DUKE ENERGY CORPORATION

139 East Fourth Street
1212 Main
Cincinnati, OH 45201-0960
Telephone: (513) 287-4315
Facsimile: (513) 287-4385

Kristen Cocanougher
Sr. Paralegal
E-mail: Kristen.cocanougher@duke-energy.com

VIA HAND DELIVERY

September 13, 2011

Mr. Jeff Derouen
Executive Director
Kentucky Public Service Commission
211 Sower Blvd
Frankfort, KY 40601

Re: Case No. 2011-235
Duke Energy Kentucky 2011 Integrated Resource Plan

Dear Mr. Derouen:

Enclosed please find an original and twelve copies of the Responses of Duke Energy Kentucky, Inc. to Commission Staff's First Set of Data Requests and Petition for Confidential Treatment in the above captioned case. Also enclosed in the white envelope is one set of the confidential responses being filed under seal.

Please date-stamp the two copies of the letter and the Petition and return to me in the enclosed envelope.

Sincerely,

Kristen Cocanougher

Kristen Cocanougher

cc: Dennis Howard (w/enclosures)
Florence Tandy (w/enclosures)
Carl Melcher (w/enclosures)

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of Duke Energy Kentucky, Inc.'s Integrated Resource Plan	))	Case No. 2011-235

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. (Duke Energy Kentucky or Company), pursuant to 807 KAR 5:001, Section 7, respectfully requests the Commission to classify and protect certain information provided by Duke Energy Kentucky in its response to data request No. 23, as requested by Commission Staff (Staff) in this case on August 22, 2011. Specifically, this request asks:

23. Refer to pages 54 and 55 of the IRP. Provide separate estimates of the cost of compliance with each of the proposed regulations/issues listed for Miami Fort Unit 6 and East Bend.

The information that Staff seeks through discovery and for which Duke Energy Kentucky now seeks confidential treatment (Confidential Information) pertains to the Company's internal analysis and financial projections of costs. The analysis contains sensitive data related to the costs associated with this transaction.

In support of this Petition, Duke Energy Kentucky states:

1. The Kentucky Open Records Act exempts from disclosure certain Commercial information. KRS 61.878(1)(c). Significantly, this rule applies to those records that are generally recognized as confidential or proprietary. And provided the records at issue

satisfy this general characterization, they are subject to protection where the disclosure of such information would otherwise result in an unfair advantage to competitors of the party seeking non-disclosure. Public disclosure of the information identified herein would, in fact, prompt such a result for the reasons set forth below.

2. The information in data request No. 23, for which Duke Energy Kentucky seeks protection, concerns its internal analysis and financial projections of future costs for environmental compliance under different scenarios. This information shows Duke Energy Kentucky's confidential business strategy and considerations for future compliance. And such information is generally regarded as confidential or proprietary. Indeed, as the Kentucky Supreme Court has found, "information concerning the inner workings of a corporation is 'generally accepted as confidential or proprietary.'" *Hoy v. Kentucky Industrial Revitalization Authority*, Ky., 904 S.W.2d 766, 768.

3. The information for which Duke Energy Kentucky is seeking confidential treatment is not known outside of Duke Energy Kentucky. The disclosure of the information contained in No. 23, if made publicly available, would grant Duke Energy Kentucky's vendors and potential competitors access to the Company's business assumptions and future cost estimations. Such information would put Duke Energy Kentucky in a competitive disadvantage during negotiations as it tries to obtain better pricing thereby harming the Company and ultimately its customers.

4. 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 ten (10) 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, INC.

Rocco D'Ascenzo
Associate General Counsel
Amy B. Spiller
Deputy General Counsel
Duke Energy Kentucky, Inc.
139 East Fourth Street, 1313 Main
Cincinnati, Ohio 45201-0960
Phone: (513) 287-4320
Fax: (513) 287-4385
Email: rocco.d'asecenzo@duke-energy.com

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a copy of Duke Energy Kentucky, Inc.'s Petition for Confidential Treatment was served on the following by overnight mail, this 13 day of September 2011.

Rocco D'Ascenzo /jkc
Rocco O. D'Ascenzo

Honorable Dennis G. Howard, II
Assistant Attorney General
1024 Capital Center Drive, Suite 200
Frankfort, Kentucky 40601

Florence W. Tandy
Northern Kentucky Community Action Commission
P.O. Box 193
Covington, Kentucky 41012

Carl Melcher
Northern Kentucky Legal Aid, Inc.
302 Greenup
Covington, Kentucky 41011

VERIFICATION

State of North Carolina)
)
County of Mecklenburg)

SS:

The undersigned, Tony Mathis, being duly sworn, deposes and says that he is the Director By-Products Management, that he has supervised the preparation of the responses to the foregoing information requests; and that the matters set forth in the foregoing responses to information requests are true and accurate to the best of his knowledge, information and belief, after reasonable inquiry.

Tony Mathis, Affiant

Subscribed and sworn to before me by Tony Mathis on this 12 day of September 2011.

Evia J. Woolard
Notary Public
Mecklenburg County, State of North Carolina

NOTARY PUBLIC

My Commission Expires: August 14, 2016

VERIFICATION

STATE OF NORTH CAROLINA)
) SS:
COUNTY OF MECKLENBURG)

The undersigned, Robert Mc Murry, being duly sworn, deposes and says that he is employed by the Duke Energy Corporation affiliated companies as Director, Integrated Resource Planning for Duke Energy Business Services, LLC; that on behalf of Duke Energy Kentucky, Inc., he has supervised the preparation of the responses to the foregoing information requests; and that the matters set forth in the foregoing responses to information requests are true and accurate to the best of his knowledge, information and belief after reasonable inquiry.

Robert Mc Murry

Subscribed and sworn to before me by Robert Mc Murry on this 7 day of September, 2011.

NOTARY PUBLIC

Evia J. Woodard
Notary
Public
Mecklenburg County
State of North Carolina

My Commission Expires: August 14, 2016

VERIFICATION

STATE OF NORTH CAROLINA)
) SS:
COUNTY OF MECKLENBURG)

The undersigned, Rick Mifflin, being duly sworn, deposes and says that he is employed by the Duke Energy Corporation affiliated companies as Manager, Products and Services for Duke Energy Business Services, LLC; that on behalf of Duke Energy Kentucky, Inc., he has supervised the preparation of the responses to the foregoing information requests; and that the matters set forth in the foregoing responses to information requests are true and accurate to the best of his knowledge, information and belief after reasonable inquiry.

Rick Mifflin

Subscribed and sworn to before me by Rick Mifflin on this 6th day of September, 2011.

DIANE M. WILKINSON
Notary Public
North Carolina
Lincoln County

Diane M. Wilkinson
NOTARY PUBLIC

My Commission Expires:

12 Jul 2014

VERIFICATION

STATE OF OHIO)
) SS:
COUNTY OF BUTLER)

The undersigned, Mike Vorderbrueggen, being duly sworn, deposes and says that he is employed by the Duke Energy Corporation affiliated companies as General Manager, Simple Cycle Region for Duke Energy Business Services, LLC; that on behalf of Duke Energy Kentucky, Inc., he has supervised the preparation of the responses to the foregoing information requests; and that the matters set forth in the foregoing responses to information requests are true and accurate to the best of his knowledge, information and belief after reasonable inquiry.

Mike Vorderbrueggen

Subscribed and sworn to before me by Mike Vorderbrueggen on this 6th day of September, 2011.

NOTARY PUBLIC

My Commission Expires:
MICHAEL S. FLAHERTY
Notary Public, State of Ohio
My Commission Expires 11-12-2011

VERIFICATION

STATE OF INDIANA)
) SS:
COUNTY OF HENDRICKS)

The undersigned, Ed Abbott, being duly sworn, deposes and says that he is employed by the Duke Energy Corporation affiliated companies as Consulting Engineer for Duke Energy Business Services, LLC; that on behalf of Duke Energy Kentucky, Inc., he has supervised the preparation of the responses to the foregoing information requests; and that the matters set forth in the foregoing responses to information requests are true and accurate to the best of his knowledge, information and belief after reasonable inquiry.

Ed Abbott

Subscribed and sworn to before me by Ed Abbott on this 6th day of September, 2011.

NOTARY PUBLIC Paula M. Roseman

My Commission Expires: 3/17/17

Resident: Hendricks County

VERIFICATION

State of North Carolina)
)
County of Mecklenburg)

SS:

The undersigned, Chris Hallman, being duly sworn, deposes and says that he is the Principal Environmental Specialist, that he has supervised the preparation of the responses to the foregoing information requests; and that the matters set forth in the foregoing responses to information requests are true and accurate to the best of his knowledge, information and belief, after reasonable inquiry.

Chris Hallman

Chris Hallman, Affiant

Subscribed and sworn to before me by Chris Hallman on this 6th day of September 2011.

Evie J. Woolard

NOTARY PUBLIC

My Commission Expires: August 14, 2016

VERIFICATION

State of North Carolina)
) **SS:**
County of Mecklenburg)

The undersigned, Bob Dollar, being duly sworn, deposes and says that he is the Director, R&I Planning, that he has supervised the preparation of the responses to the foregoing information requests; and that the matters set forth in the foregoing responses to information requests are true and accurate to the best of his knowledge, information and belief, after reasonable inquiry.

Bob Dollar

Bob Dollar, Affiant

Subscribed and sworn to before me by Bob Dollar on this 6th day of September 2011.

Patricia W Townsend

NOTARY PUBLIC

My Commission Expires: 6/24/2014

VERIFICATION

State of North Carolina)
)
County of Mecklenburg)

SS:

The undersigned, Elliott Batson, Jr., being duly sworn, deposes and says that he is the Vice President, Regulated Fuels, that he has supervised the preparation of the responses to the foregoing information requests; and that the matters set forth in the foregoing responses to information requests are true and accurate to the best of his knowledge, information and belief, after reasonable inquiry.

Elliott Batson, Jr., Affiant

Subscribed and sworn to before me by Elliott Batson, Jr. on this 2nd day of September 2011.

RITA G KALE
NOTARY
PUBLIC
CATAWBA CO., NORTH CAROLINA

NOTARY PUBLIC

My Commission Expires: 06/17/12

VERIFICATION

STATE OF INDIANA)
) SS:
COUNTY OF HENDRICKS)

The undersigned, Keith Pike, being duly sworn, deposes and says that he is employed by the Duke Energy Corporation affiliated companies as Consulting Engineer for Duke Energy Business Services, LLC; that on behalf of Duke Energy Kentucky, Inc., he has supervised the preparation of the responses to the foregoing information requests; and that the matters set forth in the foregoing responses to information requests are true and accurate to the best of his knowledge, information and belief after reasonable inquiry.

Keith Pike

Subscribed and sworn to before me by Keith Pike on this 31 day of August, 2011.

Diane M. Clark
NOTARY PUBLIC

My Commission Expires: April 17, 2014

VERIFICATION

STATE OF NORTH CAROLINA)
) SS:
COUNTY OF MECKLENBURG)

The undersigned, Lesa Perkins, being duly sworn, deposes and says that she is employed by the Duke Energy Corporation affiliated companies as Manager of Accounting for Duke Energy Business Services, LLC; that on behalf of Duke Energy Kentucky, Inc., she has supervised the preparation of the responses to the foregoing information requests; and that the matters set forth in the foregoing responses to information requests are true and accurate to the best of her knowledge, information and belief after reasonable inquiry.

Lesa Perkins

Subscribed and sworn to before me by Lesa Perkins on this 31st day of August, 2011.

Judith A. Reese
NOTARY PUBLIC

My Commission Expires: 02/24/2012

VERIFICATION

State of North Carolina)
)
County of Mecklenberg)

SS:

The undersigned, Jose Merino, being duly sworn, deposes and says that he is the Director, Load Forecasting, that he has supervised the preparation of the responses to the foregoing information requests; and that the matters set forth in the foregoing responses to information requests are true and accurate to the best of his knowledge, information and belief, after reasonable inquiry.

