

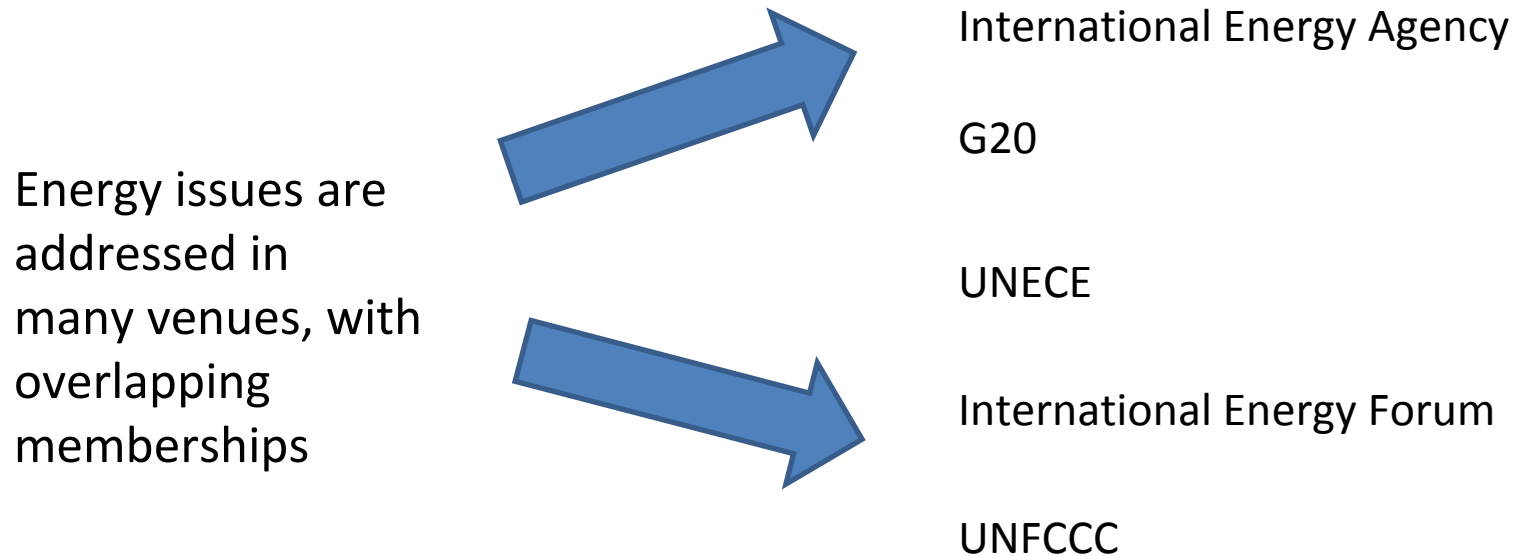
*U.S. PERSPECTIVES ON ENERGY SECURITY*

**MAY 3, 2010**

**ASHGABAT, TURKMENISTAN**

**DOUGLAS C. HENGEL  
U.S. DEPARTMENT OF STATE**

# OSCE Role in Energy Security



OSCE can promote cooperation and dialogue on energy security by helping members address these challenges and reinforcing efforts in other venues.

