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**VIA OVERNIGHT MAIL**

September 19, 2016

Talina R. Matthews  
Executive Director  
Kentucky Public Service Commission  
211 Sower Blvd  
Frankfort, KY 40602-0615

RECEIVED

SEP 20 2016

PUBLIC SERVICE  
COMMISSION

**Re: Case No. 2016-00228**  
**In the Matter of the Application of Duke Energy Kentucky, Inc. for an Adjustment to Rider ASRP Rates and for Tariff Approval**

Dear Ms. Matthews:

Enclosed please find the original and ten copies of Duke Energy Kentucky, Inc.'s supplemental responses to *Commission Staff's First Set of Data Requests*. Additionally, ten copies of a CD containing the electronic version of STAFF-DR-01-003 Supplemental Attachment 1 are being provided.

Please let me know if you have any questions.

Very Truly Yours,

E. Minna Rolfes-Adkins

ERA  
Enclosures

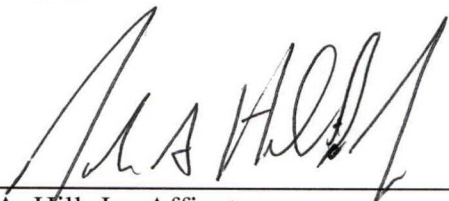
cc: Rebecca Goodman (w/enclosures)



**VERIFICATION**

STATE OF OHIO )  
 ) SS:  
COUNTY OF HAMILTON )

The undersigned, John A. Hill, Jr., Director, Integrity Management, Engineering and Growth, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing supplemental data requests, and that the answers contained therein are true and correct to the best of his knowledge, information and belief.

  
\_\_\_\_\_  
John A. Hill, Jr., Affiant

Subscribed and sworn to before me by John A. Hill, Jr. on this 19<sup>th</sup> day of September, 2016.

  
\_\_\_\_\_  
NOTARY PUBLIC

My Commission Expires: July 8, 2017



**E. MINNA ROLFES**  
Notary Public, State of Ohio  
My Commission Expires  
July 8, 2017

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**SUPPLEMENTAL STAFF-DR-01-003**

**REQUEST:**

Refer to the Application, Exhibit 1, Schedule 2.1, page 6 of 10.

- a. Refer to line 1, Total ASRP Plant Additions, columns (C) and (D). Provide a narrative explanation of how the amounts were determined, along with any spreadsheets, work papers, etc.
- b. Refer to the amount of \$576,672 listed on line 11, Deferred Taxes, Column (C). Explain why the total amount of deferred taxes related to the \$7.5 million in 2016 Accelerated Service Replacement Program (“ASRP”) capital expenditures should not be utilized for 2017 ASRP rates.
- c. State whether Duke Kentucky calculates Allowance for Funds Used During Construction related to ASRP capital expenditures.

**RESPONSE:**

See Supplemental Staff-DR-01-003 Attachment 1 for a revised set of schedules. The schedules have been revised from the initial application to account for new projections indicating overall lower costs than what was initially projected at the time of filing. The reduction in costs is due primarily to an overall lower cost to replace per service than what was initially budgeted (approx. \$3,500 vs. \$5,000 per service) and a fewer than expected number of renewals/replacements in the field. The schedule revisions also include acceleration of replacements for qualifying customer-owned curb-to-meter (C-M)

services (of an unidentified material-type) during the upcoming calendar year(s). Initially, these unknown C-M services were targeted for reconnaissance during the upcoming calendar year with any identified replacements to occur through a targeted replacement program in the later portion of the ASRP. As a result of feedback from communities while obtaining permits for the reconnaissance, and through a desire to minimize impact to customers whose C-M services are identified as of a material type necessitating replacement under the ASRP, the Company is now desiring to replace these services under the ASRP upon discovery, rather than identify all replacements and then performing that work at a later time.

Additionally, Schedule 2.1 Column (C) was amended to include the deferred taxes related to the total revised estimate for plant additions for 2016, not the 13 month average. Schedule 2.1 Line 1-Total ASRP Plant Additions was amended for revised 2016 & 2017 capital expenditure estimates.

