

# **The Global Energy Markets with Projections to 2030**

**A. Michael Schaal  
U.S. Energy Information Administration**

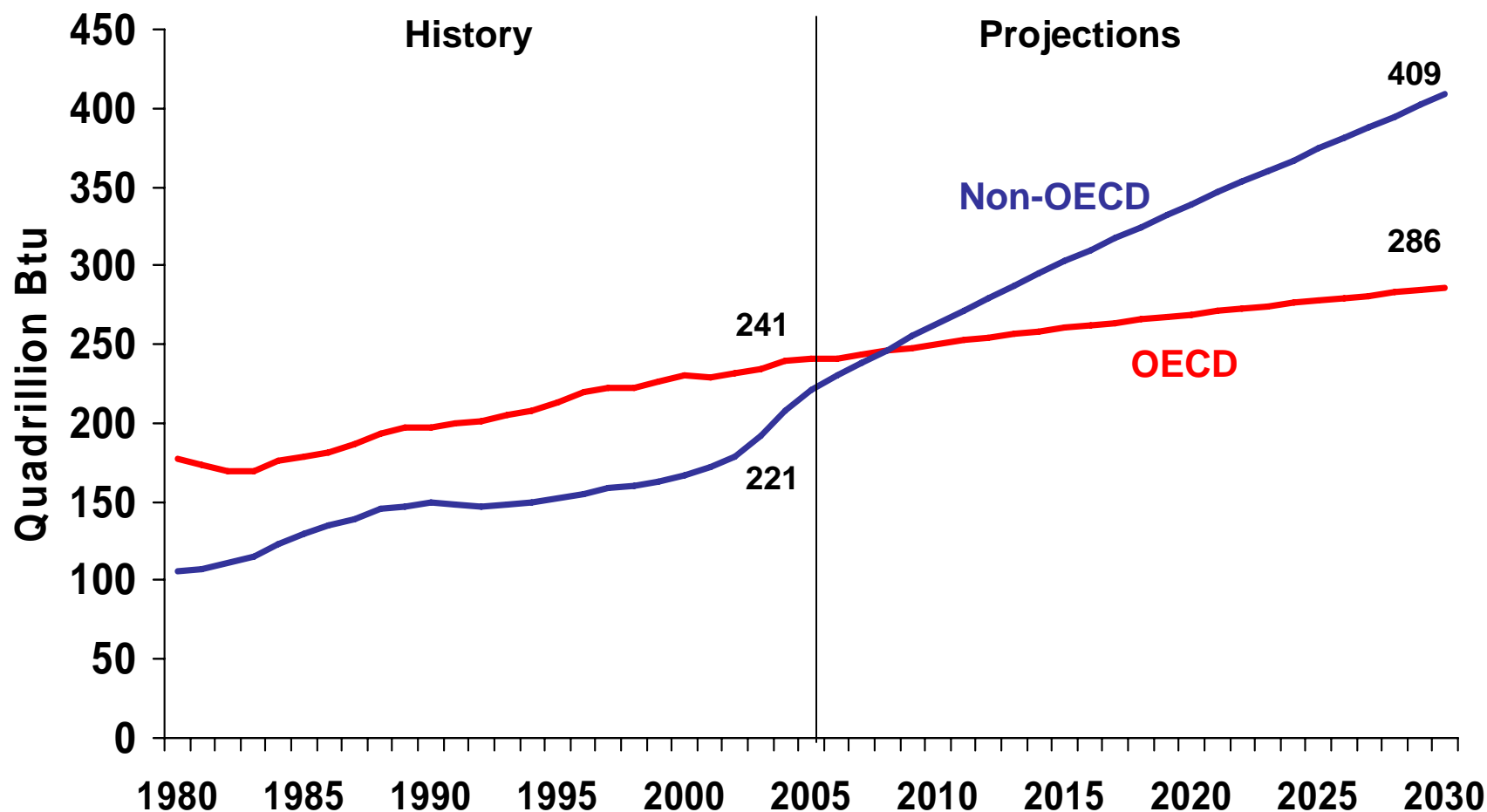
**Global Issues in the Bioeconomy  
Washington, DC  
March 30, 2009**



# Four Keys Factors Determine the Long-Term Liquid Fuels Outlook

- Global Liquids Demand
- Conventional, Non-OPEC Supply
- OPEC Behavior
- Unconventional Supply
  - Biofuels
  - Heavy Crudes/Oil Sands/Oil Shale
  - Gas-To-Liquids/Coal-To-Liquids

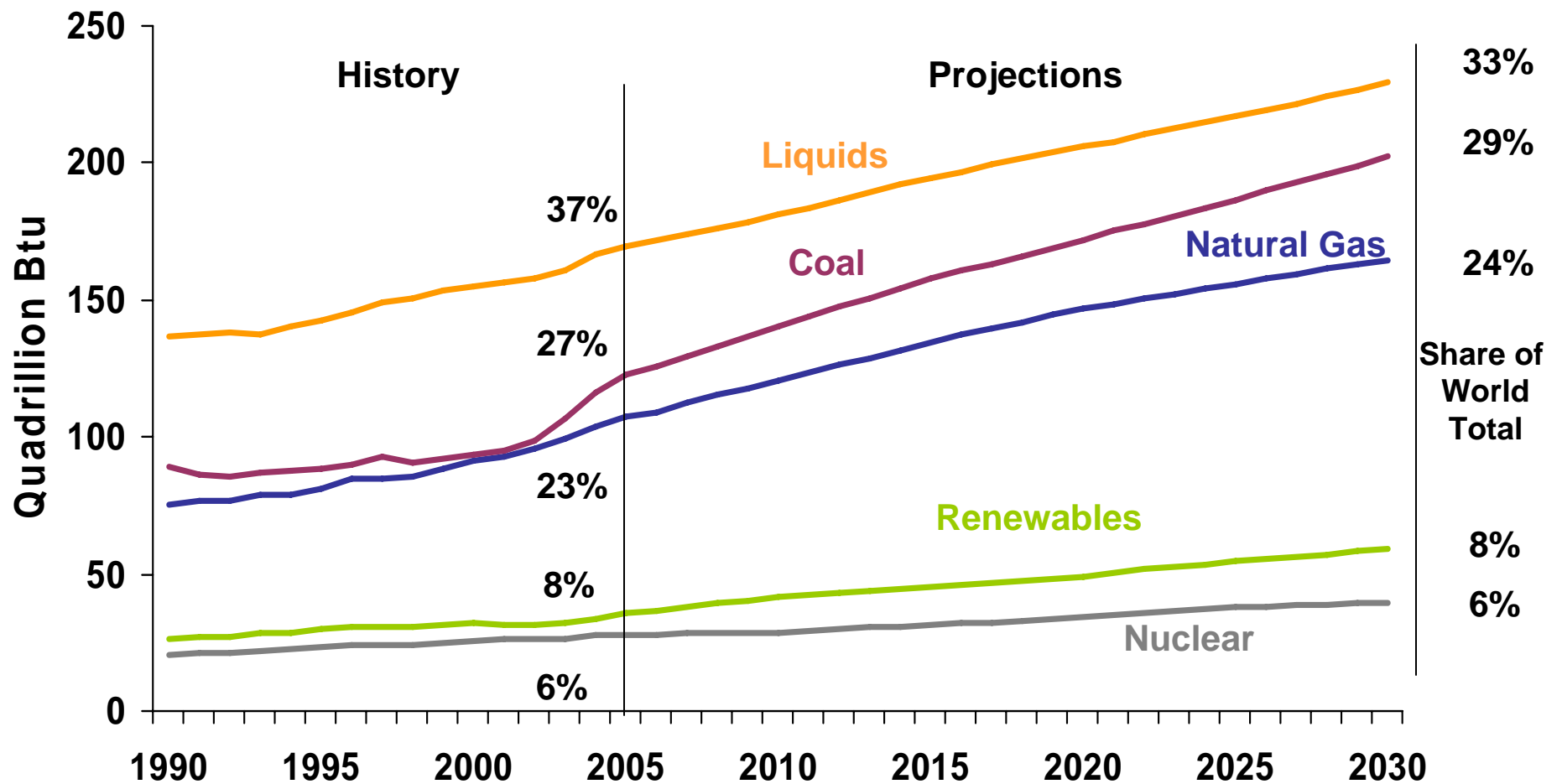
# World Marketed Energy Use: OECD and Non-OECD



