

# ***International Energy Outlook 2009*** ***with Projections to 2030***

**Energy Information Administration**

**[www.eia.doe.gov](http://www.eia.doe.gov)**

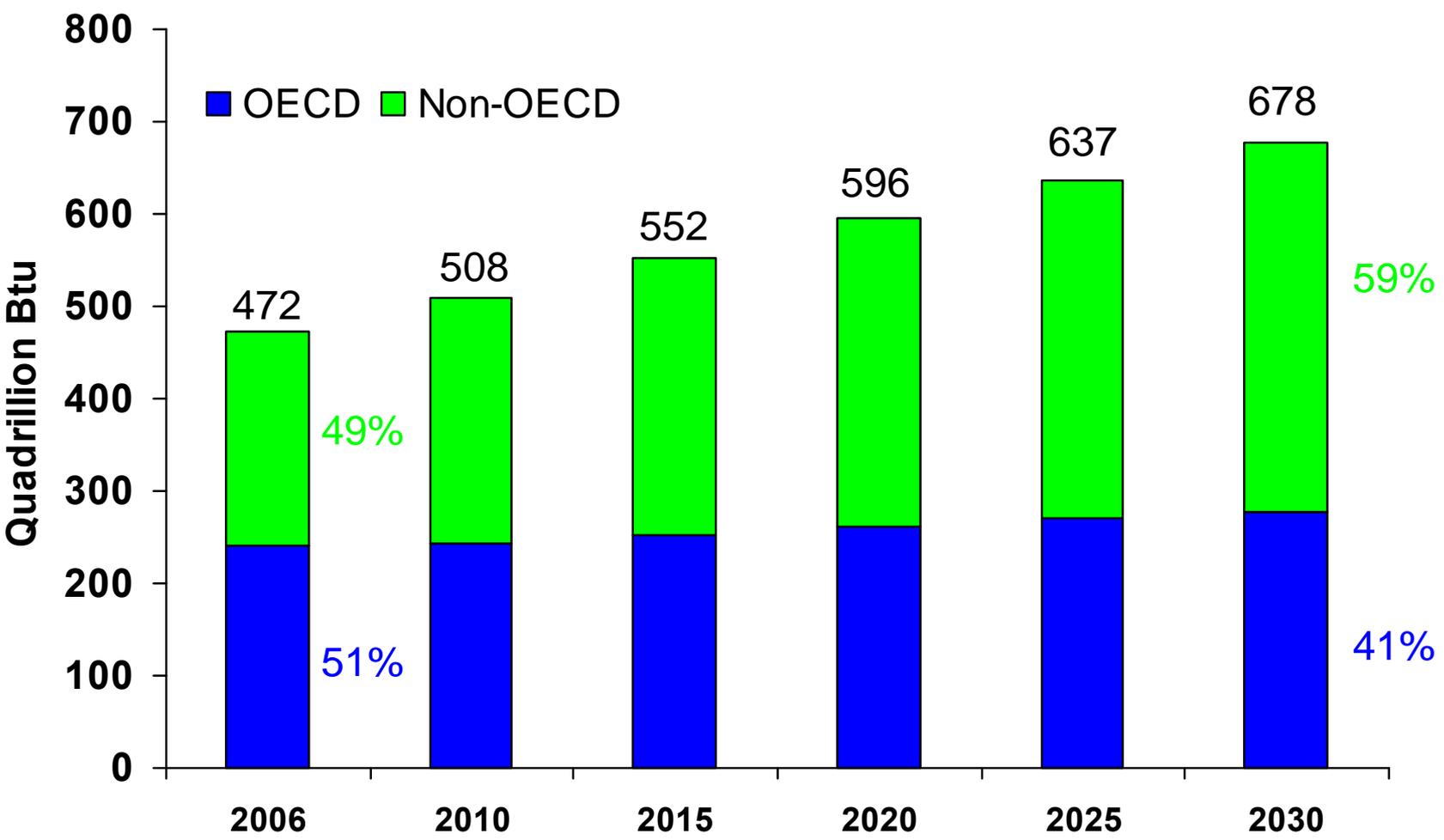
**presented at**

**Center for Strategic and International Studies**

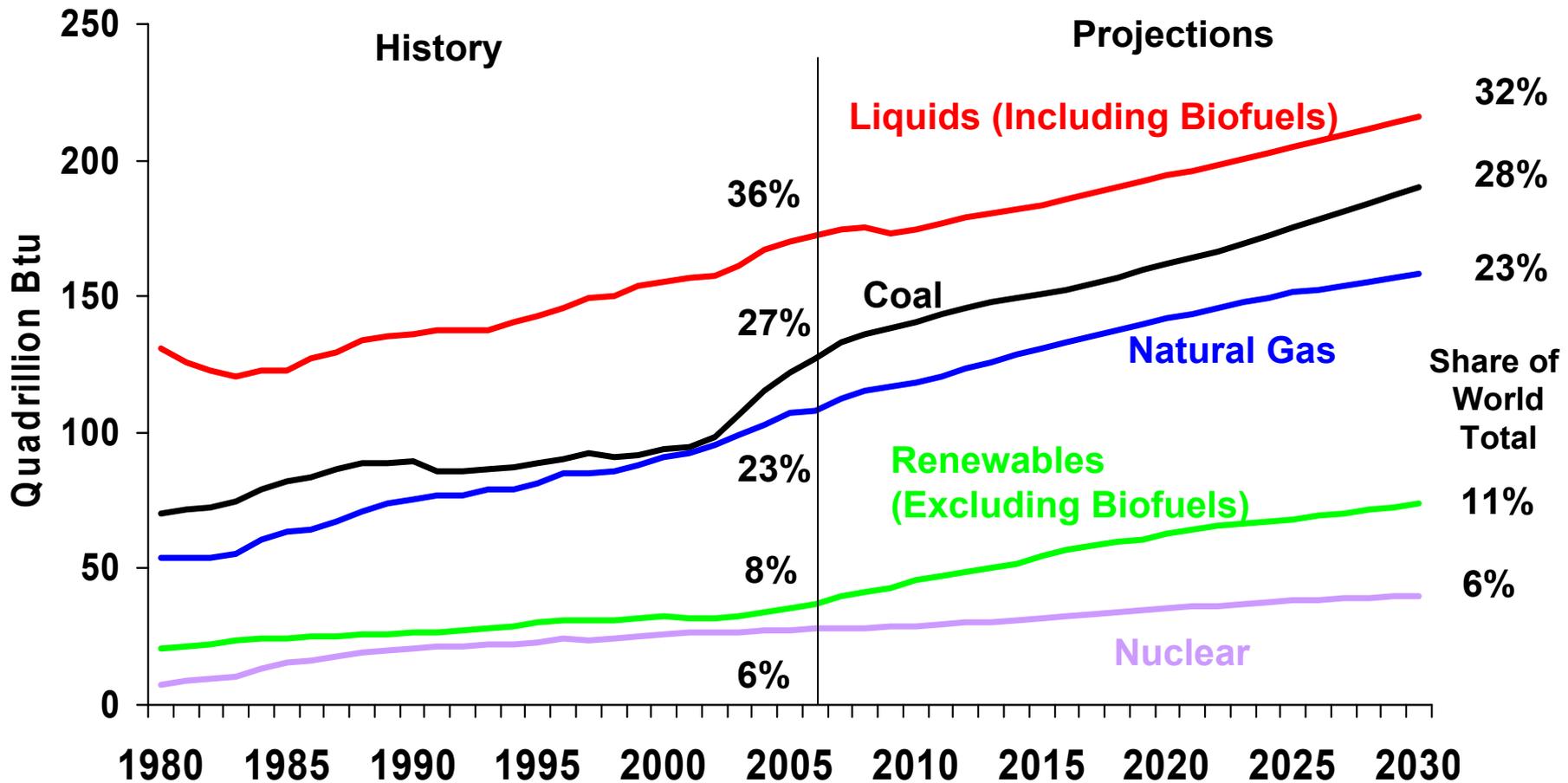
