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DE-OHIO EXHIBIT ____

BEFORE

THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Application of Duke Energy Ohio for an Increase in Electric Distribution Rates	)	Case No. 08-709-EL-AIR
In the Matter of the Application of Duke Energy Ohio for Tariff Approval	)	Case No. 08-710-EL-ATA
In the Matter of the Application of Duke Energy Ohio for Approval to Change Accounting Methods	)	Case No. 08-711-EL-AAM

DIRECT TESTIMONY OF

TODD W. ARNOLD

ON BEHALF OF

DUKE ENERGY OHIO

______ Management policies, practices, and organization

______ Operating income

______ Rate Base

______ Allocations

______ Rate of return

______ Rates and tariffs

__X__ Other: SmartGrid

August 8, 2008

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INDEX

TABLE OF CONTENTS

PAGES

I. INTRODUCTION AND PURPOSE

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Todd W. Arnold, and my business address is 139 East Fourth Street, Cincinnati, Ohio 45202.

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

A. I am employed by the Duke Energy Corporation (Duke Energy) affiliated companies as Senior Vice President, Smart Grid and Customer Systems.

Q. PLEASE BRIEFLY DESCRIBE YOUR JOB DUTIES AS VICE PRESIDENT, SMART GRID AND CUSTOMER SYSTEMS.

A. As Vice President, Smart Grid and Customer Systems, I am responsible for the SmartGrid strategy, deployment planning, and implementation, as well as the customer and meter data management systems.

Q. PLEASE SUMMARIZE YOUR EDUCATION AND PROFESSIONAL QUALIFICATIONS.

A. I received a Bachelor's Degree in Marketing from Indiana State University in 1977 and a Master's Degree in Business Administration from the University of Indianapolis in 1986. I began my career with Public Service Company of Indiana, Inc. (PSI) in 1977 in field sales and marketing. I have served in many customer operations, distribution operations, and corporate office capacities. I have my "Strategic Leader" professional certification from the Call Center Industry Advisory Council (CIAC). CIAC is a not-for-profit corporation established by the call center industry to provide standardized competency-based professional certification for call center leaders. I am currently a member of the Board of

Directors of People Working Cooperatively.

Q. PLEASE SUMMARIZE YOUR WORK EXPERIENCE.

A. I have over thirty-two years of utility experience including field operations, customer service, strategic planning, system implementation, process reengineering, and merger integration. Prior to my current position, I was Senior Vice President, Customer Service for Duke Energy, responsible for call center operations, billing, credit and collections and meter data management for Duke Energy Corporation (Duke Energy) affiliated operating companies.

Q. HAVE YOU PREVIOUSLY PROVIDED TESTIMONY BEFORE ANY OTHER REGULATORY AGENCIES?

A. Yes. Most recently, I provided testimony in support of Duke Energy Ohio's (DE-Ohio) electric security plan case application in Case No. 08-920-EL-SSO.

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

A. The purpose of my testimony is to provide a detailed description of (1) the equipment to be installed for Duke Energy Ohio (DE-Ohio or Company) SmartGrid initiative; (2) the near-term functionality of the SmartGrid equipment; (3) the potential future functionality of the SmartGrid equipment; (4) the estimated costs associated with the project; and (5) the proposed deployment schedule for the SmartGrid initiative. My testimony also explains what a "smart grid" is and summarizes the work that Duke Energy has done with smart grid technology over the past few years.

II. OVERVIEW OF DE-OHIO'S SMARTGRID INITIATIVE

Q. WHAT IS SMARTGRID?

A. SmartGrid is the new name for the Duke Energy's Utility of the Future project to transform its gas and electric transmission and distribution systems into an integrated, digital network – much like a computer network – to produce operating efficiencies, enhanced customer and utility information and communications, innovative services, and other benefits. One fundamental component of the SmartGrid project is Advanced Metering Infrastructure (AMI). AMI is a metering and communication system that records customer usage data over frequent intervals and transmits the data over an advanced communication network to a centralized data management system. The usage data is made available to the utility and customers on a frequent and timely basis. The SmartGrid project uses the communication network to carry data from AMI and other intelligent devices on the distribution grid, creating a networked system and utilizing the AMI to its greatest extent.

SmartGrid, however, is not limited to AMI metering. The possibilities with SmartGrid technologies are infinite as it is continuously evolving much like the internet has evolved over time. SmartGrid is much more than simply the functions it is capable of performing. It is an open architecture integration of the electric distribution system which will provide capabilities and/or a platform for emerging technologies.

