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Michael J. Renna
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VIA ELECTRONIC MAIL

Aida Camacho
Secretary of the Board
New Jersey Board of Public Utilities
44 South Clinton Avenue
Trenton, NJ 08625
EMP.comments@bpu.nj.gov

Re: SJI Comments on the Draft 2019 Energy Master Plan

Dear Secretary Camacho:

Please accept the following comments on behalf of South Jersey Industries (SJI) in response to the Board of Public Utilities' (BPU) request for feedback on the Draft 2019 New Jersey Energy Master Plan (EMP).

As the operator of two natural gas distribution companies in New Jersey, South Jersey Gas (SJG) and Elizabethtown Gas (ETG), our organization is uniquely situated to help shape the State's energy policy and to play a role in meeting future energy demands of our citizens. For over a century, SJG has been committed to serving the energy needs of our customers across New Jersey's seven southern-most counties. With the recent addition of ETG to the SJI family, we now serve nearly 700,000 customers in all corners of the State. Moreover, since its inception, our company has been a committed community partner as well as a driver of economic growth, supporting thousands of jobs and contributing significant resources to the State's economy. As an integral part of New Jersey's energy economy, we look forward to working with the BPU and Governor Murphy's Administration on the important work being undertaken to facilitate the development of the EMP.

At the outset, it should be noted that SJI remains committed to helping the State realize its important environmental goals, including reducing carbon emissions, promoting energy efficiency, and enhancing the deployment of clean energy technologies. Toward that end, we firmly believe that continued access to abundant and inexpensive natural gas is vitally important to achieving these goals. Not only will continued access to natural gas facilitate the orderly and cost-effective build-out of the wind and solar infrastructure necessary to meet the Governor's 2050 goals, but continued reliance on gas will also allow the State to leverage the carbon emissions reductions and energy efficiency enhancements that the natural gas industry has delivered in recent years.

Conversely, a statewide energy policy that imposes arbitrary limitations on continued access to natural gas for the State's energy consumers will jeopardize the State's long-term clean energy goals. As noted in greater detail below, an improperly calibrated transition to clean energy will significantly drive up costs for consumers, threaten energy reliability and resiliency, and stifle economic development. Without necessary battery storage technologies available for mass

electrification, the intermittency of wind and solar generation can only be addressed with continued access to abundant and inexpensive natural gas. Simply put, the most responsible way to meet the State's long-term clean energy goals is with a balanced energy portfolio that does not rely too heavily on any one source.

We very much appreciate the opportunity to participate in the EMP stakeholder process and respectfully offer the following comments on the Draft 2019 EMP:

Strategy 1: Reduce Energy Consumption and Emissions from the Transportation Sector

The Draft 2019 EMP calls for electrification of the transportation sector, including the deployment of 330,000 light-duty electric vehicles (EV) by 2025, the development of EV charging infrastructure statewide, improvements in environmental performance by the NJ Transit fleet, the enhancement of clean transportation options in low- and moderate-income and environmental justice communities, and incentives for the electrification of medium- and heavy-duty vehicles.

The Draft EMP's emphasis on transportation is properly placed as this sector accounts for 46% of the State's net greenhouse gas emissions and represents the single largest source of emissions statewide. By contrast, it is estimated that emissions from the residential building sector account for merely 4% of greenhouse gas emissions. Moreover, emissions from the transportation sector disproportionately impact urban areas and low- and moderate-income residents. Accordingly, addressing emissions from the transportation sector presents the greatest opportunity for meaningful strides in meeting the State's long-term environmental goals.

With respect to the reduction of energy consumption and emissions from the transportation sector, compressed natural gas (CNG) can play a transformative role. At present, heavy-duty CNG-powered vehicles are commercially available, while heavy-duty electric vehicles are not. Moreover, CNG fueling infrastructure is already in place and can be easily expanded to support the rapid deployment of CNG fleets.

