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

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 diverse 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), 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.[1] 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, Revised Code, and an electric utility operating company subsidiary of American Electric Power Company, Inc.

WHEREAS, the Commission in its August 8, 2012, Opinion and Order in the Company's second electric security plan proceedings directed AEP Ohio to continue its gridSMART Phase 1 project and to initiate Phase 2 of the gridSMART project. *In the Matter of the Application of Columbus Southern Power Company and Ohio Power Company for Authority to Establish a Standard Service Offer Pursuant to Section 4928.143, Revised Code, in the Form of an Electric Security Plan*, Case No. 11-346-EL-SSO, et al., Opinion and Order at 62 (August 8, 2012). The Commission's order further directed the Company to file its proposed expansion of the gridSMART project – gridSMART Phase 2 – as part of a new gridSMART application. *Id.*

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

WHEREAS, on September 9, 2013, AEP Ohio commenced this proceeding by filing an application proposing the initiation of Phase 2 of the gridSMART project and establishment of the gridSMART Phase 2 rider as the mechanism for recovering gridSMART project investment beyond Phase 1.

WHEREAS, on December 14, 2015, a Joint Stipulation and Recommendation Agreement in the Purchase Power Agreement (PPA) proceedings, Case Numbers 14-1693-EL-RDR *et al.*, ("PPA Stipulation") was filed by AEP Ohio and several Signatory Parties that includes provisions related to the gridSMART Phase 2 docket.

WHEREAS, on March 31, 2016, the Commission issued an Opinion and Order modifying and adopting the PPA Stipulation; that decision is subject to rehearing and is not yet a final order. Accordingly, as further referenced below, the commitments from the PPA Stipulation that are incorporated in this Stipulation are dependent upon the Commission issuing a final order in the PPA proceedings adopting the PPA Stipulation without material modification.

WHEREAS, AEP Ohio and the Staff agreed to support Sierra Club's full intervention in this case if the Commission adopts the PPA Stipulation without material modification.

WHEREAS, AEP Ohio's gridSMART Phase 2 Proposal takes into account the Grid Modernization plan outlined in the PPA Stipulation Section III.A.15.G (page 29) which is fully consistent with this Stipulation.

WHEREAS, the Signatory Parties agree 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 find as follows:

1. The Company shall be granted a limited approval of recovery of reasonable costs to complete the following:

A. BUSINESS CASE DEVELOPMENT

i. The Company submitted its Business Case for gridSMART Phase 2 as Attachment A to its Application in this case, which demonstrated a benefit-cost ratio of 2.8 on a cash basis and 2.0 on a net present value basis. Based on additional compromises agreed to by the Company in the context of this Stipulation (operational cost savings credit, additional VVO deployment etc.), the benefit-cost ratio remains the same even with additional investment. Moreover, as provided below, there will be a formal evaluation of benefits to be reported which will serve to further illustrate the benefits associated with the proposed implementation. Accordingly, the Signatory Parties agree that no further Business Case development is needed.

B. PHASE 2 FEASIBILITY AND SELECTION STUDIES

i. Engineering feasibility and selection studies will be completed for distribution automation circuit reconfiguration (DACR) and advanced meter infrastructure (AMI) scopes of work as originally proposed in the Company's application.

ii. The Company will use best efforts for completion and submittal of the feasibility and selection studies within one year of approval of the Stipulation.

iii. The Company shall also provide deployment selection detail and documentation to show how to select deployment activities that result in the maximum customer and company benefits for the technologies proposed in the original scope of the Phase 2 application.

iv. The primary purpose of the finalized feasibility and selection studies in parallel to deployment is to fully document the circuit selection process including examination of the expected reliability considerations associated with DACR.

C. DEPLOYMENT OF AMI AND DACR TECHNOLOGIES

i. The Company shall be authorized to move forward with deployment of AMI meters and DACR while the feasibility and selection studies are being finalized.

a. AMI deployment shall be the approximately 894,000 AMI meters proposed in the Application. The Company shall initiate efforts to develop the needed systems and/or processes to provide the customers and the CRES providers with customer interval data. The Company agrees, where possible, to develop the systems and/or processes to provide the customers and CRES with interval data using a phase-in approach and to transfer as much data as possible to the customers and the CRES through the various implementation stages.

b. DACR deployment shall involve a total of 250 circuits as referenced in the Application. The Company shall consider prioritizing those circuits that have adequate circuit ties or are adjacent to other circuits and have a history of appearing on the AEP Ohio Rule 11 Report (worst performing circuit list) in recent years. The Company shall determine the location of DACR technology deployment based on these and other relevant criteria and will work with the Staff to obtain their input regarding which Rule 11 circuits will yield maximum customer reliability benefits for the 250 circuits. The Company's selection and scheduling of the 250 circuits will be finalized after considering the Staff's input regarding the above factors.

c. The AMI deployment is expected to take approximately forty-eight months from approval of the Stipulation. The DACR deployment is expected to take approximately seventy-two months from approval of the Stipulation.

