

Kentucky Power Company Fuel Adjustment Clause

Public Service Commission Presentation July 12, 2016

Topics for Discussion

KPSC 2017-00001
Commission Staff's Third Set of Data Requests
Dated March 28, 2017
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- **Planned change in source of purchase and sales estimates for FAC calculation.**
- **FAC form changes needed to include Big Sandy Gas.**

Current FAC Process

- **FAC calculation is based on current month estimates with a true-up for prior month actuals.**
- **Currently the estimates for power purchases and sales are calculated using average owned generation cost.**

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KENTUCKY POWER COMPANY					Page 2 of 5
FUEL COST SCHEDULE					
Month Ended:		May 2016			
A.	Company Generation				
	Coal Burned	(+)	\$4,598,721		
	Oil Burned	(+)	207,463		
	Gas Burned	(+)	0		
	Fuel (jointly owned plant)	(+)	0		
	Fuel (assigned cost during F. O.)	(+)	0		
	Fuel (substitute for F. O.)	(-)	0		
	Sub Total		4,806,184		
B.	Purchases				
	Net Energy Cost - Economy Purchases	(+)	0		
	Identifiable Fuel Cost - Other Purchases	(+)	7,247,688	will be replaced with PJM based estimate	
	Identifiable Fuel Cost (substitute for F. O.)	(-)	0		
	Sub Total		7,247,688		
C.	Inter-System Sales Fuel Costs		1,123,896	will be replaced with PJM based estimate	
	Sub Total		1,123,896		
D.	Total Fuel Cost (A + B - C)		\$10,929,976		
E.	Adjustment indicating the difference in actual fuel cost for the month of April 2016 originally reported.		\$11,547,381	-	and the estimated cost \$12,085,475 = (538,094) will be minimized with proposed changes
		(actual)		(estimated)	
F.	Total Company Over or (Under) Recovery from Page 4, Line 12		12,601		
G.	Grand Total Fuel Cost (D + E - F)		\$10,379,281		
H.	Net Transmission Marginal Line Loss for month of (Accounts 4470207, 447208, 5550326, and 5550327)	May 2016	243,293		
I.	ADJUSTED GRAND TOTAL FUEL COSTS (G + H)		\$10,622,574		
	* Estimated - based on average generation unit cost		\$4,806,184		Will go away with new purchase and sales estimates.
			200,283,000	0.02400	/KWH

Changes to FAC Calculation

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The Company is planning to change the data used to make estimates of purchases and sales amounts effective August 2016 for October billing.

- **Because estimates are trued up to actual amounts, there will be no change to the actual fuel costs paid by customers.**
- **The proposed change will increase estimate accuracy and lower rate variability.**
- **Currently purchases and sales are estimated based on the Company's owned generation cost.**
- **With the planned change, purchase estimates will be based on PJM data.**
- **With the planned change, sales estimates will be based Company owned and affiliated generation cost and PJM data.**

