ExxonMobil

2025 Global Outlook

The Global Outlook includes Exxon Mobil Corporation's internal estimates of both historical levels and projections of challenging topics such as global energy demand, supply, and trends through 2050 based upon internal data and analyses as well as publicly available information from many external sources including the International Energy Agency. Separate from ExxonMobil's analysis, we discuss a number of third-party scenarios such as the Intergovernmental Panel on Climate Change Likely Below 2°C and the International Energy Agency scenarios. Third-party scenarios discussed in this report reflect the modeling assumptions and outputs of their respective authors, not ExxonMobil, and their use and inclusion herein is not an endorsement by ExxonMobil of their results, likelihood or probability. Work on the Outlook and report was conducted during 2024 and 2025. The report contains forward-looking statements, including projections, targets, expectations, estimates and assumptions of future behaviors. Actual future conditions and results (including but not limited to energy demand, energy supply, the growth of energy demand and supply, the impact of new technologies, the relative mix of energy across sources, economic sectors and geographic regions, imports and exports of energy, emissions and plans to reduce emissions) could differ materially due to changes in a number of factors, including: economic conditions, the ability to scale new technologies on a cost-effective basis, unexpected technological developments, the development of new supply sources, changes in law or government policy, political events, demographic changes and migration patterns, trade patterns, the development and enforcement of global, regional or national mandates, changes in consumer preferences, war, civil unrest, and other political or security disturbances, including disruption of land or sea transportation routes; decoupling of economies, realignment of global trade and supply chain networks, and disruptions in military alliances and other factors discussed herein and under the heading "Factors Affecting Future Results" in the Investors section of our website at Exxon Mobil Corporation | ExxonMobil

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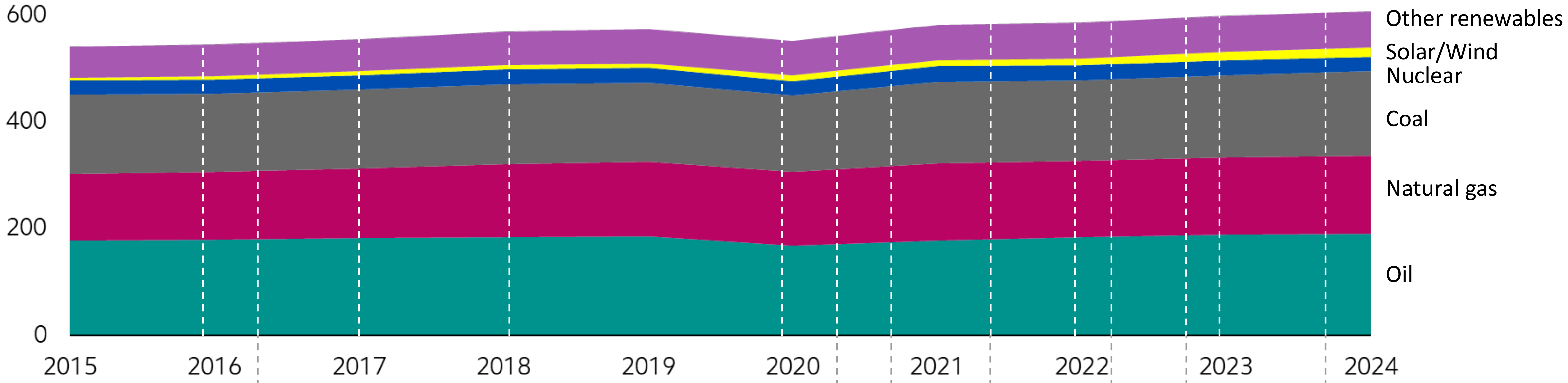
Why we do the Outlook

- Basis for ExxonMobil's strategy and plans
- Learning process for better and earlier insights
- Fundamentals to support data-driven policy discussions
- Foundation for stakeholder engagement

Over the past 10 years…

The global energy mix has remained largely constant in a dynamic world (2015 – 2024)

Quadrillion Btu



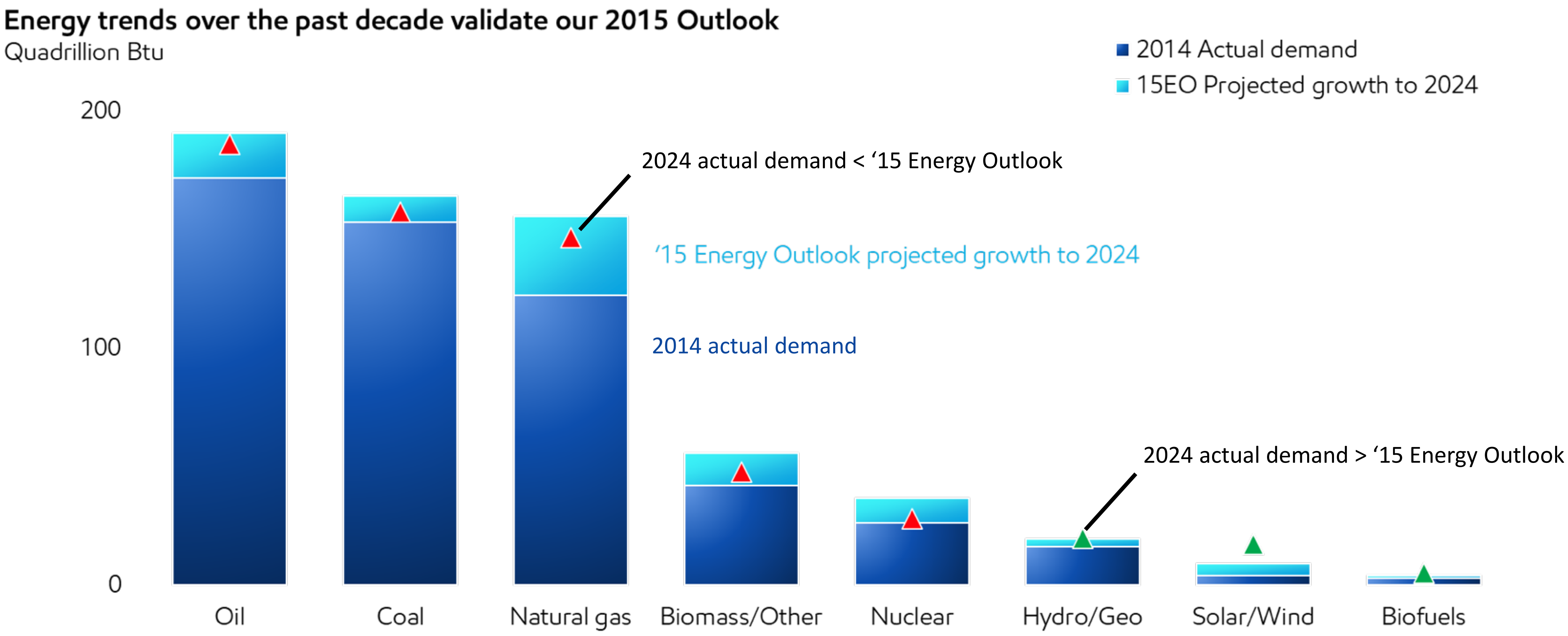
Paris Agreement	U.S. LNG exports	OPEC+ forms	U.S. largest oil producer	European Green Deal	COVID 19	China 2060 net zero	EVs* 1% of global cars	Rising interest rates	Russia invades Ukraine	GenAI launch	Solar 1% of energy	EU Industry challenged (Draghi)
Dec. ‘15	Feb. ‘16	Dec. ‘16	’18	Dec. ‘19	Mar. ‘20	Sep. ‘20	Jun. ‘21	Dec. ‘21	Feb. ‘22	Nov. ‘22	Dec. ‘22	Sep. ’24

Policy Technology Supply shifts Economic/Geopolitical

Sources: UNFCC, EIA, OPEC, EU Commission, EIA, US Federal Reserve, Grantham Institute

*EVs include Battery Electric and Plug-in hybrids

A look back: ExxonMobil's 2015 Outlook for 2024



'15 Energy Outlook refers to ExxonMobil's 2015 Energy Outlook
2024 Actual demand is an estimate and may be revised as full country reporting lags 12-18 months
See "About the ExxonMobil Global Outlook" for history data sources
Oil excludes biofuels

Our view to 2050: Key takeaways

Developing countries will use 25% more energy as living standards improve

- >4 billion people currently live in countries where access to energy is below what is needed to address basic human development needs.

Industry and commercial transportation drive economic growth

- These sectors, which make up ~65% of global use, have unique energy needs that cannot be fully replaced with electricity or renewables.

CO_2 emissions projected to fall 25% by 2050, but more progress is needed

- Efficiency improvements and renewables are necessary but not a complete solution
- Technologies like hydrogen, carbon capture and storage, and biofuels have yet to reach their full potential but are needed to reduce emissions on a global scale

Affordability will drive the pace of any energy transition

- Sustained economic growth and continued innovation to reduce costs for key technologies are essential for improving affordability.

All energy types will be needed

- Under any credible scenario, oil and gas remain essential.

