VERIFICATION

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

The undersigned, Brad Daniel, Director, Generation Dispatch and Operations, 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.

Brad Daniel, Affiant

Subscribed and sworn to before me by Brad Daniel on this 9 day of December, 2021.

NOTARY PUBLIC

My Commission Expires:

SHAMALE M WILSON
Notary Public, North Carolina
Mecklenburg County
My Commission Expires
July 06, 2026

VERIFICATION

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

The undersigned, Brett Phipps, Managing Director, Fuel Procurement, 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.

Brett Phipps, Affiant

Subscribed and sworn to before me by Brett Phipps on this 14 day of December, 2021.

NOTARY PUBLIC

My Commission Expires:

SHAMALE M WILSON
Notary Public, North Carolina
Mecklenburg County
My Commission Expires
July 06, 2026

VERIFICATION

STATE OF NORTH CAROLINA)
)
COUNTY OF MECKLENBURG)

SS:

The undersigned, John D. Swez, Managing Director, Trading and Dispatch, 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.

John D. Swez, Affiant

Subscribed and sworn to before me by John D. Swez on this 14 day of December, 2021.

NOTARY PUBLIC

My Commission Expires:

SHAMALE M WILSON
Notary Public, North Carolina
Mecklenburg County
My Commission Expires
July 06, 2026

VERIFICATION

STATE OF OHIO)
) **SS:**
COUNTY OF HAMILTON)

The undersigned, Libbie S. Miller, Lead Rates & Regulatory Strategy Analyst, being duly sworn, deposes and says that she 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 her knowledge, information and belief.

Libbie S. Miller

Libbie S. Miller Affiant

Subscribed and sworn to before me by Libbie S. Miller on this 17th day of December, 2021.

E Minna Rolfes

NOTARY PUBLIC

My Commission Expires: July 8, 2022

NOTARY PUBLIC STATE OF OHIO

E. MINNA ROLFES-ADKINS
Notary Public, State of Ohio
My Commission Expires
July 8, 2022

KyPSC Case No. 2021-00296
TABLE OF CONTENTS

Duke Energy Kentucky
Case No. 2021-00296
STAFF Second Set Data Requests
Date Received: December 8, 2021

STAFF-DR-02-001

REQUEST:

Refer to Duke Kentucky's response to Commission Staff's First Request (Staff's First Request), Item 9. The response appears to have confused the information requested in subparts f. and g.

a. Provide an update to the response with the contract tonnage requirements.

b. For any contracts where the supplier is having trouble delivering the required coal, explain what actions Duke Kentucky is taking in response.

RESPONSE:

a.) Please see the response **f** for the contract tonnage requirements

a. 33097

b. Knight Hawk Coal LLC

c. Knight Hawk's Prairie Eagle Mine, IL

d. Barge

e. 230,355

f. 137,500

g. $40.52

a. 32262

b. Alliance Coal, LLC

c. Tunnel Ridge, Ohio County, WV

d. Barge

e. 60,291

f. 156,250

g.$46.10

a. 33073

b. Alliance Coal, LLC

c. Tunnel Ridge, Ohio County, WV

d. Barge

e. 152,115

f. 95,750

g. $39.89

a. 32274

b. Foresight Coal Sales, LLC.

c. Shay Mine, Carlinville, Illinois

d. Barge

e. 35,662

f. 96,500

g. $36.14

a. 33982

b. Central Coal Company as agent for Knight Hawk Coal, LLC

c. Knight Hawk's Prairie Eagle Mine, IL

d. Barge

e. 225,557

f. 162,500

g. $32.86

Question b. During the FAC Period the Company did not have issues with suppliers having trouble delivering the required coal. The Company received coal under contract PO's 32262 and 32274 earlier in their contractal periods and these obligations were completed during the FAC period.

PERSON RESPONSIBLE: Brett Phipps

Duke Energy Kentucky
Case No. 2021-00296
STAFF Second Set Data Requests
Date Received: December 8, 2021

STAFF-DR-02-002

REQUEST:

Refer to Duke Kentucky's response to Staff's First Request, Item 4. Explain the term "purchase requirement met."

