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Dianne B Kuhnell
Senior Paralegal

VIA OVERNIGHT DELIVERY

September 26, 2008

Ms. Stephanie Stumbo
Executive Director
Kentucky Public Service Commission
211 Sower Boulevard
Frankfort, Kentucky 40602-0615

Re: Case No. 2008-00248

Dear Ms. Stumbo:

Enclosed please find an original and five copies each of the Responses to the Commission's First Request for Information in the above captioned case and a Petition for Confidential Treatment. The response to be filed under seal is enclosed in a separate envelope.

Please date-stamp the extra two copies and return to me in the enclosed envelope.

Sincerely,

Dianne Kuhnell
Senior Paralegal

cc: Dennis G. Howard
Gregory M. Young

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VERIFICATION

State of Ohio)
) SS:
County of Hamilton)

The undersigned, Richard G. Stevie, being duly sworn, deposes and says that I am employed by the Duke Energy Corporation affiliated companies as Managing Director, Customer Market Analysis; that on behalf of Duke Energy Kentucky, Inc., I have supervised the preparation of the responses to the foregoing responses to information requests; and that the matters set forth in the foregoing response to information requests are true and accurate to the best of my knowledge, information and belief after reasonable inquire.

Richard G. Stevie, Affiant

Subscribed and sworn to before me by Richard Stevie on this 25th day of September 2008.

NOTARY PUBLIC

My Commission Expires:

NOTARY PUBLIC STATE OF OHIO

ANITA M. SCHAFER
Notary Public, State of Ohio
My Commission Expires
November 4, 2009

Duke Energy Kentucky, Inc.
Case No. 2008-00248
Kentucky Public Service Commission
First Set of Data Requests
Request Date: September 15, 2008
Response Due Date: September 29, 2008

KyPSC-DR-01-001

REQUEST:

Refer to page 1-2 of Duke Kentucky's 2008 Integrated Resource Plan ("IRP"). Provide a full description of Duke Kentucky's Vermillion control area.

RESPONSE:

The verbiage in paragraph 2 on page 1-2 appears to be from a previous IRP. Initially the Wheatland and Vermillion generating plants were their own control areas. Both the Vermillion and Wheatland generating plants are connected to the Duke Energy Indiana (DEI) Transmission system. The Wheatland plant is DEI asset while the Vermillion plant is co-owned with Wabash Valley Power Authority (WVPA) with a 25% share and Duke Energy (Ohio) non-regulated with a 75% share.

PERSON RESPONSIBLE: Jeff Gindling

Duke Energy Kentucky, Inc.
Case No. 2008-00248
Kentucky Public Service Commission
First Set of Data Requests
Request Date: September 15, 2008
Response Due Date: September 29, 2008

KyPSC-DR-01-002

REQUEST:

Refer to page 1-3 of Duke Kentucky's 2008 IRP, specifically, the second paragraph under the heading Duke Energy Merger. The paragraph states, among other things, that Duke Kentucky's planning is performed separately from that of Duke Energy Indiana and Duke Energy Carolinas. Can it be correctly inferred that Duke Kentucky's planning is not separate from the planning of Duke Energy Ohio? If yes, describe the extent to which the planning is performed jointly.

RESPONSE:

DE-Kentucky's planning is separate from Duke Energy Ohio.

PERSON RESPONSIBLE: David Freeman

Duke Energy Kentucky, Inc.
Case No. 2008-00248
Kentucky Public Service Commission
First Set of Data Requests
Request Date: September 15, 2008
Response Due Date: September 29, 2008

KyPSC-DR-01-003

REQUEST:

Refer to page 1-6 of Duke Kentucky's 2008 IRP, specifically, the second paragraph under the heading Increased Potential for Renewable Portfolio Standard ("RPS") Legislation and to the bulleted assumptions on page 1-10 of the IRP. Explain the apparent contradiction between the paragraph on page 1-6 and the last bulleted assumption on page 1-10.

RESPONSE:

There is no contradiction between the referenced statements. On page 1-10, DE-Kentucky notes that it is not assuming that a Renewable Energy Portfolio Standard (RPS) will be mandated. Thus, the base case does not assume an RPS. On page 1-6, however, DE-Kentucky notes that it appears more likely than in past years that an RPS will be imposed and, thus, the IRP included a sensitivity on inclusion of an RPS.

PERSON RESPONSIBLE: David Freeman

Duke Energy Kentucky, Inc.
Case No. 2008-00248
Kentucky Public Service Commission
First Set of Data Requests
Request Date: September 15, 2008
Response Due Date: September 29, 2008

KyPSC-DR-01-004

REQUEST:

Refer to page 1-8 of Duke Kentucky's 2008 IRP. Provide a detailed description of the entity/organization identified as ReliabilityFirst.

RESPONSE:

In May 2005, East Central Area Reliability Coordination Agreement (ECAR), Mid-Atlantic Area Council (MAAC), Mid-America Interconnected Network (MAIN), and Midwest Reliability Organization (MRO), four regional reliability councils (RRCs) of the North American Electric Reliability Council (NERC), signed a memorandum of understanding (MOU) to proceed with the formation of a new, larger regional reliability organization. The participating RRCs share the goal of establishing more uniformity of standards and compliance conformance across a broader geographical area that encompasses multiple systems and market operators.

On June 15, 2005, Reliability*First* Corporation (Reliability*First*) was organized as a Delaware Corporation, resulting from the culmination of more than six months of work performed by the existing regional reliability council staffs in the Midwest and Mid- Atlantic states and over one hundred of their members. Reliability*First* is comprised of all or parts of the former ECAR, MAAC, and MAIN reliability councils. A formal coordination agreement was signed with MRO to achieve the benefits of closer collaboration with that council.

