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December 4, 2014

The Honorable Andrew M. Cuomo
Governor of New York State
NYS State Capitol Building
Albany, NY 12224

Dear Governor Cuomo,

I am a Ph.D. economist and formerly Chief Economist of the New York Metropolitan Transportation Authority. I live and work in New York State, I raised my children here, and my only grandchild (so far) lives in New York State. My family and I love New York State and want to see it prosper in the long term.

I am very concerned that you and your administration are discounting independent, unbiased research regarding the potential economic impacts of shale gas development in New York State. And worse, I fear that you and your administration have the facts wrong, because you appear to be listening primarily to biased corporate interests instead of independent economists without financial ties to the industry.

I have been researching economic impacts of extractive industries, and in particular shale gas development, since 2008. My principal findings, even in my earliest writings on the subject, consistently show that industry estimates of potential economic benefits from shale gas development, particularly job creation, are highly exaggerated and that significant negative economic impacts are routinely ignored. I have emphasized repeatedly that there has been no adequate, unbiased assessment of economic impact for New York State and that the net economic impact to New York State from shale gas development is likely to be negative, following the histories in other states. For details, evidence, and citations that support my claims, I respectfully invite you to read both my extensive testimony submitted earlier this year at the NYS public forum in Albany, entitled Economic Realities of Hydrofracking ¹, and my peer reviewed article on the subject, entitled "The Economic Impact of Shale Gas Development on State and Local Economies: Benefits, Costs and Uncertainties" ².

Extractive industries, including shale gas development, are known for their boom and bust cycles, so claiming future job creation is misleading. Of course, there will be some short-term jobs created, but they will disappear when the industry matures and inevitably leaves. As is typical of short-term boom industries, they come into an area and attract workers from existing small businesses, forcing

¹ Barth, JM, "Economic Realities of Shale Gas Development in New York State," February 2014, Submitted in support of testimony presented at February 4th Public Forum, Albany, New York.
http://www.catskillcitizens.org/Barth/JMB_Economic_Realities_February_2014.pdf

² Barth, JM, "The Economic Impact of Shale Gas Development on State and Local Economies: Benefits, Costs, and Uncertainties," New Solutions Vol.23(1), 2013.
<http://www.catskillcitizens.org/Barth/NS%20JM%20Barth%20Final.pdf>

the small businesses to close. The shale gas industry will create an industrial landscape in formerly rural and pristine areas. Existing industries that are vital to the long-term interests of upstate New York, such as tourism, agriculture, organic farming, wine and beer making, hunting, fishing and other outdoor recreation, are likely to decline as these industries are not compatible with an industrial landscape or with a real or perceived threat of water, air and land contamination.

Neither job creation nor potential gas production are accurately reported by the industry and sadly, many of our elected leaders have been perpetuating inaccuracies. While the Governor of Pennsylvania has stated that 200,000 jobs have been created by gas development in Pennsylvania, detailed analysis by the unbiased Marcellus Shale Research Collaborative shows only one-tenth that number of jobs created. Likewise in Ohio, job creation projected by independent researchers is about one-tenth of the jobs claimed by industry researchers.

Furthermore, many of the jobs created are not filled by currently unemployed local workers, but instead are given to out-of-state workers who typically come for a few weeks at a time, sending the bulk of their wages to their families back in their home states. In other words, much of the money would leave New York State, thus not contributing to the economic multiplier effect in New York State.

Instead of considering the facts, you continue to state that shale gas development would improve the economy of the Southern Tier. The truth is that it is likely to be devastating to the Southern Tier in the long run, and the majority of residents in areas likely to be fracked in NYS are opposed to it. A recent survey found that 79% of the people in these areas do not want the de-facto moratorium lifted. If fracking is allowed in the Southern Tier, when the short-term shale boom ends, our Southern Tier communities will become New York's Appalachia, complete with ghost towns and much higher levels of poverty.

