

The Energy Policy Act of 2005 and Section 999:

A Public/Private Partnership for R&D in the
Ultra-Deepwater in the Gulf of Mexico and in
Unconventional Onshore Natural Gas and Other
Petroleum Resources of the United States



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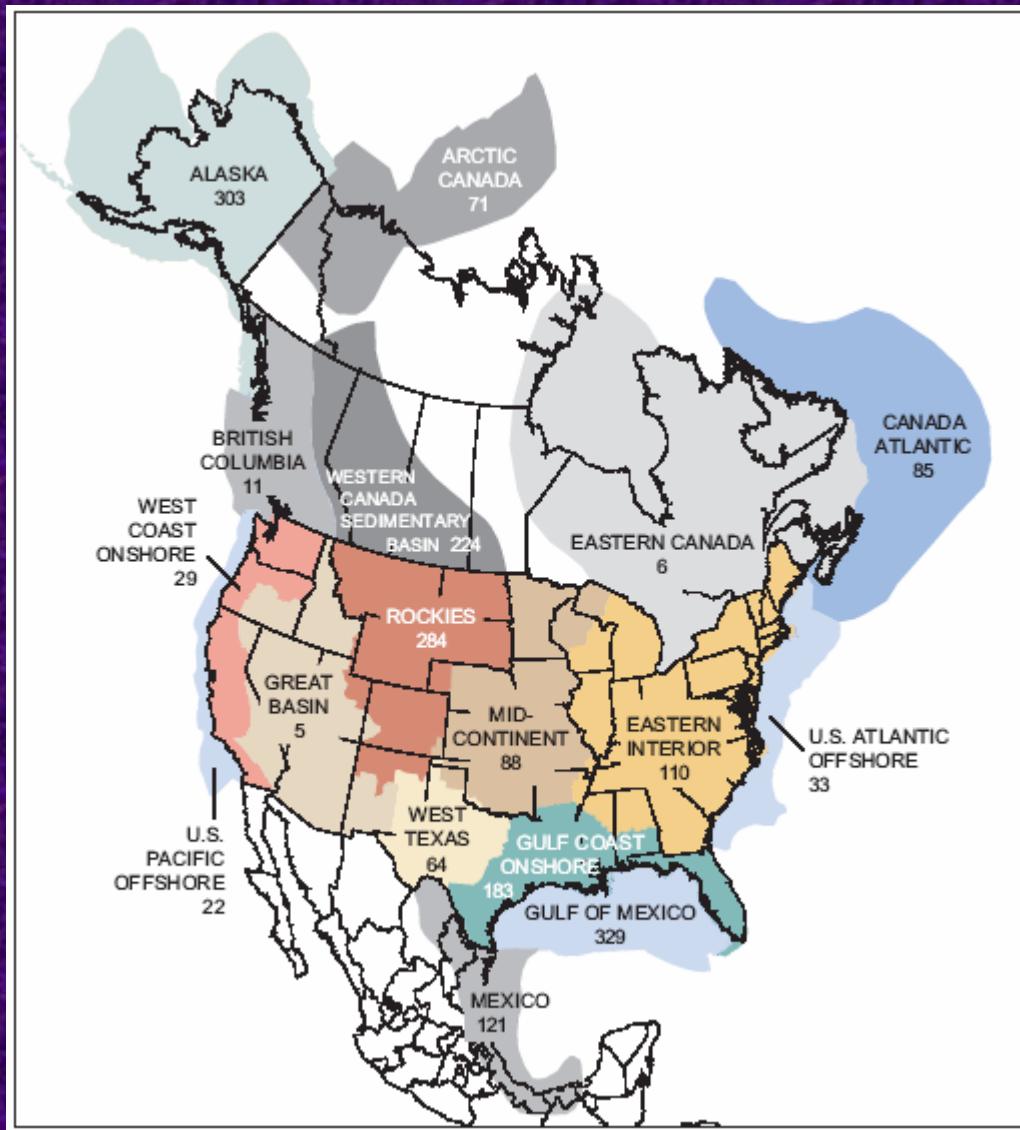
RPSEA Member Forum

