



Mailing Address:
139 East Fourth Street
1303-Main / P.O. Box 960
Cincinnati, Ohio 45202
o: 513-287-4320
f: 513-287-4385

Rocco.O.D'Ascenzo@duke-energy.com
Rocco O. D'Ascenzo
Associate General Counsel

VIA OVERNIGHT DELIVERY

RECEIVED

MAR 31 2016

PUBLIC SERVICE
COMMISSION

March 30, 2016

James W. Gardner
Acting Executive Director
Kentucky Public Service Commission
211 Sower Blvd
Frankfort, KY 40601

RE: Administrative Case No. 387 – Annual Load/Demand Forecast Report

Dear Chairman Gardner:

Enclosed please find the 2015 redacted responses to the Commission data requests filed annually, as ordered in Administrative Case No. 387, paragraph 2, dated October 7, 2005. These updated responses are being filed separately from the Annual Reporting of Duke Energy Kentucky upon request.

We have included the unredacted and highlighted responses in a separate envelope to be filed under seal. Also enclosed is a Petition for Confidential Treatment for your consideration in the above referenced matter.

Please date-stamp the two copies of this letter and return to me in the enclosed return-addressed envelope. Should you have any questions or concerns, please do not hesitate to contact me.

Sincerely,


Rocco D'Ascenzo
Associate General Counsel

Enclosures

597886

www.duke-energy.com

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

RECEIVED

MAR 31 2016

PUBLIC SERVICE
COMMISSION

A Review of The Adequacy of)
Kentucky's Generation Capacity and)
Transmission System)

Administrative
Case No. 387

DUKE ENERGY KENTUCKY, INC.'S
PETITION FOR THE CONFIDENTIAL TREATMENT OF INFORMATION FILED
FOR CALENDAR YEAR 2016

1. Duke Energy Kentucky, Inc. ("Duke Energy Kentucky" or "Company"), pursuant to 807 KAR 5:001, Section 13, respectfully requests the Commission to classify and protect certain information provided by Duke Energy Kentucky in its responses to Data Request Nos. 6 and 11, as requested by Commission Staff ("Staff"). The information that Staff seeks, and for which Duke Energy Kentucky now seeks confidential treatment ("Confidential Information"), includes the internal, proprietary policies, procedures and guidelines Duke Energy Kentucky has in place with regard to price elasticity estimates used as part of the Company's forecasting process,¹ and planned outage and retirement schedules by plant.² In support of this Motion, Duke Energy Kentucky further states:

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

¹ Supplemental Data Request No. 6.

² Data Request No. 11.

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

2. The public disclosure of the Company's internal price elasticity standards, protocols or policies would reveal the information that is, quite obviously, highly sensitive, commercially valuable and strictly proprietary. This information, if disclosed, will reveal Duke Energy Kentucky's underlying assumptions of the energy markets that are used as part of its internal resource planning and pricing estimation processes. The public disclosure of this information would potentially also harm Duke Energy Kentucky's competitive position in the marketplace, to the detriment of Duke Energy Kentucky and its customers in that potential counter parties would have access to Duke Energy Kentucky's underlying resource model and planning assumptions.

3. The above information, if openly disclosed, would grant competitors a distinct advantage in that they would be able to anticipate Duke Energy Kentucky generation costs. With this information, a competitor could take actions that in the absence of this information it would not take. Such actions might include adjusting its prices, either to win contracts on which Duke Energy Kentucky may also be bidding — business the competitors otherwise would not be in a position to win, or to set its prices artificially high to take advantage of such knowledge, the latter action obviously forcing consumers to pay higher prices for power.

4. Similarly, the list of projected outages, as contained in response to Data Request No. 11, will grant vendors a distinct advantage in that they would be able to anticipate Duke Energy Kentucky's maintenance schedules. Duke Energy Kentucky submits that the following information, if openly disclosed, could present antitrust issues by giving its competitors access to competitively sensitive, confidential information, which in turn could cause energy prices to

consumers to be above competitive rates, and would permit competitors of Duke Energy Kentucky to gain an unfair competitive advantage in the marketplace:

- a. Scheduled outages or retirements of generating capacity during the current year and the following four years.

