BEFORE

THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Application of Duke Energy Ohio, Inc. to Establish its Fuel and Purchased Power Component of its Market- Based Standard Service Office for the Period of July 1, 2007, through December 31, 2008.)	Case No. 07-974-EL-UNC
In the Matter of the Application of Duke Energy Ohio, Inc. to Establish its 2008 System Reliability Tracker of its Market- Based Standard Service Offer.)	Case No. 07-975-EL-UNC

DIRECT TESTIMONY OF

CHARLES R. WHITLOCK

ON BEHALF OF

DUKE ENERGY OHIO, INC.

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March 2, 2009

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Attachment:

CRW-1 Summary of Rider SRT Purchases (July 1, 2007, through December 31, 2008)

I. INTRODUCTION

- 1 Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.
- 2 A. My name is Charles R. Whitlock, and my business address is 139 East Fourth
- 3 Street, Cincinnati, Ohio 45202.
- 4 Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?
- 5 A. I am employed by Duke Energy Business Services, Inc. as Senior Vice President,
- 6 Commercial Asset Management ("CAM") Group.
- 7 Q. PLEASE DESCRIBE YOUR EDUCATION AND PROFESSIONAL
- 8 BACKGROUND.
- 9 A. I am a graduate of the University of Alaska at Anchorage with a Bachelor's
- Degree in Business Studies and Accounting. I am also a graduate of the Mahler
- 11 School, Advanced Management Skills Program and the Center for Creative
- 12 Leadership Developing Strategic Leadership Program. I have also taken
- 13 advanced course work in the area of business management at Harvard University.
- I joined Cinergy in May 2000 as a power trader for Cinergy Services. Prior to
- joining Cinergy, I was a Senior Power Trader with Statoil Energy. I also held
- various positions with Vitol Gas and Electric, which included responsibilities for
- energy trading, marketing, and risk management. I was named to my current
- position in January 2006. Although my title has changed since 2006, my areas of
- responsibilities have not.
- 20 Q. PLEASE DESCRIBE YOUR RESPONSIBILITIES AS SENIOR VICE
- 21 PRESIDENT, COMMERCIAL ASSET MANAGEMENT.

1	A.	I am responsible for the commercial asset management. Specifically, I have
2		responsibility to provide the safe, reliable and economic supply of fuel, power,
3		emission allowances and capacity to Duke Energy Ohio, Inc.'s ("DE-Ohio" or
4		"Company") Standard Service Offer ("SSO") consumers. I also have
5		responsibility for the commercial risk management of all components of DE-
6		Ohio's non-SSO generation, which includes risk associated with power prices,
7		fuel prices, emission allowance prices, congestion and weather.

8 Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THIS COMMISSION?

9 A. Yes, I have.

A.

10 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS

PROCEEDING?

The first part of my testimony pertains to DE-Ohio's Fuel and Purchased Power Rider ("Rider FPP"). Therein, I provide an overview of the history of Rider FPP and identify the prior audits of that Rider. I will discuss, in greater detail, some issues raised by the auditor during the previous audit and the stipulation entered into following that audit. Additionally, I will describe the changes to Rider FPP resulting from the DE-Ohio's Electric Security Plan ("ESP"), which went into effect on January 1, 2009.

The second part of my testimony concerns DE-Ohio's System Reliability Tracker ("Rider SRT"). Through this testimony, I describe the Company's Rider SRT and identify the prior audits of it. Again, I discuss the stipulation reached in the 2007 audit of Rider SRT. Finally, I sponsor Attachment CRW-1, which is a summary of the SRT purchases from July 1, 2007, through December 31, 2008.

II. RIDER FPP DISCUSSION

Ο	PLEASE	EXPLA	IN DE.	OHIO'S RII	TR FPP.
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A. Rider FPP is the mechanism that DE-Ohio uses to recover fuel costs needed to power its generation plants, the cost of energy bought on the open market, the cost of emission allowances, and the recovery of congestion and losses billed from the Midwest Independent System Operator, Inc. (MISO). DE-Ohio makes quarterly adjustments to the Rider, which is subject to an annual management and financial review by an independent auditor.

