Agenda Date: 8/23/17
Agenda Item: 2F

STATE OF NEW JERSEY

Board of Public Utilities
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ENERGY

IN THE MATTER OF THE PETITION OF ROCKLAND ELECTRIC COMPANY FOR APPROVAL OF AN ADVANCED METERING PROGRAM; AND FOR OTHER RELIEF	))))	DECISION AND ORDER BPU DOCKET NO. ER16060524

Parties of Record:

James C. Meyer, Esq., on behalf of Rockland Electric Company
John L. Carley, Esq., Rockland Electric Company
Stefanie A. Brand, Esq., Director, New Jersey Division of Rate Counsel
Aaron Kleinbaum, Esq., on behalf of Environmental Defense Fund, Intervener

BY THE BOARD:

BACKGROUND/PROCEDURAL HISTORY

On May 13, 2016, Rockland Electric Company ("RECO" or "Company") filed a Verified Petition with the New Jersey Board of Public Utilities ("Board" or "BPU") seeking a change in base rates and other relief ("Base Rate Case Petition"). On June 29, 2016, the Board issued its Order Amending the Suspension Order, Bifurcating Petition, Designating Presiding Commissioner, and Setting Manner of Service and Intervention Bar Date ("Bifurcation Order"). The Bifurcation Order directed that the portion of the Company's Base Rate Case Petition seeking to deploy Advanced Metering Infrastructure ("AMI") and smart meters throughout its service territory be retained by the Board for hearing in the above-captioned docket ("RECO AMI Petition") (with the remainder of the Base Rate Case Petition being transferred to the Office of Administrative Law). The Bifurcation Order designated Commissioner Upendra J. Chivukula as presiding officer with authority to rule on all motions that arise during the proceeding and to establish and modify schedules and set August 5, 2016 as the deadline for filing motions to intervene or participate in this matter.

On July 6, 2016, the Company made a letter filing with the Board identifying and filing the materials constituting the RECO AMI Petition, including the specified portions of the Base Rate Case Petition, Panel Direct Testimony (specified pages), and two schedules (AMI Business Plan and White Paper). The RECO AMI Petition included a request that the Board issue an Order approving the Company's proposed Advanced Metering Program, including the deployment of AMI and smart meters.

On July 29, 2016, Commissioner Chivukula issued a prehearing order which established a procedural schedule and directed the parties to serve all documents in the RECO AMI Petition electronically, while providing hard copies to the Board for those documents which must be filed with the Board.

On September 14, 2016, Commissioner Chivukula issued an order granting intervener status to the Environmental Defense Fund ("EDF"), and participation status to Public Service Electric and Gas Company ("PSE&G") and Atlantic City Electric Company ("ACE"). On October 28, 2016, Commissioner Chivukula issued an Amended Prehearing Order and Amended Procedural Schedule.

After publication of notice in newspapers of general circulation in the Company's service territory, Commissioner Chivukula presided over two public hearings in Mahwah, NJ on September 19, 2016 at 4:30 P.M. and 6:30 P.M. No members of the public attended.

Throughout the course of the proceeding, the parties held numerous discovery conferences and on October 13, 2016, the parties participated in a technical conference.

By letter, dated March 13, 2017, RECO filed an executed stipulation between RECO and EDF ("RECO/EDF Stipulation"). The stipulation sets forth RECO and EDF's support for Board approval of the AMI Program, a Green Button Connect data sharing policy, and proposed metrics and reports.

Commissioner Chivukula held an evidentiary hearing on March 20, 2017.

RECO, the Division of Rate Counsel ("Rate Counsel") and EDF filed briefs, and ACE filed a letter of support of RECO's petition with the Board on April 7, 2017. PSEG did not make any filings. On April 26, 2017, RECO, Rate Counsel, and EDF filed reply briefs.

RECO Proposal

In the RECO AMI Petition, RECO sought Board approval to deploy the AMI system (meters and associated infrastructure) through its service territory during the period of 2017 through 2019. The AMI system consists of: (1) an AMI communications network; (2) the AMI Information Technology ("IT") Head End System (hardware and software to manage two-way communications to all of the AMI devices); and (3) the AMI smart meters themselves. (P-2 at 29-20 to 30-2). The system will use a two-way point-to-point "mesh" network that enables smart meters to communicate directly with wireless communications devices across the network using an open, standards-based architecture. This architecture enables integration with various IT platforms. (Id. at 35-5 to 14). Additionally, the AMI Program includes the implementation of a Meter Data Management System ("MDMS") and Meter Asset Management System ("MAMS"). The MDMS provides a central repository for meter data storage and provides the Company's other IT platforms access to that data. The MAMS is a system that allows the Company to manage the meter inventory and provides the ability to transfer, configure, test, and report on metering system field assets. (Id. at 30-3 to 20).

RECO filed the direct testimony of Keith C. Scerbo, Joseph N. White, and Michael E. Durling, (collectively, the "Panel").

The Company proposes to install two-way AMI communications infrastructure and smart meters across its entire service territory and seeks Board approval, though not cost recovery, prior to beginning implementation. (P-2 at 5-9 to 18). It also plans to deploy distribution system technologies that provide increased visibility and Distribution Automation ("DA") across its service territory. (Id. at 6-13 to14). Finally, the Company plans to upgrade its communications infrastructure to enhance day-to-day operations and to support the planned Smart Grid/DA projects. (Id. at 7- 14 to 15).

Installation would include verifying that the existing IT platform and the legacy IT systems are operating according to performance specifications; installing approximately 73,880 smart meters; gathering meter usage data measured in 5 minute intervals for commercial meters and 15 minute intervals for residential meters, to be delivered in near real time; and providing data for potential distribution system improvements and monitoring. (Id. at 8-16 to-9-5).

According to the petition, the AMI Proposal aligns with New Jersey's Energy Master Plan ("EMP") goals in several ways. By coupling AMI with a data access web portal that allows customers to see their real-time energy usage data, the Company states that it provides customers with tools to modify their usage and lower their energy costs. (Id. at 10-5 to 8). In addition, the Company states that it also contributes to the EMP's goal of driving down the cost of energy for all customers. (Id. at 10-1 to 3 and 8 to 16). In addition, implementing AMI would support the EMP goal of capitalizing on emerging technologies by allowing RECO to use advanced distribution technologies that support efficient operation of its distribution system. (Id. at 11- 1 to 7). By optimizing the emerging technology of advanced distribution management system, RECO will be better able to manage the expected increase in distributed energy resources ("DERs"). (Id. at 11-9 to 13). Moreover, AMI will support the goal of increased energy resiliency identified in the 2015 EMP update in several ways. The 2015 EMP Update calls expressly for updating electric distribution systems with the most current technology, focuses on the electric utilities' future plans for Smart Grid/ DA, and promotes efforts to increase response and restoration time. (Id. at 12- 1 to 16). In addition, the granular real-time data provided by AMI supports the Board's goal of increasing storm resiliency by optimizing monitoring and control capabilities such as DA and enabling utilities to respond and restore power more quickly. (Id. at 13- 4 to 13).

RECO states that AMI also provides numerous other benefits. Its deployment will allow the Company to operate more efficiently, thereby saving money and reducing customer costs; improve the heretofore limited visibility into the operation of the distribution system; and improve operational efficiency, customer experiences, and air quality through reductions in duplicated efforts and emissions. (Id. at 13-18 to 14-16). Recent Federal Energy Regulatory Commission ("FERC") reports support AMI's growing importance and its usefulness in restoring power following outages caused by storms. (Id. at 15-1 to 16-4). These advantages can be gained at a significantly reduced cost by coordinating the RECO AMI deployment with that of Orange and Rockland ("O&R"). (Id. at 16-9 to 17-6). Furthermore, AMI is a key component to future grid modernization technologies such as connecting customers to third-party vendors to consult on energy usage reduction and supporting the ability to remotely upgrade metering firmware. (Id. at 18-3 to 11).

According to the petition, AMI will provide significant benefits to RECO's service territory. In its AMI deployment, RECO is leveraging lessons learned from its discussions with utilities that have already deployed AMI, as well as from the contract pricing obtained by O&R, which has already selected AMI vendors and technologies. (Id. at 19-1 to 20-4). Evidence suggests that providing customers with granular usage data leads to proactive customer energy management. (Id. at 21-9 to 17). AMI data will also enable improved voltage/VAR optimization and equipment

usage analysis, thereby promoting both increased system efficiency and longer equipment life; it will also reduce the duration of outages at critical facilities and allow the Company to provide information which will support New Jersey's energy efficiency efforts. (Id. at 22-1 to 8). The data provided will also facilitate identifying potential problems and modernizing the distribution infrastructure. (Id. at 22-10 to 16). AMI works with and supports DA to enable all of the above benefits. (Id. at 23-3 to 24-12). By inputting the 15-minute interval AMI data to the Company's Integrated System Model ("ISM") and applying its sophisticated analysis tools, RECO will get a more accurate picture of its system's electrical performance which, in turn, will benefit its planning and forecasting processes, as well as improving its integrated planning analysis such that it can better incorporate more DER. (Id. at 24-14 to 22). AMI metering will enable the Company to review the entire system as well as to closely monitor and model load characteristics, local voltage, and power quality. (Id. at 25-3 to 12).

The additional $2.7 million per year approved by the Board for investment in DA in RECO's Storm Hardening Program[1] allowed RECO to accelerate its investment in DA infrastructure from a 40-year timeframe to an 8 to 10 year timeline. (Id. at 26-3 to 9). The Company anticipates implementing Smart Grid/DA between 2016 and 2018, which approximates the proposed AMI deployment from 2017 to 2019. (Id. at 26-10 to 16). The Company intends to develop an outreach plan to engage customers but will allow those customers who do not wish to change to AMI to keep their manual meters. (Id. at 26-17 to 27-4). The Company has calculated its incremental costs for continuing a manual meter read and for removing an AMI meter after its installation and proposes a $15 per month service fee for meter reads and a one-time $45 fee for the removal of an AMI meter and the re-installation of a conventional meter. (Id. at 27-14 to 28-3). The Company requests that the Board waive the rule requiring a test on all meters to be retired since such a test on the approximately 74,000 meters in its territory would add about $0.9 million to the $16.5 investment. (Id. at 28- 6 to 13). Since the meters will not be re-used, the Company does not believe that the test would provide any benefit. (Id. at 28- 13 to 16).