RESPONSE:

"Purchase requirement met" means there is no need to purchase additional tons due to other selected purchases meeting the Company's soliciated required coal supply needs (i.e. coal volume, coal quality, contractual flexibility or term).

PERSON RESPONSIBLE: Brett Phipps

Duke Energy Kentucky
Case No. 2021-00296
STAFF Second Set Data Requests
Date Received: December 8, 2021

STAFF-DR-02-003

REQUEST:

Refer to Duke Kentucky's response to Staff's First Request, Item 6, Attachment 1. Confirm that no natural gas was purchased in November 2020. If natural gas was purchased during November 2020, provide an update to the Table.

RESPONSE:

As originally reported in response to Staff's First Request, Item 6, Attachment 1, there were no natural gas purchases in November 2020.

PERSON RESPONSIBLE: Brett Phipps

Duke Energy Kentucky
Case No. 2021-00296
STAFF Second Set Data Requests
Date Received: December 8, 2021

STAFF-DR-02-004

REQUEST:

Refer to Duke Kentucky's response to Staff's First Request, Item 9. Explain whether and how Duke Kentucky personnel conduct physical inspections of its supplier or transporter facilities to ensure both fuel quality and weight to ensure contract performance.

RESPONSE:

Coal

In-person visits did not occur during the FAC period due to the COVID pandemic. Duties of the Company's Field Representative typically include, but are not limited, to the following: visual observation of suppliers' coal stockpiles, observation and participating in laboratory & testing facility coal sampling audits, observation of belt-scale and/or weigh-bin certifications, visual inspections of the mechanical coal sampling systems, visual observation of belt magnets, crushers and coal preparation plants, along with any additional requests that the company may have.

Natural Gas, Natural Gas Transportation, and Fuel Oil

Hightowers Petroleum (Hightowers) is Duke Energy Kentucky's primary supplier for fuel oil. Hightowers sources their fuel oil supply from larger pipeline connected terminals in Dayton, OH for Woodsdale, and Covington, KY for East Bend. The pipelines that deliver the product into the terminals test the product specifications to ensure pipeline quality standards are met prior to injection to the pipeline. The fuel oil terminals themselves also

test the product after a delivery is received from the pipeline and before it is put into the terminal tanks. The bills of lading provide an audit trail of the terminal and product specifications for each truck load.

For East Bend – Duke Energy Kentucky relies on the vendor analysis and safeguards performed by the pipelines and product terminals.

For Woodsdale – Duke Energy Kentucky independently tests the product in the on-site tank after product is delivered and before it is released for dispatch.

PERSON RESPONSIBLE: Brett Phipps

Duke Energy Kentucky
Case No. 2021-00296
STAFF Second Set Data Requests
Date Received: December 8, 2021

STAFF-DR-02-005

REQUEST:

Refer to Duke Kentucky's response to Staff's First Request, Item 13.

a. Explain the factors that contributed to Duke Kentucky's low sales for November 2020.

b. Explain the reason for a credit (negative charge) in the "Other" column for November 2020 and March 2021.

RESPONSE:

a. Duke Energy Kentucky had low sales for November 2020 due to East Bend Unit 2 being off-line most of the month for a planned maintenance outage. Please see STAFF-DR-02-006 for more information.

b. Duke Energy Kentucky can have a sales loss when generation is greater than customer load. This typically occurs in the non-peak hours when the East Bend Unit 2 minimum generation load is more than customer load for that hour. The excess generation is sold to PJM by a function of the market, where the unit's cost could be higher than the unit's locational marginal price (LMP) received. Generally, the LMP is at its lowest price during the off-peak hours, and the unit is at its lowest efficiency during off-peak hours when it is running at or near minimum load. The inefficient unit costs more to run but receives a lower LMP price, resulting in a sales loss for Duke Energy Kentucky. This was the case for a loss on sales in both November 2020 and March 2021.

PERSON RESPONSIBLE: Libbie S. Miller

Duke Energy Kentucky
Case No. 2021-00296
STAFF Second Set Data Requests
Date Received: December 8, 2021

STAFF-DR-02-006

REQUEST:

Refer to Duke Kentucky's response to Staff's First Request, Items 15 and 16. Explain why the East Bend "Net MWH" is low for November 2020.

