BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of PPL Electric Utilities Corporation for Approval of Tariff Modifications and Waivers of Regulations Necessary to Implement its Distributed Energy Resources Management Plan	: : : : :	Docket No. P-2019-3010128

REJOINDER TESTIMONY OF BETHANY L. JOHNSON

PPL Electric Statement No. 7-RJ

August 26, 2020

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Bethany L. Johnson, and my business address is 2 North Ninth Street, Allentown, PA 18101.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am employed by PPL EU Services Corporation, an affiliate of PPL Electric Utilities Corporation ("PPL Electric" or the "Company") as Manager – Regulatory Operations.

Q. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY IN THIS PROCEEDING?

A. Yes. My rebuttal testimony is set forth in PPL Electric Statement No. 7-R.

Q. WHAT IS THE PURPOSE OF YOUR REJOINDER TESTIMONY?

A. I will respond to some of the allegations and recommendations made in OCA Statement No. 1-SR, the Surrebuttal Testimony of Ron Nelson submitted on behalf of the Office of Consumer Advocate ("OCA"); SEF Statement No. 1-SR, the Surrebuttal Testimony of John Costlow submitted on behalf of the Sustainable Energy Fund ("SEF"); and SEF Statement No. 2-SR, the Surrebuttal Testimony of Ron Celentano submitted on behalf of SEF. In this rejoinder testimony, I will address the witnesses' surrebuttal testimony in that order.

Q. ARE YOU SPONSORING ANY EXHIBITS WITH YOUR REJOINDER TESTIMONY?

A. Yes. Attached to my rejoinder testimony is PPL Electric Exhibit BLJ-1RJ.

I. <u>OCA STATEMENT NO. 1-SR – SURREBUTTAL TESTIMONY OF RON NELSON</u>

Q. OCA WITNESS NELSON AVERS THAT THE PENNSYLVANIA PUBLIC UTILITY COMMISSION ("COMMISSION") "SHOULD REQUIRE A COMPREHENSIVE AND TRANSPARENT VETTING OF TECHNOLOGY FOR AN INVESTMENT THAT CAN INCREASE RATE BASE AND RATES SIGNIFICANTLY." (OCA STATEMENT NO. 1-SR, P. 5.) WOULD YOU PLEASE RESPOND?

A. As an industry leader in Distributed Energy Resource ("DER") technology, as evidenced throughout PPL Electric's DER Management Petition and testimony, PPL Electric has conducted comprehensive analysis of the ConnectDER LLC ("ConnectDER") technology. In fact, no other utility is more familiar with this technology because PPL Electric has been working with ConnectDER to develop it. As the product is being certified for Institute of Electrical and Electronics Engineers ("IEEE") 1547-2018 and Underwriters Laboratories ("UL") 1741 compliance, it is unclear what additional vetting Mr. Nelson would envision beyond certification by the national organizations known for the development and testing of equipment that is used in the industry.

PPL Electric maintains that it is best positioned to determine what equipment is optimally designed to operate seamlessly with its system and to abide by industry standards and regulations. The Company also routinely participates in extensive benchmarking and industry sharing regarding equipment usage on its system. This is evidenced by the Company's participation in various industry groups, such as Electric

Power Research Institute ("EPRI"), Smart Electric Power Alliance ("SEPA"), SEE ("Southeastern Electric Exchange"), the Association of Edison Illuminating Companies ("AEIC"), to name a few. PPL Electric also has provided, through interrogatory responses, significant information on its system planning and design procedures and processes and its equipment standards. The ConnectDER DER Management device, like other devices that PPL Electric evaluates for use on its system, has been evaluated to those standards.

Finally, the Commission's discovery process is intended to provide parties the opportunity to vet the proposals set forth by the Company, including the technology proposed, in a comprehensive and transparent manner for the evidentiary record. The OCA had the opportunity to submit additional interrogatories regarding the ConnectDER device after: (1) the Company mentioned and provided details on the device in its response to Interrogatory 42 in SEF's first set of discovery requests on December 3, 2019, *i.e.*, over two months before the OCA served its direct testimony; and (2) PPL Electric served its rebuttal testimony on March 4, 2020. Yet, even over 5 months later, the OCA chose not to propound additional discovery about the ConnectDER DER Management device.

