

**COMMONWEALTH OF KENTUCKY
BEFORE THE
KENTUCKY PUBLIC SERVICE COMMISSION**

In the Matter of:

The Application of Duke Energy Kentucky,)
Inc., for a Certificate of Public)
Convenience and Necessity Authorizing)
the Implementation of an Accelerated)
Service Line Replacement Program,) Case No. 2015-00210
Approval of Ownership of Service Lines,)
and a Gas Pipeline Replacement Surcharge)

DIRECT TESTIMONY OF

PEGGY LAUB

ON BEHALF OF

DUKE ENERGY KENTUCKY, INC.

July 6, 2015

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ATTACHMENTS

- Attachment PAL-1 - ASRP Calculation and Schedules
- Attachment PAL-2 - Proposed Rider ASRP
- Attachment PAL-3 - Typical Bill Comparison

I. INTRODUCTION AND PURPOSE

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A. My name is Peggy A. Laub. My business address is 139 East Fourth Street,
3 Cincinnati, Ohio 45202.

4 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

5 A. I am employed by Duke Energy Business Services LLC, (DEBS) an affiliate
6 service company of Duke Energy Kentucky, Inc., (Duke Energy Kentucky or
7 Company) as Director, Rates and Regulatory Planning. DEBS provides various
8 administrative and other services to Duke Energy Kentucky, Inc., (Duke Energy
9 Kentucky or the Company) and other affiliated companies of Duke Energy
10 Corporation (Duke Energy).

11 **Q. PLEASE BRIEFLY SUMMARIZE YOUR EDUCATIONAL BACKGROUND
12 AND PROFESSIONAL EXPERIENCE.**

13 A. I received a Bachelor of Business Administration Degree with a major in
14 accounting from the University of Cincinnati. I began my career with The
15 Cincinnati Gas & Electric Company in the Accounting Department in 1981. I
16 worked in various departments including Tax, Regulated Business Unit's
17 financial group and Fixed Assets. In May 2006, following the merger with Duke
18 Energy Corporation, I transferred to the Midwest US Franchised Electric & Gas
19 accounting group. In November 2008, I transferred to the Midwest wholesale
20 accounting group as Manager of Wholesale and Bulk Power Marketing
21 accounting. In May 2010, I transferred to the Rate Department and to my current

1 position as Director, Rates & Regulatory Planning in the Ohio/Kentucky Rate
2 Department.

3 **Q. PLEASE SUMMARIZE YOUR DUTIES AS DIRECTOR OF RATES AND**
4 **REGULATORY PLANNING.**

5 A. As Director of Rates and Regulatory Planning, I am responsible for the
6 preparation of financial and accounting data used in Duke Energy Kentucky and
7 Duke Energy Ohio, Inc., retail rate filings and changes in various other rate
8 recovery mechanisms.

9 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE KENTUCKY**
10 **PUBLIC SERVICE COMMISSION (COMMISSION)?**

11 A. Yes. I have previously testified in a number of cases before this and other
12 regulatory commissions.

13 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

14 A. The purpose of my testimony is to explain and support the Company's proposal to
15 create and implement a surcharge mechanism to recover the costs of its
16 Accelerated Service Line Replacement Program (ASRP). I will describe the
17 Company's proposal to establish the ASRP surcharge mechanism (Rider ASRP)
18 and its annual true-up. In doing so, I will explain the tariff and schedules that
19 support the revenue requirement calculation for Rider ASRP. Finally, I describe
20 the reasonableness of the Company's proposal and the benefits of a rider
21 surcharge mechanism.

II. RIDER ASRP

1 **Q. PLEASE EXPLAIN DUKE ENERGY KENTUCKY'S PROPOSAL TO**
2 **CREATE AND IMPLEMENT THE RIDER ASRP SURCHARGE**
3 **MECHANISM.**

4 A. Duke Energy Kentucky proposes to create Rider ASRP to recover the costs of its
5 service line replacement program. Once established in this proceeding, the
6 Company will file an annual application to adjust Rider ASRP, based on actual
7 and projected data, to recover the costs of its ASRP. Rider ASRP will include a
8 return on the Company's ASRP investment and a return of the related expenses.