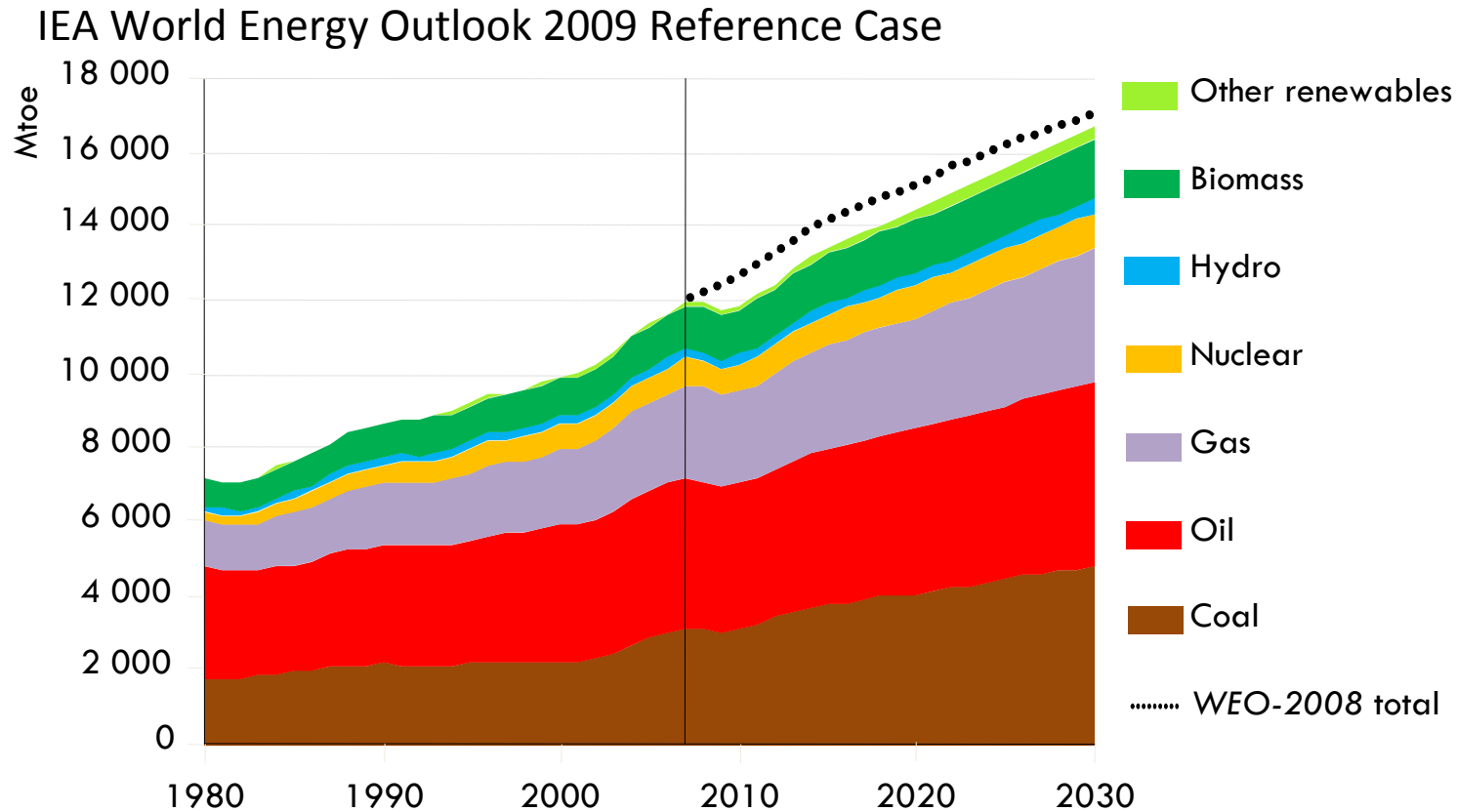
# **U.S. Approach to Energy Security**

- Reduce Oil Dependence
- Strategic Petroleum Reserve
- Integrating Energy Security and Foreign Policy
- Governance
- Market Functioning
- Expanding Collective Energy Security

