Exhibit B

Michael Aucott Report

INTERVENORS' ADDITIONAL COMMENTS ON FERC'S MARCH 2018
DRAFT ENVIRONMENTAL IMPACT STATEMENT
FOR THE NORTHEAST SUPPLY ENHANCEMENT PROJECT
FERC DOCKET #CP17-101-000

SUBMITTED ON BEHALF OF:

NY/NJ Baykeeper,
Food & Water Watch,
Central Jersey Safe Energy Coalition, and
Princeton Manor Homeowners Association

BY:

Aaron Kleinbaum, Esq.
Raghu Murthy, Esq.
Eastern Environmental Law Center
50 Park Place, Suite 1025
Newark, NJ 07102

Michael Aucott, Ph.D.
Environmental Science and Energy Consulting
44 Dublin Rd., Pennington NJ 08534
609-477-0065
mlaucott@gmail.com

Date: May 10, 2018

To: Eastern Environmental Law Center
50 Park Pl., Suite 1025
Newark, NJ 07102

Re: Air Quality Review of Transco's Northeast Supply Enhancement (NESE) ("Project"), FERC Docket No. CP17-101-000

I was asked by the Eastern Environmental Law Center ("EELC") to review various documents associated with the Northeast Supply Enhancement Project. EELC is representing NY/NJ Baykeeper, Food & Water Watch, Princeton Manor Homeowner Association and the Central Jersey Safe Energy Coalition. I was specifically asked to review several documents submitted to FERC, including Transco's Resource Report 9 on Air Quality & Noise, and FERC's Draft Environmental Impact Statement, or DEIS, dated March 2018 for the Project. EELC has asked me to identify any air quality and air emissions-related information that is missing or inadequate and any Project air quality and air emission-related risks, based on my experience in environmental regulation and pollution control spanning over 25 years. I have the following three observations:

(1) Transco's emissions of nitrogen oxides (NOx) will exacerbate the region's ozone pollution problem. Ozone pollution is a known threat to human health and the environment. Transco's proposal to mitigate these emissions is faulty.
(2) Transco's statements on New York City's demand for natural gas rely on outdated City documents that have been revised and updated numerous times. The up-to-date City documents do not support Transco's position.
(3) Hazardous Air Pollutant emissions from the Project will significantly exceed NJDEP's new HAP reporting thresholds.

1) Transco's NOx emissions will exacerbate the region's ozone pollution problem and the proposed mitigation is inadequate.

The Project area's air quality is already unhealthy. It is in a Clean Air Act (CAA) "non-attainment" area for Ozone pollution. Construction of the pipeline will emit a precursor for ozone, nitrogen oxides (NOx), in a quantity that is well above acceptable levels (100 tons per year) and thus, trigger further controls. Control of NOx emissions, leading to an eventual reduction of such emissions, is part of NJDEP's CAA State Implementation Plan, which is designed to reduce air pollutants to levels acceptable to protect human health and the environment. Ozone is created in the atmosphere when levels of NOx and volatile organic chemicals (VOCs) are sufficiently high and warmth and bright sunlight are

also present. In order to prevent the formation of ozone above acceptable levels, emissions of NOx and VOCs must be controlled.

Ozone pollution is a threat to human health and the environment in the region, and the significant quantities of NOx that would be released by the NESE construction activities will exacerbate this problem. The DEIS and other documents relating to the NESE acknowledge the requirement to mitigate the excess NOx emissions, but do not provide detail on the several options identified as ways that the excessive NO_x emissions from the construction activities will be mitigated by reductions elsewhere. Because of this lack of detail, it is not possible to determine whether some of these mitigation options may overlap with or include emission reduction actions that the Port Authority, working in conjunction with NJDEP, has already achieved or may be in the process of achieving. If this is the case, the proposed mitigation options could represent double counting. These emissions reduction actions are listed in a 2013 Memorandum of Agreement between the Port Authority and NJDEP[1] and include the following:

- $28 million in funding for a Truck Replacement Program to replace older drayage trucks
- $7.2 million in funding for a Supplemental Truck Replacement Program
- Up to $2.6 million in funding for an Emissions Reduction Program
- Modifications to rules and regulations to implement a Truck Phase Out Plan
- Up to $3 million in funding to retrofit two Port switching locomotives
- Up to $2.24 million in funding for a Cargo Handling Equipment Modernization program
- Funding for a Cargo Handling Equipment Alternative Powered Technology Incentive Program

It is important that the lack of specificity and potential redundancy of Transco's proposed mitigation options be thoroughly addressed including sufficient detail on specific emissions reductions expected. Mitigation options must include enforceable provisions for contracting, funding, and completing the necessary work within the permissible time frame.