Q. DOES OCA WITNESS NELSON'S CONCERN ABOUT THERE BEING "NO UPPER LIMIT ON THE POTENTIAL IMPACT ON RATES" FROM THE COMPANY PURCHASING, OWNING, INSTALLING, AND MAINTAINING THE DER MANAGEMENT DEVICES HAVE ANY MERIT? (OCA STATEMENT NO. 1-SR, PP. 6-7.)

A. No. As I explained in my rebuttal testimony, PPL Electric is not seeking approval in this proceeding for immediate recovery of the capital costs and expenses associated with the ConnectDER DER Management devices. Therefore, parties will still be able to investigate and challenge the amount of capital costs and expenses that the Company proposes to recover in a future proceeding, which will most likely be a base rate case.

Moreover, Mr. Nelson's argument is inconsistent with a fundamental principle of utility regulation, which is the fair opportunity to recover reasonable and prudent costs to serve customers. It is the Company's obligation as an electric distribution company ("EDC") to provide safe and reliable service to all of its customers. The ConnectDER DER Management devices will permit PPL Electric to continue doing that in a way that is economically efficient, optimizes its distribution system, and supports Pennsylvania's public policy goals to encourage DER adoption.

In addition, OCA witness Nelson's "example" of the potential rate impact of the Company's updated proposal is based on unrealistic assumptions and misrepresents his analysis. In his example, Mr. Nelson states that if approximately five percent of PPL Electric's residential customers would "adopt DERs in the near term," that "would equate to approximately 50,000" ConnectDER DER Management devices "being installed over this period, which would be a total investment of approximately $38 million with annual maintenance costs of $1.75 million." (OCA Statement No. 1-SR, pp. 6-7.) However, Mr. Nelson fails to recognize that his example would only hold true if 50,000 devices were going to be installed in the Fully Projected Future Test Year ("FPFTY"), not the "near term."

Furthermore, if PPL Electric proposes a general rate increase using the FPFTY, the parties would be free to investigate and challenge the Company's projected capital costs and expenses associated with the installation of the DER Management devices, which would necessarily be affected by the estimated number of devices that would be installed during the FPFTY.

Also, Mr. Nelson's use of 50,000 installations is approximately 48,000 more than the annual average of DER installations that PPL Electric has historically experienced. While the Company believes that an estimated increase in installations in 2022 of nearly 3,000% versus 2019 is wildly unrealistic, it does underscore the urgency of the Company's Petition. If Mr. Nelson's estimate for ratemaking purposes is to be believed, the Company would likely need to incur significant other investments to manage an average of 300,000 kW (or 300 MW) of generation onto its system in just one year. As stated in other testimony, the average residential system is approximately 6 kW. For context, PPL Electric, as of December 31, 2019, had approximately 71 MW of residential nameplate DER installed on its system. Although PPL Electric projects that the number of DER installations will increase in the future based on several factors, including its DER Management proposal, Mr. Nelson's use of 50,000 installations in the "near term" is not a realistic assumption.

Finally, even assuming *arguendo* that Mr. Nelson's estimated rate impact of "approximately $38 million with annual maintenance costs of $1.75 million" for residential customers was accurate, the average residential customer's monthly bill would only increase $0.55, as seen in PPL Electric Exhibit BLJ-1RJ. Given the substantial safety and reliability benefits of PPL Electric's DER Management proposal and the investment that would likely be required to accommodate 300 MW of nameplate capacity in one year,[1] the Company believes that the Commission will find that these costs and expenses should be fully recovered in a future proceeding. Moreover, as explained in the Company's rebuttal testimony and PPL Electric Exhibit SS-1RJ, PPL Electric's DER Management Plan can defer costly distribution system upgrades.

