
**Development of the Appalachian Shale
Recommended Practices Group**

**2013 SPE – Gulf Coast Section
Reservoir Study Group
Reservoir Technology Forum**

National Petroleum Council (NPC)

Origins Continuation of WWII government / industry cooperation

Purpose Sole purpose of NPC is to advise U.S. Secretary of Energy and Executive Branch by conducting studies at their request

Organization A Federally chartered, self-funded Advisory Committee; Not an advocacy group, does not lobby

Membership Broad and balanced. Approximately 200 members from all segments of the oil and gas industries and many outside interests

Study Participants Diverse interests and expertise relating to the topic being addressed

Study Reports All NPC advice is provided in reports approved by its members and is available to the public. Reports can be viewed and downloaded at no cost from the NPC website – www.npc.org

Prudent Development

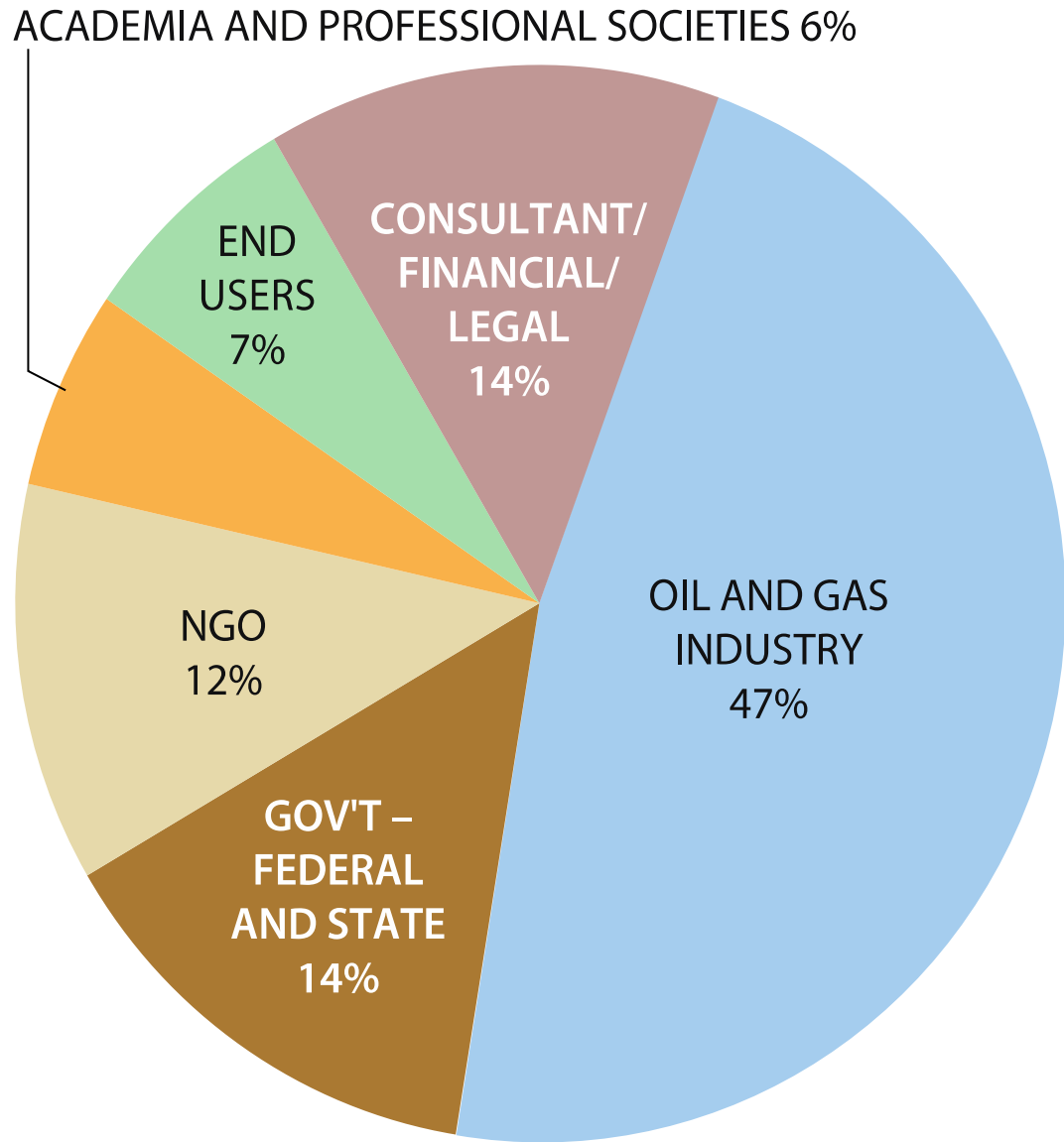
Realizing the Potential of North America's Abundant Natural Gas and Oil Resources



