Jersey Central Power & Light
A FirstEnergy Company

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VIA ELECTRONIC MAIL

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Re: New Jersey Draft Energy Master Plan

Dear Energy Master Plan Committee:

Jersey Central Power & Light Company ("JCP&L" or the "Company") is pleased to submit comments on the Draft Energy Master Plan ("Draft EMP") dated June 10, 2019. The Draft EMP identifies "seven main strategies to reach the goals of 100% clean energy and 80% emissions reductions from 2006 levels by 2050."[1]

JCP&L thanks the EMP Committee for the opportunity to provide comments on the Draft EMP and the strategies it sets forth. New Jersey's clean energy goals are ambitious, and the State's utilities will need to play a crucial role in meeting them. JCP&L looks forward to serving as a partner to the Murphy Administration and the New Jersey Board of Public Utilities (the "Board" or the "BPU") as they work towards a cleaner, smarter and more resilient system for the provision of energy to the State. The road map set out in the Draft EMP calls for mass electrification, the broad deployment of distributed energy resources ("DER") throughout New Jersey, and robust energy efficiency ("EE") programs. Each of these initiatives will require substantial planning and investment by the State's utilities to ensure the continued safe and reliable operation of their systems. JCP&L appreciates the EMP Committee's recognition of this fact, as the Company's first priority is and will remain providing safe and reliable electric service to its customers.

JCP&L also appreciates the Draft EMP's recognition that the current regulatory framework for utilities in New Jersey may need some reevaluation to support the State's goals. As set forth below, JCP&L encourages the Board and other policymakers to consider using the current regulatory mechanisms in place to their fullest potential, and to remove regulatory barriers that

[1] Draft EMP at 9. The seven strategies identified in the Draft EMP are: (1) Reduce Energy Consumption and Emissions from the Transportation Section; (2) Accelerate Deployment of Renewable energy and Distributed Energy Resources; (3) Maximize Energy Efficiency and Conservation, and Reduce Peak Demand; (4) Reduce Energy Use and Emissions from the Building Sector; (5) Modernize the Grid and Utility Infrastructure; (6) Support Community Energy Planning and Action in Low- and Moderate-Income and Environmental Justice Communities; and (7) Expand the Clean Energy Innovation Economy.

may exist, in order to provide incentives for the substantial investments that are going to be required. JCP&L also encourages the Board and other policymakers to consider opportunities to align customer interests, utility interests, and the State's goals through the use of alternative regulatory mechanisms, proper incentive structures encouraging energy efficiency achievements, and utility ownership of electric vehicle ("EV") charging infrastructure, DER, and energy storage devices. By working together on these issues, JCP&L is hopeful that the Board, the State's utilities, and other stakeholders will be able to provide the maximum benefits to the State's energy consumers while meeting New Jersey's clean energy goals.

Below are JCP&L's comments on several of the strategies identified in the Draft EMP. JCP&L hopes the EMP Committee finds these comments helpful in developing the final EMP.

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

JCP&L strongly supports Strategy 1 of the Draft EMP, which is focused on developing strategies to electrify the transportation sector.[2] The Draft EMP correctly recognizes that electrification of the transportation sector, which represents nearly half of all net greenhouse gas emissions in New Jersey,[3] has the greatest potential to reduce emissions to achieve New Jersey's clean energy goals. Transportation sector emissions remain largely unregulated and, therefore, government-mandated action to provide incentives for electrification of this sector is necessary to achieve maximum deployment and the accompanying environmental benefits. In the near term, the Draft EMP includes concrete strategies to achieve New Jersey's commitment to reach 330,000 Zero Emission Vehicles ("ZEVs") on the road by 2025.[4] To have the best chance of meeting this goal, electric utilities must play a central role in the expansion of EV charging infrastructure and the development of EV programs.

Electric utilities are in an ideal position to develop and offer EV programs that will encourage more widespread EV adoption. A primary factor that is discouraging the general public from purchasing EVs is the shortage of available public charging infrastructure. This phenomenon is commonly referred to as "range anxiety." The average consumer is familiar with the ubiquitous availability of gasoline stations and expects similar EV charging infrastructure before he or she will be ready to purchase an EV. Range anxiety not only slows growth in EV ownership, but it also restricts the growth of the competitive EV charger market. Without new EV purchases, competitive EV charger companies also will not expand further into New Jersey due to the lack of potential users.

[2] As an electric utility, JCP&L focuses these comments on the electrification strategies within the EMP as opposed to strategies related to other alternative fuels, such as compressed natural gas or hydrogen.
[3] Draft EMP at 9.
[4] Draft EMP at 27-41.

As recognized by a number of other states, electric utility EV charging programs offer a solution to this problem.[5] For all of the reasons cited within this section, electric utilities are well-positioned to own and operate publicly-available chargers within their service territories and establish a baseline level of charging infrastructure, which will, in turn, reduce range anxiety for New Jersey residents. As EV purchases increase, the competitive charger market should likewise expand, which will result in more development of public charging infrastructure. Accordingly, one of the electric utility's most important roles in providing incentives for EV growth is to jumpstart the competitive market.

In addition, as recognized within the Draft EMP, the additional load associated with increased charging could result in system challenges if appropriate system planning does not occur.[6] As the main function of the electric utility is to conduct transmission and distribution system planning and operation, an electric utility's deployment of public charging infrastructure makes abundant sense. Electric utilities are in the best position to know where to install public chargers in locations that would target the most effective and efficient utilization in a manner that does not adversely impact the electric grid and minimizes cost to consumers. Further, because electric utilities are not motivated by traditional competitive market forces, electric utilities also can ensure sufficient distribution of EV chargers throughout the state and offer universal access to public chargers, including in economically challenged areas.

JCP&L's affiliated utility in Maryland, The Potomac Edison Company ("Potomac Edison"), recently launched an EV charging pilot program.[7] As part of this program, Potomac Edison will install, own, and operate 59 Level 2 and DC Fast chargers at locations across its territory at sites leased, owned, or occupied by a unit of state, county, or municipal government. Due to the budgetary and resource constraints faced by many governmental entities, this program provides an important opportunity for governmental entities to host chargers without added cost and resource concerns. Potomac Edison is currently in the process of reaching out to each of the counties and municipalities it serves to generate interest in this program and is focused on establishing public EV charger availability throughout its territory.

Utility ownership of public charging infrastructure is crucial to encourage near-term increased EV adoption throughout New Jersey. In fact, without utility ownership of public charging infrastructure, it is possible that infrastructure deployment levels will be insufficient to overcome the range anxiety barrier. California initially barred investor-owned utilities from ownership of EV charging infrastructure, but in 2014 rescinded its decision because sufficient deployment could not be reached without utility ownership and management as an option.[8] The

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[5] *Electric Transportation Biannual State Regulatory Update*, Edison Electric Institute (May 31, 2019), available at https://www.eei.org/issuesandpolicy/electrictransportation/Documents/FINAL_ET%20Biannual%20State%20Regulatory%20Update_May%202019.pdf.

[6] Draft EMP at 64.

[7] *In the Matter of the Petition of the Electric Vehicle Work Group for Implementation of a Statewide Electric Vehicle Portfolio*, Order No. 88997 (M.D.P.S.C. Jan. 14, 2019).

[8] Melton, Michelle, *Utility Involvement in Electric Vehicle Charging Infrastructure: California at the Vanguard*, Center for Strategic and International Studies (April 6, 2016), available at https://www.csis.org/analysis/utility-involvement-electric-vehicle-charging-infrastructure-california-vanguard.

importance of utility-run EV programs, many of which include utility ownership of EV chargers, has been recognized by state commissions across the country in recent years.[9]

JCP&L is also interested in pursuing public-private partnerships to ensure the further proliferation of EVs and to expand EV infrastructure growth. For example, the funds available from the recent Volkswagen settlement[10] could be granted to a municipality to establish an electrification program for its fleet vehicles. JCP&L could partner with that municipality to install public EV charging stations that are accessible to the newly electrified fleet.