Source: EIA, IEO2008



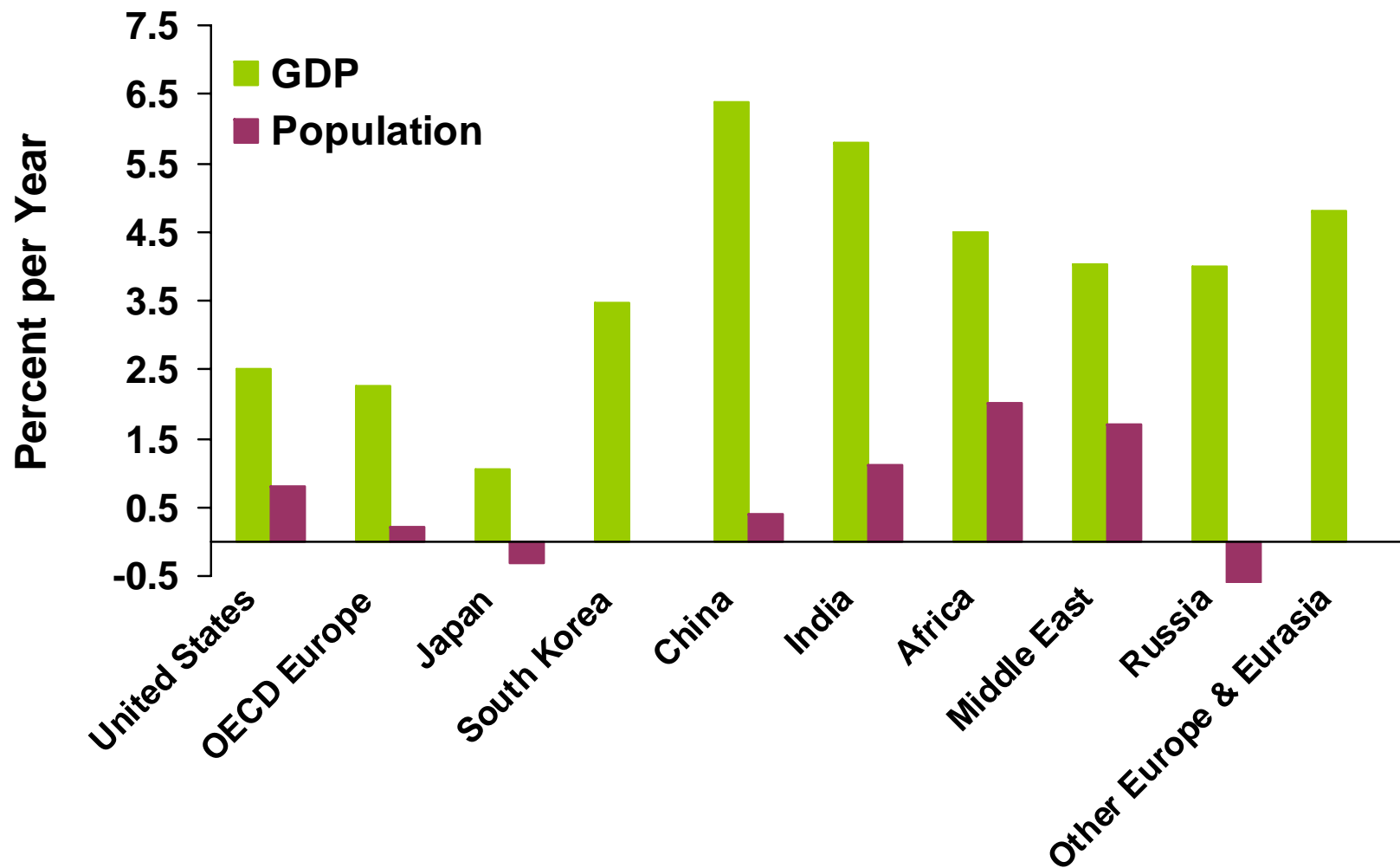
# World Marketed Energy Use by Fuel Type