# **U.S. implementing policies at home to improve energy security and address climate change**

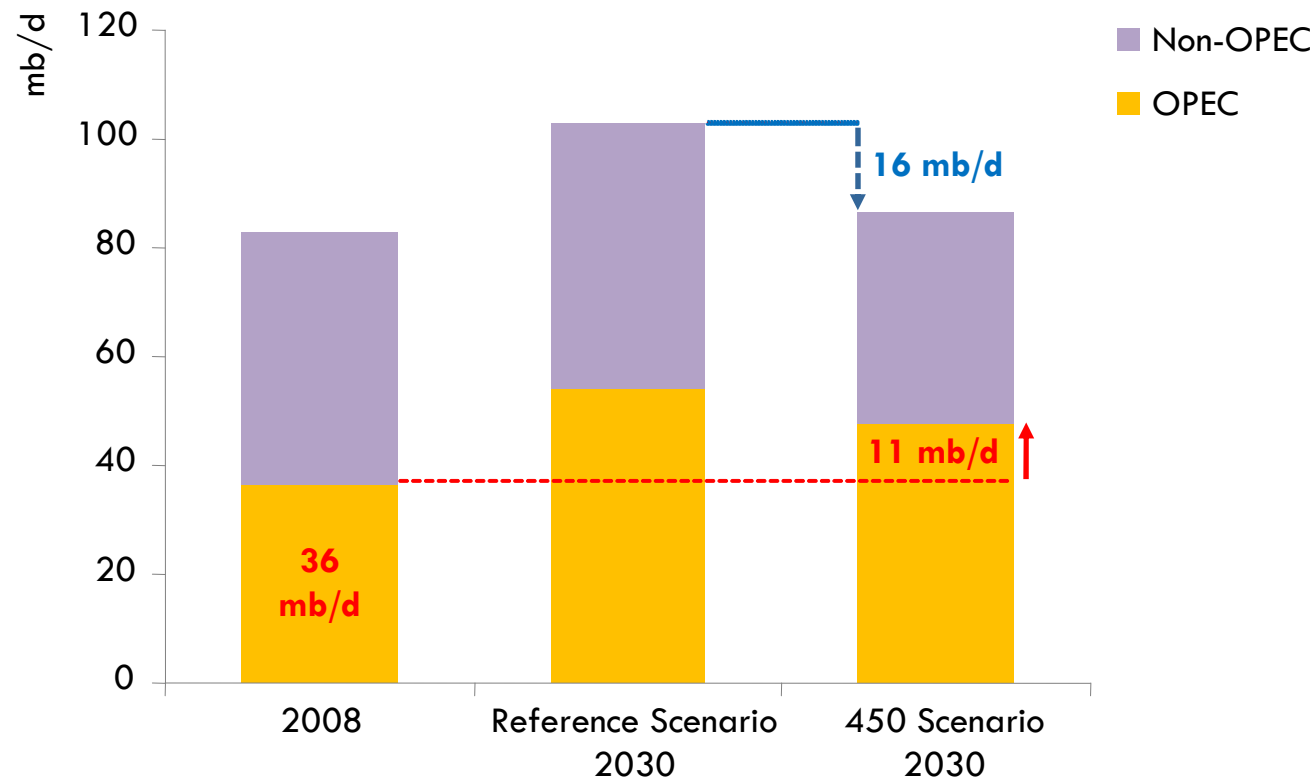
- Investing over \$80 billion in clean energy through the Economic Recovery Act, including loan guarantees for nuclear and renewable projects
- Increasing Fuel Economy Standards 2012-2016 on average 5% per year, to 35.5 mpg
- Developing more stringent efficiency standards
- Support for Congressional action to advance comprehensive climate and energy legislation to promote clean energy and improve energy efficiency

# Fossil Fuels continue to be an important part of the global energy mix out to 2030



*Global demand grows by 40% to 2030*

# World oil production by scenario



*Curbing CO<sub>2</sub> emissions would improve energy security by cutting demand for oil, but even in the 450 Policy Scenario, OPEC production increases by 11 mb/d between now and 2030*