RECO's affiliate O&R performed a market assessment on AMI vendor technologies and issued a number of RFPs for AMI meters and communication systems in 2015, resulting in the selection of the AMI technology and vendors. (Id. at 28-17 to 29-11). The AMI system has three major components: AMI smart meters, an AMI communication network, and AMI IT platform systems to manage two-way communications. (Id. at 29- 12 to 16). O&R and RECO selected Silver Springs Network because it employs an open, standards-based architecture that maximizes the benefits of the AMI platform. (Id. at 29-16 to 31-2). The Panel estimates the cost of a 2.6 year deployment at $16.5 million and the cumulative recurring O&M expenses over a 20-year period at $12.0 million, with net depreciation costs, including the amortization of outmoded meter assets, are estimated at $20.8 million over the twenty years. (Id. at 31-3 to 11). Total benefits, among others including reduced labor for field services and outage management, are estimated at $82 million over the same period. (Id. at 32-1 to 34-12). Subtracting total costs from total benefits produced a net benefit of $49.2, a simple payback period of 7.2 years, and a discounted payback period of 15.5 years. (Id. at 35). Additional benefits are provided by the technology's flexibility in supporting multiple meter vendors and multiple service types. (Id. at 35-5 to 7).

In the petition, the Company states that it evaluated multiple alternatives to a fully enabled AMI rollout and determined that partial deployment or deployment of Automated Meter Reading

[1] In re the Board's Establishment of a Generic Proceeding to Review the Costs, Benefits and Reliability Impacts of Major Storm Event Mitigation Efforts AND In re the Verified Petition of Rockland Electric Company for Establishment of a Storm Hardening Surcharge: Docket Nos. AX13030197 and ER1403025 (January 28, 2016).

("AMR") would not produce the full benefits of AMI. (Id. at 35-15 to 37-6). Partial deployment would be inequitable to RECO's customers, would not support optimal outage reduction, and would not allow voltage/VAR optimization. (Id. at 36-7 to 13). Were there to be a subsequent expansion of deployment, the costs would exceed those of a single complete implementation. (Id. at 36- 13 to 16). Extending the deployment time or installing Itron meters as an intermediate technology would also reduce benefits and increase cost, while all of the benefits derived from the real-time granular data AMI provides would be significantly reduced. (Id. at 36-17 to 37-15). In addition, beginning the implementation in 2017 will leverage the full benefit of the bids received from the O&R RFP process. (Id. at 38- 16 to 20).

Although the Company seeks the Board's approval in this filing, it does not seek cost recovery at this time. (Id. at 39-13 to 21).

Rate Counsel and Intervener Testimony

Rate Counsel

Rate Counsel's witness, Timothy Woolf, testified that Board approval of the AMI Program in advance of its implementation is not necessary or appropriate, and that if the Company finds that AMI is a prudent investment it should make that investment and request recovery of the costs in its next base rate case. (RC-1 at 4-3 to 16).

Mr. Woolf stated that RECO initially provided the amortization of its capital investment in its statement of program costs but did not include other costs, primarily the recovery of equity, debt, and taxes. (Id. at 5-17 to 6-4). He also stated that RECO did not provide any accounting of its revenue requirements, despite repeated discovery requests, until September 7, 2016, two days before Mr. Woolf filed his direct testimony. (Id. at 6-4 to 6). For this reason, the witness testified, he intended to file supplemental testimony. (Id. at 3-1 to 10).

The Company estimated that most of its operational savings would come from eliminating nine meter reader positions. (Id. at 7-10 to 17). The witness noted that these employees would be moved to other positions rather than laid off. (Id. at 7-17 to 18). In addition, he noted that although the Company claimed many other benefits, such as reduced outage restoration costs, these savings were "dwarfed" by the claimed reduction in meter reading costs. (Id. at 8-1 to 7; Chart on page 8).

Under traditional rate base, rate of return regulation, utilities make investments first and the Board reviews that investment for prudency and reasonableness afterward. The Company had not offered any compelling reason for departing from this model, since AMI investments are not extraordinary and should not receive special treatment. (Id. at 9-1 to 18). Utility management has the responsibility to monitor industry developments and evaluate the reasonableness of prospective infrastructure investments. (Id. at 10-1 to 5). New Jersey employs historic test-years, against which known and measurable changes can be measured, precisely so that its review can occur after the investment. (Id. at 10-6 to 10). Moreover, the actual benefits may vary from the estimates in the Company's cost-benefit and evaluating the investment in a rate case would provide the Board more certainty. (Id. at 10-11 to 16). For instance, the Company claims significant benefits from the elimination of nine meter reader jobs, but no one can know in advance whether moving these workers to other Company jobs will actually produce the claimed savings. (Id. at 10-17 to 11-3). Lastly, since the Company seeks the same rate of return as it earns on the rest of its infrastructure investments, and since the return on equity

included in that rate of return functions as a compensation for the risk taken when investing, pre-approval is not appropriate. (Id. at 11-4 to 9).

The Company has not justified its proposed AMI investment. It did not provide its accounting for revenue requirements in a timely fashion, such that the witness was not able to analyze these prior to filing this testimony. (Id. at 11-12 to 12-7). The Company plans to seek a rate of return on its AMI investments in a future rate case, and it also plans to continue recovering for its existing meters, which means that the average ratepayer will be paying for two meters for the next 14 to 16 years. (Id. at 12-8 to 17). However, the existing meters will no longer be "used and useful" after they are replaced and the Company should neither continue to recover their cost nor collect a rate of return upon them. (Id. at 12-18 to 13-4).

In addition, Rate Counsel asserted that the Company erred in estimating costs and benefits in nominal rather than discounted dollars. (Id. at 13-5 to 12). Since inflation erodes the value of nominal, or current year, dollars, a comparison of dollar values from different years must account for this loss of value. (Id. at 13-13 to 14-3). In addition to inflation, an evaluation of future costs and benefits must account for the time value of money. (Id. at 14-4 to 8). In evaluating investments over multiple years, analysts typically use a "discount rate," which places a value on the foregoing of benefits or costs for each additional year. (Id. at 14-9 to 13). After applying the discount rate, the cumulative discounted costs are subtracted from the cumulative discounted benefits to arrive at the Net Present Value ("NPV"). (Id. at 14-15 to 17). Unless presented in terms of NPV, a determination of ratepayer impacts cannot be made. (Id. at 15-5 to 8).

The Company provided discounted benefits and costs in a data request, but since these were provided in the context of the Company's economic analysis rather than in terms of revenue requirements, Rate Counsel argues that they did not present the impact on ratepayers. When the Company did present its revenue requirements, as noted above, it was too late for them to be incorporated in Rate Counsel's testimony. (Id. at 15-9 to 17).

Rate Counsel requested that the Board find that advance authorization of the AMI Program is inappropriate and deny the request for this authorization. (Id. at 15-18 to 16-2).

EDF

EDF witness, Ronny Sandoval, testified to contribute EDF's expertise on AMI, in particular maximizing the benefits of RECO's AMI proposal, Volt/VAR optimization, and smart meter data access. (EDF-1 at 3). According to EDF, AMI significantly enhances the level of data that is available to customers, system operators, system planners, and policy makers, making it possible to obtain valuable time and location specific data on portions of the electric system closer to the customer where gathering such information was previously infeasible. (Ibid.). Three recent trends have contributed to the need for greater visibility and control of electric system assets: the electric system is becoming more dynamic due to the increase in emerging sources of energy such as renewables and distributed energy resources; reliable energy is becoming more and more necessary for the functioning of modern society; and powerful storms are becoming more frequent, highlighting the need for investment in resiliency. (Ibid.).

In 2016, the Indiana Utility Regulatory Commission ("IURC") and the New York State Public Service Commission ("NYPSC") approved significant smart grid programs. (Id. at 4). IURC approved a 7-year smart grid plan as part of a broader reliability proceeding to which EDF was a party. (Id. at 4 to 5). The approved plan included significant investments in voltage optimization technologies to realize energy savings on heavily loaded circuits; energy efficiency/demand

response pilots; voluntary dynamic pricing riders; and a new depreciation rate for advanced meters. (Id. at 5). IURC required electric distribution company involved to submit periodic reports on the progress of these investments, using metrics including voltage reductions, energy savings, and greenhouse gas emission reductions. (Ibid.). Should the Board approve the program, EDF contends that the Board should impose similar requirements and specifically include RECO's call-handling metric and its Customer Interruption Duration Index ("CAIDI") metric. (Ibid.).

NYPSC approved capital expenditures in AMI by Consolidated Edison Company of New York, Inc. ("Con Ed") which Con Ed anticipated to have many of the same benefits as those cited in the RECO AMI proposal, including but not limited to empowering customers to make better energy decisions and reducing outages and greenhouse gas emissions. (Id. at 5 to 6). Cost recovery is being addressed in a currently pending rate case wherein the parties have already reached a joint agreement. (Id. at 6). This joint agreement also defines a broad listing of metrics by which to measure progress, and EDF recommends that the Board require period reports on a broad array of metrics if it approves the RECO AMI proposal. (Ibid.). Establishing performance metrics to measure progress toward anticipated benefits and desired policy goals is critical to the success of smart grid plans. (Ibid.). For New Jersey, these metrics should include those identified in the December 2015 EMP, including peak demand reduction, emergency preparedness and response, and the use of microgrid technologies. (Id. at 7).

More frequent, timely, and actionable energy use information enables customers to make more informed energy decisions and EDF commends RECO for "making data access a central component of its AMI plan." (Id. at 8). EDF recommends that RECO go further and ensure that its customers can share their data via the proposed Green Button Connect technology without a fee. (Ibid.) Similarly, EDF praises RECO for recognizing the benefits of AMI for customer convenience and control but proposes that RECO add proactive education in AMI benefits and a customer feedback mechanism to its AMI plan. (Ibid.). EDF recognizes the planning value of the more granular information, but adds that RECO would need to proactively pursue the use of this data to achieve these benefits. (Id. at 8 to 9).

EDF explains that Volt/VAR optimization involves the management of various distribution system assets and advanced control technologies to "right-size" the voltage delivered to end-use customers. (Id. at 10). Reductions in voltage have been shown in a U.S. Department of Energy report to produce reductions in consumption. (Ibid.). EDF recommends that RECO add reporting on the current capabilities for voltage optimization across its system, the additional capabilities added by the AMI Proposal, and a pathway to identify the savings that can be achieved with additional cost-effective investment. (Ibid.). IURC and NYPSC each required such reporting in 2016. (Id. at 10). EDF believes that this kind of reporting would be essential components of RECO's AMI plan and recommends that stakeholders begin an on-going dialogue on how these investments can best support state policies. (Id. at 11).

Rebuttal Testimony

On October 19, 2016, RECO filed the rebuttal testimony of the Panel. In its rebuttal testimony, the Panel noted that Mr. Woolf did not challenge the technical merits of the AMI Proposal and reiterated the environmental and technical benefits of the program for RECO's customers. (P-3 at 2-3 to 3-2). RECO continued to contend that it is appropriate for the Board to pre-authorize this program because it represents a significant investment by the Company; aligns with the New Jersey EMP goals, in particular the goals of rewarding energy efficiency and conservation and of driving down the cost of energy for all customers; and if approved will be the first

investment of its kind in New Jersey. (Id. at 3-12 to 4-8). The Company has previously received the Board's approval in advance of investment, in particular its smart grid investment and storm hardening program, and that the Company anticipates that AMI investments would be subject to the same kind of prudency review as was required by those earlier approvals. (Id. at 4-9 to 5-6). The Panel argues that Mr. Woolf did not rely on any Board precedent in his testimony on the appropriateness of pre-approval. (Id. at 5-7 to 11).