RESPONSE:

The East Bend Unit 2 was in a planned outage from mid-September to mid to late-November 2020.East Bend Unit 2 returned on-line after its Fall 2020 planned outage on November 20, 2020 at 7:58 PM. Thus, the unit was unavailable for much of the month prior to returning on-line. Additionally note that, as is typical, the unit takes longer to return to a full capability following a long outage, and thus the unit was in a state of reduced output until approximately the evening of November 24, 2020.

PERSON RESPONSIBLE: John Swez / Brad Daniel

Duke Energy Kentucky
Case No. 2021-00296
STAFF Second Set Data Requests
Date Received: December 8, 2021

STAFF-DR-02-007

REQUEST:

Provide a table showing the monthly PJM Interconnection LLC (PJM) revenues and charges for each billing line item that Duke Kentucky is authorized to pass through the Fuel Adjustment Clause (FAC) in Excel spreadsheet format with all formulas, columns, and rows unprotected and fully accessible.

RESPONSE:

Please see STAFF-DR-02-007 Attachment.

PERSON RESPONSIBLE: Libbie S. Miller

Duke Energy Kentucky PJM Charge Detail
Net Fuel Related RTO Billing Line Items
November 30, 2020

PJM Statement	PJM S14 Total_Amt	Native FAC	Allocation Method	PJM BLI
1230-Inad Inter	$ (100.30)	$ (99.70)	Mkt Ratio	1230
1250-Meter Err Cor	$ 3.76	$ 3.74	Mkt Ratio	1250
1340-Regulation	$ (38,734.16)	$ (38,734.16)	Load Ratio	1340
1360-Synch Reserve	$ (19,244.17)	$ (19,244.17)	Load Ratio	1360
1370-Operating Resrv	$ (2,670.25)	$ (2,670.25)	Load Ratio	1370
1375-Bal Opr Rsrv	$ (24,889.89)	$ (23,886.48)	Gen Ratio	1375
1500-FTR Shortfall	$ 994.56	$ 994.56	Load Ratio	2211
1500-Mthly FTR Prem	$ 0.28	$ 0.28	Load Ratio	1500
2215-Bal Trns Cng Cr	$ (69,701.59)	$ (66,891.65)	Gen Ratio	2215
2220-Tran Loss	$ 60,531.07	$ 60,166.49	Mkt Ratio	2220
2340-Lost Opp. Cost	$ 0.20	$ 0.19	Gen Ratio	2340
2360-Synch Reserve	$ 1,302.00	$ 1,249.51	Gen Ratio	2360
2375-Bal Opr Rsrv Cr	$ 109,083.08	$ 109,083.08	Manual	2375
2510-ARR	$ 279,788.70	$ 279,788.70	Load Ratio	2510
FTR	$ (4,003.02)	$ (4,003.02)	Load Ratio	2211
PJM Annual FTR Prem	$ (266,902.81)	$ (266,902.81)	Load Ratio	1500
PJM Mthly FTR Prem	$ 72,598.83	$ 72,598.83	Load Ratio	2500
Reg.Supply	$ 1,788.24	$ 1,716.15	Gen Ratio	2340
	$ 99,844.53	$ 103,169.29		
Congestion & Losses		$ 121,636.94		
Net Fuel Related RTO Billing Line Items		$ (18,467.65)		

	MW Native	MW Total		
Load	$ 292,372.84	$ 292,372.84	**1.0000**	Load Ratio
Gen	$ 49,283.72	$ 51,354.00	**0.9597**	Gen Ratio
	$ 341,656.56	$ 343,726.84	**0.9940**	Market Ratio

Duke Energy Kentucky PJM Charge Detail
Net Fuel Related RTO Billing Line Items
December 31, 2020