An expansion of CNG-powered vehicles would result in significant and immediate reductions in greenhouse gas emissions and smog forming pollutants, with some estimates demonstrating reductions of over 50%. With heavy-duty vehicle emissions accounting for 20% of transportation related emissions statewide, and commercially available CNG vehicles and fueling infrastructure across New Jersey, the State should act now to incentivize and enhance the continued deployment of CNG.

In addition, renewable natural gas (RNG) presents an opportunity for meaningful emissions reductions in the transportation sector as well. RNG resources such as landfills, water treatment facilities, and food processing operations are readily available and can be leveraged for transportation fuel rapidly. RNG presents a cost-effective opportunity to reduce the carbon intensity of fuel presently used to power heavy-duty vehicles by 50%. As such, the EMP should consider the adoption of a low-carbon fuel standard program to incentivize the usage of fuels containing RNG.

Strategy 2: Accelerate Deployment of Renewable Energy and Distributed Energy Resources

Pursuant to proposed Strategy 2, the Draft EMP calls for the development of offshore wind and in-state renewable energy generation, along with the interconnection of carbon neutral distributed energy resources. As noted previously, SJI supports the development of renewable energy generation such as offshore wind and solar provided that such development occurs in a cost-effective manner that does not overburden ratepayers or jeopardize the reliability of energy supply and transmission.

The Draft EMP properly recognizes that New Jersey has benefited from an abundance of natural gas in our region which has not only driven prices to historically low levels but has also resulted in new generation capacity that is more efficient and environmentally friendly than traditional sources. The proliferation of natural gas supplies has allowed the State to move away from the heaviest polluting fuels such as coal, while also enhancing the reliability of the grid. A premature shift away from natural gas for electric generation will only serve to artificially limit these benefits.

Additionally, affordable and abundant natural gas has created the headroom necessary for investment in critical infrastructure improvements that ensure the resiliency and safety of energy distribution systems across the State. In 2018, for example, SJI successfully completed gas distribution and transmission line improvements and upgrades that have modernized our systems for increased safety and reliability, including 152 miles of main for SJG and 173 miles for ETG. Likewise, natural gas can be the bridge fuel that allows for a properly calibrated transition to renewable energy by keeping energy costs low to allow for investments in renewable technologies. Moreover, until solar, wind, and storage technologies are fully dependable and resilient, it is imperative that we continue to have access to natural gas to meet the demands of energy consumers across the State.

Strategy 3: Maximize Energy Efficiency and Conservation and Reduce Peak Demand

Under Strategy 3, the Draft EMP seeks to hold utilities accountable for the requirement set forth in the Clean Energy Act of 2018 that electric and gas utilities reduce consumption by at least 2% and 0.75%, respectively, including the establishment of performance indicators and evaluation, measurement, and verification methods. This strategy also calls for enhancements to the Clean Energy Program in various ways.

Through its programmatic efforts at both SJG and ETG, SJI remains supportive of the State's energy efficiency goals and is committed to achieving the energy consumption reduction targets set forth in the Clean Energy Act. Historically, SJI has actively promoted energy efficiency measures and strategies with great success. Beginning well before the promulgation of the Clean Energy Act, energy efficiency programs at SJG and ETG have saved our customers money while reducing greenhouse gas emissions. To date, SJG and ETG have accomplished the following through BPU-approved energy efficiency programs:

- Served over 30,000 customers
- Invested \$113 million in energy efficiency measures
- Achieved 880,000 metric tons of lifetime CO₂ emissions reductions

- Achieved 24 million dekatherms of lifetime gas savings
- Assisted 18,000 low-income families through the Comfort Partners Program

While we will continue to support programs that promote energy efficiency and reduce costs for our customers, we urge the State to avoid marginalizing the role that utilities play in the administration of energy efficiency programs. Specifically, it would be prudent to set realistic targets for reductions in energy consumption that are based upon feedback and input from utilities and to adopt an approach that facilitates a diverse set of energy efficiency programs. Most importantly, such programs must ensure a mechanism for the full recovery of all reasonable and prudent energy efficiency program costs, including a return on capital investments and an accounting for the impact of lost revenue.