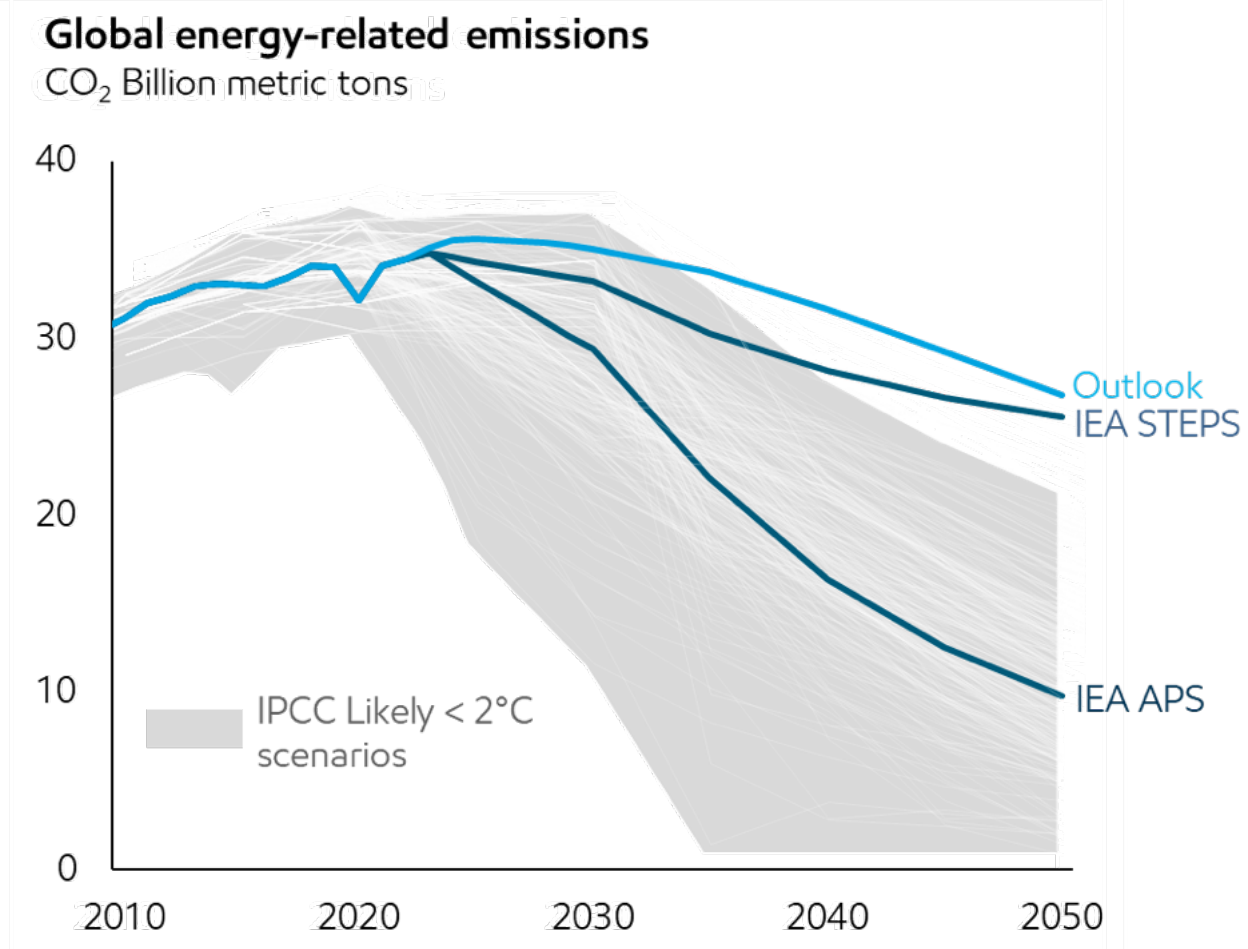
Sustained oil and natural gas investment is more important than ever

- Oil and natural gas supply from existing wells naturally declines over time, which requires investment in new and existing fields to meet demand across scenarios.

“and” equation

Projections and scenarios

What's the difference – and why do we consider different views?



Society's current trajectory

Global Outlook
ExxonMobil's latest view of energy demand and supply through 2050 is based on trends in population, economic development, policy, technology and consumer preferences.

International Energy Agency "Stated Energy Policies Scenario" (STEPS)
Reflects a sector-by-sector assessment of current policy in place or announced by governments around the world.

Paris-aligned scenarios

U.N. Intergovernmental Panel on Climate Change (IPCC) Likely < 2°C
311 scenarios in the IPCC database with a 67% likelihood of limiting peak warming to below 2°C throughout the 21^{st} century.

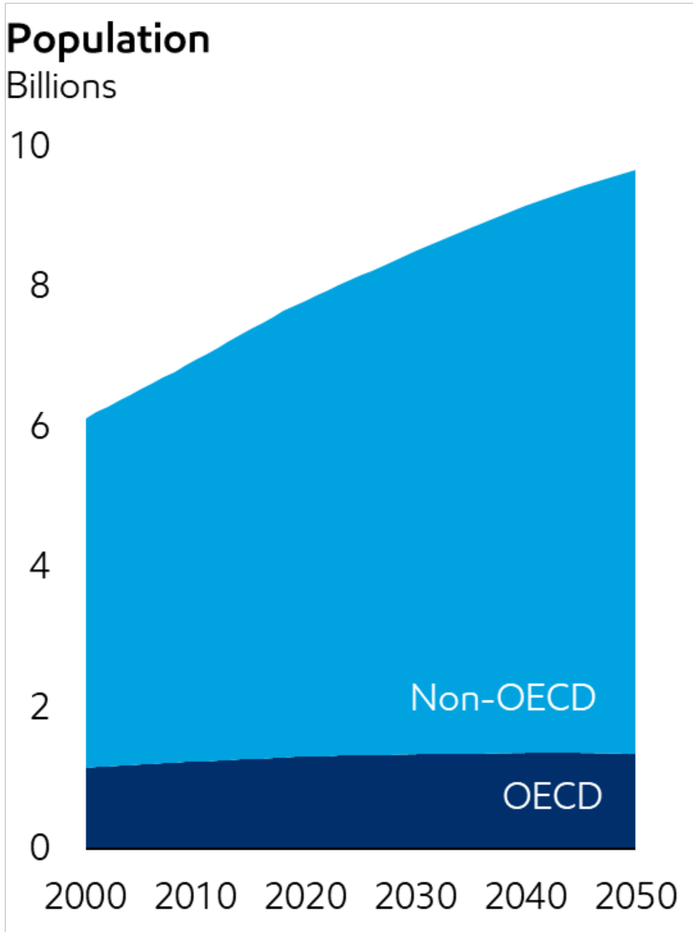
International Energy Agency "Announced Pledges Scenario" (APS)
Assumes that all aspirational targets announced by governments are met on time and in full, including their long-term net zero and energy access goals.

Source: 2024 IEA World Energy Outlook; IPCC: AR6 Scenarios Database hosted by IIASA release 1.0 average IPCC C3: "Likely below 2°C" scenarios
Emissions do not contain industry process emissions or land use and natural sinks

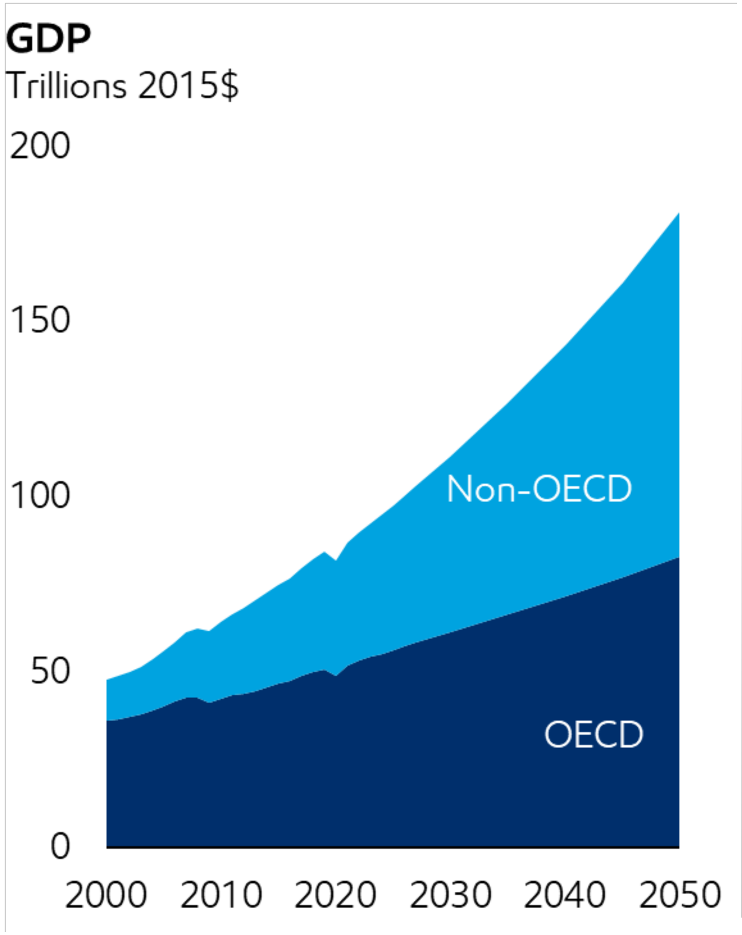
Population grows by >1.5 billion as GDP doubles

Developing countries' income doubles to $30,000 but remains well below developed-country levels

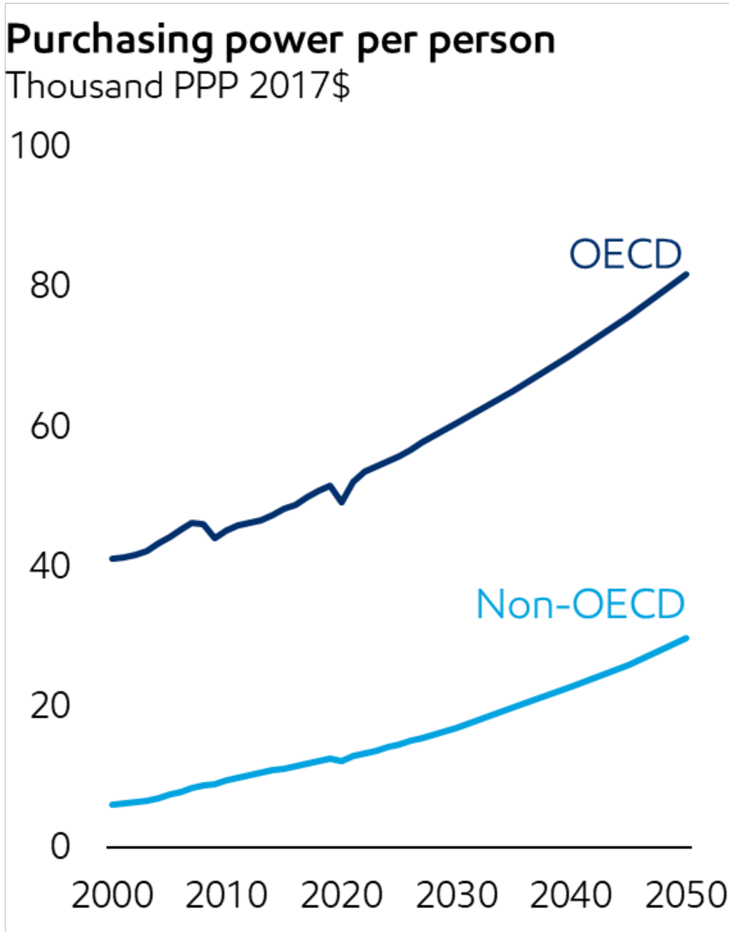
20% Increase in global population 2024-2050