The purpose of Reliability*First* is to preserve and enhance reliability and security of the interconnected bulk power system and to serve as a Regional Entity, duly recognized and authorized by the Federal Energy Regulatory Commission (FERC), with key reliability functions delegated to it by the Electric Reliability Organization (ERO or NERC).
Reliability*First*'s key delegated functions are the development of standards for reliable planning and operation of the bulk power system, non-discriminatory compliance monitoring and enforcement of all reliability standards, and the independent assessment of the projected near and long-term reliability and adequacy of the bulk power system. Reliability*First* is designed to be flexible and adaptable in order to foster the broadest possible participation and meet the changing needs of the industry.

A hybrid Board, with both balanced industry sector and independent Directors, governs Reliability*First*. In addition to the Board, numerous stakeholder populated technical committees and working groups assist the organization in carrying out its mission and in ensuring that industry input is provided and incorporated where possible.

The following guiding principles were followed in the formation of Reliability*First*:

- Reliability*First* will embrace fair, open, and inclusive processes with respect to membership, participation and regional standards development.
- Reliability*First* will be committed to resolving reliability criteria differences fairly and openly.
- Reliability*First* staff will be governed by standards of conduct and independence assuring fair, non-discriminatory compliance measurement processes.

PERSON RESPONSIBLE: David E. Freeman

Duke Energy Kentucky, Inc.
Case No. 2008-00248
Kentucky Public Service Commission
First Set of Data Requests
Request Date: September 15, 2008
Response Due Date: September 29, 2008

KyPSC-DR-01-005

REQUEST:

Refer to page 1-11 of Duke Kentucky's 2008 IRP, specifically, the third step under the analytical process and to Chapter 4, Demand Side Management Resources. Identify where in the IRP potential demand-side management resource options were identified and screened.

RESPONSE:

On pages 4-35 to 4-38 of the IRP, the process for evaluating the existing programs is discussed. Those programs are the set that were developed in conjunction with the Residential DSM Collaborative and the Commercial and Industrial DSM Collaborative. The Company re-screened those programs to assess their cost-effectiveness. The results of that screening are provided on page 4-38.

Currently, the Company is undertaking an effort to screen a new set of programs and measures. This is not yet completed. Once this has been finalized, the Company intends to bring those to the Commission in an application for approval. This was referenced to some degree in the IRP on page 1-17 of the IRP, but the Company was not far enough along in the process to incorporate any results in this report. Additionally, the Company has commissioned a market potential study to ascertain the potential for additional measures and program.

PERSON RESPONSIBLE: Richard G. Stevie

Duke Energy Kentucky, Inc.
Case No. 2008-00248
Kentucky Public Service Commission
First Set of Data Requests
Request Date: September 15, 2008
Response Due Date: September 29, 2008

KyPSC-DR-01-006

REQUEST:

Refer to page 1-15 of Duke Kentucky's 2008 IRP under the heading Changes in Methodology, which reflects the lower growth rates for energy and peak summer demand in the current IRP compared to the 2003 IRP. Discuss whether the current forecasts for the other members of Duke Energy Midwest, Duke Energy Indiana and Duke Energy Ohio reflect similar reductions from 2003 to 2008 and provide their respective growth rates for those years.

RESPONSE:

Yes, the forecasts for the other members of Duke Energy Midwest do reflect similar reductions. The growth in energy for Duke Indiana over the forecast period is expected to be 0.3 percent as compared to 1.4 percent in 2003. Similarly, the summer peak demand for Duke Indiana is expected to grow 0.7 percent as compared to 1.1 percent. The respective numbers for Duke Ohio are 0.5 percent vs. 1.6 percent for energy and 0.8 percent vs. 1.2 percent for peak demand.

PERSON RESPONSIBLE: James Riddle

Duke Energy Kentucky, Inc.
Case No. 2008-00248
Kentucky Public Service Commission
First Set of Data Requests
Request Date: September 15, 2008
Response Due Date: September 29, 2008

KyPSC-DR-01-007

REQUEST:

Refer to the second paragraph on page 1-17 of Duke Kentucky's 2008 IRP. Explain whether the "energy efficiency and demand response products and services" refers to Duke Kentucky's existing programs or a set of new programs.

RESPONSE:

The paragraph refers to the fact that Commission authorization for the existing set of programs, except Power Manager and Personalized Energy Report, will expire at the end of 2009. The paragraph also mentions that the Company intends to file an application for a set of energy efficiency and demand response programs. At the time of the writing of the IRP, the Company was not far enough along in the analytical process to determine if this would be an application to continue the existing set of programs or to recommend a new set of programs.

PERSON RESPONSIBLE: Richard G. Stevie

Duke Energy Kentucky, Inc.
Case No. 2008-00248
Kentucky Public Service Commission
First Set of Data Requests
Request Date: September 15, 2008
Response Due Date: September 29, 2008

KyPSC-DR-01-008

REQUEST:

Refer to the page 1-24 of Duke Kentucky's 2008 IRP, specifically, the sentence immediately above the heading Plan Changes Compared to 2003 IRP. Starting with the date Duke Kentucky acquired the generating assets it now owns, provide, using tables or charts, the movement of the prices of SO_2 and NO_x allowances through June 2008.