PJM Statement	PJM S14 Total_Amt	Native FAC	Allocation Method	PJM BLI
1230-Inad Inter	$ (1,189.56)	$ (1,089.12)	Mkt Ratio	1230
1250-Meter Err Cor	$ (3,006.99)	$ (2,753.10)	Mkt Ratio	1250
1340-Regulation	$ (39,903.80)	$ (39,903.80)	Load Ratio	1340
1360-Synch Reserve	$ (16,783.93)	$ (16,783.93)	Load Ratio	1360
1370-Operating Resrv	$ (2,414.53)	$ (2,414.53)	Load Ratio	1370
1375-Bal Opr Rsrv	$ (33,994.28)	$ (28,565.98)	Gen Ratio	1375
1378-Reactive Servic	$ (8.57)	$ (8.57)	Load Ratio	1378
1500-FTR Shortfall	$ (557.09)	$ (557.09)	Load Ratio	2211
1500-Mthly FTR Prem	$ (0.08)	$ (0.08)	Load Ratio	1500
2215-Bal Trns Cng Cr	$ (68,329.46)	$ (57,418.42)	Gen Ratio	2215
2220-Tran Loss	$ 107,084.08	$ 98,042.71	Mkt Ratio	2220
2340-Lost Opp. Cost	$ 182.20	$ 153.11	Gen Ratio	2340
2360-Synch Reserve	$ 17,594.96	$ 14,785.35	Gen Ratio	2360
2375-Bal Opr Rsrv Cr	$ 461,428.90	$ 79.52	Manual	2375
2510-ARR	$ 289,114.99	$ 289,114.99	Load Ratio	2510
FTR	$ (28,426.43)	$ (28,426.43)	Load Ratio	2211
PJM Annual FTR Prem	$ (275,799.56)	$ (275,799.56)	Load Ratio	1500
PJM Mthly FTR Prem	$ (14,190.79)	$ (14,190.79)	Load Ratio	2500
Reg.Supply	$ 6,944.01	$ 5,835.17	Gen Ratio	2340
	$ 397,744.07	$ (59,900.56)		
Congestion & Losses		$ 57,200.95		
Net Fuel Related RTO Billing Line Items		$ (117,101.52)		

	MW Native	MW Total		
Load	$ 353,313.44	$ 353,313.44	**1.0000**	Load Ratio
Gen	$ 333,122.75	$ 396,425.00	**0.8403**	Gen Ratio
	$ 686,436.19	$ 749,738.44	**0.9156**	Market Ratio

Duke Energy Kentucky PJM Charge Detail
Net Fuel Related RTO Billing Line Items
January 31, 2021

PJM Statement	PJM S14 Total_Amt	Native FAC	Allocation Method	PJM BLI
1230-Inad Inter	$ 689.84	$ 689.84	Mkt Ratio	1230
1250-Meter Err Cor	$ 28.73	$ 28.73	Mkt Ratio	1250
1340-Regulation	$ (32,036.63)	$ (32,036.63)	Load Ratio	1340
1360-Synch Reserve	$ (11,190.38)	$ (11,190.38)	Load Ratio	1360
1370-Operating Resrv	$ (3,428.68)	$ (3,428.68)	Load Ratio	1370
1375-Bal Opr Rsrv	$ (15,795.99)	$ (15,795.99)	Gen Ratio	1375
1500-FTR Shortfall	$ 87.65	$ 87.65	Load Ratio	2211
1500-Mthly FTR Prem	$ 0.14	$ 0.14	Load Ratio	1500
2215-Bal Trns Cng Cr	$ (144,896.89)	$ (144,896.89)	Gen Ratio	2215
2220-Tran Loss	$ 115,840.20	$ 115,840.20	Mkt Ratio	2220
2360-Synch Reserve	$ 13.03	$ 13.03	Gen Ratio	2360
2510-ARR	$ 313,799.98	$ 313,799.98	Load Ratio	2510
FTR	$ (47,417.29)	$ (47,417.29)	Load Ratio	2211
PJM Annual FTR Prem	$ (275,799.56)	$ (275,799.56)	Load Ratio	1500
PJM Mthly FTR Prem	$ (5,399.10)	$ (5,399.10)	Load Ratio	2500
	$ (105,504.95)	$ (105,504.94)		
Congestion & Losses		$ 249,611.93		
Net Fuel Related RTO Billing Line Items		$ (355,116.87)		

	MW Native	MW Total		
Load	$ 340,001.06	$ 340,001.06	**1.0000**	Load Ratio
Gen	$ 325,958.68	$ 358,263.00	**1.0000**	Gen Ratio
	$ 665,959.74	$ 698,264.06	**1.0000**	Market Ratio

