EXHIBIT NO. ______

BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Application of	)	
Ohio Power Company for Approval	)	Case No. 16-0574-EL-POR
of Its Energy Efficiency/Peak Demand	)	
Reduction Portfolio Plan	)	

DIRECT TESTIMONY
IN SUPPORT OF THE STIPULATION
OF
JON F. WILLIAMS
ON BEHALF OF OHIO POWER COMPANY

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INTRODUCTION

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

A. My name is Jon F. Williams. I am employed by Ohio Power Company ("AEP Ohio" or the "Company"), a subsidiary of American Electric Power Company, Inc. ("AEP"), as Manager of Energy Efficiency and Peak Demand Reduction Programs. My business address is 301 Cleveland Ave., S.W., Canton, OH 44702.

Q. ARE YOU THE SAME JON F. WILLIAMS WHO PREVIOUSLY FILED TESTIMONY IN THIS PROCEEDING?

A. Yes. I provided pre-filed direct testimony ("Direct Testimony") in support of the Company's June 15, 2016 application ("Application") in this proceeding. My Direct Testimony was filed on June 15, 2016. My Direct Testimony attached and sponsored the Company's proposed energy efficiency/peak demand response plan ("EE/PDR Plan," "2017-20 Plan,"[1] or "Plan") as Exhibits JFW-1 and JFW-2.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY HERE?

A. The purpose of my testimony here is to sponsor, summarize, and support the Stipulation and Recommendation filed on December 9, 2016 in this proceeding ("Stipulation"), which is attached to my testimony as Settlement Exhibit JFW-1. My testimony addresses

[1] In the Application and in my Direct Testimony, the Company's EE/PDR Plan was initially proposed to be in effect from 2017 through 2019. As described below, the Stipulation in this proceeding proposes that the term of the Plan be extended through 2020. Accordingly, in this testimony, I refer to the proposed EE/PDR Plan as the "2017-20 Plan," as well as the "EE/PDR Plan" and "Plan."

the criteria that the Commission uses when considering settlement agreements and explains how the Stipulation in this proceeding meets those criteria. Specifically, my testimony supports the conclusion that the Stipulation:

(1) is the product of serious bargaining among capable, knowledgeable parties;

(2) as a package, benefits rate payers and the public interest; and

(3) does not violate any important regulatory principle or practice.

Q. DID YOU PARTICIPATE IN THE NEGOTIATIONS THAT LED TO THE STIPULATION BEING SUBMITTED FOR CONSIDERATION AND APPROVAL BY THIS COMMISSION?

A. Yes. I participated in multiple settlement meetings involving all parties in this proceeding that were held at the offices of this Commission. I also participated in numerous meetings with individual parties in this case.

SUMMARY OF THE STIPULATION

Q. WHO ARE THE SIGNATORY PARTIES TO THE STIPULATION?

A. The parties who signed the Stipulation ("Signatory Parties") represent a variety of diverse interests and include the Staff of the Public Utilities Commission of Ohio ("Staff"), the Environmental Defense Fund ("EDF"), the Environmental Law & Policy Center ("ELPC"), Interstate Gas Supply, Inc. ("IGS"), the Kroger Company ("Kroger"), the Mid-Ohio Regional Planning Commission ("MORPC"), the Natural Resources Defense Council ("NRDC"), the Ohio Energy Group ("OEG"), the Ohio Environmental Council ("OEC"), the Ohio Farm Bureau Federation ("OFBF"), the Ohio Hospital Association ("OHA"), the Ohio Manufacturers' Association Energy Group ("OMAEG"), Ohio Partners for Affordable Energy ("OPAE"), and AEP Ohio. In addition, on December 12, 2016, the Office of the Ohio Consumers Counsel ("OCC") filed a letter on the docket in this proceeding indicating that it does not oppose the Stipulation.

Q. PLEASE PROVIDE AN OVERVIEW OF THE STIPULATION.

A. The Stipulation recommends that the Commission adopt and approve the Company's Application in this proceeding, including the Company's proposed 2017-20 Plan, subject to the clarifications and modifications contained in the Stipulation.

The Stipulation represents the culmination of a long and detailed settlement process by a diverse group of parties, nearly all of which ultimately determined to sign the Stipulation or not to oppose it. The Stipulation proposes a number of clarifications and modifications to the Company's Application that, as a package, provide for AEP Ohio to offer a suite of energy efficiency and peak demand reduction programs in 2017-2020 that will allow AEP Ohio to meet its statutory EE/PDR benchmarks and provide numerous benefits to customers.

Q. WHAT ARE THE PARTS OF THE STIPULATION?

A. The Stipulation is divided into five parts: (I) Introduction, (II) Signatory Parties, (III) Background, (IV) Recommendations, and (V) Procedural Matters. My testimony supports the entire Stipulation, but below I will focus on summarizing Part IV, Recommendations.

Q. PLEASE DESCRIBE STIPULATION PARAGRAPH IV.A REGARDING THE "PLAN TERM AND COST CAP."

A. Paragraph IV.A addresses the term of the Plan and establishes an annual cost cap. The Stipulation proposes extending the term of the Plan to four years, so that it is in effect from January 1, 2017 through December 31, 2020. This longer term provides important stability and predictability for AEP Ohio's EE/PDR programs, provides cost certainty for customers over a longer term, and allows the Company to engage in longer-term planning. Stipulation Paragraph IV.A.2 provides that if legislation is passed affecting EE/PDR plans during the four-year Plan term, AEP Ohio will not file – and will not be required to file – for a new or amended Plan.

Paragraph IV.A also proposes an annual cost cap of $110,310,902 for the Plan. Program costs and shared savings are subject to the proposed cap; net lost revenues and IRP-D costs are not. The Stipulation proposes that the annual cost cap will be in place for each year of the Plan (2017-2020), though Paragraph IV.X (discussed below) proposes a procedure by which the Commission can consider whether to eliminate the annual cost cap in the final two years of the Plan (2019-2020). Paragraph IV.A proposes provisions by which AEP Ohio will adjust its program budget to meet this annual cost cap.

Q. HOW WILL THE COMPANY KEEP PLAN COSTS BELOW THE ANNUAL COST CAP?

A. The Company's Application proposed a Plan budget that included new programs and existing program expenditures that could exceed the cap. However, as part of the settlement bargaining process, the Company has agreed to reduce its Plan expenditures through the proposed annual cost cap. To that end, the Company has made a preliminary, good faith estimate of the Company's 2017 operating budget with the proposed cost cap in place. This preliminary revised budget is attached to my testimony as Settlement Exhibit JFW-2. This budget is preliminary, and AEP Ohio may adjust program budgets or eliminate programs based on further budgetary development and operational realities.

Further, the Company has a long track record of controlling costs while maximizing energy and demand savings below Plan budgets and intends to continue those efforts to stay within the lower overall cost cap.

Q. PLEASE DESCRIBE STIPULATION PARAGRAPHS IV.B AND IV.C REGARDING "COST ALLOCATION" AND "RATE DESIGN."

A. Paragraphs IV.B and IV.C make certain modifications to the Company's Application concerning the allocation of Plan costs to customer classes and the design of EE/PDR Rider rates.

Q. PLEASE DESCRIBE STIPULATION PARAGRAPH IV.D REGARDING "SHARED SAVINGS."

A. Paragraph IV.D addresses several issues concerning the treatment of shared savings. As an initial matter, Paragraph IV.D caps the Company's opportunity to earn shared savings at $20 million after tax annually, which is a continuation of the shared savings opportunity that has been in place since the Company's last EE/PDR Plan was approved in Case No. 11-5568-EL-POR. Paragraph IV.D also clarifies and modifies several aspects of the Company's eligibility for – and the calculation of – shared savings. This includes an agreement in Paragraph IV.D.5 that avoided generation costs used for the purpose of calculating net benefits (and thus shared savings) are set forth in Stipulation Attachment A, though the Company commits to updating that attachment on or about October 2018 for use in 2019-2020. As noted in my initial testimony, shared savings are a critical component of the Company's EE/PDR Plan, and provide an important incentive for the Company to implement its EE/PDR programs in a cost-effective manner.

Q. PLEASE DESCRIBE STIPULATION PARAGRAPH IV.E REGARDING THE "LONG-LIFE MEASURE COMPANY INCENTIVE."

A. In Paragraph IV.E, the Company agrees to eliminate the Long-Life Measure Company Incentive proposed in its Application.

Q. PLEASE DESCRIBE THE PARAGRAPHS OF THE STIPULATION ADDRESSING SPECIFIC EE/PDR PROGRAMS, THAT IS, STIPULATION PARAGRAPHS IV.F, IV.G, IV.J, IV.L, IV.M, IV.N, IV.Q, IV.R, IV.S, IV.U, AND IV.V, IV.W.