It should be noted that without a firm and enforceable plan to offset the excessive emissions of NOx, the project appears to fail a demonstration that this project is in the public interest of New Jersey. Even if it can be demonstrated that the NESE project can provide an overall benefit to New York City (and this may be unlikely - see problem #2, below), no benefits are projected to accrue to New Jersey. And the people and the environment of that state will bear the impacts of the excess emissions of NOx and the associated threat of exacerbation of ozone pollution.

Ozone above acceptable levels is harmful to human health and the environment. The impacts on human health range from eye irritation to significant respiratory distress that can lead to chronic illness and premature death. Ozone pollution also reduces resistance to diseases such as colds and pneumonia. It also damages lung tissue, intensifies heart and lung diseases such as asthma, and causes coughing and throat irritation. Asthmatics and children are most at risk. Healthy adults doing hard work outdoors can

[1] Memorandum of Agreement between Port Authority of New York and New Jersey and the New Jersey Department of Environmental Protection, April 30, 2013

also be affected by ozone pollution. Further, ozone levels above acceptable levels damage plants, impacting crops and forests. Essentially, ozone causes degradation of living tissues and a wide variety of materials including components of motor vehicles and boats. Ozone is especially damaging to certain molecules, including those found in rubber, the photosynthetic apparatus of plants, and the membranes lining the air passages of the lungs.[2]

In 2008, the U.S. EPA, based on a large body of data detailing impacts on human health and the environment, lowered the ozone standard to a level of 0.075 ppm averaged over an 8-hour period. This standard is met when the 3-year average of the annual fourth-highest daily maximum 8-hour ozone concentration is less than or equal to 0.075 ppm. Based on its failure to comply with acceptable concentrations of ozone pursuant to the 2008 federal standard for ozone, the entire northern part of New Jersey, as well as New York City and adjacent portions of Long Island, Connecticut, and southern New York State, is considered to be in moderate non-attainment for ozone, and therefore is required to reduce emissions of the ozone precursors NOx and VOCs. In 2015, after a finding that the 2008 ozone standard was insufficient to protect public health and the environment, the ozone standard was lowered to 0.070 ppm. EPA has not yet made a determination as to attainment status of regions relative to the new standard.

2) Transco's statements on New York City's demand for natural gas rely on outdated documents.

The NESE project will make possible the supply an additional 400,000 dekatherms per day of natural gas to New York City. The DEIS claims that this additional supply would "support the environmental initiatives within New York City's PlaNYC," referencing a 2011 PlaNYC report.[3] However, the referenced report is outdated, and the NESE project conflicts with the City's current goal of achieving an 80% reduction in greenhouse gas emissions by 2050.

New York City recognizes that it is vulnerable to the potentially catastrophic impacts of climate change, including sea level rise and the associated threat of flooding, episodes of heat stress, and other impacts. The City has committed to an 80 percent reduction in greenhouse gas emissions by 2050.[4] The DEIS itself acknowledges the problem of increased use of fossil fuels, stating that, "Construction and operation emissions from the NESE Project would increase the atmospheric concentration of GHGs, in combination with past and future emissions from all other sources, and contribute incrementally to future climate change impacts."[5]

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[2] Spiro, Thomas, Kathleen Purvis-Roberts, and William Stigliani, 2012, Chemistry of the Environment, 3rd Edition, University Science Books, p. 37

[3] Northeast Supply Enhancement Project, Draft Environmental Impact Statement, Federal Energy Regulatory Commission, Office of Energy Projects, Washington, DC 20426, Docket No. CP17-101-000
FERC/EIS-0280D, page ES-1

