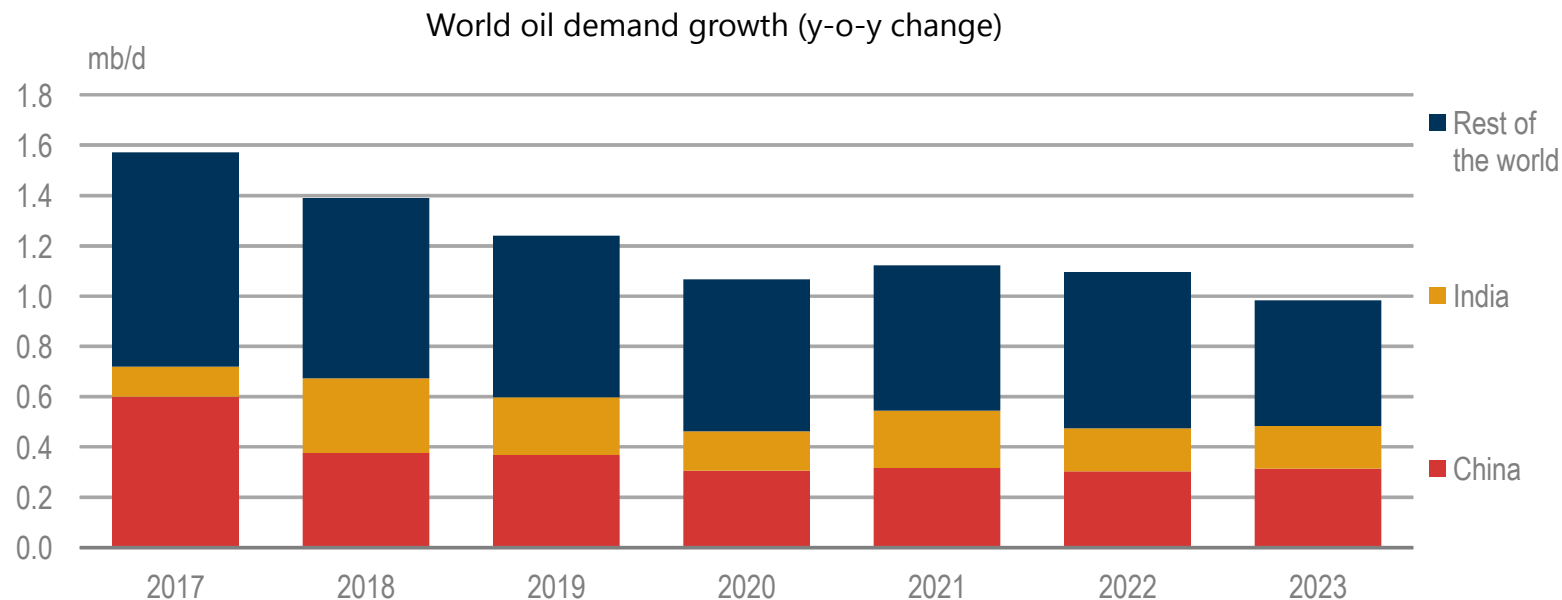




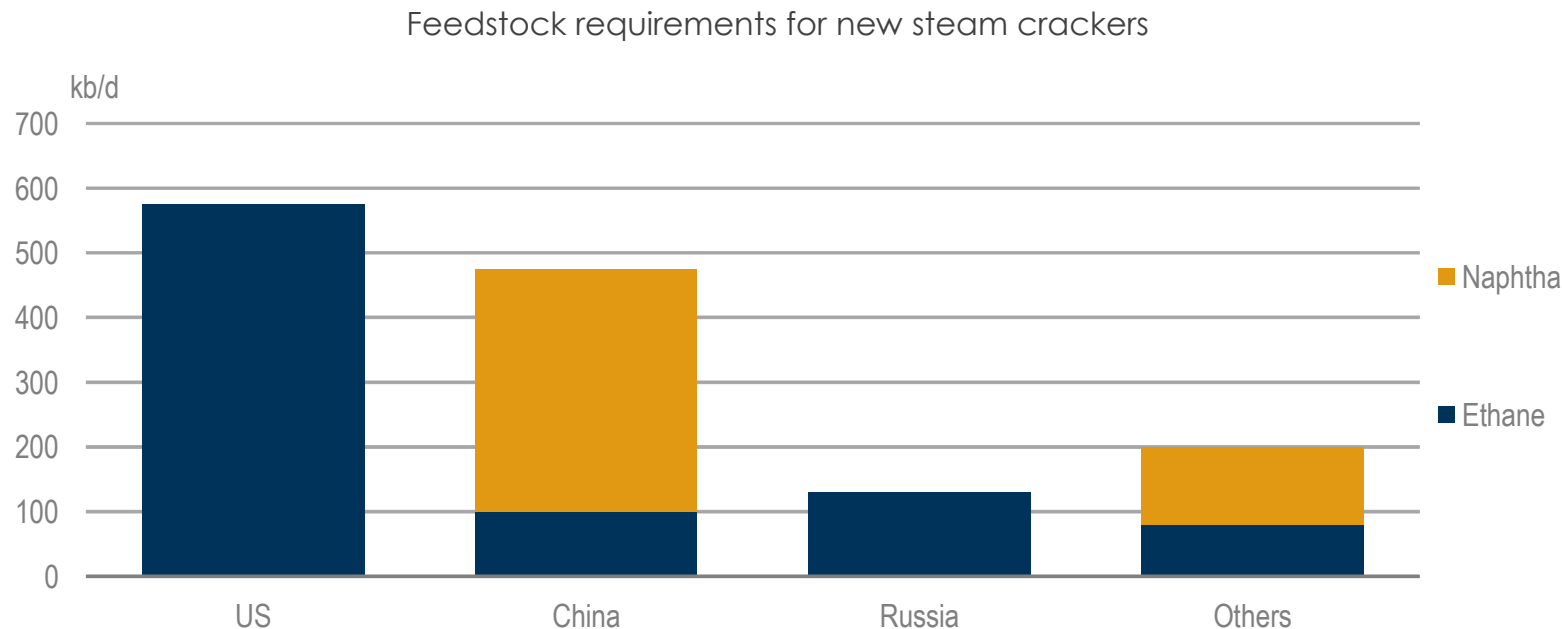
Market Report Series Oil 2018

CERA Week, Houston – 5 March 2018