**Washington, DC**

**May 27, 2009**

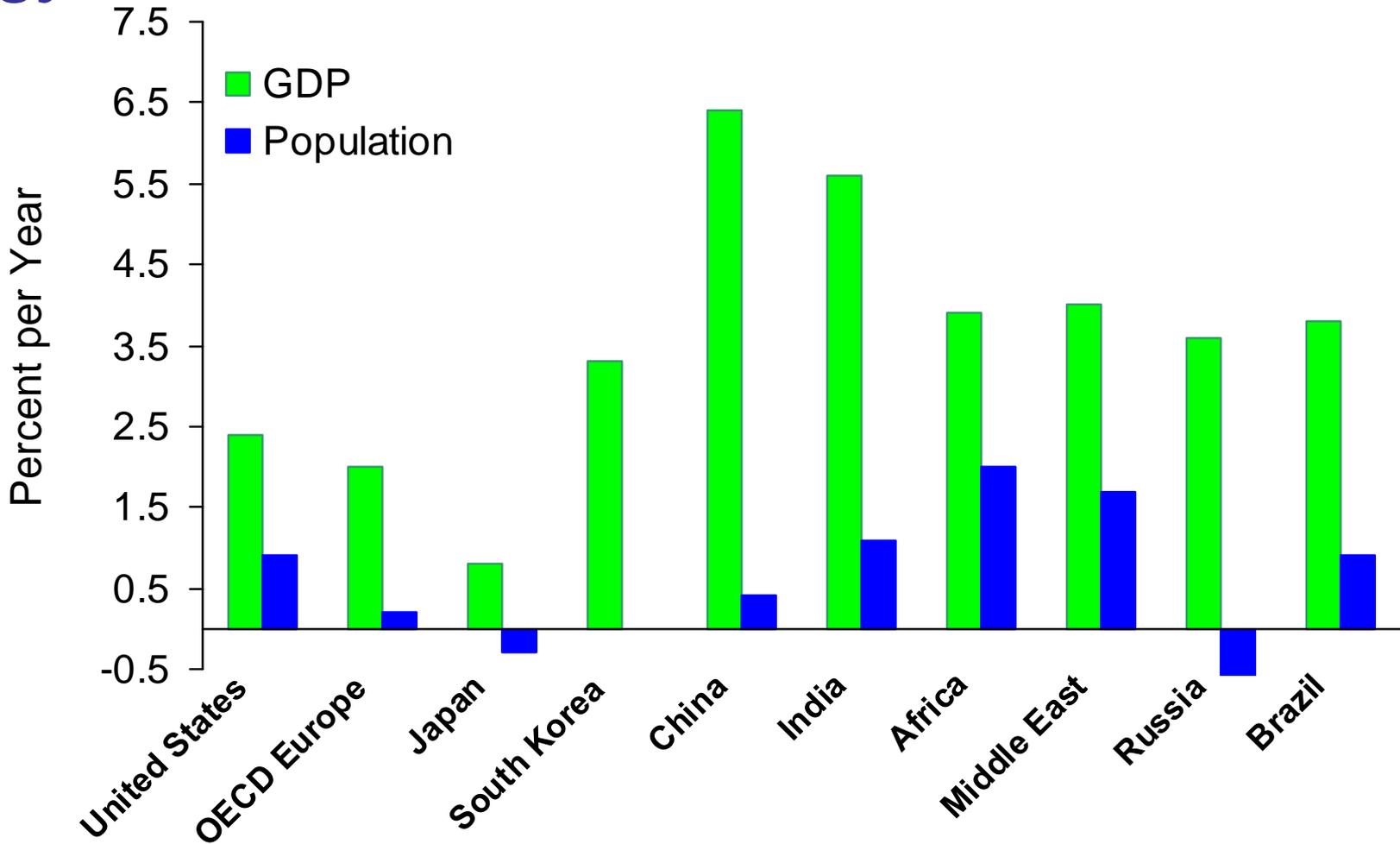
# Non-OECD countries account for 82% of the increase in global energy use



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



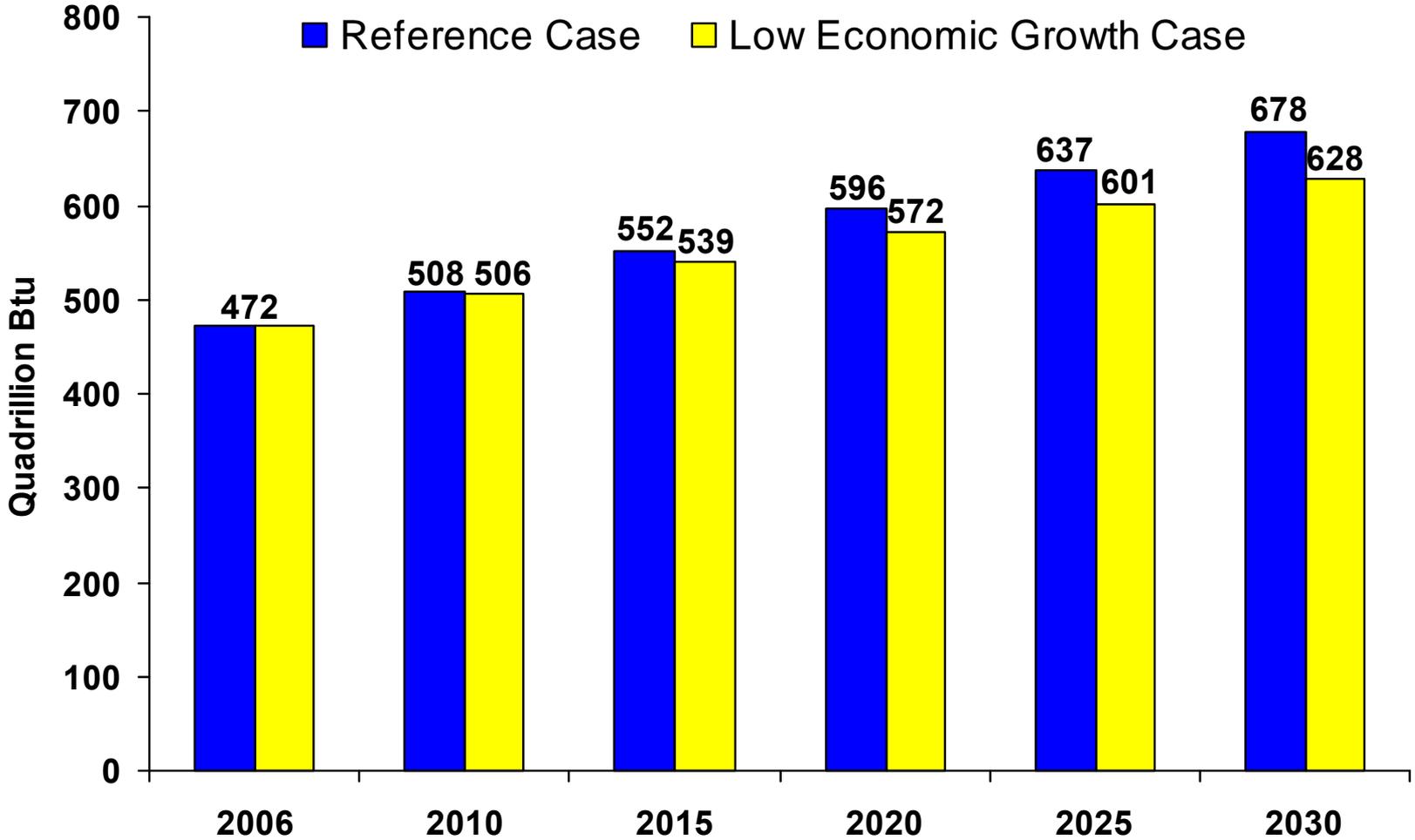
# Growth in worldwide economic activity, and population growth in some regions, drives increased energy use



