

FILE

23

RECEIVED-DOCKETING DIV

BEFORE  
THE PUBLIC UTILITIES COMMISSION OF OHIO

2012 FEB 24 AM 11:43

PUCO

In the Matter of the Application of Duke )  
Energy Ohio, Inc. to Adjust and Set Its )  
Gas and Electric Recovery Rate for 2010 )  
SmartGrid Costs Under Riders AU and )  
Rider DR-IM and Mid-deployment )  
Review of AMI/SmartGrid Program. )

Case No. 10-2326-GE-RDR

STIPULATION AND RECOMMENDATION

Ohio Administrative Code (O.A.C.), Section 4901-1-30, provides that any two or more parties to a proceeding before the Public Utilities Commission of Ohio (Commission) may enter into a written stipulation covering the issues presented in that proceeding. This Stipulation and Recommendation (Stipulation) sets forth the understanding of Duke Energy Ohio, Inc. (Duke Energy Ohio or the Company), the Office of the Ohio Consumers' Counsel (OCC), the Commission Staff (Staff),<sup>1</sup> Ohio Partners for Affordable Energy (OPAE), Direct Energy Services, LLC, and Direct Energy Business Services, LLC (each of whom is a Signatory Party, and together constitute the Signatory Parties or Parties). The Signatory Parties recommend that the Commission approve and adopt, as part of its Opinion and Order, this Stipulation that resolves all of the issues in the above-captioned proceeding.

This Stipulation is a product of lengthy, serious, arm's-length bargaining among the Signatory Parties, who are all capable, knowledgeable parties, which negotiations were undertaken by the Signatory Parties to settle this proceeding and is not intended to reflect the views or proposals that any individual party may have advanced acting unilaterally. This

<sup>1</sup> The Staff of the Public Utilities Commission of Ohio will be considered a party for the purpose of entering into this Stipulation pursuant to Ohio Administrative Code Sections 4901-1-10(C) and 4901-1-30.

This is to certify that the images appearing are an accurate and complete reproduction of a case file document delivered in the regular course of business 2012  
technician Sm Date Processed FEB 24 2012

Stipulation was negotiated among all parties to the proceeding. The Signatory Parties agree that this Stipulation is in the best interests of the public, and urge the Commission to adopt it.

This Stipulation is supported by adequate data and information. As a package, the Stipulation benefits customers and the public interest; represents a reasonable resolution of all issues in this proceeding, violates no regulatory principle or practice, and complies with and promotes the policies and requirements of Ohio Revised Code Chapter 4928. While this Stipulation is not binding on the Commission, it is entitled to careful consideration by the Commission, where, as here, it is sponsored by parties representing a wide range of interests.

Except for purposes of enforcement of the terms of this Stipulation, this Stipulation, the information and data contained therein or attached, and any Commission rulings adopting it, shall not be cited as precedent in any future proceeding for or against any Signatory Party or the Commission itself. The circumstances of this case are unique to it, and thus imputing the terms of this Stipulation into any other case undermines the willingness of the parties to compromise that is a necessary element of negotiating settlements in Commission proceedings. The Signatory Parties' agreement to this Stipulation, in its entirety, shall not be interpreted in a future proceeding before this Commission as their agreement to only an isolated provision of this Stipulation, or to any position, argument or recommendation contained in the record of this proceeding or otherwise presented in this proceeding. More specifically, no specific element or item contained in or supporting this Stipulation shall be construed or applied to attribute the results set forth in this Stipulation as the results that any Signatory Party might support or seek, but for this Stipulation in these proceedings or in any other proceeding. The Stipulation is a recognition that each Signatory Party disagrees with individual aspects of the Stipulation, but believes that the Stipulation has value as a whole. 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 is expressly conditioned upon its adoption by the Commission in its entirety and without material modification. If the Commission rejects or materially modifies all or any part of this Stipulation,<sup>2</sup> each and every Signatory Party shall have the right, within thirty days of issuance of the Commission's Order, to file an application for rehearing or to terminate and withdraw the Stipulation by filing a notice with the Commission. The Signatory Parties agree they will not oppose or argue against any other Signatory Party's notice of termination or application for rehearing that seeks to uphold the original, unmodified Stipulation. If, upon rehearing, the Commission does not adopt the Stipulation in its entirety and without material modification, any Signatory Party may terminate and withdraw from the Stipulation. Termination and withdrawal from the Stipulation shall be accomplished by filing a notice with the Commission, including service to all Signatory Parties in this proceeding, within thirty days of the Commission's Order or ruling on rehearing that does not adopt the Stipulation in its entirety and without material modification. Other Signatory Parties to this Stipulation agree to not oppose the termination and withdrawal 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.

