
International Energy Outlook 2010

With Projections to 2035

Center for Strategic and International Studies
May 25, 2010
Washington, DC

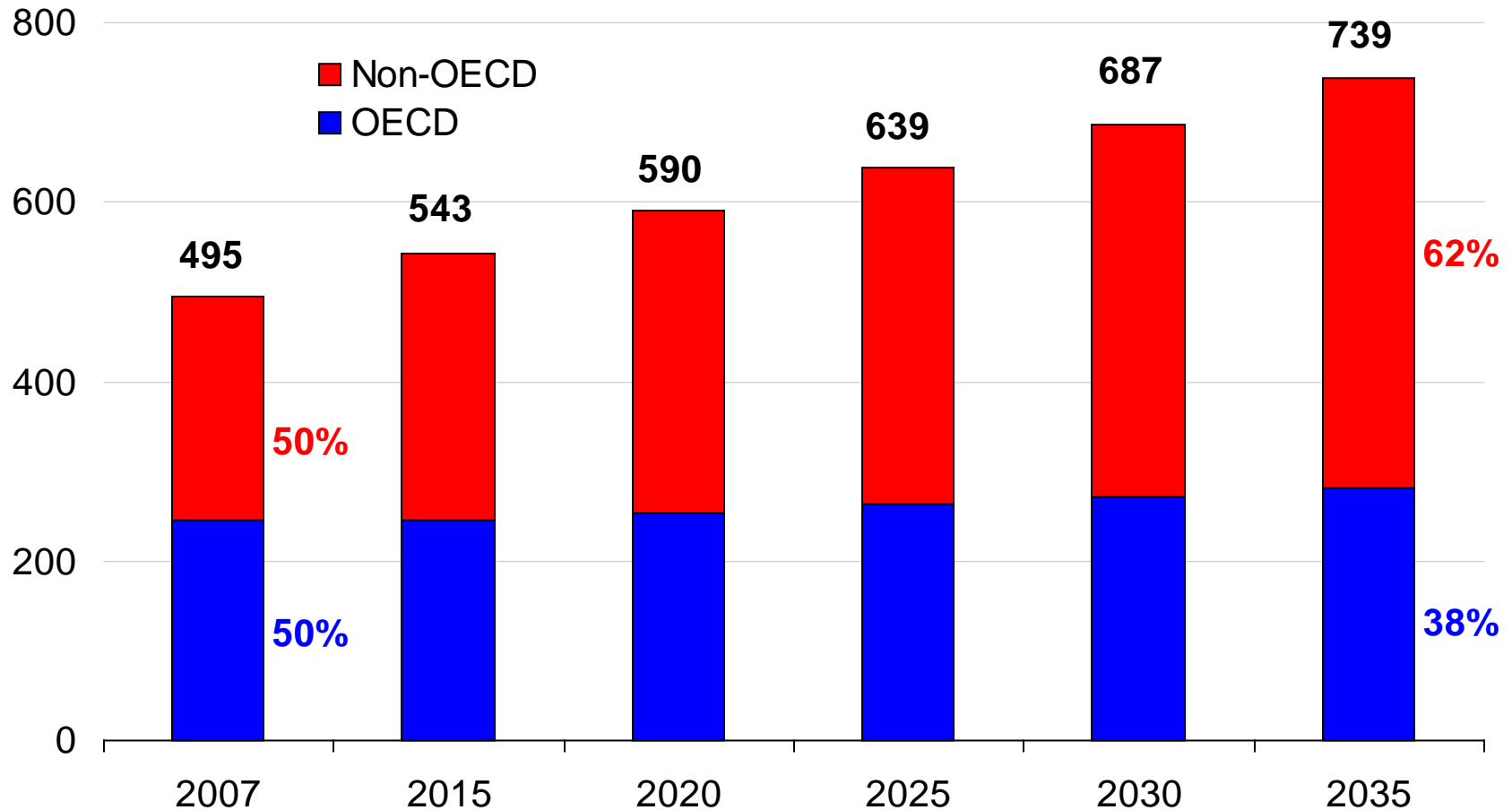
Howard Gruenspecht, Deputy Administrator



U.S. Energy Information Administration
Independent Statistics and Analysis

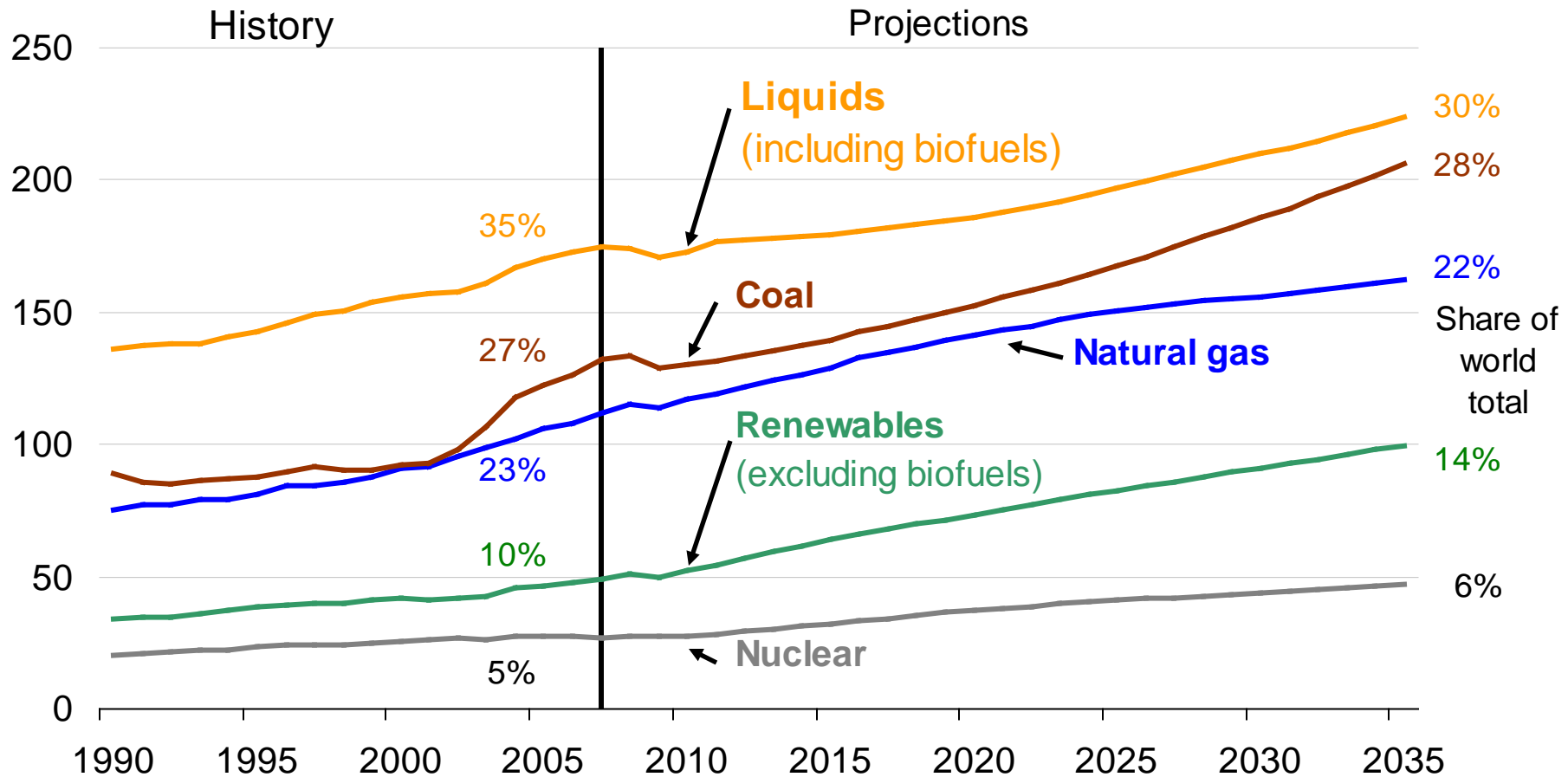
Non-OECD countries account for 86% of the increase in global energy use