Jose Merino, Affiant

Subscribed and sworn to before me by Jose I. Merino on this 31st day of August 2011.

NOTARY PUBLIC

My Commission Expires:
January 26, 2012

VERIFICATION

STATE OF NORTH CAROLINA)
) SS:
COUNTY OF MECKLENBURG)

The undersigned, Kevin Delehanty, being duly sworn, deposes and says that he is employed by the Duke Energy Corporation affiliated companies as Director, Marketing Fund & Compensation Analytics for Duke Energy Business Services, LLC; that on behalf of Duke Energy Kentucky, Inc., he has supervised the preparation of the responses to the foregoing information requests; and that the matters set forth in the foregoing responses to information requests are true and accurate to the best of his knowledge, information and belief after reasonable inquiry.

Kevin Delehanty

Subscribed and sworn to before me by Kevin Delehanty on this 31st day of August, 2011.

Nancy H. Taylor
NOTARY PUBLIC

My Commission Expires: January 26, 2012

VERIFICATION

STATE OF NORTH CAROLINA)
) SS:
COUNTY OF MECKLENBURG)

The undersigned, John Swez, being duly sworn, deposes and says that he is employed by the Duke Energy Corporation affiliated companies as Director, Generation Dispatch & Operations for Duke Energy Business Services, LLC; that on behalf of Duke Energy Kentucky, Inc., he has supervised the preparation of the responses to the foregoing information requests; and that the matters set forth in the foregoing responses to information requests are true and accurate to the best of his knowledge, information and belief after reasonable inquiry.

John Swez

Subscribed and sworn to before me by John Swez on this 29 day of August, 2011.

RITA G KALE NOTARY PUBLIC CATAWBA CO., NORTH CAROLINA

NOTARY PUBLIC

My Commission Expires: 6/17/12

VERIFICATION

STATE OF OHIO)
) SS:
COUNTY OF HAMILTON)

The undersigned, Kelvin Davis, being duly sworn, deposes and says that he is employed by the Duke Energy Corporation affiliated companies as Senior Engineering Technologist for Duke Energy Business Services, LLC; that on behalf of Duke Energy Kentucky, Inc., he has supervised the preparation of the responses to the foregoing information requests; and that the matters set forth in the foregoing responses to information requests are true and accurate to the best of his knowledge, information and belief after reasonable inquiry.

Kelvin Davis

Subscribed and sworn to before me by Kelvin Davis on this 30th day of August, 2011.

JANICE L. WALKER, Attorney at Law
Notary Public, State of Ohio
My Commission Expires Has No Expiration Date
Section 147.03

NOTARY PUBLIC

My Commission Expires: No Expiration

VERIFICATION

STATE OF OHIO)
) SS:
COUNTY OF HAMILTON)

The undersigned, Andrew Ritch, being duly sworn, deposes and says that he is employed by the Duke Energy Corporation affiliated companies as Renewable Strategy & Compliance Director for Duke Energy Business Services, LLC; that on behalf of Duke Energy Kentucky, Inc., he has supervised the preparation of the responses to the foregoing information requests; and that the matters set forth in the foregoing responses to information requests are true and accurate to the best of his knowledge, information and belief after reasonable inquiry.

Andrew Ritch

Subscribed and sworn to before me by Andrew Ritch on this 31st day of August, 2011.

NOTARY PUBLIC

My Commission ~~Expires~~:
does not experie

VERIFICATION

STATE OF OHIO)
) SS:
COUNTY OF HAMILTON)

The undersigned, Thomas J. Wiles, being duly sworn, deposes and says that he is employed by the Duke Energy Corporation affiliated companies as General Manager, Market Analytics for Duke Energy Business Services, LLC; that on behalf of Duke Energy Kentucky, Inc., he has supervised the preparation of the responses to the foregoing information requests; and that the matters set forth in the foregoing responses to information requests are true and accurate to the best of his knowledge, information and belief after reasonable inquiry.

Thomas J. Wiles

Subscribed and sworn to before me by Thomas J. Wiles on this 6TH day of ~~August~~ SEPTEMBER, 2011.

NOTARY PUBLIC

My Commission Expires:

NOTARIAL SEAL STATE OF OHIO

ROCCO O. D'ASCENZO
ATTORNEY AT LAW
Notary Public, State of Ohio
My Commission Has No Expiration
Section 147.03 R.C.

VERIFICATION

STATE OF OHIO)
) SS:
COUNTY OF HAMILTON)

The undersigned, Bruce Sailers, being duly sworn, deposes and says that he is employed by the Duke Energy Corporation affiliated companies as Manager, Retail Energy Desk for Duke Energy Business Services, LLC; that on behalf of Duke Energy Kentucky, Inc., he has supervised the preparation of the responses to the foregoing information requests; and that the matters set forth in the foregoing responses to information requests are true and accurate to the best of his knowledge, information and belief after reasonable inquiry.

Bruce L. Sailers
Bruce Sailers

Subscribed and sworn to before me by Bruce Sailers on this 30TH day of August, 2011.

ADELE M. DOCKERY
Notary Public, State of Ohio
My Commission Expires 01-05-2014

Adele M. Dockery
NOTARY PUBLIC

My Commission Expires: 1/5/2014

VERIFICATION

STATE OF OHIO)
) SS:
COUNTY OF HAMILTON)

The undersigned, Kevin Bright, being duly sworn, deposes and says that he is employed by the Duke Energy Corporation affiliated companies as Managing Director, Non-Residential Products & Strategy for Duke Energy Business Services, LLC; that on behalf of Duke Energy Kentucky, Inc., he has supervised the preparation of the responses to the foregoing information requests; and that the matters set forth in the foregoing responses to information requests are true and accurate to the best of his knowledge, information and belief after reasonable inquiry.

Kevin Bright

Subscribed and sworn to before me by Kevin Bright on this 25 day of August, 2011.

ADELE M. DOCKERY
Notary Public, State of Ohio
My Commission Expires 01-05-2014

NOTARY PUBLIC

My Commission Expires: 1/5/2014

VERIFICATION

STATE OF NORTH CAROLINA)
) SS:
COUNTY OF MECKLENBURG)

The undersigned, Allen Carrick, being duly sworn, deposes and says that he is employed by the Duke Energy Corporation affiliated companies as Managing Director of Corporate Finance & Assistant Treasurer for Duke Energy Business Services, LLC; that on behalf of Duke Energy Kentucky, Inc., he has supervised the preparation of the responses to the foregoing information requests; and that the matters set forth in the foregoing responses to information requests are true and accurate to the best of his knowledge, information and belief after reasonable inquiry.

Allen Carrick

Allen Carrick

Subscribed and sworn to before me by Allen Carrick on this 30 day of August, 2011.

Katie Jamieson

NOTARY PUBLIC

My Commission Expires: June 14, 2016

KATIE JAMIESON
Notary Public
Mecklenburg County
NORTH CAROLINA

VERIFICATION

STATE OF NORTH CAROLINA)
) SS:
COUNTY OF MECKLENBURG)

The undersigned, Tim Duff, being duly sworn, deposes and says that he is employed by the Duke Energy Corporation affiliated companies as General Manager, Retail Customer & Regulatory Strategy for Duke Energy Business Services, LLC; that on behalf of Duke Energy Kentucky, Inc., he has supervised the preparation of the responses to the foregoing information requests; and that the matters set forth in the foregoing responses to information requests are true and accurate to the best of his knowledge, information and belief after reasonable inquiry.

Tim Duff

Subscribed and sworn to before me by Tim Duff on this 29 day of August, 2011.

CHRISTOPHER LEE HAMRICK

NOTARY PUBLIC

My Commission Expires:

My Commission Expires October 24, 2014

VERIFICATION

STATE OF NORTH CAROLINA)
) SS:
COUNTY OF MECKLENBURG)

The undersigned, John Freund, being duly sworn, deposes and says that he is employed by the Duke Energy Corporation affiliated companies as Structuring Manager for Duke Energy Business Services, LLC; that on behalf of Duke Energy Kentucky, Inc., he has supervised the preparation of the responses to the foregoing information requests; and that the matters set forth in the foregoing responses to information requests are true and accurate to the best of his knowledge, information and belief after reasonable inquiry.

John Freund

Subscribed and sworn to before me by John Freund on this 29 day of August, 2011.

RITA G KALE
NOTARY
PUBLIC
CATAWBA CO., NORTH CAROLINA

NOTARY PUBLIC

My Commission Expires: 6/17/12

TABLE OF CONTENTS

Duke Energy Kentucky
Case No. 2011-235
Staff First Set Data Requests
Date Received: August 23, 2011

STAFF-DR-01-001

REQUEST:

Refer to pages 6-7 of Duke Kentucky's 2011 Integrated Resource Plan ("IRP"). Duke Kentucky states that Miami Fort 6 will be retired January 1, 2015. Provide the date on which ownership of the unit was transferred to Duke Kentucky, the price paid for the unit, and whether the unit is fully depreciated. If not fully depreciated, provide the net book value remaining and describe the anticipated accounting treatment of the remaining to be depreciated.

RESPONSE:

Miami Fort Unit 6 (MF6) is a regulated generation unit located in Hamilton County, Ohio. On January 1, 2006, the ownership was transferred from Duke Energy Ohio (f/k/a CG&E) to Duke Energy Kentucky (f/k/a ULH&P), along with Duke Energy Ohio's ownership interest in East Bend Station and Woodsdale Station.

The transaction was effective at net book value and included the assumption by Duke Energy Kentucky of certain associated liabilities from Duke Energy Ohio. The book value of Miami Fort Unit 6 at the time of the transaction included approximately $68 million in Electric Plant in Service (accounts 101/106), Accumulated Provision for Depreciation (account 108) of $55 million, and Construction Work in Progress (account 107) of less than $1 million.

In 2015, MF6 will be 5 years from the estimated retirement date per current depreciation rates. Current net book value for Miami Fort 6 is around $13 million (Plant in Service of approximately $79 million net of accumulated depreciation reserve of $66 million). We would view this as a normal retirement per our current philosophy. The accounting entries would be to credit the plant account for the original cost and debit accumulated depreciation for the original cost. Demolition costs would also be debited to the reserve and any salvage value would be credited to the reserve.

PERSON RESPONSIBLE: Lesa Perkins

Duke Energy Kentucky
Case No. 2011-235
Staff First Set Data Requests
Date Received: August 23, 2011

STAFF-DR-01-002

REQUEST:

Refer to page 7 of the IRP at the paragraph headed "Recessionary Impacts on the Projected Load Forecast." The text reads, "Between 2007 and 2009 the actual peak load dropped 113 MWs and the peak energy dropped 519 GW-hrs due to the recessionary impacts on the economy."

a. Provide the drop in peak load and peak energy by year and by customer class.

b. Explain how much of the drop in peak energy and demand is attributed to Duke Kentucky's Demand Side Management ("DSM") and Energy Efficiency ("EE") programs and how much is attributed to the weak economy.

c. Provide a monthly comparison of actual peak loads and peak energy sales in the years 2007 through 2010.

RESPONSE:

a. The actual Duke Energy Kentucky internal demand declined from 921 MW in 2007 to 808 MW in 2009 (see Figure B-4 on page 140 of the IRP). However, this is a decline in the actual peak and not the weather normal peak load. The decline in peak load, cited on page 7 of the IRP, is primarily due to mild weather at the time of the peak in 2009, not a decline in the economy. In 2009, the temperature barely touched 90 degrees Fahrenheit. On a weather normal basis, the peak load is fairly constant between 2007 and 2009. The table on page 154 of the IRP provides the peak loads on a weather normal basis for the years 2007 through 2009. Peak demands by customer class are not available.

The actual level of energy usage declined from 4,339 GWH in 2007 to 4,016 GWH in 2009 (see Figure B-1 Part 2 on page 136 of the IRP). This is a decline of 323 GWH. Again, referring to the weather normal table on page 154 of the IRP, total energy (or Net Energy for Load) declined from 4,202 GWH in 2007 to 4,086 GWH in 2009. On a weather normal basis, this represents a decline of 116 GWH.

