

# Global oil outlook to 2040

Summary report

February 2021

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# Executive summary

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## Recap 2020

Demand has partially recovered since April 2020 but still ended the year approximately 9 million barrels per day (MMb/d) below the 2019 level, with continued COVID-19-related lockdown measures in January 2021 keeping it around 6 MMb/d lower than January 2019.

Supply remained robust until April 2020 and then dropped by 13 to 14 MMb/d in May, driven by OPEC+<sup>1</sup> cuts and shut-ins (that have mostly returned to the market), thus showing the willingness of OPEC+ to continue interventions. The market saw an oversupply of approximately 20 MMb/d in April 2020, pushing Brent prices to \$18 per barrel of oil (bbl) for the month, before recovering to \$50/bbl by the end of the year.

OECD commercial inventories remain at high levels and, although we have seen draws over the past months, they are still 150,000 barrels above pre-COVID-19 levels.

## Short-term up to 2025

Oil demand is expected to take two to four years to return to 2019 levels, depending on the duration of lockdowns and the pace of GDP recovery. Based on our Global Energy Perspective reference-case demand insights, current OPEC+ intervention will be sufficient to help balance the market in 2021, with prices remaining at a sustained level of \$50 to \$55/bbl through to 2025.

If GDP growth recovers faster than expected, we may see a near-term price increase at more than \$55/bbl. However, if demand recovers slower than expected or if OPEC+ stops cutting output, prices could be depressed or highly volatile for the next three to four years.

## Long-term up to 2040

Long-term equilibrium oil prices have decreased by \$10 to \$15/bbl compared with pre-COVID-19 outlooks, as driven by a flattening cost curve and lower demand. Under an OPEC-control scenario, in which OPEC maintains its market share, we see a \$50 to \$60/bbl equilibrium price range in the long term, fueling 10 to 11 MMb/d US shale oil and 11 to 13 MMb/d deepwater production from pre-financial-investment-decision (FID) projects.

While most of the offshore-oil-producing regions will be under pressure in an accelerated energy-transition scenario, the sector will still require new production of nearly 23 MMb/d to meet demand after 2030.

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<sup>1</sup> OPEC plus Azerbaijan, Bahrain, Brunei, Kazakhstan, Malaysia, Mexico, Oman, Russia, South Sudan, and Sudan.

# 5 key findings

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**1**

## **Demand recovery to 2019 levels is in sight**

Liquid demand is likely to return to 2019 levels by late 2021 or early 2022. Slower demand recovery would be due to a slow vaccination rollout or if COVID-19 control remains a potential risk

**2**

## **Oil capital expenditures are unlikely to fully recover**

Investments in oil capital expenditures are expected to gradually recover but remain below the pre-COVID-19 outlook. We expect a slow rebound in shale and offshore in North America

**3**

## **Long-term oil demand is exposed to large variations across all scenarios**

After more than 30 years of stable growth of more than 1 percent per year, oil-demand growth slows in the late 2020s and peaks in 2029. Various energy-transition drivers could cause peak to occur six to ten years earlier

**4**

## **New oil drilling is needed to meet demand by 2040**

By 2040, exploration and production companies need to add 38 MMb/d of new crude production from unsanctioned projects to meet demand. Most new supply is expected to come from offshore and shale resources