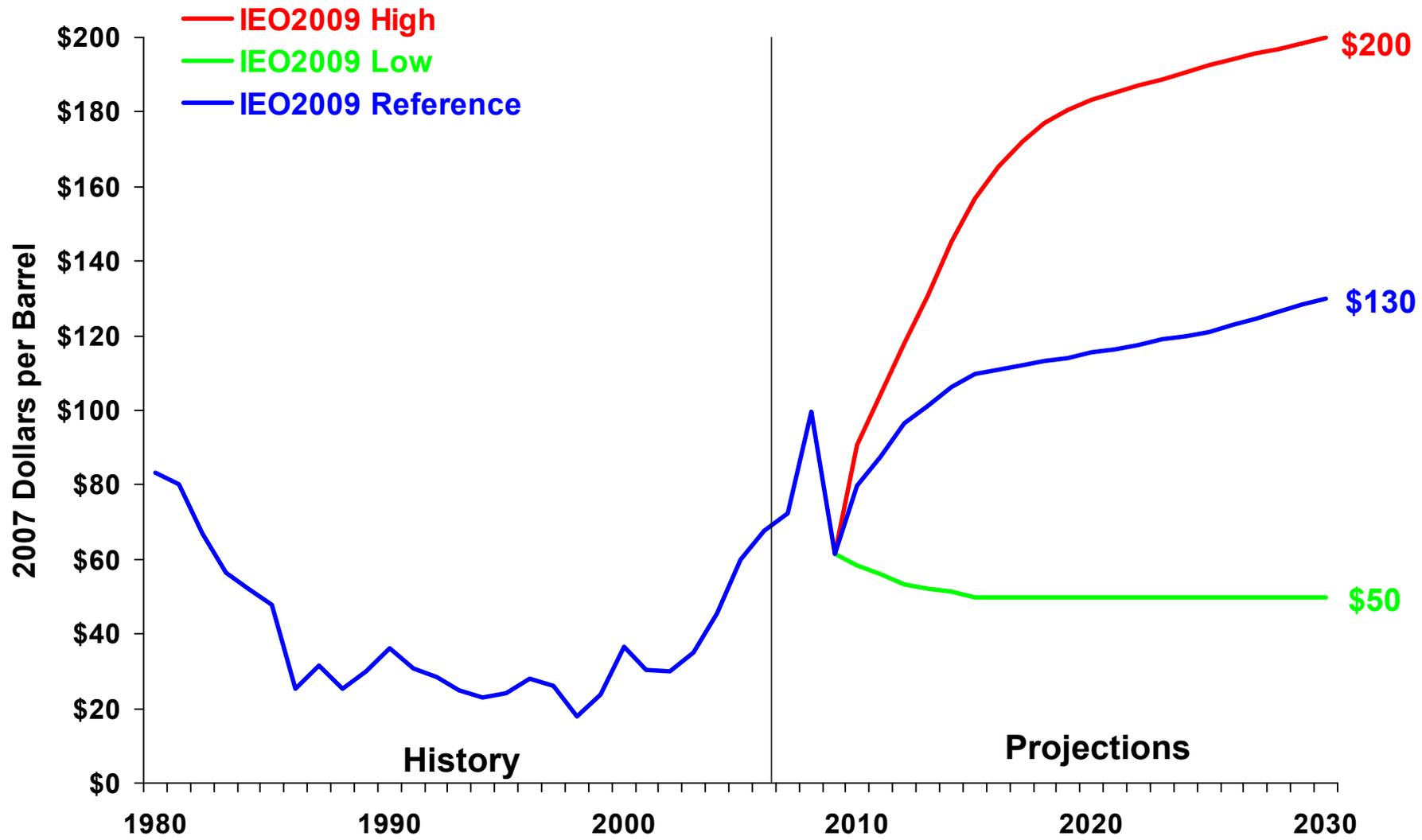
Source: US: Published AEO2009 (March 2009); ROW: GDP Assumptions based on IHS Global Insight, Inc.; Population from UN World Population Prospects (2006 Revision)



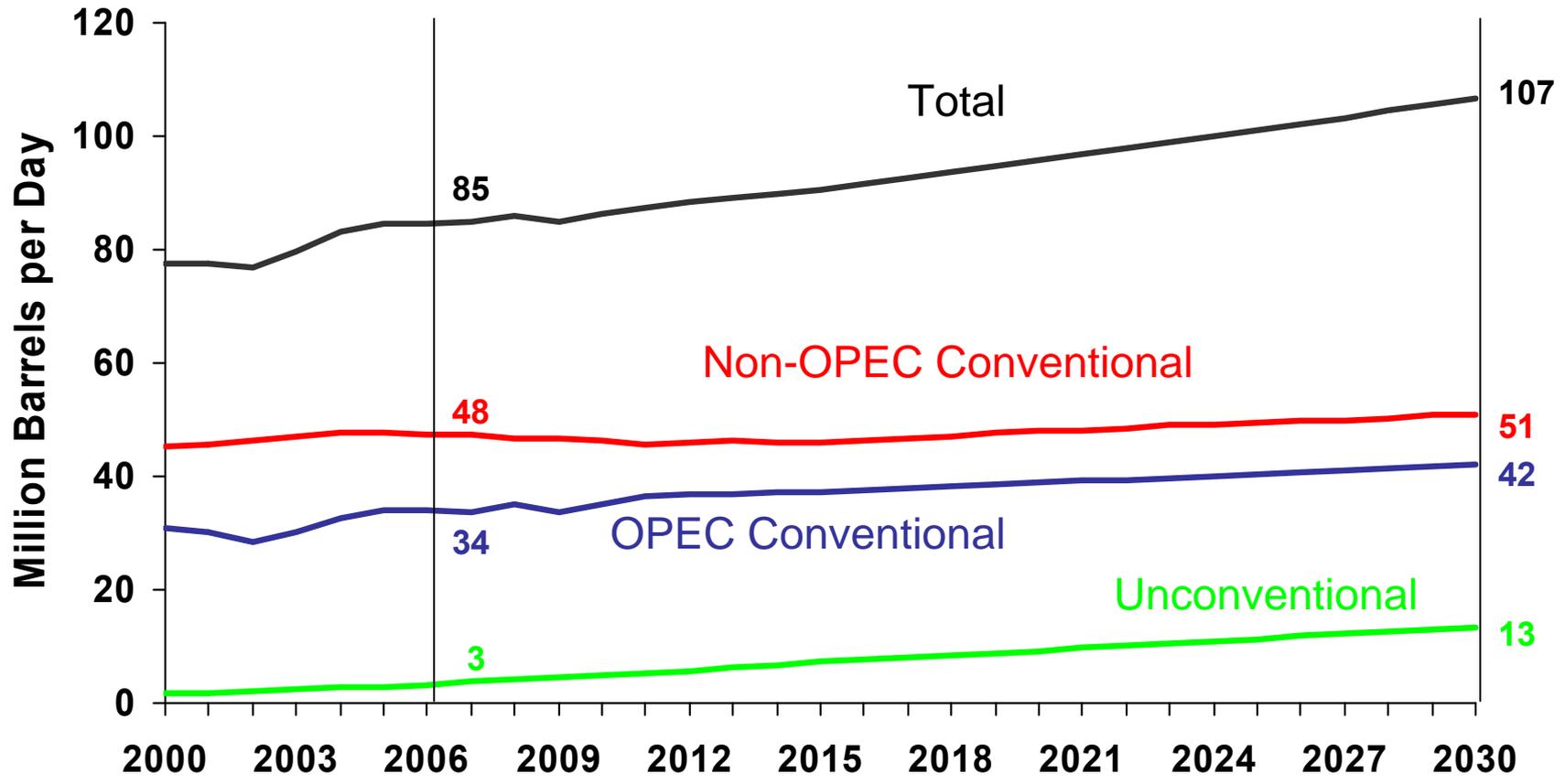
# Projected energy use depends on the rate of growth in economic activity



