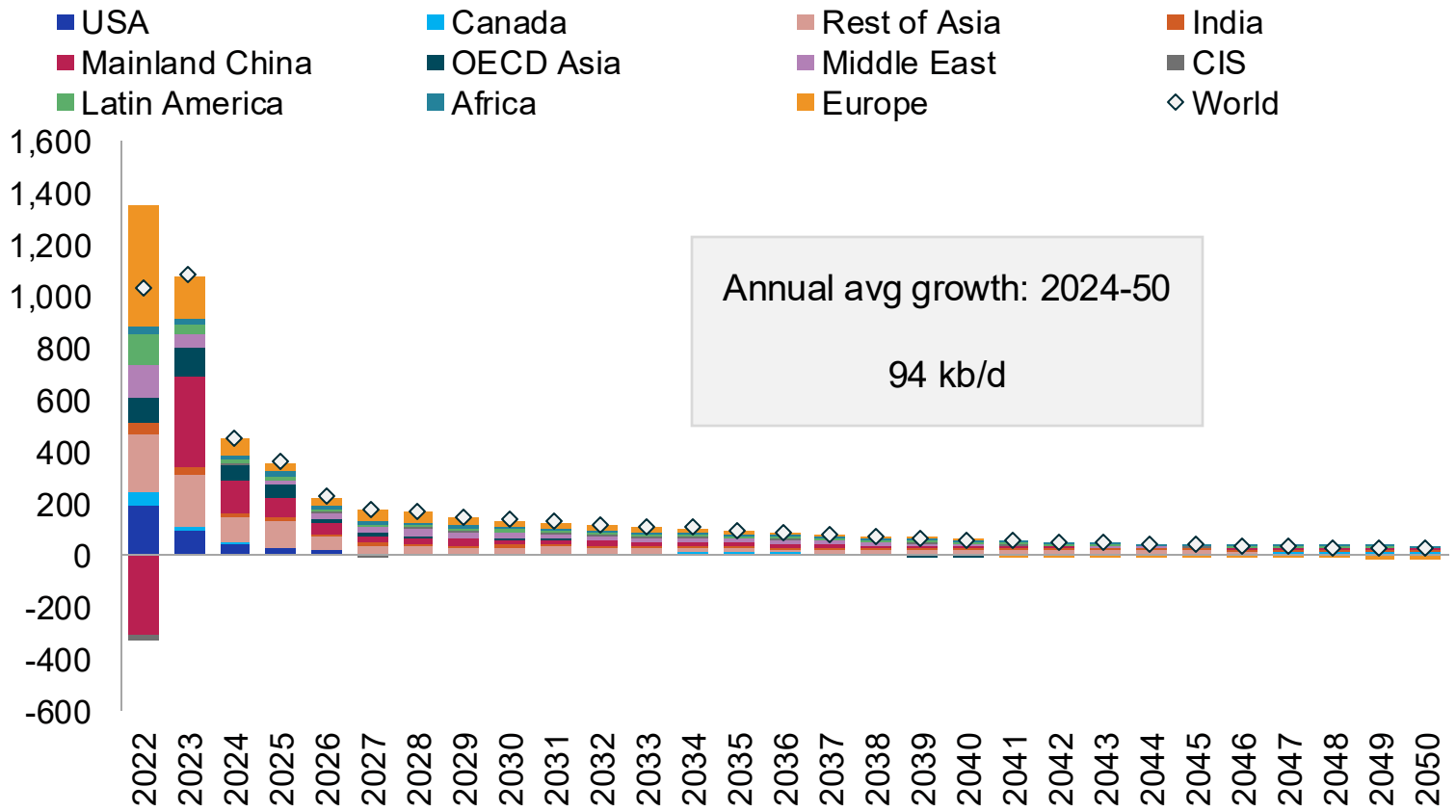
Jet fuel: Post-Covid recovery upside ending, growth prospects dampened by ongoing efficiency gains, lackluster economic outlook and carbon pricing

Global demand growth by region: Jet Fuel (Thousand barrels per day)



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Source: S&P Global Commodity Insights.

Jet fuel markets will largely exceed pre-Covid levels in 2025, leaving very little upside for growth in the near term

North America will lag recovery elsewhere, reaching 2019 levels in the second half of the decade

Mainland China will lead growth, with 400,000 b/d of additional demand to 2050, followed by India at over 200,000 b/d.