November 14, 2006

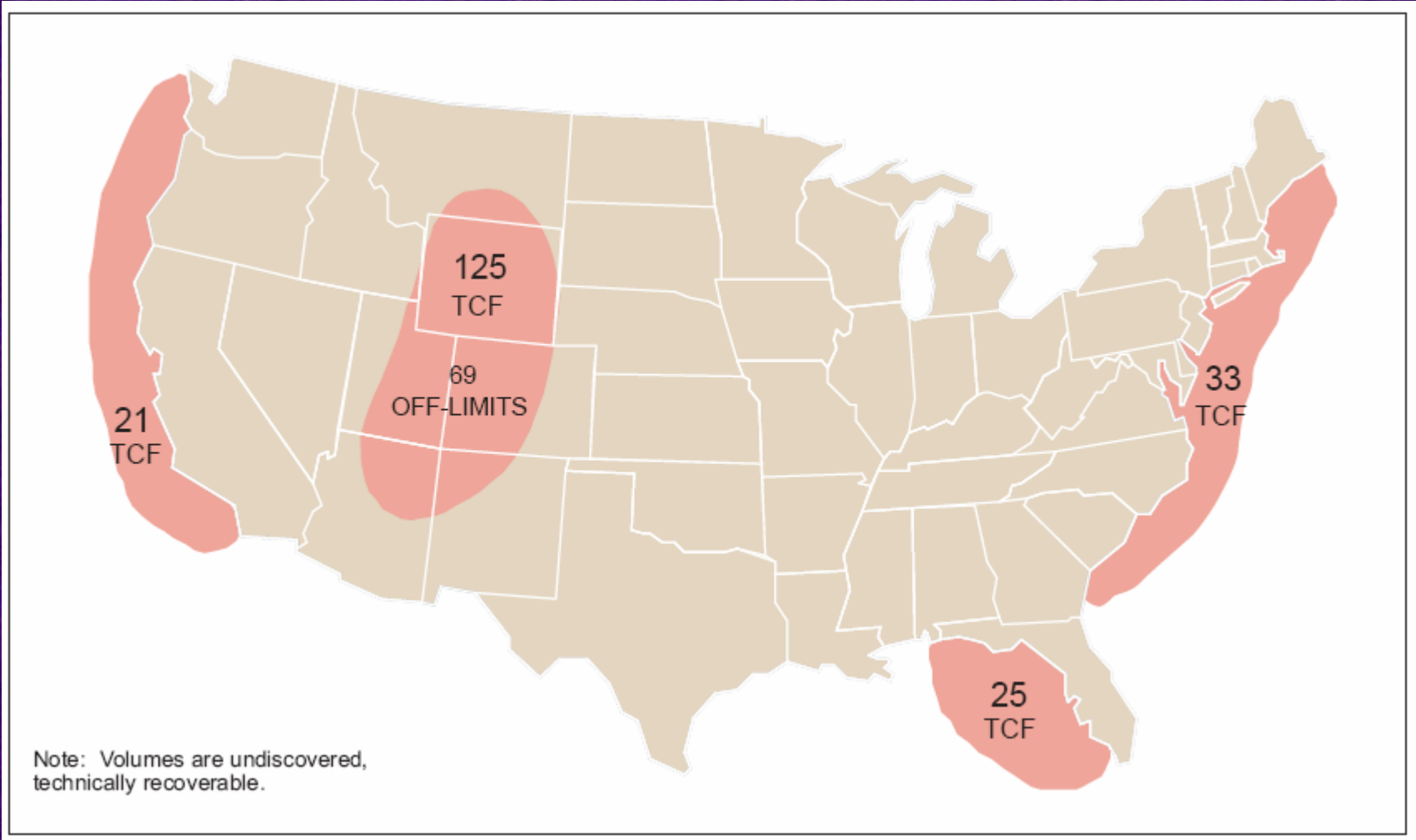
What is Section 999?

