

September 12, 2016

Mr. Christopher Hogan
New York State D. E. C.
Division of Environmental Permits
625 Broadway, 4th Floor
Albany, NY 12233-1750

Re: Dominion New Market Project Air State Facility Permits

Dear Mr. Hogan:

Please accept this testimony as part of the record of public comment regarding the draft air permits for the Dominion New Market Project.

Who we are and why we are writing

The undersigned are health professionals who have followed with interest, for several years, the inherent challenges and problems posed by unconventional natural gas development (UNGD) aka HVHF and its associated infrastructure. We are professionally and ethically bound to promote the health and well-being of our patients; we recognize that such well-being is intricately bound to clean water, air, and soil; and also note the connections and commonality amongst living systems - people, animals, and wildlife at all levels of complexity require a healthy environment to live and to thrive.

We note with concern and urgency two trends: symptoms of illness reported by those living in close proximity to UNGD/HVHF activities are occurring in individuals living near gas infrastructure, in particular compressor stations. Furthermore, the expansive slate of air toxics that emanate from UNGD also are emitted from compressor stations; therefore this sobering commonality of clinical signs is not unexpected.

We are also greatly concerned that no state agency appears to be monitoring the ever increasing flow of information and scientific studies based on effects of UNGD and its associated infrastructure. On this point we would like to be mistaken; and please correct us if we are. But since the two year Public Health Review of HVHF activities concluded in December 2014, it appears that DEC and DOH have “washed their hands” of the issue. Nevertheless, huge problems - with health impacts, quality of life and climate impacts associated with the proliferation of natural gas infrastructure in our state - are not going away. Someone needs to be paying attention to this, and “connecting the dots” - individual infrastructure projects must be considered not only separately but in

their cumulative health, environmental, and climate impacts. We do not see this happening in New York State.

These comments are provided as an overview and are not intended at this time to comprehensively cite or review the current state of peer reviewed literature on the topic of health impacts associated with air pollution or other problems posed by gas infrastructure. We offer our assessment as expert witnesses here.

We also know that “prevention is the best medicine” and this core concept of responsible health care informs our work and these comments.

The issue at hand: The Dominion New Market application and Draft State Air Facility Permits issued by DEC July 6, 2016:

This project and the draft air permits under review present multiple problems well delineated by others. We highlight some of the problems here, as these inaccuracies, omissions, and design flaws, if allowed to go forward, will have a deleterious impact on the health and well-being of those along the project’s path, in particular those living near the new and expanded compressor stations in Chemung, Madison, and Montgomery Counties. There is the opportunity here, however, for DEC to take major, corrective steps.

- Dominion’s use of irrelevant, inapplicable weather data and mathematical emission modeling does not reflect what is actually happening around compressor stations.

While this may be standard practice - the use of non-local wind and weather data to predict emission dispersion- it is grossly inaccurate and does not reflect how local residents will be exposed at each compressor station site. On this topic, peer reviewed research has demonstrated two serious trends:

1. Alarmingly high toxic emission spikes not predicted by theoretical modeling or captured by remote air monitoring regularly occur near gas infrastructure, notably, near compressor stations (Macey et al, Environmental Health, 2014). These spikes of air toxics acutely affect the respiratory system, and can enter the blood: oxides of sulfur and nitrogen, particulate matter, formaldehyde and volatile organics are regularly emitted by compressor stations, and at high levels, in particular, formaldehyde, a pickling agent and carcinogen. A natural consequence of the above are the commonly reported acute signs of illness experienced by people exposed to these toxic plumes: nosebleeds, headaches, dizziness, nausea, and rashes, among other non-specific symptoms. What is unknown are the longer term effects of these poisons, some carcinogens

and some known fetotoxins - on these exposed communities. There is an emerging body of information on the ill effects of air pollution on the developing fetus. As you review this application, DEC, you cannot pretend that this information does not exist.

2. There is profound day to day, morning to evening variability in the magnitude of emission spikes coming from compressor stations. Brown and colleagues documented this phenomenon clearly (Brown et al, Reviews on Environmental Health, 2014). The current regulatory monitoring regime completely misses this. DEC needs to close this information gap. A suggestion: at the applicant's expense, the monitoring agency/lab of DEC's choice should conduct real-time, on-site monitoring - smokestack and fence-line - of every compressor station. This must be a permit condition. Short of that type of monitoring, everyone remains in the dark. And what we do not know and are not acknowledging is impacting public health, and our climate, across the country. New York State can and must do a better job.

DEC has failed to require the most effective, up to date pollution controls on these compressor stations, most notably for the planned expansion of the existing station in Minden, Montgomery County.

Given what is currently known and from emerging information, this is not only irresponsible but an unethical abdication of responsibility to protect public health and the environment. We are well aware of the arguments DEC staff have put forth that their hands are legally tied on this issue and that they cannot compel Dominion to do this. We are not lawyers, but we are aware of the countering argument that DEC's rights to apply the Clean Air Act are not pre-empted by the Natural Gas Act. If DEC is leaving power to protect the air and environment of New York State on the table, then it is failing the people of New York and failing the state's commitment to lead on climate change and reduce harmful GHG emissions.

