

KyPSC Case No. 2021-00057
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**Duke Energy Kentucky
Case No. 2021-00057
STAFF First Set Post-Hearing Data Requests
Date Received: May 20, 2021**

STAFF-PH-DR-01-001

REQUEST:

Refer to Duke Kentucky's response to the March 4, 2021 Order, Item 23. Explain in greater detail for what purpose fuel oil was consumed in March 2020.

RESPONSE:

The fuel oil consumption at East Bend in March 2020 was for bringing the unit back online after a forced outage. East Bend burns fuel oil for unit startup.

PERSON RESPONSIBLE: Libbie S. Miller

**Duke Energy Kentucky
Case No. 2021-00057
STAFF First Set Post-Hearing Data Requests
Date Received: May 20, 2021**

**CONFIDENTIAL STAFF-PH-DR-01-002
(As to Attachment 2 only)**

REQUEST:

Refer to the Direct Testimony of Libbie S. Miller, pages 4-5. Provide the workpapers showing the historical and projected fuel calculations supporting the decision to use March 2020 to calculate the proposed base fuel rate.

RESPONSE:

CONFIDENTIAL PROPRIETARY TRADE SECRET (As to Attachment 2 only)

Please see STAFF-PH-DR-01-002 Attachment 1, STAFF-PH-DR-01-002 Confidential Attachment 2, and STAFF-PH-DR-01-002 Attachment 3.

PERSON RESPONSIBLE: Libbie S. Miller

DUKE ENERGY KENTUCKY FUEL COST SCHEDULE		2018 November S105 Dollars (\$)	2018 December S105 Dollars (\$)	2019 January S105 Dollars (\$)	2019 February S105 Dollars (\$)	2019 March S105 Dollars (\$)	2019 April S105 Dollars (\$)	2019 May S105 Dollars (\$)	2019 June S105 Dollars (\$)	2019 July S105 Dollars (\$)	2019 August S105 Dollars (\$)	2019 September S105 Dollars (\$)
A. Company Generation												
Coal Burned	(+)	5,859,728.76	8,119,387.16	7,804,600.84	6,375,408.03	7,716,651.90	0.00	6,127,617.55	6,886,577.13	7,792,478.13	7,221,947.10	7,534,035.23
Oil Burned	(+)	298,376.93	145,061.75	88,987.82	194,311.15	82,778.87	341,053.24	1,597,426.43	1,206,429.41	89,511.11	135,065.87	929,678.90
Gas Burned	(+)	137,000.01	0.00	617,000.00	104,975.00	219,782.95	115,810.00	86,432.27	268,640.00	1,696,952.57	513,332.32	785,024.60
MISO Make Whole Payments / Net Fule Related BLI	(-)	(322,883.54)	(157,392.41)	(311,522.87)	(157,726.42)	(232,895.57)	(24,661.09)	807,859.73	(165,755.60)	(132,911.19)	(235,671.40)	(471,821.81)
Fuel (assigned cost during Forced Outage ^(a))	(+)	16,044.98	19,154.88	0.00	0.00	0.00	473,947.69	83,722.42	7,537.39	0.00	0.00	0.00
Fuel (substitute cost during Forced Outage ^(a))	(-)	0.00	0.00	0.00	0.00	0.00	34,360.78	24,830.01	0.00	0.00	0.00	0.00
Sub-Total		6,634,034.22	8,440,996.20	8,822,111.53	6,832,420.60	8,252,109.29	921,111.24	7,062,508.93	8,534,939.53	9,711,853.00	8,106,016.69	9,720,560.54
B. Purchases												
Economy Purchases	(+)	3,109,639.20	1,441,173.24	904,318.74	1,250,322.07	574,129.65	8,021,396.71	1,672,583.76	692,790.60	1,475,994.89	1,747,913.88	976,621.39
Other Purchases	(+)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Purchases (substitute for Forced Outage ^(a))	(-)	27,253.17	30,042.74	0.00	0.00	0.00	714,913.95	110,185.20	7,537.39	0.00	0.00	0.00
Less purchases above highest cost units	(-)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sub-Total		3,082,386.03	1,411,130.50	904,318.74	1,250,322.07	574,129.65	7,306,482.76	1,562,398.56	685,253.21	1,475,994.89	1,747,913.88	976,621.39
C. Non-Native Sales Fuel Costs												
		879,006.26	1,093,132.98	663,817.53	519,036.39	1,023,003.33	0.00	652,913.54	536,350.89	984,079.39	355,076.69	1,088,941.81
E. Total Fuel Costs (A + B - C - D)												
		\$8,837,413.99	\$8,758,993.72	\$9,062,612.74	\$7,563,706.28	\$7,803,235.61	\$8,227,594.00	\$7,971,993.95	\$8,683,841.85	\$10,203,768.50	\$9,498,853.88	\$9,608,240.12
kWh Sales												
		305,086,940	330,704,714	351,658,176	313,825,140	303,385,178	273,025,641	339,521,493	363,729,076	438,411,518	392,536,057	316,941,971
Fuel (assigned cost during Forced Outage ^(a))	(+)	16,044.98	19,154.88	0.00	0.00	0.00	473,947.69	83,722.42	7,537.39	0.00	0.00	0.00
Fuel (substitute cost during Forced Outage ^(a))	(-)	0.00	0.00	0.00	0.00	0.00	34,360.78	24,830.01	0.00	0.00	0.00	0.00
Other Purchases (substitute for Forced Outage ^(a))	(-)	27,253.17	30,042.74	0.00	0.00	0.00	714,913.95	110,185.20	7,537.39	0.00	0.00	0.00
Total Cost Unallowed due to Forced Outages		(11,208.19)	(10,887.86)	0.00	0.00	0.00	(275,327.04)	(51,292.79)	0.00	0.00	0.00	0.00
Estimated Sales												
		302,546,150	320,128,370	360,508,145	311,550,137	324,600,422	277,297,282	313,035,746	327,491,403	402,802,025	381,645,933	357,961,139
Actual Fuel Cost Rate												
		0.029210	0.027361	0.025138	0.024278	0.024040	0.029671	0.025467	0.026516	0.025332	0.024889	0.026842
Base Fuel Rate												
		0.023837	0.023837	0.023837	0.023837	0.023837	0.023837	0.023837	0.023837	0.023837	0.023837	0.023837
Charge (+) / Refund (-)												
		0.005373	0.003524	0.001301	0.000441	0.000203	0.005834	0.001630	0.002679	0.001495	0.001052	0.003005