	<b>Original Estimate</b>	<b>Revised Estimate</b>
<b>2016 Plant Additions</b>	\$ 7,500,000	\$ 2,000,000
<b>2017 Plant Additions</b>	\$ 12,000,000	\$ 8,702,051

Capital expenditures and retirements on Schedule 2.2 were revised to reflect the costs of the program going down due to the fact that a lower number of services needs to be replaced. See Supplemental Staff-DR-01-04 for more details.

The Reconnaissance O&M expenses have been revised to reflect the number of services that are not being replaced but still require field reconnaissance/verification to ensure that all non-protected metallic services have been removed from the system. In addition, the cost of reconnaissance is slightly higher than originally estimated. To the extent a

service requires replacement under the ASRP, such costs, including the reconnaissance is considered a capital expense. However, any costs related to a service that does not require replacement must then be treated as an O&M expense. Therefore, the fewer capitalized replacements results in a greater O&M expense under the ASRP. See Supplemental Staff-DR-01-003 Attachment 2 for revised tariffs.

**PERSON RESPONSIBLE:** Lisa D. Steinkuhl\John Hill

**Duke Energy Kentucky**  
**Annual Adjustment to the Accelerated Service Line Replacement Program ("ASRP")**  
**Forecasted Period Ending December 31, 2017**  
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<b><u>Schedule</u></b>	<b><u>Description</u></b>
1.0	ASRP Rates by Rate Schedule
1.1	Revenue Requirement
1.2	Cost of Capital
2.0	Plant Additions and Depreciation
2.1	Tax Depreciation
2.2	ASRP Additions and Retirements
2.3	Reconnaissance O&M
2.4	Meter Relocation O&M
3.0	Billing Determinants



**Duke Energy Kentucky  
 Annual Adjustment to the Accelerated Service Line Replacement Program ("ASRP")  
 ASRP Rider by Rate Schedule**

<u>Line No.</u>	<u>Rate Schedule</u>	(A)	Weighted Customers- Services		Billing	Monthly
			<u>Approved PSC</u> <u>Case No. 2009-202</u>	<u>Revenue</u> <u>Requirement</u>	<u># of Bills / CCF</u>	<u>ASRP</u> <u>Rider</u>
			(B)	(C)	(D)	(E)
1	RS- Residential		92.301%	\$ 844,792	1,082,302	\$ 0.78 Per Customer
2	GS - General Service		6.969%	63,784	82,525	\$ 0.77 Per Customer
3	FT - Firm Transportation (Includes DGS)		0.454%	4,155	20,583,780	\$ 0.00020 Per CCF
4	IT - Interruptible Transportation		0.276%	2,526	13,550,910	\$ 0.00019 Per CCF
5	Total		<u>100.000%</u>	<u>\$ 915,257</u>		

Residential charge per customer is under the \$2 cap for calendar year 2017

**Duke Energy Kentucky**  
**Annual Adjustment to the Accelerated Service Line Replacement Program ("ASRP")**  
**Forecasted ASRP Revenue Requirement for 2017**

<u>Line No.</u>	<u>(A)</u>	<u>ASRP Investment</u> <u>December 31, 2017</u> <u>(B)</u>	<u>Reference</u> <u>(C)</u>
<b>Return on Investment</b>			
<b><u>Rate Base</u></b>			
1	Net ASRP Investment - Property, Plant and Equipment	\$ 5,123,132	Form 2.2
2	Cost of Removal	-	Form 2.2
3	Accumulated Reserve for Depreciation	(96,615)	Form 2.0
4	Net PP&E	5,026,517	
5	Accumulated Deferred Taxes on Liberalized Depreciation	(1,091,071)	Form 2.1
6	Net Rate Base	3,935,446	Line 4 + Line 5
7	Authorized Rate of Return, Adjusted for Income Taxes	10.117%	Form 1.2
8	Required Return on ASRP Related Investment	\$ 398,145	Line 6 * Line 7
<b><u>Operating Expenses</u></b>			
9	Depreciation	\$ 132,884	Form 2.0
10	Property Tax	61,324	Line 4 * 1.220%
11	O&M related to reconnaissance fees	302,161	Form 2.3
12	O&M related to relocation of meters	18,966	Form 2.4
13	PSC Assessment	1,777	(Sum Line 8 thru 12) * (0.1941% / (1-0.1941%))
14	Total Operating Expenses	517,112	Sum Lines 9 thru 11
15	<b><u>Total Annual Revenue Requirement</u></b>	<b><u>\$ 915,257</u></b>	Line 8 + Line 12

