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**Remarks of Stefanie A. Brand
Director of the N.J. Division of Rate Counsel
Regarding the Energy Master Plan**

August 11, 2015, Newark, N.J.

August 13, 2015, Trenton, N.J.

August 17, 2015, Galloway, N.J.

Good afternoon, my name is Stefanie A. Brand. I am the Director of the Division of Rate Counsel. I would like to thank you for the opportunity to speak today regarding the update to the 2011 Energy Master Plan.

The Division of Rate Counsel represents and protects the interests of all utility consumers - residential customers, small business customers, small and large industrial customers, schools, libraries, and other institutions in our communities. Rate Counsel is a party in cases where New Jersey utilities seek changes in their rates or services. Rate Counsel also gives consumers a voice in setting energy, water and telecommunications policy that will affect the rendering of utility services well into the future.

Our office will be providing comprehensive written comments by the

August 24, 2015 deadline. We also hope that interested parties will be given an opportunity to comment, even if only in written form, on the actual Update when it is completed. We believe this is required by the governing statute, N.J.S.A. 52:27F-14. Subsection c of that statute requires that the master plan and any revisions thereof be disseminated to the public in an effort “to reach the greatest possible number of citizens of New Jersey,” and that the public be given the opportunity to comment on the “overall content of the plan.” While we appreciate the opportunity to comment while the Administration is considering what to say in the plan, we do not believe this alleviates the obligation to allow public comment on the Update itself. For one thing, the EMP Updates have traditionally included updated data setting forth how New Jersey has progressed in reaching its goals since the last EMP Update. Since members of the public, including Rate Counsel, do not have access to the same data the State has on our progress, it is difficult for us to comment at the level of detail that would be most helpful to the process. Consistent with the governing statute, we strongly urge the Board to allow written comments from the public on the actual Update once it is finalized and before it is adopted.

Today, my testimony will focus first on some issues discussed in the July 22nd Updated Notice of the Energy Master Plan, including the Emerging Issues listed on the second page of that Notice. I will then take the opportunity, as

requested in the Updated Notice, to comment on our progress toward the goals of the last Energy Master Plan which was issued in 2011.

With respect to the Updated Notice, I wanted to discuss briefly some of the numbers that are contained therein. First, the Notice states that New Jersey “has fallen from a high energy cost state to a range that falls within the national average for total energy costs (electricity, natural gas, fuel oil and gasoline).” It is not clear from the Notice how that conclusion was reached and what numbers went into it. We know as of 2013, the U.S. Energy Information Agency ranked New Jersey as tenth in electricity costs, which is certainly higher than average. Since then, the State has approved a number of large programs, such as PSE&G’s Energy Strong, and our regional grid operator, PJM, has made changes to its Reliability Pricing Model that everyone believes will raise wholesale capacity prices in the next auction. Also, while New Jersey’s ranking is down from where it was a few years ago, its electricity prices have not gone down. Instead, other states have surpassed us with higher prices. Thus, while we should be glad that electricity prices have remained stable in New Jersey, it would be foolish and inaccurate to view our state as one that is no longer subject to high energy costs.

Like other states, we have achieved some reductions in our heating costs due to the drop in natural gas prices. This will hopefully continue as natural gas is being used more and more not only for heating but for electricity generation as

well. If natural gas prices stay low, it will help us continue our stable electricity prices. Likewise, gasoline prices have been lower recently, and, if this continues, it may help stabilize our overall energy costs.

Emerging Issues Since 2011

Protecting critical energy infrastructure

Since the aftermath of the recent storms like Hurricane Irene and Sandy, all New Jersey ratepayers are concerned about the state of energy utility infrastructure and the level of resiliency and hardening to withstand future weather events. Rate Counsel believes that reliable utility service is a basic fundamental necessity. Without these critical services, customers cannot live in their homes or operate their businesses. We agree with the EMP goal of protecting critical energy infrastructure especially in this modern age when we rely so heavily on electric and gas services. As Rate Counsel, however, I don't agree with spending additional ratepayer money on whatever project is purported to improve the system without sufficient proof that the spending is well thought out, cost effective, and assured to have real impact on the hardening and restoration of services. The utilities should also not be relieved of their obligation to spend the money ratepayers already pay in rates to ensure reliability and safe, adequate and proper service. They should not earn the premium return that comes with alternative rate mechanisms for capital projects that should have been done in the ordinary course of business.