energy consumption
quadrillion Btu



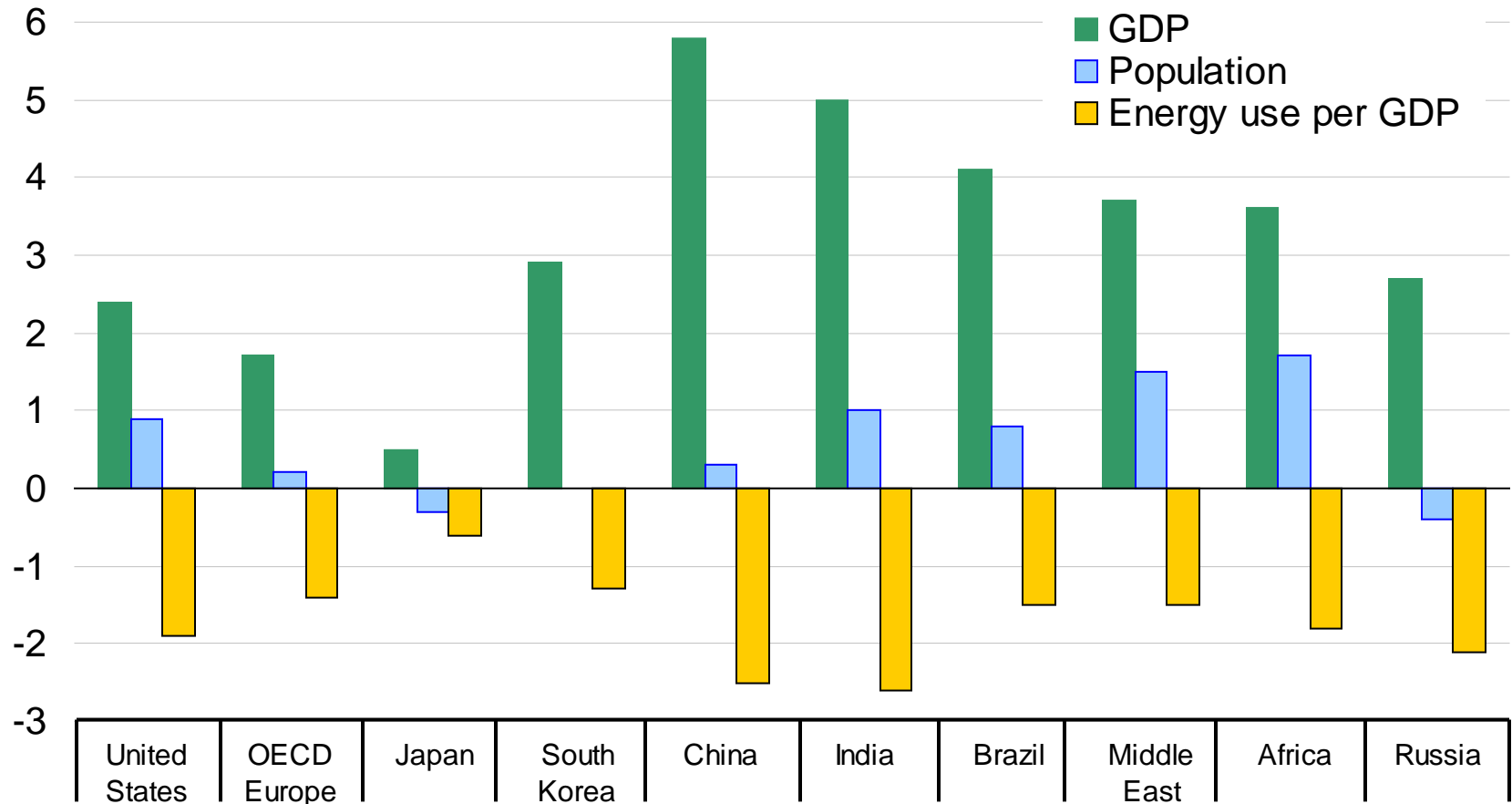
Renewables are the fastest growing energy source (but from a relatively small base)

world primary energy consumption
quadrillion Btu



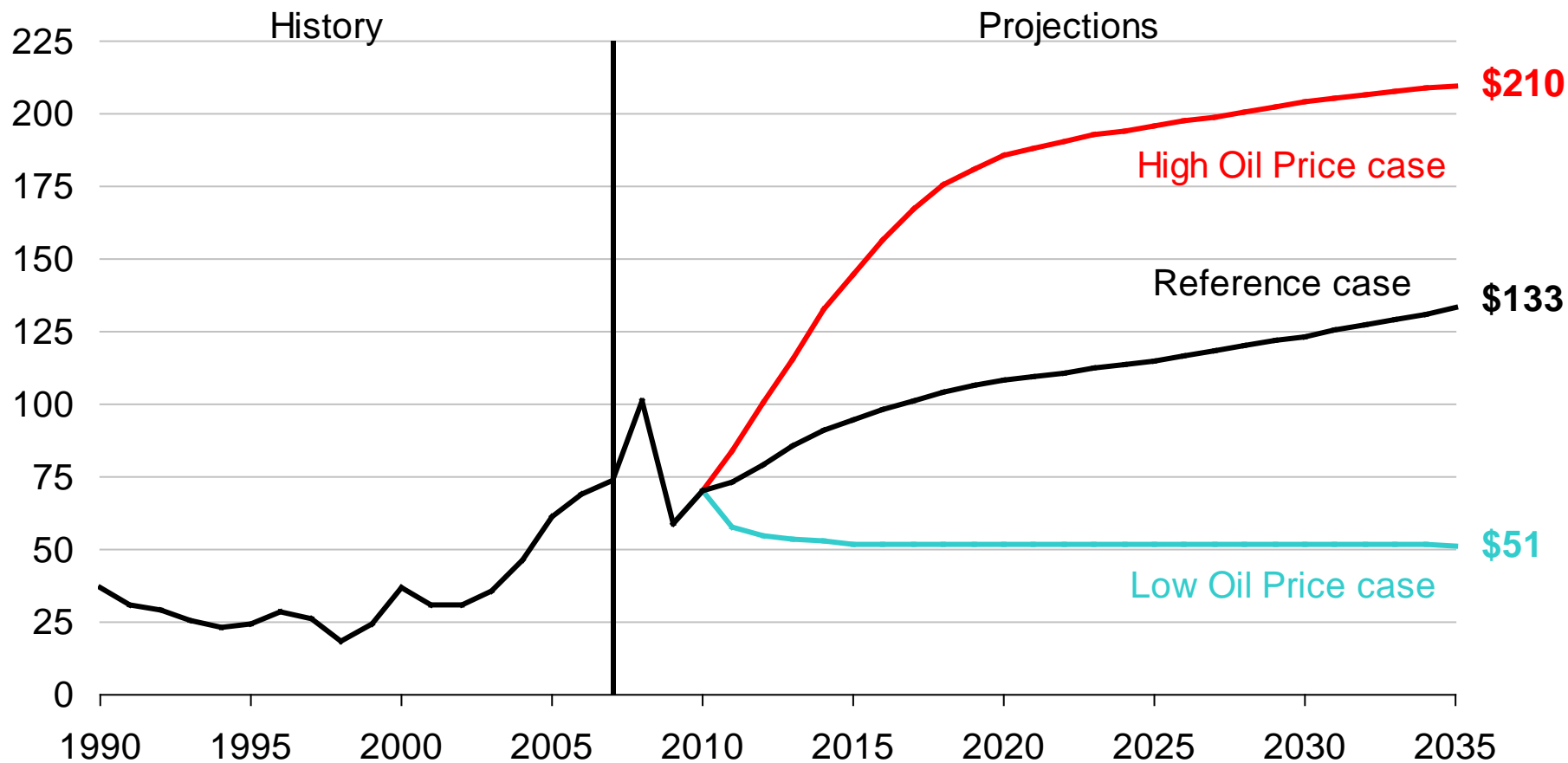
Economic activity and population drive increases in energy use; energy intensity improvements moderate this trend