Notes:

- (1) Property taxes estimated using an effective rate of 1.22%
- (2) PSC Assessment using Fiscal Year 2017 rate of 0.1941%

**Duke Energy Kentucky**  
**Annual Adjustment to the Accelerated Service Line Replacement Program ("ASRP")**  
**Cost of Capital**

<u>Line No.</u>	<u>Capital Structure</u> (A)	<u>Ratio</u> (B)	<u>Cost</u> (C)	<u>Weighted</u> <u>Cost</u> (D)	<u>Pre-Tax @ Effect.</u> <u>Tax Rate of 38.47%</u> (E)
1	Short term Debt	5.609%	1.009%	0.057%	0.057%
2	Long term Debt	43.595%	4.703%	2.050%	2.050%
3	Equity	50.796%	9.700%	4.927%	8.010%
4	Total	100.000%		7.034%	10.117%

Capital structure and cost of debt as approved in Case No. 2009-202  
 Return on equity as approved in settlement in Case No. 2015-210

**Duke Energy Kentucky**  
**Annual Adjustment to the Accelerated Service Line Replacement Program ("ASRP")**  
**Depreciation**

Line No.	Description (A)	Acct Number (B)	(C)	EOY 2016 (D)	Projected 2017 Additions												EOY 2017 (Q)
					Jan (E)	Feb (F)	Mar (G)	Apr (H)	May (I)	Jun (J)	Jul (K)	Aug (L)	Sep (M)	Oct (N)	Nov (O)	Dec (P)	
<b>Gas Plant Investments <sup>(1)</sup></b>																	
<b>Additions</b>																	
1	Service Lines	380		\$ 2,000,000	\$ -	\$ 174,041	\$ 261,062	\$ 522,123	\$ 696,164	\$ 1,044,246	\$ 1,392,328	\$ 1,392,328	\$ 1,392,328	\$ 1,218,287	\$ 609,144	\$ -	\$ 10,702,051
2	Meter Installations	382		-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	Total Additions			\$ 2,000,000	\$ -	\$ 174,041	\$ 261,062	\$ 522,123	\$ 696,164	\$ 1,044,246	\$ 1,392,328	\$ 1,392,328	\$ 1,392,328	\$ 1,218,287	\$ 609,144	\$ -	\$ 10,702,051
<b>Retirements</b>																	
4	Service Lines	380		\$ (196,600)	\$ -	\$ (17,108)	\$ (25,662)	\$ (51,325)	\$ (68,433)	\$ (102,649)	\$ (136,866)	\$ (136,866)	\$ (136,866)	\$ (119,758)	\$ (59,879)	\$ -	\$ (1,052,012)
5	Meter Installations	382		-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	Total Retirements			\$ (196,600)	\$ -	\$ (17,108)	\$ (25,662)	\$ (51,325)	\$ (68,433)	\$ (102,649)	\$ (136,866)	\$ (136,866)	\$ (136,866)	\$ (119,758)	\$ (59,879)	\$ -	\$ (1,052,012)
<b>Cost of Removal</b>																	
7	Service Lines	380		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8	Total Cost of removal			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Accumulated Depreciation Reserve</b>																	
Annual Depreciation Rate																	
EOY 2016																	
Projected 2017 Depreciation Expense																	
13 month Average																	
9	Service Lines	380	2.80%	\$ 56,000	\$ 4,667	\$ 4,667	\$ 5,073	\$ 5,682	\$ 6,900	\$ 8,525	\$ 10,961	\$ 14,210	\$ 17,459	\$ 20,707	\$ 23,550	\$ 24,971	
10	Meter Installations	382		-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	Total Additions			\$ 56,000	\$ 4,667	\$ 4,667	\$ 5,073	\$ 5,682	\$ 6,900	\$ 8,525	\$ 10,961	\$ 14,210	\$ 17,459	\$ 20,707	\$ 23,550	\$ 24,971	
<b>Retirements</b>																	
12	Service Lines	380	2.80%	\$ (5,505)	\$ (459)	\$ (459)	\$ (499)	\$ (559)	\$ (678)	\$ (838)	\$ (1,077)	\$ (1,397)	\$ (1,716)	\$ (2,036)	\$ (2,315)	\$ (2,455)	
13	Meter Installations	382		-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	Total Retirements			\$ (5,505)	\$ (459)	\$ (459)	\$ (499)	\$ (559)	\$ (678)	\$ (838)	\$ (1,077)	\$ (1,397)	\$ (1,716)	\$ (2,036)	\$ (2,315)	\$ (2,455)	
15	<b>Total Accumulated Depreciation Reserve</b>			\$ 50,495	\$ 54,703	\$ 58,911	\$ 63,485	\$ 68,608	\$ 74,830	\$ 82,517	\$ 92,401	\$ 105,214	\$ 120,957	\$ 139,628	\$ 160,863	\$ 183,379	\$ 96,615