A. Several Stipulation paragraphs contain provisions and Company commitments concerning specific EE/PDR Plan programs. I summarize these below:

- Paragraph IV.F sets forth several provisions concerning the Combined Heat and Power ("CHP") Program, including a commitment to raise the floor of CHP incentives to a total of 3.5 cents per kWh.
- Paragraph IV.G contains a Company commitment to work with NRDC on a midstream or upstream approach to delivering efficient residential circulator pumps.
- Paragraph IV.J contains a Company commitment to work in collaboration with OFBF to promote energy efficiency programs for agricultural customers.
- Paragraph IV.L contains Company commitments to sourcing its Community Assistance Program to OPAE through the term of the 2017-20 Plan, as well as important commitments from OPAE concerning performance targets and reporting of its progress to the Company's EE/PDR Collaborative.
- Paragraph IV.M provides for the Company to work in collaboration with OHA to promote EE/PDR programs for hospitals.

- Paragraph IV.N provides for the Company to work in collaboration with OMAEG to promote EE/PDR programs among OMAEG members.
- Paragraph IV.Q reflects a commitment by the Company to phase out incentives for commercial linear florescent lighting in favor of LED lighting.
- Paragraph IV.R contains several provisions addressing smart thermostats, including specific incentive levels and funding commitments, as well as a Company commitment to work with IGS on a streamlined incentive process for smart thermostats.
- Paragraph IV.S describes a local government pilot offering for the Company to pursue in collaboration with MORPC.
- Paragraph IV.U reflects a Company commitment to continue providing energy audits for non-residential customers as a pilot program.
- Paragraph IV.V reflects Company commitments concerning home energy monitors.
- Paragraph IV.W proposes an LED lighting pilot program in partnership with Kroger.

Q. PLEASE DESCRIBE STIPULATION PARAGRAPH IV.H REGARDING THE "AUTOMATIC APPROVAL OF TRUE-UP."

A. Paragraph IV.H proposes that the Commission approve the Company's request, made in its Application, for automatic approval of the rates proposed in each of the Company's annual EE/PDR Rider true-up filings. The purpose of this automatic approval provision is to avoid the significant over- or under-collection balances that can accrue if there is a delay in implementing the Company's updated EE/PDR Rider rates. Paragraph IV.H makes clear that, even with the automatic approval of the Company's proposed true-up rate, the true-up filing will remain subject to a Commission prudence audit and final reconciliation. Paragraph IV.H also makes clear that the automatic approval does not prevent any party from raising objections in the true-up proceeding.

Q. PLEASE DESCRIBE STIPULATION PARAGRAPH IV.I REGARDING "TRUE-UP PROJECTIONS TO ACCOUNT FOR OPT-OUTS."

A. In Paragraph IV.I, the Company commits to accounting for EE/PDR Rider opt-outs in its annual true-up filings.

Q. PLEASE DESCRIBE STIPULATION PARAGRAPH IV.K REGARDING "BIDDING EE/PDR RESOURCES IN PJM."

A. Paragraph IV.K describes several provisions and Company commitments regarding the bidding of EE/PDR resources in the PJM capacity auctions. In particular, Paragraph IV.K proposes continuing the Company's current practice of passing through 80% of PJM revenues from Plan programs through the EE/PDR Rider to customers' benefits, with the Company retaining 20% of such revenues. Recognizing that the PJM base residual auction is conducted three years in advance of the delivery year, Paragraph IV.K also addresses the manner in which the Company bids EE/PDR resources for unapproved plan years.

Q. PLEASE DESCRIBE STIPULATION PARAGRAPH IV.O REGARDING "OPT-OUT RIGHTS NOT AFFECTED."

A. Paragraph IV.O makes clear that nothing in the Stipulation affects the EE/PDR opt-out rights contained in Sections 4928.6610 to 4928.6616 of the Ohio Revised Code, and also does not affect any opt-out rights for mercantile customers if the General Assembly enacts such rights in the future.

Q. PLEASE DESCRIBE STIPULATION PARAGRAPH IV.P REGARDING "STREAMLINED OPT-OUT."

A. In Paragraph IV.P, the Company commits to working with Staff, OEG, OMAEG, and IEU to develop a streamlined process for eligible customers to opt out of the EE/PDR Rider and Plan programs under Sections 4928.6610 to 4928.6616 of the Ohio Revised Code, if they chose to do so.

Q. PLEASE DESCRIBE STIPULATION PARAGRAPH IV.T REGARDING A "STATUS REPORT WAIVER."

A. Paragraph IV.T supports the Company's proposal, made in its Application, to postpone the deadline for the Company's status report required by Section 4901:1-39-05(C) of the Ohio Administrative Code from March 15 to May 15 for each year of the 2017-20 Plan.

Q. PLEASE DESCRIBE STIPULATION PARAGRAPH IV.X REGARDING A "HEARING TO DETERMINE WHETHER TO ELIMINATE THE ANNUAL COST CAP IN YEARS 2019-20."

A. Paragraph IV.X proposes a procedure by which the Commission will determine whether the annual cost cap set forth in Paragraph IV.A.3 should be eliminated in Plan years 2019-2020. Paragraph IV.X first recommends that the Commission adopt this Stipulation and approve the Company's Application as amended by the Stipulation so that the 2017-20 Plan is in effect on January 1, 2017 or as soon as possible thereafter. Then, once the Stipulation and proposed 2017-20 Plan are approved, Paragraph IV.X proposes that the Commission hold a hearing in March 2017 (or as soon as practicable thereafter) in which the parties will be able to submit evidence and argument concerning whether the annual cost cap should be eliminated in Plan years 2019-2020.

It is an essential part of the proposal in Paragraph IV.X that the referenced hearing will only address whether the cost cap will be eliminated in 2019-20 and will *not* address or call into question any other aspect of the 2017-20 Plan. Thus, Paragraph IV.X makes expressly clear that there are only two proposed outcomes of the referenced hearing: All aspects of the Stipulation and 2017-20 Plan will go forward in 2019-20 with the cost cap or they will go forward without the cost cap. Relatedly, Paragraph IV.X provides that, in the referenced hearing, no party will oppose the level of shared savings provided in this Stipulation or any other aspect of the Application as modified by this Stipulation. Based on these critical boundaries on the referenced hearing, the Company has committed in Paragraph IV.X.5 that it will take no position in the hearing except to ensure that the only issue being addressed is whether the annual cost cap should be eliminated in 2019-2020.

APPLICATION OF THE COMMISSION'S THREE-PART TEST

Q. IS THE STIPULATION THE PRODUCT OF SERIOUS BARGAINING AMONG CAPABLE AND KNOWLEDGEABLE PARTIES?

A. Yes. The Stipulation was the result of lengthy and detailed negotiations involving all parties in the case, all of which are experienced participants in Commission proceedings and were represented by experienced counsel. All parties met on multiple occasions for settlement negotiations at the Commission's offices, and the Company engaged in further individual settlement discussions with all parties. The final Stipulation reflects the feedback and input of all Signatory Parties and non-opposing parties.

Q. DOES THE STIPULATION REFLECT COMPROMISES BY THE COMPANY AND OTHER PARTIES?

A. Yes. The Stipulation reflects compromises by the Company, all other Signatory Parties, and non-opposing parties and thus provides for a balanced outcome for all stakeholders. The compromises made by the Company, reflected in the modifications made by the Stipulation to the Company's Application, are too numerous to list comprehensively. But some of the most significant compromises by the Company include the following:

- The annual cost cap (Paragraph IV.A).
- Substantial changes to the Company's proposed cost allocation and rate design (Paragraph IV.B-C).
- The exclusion of certain programs and measures from shared savings calculations (Paragraph IV.D)
- The elimination of the Company's proposed Long-Life Measure Company Incentive (Paragraph IV.E).
- Specific programmatic commitments, including commitments to incentive levels, funding levels, and program elements for several programs (Paragraphs IV.F, IV.G, IV.J, IV.L, IV.M, IV.N, IV.Q, IV.R, IV.S, IV.U, and IV.V, IV.W).

Q. DOES THE STIPULATION, AS A PACKAGE, BENEFIT CUSTOMERS AND THE PUBLIC INTEREST?

A. Yes. By approving the Application as modified by the Stipulation, the Commission will enable AEP Ohio to offer many beneficial EE/PDR programs to its customers during the 2017-2020 period. As I noted in my Direct Testimony, AEP Ohio's EE/PDR programs benefit customers and are in the public interest because they play a critical role in helping customers become more energy efficient, and because they reduce costs for all customers, for example by reducing the need for generating capacity additions. They also lead to other customer and public benefits, such as environmental benefits that come from reducing total generating plant emissions.

The Stipulation reflects a compromise that ensures that the Company will continue to be able to offer its effective EE/PDR programs, as well as potentially new EE/PDR offerings, in a cost effective manner. That outcome results in part from the Stipulation provisions providing an opportunity to earn shared savings (and capping shared savings at current levels), since shared savings give the Company an incentive to manage programs more cost effectively. In addition, the rate impacts on customers are limited by other Stipulation provisions that address the Company's costs and how those costs are recovered by customers.

