



October 12, 2018

DELIVERED VIA ELECTRONIC MAIL:

Ms. Grace Power
New Jersey Board of Public Utilities
44 South Clinton Avenue
Trenton, NJ 08625

Re: Comments on Energy Master Plan

I am writing to you today on behalf of PennEast Pipeline Company, LLC ("PennEast" or "PennEast Pipeline") and respectfully submit these comments regarding New Jersey's Energy Master Plan (EMP).

The PennEast Pipeline project was designed to meet demand for natural gas supply for families and businesses in New Jersey and eastern Pennsylvania. When complete, PennEast Pipeline will be capable of delivering approximately 1 billion cubic feet (Bcf) of low-cost, domestic natural gas per day to markets that need it. Nearly 75 percent of New Jersey households rely on natural gas, and approximately half of New Jersey's total electricity portfolio is powered by natural gas.¹

The project will be constructed across six municipalities in New Jersey and will connect to existing underground pipeline networks that provide safe, reliable and affordable natural gas. Upon completion, PennEast Pipeline will benefit every New Jersey resident through:

- Lower gas and electric bills for families and businesses by providing a direct link to the cheapest and most abundant domestic supply available
- Reducing carbon emissions and improved public health as New Jersey further transitions away from the higher emissions of coal and oil
- Enabling greater investment in - and the market development of intermittent renewable energy resources by complementing these with low-priced and reliable natural gas
- Making the power grid more reliable by diversifying geographic supply points

Simply put, this project will add critically-needed security to an energy source relied upon by millions of people and businesses in every corner of New Jersey. Just as important, this project is consistent with, and in fact necessary to realize, the Administration's bold vision for New Jersey's clean energy future via the EMP, as detailed in this submission.

PennEast Moves New Jersey Away from Coal, Cuts Emissions and Fights Climate Change

Without new infrastructure, real-world examples show that our environment pays the price when insufficient natural gas capacity is available for making electricity and powering industrial operations. These events occur primarily during periods of peak demand, when generators and industry are

¹ U.S. Energy Information Administration, Census Bureau

forced to turn to carbon-heavy fuels to maintain power and operations, either because natural gas capacity is restricted, or the real-time cost exceeds coal or oil due to peaking natural gas demand. For example:

- **New Jersey burned 51.8 percent more coal in January 2018, than January 2017** to meet the power needs of the region and avoid power disruption to communities in southern New Jersey. This is counter to New Jersey's clean energy and emission reduction goals.
- This past summer, **approximately 30 percent of the electricity of New Jersey's independent and regional power grid was generated from coal.** Adding 1 Bcf of natural gas capacity per day from the PennEast Pipeline and into the marketplace will reduce the region's reliance on coal to help reduce overall carbon emissions.²
- New England **burned 2 million barrels of oil in a 15-day period** in the winter of 2018, more than double the amount of oil burned in all of 2016, which equates to 5 percent of their six-year emission reduction goals.³ In some cases, after just one week into 2018, several oil-fired generators were already nearing their annual emission limits.⁴
- PJM reported during the 2018 Cold Snap that non-firm natural gas capacity restrictions were put in place for approximately two weeks or more on interstate pipelines serving New Jersey, in-turn forcing fuel-switching to dirtier fuels for customers like electric power generators that did not have adequate pipeline capacity.⁵ In addition to 37 percent of the grid relying on coal, approximately 10 percent of PJM's generation during the 2018 Cold Snap **came from oil, two-thirds of which were dual-fuel power units where natural gas was the primary (though unavailable) fuel.**⁶
- New England's ISO January 2018 *Operational Fuel Security Analysis* demonstrates the risks to reliability without sufficient natural gas pipeline infrastructure. The power grid covering six states modeled **23 future energy mix scenarios, 19 of which resulted in rolling blackouts for extended periods of time** by the mid-2020s. Even with the most ambitious scenarios of increasing renewables to one-third of the grid by 2025, the system would still require large injections of imported LNG.⁷ Massachusetts relied on such foreign imports from Russia last winter, a first in American history, even though the use of the Russian facility where the LNG was sourced was far more destructive to the environment than a domestic natural gas pipeline.⁸

The PennEast partner companies are proud to be among the largest investors in renewable sources (primarily solar power) over the last 15 years in New Jersey. However, renewables still account for less than 5 percent of New Jersey's total energy needs.

