STATE OF ILLINOIS
ILLINOIS COMMERCE COMMISSION

COMMONWEALTH EDISON COMPANY	**)**	
	)	**13-0495**
Approval of the Energy Efficiency and	**)**	
Demand Response Plan Pursuant to	**)**	
Section 8-103(f) of the Public Utilities Act	**)**	

REBUTTAL TESTIMONY OF REBECCA DEVENS

ON BEHALF OF

THE CITIZENS UTILITY BOARD AND THE CITY OF CHICAGO

CUB-CITY Exhibit 2.0

November 12, 2013

INTRODUCTION

Q. Please state your name and business address.

A. My name is Rebecca Devens. My business address is 309 W. Washington, Suite 800, Chicago, IL 60606.

Q. Are you the same Rebecca Devens who filed testimony in this docket on November 4, 2013?

A. Yes.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to respond to the direct testimonies of the Office of the Attorney General on Behalf of the People of the State of Illinois ("OAG"), the Natural Resources Defense Council ("NRDC"), the Environmental Law and Policy Center ("ELPC"), and the Staff of the Illinois Commerce Commission ("Staff") regarding Commonwealth Edison Company's ("ComEd" or "the Company") three-year Energy Efficiency Portfolio Standard ("EEPS") Plan (the "Plan"). Specifically, I:

- Support ELPC and NRDC's recommendations related to shifting several portfolio level funds;
- Recommend that the Commission order ComEd to remove the 5% risk reduction strategy from the Plan;
- Support ELPC's recommendations related to Voltage Optimization ("VO") and smart devices;
- Support the OAG and Staff's recommendations related to Company flexibility; and
- Clarify my recommendations related to spillover and evaluator discretion.

REALLOCATION OF PORTFOLIO LEVEL COSTS

Q. What are portfolio level costs?

A. Portfolio level costs are costs include labor, evaluation, measurement, and verification ("EMV"), education and outreach, and research and development ("R&D"), which is sometimes referred to as Emerging Technologies.

Q. Do other parties comment on ComEd's forecasted expenditures on portfolio level costs?

A. Yes. ELPC and NRDC critique ComEd's forecasting spending in three categories: education and outreach, R&D/Emerging Technologies, and labor, which total $39.4 million in PYs 7-9 and represent 11% of ComEd's proposed costs. ELPC Ex. 2.0 at 29.

Q. What do ELPC and NRDC posit regarding ComEd's proposed education and outreach expenditures?

A. ELPC determined that the proposed budget for Education and Outreach is $9.4 million, or 130% greater than budget for the previous Plan, PYs 4-6. ELPC Ex. 2.0 at 30. ELPC reports that "ComEd expects to continue the same marketing approach it currently employs." *Id.* As a result, ELPC recommends that the Commission order ComEd to cap the budget for Education and Outreach at 50% above Plan 2 levels ($11 million), which would free up $5.7 million to fund the Smart Device program. ELPC Ex. 2.0 at 30-31.

NRDC determined that Com Ed has proposed to spend approximately $6 million per year over the next three years on Education and Outreach. NRDC Ex. 1.0 at 14-15. NRDC states the Company spent $4.5 million on general education in PY4 and $4.4 million on general education in PY5. *Id*. NRDC states that the Company's explanation for increasing the education budget by one-third fails to explain what benefits the increase provides. *Id*. NRDC finds that it would be inappropriate for ComEd to increase the general education budget in PYs 7-9, and that if the Company kept general education spending in PYs 7-9 at PY 4 and 5 levels, $1.5 million would be available in additional funds for other programs. *Id*. at 15. NRDC states that this would allow the Company to generate 27,000 additional MWH in PYs 7-9. *Id*.

Q. What is your response?

A. I agree with ELPC and NRDC that ComEd's proposed Outreach and Education budgets are inflated given that ComEd proposes to complete the same scope of work as the Company delivered in PYs 4-6, and that the Company has not justified why it requires a larger budget in PYs 7-9 than it has had historically. I further agree with ELPC and NRDC that if a portion of the Education and Outreach budget were spent on programs instead, the Company could generate additional MWH savings and direct customer benefits.