Diverse Study Participation

**Study Committee,
CSC,
Task Groups,
Subgroups**

**Over
400
Participants**



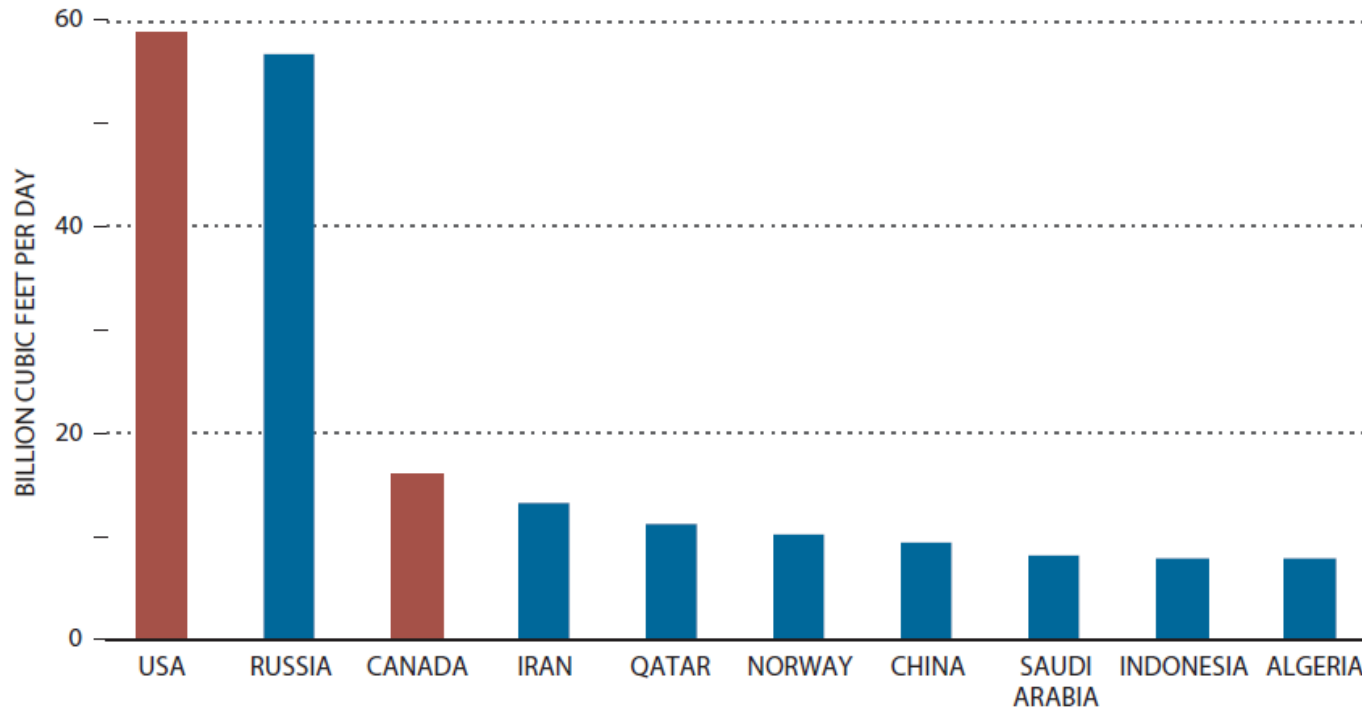
Four Major Findings

- **First, the potential supply of North American natural gas is far bigger than was thought even a few years ago**
- **Second – and perhaps surprising to many – America’s oil resources are also proving to be much larger than previously thought**
- **Third, we need these natural gas and oil resources even as efficiency reduces energy demand and alternatives become more economically available on a large scale**
- **Fourth, realizing the benefits of natural gas and oil depends on environmentally responsible development**

Core Strategies and Recommendations

- **Support prudent natural gas and oil resource development..... and regulation**
- **Better reflect environmental impacts in markets and fuel/technology choices**
- **Enhance the efficient use of energy**
- **Enhance the regulation of markets**
- **Support the development of intellectual capital and a skilled workforce**

North American global leadership in natural gas and oil production - a platform for development in natural gas...



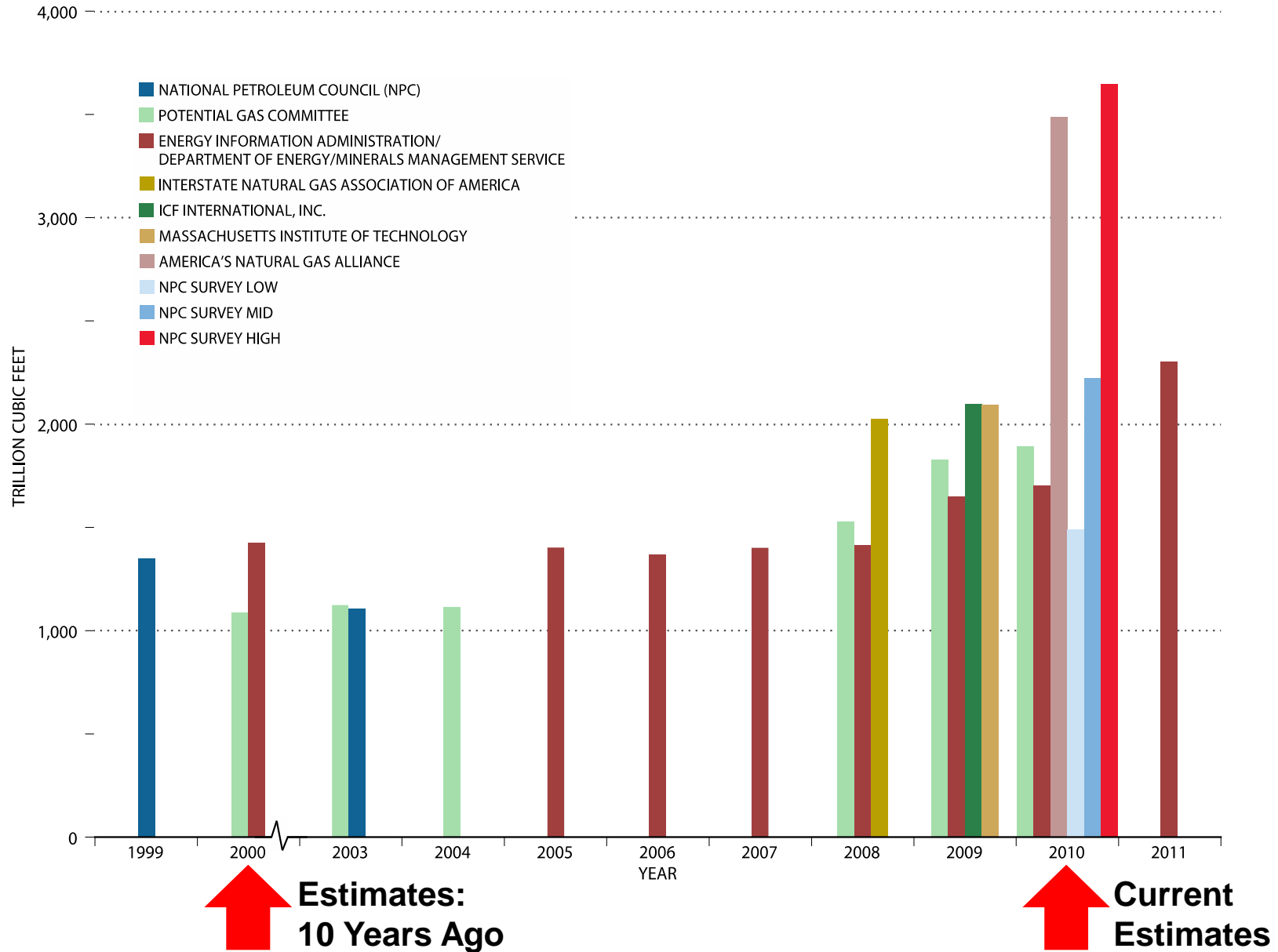
Source: BP Statistical Review of World Energy.

