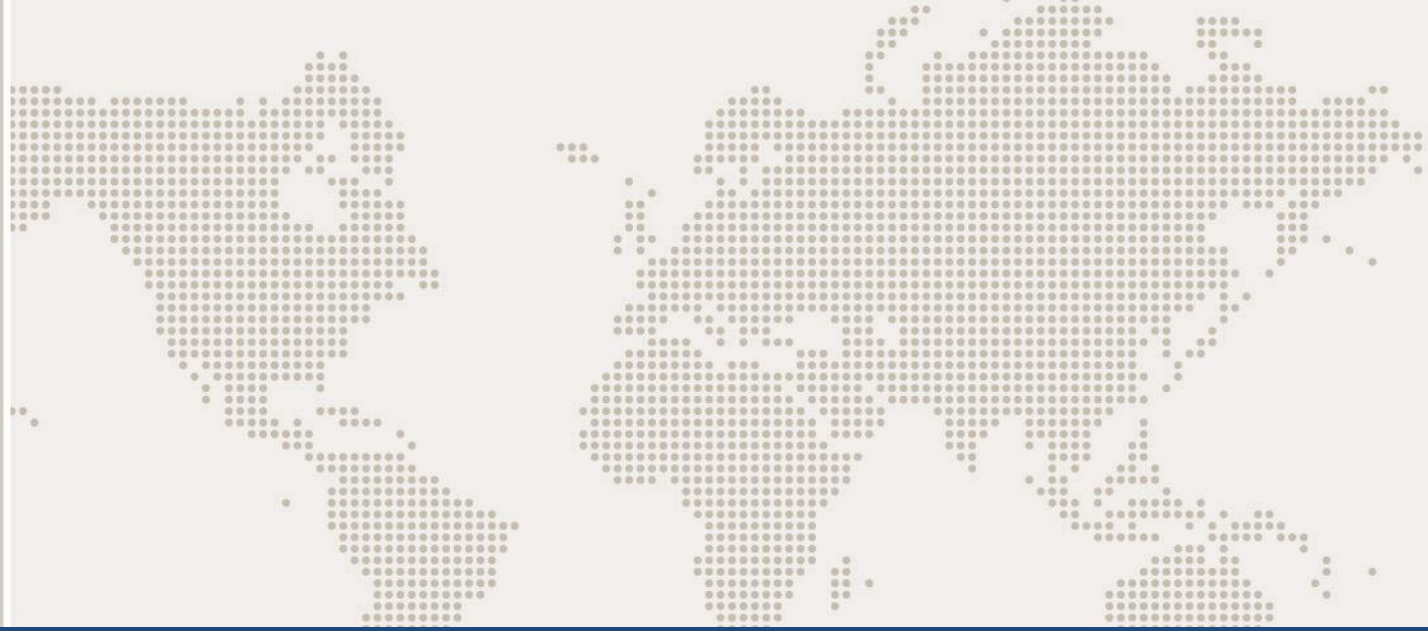


CSIS | CENTER FOR STRATEGIC &
INTERNATIONAL STUDIES

1800 K STREET, NW | WASHINGTON DC, 20006



Realizing the Potential of U.S. Unconventional Natural Gas

Key Findings and Recommendations

CSIS Energy and National Security Program

February 13, 2013

Report Rollout

CSIS

CENTER FOR STRATEGIC &
INTERNATIONAL STUDIES

Energy & National
Security Program

Purpose of the Study

- (1) highlight the key trends, challenges, and opportunities
- (2) provide practical and timely public policy solutions for government, industry, and civil society to chart a sustainable path forward

Study Approach***Workshops***

- Supply and Industry Developments
- Demand Drivers
- Path Forward

In-Depth Sessions

- LNG exports
- Water Management
- Methane Emissions
- Seismicity
- Responsible Development

Outreach

- COGA
- GWPC
- Marcellus Tour
- IOGCC
- State Regulator Calls

A REPORT OF THE CSIS
ENERGY AND NATIONAL
SECURITY PROGRAM

Realizing the Potential of U.S. Unconventional Natural Gas

EXECUTIVE SUMMARY

Authors

Lisa A. Hyland
Sarah O. Ladislav
David L. Pumphrey
Frank A. Verrastro
Molly A. Walton