² PJM Fuel Mix, 6/1-8/1/18

³ Telegram, 1/24/18; <http://www.telegram.com/news/20180124/massive-oil-burn-during-cold-snap-disaster-says-beaton>

⁴ Comments of ISO New England CEO Gordon van Welie, 2/27/18, p16; https://www.iso-ne.com/static-assets/documents/2018/02/02272018_pr_remarks_state-of-the-grid.pdf

⁵ PJM Cold Snap Performance, 2/26/18, p18; <https://www.pjm.com/-/media/library/reports-notice/weather-related/20180226-january-2018-cold-weather-event-report.ashx>

⁶ PJM Cold Snap Performance, 2/26/18, p13

⁷ ISO-New England, Jan 17, 2018; https://www.iso-ne.com/static-assets/documents/2018/01/20180117_operational_fuel-security_analysis.pdf

⁸ Boston Globe Editorial, 2/13/18, "Our Russian pipeline, and its ugly toll;" <https://www.bostonglobe.com/opinion/editorials/2018/02/12/our-russian-pipeline-and-its-ugly-toll/K0wQ7FBTGR756DqorYkwxN/story.html>

To date, the biggest victory in the fight against climate change and emission reductions has come from natural gas displacing carbon-heavy sources of energy like coal and oil for making electricity. New Jersey's carbon emissions in the power sector are lower than the year 2000 levels, even though total power generation in the Garden State is 33.6 percent higher, according to the Energy Information Administration. Natural gas use for electricity nearly tripled in that time.⁹

PennEast Enables Investments in Renewable Energy via Cost and Reliability

Former Obama Administration Energy Secretary Ernest J. Moniz, said “natural gas has shown itself to be an important bridge to a clean energy future.”¹⁰ Here in New Jersey, PennEast Pipeline helps complement and achieve the administration's clean energy goals in the decades ahead.

- First, because PennEast Pipeline has been found to generate significant electric and gas savings totaling \$1.32 billion in recent winters, access to lower cost natural gas offsets the investment in higher-cost solar and wind, reducing the burden on low-income families, seniors and others. In the Mid-Atlantic region, 4.1 million households are designated as “energy insecure” (26.6%) including 18 percent who report forgoing food or medicine to pay energy bills, according to EIA's 2015 Residential Energy Consumption Survey.¹¹
- Second, both solar and wind power are an important part of a diverse grid but generate variable power, even though New Jersey's 9 million residents demand power all of the time. Twelve-month capacity factors for offshore wind in the U.K. and Denmark show offshore wind is unavailable more than 50 percent of the time. Battery technologies are advancing, but are unproven and costly. Therefore, other sources like natural gas will be needed to fill in the gaps during evening hours, storms, or when intermittent resources are unavailable, particularly over the next 30 years as more renewable capacity is built out. Natural gas fills that role, and PennEast Pipeline is an important complement to those investments.

The intermittency of renewable power requires complementary power sources to be flexible, to quickly fill the gaps in load when the sun and wind are unavailable. Unlike other forms of energy, natural gas generating plants are quick to “turn on” in response to these varied energy sources. An August 2018 *University of California-Berkeley* study found that California's investment in solar power and its varying minute-by-minute generation has indirectly caused an increase in more flexible, but less efficient and environmentally-unfriendly combustion turbines to fill the gaps, rather than more efficient and environmentally-friendly combined cycle natural gas plants.¹² This has the end result of increasing emissions and costs for the same megawatt hours generated.

Our region is not immune from this reality as an increasing proportion of our energy mix is generated from renewable sources. Ensuring adequate supplies of natural gas to address these fuel flexibility questions can be answered by PennEast Pipeline.

⁹ EIA, Net Generation by State by Energy Source, 1980-2016;

https://www.eia.gov/electricity/data/state/annual_generation_state.xls

¹⁰ Boston Globe, 2/12/18, <https://www.bostonglobe.com/opinion/editorials/2018/02/12/our-russian-pipeline-and-its-ugly-toll/K0wQ7FBTGR756DqorYkwxN/story.html>

¹¹ Energy Information Administration, October 2017, RECS

<https://www.eia.gov/consumption/residential/data/2015/hc/php/hc11.1.php>

¹² Bushnell and Novan, Energy Institute at Haas, August 2018;

<https://assets.documentcloud.org/documents/4797147/Haas-Setting-With-the-Sun.pdf>

Lowering Costs to Support Economic Growth and Make New Jersey More Affordable

PennEast's partners understand the benefits of bringing local gas supplies to the region, as they and their companies directly serve families and businesses in New Jersey and Pennsylvania, among other states. The availability of affordable energy will make our region more attractive to energy-intensive businesses, manufacturing, and the strong middle-class jobs they provide. Lower energy costs also will increase every family's disposable income and every business owner's operating budget.