A new federal collaborative R&D partnership, **managed by industry and academia**, engaging all stakeholders in the value chain to benefit consumers and enhance domestic productivity and competitiveness



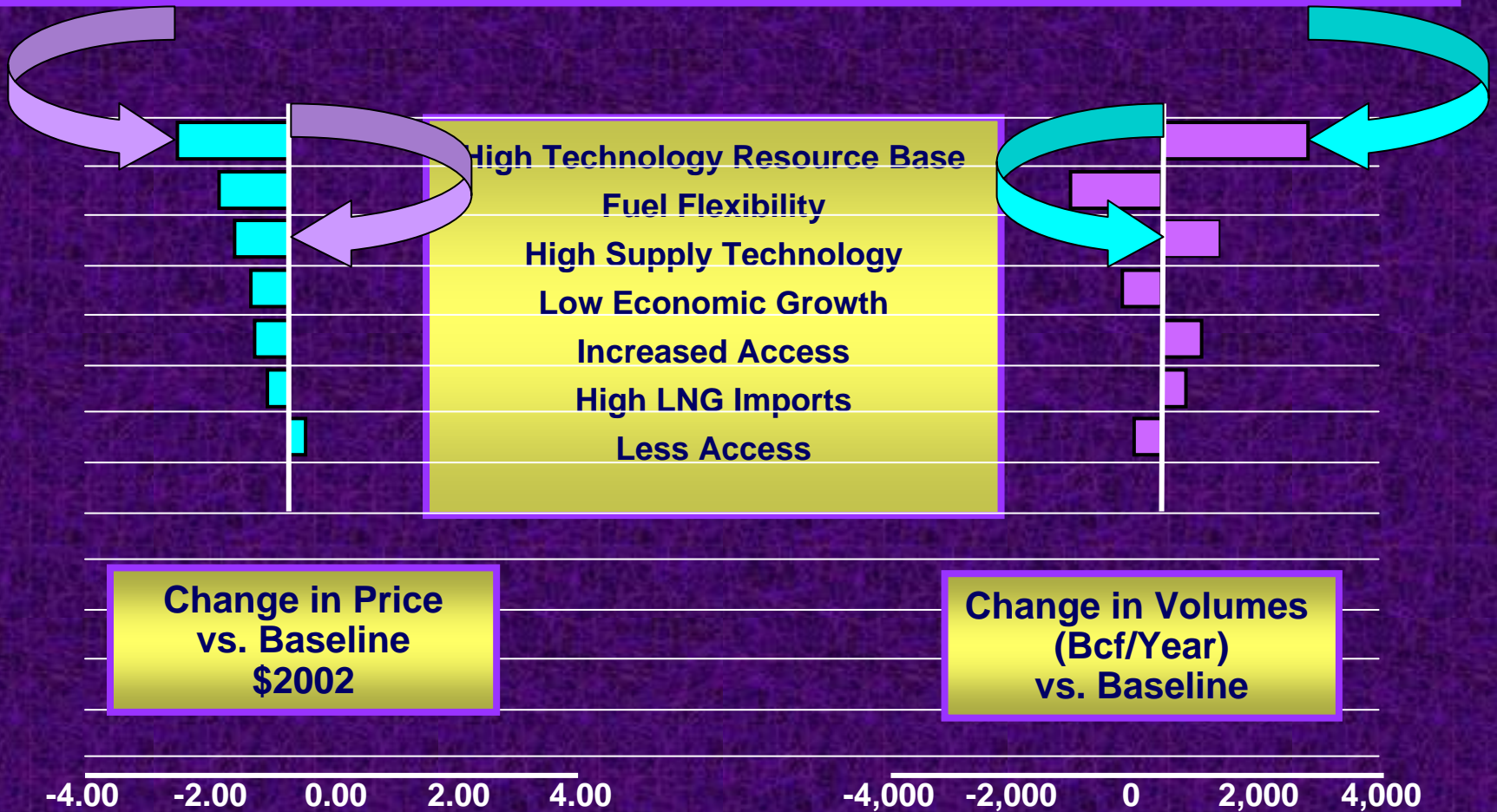


NPC 2003 Technical Resources (TCF)



NPC 2003 Access Restrictions (TCF)

NPC Selected Sensitivity Analyses: 2003 Natural Gas Supply Report



**Change in Price
vs. Baseline
\$2002**

**Change in Volumes
(Bcf/Year)
vs. Baseline**

-4.00 -2.00 0.00 2.00 4.00 -4,000 -2,000 0 2,000 4,000

Values shown are averages for the 2011 to 2025 period

What is Section 999?