Improving the Electric Distribution Companies' Emergency Preparedness and Response.

Following Hurricane Irene, the October 2012 snowstorm, and Superstorm Sandy the Board of Public Utilities has taken significant steps to investigate and improve the four regulated electric utility (“EDCs”) responses during severe weather. Back in December 2011, after Hurricane Irene, the Board Ordered the EDCs to comply with the Staff recommendations that included immediate action by the EDCs to improve their communications.

While a consultant’s further review of the EDC’s storm preparedness was ongoing, Superstorm Sandy made landfall in New Jersey on October 29, 2012. On January 23, 2013, the Board accepted the consultant’s final report, which contained extensive recommendations touching upon 1) preparedness efforts by the EDCs, 2) communications with customers, government officials and company personnel, 3) restoration response and 4) posting of event reporting. The Board Order was specific with respect to the actions to be taken by the EDCs as well as the timeline in which these actions were to be taken by the companies. A subsequent Order, issued by the Board on March 20, 2013, opened a generic proceeding to support and protect New Jersey utilities’ infrastructure by, among other things, inviting all regulated utilities to submit detailed proposals for infrastructure upgrades designed to protect the State’s utility infrastructure from future Major Storm Events. Under the umbrella of the Board’s infrastructure resiliency and hardening initiatives, the

Board has approved programs including PSE&G's \$1 billion Energy Strong Program, which are currently underway. The work is proceeding, but thankfully, since we have not experienced another statewide major storm, we do not know yet the extent to which the work will be successful in improving our resiliency in the future.

We have had one test of our current level of resiliency, however. Atlantic Electric and PSE&G were tested by the recent storm on June 23, 2015. Atlantic was hardest hit by the June 23rd storm, and its response both in light of preparedness and post storm restoration left a lot to be desired. In particular, BPU staff raised concerns regarding field and customer communications by utilities when telephone and wireless communications are also impacted by the storm the utility is responding to. BPU's press release on the utility response to the June 23rd Storm commented as follows:

The electric utility sector's reliance on wireless communications is particularly critical in a weather impact outage that causes widespread infrastructure damage and requires a major mutual assistance response. For a period of at least 12 hours after the storm's impact, ACE was unable to use its field mobile data terminals for mobile dispatching of workforce and to communicate fluidly with its field crews and personnel. The utility needed to revert to radios and manual processes to dispatch crews and personnel; collect damage assessment information; and input data into its Outage Management System. This process caused inaccuracy in the outage information contained on ACE's outage webpages and maps. Additionally, mutual assistance crews were initially hampered by the wireless outage.

I think this experience serves as an additional lesson as we proceed in our efforts to improve storm response. Clearly, utilities must keep regulators, as well as the customers and government officials informed about the status of the storm impact and restoration. They must also be able to communicate with field personnel. As we move forward we must find a way to deal with the fact that most telephonic and often wireless communications may be down after severe storms. This is an issue that requires the attention not only of the EDC's, but of the telecommunications and wireless industries as well. No matter how much we harden our electric and gas utility infrastructure and deploy resources, if a reliable communication system doesn't exist then our storm response will suffer.

Long term financing through the Energy Resiliency Bank (“ERB”)

It is my understanding that the ERB, which is now administered by EDA, has been developing program rules for the first round of funding, in which \$65 million will be made available for resilience projects at water and wastewater treatment plants. As of now, I do not believe any grants have been awarded. It is also my understanding that a second round, providing funds for resiliency projects at other types of facilities, is anticipated. Rate Counsel strongly supports utilizing the ERB money to the greatest extent possible as it reduces the additional amount ratepayers must pay for resiliency programs.

2011 Energy Master Plan Goals & Recommendations

Rate Counsel was and remains supportive of the overarching goals contained in the 2011 EMP, including driving down the cost of energy for consumers, promoting a diverse and clean portfolio of generation sources, promoting energy efficiency and peak demand reduction, and supporting increasing use of energy from renewable sources. Rate Counsel believes we have had moderate success in these areas, but that there is always more that we can do. It is not possible in today's comments to cover everything, but I do want to touch on a few subjects.