The table on page 154 of the IRP provides the information on energy by customer class on a weather normal basis for the years 2007 through 2009. Total consumption declined 87 GWH. Most of this decline occurred in the industrial class which dropped 63 GWH from 2007 to 2009. From 2009 to 2010, weather normal total sales have increased 61 GWH, lead by a 41 GWH increase in industrial usage.

Upon reviewing the historical data, the Company has determined that a few of the historical peaks loads were not updated properly in preparing tables B-3 to B-6 in Appendix B. Revised tables are provided below.

TABLE B-3 REVISED

DUKE ENERGY KENTUCKY SYSTEM

SEASONAL PEAK LOAD FORECAST (MEGAWATTS)

BEFORE EE

NATIVE LOAD a

		SUMMER			WINTER d		
	YEAR	LOAD	CHANGE b	PERCENT CHANGE c	LOAD	CHANGE b	PERCENT CHANGE c
-5	2006	881			738		
-4	2007	912	31	3.5	725	-13	-1.8
-3	2008	853	-59	-6.5	768	43	6.0
-2	2009	808	-45	-5.3	682	-86	-11.2
-1	2010	892	84	10.4	703	21	3.1
0	2011	855	-37	-4.1	718	15	2.1
1	2012	868	13	1.5	730	12	1.7
2	2013	878	10	1.2	741	11	1.5
3	2014	893	15	1.7	749	8	1.1
4	2015	901	8	0.9	751	2	0.3
5	2016	901	0	0.0	757	6	0.8
6	2017	909	8	0.9	760	3	0.4
7	2018	916	7	0.8	766	6	0.8
8	2019	923	7	0.8	770	4	0.5
9	2020	931	8	0.9	776	6	0.8
10	2021	939	8	0.9	781	5	0.6
11	2022	946	7	0.7	786	5	0.6
12	2023	955	9	1.0	790	4	0.5
13	2024	961	6	0.6	795	5	0.6
14	2025	967	6	0.6	800	5	0.6
15	2026	974	7	0.7	806	6	0.7
16	2027	982	8	0.8	813	7	0.9
17	2028	992	10	1.0	820	7	0.9
18	2029	1,001	9	0.9	826	6	0.7
19	2030	1,010	9	0.9	834	8	1.0
20	2031	1,021	11	1.1	843	9	1.1

(a) Excludes controllable load

(b) Difference between reporting year and previous year

(c) Difference expressed as a percent of previous year

(d) Winter load reference is to peak loads which occur in the following winter.

TABLE B-4 REVISED

DUKE ENERGY KENTUCKY SYSTEM

SEASONAL PEAK LOAD FORECAST (MEGAWATTS)

BEFORE EE and DSM

INTERNAL LOAD a

		SUMMER			WINTER d		
	YEAR	LOAD	CHANGE b	PERCENT CHANGE c	LOAD	CHANGE b	PERCENT CHANGE c
-5	2006	882			736		
-4	2007	921	38	4.3	725	-12	-1.6
-3	2008	860	-61	-6.6	768	43	6.0
-2	2009	808	-52	-6.1	682	-86	-11.2
-1	2010	899	91	11.3	703	21	3.1
0	2011	886	-13	-1.4	736	33	4.7
1	2012	900	14	1.6	749	13	1.8
2	2013	913	13	1.4	762	13	1.7
3	2014	930	17	1.9	772	10	1.3
4	2015	940	10	1.1	776	4	0.5
5	2016	941	1	0.1	782	6	0.8
6	2017	949	8	0.8	785	3	0.4
7	2018	956	7	0.7	791	6	0.8
8	2019	963	7	0.7	795	4	0.5
9	2020	971	8	0.8	801	6	0.8
10	2021	979	8	0.8	806	5	0.6
11	2022	987	8	0.8	811	5	0.6
12	2023	995	8	0.8	815	4	0.5
13	2024	1,001	6	0.6	820	5	0.6
14	2025	1,007	6	0.6	825	5	0.6
15	2026	1,014	7	0.7	831	6	0.7
16	2027	1,023	9	0.9	838	7	0.8
17	2028	1,032	9	0.9	845	7	0.8
18	2029	1,041	9	0.9	851	6	0.7
19	2030	1,050	9	0.9	859	8	0.9
20	2031	1,061	11	1.0	868	9	1.0

(a) Excludes controllable load

(b) Difference between reporting year and previous year

(c) Difference expressed as a percent of previous year

(d) Winter load reference is to peak loads which occur in the following winter

TABLE B-5 REVISED

DUKE ENERGY KENTUCKY SYSTEM

SEASONAL PEAK LOAD FORECAST (MEGAWATTS) a

AFTER EE

NATIVE LOAD b

		SUMMER			WINTER e		
	YEAR	LOAD	CHANGE c	PERCENT CHANGE d	LOAD	CHANGE c	PERCENT CHANGE d
-5	2006	881			738		
-4	2007	912	31	3.5	725	-13	-1.8
-3	2008	853	-59	-6.5	768	43	6.0
-2	2009	808	-45	-5.3	682	-86	-11.2
-1	2010	892	84	10.4	703	21	3.1
0	2011	855	-37	-4.1	717	14	2.0
1	2012	866	11	1.3	728	11	1.5
2	2013	875	9	1.0	737	9	1.2
3	2014	887	12	1.4	743	6	0.8
4	2015	893	6	0.7	743	0	0.0
5	2016	891	-2	-0.2	747	4	0.5
6	2017	897	6	0.7	749	2	0.3
7	2018	901	4	0.4	753	4	0.5
8	2019	908	6	0.8	756	3	0.4
9	2020	912	6	0.7	760	4	0.5
10	2021	918	6	0.7	763	3	0.4
11	2022	924	6	0.7	767	4	0.5
12	2023	930	6	0.6	769	2	0.3
13	2024	933	3	0.3	772	3	0.4
14	2025	937	4	0.4	776	4	0.5
15	2026	943	6	0.6	780	4	0.5
16	2027	949	6	0.6	785	5	0.6
17	2028	957	8	0.8	790	5	0.6
18	2029	963	6	0.6	795	5	0.6
19	2030	970	7	0.7	803	8	1.0
20	2031	981	11	1.1	811	8	1.0

(a) Includes EE Impacts

(b) Includes controllable load

(c) Difference between reporting year and previous year

(d) Difference expressed as a percent of previous year

(e) Winter load reference is to peak loads which occur in the following winter.

TABLE B-3 REVISED

DUKE ENERGY KENTUCKY SYSTEM

SEASONAL PEAK LOAD FORECAST (MEGAWATTS) a

AFTER EE / BEFORE DSM

INTERNAL LOAD b

		SUMMER			WINTER e		
	YEAR	LOAD	CHANGE c	PERCENT CHANGE d	LOAD	CHANGE c	PERCENT CHANGE d
-5	2006	883			738		
-4	2007	921	38	4.3	725	-13	-1.8
-3	2008	860	-61	-6.6	768	43	6.0
-2	2009	808	-52	-6.1	682	-86	-11.2
-1	2010	899	91	11.3	703	21	3.1
0	2011	886	-13	-1.4	735	32	4.6
1	2012	898	12	1.4	746	11	1.5
2	2013	910	12	1.3	758	12	1.6
3	2014	925	15	1.6	766	8	1.1
4	2015	933	8	0.9	768	2	0.3
5	2016	931	-2	-0.2	772	4	0.5
6	2017	937	6	0.6	774	2	0.3
7	2018	941	4	0.4	778	4	0.5
8	2019	946	5	0.5	781	3	0.4
9	2020	952	6	0.6	785	4	0.5
10	2021	958	6	0.6	788	3	0.4
11	2022	964	6	0.6	792	4	0.5
12	2023	970	6	0.6	794	2	0.3
13	2024	974	4	0.4	797	3	0.4
14	2025	978	4	0.4	801	4	0.5
15	2026	983	5	0.5	805	4	0.5
16	2027	989	6	0.6	810	5	0.6
17	2028	997	8	0.8	815	5	0.6
18	2029	1,003	6	0.6	820	5	0.6
19	2030	1,010	7	0.7	828	8	1.0
20	2031	1,021	11	1.1	839	8	1.0

(a) Includes EE Impacts

(b) Excludes controllable load

(c) Difference between reporting year and previous year

(d) Difference expressed as a percent of previous year.

(e) Winter load reference is to peak loads which occur in the following winter.

b. As previously mentioned, the drop in actual peak demand is due to the weather, not the economy. In 2008, the demand response programs were activated just once due to the mild summer weather. In 2009, the demand response programs were again not activated due to the mild weather (the temperature barely made it to 90 degrees Fahrenheit all summer). The energy efficiency driven peak load reductions for 2007 though 2009 is estimated to be 10 MW (See Company applications in Cases 2008-00473 and 2009-00444).

With respect to energy usage, the decline in total consumption is partially due to the impacts of the Company's energy efficiency programs. For the energy efficiency reporting periods for 2008 and 2009, the Company has estimated that its energy efficiency programs produced 52 GWH in load reductions (See Company applications in Cases 2008-00473 and 2009-00444). This implies that approximately 45% of the 116 GWH reduction in net energy for load can be attributed to the Company's energy efficiency programs. The remaining portion of the decline can be attributed to the weakness in the economy.

While the reporting periods for the Company applications in Cases 2008-00473 and 2009-00444 do not align perfectly with the calendar years, they are indicative of the annual level of energy impacts.

c.

Duke Energy Kentucky System Peak - Megawatts

Native Load [a]

	2007	2008	2009	2010
January	670	725	768	671
February	738	681	720	655
March	607	603	649	608
April	573	553	594	531
May	757	607	652	694
June	809	817	796	822
July	816	810	736	823
August	912	805	808	892
Septembe	841	853	673	816
October	781	614	516	575
Novembe	589	595	560	555
Decembei	669	707	682	703

(a) Includes the impact of Demand Response and Energy Efficiency

Duke Energy Kentucky System Sales [b] - Megawatt Hours

	2007	2008	2009	2010
January	355,099	383,371	386,463	383,147
February	365,631	351,318	320,903	344,307
March	318,253	338,253	318,452	323,402
April	308,345	296,584	289,054	279,547
May	348,310	308,700	310,501	318,275
June	381,885	377,446	368,443	401,771
July	398,294	416,162	356,420	434,674
August	479,021	408,943	389,539	436,130
September	379,094	345,557	328,219	344,273
October	334,332	316,170	295,243	295,902
November	317,280	320,148	284,744	302,213
December	353,698	371,052	368,190	383,083
Annual	4,339,242	4,233,705	4,016,171	4,246,725

(b) Net Energy for Load including the impacts of Energy Efficiency

PERSON RESPONSIBLE: Jose I. Merino

Duke Energy Kentucky
Case No. 2011-235
Staff First Set Data Requests
Date Received: August 23, 2011

STAFF-DR-01-003

REQUEST:

Refer to pages 8-9 and Appendix B, pages 91-97, of the IRP. Explain how the effects of existing and future DSM and EE programs have been modeled and incorporated into the load and peak demand forecasts.

RESPONSE:

The components of the DSM programs are detailed in Appendix C of the Application. The demand response programs modeled includes Power Manager, a dispatchable resource limited in duration to 100 hours per year during the summer months. PowerShare© is the other type of demand response program included in DSM for Duke Energy Kentucky. PowerShare© is also modeled as a dispatchable resource with a 96 hour limitation per year and 8 hours per event. The EE programs are designed to help reduce demand on the system during times of peak load and reduce energy consumption during peak and off-peak hours. The EE programs are modeled as a non-dispatchable resource and the energy and capacity impacts are reflected in the load forecast.