To ensure the success of the Clean Energy Act's objectives, we respectfully urge that the utilities be empowered to control the administration of energy efficiency programs. This approach will allow the State to accomplish its energy efficiency goals, while also holding each utility accountable for its efforts in support of efficiency. Utilities will be subject to energy savings targets and quantitative performance indicators and receive incentives or penalties depending on performance. It is not reasonable to assign targets with incentives and penalties on utilities without utilities being directly responsible for the delivery and administration of their programs. Utility program administration is a model used amongst leading states in energy efficiency because utilities are best positioned to design, implement, and manage complete energy efficiency program portfolios that account for the unique customer class mix within their service territories.

Finally, it should be noted that in May of 2019, the Board released a study entitled "Energy Efficiency Potential in New Jersey" to examine the energy efficiency market potential in our State. The study included findings on, amongst other things, energy savings targets and penalties and performance incentives. As set forth in our May 16, 2019 comments on the study, we remain concerned that the savings targets reflected therein are unreasonably aggressive and inconsistent with the Clean Energy Act - specifically, the acceleration of targets for the five-year period 2020 through 2024. While the Act requires gas utilities to achieve reductions in consumption of 0.75 percent within 5 years, the study targets 1.1% in natural gas savings in year 5. Accordingly, we respectfully urge the Board to adopt energy savings targets that are reasonable for utilities and to not impose targets that are greater than those required by law.

Strategy 4: Reduce Energy Use and Emissions from the Building Sector

In Strategy 4, the Draft EMP calls for large-scale electrification of the building sector with an early emphasis on new construction and the conversion of oil and propane fueled buildings, as well as the expansion and acceleration of the net zero carbon homes incentive program, the adoption of new building codes, and the transition to electrified heat pumps and water heaters.

As recognized by the Draft EMP, full electrification of the building sector will be the most challenging goal for the State to meet. At present, 75% of New Jersey homes are heated with natural gas and, on average, consumers spend half as much to heat their homes with natural gas during winter months than consumers who heat with electricity. Moreover, as explored below, natural gas appliances are generally less expensive to install and operate than electric appliances. Finally, the increased grid modernization investments needed to shoulder the significant increase in load necessitated by rapid, large-scale electrification will only drive up costs

even more. With natural gas consumption in the residential sector accounting for only 4% of overall U.S. greenhouse gas emissions, State policymakers must consider whether the significant cost increases imposed upon New Jersey households by this aggressive electrification policy is justified.

As noted previously, abundant supplies of natural gas have led to historically low prices for consumers which have translated into significant energy savings for households across our region. For instance, on average, households that use natural gas for heating, cooking, and clothes drying save \$875 annually compared to households that use electricity for those appliances. More specifically, a recent analysis by the U.S. Energy Information Administration reveals that the annual cost of operating an electric air source heat pump is 66% higher than a high efficiency natural gas furnace. Moreover, installation costs for an electric heat pump are \$3,000 more than installation costs for a high-efficiency natural gas furnace. Similarly, the annual operating cost for a natural gas hot water heater is less than half the cost of operating an electric resistance water heater.

With respect to energy efficiency and greenhouse gas emissions, natural gas appliances also outperform electric appliances, making the Draft EMP's goal of large-scale electrification of the building sector counterproductive unless statewide wind and solar generation and massive grid enhancements are effectuated rapidly. First, electric air source heat pumps emit 17% more CO₂ annually, and use 7% more energy annually, compared to high-efficiency natural gas furnaces. Likewise, electric resistance water heaters use nearly twice as much energy, and emit nearly twice as much CO₂, as natural gas hot water heaters. Overall, natural gas consumption in the residential sector has delivered decreased CO₂ and methane emissions over the past 20 years. Moving to electrification too quickly will only serve to reverse those gains.

