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VIA ELECTRONIC MAIL
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Sherry Golden
Secretary of the Board
New Jersey Board of Public Utilities
44 South Clinton Avenue
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Trenton, NJ 08625-0350

Re: ***IMO The Implementation of Executive Order 317 Requiring the Development of Natural Gas Utility Emission Reduction Plans,*** **BPU Dkt. No. GO23020099**

Comments on the Aug. 2-3, 2023 Future of the Gas Utility Technical Conference

Dear Secretary Golden:

South Jersey Industries ("SJI") respectfully submits these comments regarding the Technical Conference convened by the New Jersey Board of Public Utilities ("Board" or "BPU") on August 2-3, 2023. SJI is an energy services holding company with its headquarters in Folsom, New Jersey. SJI has two regulated natural gas utilities, South Jersey Gas ("SJG") and Elizabethtown Gas ("ETG"). Together, SJG and ETG deliver safe, reliable, and affordable natural gas to over 730,000 customers in New Jersey. In addition to its regulated utilities, SJI also has businesses focused on renewable and low-carbon energy, including solar, fuel cells, renewable natural gas ("RNG"), and green hydrogen development.

SJI appreciates the opportunity to comment on this matter, and we were pleased to put forward two of our own personnel to appear on Panels 3 and 5. As we have indicated, both during the conference and on other occasions, SJI is committed to supporting the State's clean energy goals, while at the same time pursuing our own goal of achieving carbon neutral operations by 2040. Our goal is one of the most aggressive in our industry, and we have begun to implement a range of strategies to achieve it, including vigorous leak reduction measures, converting our facilities to solar power, utilizing low-carbon transportation fuels, deployment of clean fuels like RNG and hydrogen, robust energy efficiency ("EE") programs, and committing 25% of all our capital expenditures to sustainability projects.

SJI supports the BPU and the State in their efforts to decarbonize buildings in New Jersey and to tackle climate change head on. However, and as set forth in more detail below, many questions remain as to the correct path to achieve decarbonization, and SJI believes that gas utilities can and will be a key player in this effort.

A. General Comments

SJI supports the statements made by Board President Fiordaliso in his opening remarks that natural gas service is "here to stay" and that the State has rejected mandates that would inhibit consumer choice regarding natural gas service. These statements buttress the remarks that the President made during the July 26, 2023 Board meeting, and Governor Murphy's statements made upon the issuance of Executive Order 317 ("no one is coming for anyone's gas stove . . . . No one is being forced to do anything in any way").

During the panel discussions that followed the President's opening remarks, however, certain speakers contradicted the "no mandate" pledge issued by President Fiordaliso and Governor Murphy. Indeed, during Panel 1, one panelist remarked, "this is New Jersey, there will be mandates." Also during Panel 1, a speaker contemplated the retirement of the gas system with respect to entire neighborhoods. It strains credulity to presume that cutting off gas service to entire neighborhoods could be achieved without some form of mandate, since surely there would be at least some gas customers who would prefer to keep their gas service rather than moving away from it, for whatever reason.

Especially given that the Technical Conference was a Board event, SJI believes that it is imperative that the Board and the State continue to reemphasize that mandates are off the table. Reducing the "no mandate" pledge to a Board Order or regulatory provision would serve to quell concerns and perhaps limit the need for the Board to make repeated statements that mandates pertaining to natural gas service are not contemplated. At a minimum, SJI urges the Board to continue to rule out mandates so that natural gas utilities can continue to operate with certainty about their regulatory environment, and to avoid constraining the utilities' continued efforts to enhance their infrastructure and prepare delivery systems for the innovative fuels of the future. Continued calls for mandates and/or presumptions that mandates will be forthcoming in the future will only serve to constrain access to capital that is needed by utilities to make the proper investments in furtherance of our collective clean energy goals.

SJI was pleased to hear that the Board contemplates additional stakeholdering opportunities as part of the Future of the Gas Utility proceeding. This is warranted because the Technical Conference did not address certain threshold issues, such as electric grid readiness for widespread electrification. Indeed, grid readiness was among the items specifically addressed within

Executive Order 317 and warrants detailed examination. Understanding the capabilities of the current grid to handle electrification at scale, and the cost of upgrades needed to handle new load to electrify buildings and power electric vehicles are imperative threshold matters for discussion.

