Community Issues:
How to Prepare Your Community for Energy Development

Energy Infrastructure Workshop
October 27, 2015
Learning objectives

- Global Energy Trends
- Influence of Policy and Regulation on Development
- Energy Development in Ohio
- Community Preparation for Energy Development
- Preparing your Community for Energy Development - Lessons Learned
- Additional Resources
Global Energy Trends
Total Global Energy Consumption


Population of The World and Major Areas

Sales of passenger cars in selected countries worldwide from 2005 to 2014 (in million units)

Source: OICA (Organisation Internationale des Constructeurs d'Automobiles)
Figure 1: Investment and oil prices
Investment in billion 2014$, oil in 2014 $/b

Investment in oil and gas extraction

Real domestic crude oil first purchase price

Source: U.S. Bureau of Economic Analysis, U.S. Energy Information Administration
Note: 2015 data is average of first two quarters
Influence of Policy and Regulation on Development
Ohio Senate Bill 221 - Total Renewable Energy Capacity In Megawatts (Facilities Located in Ohio)

Source: The Public Utility Commission of Ohio, Renewable energy resource generating statistics
Ohio Senate Bill 315

This landmark legislation sends a strong and positive message to those with concerns about Ohio’s ability to regulate the shale industry. We have learned from the shortcomings of other states and we will safeguard our people and environment by providing this expanding industry with strong and clear rules for conducting business in Ohio.

- Jim Zehringer, Director, Ohio Department of Natural Resources

June 11, 2012

SB 315 Key point Summary
- Creates First Chemical Disclosure Requirement
- Requires Sharing of Chemical Information
- Allows Appeals to the Ohio Oil & Gas Commission
- Establishes Mandatory Daily Fines
- Requires Pre-drilling Water Samples Within 1,500 Feet
- Requires Disclosure of Proposed Source of Water
- Encourages Road Use Maintenance Agreements (RUMA)
- Draws Upon the Expertise of All State Agencies
- Increases Liability for Horizontal Wells
- Allows ODNR to More Closely Monitor Brine Hauling
- Requires Electronic Submission of Quarterly Brine Reports
Ohio Natural Gas and Crude Oil Production

Energy Development in Ohio
Ohio Total Energy Production

Trillion Btu

Coal
Nuclear
Natural Gas and Crude Oil
Renewable Energy
Total Energy Production

Community Preparation for Energy Development
Energy Type Can Determine Local Response

• Natural and man-made resources determine location
• Speed of development
• Breadth and depth of impact
• Regulatory/policy environment
• Expectations of pay-back to local community
• Renewable vs. non-renewable energy sources
• All require planning by community
Advantages and Limitations of Planning

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engages community leaders and residents</td>
<td>Takes time</td>
</tr>
<tr>
<td>Moves toward consensus</td>
<td>Volunteers</td>
</tr>
<tr>
<td>Provides a roadmap to desired future</td>
<td>Expense</td>
</tr>
<tr>
<td>Understands impacts</td>
<td>Expertise</td>
</tr>
<tr>
<td>Builds decision-making capacity</td>
<td>Champion</td>
</tr>
<tr>
<td>Anticipates vs. reacts</td>
<td>Manager</td>
</tr>
<tr>
<td></td>
<td>Sits on shelf</td>
</tr>
</tbody>
</table>
Sustainable Approach to Community Planning

Ideal Fit for Shale Energy Development

- Long term focus – considers future generations
- Balances social, economic and environmental effects
- Inclusionary – engages entire community
- Develops multi-dimensional goals
Finding Balance and Interconnections

• Some social, economic and environmental effects are both positive and negative
• Social, Economic and Environmental effects can work at cross-purposes with each other (zero sum gain)
• Addressing one impact may cause unintended consequences in another
Economic Effects

- New/growing business
- Increased employment
- Higher wages
- New found wealth
- Increased cost of living
- Develop local workforce
- Labor competition
- Business competition
- Increased tax revenues
- Tourism
Environmental Effects

- Traffic increases
- Maintains agriculture
- Roads improved
- Empty buildings reused
- Water usage
- Water quality
- Air quality
- Noise/lights
- Habitat disturbance
- Crop yields
Social Effects

- Higher standard of living
- Increased population
- Volunteerism
- Cost of housing
- Crowded schools
- Preserves family farms
- Crime/drugs
- Demand for services
- Philanthropy
Using Sustainability to Build Capacity in Shale Impacted Communities

**Environmental**
- Natural & Built
- Natural Resources Management
- Pollution Prevention
- Biodiversity
- Infrastructure-Transportation

**Economic**
- Entrepreneurship
- Innovation
- Full Employment
- Expanded Tax Base
- Financial Capital
- Economic Growth
- Profit

**Social**
- Education & Skills
- Equal Opportunity
- Civic Engagement
- Diversity
- Vibrant Arts & Culture

**Social/Environmental**
- Compensation for Natural Resource Depletion
- Green Infrastructure
- Alternative Transportation
- Farmland Preservation

**Environmental/Economic**
- Compensation for Natural Resource Depletion
- Green Infrastructure
- Alternative Transportation
- Farmland Preservation

**Economic/Social**
- Living Wage Ethical Enterprise
- Lifestyle Entrepreneurship
- Philanthropy
- Job Ready Workforce
Use in Appalachia - Guernsey County Pilot

Creating Project Guidance

| Steering Committee | Workgroups | Community Engagement |

Writing Chapter Plans

| Educational Sessions | Workgroups – Goals & Actions |

Link Together to Create Sustainable Goals

| Creation of Growth Management Chapter | Adoption by Community |
Preparing your Community for Energy Development – Lessons Learned
Lesson #1: Become Informed & Knowledgeable

- About specific energy industry
- Understand potential challenges
- Understand potential benefits
- What is the regulatory environment?
Lesson #2: Reach Out - internally, regionally, & to others with experience

• Educate & engage entire community
• Who has been there before?
• Who is going through same/similar challenges?
• Develop partnerships with industry
Lesson #3: Think & Act Strategically

- Can you use potential benefits to your community’s advantage?
- Anticipate negative impacts – avoid or minimize
- Regulatory environment - where do you have control/influence?
- Think “generationally”
- Strive to *anticipate* vs. *react*
- Develop multi-dimensional goals
Additional Resources

Community Planning Resources
• go.osu.edu/shaleplanning
• energizeohio.osu.edu

OSU Shale Work Group – Shale Library
• http://serc.osu.edu/extension/shale-library

Subsurface Energy Resource Center (SERC)
• serc.osu.edu

OSU Extension Sustainable Communities Initiative
• http://comdev.osu.edu/programs/community-planning/sustainable-development
Questions?

Myra Moss  
OSU Extension Extension Educator, Heart of Ohio EERA  
moss.63@osu.edu

Eric Romich  
OSU Extension Field Specialist, Energy Development  
romich.2@osu.edu