RESPONSE:

9/23/2008	VOL	SO2 CASH/ TON	NOx - Seasonal CASH/ TON
Dec-05		$ 1,585 00	$2,700 00
Jan-06		$ 1,350 00	$2,750 00
Feb-06		$ 975 00	$2,500 00
Mar-06		$ 810 00	$2,500 00
Apr-06		$ 670 00	$2.300 00
May-06		$ 590 00	$2,125 00
Jun-06		$ 622 50	$2,100 00
Jul-06		$ 755 00	$1,775 00
Aug-06		$ 655 00	$1,775 00
Sep-06		$ 520 00	$1,275 00
Oct-06		$ 536 00	$ 825 00
Nov-06		$ 480 00	$ 650 00
Dec-06		$ 472 00	$ 750 00
Jan-07		$ 475 00	$1,000 00
Feb-07		$ 465 00	$1,000 00

Mar-07		$ 435.00	$1,008.00
Apr-07		$ 350 00	$ 775 00
May-07		$ 645 00	$ 750 00
Jun-07		$ 525.00	$ 715.00
Jul-07		$ 544 00	$ 510 00
Aug-07		$ 512 00	$ 625 00
Sep-07		$ 555.00	$ 650.00
Oct-07		$ 557 00	$ 900 00
Nov-07		$ 555 00	$ 760 00
Dec-07		$ 535.00	$ 725.00
Jan-08		$ 472 50	$ 787 50
Feb-08		$ 461 00	$ 825 00
Mar-08		$ 345.00	$ 775.00
Apr-08		$ 350 00	$ 775 00
May-08		$ 300 00	$ 765 00
Jun-08		$ 325.00	$ 860.00

PERSON RESPONSIBLE: John Griffith

Duke Energy Kentucky, Inc.
Case No. 2008-00248
Kentucky Public Service Commission
First Set of Data Requests
Request Date: September 15, 2008
Response Due Date: September 29, 2008

KyPSC-DR-01-009

REQUEST:

Refer to Figure 1-7 on page 1-35 of Duke Energy's 2008 IRP. Explain why the MW reductions from conservation and demand response plateau fairly early in the forecast period and include no increase after 2016 and 2010, respectively.

RESPONSE:

This may be better explained by referring to the table on page 4-39. Regarding demand response, the Company has not been able to obtain additional Power Share customers over the last couple years. In addition, the Company expects that it will become increasingly difficult to acquire participants into the Power Manager program. The Company will continue to market the program as long as the additional marketing is cost-effective.

Regarding the conservation programs, the Company allows for growth in the existing programs for 10 years. This is an assumption that will be evaluated with each IRP to determine if the programs can continue to deliver results or new programs need to be developed to replace them.

PERSON RESPONSIBLE: Richard G. Stevie

Duke Energy Kentucky, Inc.
Case No. 2008-00248
Kentucky Public Service Commission
First Set of Data Requests
Request Date: September 15, 2008
Response Due Date: September 29, 2008

KyPSC-DR-01-010

REQUEST:

Refer to the last paragraph on page 2-6 of Duke Kentucky's 2008 IRP. Provide a detailed description of Duke Kentucky's present understanding of how the Midwest Independent System Operator, through its Ancillary Service Market, will procure reserve resources beginning in September of 2008.

RESPONSE:

Upon the start of the ancillary services market ("ASM"), the Midwest ISO will assume responsibility for the provision of regulation service and contingency reserves to transmission customers in place of the existing balancing authorities' provision. Market participants will be able to sell and purchase these ancillary services in the Midwest ISO's day ahead and real time ASM and energy markets. Specifically, market participants will make offers for ancillary services in both the day-ahead and real-time markets, similar to the process made for offers today in the energy only market. Using a process called simultaneous co-optimization, units are cleared by the Midwest ISO in the Day-Ahead market (each hour) and Real-Time market (every 5 minutes) for a combination of energy, regulating, spinning and/or supplemental reserves (spinning reserves plus supplemental reserves are collectively called contingency reserves). For ancillary services, the Midwest ISO then decides in the Real-Time market which ancillary service is deployed for each particular unit. Energy and ancillary services for each deployed unit then are added together to create a Real-Time control set point target that is received by DE-Kentucky from the Midwest ISO approximately every four seconds. Depending on whether the unit is equipped with Automatic Generation Control (AGC), the generator will either move automatically to the set points via electronic pulses sent by the DE-Kentucky Energy Management System (EMS) to the generating unit, or a generation dispatcher will verbally instruct the generator to move to the desired control set point. If the Midwest ISO makes a change to the energy or reserve deployment levels, the control set point will once again change. Again, the unit will either automatically move to this new set point if equipped with AGC, or the unit will be verbally instructed to move to the new set point. Generators will be promptly aware of the set point or verbal instructions.

PERSON RESPONSIBLE: John Swez

Duke Energy Kentucky, Inc.
Case No. 2008-00248
Kentucky Public Service Commission
First Set of Data Requests
Request Date: September 15, 2008
Response Due Date: September 29, 2008

KyPSC-DR-01-011

REQUEST:

Refer to page 3-33 of Duke Kentucky's 2008 IRP. Duke Kentucky's historical load factors from 2003 through 2007 ranged between 61 and 65 percent. Explain why the forecast load factors beginning in 2008 are never greater than 55 percent. Specifically identify why the higher load factors are not expected to continue.

RESPONSE:

The load factors shown on page 3-33 for the years 2003 through 2007 are incorrect. Here are the correct numbers which are in the same range as those from 2008 through 2028.

2003	57.61%
2004	58.91%
2005	53.94%
2006	52.79%
2007	52.61%

PERSON RESPONSIBLE: James Riddle

Duke Energy Kentucky, Inc.
Case No. 2008-00248
Kentucky Public Service Commission
First Set of Data Requests
Request Date: September 15, 2008
Response Due Date: September 29, 2008

KyPSC-DR-01-012

REQUEST:

Refer to pages 3-35 and 3-36 of Duke Kentucky's 2008 IRP. For the categories in columns 1-9, provide a side-by-side comparison of forecast energy sales and actual, weather-normalized energy sales for the years 2003 through 2007.

