SOUTHERN NEW JERSEY DEVELOPMENT COUNCIL

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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 in 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 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.

I. Clean & Renewable Power

The Renewable Energy Standard set forth in Assembly Bill no. 3723, or the Renewable Energy Bill, is an ambitious metric that positions New Jersey as one of the most progressive in the nation in terms of pursuing a clean energy economy.

Successful outreach will be an important part of increasing public understanding of the benefits and opportunities alternative energy presents to New Jersey. Ensuring a clean and consistent message on areas such as programs, initiatives and accomplishments while expanding clean energy related workforce training and skills development will be necessary for New Jersey to drive its infrastructure modernizing demands. Coordinating efforts through utility companies, vocational and high schools and county colleges and supporting initiatives to provide the math concepts required to successfully complete employment testing for jobs in the energy industry will be necessary to keep our energy grid running, advance solar, wind, and other clean energy technologies in addition to driving further innovation in the industry.

Solar

Already, New Jersey has made great progress in the development of solar energy, mainly due to the initial smart policy initiatives designed to jumpstart the industry and create and maintain a stable market. State incentive programs and a federal tax credit helped meet solar energy targets years ahead of schedule, propelling New Jersey as an early leader and a top-ten solar state, creating over 7,000 jobs.

With the continued success of the state's solar energy program comes the need to resolve the rate structure tensions that exist among rate payers and between utilities and the BPU. The Renewable Energy Bill mandates utilities provide 50% of their electricity from renewable energy sources as well as requires generators source 5% of their electricity from customer-owned and other forms of behind-the-meter solar. As a result, meters will spin less but the utilities' costs for grid maintenance and repairs and building transmission infrastructure continue to rise with the need for reliability and resiliency.

Perversely, rate increases approved to cover utility company costs for grid maintenance and repairs falls disproportionally among ratepayers with those using a solar system and other behind-the-meter systems not bearing any of the rate increase yet utilizing the grid.

Reconciling the rate structure to remove the disincentives utilities face and establishing a mechanism to recover investments dollars for all customers who benefit from the system will create an equitable system necessary to sustain the long-term growth of clean and renewable energy sources to meet the 2050 goals.

Wind

In the intervening years since the signing of the Offshore Wind Economic Development Act, wind energy technology has advanced increasing capacity, efficiency and reliability – and affordability. Where once New Jersey was in a position to lead the nation in developing offshore wind, we delayed adopting the regulations needed and witnessed another state successfully launch a project.

New Jersey still maintains a unique opportunity for much needed public and private investment in the burgeoning industry of offshore wind energy. South Jersey stands ready to facilitate a net-export industry to service offshore wind development from New York to Maryland.

Opening wind solicitation and the Governor's plan to solicit 1,200MW of offshore wind in 2020 and 2022 provides a clear timeline of large-scale procurement and certainty to offshore wind developers and the supply chain, which will support the anchoring of a supply chain in New Jersey and contribute to job growth.

Wind power is ready to support the Energy Master Plan Committee goals to "drive down the cost of energy for all customers," "maintain support for renewable energy portfolio standard," "ensure reliability and affordability for all customers," "grow NJ's clean energy economy," by "putting NJ on a path to achieve 100% clean energy by 2050."

Natural Gas

While New Jersey has made great strides in the development of clean and renewable energy and retired all but one of its coal burning plants, there still exists the need for a transitional energy source to reasonably achieve the 100% clean energy metric. Despite the progress and achievements in developing solar and wind, New Jersey cannot currently meet its energy consumption needs through renewables alone, nor does the infrastructure exist today to support such an act. We must recognize the requirement of an intermediary source to get us to the stated goals of 100% clean energy by 2050.

The SNJDC supports natural gas as a low-cost, efficient, domestic, and reliable transitional energy source as the partner for tomorrow's renewable energy future.

We must make several investments in gas infrastructure to capitalize on the abundant and affordable supply of clean natural gas and to ensure the needed capacity for natural gas to serve as the transition fuel partner. Given the Marcellus Shale is a strategic geographic advantage for New Jersey's competitiveness, the reduced cost benefit of local gas as well as improved air quality, can only be realized if interstate infrastructure projects such as the Penn East Pipeline is in place to allow this gas to move to market.

While demand for low-cost natural gas increases, the supply to New Jersey has not kept pace. As we saw during the 2014/2015 Polar Vortex, New Jersey's natural gas utilities all recorded new send-out records of natural gas on February 15th, 2015. Increased drawing of natural gas depleted the pre-purchased supply, creating an increase in demand which drove an increase in prices and price spikes. And, as the costs of natural gas exceeded that of fossil fuels, plants shifted to the less expensive supply such as coal, causing a significant increase in greenhouse gasses to be expended.