Further, the Panel asserts that Mr. Woolf is mistaken in saying that the benefits and costs of the AMI Program should have been presented in nominal dollars as such a presentation would have been inappropriate in the present proceeding since the Company does not seek rate recovery. (Id. at 5-20 to 6-7). According to the Company's response to RCR-AMI-27, the Company generated simple and net payback periods from the customer perspective, arriving at a discounted net customer backpack of 11.0 years. (Id. at 6-7 to 13)

Regarding Mr. Woolf's statement that the Company may not be able to realize savings from eliminating the meter reading jobs because those employees will be reassigned within the Company, the Panel states that meter reading is typically an entry-level position. By eliminating nine of these positions the Company will experience a reduction in total work force when the current meter readers are reassigned as there will be no need for new hires to replace them. (Id. at 6-14 to 7-12).

In addition, in its rebuttal testimony, the Company argues that Mr. Woolf did not provide analysis or precedent to support his position that the existing meters should be removed from rate base once they are no longer in use. (Id. at 7-13). In New Jersey and across the country, a utility continues to recover the cost of a physical asset if that asset is damaged or if it is removed in the normal course of business. (Id. at 7-18 to 8-9). Mr. Woolf had almost three business days to review the data in question and never submitted supplemental testimony as he had originally said he intended to. (Id. at 8-10 to 22).

RECO does not object to the EDF witness's recommendation that RECO report on certain metrics such as CAIDI, provided that the details of these reports can be worked out, and suggests that they be submitted annually on a service territory wide basis. (Id. at 9-8 to 22). Additionally, RECO does object to the recommendation of EDF's witness that the Board require it to track metrics such as peak demand reduction, RPS, emergency preparedness, and the use of microgrids, stating that such requirements would be expensive and are beyond the scope of this proceeding. (Id. at 10-4 to 13). RECO is willing to discuss the recommendation that its customers be allowed to share their data with authorized third party vendors without a fee. (Id. at 10-14 to 20). RECO has no objection, in concept, to the recommendation that RECO expand its customer education to include outreach and periodic surveys, nor to tracking these engagement efforts, but notes that the cost of these measures is not included in its petition and further discussion among the parties would be needed. (Id. at 10-21 to 11-9). However, the Company does object to EDF's recommendation that the Board require RECO to report on current capabilities for voltage optimization across its system, additional capabilities enabled by AMI, and a pathway to identify the potential for energy and carbon emission reductions. (Id. at 11-10 to 14). RECO asserts that this proposal is beyond the scope of the current proceeding and notes that its volt/VAR optimization program is driven in large part by the Company's DA program. RECO further asserts that AMI is an additional enabler for volt/VAR optimization in that the information provided from each meter along a circuit will allow the Company to determine the optimum voltage level setting of each transformer within the substations. (Id. at 11-15 to 20).

POSITIONS OF THE PARTIES

Initial Briefs

RECO

In its Initial Brief, the Company states that Board approval of its AMI deployment in advance of implementation is both necessary and appropriate. RECO asserts that the filing is responsive to requests from the Board, including: (1) encouragement from President Mroz during RECO's Storm Hardening Program approval; (2) the EMP contemplates smart grid and resiliency efforts; and (3) the Board invited utility storm resiliency proposals in its March 20, 2013 Order.[2] (RECO Initial Brief at 31). RECO further argues that the AMI program involves a major financial and operational commitment for a utility the size of RECO. In addition, the deployment of AMI is unprecedented in New Jersey history as there are no New Jersey AMI implementations and, given the scope and novelty of AMI, the investment is fundamentally different from traditional capital investments. (Ibid.). RECO asserts that the Board has unquestioned authority to approve the investment prior to its commencement and there is ample precedent for the Board to do so. (Id. at 32). Finally, RECO contemplates the Board will address whether the actual implementation of the AMI Program was conducted in a prudent manner and review the Company's actual expenditures in a future base rate case. (Id. at 33).

According to the Company, the substantial, undisputed benefits of the AMI Program include storm resiliency, outage detection and response/ outage prevention, enhanced customer service and convenience, customer access to data and electric cost reductions, Volt/VAR optimization, environmental benefits, and improvements in system operations and efficiency. Additionally, the AMI Program serves to implement the goals of the EMP. (Id. at 13-23).

RECO believes that a three-year, territory-wide roll-out is an optimal timeframe to deploy the two-way AMI communications infrastructure and approximately 73,880 smart meters. This timeframe allows the Company to align its deployment with O&R's deployment schedule in its New York service territory to achieve cost efficiencies and economies of scale. Additionally, there will be sufficient time to address any issues identified during deployment and all customers will receive the benefits of AMI, avoiding groups of customers that are able to experience AMI's benefits and those that do not. A partial or staggered deployment would increase costs due to inefficiencies introduced during installation and forfeit the economies of scale discussed previously. A staggered deployment also introduces technological complications, in that the mesh network depends on a specific meter density to achieve an efficient communications network, and might require the installation of additional communication devices to support the needs of a scattered network. Finally, utilizing Itron AMR meters as an interim measure before conversion to AMI is inadequate. AMR does not provide the same benefits as AMI and there are no Itron AMR meters capable of conversion to AMI in RECO's service territory, resulting in much greater project costs. (Id. at 27-30).

The Company prepared a business case financial analysis that it believes supports the investment and is set forth in the record. RECO's financial analysis has two components: (1) a Benefits Less Costs determination over 20 years and (2) a "Payback Period" for the AMI Program costs. The financial analysis quantifies over $49 million in net benefits over 20 years in nominal dollars, equating to $23 million in Net Present Value, and a discounted net customer payback period of 11 years. The calculation of capital investment and ongoing O&M costs was

[2] In re the Board's Establishment of a Generic Proceeding to Review the Costs, Benefits and Reliability Impacts of Major Storm Event Mitigation Efforts, Docket No. AX13030197 (March 20, 2013).

based on actual vendor pricing from a competitive bid process and the quantification of benefits is set forth in extensive detail in the evidentiary record. (Id. at 23-26).

RECO asserts that the Board should determine that the Company is entitled to continue to recover the costs of legacy meters that are removed in order to install AMI meters, with the timing and methodology for such recovery established in a future base rate case. RECO has detailed the book and depreciation costs of the legacy meters and included these costs in the net benefit analysis. The replacement of the legacy meters is a prerequisite for installing the AMI meters and should be part of the cost of implementing AMI. Rate Counsel has never provided any foundation for its opposition to continued recovery of the costs of the legacy meters. Furthermore, there is recent precedent from the NYPSC ruling in favor of continued recovery of the costs for legacy meters with regard to Con Ed's AMI proposal. (Id. at 34-37).

RECO also argues that the Board should approve an AMI opt-out service fee and meter change-out fee. RECO expects that a certain portion of customers will not desire an advanced meter. The AMI Program would allow the customer to retain their existing non-AMI for a monthly service fee. RECO proposes to charge customers requesting a change from an AMI meter to a non-AMI (or the reverse) a one-time meter change-out fee. The Board should determine that the Company is authorized to establish these fees, consistent with basic cost causation principles, at $15 per month for the opt-out fee and $45 for the one-time meter change-out fee. Customers who opt-out of the AMI program or request a meter change-out cause exceptional costs that would not otherwise be incurred had the customer accepted the AMI meter or had not requested a change-out. (Id. at 37-40).

RECO also believes that the Board should waive the provisions of N.J.A.C. 14:3-4.7(c)6 that require the company to maintain a record of "the results of the last test of the meter, performed after the meter's final use and prior to its retirement of service." This rule was plainly intended to apply to the periodic testing of individual meters, rather than bulk replacements and the testing is unnecessary because the meters will not be used again. The Company has proposed to store the meters for a reasonable time period in the event that a retirement test becomes necessary. Granting this waiver will enable the Company to save its customers approximately $0.9 million in total project costs. The Board clearly has the authority to permit such a waiver, pursuant to N.J.A.C. 14:1-1.2(a) and (b). (Id. at 40-41).

The RECO/EDF Stipulation provides benefit for customers and the Board should approve it. The Board may use a non-unanimous settlement as a fact-finding tool and adopt it provided that it finds independent support in the record, the parties had an opportunity to discuss settlement, and the non-consenting parties have the opportunity to argue against the stipulation. These conditions have been satisfied in this proceeding. The Stipulation establishes reporting requirements on several metrics and provides that RECO will share basic usage data, free of charge, with third party vendors selected by the customers via the Green Button Connect platform. (Id. at 41-42).

Rate Counsel

In its Initial Brief, Rate Counsel argues that the Board should deny the RECO AMI Petition without considering the merits of the proposed AMI plan. (Rate Counsel Initial Brief at 1). Instead, Rate Counsel states that the Board should direct RECO to invest in AMI and, if and when RECO determines AMI to be a reasonable and prudent investment, they may seek subsequent recovery in a base rate case. (Ibid.)

However, Rate Counsel states that if the Board chooses to evaluate the RECO AMI Petition on its merits, it is clear that RECO fails to meet its burden of proof that AMI is a reasonable and prudent investment. Rate Counsel believes that the analyses provided by the Company are lacking, including the fact that the Company has not even justified its selection of an AMI vendor. (Id. at 1-2).

Rate Counsel argues that RECO's request for pre-approval to install AMI meters and to recover stranded costs on retired meters is unnecessary, unprecedented, and should be denied. Rate Counsel asserts that Board approval of AMI is not required, as RECO is free to invest in AMI when it determines the investment is reasonable, prudent, and in customers' best interests. Rate Counsel states that if RECO's management is confident that AMI is a cost-effective investment, then it could simply proceed with the investment and recover its prudent costs in a rate case. (Id. at 7). Rate Counsel further contends that a fundamental problem with RECO's pre approval request is the Company is asking the Board to make a prudency determination based solely on estimates of costs and benefits, neither of which the Company will guarantee. (Id. at 7-8). This has the effect of shifting the risk of RECO's management decisions away from shareholders to ratepayers and the Board itself. (Id. at 8).

According to Rate Counsel, in addition to the pre-approval of its decision to invest in AMI, RECO also seeks a guarantee that it will be allowed to recover $8.9 million of stranded costs for its retired meters in a future rate case. Granting these requests will eliminate regulatory risk for RECO's shareholders and shift it to ratepayers. (Id. at 9). Rate Counsel asserts that RECO has refused to commit to any cap on AMI costs, or to actually realizing any of the benefits contained in the cost/benefit analysis it has submitted as evidence in support of its petition and therefore the Board should not make a premature determination that AMI is a prudent investment. (Ibid.) Rate Counsel argues that there is nothing extraordinary about RECO making a business decision on whether to invest in new meters and prior Board approval for storm hardening and the Smart Grid Pilot program are not a valid comparison. (Id. at 9 to 12).