Moreover, even if the electric grid could be scaled up to accommodate widespread building electrification—no matter the cost—there remains the question as to whether the electric grid is sufficiently reliable for New Jerseyans to rely upon it exclusively for heating, particularly during periods of cold weather. Nationally, every electric customer can expect to experience at least one electric outage over the course of a year.[1] By contrast, only 1 out of every 800 gas customers experience an unplanned gas outage annually.[2] Given the stark contrast between the electric and gas systems in terms of reliability, merely scaling up the electric system to accommodate more load, without dramatic improvements to reliability, will leave many residents at risk of inadequate heat in the winter. As Rate Counsel rightly pointed out during Panel 2, the consequences of that scenario are literally ones of "life and death."

Another threshold issue is the expected emissions impact of electrification. As a speaker on Panel 2 noted, about 60% of electric generation within PJM relies on fossil fuels, whereas nuclear produces 33%, and renewables (including hydroelectric) produce the remaining 7%.[3] What this means is that heating a home with electricity today is much more carbon intensive than heating a home with natural gas. Specifically, the CO_2 emission factor for electric consumed within New Jersey is 835.75 lbs. of carbon per megawatt hour ("MWh"),[4] or 244.94 lbs. per million British Thermal Units ("MMBTU").[5] The CO_2 emission factor for natural gas, by contrast, is *less than half* that amount for electric, at 116.65 lbs. per MMBTU. Indeed, according to the U.S. Energy Information Administration, natural gas is a "relatively clean burning fossil fuel" and "burning natural gas for energy results in fewer emissions of nearly all types of air pollutants and carbon dioxide than burning coal or petroleum products to produce an equal amount of energy."[6]

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[1] See https://playbook.aga.org/reliable/.

[2] Id.

[3] See, e.g., *Environmental Information Disclosure for the Electricity Product of Jersey Central Power & Light (June 1, 2021 to May 31, 2022),* https://firstenergycorp.com/content/dam/customer/OpCoHome/files/Environmental-Information-Disclosure.pdf (indicating the CO_2 intensity for the PJM system mix is 835.75 lbs. of carbon dioxide per MWh).

[4] Id.

[5] See https://www.inchcalculator.com/convert/megawatt-hour-to-million-btu/ (conversion formula for MWh to MMBTU).

[6] See https://www.eia.gov/energyexplained/natural-gas/natural-gas-and-the-environment.php.

Unless and until electric generation serving the State becomes emissions-free, or at least declines substantially where electric emissions are less than that of natural gas service, a migration away from gas service in favor of electrification will *increase* emissions, causing greater emissions to emanate from fossil-powered electric power plants rather than individual buildings. This would have been the case had the proposed-but-since-withdrawn "boiler rule" contemplated by the New Jersey Department of Environmental Protection ("NJDEP") gone into effect. As SJI noted within its comments during stakeholdering of NJDEP's boiler proposal in 2022, electric alternatives to traditional boilers would have produced 50% more net emissions than the status quo over the near-to-intermediate term. Accordingly, SJI recommends that, in future events as part of this docket, the Board fully address the emissions impact of electrification over the near-, intermediate-, and long-term.[7] Expensive policies that would increase net emissions, or fail to dramatically reduce them, should be rejected as counterproductive.

Furthermore, the Board should consider how electrification may impact the State's other climate goals, such as achieving 100% clean electricity by 2035. Building electrification would naturally require much more electric production than we have now, on top of all the new electric load that will be required for electric vehicles. All of this new electricity must come from clean sources if the State is going to realize its goal in this regard. Accordingly, the current effort to decarbonize buildings should work in concert with the State's other clean energy goals, and not jeopardize our collective efforts to achieve them.

B. Panel 1 – A Clean Heat Standard

In general, a clean heat standard ("CHS") is a credit-based performance standard applied to suppliers of heating energy. A CHS would effectively increase the cost of fossil home heating fuels—oil, propane, kerosene, and natural gas—by requiring suppliers of these fuels to purchase credits to offset the greenhouse gas emissions associated with these fuels. These credits are to be created primarily by other businesses by installing cold climate heat pumps, getting customers to switch from oil to biofuel, weatherizing buildings, and similar actions. Once the credits are created, the businesses that created them can sell them to the fuel dealers who, by law, would need to buy them. Ultimately, all these costs will be passed on to consumers.

Enacting a CHS in New Jersey would undoubtedly be a complicated and costly proposition. The members of Panel 1 had more questions than answers regarding how a New Jersey CHS would

[7] In so doing, the Board should not necessarily presuppose that the goal of 100% clean electric generation by 2035 will be realized on time and should further consider the emissions impact of out-of-state fossil fuel generation upon which New Jersey relies now and will in the future. To adequately assess the emissions impact of widespread electrification, the Board should consider a range of scenarios, and make judgments with an eye towards ensuring that its policies do not *increase* net emissions.

operate, such as: (1) What actions or fuels would earn credits? (2) Would certain heat choices be excluded or promoted? (3) How would performance be measured? (4) How would credits be created, traded, retired? and (5) How would governance and program administration work?