Over the past decade, New Jersey residents and businesses have benefited from a robust mix of energy choices that include both traditional and renewable sources. This was made possible, in large part, by the low cost of natural gas. High-efficiency equipment, coupled with low gas costs, have driven home heating costs to historic lows. This diversity of consumer choices has increased energy affordability and has led to economic growth and a cleaner environment. Eliminating natural gas from the energy mix prematurely will unwind the impressive gains we have made across the State.

Strategy 5: Modernize the Grid and Utility Infrastructure

In recognition of the significant new demands that will be placed upon the electric distribution grid pursuant to the State's proposals for mass-electrification, the Draft EMP calls for the planning, financing, and implementation of necessary distribution system upgrades. Under this strategy, utilities will be required to establish Integrated Distribution Plans (IDPs) to allow for the anticipated growth of distributed energy resources and electric vehicles. Changes to current rate design and ratemaking processes will be necessary, and gas utilities will be instructed to prioritize the replacement of pipelines leaking methane.

Here, the Draft EMP properly recognizes the limitations of our current electric distribution grid and acknowledges that major investment will be required to meet the increased demand created through electrification. While we support a continued and concerted shift to clean electricity, we have an obligation to ensure that our grid is reliable, resilient, and up to the challenge posed by intermittent renewable energy supply. A recent report based upon national estimates indicates that it would cost \$5.7 trillion to transition U.S. electric generation to 100% renewables. On a pro rata basis, New Jersey residents would be responsible for \$115 billion of

that cost. Thus, if the transition to electrification is implemented in an overly aggressive way, New Jersey's energy consumers can expect significantly adverse financial impacts in a very short timeframe.

Without question, an overly accelerated call to electrification will bring a new wave of challenges to the energy industry, including a mix of economic, financial, and operational difficulties. Those challenges include, but are not limited to, the economics associated with a significant increase in the cost for electric services, meeting the marginal electric load without fossil fuel electric production, and the ability of the grid to support the proposed demand for power. According to some analysts, to meet large-scale electrification targets the electric sector will require between \$255 and \$425 billion in associated transmission system upgrades and incremental generation capacity up through 2035. These significant costs would be passed on to rate payers and in addition to the costs associated with converting home heating and other appliances from natural gas to electric.

With respect to the Draft EMP's call for utilities to address methane leaks in the natural gas distribution system, SJI supports the plan but urges the BPU to continue to work collaboratively with the utilities on such system upgrades and enhancements. As noted previously, greenhouse gas emissions caused by natural gas consumption have fallen steadily nationwide, with some studies showing a 13% decrease from 2007 to 2017, with additional reductions annually. In New Jersey, much of this improvement can be attributed to aggressive infrastructure investments made by utilities statewide.

Natural gas utilities in our State have worked closely with the BPU to prioritize the removal of old cast iron and bare steel infrastructure that is the primary source of methane leaks from New Jersey's gas distribution systems. SJG and ETG, for instance, have aggressive programs in place to prioritize gas pipeline replacements and, due to these efforts, significant gains have been made in reducing methane leaks. At SJG, it is estimated that system improvements have reduced CO₂-equivalent emissions by 45% from 2011 to 2018. At ETG, emissions have been reduced by 30% over that same time period, with additional work ongoing. Our utilities will continue to make these important investments with BPU support.

Strategy 6: Support Community Energy Planning and Action in Low- and Moderate-Income and Environmental Justice Communities

Pursuant to Strategy 6, the Draft EMP proposes support for local, clean power generation in low- and moderate-income and environmental justice communities, including the acceleration of community solar projects, incentives for rooftop solar, and the development of clean energy workforce opportunities and training programs.

