

Attn: Draft HVHF Regulations Comments  
New York State Department of Environmental Conservation  
625 Broadway  
Albany, NY 12233-6510

To: New York State Department of Environmental Conservation

Re: Comments on Proposed Regulations for High Volume Hydraulic Fracturing  
(6 NYCRR Parts 52, 190, 550-556, 560, and 750) with regard to methane emissions.

From: Adrian Kuzminski, Moderator, Sustainable Otsego, 279 Donlon Road, Fly  
Creek, NY

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Introduction:

These comments on the proposed regulations are submitted by Adrian Kuzminski, Moderator, Sustainable Otsego. Sustainable Otsego is a social network of several hundred subscribers dedicated to promoting sustainability issues in the Otsego County, NY, region.

The proposed Revised Regulatory Impact Statement (RRIS) for High Volume Hydraulic Fracturing (HVHF) must be measured against the legal and ethical obligations of the DEC.

Among the most important of these is the Mission Statement of the DEC: "To conserve, improve and protect New York's natural resources and environment and to prevent, abate and control water, land and air pollution, in order to enhance the health, safety and welfare of the people of the state and their overall economic and social well-being."

Other obligations stated by the DEC include the following:

- “guaranteeing beneficial use of the environment without risk to health and safety”
- “management of water, land, fish, wildlife and air resources to assure their protection”
- “assuring the preservation and enhancement of natural beauty and man-made scenic qualities”
- to “prevent the pollution of fresh water supplies by oil, gas, salt water or other contaminants”
- to “conserve and control water resources for the benefit of all inhabitants of the state”
- to “ensure that potential environmental impacts resulting from HVHF are mitigated to the maximum extent practicable”
- to promote “the management of water, land, fish, wildlife and air resources to assure their protection, enhancement, and balanced utilization taking into account the **cumulative impact** upon all such resources in promulgating any rule or regulation”
- to “ensure that an owner or operator does not drill wells that may injure the common source of supply or the environment”
- to meet a “mandate to protect the environment”
- “ensuring that wells are properly plugged and abandoned to prevent such wells from becoming a pathway for contamination”
- to “impose reasonable and necessary conditions to minimize any adverse impact”
- to impose a “rigorous and robust regulatory program protecting the environment and human health “

With these in mind, we offer the following comments on the proposed regulations with regard to emissions of greenhouse gases (GHGs), including methane.

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The "Climate Change" section of the DEC website cites governing NYS policy on GHGs:

"To help minimize risks from climate change, New York State has set two goals: **Reduce emissions of heat-trapping greenhouse gases** by 80 percent from 1990 levels, by the year 2050 ("80 by 50"), and **Improve resilience to climate change** in all the state's communities." (emphasis in original)

One of the most powerful and largely overlooked greenhouse gases is methane. Although it's half-life in the atmosphere is less than CO<sub>2</sub>, it is 25 to 100 times more potent. Massive methane emissions from large-scale HVHF conducted over just a few decades could be catastrophic. So-called fugitive methane emissions result from all phases of natural gas production, from the HVHF process itself, to the wellhead, to compressors, to the pipeline system, with its leaky seams, valves, etc.

Peer-reviewed research on this subject has been carried out by Prof. Robert Howarth and associates at Cornell University; it shows that these fugitive emissions are very serious contributors to global warming, even if they constitute but a very small percentage of the total of the gas moving through the system. In a perfect world methane seepage might be eliminated, but in a real world subject to entropy and human error, continued significant methane emissions must be anticipated, given the imperfect state of the art of current HVHF technology. Howarth's latest paper, "Methane Emissions from Natural Gas Systems," is appended to these comments.

Howarth and associates are not alone. Included here as well is the Summary section from a draft of a Leak Detection Study carried out for the US Department of Transportation, Pipeline and Hazardous Materials Safety Administration, by Dr. David Shaw, et. al, and released on 28 September 2012. Shaw and associates document significant leakage from gas pipelines, and note an almost total lack of

industry guidelines for monitoring leaks. HVHF should not be allowed to go forward in NYS in the face of likely methane emissions and in the absence of significant controls over or even monitoring of emissions.

