

Sergei Krasikov (on behalf of Green Beacon Coalition)
386 Liberty Street
Beacon NY 12508

Dear Mr Mayor and City Council members,

I want to provide feedback to the letter Mr. Mayor and City Council received prior to voting on the resolution to oppose the construction of Danskammer Plant on July 1st, 2019.

As a citizen, environmentalist and a proud resident of Beacon, I find their letter disrespectful and at times menacing. They claim that *“much of the information contained in the resolution before your is misleading, whether intentional or not, and seems to be based on talking points from opposition groups working to undermine a project that would ultimately benefit the entire region”* without citing much evidence. The *“talking points”* that helped to inform the resolution are the result of years of robust scientific research by *“opposition groups”* such as Scenic Hudson, Riverkeeper, Natural Resource Defence Council and others. And then Danskammer goes on to make a number of misleading, false or threatening assertions in their attempt to influence your vote. All 34 pages of *“talking points”* in Scenic Hudson report are available on New York State Department of Public Service Danskammer project page:

<http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={C4A75E61-447C-4152-BA86-C4F02A49C166}>

I want to point out those misstatements and inaccurate data points Danskammer used as well as provide additional information on the following subjects:

1. Air quality in surrounding communities
2. Increase of mostly fracked natural gas production necessary to fuel the plant
3. NYS existing energy generating capacity and the claimed need to increase it in lieu of the Indian Point closing
4. Use of Natural Gas as a bridge fuel towards 100% renewable energy

There are several questions that I couldn't answer not been able to obtain the necessary data (Danskammer so far stone-walled our requests). I lay those questions out in the end and urge City Council to request Danskammer or an impartial independent source to provide answers.

1. AIR QUALITY IN SURROUNDING COMMUNITIES

“D” rating for high levels of ground level ozone was given when Danskammer was a coal-fired facility”, says Michelle Cook. This is patently untrue. It is given to Dutchess County NOW by American Lung Association based on 2015-2017 data¹. It is not the result of Danskammer burning coal in the past. It is a combination of pollution that comes from power plants, the trash incinerator in Poughkeepsie, car exhausts, landscaping tools, heavy industry, etc on a daily basis. It means that adding even more pollutants into the air would further deteriorate air air quality beyond “D” rating. The high amounts of oxides of nitrogen (NOx) and volatile organic compounds (VOC) that gas power plants emit react in the presence of sunlight and form ozone.

Breathing ozone can trigger a variety of health problems including chest pain, coughing, throat irritation, and airway inflammation. It also can reduce lung function and harm lung tissue. Ozone can worsen bronchitis, emphysema, and asthma, leading to increased medical care. It is especially dangerous for little kids, pregnant women, elderly and plant workers due to higher levels of exposure.

Danskammer has so far failed to provide estimates of CO₂, NO_x, VOC and other pollutants a new plant would generate. Researchers predict at least a 10-fold increase of air pollutants generated by a new Danskammer plant compared to the one operating now as a peaker. EPA data² shows that in 2016 Danskammer plant emitted 6 tons of NO_x and 11 723 tons of CO₂. The estimated yearly emissions by a recently built 675 MW CPV Valley Energy Center, according to CPV's own materials³, will be 187 tons of NO_x and 590 000 tons of CO₂. Let these numbers sink in. 6 tons vs 187 tons. 11 723 tons vs 590 000 tons. Danskammer is a bit smaller. Technology

¹ <https://www.lung.org/our-initiatives/healthy-air/sota/city-rankings/states/new-york/dutchess.html>

² https://www.epa.gov/sites/production/files/2018-02/arpcaircoal16vs17annual_0.xls

³ <https://www.cpv.com/assets/docs/valley-deis/Volume%20I/CPVValleyDEISSections1thru19.pdf>

might be a bit better. But still. We will see a drastic increase in local air pollution and there is no way Danskammer can spin this fact out of reality.

