SOUTHERN NEW JERSEY DEVELOPMENT COUNCIL

September 16, 2019

Ms. Aida Camacho-Welch, Secretary
New Jersey Board of Public Utilities
P.O. Box 350
Trenton, NJ 08625-0350

Via Email: EMP.Comments@bpu.nj.gov

RE: New Jersey 2019 Energy Master Plan

Introduction

The Southern New Jersey Development Council (SNJDC), a business economic development organization comprised of over 300 mid to large size businesses located throughout the eight southern counties of New Jersey, appreciates the opportunity to submit written comments to the New Jersey Board of Public Utilities (BPU) as part of the State's 2019 Energy Master Plan (EMP) update.

As a business economic development organization, much of our mission is to provide access to good information for business leaders to make decisions that spur sustainable economic development and maintain businesses that lead to better jobs, higher wages and tax revenues in southern New Jersey. Over the past several years, the SNJDC hosted workshops and seminars on clean energy and energy infrastructure that featured policy makers and project developers with the goal of educating our membership on resiliency and reliability, emerging technologies, investments in infrastructure, and opportunities to increase efficiency and lower energy costs. In providing that content, and through collaboration with our membership, we are pleased to offer these comments for consideration.

Strategy I: Reduce Energy Consumption & Emissions from the Transportation Sector.

Goal 1.1.1 Support the Deployment of 330,000 Light-Duty Electric Vehicles on the Road by 2025, Per Zero Emissions Vehicle MOU; and,

Goal 1.1.2: Deploy Electric Vehicle Charging Infrastructure Throughout the State

The SNJDC supports the Administration's EV goals. In May of 2018, New Jersey became the ninth state to join a Memorandum of Understanding (MOU) previously executed by the Governors of eight states including, California, Connecticut, Maryland, Massachusetts, New York, Oregon,

Rhode Island and Vermont. Collectively, these states are committed to having at least 3.3 million zero emission vehicles (ZEVs) operating on their roadways by 2025.

The SNJDC supports the State's review and potential adoption in the EMP of the recommendations that come out of the multi-state study.

New Jersey's commitment to ZEV and 330,000 light duty electric vehicles on New Jersey roads by 2024 sets a solid foundation for moving to a cleaner transportation sector. We agree with the EMP that transportation electrification is essential to deliver the deep reductions in emissions that are needed to meet New Jersey climate goals. New Jersey's transportation electrification program is an essential strategy for its state climate goals and South Jersey will be a critical component to its success. It needs to be noted however, that in order to combat one of the most significant concerns of realizing this transformation, "range anxiety", that the state support investments in properly located charging infrastructure. This charging infrastructure will aid in the acceleration of EV adoption and ensure electric transportation fueling is available and affordable to everyone. Electrification of transportation is a primary way all communities in South Jersey, including "environmental justice communities", can benefit from existing and future efforts to clean the energy grid. As cleaner electricity powers more of our energy needs, all New Jerseyans will benefit from the climate and air quality improvements.

There are several stakeholders that are going to be critical in the build out of EV infrastructure and the adoption of light duty electric vehicles. We believe it is and will be essential that the electric utility play a role in building, owning, investing, and maintaining the infrastructure necessary to support the electrification of the transportation sector because they are best positioned to manage the impact of EVs to the underlying grid, maintaining reliability of the energy grid and providing shared value for all South Jerseyans.

The Final EMP should include a clear role for the utility in electric vehicle charging infrastructure consistent with the comments above. Keeping in mind, as with any new transformative technology, who pays is a paramount concern.

Goal 1.1.6: Continue to Improve New Jersey Transit's Environmental Performance

The SNJDC is encouraged by the EMP's recognition of the need to improve NJ Transit's environmental performance. As NJ Transit replaces its diesel bus fleet with cleaner vehicles, adequate charging infrastructure and station equipment are necessary. Utilities and other stakeholders will be needed for successful implementation of these initiatives for heavy-duty vehicles, such as buses and commercial heavy-duty vehicles. Utility rate base could support charging infrastructure for transit buses, particularly those servicing low-moderate income and environmental justice communities. Utility support can also help increase the number of Transit Villages, providing economic as well as environmental benefits to these areas.

