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DE-Ohio Exhibit ________

BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Application of Duke Energy Ohio, Inc. to Adjust and Set Its Gas and Electric Recovery Rate for 2009 SmartGrid Costs Under Riders AU and Rider DR-IM	))))	Case No. 10-867-GE-RDR

DIRECT TESTIMONY OF

DONALD L. SCHNEIDER, JR.

ON BEHALF OF

DUKE ENERGY OHIO, INC.

Management policies, practices, and organization

_____ Operating income

_____ Rate Base

_____ Allocations

_____ Rate of return

_____ Rates and tariffs

__x__ Other

July 26, 2010

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I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Donald L. Schneider, Jr., and my business address is 139 East Fourth Street, Cincinnati, Ohio.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am employed by Duke Energy Business Services LLC, an affiliate of Duke Energy Ohio, Inc. ("Duke Energy Ohio," or "Company") as General Manager, Smart Grid Field Deployment.

Q. WHAT IS YOUR PRIMARY RESPONSIBILITY AS GENERAL MANAGER, SMARTGRID FIELD DEPLOYMENT?

A. As General Manager, Smart Grid Field Deployment, I am responsible for managing the installation of the Smart Grid equipment in the field, including both the Advanced Metering Infrastructure and Distribution Automation devices for all Duke Energy jurisdictions.

Q. PLEASE BRIEFLY DESCRIBE YOUR PROFESSIONAL AND EDUCATIONAL BACKGROUND.

A. I received a Bachelor of Science Degree in Electrical Engineering from the University of Evansville in 1986. Upon graduation, I was employed by Duke Energy Indiana (then known as Public Service Indiana) as an Electrical Engineer. Throughout my career, I have held various positions of increasing responsibility in the areas of engineering and operations, including distribution planning, distribution design, field operations, and capital budgets. Immediately prior to my current position, I was General Manager, Midwest Premise Services, responsible for managing all of Duke Energy's Midwest premise service and meter reading departments. I was promoted to my current position in 2008.

Q. ARE YOU A REGISTERED PROFESSIONAL ENGINEER?

A. Yes, and have been since 1995.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. I will discuss the status of Duke Energy Ohio's deployment of SmartGrid in its service territory, the progress made to date generally, and lessons learned.

II. DUKE ENERGY OHIO'S DEPLOYMENT

Q. PLEASE PROVIDE A BRIEF OVERVIEW OF THE ADVANCED METERING INFRASTRUCTURE (AMI) AND ASSOCIATED COMMUNICATIONS NETWORK THE COMPANY HAS INSTALLED AS PART OF ITS INITIAL DEPLOYMENT.

A. Our AMI and associated communications network consists of a fully automated metering system that provides two-way communications between the meter and the back office data systems, and is capable of performing remote operations of the meter, including remote meter reads, upgrades, and disconnections and reconnections, among other attributes.

Duke Energy Ohio has installed approximately 57,800 electric meters and 44,000 gas modules as part of the AMI initial deployment. A map of the areas of initial deployment is attached to my testimony as Exhibit DLS-1. Approximately 98% of the meters are installed at residential locations and 2% are at small commercial locations. Along with those meters, the Company has installed approximately 5,000 communication nodes, referred to as "collection boxes." These collection boxes are part of the communications network to facilitate the two-way communications and data transfer between the meters and the Company's back office.

Q. HOW SUCCESSFUL HAS THE DEPLOYMENT OF THESE ELEMENTS OF THE SMARTGRID BEEN TO DATE AND WHAT ARE LESSONS LEARNED?

A. We have been successful in our initial deployment and we have learned some very valuable lessons. The most valuable lesson learned was in regards to our deployment methodology. In the initial deployment we installed both meters and communications nodes in parallel to help shorten the overall deployment time period. Deploying in this fashion caused a lot of extra work by our back office groups in commissioning process. We now deploy the communications nodes first and allow a short period to get them up, running, and stabilized before we install the meters. This methodology drastically reduced the time for commissioning, allowing us to begin remote reading a lot sooner. In regards to our communications node installation standard, we have revised the standard to help reduce installation costs as well as future operation and maintenance costs.

Q. PLEASE GENERALLY DESCRIBE DISTRIBUTION AUTOMATION.

A. Distribution automation is a term used to describe the transformation of an existing distribution system that requires a lot of manual on-site operation of power equipment to an advanced distribution system with power equipment having capability of being operated automatically or remotely through installation of a two way communications network and advanced control systems.

Duke Energy Ohio expects to gain a number of benefits from this modernization of our distribution system, including improved system reliability, improved power quality, improved operating efficiencies, and improved customer satisfaction.

Q. PLEASE PROVIDE AN UPDATE ON DUKE ENERGY'S DEPLOYMENT OF SMART GRID EQUIPMENT IN OHIO.

A. Duke Energy has been working on its Ohio Smart Grid full-scale deployment since receiving approval from the Ohio Commission late in 2008. To date, including our initial deployment and the start of our full-scale deployment, over 120,000 meters/modules have been deployed – approximately 70,600 electric and 49,500 gas. We have "certified" approximately 30% of these meters, meaning that Duke Energy has commissioned the communications network and meters, and customers are receiving bills based upon this data. The remaining 70% will likely be certified by end of third quarter 2010. Duke Energy has also installed approximately 9,500 communication nodes in its Ohio service territory to date. By year-end 2010 we should have approximately 235,000 meters/modules (137,000 electric and 98,000 gas) with 75% certified. As part of our distribution automation work, to date we have installed three self-healing teams, 16 substation communications networks, 17 substation breakers, 85 digital relays, 16 voltage regulator controls, 57 electronic reclosers, and 112 hydraulic reclosers.