Expanding the pipeline infrastructure will ease existing bottlenecks and meet growing energy needs. Without new pipeline capacity, both costs and air emissions will increase, as power generators switch off to more expensive, carbon heavy forms of energy, particularly during peak energy use.

In addition, intrastate pipelines help improve reliability of existing gas systems by building redundancy, such as the South Jersey Gas Reliability Pipeline. The re-powering of the B.L. England Plant, the state's remaining coal-fired power plant, to natural gas will provide the B.L. England electric generation facility in Beesley's Point with the natural gas supply needed to support its transition as well as reinforce the South Jersey Gas system to provide customers increased reliability in Cape May and Atlantic counties. Currently the existing South Jersey Gas system only has one feed into Cape May County. This single feed is vulnerable, and any disruption could severely interrupt service for months at a time. The recent decommissioning of the Oyster Creek Nuclear Generating Station places even more emphasis on the need for reliability as the B.L. England plant is the only significant electricity generator in Southeastern New Jersey.

Completing natural gas pipeline infrastructure projects, while encouraging investments in renewables like solar and offshore wind, will ultimately lower costs for families and businesses and together can put New Jersey on the path to achieve the 2050 benchmark.

II. Transportation

New Jersey's air quality does not meet the 2008 National Air Quality Standards for ground-level ozone. While progress has been achieved to reduce ozone emissions, including closing and converting coal power plants, this does not address the most significant contributor to ozone pollution: transportation. Our current generation of electricity through nuclear energy and natural gas accounts for roughly 18% of greenhouse gas emissions; whereas the 46% contributed by vehicles makes the emissions from transportation the obvious target for the greatest reduction results.

The transition to electric vehicles (EVs) does not equate to an even exchange in emissions. We derive such a low amount of ozone pollution from generating electricity, that electric and CNG vehicles present an opportunity to dramatically reduce New Jersey's greenhouse gas emissions. Our commitment to achieving 100% clean energy by 2050 requires significant attention to this fact. We excel in reducing emissions from all other sectors but lag in addressing vehicles.

Electric

New Jersey has fewer electric vehicles on the road than in many other states due in large part to the lack of a charging infrastructure, which creates a range anxiety barrier for purchasing an EV. Workplace charging and single-family home charging stations present the most practical accommodations to EV drivers based on time spent at home and work, with Public Opportunity Charging locations an important piece of tackling range anxiety.

Any incentive program to offset the costs for purchase and installation of EV charging stations must contain a stable and dedicated funding source, that is long-term (at least 3-5 years duration), with criteria that include regional benchmarks to address geographic parity and that are not contingent on available funding to begin construction. The New Jersey Department of Environmental Protection Workplace Charging Grants program, because of its success, ran out of funds and rules require the grant application

be executed before installation of charging stations. With no grant monies available, installations weren't constructed, and progress stalled.

The continuation of the New Jersey sales tax exemption for EVs for several years is important while the state initiates the transportation sector transition.

Developing policies for an EV transportation infrastructure must include energy providers to address the weak links in the current grid infrastructure. The effects of connecting electric vehicles to the grid are significant; charging an electric vehicle is similar to connecting another house to the grid. In addition, pole mounted transformers are the first link to the grid and the impacts of connecting charging stations must be addressed to avoid service disruptions.

CNG

The opportunity provided through the Environmental Mitigation Trust on behalf of the Volkswagen Settlement presents an opportunity for the State to significantly reduce air pollutants from transportation sources with a clear economic advantage by investing in alternative fueled vehicles. The EMT should provide businesses and fleet operators the opportunity to utilize a technology, such as compressed natural gas (CNG), that is currently available, affordable, clean burning and reliable domestic energy.

Targeting heavy and medium duty diesel vehicles for reduction in emissions through greater adoption of CNG is in line with the state's EMP goals. Deploying a near zero emission CNG vehicle has a lower nitrogen oxide profile than clean diesel vehicles. While commercial heavy-duty electric vehicles have not achieved scale and are not a viable option today, CNG is particularly well suited for heavy and medium duty applications. The majority of these heavy-duty vehicles are vocational in nature and generally log more miles and consume much more fuel on a yearly basis than light duty cars and trucks. In addition, natural gas prices are lower and much less volatile than diesel and gasoline. The opportunity for fuel cost savings and pollution reduction are maximized by targeting these vehicle classes. Dollar for dollar, natural gas-powered vehicles lead to the greatest reduction in nitrogen oxide emissions over other AFVs.

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.

The potential benefits addressed by increased adoption of EV and CNG technologies will vastly improve harmful air emissions and address New Jersey's designation by the Environmental Protection Agency as an Ozone Non-Attainment Zone.

III. Modern Grid

Today's electric grid hasn't changed much since the days of Thomas Edison; the flow of energy is one way, moving from the utility company to the consumer while the system grows to accommodate larger peak periods. To achieve its renewable energy goals, the state should modernize the grid by integrating renewable energy sources and by incorporating new technologies, including energy storage systems and advanced metering infrastructure.