D. FULL SYSTEM FEASIBILITY STUDY

i. In conjunction with the Phase 2 feasibility and selection studies described in Section B above, the Company shall conduct a feasibility study that encompasses all circuits and all meters to determine the full extent of cost justified future possible deployments of AMI, DACR, and VVO (including Volt-Amp Reactive power and Conservation Voltage Reduction technology). The VVO cost/benefit study shall be broken down by distribution circuit and substation, to determine the total amount of investment which would be cost-effective.

ii. Any additional future deployments of smartgrid technology beyond what is outlined in Section IV.1.C and IV.3 will be determined through a potential new gridSMART Phase 3 rider filing based upon completion of Phase 2including a cost/benefit study and a proposal for seeking cost recovery of deployment of all cost-effective Volt/Var technology. Nothing herein requires the Company to wait until after Phase 2 is completed to begin planning or filing for such additional future deployments. AEP Ohio agrees not to seek any additional incentive for installing the equipment or shared savings for any resulting energy savings.[2] If the filing is approved, the Company agrees to develop a deployment schedule and deploy the equipment in a timely manner.

2. Distribution Automation Circuit Reconfiguration (DACR) Reliability Improvement

The Company will annually report its performance improvements to the Staff for Phase 2 circuits equipped with DACR for more than six months. Annual reports will be submitted by August 15 based on the prior period ending June 30. The first report will occur when there are at least ten circuits that have had DACR technology installed for at least six months. The Company commits to achieve a 3-year average annual SAIFI improvement of 15.8%, excluding major events, on the aggregated performance of that group of circuits. In other words, the performance metric is expected to show that SAIFI performance (based on a 3-year rolling average) for the group of circuits that have had DACR technology installed for at least six months is 15.8% better than SAIFI performance on the same group of circuits would have been without DACR. This performance metric shall continue to be calculated annually through 2021. Since reliability improvement has many factors outside of the Company's control, the Company will have a secondary metric regarding successful operation of the DACR systems to be used if the SAIFI savings target is not reached. For this secondary metric, the Company expects to achieve a 80% successful operation of the DACR systems (based on a 3-year rolling average) for the aggregate of circuits equipped with DACR more than six months. The secondary metric will only be evaluated if the group of circuits experienced an average of at least 15 reconfigurable events per year and will incorporate factors agreed to by Staff and the Company. If the minimum requirement of 15 reconfigurable events is triggered for a particular year, that year will be excluded from the 3-year rolling average calculations and an additional historical year will instead be included (*i.e.*, an additional year preceding the earliest year that was otherwise to be included in the 3-year rolling average calculation). If neither measure is met, the Company must submit to Staff the reasons both measures were not met as well as an action plan in order to meet the measures the following year. If the commitment is missed 2 years in a row, the Company is required to file a report explaining its failure and show cause as to why the misses should not constitute a violation of the Stipulation; thereafter, the Commission can determine whether the Company has violated the Stipulation.

3. <u>Volt VAR Optimization (VVO)</u>

The Signatory Parties agree that the Company will move forward with a 160-circuit capital deployment of VVO with the costs to be recovered under the gridSMART Phase II rider with no shared savings and no incentive ROE.[3] The Company will make additional recoverable capital investments for any cost disallowed by a final Commission order so that the total capital investment is at least $20M (the Company reserves its normal rights to rehearing and appeal for any disallowance order). The parties agree that any lost distribution residential revenues

[2] This is commitment arose as part of the PPA Stipulation and is dependent upon that agreement being adopted by the Commission through a final order without material modification.