average annual change (2007-2035)
percent per year



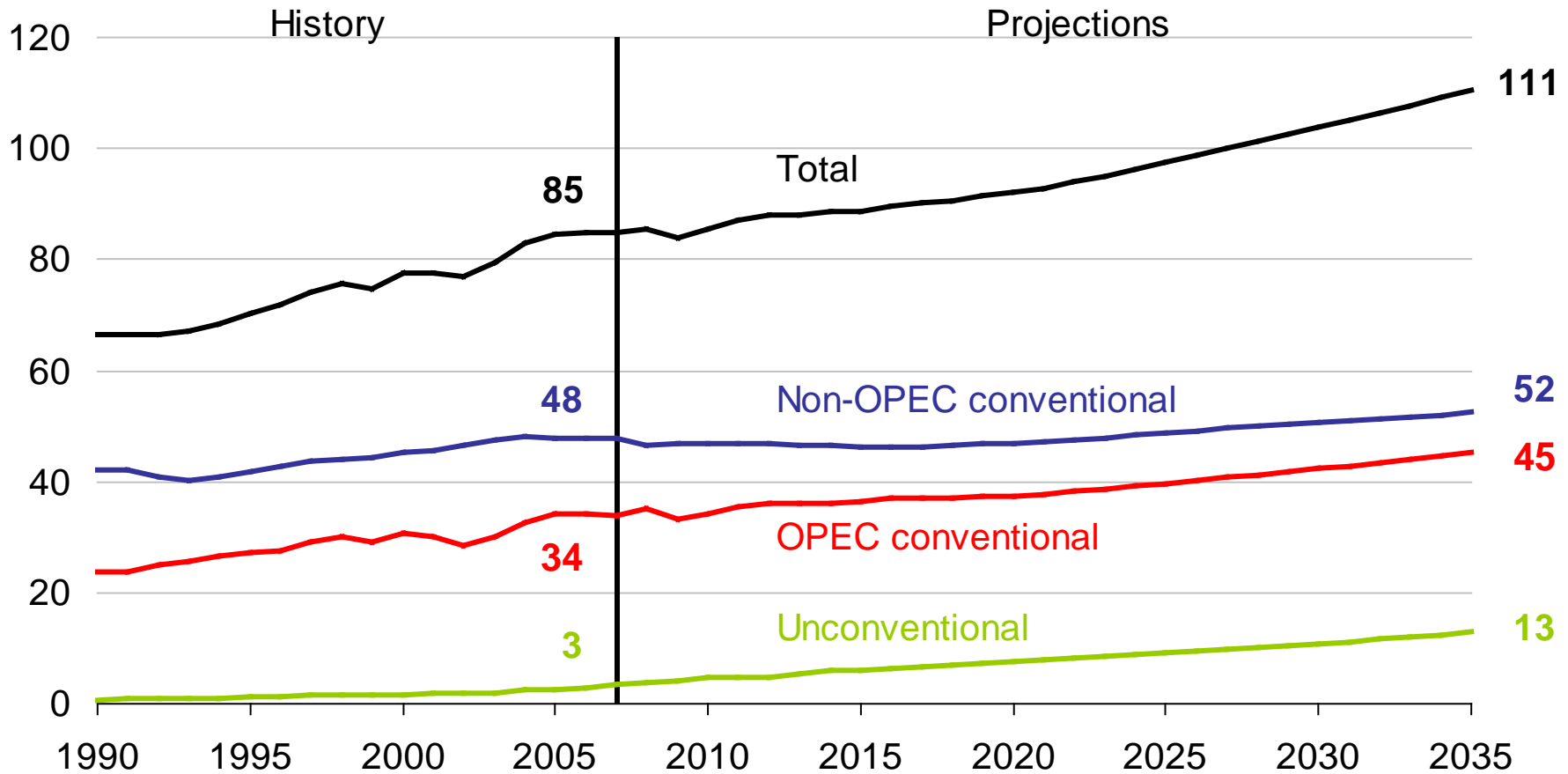
The IEO reflects uncertainty in oil prices through a wide set of price cases

light, sweet crude oil price
2008 dollars per barrel



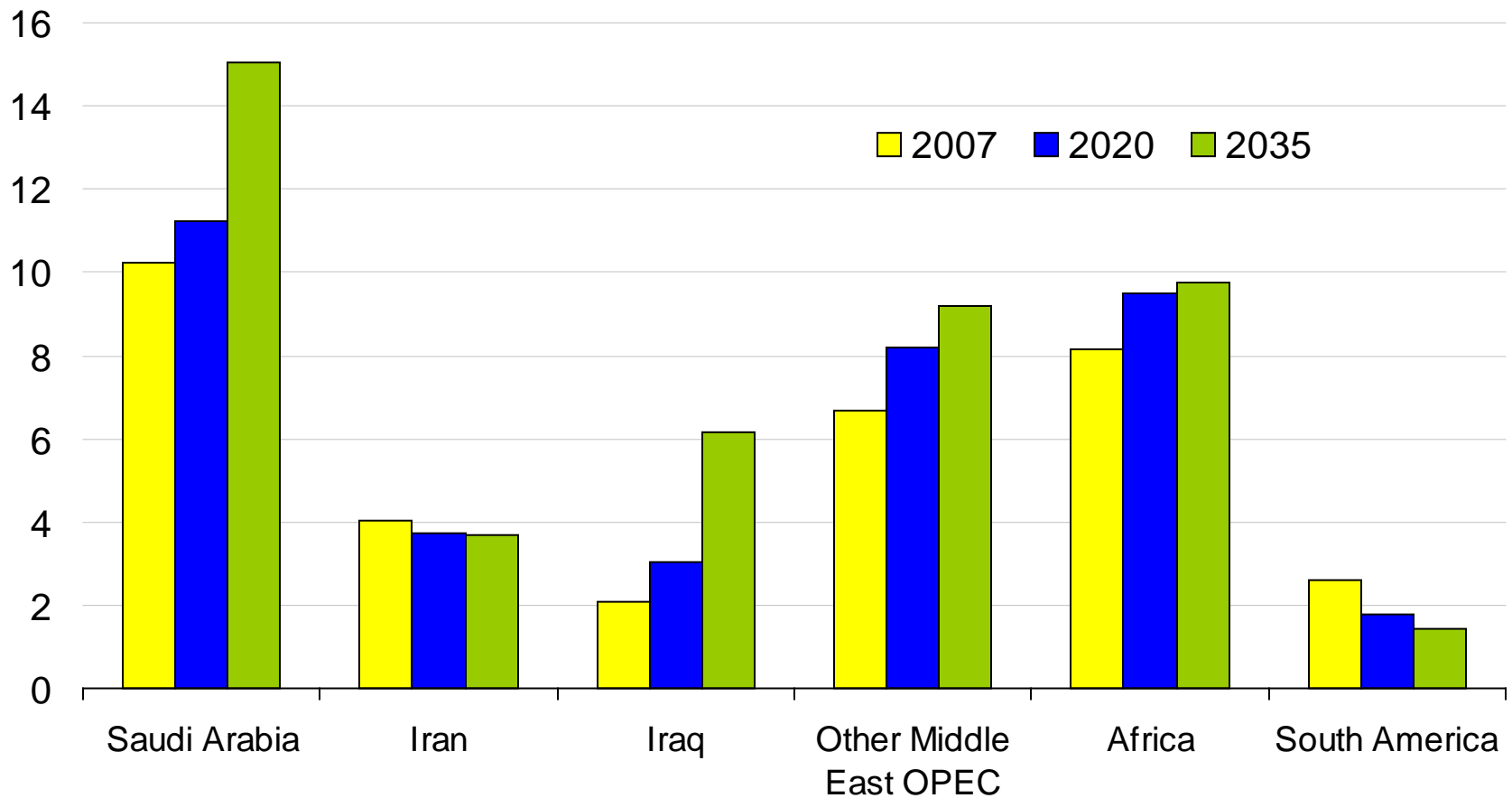
OPEC producers maintain an approximate 40% share of total liquids production in the Reference case

liquids production
million barrel per day



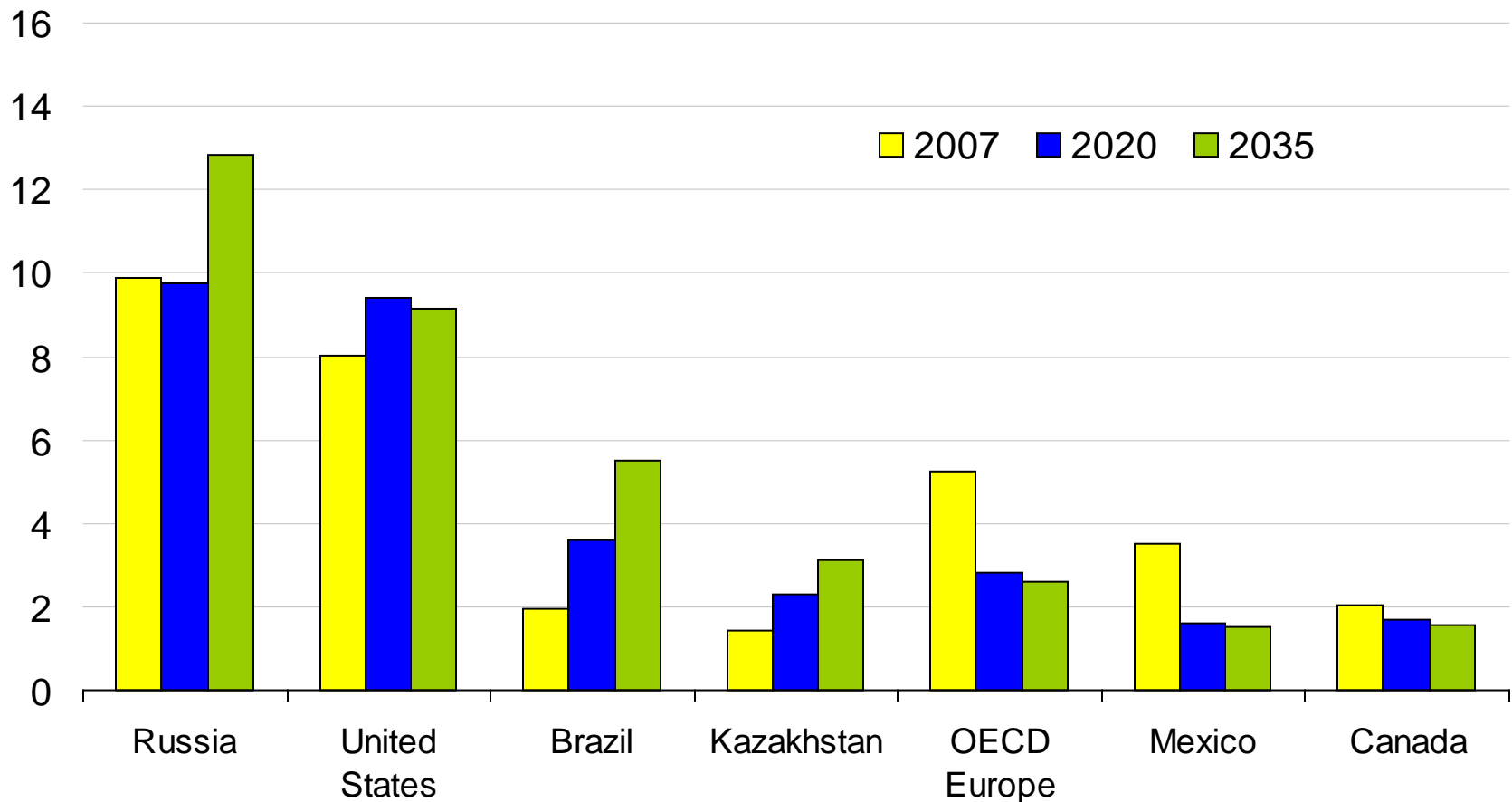
Growth in OPEC production of conventional liquids comes primarily from Saudi Arabia and Iraq