9 **Q. PLEASE EXPLAIN HOW RIDER ASRP IS SIMILAR TO ITS**
10 **PREDECESSOR, RIDER AMRP.**

11 A. Duke Energy Kentucky f/k/a The Union, Light, Heat & Power Company, with
12 this Commission's approval, previously had a similar surcharge mechanism,
13 Rider AMRP (Accelerated Main Replacement Program), that computed a revenue
14 requirement on expenditures necessary to replace aging gas main infrastructure.
15 Although the rider was suspended while the Kentucky Public Service
16 Commission's (Commission) Order approving the program was under appeal,
17 Rider AMRP was eventually upheld by the Supreme Court of Kentucky, and
18 eventually terminated when the program was completed in 2010. Rider AMRP
19 included a return on the investment (net plant less deferred income taxes) and a
20 return of the associated depreciation and maintenance expenses.

21 **Q. PLEASE EXPLAIN THE COSTS THAT WILL BE INCLUDED IN RIDER**
22 **ASRP.**

1 A. As shown on Attachment PAL-2, Rider ASRP will include a return on ASRP net
2 plant in service, net of associated retirements and deferred taxes. It will also
3 include a return of depreciation expense, and property tax associated with the
4 ASRP investment and operation and maintenance costs associated with relocation
5 of meters.

6 **Q. HOW WILL RIDER ASRP BE CALCULATED AND ALLOCATED?**

7 A. Rider ASRP will be calculated using a projected thirteen-month average balance
8 for ASRP related capital. It will also include projected depreciation expense,
9 property tax expense and operation and maintenance expenses. It will be
10 allocated to customers using the Weighted Customer cost allocation as approved
11 in Duke Energy Kentucky's most recent gas case.

12 **Q. WHAT RATE OF RETURN DO YOU PROPOSE TO USE FOR THE**
13 **RIDER?**

14 A. The Company will use its current Commission-approved authorized rate of return.

15 **Q. HOW WILL RIDER ASRP BE UPDATED AND TRUED UP?**

16 A. Duke Energy Kentucky's current application includes the projected ASRP costs
17 for 2016. The Company then proposes to file its subsequent applications by
18 October 1st, annually, to true-up the prior year's actual program spend and to set
19 the level of the upcoming year's projected spend.

20 **Q. WHEN WILL RIDER ASRP INITIALLY BE EFFECTIVE?**

21 A. Initially, the Company anticipates the Rider will be effective upon approval but
22 no later than January 4, 2016, which is the first billing cycle for calendar year
23 2016. In subsequent years, the rider will be effective on the first billing cycle for

1 that calendar year. The Company has proposed an effective date of August 6,
2 2015, however, it does not anticipate passing any costs through the Rider until
3 January 4, 2016.

4 **Q. WHAT IS THE ESTIMATE OF THE INITIAL RIDER ASRP CHARGE?**

5 A. The estimated charge by customer class is shown on Page 2 of Attachment PAL-
6 1.

7 **Q. HOW WAS THIS CHARGE DETERMINED?**

8 A. As shown on Attachment PAL-2, the Company proposal uses the same billing
9 determinants as established in the Company's last natural gas base rate
10 proceeding to calculate the estimated charges.

III. EXPLANATION OF ATTACHMENTS AND SCHEDULES

11 **Q. PLEASE EXPLAIN ATTACHMENT PAL-1.**

12 A. Attachment PAL-1 contains several schedules (as described below) that calculate
13 the revenue requirement for the projected 2016 ASRP expenditures and associated
14 billing determinants.

15 **Q. PLEASE EXPLAIN SCHEDULES 1.0 of Attachment PAL-1.**

16 A. Schedule 1.0 shows the proposed ASRP rates by rate schedules.

17 **Q. PLEASE EXPLAIN SCHEDULE 1.1 of Attachment PAL-1.**

18 A. Schedule 1.1 is the calculation of the annual revenue requirement based on a
19 projected test year of 2016.

20 **Q. PLEASE EXPLAIN SCHEDULE 1.2 of Attachment PAL-1.**

21 A. Schedule 1.2 shows the cost of capital as approved in Duke Energy Kentucky's
22 most recent natural gas base rate case, Case No. 2009-00202.