[3] This is commitment arose as part of the PPA Stipulation and is dependent upon that agreement being adopted by the Commission through a final order without material modification. If the Stipulation is terminated, the Company will make a $20 million investment in lieu of the 160-circuit commitment, subject to the remaining terms of this paragraph.

associated with the VVO deployment shall be recovered through the current decoupling pilot approved in Case 11-351-EL-AIR or another mechanism if that pilot ends prior to the filing of a base distribution case post installation of VVO. The parties agree that another mechanism will be implemented for the Company to recover any lost distribution revenue associated with demand-metered commercial and industrial class customers. The parties agree that the proposed VVO investment in this paragraph resolves the Company's outstanding obligation for renewable or similar investment associated with the 2009 SEET case (Case No.10-1261-EL-UNC). All of the Signatory Parties recommend the Commission's adoption of the entire Stipulation including this paragraph as the order in this case and agree to affirmatively support the same. All Signatory Parties agree that the Commission can decide, based on an appropriate procedure established to consider this issue, whether to adopt this paragraph as part of the order in this case or sever the provision from the Stipulation. The Signatory Parties agree that rejection of the entire paragraph by the Commission would not constitute a modification of the Stipulation that could trigger withdrawal under Paragraph V.3 below, but a partial adoption or partial rejection does constitute a modification that could trigger a withdrawal.

AEP Ohio will prioritize deployment timelines for Company selected circuits with OHA members for any Volt-Var Optimization deployments over the term of the Affiliate PPA, when determining the implementation plan. AEP will work with OHA and the Staff to determine which circuits will be prioritized taking into account the benefit to the circuit in comparison to others and construction/staging considerations.

The VVO deployment is expected to take approximately seventy-two months from approval of the Stipulation.

AEP Ohio shall keep the equipment operational during the useful life of the equipment and shall file annual reports with the Commission stating the amount of energy reductions, peak demand reduction, and monetary savings and greenhouse gas emission reductions resulting from this equipment.

4. **gridSMART Collaborative**

The Company shall establish a gridSMART Collaborative process, separate from the existing EE/PDR Collaborative, to advise on the benefit analysis, structure of time of use rate offerings, provide deployment updates, review customer enrollment activities, annually report the level of customer savings being achieved, discuss customer and CRES access to interval data, discuss possible ways for customers to connect in-home technologies with real time electric usage data, and review the performance and environmental metrics. The gridSMART Collaborative shall be established and administered monthly through the project deployment timeframe for all stakeholders.

5. **Time Differentiated Rates and other gridSMART Tariffs**

A. The Company agrees to work with the Staff and Competitive Retail Electricity Suppliers (CRES) to administer a Time-of-Use (TOU) Transition plan. The CRES agree to develop similar programs to the Company's SMART Shift (2-tier Time of Use), SMART Shift Plus (3-tier TOU plus Critical Peak Pricing), and SMART Cooling (Thermostat) programs within 6 months of the Stipulation being adopted, using the same on-off peak meter program structure. Costs associated with the TOU plan and interval data portal will be recovered through the gridSMART rider; if the Company through its own fault departs significantly from the timelines outlined in this section, the Commission can consider reducing recovery of such costs.

B. The TOU Transition plan will include the following steps:

i. DEVELOP THE SYSTEM AND PROCESSES (6 months)

Within approximately 6 months of an approved Stipulation Order, the Company will complete the development of the necessary systems and processes to enable CRES TOU programs similar to the existing gridSMART TOU and Consumer Programs. As part of the transitional period, the gridSMART project shall include the capability of the Company to provide rate ready and bill ready billing for time of use rates offered by CRES providers that meet the same criteria of AEP Ohio's SMART Shift and SMART Shift plus. In addition, the Company will support bill ready billing for customers on CRES Smart Cooling programs, where compliance and customer credit calculations will be performed by the CRES. The monthly billing cycle totals per period (*i.e.*, on-peak and off-peak) will be provided to CRES providers within the time windows required by CRES providers for bill-ready and rate-ready billing. The Company shall continue to gather CRES input associated with these systems/processes. The Company will work with the CRES providers offering these programs and engage them in testing through the development effort. The Company shall build its systems and/or processes to allow for CRES Settlement via actual load data for TOU customers. The Company will add an AMI flag to the enrollment list to allow the CRES providers to be able to market to the gridSMART customers with an AMI meter.

ii. CUSTOMER COMMUNICATIONS (6 months)

After completion of the development of the system, the Company will disseminate customer communications to aid customers in moving to the CRES with similar program options. These communications will inform the customer of similar CRES programs for the customer to switch to if they so desired and will be administered over a timeframe of approximately six months. The Company agrees to seek input from interested parties in the gridSMART Collaborative to develop the plan and customer communications during the System Development and Customer Communications Phases.

iii. TOU COMPETITIVE REVIEW

Consistent with the Commission's Finding and Order in Case No. 12-3151-EL-COI, the Company shall agree to propose, within 90 days following the adoption of this Stipulation by the Commission, a simple two-tier, non-technology TOU rate reflecting default load auction prices for these AMI customers to be used as specified below only if the CRES TOU market has not evolved to be "sufficiently competitive" after the Customer communication phase.