conventional liquids production
million barrels per day



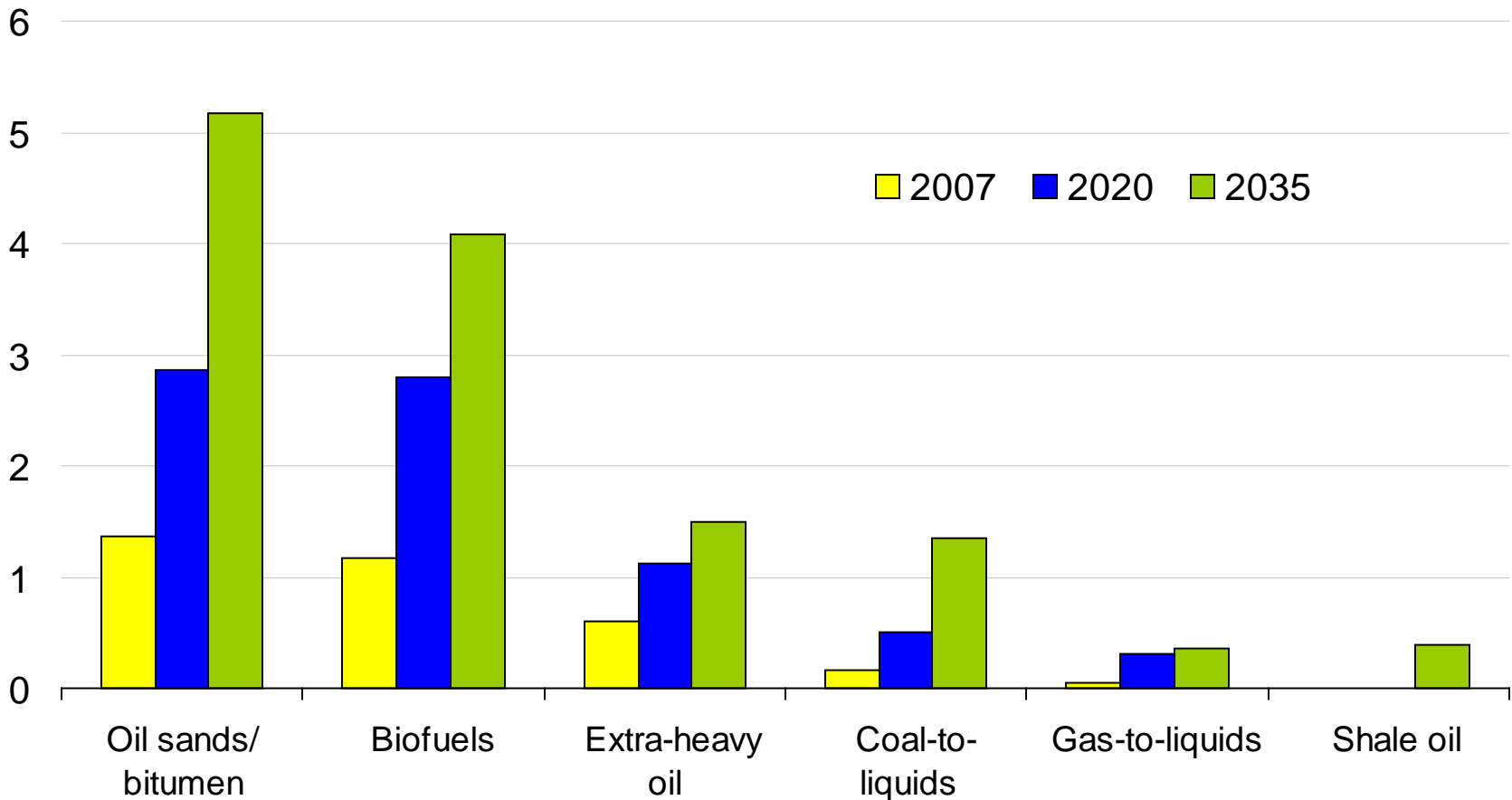
Brazil, Russia, Kazakhstan, and U.S. lead increases in non-OPEC conventional supplies

conventional liquids production
million barrels per day



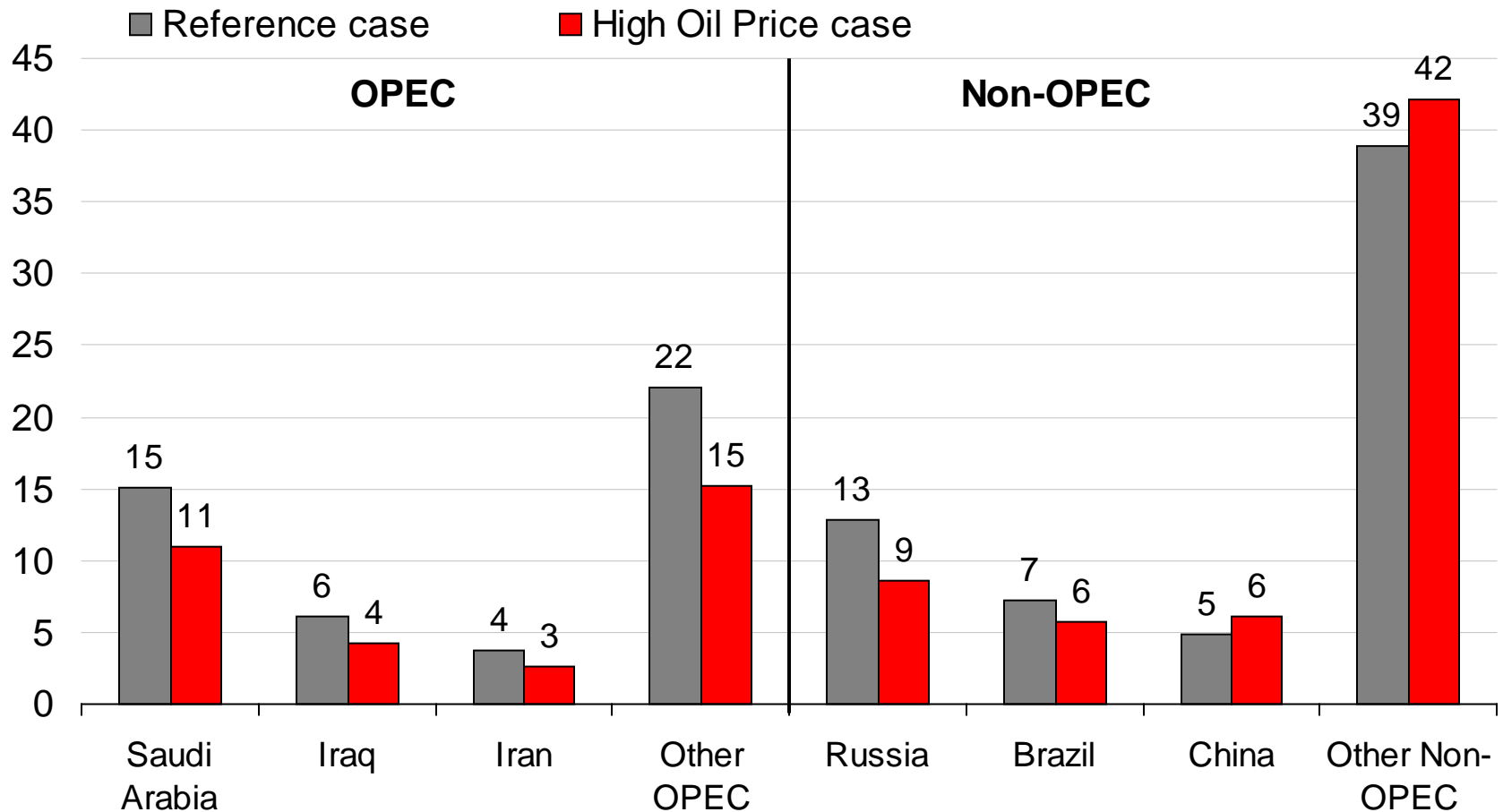
Canadian oil sands and biofuels account for 70% of the increase in total unconventional liquids