Prior to the filing of such a notice, the Signatory Party wishing to terminate agrees to work in good faith with the other Signatory Parties to achieve an outcome that substantially satisfies the intent of the Stipulation and, if a new agreement is reached that includes the Signatory Party wishing to terminate, then the new agreement shall be filed for Commission

---

<sup>2</sup> Any Signatory Party has the right, at its sole discretion, to determine what constitutes a "material" change for the purposes of that Party withdrawing from the Stipulation.

review and approval. If the discussions to achieve an outcome that substantially satisfies the intent of the Stipulation are unsuccessful in reaching a new agreement that includes all Signatory Parties to the present Stipulation, the Commission will convene an evidentiary hearing such that the Signatory Parties will be afforded the opportunity to present evidence through witnesses and cross-examination, present rebuttal testimony, and brief all issues that the Commission shall decide based upon the record and briefs as if this Stipulation had never been executed.

WHEREAS, in its first Electric Security Plan (ESP) proceeding, Case Nos. 08-920-EL-SSO, *et al.*, Duke Energy Ohio agreed to deploy a SmartGrid program for electric and gas customers; and

WHEREAS, in its first ESP proceeding, Duke Energy Ohio agreed that as part of the annual due process related to 2010 costs net of benefits, the Company would include a mid-deployment program summary and review with the second quarter 2011 filing, outlining its progress in deploying the SmartGrid program through 2010; and

WHEREAS, this case involves the mid-deployment review of the Company's progress in deploying the SmartGrid program; and

WHEREAS, this Stipulation represents a serious compromise of complex issues and involves substantial benefits that would not otherwise have been achievable; and

WHEREAS, the Signatory Parties believe that the agreements herein represent a fair and reasonable solution to the issues raised in the case set forth above concerning Duke Energy Ohio's Application,

THEREFORE, it is agreed that:

## **I. FINANCIAL AND ACCOUNTING**

- a. The Signatory Parties agree that Duke Energy Ohio shall receive a revenue increase applicable to Rider DR-IM of \$19.2 million, and a revenue increase of \$9.8 million applicable to Rider AU.<sup>3</sup> These revenue increases result in rates of \$2.24 per meter per month for residential electric customers and \$3.31 per meter per month for non-residential electric customers under Rider DR-IM. The revenue increase results in a rate of \$1.97 per meter per month under Rider AU. Gas only customers will receive a \$0.92 credit per meter per month.
- b. The Signatory Parties recognize and agree that the monthly charge per residential electric meter resulting from the Rider DR-IM revenue requirement for the applicable period is below the applicable cap established in the Stipulation and Recommendation approved by the Commission in Case No. 08-920-EL-SSO, *et al.*
- c. The Signatory Parties further agree that the revenue requirements are based upon a cost of capital consistent with the latest approved cost of capital (from Case No. 08-709-EL-AIR and Case No. 07-589-GA-AIR).

## **II. NETTING OF BENEFITS AGAINST COSTS**

- a. The Signatory Parties agree that Duke Energy Ohio shall reduce its revenue requirement by an amount equal to the value of operational benefits, as set forth by MetaVu in its Smart Grid Audit and Assessment Report (MetaVu Report) levelized over four years as provided in paragraph b. below. The electric share of the 2010 benefits to be netted against 2010 costs for purposes of revenue recovery is \$1,048,000.

---

<sup>3</sup> The Signatory Parties are not agreeing to any particular expense item in Duke Energy Ohio's Application.

b. Duke Energy Ohio commits to maintain Rider DR-IM as the means to recover SmartGrid investment through the year in which full deployment occurs.<sup>4</sup> Beginning with the next Rider DR-IM filing, which will recover the electric share of SmartGrid costs incurred through December 31, 2011, and for each Rider DR-IM filing for the following three years, the Company agrees to include the electric distribution share of operational savings derived from the MetaVu Report. The total savings from the MetaVu Report for the respective years are as follows:

Savings to include in 2011 revenue requirement:	\$2.38 million
Savings to include in 2012 revenue requirement:	\$4.77 million
Savings to include in 2013 revenue requirement:	\$8.00 million
Savings to include in 2014 revenue requirement:	\$10.67 million

c. In order to mitigate the impact of the rate increases attributable to Rider DR-IM, the Company agrees to defer recovery of all or a portion of the following expenses normally recovered in the Rider DR-IM revenue requirement for 2011 and 2012 (O&M, depreciation, and/or property taxes). Such deferrals are incremental to the normal deferral process used in the Rider DR-IM calculations and are calculated as per Attachment 1. The amount of the incremental deferrals attributable to costs incurred in 2011 and 2012 will be \$3.86 million and \$1.47 million, respectively. Duke Energy Ohio shall be allowed to increase the revenue requirement of Rider DR-IM for costs incurred in 2013 and 2014 to recover the expenses deferred from the 2011 and 2012 recovery periods. The additional

---

<sup>4</sup> Full deployment shall mean that all SmartGrid hardware and systems necessary to generate the benefits set forth in Attachment 2, Column 2015. The point in time when full deployment occurs or has been achieved shall be determined by the Staff of the Commission based upon information provided by the Company.

recovery in 2013 and 2014 will be \$1.76 million and \$4.43 million, respectively.

The impact on the Rider DR-IM revenue requirement will be as follows:

DR-IM for 2011	\$3.86 million <u>reduction</u> in revenue requirement
DR-IM for 2012	\$1.47 million <u>reduction</u> in revenue requirement
DR-IM for 2013	\$1.76 million <u>increase</u> in revenue requirement
DR-IM for 2014	\$4.43 million <u>increase</u> in revenue requirement

- d. The Company commits to filing an electric distribution rate case in the first year after full deployment of SmartGrid as defined herein. The rate case will include the SmartGrid investment and adjusted operating expenses. The test year used in the base rate application shall begin no earlier than the date of full deployment such that the revenue requirement requested in that case will reflect the level of the benefits attributable to SmartGrid which have actually been achieved by the Company and all prudently incurred current costs associated with the program. If full deployment does not occur by the end of 2014, the Company will continue filing Rider DR-IM for each year until full deployment occurs and will net against costs in the Rider DR-IM revenue requirement for 2015 the electric distribution share of savings of \$12.933 million. Insofar as 2015 represents the projected full deployment date and the estimated benefits for that year should approximate steady state savings, the Company will continue to include the electric distribution share of savings of \$12.933 million in the Rider DR-IM revenue requirement for as long as it continues.
- e. For any electric distribution rate case filed subsequent to full deployment, and which includes a test year that falls after full deployment, such that the revenue

requirement requested in that case will reflect actual level of benefits attributable to SmartGrid achieved to date, the Signatory Parties agree there will no longer be a need to account for costs and benefits outside of the base rate setting mechanism.

- f. The Signatory Parties agree that costs and savings attributable to SmartGrid flowed through Rider DR-IM will not also be flowed through electric distribution base rates if new base rates are established before full deployment; consequently, Duke Energy Ohio may adjust test year O&M expenses for the test year being used for the rate case, as appropriate to ensure that the costs and savings attributable to SmartGrid during the test year are not counted twice.
- g. With regard to gas SmartGrid, the 2011 annual revenue requirement for Rider AU will reflect \$1.041 million in savings (as allocated to gas distribution per Attachment 1).
- h. If the Company files for new gas distribution rates before full deployment, the revenue requirement for gas distribution rates will include (1) all prudently incurred SmartGrid costs allocable to gas and (2) a guaranteed level of savings, which will be at the level established in Attachment 1<sup>5</sup> net of gas SmartGrid savings that are already included in the test year. For example, if the next rate case uses 2012 as a test year for revenue requirements, the guaranteed level of savings will be \$2.026 million. If the next rate case uses 2013 as a test year, the guaranteed level of savings to be incorporated into base rates will be \$3.409 million and the 2012 Rider AU will include \$2.026 million in savings. And, if the

---

<sup>5</sup> It may be necessary to pro rate the savings between years if the rate case is filed using a test year that is not a calendar year.



next rate case uses 2014 as a test year, the guaranteed level of savings will be \$4.544 million in base rates and the Rider AU filings for 2012 and 2013 will include a guaranteed level of savings of \$2.026 million for 2012, and \$3.409 million for 2013. Moreover, if the Company files an application for authority to implement a capital expenditure program pursuant to sections 4909.18, and 4929.111, Revised Code, that includes SmartGrid investment, the savings mentioned in paragraph g. above will be used as an offset for the appropriate time.