8 Q. PLEASE IDENTIFY THE PRIOR AUDITS OF RIDER FPP.

A. The initial review of DE-Ohio's Rider FPP occurred in 2005 in Case No. 05-806-EL-UNC. This review concerned the period of January 1, 2005, through June 30, 2005. In that proceeding, the auditor made several recommendations, many of which were incorporated into a stipulation approved by the Commission in February 2006. DE-Ohio implemented the recommendations included in the stipulation as part of its FPP management.

The second review of DE-Ohio's Rider FPP occurred in 2006 in Case No. 05-724-EL-UNC and encompassed the period of July 1, 2005, through June 30, 2006. Once again, the auditor made several recommendations in its audit report, many of which were adopted into a stipulation dated April 9, 2007. This stipulation was approved by the Public Utilities Commission of Ohio ("Commission") on November 20, 2007.

Case No. 07-723-EL-UNC reflects the third audit of DE-Ohio's Rider FPP, which occurred in 2007. This audit concerns the time period of July 1, 2006,

1	through June 30, 2007. Again, the auditor made several recommendations in its
2	report, and certain of these recommendations were adopted in a stipulation dated
3	December 13, 2007. The Commission approved this stipulation on February 27,
4	2008. As used subsequently, "the 2007 audit" refers to this audit,

An audit is currently being conducted of the Company's Rider FPP relative to the six quarters between July 1, 2007, and December 31, 2008.

7 Q. WHY DOES THE CURRENT AUDIT CONCERN SIX QUARTERS?

- A. Pursuant to the stipulation submitted in connection with DE-Ohio's ESP (Case No. 08-920-EL-SSO), DE-Ohio committed to an audit of its Rider FPP for the eighteen months ending December 31, 2008. The Commission approved this Stipulation on December 17, 2008.
- 12 AS A RESULT OF THE 2007 AUDIT, DE-OHIO AGREED TO Q. 13 DOCUMENT **PROCEDURES** AND **GUIDELINES** FOR ITS 14 COMMERCIAL ASSET MANAGEMENT **GROUP FOR** THE 15 PROCUREMENT AND MANAGEMENT OF FUEL, POWER AND EMISSION ALLOWANCES. HAS THIS BEEN DONE? 16
- 17 A. Yes. DE-Ohio has memorialized the CAMs Policies and Procedures. The
 18 Company has assembled a manual that sets forth procedures for active
 19 management of its procurement and management of fuel, power and emission
 20 allowances. The CAMs Policies and Procedures is one of three core documents
 21 used for the active management of various commodities. The remaining two are
 22 Duke Energy's Global Risk Management Policies and the Duke Energy's
 23 Delegation of Authority, both of which previously existed.

The CAMs Policies and Procedures not only documents the triggers for entering
into transactions, but provides a summary of the organization, a description of an
individuals role and an overview of the active management process broken down
by fuel, power and emission allowance. Significant documentation is devoted to
coal procurement practices and procedures. Finally, the CAMs Policies and
Procedures Manual consist of ten chapters covering sixty pages.

Q. PLEASE DESCRIBE ANY CHANGES TO DE-OHIO'S PROCEDURES AND METHODS FOR FORECASTING COAL CONSUMPTION AS A RESULT OF THE 2007 AUDIT.

Pursuant to Recommendation No. 5 of the stipulation reached in Case Nos. 07-723-EL-UNC and 07-975-EL-UNC dated December 13, 2007, the CAM Group reviewed other potential methods of coal forecasting, including the five-year weighted average method, and the min/max average method. As a result of this review, the CAM Group concluded that its current forward looking, market-based, weather normalized forecast methodology is preferred. Significantly, a historical review does not contemplate structural shifts in price; nor does it reflect recent capital investments in a company's facilities. Furthermore, a historical review does not allow for the introduction of a distribution of outcomes.