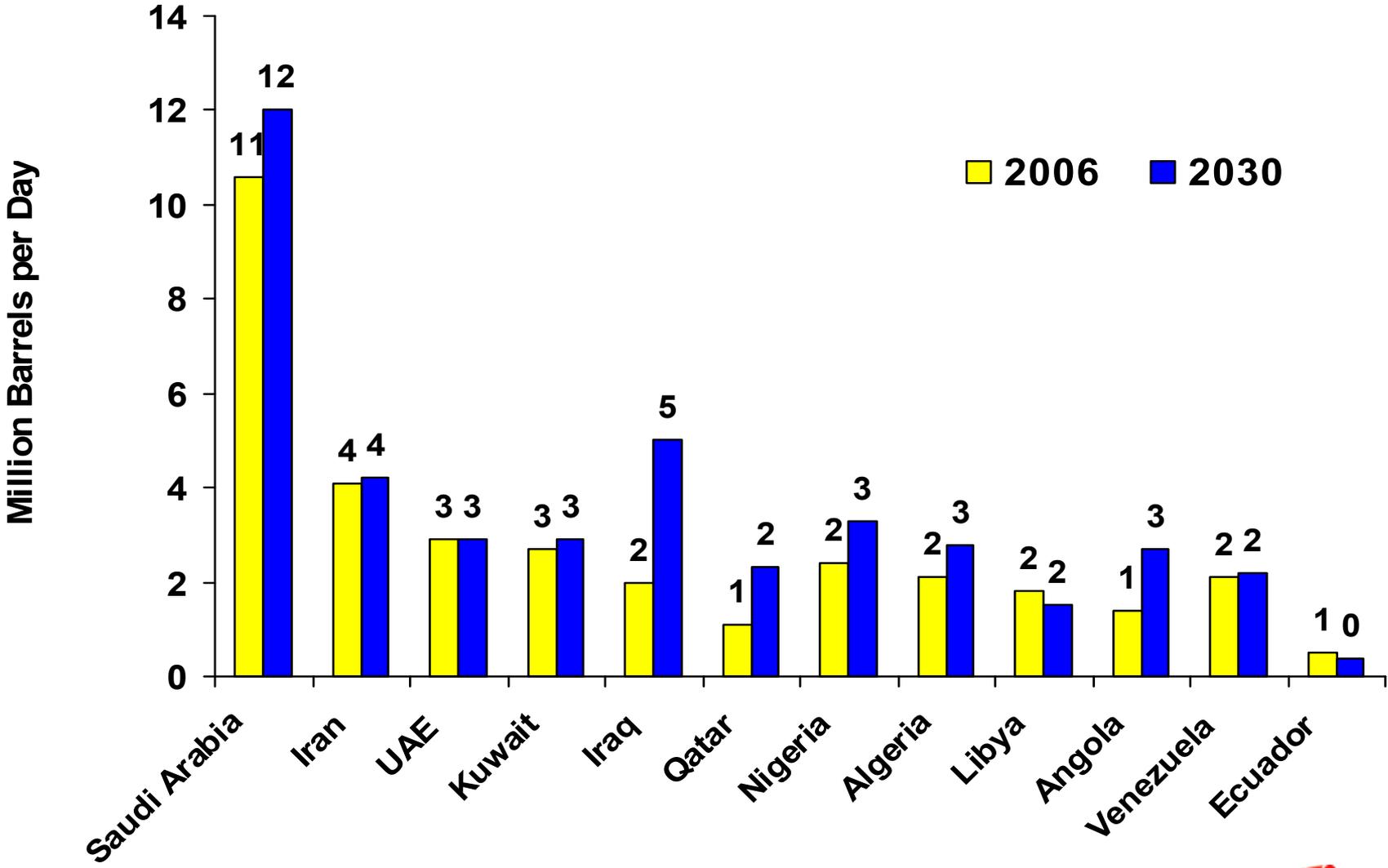
# The IEO includes three oil price cases



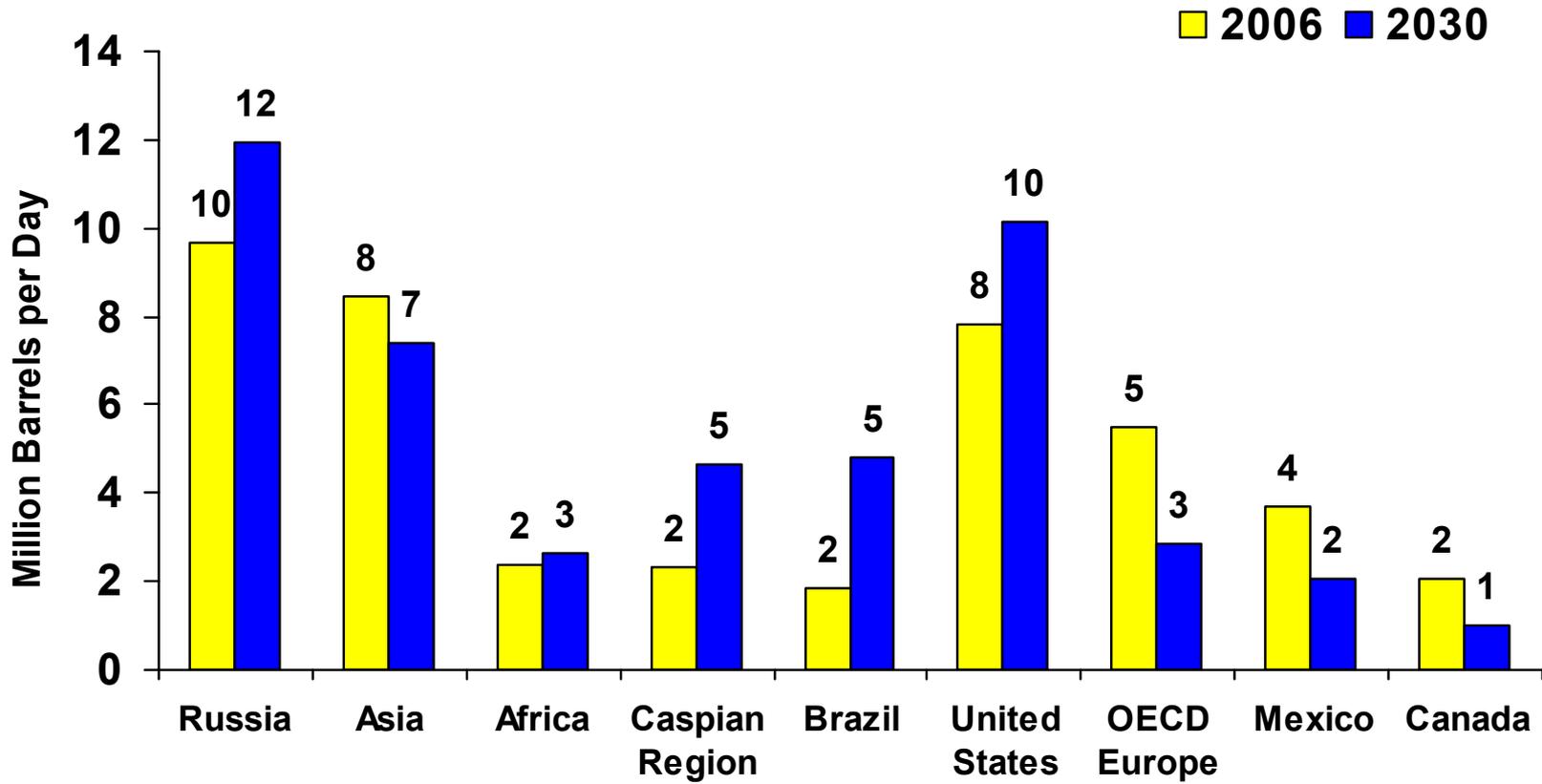
# Unconventional sources provide nearly half of the growth in global liquid fuel supply between 2006 and 2030 in the reference case