- i. The Signatory Parties agree that they will not consider the deferred cost recovery described in paragraph (c) above to be included for purposes of determining whether the Rider DR-IM rates for recovery of 2013 and 2014 electric SmartGrid costs are above the caps the Signatory Parties agreed to in the Stipulation and Recommendation in Case Nos. 08-920-EL-SSO, *et al.*
- j. For at least one year beyond full deployment, the Company will separately track SmartGrid non-cost metrics for electric Rider DR-IM. The Company will provide annual reports to the Commission and to the Signatory Parties that detail progress in achieving completion of non-cost metrics related to operational benefits as set forth in Attachment 2.
- k. In light of the Signatory Parties' agreement that the Company will provide annual reports to the Commission detailing its progress with respect to the non-cost metrics set forth in Attachment 2, and further, because the Company has agreed to reduce its revenue requirement by the full value of operational benefits as set forth in Attachment 2, including the bringing forward of value so that customers receive such value sooner, the Signatory Parties agree that there will be no dispute

in the agreed upon number for netting of benefits in any succeeding Rider DR-IM or Rider AU proceeding.

1. The Signatory Parties agree that the Company is entitled to full recovery of an annual revenue requirement that is approved by the Commission (subject to any appeals) related to SmartGrid independent of the timing of any base rate case.<sup>6</sup> The Signatory Parties further agree that recovery of SmartGrid revenue requirements should only be via the SmartGrid Riders (DR-IM and AU) *or* through base rates but should not be recovered through both mechanisms contemporaneously even if the recovery is for revenue requirements associated with different periods. The Signatory Parties agree that an adjustment to revenue requirements (via deferrals, regulatory asset creation, and regulatory asset amortization) for a base rate case may be necessary to ensure that the SmartGrid riders are not being collected at a time when any SmartGrid costs for any period are being collected in base rates.

### **III. CUSTOMER PILOTS AND TIME DIFFERENTIATED RATES**

- a. Duke Energy Ohio will continue to work with the Duke Energy Ohio SmartGrid Collaborative in developing a portfolio of time-differentiated rate offerings<sup>7</sup> that include further pilot programs of innovative designs and non-pilot rates that

---

<sup>6</sup> The Signatory Parties expressly reserve the right to challenge recovery of costs in each Rider proceeding and in any rate case proceeding as imprudent, so long as any such challenge is not inconsistent with the terms of this Stipulation.

<sup>7</sup> For purposes of this Stipulation, time differentiated rates are rates that include different electricity prices for different times of the day, week, or year. Time differentiated rates also include rates that respond as predetermined by the Company to electricity market events.

provide standard service offer customers pricing structures that incentivize them to shift energy usage to reduce their electric bills.

- b. Duke Energy Ohio will conduct an educational workshop for all interested parties and specifically interested competitive retail electric service (CRES) providers wherein the Company will provide and share its insights and learning related to the Company's two years of experience offering time differentiated rates. The Company will continue to conduct workshops for CRES providers and interested parties twice a year during the course of SmartGrid deployment so long as there is interest in doing so. The first educational workshop shall take place at the Commission offices on or before November 1, 2012.
- c. The Company will provide CRES providers the necessary billing system functionality to offer CRES customers time differentiated rates consistent with its existing supplier tariff beginning January 1, 2013. Duke Energy Ohio shall provide a quarterly update to the Collaborative on the status of implementing the necessary billing functionality.
- d. During 2012, the Company shall work with the Collaborative to develop a deployment plan for a general public awareness and an education campaign designed to increase customer awareness and inform customers about the justification for time differentiated rates and the value that they can potentially bring to customers. After vetting the campaign and gaining Collaborative approval for the plan, the Company shall begin its campaign in calendar year 2013 consistent with the plan. The Company shall file the Collaborative-approved plan for the campaign in its filing in the 2012 Rider DR-IM filing to be

made with the Commission in the spring of 2013. The actual costs incurred consistent with the Collaborative's approved plan for the general awareness campaign shall be recovered by the Company beginning in 2014 through Rider DR-IM. This provision in no way affects the rights of individual Collaborative members to challenge the Company's collection of costs associated with the campaign through Rider DR-IM.

- e. Duke Energy Ohio agrees, through the end of 2015: (a) not to use prepaid metering; (b) not to require mandatory non-pilot time-of-use rates, and (c) not to seek a waiver from Rule 4901:1-18-05(A), O.A.C., regarding personal or written notice, prior to using any remote disconnection capabilities for non-payment (but once properly noticed, the Company may still use remote disconnect functionality).
- f. If approved in the Company's Energy Efficiency Portfolio (Case No. 11-4393-EL-POR), Duke Energy Ohio will offer an incentive to participating customers toward the installation of a Home Energy Management device that will not only provide customers enhanced information to optimize bill savings through energy efficiency, but also to potentially enhance the attractiveness of time differentiated rates. Customers will not be required to purchase a specific Home Energy Management device or to purchase a device from a specific vendor to participate in the new rates.