Another useful possibility for electric utility-run EV programs is the offering of rebates. Electric utilities could offer rebates to all customers who purchase a qualified EV charger. In fact, Potomac Edison's EV charging pilot program also offers rebates to residential and multiunit dwelling customers.[11] To be eligible to receive a rebate, the customer must agree to install certain qualified EV chargers capable of sharing interval charging data with Potomac Edison. This data will be useful in order to develop innovative rate offerings that provide incentives for charging during off-peak times, as well as to inform distribution system planning as load growth continues due to EV charging.[12] A similar program could be developed in New Jersey.

In addition, electric utilities can play a key role in educating customers regarding EVs and EV charging stations. Given their unique relationship with their customers, electric utilities can engage in effective education and outreach programs within their territories to create greater awareness about the benefits of EVs. Due to their customer service experience and technical knowledge, electric utilities are well-positioned to answer customer questions about EVs and help to resolve their uncertainty regarding EV adoption.

The implementation costs associated with electric utility-run EV programs, including electric utility ownership of EV charging infrastructure, rebates, and customer outreach and education, can be managed most efficiently by electric utilities due to optimal planning that maximizes deployment by leveraging economies of scale. For perspective, Potomac Edison joined the other investor-owned electric utilities in Maryland to submit a joint petition for implementation of a statewide electric vehicle portfolio in January 2018, which was hailed as the second largest proposed electric utility EV program in the country featuring approximately 24,000 EV chargers.[13] Even with the size of the proposed program, the projected peak monthly residential bill impact

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[9] *Electric Transportation Biannual State Regulatory Update*, Edison Electric Institute (May 31, 2019), available at https://www.eei.org/issuesandpolicy/electrictransportation/Documents/FINAL_ET%20Biannual%20State%20Regulatory%20Update_May%202019.pdf.

[10] *See Volkswagen Clean Air Act Civil Settlement*, United States Environmental Protection Agency, available at https://www.epa.gov/enforcement/volkswagen-clean-air-act-civil-settlement.

[11] *In the Matter of the Petition of the Electric Vehicle Work Group for Implementation of a Statewide Electric Vehicle Portfolio*, Order No. 88997 (M.D.P.S.C. Jan. 14, 2019), pp. 47 and 59.

[12] *In the Matter of the Petition of the Electric Vehicle Work Group for Implementation of a Statewide Electric Vehicle Portfolio,* Case No. 9478 (Petition dated Jan. 19, 2018).

[13] Merchant, Emma, *Maryland Could Soon Have the Second-Largest EV Charging Network in the US*, Green Tech Media (Jan. 26, 2018), available at https://www.greentechmedia.com/articles/read/maryland-second-largest-ev-charging-network.

ranged between $0.25 and $0.42 among the electric utilities.[14] Considering this modest bill impact, New Jersey should likewise take advantage of this opportunity to expand its public EV charging infrastructure and accelerate EV adoption through similar electric utility-run EV programs.

To ensure that New Jersey electric utilities are in a position to launch EV programs in the near future, the BPU should authorize full and timely recovery of all costs associated with these programs through a non-bypassable surcharge. A non-bypassable surcharge promotes cost transparency, as costs collected are subject to regular filings at the Board that support the costs that will subsequently be collected. In addition, costs associated with other public benefit programs are also subject to recovery through non-bypassable surcharges, *e.g.*, the Regional Greenhouse Gas Initiative ("RGGI") recovery charge and societal benefits charge.

The importance of developing EV charging programs to accelerate EV adoption cannot be understated. Maryland joined the same Multistate Zero-Emission Vehicle Memorandum of Understanding as New Jersey, and it committed to deploying 300,000 ZEVs by 2025. M.J. Bradley and Associates conducted a study that concluded that such an EV growth rate would result in cumulative net benefits in Maryland that exceed $6.2 billion by 2050.[15] In addition, the National Renewable Energy Laboratory ("NREL") developed a methodology called the EVI-Pro tool, which evaluates what levels of charging infrastructure would be required to support a certain level of EV growth.[16] NREL ultimately determined that a significant gap exists between current levels of work and public EV charging infrastructure and the levels that will be required to support growth to 300,000 ZEVs. This conclusion provided support for a utility-owned public charging network in Maryland. The EVI-Pro tool or another similar methodology could be used in New Jersey to determine the level of additional EV charging infrastructure that would be necessary to support New Jersey's goal of 330,000 ZEVs by 2025.

These studies demonstrate that an expedited deployment of EVs in New Jersey likely will result in substantial economic and societal benefits to the State. Electric utility-run EV programs, including electric utility-owned public EV charging networks, are necessary to help jumpstart the EV market in New Jersey and to allow these benefits to accrue within the State. To provide the best chance for New Jersey to meet its goal of 330,000 ZEVs on the road by 2025, JCP&L recommends that the Board initiate a proceeding to begin evaluating proposed electric utility-run EV programs.

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[14] *Id.* The Maryland Commission ultimately scaled back certain components of utilities' EV programs and revised monthly bill impact information is not yet known.

[15] Lowell, Dana *et al.*, *Electric Vehicle Cost-Benefit Analysis, Plug-in Electric Vehicle Cost-Benefit Analysis: Maryland*, M.J. Bradley and Associates (Dec. 2016), available at https://mjbradley.com/sites/default/files/MD_PEV_CB_ Analysis_FINAL.pdf.

[16] Wood, Eric *et al.*, *Meeting 2025 Zero Emission Vehicle Goals: An Assessment of Electric Vehicle Charging Infrastructure in Maryland* (2018).

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

As an electric distribution company ("EDC"), JCP&L's primary goal during New Jersey's transition to clean energy is to preserve the integrity of the electric distribution system, pursuant to JCP&L's statutory obligation to provide safe, adequate, and proper service. The goals articulated within the Clean Energy Act[17] and the State's long-term goal to achieve 100% clean, carbon-neutral generation by 2050 will require strategic transmission and distribution system planning and significant investment to ensure the continued safe and reliable delivery of electricity.

In order to support the objectives of the State's clean energy goals, DER is expected to be deployed at an increasing rate across the State. Given electric utilities' expertise in the operation and maintenance of transmission and distribution systems, electric utilities must be integrally involved in the planning and deployment of DER to facilitate successful integration within the electric grid. As the deployment increases, investments in the transmission and distribution system, including smart grid components, will be critical to support the ongoing changes to the grid. Furthermore, it is of the upmost importance for the EDCs to be involved in the interconnection of DER in order for the EDCs to know the location of all DER interconnected to the transmission and distribution systems to have the ability to control DER and ensure the DER meets the EDCs' standards to ensure the safety, security and reliability of the transmission and distribution systems. In addition, electric utilities are well-positioned to locate, own, and operate DER and storage in a manner that is complementary to the grid and in furtherance of the EMP's clean energy goals.

The Governor has also set a target of 3,500 MW of offshore wind by 2030 to help achieve the State's clean energy goals. JCP&L believes that a coordinated and collaborative transmission planning process driven by the Board, which involves all stakeholders, will be vital to the efficient integration of offshore wind. Furthermore, the Board should look to the EDCs, as local transmission owners, to have a significant role in the design and build-out of the transmission infrastructure needed to achieve the offshore wind objectives.

a. Electric utilities must be involved in the accelerated deployment of DER to ensure deployment occurs in a manner that complements the electric grid.

The accelerated deployment of DER should continue to include a collaborative and coordinated interconnection process between the DER developer and the electric utility. Electric utilities must continue to have an opportunity to conduct a technical review of each interconnection application and identify if any system upgrades will be required. Any effort to expedite the interconnection process must be accompanied by a plan for electric utilities to recover the costs associated with the additional staff who will need to be hired to process these applications on an expedited basis. At all times, the interconnection process must prioritize the safety and reliability of the distribution system.

[17] P.L. 2018, c.17.