Notes:  
 (1) See Form 2.2 for detail of 2017 ASRP eligible additions

**Duke Energy Kentucky**  
**Annual Adjustment to the Accelerated Service Line Replacement Program ("ASRP")**  
**Deferred Taxes on Liberalized Depreciation**

<u>Line No.</u>	(A)	(B)	Tax Year 2016	Tax Year 2017		<u>TOTAL</u>
			Vintage 2016 (C)	Vintage 2016 (D)	Vintage 2017 (E)	
1	Total ASRP Plant Additions		\$ 2,000,000	\$ 2,000,000	\$ 3,681,637	\$ 5,681,637
	Tax Base In-service subject to :					
2	Bonus Depreciation- 50%		2,000,000	2,000,000	3,681,637	5,681,637
3	MACRS		1,000,000	0	0	0
	Tax Depreciation					
4	Bonus Depreciation- 50%		1,000,000	0	1,840,819	1,840,819
5	MACRS on Balance		37,500	72,190	69,031	141,221
6	Total Tax Depreciation		1,037,500	72,190	1,909,850	1,982,040
7	Book Depreciation		50,495	50,495	82,389	132,884
8	Tax Depreciation in Excess of Book Depreciation		987,005	21,695	1,827,461	1,849,156
9	Cost of Removal		0	0	0	-
10	Total Difference		\$ 987,005	\$ 21,695	\$ 1,827,461	\$ 1,849,156
11	Deferred Taxes @	38.47%	379,701	8,346	703,024	711,370
12						<u>\$ 1,091,071</u>

**Duke Energy Kentucky**  
**Annual Adjustment to the Accelerated Service Line Replacement Program ("ASRP")**  
**Thirteen Month Average Additions and Retirements**

**Test Year 12/31/17 ASRP Investment Summary**

<u>Line No.</u>	<u>Month</u> (A)	<u>Number of</u> <u>Months</u>	<u>ASRP Capex</u>		<u>Retirements</u>		<u>Cost of Removal</u> (G)
			<u>By Month</u> (C)	<u>Cumulative</u> (D)	<u>By Month</u> (E)	<u>Cumulative</u> (F)	
1	Balance @ 12/31/2016	13		\$ 2,000,000		\$ (196,600)	\$ -
2	Jan-17	12	\$ -	2,000,000	\$ -	(196,600)	0
3	Feb-17	11	174,041	2,174,041	(17,108)	(213,708)	0
4	Mar-17	10	261,062	2,435,103	(25,662)	(239,371)	0
5	Apr-17	9	522,123	2,957,226	(51,325)	(290,695)	0
6	May-17	8	696,164	3,653,390	(68,433)	(359,128)	0
7	Jun-17	7	1,044,246	4,697,636	(102,649)	(461,778)	0
8	Jul-17	6	1,392,328	6,089,964	(136,866)	(598,643)	0
9	Aug-17	5	1,392,328	7,482,292	(136,866)	(735,509)	0
10	Sep-17	4	1,392,328	8,874,620	(136,866)	(872,375)	0
11	Oct-17	3	1,218,287	10,092,907	(119,758)	(992,133)	0
12	Nov-17	2	609,144	10,702,051	(59,879)	(1,052,012)	0
13	Dec-17	1	-	10,702,051	-	(1,052,012)	0
				<u>73,861,281</u>		<u>(7,260,564)</u>	<u>0</u>
14	Number of months			13		13	13
15	13 Month Average			<u>\$ 5,681,637</u>		<u>\$ (558,505)</u>	<u>\$ -</u>