Robust global oil demand growth to 2023

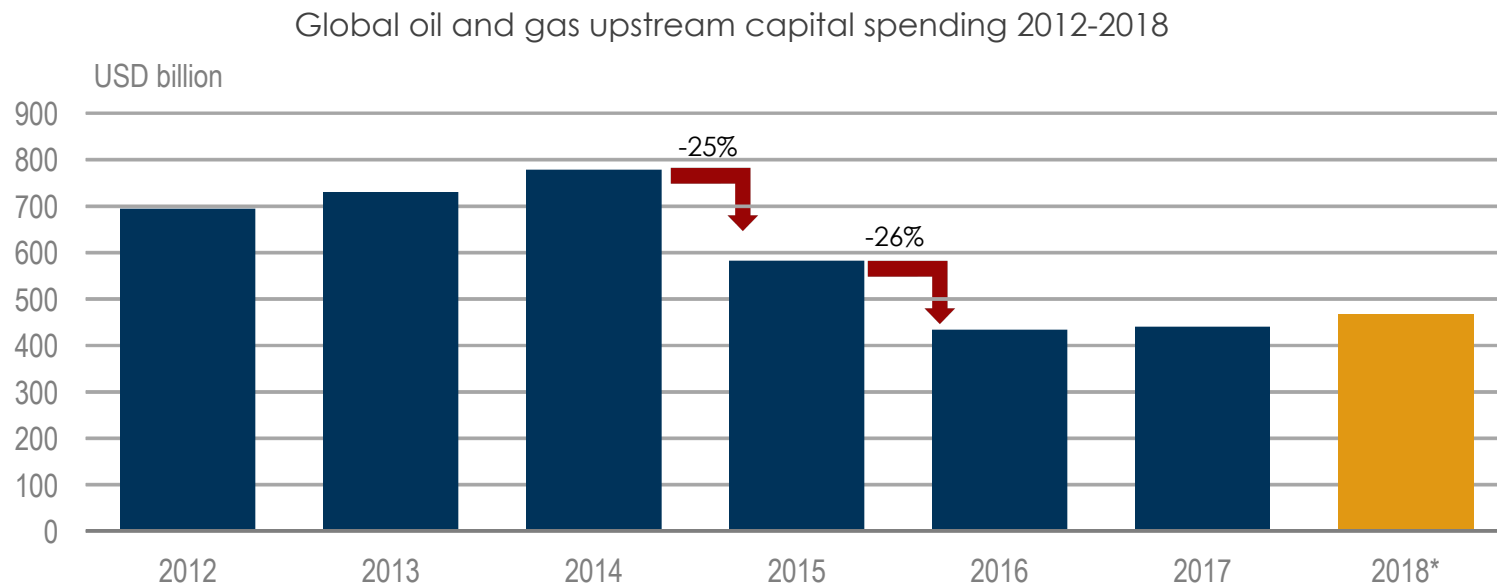


China and India account for almost half of world oil demand growth