Goal 1.2.1: Identify Opportunities to reduce vehicle miles traveled

The SNJDC recommends the final EMP consider expansion of passenger rail service to the southern counties through the Glassboro-to-Camden Line, a continuation of the RiverLine consistent with the original design.

In addition to reducing vehicle miles traveled, RiverLine service through Burlington County has also provided incredible economic advantages and access to the area and we anticipate similar success in the Camden/Gloucester counties region.

Currently, trends in workforce development outside the higher education track as well as for employers struggling to address the talent gap and effectively compete for talent, face a workforce demanding alternative commuting solutions—specifically, access to rail service.

However, mass transit in South Jersey has a considerably higher hill to climb. While rail rights of way still exist in many places, efforts to make use of them, such as the light rail extension to Glassboro, have not advanced in a decade. Rail travel access to Bridgeton and Cumberland County has been largely abandoned. With the decline of industry in the Millville area has gone most mass transit. Proposals to resuscitate mass transit in the Atlantic City-Cape May corridor have received no action.

SNJDC believes that the EMP should focus on these communities in South Jersey for expanded clean energy industry development and growth opportunities. South Jersey is an ideal location to support this burgeoning industry, from manufacturing, education and application. This kind of focus and development could support the mass transit rail mentioned above to be developed.

Goal 1.3.2: Support a diesel truck buy-out program.

A buyout program needs to be realistic and cost effective. These fleets, whether public or private, will generally not change unless the additional cost is reasonable and de-risked for the buyer. A buyout program should fund the total of lowest cost of the vehicle, fuel and emissions reductions per ton of greenhouse gas (GHGs) and NOx. Generally, CNG vehicles, using renewal natural gas, offer the least cost and highest reduction in emissions available today. As an example, a garbage truck, on average, burns 10,000 gallons of diesel fuel a year. Even smaller paratransit Class 5 bus fleets can consume between 20-50,000 gallons of fuel per month depending on the fleet size. While single owner-operator truck owners are more financially challenged to change their trucks to alternative or zero emissions drivetrains, there are a significant number of vehicles in government and private fleets that produce an outsized proportion of GHGs that should be considered priority conversion candidates to meet the state's climate goals.

New Jersey lacks a CNG vehicle incentive program and is at a competitive disadvantage with neighboring states. Any incentive program the EMP initiates (rebates, grants, vouchers, tax

credits) should include a medium and heavy-duty vehicle incentive targeting fleet owners to invest in CNG.

Goal 1.3.3: Support Community Solar Developments on port property

SNJDC supports community solar development on port property. Extending from South Camden, through the South Jersey Port Corporation (SJPC) and down the Jersey-side Delaware riverfront, the potential exists for as much as 3000 MW of additional solar electric capacity. Much of it would be sited on redeveloped or brownfield properties, many with no other attractive economic uses. Some examples include the scrap yards that contribute to considerable "environmental justice" community issues; the dredge spoil deposit locations in Gloucester and Salem counties; solar development at the Paulsboro and Exxon sites; solar on the north end of Artificial Island and in Greenwich township in Salem county; and redevelopment in the formerly used Salem and Bridgeton waterfront areas. Additionally, the NJBPU's recent award of 1,100 MW of offshore wind capacity (with more to come) means there will be a significant increase in industrial activity at New Jersey's ports. As such it is imperative to ensure that this economic expansion does not result in poorer environmental performance for South Jersey. SNJDC believes that the utility is a crucial stakeholder, together with groups like the SNJDC, and other private and public stakeholders, to implement the necessary equipment to support the beneficial electrification of the port.

For example, (1) the area south of the SJPC is underlain with extensive tailings from thorium ore extraction for the gas lantern industry that was prominent in Camden in the early 1900s. These tailings were used as fill with the intention to expand the shipyard that preceded the Port Corporation. Due to the nature of the materials, it is unlikely the area will ever be used for activities occupied by human beings, but the area could be utilized for a large solar installation that could be developed as a community solar facility; (2) the area north of the Port Corporation is occupied by obsolete buildings that could be redeveloped for multi-mode commercial applications and modern manufacturing that includes a substantial solar component.