**Duke Energy Kentucky**  
**Annual Adjustment to the Accelerated Service Line Replacement Program ("ASRP")**  
**O&M - Reconnaissance**

**Test Year 12/31/17 Reconnaissance O&M**

<u>Line No.</u>	<u>Month</u> (A)	<u>ASRP O&amp;M 2017</u> (B)
1	Jan-17	\$ -
2	Feb-17	6,043
3	Mar-17	9,065
4	Apr-17	18,130
5	May-17	24,173
6	Jun-17	36,259
7	Jul-17	48,346
8	Aug-17	48,346
9	Sep-17	48,346
10	Oct-17	42,302
11	Nov-17	21,151
12	Dec-17	-
13	Total	\$ 302,161

**Duke Energy Kentucky**  
**Annual Adjustment to the Accelerated Service Line Replacement Program ("ASRP")**  
**O&M Meter Relocation**

**Test Year 12/31/17 ASRP Meter Relocation O&M**

<u>Line No.</u>	<u>Month</u> (A)	<u>ASRP O&amp;M 2017</u> (B)
1	Jan-17	\$ 190
2	Feb-17	379
3	Mar-17	379
4	Apr-17	1,138
5	May-17	1,138
6	Jun-17	1,897
7	Jul-17	3,035
8	Aug-17	3,224
9	Sep-17	3,224
10	Oct-17	2,845
11	Nov-17	1,138
12	Dec-17	379
13	Total	<u>\$ 18,966</u>



**Duke Energy Kentucky**  
**Annual Adjustment to the Accelerated Service Line Replacement Program ("ASRP")**  
**ASRP Rider Billing Determinants by Rate Schedule**  
**for the Twelve Month Ending April 30, 2016**

<u>Line No.</u>	<u>Rate Schedule</u> (A)	<u>May-15</u> (B)	<u>Jun-15</u> (C)	<u>Jul-15</u> (D)	<u>Aug-15</u> (E)	<u>Sep-15</u> (F)	<u>Oct-15</u> (G)	<u>Nov-15</u> (H)	<u>Dec-15</u> (I)	<u>Jan-16</u> (J)	<u>Feb-16</u> (K)	<u>Mar-16</u> (L)	<u>Apr-16</u> (M)	<u>Total</u> (N)
1	RS- Residential (Number of Customers)	89,639	89,722	89,590	89,408	89,444	89,646	88,916	90,843	90,566	91,083	91,344	91,091	1,082,302
2	GS - General Service (Number of Customers)	6,813	6,715	6,706	6,658	6,651	6,735	6,895	7,039	7,074	7,096	7,112	7,031	82,525
3	FT - Firm Transportation (CCF)	1,537,980	1,260,700	1,226,270	1,172,450	1,263,770	1,269,360	1,463,240	1,760,200	2,047,140	2,960,940	2,549,730	2,072,000	20,583,780
4	IT - Interruptible Transportation (CCF)	923,820	1,033,750	1,070,110	1,097,330	1,151,670	991,290	1,131,440	1,158,570	1,261,360	1,342,340	1,209,210	1,180,020	13,550,910

Duke Energy Kentucky, Inc.  
 4580 Olympic Blvd.  
 Erlanger, Kentucky 41018

Ky. P.S.C. Gas No. 2  
 First Revised Sheet No. 63  
 Cancelling and Superseding  
 Original Sheet No. 63  
 Page 1 of 1

**RIDER ASRP**

**ACCELERATED SERVICE REPLACEMENT PROGRAM RIDER**

**APPLICABILITY**

Applicable to all customers receiving service under the Company's sales and transportation rate schedules.