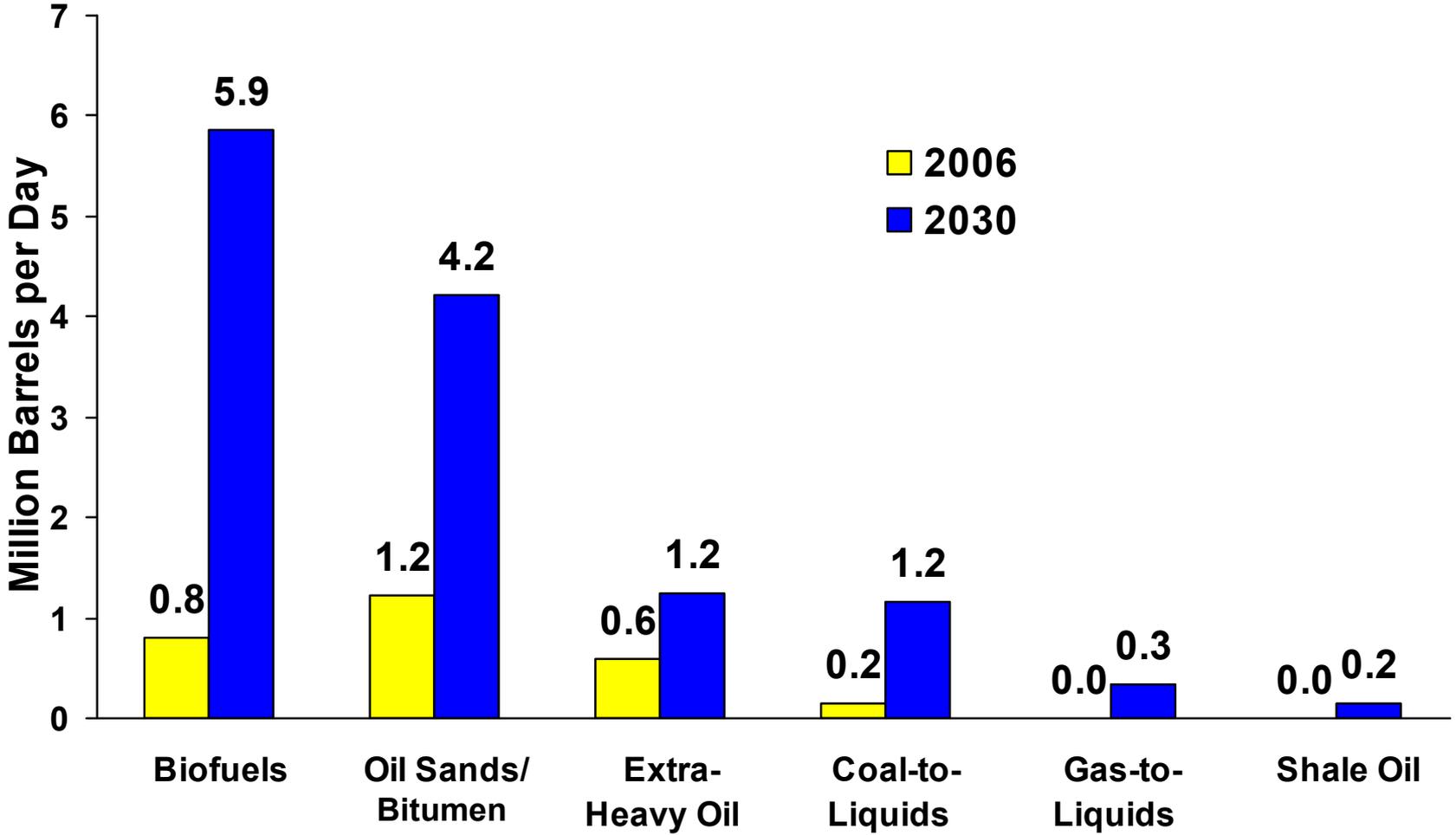
# Growth in OPEC production of conventional liquids comes primarily from the Middle East



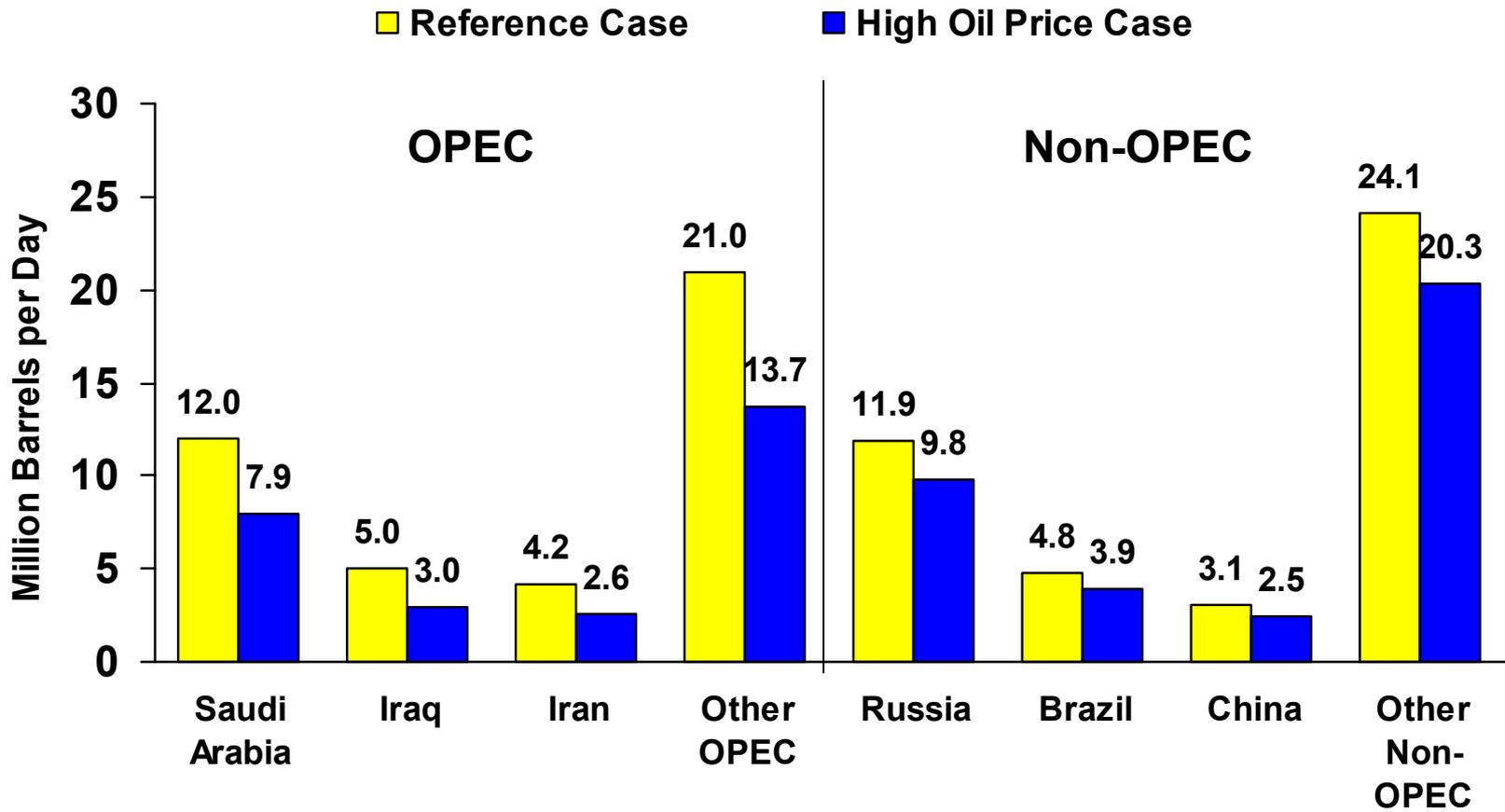
# Brazil, Russia, Kazakhstan, and U.S. lead gains for non-OPEC conventional supplies