Q. DOES THE STIPULATION VIOLATE ANY IMPORTANT REGULATORY PRINCIPLE OR PRACTICE?

A. No. To the contrary, the Stipulation promotes several regulatory policies. As an initial matter, as I noted above, the Stipulation is a reasonable compromise that will allow the Company to meet the energy efficiency and peak demand reduction levels established by statute. Importantly, moreover, the Stipulation furthers several other aspects of Ohio energy policy. For instance, many aspects of the Stipulation and the proposed 2017-20 Plan will fulfill the statutory policy in Section 4928.02(D) of the Ohio Revised Code to encourage "cost effective supply- and demand-side retail electric service," including "demand-side management." Furthermore, aspects of the 2017-20 Plan – including, for example, the Stipulation terms related to CHP and smart thermostats – will further the statutory policy in Section 4928.02(J) of the Revised Code by "[p]rovid[ing] coherent, transparent means of giving appropriate incentives to technologies that can adapt successfully to potential environmental mandates." Other aspects of the Stipulation and Plan – including, for example, the proposed Community Assistance Program – specifically provide benefits for "at-risk populations" and thereby fulfil the statutory policy in Section 4928.02(L) of the Revised Code. In addition, many of the proposed business sector programs in the 2017-20 Plan will directly further the policy in Section 4928.02(M) of the Revised Code by "[e]ncourag[ing] the education of small business owners in this state regarding the use of, and encourage the use of, energy efficiency programs . . . in their businesses." That aspect of the Plan is embodied in particular by the Stipulation provisions relating to outreach and coordination with OFBF, OMAEG, OHA, and Kroger. Finally, the beneficial EE/PDR offerings provided in the Stipulation, in general, will "[f]acilitate the state's effectiveness in the global economy" by making the Company's service territory an attractive place to do business with effective energy efficiency and peak demand reduction programs for companies and their employees.

Q. HAS THE COMPANY UPDATED ITS RATE CALCULATIONS AND ESTIMATED BILL IMPACTS BASED ON THE STIPULATION?

A. Yes. At my direction and with my input, Company witness David R. Gill, who previously pre-filed testimony in support of the Application on June 15, 2016, updated the Company's EE/PDR Rider rate calculation and estimated bill impacts based on the terms of the Stipulation, as well as the adjusted preliminary budget attached to my testimony as Settlement Exhibit JFW-2. These updated rate calculations and bill impacts are attached to my testimony as Settlement Exhibits JFW-3 and JFW-4.

Q. HOW DOES THE COMPANY PROPOSE TO IMPLEMENT NEW EE/PDR RIDER RATES FOLLOWING APPROVAL OF THE STIPULATION?

A. After the Commission issues an order approving the Stipulation, the Company proposes to file a compliance tariff based on the approved Stipulation.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY IN SUPPORT OF THE STIPULATION?

A. Yes.

BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Application of Ohio Power Company for Approval of Its Energy Efficiency/Peak Demand Reduction Portfolio Plan	))))	Case No. 16-0574-EL-POR

STIPULATION AND RECOMMENDATION

I. INTRODUCTION

Rule 4901-1-30, Ohio Administrative Code ("OAC"), provides that any two or more parties to a proceeding may enter into a written or oral stipulation concerning the issues presented in such a proceeding. This document sets forth the understanding and agreement of the parties who have signed below ("Signatory Parties") and jointly recommend that the Public Utilities Commission of Ohio ("Commission") approve and adopt this Stipulation and Recommendation ("Stipulation") without modification, which resolves all of the issues raised in the above-captioned proceeding involving Ohio Power Company ("AEP Ohio" or the "Company").

This Stipulation is the product of lengthy, serious, arm's-length bargaining among the Signatory Parties, all of whom are capable, knowledgeable parties. All parties to this proceeding were invited to discuss and negotiate this Stipulation, and it was openly negotiated with all parties. This Stipulation is supported by adequate data and information. As a package, the Stipulation benefits customers and the public interest, provides direct benefits to residential and low-income customers, and represents a just and reasonable resolution of all issues in this proceeding. The Stipulation violates no regulatory principle or practice and complies with and promotes the policies and requirements of Title 49 of the Ohio Revised Code. This Stipulation represents an accommodation of the interests represented by the Signatory Parties and, though not binding, is entitled to careful consideration by the Commission. For purposes of resolving the issues raised by this proceeding, the Signatory Parties stipulate, agree, and recommend as set forth below.

II. SIGNATORY PARTIES

This Stipulation is entered into by the Staff of the Public Utilities Commission of Ohio ("Staff"),[1] the Environmental Defense Fund ("EDF"), the Environmental Law & Policy Center ("ELPC"), Interstate Gas Supply, Inc. ("IGS"); the Kroger Company ("Kroger"), the Mid-Ohio Regional Planning Commission ("MORPC"), the Natural Resources Defense Council ("NRDC"), the Ohio Energy Group ("OEG"), the Ohio Environmental Council ("OEC"), the Ohio Farm Bureau Federation ("OFBF"), the Ohio Hospital Association ("OHA"), the Ohio Manufacturers' Association Energy Group ("OMAEG"), Ohio Partners for Affordable Energy ("OPAE"), and AEP Ohio. The Signatory Parties agree to fully support the adoption of the Stipulation without modification in this proceeding.

III. BACKGROUND

WHEREAS, AEP Ohio is an electric utility and an electric distribution utility as those terms are defined in Section 4928.01, Ohio Revised Code, and an electric utility operating company subsidiary of American Electric Power Company, Inc.

WHEREAS, Section 4928.66 of the Ohio Revised Code requires utilities such as AEP Ohio to meet benchmarks for energy efficiency savings and peak demand reductions, and the Commission has adopted rules for implementing the EE/PDR benchmarks in OAC 4901:1-39-01 et seq. Among other things, the Commission's rules require electric utilities to "design and

[1] For purposes of this Stipulation, Staff is considered a party in accordance with OAC 4901-1-10(C).

propose a comprehensive energy efficiency and peak-demand reduction program portfolio" ("Action Plan"). O.A.C. 4901:1-39-04(A).

WHEREAS, AEP Ohio's current Action Plan expires December 31, 2016, and AEP Ohio commenced this proceeding by filing an application and supporting testimony proposing a new Action Plan to be effective from 2017 through 2019 ("2017-19 Plan").

WHEREAS, following lengthy, serious, arm's-length bargaining among all parties, the Signatory Parties have agreed on how to resolve the issues presented in this proceeding, as reflected in their recommendations set forth below.

WHEREAS, the Signatory Parties believe that this Stipulation represents a fair and reasonable solution to all of the issues raised in this proceeding.

NOW, THEREFORE, the Signatory Parties stipulate, agree, and recommend that the Commission should issue its Opinion and Order in this proceeding accepting and adopting without modification this Stipulation and relying upon its provisions as the basis for resolving all issues raised by this proceeding.

IV. RECOMMENDATIONS

The Signatory Parties recommend that the Commission approve the Company's application dated June 15, 2016 (the "Application") in this proceeding except as modified as follows:

A. Plan Term and Cost Cap.

1. The term of the proposed 2017-19 Plan will be extended to four years through December 31, 2020. The 2017-19 Plan will be hereinafter referred to as the "2017-20 Plan" or "Plan."

2. If, during the term of the 2017-20 Plan, new legislation is passed affecting utility EE/PDR Plans, AEP Ohio will not file, and will not be required to file, for a new or amended EE/PDR Plan for the 2017-20 period unless it is expressly required to do so by the new legislation.

3. The 2017-20 Plan will be subject to an annual cost cap of $110,310,902, which is 4% of the amount listed on page 300, line 10 of the Company's 2015 FERC Form 1, Year End 2015/Q4. This cap will be fixed at $110,310,902 for each year of the 2017-20 Plan, subject to the terms of Paragraph IV.X below. All 2017-20 Plan program costs and shared savings will be subject to the cap. The cap will exclude net lost distribution revenues and IRP-D costs. This Stipulation, however, does not otherwise address lost distribution revenues or provide for any mechanism for customers to pay lost distribution revenues. Any PJM revenues from EE/PDR programs that are passed through the EE/PDR Rider as referenced in Paragraph IV.K can be used for program spending by the Company; however, net Plan costs (i.e., costs subject to the annual cost cap minus PJM revenues) may not exceed the annual cost cap.

4. The Company will refine its Plan budget in order to achieve the program year energy efficiency and peak demand reduction requirements within the cost cap. If necessary, the Company may adjust programs and measures at its discretion within the 2017-20 Plan, in order to develop a budget that meets the statutory requirements within the cost cap. If, after making all such adjustments, the Company projects it is unable to meet the statutory requirements, it may request that the Commission amend its applicable benchmark, pursuant to Section 4928.66(A)(2)(b) of the Revised Code. In no event will the Company be eligible for shared savings or any other utility incentive when making such a request, but the Company may continue to retain 20% of PJM revenues as provided in Paragraph IV.K below.

5. After the completion of any given program year, the Company will prepare an auditable summary of all costs incurred for each program year to be filed on May 15 with the Company's annual true-up filing for the EE/PDR rider. The summary will include all costs associated with shared savings and all costs of all programs within the 2017-20 Plan. To the extent that the costs exceed the cost cap applicable to that program year, the amount of shared savings recoverable by the Company will be reduced to the extent necessary in order not to exceed the cap.