North America has a track record in developing and deploying key technology areas which have led to this position, including for natural gas:

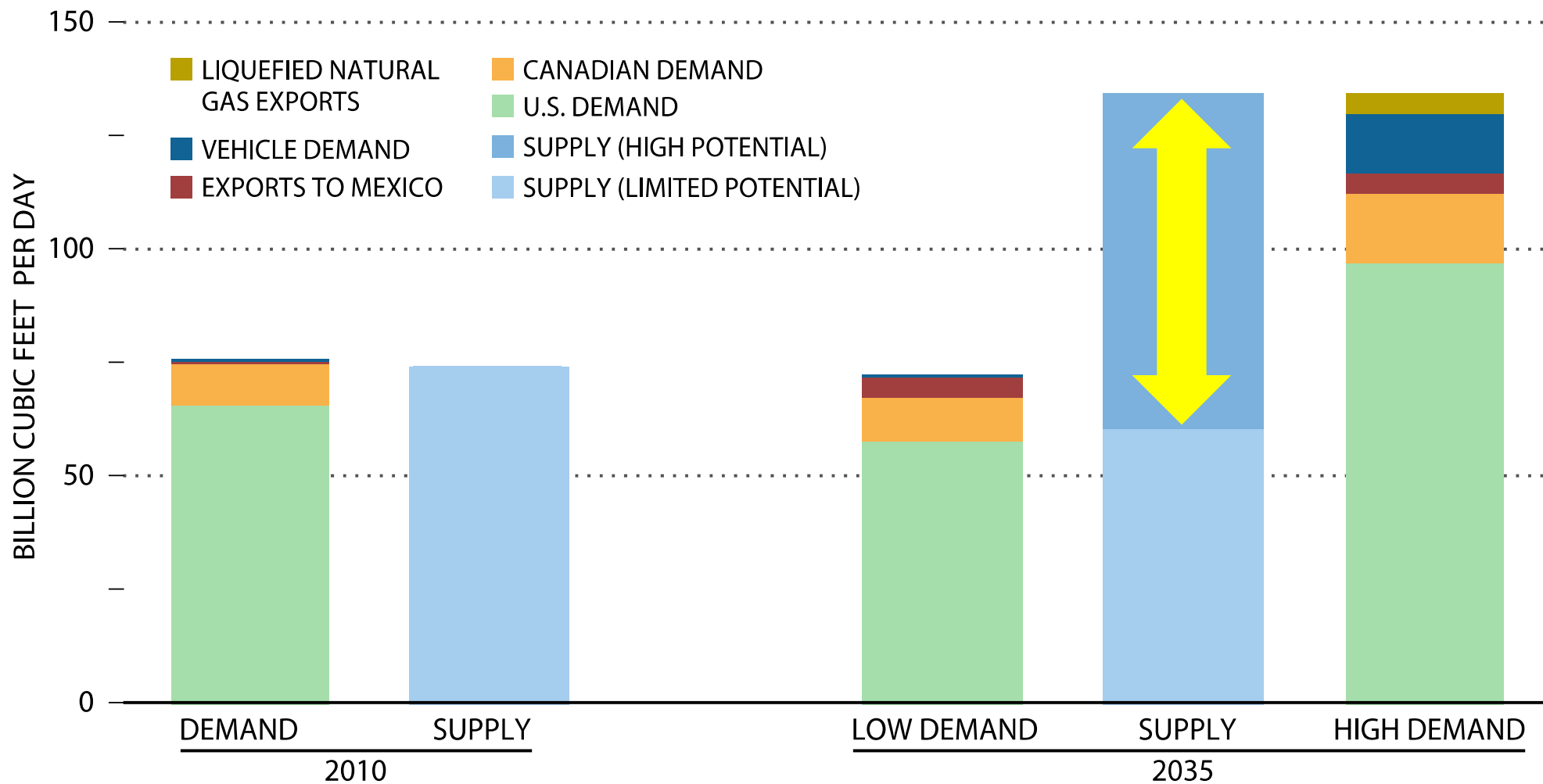
- offshore drilling, facilities and operations
- unconventional gas appraisal, development and production (CBM, tight gas, shale gas)
- horizontal drilling and multi-stage fracturing applied to source rock
- ...