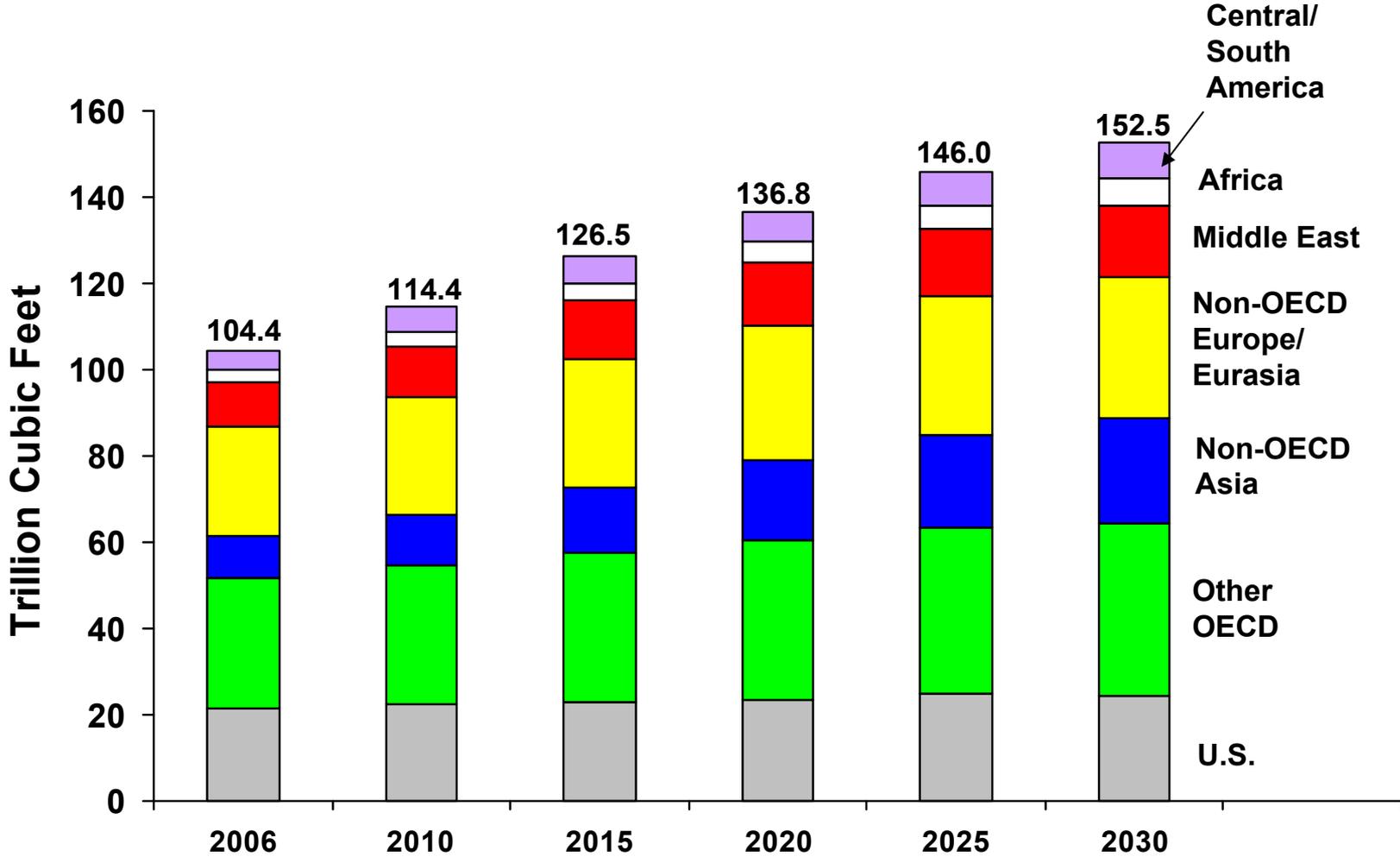
# *Biofuels and Canadian oil sands account for 78% of the increase in total unconventional liquids*



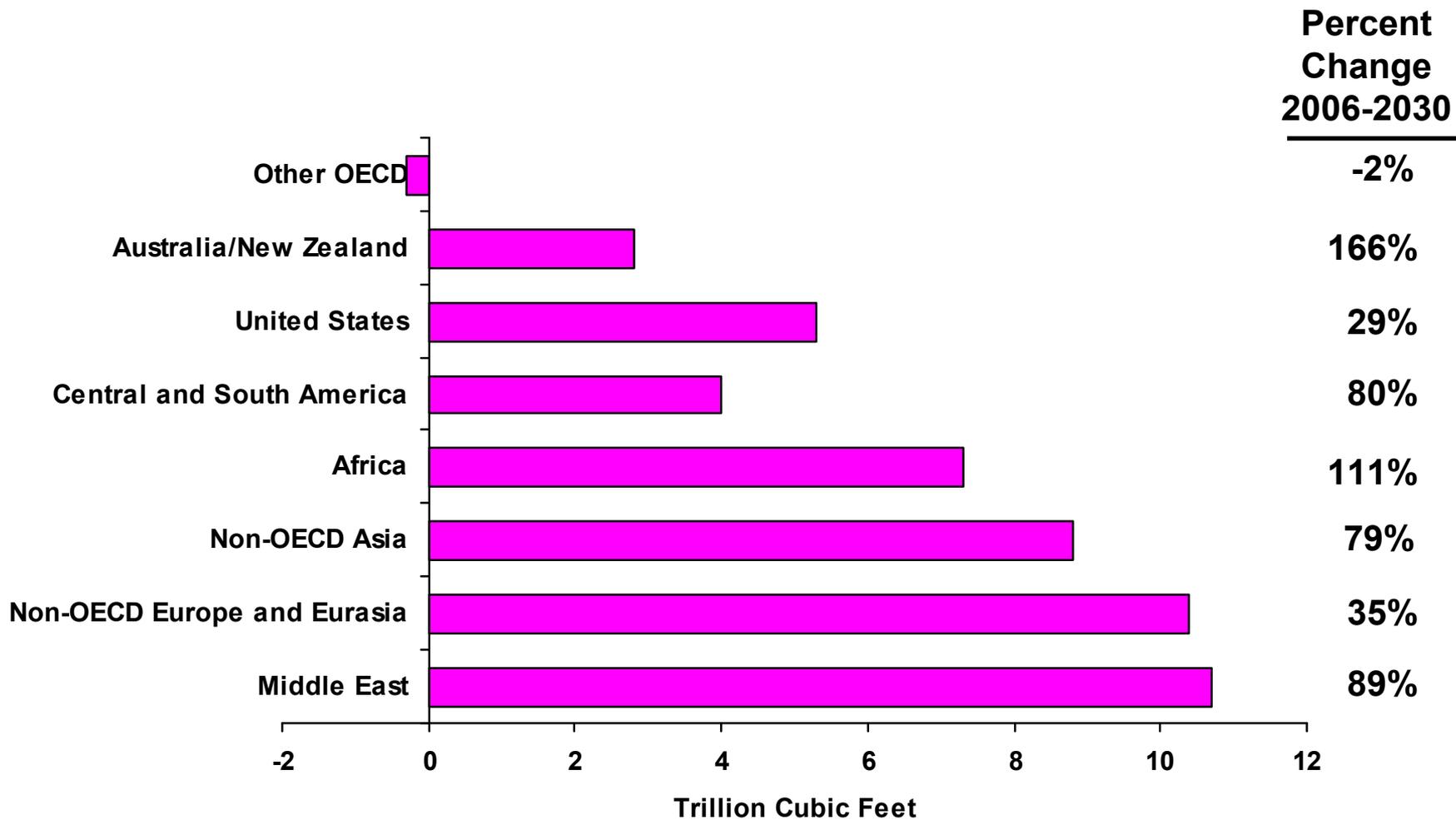
# The high price case assumes much lower production from key oil exporters