[4] OneNYC 2017: Progress Report, http://onenyc.cityofnewyork.us/wp-content/uploads/2017/04/OneNYC_2017_Progress_Report.pdf accessed 3/31/18

[5] Northeast Supply Enhancement Project, Draft Environmental Impact Statement, Federal Energy Regulatory Commission, Office of Energy Projects, Washington, DC 20426, Docket No. CP17-101-000

Data on NYC's use of natural gas and fuel oils make it clear that the NESE project's goal of increasing the supply of gas to the City by 400,000 dekatherms per day is inconsistent with the City's 2050 greenhouse gas reduction goal. NYC's residential, commercial, and industrial stationary energy sectors (primarily commercial and residential buildings) are reported to have used approximately 298,000,000 gigajoules (GJ) of energy in the form of natural gas in 2016, and approximately 67,000,000 GJ of energy in the form of fuel oils (#2, #4, and #6) in that year.[6] (Fuels used by the electricity generation sector or converted to steam are not included.) If the entire stationary energy sector's fuel oil usage was converted to natural gas, approximately 67,000,000 GJ per year of energy would need to be supplied by additional natural gas. This translates to approximately 63,500,000 dekatherms of natural gas per year. The proposed pipeline's supply of 400,000 dekatherms per day is equivalent to 146,000,000 dekatherms per year. This is more than twice as much additional natural gas as NYC would need even if it achieved the highly unlikely goal of converting all of its residential and commercial buildings' fuel oil use to natural gas.

Converting its fuel oil use to natural gas would lower the city's overall greenhouse gas emissions because natural gas is less carbon-intensive than fuel oil. However, as clarified by review of the data as discussed above, this switch by itself would only reduce the City's overall greenhouse gas emissions on the order of 3%.[7] In order to reduce its greenhouse gas emissions by 80% by 2050, the city will have to do much more than switch its use of fuel oil to natural gas. In fact, it will not be able to achieve its 80% reduction without an actual overall reduction in its natural gas use. New technology increasingly makes significant reductions of natural gas use feasible. Such new technology includes high efficiency condensing gas furnaces and boilers, high efficiency condensing gas water heaters, and improved building insulation procedures.

As detailed below, recent communications from the City support the view that increases of natural gas supply that could more than double the supply of natural gas that the City would need if it replaced the oil combustion of all of its residential and commercial buildings with natural gas is not consistent with the City's long-term greenhouse gas reduction goal.

A July 7 letter to FERC from the NYC Mayor's Office of Recovery and Resiliency,[8] while noting that any gas transportation to the City should be designed to be resilient to any future climate risks and environmental conditions, states that the City is committed to achieving an 80 percent reduction of greenhouse gas emissions compared to 2005 levels by 2050. This letter references the City's 2016 report, *Roadmap to 80x50*.[9] The letter further states that in order to achieve this goal, the

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FERC/EIS-0280D, page 4-366

[6] https://data.cityofnewyork.us/Environment/Inventory-of-New-York-City-Greenhouse-Gas-Emission/k3e2-emsq, accessed 3/30/18

[7] https://data.cityofnewyork.us/Environment/Inventory-of-New-York-City-Greenhouse-Gas-Emission/k3e2-emsq, accessed 3/30/18

[8] July 7, 2017 letter from Ke Wei, NYC Mayor's Office of Recovery and Resilience, to Christine Allen, Federal Energy Regulatory Commission.

[9] https://www1.nyc.gov/site/sustainability/codes/80x50.page, accessed 4/28/18

City will need to be largely dependent on wholesale renewable energy generation, with natural gas being "likely" to play a role in supporting overall system reliability and flexibility.

