OCC EXHIBIT NO. _____

BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Application of Ohio Power Company to Initiate Phase 2 of Its gridSMART Project and to Establish the gridSMART Phase 2 Rider.	))))	Case No. 13-1939-EL-RDR

DIRECT TESTIMONY
OF
PETER J. LANZALOTTA

On Behalf of
The Office of the Ohio Consumers' Counsel
10 West Broad Street, Suite 1800
Columbus, Ohio 43215-3485

July 22, 2016

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I. INTRODUCTION

Q1. PLEASE STATE YOUR NAME, POSITION, AND BUSINESS ADDRESS.

A1. My name is Peter J. Lanzalotta. I am a Principal with Lanzalotta & Associates LLC, ("Lanzalotta"), 67 Royal Point Drive, Hilton Head Island, SC 29926.

Q2. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS CASE?

A2. I am testifying on behalf of the Office of the Ohio Consumers' Counsel ("OCC").

Q3. PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND RECENT WORK EXPERIENCE.

A3. I am a graduate of Rensselaer Polytechnic Institute, where I received a Bachelor of Science degree in Electric Power Engineering. In addition, I hold a Master's degree in Business Administration with a concentration in Finance from Loyola College in Baltimore.

I am currently a Principal of Lanzalotta & Associates LLC, which was formed in January 2001. Prior to that, I was a partner of Whitfield Russell Associates, with which I had been associated since March 1982. My areas of expertise include electric system planning and operation. I am a registered professional engineer in the states of Maryland and Connecticut.

In particular, I have been involved with the planning and operation of electric utility systems as an employee of and as a consultant to a number of privately- and publicly-owned electric utilities over a period exceeding thirty years.

I have presented expert testimony before the Federal Energy Regulatory Commission ("FERC") and before regulatory commissions and other judicial and legislative bodies in 25 states, the District of Columbia, and the Provinces of Alberta and Ontario. I have testified in several proceedings before the Public Utilities Commission of Ohio ("PUCO" or "Commission"), including Case Nos. 83-33-EL-EFC, 06-222-EL-SLF, 10-503-EL-FOR, and 14-1297-EL-SSO. My clients have included utilities, state regulatory agencies, state consumer advocates, independent power producers, industrial consumers, the United States Government, environmental interest groups, and various city and state government agencies.

A copy of my current resume is included as Exhibit PJL-1 and a list of my testimonies is included as Exhibit PJL-2.[1]

[1] Exhibit PJL-1 and Exhibit PJL-2, as well as all other Exhibits referenced herein, are attached to and incorporated by reference in this testimony.

II. PURPOSE OF TESTIMONY AND RECOMMENDATIONS

Q4. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A4. My testimony addresses (i) the Proposed gridSMART Phase 2 ("GS-II") Stipulation ("Stipulation") filed in this case on April 7, 2016, and (ii) various aspects of Ohio Power Company's ("AEP Ohio" or "Company") proposed expansion of the gridSMART projects.

Q5. PLEASE SUMMARIZE YOUR RECOMMENDATIONS.

A5. I recommend that the PUCO not adopt the Stipulation. I present evidence that the Stipulation is not reasonable, will not benefit customers and the public interest and does not meet the three-prong test for PUCO approval of settlements.

III. THE STIPULATION DOES NOT MEET THE THREE-PRONG TEST FOR APPROVAL OF SETTLEMENTS.

Q6. WHAT ARE THE CRITERIA THAT THE COMMISSION USES TO REVIEW SETTLEMENTS?

A6. The Commission may approve a settlement only if:

(1) The settlement is the product of serious bargaining among capable, knowledgeable parties with diverse interests; [2]

(2) The settlement benefits customers and the public interest as a package; and

(3) The settlement does not violate any important regulatory principle or practice.[3]

Q7. PLEASE DISCUSS WHETHER THE STIPULATION IN THIS PROCEEDING REFLECTS SERIOUS BARGAINING AMONG CAPABLE, KNOWLEDGEABLE PARTIES WITH DIVERSE INTERESTS.

A7. It does not. The Stipulation states the following:

> This Stipulation is entered into by the Staff of the Public Utilities Commission of Ohio (Staff), Direct Energy Business, LLC and Direct Energy Services, LLC (collectively, Direct Energy), Interstate Gas Supply Inc. (IGS), the Ohio Hospital Association (OHA), Environmental Defense Fund, and Ohio Environmental Council and AEP Ohio.[4]

These signatories represent AEP Ohio, sellers of electricity, hospitals, and some environmental interests. There are no signatories that represent residential

[2] *See In the Matter of the Application of Columbus Southern Power Company and Ohio Power Company, Individually and, if Their Proposed Merger Is Approved, as a Merged Company (collectively, AEP Ohio) for an Increase in Electric Distribution Rates*, Case No. 11-351-EL-AIR, et al., Opinion and Order (December 14, 2011), p. 9. The PUCO recently stated that the first prong does not incorporate a diversity requirement. *In the Matter of the Application Seeking Approval of Ohio Power Company's Proposal to Enter into an Affiliate Power Purchase Agreement for Inclusion in the Power Purchase Agreement Rider*, Case No. 14-1693-EL-RDR, et al., Opinion and Order (March 31, 2016), p. 52. Nevertheless, the PUCO did consider the diversity of the signatory parties in that case. See id.

[3] See *In the Matter of the Application of Columbus Southern Power Company and Ohio Power Company, Individually and, if Their Proposed Merger Is Approved, as a Merged Company (collectively, AEP Ohio) for an Increase in Electric Distribution Rates*, Case No. 11-351-EL-AIR, Opinion and Order (December 14, 2011), p. 9.

[4] Stipulation at 2.

customers, or any other customer classes as a whole.[5] The Stipulation fails the first prong of the reasonableness test because residential customers, who will be charged annual amounts ranging from $5 million per year in year 1 to almost $38 million in year 7[6] for the smart grid initiatives recommended under the Stipulation, are not parties to it. The diversity of interests test is not met. There is also a question as to the degree of seriousness inherent in recent settlement negotiations. A number of the provisions[7] of this Stipulation were reflected in the Stipulation filed in AEP Ohio's power purchase agreement case last December.[8] Regarding these provisions, any settlement negotiations since last December produced little or no change in position by the participants.

The relatively one-sided result of this settlement process is that most of the objections and concerns that OCC expressed on behalf of residential customers regarding the original GS-II proposals in AEP Ohio's Application remain largely unaddressed, or have been exacerbated.

[5] OHA only represents hospitals, which is a small segment of the commercial customer class.

[6] These annual amounts come from Exhibit PJL-3, which includes the Company's second supplemental Attachment 1 to its response to OCC INT 3-67, from the Updated Attachment B pages reflecting Year 1 through Year 7.

[7] These provisions include (i) the expansion of the VVO program to 160 circuits, (ii) the breakdown of costs and benefits for the VVO program by circuit and substation, and (iii) VVO deployment will be prioritized for circuits serving OHA members. This settlement provision is problematic because residential customers are substantially paying for the VVO investment, but the energy efficiency benefit could be prioritized to provide disproportionately high benefits for OHA members (compared to benefits for residential consumers).

[8] Case Nos. 14-1693-EL-RDR and 14-1694-EL-RDR, Joint Stipulation and Recommendation (December 14, 2015), pp. 14 and 26-27.

The Stipulation produced no limits on the deployment of smart grid technology as originally proposed by AEP Ohio. Actually, the Stipulation increases some of the quantities permitted to be deployed, such as Volt-Var Optimization ("VVO"),[9] which increased from 80 circuits to 160 circuits. In addition, the Stipulation reduced an important consumer protection, by eliminating the requirement that AEP Ohio file a business case before smart grid deployment.

Q8. PLEASE DISCUSS WHETHER THE STIPULATION AS A PACKAGE, BENEFITS CUSTOMERS AND THE PUBLIC INTEREST.

A8. It does not. The settlement does not benefit customers and the public interest for all the following reasons:

(i) The Stipulation allows AEP Ohio to front load the expenses for its GS-II projects, while potential benefits to customers are not passed through until some future date.

(ii) There is an unfair burdening of customers with the financial risks of GS-II projects that should be borne by AEP Ohio investors. Customers have to shoulder all of the financial risks, when those risks are for investors to bear.

(iii) The costs of the GS-II projects that are allocated to various customer classes are not commensurate with the expected benefits of the GS-II projects. More than 75% of the projected benefits

[9] VVO refers to technology which monitors the voltage and the reactive power needs on each segment of a distribution circuit and adjusts each on a segment by segment basis, thereby lowering the overall average voltage on the distribution circuit and reducing loads and consumption.

accrue to commercial and industrial customer classes, while more than 60% of the costs of such GS-II projects are allocated to residential customers. Such subsidization of other customer classes by residential customers is unfair to residential customers and is not in the public interest.

(iv) The base-level reliability for consumers on AEP Ohio's system in 2014 is declining. Reliability levels saw only some limited CAIDI[10] improvement in 2015 despite increased reliability spending by AEP Ohio, at customer expense, in the first phase of its gridSMART program ("GS-I").

(v) The increase in interruptions of customer service experienced by the GS-I Distribution Automation Circuit Reconfiguration ("DACR")[11] circuits in 2014 and 2015 call into question the reliability benefits projected for the GS-II DACR program.

The points I address throughout this testimony support my opinion that the Stipulation does not satisfy the PUCO's standard for customer benefits and the public interest.

[10] CAIDI is an index reflecting the average interruption duration among customers experiencing a customer interruption during a defined period of time, usually a year.

[11] DACR refers to the ability of a distribution circuit to automatically sectionalize to isolate a faulted segment of the circuit and to connect the unfaulted segments to segments of other nearby distribution circuits, thereby restoring service.

Q9. DOES THE STIPULATION VIOLATE ANY IMPORTANT REGULATORY PRINCIPLE OR PRACTICE AND THUS HARM CUSTOMERS?

A9. Yes. The Stipulation violates prior Commission orders, and does not show that the implementation of GS-II will ensure the availability of reliable and non-discriminatory electric service. The state policy related to electric utility regulation in R.C. 4928.02(A) is to, "[e]nsure the availability to consumers of adequate, reliable, safe, efficient, nondiscriminatory, and reasonably priced retail electric service." The Stipulation would appear to violate state policy to the extent that some GS-II programs, notably distribution automation, are based on GS-I programs that have been accompanied by increased numbers of customer interruptions in 2014 and 2015.

In addition, the economic justification of GS-II projects is discriminatory because the estimated reliability benefits, which make up more than 75% of the total 15-year cash benefits projected for the GS-II projects, accrue primarily to commercial and industrial customer classes, while more than 60% of the costs of such GS-II projects are allocated to residential customers.

The points I address throughout this testimony support my opinion that the Stipulation does not satisfy the PUCO's standard for avoiding the violation of regulatory principles and practices.

Q10. WHAT IS YOUR CONCLUSION AS TO WHETHER CUSTOMERS SHOULD BE CHARGED NOW FOR AEP OHIO'S GS-II PROPOSALS?

A10. While AEP Ohio's GS-II Application and the Stipulation reflect the Commission's desire for the Company to proceed with smart grid technology implementation, they have a number of significant problems that call into question the underlying premises of AEP Ohio's Application, and the value of the GS-II programs to the Company's residential customers. Given the shortcomings of AEP Ohio's Application and of the Stipulation, the Stipulation should be rejected. AEP Ohio should not be permitted to proceed with the GS-II programs at consumer expense as proposed in its Application and modified by the Stipulation.

Q11. DOES THE STIPULATION ADDRESS THE COMMISSION REQUIREMENT FOR A BUSINESS PLAN REGARDING THE GS-II PROGRAMS?

A11. No. When the PUCO directed AEP Ohio to initiate Phase 2 of the gridSMART project, it ordered the Company as follows:

> The Company shall file its proposed expansion of the gridSMART project, gridSMART Phase 2, as part of a new gridSMART application including sufficient detail on the equipment and technology proposed for the Commission to evaluate the demonstrated success, cost-effectiveness, customer acceptance and feasibility of the proposed technology.[12]

In response, AEP Ohio produced Attachment A to its Application. The 14-page Attachment A was labelled a "business plan," and claimed estimates of more than $1.325 billion in benefits over 15 years with one page of supporting

[12] Case No. 11-346-EL-SSO, et al, Opinion and Order (August 8, 2012) ("ESP-II Order"), p. 62.

documentation in Attachment C. Considering the hundreds of millions of dollars of costs being committed for customers to pay under GS-II programs over the next 15 years, this was not sufficient documentation to demonstrate the cost-effectiveness of the program.