5. The information for which Duke Energy Kentucky is seeking confidential treatment is not known outside of Duke Energy Corporation.

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

7. This information was, and remains, integral to Duke Energy Kentucky's effective execution of business decisions. 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*, 904 S.W.2d 766, 768 (Ky. 1995).

8. In accordance with the provisions of 807 KAR 5:001, Section 13(3), the Company is filing one copy of the Confidential Information separately under seal, and one copy without the confidential information included.

9. Duke Energy Kentucky respectfully requests that the Confidential Information be withheld from public disclosure for a period of ten years. This will assure that the Confidential Information – if disclosed after that time – will no longer be commercially sensitive so as to likely impair the interests of the Company or its customers if publicly disclosed.

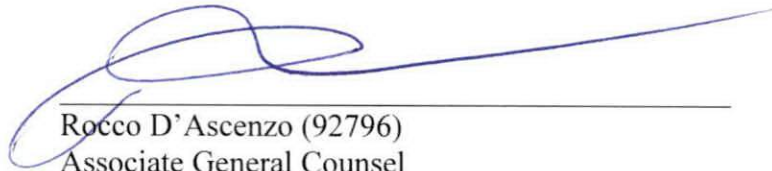
10. To the extent the Confidential information becomes generally available to the

public, whether through filings required by other agencies or otherwise, Duke Energy Kentucky will notify the Commission and have its confidential status removed, pursuant to 807 KAR 5:001 Section 13(10)(a).

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 (92796)
Associate General Counsel
Amy B. Spiller (85309)
Deputy General Counsel
139 East Fourth Street
1303 Main
Cincinnati, Ohio 45201-0960
Phone: (513) 287-4320
Fax: (513) 287-4385
E-mail: rocco.d'ascenzo@duke-energy.com

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing filing was served on the following via overnight mail, this 30TH day of March 2016:

Office of the Attorney General
Larry Cook
1024 Capital Center Drive
Frankfort, Kentucky, 40601

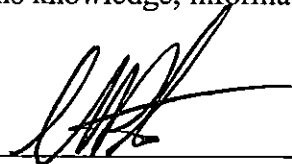


Rocco D'Ascenzo

VERIFICATION

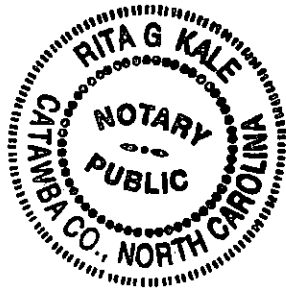
STATE OF NORTH CAROLINA)
) **SS:**
COUNTY OF MECKLENBURG)

The undersigned, Scott Park, being duly sworn, deposes and says that he is the Director of Midwest Integrated Resource Planning, and that he has personal knowledge of the matters set forth in the foregoing data requests, and that the answers contained therein are true and correct to the best of his knowledge, information and belief.



Scott Park, Affiant

Subscribed and sworn to before me by Scott Park, on this 24 day of March, 2016.



NOTARY PUBLIC

My Commission Expires: 6/17/2017

VERIFICATION

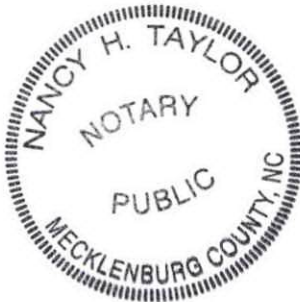
STATE OF NORTH CAROLINA)
) SS:
COUNTY OF MECKLENBURG)

The undersigned, Leon Brunson, Lead Load Forecasting Analyst, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing data requests, and that the answers contained therein are true and correct to the best of his knowledge, information and belief.