N.A. Natural Gas Resource Estimates Transform Supply Outlook

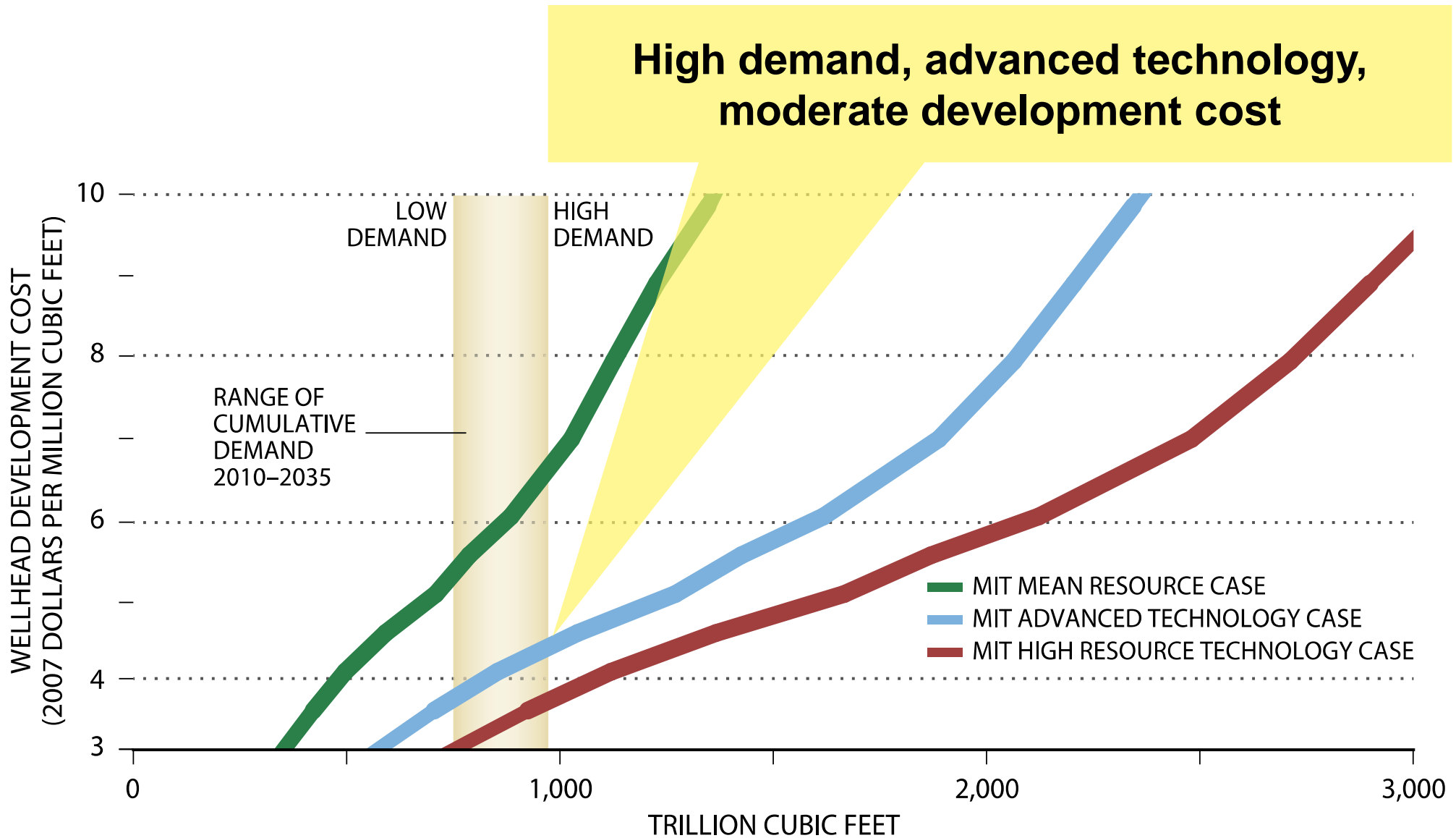
Recent Estimates of Natural Gas Resources