- 1 **Q. PLEASE EXPLAIN SCHEDULE 2.0 OF ATTACHMENT PAL-1.**
- 2 A. Schedule 2.0 shows the calculation of current year depreciation expense.
- 3 **Q. PLEASE EXPLAIN SCHEDULE 2.1 OF ATTACHMENT PAL-1.**
- 4 A. Schedule 2.1 is the calculation of deferred taxes on liberalized depreciation
5 related to the ASRP plant additions for 2016.
- 6 **Q. PLEASE EXPLAIN SCHEDULE 2.2 OF ATTACHMENT PAL-1.**
- 7 A. Schedule 2.2 calculates the 13 month average of ASRP capital expenditures for
8 the calendar year 2016.
- 9 **Q. PLEASE EXPLAIN SCHEDULE 2.3 OF ATTACHMENT PAL-1.**
- 10 A. Schedule 2.3 shows the projected Operating and Maintenance costs for calendar
11 year 2016 to relocate the gas meters.
- 12 **Q. PLEASE EXPLAIN SCHEDULE 3.0 of Attachment PAL-1.**
- 13 A. Schedule 3.0 shows the billing determinants by month for the twelve
14 months ended April 30, 2015.
- 15 **Q. PLEASE EXPLAIN ATTACHMENT PAL-2.**
- 16 A. Attachment PAL-2 is Duke Energy Kentucky's proposed Rider ASRP Tariff. This
17 tariff, Ky. P.S.C. No. 5, Sheet No. 63, explains the terms, conditions, calculations
18 and rates for Rider ASRP. The Company intends to update the tariff rates
19 annually as I described above.
- 20 **Q. PLEASE EXPLAIN ATTACHMENT PAL-3.**
- 21 A. Attachment PAL-3 is a typical bill comparison that shows the dollar change and
22 percentage increase from current bills as a result of Rider ASRP for Kentucky
23 customers.

IV. REASONABLENESS OF REQUESTED RIDER ASRP

1 **Q. HAVE YOU REVIEWED DUKE ENERGY KENTUCKY'S**
2 **APPLICATION IN THIS PROCEEDING?**

3 A. Yes.

4 **Q. DO YOU HAVE AN OPINION REGARDING WHETHER DUKE**
5 **ENERGY KENTUCKY'S REQUEST FOR A NEW RIDER ASRP IS FAIR,**
6 **JUST, AND REASONABLE?**

7 A. Yes.

8 **Q. PLEASE EXPLAIN THE BASIS FOR YOUR OPINION.**

9 A. I believe Duke Energy Kentucky's request is fair, just, and reasonable. I believe
10 that the costs of service are properly allocated to customer classes and the rate
11 design was properly performed such that the Company will recover its revenue
12 requirement related to the ASRP.

13 **Q. ARE THERE ANY BENEFITS ASSOCIATED WITH IMPLEMENTING**
14 **THIS PROGRAM THROUGH A SURCHARGE MECHANISM?**

15 A. Yes. The implementation of Rider ASRP is beneficial in that it reduces the need
16 for multiple rate cases, results in a lower impact to customer bills than if the
17 program was implemented through a full base rate proceeding, and provides a
18 more efficient recovery mechanism for the Company's safety and integrity
19 management service line replacement programs.

20 **Q. PLEASE ELABORATE.**

21 A. Rider ASRP, like its predecessor Rider AMRP, reduces the potential impact of
22 rate shock that customers could experience if the program were implemented as

1 part of a full base rate proceeding, where all other drivers for rate increases are
2 considered. By implementing Rider ASRP, the Company is able to accelerate the
3 replacement of these at-risk service lines and recover its costs in a timely fashion,
4 while managing the impact to customer bills in a way that allows a smooth and
5 steady transition with minimal increases. As the Commission is aware, a full base
6 rate case is a timely and expensive process for both utilities and the Commission.
7 Rider ASRP, once implemented, would allow the Company to avoid having to
8 make multiple base rate filings to recover the costs of this multiple-year program.
9 And the surcharge mechanism allows the Commission to have ongoing and
10 continuous regulatory oversight over the Company's program and expenditures
11 through annual prudence reviews.

