Natural Gas Extraction: Issues and Policy Options

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What are the “real” issues?


- **Demonstrated**
- **Inferred**

- **Hypothetical**
- **Speculative**

- **Undiscoverable**
- **Irretrievable**
Key question: “Do benefits of fracking outweigh the costs?”

- Likely benefits
  - Cheap energy
  - Economic development/jobs
  - Energy independence
  - Export energy
  - Environmental benefits

- Likely costs
  - Damage to environment
  - High infrastructure costs
  - Opportunity costs
    - Alternative water use
    - Energy/environment for future generations
    - Alternative land use

Answer: “It depends, and we may not know yet.”
## Regulatory Philosophy

<table>
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<tr>
<th>Innocent until proven guilty</th>
<th>Guilty until proven innocent</th>
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<tr>
<td>• Allow activity to proceed until objective proof of harm is found</td>
<td>• Regulate activity until objectively proven benign or of acceptable impact</td>
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<tr>
<td>• Presumes benign nature of activity</td>
<td>• Presumes harmful nature of activity</td>
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<td>• Assumes markets can quickly find equilibrium</td>
<td>• Who pays?</td>
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<td>• Standard of proof?</td>
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Locus of Control

Local Level      State Level      Federal Level

Local knowledge
Locus of impact
Available resources?
Authorization?
Uniformity?
Regional knowledge
Plenary statutory authority*
Delegation of programs
Removed from impacts?
Access to expertise
Uniformity
Most removed
Uniformity desired?
Alternatives to resolve concerns

Environmental & Community

Private-only
“Free market”
“Grassroots”

Public/Private Partnerships

Voluntary fluid disclosure programs

FracFocus

Government-only
“Command & Control”
“Top-Down”

Mandated disclosure requirements
Alternatives to resolve concerns
Environmental & Community

Private-only
“Free market”
“Grassroots”

Public/Private Partnerships

Government-only
“Command & Control”
“Top-Down”

Developer-provided camps

Facilitated housing programs / “turnover” programs

Public housing projects
Alternatives: Environmental

General Environmental
- Moratoria
- Increased research efforts

Water
- Regulate quantity & source used
- Secondary containment reqs
- Regulate fracking under SDWA UIC / well specs
- Fluid component disclosure reqs
- Increase/ expand treatment reqs

Air
- “Green” completion reqs
- Equipment emissions limitations
- Sealed vessel storage reqs

Solid Waste
- Regulation under RCRA (remove exemption)
- New NORM handling reqs

Liability Issues
- Limit bankruptcy dischargeability of liabilities
- Prohibit dissolution of entities w/ envir. liabilities
Alternatives: Community

Financing responses to NGE impacts
- Ad valorem severance tax
- Fixed (per unit) severance tax
- Resource revenue trust funds
- Voluntary mitigation funds
- Revenue-sharing between governmental levels/units

Engaging community stakeholders
- Education efforts for community leaders
- Public deliberation forums
- Community social events engaging current & new residents

Housing
- Community-built housing
- Developer-built housing
- Facilitation of private housing development
- Streamline housing approval / permit process
- Voucher / subsidy programs for low- or fixed-income residents

Sociological impacts
- Crime prevention through community engagement programs
- On-site drug abuse prevention programs
- Public-private partnerships to address sexual abuse / disease
- Community programs for supportive youth environments
- Domestic violence support / therapy programs
Alternatives: Community

- **Education**
  - Temporary facilities
  - Alternative class schedules
    - Alternative schooling arrangements (online / homeschooling)

- **Workforce availability**
  - Accelerated training programs
  - Public-private training partnerships

- **Transportation infrastructure**
  - Posting vehicle weight limits
  - Well permit fees allocated to transportation systems
  - Road maintenance agreements

- **Landowner impacts**
  - Visual impact mitigation
  - Auditory impact mitigation
  - Setbacks / siting requirements
    - Surface damage compensation requirements
    - Landowner / mineral owner education programs
Conclusions

• Much uncertainty about natural gas extraction issues remains
• All stakeholders have numerous options for action
• Informed dialog among stakeholders at every level is critical

• Short term impacts are generally known
• Long term impacts less certain
• More research on fracking is needed
• More research on alternative solutions is needed
• Education and transparency are important
THANKS!

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