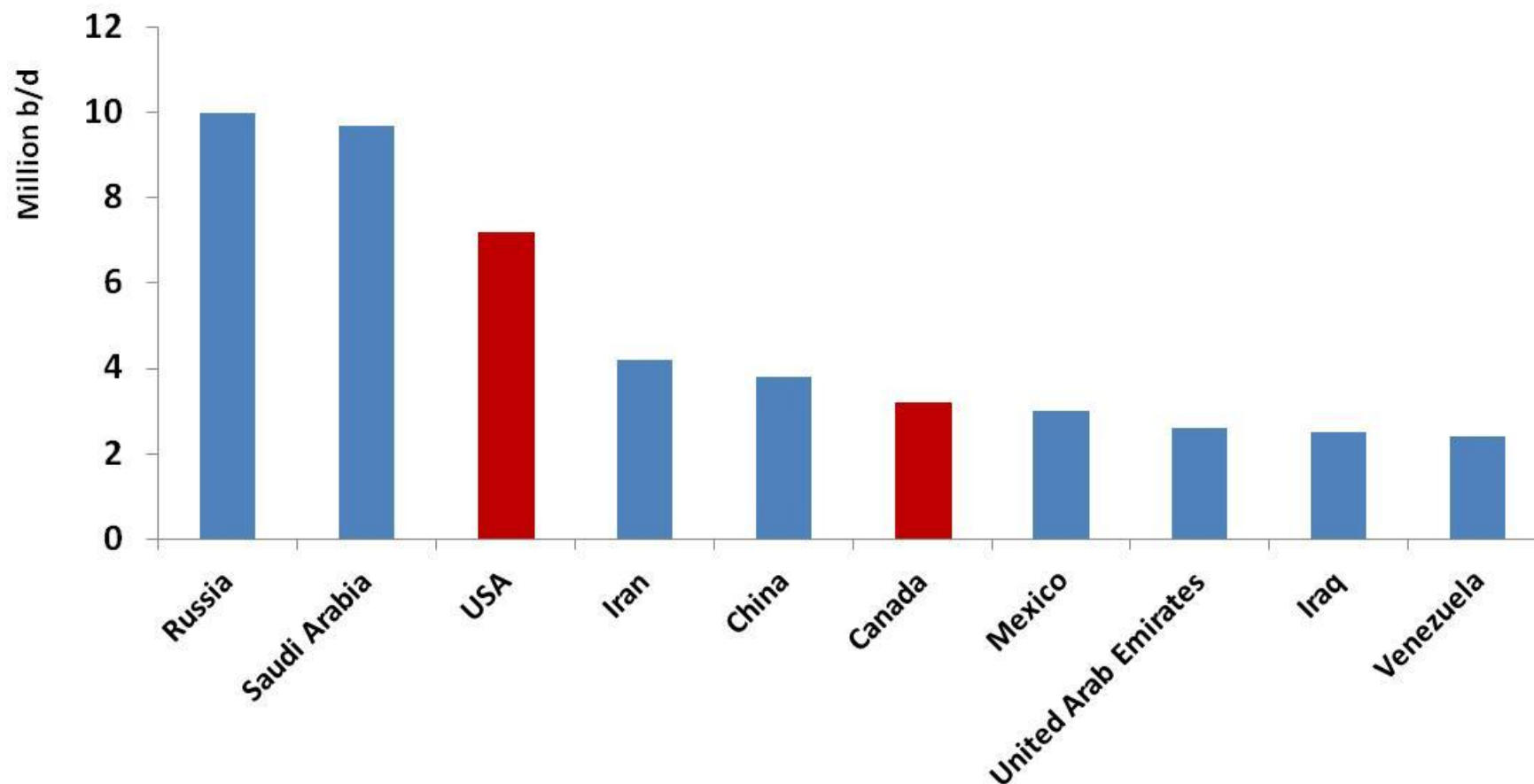
North American Natural Gas Can Meet Even the Highest Potential Demand