~2x Increase in global GDP 2024-2050



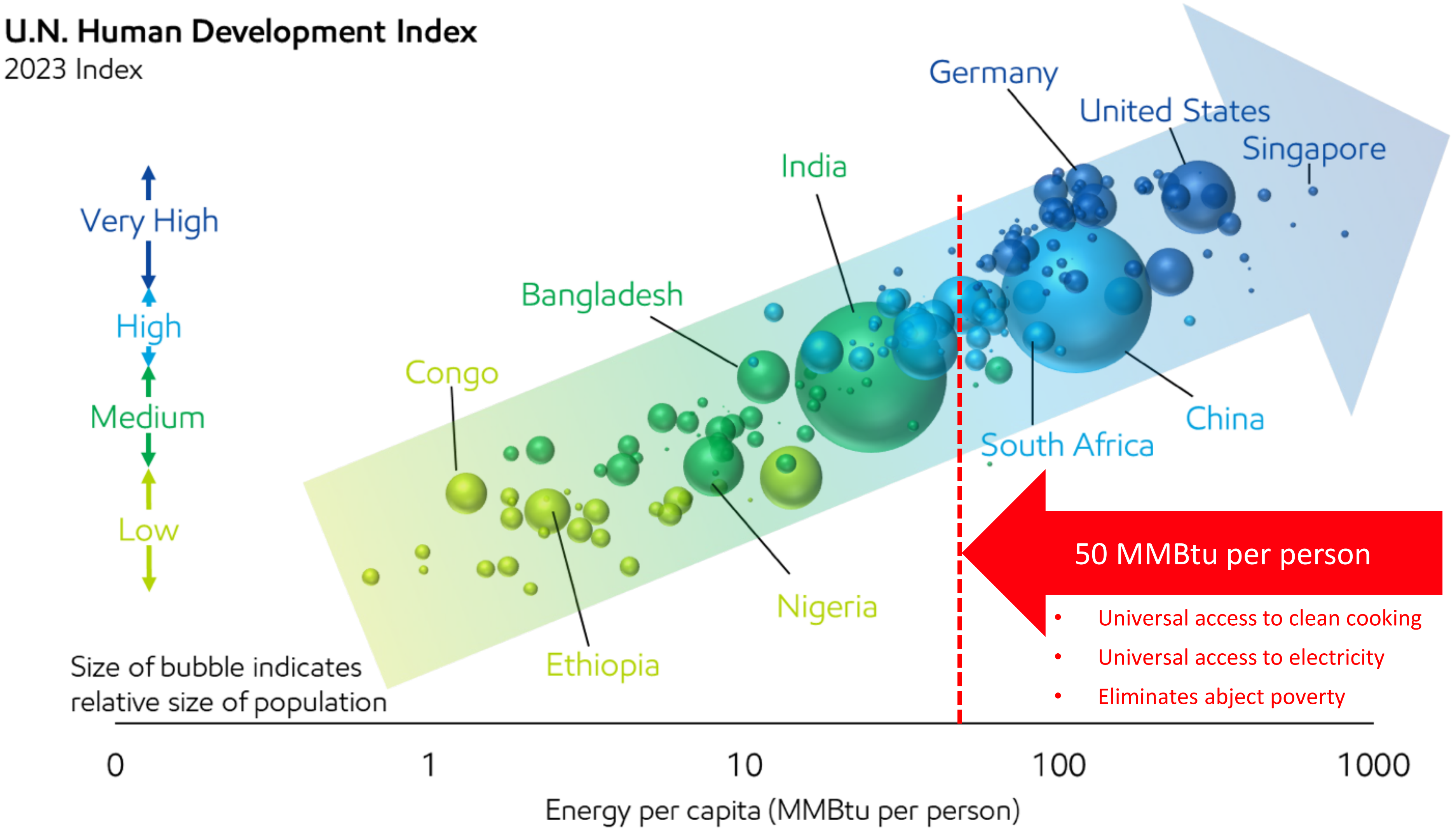
80% Increase in per capita income 2024-2050



OECD: Organization for Economic Cooperation and Development, a group of more affluent democracies with market-based economies that promotes economic growth.

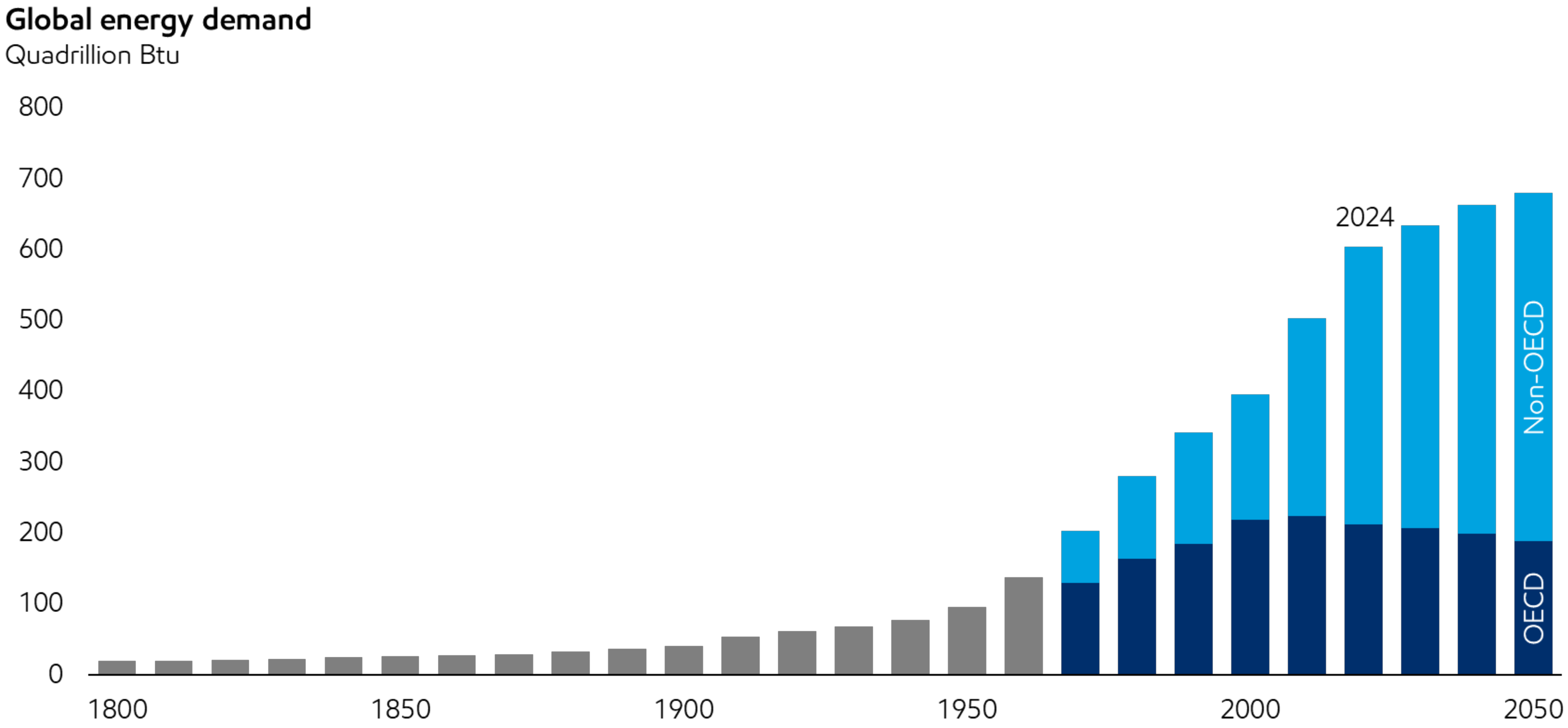
Energy improves quality of life

More than 4 billion people live below modern standards for life expectancy, education, and income



Sources: U.N. Human Development Reports, EIA, ExxonMobil analysis

Developing countries use 25% more energy as living standards improve

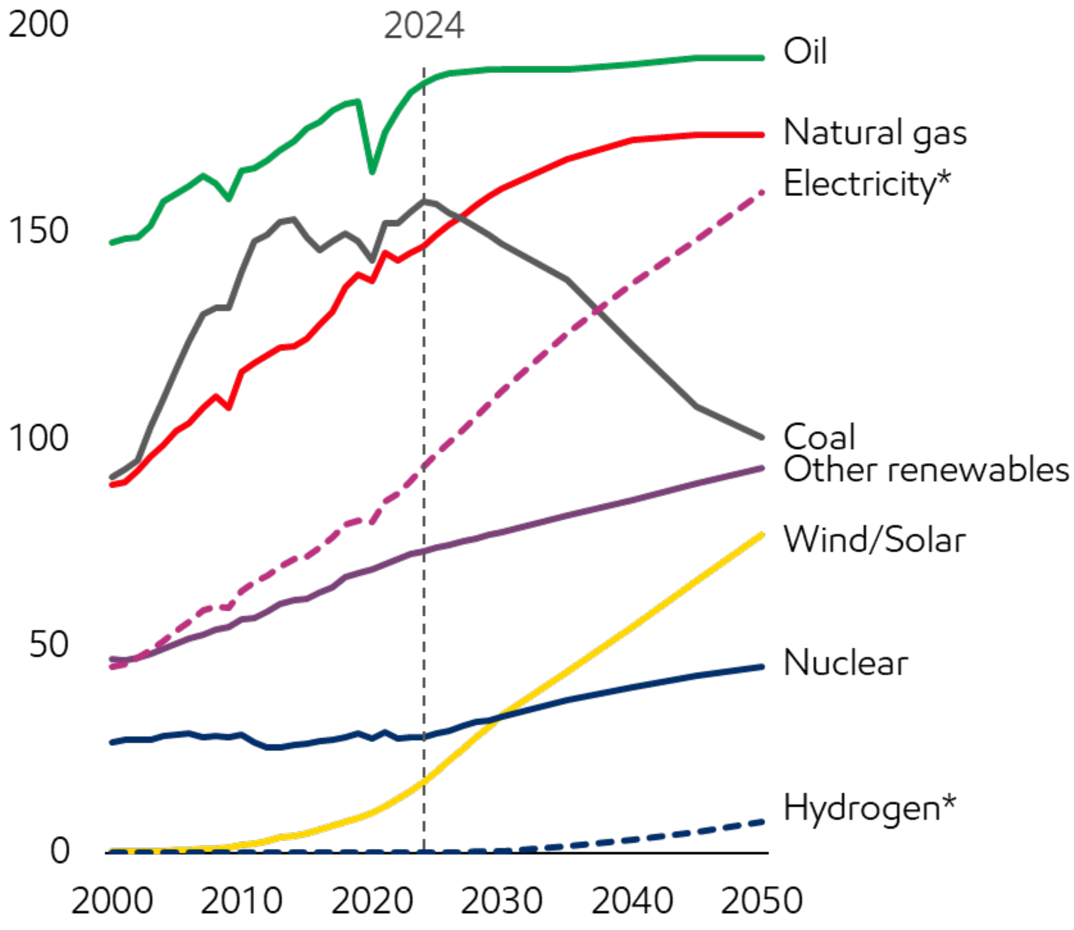


Sources: Smil, Energy Transitions (1900-1960), 2024 ExxonMobil Global Outlook (1970-2050)