Experience in the three Marcellus Shale states that have allowed drilling has not been the "game changer" promised by the industry. A report from West Virginia entitled, "The Emperor has no gas boom," states that the so-called "game changing" gas boom has not materialized there. In Ohio, a report entitled, "Fracking: So Where's the Economic Boom that was Promised?" states, "Oil and gas industry officials predicted in September 2011 that the growing effort to tap oil and gas ... would lead to more than 200,000 new jobs in four years. So far, that has not panned out, even in counties with the most drilling activity." And from sister-state Pennsylvania, the Philadelphia Inquirer reported, "Pennsylvania Fracking Boom goes Bust."

As additional research is produced, new costs have been identified, none of which are reflected in the DEC's analysis or in any of the economic impact studies funded by the industry. To understand new health and environmental costs, please see the recent Compendium produced by Concerned Health Professionals of New York.³

Peer-reviewed research shows that fossil-fuel driven air pollution causes widespread illness, lost time from work and school, and in New York State alone, 4,000 annual premature mortalities, costing the state approximately \$33 billion per year.

³ Concerned Health Professionals of New York, "Compendium of Scientific, Medical and Media Findings Demonstrating Risks and Harms of Fracking (Unconventional Gas and Oil Extraction)" July 10, 2014. <http://catskillcitizens.org/learnmore/CHPNY-Fracking-Compendium.pdf>

There will be costs to communities in the form of increased demand for social services, first responders, and police. In Wyoming there has been a 10% to 15% increase in crime and communities have had to build larger jails. And other research shows that revenue is unlikely to offset burdens to state and local governments.

Damage to roads is known to be significant. A report from Texas states that, “drilling trucks have caused an estimated \$2 billion in damage to Texas roads.” A report from Cornell Law School stated, “In Bradford County, Pennsylvania, 1,000 of 1,300 miles of roads have been damaged,” and, “This type of road damage will lead to extraordinary monetary cost. In Pennsylvania, tens of thousands of dollars have been spent on weight limit signs alone,” and, “Arkansas State Highways have incurred over \$200 million in repair costs in the Fayetteville Shale.”

The decline in property values is a great concern which has been omitted from most analyses. Research by Duke University and Resources for the Future demonstrated that just the risk of ground water contamination from natural gas extraction leads to a “large and significant reduction in house prices.” And other research found that proximity to fracking activity lowered bid values by 5% to 15%.

The economic benefits of pipeline construction are very short-term, creating a few jobs for a short period of time just during construction. The temporary construction jobs end, and once a network of pipelines is built, including gathering lines, transmission lines and larger pipelines, future development is unlikely as one cannot build on top of or close to natural gas pipelines.

The industry often claims that the low price of natural gas makes the commodity attractive to end users, both residential and business. What they don't point out is that natural gas has a long history of price volatility and that the price may very well increase substantially due to both supply constraints and demand pressure. Official supply estimates continue to be reduced and there will be increased demand through LNG exports, the conversion of buildings, vehicles and power plants to natural gas, and new manufacturing plants that plan to take advantage of low natural gas prices. When the price of natural gas increases dramatically after widespread conversion to the fuel for heating, transportation, power and industrial processes, everybody, residents and businesses alike, will suffer financially. The uncertainty resulting from volatility in fuel prices makes for very uncertain long-term planning for both residents and businesses.

The price of natural gas as an input to a fossil fuel based energy system will always be volatile and can be expected to increase, perhaps substantially, in the long-term. In contrast, the price of wind, water and sunlight as inputs into an energy system based on renewable energy will always be zero.

Shale gas development in New York State would yield a short-term benefit to the gas industry and perhaps a few large landowners, but it would come at the expense and exploitation of communities and taxpayers statewide. I urge you to consider the full scope of impacts and protect the people and economy of our state by discouraging the expansion of shale gas development.

Sincerely yours,
Jannette M. Barth, Ph.D.

cc: Joseph Martens, Commissioner, NYS Department of Environmental Conservation
Howard Zucker, M.D., J.D., Acting Commissioner, NYS Department of Health