6. The Signatory Parties support the Company receiving a waiver, as part of the Commission decision adopting this Stipulation, of the requirement to obtain written Staff approval to reallocate funds provided in O.A.C 4901:1-39-05(C)(2)(c). However, the Company will notify Commission Staff and the Collaborative when program budgets change significantly. The Company is permitted to reallocate up to 25% of the program funds reflected in Exhibit JFW-1 (Volume 1) within a customer class to other programs within that class without Staff approval.

B. Cost Allocation. The Signatory Parties support allocation of EE/PDR Rider costs and credits as follows:

1. *IRP-D Costs*. The Signatory Parties agree to continue the current kWh allocation of IRP-D costs during the 2017-20 Plan period, with continued recovery of IRP-D costs in the EE/PDR Rider subject to the outcome of the Company's proposed ESP III Extension proceeding, Case Nos. 16-1852-EL-SSO et al.

2. *Other EE/PDR Rider Costs*. The Signatory Parties agree that all other EE/PDR Rider costs (except IRP-D costs) will be allocated as follows:

a. Residential program costs will be allocated to the residential class.

b. Non-residential program costs will be allocated to the non-residential classes according to each class's contribution to base distribution revenue, except that costs allocated to the lighting class will be capped at $4 million. Any costs above $4 million that would otherwise be allocated to the lighting class will be allocated to other nonresidential classes.

c. Cross-sector program costs will be allocated 45% to the residential class and 55% to nonresidential classes, except the Multifamily Program and the Targeted Advertising Program, which will be allocated 80% to the residential class and 20% to nonresidential classes.

d. Shared savings will be allocated to the residential class and nonresidential classes based on the net benefits that result from each class's programs (consumer sector allocated to the residential class; business sector allocated to the nonresidential class). Shared savings for cross-sector programs will be allocated based on the percentages set forth in Paragraph IV.B.2.c above.

e. Costs will not shift to the residential class as a result of nonresidential customer opt-outs.

C. Rate Design. The Signatory Parties support the rate design proposed by the Company in this proceeding, except that:

1. EE/PDR Rider costs allocated to the residential class will be recovered through a per kWh charge.

2. IRP-D costs will continue to be recovered from all classes through a kWh charge.

D. Shared Savings. The Signatory Parties support the Company's request, as set forth in its application, to maintain the Company's current shared savings calculation methodology as most recently approved by the Commission in Case Nos. 11-5568-EL-POR et seq., including that the Company's shared savings will be capped at $20 million after tax annually (currently equivalent to approximately $31.2 million before tax annually), and with the following clarifications or modifications:

1. Existing programs that were counted towards shared savings in Case Nos. 11-5568-EL-POR et seq. will continue to count toward shared savings in the Company's 2017-20 Plan. Existing programs that were not counted toward shared savings in Case Nos. 11-5568-EL-POR et seq. (i.e., the Self-Direct, T&D Loss Reductions, and Community Assistance Programs) will not be counted toward shared savings in the Company's 2017-20 Plan. As in Case Nos. 11-5568-EL-POR et seq., all existing programs will be counted toward the calculation of shared savings eligibility in the 2017-20 Plan.

2. All new programs proposed by the Company in its 2017-20 Plan will count towards shared savings and the calculation of shared savings eligibility except the EE Customer Assessment Survey, which will not count toward shared savings, the calculation of shared savings eligibility, or the applicable shared savings incentive tier found on page 19 of the direct testimony of Jon F. Williams filed in support of the Application.

3. As in Case Nos. 11-5568-EL-POR et seq., all programs with measurable savings will count toward the Company's benchmark requirements.

4. The Company will consider studying avoided transmission and distribution costs and including the impact of those avoided costs in the shared savings calculation as available. In addition, the Company agrees to consider studying the use of marginal versus average avoided costs. These studies will be funded without any increase to the research and development budget proposed in the Application. The Company will report its findings to the Collaborative. Any change to the shared savings calculation related to these items would not take place during the 2017-20 Plan period, but would be an open item for discussion in the Collaborative going forward.

5. Avoided generation costs for the purpose of developing net benefits of the Company's EE/PDR programs (and the resulting calculation of shared savings) for Plan years 2017 and 2018 will be those utilized in Stipulation Attachment A.[2] On or about October 2018, the Company will update Stipulation Attachment A with current data to provide for avoided generation costs for use in Plan years 2019 and 2020. The Company will

[2] IGS takes no position regarding this provision of the Stipulation. But within the context of this settlement, IGS does not oppose AEP Ohio's use of Attachment A for purposes of its calculations in this proceeding.

share its updated avoided generation costs with the Collaborative, and provide an opportunity for input from Collaborative members, in the first collaborative meeting following the October 2018 update.

6. For the 2017-20 Plan, net benefits from the following will not count toward shared savings: (a) natural gas savings, (b) water savings and wastewater reduction and improvements, (c) heat rate improvements or other energy intensity improvements, (d) other nonelectric savings, (e) nonenergy benefits, (f) energy savings and demand reductions achieved by customers outside of AEP Ohio's approved energy efficiency programs, and (g) banked energy savings.

E. Long-Life Measure Company Incentive. The Company will eliminate its proposed Long-Life Measure Company Incentive ("Long-Life Incentive").

F. Combined Heat & Power. The Company agrees to the following commitments for the Combined Heat and Power ("CHP") Program:

1. The Company will increase the floor of the CHP incentives to a total of 3.5 cents per kWh and eliminate the percentage of project cost caps and ceiling of incentives per kWh. Payment of the incentive could occur over a period of 1 to 5 years, and a portion of the incentive payment could be made in advance.

2. The Company will consider separate payments for feasibility studies.

3. Complete CHP program details, requirements, and incentive structure will be clearly established and communicated externally. The details, requirements, and incentive structure will be updated on an annual basis; however, incentives cannot be reduced less than the floor established in Section (F)(1) above.

4. Interested parties in the AEP Ohio EE/PDR Collaborative will advise the Company on the details, requirements, and incentive structure to be established on an annual basis, including criteria for customers to become eligible to earn a higher incentive than the 3.5 cents per kWh floor, and the Company will convene planning sessions prior to the start of each year to gain Collaborative input. In addition, the Company will report CHP program activity and progress at each quarterly Collaborative meeting.

5. For CHP projects that are completed and paid within the Plan approval period, no separate filing with the Commission is required.

6. For CHP projects that are completed within the approved Plan period, but for which payments are not completed within the approved Plan period, the CHP project must be filed with and approved by the Commission, and any funding required after the approved Plan period is not part of the overall CHP program budget or the overall Plan budget.

7. No costs associated with CHP will be allocated to the residential class.

G. Circulator Pumps. The Company commits to working with NRDC on a midstream or upstream approach to delivering efficient residential circulator pumps.

H. Automatic Approval of True-Up. In order to avoid the accrual of significant over-collection or under-collection balances, the Company's annual EE/PDR Rider true-up filings will be automatically approved with the clarification that EE/PDR Rider costs will remain subject to a Commission prudence audit and final reconciliation notwithstanding automatic true-up approval. Automatic true-up approval does not preclude any party from objecting to or otherwise taking any position in any EE/PDR Rider true-up filings. Nor does it preclude any party from objecting to or otherwise taking any position with respect to the prudence audit and final reconciliation.

I. True-Up Projections to Account for Opt-Outs. In its EE/PDR Rider true-up filings, the Company will adjust projected EE/PDR Rider costs to account for Company estimates of total Plan costs as well as impacts of EE/PDR Rider opt-out levels based on most current available information. In addition, the Company will report on the impact of opt-outs on plan savings, goals, and budgets during the quarterly collaborative meetings.

J. Agricultural Customer Education. The Company will work in collaboration with OFBF to educate OFBF members and agricultural customers about – and encourage their participation in – the Company's newly proposed Agriculture Program.

K. Bidding EE/PDR Resources in PJM. The Signatory Parties support the Company's proposal to bid EE/PDR resources in the PJM capacity auctions with the following clarifications or modifications:

1. The Company will continue its efforts to maximize PJM capacity revenue, and the Company will continue to pass through 80% of PJM revenues to customers through the EE/PDR Rider, with 20% retained by the Company. The Company will continue to pass through 80% of PJM revenues to customers through the EE/PDR Rider from 2017-2020 programs implemented through this Plan even if those revenues are received after 2020.

2. The Company will bid EE/PDR resources for unapproved future plan years at levels consistent with then-current legislative benchmarks applicable to the Company. In the event that the legislative benchmarks are changed or the Company's future plan years are not approved at anticipated levels, the Company will attempt to minimize costs by covering its obligations in supplemental auctions. Any net costs from

bidding unapproved future plan years will be recovered through the EE/PDR Rider.

3. The Company will bid eligible EE/PDR resources into base residual auctions, incremental auctions, or both, at the Company's discretion.

4. The 20% of PJM capacity revenues retained by the Company will not be included in any calculation of net benefits, and the resulting shared savings.