V. CONCLUSION

12 **Q. WERE ATTACHMENTS PAL-1, PAL-2 AND PAL-3 TRUE AND**
13 **ACCURATE TO THE BEST OF YOUR KNOWLEDGE?**

14 A. Yes.

15 **Q. WERE ATTACHMENTS PAL-1, PAL-2 AND PAL-3 PREPARED BY YOU**
16 **OR UNDER YOUR DIRECTION AND CONTROL?**

17 A. Yes.

18 **Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?**

19 A. Yes.

Duke Energy Kentucky
Annual Adjustment to the Accelerated Services Replacement Program ("ASRP")
Forecasted Period Ending December 31, 2016
Table of Contents

<u>Schedule</u>	<u>Description</u>
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	Meter Relocation O&M
3.0	Billing Determinants

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

<u>Line No.</u>	<u>Rate Schedule</u>	<u>Weighted Customers- Services Approved PSC Case No. 2009-202</u>	<u>Revenue Requirement</u>	<u>Billing Determinants # of Bills</u>	<u>Monthly ASRP Rider</u>	
1	RS- Residential	92.301%	416,780	1,075,522	\$ 0.39	Per Customer
2	GS - General Service	6.969%	31,468	82,224	\$ 0.38	Per Customer
3	FT - Firm Transportation (Includes DGS)	0.454%	2,050	22,655,270	\$ 0.00009	Per CCF
4	IT - Interruptible Transportation	0.276%	1,246	13,382,440	\$ 0.00009	Per CCF
5	Total	100.000%	451,545	37,195,456		

Duke Energy Kentucky
Annual Adjustment to the Accelerated Services Replacement Program ("ASRP")
Forecasted ASRP Revenue Requirement for 2016

<u>Line No.</u>		<u>ASRP Investment</u> <u>December 31, 2016</u>	<u>Reference</u>
Return on Investment			
<u>Rate Base</u>			
1	Net ASRP Investment - Property, Plant and Equipment	\$ 1,964,505	Form 2.0
2	Cost of Removal	-	Form 2.0
3	Accumulated Reserve for Depreciation	(50,880)	Form 2.0
4	Net PP&E	1,913,625	
5	Deferred Taxes on Liberalized Depreciation	(9,663)	Form 2.1
6	Net Rate Base	1,903,962	Line 4 + Line 5
7	Authorized Rate of Return, Adjusted for Income Taxes	10.67%	Form 1.2
8	Required Return on ASRP Related Investment	203,153	Line 6 * Line 7
<u>Operating Expenses</u>			
9	Depreciation	50,880	Form 2.0
10	Property Tax	24,556	Line 1 * 1.250%
11	PSC Assessment	545	(Sum Line 8 thru 10) * (.1952% / (1-.1952%))
12	O&M related to relocation of meters	172,411	Form 2.3
13	Total Operating Expenses	248,392	Sum Lines 9 thru 11
14	<u>Total Annual Revenue Requirement</u>	<u>451,545</u>	Line 8 + Line 12

Notes:

- (1) Property taxes estimated using an effective rate of 1.25%
- (2) PSC Assessment using Fiscal Year 2015 rate of .1952%

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

<u>Line No.</u>	<u>Capital Structure</u>	<u>Ratio</u>	<u>Cost</u>	<u>Weighted Cost</u>	<u>Pre-Tax @ Effect. Tax Rate of 38.47%</u>
1	Short term Debt	5.609%	1.009%	0.06%	0.06%
2	Long term Debt	43.595%	4.703%	2.05%	2.05%
3	Equity	50.796%	10.375%	5.27%	8.56%
4	Total	<u>100.000%</u>		<u>7.38%</u>	<u>10.67%</u>

As approved in Case No. 2009-202

**Duke Energy Kentucky
Annual Adjustment to the Accelerated Services Replacement Program ("ASRP")
Additions and Retirements**

<u>Line No.</u>	<u>Description</u> (1)	<u>Acct Number</u> (2)	<u>2016 Additions & Retirements</u> (3)	<u>Depr Rates</u> (4)	<u>Current Year Depr on Adds / (Ret.)</u> (5) = (3) * (4)
<u>Additions</u>					
1	Service Lines	380	2,165,383	2.59%	56,083
2	Meter Installations	382	-	2.39%	-
3	Total Additions		<u>2,165,383</u>		<u>56,083</u>
<u>Retirements</u>					
4	Service Lines	380	(200,878)	2.59%	(5,203)
5	Meter Installations	382	-	2.39%	-
6	Total Retirements		<u>(200,878)</u>		<u>(5,203)</u>
7	<u>Total Plant In Service</u>		<u><u>1,964,505</u></u>		<u><u>50,880</u></u>
<u>Cost of Removal</u>					
8	Service Lines	380			
9	Total Cost of removal				

Notes:

(1) See Form 2.2 for detail of 2016 ASRP eligible additions.