When AEP Ohio filed its Application, the PUCO Staff was similarly critical of the shortcomings of the filed business plan:

> The business plan summarizes the Company's analysis at a high level. It provides insufficient documentation of calculation details and assumptions with regard to the benefits represented, including formulas, methodologies, and work papers. It is important to see when the Company estimates certain benefits will be available. This is especially true in light of the Commission's instruction that the Phase 2 application include "sufficient detail on the equipment and technology proposed for the Commission to evaluate the demonstrated success, cost-effectiveness, customer acceptance and feasibility of the proposed technology.[13]

The Stipulation appears to recognize the deficiency in AEP Ohio's filing, as it addresses the development of the business case by noting that there will be a future formal evaluation of the benefits "which will serve to further illustrate the benefits associated with the proposed implementation."[14] However, instead of requiring an adequate business case to justify smart grid deployment before it (and the associated charges to customers) begins, the Stipulation would allow AEP Ohio to deploy smart grid *first*, then evaluate feasibility and benefits *after* deployment. This backward sequence of actions in the Stipulation is the exact

[13] Case No. 13-1939-EL-RDR, Comments Submitted on Behalf of the Staff of the Public Utilities Commission of Ohio (November 1, 2013), pp. 4-5, citing ESP-II Order, p. 62.

[14] Stipulation, p. 4.

opposite of what was anticipated by the PUCO and what should be done to protect consumers.[15]

This future evaluation of benefits, which *may* be conducted by an external consultant at some unspecified future date, will review the operational gridSMART benefits for both Phase 1 and Phase 2. If a consultant is hired, that consultant will recommend an ongoing level of operational benefits to be recognized in rates.[16] If all parties do not agree with the consultant's findings, the Stipulation calls for the Commission to establish a process for parties to advocate their positions.

With this Stipulation, we have gone from (i) a requirement that data sufficient to evaluate the demonstrated success, cost-effectiveness, customer acceptance and feasibility of the proposed GS-II projects be provided at the time the Company filed its GS-II Application and before deployment (and charges to customers) begins, to (ii) the *possibility* of an external consultant to be hired at some unspecified future date to determine operational benefits post-deployment, and after costs for such deployment have been paid for by customers. That approach is inconsistent with sound regulatory principles and practices that balance consumer and investor interests. Those principles and practices include that

[15] I note that the Commission approved gridSMART Phase I in March of 2009. Yet, today, more than seven years later, customers still have received none of the benefits that depend on the filing of a new rate case in order to be reflected in rates.

[16] The Stipulation does not address what happens if the PUCO Staff does not choose to retain an external consultant.

consumers should not be charged for plant until and unless it is proved by the utility and found by the regulator to be used and useful.

Meanwhile, all the GS-II programs will proceed with only the cursory estimates of costs and benefits included with its Application. By the time a detailed review of operational benefits is made, a big part of the proposed spending may have already taken place – with residential customers footing a disproportionately larger share of the bill. Customers could be stuck with paying millions of dollars for equipment that is not cost effective, not acceptable to customers, and/or not successful. And there is no promise to pay back customers if future evaluations do not bear out the assumed cost effectiveness of the program.

Q12. DOES THE STIPULATION RESULT IN THE FRONT-LOADING OF GS-II EXPENSES ONTO CUSTOMERS, WHILE BENEFITS TO CONSUMERS ARE NOT SHARED WITH CUSTOMERS UNTIL SOME FUTURE TIME?

A12. Yes. AEP Ohio's GS-II proposal tends to front-load the expenses for many of its GS-II projects, ahead of customers receiving many operational cost benefits that may be received at some point in the future from those projects by consumers. In effect, AEP Ohio's proposal treats consumers as investors by increasing rates right away for the GS-II projects, with only a limited offset or consideration of the operational benefits that may result after implementation of the projects has been completed.

These tendencies are not materially balanced by the Stipulation, which provides for a credit reflecting projected operational cost savings to help offset costs being collected through the GS-II rider. However, the initial credit to customers under this proposal is $1.6 million per year. Considering that AEP Ohio has estimated a 15-year cash benefit of $194 million[17] from the installation of 894,000 advanced meters as provided for in the Stipulation, the Company is expecting a net gain of almost $13 million per year.[18] Any operational cost savings realized by AEP Ohio, but not credited (or used to offset to the gridSMART charge) to customers becomes Company profit.

In addition, the Application in this case showed the advanced meters already installed in gridSMART Phase 1 have resulted in savings of $6.50 per meter for 132,000 meters. These savings will have benefitted only AEP Ohio and have not been passed on to customers. This equates to about $860,000 per year over the past six years for a total of $5.2 million to AEP Ohio from GS-I programs with no benefit to customers in the form of a credit or gridSMART charge offset.

Under the proposed Stipulation, the initial credit to customers for GS-II is less than 13% of the projected annual benefits in reduced costs.[19] Any changes in the credit to customers will either be mutually agreed to by parties (based on a review

[17] Attachment C to AEP Ohio's Application lists 15-year cash total benefits of (i) $83 million from meter reading and meter operations, (ii) $21 million from credit and collections, (iii) $49 million in uncollectable revenue reductions, (iv) $35 million in theft reduction, and (v) $6 million from reduced consumption on inactive meters, for a total of $194 million.

[18] Application, Attachment A, p. 5. $194 million divided by 15 years equals $12.93 million per year.

[19] $1,600,000 divided by $13,000,000 = 0.123.

of operational benefits at some future date), or it will be subject to some other PUCO process. This process will not ensure that residential customers' interests will be considered as part of the process.

To be sure, some of the proposed GS-II programs are expected to start providing benefits to consumers as soon as they are in-service, such as DACR and VVO. However, the potential reductions in operating costs are not reflected in the proposed GS-II rider of the Stipulation. Instead they are left to be reflected in a future benefits determination process at some undefined point in time. Also, there are a number of additional AMI benefits that have not been monetarily quantified.[20]

Q13. WHAT ARE THE TECHNOLOGICAL RISKS OF THE PROGRAMS PROPOSED AND WHY IT IS INAPPROPRIATE TO PLACE ALL SUCH RISKS ON CUSTOMERS?

A13. There are technological risks that the technology underlying one or more of the GS-II programs will not produce the benefits that are being projected. If the expected operational and/or investment benefits from the GS-II programs do not materialize, or are smaller than what was assumed in the determination of expected benefits, then consumers will not receive the benefits projected in AEP Ohio's Application. This approach puts all of this type of technological risk for the GS-II programs on consumers. There is also a risk to be avoided for

[20] Application, Attachment A, p.5.

consumers that deploying the technology now advances the time when the equipment could become technologically obsolete.

In the ESP I Order, it is noted that the PUCO Staff argued that the then-current gridSMART proposal did not contain sufficient information regarding risk-sharing between the consumers and stockholders.[21] The same Order notes that OCC criticized AEP Ohio's proposal as failing to acknowledge that full system implementation would be required before many of the expected benefits could actually be realized.[22]

The Stipulation does not address concerns about risk-sharing expressed by the PUCO Staff and OCC that were recognized by the PUCO. Risks are disproportionately borne by the customers.

Q14. HOW ARE THE FINANCIAL RISKS OF THE PROGRAM TREATED AND WHY IT IS INAPPROPRIATE TO PLACE ALL SUCH RISKS ON CUSTOMERS?

A14. There is only limited sharing of the financial risks from GS-II projects between AEP Ohio and its customers, under either AEP Ohio's Application or the Stipulation. Customers must shoulder most of the financial risks. All of the costs from the proposed GS-II programs are paid for by customers, regardless of whether these programs result in financial savings to customers. If such

[21] Case Nos. 08-917-EL-SSO and 08-918-EL-SSO, Opinion and Order (March 18, 2009), p. 36.

[22] Id.

technology does not result in financial savings, then customers will receive few benefits from its implementation.

AEP Ohio bears only limited risk for any portion of the costs of the GS-II programs, regardless of how poorly the programs may perform in producing expected operational savings and other savings. There should be balancing of rewards and risks between the Company and customers. Because AEP Ohio is receiving guaranteed financial benefits from these programs, i.e., higher revenues, it should bear most, if not all, of the financial risk of implementation. As referenced above, the PUCO Staff argued in the ESP-I proceeding that the gridSMART proposal in that case did not contain sufficient information regarding risk-sharing between customers and stockholders.[23] The Stipulation in this case puts all of the financial risk of the GS-II programs on customers.

In addition to and separate from this financial risk, there is no commitment by AEP Ohio for a rate case as part of the GS-II deployment. Without such a rate case, there is no opportunity for customers to receive many of the benefits anticipated to result from GS-II deployment. This is because many of the benefits are reflected in a reduced cost of service which customers can only receive if there is rate case which reflects these costs of service reductions. Additionally, a rate case is where the bearing of risks can be sorted out, with investors bearing the

[23] Id.

risks of investment until the plant (the smart grid) is proven to be used and useful for consumers.

Q15. WHAT ARE YOUR CONCERNS THAT THE STIPULATION'S INCREASE IN THE NUMBER OF CIRCUITS HAVING VOLT VAR OPTIMIZATION TECHNOLOGY MIGHT NOT BENEFIT CONSUMERS?

A15. The Stipulation doubles the number of circuits that will have VVO technology installed as proposed in the Company's Application. Instead of 80 circuits, the Stipulation would install VVO on 160 circuits. Considering that the Company's experience with VVO is based on studies of only 17 circuits with VVO technology installed in Phase 1, even the originally proposed 80 circuits was ambitious. That's because it is likely that the Company's 17-circuit pilot program did not result in the Company learning everything it needs to know about installing this technology and operating it system-wide. One example of this is reflected in the study of the 17-circuit pilot to see if VVO had an effect on maintenance costs of distribution circuit equipment. The study reached the following conclusion:

> There is no evidence of impact on maintenance costs due to the installation and operation of VVO. A longer term of observation would be necessary to determine definitively if VVO has a measurable impact on maintenance. [24]

Another reflection of the effects of doubling the size of the proposed VVO installation is reflected in an increase in the capital cost of installing VVO

[24] See link in Company's response to OCC INR 3-39 to report titled AEP Ohio gridSMART Demonstration Project, p. 234.

technology from $250,000 per distribution circuit in the Company's Application to $334,000 per circuit in Exhibit SSO-1 to Mr. Osterholt's testimony. While the initial $250,000 estimate was based on the cost for the Phase 1 circuits, this cost was increased, in part, due to the need to use more expensive labor resources from outside the Company to deploy the technology on 160 circuits, as compared with Phase 1 which used less expensive internal labor.[25]

There is little doubt that a more moderate sized deployment would have permitted the Company to learn more about installing and operating the VVO technology, as well as possibly permitting the Company to use less expensive internal labor for its deployment, as was the case in Phase 1.

Under these conditions, expanding this phase of VVO to 160 circuits, as provided in the Stipulation, appears speculative and unduly ambitious with adverse cost consequences on customers.

In addition, the Stipulation is inconsistent with the Commission's ESP-II Order, in which the PUCO recognized that VVO is not specifically smart grid technology:

> However, the Company shall include, as Staff recommends, IVVC only within the distribution investment rider, as IVVC is not exclusive to the gridSMART project.[26]

[25] See the Company's response to OCC INT-5-069.

[26] ESP-II Order, p. 62. The term "IVVC" is defined in the ESP-II Order at 61 as "integrated voltage variation control". This is the same as VVO.

This is supposed to limit the Company to collecting costs associated with VVO under the distribution investment rider, and not under gridSMART. Similarly, the Green Button that has been stipulated in this case is not a smart grid issue. VVO and Green Button issues should be addressed in a separate case, not in this case.[27]

Q16. ARE YOU CONCERNED THAT BENEFITS TO CUSTOMERS MAY BE FURTHER DELAYED BY AEP OHIO'S PROPOSAL TO SATISFY ITS OBLIGATION TO INVEST $20 MILLION IN A PROJECT BENEFITTING CUSTOMERS BY INVESTING THIS AMOUNT IN VVO TECHNOLOGY AS PART OF GS-II?