With respect to RECO's request for stranded costs on its retired meters, Rate Counsel asserts that this request, which was not an aspect of this proceeding until November 2016, should be denied. (Id. at 13). Rate Counsel believes the issue of stranded cost recovery should only be considered in the context of a future rate case, if necessary because a rate case is the proper forum to consider the prudency of the investment and associated stranded costs. (Id. at 14).

Rate Counsel argues that even if the Board decides to consider the Petition on the merits, RECO has failed to demonstrate that AMI is a reasonable and prudent investment. With respect to the cost benefit analysis submitted by RECO in its petition, Rate Counsel believes that the analysis was flawed and RECO has failed to meet its burden of proof. According to Rate Counsel, the Company's petition offered an economic analysis which failed to present a net present value revenue requirement analysis. Without results that are presented in terms of present value of revenue requirements, Rate Counsel states that it is impossible to make a determination of the impacts of an investment on customers and therefore fails to meet the burden of proof that AMI is a reasonable and prudent investment. (Id. at 15).

Rate Counsel further asserts that because RECO is asking for approval of AMI in advance and could only present estimated costs and benefits in its petition, the Board has no way of knowing how accurate these costs and benefits really are. Accordingly, the estimated costs and benefits do not offer a sufficient basis for the Board to determine that AMI is a prudent and reasonable investment. (Id. at 16). Rate Counsel urges the Board to consider RECO's refusal to make commitments to its own estimates of costs and benefits (via a cap) in evaluating this case. (Ibid.)

In addition, Rate Counsel states that RECO has not justified the costs charged by its AMI vendor or that it has made a prudent decision in its selection of its vendor. The parties to this proceeding were not provided with information related to the other bids because RECO claimed that the bids were submitted pursuant to a non-disclosure agreement. (Id. at 16 to 17).

Regarding the cost/benefit analysis submitted, Rate Counsel asserts that the costs presented by RECO are not comprehensive, excluding a number of costs. While continuing to rely on its original cost/benefit analysis, RECO did not incorporate all costs related to the three major components of an AMI system. According to Rate Counsel, RECO did not include a rate of return on either the new AMI meters or the prematurely retired meters or the capital costs associated with AMI's two management systems (MDMS and MAMS). (Id. at 17). Rate Counsel further states that costs of developing and deploying the new web portal that RECO is developing (DCX) which is necessary to allow customers to view their usage data in fifteen minute increments are not included in the cost/benefit analysis. (Id. at 18 to 19).

With respect to the benefits of AMI, Rate Counsel argues that RECO has failed to demonstrate that customers will realize significant benefits from AMI. In its Initial Brief, Rate Counsel notes that almost half of the estimated benefits from implementing AMI will come in the form of job loss with the elimination of nine meter reading positions and additional labor reductions in the call center and the Gas and Electric Meter System for a total savings of approximately $22.275 million. (Id. at 19 to 20). Rate Counsel further states that the main beneficiaries of an AMI investment will be the Company's shareholders by realizing a rate of return on the new system, while continuing to earn a rate of return on the prematurely retired meters. The customer benefits appear to be mainly related to RECO's operations. (Id. at 20). In addition, the purported customer benefits from AMI deployment (energy consumption data availability through DCS, faster outage restoration, reduced meter reading costs, fewer estimated bills and remote turn on/off of service) are far from assured. (Id. at 21).

Rate Counsel further argues that RECO's examination of potentially cheaper alternatives was inadequate given that the Company did not perform any studies on implementing the alternative of full deployment of Automated Meter Reading ("AMR") and instead dismissed the alternatives after the decision to deploy AMI was made. (Id. at 22 to 23). Additionally, when RECO did examine the alternative of installing an Itron AMR bridge meter, the Company assumed it would eventually deploy AMI and ruled out the AMR meter because it was not compatible with Itron AMI meters. (Id. at 23).

With respect to the assumed twenty (20) year life span of the AMI meters, Rate Counsel does not believe that RECO has demonstrated that the life span will be equal to or greater than their payback periods citing that it is lower than what has been projected in other states. Moreover, RECO's three cost/benefit analyses show that the period of time before the benefits of the meters outweighs the costs may be as long or longer than the useful life, making the investment imprudent. (Ibid.) Rate Counsel asserts that because RECO is also requesting stranded costs for its legacy meters, customers will be forced to pay for two meters simultaneously under RECO's proposal. Additionally, if the AMI meters become obsolete before twenty years, customers may not receive the full benefits associated with the costs of the AMI meters and may be asked to pay for three meters simultaneously. (Id. at 24 to 25).

With respect to RECO's proposal to perform work on the customer side of the meter and capitalize these costs in rates, Rate Counsel argues that this proposal violates settled New Jersey case law and would be poor public policy and urges the Board to deny RECO's proposal. The proposal would allow RECO to repair or replace any faulty customer-owned equipment on

the customer's side of the meter, such as meter pans, faulty electric cables, etc., as necessary. (RC-20). Per the Company's current tariff, customers are responsible for maintenance of such equipment. Rate Counsel asserts that the cost of performing these repairs is unknown as RECO has budgeted $242,000 plus a 10% contingency for this work based on suggestions made by other utilities while not knowing how many buildings/residences in its service territory will really require repairs. (Rate Counsel Initial Brief at 25).

According to Rate Counsel, after the work is performed, the ownership of these repaired or replaced facilities will remain with the customer, while the Company will capitalize the costs and add the costs to its rate base. (Ibid.) Citing several New Jersey Supreme Court decisions, Rate Counsel asserts that work performed on a customer's property should be excluded from rate base under New Jersey law. (Id. at 25 to 26). In addition, as the Company's proposal did not propose to change the tariff, the proposal to perform such repairs on the customer's behalf would be in violation of its own tariff. (Id. at 26).

Rate Counsel also asserts that allowing utilities to perform work on the customer side of the meter is poor public policy as it rewards customers who may have neglected to properly maintain their home or other building at the expense of all ratepayers in RECO's service territory. The proposal further financially penalizes those ratepayers that made capital investments on their own property without ratepayer funds. (Ibid.)

Finally, Rate Counsel states that if the Board decides to approve RECO's AMI Petition, the Board should impose the following conditions to safeguard ratepayers:

1. A hard cap on RECO's recovery of AMI costs ($16.5 million)

2. A reduced return on equity for the AMI investment to reflect the reduced risk borne by the Company's shareholders.

3. A specific requirement that the estimated value of the benefits ($82 million) be credited to customers in rates. If actual benefits are greater than $82 million, Rockland will also pass these along to customers in rates.

4. A clear statement that the Board will review the prudency of the Company's decision to invest in AMI, and the prudency of the costs spent in implementation; and that the Company bears the risks that it will not recover its full investment.

5. Denial of recovery of stranded costs for existing meters.

6. A clear statement that the Company is prohibited from performing any repair or replacement work on the customer side of the meter.

(Id. at 27 to 28).

EDF

In its Initial Brief, EDF supported the approval of RECO's AMI Program. EDF states that the Company, through its AMI Business Plan, demonstrated that the AMI Program has benefits that significantly outweigh costs and that pre-approval is appropriate. As is appropriate for AMI, the Board has pre-approved storm hardening programs and pipeline replacement programs where utilities could not justify a large investment in infrastructure upgrades without a structure in place beforehand for cost recovery and prudency review. (EDF Initial Brief at 11 to 12).

The AMI Program will provide near-real-time data to customers, rewarding energy efficiency and driving down energy costs. The AMI program would provide residential customers with energy use data at fifteen minute intervals and commercial customers at five minute intervals using the Green Button Connect data sharing system. EDF has observed that customers make better energy decisions when they have access to frequent, timely, and actionable energy use information. The state also recognizes this in 2015 EMP update. (Id. at 14).

The AMI Program will provide complete near-real-time data to grid operators, allowing for peak demand reductions through more accurate peak forecasts and improved volt-VAR optimization. Currently, load forecasts are based on incomplete and infrequent data because of the limitations of current meter technology. The company will have more granular data with the implementation of the AMI Program, aiding in planning for localized peaks and in identifying impacts of DER on the system. This data can also be used to improve volt-VAR optimization for further reductions in peak demand. (Id. at 15-16.)

EDF argues that the AMI Program will allow for improvements in reliability and resiliency, referencing a 2014 Department of Energy report on Duke Energy's AMI deployment that found AMI can provide "outage diagnostics features that allow the utility to...determine where power is out." This frees up personnel and resources in the critical hours and days after a major storm. (Id. at 16 to 17).

EDF emphasizes that AMI will enable greater integration of DER, in accordance with the EMP. (Id. at 18).

The Board has previously granted pre approval for reliability and resiliency projects that are not "business as usual", requiring post investment prudency review and extensive performance tracking metrics. EDF states that enhancements in metering technology are beyond "business as usual," as that would be replacement of meters as they expire with like technology currently in use in New Jersey, and the BPU can decide that pre-approval is justified. (Id. at 20-25).

EDF also argued that the Board should approve the March 2017 RECO/EDF Stipulation that ensures significant customer benefits. RECO agreed to track fourteen performance metrics and also agreed to provide each of its customers with free access to basic Green Button Connect data. EDF supports the AMI Program, with these inclusions, and concludes that the Board should approve the RECO/EDF Stipulation and grant pre-approval of the AMI Program, with post investment prudency review to follow. (Id. at 25-27).

Reply Briefs

RECO

In its Reply Brief, RECO argues that Rate Counsel's Initial Brief demonstrates that Board approval of the AMI Program is necessary. According to RECO, the record in this proceeding demonstrates undisputed qualitative customer benefits and a financial cost benefit analysis demonstrating that benefits significantly exceed costs. Despite this evidence and Rate Counsel's failure to provide testimony contesting the benefits, Rate Counsel continues to oppose the AMI Program. (RECO Reply Brief at 2 to 3).

The Company argues that Rate Counsel's assertion regarding estimates does not provide any basis for delaying approval of the AMI Program. The Board has relied on estimates in issuing approval of numerous capital projects and programs. The use of estimates is reasonable here

because the costs are based on actual, competitive vendor pricing and the benefits were quantified by Company subject matter experts with extensive detail set forth in the record. The Company concedes that the actual future benefits may deviate from the estimates, but notes that the estimated benefits exceed the project costs by such an amount that net benefits should be realized even if they do not meet projections. (Id. at 3 to 4).

Additionally, RECO believes that Rate Counsel's assertion that pre-approval is not warranted because AMI is a routine capital investment is at odds with the facts. There are zero AMI meters installed in New Jersey and RECO is the only New Jersey electric or gas utility with a pending proposal to install AMI. Business as usual would encompass the periodic replacement of selected meters on the electric system with the same type of meters, not the wholesale replacement of the Company's traditional meter system with a modern two-way AMI system. (Id. at 5 to 7).