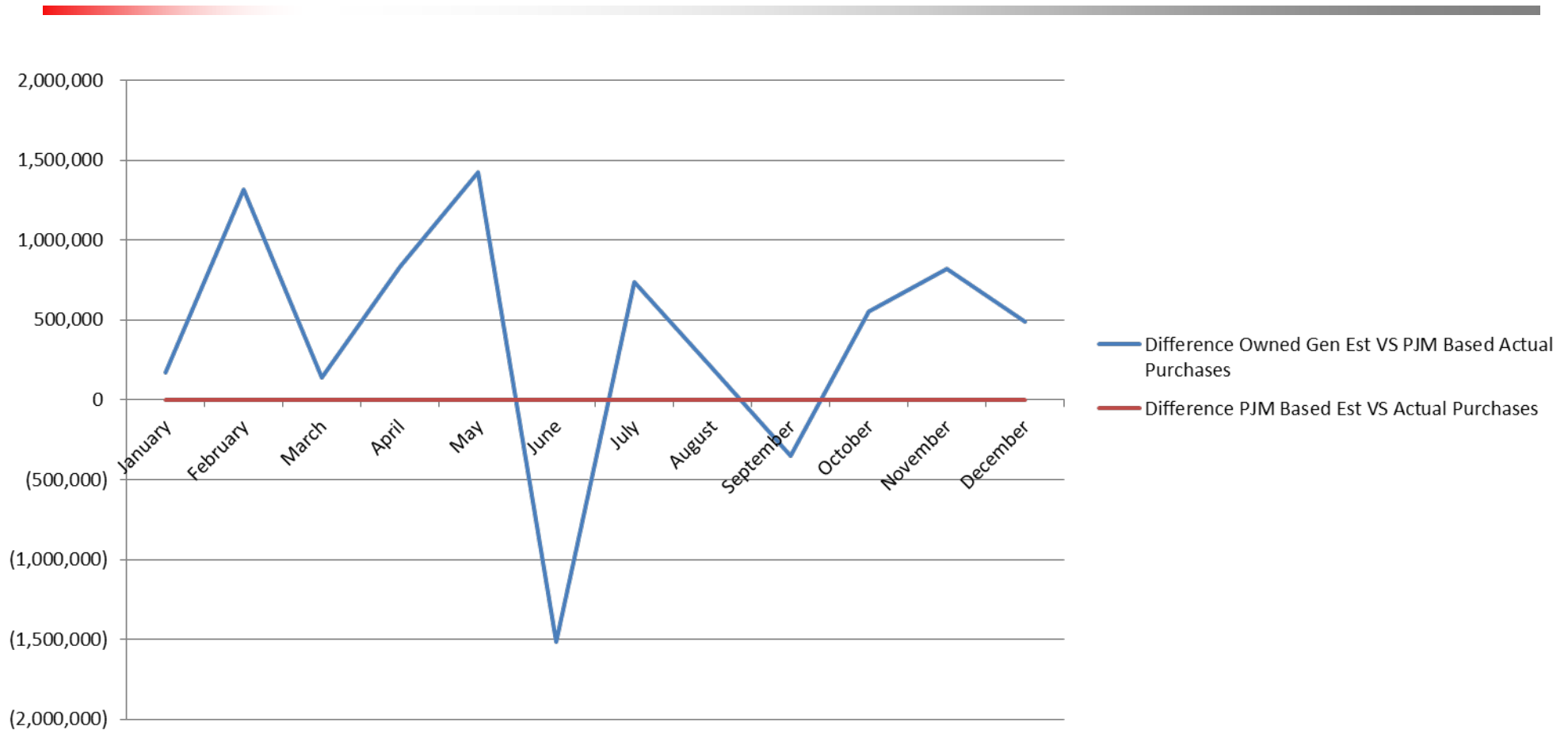
Estimated Purchase Comparison

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2015	Estimated Purchases As Calculated using Owned Generation Cost and Included in FAC (Current Method)	Purchases from PJM Based Estimate (Proposed Method)	Purchases from PJM Based Actual
January	7,188,027	7,361,858	7,361,858
February	6,259,406	7,572,770	7,572,770
March	5,531,789	5,669,471	5,669,471
April	4,308,175	5,139,906	5,139,906
May	7,465,889	8,887,929	8,887,929
June	9,654,276	8,139,441	8,139,441
July	7,316,367	8,051,440	8,051,440
August	6,546,243	6,740,888	6,740,888
September	4,585,199	4,237,118	4,237,118
October	7,986,690	8,542,217	8,542,217
November	5,885,775	6,704,601	6,706,879
December	6,706,094	7,195,507	7,195,507
2015	Difference Owned Gen Est VS PJM Based Actual Purchases	Difference PJM Based Est VS Actual Purchases	
January	173,831	0	
February	1,313,364	0	
March	137,682	0	
April	831,731	0	
May	1,422,040	0	
June	(1,514,835)	0	
July	735,073	0	
August	194,645	0	
September	(348,081)	0	
October	555,527	0	
November	821,104	2,278	
December	489,413	0	
Total (absolute value)	8,537,326	2,278	