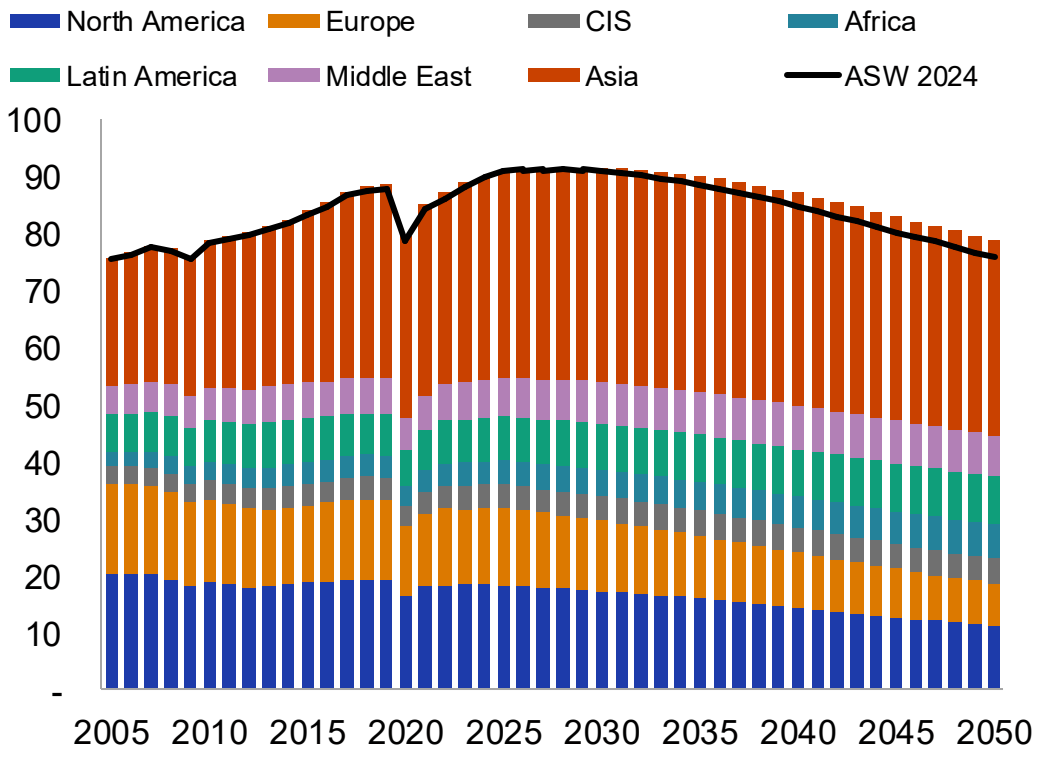
Longer term, air transport markets will continue to grow travel, but pressure is on to reduce fuel burn, supported by carbon pricing under European ETS and globally, under CORSIA

Although we expect global jet to continue growing through 2050, Europe and OECD Asia will reach peak jet fuel demand around 2040

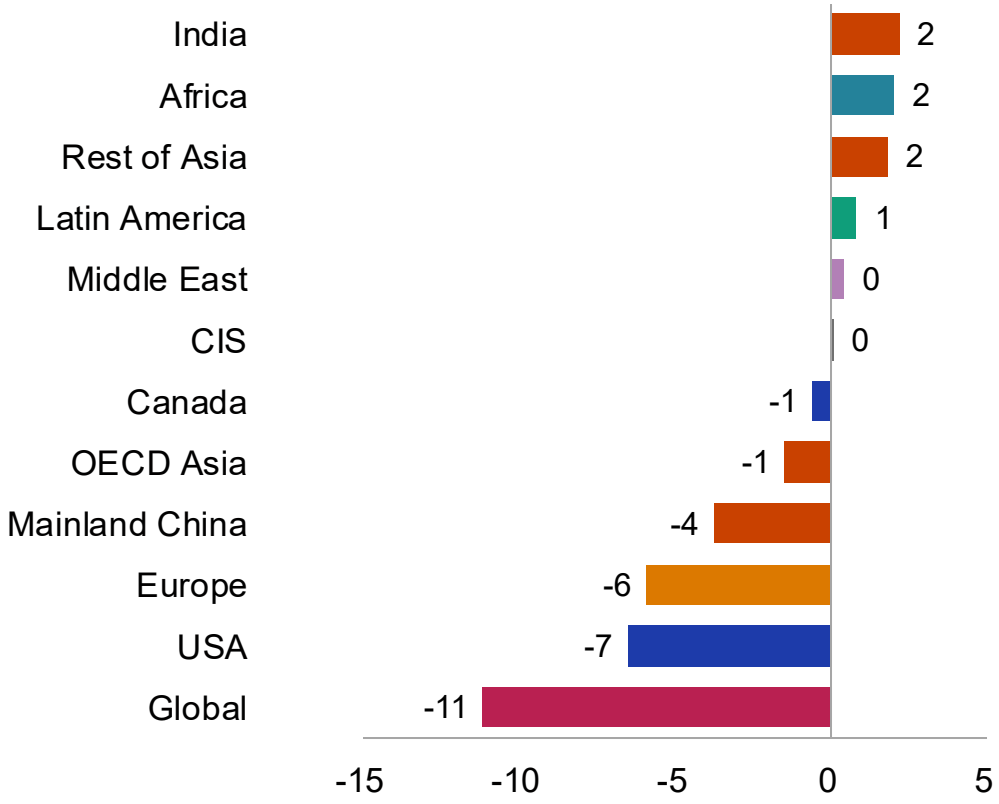
Outlook assumes a Sustainable Aviation Fuel incorporation of 19%, by 2050, down from 26% in previous outlooks. This is due to lowered signposts around SAF investment support in US, and to a lesser degree in Europe.