C. Within 90 days after commissioning the necessary systems and engaging the customers (approximately three months after the systems and processes and customer communications steps are both completed), the Company and Staff will coordinate to file a report containing the latest data available concerning CRES TOU offerings. Within 90 days after the report is filed, the Commission will either determine if the CRES TOU market is “sufficiently competitive” or establish a process for reaching that determination. If the CRES TOU offers are deemed “sufficiently competitive", the Company’s simple AMI TOU tariff filing will be dismissed and the Company’s pending application requesting to withdraw its existing experimental TOU tariffs (Case No. 13-1937-EL-ATA) will be deemed approved and such tariffs will be discontinued. The Company will work with customers who have not enrolled in a CRES TOU to transition them to a program of their choice including CRES TOU or the Company’s non-TOU SSO. Until such time that the Commission makes a ruling under this paragraph regarding the sufficiency of competitive CRES TOU offers, the Company’s 13-1937 filing will be held in abeyance. If the Commission deems that the CRES programs are not sufficiently competitive, the Commission shall grant the Company’s 13-1937 application and adopt the Company’s newly-proposed AMI TOU program only for as long as it takes the market to develop. The Company will work with the customers that remain on the gridSMART TOU programs to transition them to the new TOU or to a CRES TOU offer or the Company’s non-TOU SSO. Once the Commission subsequently determines that the CRES TOU offers are sufficiently competitive, the Company’s AMI TOU tariffs will be discontinued and any remaining customers will be transitioned to a program of their choice including CRES TOU or the Company’s non-TOU SSO.

D. The Company agrees to develop a CRES AMI interval data portal. The Company will target completion of the CRES AMI interval data portal in approximately 24 months after approval of the Stipulation. After completion of the CRES AMI interval data portal, CRES providers will have the opportunity to offer more strategic and competitive TOU options and programs. The Company shall build its system and/or processes to allow for CRES Settlement via actual load data after completion of the CRES AMI interval data portal for all CRES TOU customers. The Company will install Zigbee or other similar communication module within the AMI meters to facilitate program offerings with in-home technologies.

6. <u>Rider Recovery Mechanism</u>

Costs incurred for the gridSMART Phase 2 project shall be recovered through a rider rate filed quarterly with automatic approval 30 days after the filing unless otherwise determined by the Commission. These costs will be subject to an annual audit for prudency and no carrying charges will be imposed on over/under recoveries due to quarterly collections. The costs will be allocated and recovered from customers in the same manner as gridSMART Phase 1.

By Order issued in the ESP III (Case No. 13-2385-EL-SSO et al. February 25, 2015 Opinion and Order at 50-52) the Commission granted the Company’s request to continue the gridSMART rider with certain modifications as proposed by the Company. Consistent with the Commission's directive in the ESP II (Case No. 11-346-EL-SSO Jan. 30, 2013 Entry on Rehearing at 53.), the Company, within 90 days after the expiration of ESP II, was required to file an application for review and reconciliation of the final year of the gridSMART Phase 1 rider (this was filed in Case No. 15-1513-EL-RDR). Additionally, in the ESP III Order the Commission approved AEP Ohio’s request to transfer the approved capital cost balance into the DIR, and to also transfer any unrecovered O&M balance into the gridSMART Phase 2 rider, after the Commission has reviewed and reconciled gridSMART Phase 1 costs. Therefore, upon a

Commission Order in this case, the Company will move the approved gridSMART Phase 1 assets to the DIR and file for any unrecovered O&M expenses in a gridSMART Phase 2 rider application.

Because meters are capitalized at the time of purchase, the value of uninstalled gridSMART meters authorized for recovery through this Rider shall on average include only the aggregate supply necessary for approximately three months of meter deployment activity. Uninstalled meters in excess of this limitation will not be eligible for recovery through any other rider.

Concurrent with the inclusion of costs in the gridSMART Phase 2 rider, a credit reflecting projected operational cost savings will be incorporated so that it offsets the costs otherwise recovered through the rider (*i.e.*, the Company will recover costs through the rider that are net of the operational cost savings credit). This initial cost savings credit will flow back $400,000 per quarter starting in the fourth quarter of the first year and will not be adjusted or reconciled during the time it will be in effect, which will extend until the Commission adopts a new operational cost savings credit as described below.