The CAM Group uses relevant and current market information for both inputs and outputs. The model is then run that produces a variety of different scenarios with different fuel consumption and the CAM Group manages to the expected position based upon these scenarios. In my opinion, CAM Group's current methodology is the better method for forecasting coal consumption.

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However, the CAM Group also the capability to evaluate different scenarios,
including those that are based upon historical data, system averages, and the
min/max average. Discussions with the Auditor during the current audit
highlighted a slightly different view of this question. This view asks to explain the
'reasons' for the variance. In essence to perform a 'back-test' of the projection
and explain the root causes of the variance for example how much of the forecast
еггог was driven by changes in weather, EFOR rates, planned outages, price
moves, etc. The company does this and has shared that information with the
auditor.

10 Q. CAN THERE BE A VARIANCE BETWEEN ACTUAL COAL AND 11

FORECASTED COAL CONSUMPTION?

- 12 A. Yes. Changes in weather, Equivalent Forced Outage Rates (EFOR), planned 13 outages, and price moves can result in variances between the actual and 14 forecasted coal consumption.
- 15 HAS DE-OHIO WORKED WITH THE COMMISSION'S STAFF TO Q. 16 DEVELOP DOCUMENTATION THAT WILL FACILITATE THE 17

AUDITING OF ACTIVE MANAGEMENT TRANSACTIONS?

18 Α. Yes. Consistent with the most recent stipulation, DE-Ohio and the Commission's 19 Staff reviewed documentation that would facilitate future audits. As a result of 20 these discussions, DE-Ohio implemented various protocols, including those 21 pertaining to policies and procedures, risk management, and delegations of 22 authority. DE-Ohio has also identified and assigned specific areas of 23 responsibility...

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- 1 Q. DID DE-OHIO EXAMINE THE CAUSE OF ITS UNDERCOLLECTION
- OF FUEL COSTS, AS REFERENCED IN THE STIPULATION
- 3 APPROVED IN FEBRUARY 2008?
- 4 A. Yes.
- 5 Q. WHAT WERE THE RESULTS OF THAT EXAMINATION?
- 6 A. Adjustments were made to the model to account for key drivers of DE-Ohio's 7 variance. In the process of evaluating necessary adjustments, DE-Ohio reviewed 8 the process that involves taking the various positions that comprise the FPP and 9 running a forecast of rates. This process is complicated and requires human 10 intervention. The adjustments, therefore, included streamlining the process and 11 implementing various checks. For example, comparisons are made between the 12 current rate and the prior quarter's rate for the purpose of understanding and 13 explaining key drivers of any variance. The comparison is also made for the same 14 quarter of the previous year. In addition, the process was expanded to discuss the 15 range of outcomes that exist in CBM. Finally, a review process has been set up 16 with DE-Ohio's Rates Department, President of Ohio and the Business Unit 17 President.
- 18 Q. THE STIPULATION APPROVED IN FEBRUARY 2008, DID NOT
 19 ADDRESS AN ADJUSTMENT, IF ANY, TO RIDER FPP RELATIVE TO
 20 AN OUTAGE AT THE ZIMMER GENERATING STATION IN 2007. DID
 21 THE COMPANY DEVIATE FROM ITS STANDARD PRACTICE IN
 22 SECURING REPLACEMENT POWER DURING THAT OUTAGE?
- 23 A. No.,

Q. PLEASE EXPLAIN.

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- A. Given the existing RTO structure, DE-Ohio sells all of its generation to MISO and it purchases all load demand from MISO. In response to the Zimmer outage in 2007, DE-Ohio again purchased its load demand from MISO. But because of the outage, it had to purchase more generation. Thus, the process was the same during the outage, with DE-Ohio securing its load demand through the least cost economic dispatch conducted by MISO.
 - In evaluating replacement costs, consideration must be given to the costs incurred by DE-Ohio in replacing the turbine. These replacement costs were not paid by DE-Ohio ratepayers. Yet, the Company's ratepayers received, and continue to receive, the benefits of the new equipment.