In spite of these strong statements, we do not mean to impugn the integrity of DEC or anyone in that department. We acknowledge that your job is not easy, but we contend that you have a mission driven, legal and moral imperative to protect public health here by **requiring the best pollution control technology in these permits, as a minimum.**

This would include, specifically at the Brookman Corners site: 1. **Timely installation of the oxidation catalyst on the existing compressor.** This means when construction commences - if indeed the permits are granted. 2. **Effective vapor recovery on the reciprocating engines.** What is currently proposed

is not the best available technology. An alternative exists which is not only much more effective, but cost saving for the applicant. A failure to require this technology ("**Remtech Slip Stream**" or its equivalent) defies common sense.

3. **Installation of "Solo-Nox" technology** to reduce nitrogen oxide emissions. Nitrogen oxide is a potent respiratory toxin. Moreover, it contributes to the formation of ground level ozone, which has multiple harmful effects on the heart and lungs.

Again, given what is known about the toxic effects and magnitude of compressor station emissions, we contend it is unconscionable to fail to require the best mitigation technology.

In the face of skepticism expressed by DEC staff regarding the reality of and potential for health impacts related to gas infrastructure, we note the cost that treating asthma presents to New York State every year. We contend that this significant drain on our state budget and the attendant suffering it causes justify, as a minimum, that DEC require the best available control technology at the source of these air toxics. We also contend that the enormous cost of this disease to our state is sufficient justification to reject this polluting project outright.

For reference, see the Comptroller's report on the OSC website: "The Prevalence and Cost of Asthma in New York State" April 2014, (http://osc.state.ny.us/reports/economic/asthma_2014.pdf). Information from this report, some directly excerpted, informs these comments.

In spite of decreasing asthma prevalence in our state overall (as of April 2014), the prevalence of asthma among Medicaid recipients has risen ("The number of New York Medicaid recipients with an asthma diagnosis rose by more than 30 percent over the five years ending in State Fiscal Year 2012-13.") and the costs of treating this "common, deadly, disruptive and expensive disease" have skyrocketed.

Montgomery County, the site of the proposed expansion of the existing Brookman Corners compressor station, is number 6 among NYS's 62 counties in asthma prevalence among Medicaid recipients.

Asthma has no known cure. It's a complex disease with several risk factors, with exposure to exhaust and air pollution being a potent trigger. The OSC's report makes clear that the "cost of asthma goes well beyond the direct expense that taxpayers bear through the Medicaid program. The disease also drives higher insurance premiums for New Yorkers with privately paid

health coverage. Including Medicaid costs, the State Department of Health (DOH) recently estimated **the annual overall cost of asthma in New York at \$1.3 billion** in direct medical costs and lost productivity. Hospitalizations account for \$660 million of these costs, a 61 percent increase since 2002.”

The OSC’s report notes the urgent need to insure that **“initiatives to address the disease are targeted as effectively as possible,” including “reducing childhood exposure to asthma triggers.”** Exposure to air toxins are a well established asthma trigger.

Clearly, asthma is a huge problem nationally and for New York State, fiscally and in terms of quality of life. It is common sense that prevention is the best medicine. It is not only ethically imperative but logical for DEC to do their part to reduce these respiratory toxins **at the source.**

Concluding Remarks

We believe DEC and DOH must take a hard look at the threats and challenges posed by this and other natural gas infrastructure projects, now. At present there are no perfect studies or irrefutable proof on the harms from gas infrastructure, just as there was not iron-clad proof of harm from the “HVHF activities” that Dr. Zucker analyzed in his public health review. But there was sufficient evidence to make a seasoned judgement call on HVHF, and there is significant, growing evidence of the harms posed by gas infrastructure. Therefore it is incumbent on DEC to minimize those harms to New York’s citizens and the climate.

Also consider the cost of a wrong decision here: if the view that this, and other gas infrastructure build-out is bad for our state (due to deleterious effects on public health, the environment, and worsening climate change) is wrong, but the best pollution control mitigation and air quality monitoring is required, or the project is denied, where is the cost? The cost is to the applicant; the benefit is cleaner air, and likely more impetus to promote renewable energy. This would be a huge benefit. If the view that this and similar projects are bad for the state is right, but the best mitigations are not required, then the costs are enormous; literally incalculable. This is another argument for the precautionary principle.

We contend that the harms inherent in the Dominion New Market Project far outweigh any benefits. The air pollution will be significant and lasting for decades, at a time where decisive action is critical in order to turn the tide on

irreversible climate change. The resultant human suffering, and cost to our climate are immeasurable.

Our upstate communities have many challenges - including poverty, lack of education, and drug addiction. This project will do nothing to alleviate those ills. What these communities *do* have going for them, by and large, though, is clean water and clean air. Continuing this gas infrastructure build-out will sadly change that, and not for the good.

We believe that the most responsible course of action is denial of these permits and we urge you to do so.

Respectfully,

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cc: Governor Andrew Cuomo
NYS DEC Commissioner Basil Seggos
NYS DOH Commissioner Howard Zucker, MD