SJI believes that proposing a CHS in New Jersey would require careful study and robust, additional stakeholdering. First, there has not yet been any analysis to determine the economic impact of enacting a CHS on New Jersey residents and businesses. In states that have considered a CHS, it is clear that these programs would be costly. Vermont, for example, enacted a CHS in May 2023, doing so legislatively (having to override the Governor's veto to achieve it).[8] Vermont, however, has not yet implemented its program. The Ethan Allen Institute (a Vermont public policy group) estimated that Vermont's CHS would have an upfront cost of $5 billion, and further asserted that the CHS would work as "a regressive fuel surcharge", hurting low- and moderate-income ("LMI") customers the hardest.[9]

If New Jersey considers a CHS, it should study the Vermont experience as it develops (the Vermont Public Utility Commission is to begin proceedings to implement the CHS in August 2023 and submit final rules in 2025).[10] Logically, New Jersey would want to ensure that its CHS does not work to *increase* net emissions, as would be the case if a CHS moves customers to electric while the carbon intensity of electricity remains higher than that of natural gas.[11] Furthermore, the Board should also consider that Vermont and New Jersey are wildly different when it comes to energy consumption (*e.g.*, 12% of Vermonters rely on wood to meet their heating needs).[12]

To be sure, a hastily imposed CHS that compels electrification will foist substantial equipment costs on New Jersey residents and businesses. With labor and equipment, the average homeowner will pay about $16,480, after incentives, to add a heat pump to their home.[13] Even with incentives, these costs are substantial, and likely out of reach for LMI customers in particular.

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[8] See https://legislature.vermont.gov/bill/status/2024/S.5.

[9] *Policy group: Affordable Heat Act would cost billions*, https://www.thecentersquare.com/vermont/article_9e2884da-b6d9-11ed-a058-c3c0c1974bad.html.

[10] See https://legislature.vermont.gov/Documents/2024/Docs/ACTS/ACT018/ACT018%20As%20Enacted.pdf, § 6, at 35-41.

[11] See infra Sec. A.

[12] See https://www.eia.gov/state/?sid=VT.

[13] See *How much do heat pumps and mini splits cost?*, https://www.energysage.com/clean-heating-cooling/air-source-heat-pumps/costs-and-benefits-air-source-heat-pumps/.

Equipment costs, of course, are just the beginning, since the resulting increased demand for electric combined with the need for vast new transmission, distribution, and generation infrastructure can be expected to push electric prices even higher.[14]

Throughout the Technical Conference, speakers expressed concern about how LMI customers could be left behind in the energy transition. Most often, the issue was framed as a transition where more affluent gas customers flock to electrification, while customers of limited means, unable to afford the conversion, would then pay more than they otherwise would to maintain the gas system as a whole. While there are reasons to question whether this dynamic would play out in practice (given the cost barriers affecting all customers, continued robust demand for gas service,[15] and the superior reliability of gas compared to electric[16], etc.), New Jersey should also consider the ways that a CHS could work to *exacerbate* inequities among customers. As mentioned, a CHS works to increase costs of traditional heating fuels, costs that will ultimately be borne by customers. And those costs are stark for LMI customers (including those who do not qualify for energy assistance but nonetheless struggle to pay their energy bills). Indeed, increasing costs upon these customers can force them to choose between paying for utilities or other necessities like groceries or housing.

Natural gas is affordable, and its delivery infrastructure is foundational to achieving New Jersey's clean energy goals. As such, SJI believes that a CHS that excludes natural gas infrastructure, especially given its ability to carry RNG and green hydrogen, would imperil the financial well-being of the State's residents and businesses (especially LMI customers), and indeed, would jeopardize New Jersey's ability to achieve its climate goals.[17]

C. Panel 2 – Consumer Costs

Immediately preceding the panel regarding consumer costs, BPU Staff provided an overview of the Ratepayer Impact Study conducted by the Brattle Group in 2022 ("the Study"). During that presentation, Staff acknowledged limitations with the Study, echoing remarks made upon the release of the Study by BPU Commissioners, as well as statements subsequently made during Panel 2. Inasmuch as the Study sought to address matters beyond the scope of the Technical Conference, Staff acknowledged that the Study did not address matters germane to the current

[14] See infra Sec. C.