12 O. DID THE ZIMMER OUTAGE AFFECT THE FPP RATE?

13 A. Yes. Typically the revenue received from MISO for the output at Zimmer reduces
14 the expense of the load buy that results form the demand bid for the SSO
15 customer. During the outage that revenue was zero.

16 Q. HOW IS THAT AMOUNT CALCULATED?

- 17 A. There are actually various ways to calculate the costs. In the current audit the company has proposed a methodology.
- 19 Q. ARE THERE COSTS THAT THE COMPANY INCURRED THAT WERE
 20 NOT INCLUDED IN THE SSO RATE THAT SHOULD OFFSET THE
 21 LACK OF REVENUE RECEIVED DURING THE ZIMMER OUTAGE?

- 1 A. Yes, the company incurred costs to replace the turbine that did not impact the
- 2 SSO rate. The benefits of those expenses were and are still received by the SSO
- 3 customers.
- 4 Q. WAS RIDER FPP MODIFIED AS A RESULT OF DE-OHIO'S ELECTRIC
- 5 **SECURITY PLAN?**
- 6 A. Effective January 1, 2009, Rider FPP became Rider PTC-FPP. The Rider
- 7 continues to serve at the mechanism for recovering fuel and purchased power
- 8 costs, costs of emissions allowances, base generation costs, and MISO costs for
- 9 net congestion and losses. Net revenue received from financial transmission and
- auction revenue rights are also recovered through Rider PTC-FPP.
- 11 O. ARE THERE ANY ADDITIONAL EMISSION ALLOWANCES
- 12 INCLUDED IN RIDER PTC-FPP THAT WERE NOT PREVIOUSLY
- 13 **INCLUDED IN RIDER FPP?**
- 14 A. Yes. Beginning January 1, 2009, Rider PTC-FPP includes annual and seasonal
- NO_x emission allowances.
- 16 Q. PLEASE EXPLAIN WHY NO_x WAS NOT INCLUDED IN RIDER FPP.
- 17 A. These emission allowances were not previously included in Rider FPP because of
- uncertainty surrounding applicable regulations at the federal and state levels.
- 19 Additionally, DE-Ohio did not include the cost of NO_x emission allowances in
- 20 Rider FPP due, in part, to the complexity of "flow control." Flow control is a NO_x
- 21 regulation that limits the ability to carry forward an unused allowance of a prior
- 22 year's vintage and use it in a subsequent year. In contrast, SO₂ emission

- l allowances can be carried forward without restriction such that, for example,
- 2 unused 2008 vintage allowances can be applied to future years.

3 Q. WHY IS NO_x INCLUDED IN RIDER PTC-FPP

- 4 Including NO_x in Rider PTC-FPP is consistent with the provisions of Amended
- 5 Senate Substitute Bill 221. These emission allowances will be treated consistent
- 6 with how DE-Ohio has historically treated SO₂ emission allowances.

7 Q. HOW WILL DE-OHIO ACCOUNT FOR THESE COMPLEXITIES

8 RELATING TO FLOW CONTROL GOING FORWARD?

- 9 A. Flow control under the Clean Air Interstate Rule (CAIR) does not exist. Flow
- 10 Control existed only under the State Implementation Plan (SIP).

11 Q. HOW WILL DE-OHIO MANAGE NO, EMISSION ALLOWANCES?

- DE-Ohio will manage NO_x the same way SO_2 allowances are managed.
- 13 Inventories will be established by splitting allowances based upon generation ratio
- share of Rider PTC-FPP load to total load as of October 27, 2008.DE-Ohio will
- manage NO_x allowances economically through active management and maintain
- separate inventories for FPP and non-FPP consumers. Gains and losses from that
- time forward will flow to each account respectively. DE-Ohio will comply with
- 18 federal requirements on a combined inventory basis but will the manage
- inventories separately.