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

Tax Year 2016
Vintage
2016

Line No.

1	Total ASRP Plant Additions		2,165,383
	Tax Base In-service subject to :		
2	Bonus Depreciation- 50%		0
3	MACRS		2,165,383
4	Total Tax Depreciation Base		<u>2,165,383</u>
	Tax Depreciation		
5	Bonus Depreciation- 50%		0
6	MACRS on Balance		81,202
7	Total Tax Depreciation		<u>81,202</u>
8	Book Depreciation		56,083
9	Tax Depreciation in Excess of Book Depreciation		25,119
10	Cost of Removal		0
11	Total Difference		25,119
10	Deferred Taxes @	38.47%	9,663

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

Test Year 12/31/16 ASRP Investment Summary

<u>Line No.</u>	<u>Month</u> (A)	<u>Number of</u> <u>Months</u> (B)	<u>ASRP Capex-2016</u> (C)	<u>13 Mo. AVG</u> (D) = (B/13)*(C)	<u>Retirements</u> (E)	<u>13 Mo. AVG</u> (F)= (B/13)*(E)	<u>Cost of Removal</u>	<u>Depreciation</u> <u>Expense (1)</u>
1	Jan-16	12	-	-	-	-	-	-
2	Feb-16	11	-	-	-	-	-	-
3	Mar-16	10	50,000	38,462	-4,638	(3,568)	-	-
4	Apr-16	9	250,000	173,077	-23,192	(16,056)	-	-
5	May-16	8	500,000	307,692	-46,384	(28,544)	-	-
6	Jun-16	7	750,000	403,846	-69,576	(37,464)	-	-
7	Jul-16	6	1,000,000	461,538	-92,768	(42,816)	-	-
8	Aug-16	5	1,000,000	384,615	-92,768	(35,680)	-	-
9	Sep-16	4	1,000,000	307,692	-92,768	(28,544)	-	-
10	Oct-16	3	250,000	57,692	-23,192	(5,352)	-	-
11	Nov-16	2	200,000	30,769	-18,554	(2,854)	-	-
12	Dec-16	1	-	-	0	-	-	-
			<u>5,000,000</u>	<u>2,165,383</u>	<u>(463,840)</u>	<u>(200,878)</u>	<u>-</u>	<u>-</u>

Notes:

(1) Year-to-date net depreciable plant multiplied by applicable depreciation rate

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

Test Year 12/31/16 ASRP Meter Relocation O&M

<u>Line No.</u>	<u>Month</u> <u>(A)</u>	<u>ASRP O&M 2016</u> <u>(B)</u>
1	Jan-16	-
2	Feb-16	-
3	Mar-16	1,724
4	Apr-16	8,621
5	May-16	17,241
6	Jun-16	25,862
7	Jul-16	34,482
8	Aug-16	34,482
9	Sep-16	34,482
10	Oct-16	8,621
11	Nov-16	6,896
12	Dec-16	
		<hr/>
		172,411

Duke Energy Kentucky
Annual Adjustment to the Accelerated Services Replacement Program ("ASRP")
ASRP Rider Billing Determinants by Rate Schedule
for the Twelve Month Ending April 30, 2015

is No.	Rate Schedule	May-14	June	July	August	September	October	November	December	January-15	February-15	March-15	April-15	Total
1	RS- Residential (Number of Customers)	89,464	88,864	88,971	88,733	88,818	89,134	89,501	90,459	90,443	89,912	90,835	90,388	1,075,522
2	GS - General Service (Number of Customers)	6,814	6,712	6,666	6,632	6,622	6,686	6,898	7,047	7,056	7,044	7,085	6,962	82,224
3	FT - Firm Transportation (CCF)	1,559,200	1,315,270	1,155,330	1,200,760	1,160,840	1,260,760	1,612,470	2,303,730	2,564,820	3,016,300	3,099,980	2,405,810	22,655,270
4	IT - Interruptible Transportation (CCF)	1,014,380	1,014,380	962,760	1,044,520	1,001,830	1,038,880	1,192,100	1,228,170	1,168,650	1,266,420	1,220,340	1,230,010	13,382,440
5	Total	2,669,858	2,425,226	2,213,727	2,340,645	2,258,110	2,395,460	2,900,969	3,629,406	3,830,969	4,379,676	4,418,240	3,733,170	37,195,456