The type of prior approval requested for the AMI Program is indistinguishable from the Board's previous orders approving utility infrastructure investment. The Board has broad authority under Title 48 to approve such a request. Approval of RECO's request is supported by Federal government calls for AMI investment in the American Recovery and Reinvestment Act, the Smart Grid Investment Grant program, and the April 2011 Call to Action on Green Button Connect. Furthermore, the EMP has expressed a desire for electric utility smart meter initiatives as a component of smart grid and resiliency measures. (Id. at 7-8).

The Company reiterated that the benefits are detailed at length in the record and argued that Rate Counsel has not provided any basis to ignore the record supporting these benefits. Furthermore, the record supports that customer bill impacts resulting from the AMI Program should be modest. In the first year of the AMI Program, the average monthly residential bill would increase by only $1.08 and projected bill impacts continue to decrease over the next 20 years as depicted in exhibit RC-19 (RCR-AMI-34, Attachment 1). (RECO Reply Brief at 8-13).

The Company argued that the costs of the AMI Program are supported in the record and reasonable. By necessity, any forward looking analysis must use estimates and projections and these are well founded in the record. Costs for the MDMS and MAMS are properly reflected as O&M costs according to the Board-approved Joint Operating Agreement between O&R and RECO and are included in the financial analysis of the AMI Program. Costs for the Digital Customer Experience ("DCX") web portal are properly excluded from the analysis because this investment would be made regardless of whether RECO proceeds with the AMI Program. (Id. at 13 to 15).

RECO asserts that, in both pre-filed and live witness testimony, the Company detailed its examination of alternatives to AMI and has met its burden of proof. In particular, the Company examined the use of AMR and found that the AMR meters would not provide the customer and operational benefits that AMI does. Furthermore, the Company need not prove that alternative proposals advanced by Rate Counsel are unreasonable, rather, there is an affirmative burden imposed on the proponent of alternative proposals. See Envtl. Def. Fund, Inc. v. Envtl. Prot. Agency, 548 F. 2d 998, 1014-1015 (D.C. Cir. 1976); Richard J. Pierce, Jr., Administrative Law Treatise, Vol II, §10.7 (4th ed., 2002). Rate Counsel has failed to provide evidence to support its own alternative proposal and has not offered any cost/benefit analysis for AMR meters. (Id. at 15 to 17).

The Company's utilization of a 20-year AMI meter lifespan is reasonable and consistent with the lifespan adopted by the New York Public Service Commission for ConEd in its most recent electric base rate case. Rate Counsel's speculation that the AMI meters could possibly become

obsolete before 20 years provides no legitimate basis to reject the use of a 20-year useful life in the financial analysis. (Id. at 17 to 18).

The Company reiterated that the continued recovery of legacy meter costs is a necessary component of the AMI Program and should be approved by the Board. The AMI Program cannot proceed without removal and replacement of legacy meters, as it is a prerequisite to installing an AMI meter. If the Board deems the AMI Program worthy of approval, then it should also approve the legacy meter cost recovery. (Id. at 20 to 22).

RECO argues that the proposal for work on the customer's side of the meter is proper. The Company performed benchmarking with other utilities that have installed AMI and this revealed that a best practice for AMI deployments was to repair, where possible, faulty or dangerous customer-owned electrical equipment. Being a recognized best practice, it is a justifiable exception to the Company's policy that customers are responsible for these repairs. This type of work will allow for the meter installation process to proceed on schedule and avoid delays and burdens associated with requiring customers to make these repairs. The budgeted amount for these repairs is based on industry experience and sound budgeting principles and the proposed accounting treatment is to capitalize these costs. The make-ready work is necessary for the safe installation of the AMI meter and is *de minimis* to the overall meter installation. The AMI meter could not be operated as "used and useful" without it and should reasonably and properly be capitalized as part of an integral component in the Company's capital investment in the meters. (Id. at 18 to 19).

RECO stated that Rate Counsel's proposed conditions are unsupported in the record, misplaced, and should be rejected. A cap on future rate recovery should be rejected because the cap is undefined, ambiguous, and there is no supporting rationale to support such a cap. RECO emphasizes that the consideration of a cap on recovery is premature, as this proceeding does not involve any adjustment of rates or allow recovery prior to a future base rate case, where the Board will review the reasonableness of the Company's actual AMI expenditures. A credit of estimated benefits to customers is also without support in the record and inappropriate. Actual savings realized by the Company will flow to customers when they are reflected in test year results in future base rate filings. (Id. at 22-23).

Rate Counsel

In its Reply Brief, Rate Counsel addresses several topics raised in both RECO's and EDF's Initial Briefs.

Rate Counsel also states that RECO's petition fails to present a compelling case or precedent for why pre-approval should be granted. (Rate Counsel Reply Brief at 2 to 3). Rate Counsel asserts that for the first time in its Initial Brief, RECO indicated that it contemplated "that the Board in a future rate case will address whether the Company's actual implementation of its AMI program was conducted in a prudent manner, and will review the Company's actual expenditures." (Id. at 6). Continuing to argue that there is nothing extraordinary regarding RECO's decision to implement AMI, Rate Counsel states that prudent capital investment decisions are integral to the responsibility accepted by RECO when it accepted a 9.6% return on equity. (Id. at 7). Further, at a cost of $16.5 million, Rate Counsel asserts that AMI is not an unusually sizeable investment for RECO. With a three year roll out, the annual capital investment equates to $5.5 million. By comparison, in RECO's most recently completed base rate case, RECO made capital investments of at least $48.4 million in the two and a half years since the rate case. (Id. at 7 to 8).

Rate Counsel reiterates its belief that the Board cannot grant guaranteed recovery of the stranded costs of its current meters in this proceeding because doing so would be contrary to settled case law that items in rate base must be used and useful in the public service. (Id. at 2 to 3). Rate Counsel states that a proffer of precedent to support the request for recovery of stranded costs is noticeably absent from RECO's argument. (Id. at 11). In addition, there are many questions that remain with respect to the stranded costs such as whether RECO will remove the legacy meters from Utility Plant in Service (because they are no longer used and useful) and if so, which account these costs would be transferred to. (Id. at 12 to 13).

With respect to RECO's claim that its petition follows the policies set forth in New Jersey's 2011 Energy Master Plan and 2015 Energy Master Plan update, Rate Counsel argues that the Company's proposal will result in direct contradiction to the EMP's goals of job creation and a reduction in energy rates. (Id. at 2, 13 to 15). In addition, Rate Counsel asserts that RECO's claim that the EMP endorses AMI is not true. While the EMP does mention smart grid technology, the EMP never advocates for implementation of AMI and specifically notes reservations with smart meters. (Id. at 15).

Regarding the RECO/EDF Stipulation, Rate Counsel argues that EDF misconstrues the purpose of the instant proceeding as a referendum on AMI but instead a proceeding to determine if pre-approval is appropriate. (Id. at 16). Similar to its response to RECO, Rate Counsel states that EDFs assertion regarding previous pre-approvals by the Board (storm hardening, pipeline replacement programs, etc.) are misplaced in this proceeding. (Id. at 16 to 17).

EDF

In its reply brief, EDF argues that Rate Counsel's opposition of AMI has led to a growing gap in AMI deployment in New Jersey as compared to the rest of the country. This risks leaving New Jersey's electricity distribution system in a state where it is not competitive with other states. This can lead to inefficiency and compromises the ability to provide safe, adequate and proper service. (EDF Reply Brief at 2).

EDF again emphasizes the AMI Program's benefits, that the benefits significantly outweigh the costs, and that the Board has a long history of pre-approving infrastructure investments where necessary. (Id. at 2-3).

EDF states that the AMI Program will enable RECO to continue to provide safe, adequate and proper service by increasing efficiency and environmental protection according to the utility's directives pursuant to N.J.S.A. 48:2-21 and N.J.A.C. 14:3-3.1. Rewarding energy efficiency, lowering peak demand, integrating DER, and improving reliability and resiliency are all key goals of the EMP and benefits of AMI. (EMP at 38, 39, 50). Numerous other states have also determined that AMI benefits far outweigh its costs and more than sixty million Americans already benefit from AMI. (EDF Reply Brief at 4-6).

EDF argues that the AMI Program qualifies for pre-approval and that states around the country have used pre-approval of AMI to confront the issue of a lack of appropriate cost recovery and prudency review structures. The Board has utilized pre-approvals as far back as March 1981. I/M/O the Implementation of the Two Bridges/Ramapo Water Diversion Project, BPU Docket # 8011-870 (BPU 1981). Since then, the Board has pre-approved at least a dozen infrastructure investments of similar nature to the relief RECO seeks for its AMI Program. (EDF Reply Brief at 7-10).

EDF states that the AMI Program's cost recovery will be based on actual costs and includes strong customer protections. The immediate proceeding does not involve cost recovery and RECO's customers will only pay for the AMI Program expenditures after the Board deems them prudent. Additionally, if the Board were to approve the RECO/EDF Stipulation, the AMI Program would make extensive use of performance metrics to track progress towards the expected benefits. (Id. at 10-11).

EDF concludes that the Board should grant pre approval of the AMI Program, with investment prudency review to follow and approve the RECO/EDF Stipulation. (Id. at 12).

DISCUSSION AND FINDINGS

Energy Master Plan Goals

The five overarching goals of the EMP are to (1) drive down the cost of energy for all customers; (2) promote a diverse portfolio of new, clean, in-state generation; (3) reward energy efficiency and energy conservation/reduce peak demand; (4) capitalize on emerging technologies for transportation and power production and; (5) maintain support for the renewable energy portfolio standard. The Company has testified that the AMI Program, in conjunction with distribution automation technology, will allow the Company to operate more efficiently by monitoring energy flowing across the distribution system and that this information will help save energy, reduce costs, and increase distribution system reliability. (P-2 at 13-19 to 14-2). The Company further provides that the AMI Program enables distributed DER integration (Id. at 6-8 to 11), enables customers to access energy usage data and share that data with third parties to encourage better energy usage habits and lower energy costs (Id. at 10-5 to 11), and allows RECO to use advanced distribution technologies to more accurately and precisely monitor and control the distribution system (Id. at 11-3 to 9). Based on this, the Board **HEREBY FINDS** that RECO's AMI Program has the potential to help satisfy the goals of the EMP and that the EMP supports RECO's intended use of AMI and smart grid technology.

Pre-Approval

It is evident from the record in this proceeding that pre-approval has vastly differing significance to each of the parties. RECO asks for pre-approval because the AMI Program is unique and transformative (RECO Initial Brief at 31), and Rate Counsel asks the Board to deny such approval because it believes that AMI is a routine investment and that the Board should not make a prudency determination based solely on estimates (Rate Counsel Brief at 7 to 8). Rate Counsel states that, if the Board does decide to approve RECO's AMI Petition, the Board should impose several conditions to safeguard ratepayers (Id. at 27). EDF also argues that states around the country utilize pre-approval as a way to confront the issue of a lack of an appropriate cost recovery mechanism, and that the Board has utilized pre-approval as far back as March 1981, approving at least a dozen infrastructure investment programs of similar nature to the relief RECO seeks for its AMI Program. (EDF Reply Brief at 7 to 10).