Petrochemical feedstocks (ethane and naphtha) responsible for 25% of global demand growth

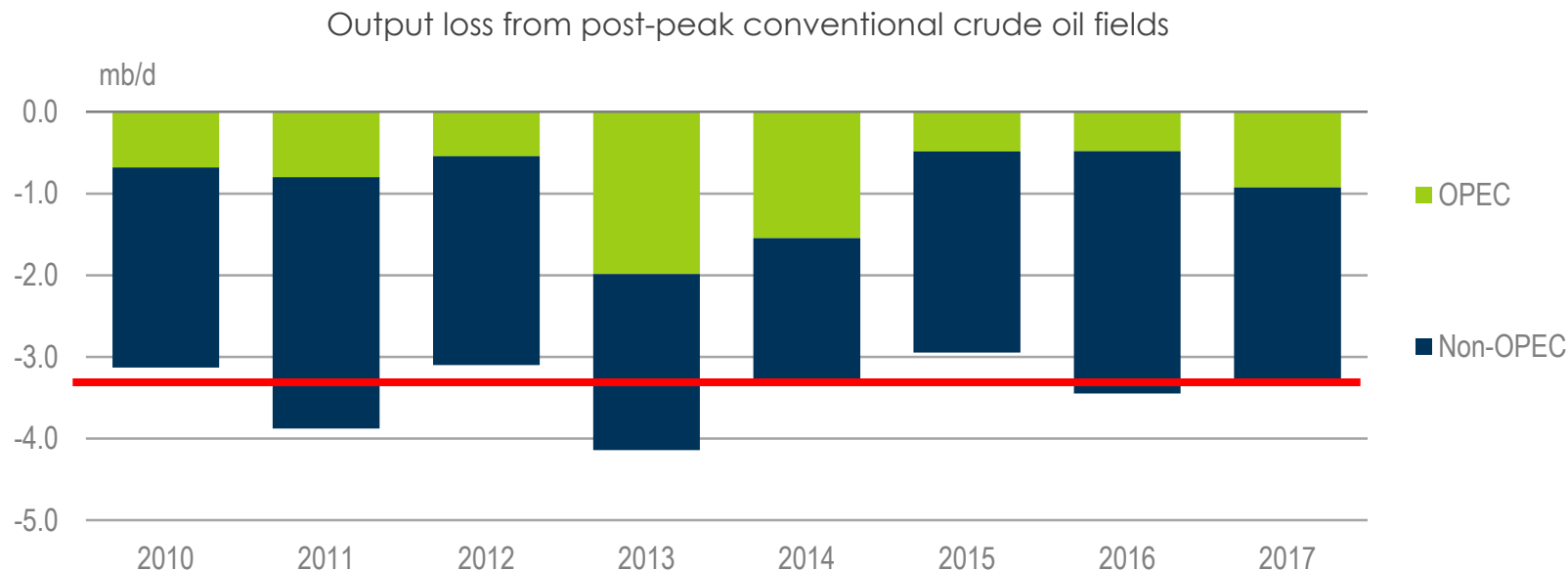
Only limited uptick in global upstream spending