SJI supports the Draft EMP's laudable goal of planning, developing, and implementing clean energy efforts in low- and moderate-income and environmental justice communities. Our organization has long been embedded in the communities we serve and our commitment to improving the quality of life for low- and moderate-income families in our service territories has never been stronger. Across all our utilities, we partner with providers to promote financial assistance for those in need, with our Customer Outreach Team advocating for programs including the Low-Income Home Energy Assistance Program (LIHEAP), Payment Assistance for Gas and Electric (PAGE) and NJ SHARES, as well as other grants and relief funds administered

by our State and federal agency partners. In 2018, these programs provided 62,251 eligible households we serve with more than \$15 million in relief. These programs provide utility bill relief for our customers and neighbors in need—keeping them connected to natural gas service to support their heating, hot water, and cooking needs.

While the Draft EMP's goal of bringing clean energy to low- and moderate-income and environmental justice communities is noble and critically important, we must be careful not to undercut environmental gains by overburdening such communities with significant new energy costs resulting from an improperly calibrated and overly-aggressive transition to renewables. New Jersey consumers already face economic challenges due to our high cost of living and many low- and moderate-income families already struggle to pay their energy bills. On average, New Jersey residents pay \$3,124 annually to meet their energy needs, which is more than neighboring New York, Pennsylvania, and Maryland. Those costs will spike if the State's clean energy goals as expressed in the Draft EMP are not implemented in a cost-effective and responsible way, with affordable and abundant natural gas playing a role in the State's energy portfolio. We believe the best interests of our low- and moderate-income residents are protected not by imposing aggressive limitations on natural gas, but rather by leveraging its abundance and affordability to meet clean energy goals in their communities.

Strategy 7: Expand the Clean Energy Innovation Economy

Strategy 7 seeks to support the growth of in-state clean energy industries through workforce training, clean energy finance solutions and investments in research and development programs.

SJI recognizes the economic growth benefits that clean energy development and deployment can provide and supports the Draft EMP's plan to expand the clean energy innovation economy in New Jersey. Presently, New Jersey's economic growth lags national averages, as well as those of our neighboring states. A strong economy depends on sound energy and environmental policy. Affordability is a major factor for businesses as they look to relocate to or expand in New Jersey. Attracting those very businesses to our State will be increasingly difficult if we prematurely eliminate natural gas as an energy option. Moreover, the installation, maintenance and repair of natural gas infrastructure supports scores of jobs across the State. An energy plan that focuses solely on the development of renewables and makes no accommodation for natural gas infrastructure projects will decrease the need for these jobs, thereby exacerbating outmigration and economic stagnation.

Conclusion

SJI appreciates the opportunity to participate in the EMP stakeholder process and to provide comments and feedback on the Draft plan. We commend the Administration for putting forth a bold agenda that proposes to alter the State's energy landscape in a very meaningful way. While we support many of the overarching goals expressed in the Draft EMP, we urge the State to embrace a diverse set of energy sources including, but not limited to, renewable sources and we strongly recommend that our State continue to leverage natural gas for its environmental and economic attributes.

At present, natural gas is abundant, inexpensive, and domestically sourced, making it an attractive energy source for residential and commercial customers. Demand for natural gas is high—as evidenced by a nearly 75% saturation level in New Jersey. Due in large part to its positive environmental attributes and low cost, we continue to see customer growth rates well above the national average. Since residential natural gas only accounts for 4% of total U.S. emissions, the premature elimination of natural gas from our energy mix would be inconsistent with consumer preferences and will drive up energy costs while having a de minimis impact on our environment.

We firmly believe that the clean energy future envisioned by the Draft EMP can only be achieved in a cost-effective and responsible way, with natural gas playing a critical role in the State's energy portfolio by keeping energy costs down, ensuring reliability and resiliency, and creating the headroom for the significant investments needed to achieve the State's long-term clean energy goals.

Sincerely,

A handwritten signature in black ink, appearing to read 'M. Renna', with a long horizontal flourish extending to the right.

Michael J. Renna
President and CEO