Marcellus Shale Natural Gas Development: Community and Economic Development

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Rod Howe, Assistant Director, Cornell Cooperative Extension
Executive Director, Community and Rural Development Institute

Key Stakeholders

- Municipal Officials
- Community Task Forces
- Landowner Coalitions
- Environmentalists
- Concerned citizens
- Agricultural Community
- Industry
Cornell Cooperative Extension’s Approach

- Public Issues Education
- Advocates for High Quality of Life for All
  - Environmental Health
  - Sense of Community
  - Economic Opportunities
  - Effective Decision Making

National Trend Transforming Rural Communities

Environmental Issues but also …
- Community Development
- Economic Development
- Workforce Development
- Cumulative Impacts and Community Character
NYS: Supplemental Generic Environmental Impact Statement (SGEIS)

• This document is the state’s Minimum Requirements for drilling permits under State Environmental Quality Review (SEQR).

• Updates 1992 document to focus on Shale Drilling and High Volume Hydro fracturing.

• SGEIS sets the “basic rules” for issuing a drilling permit. If the SGEIS rules are met, permit is issued without further review. If rules are not met, permit may still be issued after SEQRA review.

Phases of Well Drilling

Development (months per well, years per region)
• Construct access roads
• Construct well pad
• Construct local collection pipeline

Production (years)
• Drill well
• Fracture well
• Truck water from well site
• Monitor production of natural gas
• Occasional well work-overs (partially re-drill/re-frac)
• Reclaim some disturbance

Reclamation
• Remove surface equipment
• Plug well
• Restore landscape
Drilling Phase is Short Lived, Very Intensive, and Unpredictable

Social and Economic Impacts

• Quality of Life Concerns:
  – Truck Traffic
  – Dust
  – Noise
  – Health
  – View sheds and light pollution

• Growth Management
  – Temporary Housing (RV parks, “Man camps”, motels, rentals)
  – New Industrial lots and development
  – Increase in Residential and Commercial Rental Prices

• Strain on Local Governments
  – Emergency Response Services
  – Police, Court System
  – Permitting, building permits, regulations
  – Growth in Schools, medical services
Social and Economic Impacts

- New Job Creation
  - 11.53 “Development Phase” Jobs Per Well/Year
    - Mix of Non-local and local workers
  - 0.17 Long-term Production Phase jobs per well
    - Local Workers

- Increased Property Tax Revenue

- Increased local spending/new businesses catering to workers

- Changes to Real Estate Values

What specific jobs are required?
Boom and Bust

- Jurisdictional unevenness
- Insufficient control of land use
- New comers vs. Old timers
- Severity of growth
- Volatile production patterns
- Monopoly of information
- Risk

Economic Two-Sided Coin

Very High Wages:
- $15-20/hr starting wage for general gas field labor with no experience
- $23/hr starting wage for rig workers with no experience
- $Pushes up minimum wage for jobs in surrounding area

Very High Cost of Living:
- Inflation rates quadruple the national average – as high as 9%
- Rentals increase at very fast rate (both commercial and residential)
- Home prices also increase (can be good and bad for existing residents)

Non-Gas Field Businesses and Residents can struggle
Tools and Resources available to communities

• Mitigation
• Minimizing unwanted consequences
• Monitoring

Local Government Preparation

Many controls are pre-empted by state and federal government, but local governments can still beneficially guide natural gas development in their communities through:

• Updating Industrial and Commercial Use permit requirements
• Amend zoning laws to address activities like tree cutting, road traffic, road clearances, signage, and potential nuisances issues like noise and light pollution.
Local Government Preparation

- Register Critical Environmental Areas with the State Environmental Agency to identify and protect special environmental, recreational, historical, sensitive use and viewshed areas.
- Have an emergency plan in place for drilling contingencies
- Require local site plan review of activities that can be locally regulated (“general site layout”, access road construction, aquifer protection)
- Negotiate “host” (operating) agreements between municipalities and operators that encompass these points and create long-term enforcement mechanisms.

Limitations to Local Government Policy

- Understaffed
- Overwhelmed
- Unprepared
- No way to control direct causes
- Revenues take a while to flow (if at all)
- Revenues can’t be spent directly on the problems
- Lots of local controversy/dissention
- State/Federal/others looking to take money away
- State/Federal/Industry says “we don’t manage socio-economic impacts”
Some Successful Mitigation efforts

• Police Task Force preparation
• 1% optional sales tax increase (96% will come from gas industry)
• Impact fees for developers
• Funnelling money into infrastructure (can be spent directly, can’t take it away later)
• Hiring new staff, lots of new planning
• Pace of Development Projections from Industry
• Master-planned subdivisions for long-term growth

A Few Preparation Steps:

• Create Intra-Governmental Task Force
• Create Baseline Socioeconomic Profile
• Track and Project Rig and Well Counts
• Create Impact Projections
Community Task Force:

- Invite Industry
- Invite broad representation of officials and agencies

Create a clearinghouse for Information:
- Existing or New Organization
- Needs Proper Funding/Staffing – hire staff/contractor if needed – can be big task
- Needs to be County/Community Specific
- State wide or regional probably not effective

Baseline Socioeconomic Profile:

*to define what is “normal” and to react quickly*

Historical trends ■ Current capacities ■ Problem Thresholds

Government/Community Services:
EMS ■ Roads ■ Fire ■ Health Care ■ Social Services ■ Police ■ Water ■ Sewer ■ Courts

Broader Socioeconomic Trends:
Workforce ■ Economic Sectors ■ Unemployment ■ Wages ■ Housing Prices ■ Housing Availability ■ Temporary Housing Hotels
Biggest Factors Influencing Economic Impact

1. Size of Workforce
2. Length of Development
3. Size of Community

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\text{Impact} = \frac{\text{Size of New Workforce \times Length of Development}}{\text{Size of Community}}
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Federal Level vis-à-vis State & Local/Regional Plans

- Is there coherence among federal, state, and local approaches?
- Research/incentives for renewable energy
- Research on greenhouse gas emissions of various energy scenarios
- Support to communities undergoing transformation due to energy related production
Policy/Research Considerations

- Even the playing field, more control to local government
- Health Issues
- NIABY now replacing NIMBY
- Life cycle analyses, different energy scenarios