Global energy mix shifts to lower-emission fuels

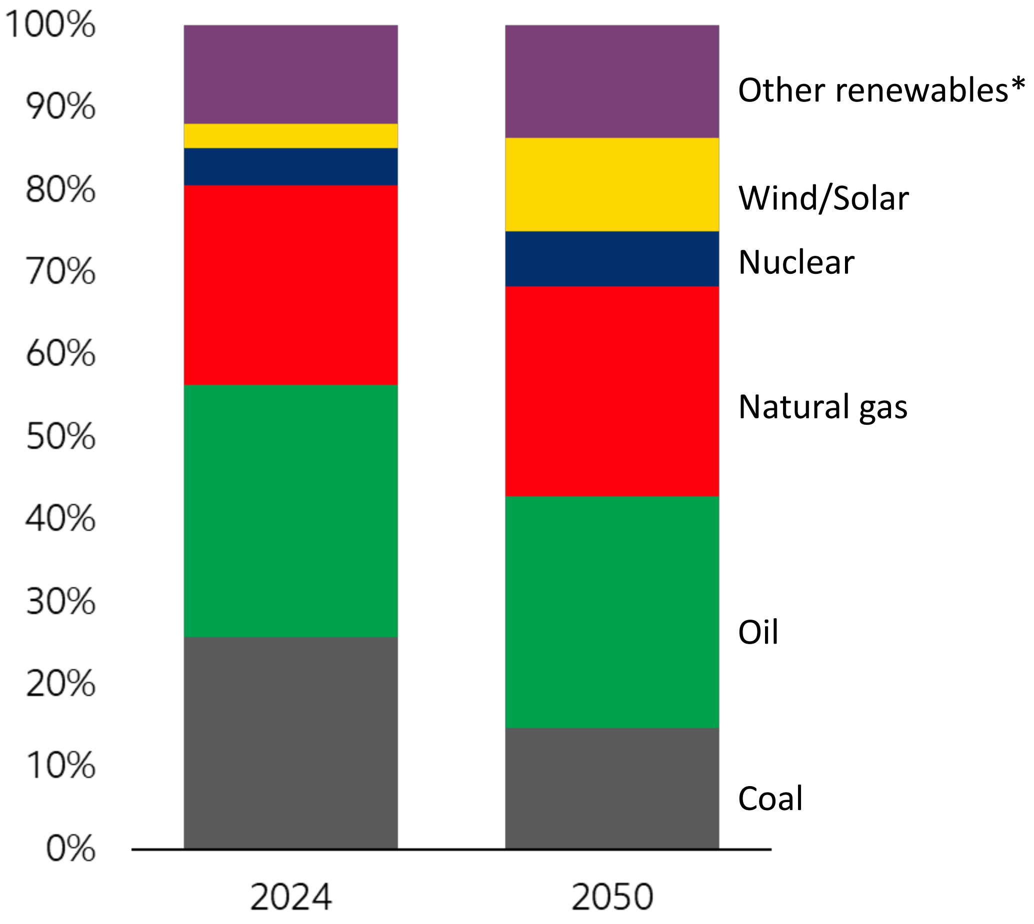
Global energy demand by fuel

Primary energy - Quadrillion Btu



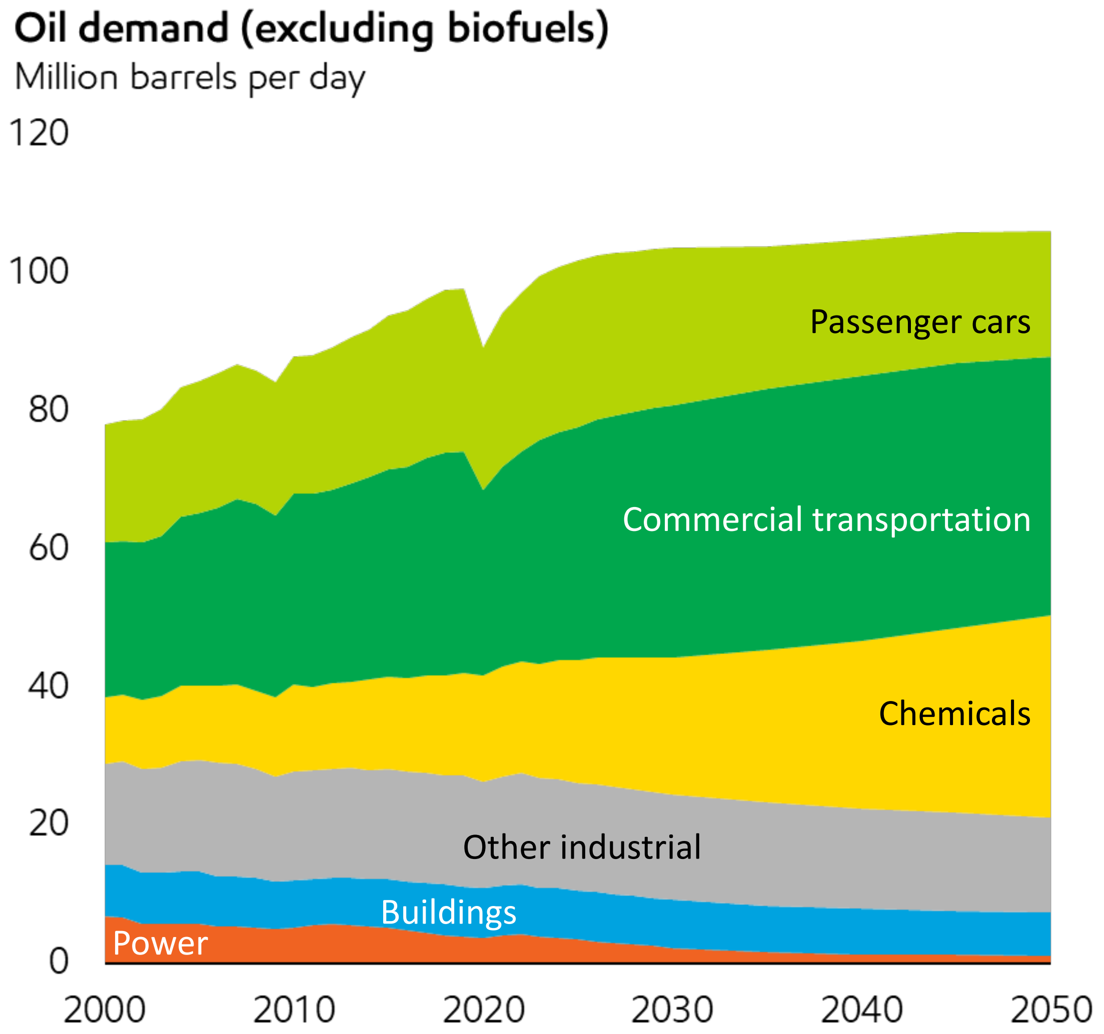
*Electricity and Hydrogen are secondary energies derived from the primary energies shown