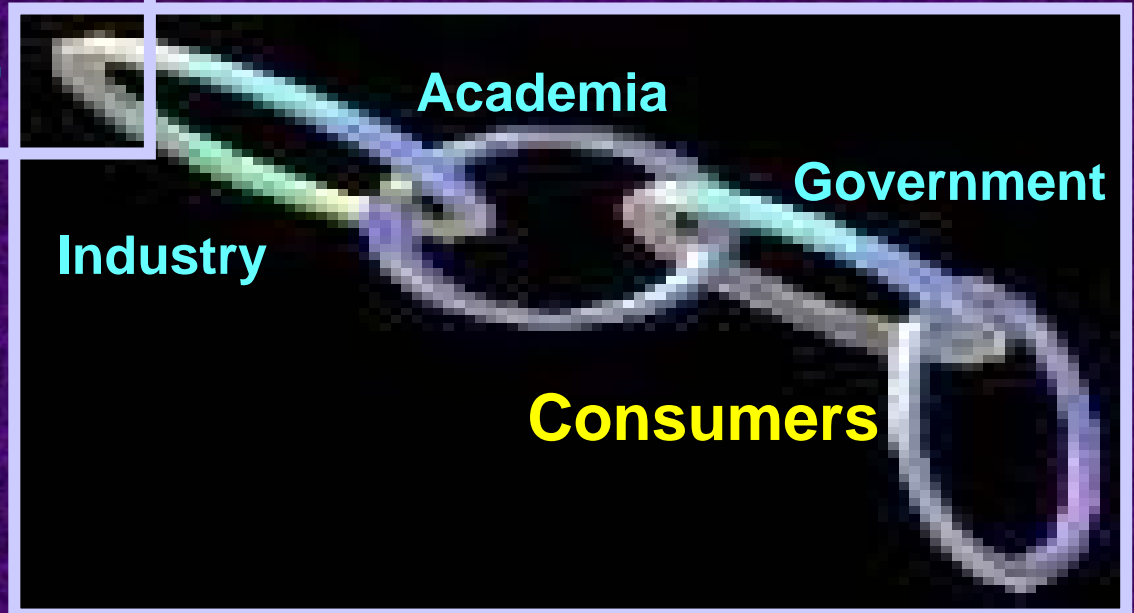
Specifically, the law directs --

- ... research, development, demonstration, and commercial application of technologies for ultra-deepwater and unconventional natural gas and other petroleum resource exploration and production. (Sec.999A.a)
- ... to maximize the value of natural gas and other petroleum resources of the United States, by increasing the supply..., ...reducing the cost ... increasing the efficiency of exploration for and production of..., while improving safety and minimizing environmental impacts. (Sec.999B.a)



How Will Section 999 Work?

This Public/Private
Research
Partnership will be
managed through a
“Program
Consortium”