N.A. Gas Resources Have Potential to Supply the Market for Decades



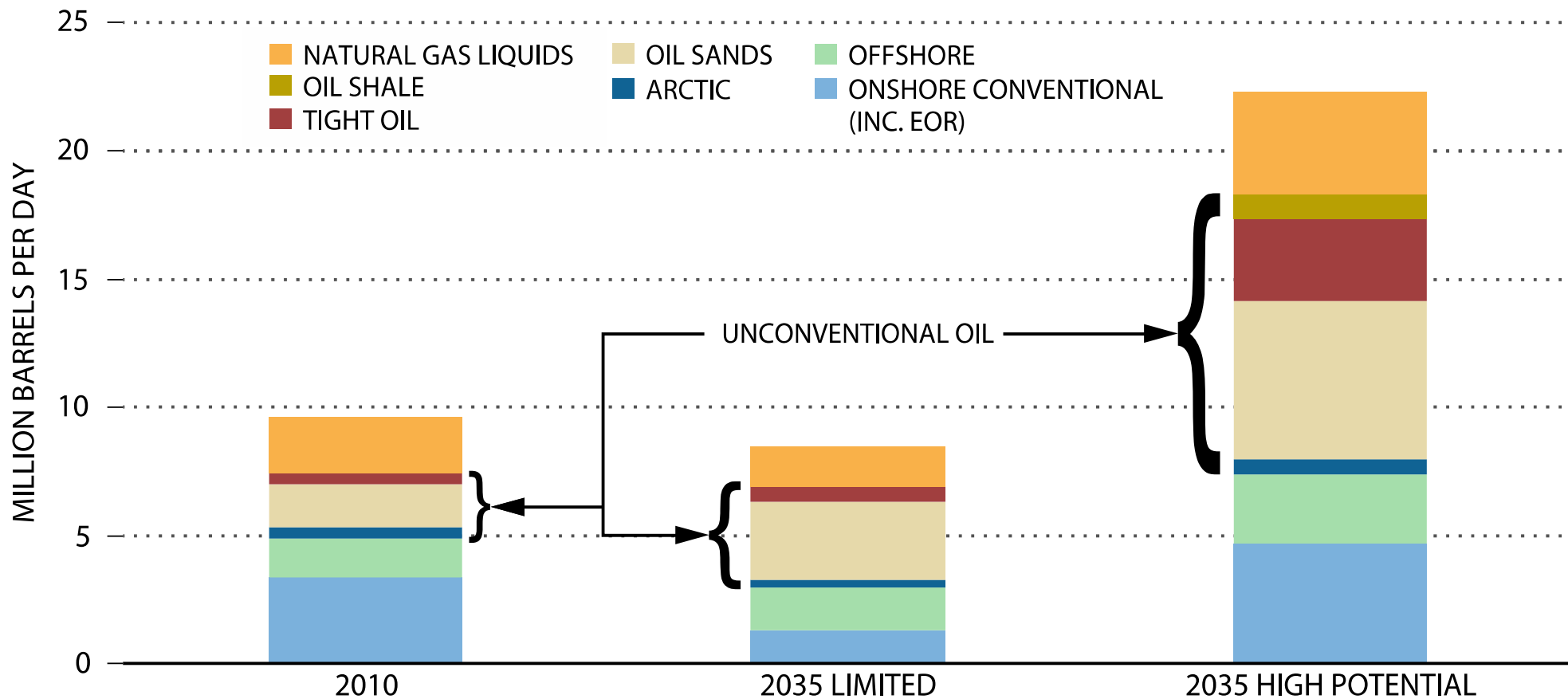
Top 10 Oil Producers



Source: BP Statistical Review of World Energy

N.A. Oil Supply Has Upside Potential But Risk of Decline

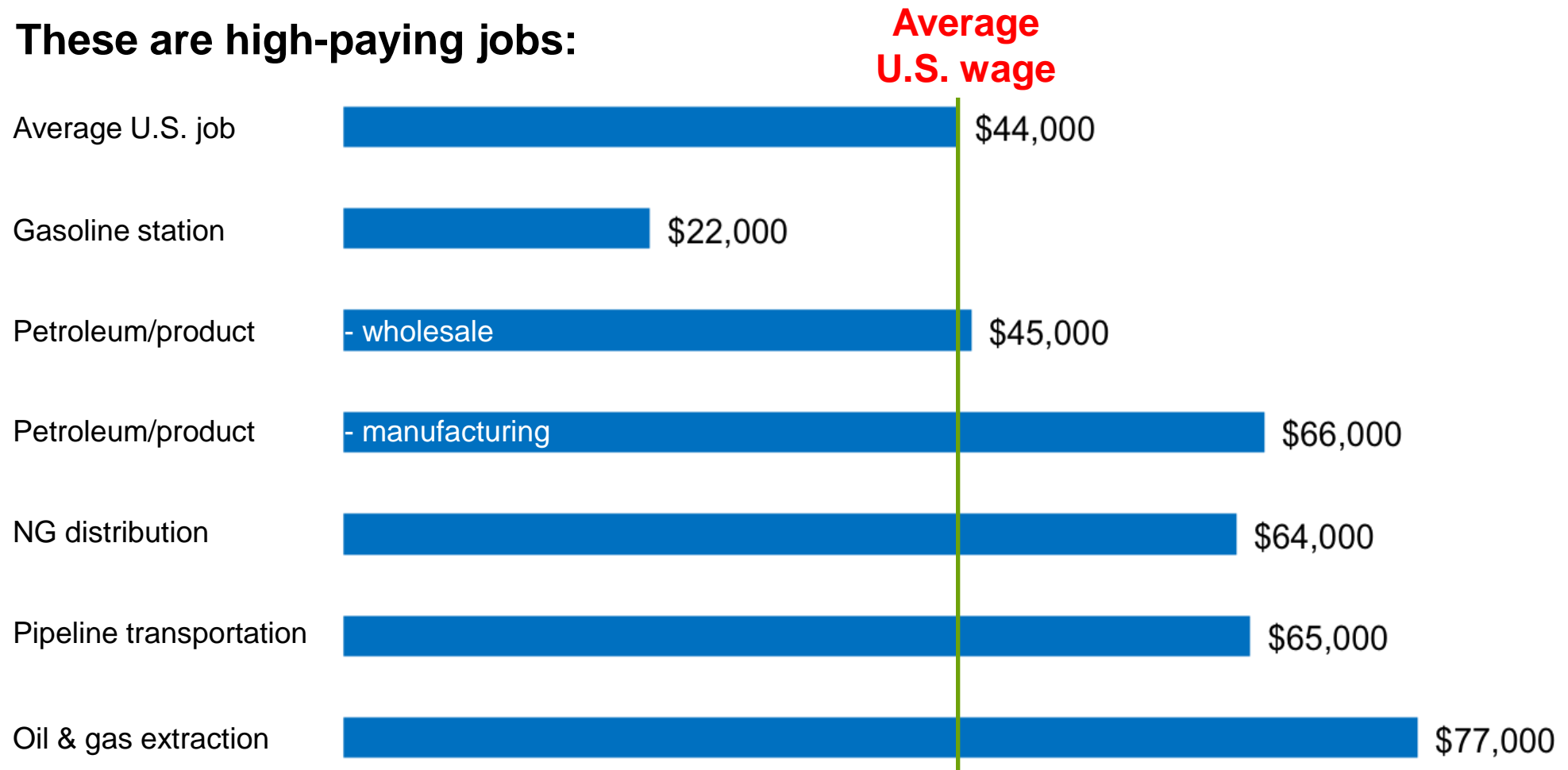
High production opportunities enabled by access frameworks



Economic Benefits Also Flow From More Domestic Gas & Oil Development

- Direct jobs in the oil & gas industry: 2+ million
- Total direct/indirect jobs from oil & gas industry activity: 9+ million