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

Ky. P.S.C. Gas No. 5
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 authorized in the Company's latest base gas rate case, 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 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, in order to reflect the impact on the Company's revenue requirements of net plant additions and by operations and maintenance expense during the most recent twelve months ended December. 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.

The charges for the respective gas service schedules for the revenue month beginning January 2016 is:

Rate RS, Residential Service	\$0.39/month
Rate GS, General Service	\$0.38/month
Rate DGS, Distributed Generation Service	\$0.00009/CCF
Rate FT-L, Firm Transportation Service – Large	\$0.00009/CCF
Rate IT, Interruptible Transportation Service	\$0.00009/CCF
Rate SSIT, Spark Spread Interruptible Transportation Rate	\$0.00009/CCF

Issued by authority of an Order of the Kentucky Public Service Commission dated ____ in Case No. 2015-____

Issued: _____
Effective: August 6, 2015
Issued by James P. Henning, President

**DUKE ENERGY KENTUCKY
(ASRP FILING)
TYPICAL BILL COMPARISON
GAS SERVICE**

LINE NO.	RATE CODE	LEVEL of DEMAND (A)	LEVEL of USE (B) (MCF)	BILL DATA INCL ALL RIDERS LESS COST of GAS (1)				GAS COST (2) (3) (G)	TOTAL CURRENT BILL (C + G) (H)	TOTAL PROPOSED BILL (D + G) (I)	PERCENT INCREASE (I-H) / H (J)
				CURRENT BILL (C) (\$)	PROPOSED BILL (D) (\$)	DOLLAR INCREASE (D - C) (E) (\$)	PERCENT INCREASE (E / C) (F) (%)				
1	(RS)	Not	1	20.63	21.02	0.39	1.890	4.06	24.69	25.08	1.579
2	RESIDENTIAL	Applicable	3	29.70	30.09	0.39	1.313	12.18	41.88	42.27	0.931
3			6	43.31	43.70	0.39	0.901	24.36	67.67	68.06	0.576
4			8	52.38	52.77	0.39	0.745	32.48	84.86	85.25	0.460
5			10	61.45	61.84	0.39	0.635	40.60	102.05	102.44	0.382
6			12	70.52	70.91	0.39	0.553	48.72	119.24	119.63	0.327
7			16	88.66	89.05	0.39	0.440	64.96	153.62	154.01	0.254
8			20	106.80	107.19	0.39	0.365	81.20	188.00	188.39	0.207
9			30	152.14	152.53	0.39	0.256	121.80	273.94	274.33	0.142
10			40	197.49	197.88	0.39	0.197	162.40	359.89	360.28	0.108
11			50	242.84	243.23	0.39	0.161	203.00	445.84	446.23	0.087
12			60	288.19	288.58	0.39	0.135	243.60	531.79	532.18	0.073
13			80	378.89	379.28	0.39	0.103	324.80	703.69	704.08	0.055
14			100	469.58	469.97	0.39	0.083	406.00	875.58	875.97	0.045
1	(GS)	Not	5	57.77	58.15	0.38	0.658	20.30	78.07	78.45	0.487
2	NON-RESIDENTIAL	Applicable	10	68.03	68.41	0.38	0.559	40.60	108.63	109.01	0.350
3			20	88.56	88.94	0.38	0.429	81.20	169.76	170.14	0.224
4			40	129.62	130.00	0.38	0.293	162.40	292.02	292.40	0.130
5			50	150.15	150.53	0.38	0.253	203.00	353.15	353.53	0.108
6			100	252.80	253.18	0.38	0.150	406.00	658.80	659.18	0.058
7			300	663.40	663.78	0.38	0.057	1,218.00	1,881.40	1,881.78	0.020
8			500	1,074.00	1,074.38	0.38	0.035	2,030.00	3,104.00	3,104.38	0.012
9			700	1,484.60	1,484.98	0.38	0.026	2,842.00	4,326.60	4,326.98	0.009
10			850	1,792.55	1,792.93	0.38	0.021	3,451.00	5,243.55	5,243.93	0.007
11			1,000	2,100.50	2,100.88	0.38	0.018	4,060.00	6,160.50	6,160.88	0.006
12			2,000	4,153.50	4,153.88	0.38	0.009	8,120.00	12,273.50	12,273.88	0.003
13			3,000	6,206.50	6,206.88	0.38	0.006	12,180.00	18,386.50	18,386.88	0.002
14	(FT LARGE)		5	438.68	438.69	0.005	0.001	0.44	439.12	439.13	0.001
15	NON-RESIDENTIAL		10	447.37	447.38	0.009	0.002	0.88	448.25	448.26	0.002
16	FIRM TRANSPORTATION		20	464.74	464.76	0.018	0.004	1.76	466.50	466.52	0.004