As the penetration of DER increases and distribution systems become more complex, the need for transmission and distribution system upgrades will increase. The DER developer who directly benefits from the development should continue to be responsible for the incremental costs associated with these upgrades as opposed to socializing these costs across all customers. As discussed further in JCP&L's comments regarding Draft EMP Strategy 5 below, electric utilities also must make comprehensive transmission and distribution system upgrades in order to accommodate the growing number of distributed generation resources across the grid. Examples of these upgrades include, but are not limited to, advanced protection devices, supervisory control and data acquisition ("SCADA")[18] additions, distribution automation, reconductoring, transformer replacements, voltage coversions, regulators and capacitor banks, advanced reclosers, production meters, Geographic Information Systems ("GIS") mapping upgrades, real-time system modeling software, advanced communication infrastructure, and the deployment of an advanced distribution management system ("ADMS") and distributed energy resource management system. These upgrades are necessary both to preserve system integrity and to support a higher level of DER deployment across the State. The adoption of policies that promote these system upgrades would likely facilitate increased DER deployment as well.

Alternative ratemaking mechanisms, as more fully described below, that provide for accelerated and contemporaneous cost recovery should be authorized for these and other distribution system investments. The Board should consider an alternative ratemaking mechanism, such as those that incorporate forward-looking test years, multi-year rate plans and annually reconcilable capital recovery riders for the collection of these costs. Such a mechanism would reduce regulatory lag and also provide transparency, as rates would be subject to Board review on an annual basis. The Infrastructure Investment Program ("IIP") could also serve as a helpful tool given its allowance for six-month recovery cycles.[19] However, the BPU needs to support the six-month recovery cycles in order to diminish regulatory lag and further encourage and attract capital investment in the State. As part of this effort, electric utilities should prepare systemwide plans for upgrading their transmission and distribution systems to enable DER proliferation. These plans likely also would include requests for additional staff (engineering, control center operators, analysts, etc.), training, information technology system upgrades, and more comprehensive resources for the commissioning, testing and robust procedures for electric utility and customer-interconnected equipment. Addressing these system upgrades from a systemwide perspective, rather than on a piecemeal basis, should better manage the costs associated with these efforts.

b. Electric utilities should be authorized to own and operate DER and storage.

In order to meet the State's short-term and long-term clean energy goals, significant DER and storage deployment is expected. Based on current levels of DER deployment in New Jersey,

[18] JCP&L uses SCADA-enabled devices to monitor and control equipment on its distribution and transmission systems. With the increased deployment of DER in New Jersey, JCP&L anticipates that there will be a need for an increased number of SCADA-enabled devices throughout its distribution system to more closely monitor the impacts that the distributed generation is having on the distribution grid and to actively control devices to react to changing system conditions.

[19] *See* N.J.A.C. 14:3-2A.

and similar to the expansion of EV charging infrastructure, it is unclear how these deployment levels would be achieved without electric utility ownership of these resources. Electric utility ownership of renewable resources is currently permissible subject to Board approval of cost recovery; however, the Electric Discount and Energy Competition Act ("EDECA") generally intends for generation to be owned by third parties.[20] The Draft EMP correctly recognizes that regulatory change should be explored if necessary to eliminate any potential barriers associated with utility-owned DER in order for New Jersey to achieve its clean energy goals.[21]

Just as with EV charging infrastructure, electric utilities are well-positioned to own and operate in-state DER. Electric utilities are able to determine where DER would be most beneficial to the grid based on the dynamic nature of the resources and can focus their deployment in those areas, thereby increasing the value of the resources and decreasing the overall costs to the customer base. Due to electric utilities' expert understanding of the operation of their transmission and distribution systems, electric utilities can operate these resources in a manner that reduces peak load, provides voltage support, reduces line loss, and generally enhances reliability and resiliency. To accelerate deployment of these resources, all costs associated with electric utility-owned DER should be recoverable on a full and timely basis through an alternative ratemaking mechanisms, as discussed below.

For similar reasons, electric utilities should be permitted to own and operate community solar projects. The community solar statute does not preclude electric utilities from owning and operating community solar projects.[22] Nevertheless, the Board adopted regulations that preclude utility ownership of these projects for the duration of the community solar pilot program.[23] In order to maximize the value of community solar projects and reach the largest number of potential community solar participants, electric utility ownership should be explicitly allowed within the permanent community solar program.

Finally, the State should allow electric utilities to own and operate additional energy storage resources. The Clean Energy Act requires the Board to "initiate a proceeding to establish a process and mechanism for achieving the goal of 600 megawatts of energy storage by 2021 and 2,000 megawatts of energy storage by 2030."[24] The Yards Creek storage facility, which is jointly owned by JCP&L and Public Service Electric and Gas Company, is the largest energy storage facility in New Jersey, with three 140 megawatt pumps/turbines that can produce 420 megawatts for approximately five hours. The State should consider all storage projects, including Yards Creek, as eligible to meet its storage-related goals.

The State also should investigate the potential benefits of battery storage, particularly in light of the anticipated growth in DER deployment. Battery storage may be integrated into the transmission and distribution system to help address increases in generation caused by large-scale

[20] N.J.S.A. 48:3-98.1; N.J.S.A. 48:3-49, *et seq.*
[21] Draft EMP at 48.
[22] N.J.S.A. 48:3-87.11.
[23] N.J.A.C. 14:8-9.3(c)(4).
[24] N.J.S.A. 48:3-87.8(d).

DER deployment. Electric utilities are in the best position to evaluate where such deployments can provide the most benefit to the system and their customers at the least cost. Battery storage may also be coupled with DER to benefit EDCs' transmission and distribution systems by providing frequency regulation to stabilize the grid during contingencies, or with DC Fast chargers to offset the impact of DC charging during peak periods. The optimal amount of energy storage to be added in New Jersey is dependent on the unique needs of each electric utility. The key to maximizing this benefit for electric utilities' customers is the strategic integration of energy storage technologies, which electric utilities are in the best position to determine.

c. Electric utilities should have a significant role in the design and build-out of the transmission infrastructure needed to achieve the offshore wind objectives.

As the Board moves towards achieving the Governor's target of 3,500 MW of offshore wind by 2030 and considers solicitations beyond the initial 3,500 MW target, JCP&L believes that a coordinated and collaborative transmission planning process driven by the Board, which involves all stakeholders, will be vital to the efficient integration of offshore wind.

JCP&L anticipates that the transmission buildout necessary to facilitate the development of offshore wind will be a significant undertaking. This effort will require careful planning as well as critical, innovative thinking to efficiently and economically support the Governor's 2030 target and initiatives beyond 2030. Certain electric utilities, including JCP&L, own significant onshore transmission facilities adjacent to the Atlantic Ocean and have extensive experience in planning, designing, and building transmission infrastructure. These electric utilities are thus uniquely positioned to help New Jersey implement its offshore wind goals.

JCP&L supports a non-discriminatory open access transmission system to facilitate competition for offshore wind, optimize the use of existing transmission infrastructure and deliver a cost-efficient, scalable solution to support current and future offshore transmission goals. Such a solution will ensure that interconnection points optimize the use of existing infrastructure and rights-of-way, reducing the overall cost burden on ratepayers and minimizing the impact on the environment. It will also provide a level playing field for all developers looking to interconnect.

JCP&L considers a coordinated transmission plan a far more efficient and effective option than building out individual radial lines for each offshore wind farm. Use of a coordinated transmission plan will ensure an economic, reliable and operationally efficient interconnection with the existing onshore transmission facilities by reducing unnecessary redundancies, optimizing the size and location of offshore substations that could serve multiple wind farms, and reducing the costs of making incremental onshore transmission upgrades. Furthermore, a planned regional transmission system that future offshore wind projects could interconnect with may provide substantial cost savings from reduced construction cycles and lower environmental impacts.

While in the near-term, individual wind farms may minimize costs by using a patchwork of offshore substations and radial lines, this approach will be less efficient for expected and continued future offshore wind development. As the Board and Murphy Administration recognize

in the Draft EMP, they are tasked with identifying least-cost pathways to transition to clean energy.[25] Therefore, JCP&L encourages the Board and Murphy Administration to collaborate with the electric utilities and other stakeholders in developing a coordinated transmission plan to achieve the offshore wind targets in a cost-efficient manner with the lowest possible environmental impact. The electric utilities, as local transmission owners, should have a significant role in the design and build-out of the transmission infrastructure needed to achieve the offshore wind objectives as they are in the best position to leverage existing utility transmission assets and develop an optimal solution to integrate offshore wind.