RESPONSE:

RESIDENTIAL

	Actual	Forecast*	Weather Normal
2003	1,342,581	1,342,657	1,395,913
2004	1,371,604	1,365,459	1,423,055
2005	1,481,111	1,386,764	1,432,233
2006	1,404,458	1,414,184	1,435,724
2007	1,534,340	1,434,518	1,439,800

* consistent with 2003 IRP

COMMERCIAL

	Actual	Forecast*	Weather Normal
2003	1,296,517	1,270,153	1,317,969
2004	1,329,565	1,299,138	1,344,291
2005	1,373,341	1,328,709	1,357,635
2006	1,371,330	1,357,926	1,381,571
2007	1,460,428	1,378,697	1,422,726

* consistent with 2003 IRP

INDUSTRIAL

	Actual	Forecast*	Weather Normal
2003	765,922	815,394	770,244
2004	768,023	835,764	771,538
2005	785,636	861,589	782,390
2006	781,003	892,732	782,090
2007	806,736	928,134	798,348

* consistent with 2003 IRP

LIGHTING

	Actual	Forecast*	Weather Normal
2003	19,020	20,708	19,020
2004	18,742	20,980	18,742
2005	18,776	21,255	18,776
2006	17,338	21,533	17,338
2007	15,988	21,815	15,988

* consistent with 2003 IRP

OTHER

	Actual	Forecast*	Weather Normal
2003	302,556	288,627	307,169
2004	304,798	288,862	309,497
2005	316,329	290,771	324,299
2006	308,383	293,305	317,332
2007	321,236	296,047	318,094

* consistent with 2003 IRP

CONSUMPTION

	Actual	Forecast*	Weather Normal
2003	3,726,596	3,737,539	3,810,315
2004	3,792,732	3,810,203	3,867,123
2005	3,975,193	3,889,088	3,915,333
2006	3,882,512	3,979,680	3,934,055
2007	4,138,728	4,059,211	3,994,956

* consistent with 2003 IRP

LOSSES AND UNACCOUNTED FOR

	Actual	Forecast*	Weather Normal
2003	366,204	170,371	374,199
2004	425,801	172,773	429,663
2005	299,325	176,624	287,008
2006	191,538	181,177	181,976
2007	148,552	187,540	146,267

* consistent with 2003 IRP

NET ENERGY FOR LOAD

	Actual	Forecast*	Weather Normal
2003	4,092,800	3,907,910	4,184,514
2004	4,218,533	3,982,976	4,296,786
2005	4,274,518	4,065,712	4,202,341
2006	4,074,050	4,160,857	4,116,031
2007	4,287,280	4,246,751	4,141,223

* consistent with 2003 IRP

PERSON RESPONSIBLE: James Riddle

Duke Energy Kentucky, Inc.
Case No. 2008-00248
Kentucky Public Service Commission
First Set of Data Requests
Request Date: September 15, 2008
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KyPSC-DR-01-013

REQUEST:

Refer to page 3-39 of Duke Kentucky's 2008 IRP. Provide a side-by-side comparison of forecast summer and winter peak demand and actual weather-normalized summer and winter peak demand for the years 2003 through 2007.

RESPONSE:

	Summer Peak		
	Actual	Forecast*	Weather Normal
2003	811	848	853
2004	817	864	900
2005	905	879	882
2006	881	890	897
2007	930	905	862

* consistent with 2003 IRP

	Winter Peak		
	Actual	Forecast*	Weather Normal
2003	665	712	673
2004	674	724	718
2005	692	737	802
2006	738	750	756
2007	725	762	749

* consistent with 2003 IRP

PERSON RESPONSIBLE: James Riddle

Duke Energy Kentucky, Inc.
Case No. 2008-00248
Kentucky Public Service Commission
First Set of Data Requests
Request Date: September 15, 2008
Response Due Date: September 29, 2008

KyPSC-DR-01-014

REQUEST:

The last full paragraph on page 5-6 of Duke Kentucky's 2008 IRP indicates that the target coal inventory at Miami Fort is a 20 to 30 days' supply, while the discussion on page 5-5 make no mention of the target inventory for the East Bend generating station. Provide the East Bend target inventory.

RESPONSE:

The coal inventory target for East Bend is to provide 40 days of supply for running at full load.

PERSON RESPONSIBLE: Vince Stroud

Duke Energy Kentucky, Inc.
Case No. 2008-00248
Kentucky Public Service Commission
First Set of Data Requests
Request Date: September 15, 2008
Response Due Date: September 29, 2008

KyPSC-DR-01-015

REQUEST:

Refer to the last paragraph on page 5-7 of Duke Kentucky's 2008 IRP. Explain in detail how the Fuel and Supply Management Agreement allows Woodsdale to obtain natural gas more economically by using Eagle Energy Partners for gas supply services.

RESPONSE:

The Fuel Supply Management Agreement allows Woodsdale to obtain natural gas more economically due to Eagle Energy Partner's utilization of multiple supply sources, storage capability, transportation resources, and relationships with pipelines, production companies, and other suppliers. The natural gas industry is a highly relationship oriented business. Our supplier has built these relationships and is able to provide a more economical and reliable natural gas supply to Woodsdale due to its supply, storage, and transportation resources tied into the Lebanon Lateral congregation of pipelines. Eagle Energy Partners is able to provide natural gas supplies and scheduling services for the day-ahead, intraday, and weekend periods. More specifically, Eagle is able to provide a bundled, delivered product based upon market prices versus Duke Energy procuring pipeline capacity and sourcing supply to meet its own needs. DE-Kentucky does not have a natural gas desk set up to perform these functions nor the necessary relationships built within the natural gas business.