<u>Strategy II: Accelerate Deployment of Renewable Energy and Distributed Energy Resources.</u>

Goal 2.2.1 Develop offshore wind power generation

In considering support of the development of offshore wind in New Jersey, the SNJDC weighed the 1,110 MW project's cost shared by private investment, federal tax-investment credits and ratepayers against potential economic development benefits and determined that the creation of thousands of good, local new jobs; the research conducted at our universities; the job training provided to non-college, continuing education, and career transitioning students; modernizing an aging power grid; and the creating of a new, forward looking industrial sector located in South Jersey, coupled with the environmental benefits, warrant our support.

Goal 2.2.3: Develop job training programs to support the offshore wind industry

New Jersey maintains a unique opportunity for much needed public and private investment in the burgeoning industry of offshore wind energy. South Jersey is uniquely situated to facilitate a net-export industry to service offshore wind development from New York to Virginia. The SNJDC supports investment in the establishment of the Offshore Wind Supply Chain in South Jersey.

We note Ørsted's Ocean Wind project has a working relationship with Jingoli Competitive Edge to utilize their Live Classroom and Talent Identification programs to identify and train Atlantic City residents and students who are interested in a career in working to construct the wind energy revolution.

Southern New Jersey's trade unions are best positioned to assist in the advancement of New Jersey's future as a leader in the offshore wind industry. With the ability to provide skilled tradespeople and train workers through union apprenticeship programs, South Jersey's labor unions will contribute the needed highly skilled, cutting-edge workforce that will help to construct the offshore wind turbines from start to finish. We note Ørsted's Ocean Wind has signed a Memorandum of Understanding with the South Jersey Building Trades Council to ensure wind construction jobs pay prevailing wage and offer broader employment through expanded apprenticeship.

The SNJDC supports investment for academic research and development through the establishment of the Offshore Wind Institute to provide the necessary workforce to drive the industry. The network of local academic institutions (Rowan, Stockton, Rutgers, Atlantic Cape Community College) is well situated to address the educational certification and degreed needs of this emerging sector and support expansion of offshore wind power projects to exceed the 3500MW target.

There is little doubt that wind power will play a crucial role in fueling Southern New Jersey's economic growth and economic diversity thoughout the coming years.

Goal 2.2.4: Support the offshore wind industry through port infrastructure development and inter-regional collaboration

New Jersey's southern ports continue to make massive investments—upgrading its port-based infrastructure—to support this burgeoning industry.

Goal 2.3.5: Develop mechanisms for achieving 600 MW of energy storage by 2021 and 2,000 MW of energy storage by 2030

The SNJDC believes that energy storage can be a critical element of a more resilient and efficient energy system. Energy Storage can provide a wide range of services whether as a generation, distribution, or customer-sited resource and is an enabling technology critical to supporting many of New Jersey's energy goals.

The EMP should prioritize the deployment of these resources in beneficial areas of the grid and acknowledge the critical role utilities play as they can best provide the most value to both the developer and the grid, to make sure that the appropriate interconnection standards are met, and to work together to provide the benefits of clean energy to all ratepayers.

The SNJDC notes that New Jersey has not taken all forms of energy storage into account when considering the energy storage goal. For example, no account is taken of the existing 760 MW of energy storage capability at the Department of Energy Princeton Plasma Physics Laboratory (PPPL). Constructed to serve the decommissioned tokamak project, the flywheel installation is connected to the grid. Using nighttime base-load generation to power up like a pumped-storage facility, with proper controls, the flywheel could be useful to meet the state's morning peak electrical load.

Goal 2.3.6: Maximize the use of source separated organic waste for energy production and encourage anaerobic digestion for electricity production or natural gas pipeline injections

The SNJDC supports the use of source separated organic waste for energy production and encouraging anaerobic digestion for electricity production or natural gas pipeline injections. Organic waste can be used with anaerobic digesters to create a syn gas for CHP or electric generation (renewable energy) or use the digester to create gas (and cleaned up) to make pipeline quality gas (renewable gas).