To that end, JCP&L looks forward to engaging in a coordinated, holistic planning effort for the offshore grid to optimize the use of existing onshore transmission infrastructure and rights-of-way and to ensure that the offshore infrastructure developed is "right sized" to meet the current 2030 objectives and scalable enough to meet initiatives beyond 2030.

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

The Clean Energy Act established extremely ambitious EE savings goals for utilities in New Jersey. If these goals are going to be met, the State's utilities will need to implement a broad array of comprehensive EE programs. JCP&L is committed to meeting these goals and providing successful and cost-effective EE programs to its customers. As the Draft EMP notes, however, there are various important questions related to how EE programs will be implemented in New Jersey that still must be answered, including the respective roles of the utilities and the Office of Clean Energy ("OCE"), the timeline, requirements and process for implementing utility-run EE programs, and how to properly provide incentives for EE investment in order to meet the State's goals. Furthermore, the Draft EMP raises questions regarding how to provide incentives for Light Emitting Diode ("LED") street lights. JCP&L encourages the Board to answer these and other important questions through planned stakeholder processes.

a. The Board should clarify the roles of the utilities and the OCE with regard to implementation of EE programs.

To facilitate the success of the Clean Energy Act's EE objectives, JCP&L agrees that it will be necessary for the State to "determine the role of utilities in energy efficiency, provide clear strategic direction, and support the utilities' efforts to achieve reduction targets."[26] As JCP&L has stated in prior comments during the EMP process, the Company believes that the OCE has a critical new role to play in supporting the utilities' achievement of the goals set forth in the Clean Energy Act. This role includes coordination of successful planning and integrated forecasting, tracking, reporting and assessment of energy savings from the broad range of sources contemplated by the Act, including such sources as building codes and efficiency standards.

[25] Draft EMP at 98.
[26] Draft EMP at 60.

With respect to utility implementation of EE programs as OCE's programs continue to be offered, the potential for customer confusion, program competition, and market inefficiencies are significant risks to the utilities achieving their targets. In light of these risks and the utilities' responsibilities under the Act, JCP&L does not believe that the ramp up of OCE's Clean Energy Program contemplated by the Draft EMP is appropriate at this time. Rather, JCP&L recommends that the Board work with stakeholders to determine an appropriate role for OCE's programs during the transition to and ramping up of utility-run EE programs. Once utility-run EE programs are implemented, JCP&L recommends that the OCE assume the supportive role discussed above.

JCP&L is committed to providing successful and cost-effective EE programs to its customers by leveraging the procedures, systems, and expert staff already in place due to the implementation of successful programs by its affiliated utilities in other jurisdictions. Statewide programs, such as OCE's Clean Energy Program, may seem to be less administratively burdensome on their face – with only one office running programs for the entire state. However, a one-size-fits-all approach may not be most effective. Further, several utilities in New Jersey already offer successful programs and many, including JCP&L, have affiliates with extensive and successful energy efficiency programs already in place. Allowing the utilities to leverage and expand existing operations within and into New Jersey, rather than attempting to initiate new, or expand existing statewide offerings, will help capture synergies and innovative program designs that can help minimize overall costs and ensure the targeted cost-effective EE programs for each individual utility's respective customers.

To the extent the OCE does continue to administer programs going forward, there needs to be a clear delineation of roles and responsibilities between the utilities and the OCE for administration of programs. This includes an understanding of how savings from each program will be applied towards the achievement of each utility's Quantitative Performance Indicators ("QPIs") established by the Board pursuant to the Clean Energy Act. Such clarity will be needed to avoid duplication of efforts and the potential for market confusion, as well as to hold the utilities harmless for factors outside their control. Extensive staff and stakeholder collaboration will be required to ensure that delineation and application of savings is accomplished in a manner that is fair to the utilities and consistent with the requirements of the Clean Energy Act.

b. The Board should set a reasonable timeline for utilities to file EE Plans.

JCP&L supports the Board's efforts to work with stakeholders to further develop the framework for utility-run EE programs under the Clean Energy Act. In addition to the role utilities and other parties will play in implementing EE programs, the Draft EMP notes several other important issues that still need to be worked out prior to the utilities developing and filing their EE plans. These include "review[ing] and clarify[ing] the processes for utilities to submit proposed programs and report program successes" and "establish[ing] the structure for cost-recovery and the assessment of incentives and penalties."[27] Additionally, the Draft EMP notes that the Energy Efficiency Advisory Group "will provide engagement opportunities for stakeholders in the

[27] Draft EMP at 60.

consideration of critical issues such as program administration, eliminating redundancy between state and utility-run programs, reviewing evaluation, measurement, and verification processes, and establishing program filing timelines and reporting requirements."[28] Finally, the Draft EMP indicates that the Board "will adopt a methodology for filing [utility EE programs] in fall 2019."[29]

JCP&L appreciates the opportunity to participate in further discussions of these critical issues. The Board's guidance on these matters, following stakeholder input, is going to be necessary for the utilities to develop their EE programs to meet the Clean Energy Act's goals in the most cost-effective manner possible. As such, JCP&L encourages the Board to provide sufficient time for both these discussions and for the utilities to develop and file plans after decisions on these and other important issues have been made.

c. The Board should properly provide cost recovery and incentives for EE Programs.

Cost recovery is an important component of utility efforts to offer EE measures. The Environmental Protection Agency's National Action Plan for Energy Efficiency, in a publication titled "Aligning Incentives with Investment in Energy Efficiency," discusses three forms of cost recovery and incentives that are beneficial for assuring proper alignment of utility and customer interests: (1) timely program cost recovery; (2) lost revenue recovery; and (3) performance incentives, such as shared savings mechanisms.[30] The Clean Energy Act also touches on each of these issues and requires the Board to establish mechanisms to address them.

JCP&L supports the alignment of utility and customer interests through the use of a mechanism allowing for lost revenue recovery and shared savings, which provides added encouragement for utilities to strive to attain savings targets. Shared savings mechanisms further support prudent and cost-effective management of programs while maximizing net benefits within budgets.

As it relates to rate design, JCP&L recommends the Board consider adopting a recovery mechanism for EE programs that consists of a non-bypassable surcharge based on a forward-looking formula that is subsequently reconciled annually based on the program's costs and revenues from the prior year. This reconciliation can be completed each year through the annual petition contemplated by the Clean Energy Act. This surcharge should allow for the timely recovery of program costs, lost revenues, and performance incentives. By implementing the surcharge in this fashion, the Board can ensure that adequate funds exist to successfully promote programs to best facilitate efficiency savings attainment.

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[28] *Id*.

[29] *Id.*

[30] *See* "Aligning Utility Incentives with Investment in Energy Efficiency: A Resource of the National Action Plan for Energy Efficiency," United States Environmental Protection Agency (Nov. 2007), *available at* https://www.epa.gov/sites/production/files/2015-08/documents/incentives.pdf.

Finally, it is important that the Board have discretion in the assessment of any penalties to ensure that utilities are not penalized for factors beyond their control. As an example, to the extent savings from non-utility programs or initiatives are underperforming, no penalties should apply. This is consistent with the Clean Energy Act's requirement that the Board consider appropriate factors to "ensure that the public utilities incentives or penalties . . . are based upon performance."[31] In furtherance of this aim, the Board should keep in mind that it has authority under the Clean Energy Act to set QPIs at "reasonably achievable" levels, including at levels that are below the minimum annual savings contemplated by the Act.[32] It is common industry practice to provide incentives for deployment of EE programs by rewarding achievement of threshold savings that are below statutory savings targets.[33] Consistent with this industry practice and the discretion given to the Board to set QPIs at "reasonably achievable" levels, JCP&L recommends that the Board adopt QPIs and an incentive mechanism that allows utilities to begin receiving incentives once a certain threshold percentage of their savings targets are achieved.

d. The Board should consider an orderly transition to LED street lights.