Q. What do ELPC and NRDC posit regarding ComEd's proposed R&D/Emerging Technologies expenditures?

A. ELPC states that the proposed Plan 3 budget for R&D/Emerging Technologies is $3.05 million, or 40% greater than the Plan 2 budget, and that ComEd has historically underspent in this category, which has also failed to yield specific results. ELPC Ex. 2.0 at 31. ELPC also asserts that there is a lack of clarity regarding what outcomes ComEd anticipates the R&D expenditures will yield. As a result, ELPC finds the costs to be "unreasonably high," and recommends that the Commission order ComEd to redirect 100% of this proposed budget ($10.7 million) toward the integration of Energy Efficiency and Demand Response with Advanced Metering Infrastructure ("AMI"), that ELPC recommends, which includes the Voltage Optimization and "Smart Devices" programs. ELPC Ex. 2.0 at 32.

NRDC makes many of the same points, stating that ComEd proposes to spend an average of around $3.6 million on R&D over the next three years, which is similar to what the PY4 and PY5 budgets, but that the Company has "significantly underspent those budgets – spending only $1.0 million in PY4 and $1.1 million in PY5." NRDC Ex. 1.0 at 15-16. NRDC states that the R&D budget thus functions as a "'cash reserve' the company can draw upon to help meet goals that are set assuming such funds are not available." *Id.* at 16. NRDC recommends that the Commission set ComEd's R&D budget at $1.4 million per year, which is the most the Company has spent on R&D, and direct the remaining $2.2 million per year in additional funds to go toward program spending, which could enable the Company to achieve 39,000 more MWH over PYs 7-9. *Id.*

Q. What is your response?

A. I agree with ELPC and NRDC that as proposed, ComEd's R&D budget could function as a cash reserve for meeting the goals, and that the funds should be directed to specific programs such as Voltage Optimization and "Smart Devices."

Q. What are smart devices?

A. ELPC defines smart devices as hardware on the customer side of the meter that enables customers to reduce their energy use overall and at times of peak demand. ELPC Ex. 2.0 at 14. Smart devices are sometimes required for customers to participate in certain energy efficiency and dynamic pricing programs. *Id*. Examples of smart devices include thermostats, plugs, power strips, switches, smart chargers for electric vehicles, gateways, and in-home displays that can communicate with smart meters. *Id*. ELPC states that the "fastest path to significant energy efficiency and demand reductions for customers in Illinois," where so many customers participate in municipal aggregation programs to receive electricity supply, is to require "ComEd to enable as many devices and market participants as possible to utilize the AMI network and associated energy and price information." *Id*. at 16. CUB and the City agree.

Q. What recommendations does ELPC make related to smart devices?

A. ELPC recommends that ComEd:

- Establish interoperability standards for smart devices to communicate with smart meters and be willing to verify and register devices that a customer may purchase and install on their own. ELPC Ex. 2.0 at 17.

- Consider offering discounts or other incentives for smart devices. *Id*. (ELPC goes on to provide more detailed recommendations for a program Ameren could employ regarding smart devices. *Id*. at 17-19.)

- Develop and implement a comprehensive plan, involving manufacturers, retailers and other third parties, to enable Smart Devices to interact with ComEd's smart meters, and to make it easy for customers to identify and purchase these devices. The plan shall include:

  - An approach for ComEd to accelerate the compatibility testing of a variety of Smart Devices with its AMI meters and to actively notify customers who have a smart meter of the availability of these devices;

  - An approach for ComEd to allow Wi-Fi and Z-Wave devices to access the energy price and usage information available through its AMI network in addition to ZigBee device;

  - A process for customers to verify and activate ComEd AMI-compatible devices that they may purchase and install on their own;

  - An approach for ComEd to work with manufacturers and retailers to modify packaging or signage to indicate a device's compatibility with its meters and AMI. This may include discounts or other incentives in communities where ComEd smart meters are installed; and

  - An approach for ComEd to more actively draw traditional device manufacturers (Honeywell, ecobee, Nest, 3M, etc.) and non-traditional market participants (Comcast, AT&T, Lowe's, etc.) to the Test Bed to certify Smart Devices, with an emphasis on Programmable Communicating Thermostats (PCTs). ELPC Ex. 2.0 at 34-35.

Q. Do you support such a smart device program?

A. Yes. CUB and the City support the creation of a smart device program. Further, the Company should discuss its plans for this program with the SAG and with the Smart Grid Advisory Council ("SGAC").