DUKE ENERGY KENTUCKY FUEL COST SCHEDULE		2019	2019	2019	2020	2020	2020	2020	2020	2020	2020	2020
		October S105	November S105	December S105	January S105	February S105	March S105	April S105	May S105	June S105	July S105	August S105
		Dollars (\$)	Dollars (\$)	Dollars (\$)	Dollars (\$)	Dollars (\$)	Dollars (\$)	Dollars (\$)	Dollars (\$)	Dollars (\$)	Dollars (\$)	Dollars (\$)
A. Company Generation												
Coal Burned	(+)	150,709.39	1,113,734.73	7,453,940.80	5,502,718.53	3,476,385.38	5,093,221.09	0.00	0.00	5,951,286.26	7,847,912.53	7,864,886.15
Oil Burned	(+)	10,271.59	412,468.64	159,518.68	159,719.05	277,894.56	200,239.36	0.00	51,609.97	232,654.43	104,344.22	83,126.20
Gas Burned	(+)	135,309.30	99,075.00	74,750.00	(10,650.00)	30,900.00	0.00	2,398.56	55,350.00	197,150.12	1,308,476.93	343,251.89
MISO Make Whole Payments / Net Fule Related BLI	(-)	(1,374,825.51)	29,118.25	(181,233.03)	(204,544.30)	(288,139.62)	(105,558.85)	(91,295.63)	1,403,068.84	(115,525.55)	241,052.67	(215,834.51)
Fuel (assigned cost during Forced Outage ^(a))	(+)	959,857.20	11,103.53	0.00	0.00	0.00	144,837.03	0.00	0.00	816,293.24	128,780.20	0.00
Fuel (substitute cost during Forced Outage ^(a))	(-)	96,437.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16,047.76	31,416.50	0.00
Sub-Total		2,534,535.72	1,607,263.65	7,869,442.51	5,856,331.88	4,073,319.56	5,543,856.33	93,694.19	(1,296,108.87)	7,296,861.84	9,117,044.71	8,507,098.75
B. Purchases												
Economy Purchases	(+)	8,693,950.62	9,392,682.61	1,121,766.66	2,628,411.11	4,013,108.12	1,944,919.75	4,651,397.85	5,430,186.02	1,801,872.28	1,384,261.40	723,080.72
Other Purchases	(+)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Purchases (substitute for Forced Outage ^(a))	(-)	1,550,626.44	11,103.53	0.00	0.00	0.00	144,837.03	0.00	0.00	800,245.48	111,927.30	0.00
Less purchases above highest cost units	(-)	12,104.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sub-Total		7,131,220.09	9,381,579.08	1,121,766.66	2,628,411.11	4,013,108.12	1,800,082.72	4,651,397.85	5,430,186.02	1,001,626.80	1,272,334.10	723,080.72
C. Non-Native Sales Fuel Costs												
		0.00	83,589.08	212,206.91	278,971.26	26,764.73	160,806.51	0.00	0.00	266,262.61	847,368.33	583,614.76
E. Total Fuel Costs (A + B - C - D)												
		\$9,665,755.81	\$10,905,253.65	\$8,779,002.26	\$8,205,771.73	\$8,059,662.95	\$7,183,132.54	\$4,745,092.04	\$4,134,077.15	\$8,032,226.03	\$9,542,010.48	\$8,646,564.71
kWh Sales												
		295,562,280	305,086,940	330,704,714	351,658,176	313,825,140	303,385,178	273,025,641	339,521,493	363,729,076	438,411,518	392,536,057
Fuel (assigned cost during Forced Outage ^(a))	(+)	959,857.20	11,103.53	0.00	0.00	0.00	144,837.03	0.00	0.00	816,293.24	128,780.20	0.00
Fuel (substitute cost during Forced Outage ^(a))	(-)	96,437.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16,047.76	31,416.50	0.00
Other Purchases (substitute for Forced Outage ^(a))	(-)	1,550,626.44	11,103.53	0.00	0.00	0.00	144,837.03	0.00	0.00	800,245.48	111,927.30	0.00
Total Cost Unallowed due to Forced Outages		(687,206.51)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(14,563.60)	0.00
Estimated Sales												
		291,470,837	305,291,150	325,667,929	327,219,596	327,732,051	282,790,188	240,199,260	272,497,694	342,463,490	406,608,056	368,266,169
Actual Fuel Cost Rate												
		0.033162	0.035721	0.026957	0.025077	0.024592	0.025401	0.019755	0.015171	0.023454	0.023467	0.023479
Base Fuel Rate		0.023837	0.023837	0.023837	0.023837	0.023837	0.023837	0.023837	0.023837	0.023837	0.023837	0.023837
Charge (+) / Refund (-)		0.009325	0.011884	0.003120	0.001240	0.000755	0.001564	(0.004082)	(0.008666)	(0.000383)	(0.000370)	(0.000358)