For energy efficiency, the historical impacts of the Company's energy efficiency programs are reflected in the data used to estimate the econometric forecasting models. As a result, the impacts of those historical programs are already reflected in the load forecast. Projected future utility program incremental impacts are subtracted from the load forecast. However, the Company is concerned that double counting of energy efficiency impacts could occur due to free-riders as well as energy efficiency impacts already captured through the econometric forecasting models. As a result, the Company has decreased the load reductions associated with impact of rising electricity prices to remove the potential for double-counting of free-rider effects.

For demand response, the estimates of past load reductions are added back to the historical peak loads before developing the peak forecasting econometric model. As a result, the "internal" peak load forecast does not reflect historical or projected demand

response impacts. The projected demand response impacts are subsequently subtracted from the forecast to produce the "native" load forecast.

PERSON RESPONSIBLE: Robert A. Mc Murry

Duke Energy Kentucky
Case No. 2011-235
Staff First Set Data Requests
Date Received: August 23, 2011

STAFF-DR-01-004

REQUEST:

Refer to page 9 and Appendix B, pages 133-134, of the IRP.

a. Explain whether and how the potential effects of the Carbon Constrained Future and the Clean Energy Future scenarios were incorporated into the load forecast risk analysis.

b. Explain whether there are any energy pricing changes that significantly affect employment and energy demand in the load forecast in either the Carbon Constrained Future or the Clean Energy Future.

RESPONSE:

a. The potential effects of a carbon constrained future and compliance with Clean Energy regulations are captured in the base case load forecast. Load forecasting did not develop scenarios to compare results from a carbon constrained future vs. an outlook without carbon constraints.

b. As explained in Appendix B, page 102, Duke Energy obtains the economic forecast from Moody's Analytics. The information provided by Moody does not include the projected impacts of energy pricing on employment or any other economic variable. Regarding the expected impact of energy prices on energy demand, Duke Energy estimates that electric energy consumption would be 3% and 5% higher by 2015 and 2020, respectively, if electric prices are assumed to remain flat in real terms.

PERSON RESPONSIBLE: Jose I. Merino

Duke Energy Kentucky
Case No. 2011-235
Staff First Set Data Requests
Date Received: August 23, 2011

STAFF-DR-01-005

REQUEST:

Refer to page 9 of the IRP. The recommended capacity replacement option for Miami Fort 6 is the installation or purchase of 140 MW of combined cycle generation capacity in 2015.

a. With the potential for increased demand for gas-fired generating capacity, explain when Duke Kentucky believes it must make a decision whether to proceed with this option. Include in the explanation the approximate length of time from contract to completion of construction of a combined cycle unit of this size.

b. Explain whether Duke Kentucky is aware of existing combined cycle capacity available from another Duke Energy subsidiary or from other sources.

RESPONSE:

a. Duke Energy Kentucky believes a decision must be made by mid-year 2012 to determine how to proceed with replacing Miami Fort 6 with combine cycle generation capacity in 2015. The generic combined cycle selected by the model is viewed as an indicator of the type of capacity needed at that time. The generic combine cycle that is commercially available is much larger than 140 MW selected by the model. The approximate length of time from contract to completion of construction is four years for a 650 MW combined cycle unit that is commercially available.

b. Duke Energy Kentucky is not aware of existing combined cycle capacity available from another Duke Energy Kentucky subsidiary or other source. Opportunities such as joint ownership or a Purchase Power Agreement will be explored from various suppliers at the time of need to replace the capacity of Miami Fort 6.

PERSON RESPONSIBLE: Robert A. Mc Murry

Duke Energy Kentucky
Case No. 2011-235
Staff First Set Data Requests
Date Received: August 23, 2011

STAFF-DR-01-006

REQUEST:

Refer to page 16, Tables 3-A and 3-B, of the IRP. Explain whether existing and future DSM programs are already included in the growth rates and whether the tables are meant to illustrate the incremental effects of EE programs only. If DSM programs are not included, explain why not.

RESPONSE:

Table 3-A provides projected growth rates that include the impact of existing EE programs only.

Table 3-B provides projected growth rates that include the impact of existing and future EE programs.

The impact of demand response (DR) programs is not reflected. The impact of the DR programs is captured in the development of the generation plan. However, since there are no impacts from the DR programs on energy use, the growth rates for energy would be unchanged. In addition, the growth rate for the summer peak (2011 to 2031) is 0.69%, essentially the same as shown on Table 3-B since the projected demand response impacts essentially shift the peak forecast down, but do not change the slope of the forecast.

PERSON RESPONSIBLE: Jose I. Merino

Duke Energy Kentucky
Case No. 2011-235
Staff First Set Data Requests
Date Received: August 23, 2011

STAFF-DR-01-007

REQUEST:

Refer to page 21 of the IRP.

a. Describe and quantify any differences resulting from Duke Kentucky's change in developing its appliance stock variable by relying more on data from Itron, Inc. for estimates of historical appliance efficiency.

b. The text referring to Table 3-C states that data is "(after demand response program impacts)" and a footnote to the table states: "All numbers are after energy efficiency." Results represented throughout the IRP do not always appear to be consistent in the inclusion of DSM generally and demand response ("DR") programs specifically. Explain whether EE, DSM, and DR programs are used interchangeably throughout the forecast.

RESPONSE:

a. Overall, the differences in the appliance efficiency forecast are small. The new Itron, Inc. data incorporates the trend in lighting efficiency that was not incorporated in the appliance stock variable in the past. As a result, the projected annual growth rate (2011 to 2031) in the appliance stock variable has declined from 0.23% in the last forecast to 0.001% in this forecast.

b. The references to DSM, DR and EE in the document are not used interchangeably. Demand Response (DR) and Energy Efficiency (EE) are subsets of the overall Demand Side Management (DSM) program. In other words, DR + EE = DSM.

A review of the terminology use in the IRP document identified several instances where the meaning should have been clearer. These are:

The text referring to Table 3-C on page 21 should state "after demand response and energy efficiency program impacts." The footnote to the table should state "All numbers are after demand response and energy efficiency."

On page 13 in the fourth bullet within the D. Planning Process section, the wording should be "Identification of electric energy efficiency (EE) and demand response (DR), options.

On page 71 within Figure 8-1 Load, Capacity and Reserves Table, the label for the line "3 Demand-Side Management" should be "3 Demand Response Programs."

PERSON RESPONSIBLE: (a) Jose I. Merino (b) Robert Mc Murry

Duke Energy Kentucky
Case No. 2011-235
Staff First Set Data Requests
Date Received: August 23, 2011

STAFF-DR-01-008

REQUEST:

Refer to page 23 of the IRP. The impacts of the DSM programs discussed in the first paragraph do not appear to match those shown in Table 4-A. Explain the discrepancies and provide any necessary corrections.

RESPONSE:

The text in the first paragraph on page 23 of the 2011 Kentucky IRP document should match Table 4-A and read as follows:

"The projected impacts of the DSM programs discussed above and in detail in Appendix C have been included in the resource plan for Duke Energy Kentucky. The conservation DSM programs are projected to reduce energy consumption by approximately **73,968** MWh and **8** MW by **2015**. At the same time, the direct load control program, Power Manager, is projected to reduce peak demand by **12** MW and the PowerShare® program another **27** MW. This brings the total peak reduction across all programs to approximately **47** MW by **2015.**

PERSON RESPONSIBLE: Robert A. Mc Murry

Duke Energy Kentucky
Case No. 2011-235
Staff First Set Data Requests
Date Received: August 23, 2011

STAFF-DR-01-009

REQUEST:

Refer to the note at the bottom of page 23 of the IRP. Explain what is meant by "monthly seasonal maximum."

RESPONSE:

The monthly seasonal maximum refers to the summer maximum capacity for the energy efficiency and demand response programs. The maximum capacity during the month of July was used for energy efficiency and from the month of August for demand response.

PERSON RESPONSIBLE: Robert A. Mc Murry

Duke Energy Kentucky
Case No. 2011-235
Staff First Set Data Requests
Date Received: August 23, 2011

STAFF-DR-01-010

REQUEST:

Refer to the last paragraph on page 24 of the IRP regarding environmental protection measures.

a. Identify and describe the procedures Duke Kentucky has in place to ensure environmental controls at coal-fired plants are operating in accordance with design specifications and will operate in accordance with design specification over the projected economic life of the environmental controls.

b. Explain what recourse Duke Kentucky has if the environmental controls at coal-fired plants do not operate within design specifications or if the controls become inoperable before the end of their projected economic lives.

RESPONSE:

a. During the design of the environmental controls, Duke Energy Kentucky takes into account the most extreme operating conditions that could be foreseen at the time. Therefore, the environmental controls do not need to continuously operate at that design level to perform adequately. If there are issues with the environmental controls, Duke Energy Kentucky will attempt to repair the issue with the unit continuing to generate at full capacity. If the repair cannot be made, the unit will lower its generation level until it is in compliance. If lowering the generation level cannot bring the unit into compliance, it will be removed from service, repairs will be made, and the unit will be brought back into service.

b. When environmental controls are initially installed, there is typically a one-time verification that the performance meets the guarantee. Along with this, there is a short-term warranty period covering unforeseen equipment design, manufacturing and installation issues. On a long-term basis, if there are performance issues, Duke Energy Kentucky would attempt fixing or repairing the issue with the environmental controls. If repairs are too costly, then replacement of a portion or all of the control equipment would be performed.

PERSON RESPONSIBLE: Ed Abbott

Duke Energy Kentucky
Case No. 2011-235
Staff First Set Data Requests
Date Received: August 23, 2011

STAFF-DR-01-011

REQUEST:

Refer to page 26 of the IRP. In 1999, a program of availability outages was instituted aimed at addressing potential summer reliability. These outages are for short periods of time, less than nine days.

a. At what time of year do these availability outages typically occur?

b. Explain whether availability outages ever occur during the peak summer months.

RESPONSE:

a. These Availability outages occur during the spring or fall months when electrical demand is lower.

b. Availability outages do not occur during a peak summer month.

PERSON RESPONSIBLE: Ed Abbott

Duke Energy Kentucky
Case No. 2011-235
Staff First Set Data Requests
Date Received: August 23, 2011

STAFF-DR-01-012

REQUEST:

Refer to the "Propane" section on page 28 of the IRP. The text reads, "Woodsdale can pull propane from storage owned by Duke Energy Kentucky, where 48,000 barrels of propane storage space is available or use up to 40,000 barrels of propane from TEPPCO on loan for replacement within 45 days." Explain how the propane that was used is replaced and at what cost per barrel.

RESPONSE:

Propane is purchased on the open market within the 45 day period. It has not been necessary to purchase propane in the last few years for Woodsdale. However, when propane is purchased it is at market price plus the transportation differential to the station site. Based on the current market price, the propane price would be $62.216 per barrel.

PERSON RESPONSIBLE: Mike Vorderbrueggen

Duke Energy Kentucky
Case No. 2011-235
Staff First Set Data Requests
Date Received: August 23, 2011

STAFF-DR-01-013

REQUEST:

Refer to page 29 of the IRP. Duke Energy uses a long-term fundamental forecast of fuel prices that is a propriety forecast developed by Wood Mackenzie, a leading energy consulting firm. Duke Kentucky has 577 MW of coal-fired capacity and 500 MW of gas-fired capacity for a total installed net summer capacity of 1,077 MW. Duke Kentucky's coal comes primarily from Ohio, Kentucky, and Pennsylvania, with 70 to 80 percent of its annual requirements under long-term coal supply requirements.

a. Explain how Duke Kentucky benefits from this proprietary forecast.

b. Explain whether the Duke Energy / Progress Energy merger will affect this proprietary forecast.

c. Explain whether Duke Kentucky purchases any coal from Illinois.