However, most counties in Southern New Jersey have already invested substantial taxpayer dollars into state-of-the-art landfill gas to energy (LGTE) facilities that utilize methane gas produced from decomposing organic food waste to generate "class I renewable energy" as defined under the Electric Discount and Energy Competition Act and warrant inclusion in the EMP as a suitable end use of source separated organic waste.

<u>Strategy III: Maximize Energy Efficiency and Conservation and Reduce Peak Demand</u>

Goal 3.1.1: Implement the CEA requirement that electric and gas utilities reduce consumption by at least 2% and 0.75% respectively, including the establishment of clear performance indicators and evaluation, measurement and verification methods while continuing to review and develop cost recovery mechanisms for complementary, non-competitive utility-run energy efficiency and peak load reduction programs

The Draft 2019 Energy Master Plan acknowledges that electric and gas utilities are mandated by the Clean Energy Act (CEA) to reduce electric and gas consumption by 2% and 0.75% respectively. These goals will change the State's energy efficiency landscape going forward.

Utilities have several unique advantages in delivering energy efficiency programs to customers, including established customer relationships, expertise administering energy efficiency programs, ability to offer on-bill repayments—which a number of utilities currently do within the clean energy programs, and all have the ability to offer in the future—and access to usage data

to identify energy savings opportunities and monitor the impact of energy efficiency projects.

The SNJDC supports utilities serving as the lead administrator of the energy efficiency programs designed to achieve the Clean Energy Acts (CEA) goals and targets. This will allow the State to accomplish its energy efficiency goals, while also holding each utility accountable for its efforts in support of efficiency. 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. The utility driven model is used amongst many leading states in energy efficiency because utilities are best positioned to manage complete energy efficiency program portfolios that account for the unique customer class mix within their service territories.

Helping customers reduce energy usage is critical to lowering emissions; the CEA requires utilities to reduce electric by 2% and gas by 0.75% and without cost-effective energy efficiency programs led by utilities - this will be difficult to achieve.

Lastly, it is vital that utilities are able to recover costs associated with energy efficiency program offerings and lost revenues due to both energy efficiency and integration of DER. In many states, there are recovery mechanisms that allow utilities to recover lost revenues resulting from energy efficiency programs and DER to remove the disincentive to implementing energy efficiency programs or interconnecting DER assets to utility systems. The right utility recovery models that consider reliability, safety, affordability and resiliency will help New Jersey meet its clean energy and GHG reduction goals.

Goal 3.1.2 Increase funding for, awareness of, and access to New Jersey's Clean Energy Program and its suite of state-wide programs

New Jersey ratepayers pay almost $1 billion annually in Societal Benefits Charges (SBC), of which approximately $350 million is annually earmarked for energy efficiency (EE) programs, through the New Jersey Clean Energy Program (NJCEP). Ratepayers pay approximately another $250 million annually, built-into utility rates, for utility-sponsored EE programs. These State-run and utility-run programs sometimes are redundant, at times overlap, and often cause confusion for ratepayers and little cost efficiencies.

THE NJBPU would serve ratepayers best by assessing the total cost of all EE programs – NJCEP and Utility-sponsored –to identify which programs are best delivered by which entity. It is also essential that the BPU hire, in sufficient numbers, the skillsets required to deliver effective, accountable programs – economists, data analysts, and engineers, among them.

Currently NJBPU staff must oversee two complex, expensive, and completely separate processes to safeguard ratepayer funds – NJCEP programs and the utility-run – a monumental task when the number of staff and skillsets are available. Currently these resources are not sufficiently available.

Strategy IV: Reduce Energy Consumption and Emissions from Building Sector

Goal 4.1.1 Expand and accelerate the current statewide net zero carbon homes incentive programs for both new construction and existing homes

After the 1970's energy shocks, the USDOE and EPA implemented precursors to the ENERGY STAR programs. New home construction was subsidized, and new construction standards implemented. However, little follow up was undertaken; thirty years later, most of the high efficiency equipment had worn out and been removed. Most of the backup heating systems were based on fuel oil use, with buried underground tanks and piping. Use of natural gas for heating was embargoed. However, the lack of follow up and measurement provided no true indication if the effort at energy saving was a chimera or real.