Q. DO YOU AGREE WITH OCA WITNESS NELSON'S CRITICISMS OF THE COMPANY'S COST-BENEFIT ANALYSIS? (OCA STATEMENT NO. 1-SR, PP. 7-10.)

A. No. OCA witness Nelson's criticisms of the Company's cost-benefit analysis are completely without merit.

First, PPL Electric properly excluded the costs associated with the Distributed Energy Resource Management System ("DERMS") and Distribution Management System ("DMS") from the cost-benefit analysis because the Company already incurred the costs associated with those prior investments. The cost-benefit analysis must be limited to the costs and benefits associated with PPL Electric's DER Management proposal and the additional planned investments thereunder. No prudent cost-benefit analysis would include all of the Company's prior investments, such as its distribution lines and automated metering infrastructure ("AMI") meters, which would necessarily be used under the DER Management Plan.

[1] PPL Electric has not prepared an estimate of the system upgrade costs that would be incurred to accommodate 300 MW of generation on its distribution system in one year because it is an extremely unrealistic assumption. However, it would easily cost well in excess of the capital costs and expenses associated with the amount of DER Management devices that would be installed in such a scenario.

Second, Mr. Nelson assumes that PPL Electric intends to hire additional employees or incur additional incremental costs for data analysis. It should be noted that the Company has made no such claim. In fact, the Company intends to automate much of the analysis and reporting functions, and any remaining labor for analysis is expected to be absorbed through the Company's existing work force. As DER adoption grows and, through normal business practices, smart devices increase, the Company may need to hire additional employees for various operational analysis; however, any additional labor costs would also be included in the Company's distribution base rate case claim at such time it files a case and may be challenged as noted above.

Third, as noted by PPL Electric witness Salet, electric vehicles ("EVs") are no longer going to be subject to the Company's DER Management Plan. Therefore, OCA witness Nelson's argument that the cost-benefit analysis may not "accurately reflect the installation costs that would be incurred for … electric vehicles" is now moot. Moreover, Mr. Salet will explain in his rejoinder testimony how standalone storage units would be interconnected under the DER Management Plan.

Lastly, Mr. Nelson continues to take the position that this cost-benefit analysis should have been provided as part of the Company's DER Management Petition or in direct testimony and that the parties have had limited time to review this cost-benefit analysis. Yet, Mr. Nelson never rebuts the Company's argument that such an analysis is not required under the Commission's regulations or even needed to justify proposals that would increase the safe and reliable operation of PPL Electric's distribution system. The Company did not provide a cost benefit analysis when it developed its DMS and DERMS systems, implemented ArcSense (downed conductor detection), the Company's automated restoration application, or began installing smart devices, such as reclosers, switches, sectionalizers, and remote capacitors. Nonetheless, as seen by PPL Electric Exhibit SS-1RJ, Mr. Salet has provided a more comprehensive cost-benefit analysis.

II. <u>SEF STATEMENT NOS. 1-SR AND 2-SR – SURREBUTTAL TESTIMONY OF JOHN COSTLOW AND RON CELENTANO</u>

Q. COULD YOU PLEASE RESPOND TO SEF'S ALLEGATIONS ABOUT THE COMPANY'S "POTENTIAL REVENUE ENHANCEMENT MOTIVES" BEHIND THE DER MANAGEMENT PLAN?

A. Even after reviewing the Company's rebuttal testimony, SEF witness Costlow argues that PPL Electric is proposing the DER Management Plan as a means to increase the Company's distribution revenue by reducing customers' revenue from DERs. (*See* SEF Statement No. 1-SR, p. 5.) In his words, the Company has "potential revenue enhancement motives." (SEF Statement No. 1-SR, p. 5.) Mr. Costlow's critiques about the Company's proposal having an impact on customers' DER revenue tie back to the volumetric component of the Company's distribution rates and charges. Effectively, since the Company's distribution revenue largely depends on the customer's electric usage, Mr. Costlow alleges that PPL Electric has an incentive to prevent the customer from offsetting that usage with electric generation from the DER.