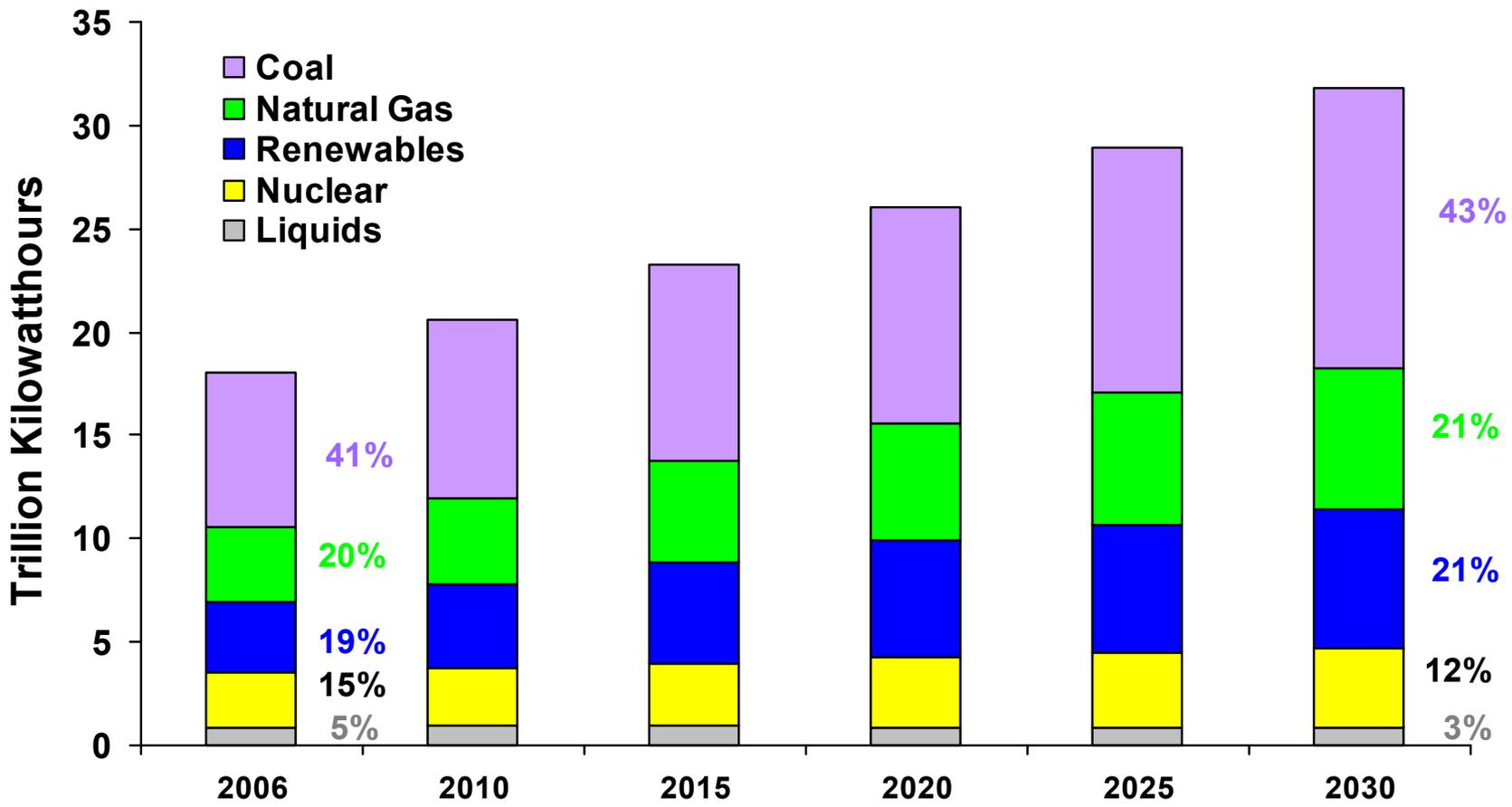
# Non-OECD Asia accounts for 31% of the total increase in natural gas use



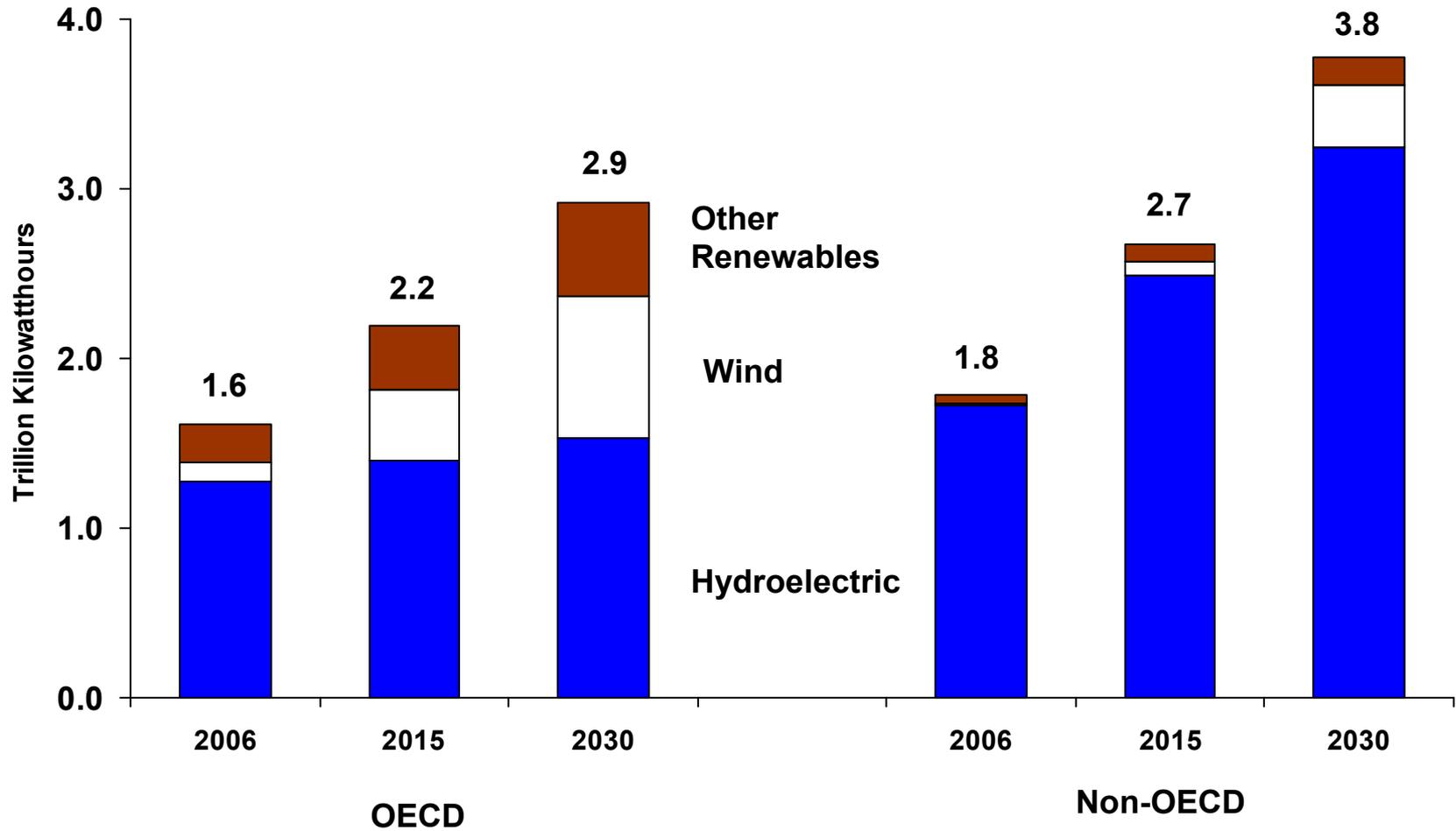
# The Middle East, non-OECD Europe and Eurasia, and non-OECD Asia each account for about 20% of increase in natural gas production