*Preliminary based on selection of investment updates

Producers spend more on short cycle supply, especially US LTO.
Investments in conventional fields remain depressed, but some signs of renewed interest in offshore.

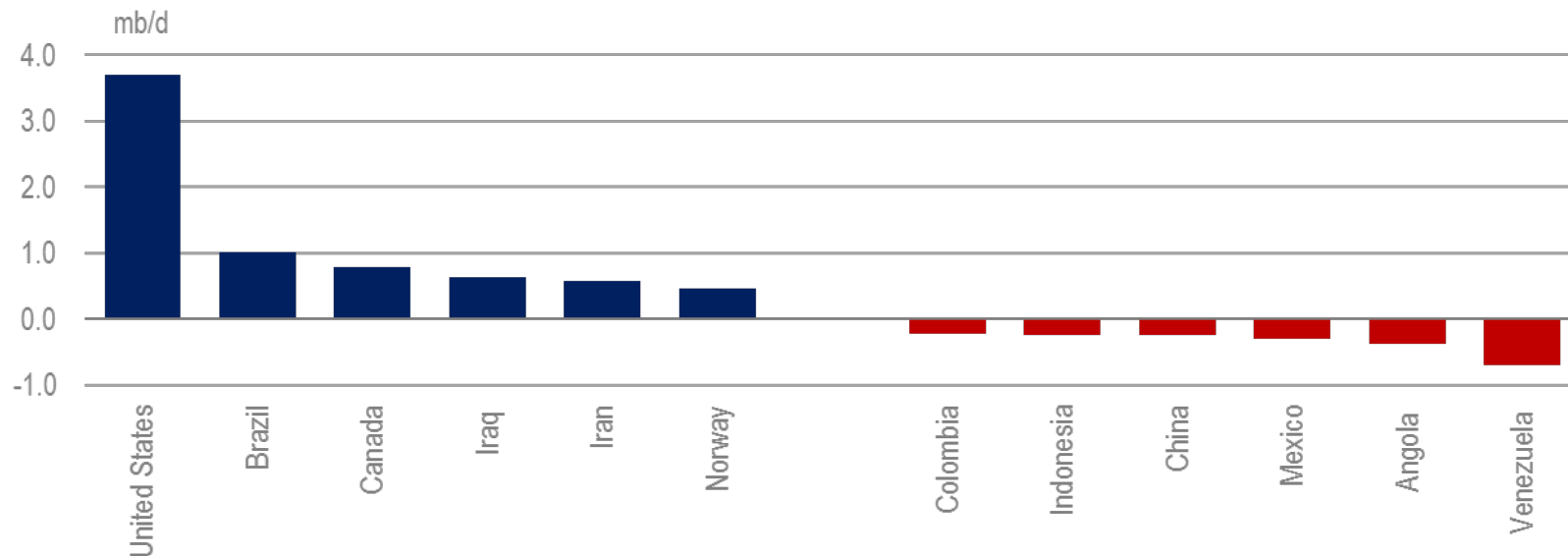
Oil industry needs to replace one North Sea each year



Ageing oil fields lose more than 3 mb/d per year despite slowing decline rates.