Source: EIA, IEO2008



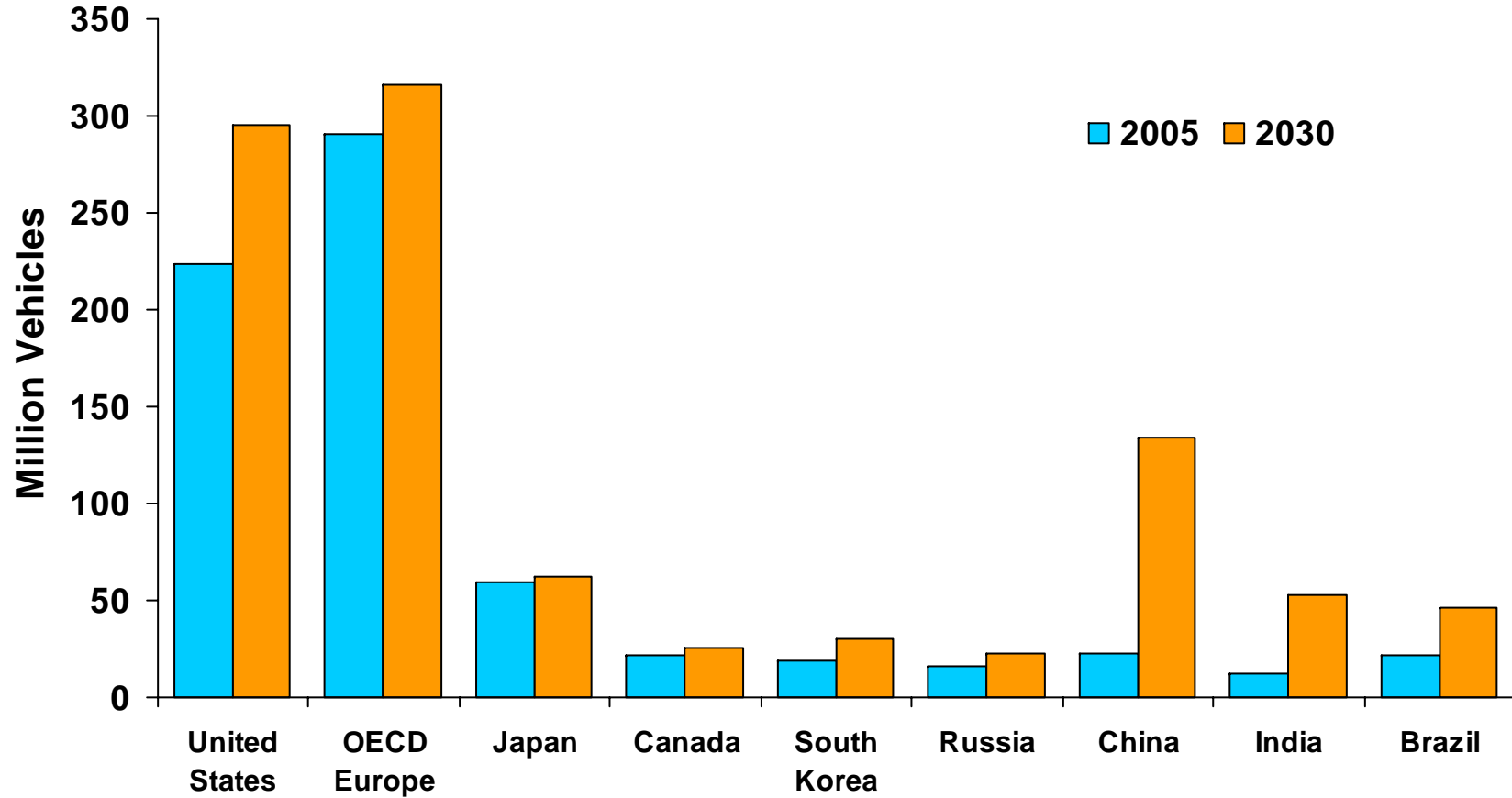
# Average Annual GDP and Population Growth for Selected Regions, 2005-2030



Source: EIA, IEO2008



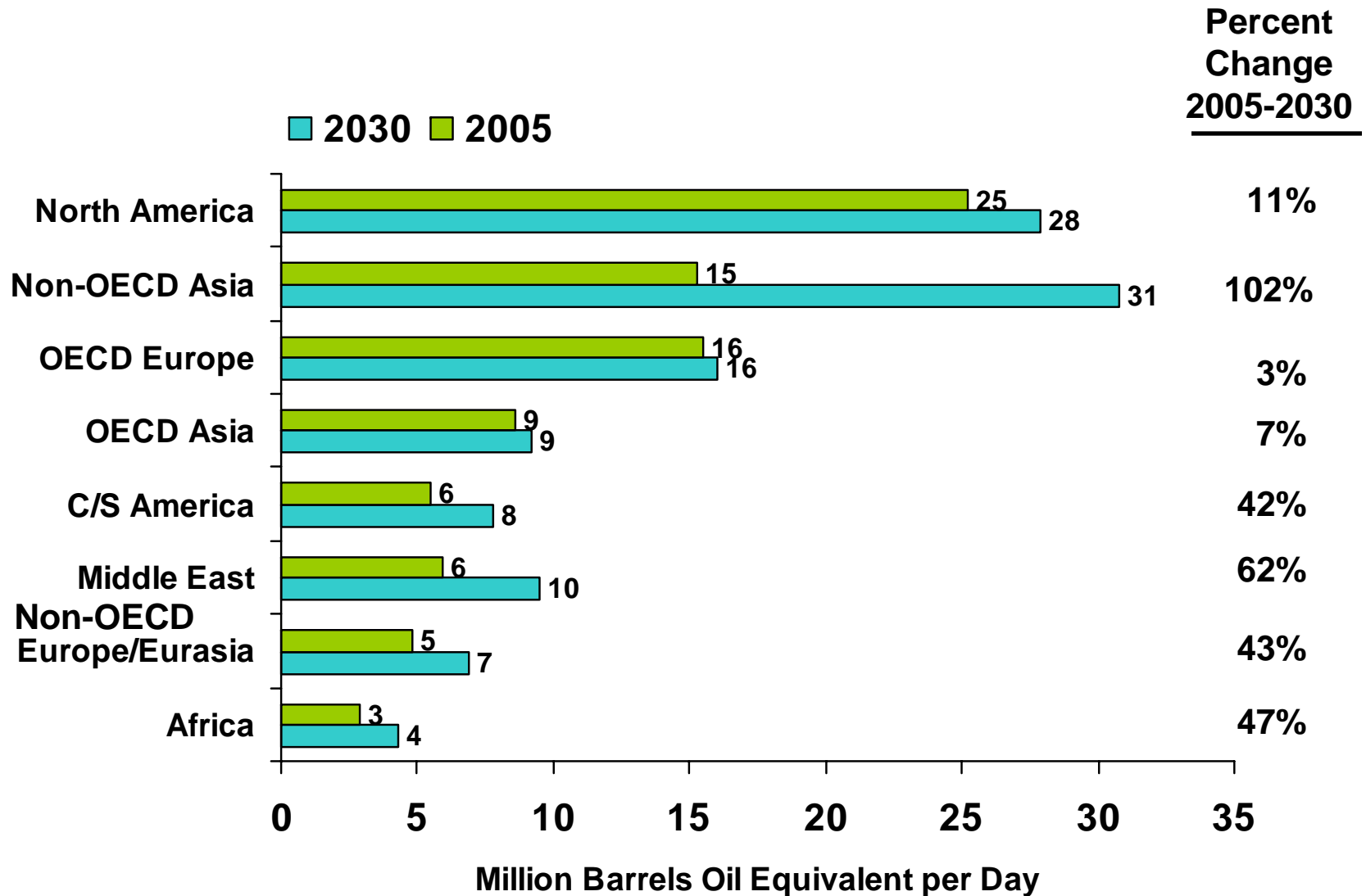
# Motor Vehicle Ownership by Selected Region