#### **IV. CYBER SECURITY**

- a. Duke Energy Ohio recognizes and acknowledges its responsibility for managing cyber security risks and will leverage applicable elements contained in *Guidelines*

*for Smart Grid Cyber Security* National Institute of Standards and Technology, Interagency Reports (NISTIR) 7628, volumes 1 and 3, and successor volumes and/or standards, practices or guidelines that evolve from such volumes. In 2012, as Duke Energy IT Security performs its risk assessment and mitigation strategy as part of the SmartGrid cyber plan, the NISTIR 7628 will be used as the basis of that assessment.

- b. In 2012, the Risk Assessment (RA) and mitigation strategy will include the security requirements identified on page 62 of the Duke Energy Ohio MetaVu Report as having a high potential of a security breach, and for which there is no conformity. The RA and mitigation strategy in subsequent years should include those security requirements to the extent the associated risks have not been mitigated. The strategy will also address relevant elements of the NISTIR that apply to new SmartGrid technology developments and deployments that have not been subject to prior analysis.
- c. Beginning in August of 2012, Duke Energy IT Security shall provide Commission Staff with updates on the development of its SmartGrid cyber security plan and on the implementation of that plan. The scope of the 2012 report will include, but not be limited to, the strategy and methodology used to assess the conformity of Duke Energy Ohio's SmartGrid security with the requirements identified above (*i.e.*, those having high potential of a security breach and no conformity) and other applicable industry standards. Briefings in subsequent years shall include those security requirements to the extent the associated risks have not been mitigated, and address relevant elements of the NISTIR that apply to new SmartGrid

technology developments and deployments that have not been subject to prior analysis.

- d. Duke Energy IT Security will update Commission Staff at least annually, and shall keep Commission Staff informed of the progress being made every six months. The annual update shall address both a forward look to the next year in terms of what risks will be considered, and a backward look at which risks have been addressed, and how they have been addressed. In addition, the annual update will speak to changes to security requirements in NISTIR 7628 (volumes 1&3) and the Company's assessment and mitigation of those changes. Further, the update will incorporate a cyber assessment and mitigation efforts in response to those changes by determining any impact to previously conforming or partially conforming recommendations contained in the NISTIR or other applicable security frameworks. Finally, the update will incorporate a SmartGrid cyber security RA and mitigation strategy regarding significant smart grid infrastructure changes.

The updates shall include:

- i. Merged Companies cyber security plan - Six months after Duke Energy Corp. and Progress Energy close the merger, the Company shall provide a confidential report to Commission Staff describing the substance of the SmartGrid cyber security plan for the merged companies. The report will include coverage of best practices and procedures of both companies, and how the incorporation of those best practices and procedures has been or will be accomplished. The report will also include an assessment of new

risks and vulnerabilities given the increased scale and scope of the merged systems.

- ii. Annual Written Preview to Commission Staff - This document will cover the scope and context of items (*i.e.*, from what organization or standards body the standards came from) to be included in the on-going RA and mitigation strategy conducted as part of the SmartGrid cyber security plan. The preview document will be confidential and will not be distributed.
- iii. Annual Briefing - The annual presentation will be in person. It will cover the results of the RA and mitigation strategy and implementation programs (risk determinations, response, mitigation steps, acceptance of risk, and status of completion). The presentation will be confidential and only include appropriate members of the Commission Staff. The presentation will be in September and annually thereafter through 2014.

## **V. SMARTGRID IMPLEMENTATION PLANS**

- a. The Company agrees to enter into a process with Commission Staff to develop the framework for SmartGrid Implementation Plans (Plan) to be completed by the Company annually. The initial Plan for years 2013 through 2015 will be presented by October 30, 2012. An objective of the Plan will be to help stakeholders understand the Company's plans to invest in the distribution business in three areas: 1) improvements in (or maintenance of) distribution reliability and efficiency; 2) improvements in distribution customer services; and 3) reductions in distribution business operations costs and risks, and to understand what actions

will be taken to adapt organizational structures and practices to deliver benefits. The Plans will be for information purposes only and not subject to approval or rejection by Commission Staff or stakeholders. The Company shall provide the Plans to the participants in the Duke SmartGrid Collaborative. Through the Collaborative, Commission Staff and stakeholders may provide suggestions on the Company's Plans, but all decision rights regarding Plan execution and modification will remain with the Company. Receipt and review by Commission Staff does not constitute pre-approval of the investments nor limit Commission Staff's rights during subsequent proceedings.