A 2018 *Concentric Energy Advisors'* analysis commissioned by PennEast confirms that electric and gas customers in **New Jersey and eastern Pennsylvania would have conservatively avoided \$1.3 billion more in energy costs** in recent winters, had PennEast Pipeline been operational.¹³

These higher costs are due to insufficient pipeline capacity to move clean natural gas particularly during periods of higher demand, when natural gas is needed most. In fact, at the peak of the 2018 "cold snap," natural gas trading prices serving New Jersey were 3,000 percent higher than gas supplies PennEast Pipeline would access, and even 3 times more on average during non-peak periods such as the month of October 2017.¹⁴

A separate 2018 economic study by Econsult Solutions found that the savings from PennEast would continue to support the broader economy by increasing disposable income. The \$435 million in single seasonal savings PennEast Pipeline would have provided in the winter of 2017-2018 would have supported 3,540 jobs, \$196 million in employee compensation, and \$684 total overall economic impact.

Delivering on the Promise of Environmental Justice

The certificate order issued by the Federal Energy Regulatory Commission ("FERC") approving the PennEast project cited that of the approximately 120-mile route, the project crosses only "one census block that could be considered a minority population, and one census block that could be considered low-income." It also stated that construction and operation of the project will not "result in adverse and disproportionate human health or environmental effects to minority or low income communities."¹⁵

A New Jersey Project Benefiting New Jersey Families and Businesses

The PennEast Pipeline is over 90 percent subscribed under long-term contracts, with local gas utilities and power generators primarily serving the New Jersey marketplace. In October 2016, PJM Interconnect, New Jersey's independent power grid operator, recommended to federal regulators that PennEast Pipeline was needed for increasing fuel "supply options" and "grid reliability."¹⁶

PennEast's partner companies believe it is crucial to expand pipeline infrastructure in eastern Pennsylvania and New Jersey to ease bottlenecks on existing pipeline networks, and meet growing energy needs by providing customers direct access to abundant and local supplies of safe, reliable, clean and affordable natural gas.

¹³ Concentric Energy Advisors, April 2018 http://penneastpipeline.com/wp-content/uploads/2018/05/PennEast_Concentric_Update_FINAL_4-24-2018.pdf

¹⁴ Transco NonNY Zone 6 comparison with Leidy Zone, January 5, 2018, and October 2017

¹⁵ Federal Energy Regulatory Commission, Docket No. CP15-558-000, 1/19/18; Section 164 and 167

¹⁶ PJM Presentation to FERC on Winter Reliability, October 20, 2016, page 8; <https://www.ferc.gov/CalendarFiles/20161020122938-3-A-4-PJM.pdf>

Creating a Diversified Supply and Fuel Security with Clean, American Energy

Interstate pipelines like PennEast Pipeline, which are regulated by the federal government, serve a different purpose than intrastate pipelines, which are regulated by the State of New Jersey. As noted by PJM and FERC, PennEast Pipeline diversifies the fuel supply points from which New Jersey relies, strengthening energy system reliability. The primary source of gas supply to the Garden State historically has been the U.S. Gulf Coast. During hurricanes and periods of prolonged cold weather in the Gulf Coast, it is not uncommon for Gulf Coast gas supplies to be interrupted, driving up the cost of natural gas. The additional pipeline capacity proposed by PennEast and the access it provides to local natural gas sources just over 100 miles from New Jersey, rather than 1,500 miles from the Gulf Coast, strengthens supply diversity and stabilizes natural gas prices.

A Clean Energy Future for Transportation

The most recent Energy Information Administration data shows that the transportation sector carbon emissions in New Jersey are over three times more than the electric power generation sector. Transportation from petroleum products accounted for 51.9% of New Jersey's total carbon emissions, as power sector emissions accounted for just 15.9%.¹⁷

Making a significant impact in carbon emission reductions in New Jersey requires leaders to address transitioning the transportation sector towards cleaner energy policies. Of course, adding more electric demand to the power grid with new car battery technologies, particularly during off-peak evening hours (when solar is unavailable), requires new burdens on the power grid that can best be addressed by increasing our natural gas capacity. Ensuring adequate supplies of natural gas to generate that electricity will be a commonsense partner in reducing those carbon emissions in the years ahead. Other alternatives should include growing the state's availability of Compressed Natural Gas (CNG) vehicles and fuel stations.

Conclusion

PennEast is dedicated to investing in infrastructure that meets New Jersey's growing energy needs and provides clean, safe, reliable and affordable natural gas to families and businesses throughout the state. In addition, we look forward to working with the administration to deliver on its clean energy goals and enabling investments in renewable energy. We appreciate your consideration of our comments.

Sincerely,



Anthony Cox
Chairman
PennEast Pipeline Company, LLC Board of Managers

¹⁷ Energy Information Administration, CO₂ Emissions by State, 1980-2015