The Commission Staff may retain an external consultant to review the Phase 1 and Phase 2 operational benefits of the gridSMART project. The consultant shall be selected by and be under the direction of Staff. The cost for the consultant and the Company's incremental resources to manage and support the consultants including data requests and other efforts associated with this review shall be paid by the Company and be fully recoverable through the Phase II rider, subject to prudence review.

The consultant will evaluate and recommend an ongoing level of operational benefits to be achieved and recognized in rates as part of the annual rider filing, to the extent such operational savings are not already reflected in rates. The Consultant shall complete this review using the AEP Ohio specific staffing situation and operational processes, where applicable, rather than using generalized industry standard data for these operational benefits. After this assessment is made, the Company and interveners shall endeavor to reach agreement on whether the recommended level of benefits should be adopted or modified. If an agreement cannot be reached, the Commission shall establish a process for the Company and intervenors to advocate their positions regarding the estimated level of benefits to be netted against gridSMART costs in this proceeding. Upon adoption by the Commission of a new operational cost savings credit, the Company's gridSMART Phase 2 riders shall reflect the net amount of prudently-incurred costs reduced by an amount equal to the value of the operational benefits as adopted by the Commission.

7. **<u>Accounting</u>**

The accounting life of all AMI meters will be 15 years instead of 7 years. 22,000 additional AMI meters that were deployed in order to perfect the Phase 1 pilot project, as well as all replacement and in stock AMI meters will be moved to the gridSMART Phase 2 rider for recovery upon approval of this Stipulation. The Company will retire the existing meters through the normal course of business which will be included in the DIR rider, and any undepreciated amount for the retired meters will be accorded standard accounting treatment and included in the calculation of the accumulated depreciation reserve for distribution and general plant in the next base distribution case. If during the Phase 2 meter rollout, the difference between the actual and theoretical reserve, as provided to Staff annually, becomes a negative 5% of the original cost on that same study, the Company will file, within two years, a base distribution case unless mutually agreed by the Company and Staff and approved by the Commission that a base case is not necessary.

Consistent with the Commission's February 25, 2015 Opinion and Order in the *ESP III* case (Page 52), the Company will file its final reconciliation for the gridSMART Phase 1 Rider to transfer the approved capital cost balance into the DIR and unrecovered O&M into the gridSMART Phase 2 Rider.

8. <u>Cybersecurity</u>

The Company agrees to brief the Commission and a limited number of key Staff on cybersecurity issues annually, including smart grid cybersecurity matters addressed in NIST Interagency Report 7628 Revision 1.

9. <u>Historical Usage Data</u>

The Company will provide historical usage data in a manner similar to the existing presentation on the AEP Supplier data website today for Commercial and Industrial customers (15 minute intervals). Data is "bill quality" (scrubbed).

10. <u>Billing Data for Customers on CRES TOU or Other Smart Meter-Enabled Products</u>

The Company agrees to provide AMI interval data to CRES via CRES Web Portal daily using 15 minute intervals. The release of the customer interval data shall be in accordance with the rules adopted by the Commission in Case No. 12-2050-EL-ORD on May 28, 2014. The Company shall continue to gather CRES input associated with these systems/processes and shall develop target timelines for implementation. Before the web portal goes "live" the Company will work with Staff to confirm that disclosure of granular residential customer usage data through the web portal only occurs with customer consent, consistent with Ohio Adm. Code 4901:1-10-24. The Company will use reasonable efforts to develop this functionality in a timely manner.

11. <u>"One Day Delay" (between bill cycles) Data</u>

AEP Ohio will make AMI data available to CRES providers as close to day-after load as possible, presenting the data on the Ohio CRES Portal for download.

12. <u>Use of Actual Data for Residential and Commercial Customer PLCs and NSPL Calculations</u>

For customers with AMI meters, AEP Ohio plans to utilize AMI interval data to not only calculate yearly transmission and capacity (NSPL and PLC) "tags," but also to perform final PJM 60 day settlement for customers on CRES TOU rates or DLC programs.

13. <u>Audit Review and Data Measures</u>

The Company will continue the same review process from Phase 1 - annual physical audit, financial audit and review of costs recovered through the rider. The Company will file quarterly updates in a single docket created for each calendar year and the annual review connected to that year shall occur in the same docket. In conjunction with the next six annual rider filings, the Company will also report the Non-financial Metrics, as shown in Attachment 1 for the prior calendar year.