Source: EIA, IEO2008



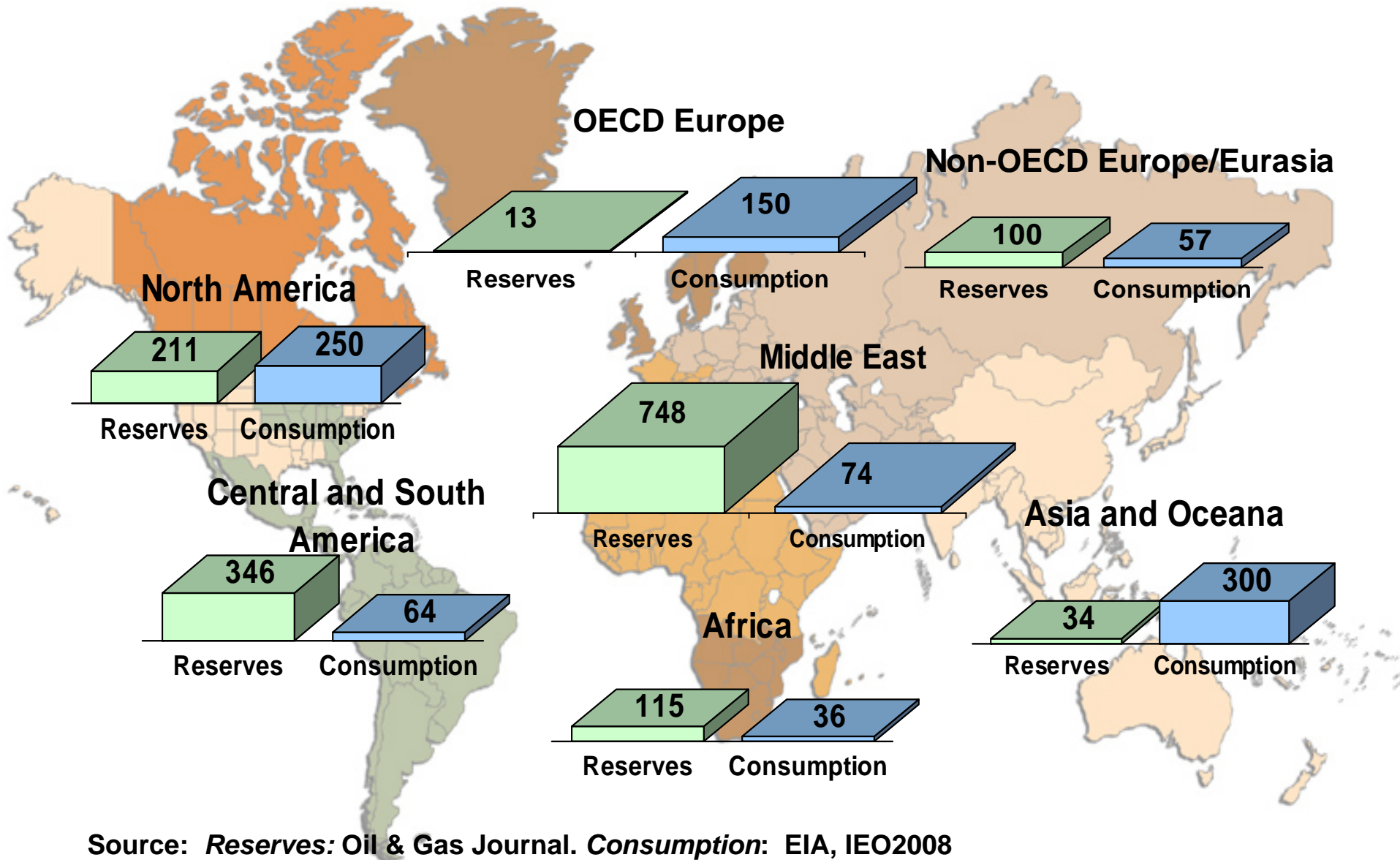
# World Liquids Consumption by Region



Source: EIA, IEO2008

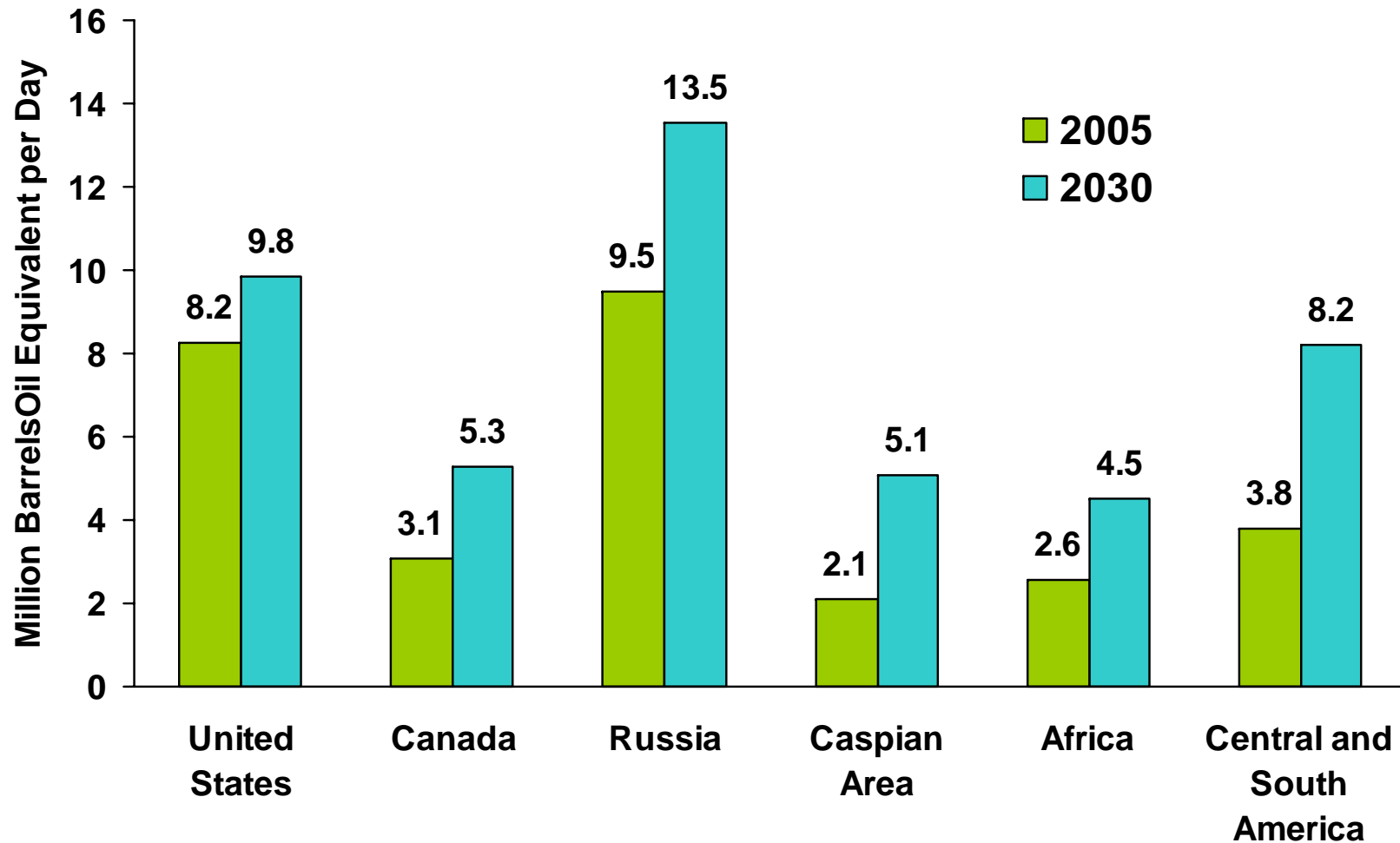


# World Proved Oil Reserves and Projected Total Liquids