Duke Energy Kentucky PJM Charge Detail
Net Fuel Related RTO Billing Line Items
February 28, 2021

PJM Statement	PJM S14 Total Amt	Native FAC	Allocation Method	PJM BLI
1230-Inad Inter	$ (2,353.00)	$ (2,245.58)	Mkt Ratio	1230
1250-Meter Err Cor	$ 7,182.74	$ 6,854.84	Mkt Ratio	1250
1340-Regulation	$ (51,802.26)	$ (51,802.26)	Load Ratio	1340
1360-Synch Reserve	$ (16,142.92)	$ (16,142.92)	Load Ratio	1360
1370-Operating Resrv	$ (4,262.86)	$ (4,262.86)	Load Ratio	1370
1375-Bal Opr Rsrv	$ (35,775.50)	$ (32,577.00)	Gen Ratio	1375
1500-FTR Shortfall	$ 489.18	$ 489.18	Load Ratio	2211
1500-Mthly FTR Prem	$ 0.16	$ 0.16	Load Ratio	1500
2215-Bal Trns Cng Cr	$ (246,845.97)	$ (224,776.75)	Gen Ratio	2215
2220-Tran Loss	$ 212,882.77	$ 203,164.48	Mkt Ratio	2220
2360-Synch Reserve	$ 57.80	$ 52.63	Gen Ratio	2360
2375-Bal Opr Rsrv Cr	$ 399,031.29	$ 44,877.33	Manual	2375
2510-ARR	$ 261,136.12	$ 261,136.12	Load Ratio	2510
FTR	$ 407,731.48	$ 407,731.48	Load Ratio	2211
PJM Annual FTR Prem	$ (249,109.28)	$ (249,109.28)	Load Ratio	1500
PJM Mthly FTR Prem	$ (10,887.96)	$ (10,887.96)	Load Ratio	2500
	$ 671,331.79	$ 332,501.62		
Congestion & Losses		$ 683,277.08		
Net Fuel Related RTO Billing Line Items		$ (350,775.46)		

	MW Native	MW Total		
Load	$ 347,441.68	$ 347,441.68	**1.0000**	Load Ratio
Gen	$ 330,095.31	$ 362,505.00	**0.9106**	Gen Ratio
	$ 677,536.99	$ 709,946.68	**0.9543**	Market Ratio

Duke Energy Kentucky PJM Charge Detail
Net Fuel Related RTO Billing Line Items
March 31, 2021

PJM Statement	PJM S14 Total_Amt	Native FAC	Allocation Method	PJM BLI
1230-Inad Inter	$ (20.31)	$ (19.17)	Mkt Ratio	1230
1250-Meter Err Cor	$ 17.16	$ 16.19	Mkt Ratio	1250
1340-Regulation	$ (46,909.96)	$ (46,909.96)	Load Ratio	1340
1360-Synch Reserve	$ (16,400.81)	$ (16,400.81)	Load Ratio	1360
1370-Operating Resrv	$ (12,624.53)	$ (12,624.53)	Load Ratio	1370
1375-Bal Opr Rsrv	$ (17,489.85)	$ (15,542.28)	Gen Ratio	1375
1500-FTR Shortfall	$ (48,554.76)	$ (48,554.76)	Load Ratio	2211
1500-Mthly FTR Prem	$ (0.12)	$ (0.12)	Load Ratio	1500
2215-Bal Trns Cng Cr	$ (125,532.31)	$ (111,553.75)	Gen Ratio	2215
2220-Tran Loss	$ 86,203.19	$ 81,354.72	Mkt Ratio	2220
2360-Synch Reserve	$ 8,442.45	$ 7,502.35	Gen Ratio	2360
2375-Bal Opr Rsrv Cr	$ 59,088.87	$ 39,178.40	Manual	2375
2510-ARR	$ 289,114.99	$ 289,114.99	Load Ratio	2510
FTR	$ 702,175.59	$ 702,175.59	Load Ratio	2211
PJM Annual FTR Prem	$ (275,799.57)	$ (275,799.57)	Load Ratio	1500
PJM Mthly FTR Prem	$ 76,328.95	$ 76,328.95	Load Ratio	2500
	$ 678,038.98	$ 668,266.25		
Congestion & Losses		$ 1,972,522.11		
Net Fuel Related RTO Billing Line Items		$ (1,304,255.87)		