RESPONSE:

a) Duke Energy's long term fundamental forecast is prepared annually in consultation with leading energy consultants (Wood Mackenzie - 2011) and internal subject matter experts. Duke Energy Kentucky benefits from the comprehensive nature of the forecast as it looks at the entire US energy sector under a set of assumptions which include the anticipated impact of forthcoming environmental rulemaking. Current forward market contracts and most publicly available commodity price forecasts do not include these impacts of pending clean air and water rules, yet Duke Energy Kentucky believes these rules will have a significant impact on retirements and by extension long term commodity prices.
b) The Duke Energy/ Progress Energy merger will not affect the 2011 or 2012 forecasts as they will likely be completed before the merger closes. However, Duke Energy will benefit from additional subject matter expertise from within Progress Energy, beginning with the 2013 forecast cycle which gets under way in the summer of 2012.
c) Duke Energy Kentucky currently purchases approximately 400,000 tons of mid-sulfur coal from one supplier located in the state of Illinois.

PERSON RESPONSIBLE: (a & b) Kevin Delehanty (c) Elliott Batson, Jr.

Duke Energy Kentucky
Case No. 2011-235
Staff First Set Data Requests
Date Received: August 23, 2011

STAFF-DR-01-014

REQUEST:

Refer to the third paragraph under the heading "Efficiency" on page 30 of the IRP. The text reads, "This loss of capability must be replaced by newly acquired resources, by off-system purchased power, or by the increased operation of less efficient units."

a. Describe Duke Kentucky's expectations and plans for purchasing power if a majority of other utilities are in a similar situation and a significant amount of existing coal-fired generation is retired.

b. Explain whether less efficient units will be compliant as to the environmental regulations and able to operate.

RESPONSE:

a. There is no expectation for existing coal-fired generation to be retired in the very next two years. In the short term, power will be purchased according to the guidelines specified as a participant in the Midwest ISO and then by PJM when the transfer occurs in 2012. The need for capacity on a longer term basis will be determined by mid-year 2012. Please reference response to Staff-DR-01-005 for further details regarding decisions to purchase power.

b. Duke Energy Kentucky operates all units within environmental regulations.

PERSON RESPONSIBLE: Robert A. Mc Murry

Duke Energy Kentucky
Case No. 2011-235
Staff First Set Data Requests
Date Received: August 23, 2011

STAFF-DR-01-015

REQUEST:

Refer to pages 33 and 34 of the IRP. Identify and describe any impacts that Duke Kentucky's transfer from the Midwest Independent System Operator ("MISO") to PJM Interconnection Regional Transmission Organization ("PJM") is expected to have on pooling and bulk power operations.

RESPONSE:

Duke Energy Kentucky will operate in PJM in much the same manner as it does today in the Midwest ISO. The Company will continue to offer its generation and bid its load into the energy and ancillary services market. PJM operates both a day-ahead market and real-time (balancing) market for energy and ancillary services. PJM will commit and dispatch resources via their security constrained unit commitment and dispatch algorithms using offers for the Duke Energy Kentucky generating resources with all other generating resource offers and demand bids in the PJM area. If not committed day-ahead, the units may still be called on in real-time. PJM also operates an ancillary service market for regulation and synchronized reserves, each of which is cleared separately with different prices for each product. Duke Energy Kentucky participates in these ancillary service markets in the Midwest ISO and intends to do the same in the PJM ancillary service markets. Duke Energy Kentucky will operate its generating resources to optimize revenues available in the PJM capacity market, energy market, ancillary services market, black start, and reactive service in a reliable manner for the benefit of customers and shareholders.

PERSON RESPONSIBLE: John Swez

Duke Energy Kentucky
Case No. 2011-235
Staff First Set Data Requests
Date Received: August 23, 2011

STAFF-DR-01-016

REQUEST:

Refer to page 40 of the IRP. Under "Baseload Technologies," explain what is meant by "1-Stage Carbon Monoxide Shift" and "2-Stage Carbon Monoxide Shift."

RESPONSE:

CO shift is a chemical reaction that occurs in the presence of a catalyst. The reaction is $CO+H_2O$-> CO_2+H_2. The reaction is exothermic, and utilizes the CO and native moisture content of the syngas to proceed. The reaction will proceed in the presence of a catalyst, and the residence time that the syngas spends in the catalyst will determine the decree to which the reaction can occur on the entire CO content of the syngas. However, because the reaction is exothermic, heat must eventually be removed to control the temperature of the syngas at an acceptable level. The stages of shift therefore refer to the amount of catalyst (and residence time) that the syngas is exposed to promote the reaction. In single stage shift, the amount of catalyst presented to the syngas allows some but not all of the CO to shift. A certain concentration of CO_2 is thus produced in the process. In two stage shift, the heat release from the first stage must be removed by a inter-stage heat exchanger. Once cooled, the syngas enters a second catalyst module where again some but not all of the remaining CO gets shifted. Additional stages of shift can occur with inter-stage heat removal until the desired CO_2 concentration is obtained. The more CO that gets shifted, the higher the concentration of CO_2 produced in the syngas, and thus the more CO_2 that may be removed by the downstream CO_2 Selexol system. With single stage water gas shift, it is expected to remove 50-60% carbon. With a two-stage water gas shift, it would capture 80-90% of the carbon.

PERSON RESPONSIBLE: Kelvin J. Davis

Duke Energy Kentucky
Case No. 2011-235
Staff First Set Data Requests
Date Received: August 23, 2011

STAFF-DR-01-017

REQUEST:

Refer to page 41 of the IRP and Figure A-2 of Appendix A. For "Peak and Intermediate Screening," describe in more detail the 460 MW identified as "Unfired."

RESPONSE:

A combined cycle (CC) installation combines combustion turbine units (CTs) with a Heat Recovery Steam Generator (HRSG). In simplest form, the exhaust heat from the CTs is used to produce steam to drive the turbine of a HRSG. This simple arrangement is referred to as the "unfired" portion of a combined cycle installation. It is also the most efficient form of a combined cycle configuration, but is not usually the form installed because of capacity value. The capacity and energy output of an "unfired" configuration can be enhanced at a relatively low installation cost by cooling the inlet air to the CTs and adding heat to the CT exhaust gases. Both of the CC screening curves shown on Figure A-2 on page 77 show a 460 MW "unfired" configuration plus a 40 MW capacity boost achieved through inlet air cooling. The two curves differ by whether a 150 MW capacity boost due to duct firing has been included. Notice the Duct Fired (ON) and Duct Fired (OFF) designation in the labeling.

Duct firing uses a duct burner as a means of introducing more heat to the waste heat coming from the CTs. This increases both the capacity and energy output from the HRSG, but it comes at a relatively high operational cost in the form of increased emissions and higher heat rates (less efficiency). For this reason, duct firing is usually used only during periods of very high electrical demand and/or system emergency.

PERSON RESPONSIBLE: Kelvin J. Davis

Duke Energy Kentucky
Case No. 2011-235
Staff First Set Data Requests
Date Received: August 23, 2011

STAFF-DR-01-018

REQUEST:

Refer to page 42 of the IRP and Figure A-3 of Appendix A. Provide a comparison, based on their availability to supply peak load, of the three Renewable Technologies that were considered.

RESPONSE:

This comparison for the wind and solar photovoltaic resources is provided in the footnote at the bottom of page 42. It states, "For the purposes of this IRP, wind resources are assumed to contribute 15% of installed capacity at the time of peak and solar resources are assumed to contribute 70% of installed capacity at the time of peak." This information was used to develop the renewable technology screening curves shown in Figure A-3 of Appendix A.

For the purpose of the analysis and modeling the contribution to the peak capacity need is listed below:

- Biomass was modeled to be dispatchable and able to contribute 100% of installed capacity at the time of peak;
- Wind was modeled to be dispatchable and able to contribute 26% of installed capacity at the time of peak; and
- Solar was modeled to be dispatchable and able to contribute 38% of installed capacity at the time of peak.

These values are more applicable estimation to peak contribution percentages that would be attained by renewable resources in Kentucky.

PERSON RESPONSIBLE: Kelvin J. Davis

Duke Energy Kentucky
Case No. 2011-235
Staff First Set Data Requests
Date Received: August 23, 2011

STAFF-DR-01-019

REQUEST:

Refer to page 43 of the IRP. Provide estimated lead times for modeling and construction of wind, photovoltaic solar and woody biomass renewable technology power resources.

RESPONSE:

The installed capital cost used in the economic analysis was estimated based on the following construction schedule:

Renewable Technologies	Construction Lead Time (Years)	Project Lead Time Collecting Data/Siting/Permitting (Years)
Wind	1	2
Photovoltaic Solar	1.5	2
Woody biomass	3	4

PERSON RESPONSIBLE: Kelvin J. Davis

Duke Energy Kentucky
Case No. 2011-235
Staff First Set Data Requests
Date Received: August 23, 2011

STAFF-DR-01-020

REQUEST:

Refer to page 45 of the IRP.

a. Describe the impacts the July 2011 Cross-State Air Pollution Rule ("CSAPR") will have on Duke Kentucky's generation assets.

b. Describe, generally, the impact on Duke Kentucky of all differences between August 2010 proposed replacement for the Clean Air Interstate Rule and CSAPR.

RESPONSE:

a. Duke Energy Kentucky filed its IRP on July 1, 2011. On July 6, 2011 the USEPA signed the final Cross-State Air Pollution Rule or CSAPR. The rule was published in the Federal Register on August 8, 2011. The most significant impact of the rule is that compliance requirements begin on January 1, 2012. Because of this, Duke Energy Kentucky had less than 5 months to fully understand the new rule and develop a strategy for compliance. The CSAPR establishes state-level annual and ozone season nitrogen oxide (NO_X) caps and annual sulfur dioxide (SO_2) caps. The CSAPR allows for compliance via a limited interstate and an unlimited intrastate trading program. The CSAPR establishes caps for both NO_X and SO_2 emissions, which begin in 2012 and decline further in 2014 for the Duke Energy Kentucky units. Based upon the unit allocations established by the CSAPR, the greatest impact appears to be on Duke Energy Kentucky units that operate in the state of Ohio. In order to comply, a variety or combination of options including power purchases, emission allowance purchases, fuel switching, reduced plant operations and others will be considered. Because of the very recent final rule date, the full impacts are still being evaluated and detailed plans to comply with the rule in the most efficient manner are still being developed.

b. The proposed rule to replace CAIR was issued by EPA in August 2010 and was called the Transport Rule (TR). The proposed TR was significantly revised before becoming final as the CSAPR in August 2011. In general, some of these differences and their impacts, where known, on Duke Energy Kentucky include: 1) EPA reduced the SO_2 and NO_X allocations in certain States. This is the case

for the state of Kentucky and Duke Energy units located in Kentucky. The allocations were not reduced for Duke Energy Kentucky generating units located in Ohio, however projected emissions in Ohio are well above these allocations and will be extremely challenging beginning with 2012. 2) EPA reduced further both the NO_X and SO_2 allocations in 2014. The TR had only proposed to reduce the SO_2 allocations in 2014. 3) The CSAPR establishes an "Assurance Account" for each state. This account sets an upper limit on emissions from all sources in the state during the applicable control period (annual or seasonal). The proposed TR allowed for unrestricted trading in 2012 and 2013 while the CSAPR imposes assurance limits on the emissions trading beginning immediately in 2012. 4) The CSAPR imposes an assurance limit exceedance penalty of 3 allowances per ton emitted versus the 2 allowance penalty beyond the variability limits proposed by the TR. (The CSAPR does increase the variability limit percentage beyond that proposed by the TR). 5) Allocations for units that are retired were available for 6 years in under the TR; these allocations will now be available for 4 years, and afterwards the allocations will be moved to the new unit set aside.

Other differences in the two rules are more minor or are still being evaluated to determine their full impact on the Duke Energy Kentucky generating units.

PERSON RESPONSIBLE: Chris Hallman

Duke Energy Kentucky
Case No. 2011-235
Staff First Set Data Requests
Date Received: August 23, 2011

STAFF-DR-01-021

REQUEST:

Refer to page 50 of the IRP, which references Duke Energy's 2010/2011 Sustainability Report. For 2010, this report shows that Duke Energy's average number of outages was 1.11 versus a target of 1.10 and the average outage duration was 144 minutes versus a target of 139 minutes.

a. For the first six months of 2011, provide Duke Kentucky's actual average number of outages versus its target.

b. For the first six months of 2011, provide Duke Kentucky's actual average outage duration versus its target.