Leon Brunson

Leon Brunson, Affiant

Subscribed and sworn to before me by Leon Brunson on this 21st day of March, 2016.



Nancy H. Taylor

NOTARY PUBLIC

My Commission Expires: January 26, 2017

VERIFICATION

STATE OF OHIO)
)
COUNTY OF HAMILTON) SS:

The undersigned, Tim Abbott, being duly sworn, deposes and says that he is the Director of System Operations Services, and that he has personal knowledge of the matters set forth in the foregoing data requests, and that the answers contained therein are true and correct to the best of his knowledge, information and belief.

Timothy A. Abbott

Tim Abbott, Affiant

Subscribed and sworn to before me by Tim Abbott, on this 11TH day of March, 2016.

Adele M. Frisch

NOTARY PUBLIC

ADELE M. FRISCH
Notary Public, State of Ohio
My Commission Expires 01-05-2019

My Commission Expires: 1/5/2019

VERIFICATION

STATE OF INDIANA)
) **SS:**
COUNTY OF HENDRICKS)

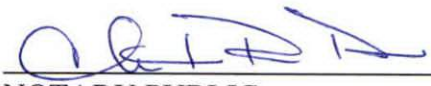
The undersigned, Ed Kirschner, being duly sworn, deposes and says that he is the Director of Transmission Planning, and that he has personal knowledge of the matters set forth in the foregoing data requests, and that the answers contained therein are true and correct to the best of his knowledge, information and belief.



Ed Kirschner, Affiant

Subscribed and sworn to before me by Ed Kirschner, on this 7th day of March, 2016.





NOTARY PUBLIC

My Commission Expires: November 21, 2021

TABLE OF CONTENTS
ADMINISTRATIVE CASE NO. 387

<u>DATA REQUEST</u>	<u>WITNESS</u>	<u>TAB NO.</u>
STAFF-DR-01-003	Leon Brunson	3
STAFF-DR-01-004	Leon Brunson	4
STAFF-DR-01-006	Leon Brunson	6
STAFF-DR-01-006 SUPPLEMENTAL	Leon Brunson/Scott Park	6
STAFF-DR-01-007	Scott Park	7
STAFF-DR-01-008	Scott Park	8
STAFF-DR-01-011	John Swez	11
STAFF-DR-01-012	Scott Park	12
STAFF-DR-01-013	Tim Abbott/Ed Kirschner	13
STAFF-DR-01-014	Ed Kirschner	14

STAFF-DR-01-003

REQUEST:

Actual and weather-normalized monthly coincident peak demands for the just completed calendar year. Demands should be disaggregated into (a) native load demand (firm and non-firm) and (b) off-system demand (firm and non-firm).

RESPONSE:

Actual and weather-normalized monthly coincident peak native load demands for 2015 are provided in the table below. Duke Energy Kentucky does not have any off-system firm demands. The table does provide off-system non-firm demands. Weather normal values for the off-system demands are not available.