Solar

The 2011 Energy Master Plan took a new and welcome direction in the promotion of renewable energy, particularly solar, in noting that while New Jersey had taken great strides in the development of solar energy, the length of those strides, on a forward-going basis, needed to be tempered with some measure of cost-effectiveness that strikes a “sensible balance” [p. 5] with “economic and political realities.” [p.4.] The 2011 EMP also emphasized that future renewable energy initiatives and programs needed to be measured against a “rigorous testing of net economic benefits to New Jersey.” [p. 3.]

Rate Counsel strongly supports maintaining these goals in the development of the renewable energy component of the 2015 EMP. New Jersey's renewable energy development has come a long way, particularly in the promotion of solar

energy, since the state adopted solar-specific generation set-aside in 2004. A great deal of this success has been the result of the financial support provided by New Jersey ratepayers in addition to a number of favorable market outcomes that now makes solar considerably more affordable than was imaginable when the state embarked on setting a leadership path for solar energy almost a decade ago.

This success leads Rate Counsel to recommend that the 2015 EMP continue to move in a direction that removes the training wheels of ratepayer financial support for solar energy and lets the industry be guided by market forces and its own entrepreneurial actions. The 2015 EMP should continue to support New Jersey's current commitments and policies for solar energy, but refrain from adopting any new levels of financial support. Rate Counsel bases this recommendation on two premises.

The first premise is based upon the fact that the financial support for New Jersey's solar industry success rests almost entirely on ratepayers, the majority of whom have not installed solar systems on their homes, businesses, or industries. These ratepayers should not be required to continue to financially support New Jersey's solar industry and continue to insulate it from the risk and challenges associated with operating in competitive energy markets. At some point, the solar industry needs to stand on its own two feet. Rate Counsel recommends that the 2015 EMP start the process of asking the industry to assume more responsibility

for its own development by refraining from the adoption of any new solar energy initiatives, and by continuing to evaluate existing and future programs on the net economic benefits they are anticipated to create for New Jersey ratepayers.

New Jersey ratepayers have made considerable financial commitments, and underwritten a considerable degree of financial risk, on the behalf of solar energy development in the state. These ratepayer financial and contractual commitments are wide-ranging and, through 2014, include:

- The cumulative payment of over \$950 million (in 2014 dollars) in SRECs that have been included in ratepayers' basic electricity service rates.
- Over \$360 million (2014 dollars) in societal benefit charges ("SBC") that supported the Office of Clean Energy's ("OCE") solar installation rebate.
- Another \$480 million (2014 dollars) in SBC payments has provided financial support for other OCE CEP renewable energy programs.
- An estimated \$77 million (2014 dollars) for PSE&G's various solar loan programs that have been approved by the Board over the past six years.
- An estimated \$140 million (2014 dollars) for PSE&G's "Solar 4 All" and "Solar 4 All Extension" programs.
- An estimated \$111 million (2014 dollars) for the various long term solar energy contracting proposals approved by the Board for ACE, JCP&L and RECO.
- And an escalation of the solar Renewable Portfolio Standard ("RPS") that increased the solar RPS requirements for an eight-year period by

an average of almost 60 percent. This increase exposed ratepayers to an estimated potential of \$2.5 billion (NPV) in upfront costs.

The second premise upon which Rate Counsel's recommendations are based is that there is no economic or other market need for any new or additional solar policy initiatives. New Jersey has a very robust and well-recognized solar energy market. Current market data indicates that New Jersey's solar energy markets are attractive to both solar system purchasers, as well as investors. The early years of New Jersey's solar energy industry, where solar installations and SRECs were falling behind the solar RPS, are long gone. SREC markets have been in balance, if not oversupplied, for the past four years. Further, these solar market trends are anticipated to continue into the future. Incremental installations were at an all-time high in February 2015, and have remained strong. These installation trends are more than sufficient for New Jersey to continue to meet future solar RPS requirements. In fact, the Office of Clean Energy ("OCE") anticipates solar capacity to grow another 15 percent in just the next six months, at an average monthly rate of 2.5 percent.