2. INCREASE OF MOSTLY FRACKED NATURAL GAS PRODUCTION NECESSARY TO FUEL THE PLANT

Danskammer is correct to point out that *“Central Hudson purchases gas from production sources based on price and availability and it is then sent to the utility via gas pipeline. We are simply a customer of Central Hudson.”* 90% of the gas, as they say, is fracked. It is, unfortunately, true. However, I ask you to look at it from a different perspective. Danskammer will be a new major natural gas consumer that will necessitate additional drilling and fracking. Anthony Ingraffea, an engineer at Cornell University whose work has tied fracking to various environmental ills, including climate change, calculated that a 650-megawatt CPV Valley Energy Center would require drilling new 130 wells⁴ each year, on average, to supply the plant with enough gas to operate. That translates into thousands of fracked wells over the 40-year lifetime typical for such a facility. Danskammer is a bit smaller at 525-575-megawatt, but not by much. Hydraulic fracking leads to toxic pollution in host communities. The fracking wastewater, highly contaminated and radioactive, is pumped into injection wells, including in New York State, which serve as permanent storage sites. The U.S. Government Accountability Office (GAO) has found a lack of protection for drinking water sources from fracking injection wells⁵. Increased gas consumption leads to expansion of gas delivery infrastructure, further binding NYS and the country in general for generations to climate degrading energy production.

But how much gas will Danskammer consume? If the plant works at 50% capacity it will produce around 6600 WMh (550 MW x 24h x 50%) of electricity a day and consume upwards of 20 million cubic feet of gas (it takes, on average, 3 cubic feet of gas to produce 1 KWh). Or 7.3 billion cubic feet a year. Average gas consumption by a household in the USA is 59 000 cubic feet per year, so the plant will need

⁴<https://stateimpact.npr.org/pennsylvania/2017/12/08/new-yorks-heralded-fracking-ban-isnt-all-its-cracked-up-to-be/>

⁵ <https://www.gao.gov/assets/680/675439.pdf>

roughly the same amount of gas as 120 000 households. Dutchess County has exactly that many households.. Please note these are conservative estimates. The plant is likely to work at higher than 50% capacity.

In 2014 New York State banned fracked gas extraction in NY because of the health and environmental impacts. It is and it will be a hypocrisy to facilitate further fracked gas production to the detriment of the health and environment of our neighbours in Pennsylvania.

I urge you to read an excellent report by Physicians for Social Responsibility (PSR) about health threats associated with methane in general and hydraulic fracking in particular: <https://www.psr.org/wp-content/uploads/2018/05/too-dirty-too-dangerous.pdf>

3. NYS EXISTING ENERGY GENERATING CAPACITY

The next big point is energy generating capacity. Danskammer claims NYS will be facing a capacity gap once Indian Point is shut down. To prove their point they are misstating important numbers, whether intentionally or not. The letter states that Indian Point provides about 2,200 megawatts of power to NYS. Indian Point nameplate capacity is 2,060 MW. Out of it, only about 1,300 MW on average is sold to NYS, and the rest - to New England⁶. As correctly stated by the Danskammer, *“Two new plants are open/under construction in the lower Hudson valley: CPV and Cricket Valley. Together these will supply about 1,500-1,700 megawatts of power to the region.”* Which covers the Indian Point “gap”, and then some.

Furthermore, to argue that reliance on natural gas is unavoidable, Danskammer states that *“Currently, there are no wind projects under construction in the state”* which is in direct contradiction to information on the DEC website: *“.. two wind power projects are under construction in New York, and one is under active review.”*⁷ On Thur July 18, 2019 Governor Cuomo awarded the largest combined offshore wind contracts by any state to date, totaling 1,700 MW⁸. Danskammer also fails

⁶https://www.nytimes.com/2013/02/16/business/electricity-costs-up-in-gas-dependent-new-england.html?pagewanted=all&_r=0

⁷ <https://www.dec.ny.gov/energy/40966.html>

⁸<https://www.governor.ny.gov/news/governor-cuomo-executes-nations-largest-offshore-wind-agreement-and-signs-historic-climate>

to mention NYPA's ongoing upgrades of electric transmission lines including Moses-Adirondack one to increase southbound transmission capacity and reliability. They also fail to mention that on April 8, 2019, the New York Independent System Operator (NYISO), which controls and operates the state's electric grid, announced the selection of two transmission projects⁹ that will enable the delivery of power from generating facilities located in upstate New York, including significant amounts of renewable energy, to downstate population centers like New York City. This selection follows approval of another project which involves providing additional transmission capacity in western New York for 2,700 MW of hydroelectric power and imports of renewable energy from Ontario which is currently going through the state permitting process for siting and constructing the project.