The Draft EMP indicates that the Board's ultimate goal is to provide incentives for "mass implementation" of LED street lights.[34] LED street lights provide potential advantages over other light sources, such as improved lighting quality, reduced carbon emissions, and utility maintenance savings. To maximize the benefits associated with this objective, JCP&L believes that the Board and the electric utilities need to work collaboratively during the workshop and stakeholder process to ensure deployment is successful and efficient for customers. Because JCP&L as well as the other electric utilities have a statutory and regulatory obligation to provide safe, proper, and adequate electric service to their customers,[35]the Board needs to ensure that a "mass implementation" of LED street lights does not strain utility resources tasked with the electric utilities' day-to-day operations and maintenance. The Board will also need to work collaboratively with the utilities to address any system changes that may be needed to meet the Board and Murphy Administration objectives. For example, JCP&L's back-office processes and work flow presently are not automated to support large-scale, accelerated LED street light conversions. "Mass implementation" of LED street lights will require significant modifications to IT systems as well as an increase in back-office administration. Therefore, JCP&L encourages the Board and Murphy administration to promote an orderly transition to LED street lights, which would likely be achieved by including a limit on the number of conversions to LED street lights on an annual basis, should some type of a deployment mandate be contemplated, in order to reduce the risk of imposing undue burdens and strain on utility resources.

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[31] *See* N.J.S.A. 48:3-87.9(c).
[32] *See id*.
[33] *See* American Council for an Energy-Efficient Economy (ACEEE), "Beyond Carrots for Utilities: A National Review of Performance Incentives for Energy Efficiency," at 10-14 (noting that "the most common thresholds for shared net benefits [incentive] mechanisms are in the range of 70-85% of energy savings targets" and providing minimum threshold levels for other types of EE incentive mechanisms, many of which are below 100 percent of savings goals).
[34] Draft EMP at 63.
[35] *See* N.J.S.A. 48:2-23.

Replacement of existing street lights with LED street lights results in stranded investment for the electric utilities. Many of the existing street lights that would be replaced through a comprehensive retrofit program will not be fully depreciated when removed from service. Thus, it will be important for the Board to work with the electric utilities to develop a regulatory policy to address full and timely recovery of any stranded investment associated with the existing street lights. The Board should consider a separate cost recovery mechanism, including appropriate carrying charges to address stranded costs associated with existing street lights. The Board and the Murphy Administration may also want to consider, *inter alia*, an exit fee (i.e., full or partial contribution toward the undepreciated value of the existing street light made by the customer at the time of removal) to recover or reduce stranded investment.

Because each of the electric utilities in New Jersey have unique service territories and systems, a one-size-fits-all approach for LED deployment would not be effective or appropriate. JCP&L also encourages the Board to refrain from requiring a uniform tariff for LED street lights for each of the electric utilities. Instead, the Board should explore having the electric utilities propose a LED street light program as part of its energy efficiency and peak demand reduction programs that each electric utility must submit under the Clean Energy Act.

The Company encourages the Board to further consider the potential role of utilities in the deployment of advanced street lighting controls to increase the benefits of LED technology. For instance, JCP&L's affiliated utilities in Ohio and Pennsylvania have been contacted by municipalities to partner with the local electric utility on "smart city" initiatives, including smart LED street lights. Some cities have proposed that the electric utility install LED street lights and network communications systems to connect physical devices, including the street lights. Such smart city networks allow the physical devices connected to the network to be managed more efficiently, lowering electric bills and reducing carbon dioxide emissions by enabling the dimming capabilities of the LED street lights. Further, communications with the street light allows for proactive maintenance. The application of LEDs in a smart city context should be explored before a "mass implementation" of LED street lights to ensure that the LED street lights are deployed in the most cost-effective manner and to define the role of the electric utility in the deployment of smart LEDs.[36] JCP&L would gladly assist the Board in considering LED street light deployment in such a broader context.

The Company believes that the Board should take a pragmatic approach in addressing the issues discussed above, and thus JCP&L supports the Board's proposal to conduct a workshop as well as a stakeholder process to work through these issues in a collaborative manner, again with the objective to ensure that there is an orderly, successful and efficient transition to LED street lights. Given that the implementation of recommendations included in the EMP are not subject to the same types of deadlines often found in legislation, JCP&L encourages the Board to establish stakeholder processes around this and other matters that allow for appropriate stakeholder input and collaboration to support this objective.

[36] It is not clear whether a legislative change is necessary for electric utilities to provide communications services to smart street lights.

Strategy 5: Modernize the Grid and Utility Infrastructure

As discussed above, the Draft EMP calls for a substantial increase in the deployment of DER throughout New Jersey. New Jersey's utilities, especially their EDCs, will need to make substantial investments in modernizing their grids to support this increased deployment and ensure the continued safe and reliable operation of their systems. JCP&L encourages the Board to consider allowing the State's utilities to introduce pilot programs to explore best practices and opportunities for a transition to non-traditional distribution grid planning strategies. JCP&L also encourages the Board to work closely with the State's utilities and other stakeholders to utilize the regulatory mechanisms that are in place, and identify alternative ratemaking mechanisms, to provide incentives for the substantial investment in the utilities' systems that will be necessary to meet the State's clean energy goals.

a. Electric utilities should have flexibility in developing integrated distribution plans and implementing grid changes necessary to support bi-directional power flow.

JCP&L appreciates the Board and EMP Committee's recognition that significant planning efforts will need to be undertaken and significant investments will need to be made in the utilities' distribution systems to support the level of DER deployment envisioned by the EMP. In addition to discussions in New Jersey, JCP&L and the other FirstEnergy utilities have been working with the Department of Energy ("DOE") and the Electric Power Research Institute ("EPRI") to develop a Grid Modernization Guidebook[37] as part of the Next Generation Distribution System Platform (DSPx) Phase 2 project. Through these efforts, the participants hope to develop a standard path forward for grid modernization investments both in New Jersey and across the country. JCP&L looks forward to sharing the insights it has gained through these efforts with the Board and other stakeholders as the collaborative process of developing Integrated Distribution Plans ("IDPs") continues.

Traditionally, the distribution grid has been designed to operate as a radial system. In order for a radial grid to operate, there is a balancing that occurs to maintain proper steady state voltage and to ensure proper overcurrent protective device coordination. The significant increase in DER penetration contemplated by the Draft EMP will require bidirectional power flow, necessitating EDC upgrades to current protection equipment and schemes to ensure the continued safe and reliable operation of the distribution system and to avoid degradations in circuit performance and power quality. For example, to support this more modern grid, customers will benefit from the building of circuit ties and reconductoring of circuits to develop a looped system. Such a system can more readily enable bi-directional power flow from distributed generation sources and provide added reliability benefits that are not available with a radial system. Additionally, substation enhancements and the addition of SCADA points are necessary to support this modernized grid.

[37] The Grid Modernization Guidebook will guide investments in the foundational infrastructure needed to realize integrated operations of reliability and resiliency and emerging grid technologies for the benefit of the customer.

These are just a few examples among many of the types of investments that will be necessary to support the changes contemplated by the Draft EMP.[38]

While New Jersey's utilities should continue to be responsible for determining the investments necessary to ensure the safe and reliable operation of their distribution systems, the Board and other policymakers will have important roles to ensure that investments are cost effective and that deployment is well planned and coordinated to meet New Jersey's ambitious clean energy goals. Chief among these roles is ensuring that electric utilities are provided full and timely recovery to make these investments. New Jersey already has in place the IIP rules[39] that provide for accelerated cost recovery of certain utility infrastructure investments. JCP&L encourages the Board to use the IIP mechanism or alternative ratemaking mechanisms policymakers may put in place, to their full potential to encourage the investments necessary to meet New Jersey's goals.

b. The Board should evaluate the results of the optimal voltage study before requiring EDCs to invest in Volt/Var Technologies.