February 2013



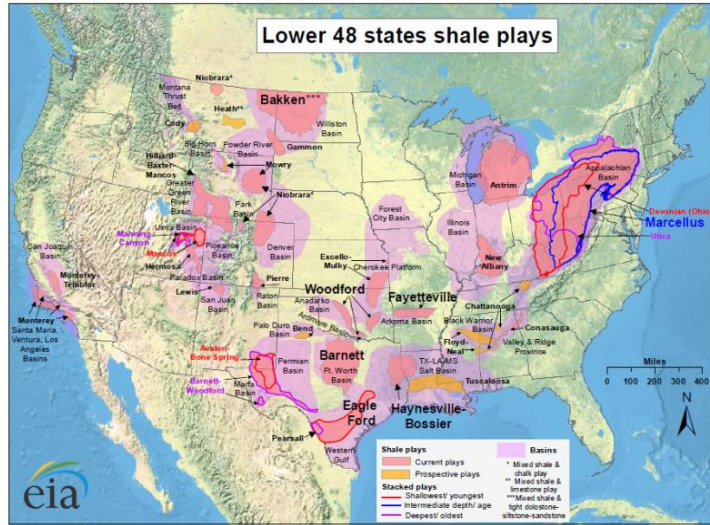
Key Findings



50
YEARS | CHARTING
OUR FUTURE

CSIS

CENTER FOR STRATEGIC &
INTERNATIONAL STUDIES



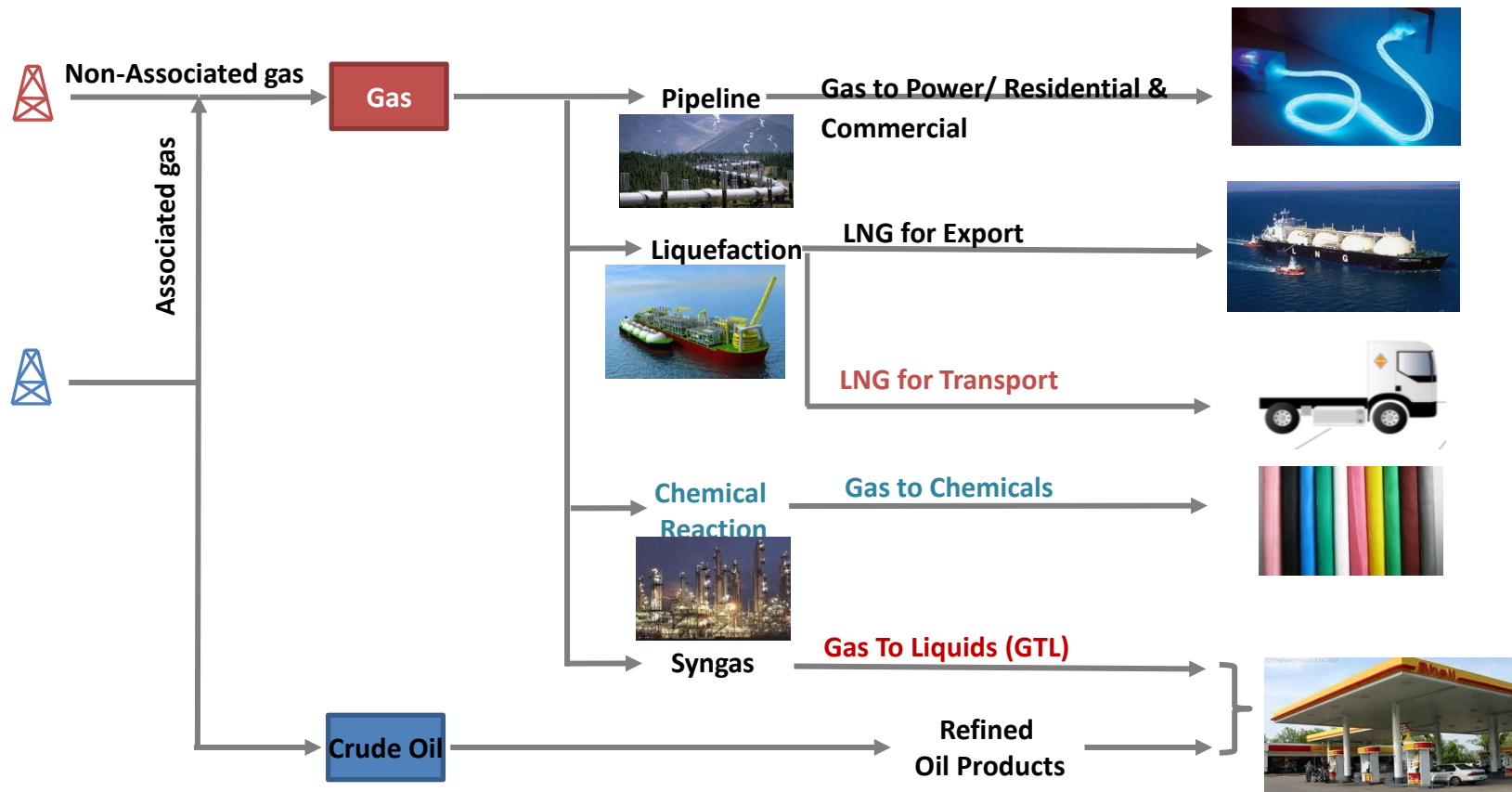
Source: Energy Information Administration based on data from various published studies.
Updated: May 9, 2011

Key Finding 1: Resource base is enormous and readily available but industry and regulators are in the early stages of learning how to optimize the value of the resource.