**5**

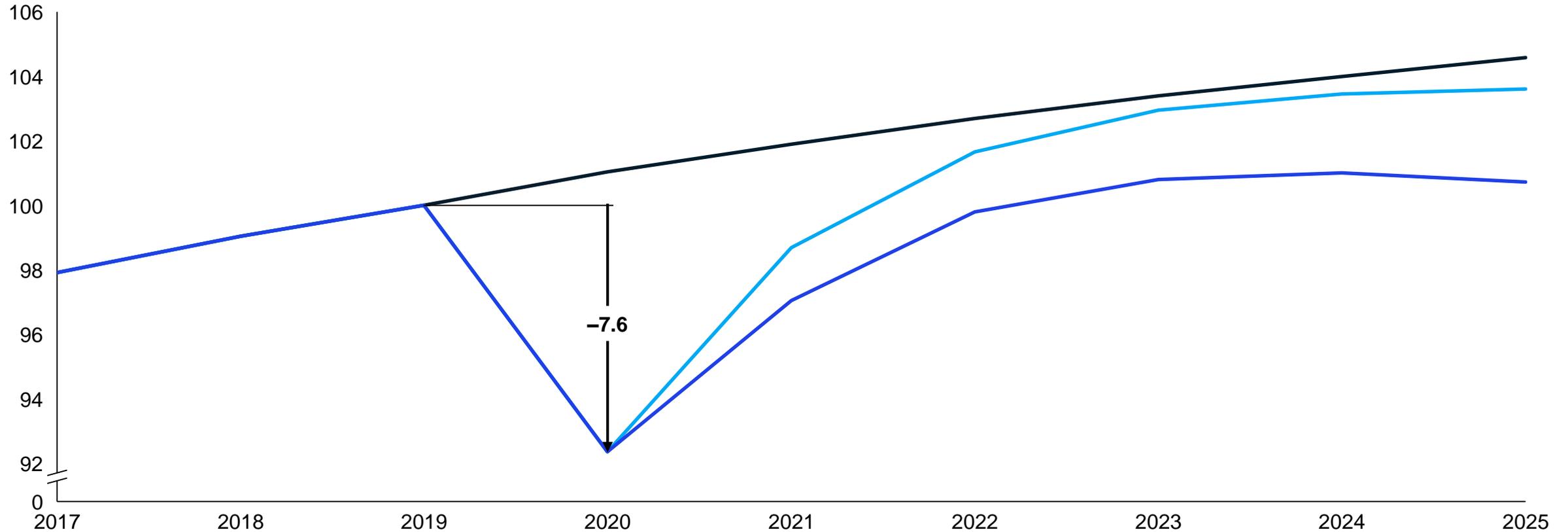
## **Even in an accelerated energy-transition scenario, we see need for new oil drilling by 2040**

While most offshore-oil-producing regions will be under pressure in an accelerated energy-transition scenario, the sector will still require new production of nearly 23 MMb/d to meet demand by 2040. Demand in a 1.5°C-pathway will force shut-ins

# Liquid demand is likely to recover to 2019 levels by late 2021 or early 2022.

**Global liquid-demand outlook,**  
MMb/d

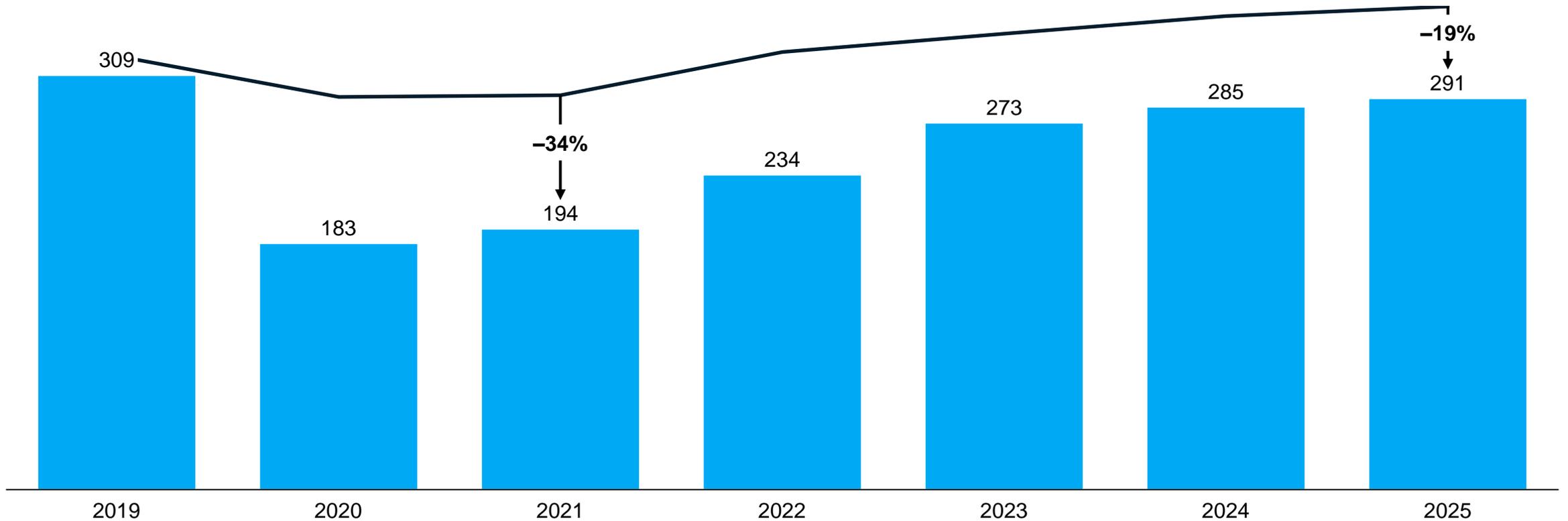
— Pre-COVID-19 reference case    — Reference case (A3)    — Slower demand recovery, accelerated transition



