Aspen Institute
Energy & Governance Forum
September, 2017

State and Federal Research Priorities

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Interactive Systems

Environment

Economy

Energy
Quadrant Model of Scientific Research

Research inspired by

Considerations of use

No

Yes

Use-Inspired Basic Research (Pasteur)

Quest for fundamental understanding

Yes

No

Source of funding and perception of bias are challenges.

Louis Pasteur 1822 – 1895
Best known for inventing a method to stop milk and wine from causing sickness called pasteurization. One of the three main founders of microbiology.

A Model for Research and Technology

- Advanced
- Improved
- Existing

- Applied (Tactical)
- Use Inspired (Strategic)
- Basic (Pure)

Shale Governance

Use Inspired Improved Technology

Tinker, 2010
Shale Governance
Finding Balance and Building Bridges

POTENTIAL RISKS
- human health
- earthquakes
- CO₂
- water
- methane
- well site

POTENTIAL BENEFITS
- economy
- manufacturing
- energy price
- energy security
- tax revenues
- cleaner

Use-Inspired R&T
Shale Governance
Finding Balance and Building Bridges

What are the state and federal research priorities that would benefit from use-inspired R&T?

- Use-inspired R&T to examine the economic and environmental impacts of options to oil and gas (e.g. large scale wind and solar) at scale
- Use-inspired R&T as a bridge between the risks and benefits of shale oil and gas?
- Use-inspired R&T to inform rulemaking, regulation and policy development?
- Use-inspired R&T to help determine appropriate governance jurisdictions?
Induced Seismicity

TexNet/CISR

- Industry
- Regulators
- Policy Makers
- Academics
- Federal Agencies
- NGOs
- “Think” Tanks
- The Public
- The Pope…

Challenges in the Radical Middle

- Coordination of research
- Impartiality and bias
- Transparency
- Broad sources of funding
- Accessible and comprehensible
- Measuring outcomes and impact
- Public engagement and acceptance
- Managing advocacy and activism