Key Finding 2: Availability of relatively affordable natural gas can create jobs, spur economic growth and support important manufacturing sectors.



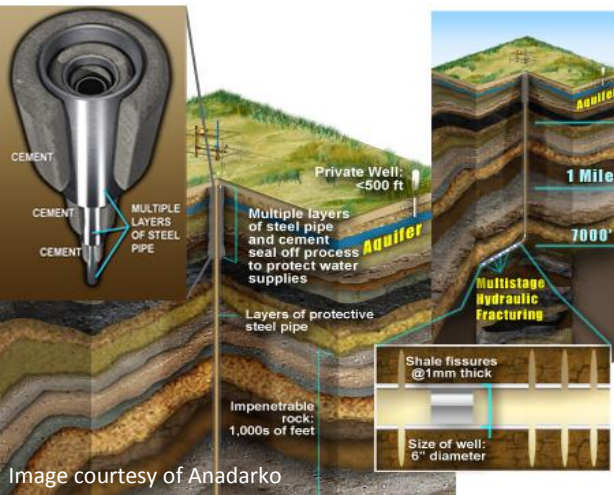
Key Finding 3: Several key domestic energy and environmental policies will drive greater U.S. domestic gas consumption and, along with natural gas exports, can provide an important stabilizing element for gas development.



Possible Gas Pathways



Key Finding 4: Development risks are manageable today but understanding risks and evolving cost-effective risk management approaches is a long term, continuous process.



Key Finding 5: Technology innovation is key to production, risk management and demand.



Key Finding 6: Public acceptance of unconventional gas development is a critical issue and the ability to manage risks must be demonstrated.

Recommendations

A REPORT OF THE CSIS
ENERGY AND NATIONAL
SECURITY PROGRAM

Realizing the Potential of U.S. Unconventional Natural Gas

EXECUTIVE SUMMARY

Authors

Lisa A. Hyland
Sarah O. Ladislaw
David L. Pumphrey
Frank A. Verrastro
Molly A. Walton

February 2013



50 | CHARTING
YEARS | OUR FUTURE

CSIS

CENTER FOR STRATEGIC &
INTERNATIONAL STUDIES

States	Federal	Industry
<ul style="list-style-type: none">• Primary regulatory responsibility should continue to lie with State governments.• State regulators should review and update all regulations that affect unconventional gas development to assure the most effective standards are in place.• Auditing state regulations should be enhanced.• Continual data improvement.• Process must be transparent.• Adopt a more holistic approach to issue management.	<ul style="list-style-type: none">• Set an energy narrative with a clear role for natural gas.• Finalize reviews and regulations in its area of responsibility.• Ensure organizational oversight and monitor key issues.• Contribute to improved data through work by USGS, and other relevant agencies, as well as the National Academies.• Promote R&D for technologies (recovery, environmental performance, demand-side)• Demand side clarity.• Improve structural regulatory certainty.	<ul style="list-style-type: none">• Best practices are a component piece of community support.• Continual improvement of technology to reduce risks.• Need to take a lifecycle approach to community engagement.

This project made possible with support from GE and SAIC and the ongoing support of our corporate sponsors.

Copies of the Executive Summary and the report will be available on our website

<http://csis.org/program/energy-and-national-security>.

A REPORT OF THE CSIS
ENERGY AND NATIONAL
SECURITY PROGRAM

Realizing the Potential of U.S. Unconventional Natural Gas

EXECUTIVE SUMMARY

Authors

Lisa A. Hyland
Sarah O. Ladislaw
David L. Pumphrey
Frank A. Verrastro
Molly A. Walton

February 2013



50 | CHARTING
YEARS | OUR FUTURE

CSIS | CENTER FOR STRATEGIC &
INTERNATIONAL STUDIES

CSIS | CENTER FOR STRATEGIC &
INTERNATIONAL STUDIES

1800 K STREET, NW | WASHINGTON DC, 20006