unconventional liquids production
million barrels per day



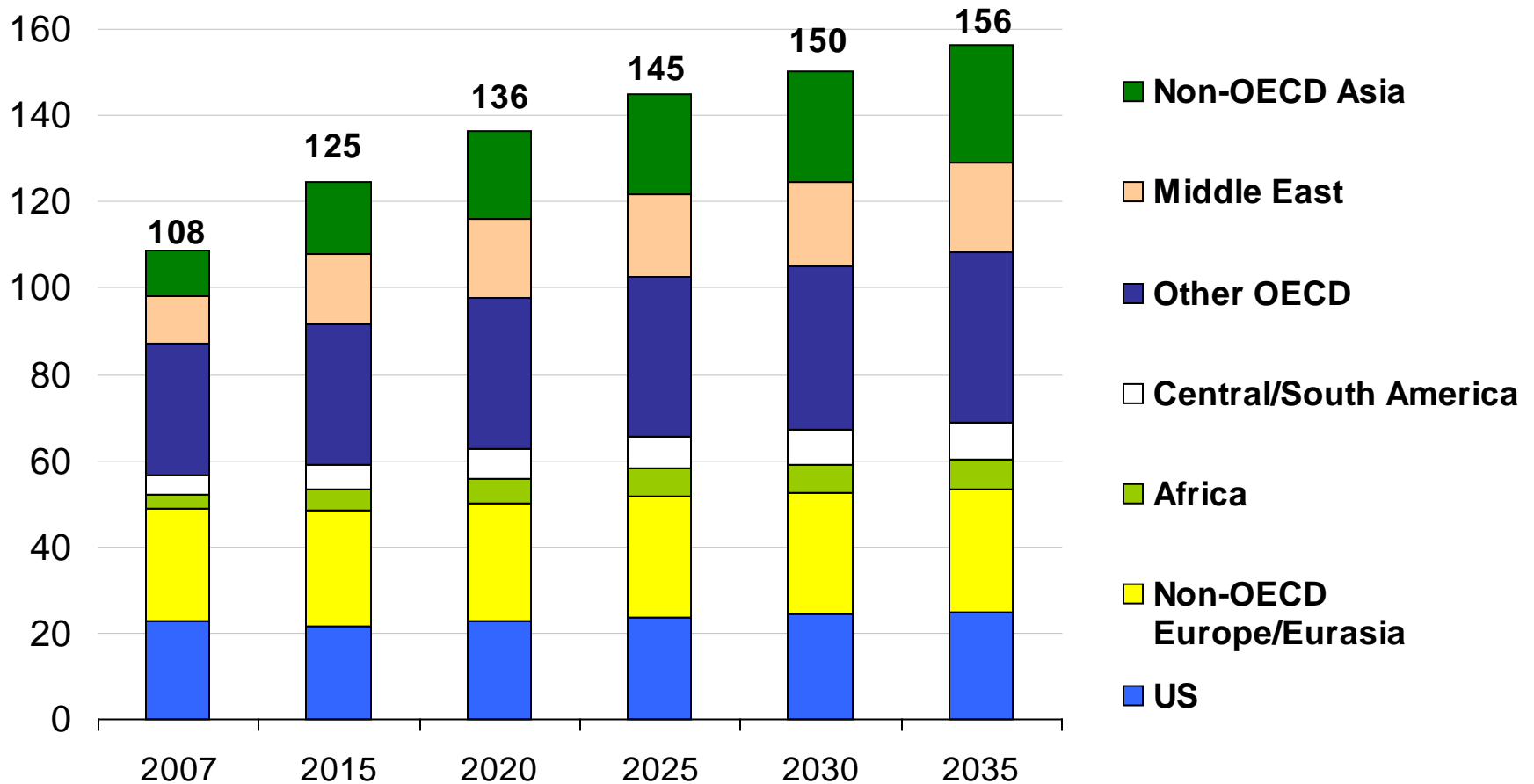
The high oil price case assumes much lower production from key oil exporters