Consumption from 2005 through 2030 (billion barrels)



Source: *Reserves: Oil & Gas Journal. Consumption: EIA, IEO2008*

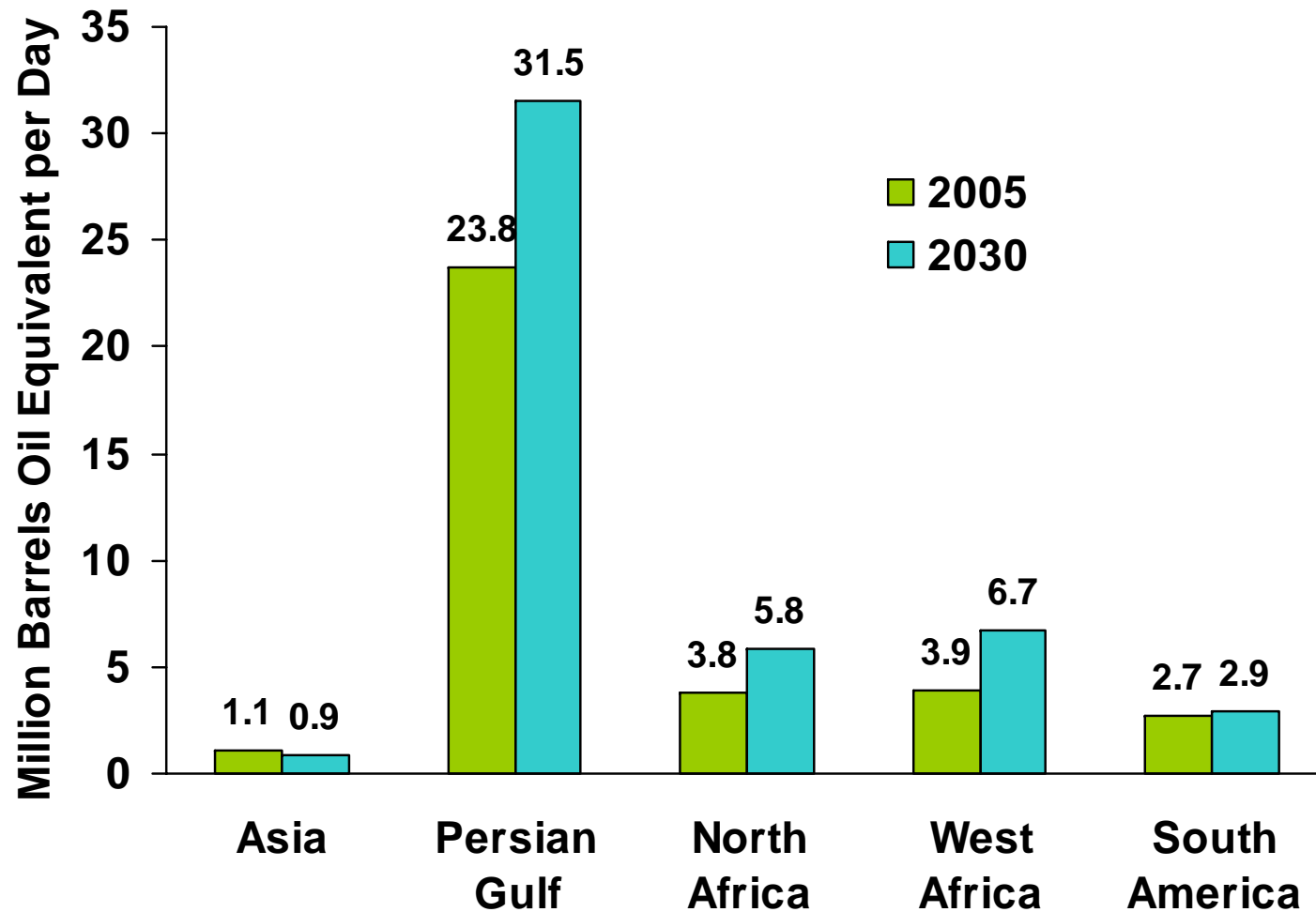
# Liquids Production in Select Non-OPEC Regions, 2005 and 2030