Global refined product demand falls to 79 MMb/d by 2050

Global demand growth by region: Total refined products. Million barrels per day.



Total refined product demand 2050-2024. Million barrels per day.



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Source: S&P Global Commodity Insights.

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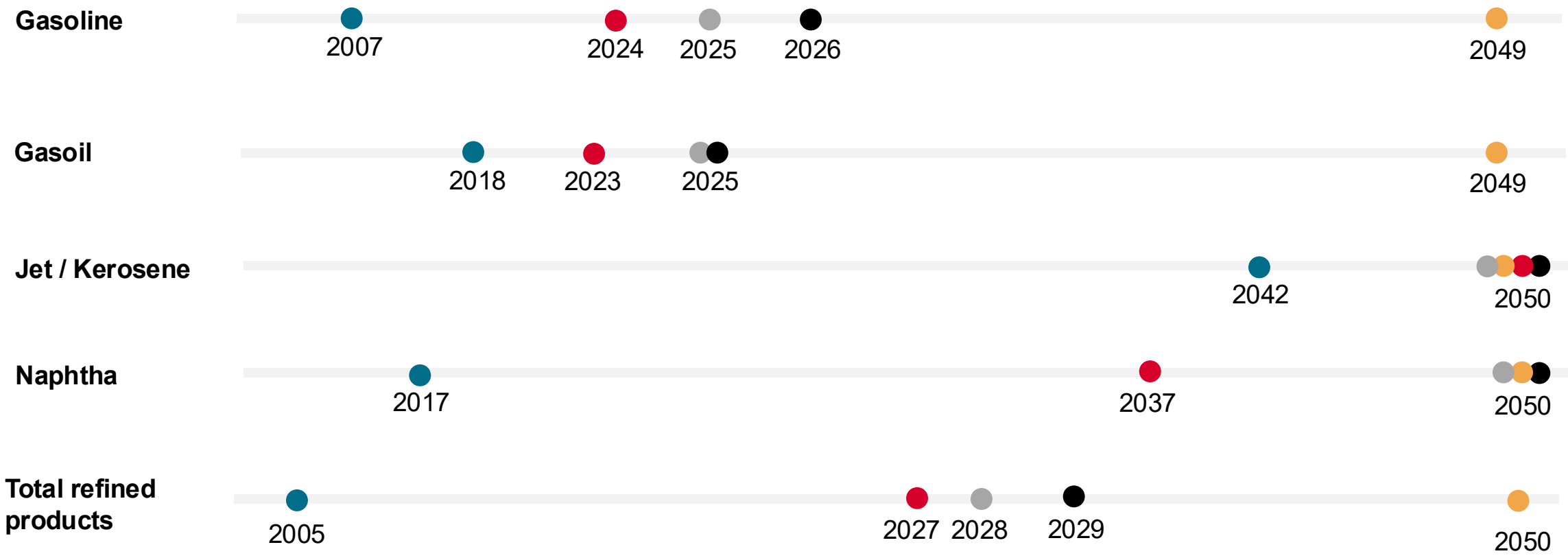
World peaks this decade for select refined products



Source: S&P Global Commodity Insights.