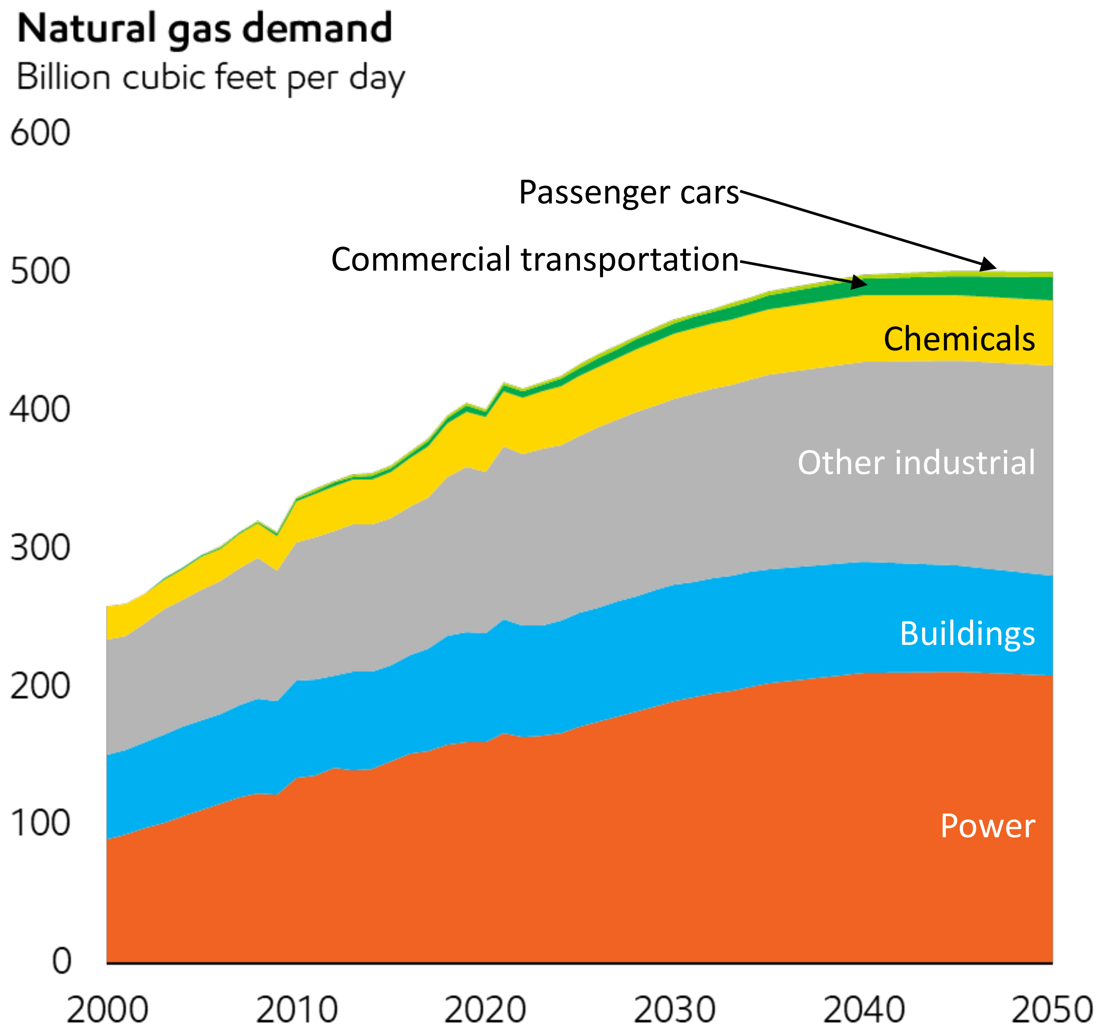
Percent of primary energy



*Includes biomass, biofuels, hydropower, geothermal

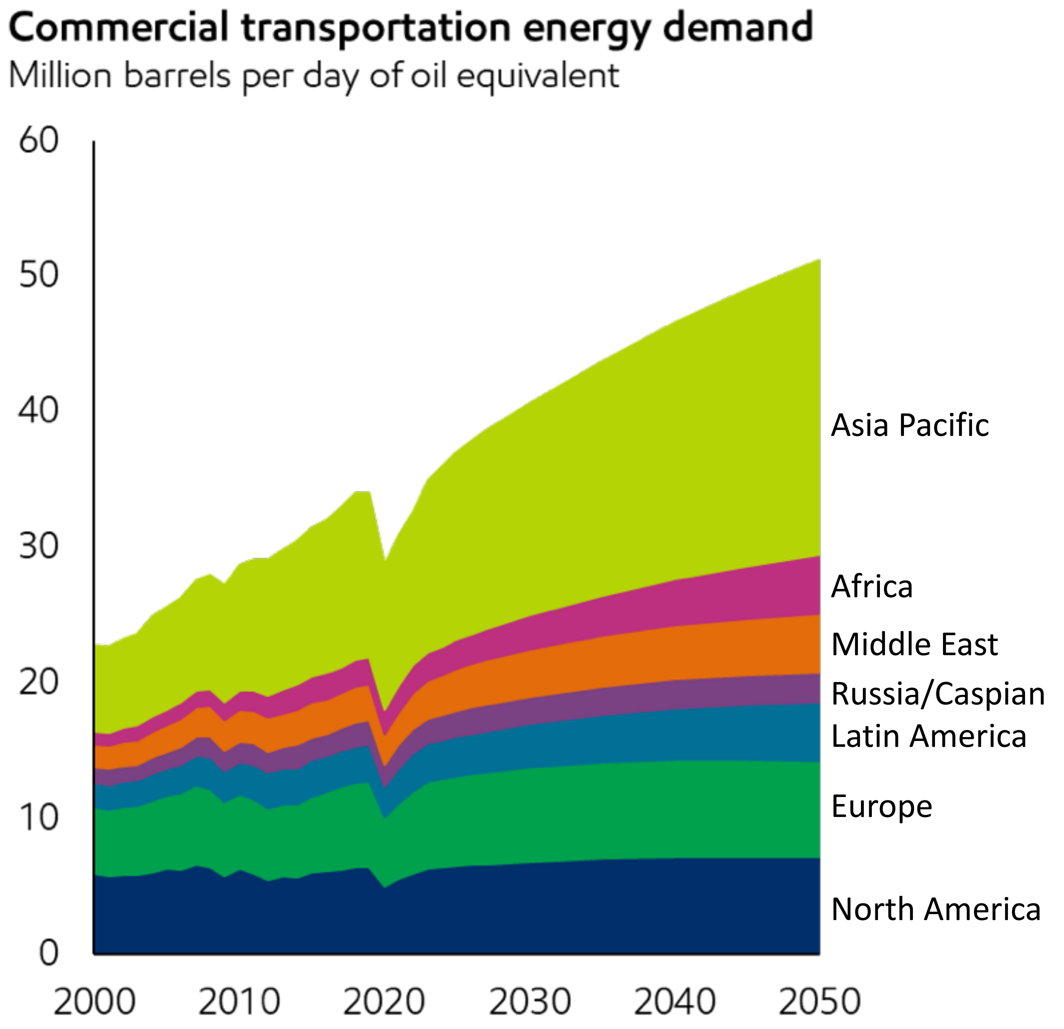
Commercial transport and chemicals drive oil demand while industrial activity and power drive demand for natural gas

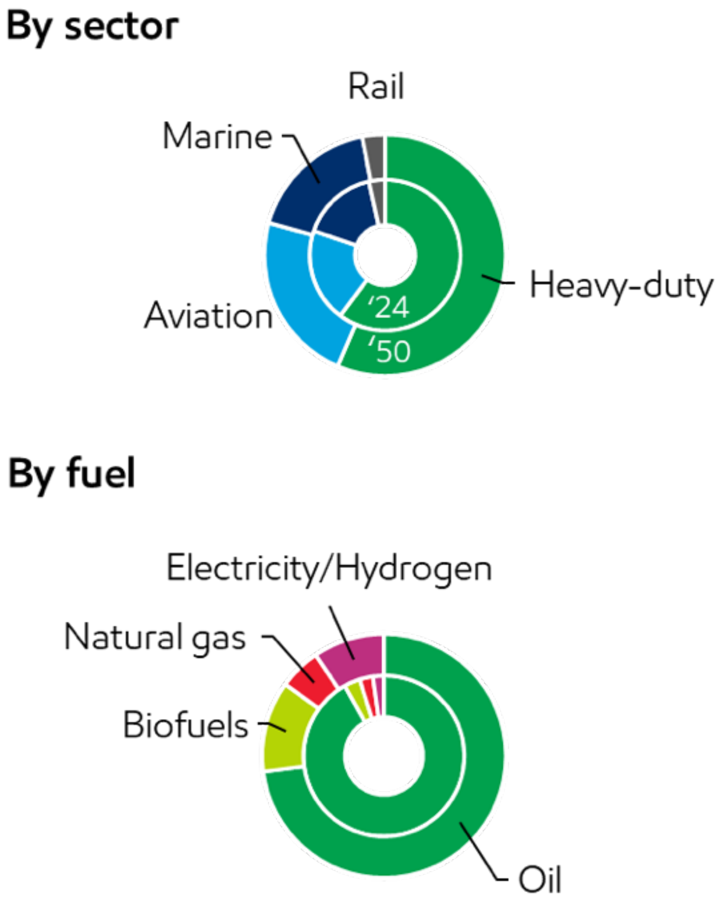




All modes of commercial transportation grow

Global commerce relies on moving essential supplies and services across and between continents