# Central Asia Playing Important Role in Ensuring Global Energy Security

## Turkmenistan

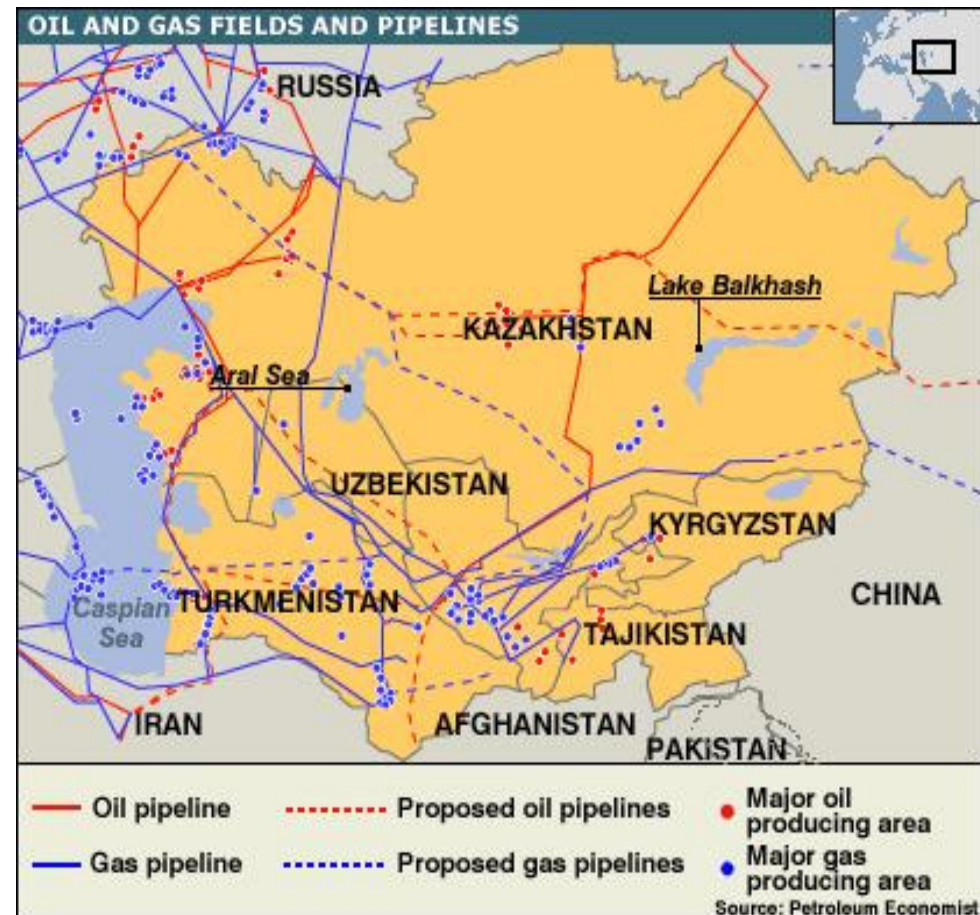
- Gas production can play growing role in meeting Eurasian demand.
- Large potential for growth in offshore and onshore.

## Kazakhstan

- Tengiz providing significant increment to meet global oil demand.
- Kashagan and Karachaganak will put Kazakhstan in top tier of global producers.
- Investment in export routes (CPC, KACTS) important.

## Uzbekistan

- Major gas export potential.