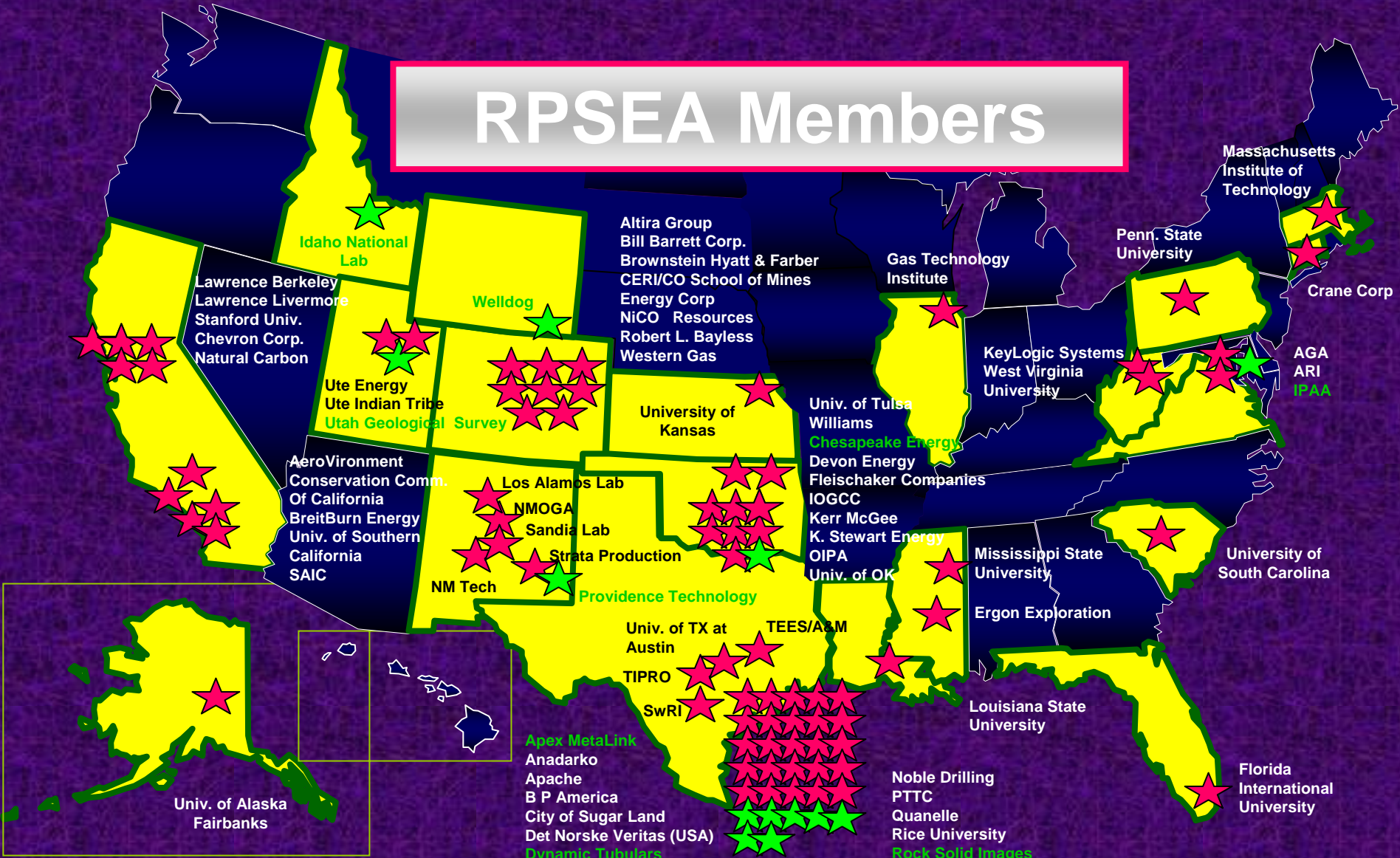


• Research
• Partnership to
• Secure Energy
• for America


Who is RPSEA and What are its Statutory Features?


- A 501c3 not for profit
- Competitively selected by DOE as the Program Consortium Manager

RPSEA Members



- Apex MetaLink
- Anadarko
- Apache
- B P America
- City of Sugar Land
- Det Norske Veritas (USA)
- Dynamic Tubulars
- Energy Valley
- Fairfield Industries
- GE Oil and Gas
- GeoTrace Technologies
- Greater Fort Bend Cnty EDC
- Groundwater Services
- Halliburton
- HARC
- Johnson Performance
- Marathon
- Noble Drilling
- PTTC
- Quanelle
- Rice University
- Rock Solid Images
- Schlumberger
- Simmons and Co.
- Stress Engineering
- Technip
- Technology Intl.
- Texas Energy Center
- Total USA
- University of Houston
- Vetco
- Weatherford

Current Members 

Pending Members 



What is the Program's focus?