[15] See infra Sec. D.

[16] See supra Sec. A.

[17] See supra Sec. A.

proceeding in terms of cost, such as "the capital costs of customer side investments," impact of potential changes to building codes, or the deployment of RNG and hydrogen, etc. As such, it is universally acknowledged that the true costs of electrification are not yet known. Having a better understanding of the actual costs of an electrification policy would better inform the public, as well as the electric and gas utilities, as to what to expect in the future.

There is an urgent need to understand the costs that our residents and businesses will face due to electrification, at any scale. These costs include those associated with that of new electric equipment and appliances, the cost of new transmission and distribution infrastructure, the cost of new, emissions-free electric generation, the cost of integrating renewable electricity into the existing grid,[18] plus the higher cost of electricity compared to natural gas, both currently and in the future.[19] These economic challenges will be especially pronounced for LMI populations.

Cost considerations regarding electrification should be carefully approached by the Board as recent history demonstrates the pitfalls associated with electrification cost calculations. Within the context of NJDEP's boiler rule proposal, mentioned above, the department initially estimated that the operational costs of electric alternatives to fossil-powered boilers would be 4.2 to 4.9 *percent* higher (to say nothing about equipment costs). To its credit, NJDEP later corrected its estimate, concluding that the operational costs for electric alternatives to fossil boilers would in fact be 4.2 to 4.9 *times* higher. Given this sizable error by a State agency of the costs of an electrification policy, in one relatively small segment of the market, widespread electrification costs must be carefully studied and understood.

One study, conducted by ICF for the American Gas Association, concluded that moving *just 60% of residential* customers from gas to electric by 2035, in an environment where new electric generation is supplied by renewables (which would make electrification worthwhile to limit emissions from electric generation), would conservatively cost $1.2 *trillion* nationwide.[20] That astronomical figure actually *excludes* a number of costs to residential consumers, like

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[18] See, e.g., *Can aging grid handle new green power?* https://www.njspotlightnews.org/2023/06/can-aging-grid-handle-new-green-power/.

[19] Based on the U.S. Energy Information Administration's ("EIA") 2023 Annual Energy Outlook for the Middle Atlantic Region, prices of electricity will have a 2022-2050 nominal growth rate of 2.4% while the average price for natural gas will have a 2022-2050 nominal growth rate of 1.1%. See https://www.eia.gov/outlooks/aeo/data/browser/#/?id=3-AEO2023&region=1-2&cases=ref2023&start=2021&end=2050&f=A&linechart=~ref2023-d020623a.118-3-AEO2023.1-2~ref2023-d020623a.122-3-AEO2023.1-2&map=ref2023-d020623a.4-3-AEO2023.1-2&ctype=linechart&sourcekey=0.

[20] See *Implications of Policy Driven Electrification,* https://www.aga.org/implications-of-policy-driven-electrification/, at 38.

required electric distribution system upgrades.[21] Based on those figures—which contemplate 40% of existing residential gas customers remaining on the gas system—ICF found that the cost of removing CO_2 from the atmosphere through electrification would be $806 per ton, whereas doing so via RNG would be a small fraction of that amount ($106 per ton).[22] As set forth in more detail below, these clean fuels that can be delivered by the existing gas system should be embraced as a means of achieving decarbonization at a far lower cost.

Therefore, the sensible approach to achieving carbon neutrality preserves natural gas service as an option for New Jersey customers, especially since millions of customers will be on the gas grid into the future, even assuming the Executive Order 316 goal of electrifying 400,000 homes by 2030 is realized.[23] A phrase often used in the promotion of energy efficiency—"meeting customers where they are"—is applicable in the building decarbonization context. Presuming a mass near-term migration away from natural gas, in a cold-weather state with aging housing stock, where 73% of residents presently rely on the service, is a far cry from meeting customers where they are, or where the vast majority of them can be expected to be in the foreseeable future.

Moreover, while our State makes the appropriate investments in electric grid upgrades, builds out renewable generation facilities like offshore wind and utility scale solar, and invests in enhanced electric transmission, the affordability of natural gas will help to keep energy costs low. According to an August 28, 2023 report by the United States Department of Energy, at present, natural gas is 3.3 times more affordable than electricity and significantly more affordable than all other major sources of residential energy for the same amount of energy delivered. Under this cost differential, households that use natural gas for heating, cooking and other applications save significantly over households that use electricity for those same applications.[24] Accordingly, continued reliance on the affordable gas system will help enable the more costly investments to build out our clean energy future.