This problem is increasingly recognized. NYS Attorney General Eric T. Schneiderman has recently filed an intent to sue the EPA for violating the Clean Air Act by failing to address methane emissions from the oil and gas industry. Schneiderman points out that "regulators have failed to require the industry to use available and cost-effective measures to control these emissions." The NYS Attorney General's complaint applies equally to the DEC. Nowhere do the proposed DEC regulations explicitly take into account the actual impacts of methane released from natural gas production as a greenhouse gas. A press release from the Attorney General's office is appended to these comments.

The DEC, in comments submitted to FERC on the Constitution Pipeline (PF 12-9) recently proposed in NYS, called for an evaluation of cumulative impacts:

"Since the location of the proposed Project route has a high potential for development of natural gas extraction from Marcellus and Utica Shale formations, as indicated in the revised NYSDEC draft Supplemental Generic Environmental Impact Statement on the Oil, Gas and Solution Mining Regulatory Program, September 7, 2011, the draft EIS must evaluate the cumulative environmental impacts associated with these potential activities."

The DEC in this comment to FERC is calling for an evaluation of cumulative impacts of HVHF. This DEC policy should be made explicit in the DEC's own proposed regulations for HVHF. Such impacts necessarily include emissions, including methane emissions.

The following proposed amendments to the regulations -- Sections 555 (a) (1) - (5)), Plugging and Abandonment, including well casings; Section 556 (Operating Practices); Section 560 (Operations associated with HVHF, including definitions (560.2 (14)); and Abandoned Wells (560.3 (8)), Emissions (560.3 (13)); Gathering

Lines (560.3 (14)); and Blowout Preventers (560.3 (15)) -- all bear on possible methane emissions and all fail to address the issue.

One of these Sections (560.2 (14)) raises the definition of HVHF from wells requiring 80,000 gallons/fracturing to wells requiring 300,000 gallons/fracturing. This is actually a step backward, exempting wells under 300,000 gallons/fracture from more stringent regulations, making increased methane emissions even more likely.

The following Sections -- 560.5 (e) on Testing, Recordkeeping and Reporting Requirements; and 560.6, on Well Construction and Operation -- are also relevant to potential methane emissions but fail to discuss the issue. Section 560.7 on Waste Management and Reclamation also fails to discuss the urgent need to reclaim methane emissions.

The proposed regulations as written will allow large-scale HVHF in NYS with almost entirely unregulated methane emissions. No method is indicated by which methane emissions throughout the production cycle can be monitored or mitigated. There is no discussion of what kind of standards, if any, might be required for an emission-free production system. These omissions place these regulations in stark contrast to established NYS policies calling for urgent reductions in GHGs.

If HVHF is allowed to go forward under these circumstances, 30 counties in NYS will not have "improved resilience to climate change" -- a goal to which NYS and the DEC are committed -- but will in fact become a vast region contributing significantly to climate change.

The climate change risk posed by methane emissions should not be understated. The worst case scenario is that methane emissions from HVHF not only in NYS but elsewhere could push the planet beyond the point of no return into runaway global warming. This is not a certainty, but neither can this outcome be dismissed. It is a real risk, and not the kind of risk we should be running.

The gas industry likes to claim that it is a "cleaner" fossil fuel than oil or coal. Much of the rationale for proceeding with HVHF is based on this claim. Given the real risks outlined here entailed by methane emissions, the industry cannot simply claim to be a "cleaner" fossil fuel. At the very least, significant further study of this issue is necessary. In the meantime, natural gas should be treated just like its sister fossil fuels, not as an exception.

Even if natural gas turns out to contribute somewhat less to total GHGs than oil and coal, the numbers remain significant and in the long run destructive. Natural gas is often touted as a "bridge fuel," but it is not clear what that means. If that means that natural gas should be used in place of oil and gas to get to renewables, then it would make more sense to move directly to renewables and save the very high costs associated with the distraction of developing a massive natural gas system based on HVHF. Those savings could instead be directed at renewables.