RESPONSE:

a. Duke Energy does not track this measure on a year-to-date basis but instead reports it on a rolling, twelve-month basis. Duke Energy Kentucky also files this measure with the Commission on an annual basis. The target in the Sustainability Report is a Duke Energy target. Duke Energy Kentucky does not have state level targets for this measure.

b. Duke Energy does not track this measure on a year-to-date basis but instead reports it on a rolling, twelve-month basis. Duke Energy Kentucky also files this measure with the Commission on an annual basis. The target in the Sustainability Report is a Duke Energy target. Duke Energy Kentucky does not have state level targets for this measure.

PERSON RESPONSIBLE: Bob Dollar

Duke Energy Kentucky
Case No. 2011-235
Staff First Set Data Requests
Date Received: August 23, 2011

STAFF-DR-01-022

REQUEST:

Refer to pages 51 and 52 of the IRP. Explain whether Duke Kentucky has considered or investigated a commercial use for fly ash or gypsum.

RESPONSE:

- Miami Fort Unit 6 - With the expected retirement date of Miami Fort Unit 6 on approximately January 1, 2015, and due to the high LOI content of the fly ash, there are no plans to make modifications that would produce a salable fly ash product, nor are there any plans to scrub the unit and start producing gypsum.

- East Bend – East Bend's planned utilization of their fly ash is to continue to mix fly ash with their calcium sulfite to produce a Posetec stability product for landfill purposes. There are currently no plans to alter East Bend's processes that would allow for the sales of fly ash or allow for their scrubber to produce a salable gypsum product.

PERSON RESPONSIBLE: Tony Mathis

Duke Energy Kentucky
Case No. 2011-235
Staff First Set Data Requests
Date Received: August 23, 2011

STAFF-DR-01-023 PUBLIC

REQUEST:

Refer to pages 54 and 55 of the IRP. Provide separate estimates of the cost of compliance with each of the proposed regulations/issues listed for Miami Fort Unit 6 and East Bend.

RESPONSE:

CONFIDENTIAL PROPRIETARY TRADE SECRET

This response has been filed with the Commission under a Petition for Confidential Treatment.

PERSON RESPONSIBLE: N/A

Duke Energy Kentucky
Case No. 2011-235
Staff First Set Data Requests
Date Received: August 23, 2011

STAFF-DR-01-024

REQUEST:

Refer to page 62 of the IRP. Provide the basis for the renewable energy portfolio standard assumptions.

RESPONSE:

As stated in the IRP (p.8), at the present time there is neither a Kentucky, nor a federal renewable energy portfolio standard (RPS) in effect. However, the Company believes it to be prudent to assume that some form of renewable energy requirement for Kentucky would become law within the planning horizon. Such requirements presently exist in 29 states nationally, including two of the five jurisdictions served by the Company (North Carolina and Ohio). Additionally, renewable energy legislation has been a topic that has been considered by members of the Kentucky legislature from time to time, and this also continues to be an ongoing topic of legislative discussion at the federal level. With this as context, the Company determined that including an assumption of a future renewable portfolio standard would be prudent in developing its long term resource plan. The particular assumptions utilized do not reflect any particular legislative proposal, but are rather a generic set of assumptions that the Company views as consistent with other renewable portfolio standards that have been adopted by other states or considered at the federal level.

The Company assumed that an RPS would be imposed by either federal or state mandate that would begin in 2016 at a 1% requirement and gradually increase 1% per year until reaching a 10% level in 2025. Furthermore, it was assumed that the Company would meet half of the requirement through purchases of unbundled Renewable Energy Certificates (RECs) from resources generating renewable energy that could be located anywhere in the state or nation, and that the remaining half of the requirement would be met with resources directly interconnected to the Company's transmission or distribution system in Kentucky, thus supplying both RECs as well as energy and capacity benefits.

PERSON RESPONSIBLE: Andrew Ritch

Duke Energy Kentucky
Case No. 2011-235
Staff First Set Data Requests
Date Received: August 23, 2011

STAFF-DR-01-025

REQUEST:

Refer to page 63 of the IRP.

a. Provide the basis for the fuel price variability sensitivities.

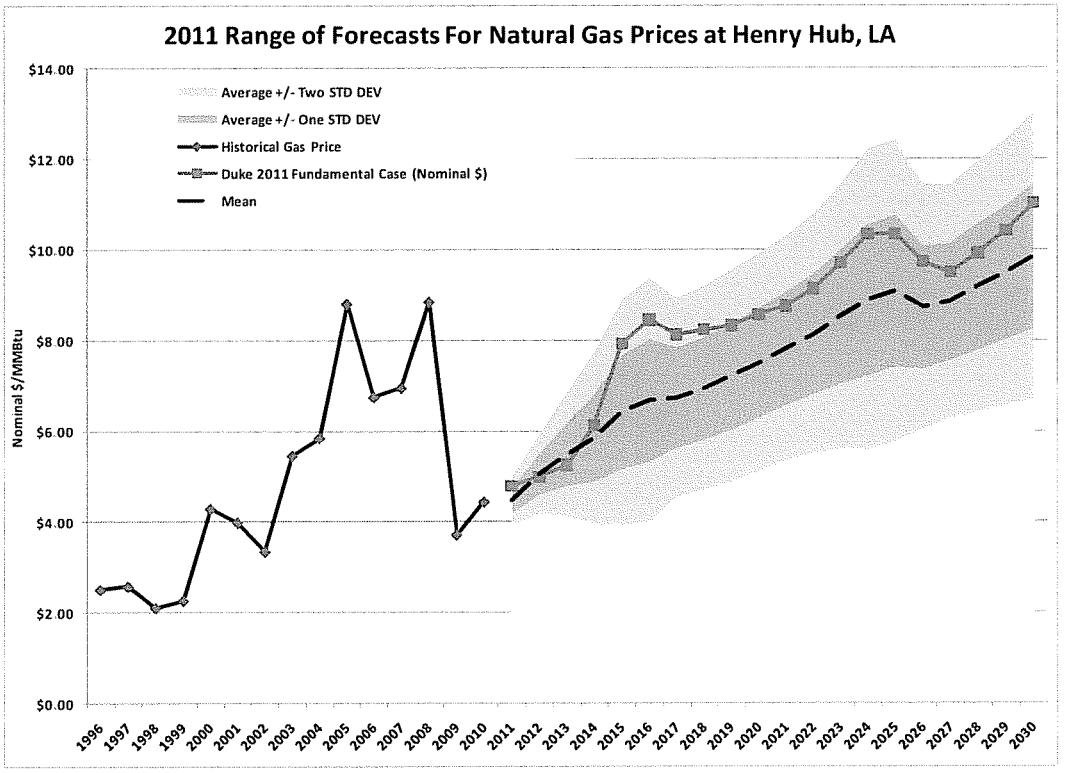
b. Explain why, when considering fuel price variability, that the possible higher price percentage considered for coal exceeds the percentage considered for natural gas.

RESPONSE:

a) The fuel price sensitivity ranges are determined separately for each fuel based on several factors. We look at the cost stack within the supply curve for each production basin and then weigh the range of potential changes in demand. We also look at a host of public and private forecasts for each fuel compared to the Duke baseline. We typically arrive at an asymmetrical sensitivity range due to disproportionate upward/downward risks to the forecast. When benchmarking our forecast we also find there are differences in assumptions between the forecasts which usually explain the divergent outcomes. For instance, the Duke gas curve was approximately one standard deviation above the mean of the range of external forecasts we follow. In fact, the (+20% / -40%) sensitivity range (Figure 1) we chose lines up very well with two standard deviations from the mean. Several factors pushed the Duke baseline gas forecast higher in 2015, including our assumption of stricter environmental rules than any of the external forecasts. These strict environmental rules in the Duke case led to higher coal retirements and thus higher gas demand from the power sector. Even with higher demand, the upside risk to the Duke forecast was found to be much smaller than the downside risk as there is a considerable amount of new gas available at the pricing points indicated in the Duke forecast. The coal price sensitivity range is similarly bounded on the lower end by rising production cash costs to continue operations and more stringent permitting and safety standards and on the upper end by fuel switching to other supply basins.
b) The coal price range is wider than gas because of the broad range of coal qualities considered and uncertainties about future supply sources. The Central

Appalachian coal market is being pressured by a steep decline in mineable reserves, exports of high btu crossover coals and stringent new permitting requirements. There are alternative coals from other supply basins which may cost less, but new limitations from cross state air pollution rules will limit the choices for uncontrolled coal units. Domestic coal markets are being pressured by global demand from Asia. It is still unclear whether future Chinese rail improvements from the inland coal production areas to the coastal demand regions will alleviate this US export demand, but for now the US is a global swing supplier. US Natural gas on the other hand is a fungible fuel without a significant global export market. Also, recent improvements in drilling and completion techniques of shale resources have not only increased the size of the technically recoverable US reserve base, but have narrowed the cost band on the supply stack.

Figure 1



PERSON RESPONSIBLE: Kevin Delahanty

Duke Energy Kentucky
Case No. 2011-235
Staff First Set Data Requests
Date Received: August 23, 2011

STAFF-DR-01-026

REQUEST:

Refer to page 65 of the IRP. At the bottom of the page, the discussion indicates a need for long-term resources if there is no renewable portfolio and the dates are 2027 to 2022. Explain whether these dates are in error.

RESPONSE:

The statement and date references are correct. As shown in the table, System Optimizer analysis identified a long-term resource need beginning in 2027 when an RPS assumption was included. When RPS resources were not included, that long-term need was accelerated in time by five years to 2022.

PERSON RESPONSIBLE: Robert A. Mc Murry

Duke Energy Kentucky
Case No. 2011-235
Staff First Set Data Requests
Date Received: August 23, 2011

STAFF-DR-01-027

REQUEST:

Refer to Appendix A, Table A-2 at page 81 of the IRP. Explain why, in the annual allowance price forecast, the CO_2 Base Cost is higher than the CO_2 High Cost until 2027.

RESPONSE:

The growth rates in pricing for the Base and High CO_2 price forecasts differ because they were derived from different legislative proposals. The High case was based on the proposed Waxman-Markey bill. The Base Case was loosely based on several more recent proposals. The Waxman-Markey approach (High Case) reached higher long-term CO_2 allowance prices, but assumed initial growth rates that were not as severe as some of the more recent proposals. Further details on the Reference Case are provided on page 62 in the IRP.

PERSON RESPONSIBLE: Robert A. Mc Murry

Duke Energy Kentucky
Case No. 2011-235
Staff First Set Data Requests
Date Received: August 23, 2011

STAFF-DR-01-028

REQUEST:

Refer to Appendix B, at pages 92-94 of the IRP.

a. The various models do not appear to use the same price of electricity. Describe the price of electricity in models (1) – (7) and explain the reasons for the pricing variable variations.

b. If not already explained above, specifically describe the derivation of the marginal electric price variable in models (4) and (7) and explain how this compares to the energy charge on a customer's bill, if at all.

c. Explain why the price of electricity relative to the price of natural gas is not relevant in the residential or commercial models. Do Other Public Authority (OPA) structures have the ability to alternate between electric and gas heat quickly?

RESPONSE:

a. Model (1) is just a definitional equation showing how total residential sales are computed. There is no price variable needed for this equation. Model (2) is used to forecast residential customers. There is no price variable needed for this equation. Models (3) through (7) all use a marginal electricity price concept. It was just not specified in the formulaic presentation of the model. The marginal price information is obtained from the Company's rates. The residential rate was used to develop the marginal price data for the residential class. The non-residential rates were utilized to develop the marginal price information for the commercial, industrial, and governmental classes. There is no difference in the marginal price concept across the models. The word "marginal" was unfortunately omitted from the model descriptions.

b. The historical marginal prices from the tariff sheets for each rate were selected based upon the average use per customer. The average use per customer was held constant through time to capture the true changes in the rates. Historically, the

average use tended to relate to the last block rate in the rate schedules. These are the same rates used to compute customer bills.

c. This variable was found to be statistically significant. The price variable has an 11 month time lag on it, so there is no assumption that the response is immediate. The Company is not aware of the capabilities of OPA customers to fuel switch quickly. The Company's forecast methodology always tests for the inclusion of alternate fuel prices. The forecast process will accept the inclusion of the variable if is statistically significant. For the residential model, the fuel switching is captured in the appliance saturation forecast obtained from Itron, Inc. For the commercial model, the variable was not found to be statistically significant.

