



February 12, 2010

Dr. Susan Riha  
Director, New York State Water Resources Institute  
Charles L. Pack Research Professor of Forest Soils  
Dept. of Earth and Atmospheric Sciences  
Cornell University  
1110 Bradfield  
Ithaca, NY 14850

Jean-Yves Parlange, Ph.D.  
Professor of Agricultural and Biological Engineering  
Dept. of Biological and Environmental Engineering  
Cornell University  
228 Riley Robb  
Ithaca, NY 14850

Dear Professors:

Following the University's recent announcement of the formation of an ad hoc advisory committee charged with examining the science, practice and potential benefits associated with natural gas development in New York's portion of the Marcellus Shale, I have the privilege of writing to you today to first thank you for your willingness to engage this critical work, and second, to offer up myself and my organization as a potential resource for your panel as it examines both the technical and practical implications of shale gas exploration in New York.

I should mention at the outset that my professional background is one of an engineer, and the focus of the organization of which I serve as executive director, Energy In Depth, is one of education and public engagement. Formed last year as a subset of a broader educational campaign of America's small and independent oil and natural gas producers, Energy In Depth, based in Washington, D.C., has worked hard over the past several months to explain the mechanics involved in deploying the latest innovations in technology in service of responsible energy production, and on occasion, to correct the myriad misconceptions that exist surrounding the record of safety, performance and environmental sensitivity to which these technologies lay claim.

My understanding is that your committee is specifically interested in assessing whether to recommend to your president that a portion of the nearly 420,000 acres owned by Cornell University be considered for potential lease; naturally, a thorough examination of the potential costs and benefits associated with such an action would seem an appropriate and requisite course. Toward that end, I'd like to take this opportunity to share just a few facts that I hope will serve to inform your investigation moving forward. Again, it's my hope that this correspondence marks the beginning of a substantive dialogue between our organization and the members of your panel, especially on issues related to the safety and environmental performance of hydraulic fracturing.

In an attempt to be brief, I would identify just a few of top-of-mind considerations that may be of interest to your committee:

- **Natural gas exploration is not new to New York, and neither is hydraulic fracturing.** Contrary to how this issue has been characterized in the press, natural gas exploration has taken place in the state of New York, safely and efficiently, for longer than 150 years. In fact, the world's first-ever commercial natural gas well was drilled in Fredonia, New York in 1829. And although hydraulic fracturing hasn't been around for quite that long, it has been in commercial use nationwide now for more than 60 years – and has safely been deployed in New York for decades.

[www.EnergyInDepth.org](http://www.EnergyInDepth.org)

1201 15<sup>th</sup> Street NW, Suite 300  Washington, DC 20005



- **In 60 years of use, hydraulic fracturing has not been shown to pose discernable risk to drinking water.** Hydraulic fracturing has been used for generations to stimulate the flow of energy resources far beneath our feet, and in that time, has not once been credibly tied to the contamination of drinking water – a fact that has been corroborated by EPA (numerous times), the Ground Water Protection Council, and various other state and federal agencies. The continued and aggressive regulation of the process by state regulators is in part responsible for this impressive record of safety; but so too is the fact that the formations we fracture reside thousands of feet below formations that support potable water, separated by millions of tons of impermeable rock.
- **The solutions used in the fracturing process are composed almost entirely of water and sand.** As experts in the fields of subsurface hydrology (Dr. Parlange) and eco-hydrology (Dr. Riha), it's certainly our anticipation that issues related to water – both subsurface and in its disposition – will likely be central to your panel's examination. As your study proceeds, it's my hope you take note of the fact that greater than 99.5 percent of the fluid used in the fracturing process is comprised of water and sand, with the remaining additives generally categorized as benign gels and friction reducers commonly found in everyday household items. Recognizing that your panel may have specific questions related to these additives, I will once again extend an offer to conference with you on this subject, or otherwise respond in writing to any questions that you may have.
- **The economic potential that shale gas exploration presents to New York is extraordinary.** Cornell University is an institution whose scholarship informs and enlightens the world, but it's also an institution with an obligation to the communities of which it is a member. We don't believe it hyperbolic to suggest that the responsible development of New York's shale gas, with the help of a well-regulated fracture stimulation process, can be an economic game-changer for the people who live and work in the Southern Tier, with the potential to create hundreds of thousands of high-wage jobs throughout the state, and direct billions of dollars a year to Albany to help your state provide essential services to those in need. On this subject, I would commend to you attention a 2009 study compiled at the request of lawmakers in Broome Co., N. Y. A copy of that text is available on our website, <http://energyindepth.org>.

With that, I will once again extend my thanks, and those of my organization, to you and your fellow committee members for taking the time to conduct an objective and science-based assessment of the potential for shale gas exploration on lands owned by the University. It's my hope that you will consider this correspondence an invitation, and in fact a request, to continue this dialogue as your examination proceeds. And it's my further hope that you will not hesitate to contact me directly should you encounter any questions, concerns or suggestions. Thank you in advance for your consideration.

Sincerely,

Lee Fuller  
Executive Director  
Energy In Depth

Vice President  
Independent Petroleum Association of America

CC: Provost Kent Fuchs, President David Skorton