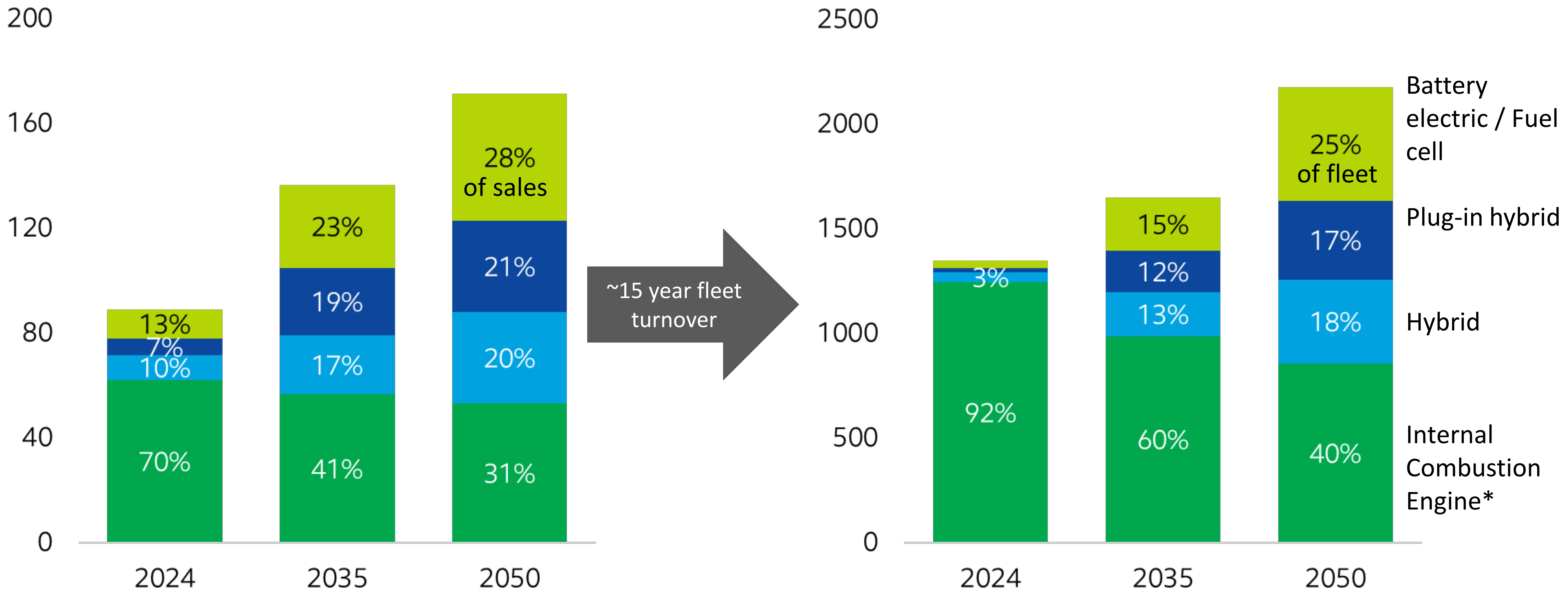




Alternate vehicle penetration into fleet lags new car sales

Light Duty Vehicle *New Car Sales*
Million of vehicles

Light Duty Vehicle *Fleet*
Million of vehicles

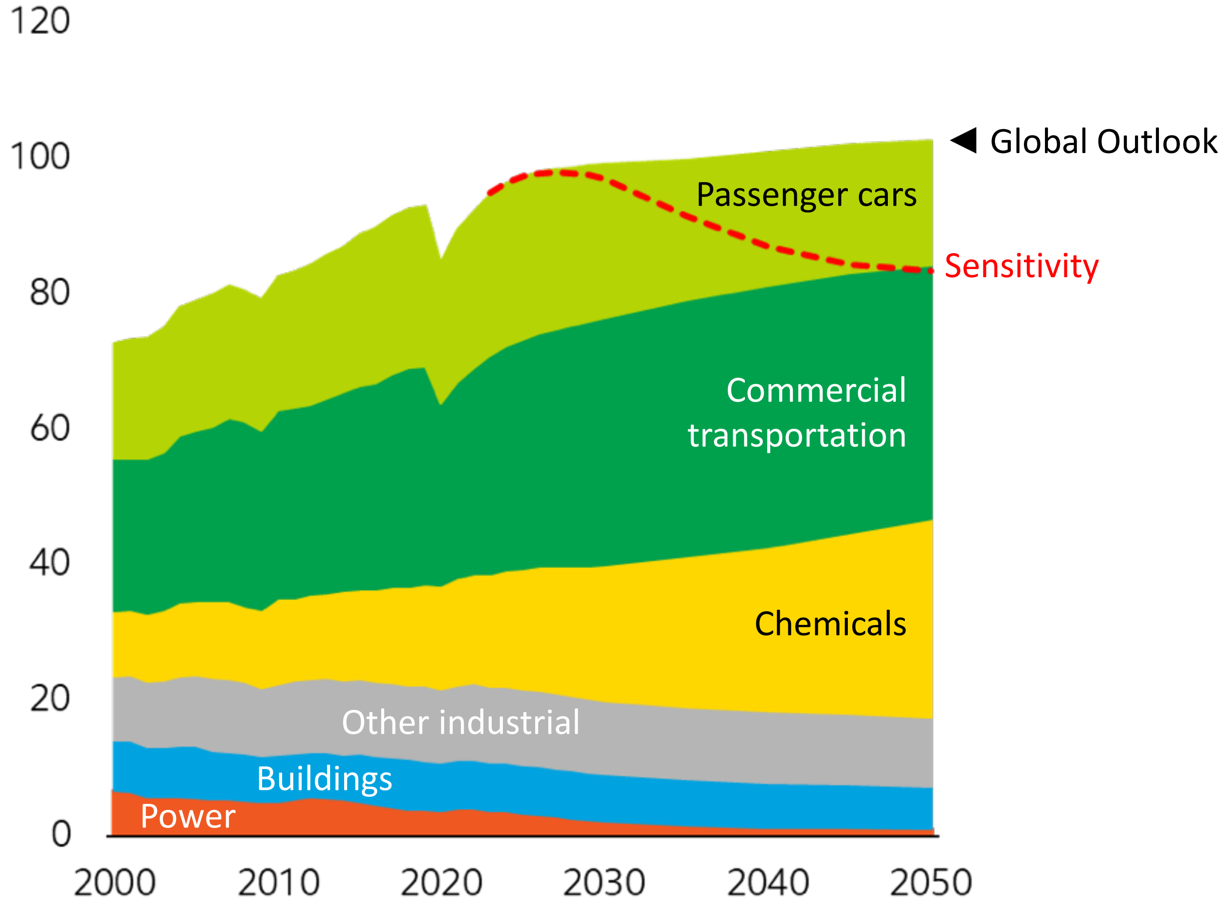


*Includes gasoline, diesel, and CNG/LPG vehicles

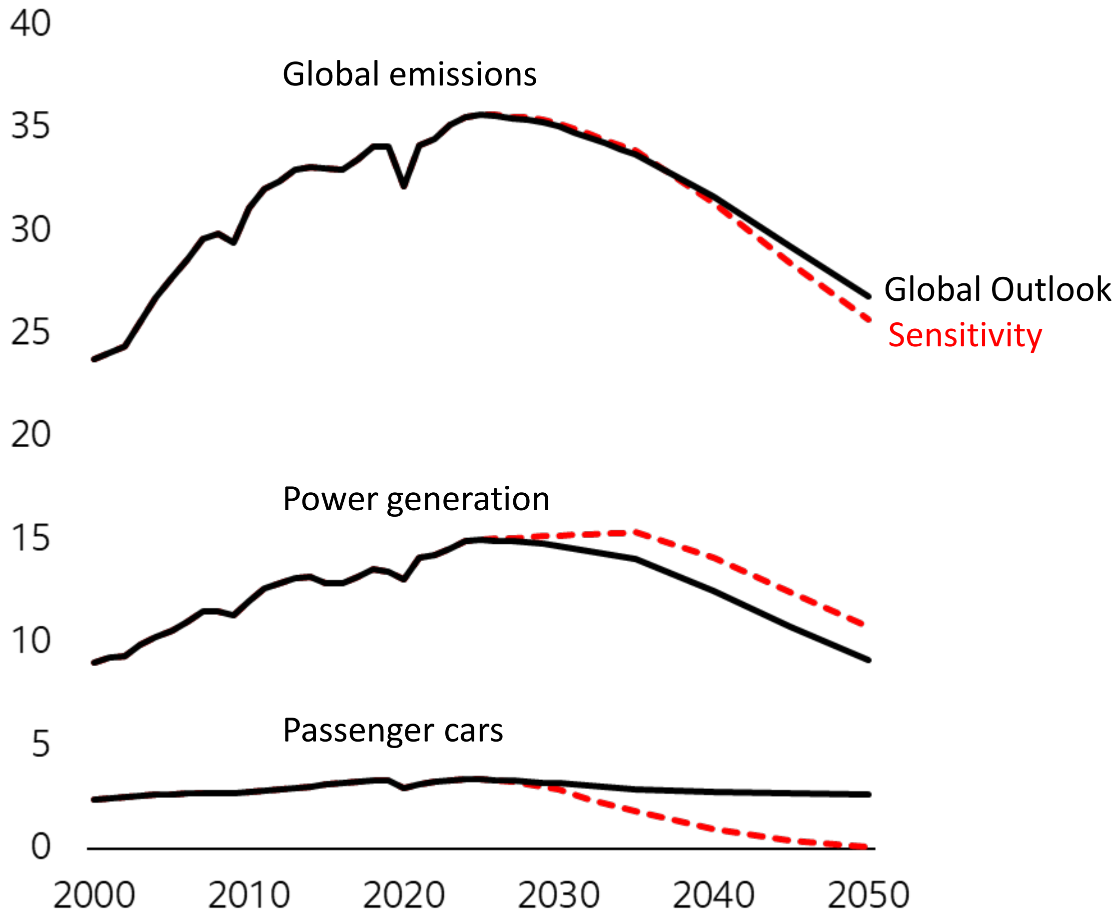
Oil demand with 100% BEV consistent with recent levels[1]

Liquids demand around ‘10 levels in sensitivity; industry investment ~$300B/yr[2] ; marginal impact on emissions

Oil excl. biofuels demand back to '10 levels in sensitivity
Million barrels per day



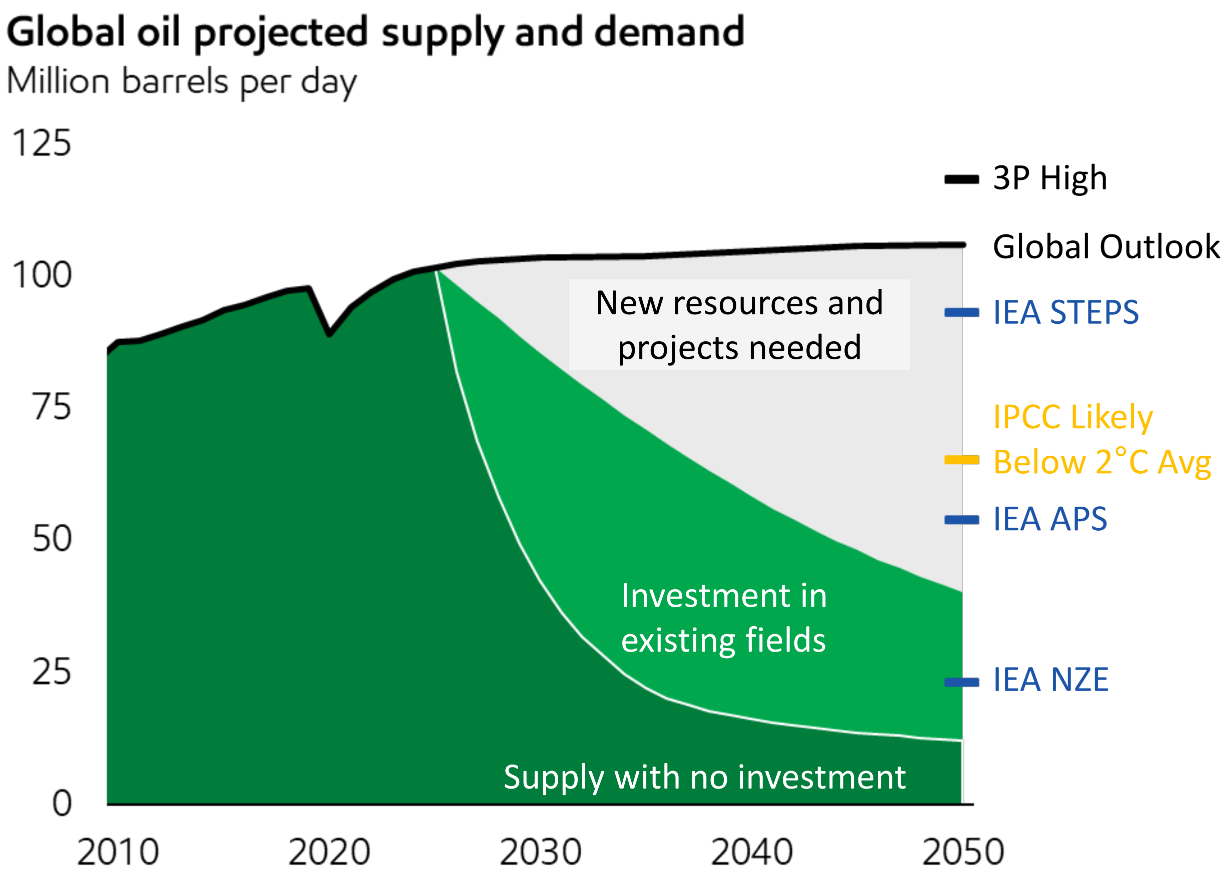
Energy-related CO_2 emissions down 5% in sensitivity
Billion tonnes



This reflects an EM hypothetical sensitivity; not a base case
2 Based on IEA world energy Investment report : IEA (2023), World Energy Investment 2023, IEA, Paris https://www.iea.org/reports/world-energy-investment-2023, Licence: CC BY 4.0

Significant new oil supplies needed to meet society's demand

Supply virtually disappears without continued investment to sustain existing production and develop new sources



- Decline rates of current oil-producing fields are biggest driver for new supply needed
- Hypothetical case of no industry investment ⇒ ~15%/yr decline (~15 MBD supply loss in year 1)
- Continued investment in existing fields reduces loss ⇒ ~4%/yr decline (~4 MBD of supply loss)
- New supply sources critical to fill gap and prevent shortages, inflationary pressure, and economic

Oil excludes biofuels
Sources (see reference list): IPCC AR6 Scenarios Database hosted by IIASA release 1.0 average of 306 IPCC C3: "Likely below 2°C" scenarios
IEA scenarios from '24 WEO; 3rd Party high 2025 OPEC WOO Reference Case
Decline rates based on 10-yr CAGR

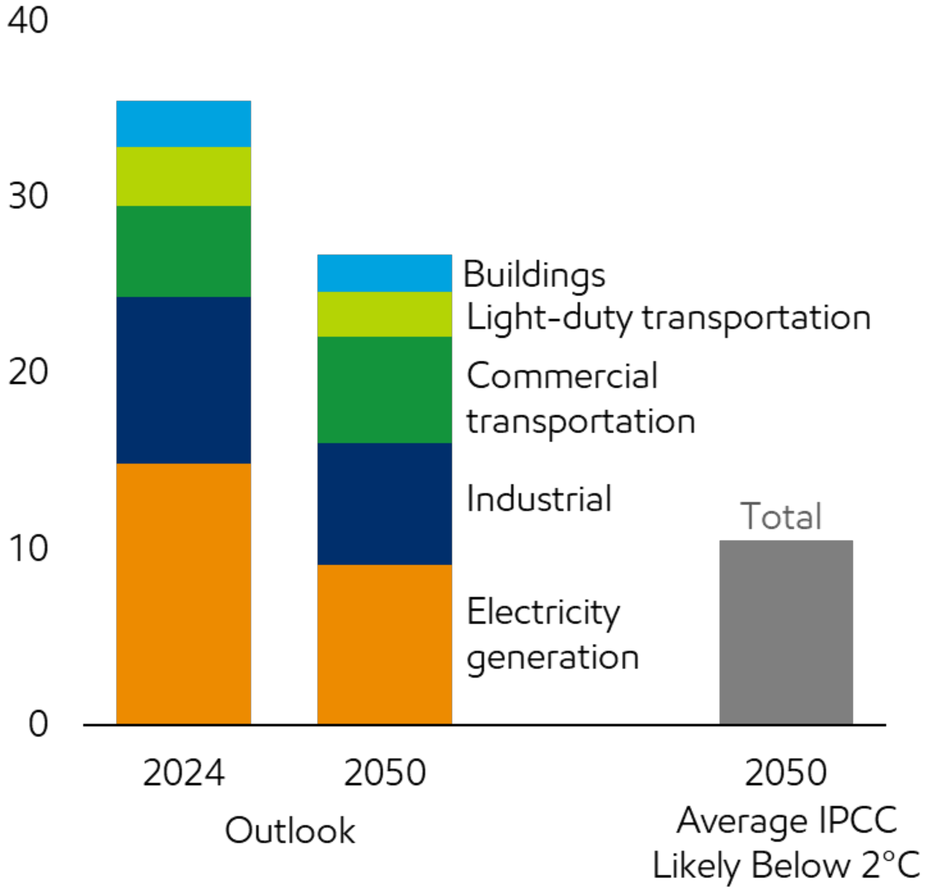
STEPS = Stated Energy Policies Scenario
APS = Announced Pledges Scenario
NZE = Net Zero Emissions Scenario