PERSON RESPONSIBLE: John Swez

Duke Energy Kentucky, Inc.
Case No. 2008-00248
Kentucky Public Service Commission
First Set of Data Requests
Request Date: September 15, 2008
Response Due Date: September 29, 2008

KyPSC-DR-01-016

REQUEST:

Refer to pages 6-2 to 6-5 of Duke Kentucky's 2008 IRP. Describe how the July 11, 2008 ruling of the U.S. Court of Appeals for the D.C. Circuit striking down the Clean Air Interstate Rule ("CAIR") is expected to affect Duke Kentucky. Specifically, how will the ruling likely impact the integrated resource plan selected by Duke Kentucky, as discussed in Chapter 8 of the IRP?

RESPONSE:

The recent court decision to vacate the CAIR (& CAMR) results in DE-Kentucky being required to continue to comply with the existing Acid Rain SO2 cap & trade program and the ozone season NOx Budget Trading Program. However, states will immediately begin to revise their State Implementation Plans to attain the fine particulate matter National Ambient Air Quality Standard, since their previous submittal relied on CAIR. It is likely that equipment installed to comply with CAIR will be mandated to operate annually to meet new SIP requirements very soon. Furthermore, in order to address emissions transport, the US Congress may act to reinstate CAIR or more stringent multi-pollutant legislation or states may file Section 126 petitions with USEPA against upwind states. DE-Kentucky is actively monitoring these activities.

PERSON RESPONSIBLE: David E. Freeman

Duke Energy Kentucky, Inc.
Case No. 2008-00248
Kentucky Public Service Commission
First Set of Data Requests
Request Date: September 15, 2008
Response Due Date: September 29, 2008

KyPSC-DR-01-017

REQUEST:

Refer to the last paragraph on page 6-7 of Duke Energy's 2008 IRP. Provide a more detailed discussion of the plans to operate the East Bend SCR for an additional time in 2008 in order to earn NO_x Compliance Supplement Pool Allowances.

RESPONSE:

With the court decision to vacate CAIR, there is no immediate requirement to operate the East Bend Station SCR outside of the ozone season – either to earn early reduction credits or the January 2009 implementation date. However, as stated in answer KyPSC-DR-01-016, the Kentucky DEP will be revising its fine particulate matter SIP very quickly and will likely require the operation of installed controls to attain the NAAQS.

PERSON RESPONSIBLE: David Freeman

Duke Energy Kentucky, Inc.
Case No. 2008-00248
Kentucky Public Service Commission
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Request Date: September 15, 2008
Response Due Date: September 29, 2008

KyPSC-DR-01-018

REQUEST:

Refer to the first paragraph on page 6-9 of Duke Kentucky's 2008 IRP under the heading New Technologies. Provide a detailed description of the sequestration demonstration project Duke Kentucky is hosting at its East Bend generating station.

RESPONSE:

A complete description of the project can be found in a fact sheet at the Midwest Regional Carbon Sequestration Partnership website at www.mrcsp.org. See fact sheet at Attachment KyPSC-DR-01-018.

PERSON RESPONSIBLE: Darlene Radcliffe

MANAGING CLIMATE CHANGE AND SECURING A FUTURE FOR THE MIDWEST'S INDUSTRIAL BASE

MRCSP
MIDWEST REGIONAL CARBON SEQUESTRATION PARTNERSHIP

Carbon Dioxide Storage Field Demonstration at Duke Energy's East Bend Generating Station: Project Overview

NETL

Purpose of the Demonstration

Duke Energy has volunteered to take part in a field test of a promising technique for permanently storing carbon dioxide deep under its East Bend Generating Station (Figure 1). The test is one of several being conducted in the Midwest by the U.S. Department of Energy's (USDOE's) Midwest Regional Carbon Sequestration Partnership (MRCSP).[1]

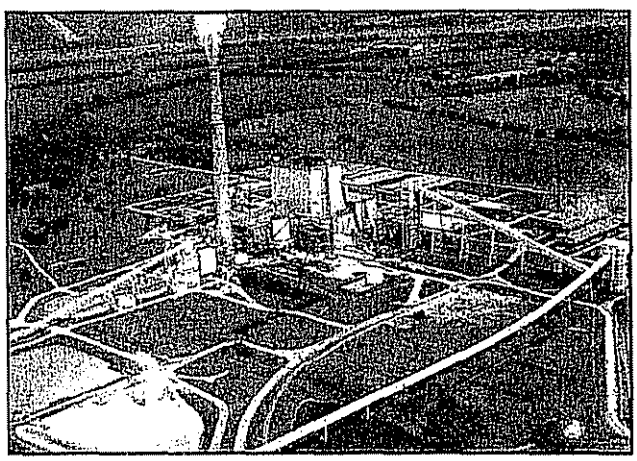

Figure 1. East Bend Generating Station

Carbon dioxide is the most common of the man-made greenhouse gases that are thought to contribute to global warming, which scientists refer to as global climate change. Coal-fired power plants, steel mills, refineries and other industrial processes are major sources of carbon dioxide emissions in the Midwestern U.S.

Concern about climate change has resulted in efforts to find ways to reduce these emissions. Permanently storing carbon dioxide deep underground in carefully selected geologic formations is one of several options being studied. This concept is often referred to as geologic sequestration.

Although the field test at East Bend is a very small-scale test, it represents an important step in building our knowledge and helping future generations to address climate change. If successful, geologic sequestration could also be economically important to Kentucky and other Midwestern states by allowing the region to produce carbon-neutral, affordable energy to support our region's economy in the future.

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[1] The Midwest Regional Carbon Sequestration Partnership is one of seven regional partnerships established by the U.S. Department of Energy. It includes Kentucky, along with Indiana, Maryland, Michigan, New York, Ohio, Pennsylvania and West Virginia. It is made up of over 30 members including universities, state geologists, many of the major energy regional companies, and state and federal officials. It is led by Battelle, a non-profit research institute headquartered in Ohio, which is a global leader in technology deployment and commercialization.

What Is Geologic Sequestration?