The Program has three program elements:

■ **Ultra-deepwater 35%**

(> 1500 Meters)

■ **Unconventional Onshore 32.5%**

(Economic accessibility)

■ **Small Producers 7.5%**

(< 1000 BOPD)



Statutory Description of Program Elements

- Ultra-deepwater program focus

Technologies and architectures

- Unconventional onshore focus

Resource perspective

- Small producer focus

Consortia addressing unique needs of small producers



Responsibilities of the Program Consortium?

- Prepare draft annual plan for the SOE
 - Recommend award recipients
 - Develop project specifications
- Oversee implementation of awards, including monitoring activities to ensure compliance with conditions of awards
 - Disburse funds to awardees
 - Manage technology transfer



Current Program Structure/Funding

Program Funding From Federal
Oil and Gas Royalties

Total Program:
\$50 M/yr for 10yrs.

Department of Energy

Fossil Energy Office

\$12.5 M

\$37.5 M

Program
Consortium

NETL

In-House R&D Program

Unconventional
\$16.25 M

Ultra-deepwater
\$17.5 M

Small Producer Program
\$3.75 M

10 yr., \$500M
directed
spending



Coalbed Methane: Small Investment, Large Return

Return on R&D
investment:

34 to 1

\$5 M
DOE
Start up

\$70 Million GRI Cash
\$70 Million Industry In-kind

2003 Annual Value of
Coal Bed Methane Industry in US:

\$5 billion

Potential for Program Funding

Program Funding From Federal
Oil and Gas Royalties

Total Program:
\$150 M/yr for 10yrs.

Department of Energy

Fossil Energy Office

\$112.5 M

\$37.5 M

Program
Consortium

NETL
Lab

Unconventional
\$48.75M

Ultra-deepwater
\$52.5M

Complimentary R&D Program
\$37.5M

Small Producer Program
\$11.25M

10 yr., \$1.5B
directed and
authorized
spending



Strategic Advisory Committee (SAC)

provides strategic direction/
long-range planning advice,
identifies metric areas

RPSEA Board

Executive Committee

President

(Program Manager)

Program Advisory Committees (PAC)

make recommendations on
elements of Annual Plan and
selection of proposals

VP Operations

(Program Operations
Manager)

Operations Team Support
from SAIC

VP Offshore

(Program Element
Manager)

Ultra-deepwater Team
Support from DeepStar

VP Onshore

(Program Element
Manager)

Small Producer Team
support from NMT

Unconventional Team
Support from GTI

Technical Advisory Committees (TAC)

may rate proposals, assist in
development of Annual Plan & tech
transfer, provide input on technical
issues/metrics as needed



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Why Does Industry Need This?