III. DE-OHIO'S VIEW OF A "SMART GRID"

Q. HOW DOES DE-OHIO VIEW THE DIFFERENCES BETWEEN A "SMART GRID", "AMI" AND "AUTOMATIC METER READING"?

A. From DE-Ohio's perspective, these three categories are on the same general spectrum of service and functionality with automatic meter reading (AMR) being the most basic, a smart grid being the most complex and functional, and AMI somewhere in between. AMR generally includes remote access to the meter, monthly kWh reads, interval data, and basic theft, outage and restoration detection. AMI typically allows for on demand meter reads, programmable load intervals, bi-directional and net metering, time-of-use and real time pricing options, and demand response capabilities. DE-Ohio's vision of a "smart grid" provides not only the metering options of AMR and AMI, but also enhanced options such as web-based applications for our operating personnel, remote and continuous collection of power quality data, remote programmability, and energy management services, along with distribution system automation components.

IV. DE-OHIO'S INVESTIGATION OF SMARTGRID TECHNOLOGIES

Q. PLEASE DESCRIBE DE-OHIO'S EFFORTS IN DECIDING TO INVEST IN SMARTGRID TECHNOLOGY.

A. Duke Energy began investigating the development of a data management system in 2004. Initially, the purpose was to gather and correlate data on generation characteristics, outages, transmission loading, distribution system constraints and meters, and then use that data to better optimize Duke Energy's system and employee work loads. The investigation led to the determination that Duke

Energy was not gathering the data frequently enough or in sufficient quantities to perform system and employee optimization analyses. Near the same time, DE-Ohio was also considering the possibility of an AMR project using a power line system in its Midwest region.

In 2006, Duke Energy initiated an internal working group consisting of every operational area of DE-Ohio (except for generation) tasked with putting together "use cases" designed to describe what technology DE-Ohio needed to accomplish this initiative and how DE-Ohio wanted to provide service and use products in the future. Approximately eighteen to twenty "use cases" were developed in conjunction with a consultant hired to assist DE-Ohio with this endeavor, KEMA, Inc. KEMA's staff analyzed and shaped the "use cases" using information from peer companies and helped to determine what technology would be needed in order to accomplish the goals of each use case.

Once DE-Ohio determined the actual technologies needed to bring its vision for the future (as set forth in its "use cases"), vendors of metering, behind-the-meter, and communication products were surveyed to assess their product offerings and to compare to DE-Ohio's functional requirements. In July of 2007, Duke Energy hosted a full-day meeting with the vendors at which DE-Ohio set forth its vision and then asked the vendors to submit proposals. It quickly became apparent that what DE-Ohio wanted to accomplish with its SmartGrid initiative was unique enough that none of the vendors' proposals met the needs of DE-Ohio. For instance, Duke Energy's vision was to have interoperable metering endpoints that would work with any communication system, and what was offered were metering endpoints that only connected to proprietary communication systems. Therefore, we selected a few firms that were closest to meeting our needs and have been working with them to move toward full compliance with our requirements and vision. Due to the nature of technology development in the smart grid area, Duke Energy did not pursue a traditional specification document from which vendors could bid, but instead opted to select vendors that were most willing to work with us to best achieve our goals. Duke Energy is continuing to work with several vendors to best implement its vision of DE-Ohio's future in this area. At this point, we have developed an architecture that allows us to minimize the proprietary communications networks and increase the long-term flexibility of the "smart grid." The process of developing technology and vendors will be an ongoing process; however, we have narrowed our initial vendor list to Echelon for metering, Verizon for backhaul communications and Ambient to assemble the communication nodes required to interface with the endpoints and the Verizon network.

Q. DID DUKE ENERGY DETERMINE THAT CERTAIN TECHNOLOGIES WERE NOT APPROPRIATE AFTER EXAMINATION?

A. Yes. Another technology reviewed by Duke Energy is a "Radio Mesh network." Mesh networks originated in the military and uses radios that can speak both to one another and to a "mother" radio. In the utility setting, there would be radios at each endpoint (meter) that would be able to communicate with each other and with the "mother" radio. The systems designed for the military were mainly utilized in the mobile environment and proved to be very reliable because as the devices moved, they always had multiple paths for communication back to "mother." However, Duke Energy believes that the challenges with the Mesh network operating in a non-mobile environment, primarily in unlicensed spectrum over a very large footprint, are significant. First, the radios cannot transmit date across large distances, which would be a challenge given DE-Ohio's expansive rural service territory areas. Second, the radios operate in an unlicensed spectrum, which means that cordless phones, baby monitors, remote controls, etc. all occupy the same space and often interfere with each others' signals. Since the spectrum is unlicensed, interference mitigation can be costly and unpredictable. Duke Energy is still evaluating the option of utilizing some of the Mesh technologies as a fill in where cellular providers do not have service and expansion of the networks is not likely.