A16. Yes. In its Application, AEP Ohio proposes to spend $20 million on VVO technology as part of GS-II to satisfy an obligation from Case No. 10-501-EL-FOR.[28] While the proposed investment in VVO technology may eventually produce customer benefits, it continues a pattern of delay in providing these benefits. The PUCO ordered in January 2011 that this $20 million, which AEP committed to in 2010, be spent in 2012. It was not. In 2013, at the PUCO's suggestion,[29] OCC asked that this $20 million be used to reduce storm expenses that AEP Ohio sought to collect from customers.[30] This would have provided timely benefits to customers. The PUCO denied OCC's request, and stated that

[27] The PUCO should not allow parties' environmental objectives to increase charges on customers' electric bills. There was a recent news story on a related topic. See "How Utilities Team Up with Greens Against Consumers," Wall Street Journal (February 26, 2016), attached as Exhibit PJL-4.

[28] Application, Part 8, pp. 3-4.

[29] See *In the Matter of the 2010 Long Term Forecast Report of the Ohio Power Company and Related Matters*, Case No. 10-501-EL-FOR, Opinion and Order (January 9, 2013), p. 28.

[30] *In the Matter of the Application of Ohio Power Company to Establish Initial Storm Damage Recovery Rider Rates*, Case No. 12-3255-EL-RDR, OCC's Nonbinding List of Issues (November 4, 2013), p. 3.

the issue would be resolved in this proceeding.[31] Now, it is four years later, in 2016, and customers have still not received these benefits. Under the Stipulation, it will be 72 months, i.e., six years, from the date of approval of the Stipulation before the proposed VVO deployment will be completed.[32] This is not what the PUCO had in mind four years ago when it ordered AEP Ohio to spend the $20 million to benefit customers.

Q17. IS THERE A MISMATCH BETWEEN THE LARGE ALLOCATION OF COSTS TO BE CHARGED TO RESIDENTIAL CUSTOMERS AND THE SMALL BENEFITS RESIDENTIAL CUSTOMERS ARE LIKELY TO RECEIVE?

A17. Yes. AEP Ohio's Application proposes that the revenue requirement attributable to GS-II be allocated between residential and non-residential customers according to base distribution revenue billed to residential customers and to non-residential customers over a period of time, in this case 2012.[33] Table 1 below reflects the base distribution revenues used in Attachment B to the Company's Application.

Table 1[34]

	Base Distribution Revenues		
	Class	**Revenues ($)**	**Percent**
	(1)	(2)	(3)
(a)	Residential	406,542,658	62.4%
(b)	Non-Residential	244,589,408	37.6%
(c)	Total	651,132,066	100.0%

[31] Id., Opinion and Order (April 2, 2014), p. 15.

[32] Stipulation, p. 7.

[33] See AEP Ohio's response to OCC INT-1-003.

[34] Dollar values come from Attachment B of AEP Ohio's Application.

Based on these revenues, 62.4% of the revenue requirement from the proposed gridSMART Phase 2 spending will be allocated to the residential customers. For this allocation to be fair, residential customers should expect to get 62.4% of the benefits from the GS-II programs.

But under the Company's proposal, residential customers can expect to get less than 2% of the reliability benefits. This proposal means that residential customers pay far too much for the benefits they receive, while other customers are paying too little for the benefits they receive.

Q18. HAS AEP OHIO INCLUDED A COMPARISON OF COSTS AND BENEFITS FOR ITS GRIDSMART PHASE 2 PROPOSAL?

A18. Yes. On page 9 of Exhibit SSO-1 to Mr. Osterholt's testimony there is a table that compares costs, benefits, and the benefit/cost ratio for gridSMART Phase 2. The data from the both the Cash View portion and the Net Present Value ("NPV") view of this table is reflected in Table 2 below.[35]

[35] There has not been a cost benefit study per se. The numbers in Table 2 reflect U.S. Department of Energy reports concerning demonstrating technologies. It does not demonstrate that the benefits will exceed costs for AEP Ohio. Furthermore, under the terms of the Stipulation, AEP Ohio may be able to control how benefits are determined because the cost data is based on AEP Ohio, and not on industry, standards.

Table 2

Benefit / Cost Analysis			
(All Figures in $ Millions Except for the Benefit/Cost Ratio)			
	(1)	(2)	(3)
	15 Year Benefits	**Cash**	**NPV View**
(a)	O&M	199	103
(b)	Capital	1	1
(c)	Energy/Capacity	210	102
(d)	Reliability	1,016	519
(e)	Total	1,426	725
(f)	**15 Year Costs**		
(g)	O&M	148	83
(h)	Capital	368	282
(i)	Total	516	365
(j)	**15 Year Impact**		
(k)	Net Cash Flows	909	361
(l)	Benefit/Cost Ratio	2.8	2.0

The Company's Benefit/Cost Analysis, shown in Table 2, shows that the gridSMART Phase 2 proposal is expected to produce benefits that are between 2.0 and 2.8 times the costs of the proposal, depending on whether we are looking at cash flow values or at NPVs. The benefits are made up mostly of reliability benefits, which make up 77% of the cash view total benefits, and 76% of the NPV total benefits.[36]

These reliability benefits are based on data taken from the "Cost of Power Interruptions to Electricity Consumers in the United States, Ernest Orlando Lawrence Berkeley National Laboratory."[37] The $1,016 million (i.e., $1.016 *billion*) value for reliability is derived from an estimate of annual reliability

[36] 1016/1325=0.77 and 519/679=0.76.

[37] See Footnote * in table on page 10 of Attachment A of AEP Ohio's Application.

benefits of approximately $71 million.[38] These $71 million in annual reliability benefits[39] are based on estimates of customer class outage cost per hour that are shown in Table 3 below.[40]

Table 3

Customer Benefits From Avoided Outages (RPD-1-16)					
Customer Class	2011 AEP Customers	Class Percent	2002 Outage Cost/Hr.	Weighted Ave. 2002 Outage Cost/Hr.	Class Percent of Cost/Hr.
	(a)	(b)	(c)	(d)	(e)
Residential	4,522,774	85.9%	$2.71	$2.33	1.6%
Commercial	699,271	13.3%	$886.00	$117.64	79.9%
Industrial	44,266	0.8%	$3,253.00	$27.34	18.6%
Total	5,266,311	100.0%		$147.32	100.0%
Total 2013 Cost				$203.92	

Table 3 reflects customer class counts, as of 2011, for residential, commercial, and industrial customers, in column (a), and the percent of total customers for each class, in column (b). Next, in column (c), Table 3 shows the 2002 outage cost per hour for each customer class, in 2002 dollars, taken from study referenced above. For residential customers, the outage cost per hour per customer is $2.71; for commercial customers it is $886 per hour per customer; and for industrial customers it is $3,253 per hour per customer. The class percentages from column (b) are multiplied by the 2002 outage cost per hour from column (c) to produce the weighted average 2002 outage costs in column (d). The sum of the totals in column (d) is $147.32 per hour of outage, which is a

[38] See AEP Ohio's response to OCC INT-1-019, and RPD-1-17.

[39] AEP Ohio's response to OCC RPD-1-16 details the calculation of the $71 million annual customer benefit from the 21 million avoided customer minutes of interruption.

[40] Table 3 reflects OCC RPD-1-16.

weighted average outage cost applicable to AEP Ohio's total number of customers. A 3% annual increase is used on the 2002 figure to calculate a 2013 weighted average outage cost of $203.92.

Table 3 reflects AEP Ohio's calculation of reliability benefits to be applied against its total number of customers to produce an estimate of the value of Company-wide reliability benefits, as is reflected in Table 1.

Note that the residential class's portion of the weighted average total outage cost is just 1.6% of the total, despite making up 85.9% of total customers. Because of the very small portion of reliability benefits, 1.6%, that accrue to residential customers, it is necessary to look at reliability benefits for each class individually in order to see how each class's benefits compare to its share of the costs from GS-II. Table 4 below shows the calculation of the value of each customer class's avoided outage cost due to GS-II.

Table 4

Monetization of Reliability Benefit						
Customer Class	Avoided CMI	Avoided CMI (In Hrs)	2002 Outage Cost/Hr.	Avoided 2002 Outage Cost	Class Percent of Outage Cost	Avoided 2013 Outage Cost
	(a)	(b)	(c)	(d)	(e)	(f)
Residential	18,035,064	300,584	$2.71	$814,584	1.6%	$1,127,574
Commercial	2,788,421	46,474	$886.00	$41,175,680	79.9%	$56,996,771
Industrial	176,516	2,942	$3,253.00	$9,570,087	18.6%	$13,247,239
Total	21,000,000	350,000		$51,560,351	100.0%	$71,371,584

Table 4 allocates 21 million customer minutes of interruption ("CMI")[41] among the three customer classes based upon the class percentages from Table 3 (column (b)) to get the avoided CMI for each customer class shown in column (a) of Table 4. These are divided by 60 to get a value in hours for the avoided interruptions, shown in Table 4 column (b), with a total of 350,000 avoided customer hours of interruption for all customer classes. The avoided hours of interruption for each class (column (b)) are multiplied by the 2002 outage cost per hour for each customer class (column (c)) to get the avoided outage cost for each class in 2002 dollars in column (d).

The 2002 avoided outage cost for the residential class totals $814,584, or 1.6% of the total avoided outage costs for all classes. When these costs are converted to 2013 costs,[42] the avoided outage costs for the residential class increase to $1,127,574, as shown in column (f). But they are still only 1.6% of the total 2013 avoided outage costs of about $71 million.

[41] AEP Ohio estimates a reduction more than 21 million customer minutes of interruption due to gridSMART Phase 2 proposed technologies on page 4 of Attachment A of AEP Ohio's Application.

[42] Using an annual escalation rate of 3% as used by AEP Ohio in its calculations in OCC RPD-1-16.

Q19. CONSIDERING THAT RESIDENTIAL CUSTOMERS RECEIVE LESS THAN 2% OF THE RELIABILITY BENEFIT SHOWN IN AEP OHIO'S CALCULATIONS, WHAT DOES A BENEFIT/COST ANALYSIS FOR THE COMPANY'S GRIDSMART PHASE 2 PROPOSAL LOOK LIKE IF RESIDENTIAL AND NON-RESIDENTIAL CUSTOMERS ARE EXAMINED SEPARATELY?

A19. Table 5 below takes AEP Ohio's cash view benefit/cost analysis that was discussed above (see Table 2) and allocates the costs and benefits between residential and non-residential classes.

Table 5

Cash View - Benefit / Cost Analysis			
(All Figures in $ Millions Except for Benefit/Cost Ratio)			
	All Customers	**Residential**	**Non-Residential**
15 Year Benefits	**(a)**	**(b)**	**(c)**
O&M	199	124	75
Capital	1	1	0
Energy/Capacity	210	131	79
Reliability	1,016	16	1,000
Total	1,426	272	1,154
15 Year Costs			
O&M	148	92	56
Capital	368	230	138
Total	516	322	194
15 Year Impact			
Net Cash Flows	910	(50)	960
Benefit/Cost Ratio	2.76		5.95

The All Customers column (column (a)) replicates the cash view column from Table 2 above. All of the benefits, except for reliability, and all of the costs, are

allocated between residential and non-residential customers using the base distribution percentages from Table 1.

AEP Ohio proposes to use these base distribution percentages in allocating the gridSMART revenue requirements between residential and non-residential classes.[43] That is, 62.4% of all the costs and 62.4% of all the benefits, except for the reliability benefit, are allocated to the residential class. Where the reliability benefits are concerned, 1.6% of the reliability benefit is allocated to residential customers, consistent with the residential customer class percentage of total avoided outage costs reflected in Tables 3 and 4. The costs not allocated to the residential class are allocated to the non-residential classes, namely 37.6% of all costs, 37.6% of all benefits other than reliability, and 98.4%[44] of the reliability benefits.

The result of this allocation of costs and benefits between residential and non-residential classes is that the residential class has costs that exceed its benefit by $50 million and has a negative benefit/cost ratio. The non-residential classes see $960 million in net cash value benefits and a benefit/cost ratio of 5.95.

[43] As stated in the Company's response to OCC INT-003(c), where it states "Actual 2012 AEP Ohio Base distribution revenue is used to allocate the gridSMART Phase 2 revenue requirement between Residential and Nonresidential because the costs being collected are distribution costs." As shown in Table 1 above, the residential portion of the total of these revenues is 62.4% and the non-residential portion of the total of these revenues is 37.6%.