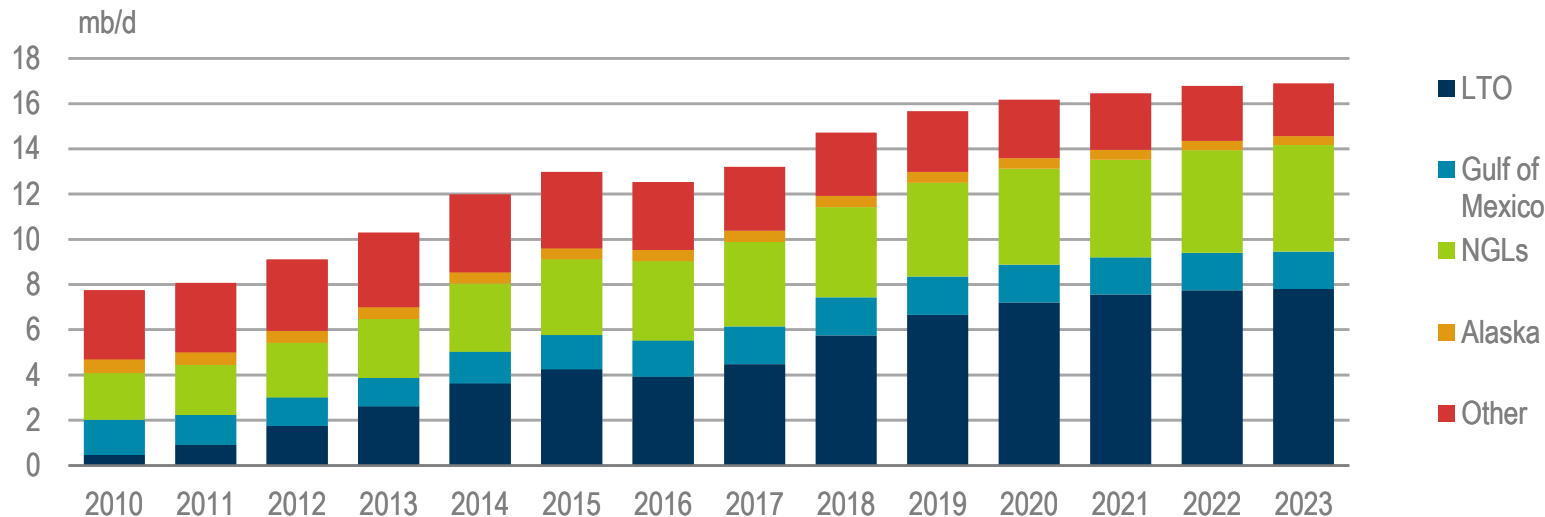
Booming non-OPEC supply growth reshapes world oil market...