L. Community Assistance Program Sourcing to OPAE. The Company commits in this proceeding to sourcing its Community Assistance Program to OPAE in 2017 through 2020 subject to the following conditions:

1. OPAE must continue to meet the Company's performance targets as established in each year.

2. A written report by OPAE on its progress toward meeting the performance targets will be made available to the Company's EE/PDR Collaborative.

3. The Company, at its sole discretion, may cancel OPAE's contract after giving six months' notice.

4. The program budget shall be $6 million for 2017, with a 5% administrative fee to OPAE.

5. The program budget shall be $5 million for 2018, 2019 and 2020 with a 6% administrative fee to OPAE.

6. OPAE agrees to all other requirements provided in the stipulation in Case Nos. 14-1693-EL-RDR et seq. including the continuation of 2016 and 2017 requirements in 2018, 2019 and 2020.

M. Outreach to OHA Members. The Company commits to working in collaboration with OHA and provide financial support in exchange for reaching mutually agreed key performance indicators to conduct outreach to its members and encourage OHA member participation in the Company's EE/PDR programs. Support is provided for OHA in the stipulation approved in Case Nos. 14-1693-EL-RDR et seq. in order to enable OHA to promote and obtain significant participation and energy/demand savings through the Company's EE/PDR programs amongst its members including Energy Star benchmarking, hospital energy audits, education related to energy efficiency and demand reduction, meetings with hospital facility directors and members of hospital c-suites, and presentations that champion energy efficiency, hospital resilience and energy-related actions to mitigate climate change, and related issues. In the event that the Company withdraws from the stipulation in Case Nos. 14-1693-EL-RDR et seq., the Company will continue the level of funding established in the Stipulation approved by the Commission in the Company's 2012-2014 Plan (Case Nos. 11-

5568-EL-POR and 11-5569-EL-POR) for all approved 2017-2020 Plan years. No costs associated with this provision will be allocated to the residential class.

N. Outreach to OMA Members. The Company commits to working in collaboration with OMAEG and provide financial support to OMA in exchange for reaching mutually agreed key performance indicators to conduct outreach to OMA's members. To assist in the development of comprehensive communication tools and strategies to promote the Company's non-residential EE/PDR Programs with OMA members and assist in their participation, the Company agrees to continue the level of funding established in the Stipulation approved by the Commission in the Company's 2012-14 Plan (Case Nos. 11-5568-EL-POR and 11-5569-EL-POR) for all approved 2017-20 Plan years. The Company and OMAEG agree to continue to track savings from OMA's membership with a goal of the savings achieved matching or exceeding the Company's annual benchmarks. This funding commitment will not increase the 2017-20 Plan budget. No costs associated with this provision will be allocated to the residential class.

O. Opt-Out Rights Not Affected. The Signatory Parties agree that nothing in this Stipulation affects a customer's opt-out rights under R.C. 4928.6610-4928.6616. The Signatory Parties further agree that nothing in this Stipulation will affect the ability of mercantile customers to opt out of the Company's 2017 to 2020 portfolio plan should legislation be enacted that would provide an opt-out option to mercantile customers similar to the opt out that exists under R.C. 4928.6610-4928.6616.[3]

P. Streamlined Opt-Out. The Company commits to working with the Commission's Staff, OEG, OMAEG, and IEU to develop, prior to January 1, 2017, a streamlined process for eligible customers to provide the Company a notice of intent to opt out under R.C. 4928.6612. AEP Ohio will include in its annual status report documentation as to how customer opt-outs affected the Company's program year actual costs, and shared savings.

Q. Linear Fluorescent Phase-Out. The Company agrees to accelerate the phasing out of incentives for commercial linear fluorescent lighting in favor of LED lighting such that standard commercial linear fluorescent lighting will not be eligible for incentives effective January 1, 2018.

R. Incentives for Smart Thermostats. The Company makes the following commitments with respect to Smart Thermostats:

1. Incentives for eligible smart thermostats in the 2017-20 Plan will be $75 for non-electrically heated homes and $100 for electrically heated homes

[3] ELPC, OEC, and EDF are not signing on to this provision and take no position about whether the terms of this Stipulation affect a customer's opt-out rights under R.C. 4928.6610-4928.6616.

in 2017; provided, however, that incentives will not exceed the cost of an eligible smart thermostat.

2. The Company agrees to work with IGS on a streamlined incentive process for eligible smart thermostats. IGS agrees that all energy and demand reductions will be fully attributable to the Company, and IGS agrees to work with the Company in a mutually agreed manner to ensure that customers know that the customer incentives are made available by the Company.

3. The Company agrees to reach out to Columbia Gas to explore potential for a streamlined rebate process for customers eligible for smart thermostat incentives from both the Company and Columbia Gas. However, the combined Company and Columbia Gas incentives will not exceed the cost of an eligible smart thermostat.

4. The Company commits to making available at least $1 million per year in incentives for Smart Thermostats under this Paragraph IV.R.

S. Local Government Pilot Offering. The Company agrees to work with MORPC to develop a local government pilot offering that is similar to the Company's Community Energy Savers program but goes further to engage local governments and constituents in maximizing their energy efficiency efforts using a broad approach of utility programs and incentives, as well as financial and public/private partnerships. The Company agrees to work with MORPC and other potential partners to develop funding details needed for the pilot at a minimum of $200,000 over the four year Plan period. MORPC and the Company will discuss metrics and outcomes. If the pilot results in cost reductions and improved net benefits of the overall Plan, a performance based incentive will be considered by the Company that may increase funding. The Company will describe to, and offer a reasonable time for feedback from, the Collaborative on any proposed performance-based incentive before such incentive is implemented. Results of the pilot will be reported to the Collaborative by MORPC on an annual basis. This funding commitment will not increase the 2017-20 Plan budget.

T. Status Report Waiver. The Signatory Parties support the Company's request to postpone the deadline for the Company's portfolio status report required by O.A.C. 4901:1-39-05(C) from March 15 to May 15 for each year of the 2017-20 Plan.

U. Energy Audits. The Company agrees to continue providing energy audits as a pilot program for business customers with interested Collaborative members' input on the details of the pilot program offerings based on budget availability as determined by the Company.

V. Home Energy Monitors. The Company will not use the approval of this Plan to argue against allowing customers to install home energy monitors purchased from other vendors. The issue of connectivity of other vendors' home energy monitors will be addressed in the gridSMART Collaborative.

W. LED Lighting Pilot Program for Kroger. The Company will partner with Kroger on the evaluation of incentives and the installation of interior LED lighting for a mutually agreed upon store in the Company's service territory through the 2017-20 Plan. The Company will determine the level of funding and the amount of the incentive for the pilot program with input from Kroger. Kroger agrees to participate in case studies to promote LED interior lighting for the grocery sector. In addition, the Company agrees to work with Kroger cooperatively on additional programs that will be mutually beneficial to both parties. This funding commitment will not increase the 2017-20 Plan budget. No costs associated with this provision will be allocated to the residential class.

X. Hearing to Determine Whether to Eliminate Annual Cost Cap in Years 2019-20. The Signatory Parties agree to the following procedure:

1. After this Stipulation is signed and filed with the Commission, AEP Ohio will submit testimony supporting the Stipulation, and the Commission will determine whether to approve the Stipulation. The Signatory Parties agree to support this Stipulation and to recommend that the Commission issue an expedited ruling approving this Stipulation so that the Company's 2017-20 Plan is effective on January 1, 2017 or as soon as possible thereafter.

2. After the Commission issues an order approving this Stipulation, a hearing will be held in 2017 to determine whether the $110,310,902 annual cost cap in Paragraph IV.A.3 above should be eliminated in Plan years 2019-2020.[4]

3. The only issue for the Commission's decision in the hearing referenced in Paragraph IV.X.2 above is whether the $110,310,902 annual cost cap should be eliminated in Plan years 2019-2020. That is, as proposed by this Stipulation, there are only two potential outcomes of the hearing: either (a) all provisions of the Stipulation and all aspects of the 2017-20 Plan continue in 2019-2020 with the $110,310,902 annual cost cap or (b) all provisions of this Stipulation and all aspects of the 2017-20 Plan continue without an annual cost cap in 2019-2020. No party will oppose the level of shared savings provided in this Stipulation or any other aspect of this Stipulation or the Application as modified by the Stipulation in arguing whether the cost cap should be eliminated in Plan years 2019-2020.

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[4] Environmental Defense Fund, Environmental Law and Policy Center, Ohio Environmental Council, and Natural Resources Defense Council do not support the spending cap for 2017 and 2018, but support the other elements of the Stipulation and do not oppose adoption of the Stipulation.

4. In the event the Commission determines that the annual cost cap should be eliminated in Plan years 2019-2020, the Company will remain bound by the Plan budget proposed in the direct testimony of Jon F. Williams, Exhibit JFW-1 (Volume 1) Table 7 (pages 21-22 of 180), filed in this proceeding. Under such circumstances, the program budget for 2020 will be the same as the program budget for 2019.

5. The Company will take no position in the hearing referenced in Paragraph IV.X.2 above except to ensure that the only issue being addressed is whether the annual cost cap should be eliminated in Plan years 2019-2020.