# Oil investments are expected to gradually recover but remain below the pre-COVID-19 outlook.

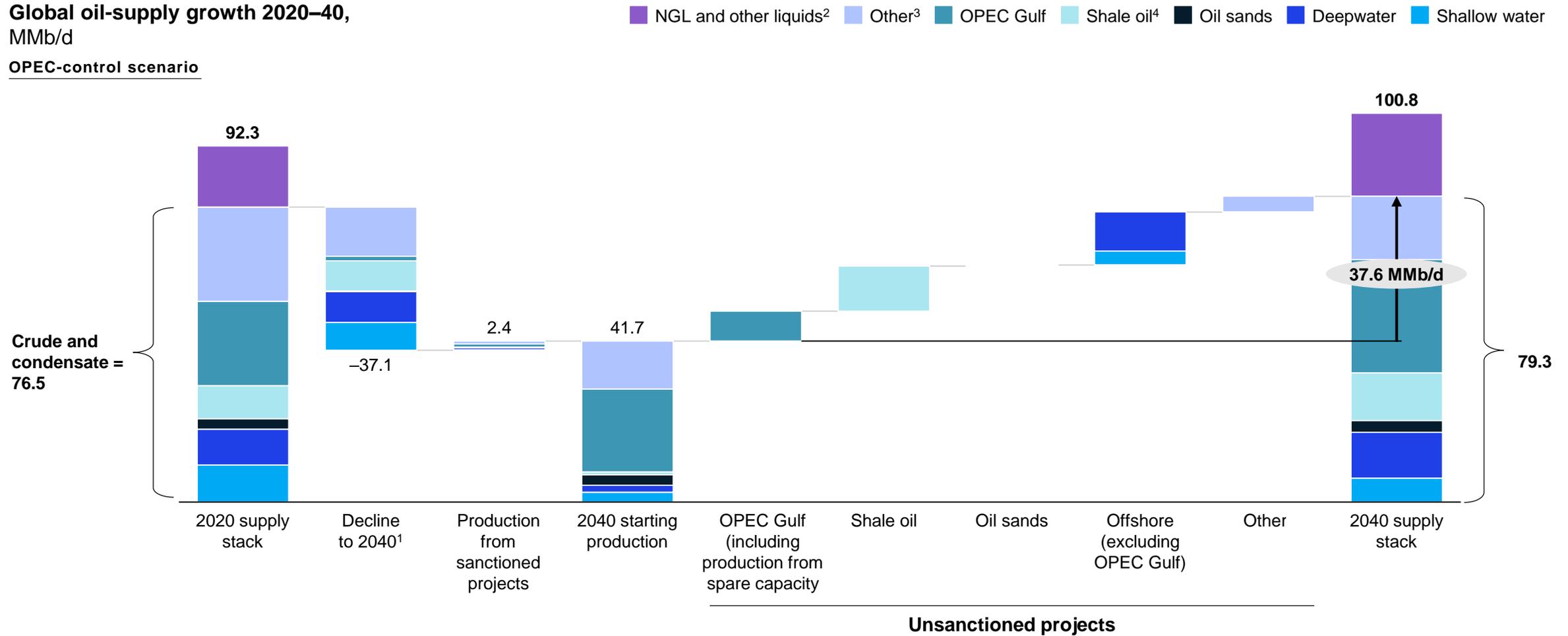
Development and maintenance capital expenditures in crude and condensate production,  
\$ billion

— Pre-COVID-19 outlook ■ OPEC control



# By 2040, exploration and production companies need to add 38 MMb/d of new crude production from unsanctioned projects.

**Global oil-supply growth 2020–40, MMb/d**  
**OPEC-control scenario**



1 This decline is net of in-fill drilling and other work done to fields that are not classified as major projects.

2 NGL stands for natural-gas liquids. Other liquids includes biofuels, processing gains, coal and gas to liquid, methyl tert-butyl ether (MTBE), and inventory movements.