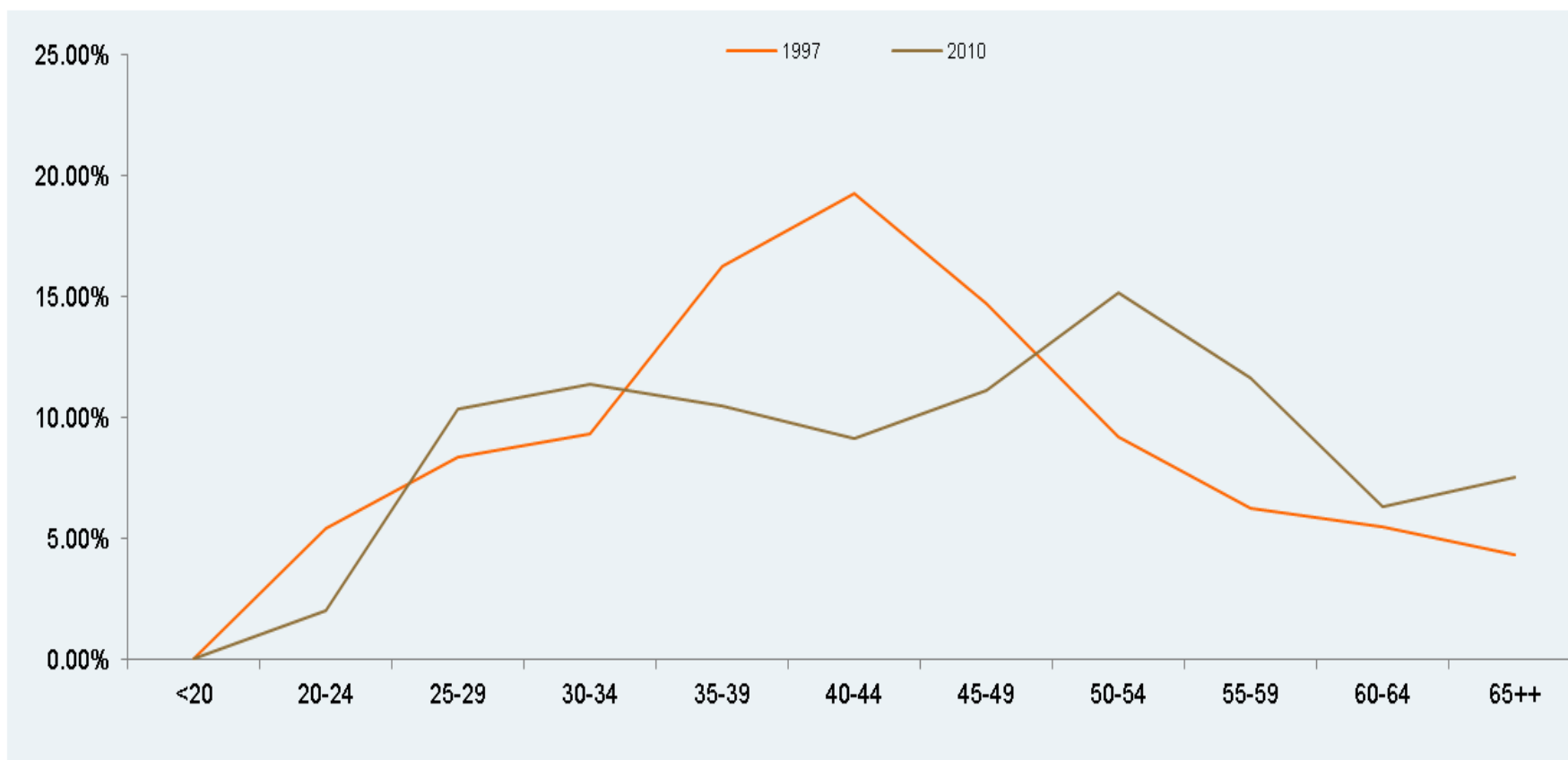
These are high-paying jobs:



Many technical professionals are reaching retirement age

- The oldest Baby Boomers turn 65 this year, highlighting the demographic change under way in the natural gas and oil industry (and other industries)

Age distribution of Society of Petroleum Engineers membership

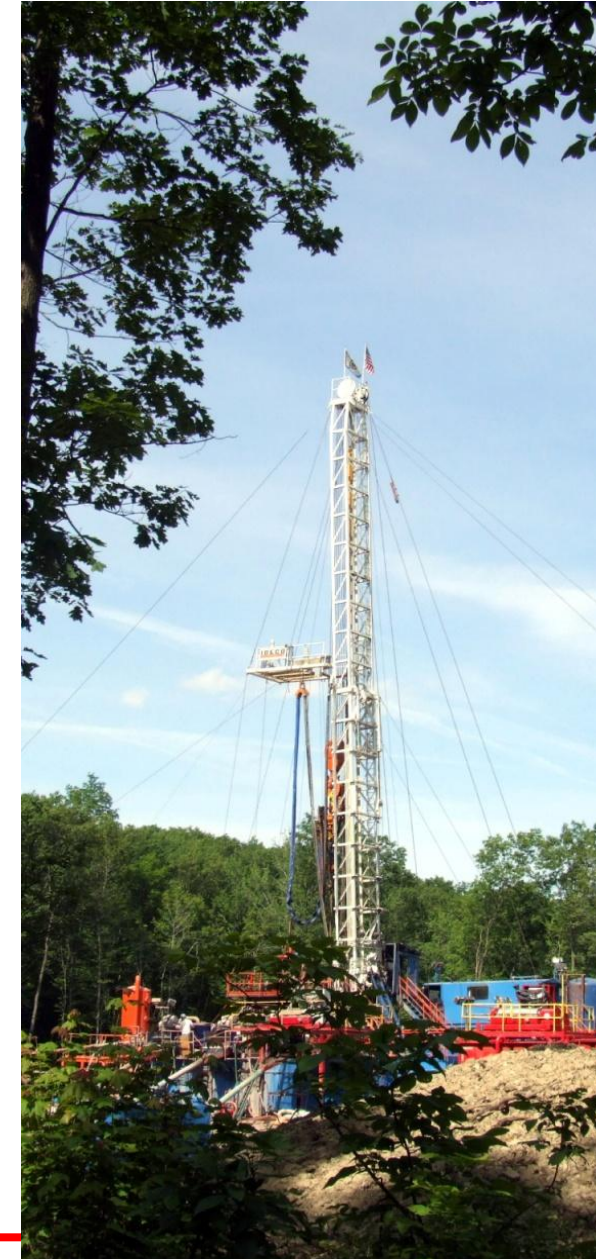


1. Support Prudent Development

- **Establish Regional Councils of Excellence to share effective environmental, health, and safety practices**
- **Adopt policies for more effective regulation of natural gas and oil reduction and operations**
- **Commit to and carry out community engagement**
- **Measure and reduce methane emissions**
- **By supporting prudent development, provide access to resources**