[44] 100% less 1.6% = 98.4%.

This raises real questions as to the economic fairness of the Company's proposals. The answer to those questions is that the proposal is unfair to residential consumers. The vast majority of the benefits claimed for the GS-II proposal are reliability benefits in the form of avoided service interruption minutes and hours. Almost all (98.4%) of the economic benefit for such avoided service interruption minutes and hours accrue to commercial and industrial customers, according to AEP Ohio's data. It is not just and reasonable for residential customers to pick up more than 60% of the bill for gridSMART when they are receiving only about 19% of the benefits.[45]

In order for the benefit/cost ratios of both residential and non-residential classes to be approximately equal to each other under the allocation of benefits reflected in Table 5, the share of total costs allocated to the residential class would have to decrease to about 19.1% (from 62.4%) of the total 15-year costs. Concomitantly, the share of the total costs allocated to non-residential would have to increase to about 80.9% (from 37.6%) of the total 15-year costs. Under this cost allocation, the benefit/cost ratio for both the residential classes and the non-residential classes would be about 2.76, the same as for the total company. These numbers reflect the cash view benefit/cost comparison. The NPV comparison may produce slightly different numbers.

[45] From Table 5, the residential customer class's share of the total benefits, $272 million divided by $1.426 billion equals 0.191, or about 19%.

Such a cost allocation would raise questions as to whether gridSMART programs can be designed so that benefits are distributed fairly among all customers. Based on the estimates of the value of avoided outages used in this case, residential customers do not realize anywhere near the same economic benefits from avoiding one hour of outage that non-residential customers realize. It is unreasonable to spend hundreds of millions of dollars to upgrade the distribution system when, in the process, the costs of these upgrades paid by the majority of customers will be greater than the economic benefits they will produce.

Q20. WAS THERE A DECLINE IN AEP OHIO'S ELECTRIC SERVICE RELIABILITY PERFORMANCE IN 2014 AND 2015?

A20. Apparently, AEP Ohio's electric service reliability performance declined in 2014 despite implementation of the GS-I programs, starting in 2012.[46] In 2014, AEP Ohio's targeted reliability performance, as measured by its SAIFI and CAIDI reliability indices,[47] was less reliable than the previous year, despite having fewer weather-related problems in 2014. In 2015, AEP Ohio's SAIFI was unchanged from 2014, while its CAIDI, with major events excluded, was somewhat improved in 2015 compared to its 2014 performance.

[46] AEP Ohio also remains low in customer satisfaction, according to the J.D. Power Survey. See "AEP remains near bottom of customer satisfaction," *Columbus Dispatch* (July 13, 2016) (attached as Exhibit PJL-5).

[47] SAIFI is an index reflecting the number of customer interruptions divided by the number of customers served over a defined period of time, usually a year. The outage of a circuit with 100 customers yields 100 customer interruptions.

Additionally, AEP Ohio's GS-I DACR feeders had more customer interruptions in 2014 than in 2013, and more customer interruptions in 2015 than in 2014. AEP Ohio's Application touts the 2013 performance as having initial results more favorable than 2012.

Table 6 below compares the Company's CAIDI and SAIFI reliability index performance standards in 2013 with the actual targeted reliability index performance, i.e., after exclusion of major event outages ("MEOs"), and with AEP Ohio's total reliability index performance, i.e., before such exclusions. The reliability indices after exclusions are referred to as "targeted" because it is these indices that are subject to performance standards. MEOs are excluded from comparison against a performance standard because such outages are tend to be weather-related to a significant extent, and the weather can vary from one year to the next.

Table 6

Ohio Power Company	**2013**	**2014**	**2015**
CAIDI[48] After Exclusions	140.97	146.61	139.03
CAIDI Before Exclusions	246.03	159.09	171.97
SAIFI After Exclusions	1.03	1.13	1.13
SAIFI Before Exclusions	1.40	1.34	1.39
DACR Phase I Feeders			
SAIFI After Exclusions	0.85	1.28	1.36

The Company's CAIDI, after excluding MEOs, increased (became less reliable) from about 141 minutes in 2013 to 146.6 minutes in 2014. This was about a 4%

[48] CAIDI is expressed in minutes per customer interruption.

increase, which indicates a 4% increase in the duration of the average service interruption.

The Company's SAIFI, after excluding MEOs, increased (became less reliable) from about 1.03 interruptions in 2013 to 1.13 interruptions in 2014. This was about a 10% increase, which indicates a 10% increase in the number of interruptions the average customer experiences each year.

Table 6 also shows the SAIFI performance of the GS-I DACR feeders, excluding MEOs, increasing over the 2013-2015 period from 0.85 in 2013 to 1.28 in 2014 to 1.36 in 2015. AEP Ohio's Application touts the 2013 performance of its DACR circuits as having initial results more favorable than 2012, which also was improved over the previous year.[49] However, the performance of the GS-I DACR circuits has worsened in the past two years. In 2014, the SAIFI of the GS-I DACR circuits increased from 0.85 to 1.28, an increase of more than 50% from 2013 to a level higher (less reliable) than what it was in 2012. In 2015, this increase continued to 1.36, an increase of 6% from 2014.

I note also that the SAIFI for the GS-I DACR circuits has been substantially higher (less reliable) than that for AEP Ohio as a whole in 2014 and 2015, after being substantially lower in 2013. And the GS-I DACR circuits as a group failed to meet AEP Ohio's SAIFI performance standard of 1.20 in both 2014 and 2015.

[49] AEP Ohio's DACR circuits from GS-I had a 2012 SAIFI of 1.23, excluding MOEs.

Q21. WHAT DOES THE DECLINE IN RELIABILITY PERFORMANCE BY AEP OHIO IN 2014 AND 2015, BY THE ENTIRE COMPANY AND BY THE GS-I DACR CIRCUITS, MEAN FOR CUSTOMERS?

A21. AEP Ohio has justified a large portion of its proposed GS-II costs that it wants to charge to customers, on the basis of increased electric service reliability. It is reasonable to expect that such increased electric service reliability will, at some point, be reflected in AEP Ohio's defined electric service reliability index performance. It is not reasonable for the GS-I DACR circuits to be exhibiting increases in the number of customer interruptions, as reflected in SAIFI, once these DACR schemes have been in service a year or two. Such performance also calls into question the projections of benefits from increased reliability for the GS-II projects.

IV. CONCLUSION

Q22. DOES THIS CONCLUDE YOUR TESTIMONY?

A22. Yes, at this time. I reserve the right to supplement this testimony if additional information becomes available.

CERTIFICATE OF SERVICE

It is hereby certified that a true copy of the foregoing *Direct Testimony of Peter J. Lanzalotta on Behalf of the Office of the Ohio Consumers' Counsel* has been served electronically this 22nd day of July 2016.

/s/ Terry L. Etter
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Prior Experience Of Peter J. Lanzalotta

Mr. Lanzalotta has more than thirty-five years' experience in electric utility system planning, power pool operations, distribution operations, electric service reliability, load and price forecasting, and market analysis and development. Mr. Lanzalotta has appeared as an expert witness on utility reliability, planning, operation, and rate matters in more than 110 proceedings in 25 states, the District of Columbia, the Provinces of Alberta and Ontario, before the Federal Energy Regulatory Commission, and before U. S. District Court. He has developed evaluations of electric utility system cost, system value, reliability planning, transmission and distribution maintenance practices, and reliability of service.

Prior to his forming Lanzalotta & Associates LLC in 2001, he was a Partner at Whitfield Russell Associates in Washington DC for fifteen years and a Senior Associate for approximately four years before that. He holds a Bachelor of Science in Electric Power Engineering from Rensselaer Polytechnic Institute and a Master of Business Administration with a concentration in Finance from Loyola College of Baltimore.

Prior to joining Whitfield Russell Associates in 1982, Mr. Lanzalotta was employed by the Connecticut Municipal Electric Energy Cooperative ("CMEEC") as a System Engineer. He was responsible for providing operational, financial, and rate expertise to Coop's budgeting, ratemaking and system planning processes. He participated on behalf of CMEEC in the Hydro-Quebec/New England Power Pool Interconnection project and initiated the development of a database to support CMEEC's pool billing and financial data needs.

Prior to his CMEEC employment, he served as Chief Engineer at the South Norwalk (Connecticut) Electric Works, with responsibility for planning, data processing, engineering, rates and tariffs, generation and bulk power sales, and distribution operations. While at South Norwalk, he conceived and implemented, through Northeast Utilities and NEPOOL, a peak-shaving plan for South Norwalk and a neighboring municipal electric utility, which resulted in substantial power supply savings. He programmed and implemented a computer system to perform customer billing and maintain accounts receivable accounting. He also helped manage a generating station overhaul and the undergrounding of the distribution system in South Norwalk's downtown.

From 1977 to 1979, Mr. Lanzalotta worked as a public utility consultant for Van Scoyoc & Wiskup and separately for Whitman Requart & Associates in a variety of positions. During this time, he developed cost of service, rate base evaluation, and rate design impact data to support direct testimony and exhibits in a variety of utility proceedings, including utility price squeeze cases, gas pipeline rates, and wholesale electric rate cases.

Prior to that, He worked for approximately 2 years as a Service Tariffs Analyst for the Finance Division of the Baltimore Gas & Electric Company where he developed cost and revenue studies, evaluated alternative rate structures, and studied the rate structures of other utilities for a variety of applications. He was also employed by BG&E in Electric System Operations for approximately 3 years, where his duties included operations analysis, outage reporting, and participation in the development of BG&E's first computerized customer information and service order system.

Mr. Lanzalotta is a member of the Institute of Electrical & Electronic Engineers, the Association of Energy Engineers, the National Fire Protection Association, and the American Solar Energy Society. He is also registered Professional Engineer in the states of Maryland and Connecticut.

Proceedings In Which Peter J. Lanzalotta Has Testified

1. **In re: Public Service Company of New Mexico**, Docket Nos. ER78-337 and ER78-338 before the Federal Energy Regulatory Commission, concerning the need for access to calculation methodology underlying filing.
2. **In re: Baltimore Gas and Electric Company**, Case No. 7238-V before the Maryland Public Service Commission, concerning outage replacement power costs.
3. **In re: Houston Lighting & Power Company**, Texas Public Utilities Commission Docket No. 4712, concerning modeling methods to determine rates to be paid to cogenerators and small power producers.
4. **In re: Nevada Power Company**, Nevada Public Service Commission, Docket No. 83-707 concerning rate case fuel inventories, rate base items, and O&M expense.
5. **In re: Virginia Electric & Power Company**, Virginia State Corporation Commission, Case No. PUE820091, concerning the operating and reliability-based need for additional transmission facilities.
6. **In re: Public Service Electric & Gas Company**, New Jersey Board of Public Utilities, Docket No. 831-25, concerning outage replacement power costs.
7. **In re: Philadelphia Electric Company**, Pennsylvania Public Utilities Commission, Docket No. P-830453, concerning outage replacement power costs.
8. **In re: Cincinnati Gas & Electric Company**, Public Utilities Commission of Ohio, Case No. 83-33-EL-EFC, concerning the results of an operations/fuel-use audit conducted by Mr. Lanzalotta.
9. **In re: Kansas City Power and Light Company**, before the State Corporation Commission of the state of Kansas, Docket Nos. 142,099-U and 120,924-U, concerning the determination of the capacity, from a new base-load generating facility, needed for reliable system operation, and the capacity available from existing generating units.
10. **In re: Philadelphia Electric Company**, Pennsylvania Public Utilities Commission, Docket No. R-850152, concerning the determination of the capacity, from a new base-load generating facility, needed for reliable system operation, and the capacity available from existing generating units.
11. **In re: ABC Method Proposed for Application to Public Service Company of Colorado**, before the Public Utilities Commission of the State of Colorado, on behalf of the Federal Executive Agencies ("FEA"), concerning a production cost allocation methodology proposed for use in Colorado.

Proceedings In Which Peter J. Lanzalotta Has Testified

12. **In re: Duquesne Light Company**, Docket No. R-870651, before the Pennsylvania Public Utilities Commission, on behalf of the Office of Consumer Advocate, concerning the system reserve margin needed for reliable service.

13. **In re: Pennsylvania Power Company**, Docket No. I-7970318 before the Pennsylvania Public Utilities Commission, on behalf of the Office of Consumer Advocate, concerning outage replacement power costs.