Deviation Between Actual and Current and Proposed Estimates Purchase Comparison

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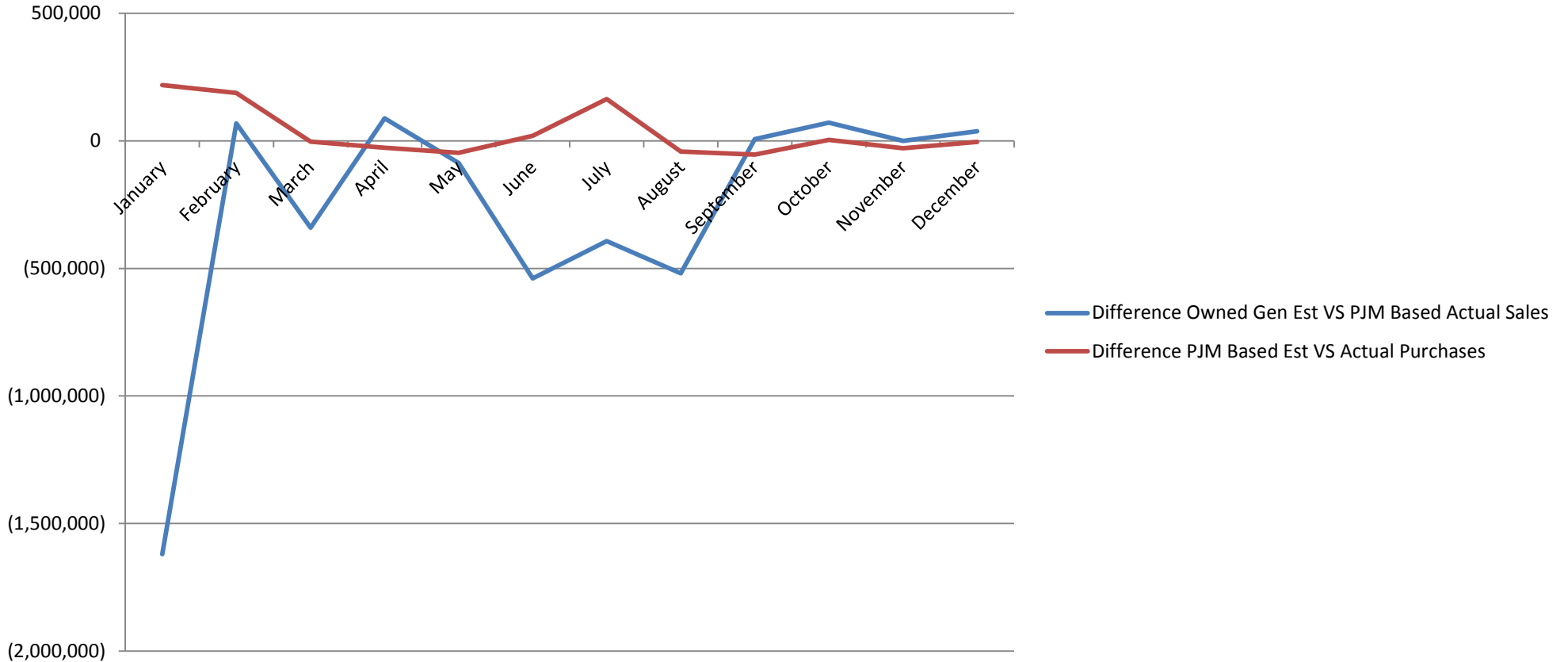
Estimated Sales Comparison

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2015	Estimated Sales As Calculated using Own Generation Cost and Included in FAC (Current Method)	Sales from PJM Based Estimat (Proposed Method)	Sales from PJM Based Actual
January	12,492,936	10,655,049	10,873,267
February	11,905,798	11,787,280	11,974,376
March	6,641,874	6,304,904	6,301,460
April	6,954,855	7,070,042	7,042,485
May	4,334,792	4,295,017	4,248,143
June	2,598,567	2,040,651	2,059,718
July	6,018,485	5,462,325	5,625,592
August	5,511,720	5,034,736	4,992,218
September	2,882,743	2,943,695	2,889,376
October	436,447	503,581	507,143
November	948,764	977,853	948,294
December	364,207	406,019	401,563
2015	Difference Owned Gen Est VS PJM Based Actual Sales	Difference PJM Based Est VS Actual Purchases	
January	(1,619,669)	218,218	
February	68,578	187,096	
March	(340,414)	(3,444)	
April	87,630	(27,557)	
May	(86,649)	(46,874)	
June	(538,849)	19,067	
July	(392,893)	163,267	
August	(519,502)	(42,518)	
September	6,633	(54,319)	
October	70,696	3,562	
November	(470)	(29,559)	
December	37,356	(4,456)	
Total (absolute value)	3,769,339	799,937	

Deviation Between Actual and Current and Proposed Estimates Sales Comparison

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Filed and Recalculated Rate Comparison