As suggested during a number of panels, and more fully set forth below concerning Panel 5, RNG and green hydrogen stand to substantially reduce emissions from the gas grid. Therefore, BPU should incorporate these technologies within its efforts to decarbonize the building sector.

[21] See id., at 35-37.

[22] See id., at 47-48.

[23] See infra Sec. D.

[24] See *Energy Conservation Program for Consumer Products: Representative Average Unit Costs of Energy*, 88 Fed. Reg. 58,576 (Aug. 28, 2023).

D. Panel 3 – Financial Health of Gas Utilities

SJI was pleased that Executive Order 317 included a directive to the Board to consider the financial health of the gas utilities, and that the Technical Conference made time for consideration of the same. Given the President's acknowledgement that "gas is here to stay," ensuring that the gas system is maintained to keep it safe, modern, and capable of carrying clean fuels like hydrogen, is a major imperative.

In contrast to the suggestions made by certain participants during various panels, specifically that residents and businesses will migrate *en masse* towards electrification, the experience of SJI's utilities is precisely the opposite. In 2021 and 2022 alone, SJG and ETG collectively added nearly 19,000 customers to their systems, representing extraordinarily high demand for gas service among those who do not yet have it. In addition to those new customers, there are a great many residents within our service territories who want gas service, but we are unable to provide it to them in a feasible manner, generally due to the would-be customers' distance from existing gas infrastructure. In short, SJG and ETG have not witnessed customers migrating away from gas towards electric, but rather customers migrating away from electric towards gas. This experience is contrary to what a number of speakers at the Technical Conference suggested is either happening or will be happening in the near future.

Given the Board's repeated emphasis on consumer choice, and reinforcing the remarks made by Governor Murphy upon issuance of Executive Order 317, it must be assumed that there will be a great many customers who will continue to rely on gas for heating and cooking in the future, and that number may continue to grow based on recent trends. That said, and regardless of what energy source customers might choose in the future, either because of electrification incentives or otherwise, there will clearly be a great many customers who will continue to rely on gas, as the Board and Board Staff have acknowledged.[25] Therefore, ensuring the financial health of the gas utilities and continued investment in the gas system is critical.

Notwithstanding the robust demand for gas service, customer counts and throughput are not the same. Indeed, SJG and ETG project that by the end of the first three-year period applicable to the utilities' EE programs, SJG and ETG will have reduced overall gas throughput by 104

[25] There are approximately 2.9 million residential gas customers in New Jersey. See https://www.eia.gov/dnav/ng/ng_cons_num_a_EPG0_VN3_Count_a.htm. New Jersey ranks seventh in the nation in terms of the number of residential gas customers, behind states with far greater populations (*e.g.*, California, Texas, New York, etc.). See id. Even if there was no further growth in the number of residential gas customers (despite recent trends), and that EO 316's goal of electrifying 400,000 homes, *by 2030*, is realized, and further that the goal is achieved *exclusively* as a result of residents leaving the gas system for electric (ignoring customers who convert to electric from delivered fuels), the State would *still* have approximately 2.5 million residential gas customers (which is more than 41 other states). See id.

million therms in lifetime energy savings from what it would have otherwise been if not for SJG's and ETG's aggressive EE efforts. Because gas throughput, and not the number of gas customers, is ultimately what drives emissions, reducing throughput via EE is a key part of SJG's and ETG's efforts to help the State achieve its climate goals. SJG and ETG look forward to continuing to drive down throughput during the next triennium of EE programs slated to begin in 2024.

Just as we envision our EE programs to reduce consumption, we expect the gas system to continue to evolve to reduce emissions through investment in clean fuels like RNG and hydrogen. As more thoroughly discussed within our comments pertaining to Panel 5, below, the Board should encourage RNG and hydrogen deployment, which stand to substantially reduce emissions from the gas system. Given the inevitability of continued reliance on the gas system by a great many customers in New Jersey, reducing emissions from it should be a key priority. Not only should the Board look favorably on utility-led RNG and hydrogen projects, it should lend its support for legislation intended to encourage the development of these technologies currently pending in the New Jersey Legislature. (S-1366 / A-577).

SJI is grateful that the Governor made the continued financial health of the gas utilities a component of EO 317, that this subject was among the first that the Future of the Gas Utility proceeding addressed, and that an SJI representative had the opportunity to appear on Panel 3. As discussed during the panel, there are plenty of reasons to remain bullish on gas infrastructure. Given the billions already invested in the system, its continued popularity, and its ability to deliver clean fuels, SJI does not foresee a world in which the gas system is retired. Instead, continued robust investment to improve the gas system, reduced throughput through EE, and an openness to clean fuels will be required to achieve the State's climate goals.