CONFIDENTIAL PROPRIETARY TRADE SECRET

STAFF-PH-DR-01-002
CONFIDENTIAL ATTACHMENT 2

FILED UNDER SEAL

**DUKE ENERGY KENTUCKY
 FUEL COST SCHEDULE**

Expense Month	2020 November Estimate	2020 December Estimate	2021 January Estimate	2021 February Estimate	2021 March Estimate	2021 April Estimate		
	Dollars (\$)	Dollars (\$)	Dollars (\$)	Dollars (\$)	Dollars (\$)	Dollars (\$)		
A. Company Generation								
Coal Burned	(+) \$ 1,617,603.73	\$ 7,791,501.66	\$ 5,716,137.13	\$ 7,516,245.87	\$ 6,489,964.36	\$ 5,331,139.86		
Oil Burned	(+) 157,233.99	163,530.72	378,940.63	513,291.64	118,040.26	94,300.56		
Gas Burned	(+) (956.45)	346,650.00	45,350.00	440,235.33	(21,000.00)	84,650.00		
Net Fuel Related RTO Billing Line Items	(-) 45,417.10	(137,097.87)	(300,867.25)	(511,820.94)	(1,370,851.65)	(469,183.22)		
Fuel (assigned cost during Forced Outage ^(a))	(+) -	-	738,976.60	-	31,777.40	203,939.79		
Fuel (substitute cost during Forced Outage ^(a))	(-) -	-	21,305.40	-	8,039.57	60,250.85		
Sub-Total	\$ 1,728,464.17	\$ 8,438,780.25	\$ 7,158,966.21	\$ 8,981,593.78	\$ 7,981,594.10	\$ 6,122,962.58		
B. Purchases								
Economy Purchases	(+) \$ 5,415,654.53	\$ 457,932.90	\$ 3,196,436.58	\$ 416,801.81	\$ 659,771.94	\$ 2,395,449.78		
Other Purchases	(+) -	-	-	-	-	-		
Other Purchases (substitute for Forced Outage ^(a))	(-) -	-	1,057,570.33	-	37,694.70	295,541.22		
Less purchases above highest cost units	(-) -	-	-	-	-	-		
Sub-Total	\$ 5,415,654.53	\$ 457,932.90	\$ 2,138,866.25	\$ 416,801.81	\$ 622,077.24	\$ 2,099,908.56		
C. Non-Native Sales Fuel Costs								
	(-) \$ 117,760.57	\$ 1,501,374.59	\$ 948,095.94	\$ 1,237,838.66	\$ 723,810.19	\$ 1,114,892.90		
D. Total Fuel Costs (A + B - C)								
	(+) \$ 7,026,358.13	\$ 7,395,338.56	\$ 8,349,736.52	\$ 8,160,556.93	\$ 7,879,861.15	\$ 7,107,978.24		
E. Total Company Over or (Under) Recovery from Schedule 5, Line 14								
	(-) \$ 75,005.74	\$ 203,023.98	\$ 137,344.72	\$ (10,654.03)	\$ 302.89	\$ (59,311.18)		
F. Adjustment indicating the difference in actual fuel cost for the month of xxxxxxxx and the estimated cost originally (actual) (estimate)								
	(+) \$ (31,752.37)	\$ 389,335.17	\$ (15,663.35)	\$ 52,906.32	\$ (112,254.79)	\$ (7,702.08)		
G. RTO Resettlements for prior periods from Schedule 6, Line G								
	(+) \$ (48,202.42)	\$ (44,566.81)	\$ (21,140.71)	\$ 7,280.37	\$ 106,550.01	\$ (13,611.86)		
K. Grand Total Fuel Cost (D - E + F + G + H - I + J)								
	\$ 6,871,397.60	\$ 7,537,082.94	\$ 8,175,587.74	\$ 8,231,397.65	\$ 7,873,853.48	\$ 7,145,975.48		
Estimated Sales	271,235,251	331,139,835	345,771,012	329,316,865	302,826,675	276,949,391		
Actual Fuel Cost Rate	0.025334	0.022761	0.023645	0.024995	0.026001	0.025802		
Base Fuel Rate	0.023837	0.023837	0.023837	0.023837	0.023837	0.023837	Charges	Refunds
Charge (+) / Refund (-)	0.001497	(0.001076)	(0.000192)	0.001158	0.002164	0.001965	4	2