Q. What do ELPC and NRDC posit regarding ComEd's proposed labor expenditures?

A. ELPC states that the Plan budget for non program specific labor is $6.4 million, or 115% greater than the budget for PYs 4-6. ELPC Ex. 2.0 at 32. ELPC finds the labor costs to be "unreasonably high," and recommends that the budget for non program specific labor be capped at PY 4-6 levels, which ELPC estimates to be $9.2 million. *Id*. ELPC recommends that the Commission order ComEd to reallocate the remaining $2.8 million of the proposed labor budget toward the AMI/EE/DR integration recommendations. *Id*.

NRDC states that the proposed labor budget of about $4.0 million is "roughly double" the PY 4-6 budget levels. NRDC Ex. 1.0 at 16. NRDC states that the Company's explanation for the increase does not fully explain the difference. *Id*. at 17. NRDC recommends that ComEd's non-program specific labor budget be reduced by an average of $0.5 million per year, to make it comparable to PY5 after adjusting for inflation, and to spend the remaining funds on programs, which could generate 9,000 MWH over three years. *Id*.

Q. What is your response?

A. I agree with ELPC and NRDC that ComEd hasn't adequately justified why the labor budget is projected to be higher for PYs 7-9 than it was for PYs 4-6, and that as a result, the a portion of the labor budget should be directed to specific programs such as Voltage Optimization and "Smart Devices."

Q. What do you recommend regarding these portfolio level costs?

A. I recommend that the Commission adopt ELPC and NRDC's recommendations. Specifically, the Commission should order ComEd to reallocate portions of the education and outreach, R&D, and labor budgets toward the voltage optimization and smart devices programs. ComEd's AMI investment must be completed with an eye toward maximizing energy efficiency and demand response customer savings. The remainder of the funds should be directed toward program budgets as recommended by NRDC.

THE MODIFIED GOAL PROPOSAL

Q. Do other parties comment on ComEd's proposed modified goals?

A. Yes. The OAG and NRDC comment on ComEd's proposal to set the modified goals at 5% below what the Company estimates it will actually achieve. ComEd Ex. 2.0 at 24. The OAG states that this "risk reduction strategy" is inappropriate, as "if ComEd has done successful and accurate planning, then it is asking the Commission to only set its goals at 95% of what it actually plans to achieve as a buffer against the possibility that it might not fully succeed." OAG Ex. 1.0 at 13. The OAG elaborates that the goals should be set "based on what ComEd actually plans to achieve," and that "to do otherwise would be to explicitly set the goals lower than ComEd has indicated it can achieve within the spending cap. This shifts risk away from ComEd to ratepayers." *Id*. NRDC adds that if PJM Interconnection ("PJM") capacity market revenues - which ComEd has not accounted for in the Plan - remain at current levels in PYs 7-9, "they would provide the same 5% risk relief that Com Ed has suggested it needs." NRDC Ex. 1.0 at 20.

Q. Do you agree with the OAG and NRDC's stances?

A. Yes. I agree that this risk reduction strategy is inappropriate for the EEPS, and that ComEd has other ways to reduce risk, including, as NRDC pointed out, putting PJM revenues from the programs back into the program budgets. The OAG points to further existing strategies to reduce risk: 1) ComEd "has developed a portfolio that leaves ample room for adjustments and mid-course corrections during the three-year plan to allow it to make up for any assumptions that turn out to be too aggressive;" 2) the probability that savings will be higher should be similar to the probability that they will be lower; 3) the TRM deems savings values for the vast majority of ComEd's efficiency measures; and 4) all parties are in agreement that procedures should be established to deem NTG values so that "the risk ComEd faces is minimized and well within the range of what can be effectively managed through the Plan 3 period." OAG Ex. 1.0 at 14.

Q. What is your recommendation to the Commission regarding the proposed modified savings goal?

A. The Commission should order ComEd to remove this 5% risk reduction strategy from the Revised Plan that the Company should file with the Commission.

DEMAND RESPONSE

Q. What do you recommend related to demand response?

A. I recommend that ComEd and the Commission adopt the recommendations in my direct testimony related to researching possible demand response measures or programs. In particular, I recommend the Commission order ComEd to adopt the

recommendations ELPC made in direct testimony related to the implementation of a voltage optimization program because we agree it is important to create efficiencies and generate customer benefits by integrating energy efficiency and advanced metering infrastructure ("AMI") objectives. ELPC Ex. 2.0 at 2-13.