Emissions projected to fall by 25% but more progress is needed

A rapid scaling of emerging technologies such as carbon capture and storage will be required

Energy-related emissions

CO_2 Billion metric tons



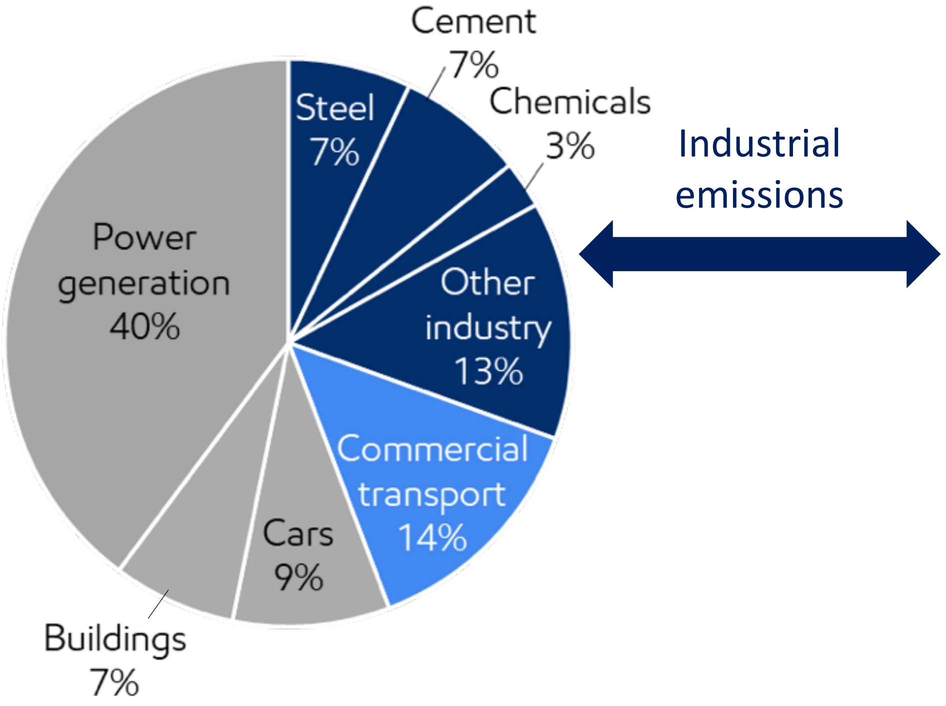
	Deployment History		Projected '25-'30[1]	
	'19 – '24 Average	'24 Actual	Global Outlook[2]	IPCC Likely Below 2°C[2]
Solar (GW/yr utility)[3]	160	335	280	375
Wind (GW/yr)[3]	95	125	115	140
Nuclear (GW/yr)[3]	0	4	10	15
Carbon capture (MTA/yr)[4]	1.5	<1	25	135
Low-carbon H_2 (MTA/yr)[4]	0.2	0.2	0.7	2

Source: IPCC: AR6 Scenarios Database hosted by IIASA release 1.0 average; IPCC C3: "Likely below 2°C" scenarios; ExxonMobil analysis
Emissions do not contain industry process emissions or land use and natural sinks

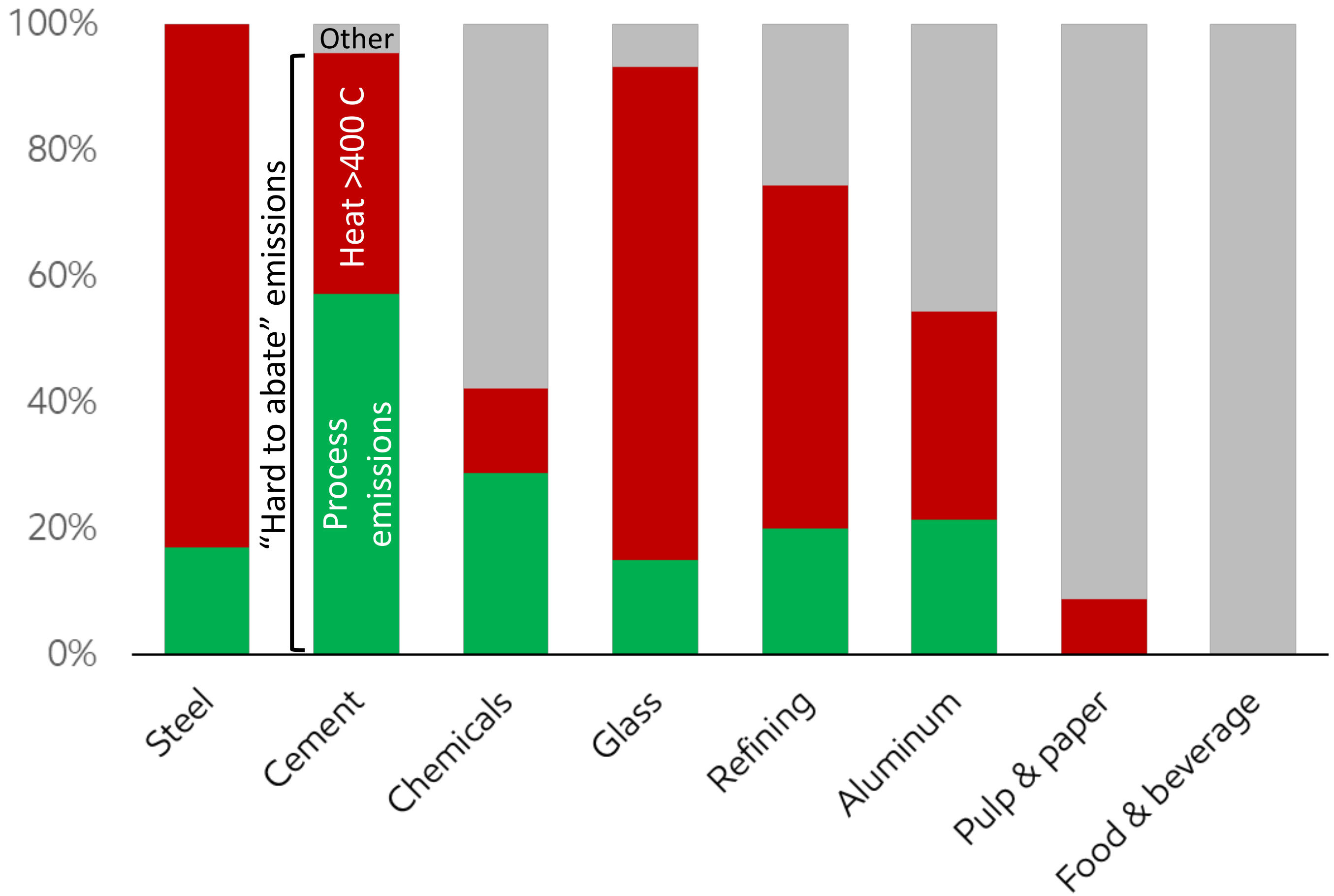
Solutions are needed for hard-to-decarbonize sectors

Industry and commercial transport make up ~45% of global emissions

World 2024 CO_2 Emissions (37.5 GT CO_2)
Includes energy-related and process emissions



Share of industrial emissions by source for key sectors
US, 2021

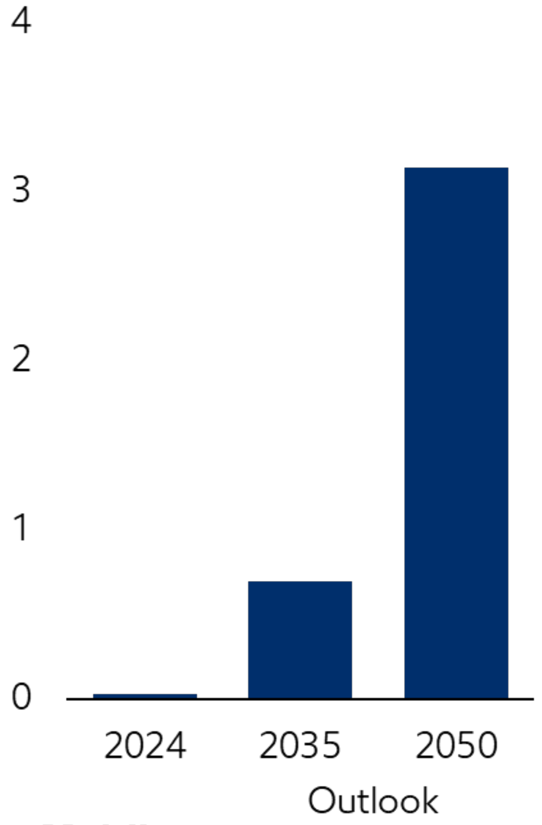


Source (see reference list): DOE Liftoff Report – Industrial Decarbonization; Electricity excludes off-site power generation