20 Q. DID THE ESP RESULT IN ANY OTHER MODIFICATIONS OR

21 ADJUSTMENTS TO RIDER FPP?

- 22 A. Yes, Rider PTC-FPP shall include and allocation, as of the October 27, 2008, of
- 23 the actual delivered cost of fuel pursuant to the existing fuel and transportation

agreements, the actual cost of net purchased power, including gains and losses
resulting from the settlement of forward power contracts, and SO2 and NOx
emission allowance inventories proportional to the expected generation share
needed to serve DE-Ohio's Rider PTC-FPP customers.

III. RIDER SRT DISCUSSION

6 Q. PLEASE DESCRIBE RIDER SRT.

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A. Rider SRT allows DE-Ohio to track and collect costs associated with meeting its SSO load obligation plus a fifteen percent (15%) planning reserve margin based on installed capacity. The Company is the provider of last resort ("POLR") and, consequently, must have the generating capacity to stand ready to serve all retail load in its service territory. Rider SRT includes costs incurred by DE-Ohio to ensure that it can provide safe and reliable service to all consumers in its service territory. The expectation for safe and reliable service should be no different than if DE-Ohio were still under traditional regulation.

15 Q. PLEASE DEFINE "GENERATING CAPACITY."

16 A. Generating capacity is the physical plant or "steel in the ground." It represents
17 the maximum amount of electric power or energy that a generating plant or unit
18 can produce at a specified time under certain conditions. It is measured in
19 Megawatts. Costs for capacity are included in Rider SRT.

20 Q. DOES DE-OHIO PURCHASE A SPECIFIC TYPE OF CAPACITY FOR

21 RIDER SRT?

A. Yes. DE-Ohio only purchases capacity that is qualified by MISO as a Designated Network Resource ("DNR"). This means that the energy from the generating

1		resource is deliverable to all load on a firm basis in the MISO footprint or to DE-
2		Ohio load.
3	Q.	PLEASE DEFINE THE TERM "ENERGY."
4	A.	Energy is the actual output from the generating plant or unit. The amount of
5		energy produced from a specific plant or unit is dependent upon the amount
6		demanded by consumers, up to the maximum capacity rating of the plant or unit.
7		It is measured in Megawatt-hours. Costs for energy are included in Rider FPP.
8	Q.	PLEASE BRIEFLY DESCRIBE THE PRIOR AUDITS OF RIDER SRT.
9	A.	These audits were conducted contemporaneous with some of the Rider FPP
10		audits, although the time periods at issue differed. The initial review of DE-
11		Ohio's Rider SRT occurred in 2005 pursuant to Case No. 05-724-EL-UNC. This
12		review concerned the accuracy of SRT calculations for the period of January 1,
13		2005, through May 31, 2006, and a prudence review for the period of January 1,
14		2005, through June 30, 2006. As mentioned above, the auditor made several
15		recommendations in its audit report, many of which were adopted in a stipulation
16		dated April 9, 2007, and approved by this Commission on November 20, 2007.
17		Case No. 07-723-EL-UNC reflects the second audit of DE-Ohio's Rider
18		SRT. This audit concerns the time period of July 1, 2006, through June 30, 2007.
1 9		Again, the auditor made several recommendations in its report, and certain of
20		these recommendations were adopted in a stipulation dated December 13, 2007,
21		and approved on February 27, 2008.
22		The Company's Rider SRT is currently being audited relative to the six

quarters between July 1, 2007, and December 31, 2008.