Q. What is voltage optimization?

A. ELPC considers voltage optimization (VO) "to be a combination of Conservation Voltage Reduction (CVR) and Volt/VAR Optimization (VVO), intended to primarily reduce end-use customer energy consumption and peak demand, and secondarily to reduce utility line losses." ELPC Ex. 2.0 at 5. ELPC explains that

> "the electricity delivered by utilities consists of usable real power (measured in Watts) and unusable reactive power (measured in Volt-Amperes Reactive or VARs). VARs occur when there is a phase shift between the voltage and the current in an alternating current system. A higher phase shift means more VARs, a less efficient system, and degraded power quality. By reducing the amount of VARs flowing on a feeder, utilities reduce line losses and improve the voltage profile along the feeder. Managing VARs is often accomplished by installing capacitors or reactors at strategic points along the feeder.
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> Volt/VAR Optimization (VVO) refers to the active management of reactive power at all points of a feeder to minimize losses and improve the voltage. When VVO is combined with Conservation Voltage Reduction (CVR), acceptable levels of power quality are maintained, distribution system losses are minimized, and customer energy savings and peak demand reductions are maximized." ELPC Ex. 2.0 at 6-7.

To summarize, voltage optimization programs have the potential to reduce line loss, improve the voltage, minimize distribution system losses, and generate customer energy and peak demand savings while maintaining acceptable levels of power.

Q. What recommendations does ELPC make related to voltage optimization?

A. ELPC states that " VO is a very cost-effective energy efficiency and demand reduction resource and, if incorporated into Plan 3, will allow ComEd to achieve significantly more energy savings and demand reductions for the same constrained budget." ELPC Ex. 2.0 at 34. ELPC makes several recommendations, including:

- The Commission should order ComEd to conduct a feasibility/potential study to determine the impact and costs;
- The Commission should formally certify the energy efficiency and demand reductions associated with VO as qualified resources in meeting IL EE/DR standards, and commit to allowing recovery of prudently incurred costs;
- The Commission should order ComEd to use the results of the VO feasibility/potential study to reprioritize the programs under Plan 3 and submit the revised plan to the Commission by June 1, 2014;
- The Commission should order ComEd to work with PJM to allow bidding both the energy efficiency and demand reduction achieved by VO into the PJM RPM auctions and to use the associated revenue to offset the costs of the VO deployment; and
- The Commission should order ComEd to work with the SAG and the SGAC to develop an appropriate measurement and verification methodology for VO. *Id.* at 33-34.

Q. Do you agree with ELPC's recommendations related to voltage optimization?

A. Yes. Based on my review of ELPC's testimony, as well as the information I have reviewed related to Ameren's voltage optimization pilot (see CUB Ex. 1.0-1.4 in ICC Docket No. 13-0498), I support ELPC's recommendations for ComEd to explore offering a voltage optimization program that could generate customer energy and peak demand savings, thereby assisting ComEd in meeting both the energy efficiency and demand response statutory goals.

COMPANY FLEXIBILITY

Q. What does ComEd request regarding flexibility and discretion?

A. ComEd requests "the flexibility necessary to manage the costs and the program and customer mix to determine when funds are reallocated and to properly manage the portfolio." ComEd Ex. 2.0 at 60. ComEd states the Company will notify the SAG of changes that result in program budget shifts of more than 20%. *Id.*

Q. Do other stakeholders comment on the request for portfolio flexibility?

A. Yes. The OAG states that "ComEd's request is too broad and effectively allows ComEd to easily "game the system." OAG Exhibit 1.0 at 24-25. The OAG elaborates that under the spending screen, this degree of flexibility would enable ComEd to "simply pursue a completely different plan than is designed to achieve savings much more cheaply simply by shifting from more expensive to less expensive programs." *Id*. Staff agrees that changes to the proposal are necessary. Staff Ex. 1.0 at 30.