By the second decade of the 21st century, many of those underground tanks have been replaced, thanks in large measure to NJDEP regulations that forestall transfer of property deeds until replacement has taken place. Most of those 1970s energy efficient buildings had hot air distribution systems, so conversion to natural gas fuel entailed merely an expensive furnace and controls replacement. Conversion to electrical heating will be considerably more complex.

Goal 4.2.2: Develop a transition plan to a fully electrified building sector

We suggest that NJBPU proceed very cautiously along this path as the full electrification of the building sector would dramatically raise homeowner costs in New Jersey. Higher energy costs will continue to fuel the exodus of individuals and businesses from New Jersey, not attract them here.

Shifting to full electrification of the building sector would require additional out-of-pocket expenses for new appliances like water heaters, stoves, ovens, dryers and more; as well as an increased need for additional powerlines, substations, transformers and electric box upgrades—not to mention the buildout of huge new capacity of the electric grid, costs which are most likely to be borne on the backs on New Jersey homeowners and businesses—particularly Low-Moderate-Income (LMI) residents.

General Comment: A major cause for concern is the goal to have New Jersey deviate from the model codes and develop its own energy code. The main objective behind the State's Uniform Construction Code law was to provide requirements for construction and construction materials consistent with nationally recognized standards. This was intended to provide uniformity across all municipalities but also intended to make sure that was in line with the rest of the nation.

- Adopting a different energy code would saddle New Jersey with another competitive disadvantage, dissuade investments, suppress the creation of new units and make it more difficult to produce affordable units.

The residential construction industry is no stranger to energy efficiency and green building techniques. The National Association of Home Builders has worked collaboratively with the non-profit International Code Council to establish the National Green Building Standard - the only

residential green building rating system approved by ANSI that provides practices for the design and construction of all types of green residential buildings, renovations, and land developments.

The development of model codes by the International Code Council, which are the model codes used in New Jersey and throughout most of the nation, have led to a 40% reduction in energy use in residential buildings built to the baseline code over the last 30 years. It is important to note that this has been accomplished incrementally through updates produced every three years, and it has been balanced with affordability.

New Jersey residents suffer from both a housing affordability problem and an affordable housing supply problem. After several years of affordable housing litigation, we are at the threshold to fulfilling these obligations, and additional costs will threaten the creation of many affordable units. Many of the proposals will significantly increase the costs of housing, slow down the state housing sector and economic growth, and will make it more difficult for residents to realize the dream of homeownership or to find affordable housing.

Strategy V: Modernize the Grid and Utility Infrastructure

Goal 5.1: Plan for and implement the necessary distribution system upgrades to handle increased electrification and integration of distributed energy resources

The SNJDC believes it is critical to develop a modern grid, as the foundation for the more connected, distributed and decarbonized future that the Draft NJ EMP envisions. Unfortunately, without a 21st century grid, all the distributed technologies that will support the EMP's goals become less valuable, environmentally and economically.

A well-planned distribution system platform will enable the safe, reliable, affordable, and efficient energy services by integrating diverse resources to meet all South Jersey consumer needs in the future. Modernizing the grid should consider including: Advance Metering Infrastructure (AMI), edge-of-grid technologies, new energy networks, and other new tools and technologies that can support innovative programs, rates, data driven decisions, forecasting, etc. designed to support new ways to operate the grid to reduce energy use across the state, provide clean energy alternatives, all the while increasing reliability and resiliency.

In facilitating the development of the modern grid, the BPU should consider accelerated implementation of AMI to enable the use of innovative technologies such as rooftop solar and energy storage and other distributed energy resources (DER). These new technologies and programs, along with a supportive rate structure, can be designed to encourage clean energy investment—all the while maintaining or increasing grid reliability and resiliency.