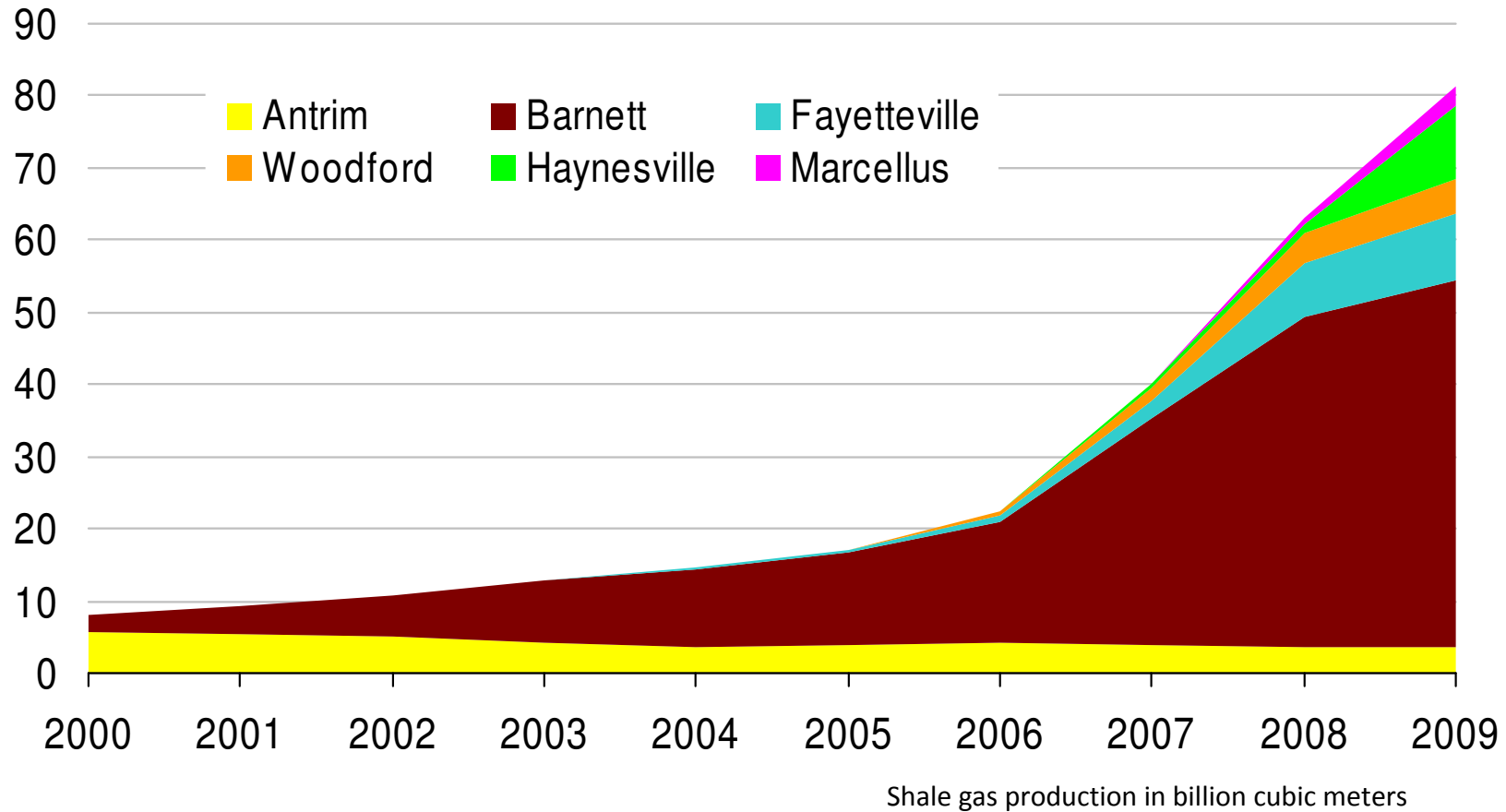


# U.S. Shale Gas Having Global Impact



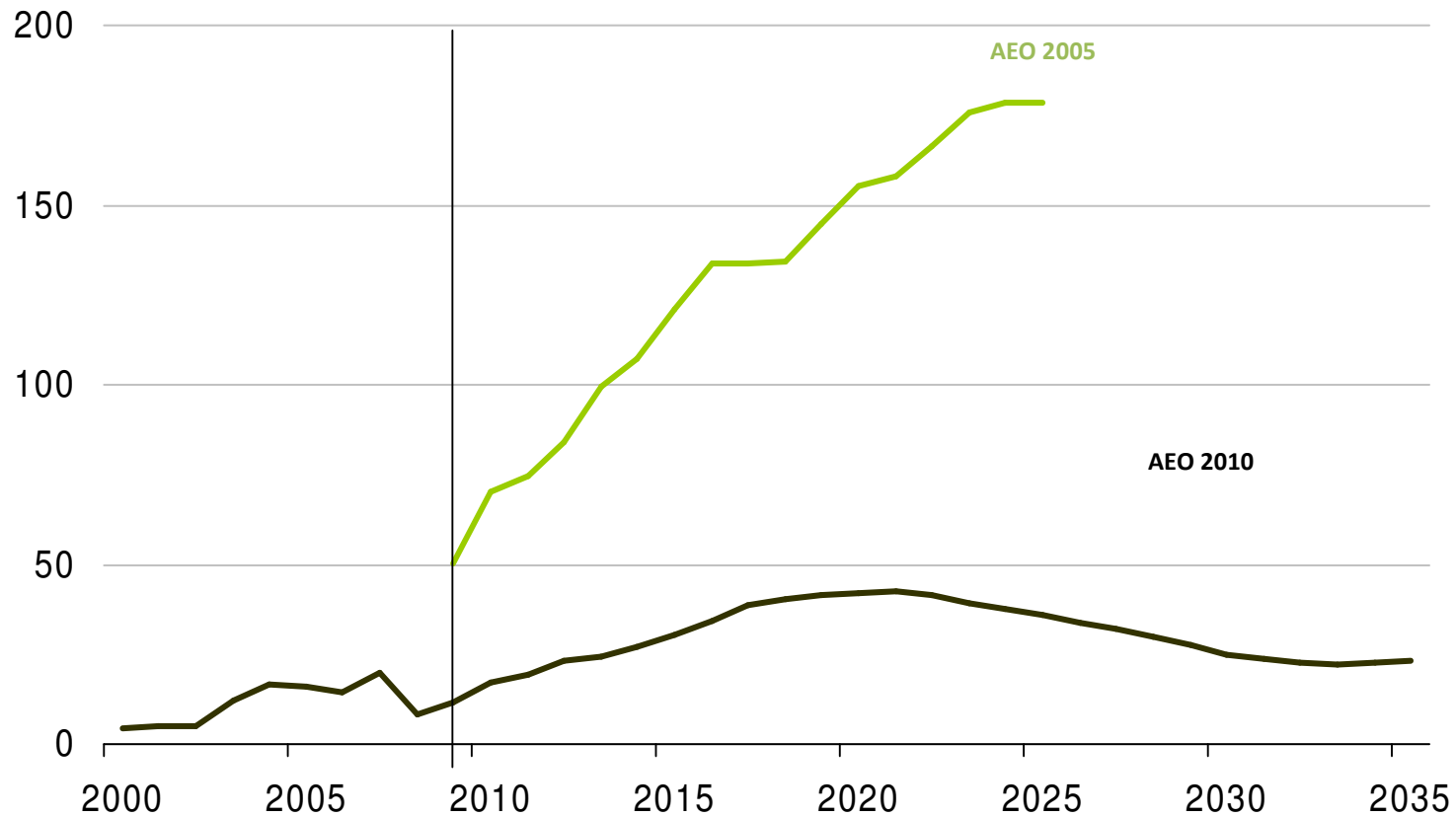


# U.S. Shale Gas Production



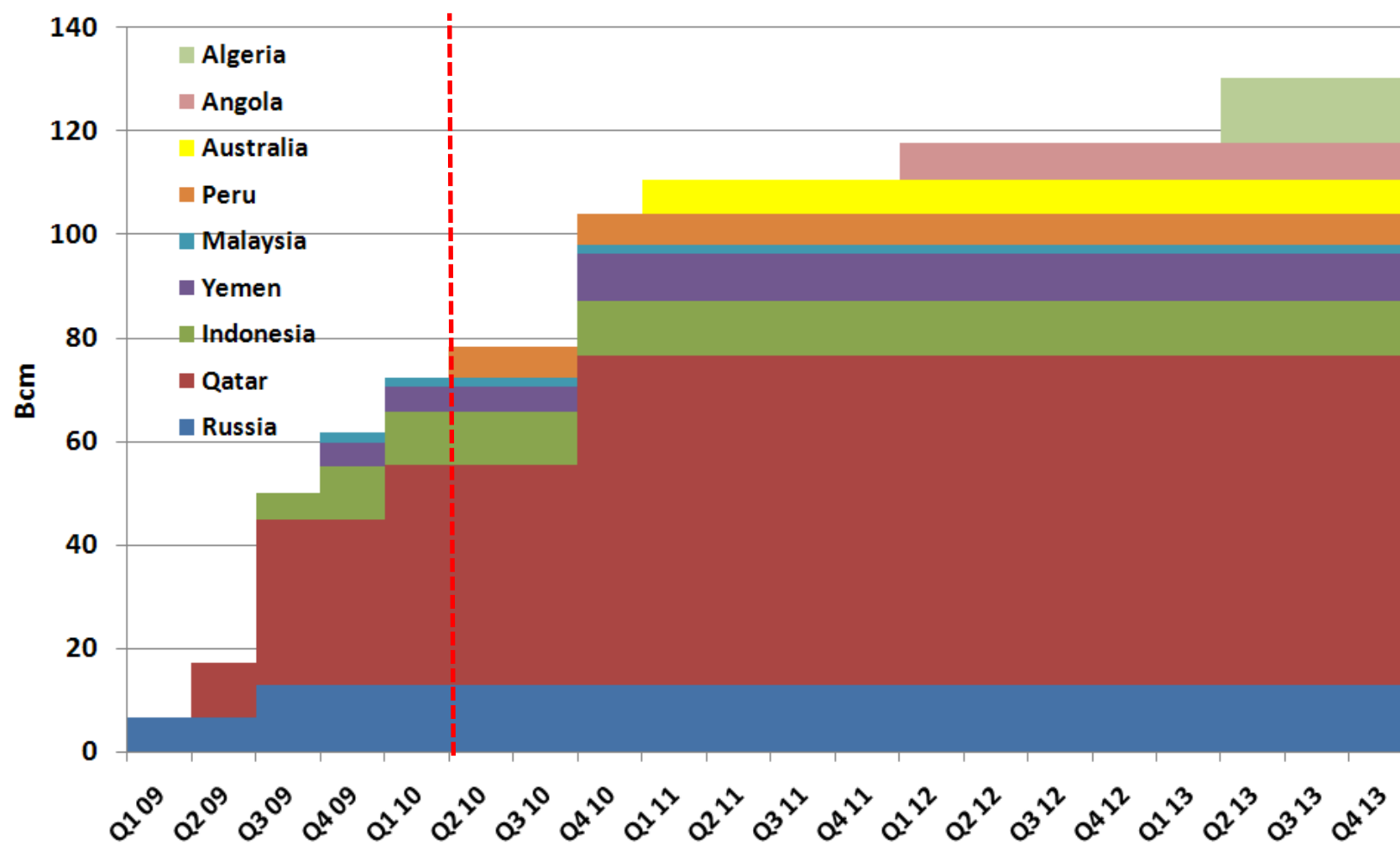