Source: EIA, IEO2008



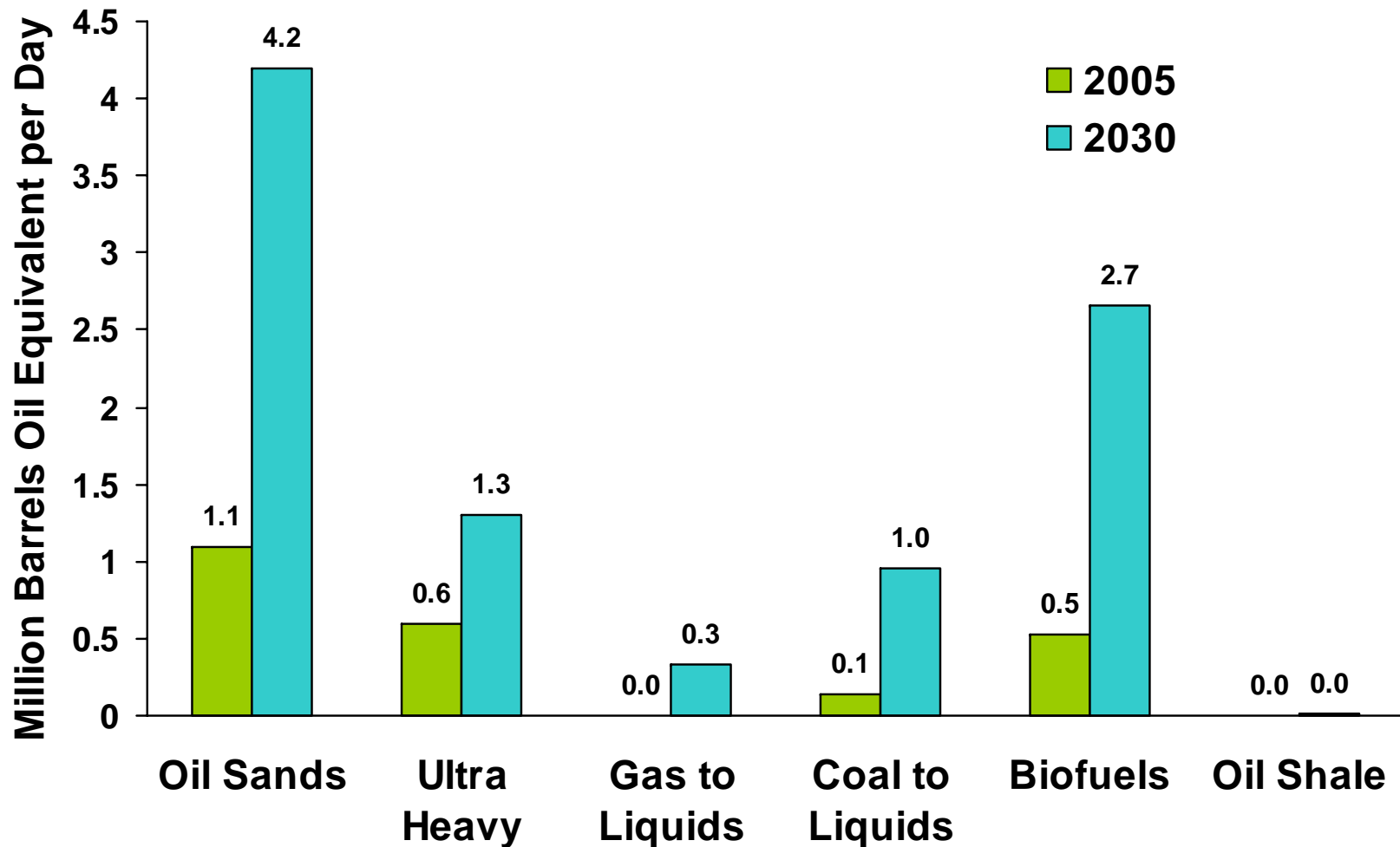
# OPEC Conventional Liquids Production



Source: EIA, IEO2008



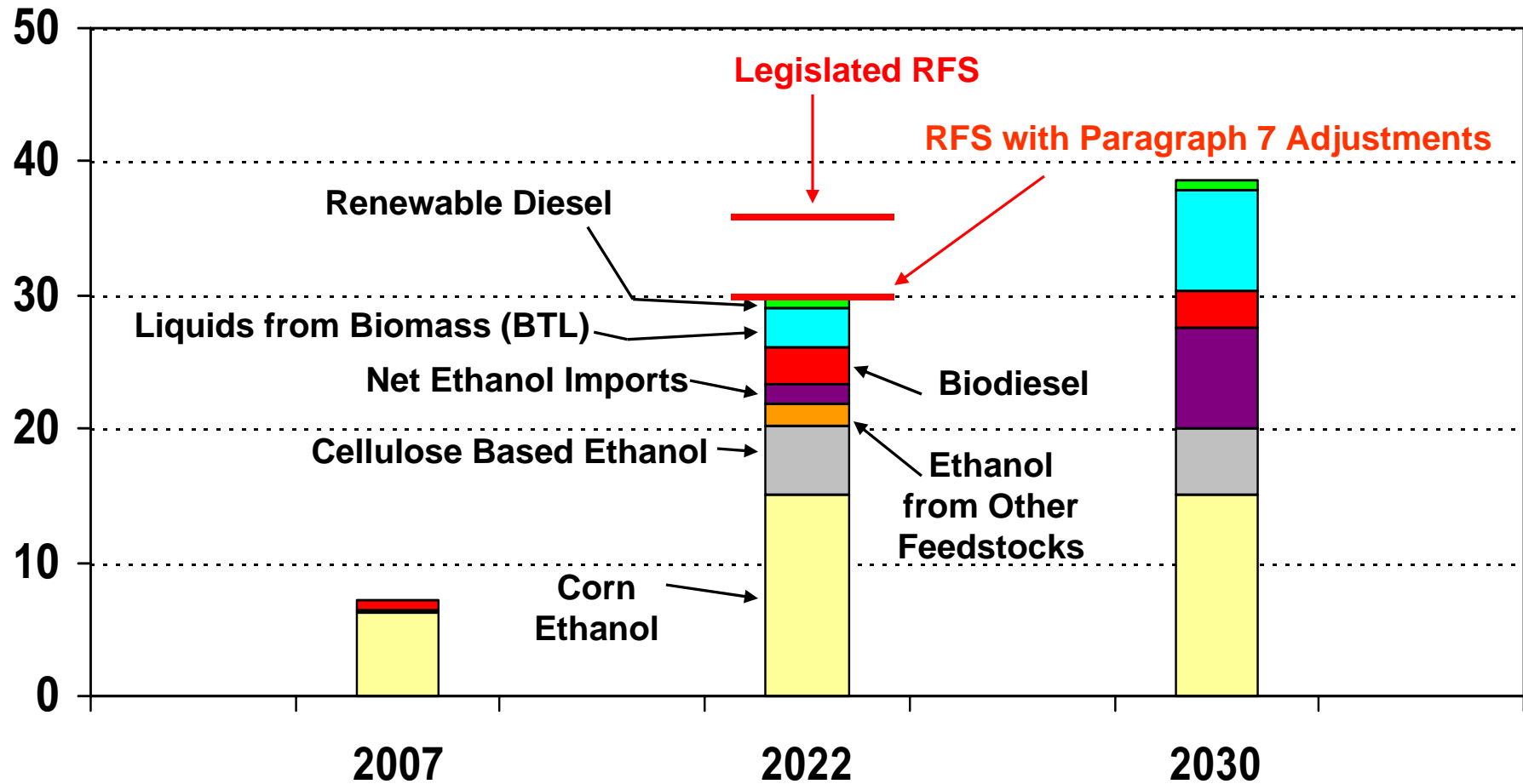
# Worldwide Unconventional Liquids Production, 2005 and 2030