Duke Energy considered and discarded several technologies before deciding on its current proposal. For example, Duke Energy examined broadband over the power lines (BPL), but has found the equipment susceptible to disturbances on the power line. We continue to evaluate BPL technology and are working with vendors to stabilize the technology.

Q. HAS DUKE ENERGY CONSULTED WITH INDUSTRY GROUPS ON ITS SMARTGRID VISION?

A. Yes. Duke Energy has consulted and collaborated on its SmartGrid initiative with the Electric Power Research Institute (EPRI), the research and development arm of the electric utility industry. Duke Energy is working on approximately twelve projects under EPRI's "Intelligrid" umbrella.

Duke Energy has also been working with the Gridwise Architectural Council and Gridwise Alliance, which were formed by the Pacific Northwest National Lab and the U.S. Department of Energy to focus on researching the future of the smart grid. The focus of the Gridwise Architectural Council is on standards, *i.e.*, how communication systems work together and the benefits of meters using the same "language." The Gridwise Alliance is involved in developing policies and standards at the state and federal levels. Duke Energy personnel are also involved in many other organizations that may have "smart grids" as a subset of their main focus, and participate in the internal development of Duke Energy's SmartGrid.

Representatives from Duke Energy have been involved with several conferences and seminars relating to smart grid investments. Utilimetrics (formerly AMR Associates) and Distributech hold annual conferences and trade shows in which Duke Energy participates in order to keep up-to-date on new developments in technology.

Q. HAS DUKE ENERGY PARTICIPATED IN ANY GOVERNMENTAL INITIATIVES RELATING TO SMART GRIDS?

A. Yes. Duke Energy has monitored the Department of Energy's (DOE) Modern Grid Initiative and frequently participates in venues to help shape the definition, direction, and policy setting of this group. Duke Energy personnel also contribute, through trade associations, material to be considered in defining the smart grid, as well as setting national policy through the DOE. Duke Energy has also applied for funding for a few smart grid-related projects from DOE, but has not been selected to date.

V. INTELLIGENT METERS

Q. HOW DOES DE-OHIO CURRENTLY OBTAIN ELECTRIC METER READINGS?

A. DE-Ohio currently obtains electric meter readings through monthly meter readings by meter readers and meter readings submitted by customers by phone or through DE-Ohio's website. Most meter readings are monthly meter readings by meter readers. DE-Ohio uses 194 meter readers who walk routes once per month to read the meters. The meter readers either automatically record, or manually key in, the usage data into a handheld electronic storage device. The stored usage data is transmitted to DE-Ohio's billing system daily.

One of the main challenges for DE-Ohio's meter reading operations is obtaining access to inside meters located primarily in urban areas of DE-Ohio's service territory. DE-Ohio maintains a "key room" containing over 60,000 keys to customers' homes, where the customers voluntarily provided DE-Ohio with a keys to enter their homes to perform the monthly meter readings in case the customer is not at home when the meter reader arrives. Most customers, however, refuse to give DE-Ohio a key to enter their home or business. In such cases, if the meter reader cannot enter the home or business to read the meter, DE-Ohio allows the customer to record the meter reading on a postcard left at the premises to enter the meter reading online or to call the meter reading into the Company's Call Center. Approximately 8% of Ohio bills (residential and non-residential) are estimated each month due to our inability to enter a customer's premises to read the meter. This results in a significant number of Call Center calls, customer complaints, and costly off-cycle meter readings.

Q. PLEASE BRIEFLY DESCRIBE THE INTELLIGENT METERS DE-OHIO IS PROPOSING TO INSTALL.

A. DE-Ohio is proposing to install intelligent meters with two-way communications. These intelligent meters will allow DE-Ohio to read meters remotely, remotely connect and disconnect service, verify power outage/restoration, and engage in increased theft protection measures. DE-Ohio will also eventually be able to send control information back through the communication system, using meter data as a basis to cycle the air conditioners and schedule use of power-heavy appliances depending on market signals and customer preferences. These meters use the power lines for a communication medium from the meter to the transformer. At the transformer, the meter data is then delivered using a public wireless carrier. Currently we anticipate using Verizon.