liquids production in 2035
million barrels per day

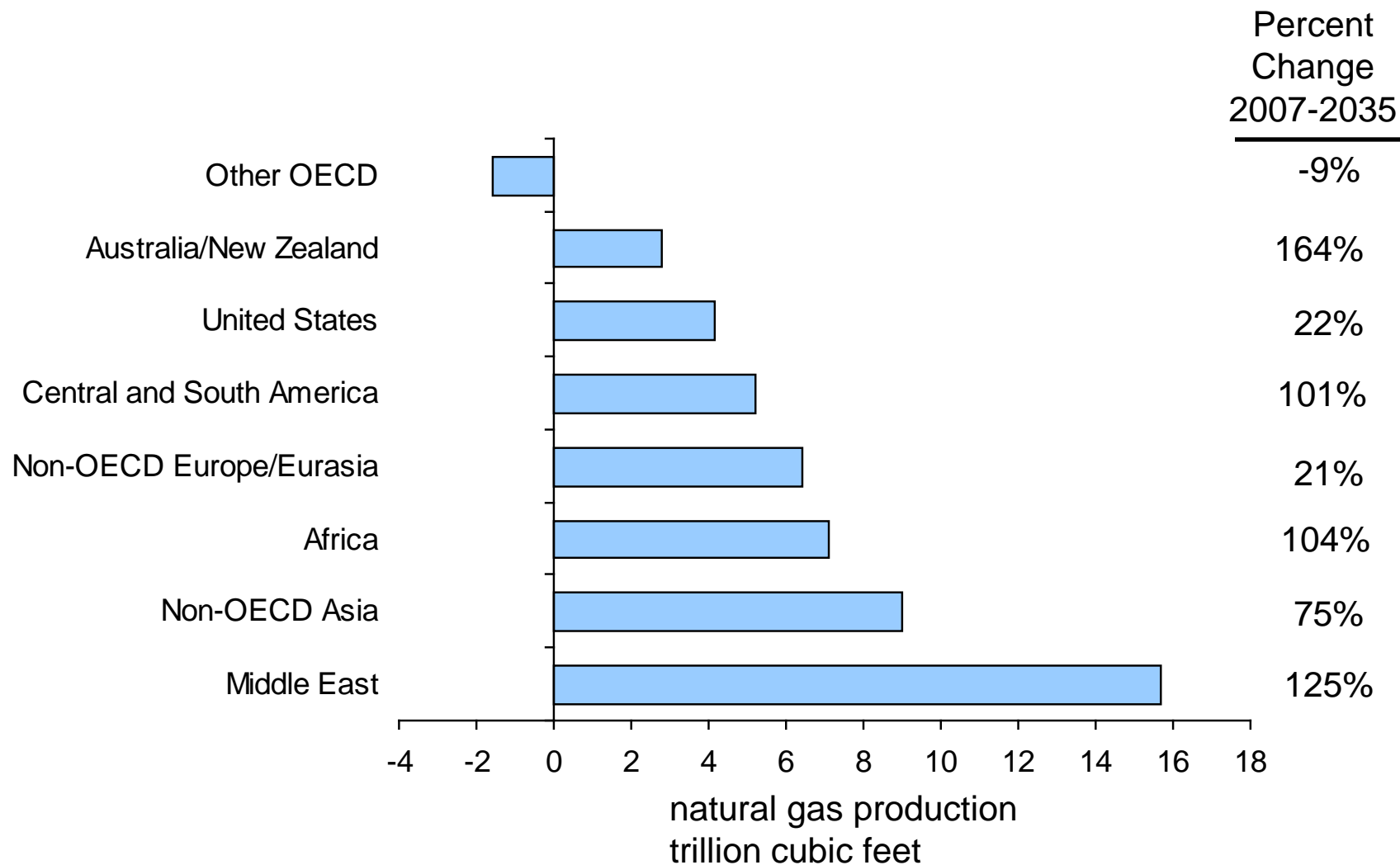


Non-OECD Asia accounts for 35% of increased natural gas use

natural gas consumption
trillion cubic feet

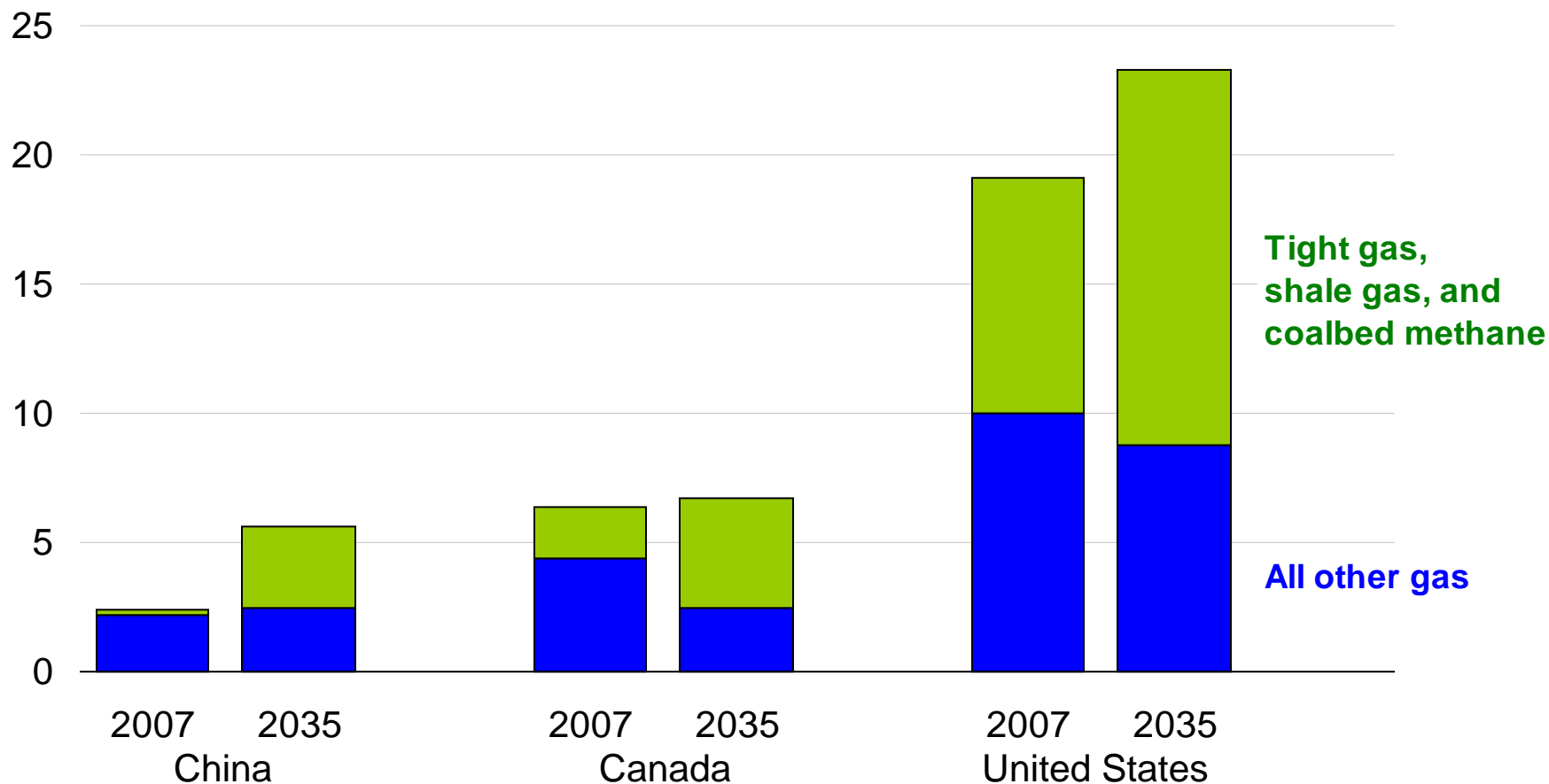


The Middle East accounts for almost one-third the increase in global gas production



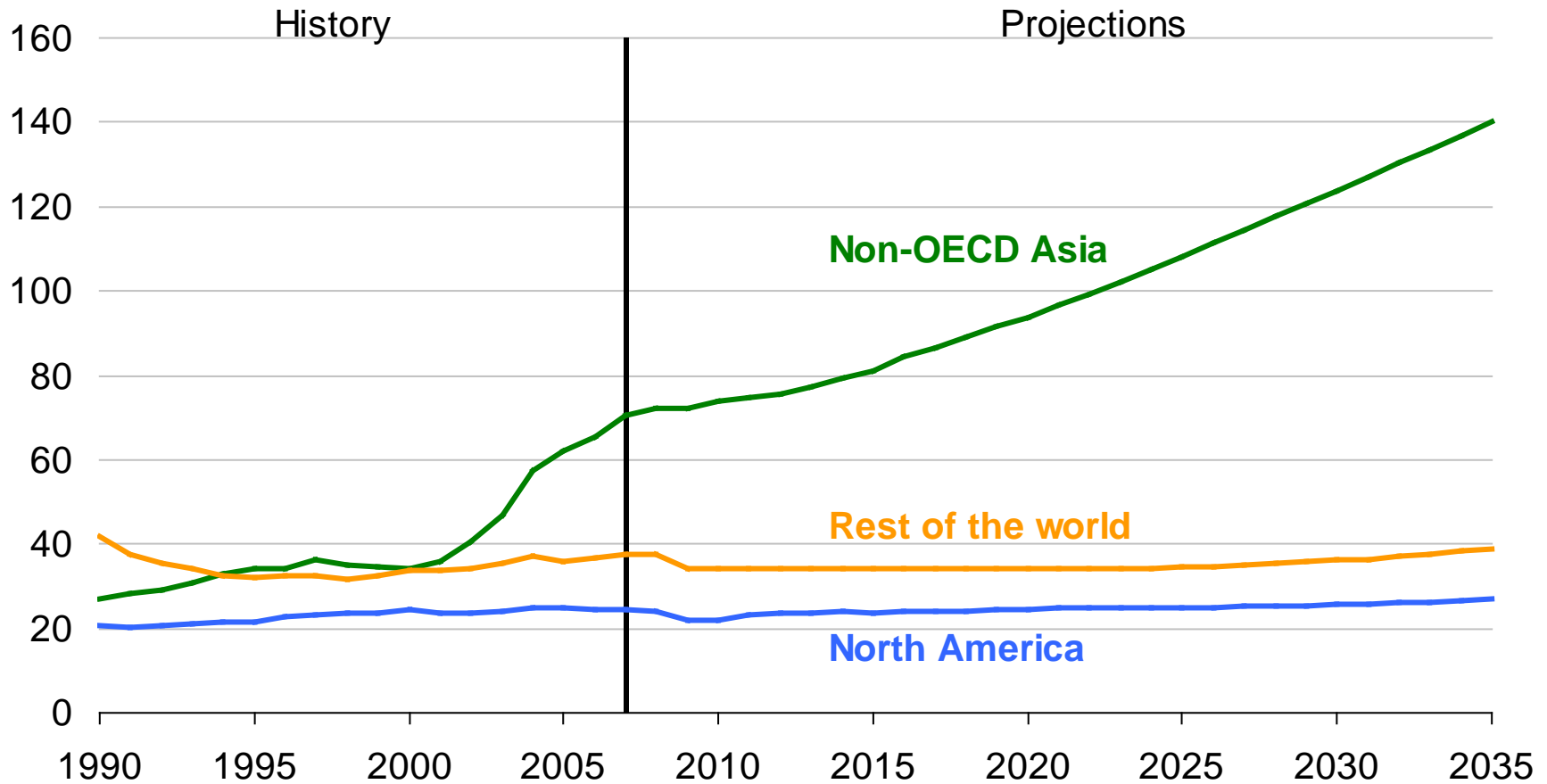
Tight gas, shale gas, and coalbed methane drive supply growth in China, Canada, and the U.S