Q. What do the OAG and Staff recommend related to flexibility?

A. The OAG makes two proposals:

> 1) "Any shifts of budgets that result in a variance from planned annual program budgets of 20% or more would trigger goal adjustments. In other words, ComEd could underspend 10% in one program and overspend 15% in another program with no adjustments. However, if they were to shift resources beyond the 20% benchmark, then goals would be modified accordingly. For example, if program A had a cost of 40 cents/kWh and program B had a cost of only 5 cents/kWh, and if ComEd shifted funds beyond the limit from program A to program B, a commensurate increase in goals would be triggered based on the 8-times higher amount of kWh expected to come from the shifted dollars than what was originally planned. I note that this can also work in ComEd's favor if they are having success with an expensive program and want to shift funds into it. OAG Ex. 1.0 at 26-27.
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> 2) ComEd should "bring any proposed modifications to the SAG for discussion and build consensus around the change. This should happen whether or not the 20% limit is exceeded, but is particularly important for big changes. The SAG has proven to be an effective sounding board to allow various stakeholders to provide input and ultimately help build support for the programs and provide the program administrators with an added level of security in knowing if any stakeholders have major concerns prior to any after-the-fact litigation. While I do not suggest the SAG should have the authority to overrule a program administrator decision, this process will ensure all stakeholders are aware of proposed changes and that ComEd has the opportunity to consider differing points of view prior to any final decision. In the event that a modification does require a modified goal, it can also reduce contentious litigation by ensuring all parties reach consensus on the exact amount to modify goals." OAG Ex. 1.0 at 28.

Staff recommends that the Company file various reports with the Commission related to program activities, implementation modifications, spending and savings projections compared to the Plan filing. Staff Ex. 1.0 at 30.

Q. Do you agree with Staff and the OAG's recommendations?

A. Yes. I agree with the OAG that the extent to which ComEd can modify spending on programs should be capped, as otherwise the Company would be able to essentially implement a different Plan than the one being litigated in this docket. The OAG's proposed parameters are reasonable. I also agree with Staff's recommendation that

ComEd include information about changes to the Plan in the reports the Company files with the Commission.

SPILLOVER AND EVALUATOR DISCRETION

Q. What recommendations do other parties make related to spillover?

A. The OAG agrees that spillover should be estimated when possible, but should not be a precondition for the application of Net to Gross ("NTG") ratios to programs. OAG Ex. 1.0 at 40. The OAG supports deeming spillover if sound judgment or research supports it, and if evaluation, measurement, and verification ("EMV") results are not available. *Id*. at 40. NRDC states that "there may be times or situations in which it is appropriate to study either free ridership or spillover," but not necessarily "both at the same time or in the same study." NRDC Ex. 1.0 at 26. NRDC believes it is more appropriate to propose that "every NTG *factor* must reflect expected free ridership and spillover effects," rather than proposing that every study must address both. *Id*. at 27. NRDC agrees with the OAG that the evaluators can recommend NTG factors based on either evaluation results from Com Ed's territory or findings from other jurisdictions. *Id*. Staff makes similar, though perhaps more specific recommendations. Staff recommend that the Commission

> "direct the independent evaluators to make reasonable efforts to calculate both free ridership rates and spillover rates while being mindful of: (1) the costs of such evaluations, (2) the likely magnitudes of spillover and free ridership rates within a program, and (3) the significance of the program to the overall portfolio savings. Staff Ex. 2.0 at 4.

Q. Do you agree with these recommendations?

A. Yes. I agree with ComEd that spillover should be included in NTG estimates, but agree with these other intervenors that spillover should not be a prerequisite for NTG estimates to be applied to programs. As Staff illustrates, there may be circumstances where evaluating spillover is expensive and the impact of including spillover would be minimal. Staff Ex. 2.0 at 6-8. If the Commission adopts NRDC and the OAG's proposal to use EMV results from other states to estimate spillover, this would mean that NTG estimates could become more accurate while not increasing the EMV budget. I recommend that the Commission adopt the recommendations made by the OAG, NRDC, and Staff related to estimating spillover.

CONCLUSION

Q. What are your recommendations related to this Plan filing?

A. The Commission should order ComEd to file a Revised Plan that adopts the following changes:

- VO and smart devices programs should be included, and portions of the education and outreach, R&D, and labor budgets should be moved to VO, smart devices, and other programs;
- The 5% risk reduction strategy should be removed from the Plan;
- Company flexibility should be limited by the OAG and Staff's recommendations; and
- Evaluators and the SAG should work together to include spillover estimates in NTG calculations.

Q. Does this conclude your direct testimony?

A. Yes.