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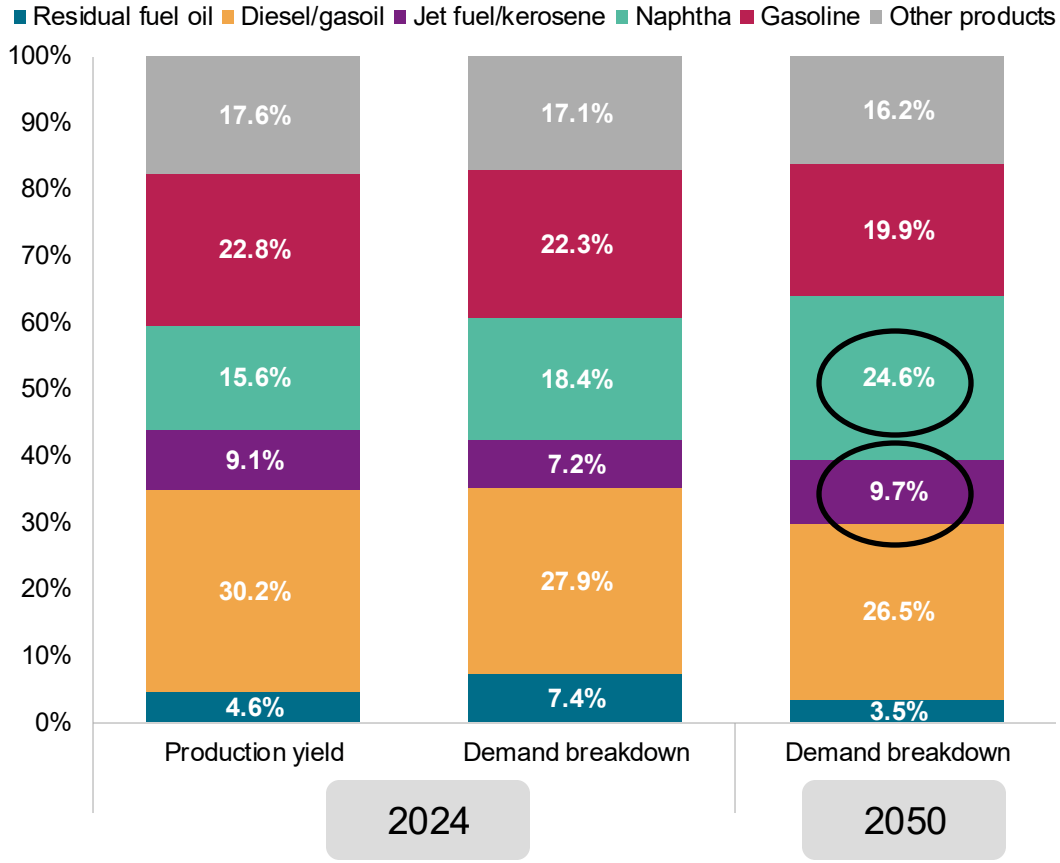
Refining

Refiners must adapt to shifting demand requirements

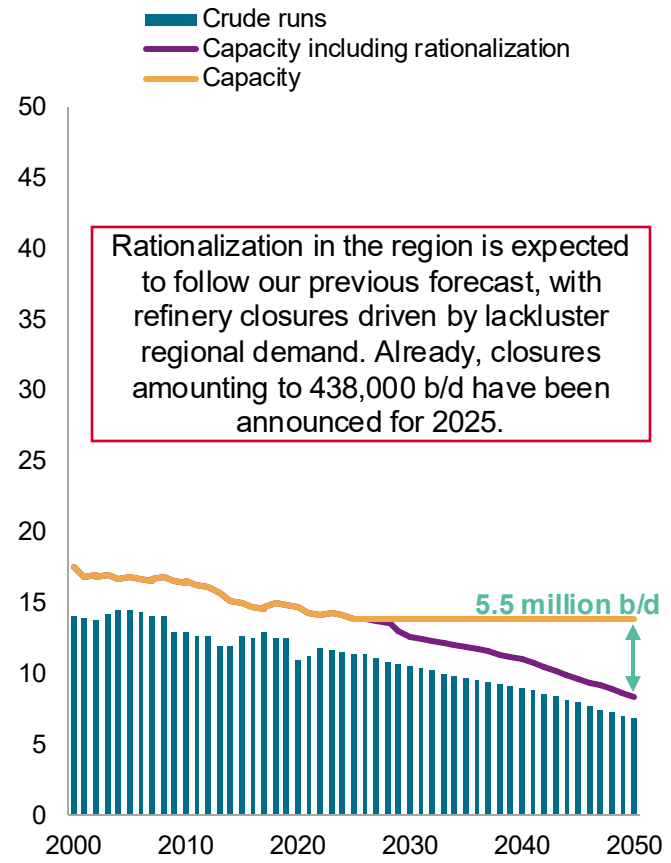
- Most refineries were built with the primary purpose of producing motor fuels
- Refiners are faced with the challenge of either adapting to the demand requirements of the future, or risk being pushed out from the market
- At the moment, refiners are looking into hydrocracking and crude-to-chemicals investments to help maximize the production of chemical products
- Any greenfield refinery investments post-2030 will struggle to receive financial support unless built in a market short on oil products and the investment is geared towards petrochemical feedstock production
- Important to note that despite the reduction, gasoline and diesel demand still account for just under half of total refined oil product demand