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Circuit breakers and reclosers act to address temporary line faults, avoiding extended interruption of service and isolating permanent line faults which reduces the number of customers experiencing extended interruption of service. Our plan calls for increasing the use of reclosers on main feeders in high customer density areas as well as automating some of the reclosers. Experience proves that additional reclosers on main feeders help reduce the number of customers experiencing a sustained outage. Also, we believe that the automation of this equipment will help the Company to obtain real-time operating data, reduce truck rolls, improve operating efficiencies, reduce O&M cost and reduce outage duration. The application of line sensors will provide near real time data of our distribution system, which will result in more timely and accurate distribution system planning and more optimal operations of the system.

Self healing technology is the use of distribution line power devices such as switches, programmable reclosers and circuit breakers that are automated and thus capable of communicating with an intelligent control system. The control system, communications system, and power line devices all work together as a "team" – all serving to communicate and isolate the portion of the system affected by a fault or other problem, thus minimizing the impact to customers.

The automation of switched capacitor banks and voltage regulators will allow the Company to better optimize our system performance and demonstrate integrated volt/VAR control strategies. This equipment will also help improve power factor, reduce line losses, allow remote control of our capacitor banks and voltage regulators, and reduce the number of manual on site inspections.

III. TESTING OF INTEGRATED VOLT/VAR CONTROL

Q. YOU PREVIOUSLY MENTIONED INTEGRATED VOLT/VAR CONTROL WHEN DESCRIBING DISTRIBUTION AUTOMATION. COULD YOU PLEASE EXPLAIN IT IN FURTHER DETAIL?

A. Yes. Integrated Volt/VAR control ("IVVC") is a strategy to better manage the application and operation of existing voltage regulators (the "Volt") and capacitors (the "VAR") on our distribution system. In general, the strategy is to maintain as flat of a voltage profile as possible across the entire circuit, starting at the substation and out to the farthest endpoint on the circuit. This is accomplished by automating the substation level voltage regulation, line capacitors, and line voltage regulators and incorporating them into a single intelligent control system. This control system continuously monitors and operates the voltage regulators and capacitors to maintain the desired relatively flat voltage profile. Once the distribution system is operating with a relatively flat voltage profile across the entire circuit, the Company would have the capability of operating the system voltage at the substation at a lower level than it has to be operated at today. Lowering the system voltage at the substation would result in an immediate reduction of system loading. By applying IVVC and reducing system voltage during peak load conditions, Duke Energy Ohio is thereby reducing system demand.

Q. PLEASE DESCRIBE THE PLANS FOR INSTALLING SMARTGRID IN "TRANCHES" IN OHIO.

A. Duke Energy Ohio is deploying SmartGrid in phases or "tranches." Ohio AMI Tranche 1.0 – our first phase of scaled AMI deployment in Ohio – began on January 11, 2010, and is scheduled to run through December 31, 2010. This first tranche will involve deployment of approximately 80,000 electric meters, 60,000 gas meters, and 10,000 communication nodes. For our distribution automation work, 2010 is our second year of scaled deployment.

Q. HAVE THE CUSTOMERS OF OHIO BEGUN TO SEE ANY BENEFITS ASSOCIATED WITH THE DISTRIBUTION AUTOMATION EQUIPMENT?

A. Yes. As an example, just seven days after the first self-healing team was installed and commissioned, 2,200 customers, including four schools, avoided a 66 minute outage. Customers are beginning to see reliability improvements from the other distribution automation work as well.

Q. DUKE ENERGY OHIO COMMITTED TO REACH SPECIFIED SYSTEM AVERAGE INTERRUPTION FREQUENCY INDEXES AS A RESULT OF THE STIPULATION IN ITS ELECTRIC SECURITY PLAN. IS THE COMPANY ON TARGET TO MEET THIS TARGET?

A. Yes, Duke Energy Ohio's System Average Interruption Frequency Index for 2009 was below the target of 1.5.

Q. WILL DUKE ENERGY PROVIDE A REPORT TO THE COMMISSION REGARDING MOMENTARY AVERAGE INTERRUPTION FREQUENCY INDEX CAPABILITIES AS A RESULT OF SMARTGRID DEPLOYMENT.

A. Yes. Consistent with our Stipulation and the Order in Case No. 09-543-GE-UNC, Duke Energy Ohio will provide that report in mid-August.

IV. <u>CONCLUSION</u>

Q. WAS EXHIBIT DLS-1 PREPARED BY YOU OR UNDER YOUR DIRECTION?

A. Yes, it was.

Q. DOES THIS CONCLUDE YOUR PREPARED TESTIMONY?

A. Yes, it does.

SMARTGRID UPDATE
Initial Deployments - Ohio