E. Panel 4 – Jobs Implications of a Decarbonized Gas System

SJI directly employs over 1,100 people, the vast majority of whom are New Jersey residents. SJI's corporate headquarters is in Folsom, New Jersey, whereas ETG is based in Union Township (Union County), and SJG is based in Atlantic City. SJG and ETG have additional locations throughout their respective service territories. While SJI has expanded its reach beyond New Jersey through investments by its non-regulated businesses in RNG production within other states, SJI is and will remain a New Jersey-based company with a New Jersey focus. The Company is particularly proud that both SJI and SJG are based in South Jersey, which faces unique economic challenges as compared to other parts of the State. To state the obvious, because SJG and ETG have billions of dollars' worth of infrastructure in New Jersey, SJI's utilities cannot relocate operations beyond the State's borders, unlike other large employers.

In addition to those that SJI or its utilities directly employ, SJI uses a large number of contractors who in turn have their own employees. Many of these employees are members of organized labor, including pipefitters, electricians, laborers, operating engineers, etc. As such, maintaining and upgrading the natural gas system provides good-paying, union jobs to a great many New Jerseyans, most notably in South Jersey where employment opportunities are not as plentiful as they are in other parts of the State.

Given the economic benefits that the gas utilities provide to the State and its residents, the Board should approach the decarbonization of the gas system in a way that preserves this industry and the people it employs. SJI believes that the Board has rightly framed the issue as "decarbonizing the gas system," as distinguished from an abandonment of it. That said, throughout the Technical Conference, a number of speakers presupposed widespread electrification, buttressed by mandates if necessary. Thankfully, the Board and Governor have eliminated mandates from consideration. To be sure, though, the livelihoods of a great many workers (many of them union workers), as well as their families, hang in the balance if the Board were to pursue policies that would compel electrification at scale. Just as the Board should not assume the inevitability of widespread electrification, it should certainly not assume that New Jerseyeans employed within the gas industry could easily transition to other careers of similar caliber and compensation elsewhere within the State's economy.

During Panel 4, Mr. Baden Almonor, of the New Jersey Department of Labor and Workforce Development, stated that he viewed the panel as "starting a conversation as to how the natural gas industry can contribute to a cleaner, brighter future for the Garden State." SJI believes that this approach is consistent with the State's economic and environmental goals, will make the gas system cleaner, and will preserve the thousands of jobs connected to it in New Jersey alone.

SJI's vision for decarbonizing the gas system not only preserves jobs, but will create new ones that currently do not exist within the State of New Jersey. As more fully set forth within these comments on Panel 5, RNG and hydrogen stand to create new jobs to produce and deploy these fuels. At present, because New Jersey has no meaningful geologic natural gas deposits, the gas that is consumed must necessarily be imported from out-of-state. RNG and hydrogen allow New Jersey to home grow clean energy sources that will utilize the gas system. To accomplish this, hydrogen electroylzers and anaerobic digesters for RNG will need to be built within the State of New Jersey and be connected to the existing gas distribution system. According to the American Gas Association, up to 2,700 new jobs could be created in New Jersey alone just for RNG production, with even more for hydrogen as that technology grows as well.[26]

[26] *The Potential for Renewable Gas: Biogas Derived from Biomass Feedstocks and Upgraded to Pipeline Quality*, https://gasfoundation.org/2011/10/22/the-potential-for-renewable-gas/.

Accordingly, SJI was pleased to hear Mr. Almonor reference SJG's solar-powered, green hydrogen project in South Harrison (Gloucester County). This project, slated to come online in early 2024, will create approximately 32 full-time equivalent jobs over the course of the project's lifetime. As the hydrogen economy grows within the State of New Jersey, so will the jobs that come with it. Those who are employed in it will be required to acquire skills to meet standards for working safely and efficiently with hydrogen. Importantly, blending hydrogen into the natural gas system to offset geologic natural gas, which is what SJG's facility will do, provides an immediate use case for hydrogen fuel, and will help to train engineers, installers, pipefitters, and others for broader applications of hydrogen fuel.

Also relevant here is the fact that New Jersey has suffered from outmigration for some time, with the State topping the list of outbound moves again in 2022.[27] Whatever the causes, New Jersey's gas utilities serve as a bulwark against the outmigration of residents and companies alike. As mentioned, in addition to fulfilling the energy needs of millions of customers, the gas utilities provide good-paying jobs to thousands of New Jerseyans. As more fully set forth below, policymakers should embrace policies that preserve these jobs through the energy transition.