# U.S. LNG Demand

## LNG Demand



U.S. net LNG imports under AEO 2005 and AEO 2010 in billion cubic meters

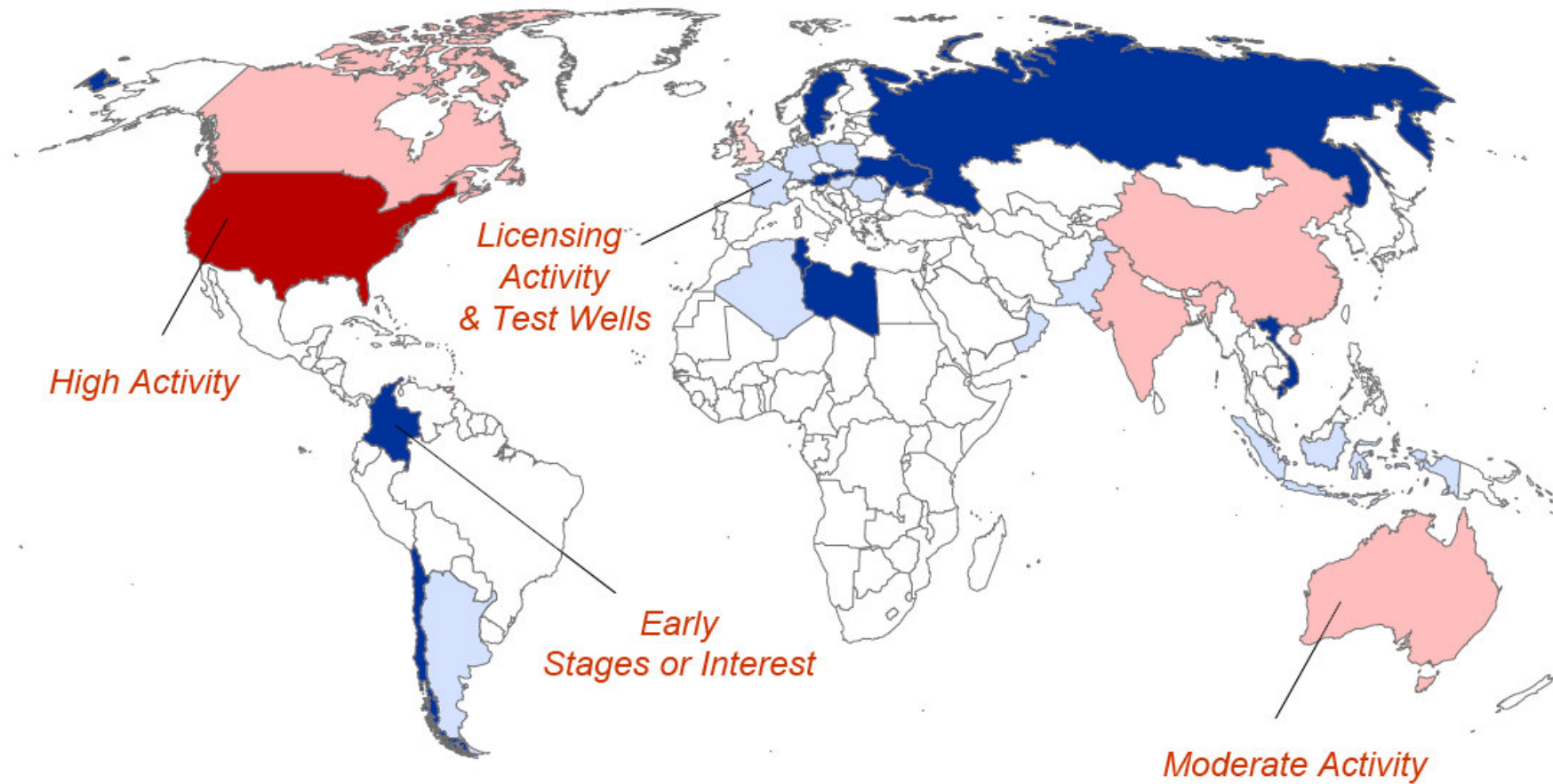
# Global expansion of LNG capacity