PERSON RESPONSIBLE: Jose I. Merino

Duke Energy Kentucky
Case No. 2011-235
Staff First Set Data Requests
Date Received: August 23, 2011

STAFF-DR-01-029

REQUEST:

Refer to Appendix B, page 99 of the IRP. Explain whether the last sentence in the first paragraph should read, "[t]he rate of growth in local employment expected over the forecast will be slightly above that of the nation: 1.3 percent locally versus 0.7 percent nationally."

RESPONSE:

The last sentence in the first paragraph should read, "[t]he rate of growth in local employment expected over the forecast will be slightly above that of the nation: 1.3 percent locally versus 0.7 percent nationally."

PERSON RESPONSIBLE: Robert A. Mc Murry

Duke Energy Kentucky
Case No. 2011-235
Staff First Set Data Requests
Date Received: August 23, 2011

STAFF-DR-01-030

REQUEST:

Refer to Appendix B, page 100 of the IRP.

a. Discuss the effectiveness of the inverted block pricing on residential energy usage.

b. Provide an estimate of how much residential customer usage has actually moderated and how this behavior is incorporated into the residential sector forecast.

c. Has Duke Kentucky seen any changes in customer participation in DR or EE programs? If yes, how have increases in participation been incorporated into the forecasts?

RESPONSE:

a. The Company has not assessed the effectiveness of the inverted block pricing on residential usage. This statement is really referring to the historical development of the pricing data. At one time, the Company used an inverted block pricing structure for the residential rate. That has been changed to a flat rate.

b. Not applicable.

c. As reported in Duke Energy Kentucky's Annual Cost Recover Filings for 2009 (Case No. 2009-00444) and 2010 (Case 2010-00445), overall incremental participation in EE and DR programs has increased by approximately 11% in the last two reporting years, however, individual programs may have increased or decreased by a higher or lower percentage. These increases in participation and projections of future participation have been incorporated into the EE and DR forecast as part of the normal process to project future energy and peak savings.

PERSON RESPONSIBLE: (a,b) Jose I. Merino (c) Tom Wiles

Duke Energy Kentucky
Case No. 2011-235
Staff First Set Data Requests
Date Received: August 23, 2011

STAFF-DR-01-031

REQUEST:

Refer to Appendix B, page 110-130 of the IRP. It appears that in many of the model equations, service area variables are composed of data taken from Indiana, Ohio and Kentucky. If this is true, explain how specific forecasts for the Kentucky service area and ultimately Kentucky customer classes are derived from the larger service area forecasts.

RESPONSE:

The Greater Cincinnati Metropolitan area, which includes Northern Kentucky, is considered one economic region for publication of economic data. As a result, it makes sense to model the energy use as a region. The process for developing the Kentucky service area is described on page 91 of the IRP. It basically involves allocating the Kentucky portion using historically based percentages of Kentucky load relative to the load for the total region.

PERSON RESPONSIBLE: Jose I. Merino

Duke Energy Kentucky
Case No. 2011-235
Staff First Set Data Requests
Date Received: August 23, 2011

STAFF-DR-01-032

REQUEST:

Refer to Appendix B, page 133 of the IRP. It appears that the potential effects of new environmental air and water quality rules of the U.S. Environmental Protection Agency ("EPA") have not been incorporated into the base case, peak demand or range of forecasts. Does this mean that the possible economic effects of new and pending rules will have no impact on electric prices, employment, participation levels in DSM, DR and EE programs, or the demand for electricity? Explain how the effects of the new and pending EPA environmental rules will impact the various load forecasts.

RESPONSE:

The price variables used in the load forecast econometric models are based on assumptions that are consistent with the Company's view on the economic impact of existing and future environmental regulations. Once the Company has developed the expected cost of complying with new regulations, it will be reflected in the Company's projected price of electricity. Higher electric prices will have a negative impact on electric sales, holding all other variables constant. If the costs of complying with new environmental regulations decrease, electric sales will increase, holding all other variables the same.

Duke Energy Kentucky does not assume that the possible economic effects of new and pending rules will have no impact on electric prices, employment, participation levels in DSM, DR, and EE programs, or the demand of electricity, simply because such impacts are not directly included in our load forecast scenarios. While the high and low forecasts provided in Figures B-7 and B-8 do not specifically address sensitivities for environmental regulation, they can be viewed as covering the impact of future uncertainties such as higher costs due to more stringent environmental regulations. As stated on the second paragraph of page 134, "In general, the upper band reflects relatively optimistic assumptions about the future growth of Duke Energy Kentucky sales while the lower band depicts the impact of a pessimistic scenario."

PERSON RESPONSIBLE: Jose I. Merino

Duke Energy Kentucky
Case No. 2011-235
Staff First Set Data Requests
Date Received: August 23, 2011

STAFF-DR-01-033

REQUEST:

Refer to Appendix C, page 163 of the IRP. Explain whether DSMore uses plant specific performance information to generate avoided CO^2 estimates, and if so, whether those estimates are considered when screening for the cost-effectiveness of individual DSM programs. If avoided CO^2 estimates are not recognized by DSMore, explain whether avoided CO^2 is recognized and how it is recognized.

RESPONSE:

DSMore does not use plant specific performance information to generate avoided CO_2 estimates. Avoided CO_2 costs can be utilized by DSMore if these costs are included in the projection of avoided production costs. For the analysis of cost-effectiveness of programs performed for this IRP, avoided CO_2 costs were not included because the projection of avoided production costs used as inputs in DSMore did not include an estimate of these CO_2 costs. The Company intends to make a filing later this year to update its energy efficiency portfolio and this upcoming filing will use projected production costs that will include an estimate of the avoided CO_2.

PERSON RESPONSIBLE: Tom Wiles

Duke Energy Kentucky
Case No. 2011-235
Staff First Set Data Requests
Date Received: August 23, 2011

STAFF-DR-01-034

REQUEST:

Refer to Appendix C, page 165 of the IRP. For each of the DSM programs, explain the procedures Duke Kentucky uses to make customers aware of the programs.

RESPONSE:

See the table below:

Program	Awareness procedures
Residential Conservation and Energy Education	The Residential Conservation and Energy Education program utilizes direct mail, community events, media, and referrals in order to make customers aware of the program. Vendors of the Residential Conservation and Energy Education program also attend Payment Plus courses in order to recruit participants.
Refrigerator Replacement	Because the Refrigerator Replacement program is a piggy-back of state weatherization programs or the Residential Conservation and Energy Education program, no additional awareness procedures are employed.
Residential Home Energy House Call	Direct mail
Residential Comprehensive Energy Education Program (NEED)	Personal outreach and workshops

Power Manager	Although Duke Energy is not actively promoting Power Manager to KY customers given our supply position in KY, customers may enroll in the program. Customers can learn more about and enroll in Power Manager via the Duke Energy Kentucky web site and telephone.
Energy Star Products	CFL campaign – Direct Mail and Duke Energy web site.
Energy Efficiency Website	Direct Mail and web site
Personal Energy Report (PER)	Direct mail
C&I Prescriptive and Custom for Schools programs	C&I Prescriptive and the Custom program for schools are both promoted through direct customer contact between Duke Energy Account Managers and customers. In addition, Duke Energy contracts with WECC to promote the programs to the trade ally network. The trade ally network includes manufacturers and distributors of lighting, HVAC, motors, food service, and industrial process equipment. Outbound telephone calls and direct mail are also employed to contact small and medium business customers.
PowerShare	PowerShare® is promoted through direct contact between Duke Energy Account Managers and potential customers.

PERSON RESPONSIBLE: Rick Mifflin

Duke Energy Kentucky
Case No. 2011-235
Staff First Set Data Requests
Date Received: August 23, 2011

STAFF-DR-01-035

REQUEST:

Refer to Appendix C, page 166 of the IRP. Describe the National Energy Audit Tool and explain how it is used by auditors in the Tier Two Services of the Residential Conservation and Energy Education program.

RESPONSE:

The National Energy Audit Tool (NEAT) was developed for use in the U.S. Department of Energy's Weatherization Assistance Program. The tool determines the most cost effective measures to install in a home by assigning an investment ratio (SIR) to envelope, equipment, and base load measures. To reflect the value to the Duke Energy and its ratepayers, those measures must have an SIR of 1.5 or greater. The investment analysis is based on Duke Energy's retail rates (as provided by Duke Energy) within the NEAT audit tool. This requirement of SIR 1.5 or above reflects the value to Duke Energy and is equivalent to the avoided cost value of the measures. If the measure investment is more than one and one-half times the total dollars spent by the measure over its life (SIR>1.5), then the measure can be included in the investment. If the measure SIR is less than 1.5, Duke Energy will not include that measure in its program since it is a non-cost effective opportunity.

PERSON RESPONSIBLE: Rick Mifflin

Duke Energy Kentucky
Case No. 2011-235
Staff First Set Data Requests
Date Received: August 23, 2011

STAFF-DR-01-036

REQUEST:

Refer to Appendix C, pages 168 and 169 of the IRP, which discuss the Residential Home Energy House Call program. At no cost, the customer receives a kit containing several energy-saving measures, including a low-flow showerhead, two aerators, outlet gaskets, and three compact fluorescent bulbs. Explain whether Duke Energy has considered including a water heater wrap as part of this program.

RESPONSE:

Home Energy House Call currently contains all low to no cost measures in our Energy Efficiency Starter Kit distributed to participants. The Energy Efficiency Starter Kit contains items that can be directly installed immediately during the audit that can fit into most homes. The inventory challenges (individual applicability & space in vehicles) and time required to install the wraps make it challenging to incorporate into the walk through assessment. When applicable, water heater wraps are recommended by the energy specialists.

PERSON RESPONSIBLE: Rick Mifflin

Duke Energy Kentucky
Case No. 2011-235
Staff First Set Data Requests
Date Received: August 23, 2011

STAFF-DR-01-037

REQUEST:

Refer to Appendix C, page 171 of the IRP. The IRP states, "Kenton County's latest project is the new Turkey Foot Middle School, designed to be a net-zero energy school with the installation of the required number of solar panels and other energy conservation and efficiency features."

a. Explain whether the Turkey Foot Middle School has achieved the target of being a net-zero energy school.

b. If the answer to part a. of this request is no, explain what else may be needed to achieve this goal.

c. Describe how the students of Turkey Foot Middle School have been instructed regarding the school's target of being a net-zero energy school and their efforts to achieve that goal.

RESPONSE:

a & b. Turkey Foot Middle school is well on its way to being Net-Zero. The first phase of photovoltaic (PV) system was completed in May of 2011. The PV array is 385 kW and covers the entire roof of the school. Since May, the system has produced 193,000 kWh with excess power being sold to Duke Energy in June and July resulting in a credit to the district for each billing period. The second phase of PV is currently being designed and will consist of covered walkway structures and a shade structure for the outdoor classroom. Once this phase is completed and data is analyzed, it will be determined how large the system should be to reach the Net-Zero goal.

c. Kenton County has partnered with National Energy Education Development (NEED) and Northern Kentucky University (NKU) to turn the school into a learning laboratory. Through work with the district STEM (Science, Technology, Engineering and Mathematics) Consultant and NKU's director for the Center for Environmental Education, a STEM class has been created in which all students

learn about the buildings "Green" features and their impact on the environment. This curriculum includes NEED kits as well as instructional assistance from our NEED representative. Turkey Foot's "Vital Signs," when complete, will also be an integral part of the STEM class. From the Vital Signs screen, students will be able to view the school's systems (i.e., Solar power generated and electrical consumption). This screen will allow students to collect and analyze data about the school's energy consumption and production on a continuous manner.