In a September 29, 2017 filing[10] NYC stated,

> "In order to reduce greenhouse gas emissions, combat climate change, and improve air quality, it is essential that we be more efficient in how we use energy and that we reduce reliance on fossil fuels. An important initial step in New York City has been the phase out of heavy fuel oil for heating and the production of electricity. Achieving that step, however, has meant increasing reliance on natural gas."
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> "This action, in conjunction with economic and environmental drivers, has contributed to Consolidated Edison Company of New York, Inc.'s ("Con Edison") growing demand projections for natural gas. Because there is no readily available means to meet that demand, Con Edison has proposed a series of measures to try to reduce its customers' use of natural gas. If successful, Con Edison's efforts **could avoid the need for new upstream pipeline capacity and help achieve the companion City of New York ("City") and State of New York goals of reducing greenhouse gas emissions and improving local air quality."** *(Emphasis added)*
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> "Given these potential benefits, the City conceptually supports the Company taking action to investigate and implement cost-effective measures to lower its gas peak demand. **The City appreciates Con Edison's consideration of alternative options to entering into one or more precedent agreements for new pipeline projects.**" *(Emphasis added)*

Given the City's current emphasis on implementation of efficiency measures designed to reduce demand for natural gas, and the possibility that increasingly cost-effective non-fossil fuel energy sources including solar and wind will displace natural gas for some uses, there appears to be no realistic possibility that the bulk of the proposed project's natural gas supply increase will actually be needed to convert the City's buildings' fuel oil use to natural gas. Implementing a pipeline construction project that would more than double the supply of natural gas that the City would be likely to need in the extremely unlikely possibility that it could convert all its buildings' fuel oil use to natural gas is inimical to the expressed goal of the City to actually reduce its dependence on natural gas and to make major reductions in its emissions of greenhouse gases.

It is possible that the provision of the capacity to provide such an excessive supply of natural gas could actually represent a long-term disincentive to efforts in NYC and the region to reduce the overall use of fossil fuels that will be necessary to significantly reduce greenhouse gas emission. Construction

[10] Case No. 17-G-0606, Petition of the Consolidated Edison Company of New York, Inc. for the Approval of the Smart Solutions for Natural Gas Customers, September 29, 2017

of fossil fuel energy supply infrastructure that has a long lifetime, such as a pipeline, can serve to lock-in a degree of commitment to fossil fuels that is unwarranted in light of the potentially catastrophic risks to the climate from global warming that is primarily driven by emissions of carbon dioxide from the combustion of fossil fuels.

3) Transco's position, that Hazardous Air Pollutant emissions are not a concern warranting a health impact assessment, is based on pollutant thresholds that were developed more than twenty-five years ago and have now been updated to reflect current science.

In NJ, emissions of HAPs by an air pollution source that are above reporting thresholds require air pollution permits. The permitting process includes a risk assessment, which in some cases may be accomplished by the permittee completing and achieving satisfactory results of a risk screening worksheet. The DEIS states that Transco will comply with all applicable requirements of its air permit, and concludes that the construction and operation of the Compressor Station aspect of the NESE Project would not result in significant impacts on air quality.

Insofar as HAP emissions are concerned, that conclusion appears to be based on old information:

Table 1. Compressor Station 206 HAP emissions and old vs. new reporting thresholds

Pollutant	Old Reporting Threshold, lbs/y	New Reporting Threshold, lbs/y	Emissions from One (1) Mars 100 turbine, lbs/y	Emissions from 2 Turbines, lbs/y
Formaldehyde	400	3.5	334	668
Acetaldehyde	1800	21	44	88
Acrolein	8	1	7.02	14.04
Benzene	87.6	6	13.18	26.36
Ethylbenzene	2000	19	35.2	70.4
Naphthalene	2000	1.4	1.428	2.856
Propylene Oxide	1000	12	31.8	63.6

Transco's Resource Report 9, published March 2017, asserted that Transco's Hazardous Air Pollutant emissions would be below NJDEP's reporting thresholds. That is no longer accurate. New NJDEP thresholds became effective in February 2018. These current HAP reporting thresholds appear in N.J.A.C. 7:27-17.9. According to these thresholds, HAP emissions from each of the two Mars 100 turbines exceed reporting thresholds for formaldehyde, acetaldehyde, acrolein, benzene, ethylbenzene, napththalene, and propylene oxide. Transco's position on the health impact of Hazardous Air Pollutants was based on compliance with the old NJDEP thresholds: that position must be revisited.

Michael Aucott, Ph.D., May 10, 2018