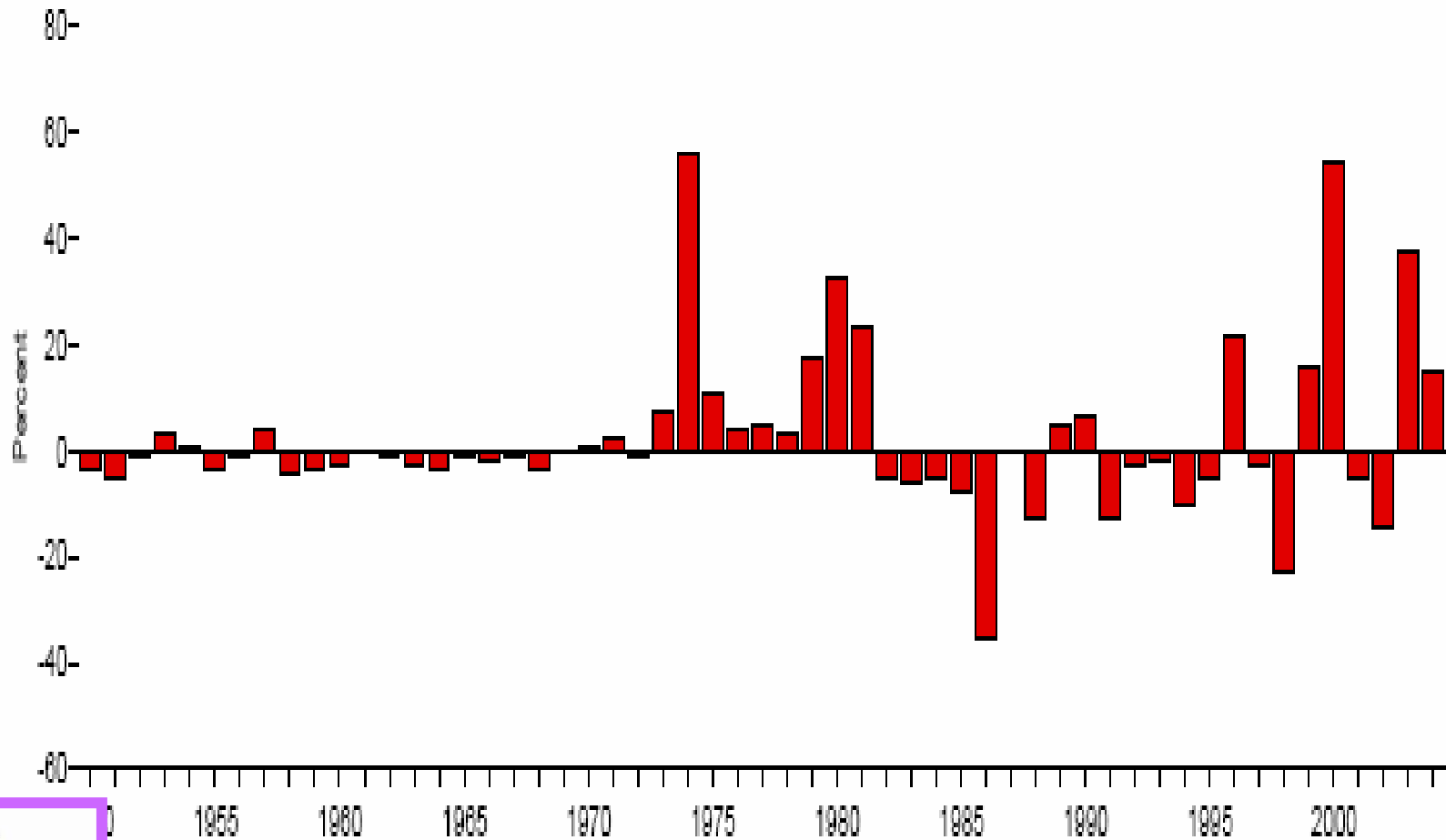
- Significantly increased E&P costs
- Continued price volatility
- Increasing personnel constraints
- Rig & service availability
- Environmental opposition & scrutiny
- Lack of research infrastructure
- Broad need for technology transfer

It's a very challenging business environment and it's getting even more so.



EIA Annual Energy Review 2004

Fossil Fuel Composite Price, Change From Previous Year, 1950-2004



Rigs & Equipment

- Has your rig(s) been short handed lately? (And more new rigs are being built or reassembled)
- Technology and improved understanding of processes must generate leverage on the existing fleet by extracting more footage and productive wells per rig
- Improved reservoir characterization leverages the rig fleet by optimizing the value of every well bore