Students also took part in the "Flip the Switch" assembly at which time students were educated about PV and how it was being incorporated into the schools operation.

PERSON RESPONSIBLE: Rick Mifflin

Duke Energy Kentucky
Case No. 2011-235
Staff First Set Data Requests
Date Received: August 23, 2011

STAFF-DR-01-038

REQUEST:

Refer to Appendix C, page 171 of the IRP. Describe the terms and purpose of an energy-saving performance contract.

RESPONSE:

Guaranteed Energy Savings Performance Contracts offer great benefits to schools, especially during tough economic times. An energy savings performance contract allows school districts to fund energy savings projects and building upgrades without affecting their capital bonding potential. The districts are able to purchase energy bonds to fund projects and upgrades that would otherwise go unfunded. These energy bonds are repaid using the energy savings realized from the project.

PERSON RESPONSIBLE: Rick Mifflin

Duke Energy Kentucky
Case No. 2011-235
Staff First Set Data Requests
Date Received: August 23, 2011

STAFF-DR-01-039

REQUEST:

Refer to Appendix C, page 172 of the IRP. List the energy-saving measures that are promoted in a Saving Energy at Home and School Kit.

RESPONSE:

The energy saving measures included in the Saving Energy at Home and School kit are described on page 20 of the NEED Catalog (http://www.need.org/needpdf/Catalog.pdf) Please see below:

Saving Energy At Home and School Kit
Grades 3–12
Elementary, intermediate, and secondary students learn about energy sources and energy efficiency through classroom activities. Hands-on activities cover energy sources, lighting, insulation, weatherization, electricity use, and water heating. Students and families install measures from the Home Energy Efficiency Kits corresponding to the lessons learned in the classroom and discuss their own energy use. The kit includes a Teacher Guide, class set of Student Guides, class set of Energy Savers Booklets, radiation cans, lab thermometers, insulation materials, an incandescent light bulb, a compact fluorescent light bulb (CFL), Kill-A-Watt meter, and a class set of 30 Home Energy Efficiency Kits (Flow meter bag, hot water gauge, bathroom sink aerator, refrigerator thermometer, roll of Teflon tape, nightlight, outlet and switch plate gaskets, low-flow showerhead, thermostat temperature guide, kitchen sink aerator, and CFL).

PERSON RESPONSIBLE: Rick Mifflin

Duke Energy Kentucky
Case No. 2011-235
Staff First Set Data Requests
Date Received: August 23, 2011

STAFF-DR-01-040

REQUEST:

Refer to Appendix C, page 173 of the IRP. In the discussion of the Program Administration, Development, and Evaluation, the IRP states "that all programs must undergo impact evaluation scrutiny and review at least once every two to three years."

a. Describe the factors that could change the evaluation of a program.

b. Describe the factors that could change the evaluation of Program 4.

c. Explain how customers find out about the Payment Plus Program.

RESPONSE:

a. Changes in customer behavior as a result of energy efficiency education could significantly affect the evaluation of a program. The more energy-conscious practices the customer adopts, the greater the energy reductions per customer. Additionally, the number of Tier 1 or Tier 2 customers may vary from year to year. Because of the extensive services performed for Tier 2 weatherization, more impacts are achieved per participant at this level.

b. Program 4 is a funding source for program development and evaluation which does not require an impact evaluation. Expenditures from this fund could vary by year depending upon the program design and evaluation plans.

c. Direct mail is sent to pre-qualified customers. The direct mail piece explains benefits of the program and the enrollment process.

PERSON RESPONSIBLE: Rick Mifflin

Duke Energy Kentucky
Case No. 2011-235
Staff First Set Data Requests
Date Received: August 23, 2011

STAFF-DR-01-041

REQUEST:

Refer to Appendix C, page 176 of the IRP. Explain why slightly over 500 of the 2,400 Cannon load control devices were not performing properly and had to be replaced. Include in the explanation, whether there were any instances in which switches failed and caused inadvertent outages at customer premises.

RESPONSE:

The description found in the IRP on page 176 was not as clear as it could have been. Duke Energy Kentucky did not replace slightly over 500 Cannon switches. These replacements are part of a QC (quality control) effort related to the older Corporate Systems Engineering (CSE) devices. These were CSE devices replaced with Cannon load control devices. Devices changed out in the QC process had not caused inadvertent outages at the customer's premise.

PERSON RESPONSIBLE: Bruce Sailers

Duke Energy Kentucky
Case No. 2011-235
Staff First Set Data Requests
Date Received: August 23, 2011

STAFF-DR-01-042

REQUEST:

Refer to Appendix C, page 177 of the IRP.

a. The IRP states, "Duke Energy Kentucky customers received a coupon mailer with four coupons, each offering $3 off the purchase of two GE CFL two-packs." Provide the wattage of the CFL replacement bulbs and the equivalent wattage of the incandescent bulb the CFL replaces.

b. Under "Energy Efficiency Website, On-line Energy Assessment" the IRP states, "Participants receive an immediate online, printable Energy Efficiency report (EE report) and also are sent a package of six, free Compact Fluorescent Light (CFL) bulbs." Explain how Duke Kentucky follows-up with customers that participate in the online assessment to determine their actual savings.

RESPONSE:

a. The 2-pack CFL offer provided flexibility for the customer to choose the wattage that best suited their lighting needs. The most popular choices included a 13-watt CFL which replaces a 60-watt incandescent, a 20-watt CFL which replaces a 75-watt incandescent and a 26-watt CFL which replaces a 100-watt incandescent.

b. For the "Energy Efficiency Website, On-line Energy Assessment," participants in this program will be randomly selected from Duke Energy's participation tracking database and their actual savings will be determined through a billing analysis and engineering estimates. Participant behavior data collected through phone surveys of these same participants will also be incorporated into this analysis.

PERSON RESPONSIBLE: (a) Rick Mifflin (b) Tom Wiles

Duke Energy Kentucky
Case No. 2011-235
Staff First Set Data Requests
Date Received: August 23, 2011

STAFF-DR-01-043

REQUEST:

Refer to Appendix C, page 177 of the IRP. Describe High Bay, T-8, and T-5 lighting fixtures.

RESPONSE:

High Bay fixtures are used in applications with high ceiling heights, like warehouses and gymnasiums. The most common type of light that was used in the High Bay fixtures were High Intensity Discharge fixtures. Because of the heat produced and the light output, the high ceiling heights were needed. Recent improvements in fluorescent technology have made the use of high bay T-8 and high output T-5 fluorescent fixtures a popular replacement. The T-8 and T-5 replacement fixtures provide equivalent lumen output, but produce less heat and use less energy than the equivalent High Intensity Discharge fixture. In addition, the fluorescent fixtures can be supplemented with occupancy sensors since they can be turned on and off immediately. A common problem with High Intensity Discharge lamps is that if the power is turned off to a lighted lamp, it takes anywhere from 5 to 15 minutes for the lamp to cool enough for it be restarted.

PERSON RESPONSIBLE: Kevin Bright

Duke Energy Kentucky
Case No. 2011-235
Staff First Set Data Requests
Date Received: August 23, 2011

STAFF-DR-01-044

REQUEST:

Refer to Appendix C, page 183 of the IRP. Identify the impacts Duke Kentucky's move from MISO to PJM is expected to have on the Power Share program.

RESPONSE:

Duke Energy Kentucky anticipates little impact from the move to PJM in terms of participation given that we have embedded several expected changes into the 2011/2012 PowerShare program and participation has not reduced. The changes incorporated include:

A. Exposure of up to 10 emergency events called by PJM with each event lasting as much as 6 hours; and
B. Lead time notification to customers of 90 minutes for emergency events.

With these changes, participation in Kentucky increased from 2010 to 2011. This could be a result of many factors (e.g., economic environment and/or effective marketing) and not simply the parameter changes above. In addition, there will be other changes in the program details surrounding items such as baseline calculations and capacity calculations. For these reasons, it is still unknown if there will be a decline in participation in 2012, but a significant decline is not anticipated.

PERSON RESPONSIBLE: Bruce Sailers

Duke Energy Kentucky
Case No. 2011-235
Staff First Set Data Requests
Date Received: August 23, 2011

STAFF-DR-01-045

REQUEST:

Refer to Appendix C, page 184 of the IRP. Provide the basis for the small monthly fee PowerShare 2010 customers are charged to participate in the program.

RESPONSE:

Participation in PowerShare QuoteOption now requires a participant to have access to Energy Profiler Online (EPO) Basic. EPO Basic allows customers to access and review their historic hourly usage data via the internet. Duke Energy Kentucky charges $20 per month to customers enrolled in the EPO Basic service.

PERSON RESPONSIBLE: Bruce Sailers

Duke Energy Kentucky
Case No. 2011-235
Staff First Set Data Requests
Date Received: August 23, 2011

STAFF-DR-01-046

REQUEST:

Refer to Appendix D, page 211 of the IRP. Explain how the 7.5 percent after-tax discount rate was determined.

RESPONSE:

The after-tax discount rate was based on an estimate of the incremental cost of long-term debt (reflects a five-year average of forecasted issuance costs), and an 11% rate of return on equity as supported in the Company's last electric rate case. The cost of debt was adjusted to reflect an after-tax cost via multiplication by one minus the combined state-Federal income tax rate.

The capitalization ratios from this same rate case were used as the weights for calculating the after-tax weighted average cost of capital (the discount rate).

DEK	Rate	Portion %	Nominal WACC	After-Tax WACC
Common Equity	11.00%	51.00%	5.61%	5.61%
Debt	6.30%	49.00%	3.09%	1.89%
				7.50%

PERSON RESPONSIBLE: Allen Carrick

Duke Energy Kentucky
Case No. 2011-235
Staff First Set Data Requests
Date Received: August 23, 2011

STAFF-DR-01-047

REQUEST:

Refer to Appendix E, page 220 of the IRP. Explain how it was determined that using a Heating Degree Day base of 59 degrees and a ten-year "normal" produced a more accurate forecast than using a base of 65 degrees and a thirty-year "normal."

RESPONSE:

The base of 59 degrees was found by performing a statistical analysis of alternate bases using hourly load research data. Using statistical models relating usage to heating degree days, we tested to see which temperature base best fit the data. From this analysis, we found that the best fit occurred with a base of 59 for heating degree days. At the same time, this analysis revealed that a base of 65 degrees was still appropriate for computing cooling degree days.

The use of a ten-year normal was a separate issue. The selection of ten years as the basis for establishing a normal level of degree days came from analyzing whether a ten-year normal would do a better job of predicting the next year's degree days than a thirty-year normal. The analysis showed that the ten-year normal predicted better. In addition, the Company performed a graphical analysis of trends in the moving average of degree days using 30 year averages, 25 year averages, and 10 years averages. The Company discovered a downward trend in heating degree days in all concepts, except that the moving ten-year average had stopped declining and leveled off. On that basis, the Company selected ten years as the basis for setting the normal level of degree days.

PERSON RESPONSIBLE: Jose I. Merino

Duke Energy Kentucky
Case No. 2011-235
Staff First Set Data Requests
Date Received: August 23, 2011

STAFF-DR-01-048

REQUEST:

Describe any impacts Duke Energy Corporation's proposed merger with Progress Energy, Inc. is expected to have on existing and future Duke Kentucky DSM programs.

RESPONSE:

Duke Energy Kentucky believes the proposed merger will have no impact on its existing and future DSM programs. As a condition of the Commission's approval of the proposed merger with Duke Energy Corporation and Progress Energy, Inc., Duke Energy Kentucky has committed to continue aggressively pursuing cost effective DSM and energy efficiency programs and commits to deploy such programs, using industry best practices, in Kentucky.

PERSON RESPONSIBLE: Tim Duff