natural gas production
trillion cubic feet



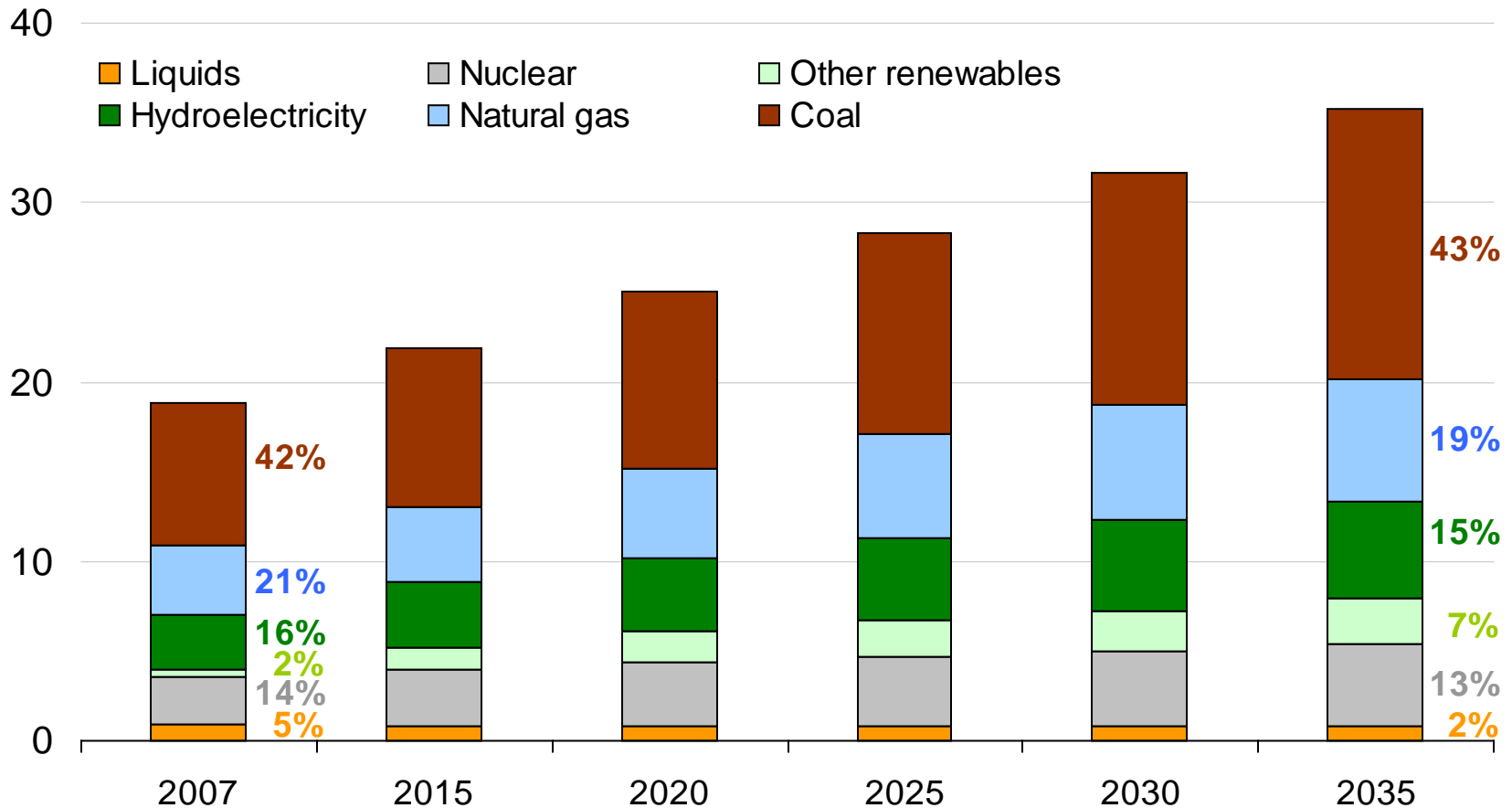
Virtually all growth in global coal use occurs in non-OECD Asian nations, especially China and India

world coal consumption
quadrillion Btu



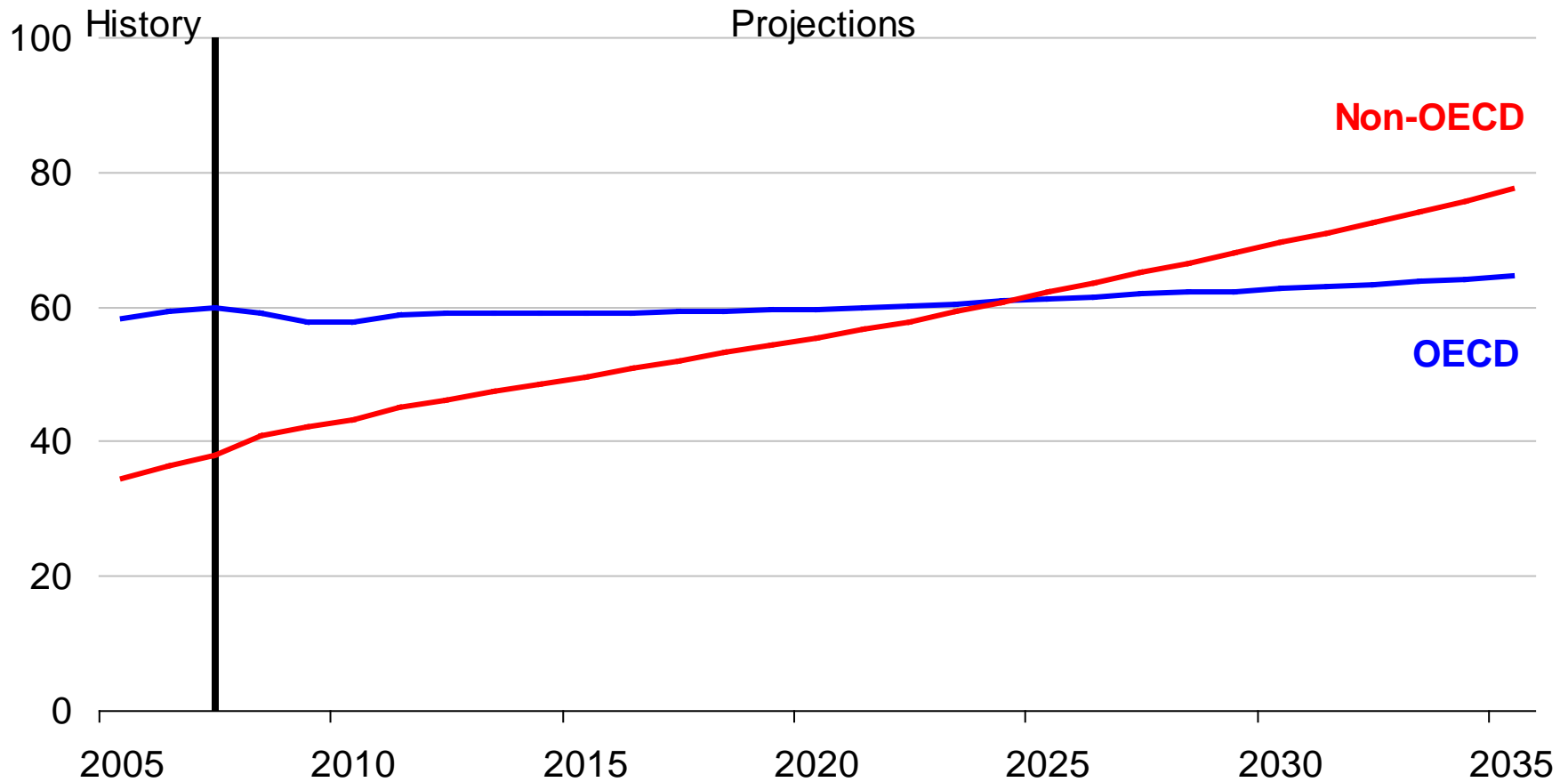
Renewables are fastest growing, but coal still fuels the largest share of the world's electricity in 2035