14. **In re: Commonwealth Edison Company**, Docket No. 87-0427 before the Illinois Commerce Commission, on behalf of the Citizen's Utility Board of Illinois, concerning the determination of the capacity, from new base-load generating facilities, needed for reliable system operation.

15. **In re: Central Illinois Public Service Company**, Docket No. 88-0031 before the Illinois Commerce Commission, on behalf of the Citizen's Utility Board of Illinois, concerning the degree to which existing generating capacity is needed for reliable and/or economic system operation.

16. **In re: Illinois Power Company**, Docket No. 87-0695 before the State of Illinois Commerce Commission, on behalf of Citizens Utility Board of Illinois, Governors Office of Consumer Services, Office of Public Counsel and Small Business Utility Advocate, concerning the determination of the capacity, from a new base-load generating facility, needed for reliable system operation, and the capacity available from existing generating units.

17. **In re: Florida Power Corporation**, Docket No. 860001-EI-G (Phase II), before the Florida Public Service Commission, on behalf of the Federal Executive Agencies of the United States, concerning an investigation into fuel supply relationships of Florida Power Corporation.

18. **In re: Potomac Electric Power Company**, before the Public Service Commission of the District of Columbia, Docket No. 877, on behalf of the Public Service Commission Staff, concerning the need for and availability of new generating facilities.

19. **In re: South Carolina Electric & Gas Company**, before the South Carolina Public Service Commission, Docket No. 88-681-E, On Behalf of the State of Carolina Department of Consumer Affairs, concerning the capacity needed for reliable system operation, the capacity available from existing generating units, relative jurisdictional rate of return, reconnection charges, and the provision of supplementary, backup, and maintenance services for QFs.

Proceedings In Which Peter J. Lanzalotta Has Testified

20. **In re: Commonwealth Edison Company**, Illinois Commerce Commission, Docket Nos. 87-0169, 87-0427, 88-0189, 88-0219, and 88-0253, on behalf of the Citizen's Utility Board of Illinois, concerning the determination of the capacity, from a new base-load generating facility, needed for reliable system operation.

21. **In re: Illinois Power Company**, Illinois Commerce Commission, Docket No. 89-0276, on behalf of the Citizen's Utility Board Of Illinois, concerning the determination of capacity available from existing generating units.

22. **In re: Jersey Central Power & Light Company**, New Jersey Board of Public Utilities, Docket No. EE88-121293, on behalf of the State of New Jersey Department of the Public Advocate, concerning evaluation of transmission planning.

23. **In re: Canal Electric Company**, before the Federal Energy Regulatory Commission, Docket No. ER90-245-000, on behalf of the Municipal Light Department of the Town of Belmont, Massachusetts, concerning the reasonableness of Seabrook Unit No. 1 Operating and Maintenance expense.

24. **In re: New Hampshire Electric Cooperative Rate Plan Proposal**, before the New Hampshire Public Utilities Commission, Docket No. DR90-078, on behalf of the New Hampshire Electric Cooperative, concerning contract valuation.

25. **In re: Connecticut Light & Power Company**, before the Connecticut Department of Public Utility Control, Docket No. 90-04-14, on behalf of a group of Qualifying Facilities concerning O&M expenses payable by the QFs.

26. **In re: Duke Power Company**, before the South Carolina Public Service Commission, Docket No. 91-216-E, on behalf of the State of South Carolina Department of Consumer Advocate, concerning System Planning, Rate Design and Nuclear Decommissioning Fund issues.

27. **In re: Jersey Central Power & Light Company**, before the Federal Energy Regulatory Commission, Docket No. ER91-480-000, on behalf of the Boroughs of Butler, Madison, Lavallette, Pemberton and Seaside Heights, concerning the appropriateness of a separate rate class for a large wholesale customer.

28. **In re: Potomac Electric Power Company**, before the Public Service Commission of the District of Columbia, Formal Case No. 912, on behalf of the Staff of the Public Service Commission of the District of Columbia, concerning the Application of PEPCO for an increase in retail rates for the sale of electric energy.

Proceedings In Which Peter J. Lanzalotta Has Testified

29. **Commonwealth of Pennsylvania, House of Representatives**, General Assembly House Bill No. 2273. Oral testimony before the Committee on Conservation, concerning proposed Electromagnetic Field Exposure Avoidance Act.

30. **In re: Hearings on the 1990 Ontario Hydro Demand\Supply Plan**, before the Ontario Environmental Assessment Board, concerning Ontario Hydro's System Reliability Planning and Transmission Planning.

31. **In re: Maui Electric Company**, Docket No. 7000, before the Public Utilities Commission of the State of Hawaii, on behalf of the Division of Consumer Advocacy, concerning MECO's generation system, fuel and purchased power expense, depreciation, plant additions and retirements, contributions and advances.

32. **In re: Hawaiian Electric Company, Inc.**, Docket No. 7256, before the Public Utilities Commission of the State of Hawaii, on behalf of the Division of Consumer Advocacy, concerning need for, design of, and routing of proposed transmission facilities.

33. **In re: Commonwealth Edison Company**, Docket No. 94-0065 before the Illinois Commerce Commission on behalf of the City of Chicago, concerning the capacity needed for system reliability.

34. **In re: Commonwealth Edison Company**, Docket No. 93-0216 before the Illinois Commerce Commission on behalf of the Citizens for Responsible Electric Power, concerning the need for proposed 138 kV transmission and substation facilities.

35. **In re: Commonwealth Edison Company**, Docket No. 92-0221 before the Illinois Commerce Commission on behalf of the Friends of Illinois Prairie Path, concerning the need for proposed 138 kV transmission and substation facilities.

36. **In re: Commonwealth Edison Company**, Docket No. 94-0179 before the Illinois Commerce Commission on behalf of the Friends of Sugar Ridge, concerning the need for proposed 138 kV transmission and substation facilities.

37. **In re: Public Service Company of Colorado**, Docket Nos. 95A-531EG and 95I-464E before the Colorado Public Utilities Commission on behalf of the Office of Consumer Counsel, concerning a proposed merger with Southwestern Public Service Company and a proposed performance-based rate-making plan.

38. **In re: South Carolina Electric & Gas Company, Duke Power Company, and Carolina Power & Light Company**, Docket No. 95-1192-E, before the South

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Carolina Public Service Commission on behalf of the South Carolina Department of Consumer Advocate, concerning avoided cost rates payable to qualifying facilities.

39. **In re: Lawrence A. Baker v. Truckee Donner Public Utility District**, Case No. 55899, before the Superior Court of the State of California on behalf of Truckee Donner Public Utility District, concerning the reasonableness of electric rates.

40. **In re: Black Hills Power & Light Company**, Docket No. OA96-75-000, before the Federal Energy Regulatory Commission on behalf of the City of Gillette, Wyoming, concerning the Black Hills' proposed open access transmission tariff.

41. **In re: Metropolitan Edison Company and Pennsylvania Electric Company** for Approvals of the Restructuring Plan Under Section 2806, Docket Nos. R-00974008 and R-00974009 before the Pennsylvania PUC on behalf of Operating NUG Group, concerning miscellaneous restructuring issues.

42. **In re: New Jersey State Restructuring Proceeding** for consideration of proposals for retail competition under BPU Docket Nos. EX94120585U; E097070457; E097070460; E097070463; E097070466 before the New Jersey BPU on behalf of the New Jersey Division of Ratepayer Advocate, concerning load balancing, third party settlements, and market power.

43. **In re: Arbitration Proceeding In City of Chicago v. Commonwealth Edison** for consideration of claims that franchise agreement has been breached, Proceeding No. 51Y-114-350-96 before an arbitration panel board on behalf of the City of Chicago concerning electric system reliability.

44. **In re: Transalta Utilities Corporation**, Application No. RE 95081 on behalf of the ACD companies, before the Alberta Energy And Utilities Board in reference to the use and value of interruptible capacity.

45. **In re: Consolidated Edison Company,** Docket No. EL99-58-000 on behalf of The Village of Freeport, New York, before FERC in reference to remedies for a breach of contract to provide firm transmission service on a non-discriminatory basis.

46. **In re: ESBI Alberta Ltd.,** Application No. 990005 on behalf of the FIRM Customers, before the Alberta Energy And Utilities Board concerning the reasonableness of the cost of service plus management fee proposed for 1999 and 2000 by the transmission administrator.

47. **In re: South Carolina Electric & Gas Company,** Docket No. 2000-0170-E on behalf of the South Carolina Department of Consumer Affairs before the Public

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Service Commission of South Carolina concerning an application for a Certificate of Environmental Compatibility and Public Convenience and Necessity for new and repowered generating units at the Urquhart generating station.

48. **In re: BGE,** Case No. 8837 on behalf of the Maryland Office of People's Counsel before the Maryland Public Service Commission concerning proposed electric line extension charges.

49. **In re: PEPCO,** Case No. 8844 on behalf of the Maryland Office of People's Counsel before the Maryland Public Service Commission concerning proposed electric line extension charges.

50. **In re: GenPower Anderson LLC,** Docket No. 2001-78-E on behalf of the South Carolina Department of Consumer Affairs before the Public Service Commission of South Carolina concerning an application for a Certificate of Environmental Compatibility and Public Convenience and Necessity for new generating units at the GenPower Anderson LLC generating station.

51. **In re: Pike County Light & Power Company,** Docket No. P-00011872, on behalf of Pennsylvania Office of Consumer Advocate before the Pennsylvania Public Utility Commission concerning the Pike County request for a retail rate cap exception.

52. **In re: Potomac Electric Power Company and Conectiv,** Case No. 8890, on behalf of the Maryland Office of People's Counsel before the Maryland Public Service Commission concerning the proposed merger of Potomac Electric Power Company and Conectiv.

53. **In re: South Carolina Electric & Gas Company,** Docket No. 2001-420-E on behalf of the South Carolina Department of Consumer Affairs before the Public Service Commission of South Carolina concerning an application for a Certificate of Environmental Compatibility and Public Convenience and Necessity for new generating units at the Jasper County generating station.

54. **In re: Connecticut Light & Power Company,** Docket No. 217 on behalf of the Towns of Bethel, Redding, Weston, and Wilton, Connecticut before the Connecticut Siting Council concerning an application for a Certificate of Environmental Compatibility and Public Need for a new transmission line facility between Plumtree Substation, Bethel and Norwalk Substation, Norwalk.

55. **In re: The City of Vernon, California,** Docket No. EL02-103 on behalf of the City of Vernon before the Federal Energy Regulatory Commission concerning Vernon's transmission revenue balancing account adjustment reflecting calendar

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year 2001 transactions.

56. **In re: San Diego Gas & Electric Company et. al.,** Docket No. EL00-95-045 on behalf of the City of Vernon, California before the Federal Energy Regulatory Commission concerning refunds and other monies payable in the California wholesale energy markets.

57. **In re: The City of Vernon, California,** Docket No. EL03-31 on behalf of the City of Vernon before the Federal Energy Regulatory Commission concerning Vernon's transmission revenue balancing account adjustment reflecting 2002 transactions.

58. **In re: Jersey Central Power & Light Company,** Docket Nos. ER02080506, ER02080507, ER02030173, and EO02070417 on behalf of the New Jersey Division of Ratepayer Advocate before the New Jersey Board of Public Utilities concerning reliability issues involved in the approval of an increase in base tariff rates.

59. **In re: Proposed Electric Service Reliability Rules, Standards, and Indices To Ensure Reliable Service by Electric Distribution Companies,** PSC Regulation Docket No. 50, on behalf of the Delaware Public Service Commission Staff before the Delaware Public Service Commission concerning proposed electric service reliability rules, standards and indices.

60. **In re: Central Maine Power Company,** Docket No. 2002-665, on behalf of the Maine Public Advocate and the Town of York before the Maine Public Utilities Commission concerning a Request for Commission Investigation into the New CMP Transmission Line Proposal for Eliot, Kittery, and York.

61. **In re: Metropolitan Edison Company,** Docket No. C-20028394, on behalf of the Pennsylvania Office of Consumer Advocate, before the Pennsylvania Public Utility Commission concerning the reliability service complaint of Robert Lawrence.

62. **In re: The California Independent System Operator Corporation,** Docket No. ER00-2019 *et al.* on behalf of the City of Vernon, California, before the Federal Energy Regulatory Commission concerning wholesale transmission tariffs, rates and rate structures proposed by the California ISO.