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Filed in 2015	January	February	March	April	May	June	July	August	September	October	November	December
Fuel Cost Schedule	14,979,470	18,269,531	12,979,067	10,533,603	8,803,700	15,836,757	10,451,454	11,511,270	8,918,711	7,537,201	11,655,221	13,315,184
Sales Schedule	687,614,000	697,771,000	565,812,000	459,973,000	492,392,000	511,016,000	530,449,000	520,354,000	484,558,000	457,062,000	481,798,000	511,879,000
Rate	0.02178	0.02618	0.02294	0.02290	0.01788	0.03099	0.01970	0.02212	0.01841	0.01649	0.02419	0.02601
Base Fuel	16,138,627	16,138,627	16,138,627	16,138,627	16,138,627	16,138,627	16,138,627	16,138,627	16,138,627	12,504,307	12,504,307	12,504,307
Base Sales	568,162,000	568,162,000	568,162,000	568,162,000	568,162,000	568,162,000	568,162,000	568,162,000	568,162,000	458,919,000	458,919,000	458,919,000
Base FAC Rate	0.02840	0.02840	0.02840	0.02840	0.02840	0.02840	0.02840	0.02840	0.02840	0.02725	0.02725	0.02725
Billed FAC Rate	(0.00662)	(0.00222)	(0.00546)	(0.00550)	(0.01052)	0.00259	(0.00870)	(0.00628)	(0.00999)	(0.01076)	(0.00306)	(0.00124)
	Billed in March	Billed in April	Billed in May	Billed in June	Billed in July	Billed in August	Billed in September	Billed in October	Billed in November	Billed in December	Billed in January	Billed in February
Recalculated 2015	January	February	March	April	May	June	July	August	September	October	November	December
Fuel Cost Schedule	16,991,188	17,689,695	12,102,176	10,616,327	9,385,147	13,411,887	12,669,645	10,847,522	7,982,310	8,341,747	11,864,282	12,858,816
Sales Schedule	687,614,000	697,771,000	565,812,000	459,973,000	492,392,000	511,016,000	530,449,000	520,354,000	484,558,000	457,062,000	481,798,000	511,879,000
Rate	0.02471	0.02535	0.02139	0.02308	0.01906	0.02625	0.02388	0.02085	0.01647	0.01825	0.02463	0.02512
Base Fuel	16,138,627	16,138,627	16,138,627	16,138,627	16,138,627	16,138,627	16,138,627	16,138,627	16,138,627	12,504,307	12,504,307	12,504,307
Base Sales	568,162,000	568,162,000	568,162,000	568,162,000	568,162,000	568,162,000	568,162,000	568,162,000	568,162,000	458,919,000	458,919,000	458,919,000
Base FAC Rate	0.02840	0.02840	0.02840	0.02840	0.02840	0.02840	0.02840	0.02840	0.02840	0.02725	0.02725	0.02725
Billed FAC Rate	(0.00369)	(0.00305)	(0.00701)	(0.00532)	(0.00934)	(0.00215)	(0.00452)	(0.00755)	(0.01193)	(0.00900)	(0.00262)	(0.00213)

Big Sandy Unit 1

- **Big Sandy Unit 1 was placed in service as of June 1, 2016 .**
- **Kentucky Power contracted with Columbia Gas Pipeline for 72,000 MMBtu per day firm transportation capacity to ensure gas availability to serve internal load.**
- **The cost of gas will include Reservation fees and various FERC-approved surcharges (Transportation Cost Rate Adjustment, Electric Power Cost Adjustment, Operational Transaction Rate Adjustment, and Capital Cost Recovery Mechanism).**
- **Reservation fees and various FERC-approved surcharges will be assigned to internal load.**
- **FAC filing will now contain a separate line for natural gas cost.**
- **Backup files will include information supporting the cost of natural gas and BS1 operational data.**

Columbia Gas Pipeline (TCO) Reservation Fee

- **Beginning June 1, 2016 Kentucky Power will be responsible for paying a Monthly Reservation fee to reserve 72,000 MMBtus per day of capacity on the Columbia Gas Pipeline.**
- **Rates included in Reservation Fee:**
 - 1) **Negotiated Demand Rate – May change one time prospectively, when final costs are assessed. Negotiated Rate portion is capped at \$0.20/MMBtu**
 - 2) **FERC Tariff Surcharge Rates - These are stated as a Monthly Rate per Dekatherm and can be adjusted, typically annually, with FERC approval**
 - **Transportation Cost Rate Adjustment (TCRA) - provides for the recovery of costs incurred for the transmission and compression of gas by others**
 - **Electric Power Costs Adjustment (EPCA) - provides for the recovery of electric power costs incurred by Transporter for compression or processing of natural gas and for company use and operations.**
 - **Operational Transaction Rate Adjustment (OTRA) - provides for the recovery of the costs of Operational Transactions incurred in order to ensure sufficient flowing supply in Transporter’s system in Market Areas 1, 2, 3 and 7, including carrying charges**
 - **Capital Cost Recovery Mechanism (CCRM) - provides for the recovery of Transporter’s revenue requirements associated with the rehabilitation or replacement of certain eligible facilities in order to modernize its system and enhance reliability and flexibility.**