Q. WHAT KIND OF DATA WILL THESE NEW METERS BE ABLE TO SEND TO DE-OHIO?

A. The new meters will be able to collect data regarding usage, ranging in frequency from every five minutes to daily reads for both energy and demand readings. The meters will also be able to collect and store other metrics (such as voltage, kilo-watt hour (kWh), and energy data). The meters will also be capable of net-metering.

Q. WHY IS DE-OHIO INTERESTED IN COLLECTING THIS DATA?

A. DE-Ohio would be better prepared to update its load forecast with access to this data. DE-Ohio would also be able to look back at the load profile for a home on an hourly basis for several days for trouble-shooting purposes. This information could be provided to customers concerned about their levels of usage. Information from the "end points" of the system will also be combined with data from other distribution assets to better plan for growth, asset management, restoration services, etc. Generation capacity planning will also be enhanced by gathering more granular consumption data over weeks and months.

Q. WHAT OTHER OPTIONS WILL THESE NEW METERS ENABLE FOR DE-OHIO?

A. The data collected and transmitted through the intelligent meters will provide new operational efficiencies. Restoration of service after an outage will be more rapid. DE-Ohio will be able to troubleshoot network problems using the network versus visual inspection. This will also reduce crew time in the field.

The intelligent meters would also enable DE-Ohio to limit its amount of load in an emergency. The meters will enable DE-Ohio to increase its energy efficiency offerings, provide for larger-scale distributed generation, and maximize load control potential.

DE-Ohio would also be able to enhance customer service. DE-Ohio would be able to obtain special reads for customers calling in with questions about their meters, usage, or billing. Customer-sited generation can be net metered on a larger-scale.

Q. WILL CUSTOMERS SEE A CHANGE IN THEIR SERVICE UPON INSTALLATION OF THESE METERS?

A. Yes. The most immediate change will be the elimination of having to obtain a manual meter reading. Having remote access to the usage data will result in more accurate billing and the ability for our customer service representatives to have better data to respond to customer billing inquiries. Over a period of time in the near term, we would begin to offer enhanced customer benefits. Customers will see no immediate change in their basic service. However, customers will be able to customize their service options with their meter and DE-Ohio in the future, like how and where information is delivered, starting and stopping service, etc.

Q. HAS DE-OHIO MADE A FINAL DETERMINATION REGARDING THE VENDOR AND METER TYPE IT WILL USE IN THIS PROJECT?

A. DE-Ohio is currently evaluating three different scenarios, each representing a variation in the vendor of the meter and the provider of the communications system. Under evaluation are:

- Echelon meters and Verizon communications
- Echelon meters and Silver Spring Network communications
- GE meters and Silver Spring Network communications

There are different costs and benefits associated with each combination, which can vary in effectiveness based on the density of housing and type of terrain. It is also possible that DE-Ohio will choose to optimize the meter selection by choosing a small mix of vendors for its meters based on the results of a circuit-by-circuit analysis of the DE-Ohio system. The most likely option for

DE-Ohio is the Echelon meter paired with the Verizon communications system. However, geographic as well as customer characteristics may dictate the technology selection. The combination of Echelon with Verizon as the communication backhaul appears to be the most flexible, cost-effective solution based on Duke Energy's requirements for its SmartGrid.

VI. <u>COLLECTION DEVICES</u>

Q. WHAT IS A COLLECTION DEVICE?

A. A collection device is like a computer and is responsible for the actual collection of data from each meter and the relaying of that data to DE-Ohio. At each collection box, there is a data collector, a modem and a processor. The processor manages the modem, so that it can be used for multiple devices. For instance, a single modem can be used to relay meter data, data from sensors on the system, as well as information from the customer's premise.

Q. WHERE WILL THE COLLECTION DEVICE BE LOCATED?

A. DE-Ohio will need to install approximately one collection box for every four to six homes, depending on housing density. They will be located at the transformer. DE-Ohio is in discussions with its vendors about the possibility of creating a meter/collector as one device. This would eliminate the need for collection equipment at the transformer in some circumstances and would allow DE-Ohio to design a more robust, cost-effective network.