As the Draft EMP notes, the Board has ordered the EDCs in the State to study the potential cost and benefits of deploying voltage optimization technology and strategies in their respective territories.[40] JCP&L agrees with the Draft EMP's recommendation to wait until the results of this study are available before the Board considers requiring the EDCs to implement Volt/Var Controls. JCP&L recognizes that significant investments in the utilities' distribution systems will be necessary to provide the supporting infrastructure to achieve New Jersey's clean energy goals. The cost and effectiveness of Volt/Var measures are highly dependent on each EDC's systems and the purpose for which the measures are used.[41] The analysis to be undertaken will assist the Board and the EDCs with determining what Volt/Var investments, if any, have the potential to benefit customers based on the characteristics of each EDC's system.

c. The Board should carefully evaluate Non-Wires Solutions.

JCP&L believes that the development of non-wires solutions ("NWS"), as suggested in the Draft EMP, will provide an opportunity for utilities and the Board to work together on innovative ideas and to develop alternative recovery mechanisms that provide incentives for non-traditional investments. JCP&L should be given the opportunity to propose pilot programs to identify approaches, best practices, and opportunities to transition from traditional planning to an approach that includes NWS. In addition to NWS specifically, these pilot programs will give utilities the opportunity to also consider alternative investment strategies that are designed to reduce long-term costs by replacing existing infrastructure with higher-specification equipment, which should

[38] Additional examples of required upgrades are outlined above in JCP&L's comments on Strategy 2.
[39] *See* N.J.A.C. 14:3-2A.
[40] Draft EMP at 101.
[41] *See, e.g.,* Jared Green, et al., *Determining the impacts of volt/VAR optimization: a tale of two approaches*, available at https://www.elp.com/articles/powergrid_international/print/volume-20/issue-8/features/determining-the-impacts-of-volt-var-optimization-a-tale-of-two-approaches.html (last visited Aug. 9, 2019).

reduce line losses and reduce demand on the distribution and transmission systems on a continuing basis. As with the Volt/Var technologies discussed above, the relative cost effectiveness of NWS investments compared to the benefits of traditional investments must be carefully considered prior to mandating them. A mandate would be impractical without appropriate time to conduct pilot programs and determine the best way to resolve issues. This pilot approach will also be more productive as it will allow for increased collaboration, development of creative ideas, and the opportunity for the Board to evaluate and consider policy recommendations.

Further, a non-traditional approach to transmission and distribution planning begs for a non-traditional approach to cost recovery. Undoubtedly, the transition to a nontraditional planning approach that includes NWS represents increased risk for the utility and its shareholders. Therefore, JCP&L encourages the Board to explore more progressive ratemaking in support of these substantial investments. As discussed above, Alternative Ratemaking Mechanisms ("ARM") include a host of designs which allow a utility to recover costs outside of a traditional base rate case or provide for periodic adjustments to tariffs without a cost of service review. Examples of ARM include: (1) forward-looking test years; (2) revenue decoupling; (3) rate riders; (4) multi-year rate plans; and (5) formula ratemaking. Properly designed ARMs have the potential to: (1) reduce regulatory lag; (2) provide additional incentives to utilities to operate efficiently; (3) provide a mechanism to target investment in areas which are considered a high priority for investment; (4) provides increased transparency; and (5) reduce the costs of regulatory proceedings for both the Company and the Board.

d. The Board should consider modifying rate structures to align with State energy demand goals.

As the Draft EMP notes, "New Jersey is embarking on a significant transition in its energy system, including aggressively pursuing energy efficiency and conservation measures, modernizing the grid, decentralizing electricity production, decarbonizing the energy system, and adding significant additional load to the grid through electrification efforts."[42]

Recognizing the inherent disincentives that traditional utility ratemaking presents for utilities, the Clean Energy Act addresses the so-called "throughput incentive" as it relates to energy efficiency by allowing utilities to recover "the revenue impact of sales losses" resulting from implementation of energy efficiency programs.[43] It also encourages utilities to invest in their energy efficiency programs by providing for incentives if QPIs are met.[44] When put in place, these non-traditional recovery and incentive mechanisms will help support the State's energy efficiency and clean energy goals. In addition, New Jersey has experience with recovery mechanisms that address the impact of sales losses for New Jersey Natural Gas and South Jersey Gas companies for a decade.

[42] Draft EMP at 79.
[43] N.J.S.A. 48:3-87.9(e)(1).
[44] N.J.S.A. 48:3-87.9(e)(2).

New Jersey can also look to certain mechanisms already in place to encourage the type of utility grid investments that will be necessary to modernize electric transmission and distribution infrastructure to support greater deployment of DER and storage. The Board's IIP "provide[s] a rate recovery mechanism that encourages and supports necessary accelerated construction, installation, and rehabilitation of certain utility plants and equipment."[45] The Board's IIP regulations, which include provisions that allow for semi-annual rate recovery, can serve as an effective means to encourage utility investment if fully utilized. Additionally, other alternative ratemaking mechanisms allowing for accelerated recovery of energy efficiency and clean energy related investments should be considered by the Board and policymakers as a means to promote the investment that will be needed to meet the State's ambitious goals. In recognition of the expansive spending and increased risk these initiatives represent, the Board should also provide an incentive for utilities to invest in these items by providing enhanced returns on these investments.

The Draft EMP proposes time-of-use rates as a potential mechanism for encouraging managed demand and load shifting by customers.[46] Currently, JCP&L has time-of-use options in place that are available to its residential, commercial and industrial customers. For residential customers, JCP&L offers time-of-use rates that are seasonally differentiated (summer/winter) and time-of-day differentiated (on-peak/off-peak) for both distribution service (on-peak/off-peak differentiation during summer season only) and generation service under Basic Generation Service ("BGS"). With respect to commercial and industrial ("C&I") customers, all are eligible for hourly priced generation service under BGS, at their election. C&I customers with billing demands greater than 500 kW taking BGS service may only subscribe for real-time pricing generation service. For C&I customers with billing demands greater than 750 kW, distribution charges are also billed using seasonally (summer/winter) differentiated rates.

BGS is meant to be a basic or default generation service for customers that do not wish to or cannot avail themselves of merchant offerings. JCP&L believes that competition for generation service driven by consumer demands and preferences will ultimately drive alternative rate designs as well as other bundled products and services. Therefore, JCP&L believes that it is not necessary for the time-of-use options already available to customers through BGS to be expanded at this time.

With respect to distribution rates, distribution costs are, for the most part, fixed costs and do not vary materially in relation to throughput. Distribution costs are most appropriately classified as customer and demand costs (non-coincident demand) and recovered through customer charges and demand charges. Distribution facilities installed to serve individual premises (i.e. distribution transformer, service, etc.) represent an investment in electric service capacity specific to each individual premises, regardless of the time of year or day when the peak billing demand is established. Time differentiated rates for distribution are not justified based on cost causation principles, but instead are designed to create price signals where the cost to provide the underlying

[45] N.J.A.C. 14:3-2A.1(b).
[46] Draft EMP at 79.

service is not time-differentiated. Because distribution costs represent a relatively small component of the overall monthly bill, JCP&L does not believe that further complicated, time differentiated distribution rates beyond those already offered by the Company will contribute significantly to achieving the goal of shifting peak demands. Rather, JCP&L believes that its current distribution base rate designs provide adequate seasonal and on-peak/off-peak price differentiation to achieve this end.

Lastly, with respect to valuing distributed resources, such as solar and/or storage, JCP&L believes that applying a nodal pricing model to determine locational value of capacity on the distribution system will prove to be overly complex and costly for the value received, especially considering the relatively minor component of distribution charges within the overall electric bill. JCP&L believes that there are empirical models that are more practical and cost-effective to value distributed resources.

e. Rollout of Advanced Metering Infrastructure in New Jersey should be evaluated on an EDC specific basis.

The Draft EMP recognizes the Board's present moratorium on pre-approval of Advanced Metering Infrastructure ("AMI") and "smart meters" until the completion of Rockland Electric Company's ("RECO") Cost Benefit Analysis ("CBA") for its Advance Metering Infrastructure ("AMI") deployment.[47] The Draft EMP further notes that the BPU should consider issuing recommendations to utilities for accelerated AMI installation upon completion of the RECO CBA as well as the final EMP.[48] JCP&L agrees that before the Board makes a decision regarding state-wide deployment of smart meters, it should evaluate the costs of the various components of AMI as well as the benefits that AMI may provide. This evaluation should occur on an EDC specific basis, and AMI deployment should not be required using a "one-size-fits-all" approach. As the Board and Administration is aware, each EDC has a unique service territory as well as unique system characteristics.