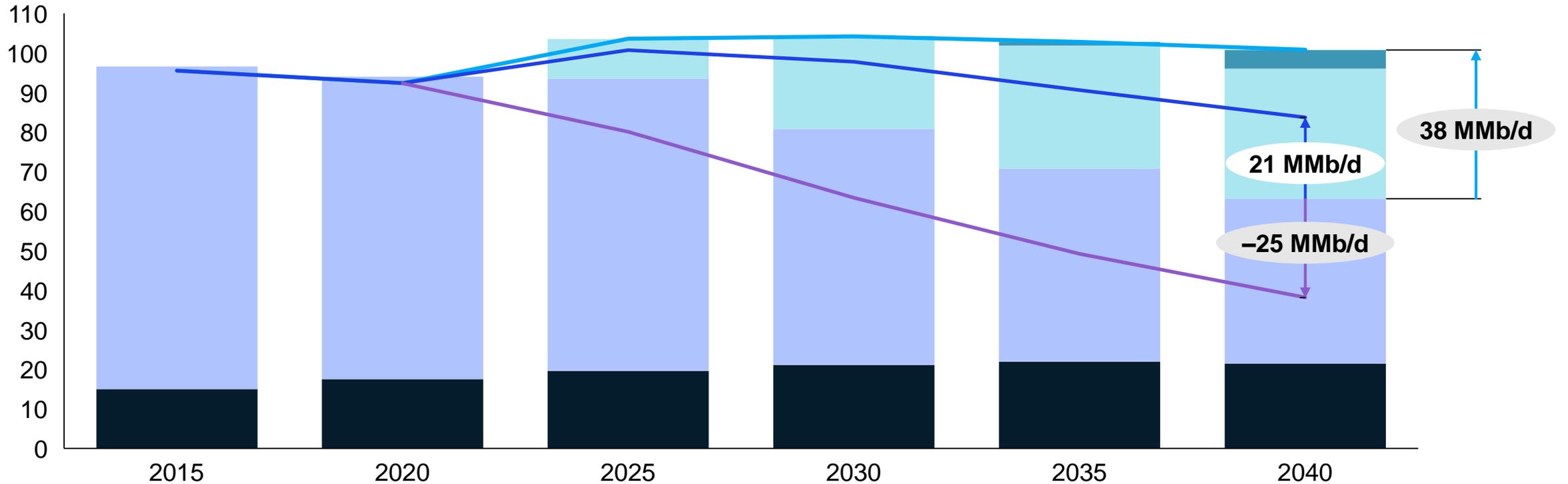
3 Other includes onshore conventional and heavy oil, all outside of OPEC Gulf.

4 Shale oil includes associated oil from unconventional gas wells.

# New projects will be needed under an accelerated-energy-transition case, but a 1.5°C pathway will force shut-ins.

Global liquid supply-and-demand outlook, MMb/d

- Reference demand
- Accelerated-energy-transition demand
- NGLs and other liquids
- Yet to find production
- Discovered pre-FID<sup>1</sup> production
- Post-FID production
- 1.5°C pathway demand
- Post-FID production



<sup>1</sup> Final investment decision

## Our oil models

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### Global Liquids Supply Model

Provides a granular and flexible outlook on the global liquids supply landscape until 2035 by bringing together McKinsey's latest perspective on project-level production and economics, OPEC behavior, global energy demand, and global natural gas liquids (NGL) supply.



### Global Liquids Cost Curve

Global oil cost curve with project-level estimates for breakeven prices for any specific year from 2019 to 2035.



### North American Supply Model

Forecasts basin-level production and cost across fuels and price scenarios to deliver intelligence around supply trends, basin competitiveness, pricing mechanisms, benchmarking, and capital-expenditure outlooks.

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