The Board is not persuaded that there is a lack of an appropriate cost recovery mechanism to address the deployment of AMI, in that utilities are free to make capital investments and seek recovery for those investments in a base rate case where the Company seeks a prudency determination. With regard to this "normal course of business", there are also instances where the Board has approved a utility's capital investments prior to them making those investments and it is within the Board's purview to do so where it feels that a policy determination is necessary to further the Board's goals and objectives, and those of the EMP. Whereby a pre-

approval of the AMI Program can enable the Board to further these objectives, it also enables the Board to take a measured approach to deploying a new technology that has not historically seen use in the State. So, while the Board can authorize the initiation of a program, it does not guarantee recovery. For these reasons, the Board **HEREBY ORDERS** that RECO may implement its AMI Program as described in its petition and testimony, subject to the conditions of this Order. Nonetheless, the Company's actual costs in implementing the AMI Program and the realization of actual benefits remain subject to prudency review. A determination as to the prudency of the program as well as the prudency of the program costs will be made in a subsequent base rate case after the AMI Program has been fully deployed and is used and useful.

Furthermore, the Board **HEREBY FINDS** that some of the terms that Rate Counsel seeks in its Initial Brief (Id. at 27), as a condition of approval, are either inappropriate or unnecessary. This Order does not approve RECO to recover costs associated with AMI or determine that the AMI Program is a prudent investment. Therefore, a cap on recovery is not necessary and a call for a reduced return on equity is misplaced. Rate Counsel argued that the Board should not rely on estimated benefits to make a prudency determination, then asks the Company to credit those estimated benefits to ratepayers upfront as a proposed condition of approval. This condition is unnecessary at this time. First, the Board has not determined that the program is prudent nor has it approved recovery of any funds from ratepayers at this time. Additionally, any actual savings will accrue to the benefit of the customer, if and when the AMI Program is deemed prudent in a base rate case.

The remainder of Rate Counsel's proposed conditions is addressed elsewhere in this order.

Legacy Meters

Similarly, since this Order does not authorize RECO to recover costs associated with AMI, or determine the prudency related thereto, the Board **DEFERS** a determination regarding recovery of the stranded costs of the legacy meters. The Board **FINDS** that it is not appropriate to allow recovery of the legacy meters until the prudency of the AMI Program itself has been determined. However, it is appropriate to permit RECO to defer, in a regulatory asset, the net book value of the legacy meters. In the Petition, RECO acknowledged that the timing and methodology for such recovery should be established in a future base rate case. The Board **HEREBY DIRECTS** RECO to file testimony in its next base rate case related to the deferral amount of the legacy meters, as well as a proposal for the amortization of such costs. All parties in that base rate case shall have the right to challenge the prudency and recoverability of the legacy costs as well as any recovery mechanism.

Benefits

The Company has testified that the AMI Program will allow the Company to operate more efficiently, thereby saving money and reducing customer costs; improve the heretofore limited visibility into the operation of the distribution system; and improve operational efficiency, customer experiences, and air quality through reductions in duplicated efforts and emissions. (P2 at 13-18 to 14-16). In its testimony, the Company identified various benefits of the AMI Program, some of which are summarized below.

(1) RECO is leveraging economies of scale in contract pricing obtained by O&R, which has already selected AMI vendors and technologies, by deploying AMI now. (Id. at 19-1 to 20-4).

(2) The AMI Program enables customers to view granular usage data, leading to proactive customer energy management (Id. at 21-9 to 17).
(3) Data gleaned from the AMI Program will enable improved voltage/VAR optimization and equipment usage analysis, thereby promoting both increased system efficiency and longer equipment life and it will also reduce the duration of outages at critical facilities and allow the Company to provide information which will support New Jersey's energy efficiency efforts. (Id. at 22- 1 to 8).
(4) The AMI Program will facilitate the identification of potential problems and modernize the distribution infrastructure. (Id. at 22-10 to 16).
(5) The AMI Program will provide a more accurate picture of its system's electrical performance which, in turn, will benefit its planning and forecasting processes, as well as improving its integrated planning analysis such that it can better incorporate more DER by using interval data from the AMI Program. (Id. at 24-14 to 22).
(6) AMI metering will enable the Company to review the entire system as well as to closely monitor and model load characteristics, local voltage, and power quality. (Id. at 25-3 to 12).

No other party provided testimony disputing the Company's claimed benefits of the proposed AMI Program.

Due to those benefits specifically identified or enumerated above, AMI will be a key component of an overall grid modernization program, some of which RECO has initiated. (P-2 at 18:4).

For the reasons above, the Board **HEREBY FINDS** that RECO's AMI Program has the potential to provide additional data and the capabilities necessary to enable a host of benefits to the distribution system, thereby allowing the Company to streamline and modernize its operations, provide an enhanced customer experience, and benefit the environment.

CBA/Business Case Analysis

Rate Counsel took exception to the fact that RECO did not submit with its Petition an analysis of economic impacts to customers and a cost benefit analysis ("CBA") based on NPV. This point was also made in the pre-filed testimony of Tim Woolf, which is dated September 9, 2016. (Id. at 12:3-7). In RECO's responses to subsequent discovery and rebuttal testimony, the Company addressed both of those concerns. (See Exhibits RC-16, 17, and 19). Rate Counsel did not provide any testimony at the evidentiary hearing to otherwise dispute the updated economic impacts to customers and CBA, updated to reflect NPV; other than Rate Counsel's witness opining at the March 20, 2017 Evidentiary Hearing that the updated analysis was submitted too late. (Hearing Transcript at 88:3 to 4). In its brief, Rate Counsel subsequently argued that the Company improperly omitted costs from the CBA, to which the Company responded that those costs were properly reflected in its O&M costs per the Board-approved Joint Operating Agreement.

The Board has reviewed the CBA included in the original petition and the revised CBA utilizing the Net Present Value analysis contained in exhibit RC-2. While several methods to calculate a CBA exist, the basic premise is that the costs saved, and in this case recovered under tariff, outweigh the installation costs. This coincidentally yields a defined payback period as well. As such, the estimated benefits to RECO due to implementation of the program appear to in fact be greater than the program costs. In reviewing the NPV analysis, the Company estimated savings above and beyond the cost of the program over twenty years. (Exhibit RC-2).

The Company estimated the AMI Program's costs based on task and equipment and construction that were included in vendor quotes. At this time, the Board is persuaded that these costs could be considered final for the AMI Program's implementation. The estimated benefits to RECO are a combination of customer and societal benefits and a reduction in operating costs. (Ibid.) This basic method of CBA is adequate for use in reviewing the petition and determining the potential payback and benefits.

The Board must be cognizant of the fact that these are estimated benefits and there is room for debate as to the accuracy of such projections. The Company should have a clear picture of the costs that will be avoided for meter reading, but the remainder of the projected benefits can be subject to interpretation. Therefore, the Board **HEREBY FINDS** that no evidence has been presented as to otherwise reject the CBA outright and that the AMI Program has the potential for net benefits to accrue to the Company and flow to the customer, should the AMI Program be implemented in a successful manner. Should these benefits materialize or not, RECO will be subject to justify the investment in a base rate case, just as with any other investment. As this program and the data it generates will be evaluated to make a determination of the actual AMI Program's prudency and benefits, the Board recommends that a consultant with specific knowledge of construction and rates be utilized to run a comprehensive CBA while the Board is evaluating the program in a future base rate case.

AMI Opt Out Fees

With respect to RECO's proposed meter change out fee, the Board is satisfied that the level of the proposed fee is consistent with meter change out fees in other jurisdictions. Notably, RECO's proposed fee is lower than eleven of the twelve benchmarked by RECO. (RC-9 at 2). The Board notes that the proposed $45 fee would not be assessed to customers who make the election thirty (30) days prior to the AMI meter initially being installed. (P-1 at 28). The Board has also reviewed RECO's proposed monthly meter reading fee of $15 for those customers opting out of the AMI program. Based on a review of the information, the Board is satisfied that the proposed monthly meter reading fee is consistent with basic cost causation principles since the fee would cover the incremental costs of manually reading the customer's meter. (Id. at 27). Similar to the proposed meter change out fee, the proposed $15 monthly meter reading fee is in line with those charged for similar services in other jurisdictions. (RC-9 at 2). Accordingly, the Board **HEREBY APPROVES** the AMI opt-out fees proposed by RECO. Additionally, the Board **HEREBY DIRECTS** RECO to provide testimony and actual cost information for these fees in its next base rate case. The ongoing assessment of these fees may be reviewed in future rate cases.

Waiver of Meter Testing Rules

RECO has requested that the Board waive the provisions of N.J.A.C. 14:3-4.7(c)6, which requires the company to maintain a record of "the results of the last test of the meter, performed after the meter's final use and prior to its retirement of service." and projects that this will save approximately $0.9 million in total project costs. (P-2 at 28). The Company argued in its initial brief (Id. at 40-41) that the rule was not intended to apply to the bulk replacement of meters and the testing is unnecessary because the meters will not be used again. In lieu of a retirement test, the Company has proposed to store the meters for a one-month time period in the event that such test becomes necessary (S-5 at 1).

RECO has misinterpreted the intent and purpose of these rules, which are intended to provide consumer protection. A final meter test, post removal, ensures that customers have been accurately and appropriately billed for their metered service. Pursuant to the Board's rules, if

the meter is found to be inaccurate, adjustments may be appropriate. The Company's reasoning that a meter will no longer be used as grounds for a waiver is unpersuasive. As set forth above, future use is not the sole basis for post-retirement meter testing. Additionally, storing the untested meter for a one-month timeframe will not obviate the purpose of the rule. One month would not give a customer, or the company, sufficient time to recognize there was a billing discrepancy and request a meter test under this proposal. For these reasons, the Board **HEREBY DENIES** RECO's request for a waiver of the provisions of N.J.A.C. 14:3-4.7(c)6.

Work on Customer Side of Meter

The Board has several concerns regarding RECO's proposal to perform work on the customer's side of the meter and capitalize such costs in rates. While the Board believes the make-ready work is necessary for the safe installation of the AMI meter to avoid unnecessary delays in the AMI Program's implementation, the Board agrees with Rate Counsel that the proposal, as requested, violates settled New Jersey case law. Per the Company's current tariff, the customer is responsible for maintenance of such equipment. The Board notes that RECO has not requested a modification to, or waiver of, this provision of their tariff. RECO has budgeted approximately $242,000 plus a ten percent contingency to perform this work, which according to RECO, is *de minimis* to the overall meter installation. Recognizing that AMI meters could not be operated as "used and "useful" without this work, the Board **HEREBY WAIVES** General Information Section No. 22 of RECO's current tariff only with respect to work done related to the AMI Program roll out and done specifically for installation of an AMI meter at the customer's location. Any work not related to the AMI Program roll out will continue to be the responsibility of the customer. With respect to the cost of such work, the Board **HEREBY FINDS** that RECO's proposal is contrary to settled New Jersey case law. Accordingly, the Board **HEREBY DENIES** RECO's request to capitalize such costs. Costs related to this work shall not be recovered from the Company's ratepayers.