Most refineries are currently configured to produce transport fuels (percent of total)

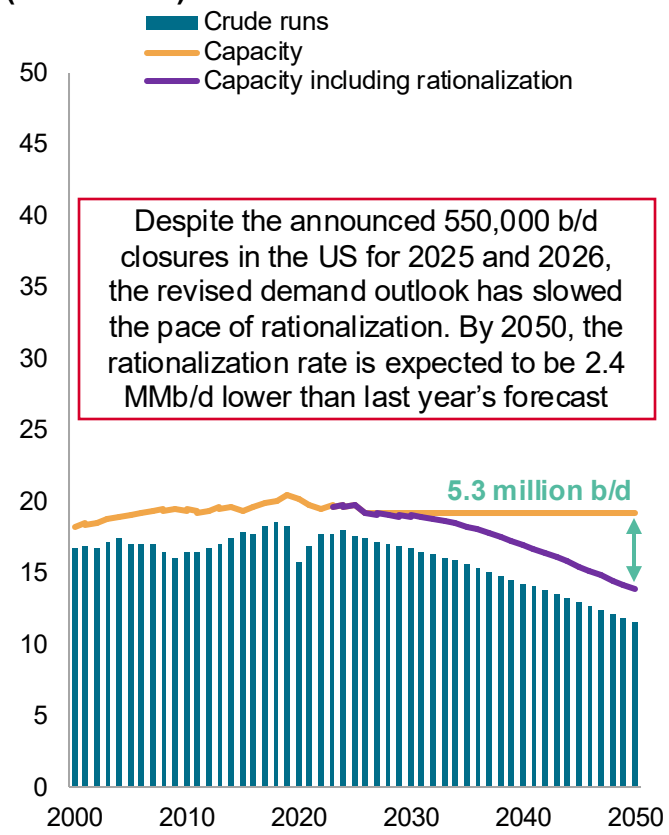


Refinery rationalization is forecast in the major regions

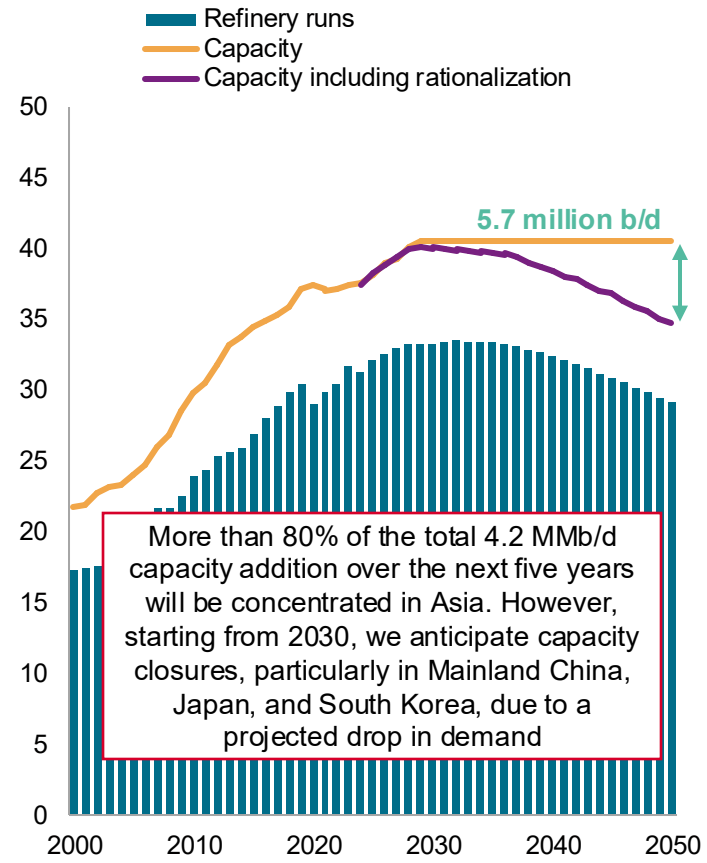
Europe crude runs and capacity (million b/d)



North America crude runs and capacity (million b/d)