6. After the Commission issues an order approving this Stipulation, the Signatory Parties agree to work together to propose a procedural schedule to the Commission for the hearing referenced in Paragraph IV.X.2. If practicable, the Signatory Parties will propose a hearing in March 2017; otherwise, the Signatory Parties will propose a hearing as soon as practicable thereafter in 2017.

V. PROCEDURAL MATTERS

A. This Stipulation is submitted for purposes of this proceeding only. Except for purposes of enforcement of the terms of this Stipulation, this Stipulation (including the information and data contained therein or attached) will not be cited as precedent in any future proceeding for or against any Signatory Party or in any legislative matter in the Ohio General Assembly. The circumstances of this case are unique; thus, using the terms of this Stipulation in any other case or legislative matter is inappropriate and undermines the willingness of the parties to compromise. This Stipulation is a reasonable compromise involving a balancing of competing positions, and it does not necessarily reflect the position that one or more of the Signatory Parties would have taken if these issues had been fully litigated. This Stipulation recognizes that each Signatory Party may disagree with individual provisions of this Stipulation, but also recognizes that the Stipulation has value as a whole. Upon filing the Stipulation and consistent with any procedural schedule established in this case, the Company will file testimony supporting the Stipulation.

B. The Signatory Parties will support the Stipulation if the Stipulation is contested, and no Signatory Party will oppose an application for rehearing designed to defend the terms of this Stipulation. If the Stipulation is adopted by the Commission, the Signatory Parties will support the Stipulation in appeal of the decision.

C. The settlement agreement embodied in this Stipulation was reached only after negotiations between the Company, Staff, and intervenors, and it reflects a bargained compromise involving a balancing of competing interests. Because the Stipulation is an integrated settlement, it is expressly conditioned upon the Commission adopting the same in its entirety without material modification. Rejection of all or any part of the Stipulation by the Commission will be deemed to be a material modification for purposes of this provision. A Commission decision regarding the application of the cost cap for years 2019-2020, specifically as referenced in Paragraph IV.X, will not be considered a material modification for purposes of this provision. If the Commission materially modifies all or any part of this Stipulation, and such modifications are not acceptable to all the Signatory Parties, the Signatory Parties agree to convene immediately to work in good faith to attempt to formulate an alternative proposal that satisfies the intent of the Stipulation, or represents a reasonable equivalent thereto, to be submitted to the Commission for its consideration through a joint application for rehearing filed by all the Signatory Parties. If the Signatory Parties do not reach unanimous agreement with respect to such an alternative proposal, no alternative proposal shall be submitted. In that circumstance (the lack of unanimous agreement on an alternative proposal) any Signatory Party may, within thirty (30) days of the Commission's order, file an application for rehearing supporting the adoption of the Stipulation as filed or may, within thirty (30) days of the Commission's Order, file a notice with the Commission terminating the Stipulation and withdrawing from it with service to all Signatory Parties. No Signatory Party shall oppose an application for rehearing or termination notice filed by any other Signatory Party pursuant to this provision. Upon the Commission's issuance of an entry on rehearing or any other ruling that does not adopt this Stipulation in its entirety without material modification, or the alternative proposal, if one is submitted, a Signatory Party may terminate the Stipulation and withdraw from it by filing a notice with the Commission within thirty (30) days of such Commission's entry on rehearing or other ruling. No Signatory Party shall oppose the termination of the Stipulation by any other Signatory Party. Upon the filing of a notice of termination and withdrawal, the Stipulation shall immediately become null and void. In such event, this proceeding shall go forward from the procedural point at which the Stipulation was filed, and the parties will be afforded the opportunity to present evidence through witnesses, to cross-examine all witnesses, to present rebuttal testimony, and to brief all issues which will be decided based upon the record and briefs, as if this Stipulation had never been executed.

December 9, 2016

/s/ Steven T. Nourse
Steven T. Nourse
On Behalf of Ohio Power Company

/s/ Natalia V. Messenger [by STN per email authority]
Natalia V. Messenger
On Behalf of the Staff of the Public Utilities Commission of Ohio

/s/ Trent Dougherty [by STN per email authority]
Trent Dougherty
On Behalf of the Environmental Defense Fund

/s/ Madeline P. Fleisher [by STN per email authority]
Madeline P. Fleisher
On Behalf of the Environmental Law & Policy Center

/s/ Joseph Oliker [by STN per email authority]
Joseph Oliker
On Behalf of Interstate Gas Supply, Inc.

/s/ Angela Paul Whitfield [by STN per email authority]
Angela Paul Whitfield
On Behalf of the Kroger Company

/s/ Christopher J. Allwein [by STN per email authority]
Christopher J. Allwein
On Behalf of the Mid-Ohio Regional Planning Commission

/s/ Robert Dove [by STN per email authority]
Robert Dove
On Behalf of the Natural Resources Defense Council

/s/ Michael L. Kurtz [by STN per email authority]
Michael L. Kurtz
On Behalf of the Ohio Energy Group

/s/ Trent Dougherty [by STN per email authority]
Trent Dougherty
On Behalf of the Ohio Environmental Council

/s/ Chad A. Endsley [by STN per email authority]
Chad A. Endsley
On Behalf of the Ohio Farm Bureau Federation

/s/ Devin D. Parram [by STN per email authority]
Devin D. Parram
On Behalf of the Ohio Hospital Association

/s/ Kimberly W. Bojko [by STN per email authority]
Kimberly W. Bojko
On Behalf of the Ohio Manufacturers' Association Energy Group

/s/ Colleen L. Mooney [by STN per email authority]
Colleen L. Mooney
On Behalf of Ohio Partners for Affordable Energy

Avoided Energy and Demand Costs	The calculations are first year + NPV(remaining years)				
Discount Rate 8.29%	Year	Off-Peak $/Annual kWh	Off-Peak $/KW	On-Peak $/Annual kWh	On-Peak $/KW
	2015	$0.03412	$83.76	$0.03412	$83.76
	2016	$0.02665	$33.32	$0.03534	$33.32
	2017	$0.02741	$34.58	$0.03862	$34.58
	2018	$0.02822	$53.33	$0.04037	$53.33
	2019	$0.03031	$80.48	$0.04312	$80.48
	2020	$0.03205	$104.84	$0.04497	$104.84
	2021	$0.03359	$114.79	$0.04742	$114.79
	2022	$0.04794	$121.10	$0.06204	$121.10
	2023	$0.04859	$123.77	$0.06373	$123.77
	2024	$0.05093	$126.37	$0.06689	$126.37
	2025	$0.05282	$129.02	$0.06981	$129.02
	2026	$0.05498	$131.73	$0.07239	$131.73
	2027	$0.05664	$134.36	$0.07510	$134.36
	2028	$0.05827	$137.05	$0.07721	$137.05
	2029	$0.06058	$139.79	$0.07993	$139.79
	2030	$0.06238	$142.59	$0.08257	$142.59
	2031	$0.06462	$145.44	$0.08539	$145.44
	2032	$0.06697	$148.35	$0.08874	$148.35
	2033	$0.07020	$151.32	$0.09242	$151.32
	2034	$0.07158	$154.19	$0.09333	$154.19
	2035	$0.07402	$157.12	$0.09581	$157.12
	2036	$0.07649	$160.26	$0.09904	$160.26
	2037	$0.07890	$163.47	$0.10138	$163.47
	2038	$0.08150	$166.74	$0.10470	$166.74
	2039	$0.08317	$170.07	$0.10573	$170.07
	2040	$0.08564	$173.47	$0.10864	$173.47
	2041	$0.08749	$176.94	$0.11008	$176.94
	2042	$0.08933	$180.48	$0.11243	$180.48
	2043	$0.09167	$184.09	$0.11444	$184.09
	2044	$0.09350	$187.77	$0.11592	$187.77
	2045	$0.09627	$191.53	$0.11958	$191.53
	2046	$0.09843	$195.36	$0.12134	$195.36
	2047	$0.10083	$200.11	$0.12429	$200.11
	2048	$0.10328	$204.97	$0.12731	$204.97
	2049	$0.10579	$209.95	$0.13040	$209.95
	2050	$0.10836	$215.06	$0.13357	$215.06
	2051	$0.11099	$220.28	$0.13682	$220.28
	2052	$0.11369	$225.64	$0.14014	$225.64
	2053	$0.11645	$231.12	$0.14355	$231.12
	2054	$0.11928	$236.74	$0.14704	$236.74