As JCP&L explained in the CBA[49] that it provided to the Board as part of the 2018 Storm Order[50], JCP&L is part of FirstEnergy Corp.'s ("FirstEnergy") corporate-wide initiative to enhance the current outage management system ("OMS") used by each of its ten electric distribution companies. The enhancement of the OMS, which is part of an overall Advanced Distribution Management System ("ADMS") is projected to be operational in 2022. Once the Company implements this system, JCP&L will be better able to evaluate the additional programing needed to fully integrate AMI. If the Board orders state-wide deployment of smart meters, it will be important to allow JCP&L maximum flexibility in integrating any future deployment of AMI

[47] Draft EMP at 78.
[48] *Id*.
[49] *In re Board's Review of Major Storm Events of March 2018*, BPU Docket No. EO18030255, RQ-BPU-2 (Submitted on January 31, 2019).
[50] *In re Board's Review of Major Storm Events of March 2018*, BPU Docket No. EO18030255, Order at p. 13 (Order effective August 4, 2018).

with the updated ADMS and OMS so that deployment could be accomplished efficiently and effectively.

The Draft EMP notes that because "smart meters have reached cost parity with traditional meters and the utilities have established annual meter replacement cycles, NJBPU should consider future replacement of meters with traditional meters rather than smart meters to be an imprudent investment."[51] In FirstEnergy's experience and based on its research, cost parity has not been achieved between traditional meters and smart meters. Several of JCP&L's affiliated companies have already embarked on smart meter projects[52] and FirstEnergy's experience is that a smart meter costs approximately five times more than a traditional meter for a typical residential meter. Furthermore, JCP&L cautions the Board on requiring utilities to replace traditional meters with smart meters before the communication network is installed. Based on FirstEnergy's experience in Pennsylvania, it is important to note that smart meter firmware can become obsolete by the time the communications network is installed. This could result in an inability to update the smart meter with new firmware over the communication network. A manual visit to each meter may be required to update the firmware and vendor support of past versions of firmware is limited. Installing smart meters years before a communication network is in place can create compatibility issues as well as additional stranded costs. Therefore, JCP&L urges the Administration to reconsider the notion that it would be "imprudent" to replace traditional meters with smart meters on a piecemeal basis.[53]

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[51] Draft EMP at 78.

[52] As a result of mandates established in Pennsylvania's Act 129 of 2008, JCP&L's sister companies in Pennsylvania (Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company, and West Penn Power Company) (hereinafter the "PA Companies")) began smart meter deployment and the related infrastructure build out in 2014 and, currently have over two million smart meters and related infrastructure operational in Pennsylvania. Furthermore, in Ohio, Cleveland Electric Illuminating Company ("CEI"), one of JCP&L's three Ohio sister companies, implemented an AMI project to improve operating performance of the electric system and encourage customer participation in controlling electric demand through various programs, including a time-of-use pilot program (hereinafter, "Ohio Pilot"). Approximately 34,000 smart meters are currently deployed in CEI's service territory on a pilot basis. In addition to the Ohio Pilot, and in response to Ohio's PowerForward Initiative, JCP&L's sister companies in Ohio (Ohio Edison Company, CEI, and the Toledo Edison Company) filed a stipulated agreement with the Public Utilities Commission of Ohio ("PUCO"), which was approved by PUCO on July 17, 2019, that will, among other things, allow for the installation of 700,000 smart meters, along with supporting infrastructure, in selected locations across the three Ohio companies' service territories. Additional smart meter deployments in these service territories are anticipated in the future. *In re Filing by Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company for a Grid Modernization Plan*, *et al,* Case Nos. 16-481-EL-UNC, 17-2436-EL-UNC, 18-1604-EL-UNC, 18-1656-EL-ATA, Opinion and Order (PUCO July 17, 2019).

[53] Moreover, JCP&L submits that implementing smart meters via the annual meter replacement cycle, or on an accelerated schedule, is not necessary to achieve the near-term improvements envisioned for the State's near-term EE objectives. JCP&L's affiliate utilities in other jurisdictions have successfully run EE programs that do not currently rely on the use of AMI. Programs and strategies used in those jurisdictions can be adopted and used to increase the EE savings being achieved in New Jersey. Further, while the savings targets contemplated by the Clean Energy Act are aggressive, the Act does not require that electric savings reach two percent annually until five years after the utilities' programs have begun to be implemented.

The Board and the Murphy Administration should also recognize the magnitude of this type of investment for the utilities and allow for a contemporaneous rate recovery mechanism, to ensure full and timely recovery of all of the AMI investments and associated costs while avoiding regulatory lag on such a major investment. JCP&L recommends that the Board and Murphy Administration consider the manner in which other jurisdictions addressed cost recovery, *e.g.*, Pennsylvania Public Utility Commission ("PA PUC") and Public Utilities Commission of Ohio ("PUCO"). Specifically, the PA PUC and PUCO have allowed all costs incurred (as well as the crediting of benefits) to occur through a non-base rate rider that is updated periodically.[54] The Board already has a similar mechanism in place and should evaluate the utilities investing in AMI through the IIP rules or utilize other alternative ratemaking mechanisms for recovery of these costs.[55]

If the Board and the Murphy Administration believe that it is cost-effective for the New Jersey utilities to comprehensively deploy AMI, then New Jersey should also allow utilities to leverage AMI work completed in other states. For instance, allowing utilities who already have AMI deployment in other states to use existing AMI infrastructure in New Jersey will allow for consistency; minimize duplication of efforts, systems and personnel; leverage economies of scale; reduce inventory; and create a more seamless system.

Another area of concern that has arisen in other states is whether programs will require customers to opt in to, as opposed to opt out of, smart meters. In the RECO proceeding, the BPU approved an opt-out smart meter installation plan.[56] As the Board is aware, an opt-out program will create higher costs; therefore, any customers who opt out of having a smart meter installed should be required to pay an AMI opt-out fee, as addressed in the RECO proceeding.[57]

f. Electric utilities must be provided the flexibility to undertake transmission projects in order to meet mandated requirements, to protect the integrity of the electric grid, and to meet New Jersey's goals for 100% clean energy.

The Clean Energy Act, coupled with the Draft EMP, details a commitment to moving towards a 100% clean energy future for New Jersey. As discussed above, this commitment will be met through aggressive electrification efforts, *e.g.*., deployment of 600 MW of energy storage by 2021 and 2,000 MW by 2030; providing incentives for 330,000 light-duty electric vehicles on the road by 2025; establishing 3,500 MW of offshore wind by 2030; and a 50 percent renewable portfolio standard by 2030. As the Board and Murphy Administration recognize, these efforts will add significant additional load to the transmission and distribution grids and require deployment of new technologies and smart infrastructure. Significant investment to modernize both electric

[54] *Id*. and *Joint Petition of Metropolitan Edison Company, Pennsylvania Electric Company and Pennsylvania Power Company for Approval of Smart Meter Technology Procurement and Installation Plan*, Docket No. M-2009-2123950 (Order entered August 3, 2010)
[55] *N.J.A.C.* 14:3-2A.
[56] *In the Matter of the Petition of Rockland Electric Company for Approval of an Advance Metering Program; and For Other Relief*, BPU Docket No. ER16060524 (Order effective September 2, 2017).
[57] *Id.*

distribution and transmission infrastructure will be essential to ensure that these commitments can be achieved in an efficient, reliable and resilient manner. JCP&L appreciates the Draft EMP recognizing, as a given, that there will be "future needs to increase transmission as the state modernizes the grid, as in-state electricity generation increases, and as transportation and building electrification add more stress to the grid…"[58]

While the Draft EMP notes that New Jersey has seen a significant growth in transmission investment, further investment is critical in order to maintain the existing transmission system, given current demands and aging of infrastructure. Such ongoing investments are needed to ensure reliability, harden infrastructure to address the impact of increasingly severe weather, guard against cybersecurity threats, and increase resiliency. As noted in the Draft EMP, additional investments in the transmission system will be needed to support the level of electrification and emissions reductions called for in the Draft EMP.[59] As these infrastructure investments will be in addition to the investments already required to maintain the distribution and transmission system, JCP&L welcomes the support of the Administration for the additional transmission infrastructure investments necessitated by the goals set forth by the Clean Energy Act and the Draft EMP.