world electricity generation
trillion kilowatt hours



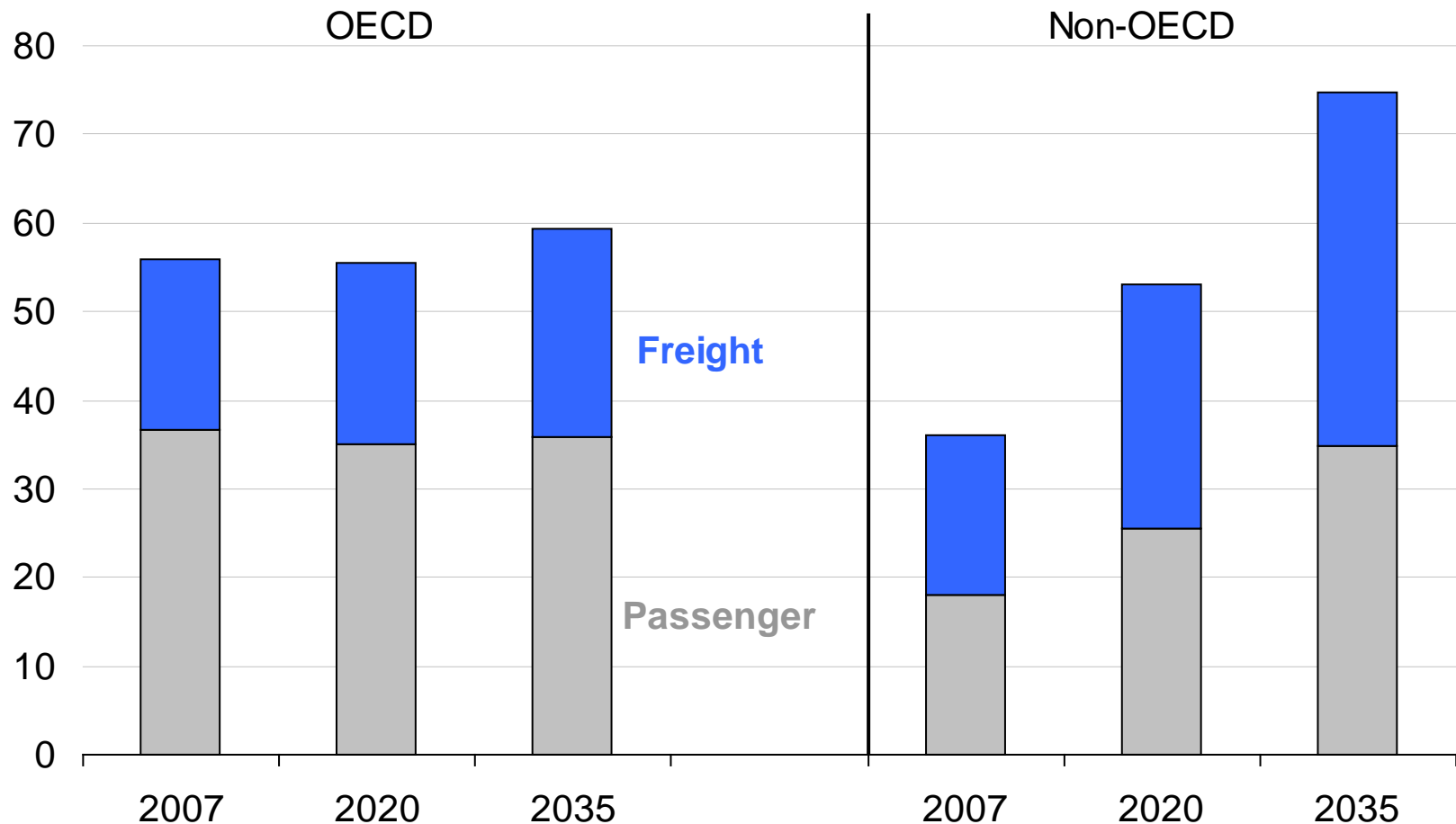
Non-OECD transportation fuel use surpasses almost flat OECD fuel use by 2025

transportation sector energy consumption
quadrillion Btu



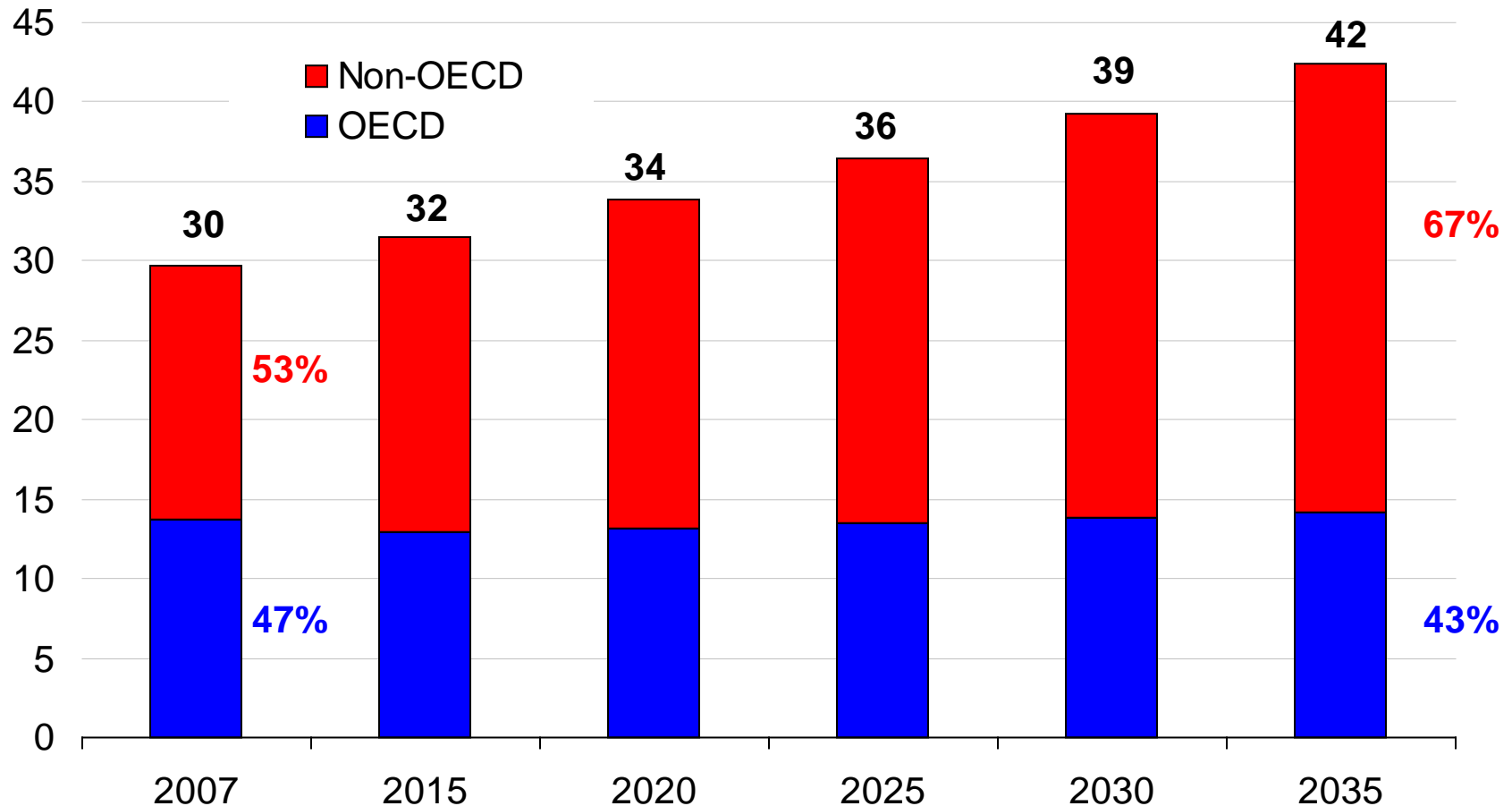
Freight energy use increases faster than passenger energy use

transportation energy consumption
quadrillion Btu



Assuming no policy changes, energy-related carbon dioxide emissions grow 43% from 2007 to 2035

energy CO2 emissions
billion metric tons



Key trends from 2007 to 2035

- In the IEO2010 Reference case, global marketed energy consumption grows by 49 percent
 - Most of this growth occurs in non-OECD Asia and the Middle East
- With no policy changes that would limit their use, fossil fuels provide nearly 80 percent of world energy consumption in 2035
 - Petroleum liquids remain the world's single largest energy source even as their share of total energy use declines
 - Renewable energy gains a growing share of total energy use, as its absolute growth in use from 2007 to 2035, outstrips that of petroleum liquids despite starting from a much lower level
- Energy-related carbon dioxide emissions are projected to rise from 30 billion metric tons in 2007 to 42 billion metric tons in 2035 under current laws and policies
- Meeting the projected increase in world liquids demand will require increases in conventional and unconventional supplies of 25.8 million barrels per day
 - Oil prices reach \$133 per barrel in 2035 (real 2008 dollars per barrel)

Key Trends from 2007 to 2035 (continued)

- Natural gas consumption increases 44%
 - Developing Asia accounts for 35% of the increase in world consumption
 - The Middle East accounts for 32% of the increase in production
- Coal use grows 56%
 - China and India alone account for 85% of the increase
- Nuclear power generation increases 74%
- Total renewable energy use, including liquid biofuels, grows 111%

For more information

U.S. Energy Information Administration home page www.eia.gov

Short-Term Energy Outlook www.eia.gov/emeu/steo/pub/contents.html

Annual Energy Outlook www.eia.gov/oiaf/aeo/index.html

International Energy Outlook www.eia.gov/oiaf/ieo/index.html

Monthly Energy Review www.eia.gov/emeu/mer/contents.html

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