Changes in global oil supply capacity 2017-2023



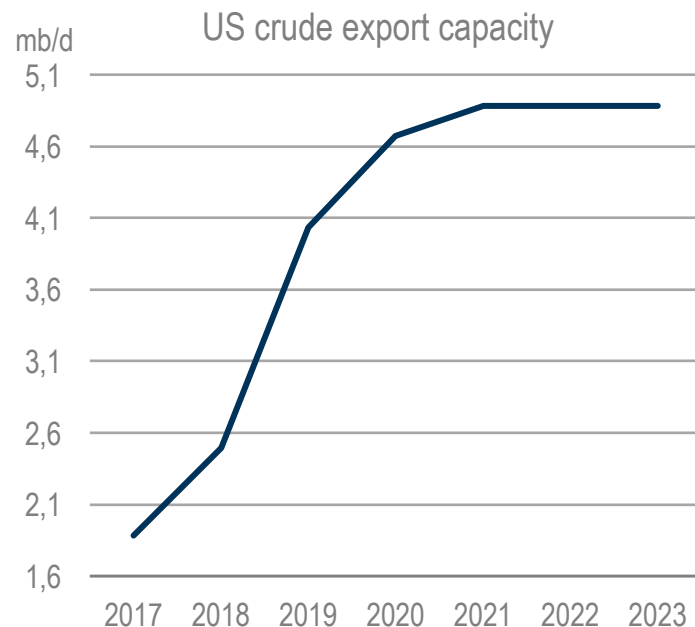
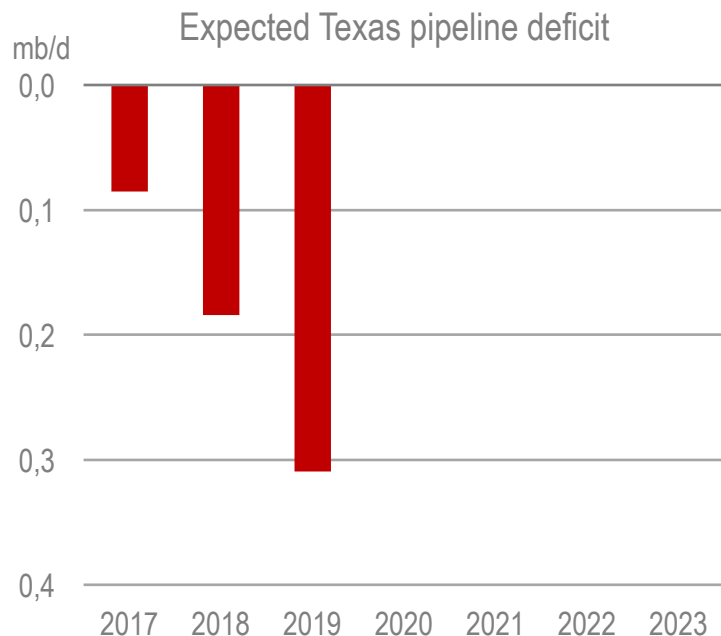
...more than covers demand growth for next three years. By 2023, non-OPEC supply grows by 5.2 mb/d. OPEC oil capacity rises only 1.2 mb/d due to Venezuelan collapse and limited increases elsewhere.

