Northeastern Agricultural and Resource Economics Association (NAREA)  
2014 Post-Conference Workshop Program  
Unconventional Gas and Oil Development: Economic and Environmental Impacts

Sponsored by:  
National Agricultural and Rural Development Policy Center (NARDeP)  
Davis College of Agriculture, Natural Resources, and Design, West Virginia University  
Office of Sponsored Programs, West Virginia University  
Regional Research Institute, West Virginia University

TUESDAY, JUNE 3, 2014

<table>
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<th>Time</th>
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| 12:00 noon – 1:00 pm | Registration  
Conference Area Lobby                                                 |
| 1:00 pm – 2:00 pm | Opening presentation by Timothy Carr, Marshall Miller Professor of Petroleum Geology, West Virginia University  
 “You Say You Want a Revolution: Shale Gas and Shale Oil in the U.S.” |
| 2:00 pm – 4:00 pm | Economic Development Paper Session  
1. What can we learn about shale gas development from land values?  
2. The Economic Impact of Shale Gas Development: A Natural Experiment along the New York and Pennsylvania Border, Brendan Cosgrove, Colby College  
3. An Empirical Investigation of Hydraulic Fracturing, Timothy Fitzgerald, Montana State University  
4. Local and Non-Local Employment Associated with Marcellus Shale Development in Pennsylvania, Timothy Kelsey, Pennsylvania State University |
| 4:00 pm – 4:15 pm | Coffee Break                                                        |
| 4:15 pm – 6:15 pm | Reveal Preference Paper Session  
1. The Housing Market Impacts of Shale Gas Development, Elisheba Spiller, Environmental Defense Fund  
2. Underground Storage of Natural Gas: An Examination of Property Values in Indiana, Michaela Jellico, Purdue University  
3. Impact and Response: The Boomtown Effect of Shale Gas and Oil Drilling on Local Housing Markets, Michael Farren, Ohio State University  
| 6:30 pm – 8:30 pm | Dinner and Keynote Address by Alan J. Krupnick, Senior Fellow Resources for the Future, Director of the Center of Energy Economics and Policy, and President of the Association of Environmental and Resource Economists  
 “What the Experts Say About the Environmental Risks of Shale Gas Development” |
| 8:30 pm – 10:30 pm | Reception (Cash Bar)                                                 |
WEDNESDAY, JUNE 4, 2014

8:00 am – 10:00 am  Panel Discussion

   Moderator:
   Randall Jackson, Director of the Regional Research Institute

   Panelists:
   Brian Anderson, GE Plastics Material Engineering Professor of Chemical Engineering, West Virginia University
   Stratford Douglas, Associate Professor of Economics, West Virginia University
   Joshua Fershee, Associate Professor of Law, Fellow of the Center for Energy and Sustainable Development, West Virginia University
   Michael McCawley, Interim Chair, Department of Occupational and Environmental Health Sciences, West Virginia University
   Douglas Patchen, National Research Center for Coal and Energy, Director Resource Extraction Division, West Virginia University
   Paul Ziemkiewicz, Director of West Virginia Water Research Institute, West Virginia University

10:00 am – 10:30 am  Coffee Break

10:30 am – 12:30 am  Environmental Impact Paper Session

   1. Shale Oil and Gas Boom Economic Impacts and Assessment of Environmental Tradeoffs, Wallace E. Tyner, Purdue University
   2. Water Quality Policy Considerations in Hydraulic Fracturing, Linda M. Fernandez, Virginia Commonwealth University
   4. Coal Seam Gas, Agriculture and the Environment: Something’s Gotta Give…, or Does It?, Tiho Ancev, The University of Sydney

12:30 pm – 2:00 pm  Lunch on your own

2:00 pm – 4:00 pm  Environmental Justice Paper Session

   1. Understanding Local Regulation of Hydro-Fracking: A Spatial Econometric Approach, Martin Heintzelman, Clarkson University
   2. A Test of Environmental Justice in the Natural Gas Industry Among Private Leasing Terms, Christopher Timmins, Duke University
   3. Effects of Information-Based Regulation: Evidence from Hydraulic Fracturing, T. Robert Fetter, Yale University

4:00 pm  Official Workshop Closes

The optional well pad tour scheduled for Thursday, June 5th has been cancelled due to a change in the drilling operation schedule.