RECO/EDF Stipulation

Both RECO and EDF have requested that the Board approve the RECO/EDF Stipulation, attached to this Order, arguing that the Board is within its rights to do so. Although the Board agrees with RECO's assertion that the Stipulation can be used as a fact finding tool, the Board is not persuaded that it is necessary to approve the Stipulation, in that the issues it encompasses are addressed separately in this Order. In fact, the discussion and findings on metrics and customer access to data are based partly on a review of the Stipulation. Furthermore, the Stipulation is ill-founded in stating that the Board should find that the AMI Program is "reasonable and prudent". (Stipulation at 5). A prudency determination for the AMI Program will only be made in a base rate case, after the AMI Program has been fully deployed, and is used and useful. Therefore, as set forth more fully below, the Board will adopt as amended herein the recommended metrics and data sharing policy in the Stipulation, but **HEREBY DENIES** RECO and EDF's request to approve the RECO/EDF Stipulation *in toto.*

Metrics and Reporting

The Board has previously found that there exists the potential for net benefits to accrue to the customer and Company, as detailed in the discussion and findings above. However, the Board must have a mechanism to ensure that the AMI Program is implemented in a fashion where these benefits materialize, and that the implementation of AMI Program is effectively managed. Upon review of the RECO/EDF Stipulation, the Board is not persuaded that the proposed metrics offer a sufficient means to accomplish this. RECO has provided that the AMI Program will have benefits in the areas of storm resiliency, outage detection and response, outage

prevention, customer service and convenience, customer access to data and electric cost reductions, volt/VAR optimization, environmental benefits, and operations improvements and savings. (RECO Initial Brief at 13 – 19) As such, in addition to the reporting requirements set forth in Exhibit A to the Stipulation there are several areas where the Board feels additional metrics must be developed:

1. The percentage of customers opting-out of the AMI Program, on a quarterly basis;
2. The number of meters installed, on a quarterly basis;
3. AMI network performance in major events, to include Access Point availability or other applicable network performance tracking metrics, on an as needed basis per major event;
4. Estimated reduction in major event duration due to the AMI Program, on an as needed basis per major event;
5. Nested outage identification metrics, on an as needed basis per major event; and
6. A quarterly project management report detailing any pertinent issues surrounding deployment activities and any substantive changes to the AMI Program as described in the Company's testimony and petition.

Furthermore, the metrics in the RECO/EDF Stipulation are incomplete in that several goals have yet to be fully developed. For those metrics in the Outage Management Category, the Company shall submit this information on a quarterly basis and not wait until the AMI Program is fully deployed.

Thus, the Board **HEREBY ORDERS** that RECO finalize and enhance the metrics as contained in the RECO/EDF Stipulation to include specific goals and submit them to the Board for review no later than December 15, 2017 and that the Company provide the additional metrics set forth herein, should the Company proceed with implementation of the AMI Program. If RECO timely notifies the Board of its intent to proceed with AMI, the Board **HEREBY ORDERS** RECO to develop and submit, no later than December 15, 2017, an AMI Implementation Plan. Customer involvement in the installation of the AMI meters, interpretation of the data, and effectiveness in the operation of the system will be significant. Many of the benefits touted by RECO rely on customer and user knowledge of how the meter data can be used to lessen energy consumption and use energy more efficiently. In addition to project management, the plan should address customer outreach and education and information security/assurance. The customer outreach portion of the plan will include: a description of specific approaches taken for low income, elderly, disabled customers; fully engage customers about AMI metering before, during and after the installation of a Smart metering system; ensure that the customer knows how to use and benefit from the Smart metering equipment to improve the energy efficiency of their home; ensure proper coordination with customers during installations to minimize disruptions; inform the customer about what data is collected from smart meters and how that information will be used (including whether personally identifiable information is collected); educate the customers in the use of AMI; and educate the customer of what information is available from the AMI, how this can be accessed, and of use to the customer; explain the rights and choices that apply to the customer in relation to AMI (including their right to opt-out and the cost of opting out) and provide "Energy Efficiency Guidance" such as information on behavioral changes, generic goods, services or building changes that could assist customers in making informed judgements about the way they can improve the efficiency with which they use their electricity.

Moratorium

The Board's authorization to allow RECO to implement the AMI Program is not an invitation for any utility to file for pre-approval of a similar program. This specific program is being authorized as a Case Study for advanced metering technology that could potentially be utilized throughout the state if it is deemed prudent and useful. Therefore, the Board does not intend to authorize or act on any previously submitted or newly petitioned pre-approvals for AMI programs until such time as the Board has made a determination that advanced metering technology is a prudent investment. The Board will review the RECO AMI program once it is fully implemented and issue guidance to Electric Distribution Companies ("EDC"). Any EDC may decide to initiate such a program of its own accord and be subject to review and approval of those expenditures and prudency review in their next base rate case; recovery of which will not be considered by the Board until after it has evaluated the prudency of RECO's AMI program.

Data Disposition

As discussed above, an anticipated benefit of the AMI Program is that it will enable customers to access energy usage data and customers may choose to share that data with third parties to encourage better energy usage habits and lower energy costs (P-2 at 10:5-11). Nonetheless, RECO shall not share non-aggregate, customer specific data without a customer's express consent. Upon review of the RECO/EDF Stipulation, the Board takes note that it includes a "Green Button Connect Data Sharing Policy" that provides customers the ability to share interval usage data with authorized third parties free of charge via a platform called Green Button Connect. The policy also anticipates that RECO will provide third-party access to "value added" data in the future, though it contemplates a fee for this service. Green Button is a data standard that provides customers with easy, secure access to their energy usage information and is a voluntary, consensus based industry standard.[3] Whereby customers may experience limited or reduced benefits if barriers to access usage information exist, the Board **HEREBY ORDERS** RECO to implement the "Green Button Connect Data Sharing Policy," as contained in the RECO/EDF Stipulation. Furthermore, the Board **HEREBY FINDS** that customer access to data is a key element of realizing the anticipated benefits of the AMI Program and reserves the right to require that additional information be provided to customers free of charge and any fees or surcharges for additional information must be included in the Company's Board-approved tariff. Additionally, the Board **HEREBY ORDERS** that RECO amend, and submit no later than December 15, 2017, the Green Button Connect Data Sharing Policy to allow multi-unit building owners access to building-level aggregate data and municipalities access to municipal-level aggregate data. This data shall be presented so that no personal or customer specific information is provided, so as to enable the analysis of the usefulness of other Board-approved energy efficiency programs and the development of municipal-level energy and greenhouse gas action plans. To the extent that the Board encourages the availability of this information, in aggregate and non-personally identifiable means, to building owners and municipalities, RECO should work with the Board's Office of Clean Energy to develop the amended data sharing policy.

The Board **HEREBY RATIFIES** the decisions made by Commissioner Chivukula during the pendency of this proceeding for the reasons stated in his decisions and Orders.

The Company's costs remain subject to audit by the Board. This Decision and Order shall not preclude nor prohibit the Board from taking any actions determined to be appropriate as a result of any such audit.

[3] https://energy.gov/data/green-button

The Board notes that its approval of this Order permits, but does not require RECO to implement the requested program. As such, the Board **HEREBY ORDERS** RECO to notify the Board of its intent to proceed with its AMI Program no later than October 2, 2017. One 30 day extension of this time frame may be granted by Board Staff.

The effective date of this Order is September 2, 2017.

DATED: 8/23/17

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BY:

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JOSEPH L. FIORDALISO
COMMISSIONER

MARY-ANNA HOLDEN
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UPENDRA J. CHIVUKULA
COMMISSIONER

ATTEST:

IRENE KIM ASBURY
SECRETARY

I HEREBY CERTIFY that the within document is a true copy of the original in the files of the Board of Public Utilities

Agenda Date: 8/23/17
Agenda Item: 2F

IN THE MATTER OF THE PETITION OF ROCKLAND ELECTRIC COMPANY FOR APPROVAL OF AN ADVANCED METERING PROGRAM; AND FOR OTHER RELIEF DOCKET NO. ER16060524

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March 13, 2017

Via Email and U.S. Mail

Hon. Upendra J. Chivukula
Commissioner and Presiding Officer
New Jersey Board of Public Utilities
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Re: Rockland Electric Company --
Request for Approval of an Advanced Metering Program, and for Other Relief
Docket No. ER16060524
Stipulation

Dear Commissioner Chivukula:

This firm represents Rockland Electric Company in the above-referenced matter. Enclosed for filing please find an original and two copies of a Stipulation between Rockland Electric Company and the Environmental Defense Fund.

Respectfully submitted,

James C. Meyer

c: Attached Service List (by email and U.S. mail to designees)
Irene Kim Asbury, BPU Secretary (by U.S. mail)

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Advanced Metering Program; and For Other Relief
BPU Docket No. ER16060524

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* Receives one hard copy
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▲ Does not receive discovery
All persons receive an electronic copy of discovery (by email), unless otherwise indicated

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STATE OF NEW JERSEY
BOARD OF PUBLIC UTILITIES

ROCKLAND ELECTRIC COMPANY -- REQUEST FOR APPROVAL OF AN ADVANCED METERING PROGRAM; AND FOR OTHER RELIEF	)))	**STIPULATION** BPU DOCKET NO. ER16060524

APPEARANCES:

James C. Meyer, Esq., Riker Danzig Scherer Hyland & Perretti, LLP, and John L. Carley, Esq., Assistant General Counsel, for the Petitioner, Rockland Electric Company

Raghu Murthy, Esq., Eastern Environmental Law Center, for Intervenor Environmental Defense Fund

This Stipulation is made as of March 13, 2017 by and between Rockland Electric Company ("RECO", the "Company", or "Petitioner"), and the Environmental Defense Fund ("EDF") (each referred to herein individually as a "Party" and collectively as the "Parties") to resolve certain issues, as between these Parties, with regard to the AMI/Smart Meter filing in this docket and to join in recommending that the Board of Public Utilities ("Board"), issue a Final Decision and Order that includes the findings and terms set forth in this Stipulation, in addition to the other determinations properly made by the Board.

1. On May 13, 2016, the Company filed a Verified Petition with the Board seeking a change in base rates and other relief ("Verified Petition"). On June 29, 2016, the Board issued its Order Amending Suspension Order, Bifurcating Petition, Designating Presiding Commissioner, Setting Manner of Service and Intervention Bar Date ("Bifurcation Order"). The Bifurcation Order directed that the portion of the

Company's Verified Petition seeking to deploy Advanced Metering Infrastructure ("AMI") and smart meters throughout its service territory be retained by the Board for hearing in the above-captioned docket (the "RECO AMI/Smart Meter Matter") (with the remainder of the Verified Petition relating to the base rate case being transferred to the Office of Administrative Law).