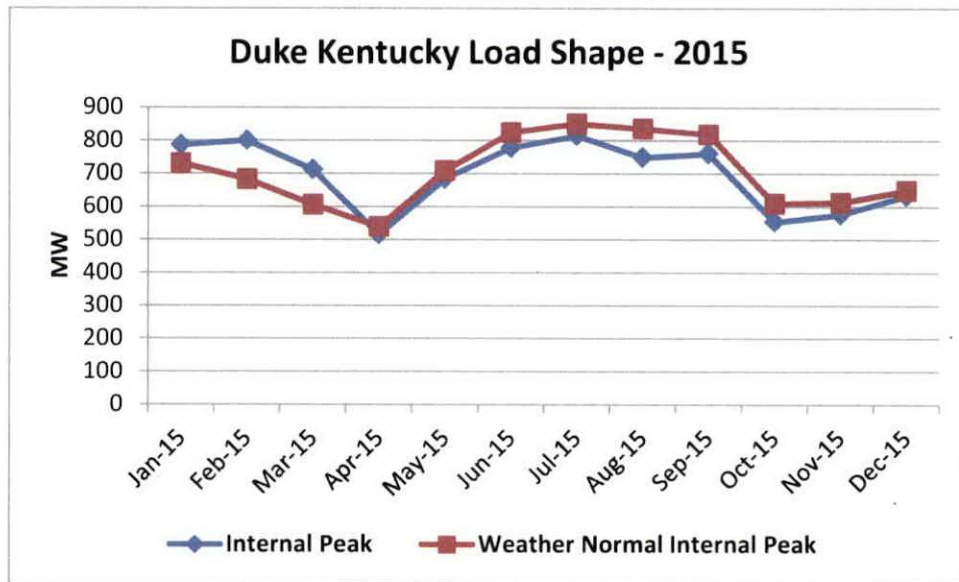
Duke Energy Kentucky Electric Energy Demands - MW						
	Native Peak	Demand Response ¹	Internal Peak	Weather Normal Internal Peak	Off-System Non-Firm	Total
Jan-15	785		785	730		730
Feb-15	799		799	682		682
Mar-15	711		711	605		605
Apr-15	515		515	538		538
May-15	683		683	708		708
Jun-15	778		778	824		824
Jul-15	814		814	851		851
Aug-15	748		748	835		835
Sep-15	760		760	818		818
Oct-15	554		554	609		609
Nov-15	576		576	612		612
Dec-15	632		632	649		649

PERSON RESPONSIBLE: Leon Brunson

REQUEST:

Load shape curves that show actual peak demands and weather-normalized peak demands (native load demand and total demand) on a monthly basis for the just completed calendar year.

RESPONSE:



PERSON RESPONSIBLE:

Leon Brunson

REQUEST:

Based on the most recent demand forecast, the base case demand and energy forecasts and high case demand and energy forecasts and high case demand and energy forecasts for the current year and the following four years. The information should be disaggregated into (a) native load (firm and non-firm demand) and (b) off-system load (both firm and non-firm demand).

RESPONSE:

Base case native load demand and energy forecasts and high case native load demand and energy forecasts are provided in the table below. Duke Energy Kentucky does not have any off-system firm energy sales or demands. The second table provides forecasts of off-system non-firm energy. A forecast of off-system non-firm demands is not available.

Duke Energy Kentucky - Native Load Forecast				
	Demand - MW		Energy - MWH	
	Base	High	Base	High
2016	829	913	4,156,983	4,497,526
2017	835	918	4,167,154	4,533,160
2018	833	916	4,157,385	4,539,709
2019	838	921	4,176,191	4,568,256
2020	837	920	4,165,717	4,563,187

Duke Energy Kentucky - Non-Firm Electric Forecast

	Demand - MW		Energy - MWh	
	Base	High	Base	High
2016	n/a	n/a	n/a	n/a
2017	n/a	n/a	n/a	n/a
2018	n/a	n/a	n/a	n/a
2019	n/a	n/a	n/a	n/a
2020	n/a	n/a	n/a	n/a

PERSON RESPONSIBLE: Leon Brunson

REQUEST:

Due to the increasing impact that price elasticity will have on electric utility sales and revenues, provide a detailed discussion of the consideration given to price elasticity in the forecasted demand, energy and reserve margin information provided with the annual Admin 387 resource assessments.

RESPONSE:

CONFIDENTIAL PROPRIETARY TRADE SECRET

Energy:

Duke Energy Kentucky's energy sales forecast models were prepared at the Kentucky territory level for the Spring 2016 projection, which is the basis for the information herein. The forecast for Duke Energy Kentucky was determined by using historical actual sales for each customer class.

The price for electricity is an input to the Ohio-Kentucky energy sales forecast models. From an economic theory perspective, the price of electricity should be included as a forecast input because it is one of the factors that determines the level of electricity consumption in the long run.