63. **In re: The Narragansett Electric Company,** Docket No. 3564 on behalf of the Rhode Island Department of Attorney General, before the Rhode Island Public Utilities Commission concerning the proposed relocation of the E-183 transmission line.

Proceedings In Which Peter J. Lanzalotta Has Testified

64. **In re: The City of Vernon, California,** Docket No. EL04-34 on behalf of the City of Vernon before the Federal Energy Regulatory Commission concerning Vernon's transmission revenue balancing account adjustment reflecting 2003 transactions.

65. **In re: Atlantic City Electric Company,** Docket No. ER03020110 on behalf of the New Jersey Division of Ratepayer Advocate before the New Jersey Board of Public Utilities concerning reliability issues involved in the approval of an increase in base tariff rates.

66. **In re: Connecticut Light & Power Company and the United Illuminating Company,** Docket No. 272 on behalf of the Towns of Bethany, Cheshire, Durham, Easton, Fairfield, Hamden, Middlefield, Milford, North Haven, Norwalk, Orange, Wallingford, Weston, Westport, Wilton, and Woodbridge, Connecticut before the Connecticut Siting Council concerning an application for a Certificate of Environmental Compatibility and Public Need for a new transmission line facility between the Scoville Rock Switching Station in Middletown and the Norwalk Substation in Norwalk, Connecticut.

67. **In re: Metropolitan Edison Company, Pennsylvania Electric Company, and Pennsylvania Power Company,** Docket No. I-00040102, on behalf of the Pennsylvania Office of Consumer Advocate before the Pennsylvania Public Utility Commission concerning electric service reliability performance.

68. **In re: Entergy Louisiana, Inc.,** Docket No. U-20925 RRF-2004 on behalf of Bayou Steel before the Louisiana Public Service Commission concerning a proposed increase in base rates.

69. **In re: Jersey Central Power & Light Company,** Docket No. ER02080506, Phase II, on behalf of the New Jersey Division of Ratepayer Advocate before the New Jersey Board of Public Utilities concerning reliability issues involved in the approval of an increase in base tariff rates.

70. **In re: Maine Public Service Company,** Docket No. 2004-538, on behalf of the Main Public Advocate before the Maine Public Utilities Commission concerning a request to construct a 138 kV transmission line from Limestone, Maine to the Canadian border near Hamlin, Maine.

71. **In re: Pike County Light and Power Company,** Docket No. M-00991220F0002, on behalf of the Pennsylvania Office of Consumer Advocate before the Pennsylvania Public Utility Commission concerning the Company's Petition to amend benchmarks for distribution reliability.

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72. **In re: Atlantic City Electric Company,** Docket No. EE04111374, on behalf of the New Jersey Division of Ratepayer Advocate before the New Jersey Board of Public Utilities concerning the need for transmission system reinforcement, and related issues.

73. **In re: Bangor Hydro-Electric Company,** Docket No. 2004-771, on behalf of the Main Public Advocate before the Maine Public Utilities Commission concerning a request to construct a 345 kV transmission line from Orrington, Maine to the Canadian border near Baileyville, Maine.

74. **In re: Eastern Maine Electric Cooperatve,** Docket No. 2005-17, on behalf of the Main Public Advocate before the Maine Public Utilities Commission concerning a petition to approve a purchase of transmission capacity on a 345 kV transmission line from Maine to the Canadian province of New Brunswick.

75. **In re: Virginia Electric and Power Company,** Case No. PUE-2005-00018, on behalf of the Town of Leesburg VA and Loudoun County VA before the Virginia State Corporation Commission concerning a request for a certificate of public convenience and necessity for transmission and substation facilities in Loudoun County.

76. **In re: Proposed Electric Service Reliability Rules, Standards, and Indices To Ensure Reliable Service by Electric Distribution Companies,** PSC Regulation Docket No. 50, on behalf of the Delaware Public Service Commission Staff before the Delaware Public Service Commission concerning proposed electric service reliability reporting, standards, and indices.

77. **In re: Proposed Merger Involving Constellation Energy Group Inc. and the FPL Group, Inc.**, Case No. 9054, on behalf of the Maryland Office of Peoples' Counsel before the Maryland Public Service Commission concerning the proposed merger involving Baltimore Gas & Electric Company and Florida Light & Power Company.

78. **In re: Proposed Sale and Transfer of Electric Franchise of the Town of St. Michaels to Choptank Electric Cooperative, Inc.,** Case No. 9071, on behalf of the Maryland Office of Peoples' Counsel before the Maryland Public Service Commission concerning the sale by St. Michaels of their electric franchise and service area to Choptank.

79. **In re: Petition of Rockland Electric Company for the Approval of Changes in Electric Rates, and Other Relief,** BPU Docket No. ER06060483, on behalf of the Department of the Public Advocate, Division of Rate Counsel, before the New

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Jersey Board of Public Utilities, concerning electric service reliability and reliability-related spending.

80. **In re: The Complaint of the County of Pike v. Pike County Light & Power Company, Inc.,** Docket No. C-20065942, et al., on behalf of the Pennsylvania Office of Consumer Advocate before the Pennsylvania Public Utilities Commission, concerning electric service reliability and interconnecting with the PJM ISO.

81. **In re: Application of American Transmission Company to Construct a New Transmission Line,** Docket No. 137-CE-139, on behalf of The Sierra Club of Wisconsin, before the Public Service Commission of Wisconsin, concerning the request to build a new 138 kV transmission line.

82. **In re: The Matter of the Self-Complaint of Columbus Southern Power Company and Ohio Power Company Regarding the Implementation of Programs to Enhance Distribution Service Reliability,** Case No. 06-222-EL-SLF, on behalf of The Office of The Ohio Consumers' Counsel, before the Public Utilities Commission of Ohio, concerning distribution system reliability and related topics.

83. **In re: Central Maine Power Company,** Docket No. 2006-487, on behalf of the Maine Public Advocate before the Maine Public Utilities Commission concerning CMP's Petition for Finding of Public Convenience & Necessity to build a 115 kV transmission line between Saco and Old Orchard Beach.

84. **In re: Bangor Hydro Electric Company,** Docket No. 2006-686, on behalf of the Maine Public Advocate before the Maine Public Utilities Commission concerning BHE's Petition for Finding of Public Convenience & Necessity to build a 115 kV transmission line and substation in Hancock County.

85. **In re: Commission Staff's Petition For Designation of Competitive Renewable Energy Zones,** Docket No. 33672, on behalf of the Texas Office of Public Utility Counsel, concerning the Staff's Petition and the determination of what areas should be designated as CREZs by the Commission.

86. **In re: Virginia Electric and Power Company,** Case No. PUE-2006-00091, on behalf of the Towering Concerns and Stafford County VA before the Virginia State Corporation Commission concerning a request for a certificate of public convenience and necessity for electric transmission and substation facilities in Stafford County.

Proceedings In Which Peter J. Lanzalotta Has Testified

87. **In re: Trans-Allegheny Interstate Line Company,** Docket Nos. A-110172 et al., on behalf of the Pennsylvania Office of Consumer Advocate, before the Pennsylvania Public Utility Commission, concerning a request for a certificate of public convenience and necessity for electric transmission and substation facilities in Pennsylvania.

88. **In re: Commonwealth Edison Company,** Docket No. 07-0566, on behalf of the Illinois Attorney General, before the Illinois Commerce Commission, concerning electric transmission and distribution projects promoted as smart grid projects, and the rider proposed to pay for them.

89. **In re: Commonwealth Edison Company,** Docket No. 07-0491, on behalf of the Illinois Attorney General, before the Illinois Commerce Commission, concerning the applicability of electric service interruption provisions.

90. **In re: Hydro One Networks ,** Case No. EB-2007-0050, on behalf of Pollution Probe, before the Ontario Energy Board, concerning a request for leave to construct electric transmission facilities in the Province of Ontario.

91. **In re: PEPCO Holdings, Inc.,** Docket No. ER-08-686-000, on behalf of the Maryland Office of Peoples' Counsel, before the Federal Energy Regulatory Commission, concerning a request for incentive rates of return on transmission projects.

92. **In re: PPL Electric Utilities Corporation and Public Service Electric and Gas Company,** Docket No. ER-08-23-000, on behalf of the Joint Consumer Advocates, including the state consumer advocacy offices for the States of Maryland, West Virginia, before the Federal Energy Regulatory Commission, concerning a request for incentive rates of return on transmission projects.

93. **In re: PPL Electric Utilities Corporation,** Docket Nos. A-2008-2022941 and P-2008-2038262, on behalf of Springfield Township, Bucks County, PA, before the Pennsylvania Public Utility Commission, concerning the need for and alternatives to proposed electric transmission lines and a proposed electric substation.

94. **In re: PEPCO Holdings, Inc.,** Docket No. ER08-1423-000, on behalf of the Maryland Office of Peoples' Counsel, before the Federal Energy Regulatory Commission, concerning a request for incentive rates of return on transmission projects.

95. **In re: Public Service Electric and Gas Company, Inc.,** Docket No. ER09-249-000, on behalf of the New Jersey Division of Rate Counsel, before the Federal

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Energy Regulatory Commission, concerning a request for incentive rates of return on transmission projects.

96. **In re: New York Regional Interconnect Inc.,** Case No. 06-T-0650, on behalf of the Citizens Against Regional Interconnect, before the New York Public Service Commission, concerning the economics of and alternatives to proposed transmission facilities.

97. **In re: Central Maine Power Company and Public Service of New Hampshire,** Docket No. 2008-255, on behalf of the Maine Public Advocate, before the Maine Public Utilities Commission, concerning CMP's and PSNH's Petition for Finding of Public Convenience & Necessity to build the Maine Power Reliability Project, a series of new and rebuilt electric transmission facilities to operate at 345 kV and 115 kV in Maine and New Hampshire.

98. **In re: PPL Electric Utilities Corporation, Docket No. A-2009-2082652 et al,** on behalf of the Pennsylvania Office of Consumer Advocate, before the Pennsylvania Public Utility Commission, concerning the Company's application for approval to site and construct electric transmission facilities in Pennsylvania.

99. **In re: Bangor Hydro-Electric,** Docket No. 2009-26, on behalf of the Maine Public Advocate, before the Maine Public Utilities Commission, concerning BHE's Petition for Certificate of Public Convenience & Necessity to build a 115 kV transmission line in Washington and Hancock Counties.

100. **In re: United States, et al. v. Cinergy Corp., et al.** Civil Action No. IP99-1693 C-M/S, on behalf of Plaintiff United States and Plaintiff-Intervenors State of New York, State of New Jersey, State of Connecticut, Hoosier Environmental Council, and Ohio Environmental Council, before the United States District Court for the Southern District of Indiana, concerning the system reliability impacts of the potential retirement of Gallagher Power Station Unit 1 and Unit 3.

101. **In re: Application of Potomac Electric Power Company, et al.** Case No. 9179, on behalf of the Maryland Office of Peoples' Counsel before the Maryland Public Service Commission concerning the application for a determination of need under a certificate of public convenience and necessity for the Maryland portion of the MAPP transmission line, and related facilities.

102. **In re: Potomac Electric Power Company v. Perini/Tompkins Joint Venture,** Case No. 9210, on behalf of Perini Tompkins before the Maryland Public Service Commission concerning a review of PEPCO's estimates of electric consumption by Perini Tompkins Joint Venture's temporary electric service at National Harbor during a 29 month period for which no metered consumption data is available.

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103. **In re: Duke Energy Ohio, Inc.,** Case No. 10-503-EL-FOR, on behalf of the Natural Resources Defense Council and Sierra Club before the Public Utilities Commission Of Ohio, concerning a review of the reliability impacts that would result from closure of selected generating units as part of a review of Duke's 2010 Electric Long-Term Forecast Report and Resources Plan.

104. **In re: Detroit Edison Company,** Case Nos. U-16472 and 16489, on behalf of the Michigan Environmental Council and the Natural Resources Defense Council, before the Michigan Public Service Commission, concerning a review looking for studies of the reliability impacts that would result from closure of selected generating units as part of an electric rate increase case.

105. **In re: Potomac Electric Power Company,** Case No. 9240, on behalf of the Maryland Office of Peoples' Counsel, before the Maryland Public Service Commission, concerning electric service reliability performance.