The Draft EMP states: "As New Jersey boldly pursues its clean energy objectives and advances grid modernization, NJBPU must have the ability to exercise its regulatory jurisdiction [over transmission] to the fullest extent to ensure that projects are necessary, and the rates paid by ratepayers are just and reasonable."[60] As the Board is aware, and as described below, there are means by which state regulatory agencies currently participate in the PJM Interconnection, LLC ("PJM") review of both baseline and supplemental transmission projects.

PJM, in its capacity as the Regional Transmission Organization and regional Transmission Planning Coordinator, Transmission Planner, and Transmission Operator, identifies the need and timing for mandatory transmission system upgrades as part of its reliability planning, economic planning, and interconnection planning processes. The PJM planning process is an 18-month cycle starting in September of every calendar year. The process ultimately produces a Regional Transmission Expansion Plan ("RTEP") that is approved by PJM's Board of Managers. The RTEP identifies transmission system upgrades and enhancements to provide for the operational, economic, and reliability requirements of PJM customers. The RTEP consists of system upgrades produced from one or more of four planning processes: reliability planning; economic planning; interconnection planning[61]; and local planning. The RTEP process is open to PJM members, regulatory agencies such as the Board, and any other interested parties. Furthermore, the RTEP process is transparent by ensuring that regular stakeholder meetings and communications occur.

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[58] Draft EMP at 76.
[59] Draft EMP at 75-76.
[60] Draft EMP at 76.
[61] Network upgrade projects are identified as part of the interconnection planning process. Generation resources and merchant transmission projects in PJM proceed through a series of studies to ensure the reliability of the transmission system is not adversely impacted by the interconnection of their project. For any violations identified through the interconnection analysis, a network upgrade project is developed to address the violation. The network upgrade projects are paid for by the developer of the interconnection project.

Baseline projects[62] are identified as part of the reliability planning and economic planning analysis. The analysis consists of a comprehensive series of detailed studies that are designed to satisfy the reliability planning criteria of PJM and the applicable transmission owners, as well as North American Electric Reliability Corporation ("NERC") and ReliabilityFirst Corporation ("RF") reliability standards. The transmission planning process and the baseline RTEP projects selected for construction under that process are required by the applicable reliability and planning criteria.

Supplemental Projects are Transmission Owner ("TO") initiated projects and are part of the local planning process.[63] Supplemental Projects are an important tool for the PJM TOs to address planning functions not transferred to PJM (e.g., asset management, customer interconnections).

While Supplemental Projects have a range of drivers, they all improve the PJM TOs' ability to provide reliable service to their customers and enhance the resilience of the transmission system. By hardening existing infrastructure against severe weather and other public safety threats, and building redundancies into the system, Supplemental Projects reduce unplanned outages and outage durations and can reduce maintenance costs. The deployment of new technologies and systems that can promote cybersecurity and provide system operators with the situational awareness necessary to more swiftly react to changing system conditions (including through system automation) are also examples of Supplemental Projects. These projects reflect a PJM TOs' obligation to reliably serve its local service territory and are grounded in good utility practice.

Attachment M-3 of the PJM Open Access Transmission Tariff ("OATT') is an open and transparent process with multiple opportunities for stakeholder input and consideration of additional needs and alternative solutions. This process provides for an information exchange between TOs and interested participants. At an annual Assumptions Meeting, the TOs provide information regarding the criteria used to plan and identify Supplemental Projects. The process for developing Supplemental upgrades includes identification and review of system needs at a separate Needs Meeting and provides an opportunity for stakeholders to comment. Next, there is a Solutions Meeting where potential solutions are discussed, as well as any alternatives identified. Stakeholders are encouraged to provide comments on the potential solutions and to submit additional solutions for consideration. PJM and the PJM TOs have held several Lessons Learned meetings and are committed to continuing to evaluate and refine this process.

The EMP notes that New Jersey stands out in the PJM region as the only state that does not currently review the necessity of transmission projects.[64] New Jersey is similar to other states

[62] The Energy Master Plan states that FERC Form 715 criteria projects are supplemental projects; however, these types of projects are considered baseline projects which are subject to PJM's approval pursuant to Section 1.5(o) of Schedule 6 of the PJM Operating Agreement. *See* Draft EMP at 76.

[63] FirstEnergy's methodology document is publicly available on the PJM website: https://www.pjm.com/-/media/committees-groups/committees/srrtep-ma/20181207/20181207-first-energy-etf-project-methodology-2019.ashx.

[64] Draft EMP at 76.

in that it has jurisdiction over siting of transmission facilities. Under N.J.S.A. 40:55D-19, the Board reviews whether the proposed installation is reasonably necessary for the service, convenience or welfare of the public. If the Board is seeking additional information about the manner in which other state public utility commissions review and approve transmission siting projects, JCP&L would be willing to discuss its experiences within the states in which its affiliated utilities are located. However, it is important to note that the Board has an avenue to participate in the PJM review of both the baseline and Supplemental Projects.

The Draft EMP also expresses concerns that transmission projects are resulting in higher costs for ratepayers. Specifically, the Draft EMP notes that there is "unjustly high Return on Equity ('ROE')" and that this is connected to the fact the "FERC does not engage in further prudency review once the formula is set and unlike standard rates, charges passed on to ratepayers through formula rates are not subject to the typical rate case type litigation."[65] It is important to note that in order for a TO to receive approval for a rate to recover the costs of its transmission investments, there must be a regulatory proceeding before the FERC, in which state agencies like the Board can participate. Moreover, the FERC is required to determine that rates, terms and conditions are "just and reasonable" and *must be* "not unduly discriminatory or preferential." If the FERC believes that an EDCs rates, terms, and conditions are no longer just and reasonable or those rates are discriminatory or preferential, then the FERC has the statutory authority under Section 206 of the Federal Power Act "after a hearing held upon its own motion or upon complaint," to independently find a jurisdictional rate to be unjust and unreasonable and to determine a new just and reasonable rate.[66] Also, if a customer, state commission, or other party believes that a formula rate approved by the FERC has become unjust or unreasonable, that party is able to file a complaint with the FERC under Section 206 and the FERC will review the complaint and adjudicate the dispute. Furthermore, the FERC's audit staff examines the conduct of regulated entities to ensure compliance with the FERC requirements. Audits primarily focus on materially relevant compliance with the FERC requirements and can encompass jurisdictional rates. Therefore, the Company disagrees with the Draft EMP's characterization that the ROEs set by the FERC are "unjustly high" as well as the implication that the FERC does not review or have protocols in place to ensure that formula rates are just and reasonable.[67]

As the Board and Murphy Administration seek to explore this issue, electric utilities must continue to have the flexibility to undertake both baseline and Supplemental Projects. As discussed above, baseline projects are important because they are mandated by PJM once they are approved through the RTEP process. Supplemental projects are equally important because these projects are needed to address the integrity of the grid and will also be needed to modernize the grid in order to integrate and realize the full locational net value of DER, support electrification efforts, and integrate offshore wind.

[65] Draft EMP at 76.
[66] 16 U.S.C. § 824e.
[67] Draft EMP at 75-77.

JCP&L appreciates the opportunity to provide these comments on the Draft EMP and hopes that the EMP Committee will find them helpful as it works toward finalizing the EMP for release later this year. JCP&L looks forward to working with the Murphy Administration and BPU as a partner and a resource as the State strives toward these goals. If the EMP Committee would like to discuss these comments or has any questions, please contact me.

Best regards,

Jim Fakult
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