14. Air Emissions Benefits

AEP Ohio agrees to work with stakeholders to develop a method to quantify the air emissions benefits from the program (resulting from any VVO efficiency gains, fewer truck rolls and time-based rate plans, etc.). The parties will use their best efforts to obtain approvals for using these air emissions benefits for compliance toward the new 111(d) rules for greenhouse gas emissions from fossil fuel plants. AEP Ohio also agrees to work with a third party to: (a) quantify the operational impacts of distributed generation on its distribution system; (b) identify additional changes needed for the distribution system to accommodate greater penetration of distributed generation; and (c) share its non-confidential findings with stakeholders. AEP Ohio will update and file the estimated cost of third party work, which will be fully recoverable through the Phase II rider, subject to audit and review.

AEP Ohio will use its best efforts to seek approval for the energy and peak demand reductions to be used as a compliance tool under the Clean Power Plan.

15. Peak Demand Reported to PJM as a result of VVO

Any approved VVO installations will be reflected in AEP Ohio's forecasts for demand. Currently, VVO is not eligible for bidding into the PJM Capacity Auction. AEP Ohio agrees to bid those resources into PJM if allowed in future rules and will support efforts to include those resources in new PJM rules. If VVO is permitted to be bid into PJM Capacity Auctions and the Company is successful in its bid, a plan will be developed for allocation of the incremental revenues received and any associated risks.

16. Green Button

AEP Ohio agrees to provide residential and small business customers with access to Green Button Download. Customers will be informed of this tool as part of the post-AMI meter installation communications. The Company agrees to continue to monitor the implementation costs and associated customer benefits of Green Button Connect. Later, if the benefits appear to exceed the implementation costs, the Company agrees to discuss possible implementation of Green Button Connect with the gridSMART Collaborative.

17. Prepaid Metering

AEP Ohio agrees to work with the Staff and interested parties within the gridSMART Collaborative to identify any legal and regulatory barriers for an EDU or CRES pilot prepaid metering program that customers could opt-into. Any future opportunity to move forward with Prepaid Metering would address consumer protections.

18. Customer Web Portal

The Company agrees to maintain a customer web portal that is customer-focused and displays the customer's AMI interval usage data. The Company shall use reasonable efforts to display this usage data the day after. The Company agrees to gather input on the customer web portal from the gridSMART Collaborative.

V. Procedural Matters

1. 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) shall not be cited as precedent in any future proceeding for or against any Signatory Party. The circumstances of this case are unique; thus, using the terms of this Stipulation in any other case 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.

2. 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.

3. 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. Except as provided in Paragraph IV. 3, rejection of all or any part of the Stipulation and Recommendation by the Commission will be deemed to be a material modification for purposes of this provision. Upon the Commission's issuance of a decision that does not adopt this Stipulation in its entirety without material modification, or the alternative proposal, if one is submitted, a Signatory Party may withdraw from the Stipulation by filing a notice with the Commission within thirty days after the Commission's decision. 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 shall be decided based upon the record and briefs, as if this Stipulation had never been executed.

April 4, 2016

Steven T. Nourse
On behalf of Ohio Power Company

by STN per authority
Werner L. Margard, III
On behalf of the Staff of the Public Utilities Commission of Ohio

by STN per authority
Mark A. Whitt
On behalf of Direct Energy

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Matthew S. White
On behalf of Interstate Gas Supply, Inc.

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Richard L. Sites
On behalf of the Ohio Hospital Association

Scott J. Casto / by STN per authority

Scott J. Casto
On behalf of FirstEnergy Solutions Corp.[4]

Trent A. Dougherty / by STN per authority

Trent A. Dougherty
On behalf of the Ohio Environmental Council

John J. Finnigan / by STN per authority

John J. Finnigan
On behalf of the Environmental Defense Fund

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[4] FirstEnergy Solutions Corp. is a non-opposing party and is not a Signatory Party for purposes of the Stipulation.

Attachment 1

Non-financial Metrics	Baseline Pre Phase I	Current	2016	2017	2018	2019
# of Certified Meters						
Average System Voltage						
# of Manual Meter Reads						
# of Non-Pay Disconnects						
# of Meter Readers, Expressed in FTEs						
# of Smart Meters Failed						
# of Customer Minutes Saved From Self Healing Events						
# of AMI Power Theft Cases Billed						
# of Call Center Calls						
MW and MWh saved - VVO						
# of Estimated Bills						
# of Meters Salvaged or Transferred						
Reduction in Greenhouse Gas from VVO (estimate)						