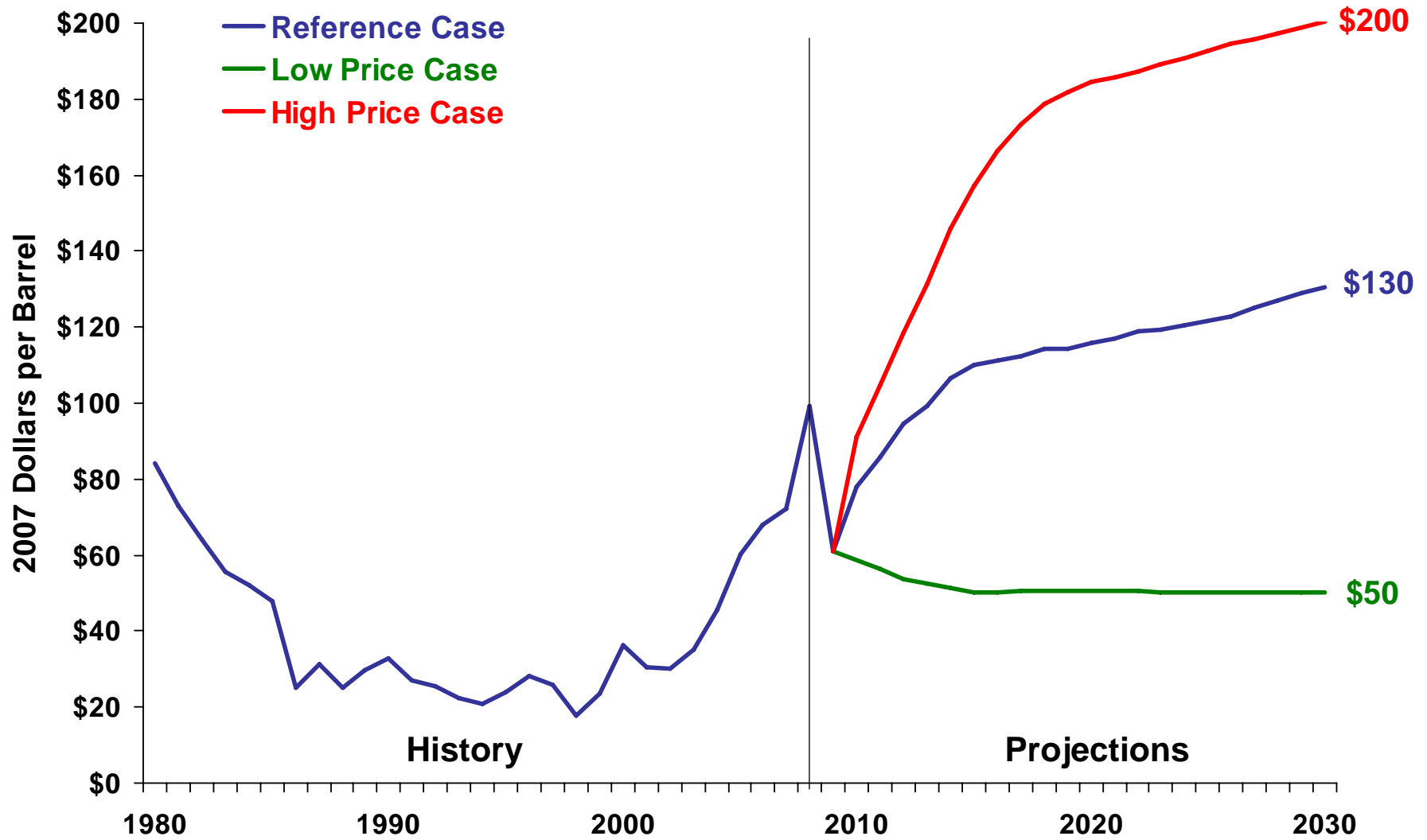
Source: EIA, IEO2008



# Meeting the Renewable Fuels Standard (billion Credits)



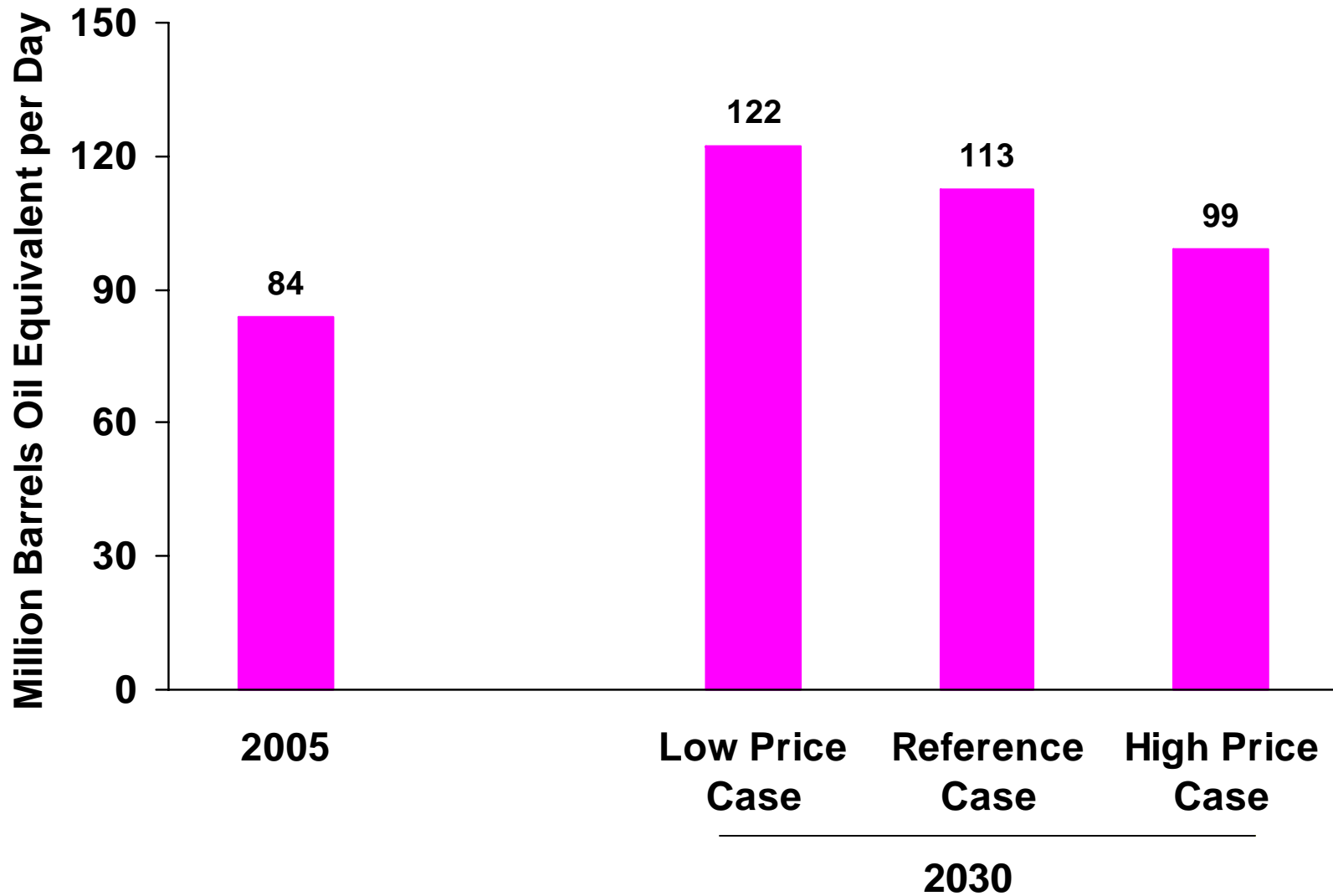
# Real World Oil Prices in Three Price Cases