F. Panel 5 – Next Generation Reimagining of Natural Gas Infrastructure

SJI was pleased that EO 317 specifically identified "the potential to convert existing pipeline infrastructure to provide decarbonized heating and cooling" as among the topics BPU was to consider as part of the Future of the Natural Gas Utility proceedings. Further, we applaud the Board for addressing this important topic as part of its initial stakeholdering. Given the inevitability of continued reliance on the gas system, SJI believes that all parties should seek to make the gas system as emissions-free as possible.

SJI is leading the way in decarbonization through infrastructure modernization, EE, and RNG and green hydrogen development. In 2021, SJI's utilities increased their total miles of main by 17%, yet reduced the CO_2 equivalent emissions from those mains by 65%, by and through the use of modern infrastructure. In addition, our utilities' EE programs will reduce gas consumption by over 104 million therms by the end of the current three-year program cycle, and we expect to do much more in future program cycles. Regarding RNG, SJI has a portfolio of over 40 dairy farm RNG projects around the country, which when online, will offset emissions equivalent to those of 50,000 passenger vehicles every year.

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[27] See *Annual 2022 United Van Lines National Movers Study*, www.unitedvanlines.com/newsroom/movers-study-2022.

Closer to home, we are actively pursuing various RNG projects in New Jersey, and intend to inject RNG into the ETG system from a food waste facility in Linden in the near future. Once operational, the Linden project will offset emissions equivalent to that of the consumption of 28,400 gallons of gasoline *every day*. Needless to say, RNG has a dramatically lower emissions profile as compared to geologic gas, and can even be carbon negative depending on its source, per the California Air Resource Board's Low Carbon Fuel Standard.

Regarding green hydrogen, SJG is currently constructing an electroylzer in South Harrison supported by an existing 1 MW solar facility. This zero-emission, green hydrogen project will produce 29,160 kg of hydrogen, which will be blended into the gas distribution system to offset geologic gas use that is currently imported from out-of-state via interstate pipeline.

The State should put its weight behind the growth of RNG and green hydrogen through legislation, proper rate treatment (which awards utilities cost recovery for prudent investments in in-state RNG and hydrogen production), and appropriate regulation. Such a step would complement those taken by the federal government through the Inflation Reduction Act, which provides incentives for hydrogen and biogas production. It would further dovetail with the State's pursuit of a regional hydrogen hub pursuant to the federal Infrastructure Investment and Jobs Act.

The benefits of green hydrogen have yet to be fully realized. Among other things, hydrogen has energy storage applications for intermittent sources of renewable power, such as offshore wind. What is clear is that the technology will grow jobs here within the State and create an energy production industry here that does not currently exist. Importantly, blending hydrogen into the gas system, as SJG will do in South Harrison, provides an ideal way to begin exposing workers to handling hydrogen and meeting standards.[28] This experience will better position the State to develop a successful hydrogen hub in New Jersey.

In-state hydrogen and RNG production will reduce the need for interstate pipelines (and thus will serve as one of many non-pipeline alternatives), accelerate the growth of renewables (since green hydrogen relies on these sources), and of course, reduce emissions. These technologies will enable customers to keep their existing appliances and side-step costly equipment upgrades for customers and electric utilities alike. Finally, hydrogen and RNG can leverage existing pipeline infrastructure, worth billions of dollars, which would lay fallow if electrification is exclusively pursued as a pathway to decarbonization.

[28] While blended hydrogen would be new to the New Jersey market, its potential has already been realized in a number of jurisdictions, most notably in Hawaii, where the gas utility in that State has been blending up to 15% hydrogen for decades. See https://www.hawaiigas.com/clean-energy/decarbonization.

In sum, leveraging existing gas infrastructure does not merely mean that it needs to distribute only conventional natural gas, but rather alternative, clean fuels like RNG and hydrogen. Availing ourselves of new and emerging technologies can help to localize energy production and provide a means of closed loop energy systems. In the case of RNG, waste created by consumers can be put to use for those same consumers as a source of energy. Further, there may be additional technological advances that can leverage this infrastructure that are not currently under consideration. Indeed, as Kyle Nolan of SJI pointed out during Panel 5, complementary industries such as aviation, maritime, and space exploration are investigating alternative fuels as well, warranting collaboration across industries to explore multiple pathways to decarbonization. Accordingly, SJI believes that the State should continue to approach the energy transition with an openness to providing a diverse means of providing energy to customers in a way that reduces emissions, limits costs, and preserves reliability.