	2055	$0.12218	$242.49	$0.15061	$242.49
	2056	$0.12515	$248.39	$0.15427	$248.39
	2057	$0.12819	$254.43	$0.15802	$254.43
	2058	$0.13131	$260.61	$0.16186	$260.61
	2059	$0.13450	$266.94	$0.16580	$266.94
	2060	$0.13777	$273.43	$0.16983	$273.43
	2061	$0.14112	$280.08	$0.17396	$280.08
	2062	$0.14455	$286.88	$0.17818	$286.88
	2063	$0.14806	$293.86	$0.18252	$293.86
	2064	$0.15166	$301.00	$0.18695	$301.00
	2065	$0.15535	$308.32	$0.19150	$308.32
	2066	$0.15912	$315.81	$0.19615	$315.81
	2067	$0.16299	$323.49	$0.20092	$323.49
	2068	$0.16695	$331.35	$0.20580	$331.35
	2069	$0.17101	$339.40	$0.21080	$339.40
	2070	$0.17517	$347.65	$0.21593	$347.65
	2071	$0.17942	$356.10	$0.22117	$356.10
	2072	$0.18379	$364.76	$0.22655	$364.76
	2073	$0.18825	$373.62	$0.23206	$373.62
	2074	$0.19283	$382.70	$0.23770	$382.70
	2075	$0.19752	$392.01	$0.24347	$392.01
	2076	$0.20232	$401.53	$0.24939	$401.53
	2077	$0.20723	$411.29	$0.25545	$411.29
	2078	$0.21227	$421.29	$0.26166	$421.29
	2079	$0.21743	$431.53	$0.26802	$431.53
	2080	$0.22271	$442.02	$0.27454	$442.02
	2081	$0.22813	$452.76	$0.28121	$452.76
	2082	$0.23367	$463.77	$0.28805	$463.77
	2083	$0.23935	$475.04	$0.29505	$475.04
	2084	$0.24517	$486.58	$0.30222	$486.58
	2085	$0.25113	$498.41	$0.30956	$498.41
	2086	$0.25723	$510.53	$0.31709	$510.53
	2087	$0.26349	$522.93	$0.32479	$522.93
	2088	$0.26989	$535.64	$0.33269	$535.64
	2089	$0.27645	$548.66	$0.34078	$548.66
	2090	$0.28317	$562.00	$0.34906	$562.00
	2091	$0.29005	$575.66	$0.35754	$575.66
	2092	$0.29710	$589.65	$0.36623	$589.65
	2093	$0.30432	$603.98	$0.37513	$603.98
	2094	$0.31172	$618.66	$0.38425	$618.66
	2095	$0.31930	$633.70	$0.39359	$633.70
	2096	$0.32706	$649.10	$0.40316	$649.10
	2097	$0.33501	$664.88	$0.41296	$664.88
	2098	$0.34315	$681.04	$0.42299	$681.04

SETTLEMENT EXHIBIT JFW-1

SETTLEMENT EXHIBIT JFW-2

This is a preliminary, good faith estimate of AEP Ohio's initial 2017 annual operating budget, which has been revised based on the December 9, 2016 Stipulation. This budget is preliminary and may change. AEP Ohio reserves the right to adjust program budgets or to eliminate programs based on further budgetary development and operational realities.

AEP Ohio 2017-2020 EE/PDR Plan Programs	Average Annual Plan Budget in Application	Estimated 2017 Plan Budget Based on Stipulation
Consumer Sector		
Appliance Recycling	$3.4	$2.7
Community Assistance	$8.5	$6.0
e3smart	$1.2	$1.2
Efficient Products	$8.6	$12.6
Behavior Change	$1.5	$1.5
In-Home Energy	$5.2	$0.0
New Home	$2.6	$2.0
Manufactured Home	$0.8	$0.8
Intelligent Home and DR (exp)	$4.2	$4.2
Intelligent Home and DR (cap)	$2.3	$2.3
Consumer Sector Total	$38.3	$33.3
Business Sector		
Business Behavior Change	$0.3	$0.0
Continuous Improvement	$2.6	$2.5
Data Center	$2.5	$2.3
Efficient Products for Business	$13.8	$12.8
New Construction	$7.0	$5.9
Express	$4.2	$3.6
Microbusiness	$1.4	$0.0
Process Efficiency	$5.4	$3.9
Retro-commissioning	$1.6	$1.0
Self-Direct	$1.5	$0.8
CHP	$3.4	$2.5
Energy Efficiency Auction	$0.2	$0.2
T&D Customer Eff. Projects	$0.2	$0.0
Business Outreach	$1.6	$1.6
Business Sector Total	$45.7	$37.1
Cross Sector Costs		
Multifamily	$2.5	$0.0
Agriculture	$0.3	$0.3
Customer EE Assessment Survey	$0.2	$0.0
Efficient Financing	$1.0	$0.0
Community Energy Savers	$0.5	$0.5
Education & Training	$0.4	$0.3
Targeted Advertising	$6.0	$4.0
Research and Development	$2.5	$3.5
Cross Sector Total	$13.4	$8.6
PLAN TOTAL	$97.4	$79.0

Settlement Exhibit JFW-3

Schedule 1

AEP Ohio
Calculation of Energy Efficiency and Peak Demand Reduction Rider January 2017 - December 2020
per Stipulation filed December 9, 2016

Portfolio Costs:

Class	Base D Revenue Allocators	Program Costs	Shared Savings	Capital Costs	PJM EE Revenue	Pre-Cap Total	Adjusted Total
	($)	($)	($)	($)	($)	($)	($)
Residential		$ 143,580,000	$ 21,233,677	$ 5,637,440	$ (8,634,552)	$ 161,816,564	$ 161,816,564
GS Non Demand	21,697,427	$ 14,362,695	$ 9,207,179	$ -	$ (863,738)	$ 22,706,136	$ 23,817,289
GS Demand	207,567,947	$ 137,400,397	$ 88,080,268	$ -	$ (8,262,926)	$ 217,217,739	$ 227,847,566
Lighting	15,041,695	$ 9,956,908	$ 6,382,857	$ -	$ (598,784)	$ 15,740,981	$ 4,000,000
Total	244,307,068	$ 305,300,000	$ 124,903,980	$ 5,637,440	$ (18,360,000)	$ 417,481,420	$ 417,481,420

Portfolio Rates:

Class	Billing Determinants		EE/PDR Portfolio Rates				Revenue Verification
			($/kWh)	($/bill)	($/kW)	(% of base D)	($)
Residential	57,264,785,612	kWh	0.0028258	-	-	-	161,818,831
GS Non Demand	5,748,196	bills	-	4.14	-	-	23,797,531
GS Demand	288,001,476	kW	-	-	0.79	-	227,521,166
Lighting	$60,166,781		-	-	-	6.64819%	4,000,002
Total							417,137,531

IRP Costs and Rate:

Class	IRP Rider Costs	PJM IRP Revenue	Net IRP Costs	Rider kWh	IRP Rate
					($/kWh)
Total	$ 69,028,432	$ (16,965,279)	$ 52,063,153	178,816,310,301	0.0002912

Ohio Power Company
Typical Bill Comparison
2017-2020 EE/PDR Plan - per filed Stipulation
Columbus Southern Power Rate Zone

Tariff	kWh	KW	Current	Proposed	$ Difference	Difference
Residential						
RR1 Annual	100		$24.46	$24.30	-$0.16	-0.7%
	250		$42.17	$41.81	-$0.36	-0.9%
	500		$71.71	$70.98	-$0.73	-1.0%
RR Annual	750		$101.23	$100.15	-$1.08	-1.1%
	1,000		$130.76	$129.31	-$1.45	-1.1%
	1,500		$189.81	$187.63	-$2.18	-1.2%
	2,000		$248.84	$245.95	-$2.89	-1.2%
GS-1						
	375	3	52.27	55.27	$3.00	5.7%
	1,000	3	117.07	118.16	$1.09	0.9%
	750	6	91.16	93.02	$1.86	2.0%
	2,000	6	220.72	218.77	-$1.95	-0.9%
GS-2 Secondary						
	1,500	12	$235.60	$240.50	$4.90	2.1%
	4,000	12	$417.47	$414.75	-$2.72	-0.7%
	6,000	30	$726.01	$731.43	$5.42	0.8%
	10,000	30	$1,016.68	$1,009.90	-$6.78	-0.7%
	10,000	40	$1,107.37	$1,108.49	$1.12	0.1%
	14,000	40	$1,398.00	$1,386.93	-$11.07	-0.8%
	12,500	50	$1,379.71	$1,381.11	$1.40	0.1%
	18,000	50	$1,777.65	$1,762.29	-$15.36	-0.9%
	15,000	75	$1,788.11	$1,801.63	$13.52	0.8%
	30,000	150	$3,549.77	$3,576.84	$27.07	0.8%
	60,000	300	$7,073.18	$7,127.31	$54.13	0.8%
	100,000	500	$11,771.05	$11,861.27	$90.22	0.8%
GS-2 Primary						
	100,000	1,000	$15,033.20	$15,518.42	$485.22	3.2%

Ohio Power Company
Typical Bill Comparison
2017-2020 EE/PDR Plan - per filed Stipulation
Columbus Southern Power Rate Zone