## **VI. RELIABILITY AND DISTRIBUTION EFFICIENCY IMPROVEMENT**

- a. The Company shall work with the Commission Staff and OCC to develop Distribution Efficiency Improvement Measurements. In development of Distribution Efficiency Improvement Measurements, consideration will be given to the cost effectiveness and availability of providing the following:
  - i. System performance data demonstrating distribution efficiency measures as set forth in Attachment 3.
  - ii. Data as set forth in Attachment 3 for varying load conditions (including but not limited to peak load, average load, and light load conditions).
  - iii. Method or methods of field measurement verification that may include but not be limited to the following:
    1. Determining the annual average power factor per feeder circuit.



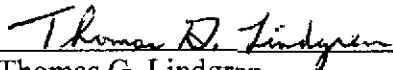
2. Running an on-line power flow program to determine what would happen without volt-var control and then comparing the result with actual field measurements.
  3. Using day on/day off testing, where voltage is reduced every other day on a test circuit, and then compare the measurement from the voltage reduction on-day with the voltage reduction off-day using statistical analysis.
- b. Validation Estimate and Edit (VEE)—Duke Energy Ohio agrees to meet with Commission Staff and OCC by the end of the second quarter of 2012 to determine appropriate reporting to indicate effectiveness of VEE routines in the Meter Data Management System (MDMS). Duke Energy Ohio will meet with Commission Staff and interested parties semi-annually through 2014 to review results.
  - c. Distribution Automation integration with rest of system
    - i. The Company will provide to Signatory Parties a written copy of its Distribution Management System (DMS) Deployment plan.
    - ii. The Company will provide to Signatory Parties an annual report of its progress against the DMS Deployment plan in its SmartGrid Rider filings beginning with the SmartGrid Rider filing in 2012 (2011 cost recovery).
    - iii. The Company will provide a DMS demonstration/briefing to Commission Staff and interested parties by the end of 2nd quarter 2012.
  - d. With respect to meter data integration with the rest of the Duke Energy Ohio system, the Company agrees to develop a cost benefit analysis for each of the

following opportunities (which are detailed on pages 40-43 of the MetaVu Report):

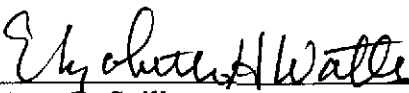
- i. Meter status for proactive outage detection – The MetaVu Report at page 41, states that proactive outage detection will be available with DMS deployment and Distribution Outage Management System (DOMS) integration. In response to MetaVu’s recommendation, the Company will notify the Signatory Parties if there are additional costs to enhance this capability, including battery back-up, and a rough estimate of such costs on or before June 30, 2012.
- ii. Meter data for power quality (voltage) to enhance integrated voltage var control (IVVC) benefits on or before June 30, 2012.
- iii. Meter data for capacity planning, including use of meter data in a Circuit Modeling Tool (CMT) and use of a data bus for associated data integration on or before June 30, 2012.
- iv. Meter data to help confirm accurate operation of Power Manager switches for load management verification on or before June 30, 2012.
- v. Substation condition monitoring (such as oil temperature, pressure, and gas levels) on or before June 30, 2012.
- vi. Based on the cost benefit analyses referenced in the above items, the Company will provide its conclusions and describe any plans with respect to each of the opportunities listed above.

IN WITNESS THEREOF, the undersigned Parties agree to this Stipulation and Recommendation as of this 24th day of February, 2012. The undersigned Parties respectfully request the Commission to issue its Opinion and Order approving and adopting this Stipulation.

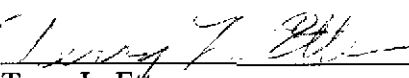
On Behalf of Staff of the Public Utilities Commission of Ohio

  
\_\_\_\_\_  
Thomas G. Lindgren  
Devin D. Parram  
Assistant Attorney General  
180 E. Broad Street  
Columbus, Ohio 43215

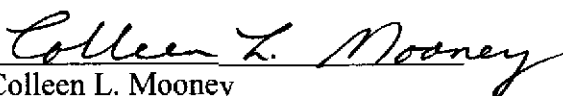
On Behalf of Duke Energy Ohio, Inc.