A modern grid in 2030 will include more distributed and renewable generation. This grid will begin to develop technological solutions for reliably managing and dispatching the variety of smaller and variable generation sources. By 2050, new technologies and markets will be in place to allow these resources to be utilized efficiently in concert with traditional baseload generation to distribute energy that balances reliability and efficiency.

Current regulatory and commercial environments limit the ability to efficiently consolidate and serve electric demand with distributed energy. Barriers preventing the state implementation include how electric distribution infrastructure is owned, utilized, and paid for and will require new business and operational models and regulations that support them.

Significant distribution planning will be required as more generation sources become smaller, intermittent, and distributed, they will be connected at lower voltages than traditional sources. This will require careful technical planning, economic planning, and enterprises to protect and manage generation assets and substations.

Energy Storage

Investing in energy storage as a more efficient means to upgrade our energy grid, as opposed to building additional substations, will provide resiliency for critical infrastructure and help meet new demands on the grid. Energy storage will further aide to smooth the impact of solar and wind on energy systems and act as another tool to increase intermittent energy generation, proving more efficient for consumers during peak usage or interruptions due to storms. Energy storage is critical to making solar and wind energy viable.

Advanced Metering Infrastructure

Enabling two-way communication between utilities and customers is integral to modernizing the power grid. An Advanced Metering Infrastructure (AMI) Program would provide a benefit for utilities and customers by lowering utility capital expenditures, reducing operational and maintenance costs to enabling customer control over consumption, lowering bills and creating a demand reduction. In addition, AMI would reduce inconvenience of outage duration and enable a utility to isolate outages faster as well as manage severe weather events as in the case of Superstorm Sandy in 2012 and the Derechos that occurred in South Jersey 2012 and 2015.

IV. Infrastructure

Developing a more sustainable, affordable and resilient energy future will require both upgrading existing infrastructure as well as investment in new infrastructure. Deploying energy resources closer to the point of use can create resiliency. However, the electric distribution infrastructure required to support this shift will need to be updated. The economic and reliable dispatch of a variety of smaller renewable generation assets will require new methods for planning, controlling, and protecting the new grid.

New Jersey must continue to remove barriers for development of distributed energy infrastructure including microgrids through 2030. The regulatory framework must encourage public and private partnerships to develop energy infrastructure that can participate in existing markets. In parallel, to meet the 2050 renewable goal New Jersey must entice private capital to invest in new clean energy infrastructure including solar, storage, wind, and alternate (bio) fuels.

Competitive markets are configured to impact the marginal cost of production. However, they are not efficient at incentivizing long term investments in resiliency or new technology.

The EMP should address infrastructure criticality and susceptibility to severe weather events when considering New Jersey's energy future. Emergency response plans should consider alternate energy sources that are hardened and near the point of use. Infrastructure such as hospitals, water treatment facilities, places of refuge, and emergency response centers require creative solutions to finance and incentivize investments in resiliency.

The ability to safely manage distributed energy infrastructure will require new planning tools, communications interfaces with ISOs and other entities, and software solutions to balance load and generation. The cost of this technology should be shared by each generator as well as customers.
Distributed energy resources (DERs) and microgrids can significantly impact state resiliency goals. Placing scalable generation closer to the point of use has many advantages in terms of efficiency and resiliency. However, these assets must be able to optimize the types and geography of loads served since resiliency on its own is often not sufficiently valued.

To encourage deployment of DERs and associated microgrids, energy providers (IOU's, IPP's, developers, government agencies, institutions, industrial facilities, etc.) must have access to a variety of customers and loads. In particular, when potentially intermittent renewable generation is deployed. Allowing energy providers access to electrical (and thermal) load across public ways allows generation assets to be optimally sized. Strategically deploying these resources allows investment in resiliency (at least partially) to be funded through improvements in efficiency.

Large fossil fuel driven generation facilities may be stranded in the re-imagined energy future. However, this evolution will occur slowly as technology develops and DERs and renewables are deployed.

Utility back up and standby charges associated with distributed generation needs to be addressed and alleviated as much as possible to allow the reliability, security and resiliency benefits of these distributed generation facilities to not be derailed if these backup electricity costs are excessive.

Reliability costs and resiliency costs should be allocated based on benefit. Investments made for the good of a community during severe weather events should be borne by a wide rate base. However, costs incurred to provide a benefit for only one customer should only be borne by that customer. Quantifying and understanding these allocations will require an abandonment of traditional rate-based allocations.

Conclusion

The Southern New Jersey Development Council appreciates the opportunity to participate in the Energy Master Plan Update process as we duly support the Murphy Administration's goals of generating 100% clean energy by 2050. 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,

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President