Higher oil prices unleash second wave of US supply

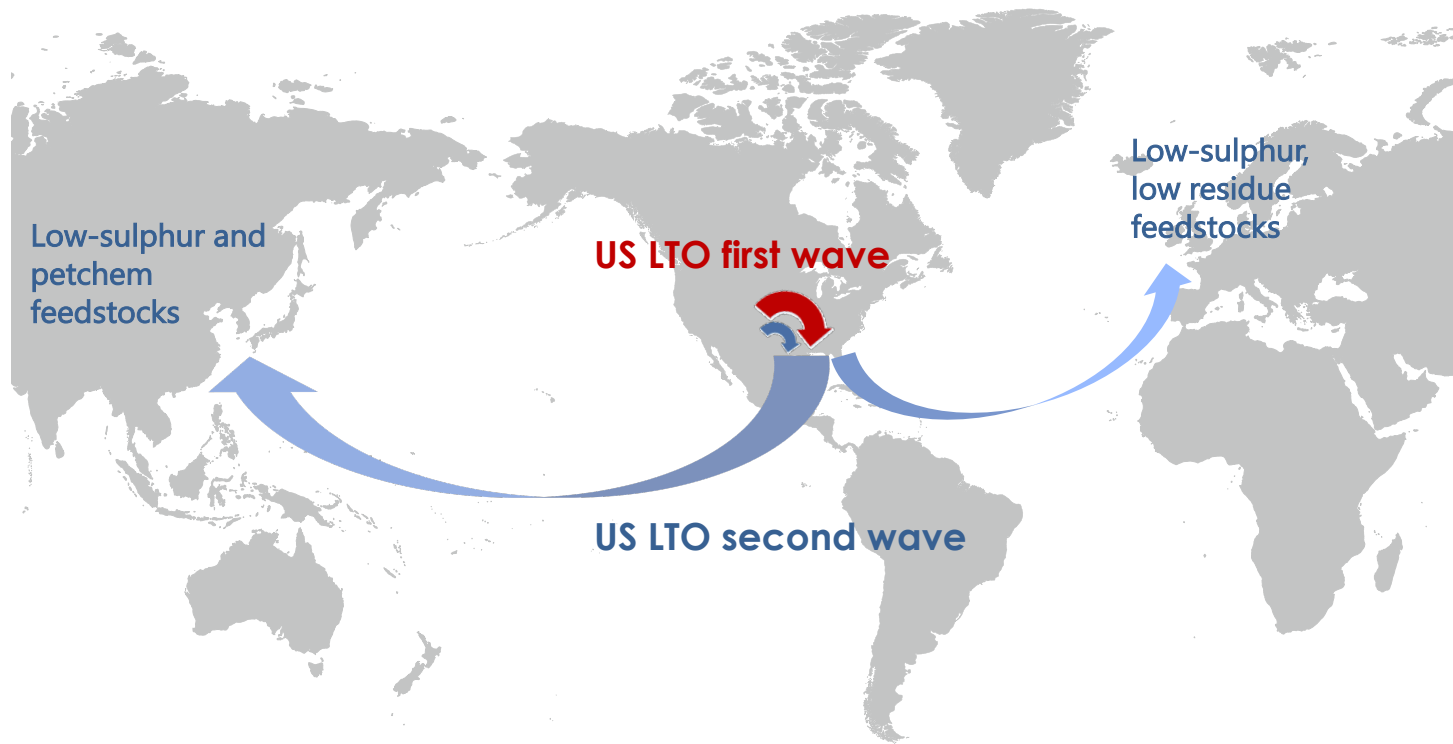


Total output reaches 17 mb/d by 2023 – and could be even higher if prices rise.

US pipeline bottlenecks ease, export capacity doubles

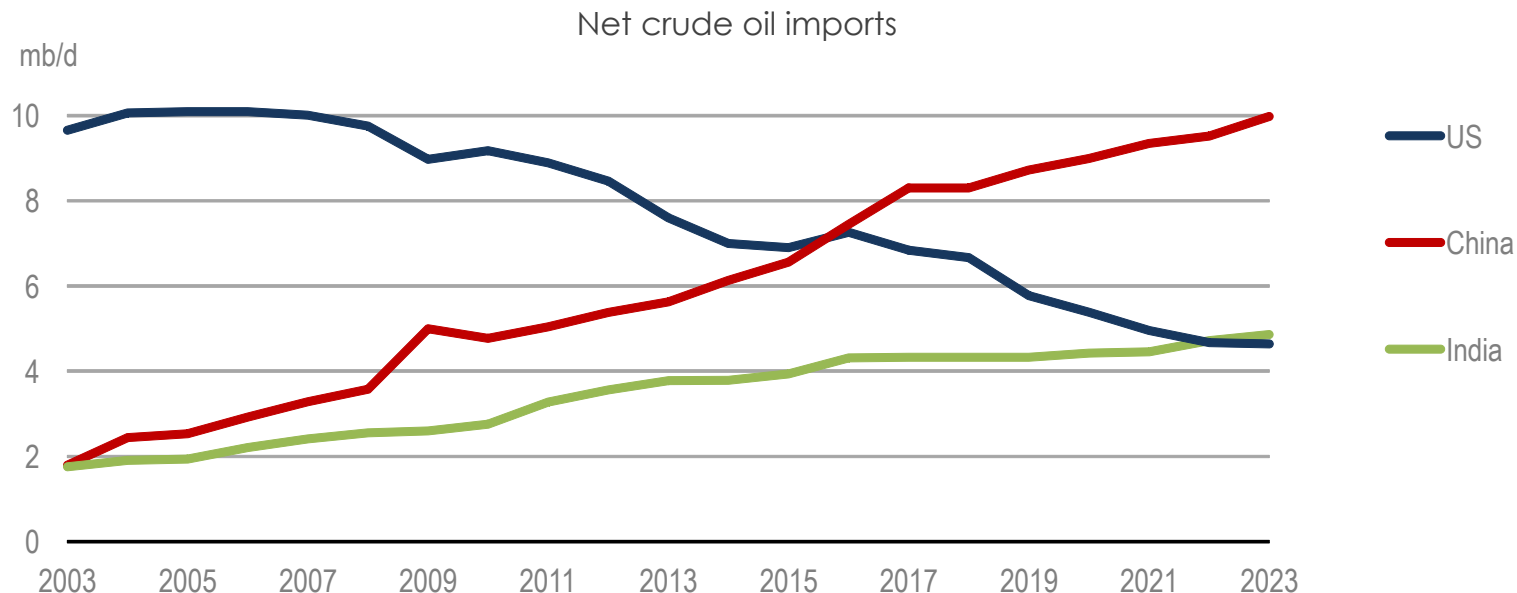


New pipeline projects (Permian Express, EPIC) ease constraints. US export capacity rises to 4.9 mb/d by 2023. Corpus Christi solidifies position as largest US export hub.