106. **In re: ISO New England, Inc.,** Docket No. ER12-991-000, on behalf of the Conservation Law Foundation, before the Federal Energy Regulatory Commission, concerning proposals for procedures for obtaining temporary regulations addressing emissions from electric generating facilities.

107. **In re: Western Massachusetts Electric Company, Docket No. D.P.U. 11-119-C** on behalf of the Attorney General of the Commonwealth of Massachusetts, before the Massachusetts Department of Public Utilities, concerning storm preparation, performance, and restoration of electric service.

108. **In re: Delmarva Power & Light Company,** Case No. 9285, on behalf of the Maryland Office of Peoples' Counsel, before the Maryland Public Service Commission, concerning storm restoration expenses and tree trimming expenses as part of a base rate increase case.

109. **In re: Potomac Electric Power Company,** Case No. 9286, on behalf of the Maryland Office of Peoples' Counsel, before the Maryland Public Service Commission, concerning storm restoration expenses and tree trimming expenses as part of a base rate increase case.

110. **In re: Fitchburg Gas And Electric Company,** Civil Action No. 09-00023, on behalf of Marcia D. Bellerman, et al., before the Commonwealth of Massachusetts Superior Court, concerning company and electric system preparedness and execution in dealing with a major winter storm.

Proceedings In Which Peter J. Lanzalotta Has Testified

111. **In re: Duke Energy Indiana, Inc.,** Cause No. 44217, on behalf of Citizens Action Coalition of Indiana, Sierra Club, Save The Valley, and Valley Watch, before the Indiana Utility Regulatory Commission, concerning the role of transmission planning studies as part of the process of deciding whether to retire coal-fired generation or equip such generation with environmental retrofits.

112. **In re: Indianapolis Power & Light Company,** Cause No. 44242, on behalf of Citizens Action Coalition of Indiana and the Sierra Club, before the Indiana Utility Regulatory Commission, concerning the role of transmission planning studies as part of the process of deciding whether to retire coal-fired generation or equip such generation with environmental retrofits.

113. **In re: Consumers Energy Company,** Case No. U-17087, on behalf of Michigan Environmental Council and Natural Resources Defense Council, before the Michigan Public Service Commission, concerning the role of transmission planning studies as part of the process of deciding whether to retire coal-fired generation or equip such generation with environmental retrofits.

114. **In re: Potomac Electric Power Company,** Case No. 9311, on behalf of the Maryland Office of Peoples' Counsel, before the Maryland Public Service Commission, concerning electric service reliability matters and tree trimming expenses as part of a base rate increase case.

115. **In re: Jersey Central Power & Light Company,** BPU Docket No. ER12111052, on behalf of the New Jersey Division of Rate Counsel, before the New Jersey Board of Public Utilities, concerning reliability issues and storm performance involved in the approval of an increase in base tariff rates.

116. **In re: Delmarva Power & Light Company,** Case No. 9317, on behalf of the Maryland Office of Peoples' Counsel, before the Maryland Public Service Commission, concerning electric service reliability matters as part of a base rate increase case.

117. **In re: PPL Electric Utilities Corporation,** Docket Nos. A-2012-2340872 et al., on behalf of the Pennsylvania Office of Consumer Advocate, before the Pennsylvania Public Utility Commission, concerning the need for and alternatives to proposed electric transmission lines and proposed electric substations as part of the Northeast Pocono Reliability Project.

118. **In re: Baltimore Gas & Electric Co.,** Case No. 9326, on behalf of the Maryland Office of Peoples' Counsel, before the Maryland Public Service Commission, concerning electric service reliability matters as part of a base rate increase case.

Proceedings In Which Peter J. Lanzalotta Has Testified

119. **In re: Jersey Central Power & Light Company,** BPU Docket Nos. EO13050391 and AX13030196, on behalf of the New Jersey Division of Rate Counsel, before the New Jersey Board of Public Utilities, concerning the prudency of costs incurred in response to major storms.

120. **In re: Potomac Electric Power Company,** Case No. 9336, on behalf of the Maryland Office of Peoples' Counsel, before the Maryland Public Service Commission, concerning electric service reliability matters as part of a base rate increase case.

121. **In re: Baltimore Gas & Electric Co.,** Case No. 9355, on behalf of the Maryland Office of Peoples' Counsel, before the Maryland Public Service Commission, concerning electric service reliability matters as part of a base rate increase case.

122. **In re: American Transmission Company LLC and Northern States Power Company – Wisconsin,** Docket No. 5-CE-142, on behalf of Citizens Energy Task Force, Inc. and Save Our Unique Lands of Wisconsin, Inc., before the Public Service Commission of Wisconsin, concerning the need for and the benefits expected from proposed transmission facilities.

123. **In re: Potomac-Appalachian Transmission Highline, LLC and PJM Interconnection, LLC,** Docket Nos. ER09-1256-002 and ER12-2708-003, on behalf of Intervenors' State Agencies, including the Virginia Office Of The Attorney General's Division Of Consumer Counsel, the Delaware Division Of The Public Advocate, the Maryland Office Of People's Counsel, the Maryland Public Service Commission, the Delaware Public Service Commission, and the Pennsylvania Office Of Consumer Advocate, before the Federal Energy Regulatory Commission, concerning transmission line abandonment costs.

124. **In re: The Matter of the Merger of Exelon Corporation and Pepco Holdings, Inc.,** Case No. 9361, on behalf of the Maryland Office of Peoples' Counsel, before the Maryland Public Service Commission, concerning electric service reliability-related matters as part of a proposed merger case.

125. **In re. the Matter of the Application of the Ohio Edison Company, the Cleveland Electric Illuminating Company and the Toledo Edison Company for Authority to Provide for an Electric Security Plan,** Case No. 14-1297-EL-SSO, on behalf of the Sierra Club, before the Public Utilities Commission Of Ohio, concerning electric system reliability and transmission matters.

126. **In re: Delmarva Power & Light Company,** Case No. 9393, on behalf of the Maryland Office of Peoples' Counsel, before the Maryland Public Service Commission, concerning an application for a CPCN for a new 138 kV electric transmission line.

Proceedings In Which Peter J. Lanzalotta Has Testified

127. **In re: The Baltimore Gas & Electric Company,** Case No. 9406, on behalf of the Maryland Office of Peoples' Counsel, before the Maryland Public Service Commission, concerning electric service reliability-related matters as part of a base rate increase case.

128. **In re: The Potomac Electric Power Company,** Case No. 9418, on behalf of the Maryland Office of Peoples' Counsel, before the Maryland Public Service Commission, concerning electric service reliability-related matters as part of a base rate increase case.

AEP Ohio
gridSMART Phase 2
Reply Comments
Case No.13-1939-EL-RDR

Updated Attachment B
YEAR 1

gridSMART Phase 2

gridSMART Incremental Investment	Estimated gridSMART Spending	Annual Carrying Charge		gridSMART Revenue Requirement
O&M (AMI, VVO, DACR)	$ 8,078,045			$ 8,078,045
Capital - 15 Year Life- AMI		$ 276,595		$ 276,595
Capital - 30 Year Life - VVO		$ -		$ -
Capital - 30 Year Life - DACR		$ -		$ -
Misc. Capital		$ 4,634		$ 4,634
		Total		$ 8,359,274
		Tax Gross Up Rate		100.683%
		Total Revenue Requirement		$ 8,416,326.4
		Less Operational Savings		$ (400,000.0)
		Total Revenue Requirement		$ 8,016,326.4
Residential Base Distribution	$ 402,458,623	Residential Revenue Requirement		$ 5,012,884
Non-Res Base Distribution	$ 241,130,854	Non-Res Revenue Requirement		$ 3,003,442
		Residential Customers	1,276,364	3.93
		Non-Residential Customers	187,705	16
		Residential Customers	Monthly Rate	$ 0.33
		Non-Residential Customers	Monthly Rate	$ 1.33

AEP Ohio
gridSMART Phase 2
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Updated Attachment B
YEAR 2

gridSMART Phase 2

gridSMART Incremental Investment	Estimated gridSMART Spending	Annual Carrying Charge	gridSMART Revenue Requirement
O&M (AMI, VVO, DACR)	$ 7,758,997		$ 7,758,997
Capital - 15 Year Life- AMI		$ 5,252,519	$ 5,252,519
Capital - 30 Year Life - VVO		$ 292,163	$ 292,163
Capital - 30 Year Life - DACR		$ 121,789	$ 121,789
Misc. Capital		$ 405,593	$ 405,593
		Total	$ 13,831,062
		Tax Gross Up Rate	100.683%
		Revenue Requirement	$ 13,925,460
		Less Operational Savings	$ 1,600,000
		Total Revenue Requirement	$ 12,325,459.9
Residential Base Distribution	$ 402,458,623	Residential Revenue Requirement	$ 7,707,534
Non-Res Base Distribution	$ 241,130,854	Non-Res Revenue Requirement	$ 4,617,926
		Residential Customers 1,276,364	6.04
		Non-Residential Customers 187,705	24.6
		Residential Customers Monthly Rate	$ 0.50
		Non-Residential Customers Monthly Rate	$ 2.05

AEP Ohio
gridSMART Phase 2
Reply Comments
Case No.13-1939-EL-RDR

Updated Attachment B
YEAR 3

gridSMART Phase 2

gridSMART Incremental Investment	Estimated gridSMART Spending	Annual Carrying Charge	gridSMART Revenue Requirement
O&M (AMI, VVO, DACR)	$ 8,706,368		$ 8,706,368
Capital - 15 Year Life- AMI		$ 13,110,294	$ 13,110,294
Capital - 30 Year Life - VVO		$ 1,674,481	$ 1,674,481
Capital - 30 Year Life - DACR		$ 2,294,527	$ 2,294,527
Misc. Capital		$ 1,009,339	$ 1,009,339
		Total	$ 26,795,010
		Tax Gross Up Rate	100.683%
		Revenue Requirement	$ 26,977,889
		Less Operational Savings	$ 1,600,000
		Total Revenue Requirement	$ 25,377,888.6
Residential Base Distribution	$ 402,458,623	Residential Revenue Requirement	$ 15,869,666
Non-Res Base Distribution	$ 241,130,854	Non-Res Revenue Requirement	$ 9,508,222
		Residential Customers 1,276,364	12.43
		Non-Residential Customers 187,705	50.66
		Residential Customers Monthly Rate	$ 1.04
		Non-Residential Customers Monthly Rate	$ 4.22

AEP Ohio
gridSMART Phase 2
Reply Comments
Case No.13-1939-EL-RDR

Updated Attachment B
YEAR 4

gridSMART Phase 2

gridSMART Incremental Investment	Estimated gridSMART Spending	Annual Carrying Charge	gridSMART Revenue Requirement
O&M (AMI, VVO, DACR)	$ 9,405,006		$ 9,405,006
Capital - 15 Year Life- AMI		$ 21,074,861	$ 21,074,861
Capital - 30 Year Life - VVO		$ 3,125,853	$ 3,125,853
Capital - 30 Year Life - DACR		$ 5,133,750	$ 5,133,750
Misc. Capital		$ 1,162,400	$ 1,162,400
		Total	$ 39,901,870
		Tax Gross Up Rate	100.683%
		Total Revenue Requirement	$ 40,174,204.4
Residential Base Distribution	$ 402,458,623	Residential Revenue Requirement	$ 25,122,311
Non-Res Base Distribution	$ 241,130,854	Non-Res Revenue Requirement	$ 15,051,893
		Residential Customers 1,276,364	19.68
		Non-Residential Customers 187,705	80.19
		Residential Customers Monthly Rate	$ 1.64
		Non-Residential Customers Monthly Rate	$ 6.68

AEP Ohio
gridSMART Phase 2
Reply Comments
Case No.13-1939-EL-RDR

gridSMART Phase 2

gridSMART Incremental Investment	Estimated gridSMART Spending	Annual Carrying Charge	gridSMART Revenue Requirement
O&M	$ 8,587,072		$ 8,587,072
Capital - 15 Year Life- AMI		$ 28,306,936	$ 28,306,936
Capital - 30 Year Life - VVO		$ 4,541,099	$ 4,541,099
Capital - 30 Year Life - DACR		$ 7,902,883	$ 7,902,883
Misc. Capital		$ 1,053,680	$ 1,053,680
		Total Revenue Requirement	$ 50,391,670
		Tax Gross Up Rate	100.683%
		Total Revenue Requirement	$ 50,735,597.8
Residential Base Distribution	$ 402,458,623	Residential Revenue Requirement	$ 31,726,713
Non-Res Base Distribution	$ 241,130,854	Non-Res Revenue Requirement	$ 19,008,884
		Residential Customers 1,276,364	24.86
		Non-Residential Customers 187,705	101.27
		Residential Customers Monthly Rate	$ 2.07
		Non-Residential Customers Monthly Rate	$ 8.44