Reservation Fee Calculation

- **Tariff Surcharge Rate Calculation = (TCRA + EPCA + OTRA + CCRM)x12/365**
 - Assuming no tariff rate changes, the tariff surcharges for the June 1, 2016 reservation fee will be:
 $(\$0.232 + \$0.07 + \$0.115 + \$1.04) \times 12/365 = \$0.2479$

Thus, the June 2016 reservation fee would be calculated as such:

72,000 MMBtus

x 30 days

x (\$0.20 demand rate + \$0.0479 tariff surcharge rate)

= \$535,466.80

KENTUCKY POWER COMPANY				
BIG SANDY PLANT				
Month 2016				
GAS INVENTORY SCHEDULE				
		<u>MCF</u>	<u>Amount</u>	<u>\$/MCF</u>
Beginning Inventory		0.00	\$0.00	\$0.0000
Purchases		0.00	\$0.00	\$0.0000
Gas Sales		0.00	\$0.00	
Adjustments		0.00	\$0.00	\$0.0000
Sub-Total		0.00	\$0.00	\$0.0000
Less Disposed				
Generation		0.00	\$0.00	\$0.0000
Loss or (Gain) on Sale				
Other		0.00	\$0.00	\$0.0000
Ending Inventory		0.00	\$0.00	\$0.0000

Sample Power Transaction Schedule

FINAL SCHEDULE APRIL 2016 COSTS - ACTUAL					
KENTUCKY POWER COMPANY					
FUEL COST SCHEDULE					
MONTH ENDED: APRIL 2016					
	BIG SANDY (PLANT)	MITCHELL 1 KP	MITCHELL 2 KP	FUEL AMOUNTS (\$)	
(A) COMPANY GENERATION					
COAL BURNED	77.07	4,951,155.72	464,849.33	5,416,082.12	
OIL BURNED	0.00	61,961.83	109,401.22	171,363.05	
⁽³⁾ GAS BURNED				-----	Big Sandy in service June 1, 2016
FUEL (JOINTLY OWNED PLANT)				-----	
⁽¹⁾ FUEL (ASSIGNED COST DURING F.O.)				157,639.41	
FUEL (SUBSTITUTE FOR F.O.)				-----	
SUB-TOTAL				5,745,084.58	
(B) PURCHASES					
IDENTIFIABLE FUEL COST - OTHER PURCHASES				3,517,230.58	
IDENTIFIABLE FUEL COST - ROCKPORT PURCHASES				3,373,184.34	
⁽¹⁾ IDENTIFIABLE FUEL COST (SUBSTITUTE FOR F.O.)				157,639.41	
⁽²⁾ IDENTIFIABLE FUEL COST (PEAKING UNIT EQUIVALENT)				261,519.99	
SUB-TOTAL				6,471,255.52	
(C) INTER-SYSTEM SALES					
⁽⁴⁾ FUEL COSTS				668,958.82	
TOTAL FUEL COSTS (A + B - C)				11,547,381.28	
F.O. = FORCED OUTAGE					
DETAILS:					
⁽¹⁾ FUEL (ASSIGNED COST DURING FORCED OUTAGE)					
TOTAL REPLACEMENT (IDENTIFIABLE FUEL COST)					
FUEL COST DUE TO F.O.:	7,111,964 kWh	22.165	MILLS/kWh	157,639.41	
TOTAL ALLOWABLE (IDENTIFIABLE FUEL COST)					
REPLACEMENT FUEL COST FOR F.O.:	7,111,964 kWh	22.165	MILLS/kWh	157,639.41	
⁽¹⁾ Kentucky Power had 36 hours of forced outages at Mitchell 1 and 2 in April 2016 when purchases were required to offset a generation deficiency to serve internal load.					
⁽²⁾ AMOUNT IN EXCESS OF PEAKING UNIT EQUIVALENT AS CALCULATED IN ACCORDANCE WITH KPSC ORDER OF OCTOBER 3, 2002 IN CASE NO. 2000-00495-B.					
⁽³⁾ Amount includes reservation fees and various FERC-approved charges.					
⁽⁴⁾ Amount excludes reservation fees and various FERC-approved charges.					