**DUKE ENERGY KENTUCKY
(ASRP FILING)
TYPICAL BILL COMPARISON
GAS SERVICE**

Attachment PAL-3
Page 2 of 2

LINE NO.	RATE CODE	LEVEL of DEMAND (A)	LEVEL of USE (B) (MCF)	BILL DATA INCL ALL RIDERS LESS COST of GAS (1)				GAS COST (2) (3) (G) (\$)	TOTAL CURRENT BILL (C + G) (H) (\$)	TOTAL PROPOSED BILL (D + G) (I) (\$)	PERCENT INCREASE (I-H) / H (J) (%)
				CURRENT BILL (C) (\$)	PROPOSED BILL (D) (\$)	DOLLAR INCREASE (D - C) (E) (\$)	PERCENT INCREASE (E / C) (F) (%)				
17			40	499.48	499.51	0.036	0.007	3.52	503.00	503.03	0.007
18			50	516.85	516.89	0.045	0.009	4.40	521.25	521.29	0.009
19			100	603.69	603.78	0.090	0.015	8.80	612.49	612.58	0.015
20			300	951.07	951.34	0.270	0.028	26.40	977.47	977.74	0.028
21			500	1,298.45	1,298.90	0.450	0.035	44.00	1,342.45	1,342.90	0.034
22			700	1,645.83	1,646.46	0.630	0.038	61.60	1,707.43	1,708.06	0.037
23			850	1,906.37	1,907.13	0.765	0.040	74.80	1,981.17	1,981.93	0.039
24			1,000	2,166.90	2,167.80	0.900	0.042	88.00	2,254.90	2,255.80	0.040
25			2,000	3,903.80	3,905.60	1.800	0.046	176.00	4,079.80	4,081.60	0.044
26			3,000	5,640.70	5,643.40	2.700	0.048	264.00	5,904.70	5,907.40	0.046
1	(IT)	Not	100,000	95,360.00	95,450.00	90.00	0.094	0.00	95,360.00	95,450.00	0.094
2	INTERRUPTIBLE	Applicable	200,000	190,290.00	190,470.00	180.00	0.095	0.00	190,290.00	190,470.00	0.095
3	TRANSPORTATION		300,000	285,220.00	285,490.00	270.00	0.095	0.00	285,220.00	285,490.00	0.095
4			400,000	380,150.00	380,510.00	360.00	0.095	0.00	380,150.00	380,510.00	0.095
5			500,000	475,080.00	475,530.00	450.00	0.095	0.00	475,080.00	475,530.00	0.095
6			800,000	759,870.00	760,590.00	720.00	0.095	0.00	759,870.00	760,590.00	0.095
7			1,000,000	949,730.00	950,630.00	900.00	0.095	0.00	949,730.00	950,630.00	0.095
8			1,200,000	1,139,590.00	1,140,670.00	1,080.00	0.095	0.00	1,139,590.00	1,140,670.00	0.095
9			1,500,000	1,424,380.00	1,425,730.00	1,350.00	0.095	0.00	1,424,380.00	1,425,730.00	0.095
10			1,800,000	1,709,170.00	1,710,790.00	1,620.00	0.095	0.00	1,709,170.00	1,710,790.00	0.095
11			2,000,000	1,899,030.00	1,900,830.00	1,800.00	0.095	0.00	1,899,030.00	1,900,830.00	0.095
12			2,500,000	2,373,680.00	2,375,930.00	2,250.00	0.095	0.00	2,373,680.00	2,375,930.00	0.095

(1) INCLUDES RIDER DSMR.