Asia crude runs and capacity (million b/d)



'Capacity including rationalization' is 'implied rationalization' calculated from forecast utilization based sustainable historical utilization.
Data compiled April 2025.
Source: S&P Global Commodity Insights

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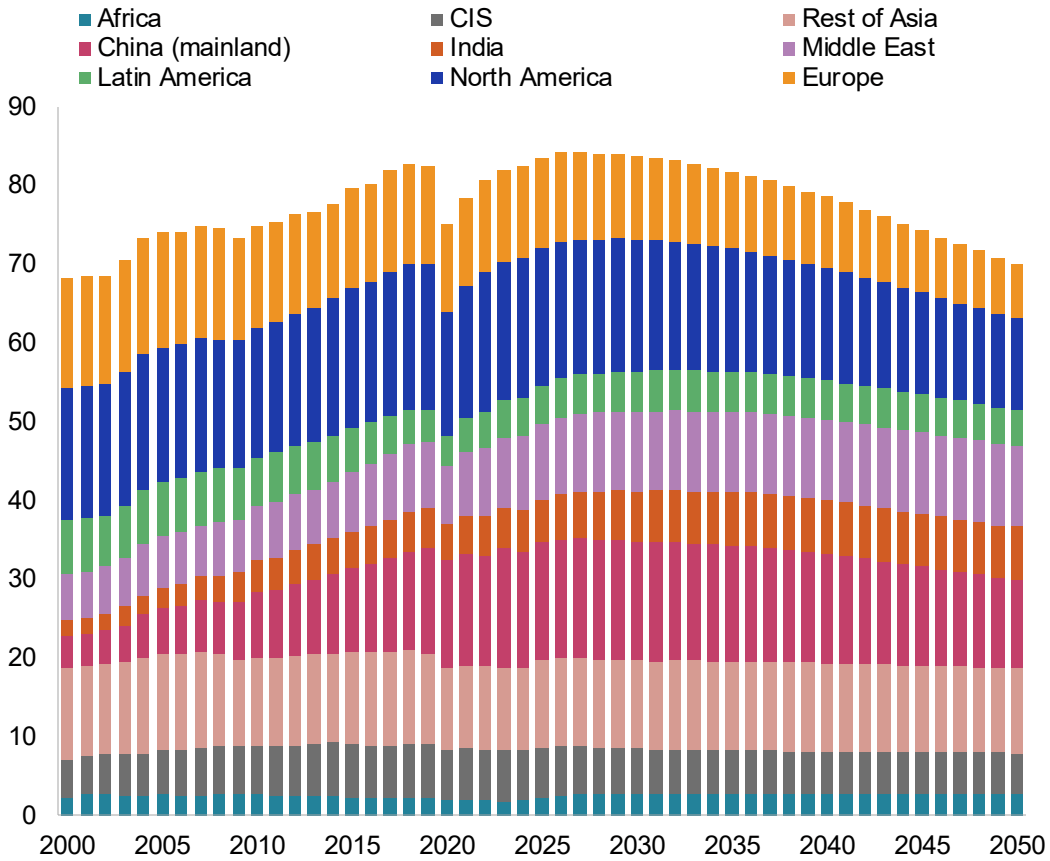
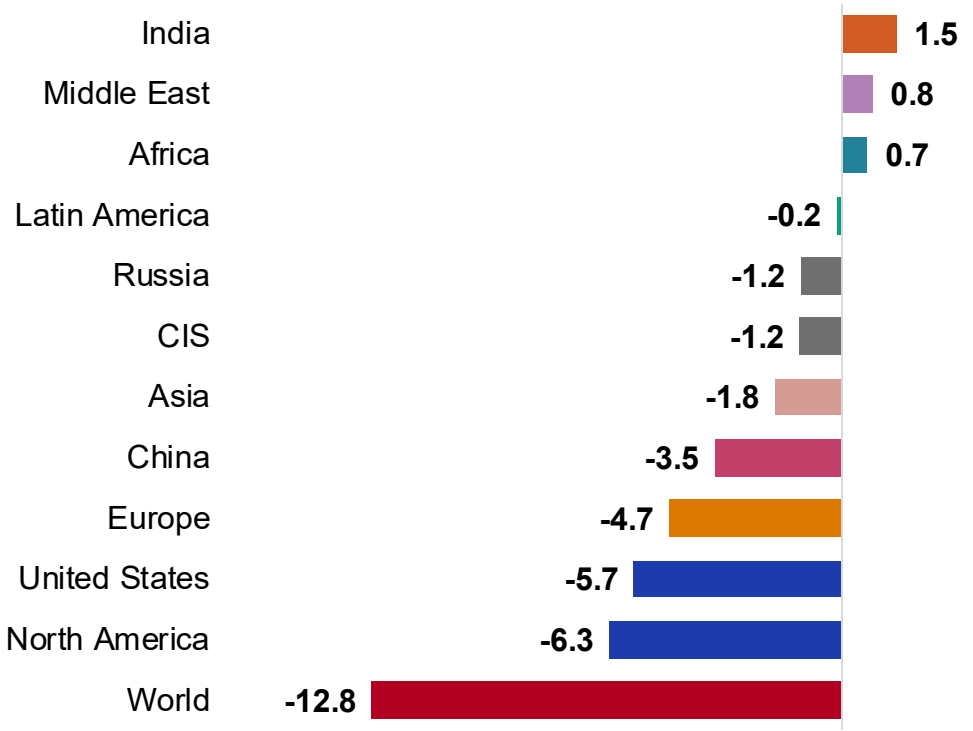
Refinery runs to peak in 2027