  
\_\_\_\_\_  
Amy B. Spiller  
Elizabeth H. Watts  
Duke Energy Business Services LLC  
139 E. Fourth Street, 1303 Main  
Cincinnati, Ohio 45202

On Behalf of Office of the Ohio Consumers' Counsel

  
\_\_\_\_\_  
Terry L. Etter  
Assistant Consumers' Counsel  
Office of the Ohio Consumers' Counsel  
10 West Broad Street, Suite 1800  
Columbus, Ohio 43215-3485

On Behalf of Ohio Partners for Affordable Energy

  
\_\_\_\_\_  
Colleen L. Mooney  
Ohio Partners for Affordable Energy  
231 West Lima Street  
Findlay, Ohio 45839

On Behalf of Direct Energy Services, LLC and  
Direct Energy Business Services, LLC

Dane Stinson / w email  
Dane Stinson permissions  
BAILEY CAVALIERI LLC EHW  
10 West Broad Street, Suite 2100  
Columbus, Ohio 43215

Duke Energy Ohio Case No. 10-2326  
Allocation of SmartGrid Benefits <sup>(1)</sup>

Benefit #	Benefit Name	Benefit Type	2011			2012			2013			2014			2015		
			Gas <sup>(2)</sup>	Electric	Total	Gas <sup>(2)</sup>	Electric	Total	Gas <sup>(2)</sup>	Electric	Total	Gas <sup>(2)</sup>	Electric	Total	Gas <sup>(2)</sup>	Electric	Total
1	Regular Meter Reads	Avoided O&M Cost	\$0.205	\$0.335	\$0.540	\$0.498	\$0.812	\$1.310	\$1.113	\$1.817	\$2.930	\$1.725	\$2.815	\$4.540	\$2.288	\$3.732	\$6.020
2	Off-Cycle / Off-Season Meter Reads	Avoided O&M Cost	0.730	1.190	1.920	1.296	2.114	3.410	1.927	3.143	5.070	2.333	3.807	6.140	2.652	4.328	6.980
3	Remote Meter Diagnostics	Avoided O&M Cost	-	0.140	0.140	-	0.310	0.310	-	0.500	0.500	-	0.680	0.680	-	0.800	0.800
7	Meter Operations Costs	Avoided O&M Cost	-	0.050	0.050	-	0.120	0.120	-	0.200	0.200	-	0.260	0.260	-	0.310	0.310
10	Outage Detection	Avoided O&M Cost	-	0.010	0.010	-	0.030	0.030	-	0.050	0.050	-	0.060	0.060	-	0.070	0.070
11	Outage Verification	Avoided O&M Cost	-	0.110	0.110	-	0.250	0.250	-	0.410	0.410	-	0.540	0.540	-	0.660	0.660
15	Continuous Voltage Monitoring	Avoided O&M Cost	-	-	-	-	-	-	-	0.080	0.080	-	0.160	0.160	-	0.240	0.240
19	Capacitor Inspection Costs	Avoided O&M Cost	-	-	-	-	-	-	-	0.060	0.060	-	0.130	0.130	-	0.200	0.200
20	Circuit Breaker Inspection Costs	Avoided O&M Cost	-	0.020	0.020	-	0.050	0.050	-	0.080	0.080	-	0.090	0.090	-	0.100	0.100
21	Call Center Efficiency	Avoided O&M Cost	-	0.030	0.030	-	0.060	0.060	-	0.090	0.090	-	0.120	0.120	-	0.140	0.140
22	Increase in Safety	Avoided O&M Cost	0.008	0.012	0.020	0.015	0.025	0.040	0.027	0.043	0.070	0.038	0.062	0.100	0.042	0.068	0.110
23	Billing Savings - Shortened Billing Cycle	Avoided O&M Cost	0.011	0.019	0.030	0.019	0.031	0.050	0.027	0.043	0.070	0.030	0.050	0.080	0.030	0.050	0.080
24	Vehicle Management Costs	Avoided O&M Cost	0.087	0.143	0.230	0.198	0.322	0.520	0.315	0.515	0.830	0.418	0.682	1.100	0.490	0.800	1.290
4/5	Power Theft / Theft Recovery Costs	Increased Revenue	-	0.180	0.180	-	0.380	0.380	-	0.620	0.620	-	0.810	0.810	-	0.990	0.990
8	Meter Accuracy Improvement	Increased Revenue	-	0.190	0.190	-	0.400	0.400	-	0.660	0.660	-	0.870	0.870	-	1.070	1.070
9	Meter Salvage Value	Increased Revenue	-	0.100	0.100	-	0.210	0.210	-	0.220	0.220	-	0.170	0.170	-	0.160	0.160
12	Outage Reductions	Increased Revenue	-	0.140	0.140	-	0.250	0.250	-	0.370	0.370	-	0.480	0.480	-	0.540	0.540
TOTALS			\$1.041	\$2.669	\$3.710	\$2.026	\$5.364	\$7.390	\$3.409	\$8.901	\$12.310	\$4.544	\$11.786	\$16.330	\$5.502	\$14.258	\$19.760
Exclude "generation" share of increased revenue benefit <sup>(1)</sup>				0.293	0.293		0.595	0.595		0.898	0.898		1.118	1.118		1.325	1.325
Transmission & Distribution Savings			\$1.041	\$2.376	\$3.417	\$2.026	\$4.769	\$6.795	\$3.409	\$8.003	\$11.412	\$4.544	\$10.668	\$15.212	\$5.502	\$12.933	\$18.435