Q. PLEASE DESCRIBE THE FUNCTIONALITY OF THE COLLECTION BOX.

A. The collection box houses the meter data collector, a modem, and a processor, along with the required power sources and a battery. The meter data collector communicates with each meter, collecting and sending information to the meter. The modem is the device connecting the collector to the DE-Ohio back office system. The processor is used to manage the modem, allowing the modem to be used for more than one purpose. For example, the electric meter data, information from the transformer, information from other utility meters (gas and water) as well as communications with customer-owned equipment (*e.g.*, air conditioners) beyond the meter can all be managed back to DE-Ohio's home office using the same modem. The processor also has a number of open slots, like a USB port on a computer, which can be connected to various communication methodologies to reach beyond the meter, all managed from within the collector box.

Q. IS DE-OHIO ALSO CONSIDERING INSTALLING EQUIPMENT AT EACH TRANSFORMER THAT WOULD COLLECT DATA FROM THE TRANSFORMER AND SEND IT TO DE-OHIO?

A. Yes. DE-Ohio is pursuing the feasibility of installing collection equipment at each transformer that would enable DE-Ohio to communicate with the transformers and would also send data from the transformer back to DE-Ohio regarding the health of the transformer. This capability would be combined within the collector box.

Q. PLEASE DESCRIBE THE APPROXIMATE EXPECTED COSTS OF THESE COLLECTION DEVICES.

A. A basic one-way communication-enabled modem that could only collect data from the meter and send it to DE-Ohio would cost approximately $70 per device. The full collection box that DE-Ohio seeks to install in this case, including the modem and processor and the box itself, will likely cost approximately $500. Today, the boxes are built one at a time by hand and cost approximately $1,000 per box. It is anticipated that these costs will decrease once DE-Ohio places an order for several hundred thousand and continues to evolve the design to gain production cost efficiencies.

VII. COMMUNICATIONS EQUIPMENT

Q. WHAT KIND OF COMMUNICATIONS EQUIPMENT IS REQUIRED FOR THE RELAY OF INFORMATION BETWEEN THE METER AND DE-OHIO?

A. DE-Ohio plans to utilize existing wireless communications systems for the communication of load data to DE-Ohio.

Q. WHY IS DE-OHIO WORKING WITH AN EXISTING WIRELESS PROVIDER INSTEAD OF INSTALLING ITS OWN SYSTEM?

A. The main benefit of working with an existing wireless telecommunications company is tapping into that company's expertise in the area. The wireless company will do the research and development of the communications network and perform necessary upgrades. As a result, DE-Ohio will always have access to the latest technology.

In addition, telecommunications is not our traditional business. However, it is possible that we may still have to meet this challenge when faced with deploying intelligent meters in areas without available wireless service. DE-Ohio will need to determine whether traditional "wireline" service or BPL would be feasible options to meet the needs of customers without available wireless service.

Q. WOULD THERE BE A DIFFERENT TYPE OF COMMUNICATIONS NETWORK BETWEEN THE METER AND THE COLLECTION DEVICE?

A. Yes. Each meter has a proprietary communications system from the meter to the collection device. However, from the collection device to DE-Ohio, DE-Ohio can use any wireless service provider available.

VIII. INFORMATION TECHNOLOGY

Q. WILL DE-OHIO NEED TO UPDATE ITS COMPUTER SOFTWARE TO HANDLE THE NEW DATA FLOWING FROM THE INTELLIGENT METERS?

A. Yes. DE-Ohio is still assessing its needs in this area, but it is clear that DE-Ohio will be receiving more data than ever before and must be able to efficiently process and utilize it. DE-Ohio will need updated computer applications that will, at a minimum, coordinate meter reading, outage management, customer interface, power delivery, generation, and billing.

Q. ARE THERE OTHER NEW SOFTWARE CAPABILITIES THAT DE-OHIO WILL NEED TO INSTALL?

A. DE-Ohio will also need meter management software that will be able to monitor the health of the new meters and new software for distribution automation.

IX. DEPLOYMENT SCHEDULE

Q. PLEASE DESCRIBE THE CONTEMPLATED STEPS IN THE DEPLOYMENT OF THE INTELLIGENT METERS.

A. There will likely be two steps in the meter deployment as proposed by DE-Ohio. The first step would be an assessment of the system and its assets to specify general deployment areas. We will start mostly in the center city and work our way out. This would include a circuit-by-circuit assessment aimed at determining the most appropriate meter/communications combination for each household and business location in the deployment area. Also occurring in this step would be DE-Ohio entering into contracts with vendors, obtaining warehouse space, and hiring contractors for the meter and equipment installations.