CCS and lower-emission fuels essential for hard-to-decarbonize sectors

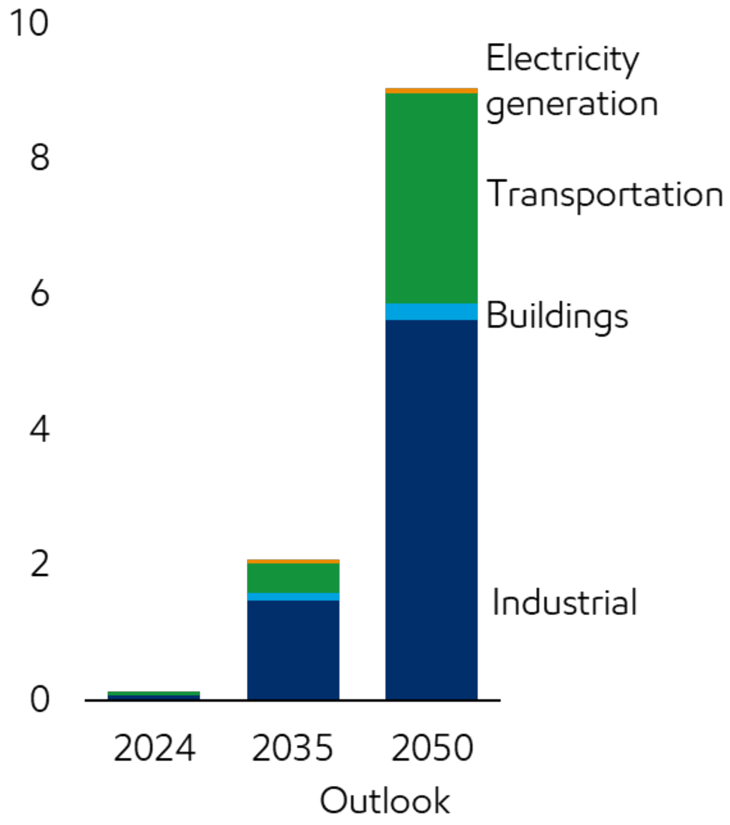
Carbon capture and storage

CO_2 Billion metric tons per year



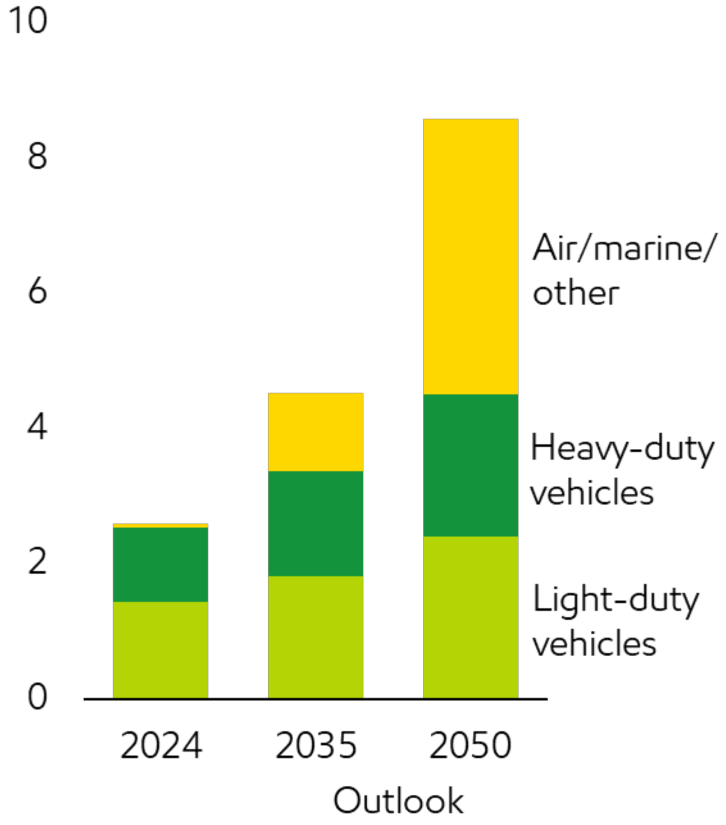
Low-carbon hydrogen-based fuel use

Quadrillion Btu



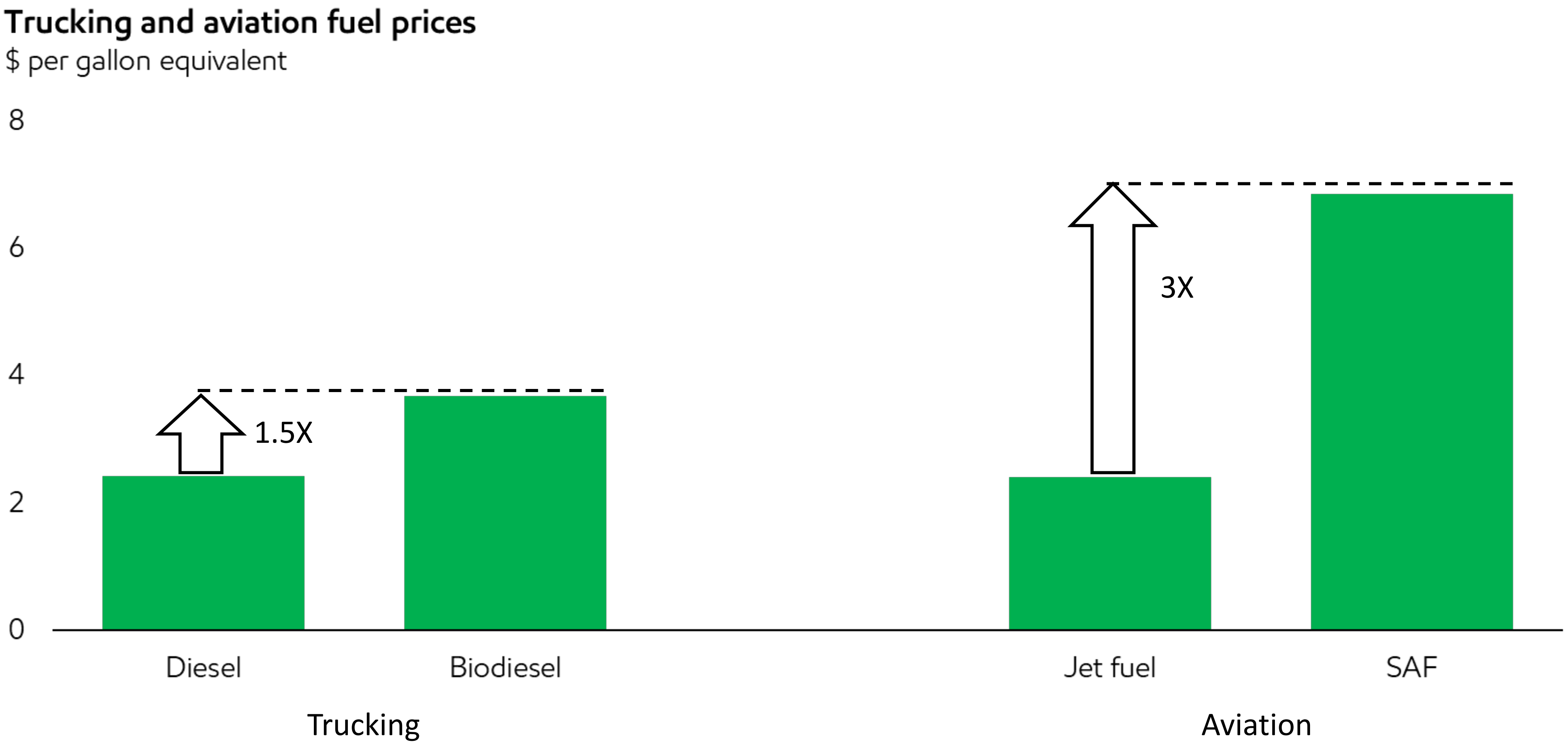
Biofuels use

Million barrels per day of oil equivalent



Lower-emission options come at a higher cost

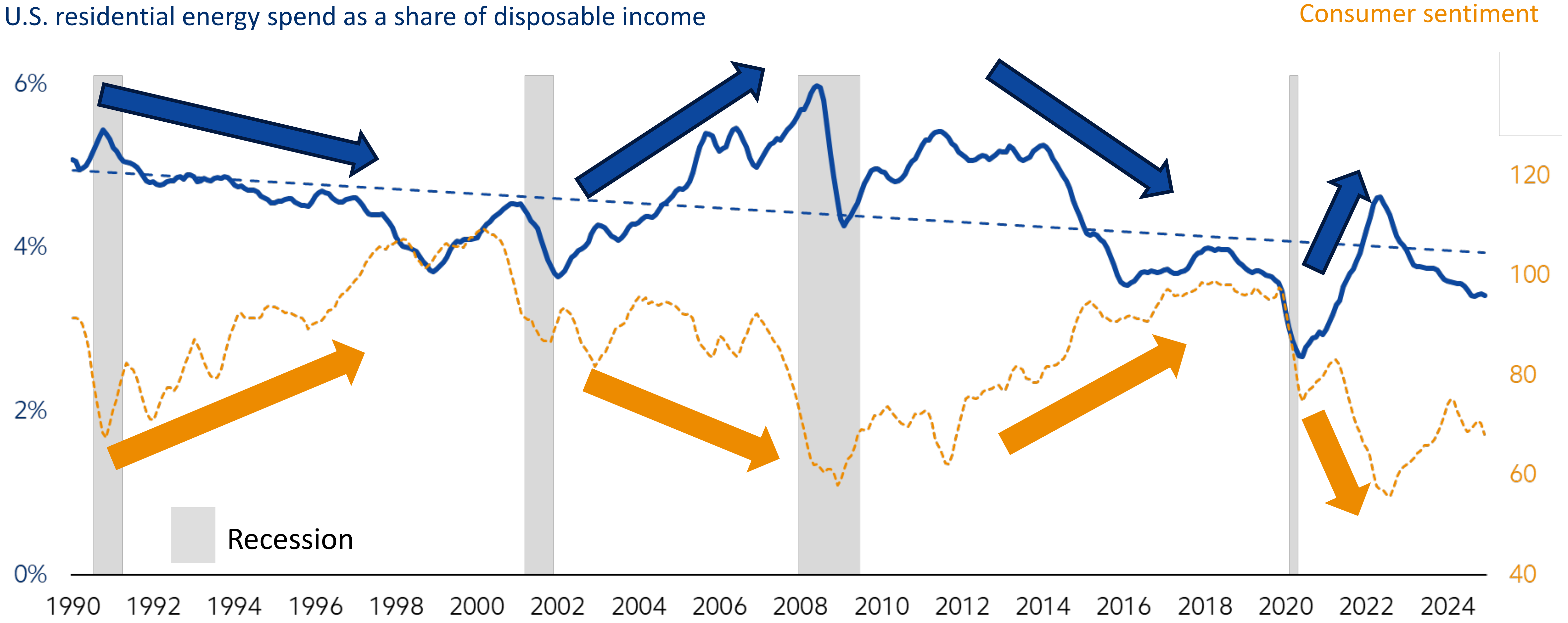
Countries will need to balance the pace of transition within fiscal and affordability constraints



Sources: Trucking from S&P, Aviation from European Union Aviation Safety Agency
Prices are European 2024 average
Gallon equivalent takes into account energy density differences between fuels

Affordability will drive the pace of any energy transition

Consumer sentiment falls when energy costs rise



Sources: Energy share of Disposal Income from US BEA (6-mo rolling average)
Consumer sentiment from UMichigan Consumer Sentiment 1966Q1 = 100
Recessions from National Bureau of Economic Research

Key enablers for a successful energy transition

Public policy support

- Policy designed to reduce carbon intensity of energy and products while avoiding energy price spikes

Market-driven solutions

- Markets must develop to naturally select the most cost-effective technologies, underpinned by a transparent and consistent accounting system

Technology advances

- Innovation to develop needed solutions
- "All of the above" technology approach for the most cost-efficient pathway

Explore more

ExxonMobil
Global Outlook:
Our view to 2050


Thank you