And then they go on threatening Beacon *"We would like to emphasize that Danskammer **will be run as more of a baseload facility** when Indian Point closes, whether we build a cleaner and more advanced plant **or keep the existing one running.**"*

On May 9, 2019 Governor Cuomo signed new pollution rules targeting older coal and gas plants. New limit is 1,800 lbs of CO₂ per MW-hr¹⁰. They go into effect on Dec 31 2020 and fully phase in by 2023. Typical new and more efficient gas powered plants produce about a 900 lb of CO₂ per MW based on what I could research. Current Danskammer plant might not be capable of meeting the 1800lb standard and would have to be shut down by 2023. Furthermore, a separate resolution "Part 227-3, Ozone Season Oxides of Nitrogen (NO_x) Emission Limits for Simple Cycle and Regenerative Combustion Turbines"¹¹ is expected to be adopted later this year specifically to force closure or expensive retrofitting of older less efficient gas burning peaker plants due to high level of ground level ozone pollution their operation results in.

⁹<https://www.nyiso.com/-/press-release-nyiso-board-selects-transmission-projects-to-meet-public-policy-needs>

¹⁰Adopted Part 251, CO₂ Performance Standards for Major Electric Generating Facilities
<http://www.dec.ny.gov/regulations/113501.html>

¹¹ Proposed Part 227-3, Ozone Season Oxides of Nitrogen (NO_x) Emission Limits for Simple Cycle and Regenerative Combustion Turbines
<http://www.dec.ny.gov/regulations/116131.html>

Plus it is most likely not financially viable to run Danskammer as a “load base” plants due to its inefficiency and high operating costs. The price paid for electricity generated by load base plants is much lower. Peakers are paid much higher rates for the electricity they produce through the NYISO capacity market.

4. NATURAL GAS AS A BRIDGE FUEL

The people behind Danskammer project have been in energy field for 20-30 years and know the ins and outs of natural gas energy production better than all of us. They, for sure, know about the natural gas industry’s contribution to Climate Change. To profess “*Danskammer believes in climate change and in making responsible choices to combat the issue.*” is quite hypocritical - methane leaks and causes enormous climate related damage. Methane, the primary component of natural gas that is 34 times stronger than CO₂ at trapping heat over a 100-year period and 86 times stronger over 20 years. As I have advised Mayor Casale and City Council earlier in this process by sharing 2015 NYS Energy Policy study by scientists at Stamford, Cornlee, UC Davis and others (p586-587)¹², accumulative contribution to Climate Change by natural gas is on par with coal. Natural gas is responsible for nearly half the warming impact of current US emissions over the next 20 years¹³. During extraction and transportation methane leaks are unavoidable, persistent and significant - on average 12 percent of the methane produced by fracking is lost by leaking into the atmosphere according to a 2016 study by Cornell University researcher Robert Howarth¹⁴. There are also accidents, explosions, pipe fractures, liquid gas storage leaks, deliberate releases of gas known as “blowdowns.” Natural Gas must be phased out if we are serious about addressing Climate Change.

¹² <https://web.stanford.edu/group/efmh/jacobson/Articles/I/NewYorkWWSEnPolicy.pdf>

¹³ http://www.eeb.cornell.edu/howarth/publications/Howarth_et_al_2012_National_Climate_Assessment.pdf

¹⁴ <https://unfccc.cloud.streamworld.de/webcast/dr-robert-howarth-is-the-global-spike-in-methane-e>

QUESTIONS TO DANSKAMMER:

I am asking Mr. Mayor and City Council to request Danskammer to provide the following information prior to July 29, 2019 workshop:

1. What are estimated emissions of CO₂, NO_x, VOC and other substances for the new plant, A) per MWh of electricity produced B) annually.
2. What are the emissions of CO₂, NO_x, VOC and other substances for the current plant, A) per MWh of electricity produced B) yearly for 2016, 2017, 2018.
3. What is the total amount of MWh / GWh the current plant produced in 2016, 2017, 2018
4. How many times the plant “fired up” in 2016, 2017, 2018.

On behalf of myself, my family and Green Beacon Coalition I urge you to carefully review the available data, think strategically about the planet our kids and grand-kids would inherit and not be misled by contrived facts and threats coming from Danskammer.

Sincerely,

Sergei Krasikov