Some in the solar industry may point to the substantial decrease in SREC prices as supporting the need for new solar initiatives when nothing could be further from the truth. First, lower SREC prices are a reflection of the increased SREC supply created by an increase in New Jersey solar installations. The increase in solar installations, in turn, is the result of a considerable decrease in

cost. The Department of Energy reports that system prices of residential commercial photovoltaic systems have declined six to seven percent per year, on average, from 1998 through 2013. Further, these costs fell 12 to 15 percent from 2012 to 2013 alone.

The Solar Energy Industries Association reports that in just one year (2014), installed costs for residential systems fell from \$3.83 per watt to \$3.48 per watt, or over nine percent, and notes that “significant opportunities to reduce costs remain.”

These significant solar energy cost decreases have made solar more affordable for average households and businesses. Increased solar affordability reduces the additional financial support that needs to be provided by non-participating ratepayers in order to stimulate solar energy development. This is exactly the type of outcome envisioned in the 2011 EMP and one that should continue to be included in the 2015 EMP. Thus, SREC price decreases reflect a successful outcome in the solar industry, not a negative one in search of a new policy initiative or financial subsidy.

Energy Efficiency

With respect to Energy Efficiency (“EE”), we have made some progress, but again further work is required. According to the ACEEE State Energy Efficiency Scorecard, we rank 26th in the country when viewing savings as a percentage of retail sales. Based on the consumption goals in the 2011 EMP and the latest 2015

PJM load forecast, it appears that current consumption is close to the EMP target for the current year, but that there will be a growing disparity going forward between the targets and the current forecast. At this rate, the total gap in 2020 will be about 10% of the PJM forecast. That's not good enough. We need to see greater coordination between the OCE and the utility programs, better analysis of how the various programs are working, greater focus on programs for low-income customers, and stepped up building codes and appliance standards.

The 2011 EMP recommended a redesign of the delivery of state energy efficiency programs (pp. 113). The 2011 EMP recognized the value of the local distribution companies delivering energy efficiency and conservation programs, while it called for an evaluation of alternative EE program delivery structures that can “optimize the delivery of effective EE programs to a wide array of customers.” (2011 EMP, pp. 119). OCE initiated a process to examine alternative EE program administrator structures in 2010 through 2011 and requested stakeholder comments. However, that process has taken longer than anyone expected. We hope that a single administrator is on board soon, as this will help streamline and coordinate the various EE programs.

As stated in Rate Counsel's previous comments to the Board, a statewide Energy Efficiency Utility structure is something the State may want to consider. It would provide consistency across the state and a single point of contact for EE

programs. Moreover, this entity could be held accountable for achieving defined goals.

If this option is not feasible, it is helpful to allow utilities to provide additional EE programs as long as their programs have no redundancy with NJCEP programs. The utilities offering incentives that supplement the Clean Energy Program (CEP) generally have not demonstrated the extent to which their program offerings lead to savings beyond the level that could be reasonably assumed to result from the CEP programs alone, or that the total level of incentives is appropriate. In addition to not having overlap with CEP, the utilities' programs either 1) should be innovative, for example by employing new methods for program delivery, trying new approaches to overcoming barriers to energy efficiency, or targeting unique market segments, or 2) should offer services that would be administratively or economically difficult for NJCEP to offer.

We have been working with OCE and the utilities to provide better analysis of the effectiveness of the utility programs and develop the information necessary to ensure that they meet these objectives. By and large, the existing utility EE programs merely supplement existing CEP programs and thus are not innovative. Some utilities offer services that CEP cannot, such as on-bill financing, but others do not. The most recent EE Program approvals include provisions that require the utilities to gather more data on the energy savings their programs achieve and the

costs and benefits of the programs generally. With this information, and new streamlined administration of the OCE programs, we hope to improve the state's EE programs and create templates that would allow for more programs and more savings. We strongly recommend that the 2015 EMP update endorse these efforts and provide for more streamlined EE program delivery with more clearly articulated, prescribed roles for NJCEP and utility programs.