However, Mr. Costlow fails to mention that PPL Electric was a driving force behind Act 58 of 2018 (codified at 66 Pa. C.S. § 1330), commonly known as the alternative ratemaking legislation. This legislation explicitly permits public utilities to propose and establish alternative rates and rate mechanisms in base rate proceedings, such as decoupling, performance-based rates, formula rates, and multi-year rate plans.

Certainly, if the Company actually had these "motives" that Mr. Costlow alleges, it would have been antithetical for PPL Electric to push for the alternative ratemaking legislation. Indeed, for example, if PPL Electric were to implement full revenue decoupling, the volumetric risk component in the Company's distribution revenues would be greatly reduced.

In addition, as I explained in my rebuttal testimony, the revenue impact of the Company's DER Management Plan is negligible. Notably, neither of SEF witnesses refutes PPL Electric's revenue impact calculations. Moreover, despite the Company specifically outlining its assumptions for those calculations in great detail in PPL Electric Exhibit SS-2R, SEF completely overlooks that information, with SEF witness Celentano stating, "I would want to know the assumed settings used and other conditions considered to yield these results." (SEF Statement No. 2-SR, p. 8.) Thus, the SEF's concerns are unfounded.

Q. DOES THIS CONCLUDE YOUR REJOINDER TESTIMONY AT THIS TIME?

A. Yes, although I reserve the right to supplement my rejoinder testimony.

PPL Electric
Statement 7RJ - Exhibit BLJ-1RJ - Estimated Average Residential Bill Impact due to Company Ownership of DER Communication Device
Hypothetical 2021 Rate Case with Fully Projected Future Test Year Revenue Requirement

Line No.				
	OCA witness Nelson's assumption of residential customer adoption (OCA Statement No. 1-SR, page 6)			50,000
1	Total Investment [(1)]		$	37,750,000
2	Depreciation Reserve [(2)]		$	2,516,667
3	Net Investment (Line 1 - Line 2)		$	35,233,333
4	Total Depreciation Expense		$	2,516,667
5	Maintenance Expense (~$35/device/year)		$	1,750,000
6	Allowed Rate of Return - Equity portion (Line 3 x 5.14%) [(3)]	5.14%	$	1,810,993
7	Allowed Rate of Return - Debt portion (Docket No. R-2019-3006863) (Line 3 x 2.01%)	2.01%	$	708,190
8	Federal Income Tax Rate gross up on Equity portion (Line 6 / (1-21%) - Line 6)	21.00%	$	481,403
9	State Income Tax Rate gross up on Equity portion (((Line 6 + Line 8) / (1-9.99%)) - (Line 6 + Line 8))	9.99%	$	254,428
10	Revenue Requirement (w/o GRT) (Sum of Lines 4 through Line 9)		$	7,521,681
11	Gross Receipts Tax gross up ((Line 10 / (1-5.90%)) - Line 10)	5.90%	$	471,603
12	Revenue Requirement (w/ GRT) (Line 10 + Line 11)		$	7,993,284
13	Provision for Regulatory Assessment gross up (Line 12 * .25%)	0.25%	$	19,983
14	**Revenue Requirement (w/ GRT and Provision for Regulatory Assessment) (Line 12 + Line 13)**		**$**	**8,013,267**

Increase in Customer Bill
Assuming 100% of revenue requirement is allocated to residential customers and collected via kWh charges

15	Revenue requirement to be collected from customers (Line 14)	$	8,013,267
16	kWh sales (Assumes approximate 2019 sales)		14,450,000,000
17	kWH price to recover revenue requirement (Line 15 / Line 16)	$	0.000555
18	Average residential customer usage (kWh)		1,000
19	Customer bill increase/month (Line 17 x Line 18)	$	0.55
20	**Customer bill increase/year (Line 19 x 12)**	**$**	**6.65**

(1) The total investment assumes a device cost of $755/installation. Installations: 2021=0, 2022=50,000

(2) Assumes 15 year life.
(3) Assumes equity % as filed in PPL Electric's most recent quarterly financial report at Docket No. M-2019-3006863; PUC Allowed ROE for DSIC related work is 9.45% (Docket No. M-2019-3015178).