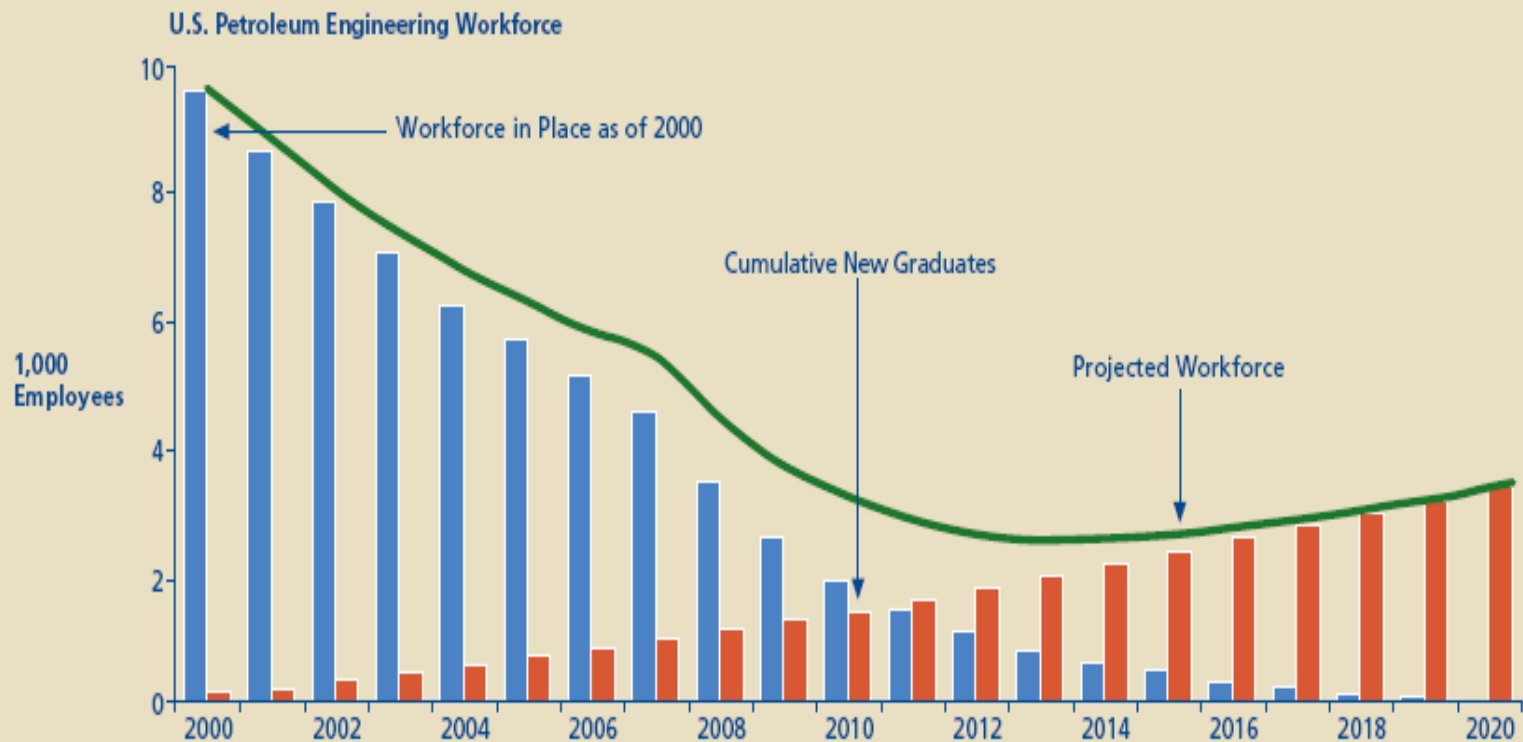


Environmental Constraints

- A mandate - lessen the footprint and overall impact of all operations
- Technology and improved processes allow the development of more reserves per unit of activity
- Technology to address public policy concerns

Workforce Constraints

Exhibit 2. Oil & Gas Workforce Projections



Source: Petrostrategies Inc.

Solutions, not Rhetoric

- It starts with commitment - \$50M per year in stable directed spending with potentially an additional \$100M per year plus industry matching funds.
- Unique publicly funded opportunity to determine industry's needs and then utilize industry's leadership in partnership with universities, researchers, and technologists to develop solutions for the American consumer.
- Generate multiples by forging new partnerships and leveraging the value of new supplies with, for example, end use efficiency.



■ **The time for action is now!**

**“You miss 100% of the shots
you don’t take.”**

Wayne Gretzky