Price elasticity is the projected percentage change in energy sales given a 1 percentage increase in electricity prices. Holding all other variables constant, if the price of electricity increases, energy sales are expected to decline. The Kentucky energy sales and peak demand projections include the impact of future electricity prices. The reported

price elasticity reflects a 50/50 probability or a value that has a 50% chance of being lower or higher. The price elasticities are calculated based on the historical relationship between sales, electricity prices and other variables such as weather, population, income, employment and industrial production. The historical period used in the energy sales model estimation ranges between 10 and 20 years and it varies by customer class.

Based on the Spring 2016 econometric model specification, the estimated price elasticities for Duke Energy Kentucky are: residential [REDACTED], commercial [REDACTED], industrial [REDACTED] and governmental [REDACTED].

Demand:

The peak demand projection is a function of weather variables and weather normal retail sales. The Duke Energy Kentucky peak demand forecast does not use the price of electricity as a direct forecast input.

Since the price of electricity is an input to the retail sales projection, it indirectly influences the peak demand growth projection in the long run. Based on Duke Energy's current forecast methodology, the price of electricity is not a material driver of peak demand in the short run.

The Duke Energy models predict that sales volumes would be approximately 1% higher than the reference case if prices were held constant in real terms. The reference case projection assumes an electricity price forecast that does not stay constant in real terms.

Duke Energy Kentucky - Native Load Forecast				
	Demand - MW		Energy - MWH	
	Base	Fixed Price	Base	Fixed Price
2016	829	831	4,156,983	4,164,426
2017	835	835	4,167,154	4,169,959
2018	833	840	4,157,385	4,197,499
2019	838	844	4,176,191	4,223,880
2020	837	846	4,165,717	4,228,570

Notes:

- MWH energy reflects load at generation level or after adding back line losses.
- Fixed price MW demand and MWH energy show how much load would have been, if retail rates did not increase from historical levels after accounting for inflation.

The projected growth in electricity prices is obtained from internal company records. This information is consistent with the financial planning assumptions used by Duke Energy Kentucky.

Since the long-term growth rate for peak demand is expected to mirror that of energy sales, changes in sales growth associated with price moves will eventually impact the peak demand forecast. Therefore, the peak demand projection would also be approximately 1% higher than the reference case if prices were assumed to stay constant in real terms.

Planning Reserve Margin:

Duke Energy Kentucky's 2016 *planning* reserve margin of 13.1% is based on the PJM Forecast Pool Requirement. This is determined from PJM and Duke Energy Kentucky equivalent forced outage rates and installed load capacities, and is independent of Duke Energy Kentucky's load forecast. The *forecasted* reserve margin is based on the base case load forecast. All else being equal, and given negative long term price

elasticities, the forecasted reserve margin varies directly with the price of electricity. For example, assuming that the price of electricity increases, then load decreases due to the negative price elasticity. Since the reserve margin calculation measures the difference between generation capacity and peak load, lower loads increase the reserve margin.

PERSON RESPONSIBLE: Energy/ Demand – Leon Brunson
Reserve Margin – Scott Park

STAFF-DR-01-007

REQUEST:

The target reserve margin currently used for planning purposes, stated as a percentage of demand. If changed from what was in use in 2001, include a detailed explanation for the change.

RESPONSE:

The planning reserve margin used for 2016 resource planning is 13.1%. The IRP models utilize the full capacity of the unit ratings to perform dispatch, so the reserve margin needs to be developed on an installed capacity rating, calculated as follows:

1. The PJM Forecast Pool Requirement (FPR_{UCAP}) is calculated using the PJM equivalent demand forced outage rate ($EFOR_d^{PJM}$) and the PJM installed reserve margin (RM_{ICAP}^{PJM}). The FPR_{UCAP} is 8.83%.
2. FPR_{UCAP} is translated to a Duke Energy Kentucky (DEK) installed-capacity-basis reserve margin ($RM_{ICAP}^{COINCIDENT}$) using the 5-year average $EFOR_d^{DEK}$ (7.92%). Based on this calculation, $RM_{ICAP}^{COINCIDENT}$ is 18.2%.
3. For long range planning, PJM's forecast assumes that the Duke Energy Ohio-Kentucky zone is 95.7% coincident with the PJM peak. Applying this coincidence factor to DEK's 18.2% $RM_{ICAP}^{COINCIDENT}$ results in a planning reserve margin of 13.1%.