A Framework for Prudent Shale Development-Mission Statement

- To identify and disseminate responsible standards and practices for effective environmental, health and safety practices utilized by natural gas and oil producers in the Appalachian region
- Responding to recommendations from SEAB and NPC reports



Participants

Anadarko

Cabot

Chesapeake

Chevron

EQT

Seneca

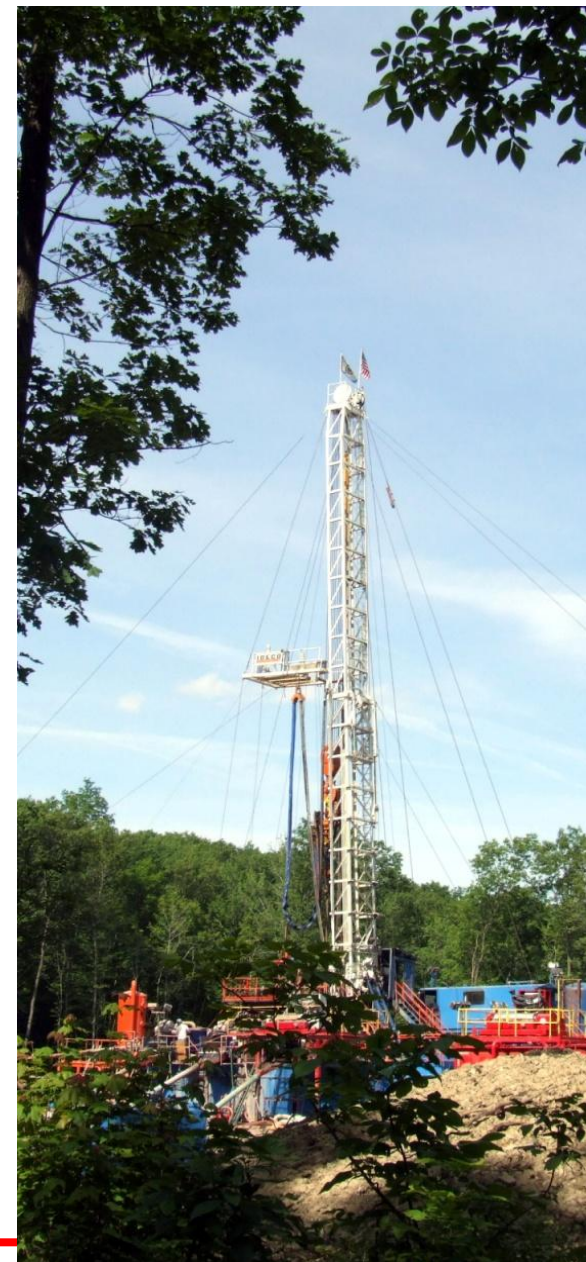
Shell

Southwestern

Talisman

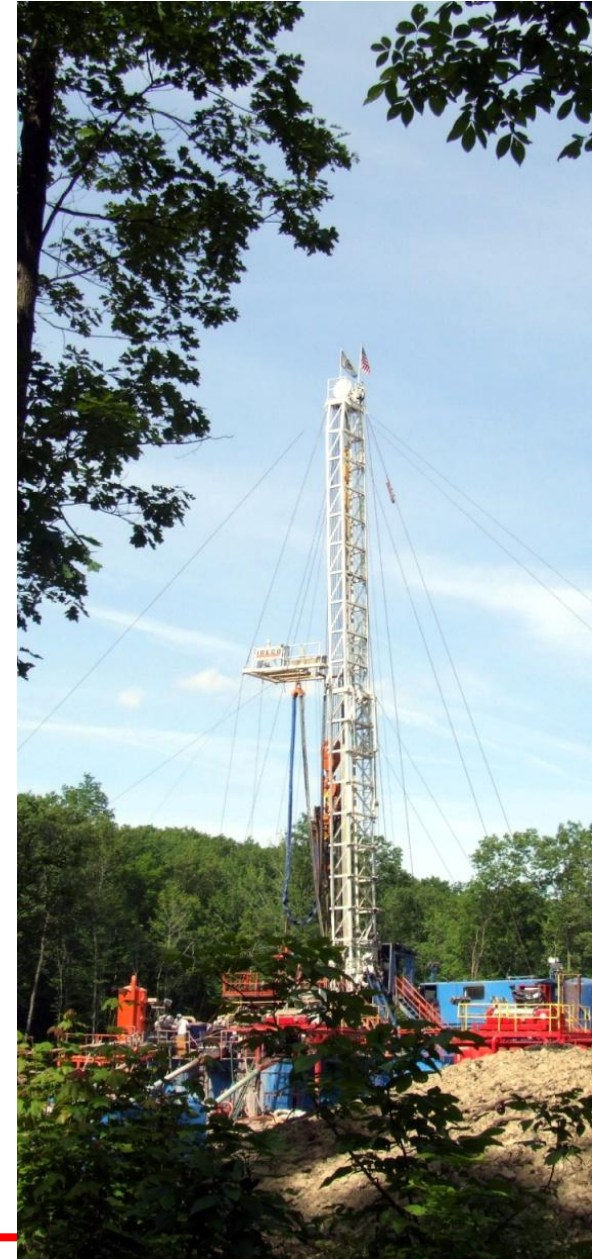
Williams

XTO



Work Product

- Recommended Standards and Practices
 - Pre-Operational Planning
 - Site Selection and Assessment
 - Site Design and Construction
 - Drilling Operations
 - Completion/Stimulation Operations
 - Flow Back
 - Production Operations
 - Measurement and Metrics
 - Landowner Relations



For more information



Visit – asrpg.org

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