G. Panel 6 – Identifying Natural Gas Subsidies & Revisiting End-Use Customer Incentive Policies

The Panel 6 discussion addressed purported subsidies favoring natural gas. Among other things, panelists questioned natural gas utilities' ability to make Infrastructure Investment Program ("IIP") filings with the Board and discussed the Board's approach to "main extensions" as applied to gas infrastructure. SJI believes that neither of these elements of Board practice are "subsidies."

Both IIPs and main extensions are creatures of the administrative code, adopted by the Board. See N.J.A.C. 14:3-2A.1 et. seq. (IIP rules); N.J.A.C. 14:3-8.1 et. seq. (main extensions). These two sets of rules apply to all utilities. In general, the IIP rules allow gas, electric, and water/wastewater utilities to propose investment programs to the Board, and upon approval, allow for the accelerated recovery of those investments, subject to refund in the utility's next rate case. Since their adoption in 2018, the IIP rules have enabled the modernization of New Jersey's electric and gas infrastructure. Among other things, IIPs have allowed SJG and ETG, collectively, to replace over 250 miles of aging pipe on an accelerated basis, making each utility's respective system safer and less prone to fugitive emissions. They also made each utility's system more capable of carrying decarbonized fuels like green hydrogen, and provided countless hours of work for skilled labor. Similarly, the electric utilities have upgraded their systems pursuant to the same set of rules. As such, IIPs are not "subsidies," as they make investments subject to prudency review (and refund, if necessary) in the utility's next rate case, nor are they unique to gas utilities.

Similarly, the Board's main extension rules govern electric, water/wastewater and gas utilities, and in general, set forth formulae for determining how the up-front costs of utility main extensions will be paid for. Adjusting these formulae or changing any element of these rules would require a rulemaking process pursuant to the Administrative Procedures Act. Insofar as panelists

suggested changes that would curtail the extension of new gas main to customers seeking gas, the net result of this approach would be a *de facto* gas hookup ban as applied to customers who would otherwise receive gas service pursuant to the existing rules. SJI respectfully submits that departing from existing practice in this regard, particularly if applied to only gas utilities, would violate the "no mandate" pledge of both the Board and the Governor, in that would-be gas customers would be disfavored under the New Jersey Administrative Code and would be forced to accept an alternative energy source other than gas to meet their needs.

The panelists further discussed the elimination of rebates for energy efficient gas appliances and equipment. Once again, these rebates are not unique to gas appliances and equipment but are available for electric appliances and equipment as well. Given the clear indications from the Board that "gas is here to stay," it is appropriate to incentivize energy efficient gas appliances and equipment, since to do otherwise would run contrary to the State's energy efficiency goals and efforts to dramatically reduce carbon emissions. This is especially true in New Jersey, where approximately 73% of residents rely on gas as their primary heating fuel. Regardless of how this figure might change in the future, substantial numbers of New Jerseyans will continue to utilize gas appliances and equipment. In light of this reality, the State should continue to support policies that ensure customers choose the most energy efficient products available, whether they rely on gas or electric, to meet their energy needs.

Furthermore, the notion of eliminating incentives for energy efficient natural gas appliances is even more troubling because of the EE targets that natural gas utilities are expected to meet. Pursuant to the Clean Energy Act, a gas utility must achieve reductions of natural gas by 0.75% of the average annual usage in the prior three years within five years of the implementation of its EE program.[29] The failure of a gas utility to meet this targets subjects the utility to a penalty.[30] Incentives for energy efficient gas appliances, made available to gas customers through EE programs, is a critical way for natural gas utilities to fulfill their EE obligations. Removing these incentives, while at the same time expecting gas utilities to achieve certain goals under the pain of financial penalties for not doing so, not only undermines the State's EE goals, but would impose an unfair burden on the State's gas utilities.

To be sure, the Panel 6 discussion, like the other panels, is of relevance to a great many stakeholders, including but not limited to homebuilders, homeowners, landlords, renters, realtors, commercial property owners/developers, appliance/equipment manufacturers/retailers, HVAC contractors/installers, organized labor, etc. Therefore, SJI recommends that future stakeholdering

[29] N.J.S.A. 48:3-87.9(a).

[30] N.J.S.A. 48:3-87.9(e)(3).

as part of this proceeding includes representatives of these various groups to offer their perspectives on these matters.

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SJI reiterates its thanks to the Board for the opportunity to provide these written comments. We look forward to continuing to work with the Board and other stakeholders in the context of these Future of the Natural Gas Utility proceedings.

Respectfully submitted,

s/ Dominick DiRocco

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