	MW Native	MW Total		
Load	$ 318,096.71	$ 318,096.71	**1.0000**	Load Ratio
Gen	$ 288,497.06	$ 324,648.00	**0.8886**	Gen Ratio
	$ 606,593.77	$ 642,744.71	**0.9438**	Market Ratio

Duke Energy Kentucky PJM Charge Detail
Net Fuel Related RTO Billing Line Items
April 30, 2021

PJM Statement	PJM S14 Total_Amt	Native FAC	Allocation Method	PJM BLI
1230-Inad Inter	$ 518.35	$ 467.10	Mkt Ratio	1230
1250-Meter Err Cor	$ (91.83)	$ (82.75)	Mkt Ratio	1250
1340-Regulation	$ (43,048.13)	$ (43,048.13)	Load Ratio	1340
1360-Synch Reserve	$ (10,886.37)	$ (10,886.37)	Load Ratio	1360
1370-Operating Resrv	$ (3,577.98)	$ (3,577.98)	Load Ratio	1370
1375-Bal Opr Rsrv	$ (62,169.34)	$ (49,291.69)	Gen Ratio	1375
1500-FTR Shortfall	$ (3,378.38)	$ (3,378.38)	Load Ratio	2211
1500-Mthly FTR Prem	$ 0.27	$ 0.27	Load Ratio	1500
2215-Bal Trns Cng Cr	$ (142,801.42)	$ (113,221.78)	Gen Ratio	2215
2220-Tran Loss	$ 75,595.98	$ 68,122.15	Mkt Ratio	2220
2340-Lost Opp. Cost	$ 1,255.18	$ 995.18	Gen Ratio	2340
2360-Synch Reserve	$ 7,214.56	$ 5,720.15	Gen Ratio	2360
2375-Bal Opr Rsrv Cr	$ 315,255.85	$ 180,477.73	Manual	2375
2510-ARR	$ 279,788.70	$ 279,788.70	Load Ratio	2510
FTR	$ 26,889.69	$ 26,889.69	Load Ratio	2211
PJM Annual FTR Prem	$ (266,902.80)	$ (266,902.80)	Load Ratio	1500
PJM Mthly FTR Prem	$ 168,105.63	$ 168,105.63	Load Ratio	2500
Reg.Supply	$ 5,546.95	$ 4,397.96	Gen Ratio	2340
	$ 347,314.91	$ 244,574.69		
Congestion & Losses		$ 641,916.98		
Net Fuel Related RTO Billing Line Items		$ (397,342.29)		

	MW Native	MW Total		
Load	$ 291,097.47	$ 291,097.47	**1.0000**	Load Ratio
Gen	$ 210,746.61	$ 265,805.00	**0.7929**	Gen Ratio
	$ 501,844.08	$ 556,902.47	**0.9011**	Market Ratio

Duke Energy Kentucky
Case No. 2021-00296
STAFF Second Set Data Requests
Date Received: December 8, 2021

STAFF-DR-02-008

REQUEST:

Confirm that no other revenues or charges from PJM billing line items not authorized by the Commission has been passed through the FAC during the six-month period under review.

RESPONSE:

Confirmed.

PERSON RESPONSIBLE: Libbie S. Miller

Duke Energy Kentucky
Case No. 2021-00296
STAFF Second Set Data Requests
Date Received: December 8, 2021

STAFF-DR-02-009

REQUEST:

Review Duke Kentucky's Fuel Adjustment Clause Tariff sheets and provide a list of necessary adjustments or subsequent information, if any, needed to correspond with the recent changes to 807 KAR 5:056, Fuel Adjustment Clause Regulation, as amended on August 20, 2019, and June 3, 2021.

RESPONSE:

The Company does not believe any changes to its current Fuel Adjustment Clause Tariff are necessary to correspond with recent changes to 807 KAR 5:056 at this time.

PERSON RESPONSIBLE: Libbie S. Miller