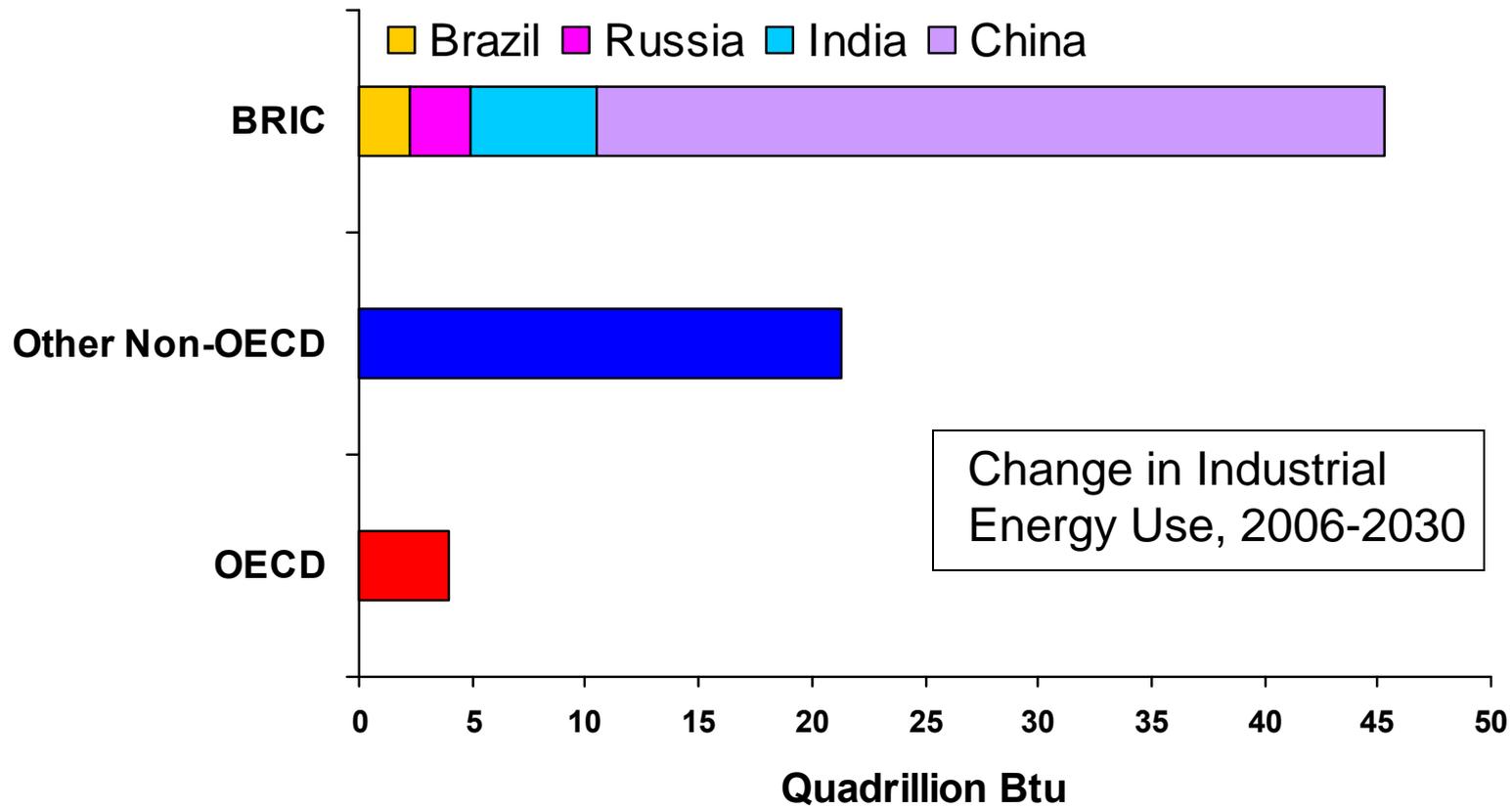
# Renewables are fastest growing electricity generation source, but coal and natural gas still fuel nearly two-thirds of world electric generation in 2030



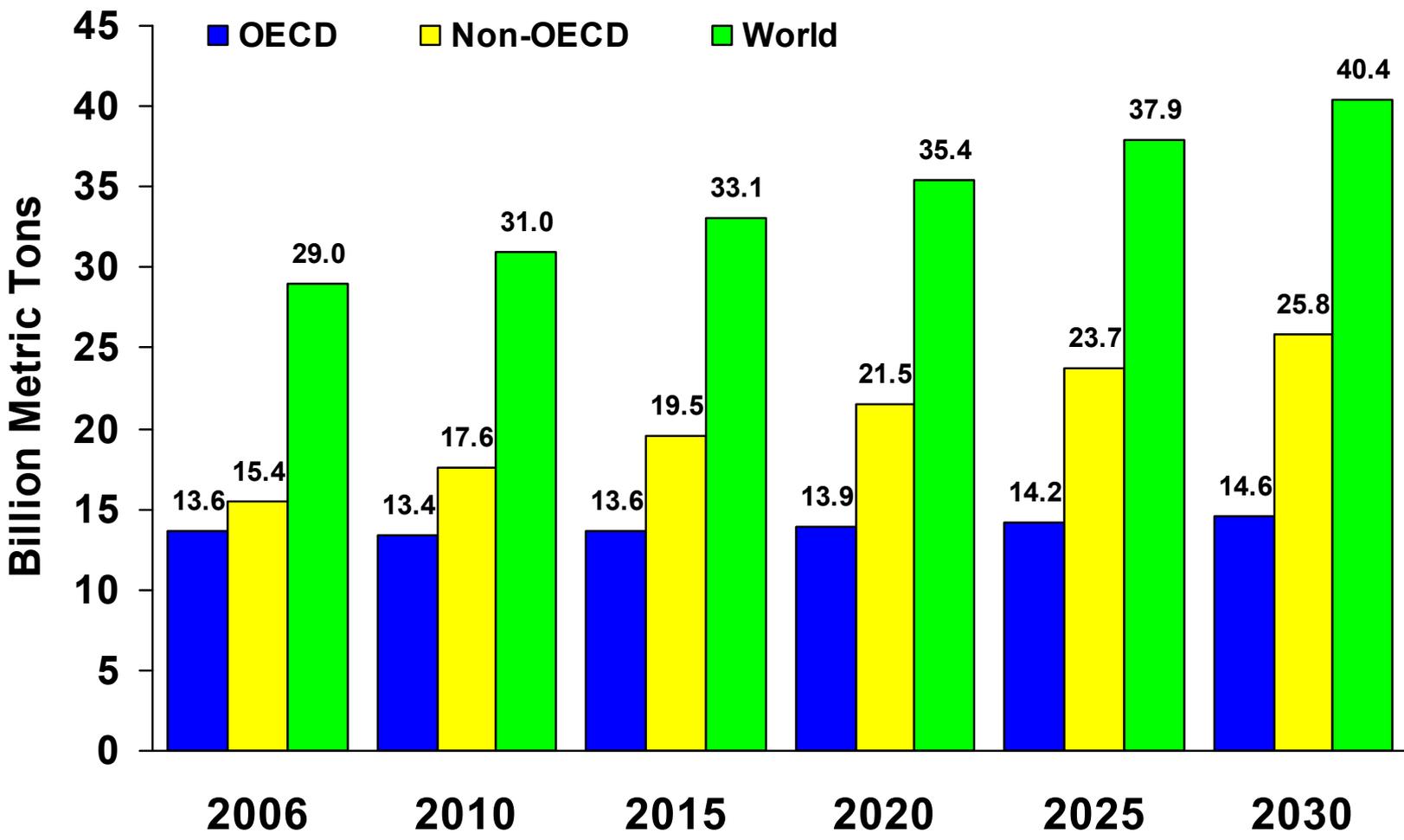
# Hydropower supplies 54% of the world increase in renewable generation; wind provides 33%



# *“BRIC” countries account for 63 percent of increase in industrial energy use*



# *Without policy changes, energy-related carbon dioxide emissions grow by 39% between 2006 and 2030 in the reference case*



# Key results from the IEO2009

- The current economic downturn is dampening near-term world energy demand growth. In the IEO2009, worldwide marketed energy consumption is projected to grow by 44% between 2006 and 2030 as economic recovery spurs future demand growth.
- Despite the big decline in oil prices after July 2008, the IEO2009 reference case reflects a return to higher oil prices as economies recover from the current recession and demand for oil returns. Prices rise to \$130 per barrel (real 2007 dollars per barrel) in 2030.
- Unconventional sources, primarily from non-OPEC sources, provide nearly half of the growth in global liquids supply between 2006 and 2030 in the reference case. The rest comes from conventional sources, primarily from OPEC producers in the Middle East.
- Renewables are the fastest-growing energy source in the IEO2009 reference case, but fossil fuels still provide over 80% of marketed energy in 2030.
- Energy-related carbon dioxide emissions are projected to rise from 29 billion metric tons in 2006 to 40 billion metric tons in 2030 under current laws and policies.
- Economic growth and oil prices, which can be significantly impacted by above-the-ground factors, are two major sources of uncertainty in all energy projections. The high and low oil price and economic growth cases in IEO2009 illustrate the impact of different growth rates and oil prices on projected energy trends.

# Examples of EIA Periodic Reports

*Petroleum Status and Natural Gas Storage Reports, weekly*

*Short-Term Energy Outlook, monthly*

*Emissions of Greenhouse Gases in the United States 2007, December 2008*

*Annual Energy Outlook 2009, updated reference case, April 2009*

## Examples of EIA Special Analyses

*Impacts of a 25-Percent Renewable Electricity Standard as Proposed in the American Clean Energy and Security Act Discussion Draft, April 2009*

*Light-Duty Diesel Vehicles: Market Issues and Potential Energy and Emissions Impacts, February 2009*

*Energy Market and Economic Impacts of S.2191, the Lieberman-Warner Climate Security Act of 2007, April 2008*

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