Duke Energy Kentucky
Case No. 2021-00057
STAFF First Set Post-Hearing Data Requests
Date Received: May 20, 2021

STAFF-PH-DR-01-003

REQUEST:

Provide the ending date or dates, if any, for any contracts with PJM Interconnection regarding blackstart capability at Duke Kentucky's Woodsdale units.

RESPONSE:

All cost recovery periods for any project constructed as a result of a blackstart contract have ended. Thus, there is no set official or known end date for the two Woodsdale blackstart units currently providing blackstart service. However, periodically PJM reviews all blackstart resources for additional needs or changes.

Even though there is no contract, the two Woodsdale blackstart units are still providing this service to PJM and thus, receiving compensation for such service. The current amount of compensation paid to Duke Energy Kentucky for this service is approximately \$28,000 per month.

The following links also provide additional PJM Black Start information:

<https://www.pjm.com/directory/etariff/MasterTariffs/23TariffSections/4406.pdf>

<https://www.pjm.com/-/media/documents/manuals/m12.ashx>

<https://www.pjm.com/~/-/media/documents/manuals/m14d.ashx>

<https://www.pjm.com/-/media/documents/manuals/m27.ashx>

<https://www.pjm.com/-/media/documents/manuals/m36.ashx>

PERSON RESPONSIBLE: John Swez

Duke Energy Kentucky
Case No. 2021-00057
STAFF First Set Post-Hearing Data Requests
Date Received: May 20, 2021

STAFF-PH-DR-01-004

REQUEST:

Explain how any revenues arising from the Woodsdale units blackstart contracts are allocated between Duke Kentucky and any other Duke Energy affiliates.

RESPONSE:

Revenues from the Woodsdale units blackstart contracts are not allocated to other Duke Energy affiliates. One hundred percent of the blackstart revenues are included in the Profit Sharing Mechanism on Schedule 3 – Non-Fuel Related RTO Charges and Credits.

PERSON RESPONSIBLE: Libbie S. Miller

**Duke Energy Kentucky
Case No. 2021-00057
STAFF First Set Post-Hearing Data Requests
Date Received: May 20, 2021**

STAFF-PH-DR-01-005

REQUEST:

Explain whether there are additional costs to maintain fuel oil at the Woodsdale units sites, and if so, explain whether those costs are recovered through Duke Kentucky's Fuel Adjustment Clause.

RESPONSE:

There are no additional costs related to maintaining fuel oil at Woodsdale Station.

