Citizens for Pennsylvania's Future
200 First Avenue, Suite 200
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April 19, 2016

Secretary Rosemary Chiavetta
Pennsylvania Public Utility Commission
400 North Street, 2nd Floor North
P.O. Box 3265
Harrisburg, PA 17015-3265

Re: Petition of Metropolitan Edison Company for Approval to Establish and Implement a Distribution System Improvement Charge
Docket No. P-2015-2508942

Dear Secretary Chiavetta:

Enclosed, please find an original copy of Citizens for Pennsylvania's Future and Environmental Defense Fund's Motion to Compel in the above-captioned matter.

Copies are being served in accordance with the attached Certificate of Service.

Sincerely,

/s/ George Jugovic, Jr.

George Jugovic, Jr.

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of Metropolitan Edison Company for Approval to Establish and Implement a Distribution System Improvement Charge	**:**	**P-2015-2508942**
Petition of Pennsylvania Electric Company for Approval to Establish and Implement a Distribution System Improvement Charge	**:**	**P-2015-2508936**
Petition of Pennsylvania Power Company for Approval to Establish and Implement a Distribution System Improvement Charge	**:**	**P-2015-2508931**
Petition of West Penn Power Company for Approval to Establish and Implement a Distribution System Improvement Charge	**:**	**P-2015-2508948**

MOTION TO COMPEL OF
CITIZENS FOR PENNSYLVANIA'S FUTURE AND
ENVIRONMENTAL DEFENSE FUND
AGAINST METROPOLITAN EDISON COMPANY,
PENNSYLVANIA ELECTRIC COMPANY, PENNSYLVANIA
POWER COMPANY & WEST PENN POWER COMPANY

Pursuant to 66 Pa.C.S. § 333(d) and 52 Pa. Code § 5.342, Citizens for Pennsylvania's Future and Environmental Defense Fund (collectively, "Intervenors") move to dismiss the objections and compel answers to the interrogatories that Intervenors propounded on Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company and West Penn Power Company (collectively, "Companies). A copy of the Intervenors' interrogatories is at Appendix A. A copy of the Companies' objections to the interrogatories is at Appendix B.

The Companies object to Intervenors' interrogatories, claiming the interrogatories are an improper collateral attack on the Commission's February 11, 2016 order in the Companies' long-term infrastructure improvement ("LTIIP") cases, and are not relevant to this proceeding. These objections are without merit. The Commission therefore should dismiss the Companies' objections and compel them to answer Intervenors' interrogatories.

I. Voltage Optimization

The interrogatories are directed to the Companies' use of voltage optimization, also known as Volt/VAR Control. Voltage optimization is a proven, cost-effective technology where the utility installs sensors along the grid to monitor voltage, and capacitors to boost voltage, and operate the grid within a lower voltage range. Voltage optimization provides energy within an acceptable voltage range, but uses lower voltage, resulting in reduced energy usage and reduced peak demand. Many utilities, including some Pennsylvania utilities, have deployed this technology. FirstEnergy, however, has not fully deployed voltage optimization because it erodes their revenues and profits.

Voltage optimization was explained in a Massachusetts grid optimization case as follows:

> In addition to opportunities at customers' premises, there are also technology-based demand optimization opportunities on the distribution grid itself. A primary example of this is volt-VAR optimization ("VVO"), which increases grid efficiency and reliability, reduces distribution losses, and reduces the amount of energy demand and consumption by regulating the flow of power in the distribution system. VVO has the potential to provide significant benefits for customers by reducing the need for generation and, therefore, lowering costs and reducing pollution. Therefore, we expect VVO technologies to be a critical part of the distribution companies' plans for grid modernization.[1]

[1] *Investigation by the Department of Public Utilities on its Own Motion into Modernization of the Electric Grid,* (Mass DPU) (Opinion at 18-19) (June 12, 2014)

Voltage optimization delivers significant customer benefits. The primary benefits are reduced line losses on the distribution grid, reduced energy usage on the customers' side of the meter and reduced peak demand. Customers save up to $32.00 annually when voltage optimization is used, as explained below:

> **Economic Benefits of Integrated Volt/VAr Control**
>
> IVVC can help utilities reduce required capacity during peak demand periods and, if used on a continual basis, reduce overall energy use. We find the economic benefits range from $11.24 to $32.01 per customer per year, depending on how a utility uses IVVC.
>
> The typical IVVC implementation is used by utilities during periods of peak demand. An Xcel Energy Smart Grid study found that IVVC helped reduce distribution line voltage from an average of 121 volts to 116 volts, yielding a 3.25 percent reduction in peak demand.
>
> Utilities can also use IVVC on a continuous basis to reduce the energy used by customer loads throughout the year. A study by Ameren Illinois of its continuous voltage reduction test on two distribution lines found reduced energy use in all seasons of the year regardless of distribution line characteristics.[2]

In Pennsylvania, FirstEnergy represented to the Commission that it would do a voltage optimization pilot, and if successful, FirstEnergy would deploy the technology throughout its service territory. FirstEnergy received taxpayer and customer funding to install the equipment, the pilot was successful, but now FirstEnergy obstinately and perniciously refuses to fully deploy this equipment because it would reduce its revenues and profits.

FirstEnergy applied to the Department of Energy to fund the pilot program in various service territories, including its Metropolitan Edison service area in Pennsylvania. FirstEnergy

[2] Smart Grid Consumer Collaborative, *Smart Grid Economic and Environmental Benefits: A Review and Synthesis of Research on Smart Grid Benefits and Costs* at 16 (October 8, 2013), available at: http://smartgridcc.org/wp-content/uploads/2013/10/SGCC-Econ-and-Environ-Benefits-Full-Report.pdf (last viewed April 12, 2016).

provided a copy of this application to Ohio regulators.[3] The application describes in detail FirstEnergy's expectations for this technology, and FirstEnergy committed to deploy the technology throughout its service territory if the pilot would be successful. FirstEnergy made the following commitments regarding the pilot program:

- The purpose of FirstEnergy's Smart Grid Modernization Initiative is to 'firmly establish the utility and regulatory business case for integrating cross-cutting smart grid technologies with existing distribution system infrastructure.' (Application at 1).

- 'Full system life cycle costs and benefit will be analyzed to justify recovery of investments, which is pivotal to ensuring expanded deployment across FirstEnergy and supporting deep-market penetration across the U.S.' (Application at 1).

- FirstEnergy stated that Volt/VAR Control would lead to improved system power factor, reduced voltage variation in the distribution feeders and reduced peak loads. (Application at 16).

- FirstEnergy stated that another goal of Volt/VAR Control is to reduce feeder losses. (Application at 17).

- FirstEnergy stated that the Volt/VAR Control system would provide targeted load control capability, permitting Met Ed to reduce load on feeders or transformers. System capability would be leveraged to provide operational and programmatic benefits, such as participation in PJM conservation programs. In addition, having the ability to reduce loads within specific areas would enable utility operators to manage power flow. (Application at 21).

- FirstEnergy stated that it planned to expand installations and operation across FirstEnergy's territories, if the pilot program was successful. (Application at 23).

- FirstEnergy stated that the benefits of Voltage Optimization includes reduced customer demand and energy consumption,

[3] *In the matter of the application of Ohio Edison Company, The Cleveland Electric Illuminating Company and The Toledo Edison Company for approval of Ohio Site Deployment of the Smart Grid Modernization Initiative and Timely Recovery of Associated Costs*, Case No. 09-1820-EL-ATA (Ohio PUC) (Application at Appendix B) (November 18, 2009), available at: http://dis.puc.state.oh.us/TiffToPDf/A1001001A09K18B31543G06404.pdf).

> reduced line losses, peak load reductions, reduced greenhouse gas emissions and lower operating costs. (Application at 33, 36).

FirstEnergy completed the voltage optimization pilot program in the Metropolitan Edison service territory. The project was successful, and FirstEnergy issued a final report to the Department of Energy detailing these successful results. FirstEnergy has not, however, fully implemented this technology, violating the commitments it made to Pennsylvania and Ohio regulators and the Department of Energy.