The second step would begin upon completion of the first step. DE-Ohio would begin to deploy the new meters to each customer by utilizing the routes already used for meter reading and billing purposes. DE-Ohio intends to deploy approximately 80% of the meters and equipment within the first three years of the initiative (2009-2011). The meter installers will likely follow the meter readers on their routes and switch out the meters along each route within a certain window (approximately two weeks). The installers would also be responsible for obtaining the final reads from the old meters at the time of switch out. Customers would not see a disruption of service other than a short outage during the meter switch out.

The collection box deployment would roughly track meter deployment. Customers with overhead service would experience no disruptions in service from the collection box installation. We are currently evaluating installations on underground transformers and whether that might require a service interruption for installation. DE-Ohio will hire more highly-trained workers for the collector box installation than will be needed for the meter installation.

X. ONGOING METERING PILOTS IN OTHER STATES

Q. ARE ANY OF DE-OHIO'S AFFILIATED UTILTIY OPERATING COMPANIES DEPLOYING ADVANCED METERING INFRASTRUCTURE PILOT PROGRAMS IN THEIR STATES?

A. Yes. Duke Energy is currently installing meters in both North Carolina and South Carolina. 5,000 meters were installed in North Carolina as of March 2008 and another 2,500 have been installed in South Carolina. Duke Energy is also proposing a deployment in Indiana.

Q. DO YOU THINK THAT THE PILOT PROGRAMS WILL GIVE DE-OHIO NEEDED EXPERIENCE WITH INTELLIGENT METERS?

A. Yes. DE-Ohio believes that its affiliates' experience with their smart metering pilots will be highly educational and will result in the sharing of knowledge between the companies. For example, we have learned about installation techniques and the challenges of using the power line as a communication tool. Based on what we have learned, we have taken the appropriate steps to prepare the equipment prior to placing it in the field. We have also performed analysis on modems that revealed a shortcoming in our initial selection, allowing us to move to a modem with different capabilities. Obtaining such knowledge and experience from our pilot programs will help make DE-Ohio's deployment more robust and successful.

XI. DEMONSTRATION LABS

Q. PLEASE DESCRIBE THE DEMONSTRATION LABS INSTALLED IN OHIO AND THE CAROLINAS.

A. The demonstration labs are designed to provide a "hands on" experience with the types of SmartGrid equipment that will eventually be deployed on our system. The labs provide a controlled setting where we can demonstrate the functionality and interaction of devices on the system without having to energize the devices. Additionally, the labs provide a setting to tie all of the devices together and begin to optimize the interaction prior to using the equipment at a customer site. The labs allow Duke Energy to continually evaluate products and services in a controlled environment prior to purchasing and installing. The set up of the Ohio lab will mimic DE-Ohio's system and interface with customers, including a replica of a home and commercial business, complete with interface for an electric car. Finally, the labs will also have a working replica of a Duke Energy work center to help tie all of the pieces of SmartGrid together.

Q. HOW AND WHEN DOES DE-OHIO PLAN TO DEPLOY THE AMI SYSTEM?

A. DE-Ohio has already begun pre-deployment of the system. The deployment will occur over approximately a three-year time span. We will begin installing AMI equipment in phases so that we can continue to perform the economic analysis, business requirement definition and planning, monitoring of the maturity of AMR technologies, and defining and understanding customer needs and behaviors.

For the first phase, we plan to focus on areas in Cincinnati that will provide a good mix of gas, electric, and combination accounts as well as inside and outside meter locations. This first phase is to demonstrate the strategic and tactical value of AMI to the customer, utility, and Commission. We plan to install advanced metering capabilities for a minimum of 50,000 electric meters and 40,000 gas meters during 2008.

Q. PLEASE DESCRIBE RIDER DR-IM.

A. Rider DR-IM is a tracking mechanism that would allow DE-Ohio to recover the costs, and pass through to customers the savings, related to the SmartGrid project. DE-Ohio would make an annual filing seeking approval to recover the revenue requirement related to the SmartGrid project. DE-Ohio witness Mr. William Don Wathen Jr. will discuss the implementation of Rider DR-IM.

XII. CONCLUSION

Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?

A. Yes.