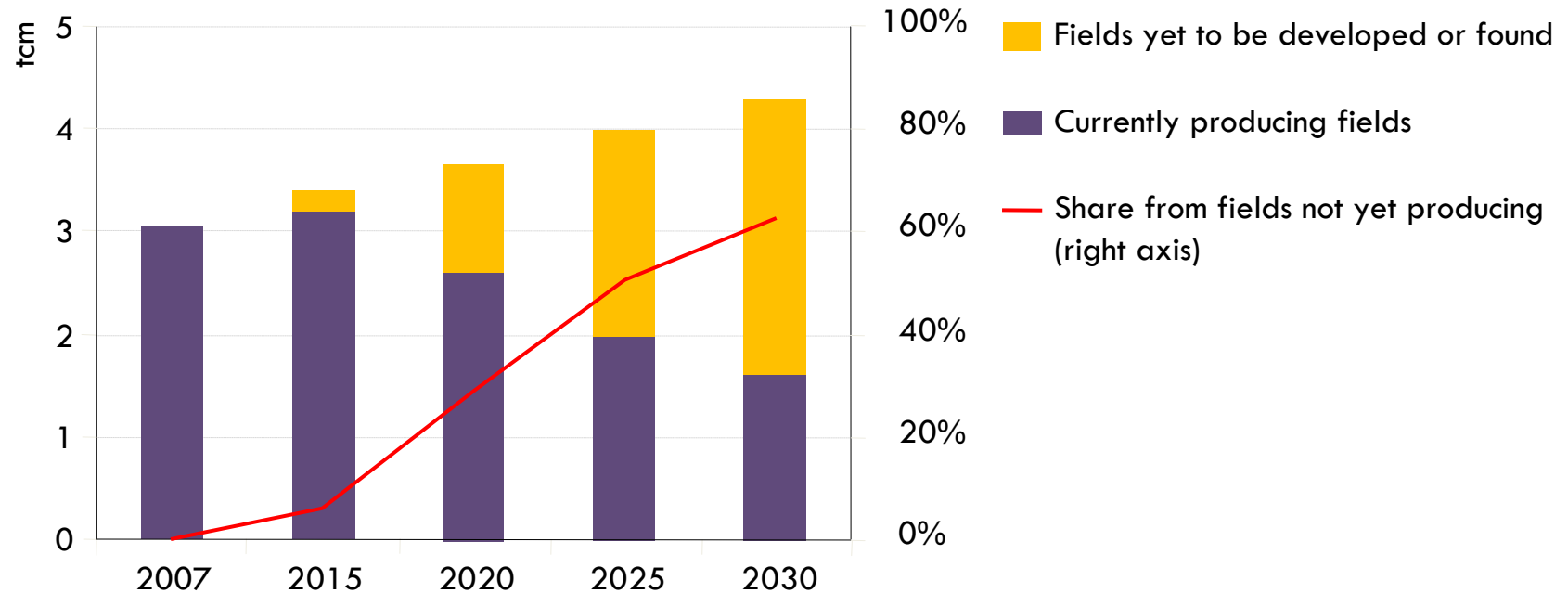
Source: IEA, NGMR 09

# International Unconventional Gas

## Global Unconventional Gas Activity



# Investment in the upstream sector will still be needed



*Additional capacity of around 2 700 bcm, or 4 times current Russian capacity, is needed by 2030 – half to offset decline at existing fields & half to meet the increase in demand*