II. The Companies' LTIIPs

The Companies' LTIIPs call for extensive grid modernization improvements, but do not include any voltage optimization.[4] The Companies claim that Intervenors should have objected to the LTIIPs for not including voltage optimization and, because Intervenors failed to do so, they should be precluded from doing so now. This argument fails. Intervenors could not have included voltage optimization in the LTIIPs because the LTIIPs are limited to certain types of utility property that is prescribed by law. Voltage optimization requires the use of sensors and capacitors and monitoring equipment. This type of equipment is not included in the scope of property that can be included in an LTIIP. If Intervenors would have attempted to include voltage optimization in the LTIIPs, the Companies would have objected that voltage optimization equipment is outside the scope of what can be included in an LTIIP under Act 11 of 2012.

[4] *Petition of Metropolitan Edison Company for Approval of its Long-Term Infrastructure Improvement Plan,* Docket No. P-2015-2508942 (Petition) (October 19, 2015); *Petition of Pennsylvania Electric Company for Approval of its Long-Term Infrastructure Improvement Plan,* Docket No. P-2015-2508936 (Petition) (October 19, 2015); *Petition of Pennsylvania Power Company for Approval of its Long-Term Infrastructure Improvement Plan,* Docket No. P-2015-2508931 (Petition) (October 19, 2015); *Petition of West Penn Power Company for Approval of its Long-Term Infrastructure Improvement Plan,* Docket No. P-2015-2508948 (Petition) (October 19, 2015).

III. The Just and Reasonable Test Requires the Use of Voltage Optimization

Intervenors can properly oppose the distribution system improvement charge ("DSIC") that the Companies seek in this proceeding because the Commission cannot approve the DSIC unless it is just and reasonable. This standard gives the Commission broad discretion to balance the interests of ratepayers and utilities. The Pennsylvania Supreme Court has explained this standard as follows:

> In determining just and reasonable rates, the PUC has discretion to determine the proper balance between interests of ratepayers and utilities. As this Court stated in *Pennsylvania PUC v. Pennsylvania Gas and Water Co.*,
>
> There is ample authority for the proposition that the power to fix 'just and reasonable' rates imports a flexibility in the exercise of a complicated regulatory function by a specialized decision-making body and that the term 'just and reasonable' was not intended to confine the ambit of regulatory discretion to an absolute or mathematical formulation but rather to confer upon the regulatory body the power to make and apply policy concerning the appropriate balance between prices charged to utility customers and returns on capital to utility investors consonant with constitutional protections applicable to both.
>
> Further, the PUC is obliged to consider broad public interests in the rate-making process.[5]

The LTIIP proceeding did not incorporate a just and reasonable test but the present DSIC proceeding does. FirstEnergy seeks to impose higher rates on customers through the DSIC charges, but has utterly failed to protect customers by committing to use voltage optimization, a proven and cost-effective technology, to reduce the customers' costs and also reduce harmful air emissions. The DSIC charges that FirstEnergy seeks would not be just and reasonable unless FirstEnergy commits to using voltage optimization when the new LTIIP equipment is installed. This proceeding is the only opportunity customers have to obtain this commitment from

[5] *Popowsky v. Pennsylvania PUC*, 665 A.2d 808, 812 (Pennsylvania 1995) (citations omitted).

FirstEnergy. The Commission can strike the proper balance between customer and utility interests by requiring FirstEnergy to implement voltage optimization when FirstEnergy implements its LTIIP.

WHEREFORE, PennFuture and EDF respectfully request that the Commission dismiss the Companies' objections and order the Companies to answer Intervenors' interrogatories.

Respectfully Submitted,

/s/ George Jugovic, Jr.

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(motion for p*ro hac vice* admission pending)

DATED: April 19, 2016

CERTIFICATE OF SERVICE

I hereby certify that I have this day served a true copy of the foregoing document upon parties of record in this proceeding in accordance with the requirements of 52 Pa. Code § 1.54 (relating to service by a participant), via email and first class mail, upon the persons listed below:

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Date: April 19, 2016