**CALCULATION OF ACCELERATED SERVICE REPLACEMENT RIDER REVENUE REQUIREMENT**

The ASRP Rider revenue requirement includes the following:

- a. ASRP-related Plant In-Service not included in base gas rates minus the associated ASRP-related accumulated depreciation and accumulated deferred income taxes;
- b. Retirement and removal of plant related to ASRP construction;
- c. The rate of return on the net rate base is the overall rate of return on capital, using the capital structure and debt rates from the most recent base gas rate case and using a 9.7% ROE, grossed up for federal and state income taxes;
- d. Depreciation expense on the ASRP-related Plant In-Service less retirements and removals;
- e. Property taxes related to ASRP and;
- f. Operation and Maintenance Costs for reconnaissance and relocation of meters.

**ACCELERATED SERVICE REPLACEMENT PROGRAM FACTORS**

All customers receiving service under Rate RS and Rate GS shall be assessed a separate monthly charge that will enable the Company to complete the service replacement program. This monthly charge is in addition to the Customer Charge component of their applicable rate schedule, as well as any other applicable monthly charges. Customers receiving service under Rate DGS, Rate FT-L, Rate IT and Rate SSIT will be assessed a separate throughput charge in addition to their commodity delivery charge, for that purpose.

Rider ASRP will be updated annually, to reflect the anticipated impact on the Company's revenue requirements of net plant additions and projected operations and maintenance expense during the upcoming calendar year. Such adjustments to the Rider will become effective with the first billing cycle of January, and will reflect the allocation of the required revenue increase based on the revenue distribution approved by the Commission. After each year, the Company will submit a balancing adjustment to true-up the actual costs with the projected program costs for the preceding year. Any balancing adjustment will become effective with the first billing cycle on or after the effective date of the change.

The charges for the respective gas service schedules for the revenue month beginning January 2017 is:

Rate RS, Residential Service	\$0.78/month	(I)
Rate GS, General Service	\$0.77/month	(I)
Rate DGS, Distributed Generation Service	\$0.00020/CCF	(I)
Rate FT-L, Firm Transportation Service – Large	\$0.00020/CCF	(I)
Rate IT, Interruptible Transportation Service	\$0.00019/CCF	(I)
Rate SSIT, Spark Spread Interruptible Transportation Rate	\$0.00019/CCF	(I)

**SUPPLEMENTAL STAFF-DR-01-004**

**REQUEST:**

Refer to the Application, Exhibit 1, Schedule 2.2, Page 7 of 10, which shows a calendar year 2017 estimated "ASRP Capex" of \$12 million derived by adding the monthly amounts in column (C). Explain how the \$12 million was derived, including the number of services lines to be replaced.

**RESPONSE:**

See Supplemental Staff-DR-01-003 Attachment 1 for a revised set of schedules. The schedules have been revised from the initial application to account for new projections indicating overall lower costs than what was initially projected at the time of filing. The new estimated ASRP CAPEX for 2017 is approximately \$8.7MM with a 13-month average of approx. \$5.6MM. The reduction in costs is due primarily to an overall lower cost to replace per service than what was initially budgeted (approx. \$3,500 vs. \$5,000 per service) and a fewer than expected number of renewals/replacements in the field.

The schedule revisions also include acceleration of replacements for qualifying customer-owned curb-to-meter (C-M) services (of an unidentified material-type) during the upcoming calendar year(s). Initially, these unknown C-M services were targeted for reconnaissance during the upcoming calendar year with any identified replacements to occur through a targeted replacement program in the later portion of the ASRP. As a result of feedback from communities while obtaining permits for the reconnaissance, and through a desire to minimize impact to customers whose C-M services are identified as of

a material type necessitating replacement under the ASRP, the Company is now desiring to replace these services under the ASRP upon discovery, rather than identify all replacements first and then performing that replacement work at a later time.

**PERSON RESPONSIBLE:** John A. Hill, Jr.