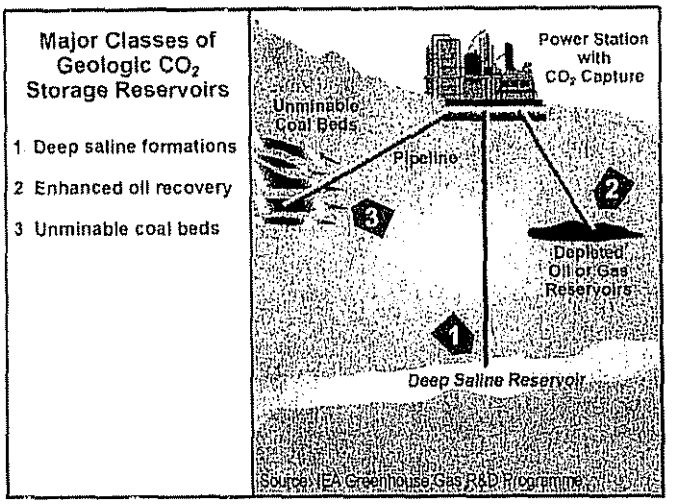

Figure 2. Formations Suitable for CO_2 Storage

Geologic sequestration is part of a broader approach to reducing carbon dioxide emissions. Typically, this would first involve capturing carbon dioxide from the emissions of power plants and other industrial facilities (in the case of this field test, however, the required amount would be very small and may be obtained from a local or regional supplier). The carbon dioxide is then injected through a deep well into the selected geologic formations. There, the carbon dioxide is permanently stored thousands of feet below drinking water supplies. Suitable formations for geologic sequestration include saline or brine (saltwater) reservoirs, depleted oil and gas fields or coal beds that are too thin or deep to be cost-effectively mined (Figure 2). Furthermore, locations suitable for storage must be deep enough to keep the injected carbon dioxide pressurized, isolated from groundwater supplies, protected by cap rocks that act as a seal to keep the carbon dioxide in place, and free of major faults or abandoned wells that could provide a pathway for the carbon dioxide to escape. The East Bend demonstration will involve injection into a deep saline (brine) reservoir, which is located about 3,000 feet underground, far below the surface and drinking water supplies.

Planned Activities

The various activities will be spread over a period of about three years. The exact timing of individual activities, which are listed below, will depend on what is learned during the previous step, as well as on the availability of needed equipment.

1. Beginning in the fall of 2006, the MRCSP project team began gathering information about the nature of the underlying rock layers to confirm that they are suitable for safely storing carbon dioxide.

2. Before injecting carbon dioxide, Duke Energy will prepare an application for a permit to the regulators at the U.S. Environmental Protection Agency (EPA), Region 4. The permit application requires an operational plan, which will include factors such as determining the pressure at which the carbon dioxide should be injected and a plan for monitoring the safety of the operations. These activities are expected to take place during 2008.

3. After obtaining a permit, the project team will inject a very small amount of carbon dioxide over a period of one to three months (approximately 100 tons or two to five truckloads per day). Before injection, the carbon dioxide is compressed to a liquid-like state. It is then injected through a well into rock formations that are filled with salty water, where it will remain trapped—much like oil and gas deposits are trapped for millions of years. Injection will occur at a depth of 3,000 to 3,500 feet, far below drinking water sources which are at a depth of less than 100 feet in this region.

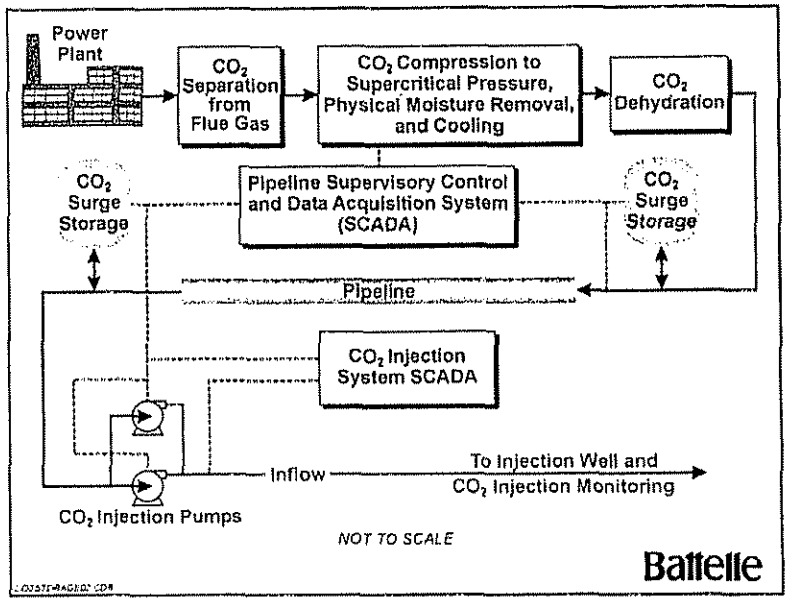

Figure 3. Geologic Sequestration System Components

4. As required by the permit, the project team will monitor activities at all stages to track the condition of the well and the injected carbon dioxide.

5. After completing the test, the project team will evaluate the results and determine whether the well should be capped for permanent closure or maintained for future use.

What Will Neighbors See or Hear?