Crude and condensate runs by region (Million b/d)



Crude and condensate runs: Delta (2050-2024). Million barrels per day



Data compiled: Apr 16, 2025.
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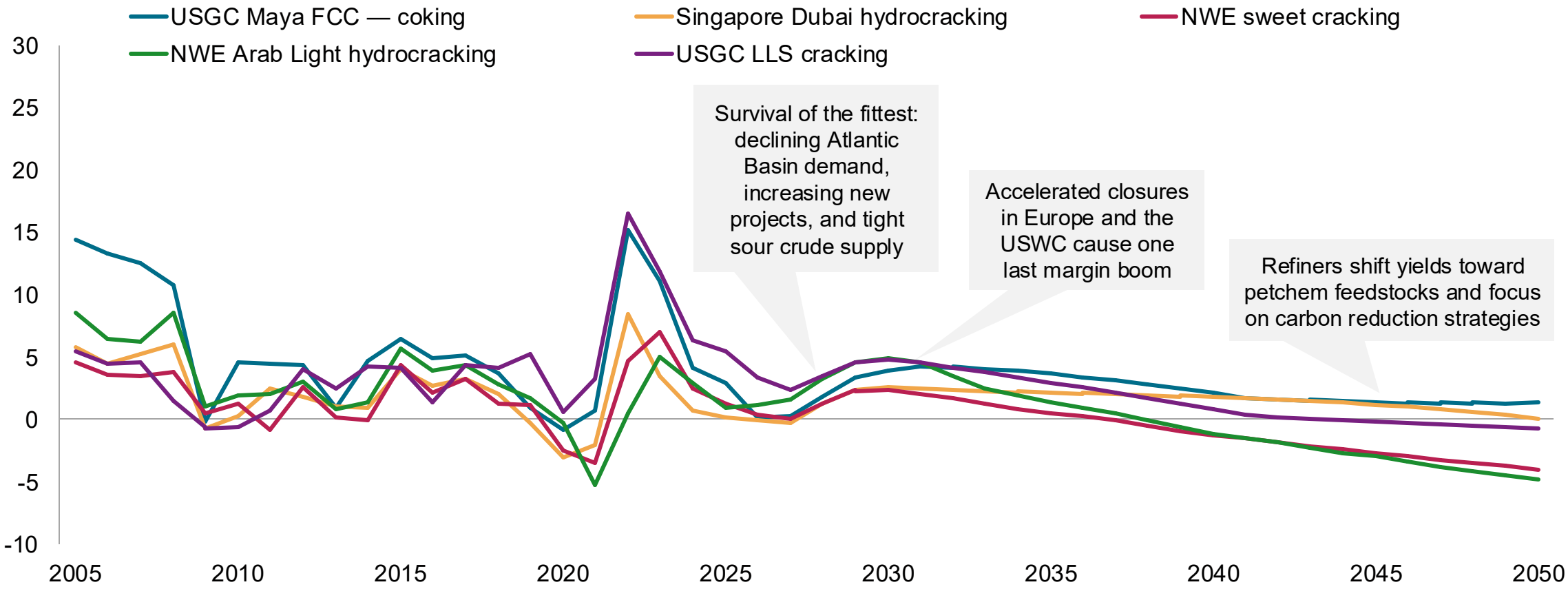
Margins impacted by long-term shift to petchems and carbon abatement

Long-term benchmark margin outlook — USGC margins include RIN costs (constant 2024 $/b)



Data compiled April 16, 2025.
RIN = renewable identification number; FCC = fluid catalytic cracker; LLS = Light Louisiana Sweet; NWE = Northwest Europe; HCU = hydrocracking unit.
Note: NWE Margins include GHG (greenhouse gas) costs
Source: S&P Global Commodity Insights.