Source: AEO2009



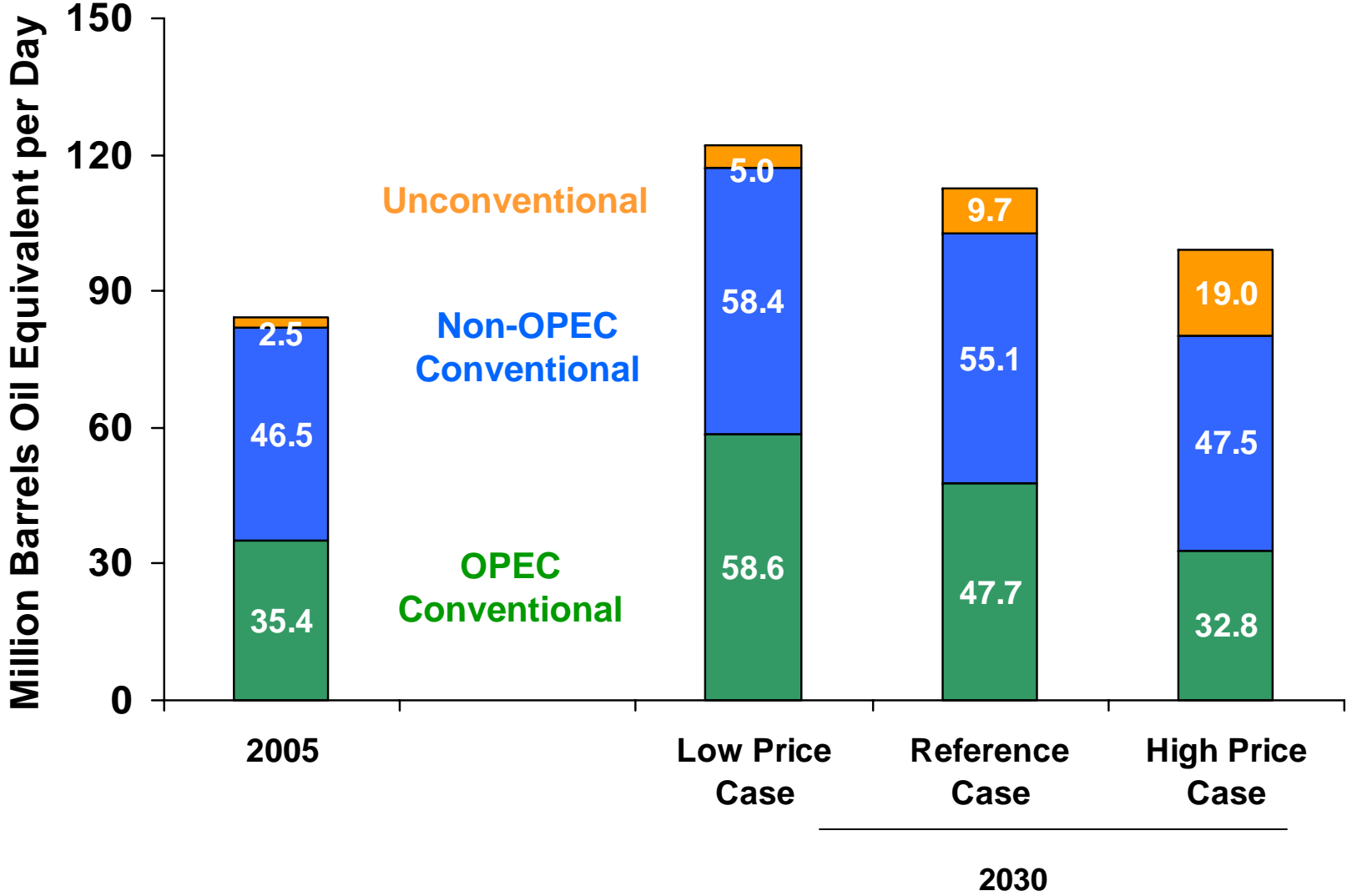
# World Liquids Consumption in Three Price Cases, 2005 and 2030



Source: EIA, IEO2008



# World Liquids Supply in Three Price Cases, 2005 and 2030



Source: EIA, IEO2008



# International Energy Outlook 2008 - Summary

- Worldwide marketed energy consumption is projected to grow by 50% between 2005 and 2030. The non-OECD countries grow by 85%.
- World oil prices remain relatively high through 2030. Prices ease somewhat in the mid-term as anticipated new liquids production (in Azerbaijan, Brazil, Canada, Kazakhstan, and the U.S.) reaches the marketplace, but ultimately supply remains tight.
- Sustained high oil prices mean that renewables are the world's fastest-growing energy source (2.1% per year), followed closely by coal (2.0% per year).
- Although petroleum and other liquids retain the largest share of total world energy use through 2030, their share falls from 37% in 2005 to 33% in 2030.
- Energy-related carbon dioxide emissions are projected to rise from 28.1 billion metric tons in 2005 to 34.3 billion metric tons in 2015 and 42.3 billion metric tons in 2030.

## Periodic Reports

*International Energy Outlook 2008, June 2008*

*Annual Energy Outlook 2009, March 2009*

*Short-Term Energy Outlook, monthly*

## Examples of Special Analyses

*“Impacts of Increased Access to Oil and Natural Gas Resources in the Lower 48 Federal Outer Continental Shelf,” Annual Energy Outlook 2007*

*Analysis of Crude Oil Production in the Arctic National Wildlife Refuge, May 2008*

*The Impact of Increased Use of Hydrogen on Petroleum Consumption and Carbon Dioxide Emissions, September 2008*

*Energy and Economic Impacts of Implementing Both a 25-Percent Renewable Portfolio Standard and a 25 Percent Renewable Fuel Standard by 2025, August 2007*

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

A. Michael Schaal

Michael.Schaal@eia.doe.gov