AEP Ohio
gridSMART Phase 2
Reply Comments
Case No.13-1939-EL-RDR

gridSMART Phase 2

gridSMART Incremental Investment	Estimated gridSMART Spending	Annual Carrying Charge	gridSMART Revenue Requirement
O&M	$ 9,526,955		$ 9,526,955
Capital - 15 Year Life- AMI		$ 30,383,786	$ 30,383,786
Capital - 30 Year Life - VVO		$ 5,920,217	$ 5,920,217
Capital - 30 Year Life - DACR		$ 10,601,925	$ 10,601,925
Misc. Capital		$ 944,960	$ 944,960
		Total Revenue Requirement	$ 57,377,843
		Tax Gross Up Rate	100.683%
		Total Revenue Requirement	$ 57,769,452.2
Residential Base Distribution	$ 402,458,623	Residential Revenue Requirement	$ 36,125,224
Non-Res Base Distribution	$ 241,130,854	Non-Res Revenue Requirement	$ 21,644,228
		Residential Customers 1,276,364	28.3
		Non-Residential Customers 187,705	115.31
		Residential Customers Monthly Rate	$ 2.36
		Non-Residential Customers Monthly Rate	$ 9.61

AEP Ohio
gridSMART Phase 2
Reply Comments
Case No.13-1939-EL-RDR

Updated Attachment B
YEAR 7

gridSMART Phase 2

gridSMART Incremental Investment	Estimated gridSMART Spending	Annual Carrying Charge	gridSMART Revenue Requirement
O&M	$ 9,816,752		$ 9,816,752
Capital - 15 Year Life- AMI		$ 29,122,889	$ 29,122,889
Capital - 30 Year Life - VVO		$ 7,263,209	$ 7,263,209
Capital - 30 Year Life - DACR		$ 13,230,876	$ 13,230,876
Misc. Capital		$ 770,706	$ 770,706
		Total Revenue Requirement	$ 60,204,432
		Tax Gross Up Rate	100.683%
		Total Revenue Requirement	$ 60,615,332.4
Residential Base Distribution	$ 402,458,623	Residential Revenue Requirement	$ 37,904,851
Non-Res Base Distribution	$ 241,130,854	Non-Res Revenue Requirement	$ 22,710,481
		Residential Customers 1,276,364	29.7
		Non-Residential Customers 187,705	120.99
		Residential Customers Monthly Rate	$ 2.48
		Non-Residential Customers Monthly Rate	$ 10.08

THE WALL STREET JOURNAL.

http://www.wsj.com/articles/how-utilities-team-up-with-greens-against-consumers-1456530275

OPINION | COMMENTARY

How Utilities Team Up With Greens Against Consumers

Oregonians are learning that electric companies like renewables because costlier systems increase profits.

Vehicle charging stations at Portland General Electric headquarters in Portland, Ore. *PHOTO: ASSOCIATED PRESS*

By **TRAVIS KAVULLA**
Feb. 26, 2016 6:44 p.m. ET

If you can't beat 'em, join 'em. This is the attitude that large electric utilities in Oregon have brought to their state's 2016 legislative session. Threatened with a sure-to-pass ballot initiative from energetic green activists, Portland General Electric and Pacific Power decided to forestall the referendum by cutting a deal instead.

The utilities' bargain—tucked inside Oregon's H.B. 4036, which the House passed last week, and S.B. 1547, which it is expected to take up soon—gives the greens what they want: no coal serving Oregon customers within two decades and a

huge expansion of renewables to 50% of the power supply by 2040.

What do utilities get in exchange? Oregonians already have little choice in which company serves them, but the legislation restricts competition even further—in case customers of a newly clean-and-green utility have second thoughts when they see their power bills rise. Under the proposal consumers would essentially buy out power companies for their remaining investment in coal plants, as well as cover the projected cost of decommissioning these plants before the end of their useful lives. The bill also carves out special ratemaking treatment for everything from investments in renewables and energy storage to charging stations for electric vehicles.

Legislators and much of the Oregon press have heralded the bill as a historic compromise, the moment when the clouds parted and citizen climate activists forced big, greedy corporations to recognize the error of their ways. They're forgetting that utilities typically enjoy a "cost of service" revenue model. Every dollar they spend, they get back from a captive base of customers over time—together with an annual return on the undepreciated amount of their investment.

In other words, unlike companies doing business in a competitive market, for whom unnecessary spending is a deadweight on earnings, utilities actually profit from building a more costly system, so long as it is politically popular. If Egyptology suddenly came into fashion in Oregon, and enthusiasts convinced the state to use its ratemaking powers to advance the cause, utilities would gladly build a pyramid in Portland, and they would make money doing so.

So it goes: Environmentalists put their feel-good sentimentalism into action by leaning on their lawmakers; the state uses its power to make regulated electric companies into a vessel of green activism; and utilities agree in exchange for being able to drive shareholder returns with risk-free investments on the backs of captive customers.

That is what lobbyists call a win-win—and not only in Oregon. Similar arrangements have coursed through legislative or regulatory processes in Nevada and Colorado, and are pending in Ohio and Washington. In some cases, lawmakers include a kickback for labor interests or an opt-out for industrial firms that might flee if their power rates rise. But everywhere the generic template is the same.

State lawmakers considering these kinds of deals ought to mull the concept of

legislative modesty. Not every topic calls out for grand compromise, or horse trading between interested parties. Utility regulation is pretty boring—and it is meant to be. The goal is to simulate a competitive market as best as it can, to ensure that power companies procure the lowest cost, most reliable service. Deals like the one in Oregon only muddy the waters.

This isn't to say that regulators have no business considering carbon-dioxide and air pollutants. Once the Environmental Protection Agency or a state air-quality board establishes a lawful standard, utilities and state public-utility commissions should hit those targets, while minimizing costs.

But that is not what these logrolling initiatives in state capitols do. The one thing absent from all of these efforts is a straightforward attempt to deal with emissions. They are, at best, a roundabout way of dealing with them—and only then by spending double the money to appease special interests.

In a paramount irony, the Oregon bill probably will not result in the closure of a single coal plant, even though consumers are being charged for the cost of decommissioning. One utility subject to the legislation, Pacific Power, has a stake in coal plants that serve customers in six states. It could simply reallocate coal-generated power to customers outside Oregon. The other utility, Portland General Electric, co-owns a coal plant with several Montana utilities. It could easily sell its interest in the plant in 2030 or swap its output with another utility for an allocation of hydroelectric or gas-fired power.

At least green activists will get to say they meant well.

Mr. Kavulla is the president of the National Association of Regulatory Utility Commissioners and the vice chairman of the Montana Public Service Commission.

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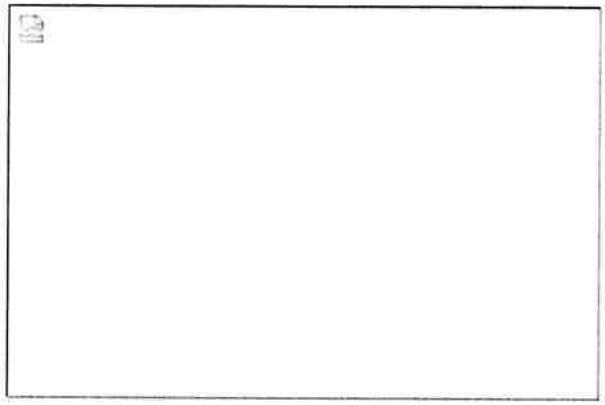

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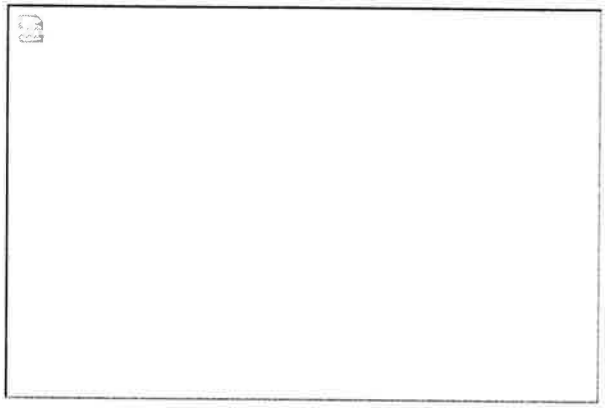

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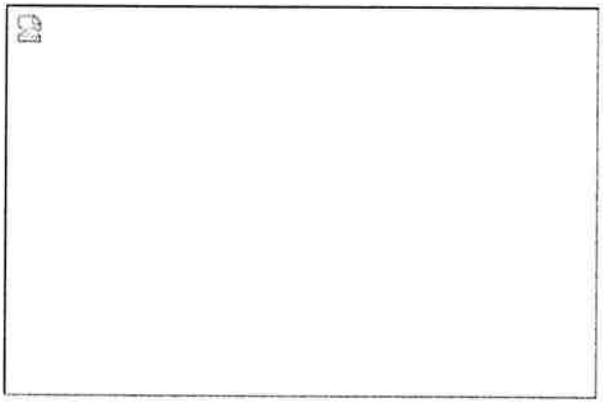

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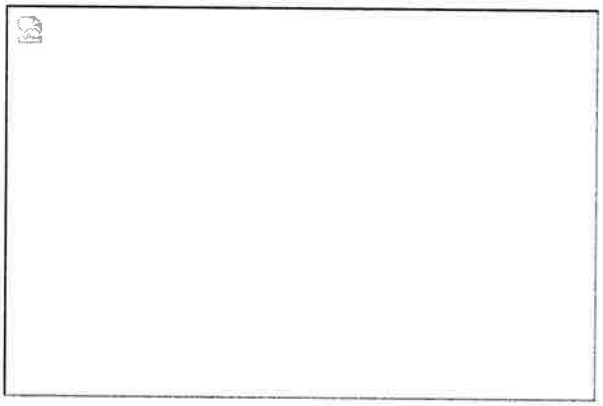

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The Columbus Dispatch

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By Dan Gearino

The Columbus Dispatch • Wednesday July 13, 2016 5:24 PM

American Electric Power Ohio has improved its score in a survey of customer satisfaction, but remains near the bottom of its peer group.

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American Electric Power's headquarters Downtown

The utility had a score of 654 out of 1,000 in the report from J.D. Power and Associates, which is up 21 points from last year.

That score means AEP Ohio ranks 14th out of 16 large Midwestern electricity utilities. Last year, the company was 15th out of 16.

AEP is "working hard to improve satisfaction, and it shows," said John Hazen, senior director of the utility practice at J.D. Power. As an example, he noted that AEP is doing better at updating customers on power failures.

Even so, he thinks it may take several years for the changes to translate into improvements in customers' perception of service.

Karen Sloneker, an AEP spokeswoman, said the company is "extremely pleased" to be one of the most improved utilities in the report.

"While we are trending in the right direction, AEP Ohio has a created customer experience improvement team to identify and implement additional ways to improve the services that we provide to our customers and to exceed their expectations," she said in an e-mail.

The industry average was 680 points, which is up 12 points from last year. Overall, customers reported that their bills have been lower and power failures have been shorter than before, which contributed to the satisfaction, J.D. Power says.

Among large Midwestern utilities, MidAmerican Energy of Des Moines, Iowa, was the top scorer for the ninth year in a row, with 713 points.

Columbus-based AEP owns utilities that operate in parts of 11 states, of which AEP Ohio is the largest subsidiary.

The top scorer in Ohio was a tie between FirstEnergy's Ohio Edison and Duke Energy, tied for sixth with 679 points.

The lowest scorer in the state was another FirstEnergy utility, the Illuminating Co. of Cleveland, with 644 points.

charitable activity, among other factors. This is the 18th year of the report.

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Summary: Testimony Direct Testimony of Peter J. Lanzalotta on Behalf of the Office of the Ohio Consumers' Counsel electronically filed by Ms. Deb J. Bingham on behalf of Etter, Terry L.