PERSON RESPONSIBLE: Scott Park

**Duke Energy Kentucky
Administrative Case No. 387
March 31, 2016**

STAFF-DR-01-008

REQUEST:

Projected reserve margins stated in megawatts and as a percentage of demand for the current year and the following 4 years. Identify projected deficits and current plans for addressing these. For each year identify the level of firm capacity purchases projected to meet native load demand.

RESPONSE:

The projected reserve margins for Duke Energy Kentucky (DEK) are shown below:

Year	Projected Reserves (MW)	Projected Reserve Margin (%)
2016	291	36.4
2017	283	35.2
2018	278	34.3
2019	272	33.2
2020	282	35.0

This plan reflects the 2015 retirement of the 163 MW Miami Fort Unit 6 and completed purchase of the remaining 186 MW interest in East Bend Unit 2 in December 2014, increasing Duke Energy Kentucky's ownership from 414 MW to 600MW.

PERSON RESPONSIBLE: Scott Park

PUBLIC STAFF-DR-01-011

REQUEST:

A list that identifies scheduled outages or retirements of generating capacity during the current year and the following four years.

RESPONSE:

CONFIDENTIAL PROPRIETARY TRADE SECRET

The table is a grid with approximately 10 columns and 25 rows. The first column is almost entirely blacked out. The second column has several white rectangular redactions. The third column is also almost entirely blacked out. The fourth and fifth columns contain some white text, but it is mostly obscured by black bars. The remaining columns are mostly empty or contain very faint text.

STAFF-DR-01-012

REQUEST:

Identify all planned base load or peaking capacity additions to meet native load requirements over the next 10 years. Show the expected in-service date, size and site for all planned additions. Include additions planned by the utility, as well as those by affiliates, if constructed in Kentucky or intended to meet load in Kentucky.

RESPONSE:

There are currently no planned base load or peaking capacity additions needed to meet native load requirements over the next 10 years.

PERSON RESPONSIBLE: Scott Park

STAFF-DR-01-013

REQUEST:

The following transmission energy data for the just completed calendar year and the forecast for the current year and the following four years:

- a. Total energy received from all interconnections and generation sources connected to the transmission system.
- b. Total energy delivered to all interconnections on the transmission system.
- c. Peak load capacity of the transmission system.
- d. Peak demand for summer and winter seasons on the transmission system.

RESPONSE:

- a. Duke Energy Kentucky does not have any generation connected to its transmission system.

Duke Energy Kentucky received 93,688 MWh via the 69 kV interconnection with East Kentucky Power that went into service in June of 2015.

- b. None.
- c. Neither Duke Energy Kentucky nor the electric utility industry has defined a term "peak load capacity of the transmission system." There is no single number that defines the capacity of a transmission system due to the interconnected nature of the electric grid. Duke Energy Kentucky does perform assessments of its transmission system to ensure all firm loads can be

served in a reliable manner. This ensures that the transmission system has the “capacity” required to reliably serve the load.

d. Winter peak Demand occurred on Feb 20 at hour ending 08:00. It was 799 MWh.

Summer peak demand occurred on July 29 at hour ending 14:00. It was 816 MWh.

PERSON RESPONSIBLE: a, b – Tim Abbott
c – Ed Kirschner
d – Tim Abbott

STAFF-DR-01-014

REQUEST:

Identify all planned transmission capacity additions for the next 10 years. Include the expected in-service date, size and site for all planned additions and identify the transmission need each addition is intended to address.

RESPONSE:

There are no transmission capacity additions planned at this time.

PERSON RESPONSIBLE: Ed Kirschner