PERSON RESPONSIBLE: John Swez

**Duke Energy Kentucky
Case No. 2021-00057
STAFF First Set Post-Hearing Data Requests
Date Received: May 20, 2021**

STAFF-PH-DR-01-006

REQUEST:

Provide, for the review period, the monthly analysis that Duke Kentucky conducted regarding Auction Revenue Rights (ARR) and purchase of Financial Transmission Rights (FTR).

RESPONSE:

Please see STAFF-PH-DR-01-006 Attachment.

PERSON RESPONSIBLE: John Swez

	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	TOTAL
1. ARR Revenue	\$589,875	\$608,546	\$608,546	\$549,654	\$608,546	\$588,915	\$609,626	\$684,137	\$706,942	\$706,942	\$684,137	\$706,942	\$703,626	\$708,953	\$706,942	\$662,575	\$706,942	\$687,024	\$707,527	\$261,136	\$270,462	\$242,484	\$263,384	\$261,136	\$13,834,996
2. FTR Purchase Cost	(\$575,501)	(\$524,659)	(\$559,600)	(\$505,413)	(\$595,960)	(\$576,712)	(\$595,931)	(\$729,122)	(\$712,928)	(\$713,195)	(\$731,978)	(\$756,578)	(\$729,723)	(\$817,927)	(\$817,979)	(\$796,582)	(\$714,026)	(\$663,468)	(\$651,842)	(\$267,602)	(\$276,619)	(\$284,256)	(\$173,100)	(\$151,051)	(\$13,921,752)
3. FTR Payout	\$37,573	\$346,372	\$725,441	\$61,207	\$16,805	\$68,163	\$49,712	\$184,501	\$1,234,156	\$233,748	\$540,577	\$136,909	\$343,297	\$503,655	\$4,861	\$1,836	(\$2,045)	\$39,358	\$24,855	\$26,303	\$723,097	\$42,797	\$191,273	\$80,912	\$5,615,362
4. Hedgable Congestion	\$71,337	(\$365,525)	(\$792,763)	(\$62,328)	(\$187,621)	\$244,645	(\$36,462)	(\$196,978)	(\$1,182,260)	(\$261,412)	(\$526,500)	(\$665,067)	(\$92,989)	(\$386,608)	(\$34,236)	(\$36,625)	\$11,578	(\$27,283)	(\$28,279)	\$3,730	(\$692,665)	(\$47,146)	(\$276,634)	\$124,987	(\$5,443,104)
5. Purchase Power	(\$148,254)	(\$9,826)	\$15,220	(\$17,134)	(\$6,586)	(\$348,695)	(\$58,738)	(\$18,364)	(\$70,319)	(\$69,778)	(\$42,532)	(\$63,854)	(\$667,892)	(\$11,774)	(\$34,500)	(\$144,351)	(\$37,855)	(\$2,962)	(\$222,647)	(\$92,378)	(\$81,447)	(\$19,551)	(\$157,305)	(\$298,819)	(\$2,610,342)
6. FTR Shortfall	\$1	(\$53,537)	(\$66,185)	(\$0)	(\$0)	(\$1)	(\$1)	(\$1)	(\$0)	(\$0)	(\$1)	\$1	(\$1)	\$1	(\$1)	(\$1)	(\$1)	\$1	(\$0)	(\$8,317)	(\$27,525)	(\$1,626)	(\$28,189)	(\$8,101)	(\$193,486)
PORTFOLIO TOTAL (1 + 2 + 3 + 4)	\$123,284	\$64,734	(\$18,376)	\$43,119	(\$158,230)	\$325,011	\$26,945	(\$57,463)	\$45,910	(\$33,918)	(\$33,764)	(\$577,794)	\$224,211	\$8,072	(\$140,412)	(\$168,796)	\$2,448	\$35,631	\$52,261	\$23,568	\$24,276	(\$46,121)	\$4,924	\$315,984	\$85,501

Duke Energy Kentucky
Case No. 2021-00057
STAFF First Set Post-Hearing Data Requests
Date Received: May 20, 2021

STAFF-PH-DR-01-007

REQUEST:

Explain how the costs and benefits of ARRs and FTRs are shared between Duke Kentucky and Duke Energy Ohio with regard to the joint use of transmission assets.

RESPONSE:

Duke Energy Kentucky has its own Network Integration Transmission Service and therefore pays a monthly charge to PJM. Thus, Duke Energy Kentucky both receives credits and pays charges related to ARRs and FTRs. There is no sharing of any of these revenues or costs with Duke Energy Ohio. When the Duke Energy Kentucky originally joined PJM, a separate pricing node, called “DEK,” was established for Duke Energy Kentucky customers exclusively that avoided any sharing of ARR and FTR charges and credits.

PERSON RESPONSIBLE: John Swez