Tariff	kWh	KW	Current	Proposed	$ Difference	Difference
GS-3 Secondary						
	30,000	75	$2,871.13	$2,838.95	-$32.18	-1.1%
	50,000	75	$4,313.18	$4,220.04	-$93.14	-2.2%
	30,000	100	$3,098.35	$3,085.92	-$12.43	-0.4%
	36,000	100	$3,530.96	$3,500.24	-$30.72	-0.9%
	60,000	150	$5,715.86	$5,651.49	-$64.37	-1.1%
	100,000	150	$8,599.94	$8,413.66	-$186.28	-2.2%
	90,000	300	$9,242.29	$9,204.99	-$37.30	-0.4%
	120,000	300	$11,405.36	$11,276.63	-$128.73	-1.1%
	150,000	300	$13,568.42	$13,348.25	-$220.17	-1.6%
	200,000	300	$17,173.51	$16,800.95	-$372.56	-2.2%
	150,000	500	$15,386.25	$15,324.08	-$62.17	-0.4%
	180,000	500	$17,549.30	$17,395.69	-$153.61	-0.9%
	200,000	500	$18,991.34	$18,776.78	-$214.56	-1.1%
	325,000	500	$28,004.09	$27,408.55	-$595.54	-2.1%
GS-3 Primary						
	300,000	1,000	$28,781.90	$28,657.56	-$124.34	-0.4%
	360,000	1,000	$32,900.48	$32,593.27	-$307.21	-0.9%
	400,000	1,000	$35,646.20	$35,217.08	-$429.12	-1.2%
	650,000	1,000	$52,806.95	$51,615.88	-$1,191.07	-2.3%
GS-4						
	1,500,000	5,000	$109,509.00	$112,465.85	$2,956.85	2.7%
	2,500,000	5,000	$166,879.60	$169,174.35	$2,294.75	1.4%
	3,250,000	5,000	$209,907.56	$211,705.73	$1,798.17	0.9%
	3,000,000	10,000	$212,714.90	$218,628.60	$5,913.70	2.8%
	5,000,000	10,000	$327,456.10	$332,045.60	$4,589.50	1.4%
	6,500,000	10,000	$413,512.00	$417,108.35	$3,596.35	0.9%
	6,000,000	20,000	$419,126.70	$430,954.10	$11,827.40	2.8%
	10,000,000	20,000	$648,609.10	$657,788.10	$9,179.00	1.4%
	13,000,000	20,000	$820,720.90	$827,913.60	$7,192.70	0.9%
	15,000,000	50,000	$1,038,362.10	$1,067,930.60	$29,568.50	2.9%
	25,000,000	50,000	$1,612,068.10	$1,635,015.60	$22,947.50	1.4%
	32,500,000	50,000	$2,042,347.60	$2,060,329.35	$17,981.75	0.9%

* Typical bills assume 100% Power Factor

Ohio Power Company
Typical Bill Comparison
2017-2020 EE/PDR Plan - per filed Stipulation
Ohio Power Rate Zone

Tariff	kWh	KW	Current	Proposed	Difference	Difference
Residential	100		$24.90	$24.74	-$0.16	-0.6%
	250		$43.27	$42.91	-$0.36	-0.8%
	500		$73.89	$73.16	-$0.73	-1.0%
	750		$104.50	$103.42	-$1.08	-1.0%
	1,000		$135.10	$133.65	-$1.45	-1.1%
	1,500		$196.33	$194.15	-$2.18	-1.1%
	2,000		$257.55	$254.66	-$2.89	-1.1%
GS-1	375	3	$56.96	$59.96	$3.00	5.3%
Secondary	1,000	3	$113.68	$114.77	$1.09	1.0%
	750	6	$91.00	$92.86	$1.86	2.0%
	2,000	6	$204.47	$202.52	-$1.95	-1.0%
GS-2	1,500	12	$264.31	$269.21	$4.90	1.9%
	4,000	12	$457.92	$455.20	-$2.72	-0.6%
	6,000	30	$779.07	$784.49	$5.42	0.7%
	10,000	30	$1,088.48	$1,081.70	-$6.78	-0.6%
	10,000	40	$1,180.98	$1,182.10	$1.12	0.1%
	14,000	40	$1,490.35	$1,479.28	-$11.07	-0.7%
	12,500	50	$1,466.84	$1,468.24	$1.40	0.1%
	18,000	50	$1,890.54	$1,875.18	-$15.36	-0.8%
	15,000	75	$1,891.45	$1,904.97	$13.52	0.7%
	30,000	100	$3,274.47	$3,262.04	-$12.43	-0.4%
	36,000	100	$3,735.18	$3,704.46	-$30.72	-0.8%
	30,000	150	$3,736.96	$3,764.03	$27.07	0.7%
	60,000	300	$7,428.00	$7,482.13	$54.13	0.7%
	90,000	300	$9,731.60	$9,694.30	-$37.30	-0.4%
	100,000	500	$12,349.40	$12,439.62	$90.22	0.7%
	150,000	500	$16,188.74	$16,126.57	-$62.17	-0.4%
	180,000	500	$18,492.33	$18,338.72	-$153.61	-0.8%

Ohio Power Company
Typical Bill Comparison
2017-2020 EE/PDR Plan - per filed Stipulation
Ohio Power Rate Zone

Tariff	kWh	KW	Current	Proposed	Difference	Difference
GS-3	18,000	50	$1,891.56	$1,876.20	-$15.36	-0.8%
Secondary	30,000	75	$3,044.76	$3,012.58	-$32.18	-1.1%
	50,000	75	$4,580.52	$4,487.38	-$93.14	-2.0%
	36,000	100	$3,737.21	$3,706.49	-$30.72	-0.8%
	30,000	150	$3,739.99	$3,767.06	$27.07	0.7%
	60,000	150	$6,043.61	$5,979.24	-$64.37	-1.1%
	100,000	150	$9,115.12	$8,928.84	-$186.28	-2.0%
	120,000	300	$12,041.32	$11,912.59	-$128.73	-1.1%
	150,000	300	$14,344.96	$14,124.79	-$220.17	-1.5%
	200,000	300	$18,184.33	$17,811.77	-$372.56	-2.1%
	180,000	500	$18,502.51	$18,348.90	-$153.61	-0.8%
	200,000	500	$20,038.26	$19,823.70	-$214.56	-1.1%
	325,000	500	$29,636.72	$29,041.18	-$595.54	-2.0%
GS-2	200,000	1,000	$23,596.93	$23,777.37	$180.44	0.8%
Primary	300,000	1,000	$30,915.10	$30,790.76	-$124.34	-0.4%
GS-3	360,000	1,000	$35,326.36	$35,019.15	-$307.21	-0.9%
Primary	400,000	1,000	$38,253.67	$37,824.55	-$429.12	-1.1%
	650,000	1,000	$56,549.35	$55,358.28	-$1,191.07	-2.1%
GS-2						
Subtransmission	1,500,000	5,000	$118,569.66	$117,947.96	-$621.70	-0.5%
GS-3	2,500,000	5,000	$182,403.06	$178,733.56	-$3,669.50	-2.0%
Subtransmission	3,250,000	5,000	$230,201.99	$224,246.64	-$5,955.35	-2.6%
GS-4	3,000,000	10,000	$224,272.41	$230,186.11	$5,913.70	2.6%
Subtransmission	5,000,000	10,000	$346,971.81	$351,561.31	$4,589.50	1.3%
	6,500,000	10,000	$438,996.36	$442,592.71	$3,596.35	0.8%
	10,000,000	20,000	$688,020.31	$697,199.31	$9,179.00	1.3%
	13,000,000	20,000	$872,069.41	$879,262.11	$7,192.70	0.8%
GS-4	25,000,000	50,000	$1,711,165.81	$1,734,113.31	$22,947.50	1.3%
Transmission	32,500,000	50,000	$2,171,288.56	$2,189,270.31	$17,981.75	0.8%

* Typical bills assume 100% Power Factor

CERTIFICATE OF SERVICE

In accordance with Rule 4901-1-05, Ohio Administrative Code, the PUCO's e-filing system will electronically serve notice of the filing of this document upon the following parties. In addition, I hereby certify that a service copy of the foregoing *Direct Testimony in Support of the Stipulation by Jon F. Williams on Behalf of Ohio Power Company* was sent by, or on behalf of, the undersigned counsel to the following parties of record this 15th day of December 2016, via electronic transmission.

/s/ Steven T. Nourse
Steven T. Nourse

Email Service List:

amilam@ofbf.org
bojko@carpenterlipps.com
callwein@keglerbrown.com
cendsley@ofbf.org
christopher.healey@occ.ohio.gov
cmooney@ohiopartners.org
dborchers@bricker.com
dparram@bricker.com
dstinson@bricker.com
fdarr@mwncmh.com
ghiloni@carpenterlipps.com
jfinnigan@edf.org
jkylercohn@BKLlawfirm.com
john.jones@ohioattorneygeneral.gov
joliker@igsenergy.com
lcurtis@ofbf.org
mdortch@kravitzllc.com
mfleisher@elpc.org
mkurtz@bkllawfirm.com
mleppla@theoec.org
mpritchard@mwncmh.com
msmckenzie@aep.com
mwarnock@bricker.com
natalia.messenger@ohioattorneygeneral.gov
paul@CarpenterLipps.com
perko@carpenterlipps.com
rdove@attorneydove.com
rkelter@elpc.org
stnourse@aep.com
swilliams@nrdc.org
tdougherty@theoec.org
rick.sites@ohiohospitals.org