Notes: <sup>(1)</sup> Benefits as provided in the MetaVu Audit Report.

<sup>(2)</sup> For benefits that accrue to gas and electric customers, allocated based on number of customers.

Percentage of Total Customers	<u>Gas</u> 38%	<u>Electric</u> 62%
-------------------------------	-------------------	------------------------

Electric SmartGrid Benefits (2011-2014)

	2011	2012	2013	2014
Electric Share of 2011-2014 SG Benefit				
T& D Savings per MetaVu	\$2.38	\$4.77	\$8.00	\$10.67
Annual O&M reduction	<b>\$6.24</b>	\$6.24	\$6.24	\$6.24
Deferred Costs	\$3.86	\$1.47	(\$1.76)	(\$4.43)

General

		Metric	Baseline	2011	2012	2013	2014	Steady State
		# of Certified Gas Modules						
		# of Certified Electric Meters						
		# of Duke Energy Ohio Employees - Gas Operations						
		# of Duke Energy Ohio Employees - Power Delivery						
		Line loss & Unaccounted for Electric (Kwh)						
		Total Delivered at Retail - Kwh						
		# of Installed & Certified Communication Nodes						
<b>Metavu Benefit #</b>								
13	24-365 System Voltage Reduction Strategy	Average System Voltage						
2	Off-Cycle/Off-Season Meter Reads	Remote Order Fulfillments as % of Total Meter Orders						
		# of Manual Electric Meter Reads						
		# of Manual Gas Meter Reads						
1	Regular Meter Reads	# of Non-pay Disconnects - Electric						
		# of Meter Readers, expressed in FTE						
		Certified Meters as % of Planned Total Deployment						
		# of Meter Reading Routes						
6	Meter Operations Capital	# of Handhelds Repaired						
		# of Handhelds Purchased						
		# of Non-AMI Meters Purchased						
		# of Meters Repaired - Mechanical						
		# of Meters Failed - Electric Smart Meter						
		# of Gas Modules Failed						
24	Vehicle Management Costs	# of Meter Reading Vehicles						
		Average Miles per Meter Reading Vehicle						
3	Remote Meter Diagnostics (individual customer)	# of Truck Rolls Avoided (Outage)						
		# of Truck Rolls Related to an Outage						
12	Outage Reductions	# of Node-notified Storm Event Outages						
11	Outage Verification	# of Node-notified Outages						
		# of Self-Healing Teams						
		# of Customer minutes saved from Self Healing events						
4, 5	Power Theft/Theft Recovery Costs	# of AMI Power Theft Cases Billed						
16	VAR Management	% Capacitor Off-line						
		# of Capacitor Banks Installed						

### Attachment 3

#### Distribution Efficiency Measurement

Provide the following data annually with Duke's Smart Grid Rider filing, starting in 2012 (2011 cost recovery).

Station Number	Substation Name	Circuit Name	Voltage (kV)	2010 Sum Peak Load (kW)	2010 Sum Losses (kW)	2010 Sum Peak Demand	Losses (%)	Power Factor
----------------	-----------------	--------------	--------------	-------------------------	----------------------	----------------------	------------	--------------

This data derived from actual load measurements (taken from load side of substation transformer) and entered into existing circuit models to calculate percent losses by circuit. Percent losses as reported here reflect only the losses in the distribution feeder itself; it excludes losses in the substation transformer, distribution transformer, and secondary system.