Rate Counsel would also like to see more programs and better programs aimed at low-income customers. A recent program evaluation of Comfort Partners conducted by Apprise in December 2014 found that the program failed to achieve expected savings, exhibited weaknesses in the audit and installation procedures, and had a high rate of job inspection failures.¹ Apprise discovered many missed opportunities for installing the most cost-effective measures and concluded that “many of these missed opportunities would not result in greater expenditures, as they would require re-prioritizing or better quality work done” and that “in over 70 percent of the cases where there were missed opportunities, the contractors did not spend up to the seasonal guideline, and could have done a more thorough job.”²

While low-income programs administered by any entity would face significant barriers and high administrative costs, it is important that the state take this

¹ Apprise 2014, page xv and viii.

² Apprise 2014, page xv.

opportunity to consider whether the current model is the most effective and whether both low-income customers and ratepayers in general might achieve more value from program modifications.

Rate Counsel also urges the Board in the EMP Update to call for updated building codes and appliance standards. New Jersey has not updated its residential and commercial building energy codes for almost five years since September 2010 despite the New Jersey Uniform Construction Code allowing the state to update the codes every three years. A recent study by DOE found that "[e]nergy cost savings for New Jersey resulting from the state updating its commercial and residential building energy codes in accordance with federal law are significant, estimated to be on the order of nearly \$195 million annually by 2030."³ We recommend that the EMP encourage New Jersey to update its building codes as soon as possible in order to ensure that consumers gain additional economic benefits through substantial energy savings. Similarly, with respect to appliance standards, the 2011 NJCEP states that "the [Board of Public Utilities (BPU)] will cooperate with the Legislature and consider adopting the higher standards as they become available, including the costs and benefits of such changes." (2011 EMP, pp. 118) However, New Jersey has not adopted any new state appliance standards since 2005. Other

³ <https://www.energycodes.gov/adoption/states/new-jersey>

states have updated their appliance standards more recently and New Jersey should consider doing so as well.

Finally, Rate Counsel has repeatedly recommended that CEP offer its energy savings into PJM's capacity markets. This issue was considered by the Utility Work Group and the Data Work Group. The updated EMP should adopt the advice of the Data Work Group and mandate that the OCE and the utilities bid their energy efficiency capacity into the PJM market. While the PJM rules in this area are currently in a state of flux, the EMP should call on the program administrator and Staff to monitor the PJM rules and maximize the capacity benefit available to offset the cost to ratepayers.

Combined Heat and Power

The 2011 New Jersey Energy Master Plan states that “[t]he Christie Administration is committed to developing 1,500 MW of CHP generation over the next ten years: 1,400 MW of C&I applications and an additional 100 MW from district energy systems.” However, it has become clear that the current installation trend for CHP is far from meeting this CHP goal in 2020. The U.S. Department of Energy Combined Heat and Power Installation database⁴ shows that 58.7 MW of CHP capacity was installed in 2011, 2012, and 2013 (no later dates are provided in the database), of which 39.8 MW are from C&I. The New Jersey Board of Public

⁴ <https://doe.icfwebservices.com/chpdb/>

Utilities provides a database⁵ of CHP applications. In 2011, 2012, and 2013, applications totaled 23.5 MW, of which 5.12 MW are from C&I.

Reflecting these low installation rates, the latest Comprehensive Resource Analysis (CRA) draft issued by NJCEP recommended a reduced level of funding for FY16 and a “stakeholder-driven process to review and redesign the CHP program, while considering related factors such as use groups, project economics, payment structures, interconnection, stand-by tariffs, resilience, etc.”⁶

The NJCEP proposed recommendations are reasonable given the large difference between actual installed CHP capacity and the EMP’s CHP goal. We also recommend that EMP take into account this situation for CHP and consider adjusting its CHP target and developing a process evaluation to identify areas for improvements.

Conclusion

Thank you for the opportunity to testify today. In closing I just want to reiterate the request that the Board allow written comments on the Update once it is completed. These are important issues for our state and greater public comment, including a review of updated data, can only help us better achieve the EMP goals.

Thank you.

⁵ <http://www.njcleanenergy.com/commercial-industrial/programs/combined-heat-power/combined-heat-power>

⁶ Office of Clean Energy. 2015. Comprehensive Resource Analysis – Staff Straw Proposal New Jersey’s Clean Energy Program Proposed Funding Levels FY 16, pp. 50, available at <http://www.njcleanenergy.com/files/file/Staff%20Straw%20Proposal%20FY2016%20050415.pdf>