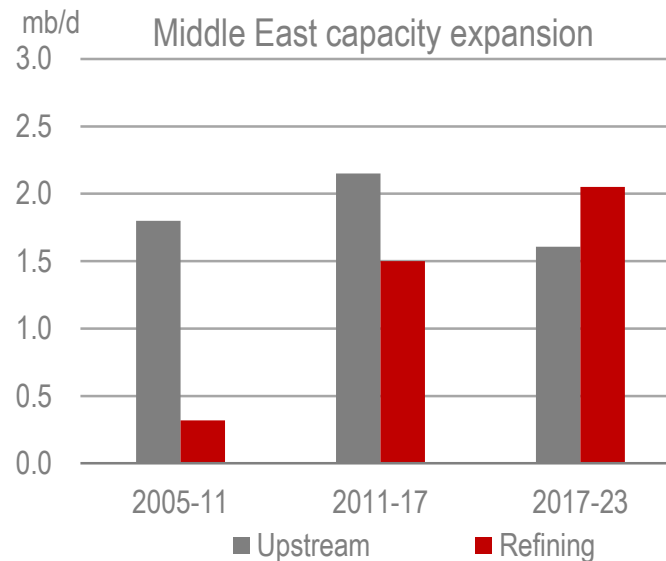
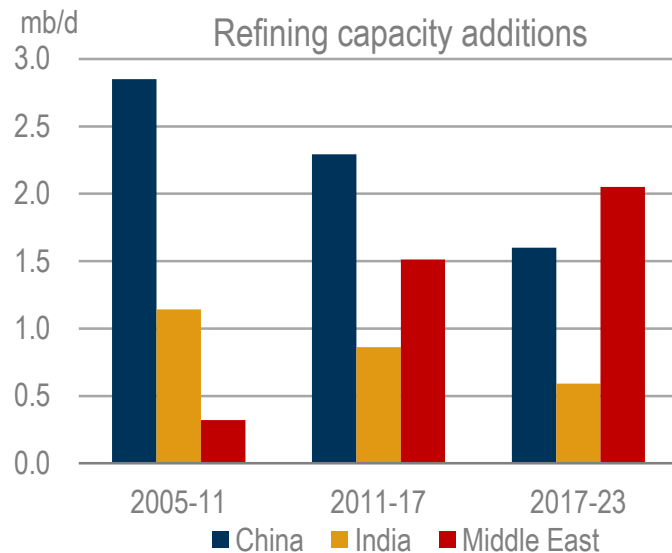
Refiners in Asia and Europe look for suitable crude oil to produce petrochemical feedstocks and low-sulphur fuels

China net crude oil imports double the US in 2023



Indian imports, too, surpass the US in 2023 as shale growth reduces US import dependence.

Middle East wants to refine more oil



Middle East accounts for 30% of global refining capacity growth.
International downstream expansion becomes a strategic objective for the region's NOCs.

- Robust world oil demand growth to 2023 driven mainly by petrochemicals – a key driver
- Non-OPEC output growth exceeds demand increase through 2020.
- US, Brazil, Canada, Norway dominate growth. New infrastructure investments relieve US export bottlenecks.
- US crude finds new markets as refiners seek light, low sulphur crude to meet petrochemical demand and IMO specifications.
- More upstream investment needed today to meet future demand and offset 3 mb/d of declines from mature oil fields each year.
- As spare capacity cushion shrinks, supply security concerns remain critical.