2. On July 6, 2016, the Company made a letter filing with the Board identifying, enclosing and filing the materials constituting the RECO AMI/Smart Meter Matter filing, including the July 6, 2016 letter, Verified Petition (specified portions), Advanced Metering Panel Direct Testimony (specified pages), and two schedules (AMI Business Plan and White Paper) (collectively the "RECO AMI/Smart Meter Matter Filing"). The RECO AMI/Smart Meter Matter Filing included a request that the Board issue an Order approving the Company's proposed Advanced Metering Program, including the deployment of AMI and smart meters.

3. The Bifurcation Order designated the Honorable Upendra Chivukula as the presiding Commissioner with authority to rule on all motions that arise regarding the RECO AMI/Smart Meter Matter and to establish and modify schedules. The Bifurcation Order also set August 5, 2016 as the deadline for filing motions to intervene or participate in this matter.

4. On July 29, 2016 Commissioner Chivukula issued a Prehearing Order including a schedule for discovery, pre-filed testimony, and hearings. The schedule was amended by Commissioner Chivukula's Order dated October 28, 2016.

5. EDF filed a motion to intervene on August 5, 2016.

6. On September 9, 2016, the Division of Rate Counsel filed the direct testimony of Tim Woolf.

7. Commissioner Chivukula granted EDF's motion to intervene by Order dated September 15, 2016 wherein he also granted Atlantic City Electric Company and Public Service Electric and Gas Company participant status. Commissioner Chivukula separately set a due date of September 30, 2016 for EDF's prefiled testimony.

8. Following the grant of intervention to EDF, EDF has actively participated in the RECO AMI/Smart Meter Matter. The Company provided EDF with all of its responses to discovery from Staff and Rate Counsel, and EDF has received and reviewed the Companies responses to interrogatories RCR-AMI-1 to 40 and S-RECO-AMI-1 to 13. EDF participated in a discovery conference call among the parties on September 19, 2016 wherein the Company made representatives available for follow-up questions on certain discovery responses. EDF also attended a technical presentation given by the Company to all of the parties to the RECO AMI/Smart Meter Matter at the Board's offices on October 13, 2016, and reviewed the Company's responses to follow-up questions posed at the conference that were provided on October 14, 2016.

9. On September 30, 2016, EDF filed the direct testimony of Ronny Sandoval. Among other things, Mr. Sandoval's testimony described benefits of AMI, but recommended that the Board adopt a number of metrics and reporting requirements should it approve RECO's proposed AMI Program. On October 14, 2016, EDF responded to the Company's interrogatories RECO-EDF-1 to 28.

10. On October 19, 2016, the Company filed the rebuttal testimony of its Advanced Metering Panel in response to the testimony of Messrs. Woolf and Sandoval.

On November 11, 2016 RECO responded to interrogatories RCR-REB-1 to 11 from Rate Counsel, and EDF-1 to 7 from EDF, regarding RECO's rebuttal testimony.

11. Two public hearings were held in RECO's service territory on September 19, 2016, one in the afternoon and one in the evening. Evidentiary hearings are scheduled for March 20 – 22, 2017.

12. All of the parties to the RECO AMI/Smart Meter Matter conducted an in-person settlement conference on November 1, 2016. In addition, EDF and the Company held additional telephonic conferences to address matters of mutual concern, including those addressed in this Stipulation.

13. EDF and RECO have reviewed all of the filings, testimony and discovery in the RECO AMI/Smart Meter Matter.

14. EDF and RECO desire to resolve certain matters between them, and to enter a Stipulation to be considered as part of the record in this proceeding.

STIPULATED MATTERS

In consideration of the foregoing and the mutual promises and covenants set forth herein, the Parties **HEREBY STIPULATE AND AGREE** to the following:

15. The Board should approve and require the metrics and reports set forth in Exhibit Ã.

16. The Board should approve and require the Green Button Connect data sharing policy set forth in Exhibit B.

17. Subject to the Board's adoption of the metrics and reporting requirements set forth in Exhibit A, and the Green Button Data Connect data sharing policy set forth in Exhibit B, the Board should approve the Company's proposed Advanced Metering

Program and authorize RECO to undertake the investment and expenditures on the projects contemplated in the AMI Program as set forth in the AMI/Smart Meter Matter Filing. EDF agrees that RECO's proposed AMI Program offers numerous benefits for customers, and that it is reasonable and prudent for RECO to undertake the investment and expenditures on the projects contemplated in the AMI Program as set forth in the AMI/Smart Meter Matter Filing, subject to approval of Exhibits A and B.

18. The Board should find that the RECO is entitled to recover the costs of the legacy meters that will be removed and retired as a result of the installation of smart meters pursuant to the AMI Program.

19. The Parties agree that this Stipulation is voluntary and consistent with law. It is the intent of the Parties that the provisions herein be approved by the Board as being in the public interest.

21. This Stipulation may be executed in one or more counterparts. Each Party has caused its duly authorized representative to execute below and deliver this Stipulation.

WHEREFORE, the Parties hereto do respectfully enter and submit this Stipulation into the record for consideration and recommend its approval by the Board as part of its final decision and Order.

ROCKLAND ELECTRIC COMPANY

By: _____ 3/13/17

James C. Meyer, Esq.
RIKER DANZIG SCHERER HYLAND & PERRETTI LLP

Title: Counsel

3.13.17

Environmental Defense Fund

By:_____

Raghu Murthy
EASTERN
ENVIRONMENTAL
LAW CENTER

Title: Counsel

Exhibit A

ockland Electric Company AMI Metrics

Category	Service/Function	Metric	Description	Goal	Report Start Date (At end of quarter specified)	Update Frequency	Notes
Customer Engagement	DCX Portal	Customers using the AMI Portal	% of customers with AMI meters who log into portal to view usage information each quarter.	TBD after one full year of AMI deployment	TBD	Quarterly	A benchmark will be established in the first year to track how many customers have logged into the portal to view their energy usage.
		Customers identified to receive energy saving messaging - All (Including Low Income)	% of customers identified to receive messages regarding their energy savings tools, personalized usage and or savings tips	A percentage of customers that will be identified to receive messages will be established by end of TBD (Identifying all customers is cost prohibitive. Analytics will be utilized to identify customers to communicate to).	TBD	Semiannual	The Company is determining the feasibility of tracking the number of customers who use the online portal once they receive their specific message for energy savings to identify energy usage since the analytics dashboards will not be available until 2018
	Awareness/Education	Near Real Time Data	Number of customers who have access to near real time data via the web after AMI meter installation	Starting at end of 4Q2018, 99% of meters deployed will be presented with near real time data.	TBD	Semi annual	This reporting will begin no sooner than December 2018
	Awareness/Education	Customer Knowledge of AMI	Awareness survey related to AMI benefits and features.	Survey to be conducted prior to AMI deployment to establish a baseline goal. Subsequent surveys to determine knowledge improvement on periodic basis after goal is established.	TBD	Semi annual	The Company will perform an initial survey that will be used to determine the initial customer awareness . The survey will be a random sample that is representative of the Company's service territory.
	Awareness/Education	Targeted Energy Forum Presentations	Number of presentations provided; Target 2 per year	2 per year	TBD	Annual	Schedule and present two energy forums within the service territory per year. These may be combined with similar energy forums in Bergen, Passaic and Sussex Counties New Jersey
	Green Button Connect My Data	Green Button Connect My Data	Track number of customers who use GBC to share their energy usage information with third parties	Number of customers with an AMI meter using GBC per quarter	TBD	Quarterly	Track the number of customer who use GBC per quarter
Billing	Billing	Estimated Bills - AMI accounts	% of accounts with bills which are estimated	Less than 1.5 % of bills rendered every 6 months for customers with an AMI meter will be estimated.	TBD	Semiannual	
Outage Management	O&M Cost Reduction	Emergency response labor reduction	Number of single outages for a large storm 50,000 or more outages) that were determined remotely via AMI eliminating the need to send a crew or call to confirm power restoration.	TBD once AMI is fully deployed across the New Jersey Service Territory	TBD	Annual	The Company will be reporting this metric when the new Outage Management System is fully integrated with AMI at the end of 2018.
	Power Quality	Proactive power quality issue identification	Number of power quality issues identified through the use of AMI data.	TBD once AMI is fully deployed across the New Jersey Service Territory	TBD	Annual	The Company will report annually on the volume of PQ issues identified via AMI data.

	False Outages	Number of false outages resolved through AMI	Number of false outages that were found through AMI that Company did not have to send a crew or call to confirm.	TBD once AMI is fully deployed across the New Jersey Service Territory	TBD	Annual	The Company will be reporting this metric when the new Outage Management System is fully integrated with AMI at the end of 2018.
System Operation and Environmental Benefits	Meter Reading Costs	Reduction in manual meter operations costs	Track avoided meter operations O&M costs and report	In accordance with O&M savings filed in AMI Business Plan.	TBD	Annual	Data will be provided every April for the year prior
	Environmental benefits resulting from less vehicle usage	Reduction in vehicle fuel consumption and vehicle emissions	Reduction in vehicle emissions due to reduction in manual meter reading.	This goal will be aligned with the information provided in the AMI Business Plan on tons of carbon avoided.	TBD	Annual	Data will be provided every April for the year prior
	Var Voltage Optimization (VVO)- KWh savings	Quantify kWh savings attributed to VVO	Quantify kWh savings attributed to VVO	In accordance with savings identified in AMI Business Plan.	TBD	Annual	Data will be provided every April for the year prior
	Var Voltage Optimization (VVO)- Environmental benefits	Environmental benefits due to VVO	Provide total fuel consumption savings and corresponding emissions reductions	This goal will be aligned with the information provided in the AMI Business Plan on tons of carbon avoided.	TBD	Annual	Data will be provided every April for the year prior

Exhibit B

Green Button Connect Data Sharing Policy

RECO will share basic customer usage data via Green Button Connect with authorized third parties free of charge as follows:

- Residential customers: 15-minute interval data. 24-hour lag through mid- 2018, 30-45 minute lag after mid-2018.
- Commercial customers: 5-minute interval data. Again, 24-hour lag through mid- 2018, 30-45 minute lag after mid-2018.
- RECO will work to identify and incorporate additional basic data sets (e.g., bill cost data).

Separate from the cost-free basic data, RECO anticipates allowing customers to authorize third parties to access value-added data, although RECO may charge fees for such data.

RECO will provide its customers and third-party service providers the same level of ability to share data via Green Button Connect that RECO's affiliate, Orange and Rockland Utilities, Inc. ("O&R"), will be providing to its customers. RECO anticipates that its Green Button Connect data sharing policy (set forth herein) will remain consistent with the corresponding O&R policy. That is, subject to any required Board approval, if O&R changes its Green Button Connect data sharing policy, RECO will propose a corresponding change to its policy, provided that such changes are material.