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- 1 Q. PLEASE EXPLAIN WHETHER THE STIPULATION APPROVED ON
- 2 FEBRUARY 27, 2008, ADDRESSED RIDER SRT.
- 3 A. The stipulation approved in February 2008 provided that the 2008 SRT market
- 4 price would include recovery of DE-Ohio's projected 2008 SRT planning reserve
- 5 capacity purchases by December 31, 2008. The stipulation also provided that the
- 6 2008 SRT should include recovery of the under-recovery of SRT purchases in
- 7 prior years. Additionally, through the stipulation, it was agreed that DE-Ohio
- 8 would resume quarterly filings to reconcile actual revenues and expenses for
- 9 Rider SRT.
- 10 Q. HAS DE-OHIO MADE QUARTERLY FILINGS FOR RIDER SRT?
- 11 A. Yes.
- 12 Q. DID DE-OHIO MAKE CAPACITY PURCHASES FOR RIDER SRT
- DURING THE CURRENT AUDIT PERIOD (JULY 1, 2007 THROUGH
- 14 **DECEMBER 31, 2008)?**
- 15 A. Yes. Those purchases are reflected in attachment CRW-1, which is a summary of
- the purchases DE-Ohio made during the current audit period.
- 17 Q. DID DE-OHIO MAKE ANY EMERGENCY CAPACITY PURCHASES
- 18 FROM ITS GAS-FIRED GENERATING UNITS COMMONLY
- 19 REFERRED TO AS "THE DENA ASSETS" DURING THE CURRENT
- 20 **AUDIT PERIOD?**
- 21 A. No. However, DE-Ohio did make purchases from Ohio Valley Electric
- 22 Cooperative, which is non-native DE-Ohio generation.
- 23 Q. WAS RIDER SRT MODIFIED AS A RESULT OF DE-OHIO'S ESP?

- 1 A. Yes. Effective January 1, 2009, Rider SRT includes the recovery of market
- 2 capacity purchases for any duration, up to three years. Rider SRT may also
- include compensation for capacity owned by DE-Ohio or its affiliates that has
- 4 never been used or useful in serving DE-Ohio load.

5 Q. ARE THERE ANY CHANGES TO THE SRT UNDER THE ESP?

- 6 A. Yes. MISO has made some changes to the "Capacity" product. Whereas, DE-
- 7 Ohio used to buy its reserve margin with an Installed Capacity Product we are
- 8 now going to buy an Un-forced Capacity Product. The difference between the two
- 9 products is the historic Forced Outage based on a three year average rate. For
- example, assume that DEO POLR obligation is 1,000 MW, that a 15% reserve
- margin is desired, and that the hisortic EFOR rate for tour units was 5%. In the
- bygone era of ICAP DEO would have procured 1,150 MW's of ICAP capacity. In
- the future we will buy 1,100 MW's of UCAP.

14 O. ARE THERE ANY OTHER IMPACTS AS A RESULT OF THIS CHANGE?

- 15 A. Yes. If DE-Ohio has a higher Forced Outage rate than the broader MISO footprint
- then DE-Ohio will purchase more capacity. If DE-Ohio's forced outage rate is
- lower than the MISO footprint then DE-Ohio will purchase less capacity
- 18 IV. <u>CONCLUSION</u>
- 19 Q. WAS ATTACHMENT CRW-1 PREPARED BY YOU OR UNDER YOUR
- 20 **SUPERVISION?**
- 21 A. Yes.
- 22 Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?
- 23 A. Yes.

Regulatory Capacity Purchase Total Applicable to Retail Customers \$ 125,025 \$ 263,100 \$ 654,525 \$ 583,250 \$ 619,525 \$ 2,368,900 \$ 4,242,026 \$ 3,725,687 \$ 2,408,750 \$ 399,526 \$ 369,250 \$ 399,525 \$ 15,979,087 \$ 125,025 \$ 263,100 \$ 554,525 \$ 653,260 \$ 619,525 \$ 2,368,900 \$ 4,242,026 \$ 3,725,687 \$ 2,408,750 \$ 356,525 \$ 350,250 \$ 359,525 \$ 15,979,087

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August September October November December

Total

Total Estimated Capacity Costs and Jurisdictional Allocation

DUKE ENERGY OHIO Summary of Protected 2008 Canacity and Purchased Power Costs Incurred to Serve SRT Gustomers

Schedule B CRW-1 Case No. 07-974-EL-UNC

Schedule B CRW-1 Case No. 07-974-EL-UNC

THE CINCINNATI GAS & ELECTRIC COMPANY Summary of Projected 2007 Capacity and Portchased Power Coats Incurred to Serve SRT Customers

Total Estimated Casacity Costs and Jurisdictional Allocation

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