To: Tompkins County Council of Governments

From: Carolyn Eberhard Speaker #61

Re: Comments at Ithaca Public Hearing for the DEC dSGEIS 12-1-2011

Date: Dec 2, 2011

SPEAKER #61 CAROLYN EBERHARD

I am Carolyn Eberhard, a biologist and landowner in the Town of Caroline and I am grateful to TCCOG for this forum.

I will get to the dSGEIS in a minute but first want to relate an incident that happened to me last spring:

> While lunching with friends, we were chatting about the recent LOBBY DAY in Albany (4-11-2011) and over comes a gentleman who joined our conversation. It turned out he was from Texas and left us with this assessment regarding Texas Oil and Gas men:
>
> "If their lips are moving, they are lying."

Now for the dSGEIS, to which this unfortunately applies. I have since learned that information about the economic benefits of High Volume Slick Water Hydrofracturing (HVSWHF) falls into two categories:

1) FIELD ECONOMICS: what is actually occurs on the ground
2) "STREET" ECONOMICS: HYPE that the OIL and GAS industry gives out to keep stock prices shored up and attract investors.

The dSGEIS seems to be depending on "street" level economics (i.e. DEC, like the major players, "took the bait") and needs to sort out what is really happening in the field. For example they should consider the track record for the Barnett Shale play in Texas, which is well documented and already in severe decline after only about 10 years. Occam's Razor says we should assume Marcellus should be no different.

DEBORAH ROGERS http://www.youtube.com/watch?v=bYzU4bEfJ5U

The actual record does not agree with assumptions used in the dSGEIS.

HYPE: There is a 100 year supply of natural gas in the Marcellus shale reserves.

FACT: Marcellus Shale technically recoverable reserves is now estimated at 84 Tcf, 80% lower than originally thought, so the gas might provide a 20 year supply. Profitably recoverable would be less. [According to the EIS Annual Report for 2009, US consumption in 2009 was 62.6 Bcf/day or 22.8 Tcf/year, projecting that Marcellus Shale could support 3.87 years of consumption. The EIA Annual Energy Outlook (AEO 2011) for the whole US estimates 827 Tcf technically recoverable unproved Natural Gas Shale resources. The US reserves could support 36.3 years of US consumption.]

EIA http://thinkprogress.org/romm/2011/08/26/305467/usgs-marcellus-shale-gas-estimates-overestimated-by-80/

EIA 2009 Data (2010 Data to be released Dec. 2011) (http://www.eia.gov/oil_gas/natural_gas/data_publications/natural_gas_annual/nga.html

HYPE: Marcellus drilling will result in a bountiful supply of cheap Natural Gas.

FACT: At current domestic prices (Henry Hub well under $4/Mcf) revenues do not even cover production costs, let alone allowing for a decrease in Natural Gas prices to the consumer. The Barnett, for example has an estimated breakeven price of $8.75 for full cycle and $5.63 for point forward production. Exportation of NG and LNG would substantially <u>increase</u> the price and is already in development.

BERMAN-PITTINGER http://www.theoildrum.com/node/8212 OR http://thinkprogress.org/romm/2011/08/05/289389/stunning-analysis-u-s-shale-gas-reserves-may-be-over-stated-at-least-100-percent/

HYPE: All parts of the Marcellus Shale will be equally productive.

FACT: In the Barnett, Chesapeake (for example) claimed all 17 TX counties would be equally productive but in fact only the wells in ~ 2.5 counties were profitable economically - 90% of the wells were uneconomical. The gas is not homogeneously distributed. If this is the case in the Marcellus, huge areas will be drilled to no purpose but the costs and environmental damage will still result. Only core area wells will bring benefits.

DEBORAH ROGERS http://www.youtube.com/watch?v=bYzU4bEfJ5U

HYPE: A large number of jobs will be created.

FACT: The gas jobs in PA in 2009 amount to 1/2 of what the industry backed study found (new study shows 23,500). Same thing in TX: The Perryman group (2008) predicted 111,131 direct production jobs for North Texas but the 2008 Bureau of Labor Statistics showed 166,500 direct production jobs for the entire US. Chesapeake (2010) claimed there would be 53,200 direct production jobs in the Ft. Worth/Arlington area alone but the 2010 Bureau of Labor Statistics showed 93,800 total US jobs in the production sector for onshore and offshore.

PENN STATE STUDY http://stateimpact.npr.org/pennsylvania/2011/08/30/new-study-cuts-estimated-marcellus-job-creation-in-half/

DEBORAH ROGERS http://www.youtube.com/watch?v=bYzU4bEfJ5U

HYPE: The Marcellus wells will produce for 30-40 years.

FACT: Production curves drop sharply in the first 1-2 years in the Barnett, Fayetteville and Haynesville shales and the extended production curves show an exponential flattening tail, not a larger hyperbolic tail as claimed by industry. The average life of Barnett wells is 7.5 years, substantial numbers lasting only a few years. Refracking is costly and would bring back the associated problems.

BERMAN-PITTINGER QUOTE: "There is far too much data from Barnett and Fayetteville to continue use of strong hyperbolic flattening decline models with b coefficients greater than 1.0."

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WORST HYPE: Marcellus Shale gas will make the US energy independent.

FACT: The industry is on a drilling treadmill to maintain their cash flow: expand reserves with joint ventures, make the companies appear to be growing by showing unproven reserves, allowed under new SEC rules, and get the price of gas up. There is a great need for industry to build the pipelines to get gas to market. Since there is a glut of gas in the domestic market and the price is below breakeven, this would be the international market, not the US. The bidirectional Empire pipeline to Ontario already has FERC approval. The Sabine Pass LNG terminal in LA is already under development (by Bechtel). As soon as US gas is flowing to Europe, Canada, Mexico and Asia, the price will sky-rocket for whatever gas is left for the US. Assuming the Pickens Plan goes into effect with massive conversion of our infrastructure to Natural Gas, we will be totally dependent on expensive gas and at the mercy of international gas companies.

FERC ORDER for Empire Bidirectional Pipeline
http://www.ferc.gov/whats-new/comm-meet/2011/051911/C-1.pdf

SABINE PASS LNG terminal for export
http://www.energyglobal.com/sectors/liquid-natural-gas/articles/Sabine_Pass_LNG_to_become_export_terminal.aspx

SUMMARY

The scenario seen in the dSGEIS is at odds with the actual experience in other natural gas shales. Apart from all the other concerns, for environmental impact, social impact, health impact, and climate change, the economics alone totally tips the balance in favor of not going forward with hydrofracking.

There will not be a huge supply of cheap gas. The gas will last for a few years, not decades. Our consumer gas price will go up due to exports. We will be more dependent on foreign controlled energy. The development of gas-related infrastructure beyond actual drilling (pipelines, compressors, dewatering facilities, storage facilities and ethylene cracker plants) will be horrendous. There will be a small number of long term jobs and the really good jobs will be at corporate headquarters in Texas, Oklahoma and Louisianna, not in NY at all.

If the long term benefits of hydrofracking are truly meager, there is no way the DEC should go forward. The dSGEIS should be abandoned because it is based on a scenario generated by the oil and gas industry and not based on sound, independent analysis.