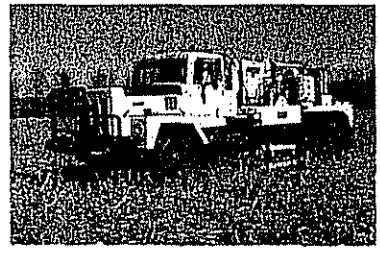

Figure 4. Seismic Survey

The most noticeable activities to neighbors are the seismic survey and well drilling. Although noticeable, none of these activities is expected to be disruptive. The MRCSP project team conducted the seismic survey during the fall of 2006. This is a technique similar to an ultrasound, which develops below-surface images by placing sensitive microphones on the ground that record reflections from vibrations created by a special type of truck called a vibroseis truck. The survey took about two weeks. Much of the work took place on East Bend property and along roads within a five mile radius of the East Bend Generating Station. The seismic survey results were positive and provided a basis for proceeding with drilling a well. A series of photographs of the survey is shown on the Cincinnati Arch-East Bend page of the MRCSP website at www.mrcsp.org.

The second major activity during this first project phase involves drilling a deep well, similar to an oil or gas well, on East Bend property. The project team will then spend up to six months conducting tests in the well to determine the nature and strength of the underground rock and the character of the deep salt water formations. Neighbors may notice trucks entering or exiting the generating station site to transport the drilling rig and related equipment (pipes, concrete, etc.) during the drill set up and take down. Depending on the type of drilling rig that is used, the start-up phase may require 30 or more truckloads but this will drop to just a few deliveries a day during drilling. Because of the distance to property lines, drilling and testing should not be noticeable to neighbors.

Figure 5. Drilling the Test Well

How can I Get More Information or Provide Input?

Duke Energy will hold an informational meeting open to the public to update the plant neighbors on planned activities prior to permitting activities in 2008. If you have questions, want more information, or wish to be put on a mailing list for updates, please contact Brian Weisker, Station Manager: 513-467-4646; brian.weisker@duke-energy.com.

Questions or comments may also be sent by email to Phil Jagucki, the Battelle Manager for the MRCSP Geologic Field Demonstration Projects at jagucki@battelle.org or Lynn Brickett, Project Manager, USDOE at Brickett@netl.doe.gov. Additional fact sheets that provide more detailed information about the test are available from these contacts or from the MRCSP web site at www.mrcsp.org. The web site also provides information about global climate change, carbon sequestration and the overall activities of the MRCSP.

Duke Energy Kentucky, Inc.
Case No. 2008-00248
Kentucky Public Service Commission
First Set of Data Requests
Request Date: September 15, 2008
Response Due Date: September 29, 2008

KyPSC-DR-01-019

REQUEST:

Refer to the last paragraph on page 8-59 of Duke Kentucky's 2008 IRP. Provide the analysis which shows that including the current Energy Efficiency and Demand Response programs in the chosen plan reduces the Present Value Revenue Requirements of the plan by approximately $2.5 million.

RESPONSE:

CONFIDENTIAL AND PROPRIETARY TRADE SECRET

All analysis information regarding Present Value Revenue Requirements on Attachment KyPSC-DR-01-019 is confidential and proprietary information and is being filed with the Commission under seal pursuant to a Motion for Confidential Treatment.

PERSON RESPONSIBLE: David Freeman

Duke Kentucky 2008 IRP Total Cost ($000)
Gas/Nuclear/EE Portfolio with Base Load Forecast ($000)
Discount Rate [redacted]
Inflation Rate

	NPV	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Production Costs	[redacted]												
Capital Costs													
Total Costs													
Updated Power Manager Costs													
Total Costs Corrected													

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Production Costs	[redacted]											
Capital Costs												
Total Costs												
Updated Power Manager Costs												
Total Costs Corrected												

	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Production Costs	[redacted]										
Capital Costs											
Total Costs											
Updated Power Manager Costs											
Total Costs Corrected											

PaR Result Gas_Nuke_EE - Base Load 060108
PaR Result NoDSM_EE - Base Load 060108
Net Savings with DSM and EE Programs [redacted]

Duke Kentucky 2008 IRP Total Cost ($000)
Gas/Nuclear/NoDSMEE Portfolio with Base Load Forecast ($000)
Discount Rate [redacted]
Inflation Rate

	NPV	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Production Costs	[redacted]												
Capital Costs													
Total Costs													

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Production Costs	[redacted]											
Capital Costs												
Total Costs												

	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Production Costs	[redacted]										
Capital Costs											
Total Costs											

COMMONWEALTH OF KENTUCKY

BEFORE THE KENTUCKY PUBLIC SERVICE COMMISSION

In the Matter of The 2008 Integrated Resource Plan)
of Duke Energy Kentucky, Inc.) Case No. 2008-00248

PETITION OF DUKE ENERGY KENTUCKY, INC.
FOR CONFIDENTIAL TREATMENT OF INFORMATION
CONTAINED IN ITS RESPONSES TO COMMISSION'S
FIRST SET OF DATA REQUESTS

Duke Energy Kentucky, Inc. ("DE-Kentucky" or "Company"), pursuant to 807 KAR 5:001, Section 7, respectfully requests the Commission to classify and protect certain information provided by DE-Kentucky in response to data request No. 19 in the Commission's first set of data requests, as contained in Appendix A of the Commission's Order dated September 15, 2008. The information DE-Kentucky seeks confidential treatment ("Confidential Information") pertains to power production costs and Present Value Revenue Requirements ("PVRR"). In support of this Motion, DE-Kentucky notes that the Commission has already treated the same information as confidential in DE-Kentucky's Integrated Power Resource review proceeding (see Letter re Petition for Confidential Treatment, Case No. 2007-248 dated August 13, 2008 attached hereto as Attachment 1.)

In support of this Petition, DE-Kentucky states:

1. The Kentucky Open Records Act exempts from disclosure certain commercial information. KRS 61.878 (1)(c). To qualify for this exemption and, therefore, maintain the confidentiality of the information, a party must establish that disclosure of the commercial information would permit an unfair advantage to competitors of that party. Public disclosure

of the information identified herein would, in fact, prompt such a result for the reasons set forth below.