Key takeaways for the aviation sector

- Shifting and tightening jet fuel supply/demand balances
  - Availability at a given airport?
  - At what price?

- Growing regional imbalances
  - Refinery closures will be concentrated in specific regions
  - Global trade flows will be upended

- Security of supply
  - Each airport will need to ensure stable and competitive long-term jet fuel supply sourcing
  - As demand for SAF grows, SAF supply will also become a growing concern

Contact us

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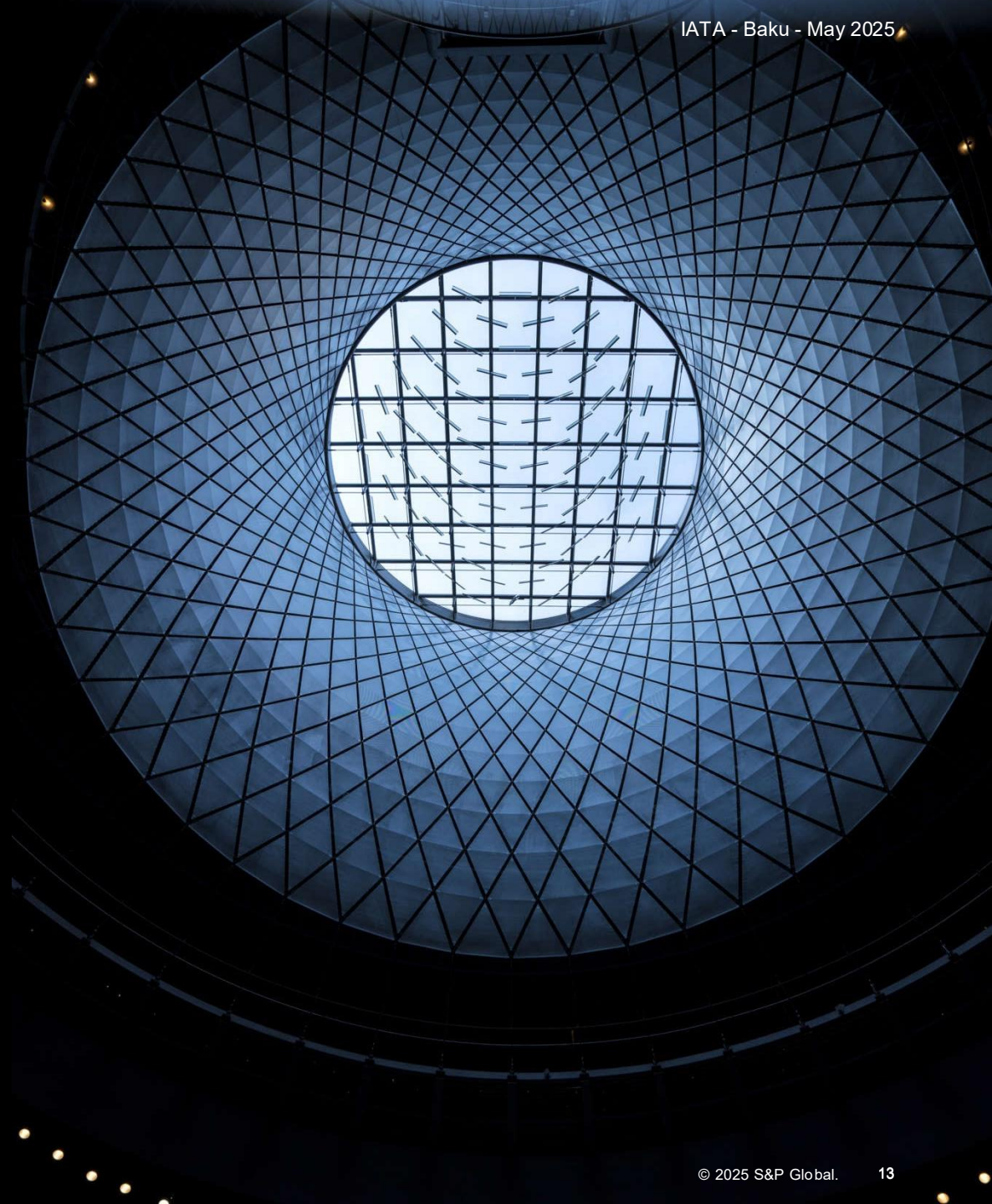

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