In SNJDC's opinion, utility control for system reliability is critical because the balancing of load and generation safely and with experience is a significant challenge that requires continuous

attention. The utility has capabilities to enable the seamless integration of DER into the grid and performing the continuous load balancing necessary to maintain safety and reliability.

Goal 5.4: Instruct Gas Utilities to Identify and Prioritize Replacement of Pipelines Leaking Methane

New Jersey gas utilities are committed to delivering safe, reliable, affordable service. Responsibly reducing, identifying and mitigating methane leaks is key to ensuring natural gas customers receive the service they expect and deserve. SNJDC supports the draft EMP's efforts in working with gas utilities to focus on leak reduction for both environmental and safety reasons. The best way to achieve this is upgrading infrastructure throughout the state to enhance the safety, reliability and resiliency of the natural gas systems New Jersey families and businesses have come to depend on.

Strategy VI: Support Community Energy Planning and Action in LMI and Environmental Justice Communities

Goal 6.1: Develop a comprehensive Community Energy Plan in concert with local community groups to identify energy needs and establish ways to participate in and benefit from the clean energy transition at the local level

The collaborative work should not be limited to just the low and moderate income and environmental justice communities. Opportunities and ideas are developed from many sources and limiting this process and focus to LMI and environmental justice communities may have an adverse effect on the ability to develop solutions at the broader local levels.

Goal 6.3.2 Build or incentivize electric vehicle charging infrastructure

While proper charging infrastructure should be built for EVs to be realized, the entry barrier of expense of EVs may be prohibitive for low-income communities to effectively obtain the benefits generated from the charging stations directly within the community. Focus in the urban LMI communities should be on Goal 6.3.3 and 6.3.1, with enough charging stations to address the uses set forth in 6.3.3 and 6.3.1.

Question 23: How can NJBPU continue to engage with communities to support local energy planning?

NJBPU should engage directly in the communities, having local focus group and forums within the local communities to encourage engagement and continued support in environmental justice concepts.

Question 25: What best practices utilized in other states or municipalities should New Jersey consider to support Community Energy Planning?

There should be support for each community to establish a community energy manager/planner to help assess and lead in energy projects within the community. This individual would be the community liaise for business and residents to engage with the local government to establish a

set of local goals and support for energy efficiencies and renewable projects, as well as the educational point of contact for the community. These concepts are well formed by several states including the State of Michigan which has a Community Energy Management –Best Practices guide which can be used as a road map.

General Comment: The topic of 'environmental justice communities' is referred to frequently in the draft. However, the term lacks a clear and concise definition. The state government has adopted a definition for other purposes; should not a definition be included in the EMP?

It would be helpful to identify, perhaps with a map, those communities already so identified, and those that might, over the near term, qualify. It may occur that very large portions of the inhabited land area of the state are included. It is likely that those portions of the state that have been industrialized since the 19th century would qualify. It may also happen that those areas most attractive for Transit Villages would be included; in this case, environmental regulations for land use, groundwater, and the like should be examined for limiting cross-purpose impacts.

Strategy VII: Expand the Clean Energy Innovation Economy

General Comment: NJBPU should use the existing educational resources located in New Jersey for training and research such as our community colleges, county vocational and technical schools along with the Rutgers Center for Real Estate.

THE NJBPU commits almost $350 million dollars annually to the development and delivery of clean energy programs. Regularly, these funds go unspent and/or are then siphoned off to plug gaps in the State's general operating budget. To truly succeed as a clean energy innovation economy, NJ will need a skilled workforce to deliver the State's aggressive energy efficiency goals and develop the solar and wind resources that are cited in the EMP. Let's re-direct these funds to their intended purpose by funding grant programs for the State's 2- and 4-year colleges committed to robust research and clean energy-focused trades. This is the workforce that NJ will need to succeed as a national innovator.

Conclusion

SNJDC appreciates the opportunity to participate in the 2019 Energy Master Plan Update process. We look forward to continued participation and collaboration with the Board of Public Utilities to support the creation of a strong, resilient and clean energy infrastructure to benefit all New Jerseyans.

Respectfully Submitted,

Marlene Z. Asselta

Marlene Z. Asselta
President