2. The information regarding power production costs that DE-Kentucky wishes to protect from public disclosure -- specifically PVRR -- is identified in the attachment to data request No. 19. This information was developed internally by DE-Kentucky personnel, is not on file with any public agency, and is not available from any commercial or other source outside DE-Kentucky. The aforementioned information is distributed within DE-Kentucky only to those employees who must have access for business reasons. If publicly disclosed, this information setting forth DE-Kentucky's power production costs could give competitors an advantage in bidding for and securing new resources. Similarly, disclosure would afford an undue advantage to DE-Kentucky's vendors and suppliers as they would enjoy an obvious advantage in any contractual negotiations to the extent they could calculate DE-Kentucky's requirements and what DE-Kentucky anticipates those requirements to cost. Public disclosure would give DE-Kentucky's contractors, vendors and competitors access to DE-Kentucky's cost and operational parameters, as well as insight into its contracting practices. Such access would impair DE-Kentucky's ability to negotiate with prospective contractors and vendors, and could harm the DE-Kentucky's competitive position in the power market, ultimately affecting the costs to serve customers.

3. The information for which DE-Kentucky is seeking confidential treatment is not known outside of DE-Kentucky.

4. DE-Kentucky filed a Petition for Confidential Treatment with its IRP on July 1, 2008, Case No. 2008-127. The Commission granted DE-Kentucky's request to keep information related to power production costs and PVRR confidential pursuant to a letter

dated August 13, 2008. The information requested in the Commission's request for information No. 19 directly relates the information already granted confidential protection.

5. DE-Kentucky does not object to limited disclosure of the confidential information described herein, pursuant to an acceptable protective agreement, to the Attorney General or other intervenors with a legitimate interest in reviewing the same for the purpose of participating in this case.

6. In accordance with the provisions of 807 KAR 5:001 Section 7, the Company is filing with the Commission one copy of the Confidential Material highlighted and five (5) copies without the confidential information.

WHEREFORE, Duke Energy Kentucky, Inc. respectfully requests that the Commission classify and protect as confidential the specific information described herein.

Respectfully submitted,

DUKE ENERGY KENTUCKY

Amy B. Spiller (85309)
139 E. Fourth Street, 25 AT II
P.O. Box 960
Cincinnati, OH 45202
(513) 419-1810 (telephone)
(513) 419-1846 (facsimile)
e-mail: Amy.Spiller@duke-energy.com

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a copy of Duke Energy Kentucky, Inc.'s Petition for Confidential Treatment of Information Contained in Its Responses to Commission's First Set of Data Requests was served on the following by overnight mail, this 26th day of September 2008.

Amy B. Spiller

Honorable Dennis G. Howard, II
Honorable David E. Spenard
Assistant Attorneys General
1024 Capital Center Drive, Suite 200
Frankfort, Kentucky 40601

Steven L. Beshear
Governor

Leonard K. Peters
Secretary
Energy and Environment Cabinet

Commonwealth of Kentucky
Public Service Commission
211 Sower Blvd.
P.O. Box 615
Frankfort, Kentucky 40602-0615
Telephone: (502) 564-3940
Fax: (502) 564-3460
psc.ky.gov

David L. Armstrong
Chairman

James Gardner
Vice-Chairman

John W. Clay
Commissioner

August 13, 2008

Duke Energy Kentucky, Inc.
Attention: Amy B. Spiller
139 East Fourth Street,
Room 25 ATII
Cincinnati, Ohio 45202

Re: Duke Energy Kentucky, Inc. - Petition for Confidentiality received 7/1/08
PSC Case No.: 2008-00248

Dear Ms. Spiller:

The Public Service Commission has received Duke Energy Kentucky, Inc.'s Petition for confidential treatment requesting to protect as confidential certain information contained in its DE-Kentucky's 2008 Integrated Resource Plan ("IRP"). This information is described as including (1) information related to operations and management costs, projected fuel and environmental compliance costs, power market prices, projected capacity and resource alternative capital costs; (2) information on projected sales and revenue requirements; (3) supply side screening curves and resource evaluations; (4) third party owned and licensed modeling tools and; (5) critical transmission system maps.

Based upon a review of the information, I have determined that the following items are not entitled to confidential treatment: (1) the interconnections list contained in Table 8(3)(a), excluding the attached map of transmissions facilities; (2) the screening curves contained in Figures GA-5-4-C through GA-5-15-C, except for Figure GA-5-8-C; and (3) Page SA-40-C Titled "Energy Efficiency Avoided Costs." Specifically, the interconnections chart in Table 8(3)(a), by itself, does not provide the location of any Critical Energy Infrastructure. Likewise, disclosure of the screening curves would not reveal Duke's internal business model regarding its supply-side evaluations because confidentiality has been conferred on Figure GA-5-8-C, which contains the underlying values critical in deriving the screening curves. Lastly, the energy efficiency avoided costs table on page SA-40-C provides only total costs and not how those costs were derived. Public disclosure of such total costs would not impair Duke's ability to negotiate with prospective contractors and vendors nor would it harm Duke's competitive position in the power market.

As to the remainder of the information requested to be granted confidential treatment, those are entitled to the protection requested on the grounds relied upon in the Petition and should be withheld from public inspection. However, the items listed above do not meet the criteria for confidentiality and are therefore, denied confidential protection.

If the information becomes publicly available or no longer warrants confidential treatment, Duke Energy Kentucky, Inc. is required by 807 KAR 5:001, Section 7(9)(a), to inform the Commission so that the information may be placed in the public record.

The information denied confidentiality will be withheld from public inspection for 20 days from the date of this letter. If you disagree with the Commission's decision, you may seek rehearing with the Commission within 20 days of the date of this letter under the provision of KRS 278.400.

Sincerely,

for Stephanie Stumbo by permission

Stephanie Stumbo,
Executive Director

kg/
cc: Parties of Record