The assumption often made that the only alternative to natural gas is oil or coal is mistaken and dangerously misleading. NYS should be avoiding dependence on natural gas and other fossil fuels, and prioritizing the development of renewable energy sources as quickly and fully as possible. Banning this unsafe technology and imposing an indefinite moratorium of unconventional natural gas development in NYS would send a power message that NYS is serious about phasing-out fossil fuels. The model here is Germany, with its impressive commitment to doing just that. The costs and limitations of renewables are well known, but the sooner these issues are addressed with maximum funding the better off we will be. Money invested in gas and other renewables only puts us further in the hole.

In conclusion, the proposed regulations are entirely inadequate, if not scandalous, with regard to the issue of methane emissions. Legally and ethically, the only course for the DEC is fully to take into account the issue of methane and other GHG emissions, as well as the lack of sufficient mitigating measures to deal

with the challenge. Insofar as the goal of NYS is to reduce GHG emissions, then the introduction of HVHF into NYS is inconsistent with that goal, and should not be permitted.

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Re: Comments on Proposed Regulations for High Volume Hydraulic Fracturing (6 NYCRR Parts 52, 190, 550-556, 560, and 750) with regard to the role of the Division of Mineral Resources and the Director (Section 550.2 (a) -- (e)).  
Comments are also related to existing regulation, Section 550.1, Policy.

From: Adrian Kuzminski, Moderator, Sustainable Otsego, 279 Donlon Road, Fly Creek, NY

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Introduction:

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Background:

The Mission Statement of the DEC is as follows: "To conserve, improve and protect New York's natural resources and environment and to prevent, abate and control water, land and air pollution, in order to enhance the health, safety and welfare of the people of the state and their overall economic and social well-being."

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Comment:

The current Director of Mineral Resources, Bradley J. Field, is reportedly a signatory to a global warming petition which calls the United States Government to reject any proposed limits on greenhouse gases. See appended article, "Field of Distortions," by Robert H. Boyle and Bruce Ferguson, 28 June 2012, *Metroland*, Albany, NY; also available online here:

<http://metroland.net/author/robert-h-boyle-and-bruce-ferguson>

Mr. Field's position, as reported, stands in direct contradiction to the stated policy of NYS regarding emissions reduction. The Director of Mineral Resources would be directly responsible for oversight of the DEC's regulation of HVHD in NYS. No one holding the views on climate change attributed to Mr. Field should be in charge of implementing NYS policies on GHG emissions. He should immediately resign his position; if he does not resign, he should be fired by the Governor.

With regard to Section 550.1 regarding Policy, the DEC Regulations state the following:

" The rules have as their objectives: (a) the fostering, encouragement and promotion of the development, production and utilization of the natural resources of oil and gas in such a manner as will prevent waste; (b) the operation and development of oil and gas properties in such a manner that a greater

ultimate recovery of oil and gas may be had; (c) full protection of the correlative rights of all owners and the rights of all persons, including landowners and the general public; (d) similar provisions for the underground storage of gas.

This language closely follows the controlling statute, ENV 23-0301, as follows:

"23-0301. Declaration of policy. It is hereby declared to be in the public interest to regulate the development, production and utilization of natural resources of oil and gas in this state in such a manner as will prevent waste; to authorize and to provide for the operation and development of oil and gas properties in such a manner that a greater ultimate recovery of oil and gas may be had, and that the correlative rights of all owners and the rights of all persons including landowners and the general public may be fully protected, and to provide in similar fashion for the underground storage of gas, the solution mining of salt and geothermal, stratigraphic and brine disposal wells."

Please note that whereas the statute only empowers the DEC to "regulate" the development, production and utilization of natural resources of oil and gas," the DEC regulation on Policy substitute the phrase "the fostering, encouragement and promotion" for the word "regulation" in the statute. This is gross and unauthorized expansion of the authority of the DEC.

Section 550.1 of the Regulations should be modified to confirm with existing statute. Failure to modify 550.1 in this light leaves the DEC open to legal challenge on this point.

Further, the Division of Mineral Resources should not be charged at all with environmental protection. It has construed the DEC mandate to "improve" natural resource to promote their economic development. As a result, conflicts often arise -- as in the case of HVHF -- between conservation, environmental protection, and sustainability of resources on the one hand, and short-term economic interests on the other. These two functions should not be in the same state agency, let alone in the same Division of the DEC.