(2) GAS COST ADJUSTMENT EQUALS \$4.060/MCF.

(2) GAS COST ADJUSTMENT TRANSITION RIDER EQUALS \$0.088/MCF. APPLICABLE TO FT-L.

**COMMONWEALTH OF KENTUCKY
BEFORE THE
KENTUCKY PUBLIC SERVICE COMMISSION**

In the Matter of:

The Application of Duke Energy Kentucky,)
Inc., for a Certificate of Public)
Convenience And Necessity Authorizing)
the Implementation of an Accelerated)
Service Line Replacement Program,) Case No. 2015-00210
Approval of Ownership of Service Lines,)
and a Gas Pipeline Replacement Surcharge)

DIRECT TESTIMONY OF

GARY J. HEBBELER

ON BEHALF OF

DUKE ENERGY KENTUCKY, INC.

July 6, 2015

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I. INTRODUCTION AND PURPOSE

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A. My name is Gary J. Hebbeler, and my business address is 139 East Fourth Street,
3 Cincinnati, Ohio 45202.

4 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

5 A. I am employed by Duke Energy Business Services LLC (DEBS) as General
6 Manager, Gas Field and System Operations, for Duke Energy Kentucky, Inc.,
7 (Duke Energy Kentucky or Company) and Duke Energy Ohio, Inc. (Duke Energy
8 Ohio). DEBS provides various administrative and other services to Duke Energy
9 Kentucky and other affiliated companies of Duke Energy Corporation (Duke
10 Energy).

11 **Q. PLEASE BRIEFLY SUMMARIZE YOUR EDUCATIONAL
12 BACKGROUND AND PROFESSIONAL EXPERIENCE.**

13 A. I am a graduate of the University of Kentucky, where I obtained my Bachelor of
14 Science in Civil Engineering. In 1994, I obtained my license as a Professional
15 Engineer in the Commonwealth of Kentucky and, by reciprocity, later in the State
16 of Ohio.

17 I began working for The Cincinnati Gas & Electric Company (CG&E),
18 and the Union Light Heat and Power Company (ULH&P), the predecessor to the
19 Company, in 1987 as an engineer in the Gas Engineering Department. I initially
20 worked as a project engineer and was responsible for designing gas mains and
21 water lines, coordinating projects with governmental agencies and consulting
22 firms, calculating pipe capacity and stress, and evaluating company paving

1 standards and designs. Until 1998, I worked for CG&E/ULH&P, and later for
2 Cinergy Services, Inc., all of which were subsidiaries of Cinergy Corp. I was
3 Vice President for Michels Concrete Construction, Inc., during 1998 and returned
4 to Cinergy Corp.'s Gas Engineering Department in 1999. In 2000, I was
5 promoted to Manager, Contractor Construction. In this position, I helped design
6 the Accelerated Main Replacement Program (AMRP) for both Kentucky and
7 Ohio. I also managed the construction activities for replacing the cast iron and
8 bare steel pipe under the AMRP. In 2002, I was promoted to Manager, Gas
9 Engineering. I was responsible for managing the engineering activities and the
10 capital expenditures for Gas Operations in the gas distributions systems of Duke
11 Energy Kentucky and Duke Energy Ohio. In 2006, I was promoted to General
12 Manager, Gas Engineering. In addition to my continued responsibilities for gas
13 engineering activities and capital expenditures, I was responsible for construction
14 activities for the AMRP, street improvements, pressure improvements, and major
15 projects. In September 2010, I was promoted to my current position of General
16 Manager, Gas Field and System Operations.

17 **Q. PLEASE SUMMARIZE YOUR RESPONSIBILITIES AS GENERAL**
18 **MANAGER, GAS FIELD AND SYSTEM OPERATIONS.**

19 A. I am responsible for managing the construction, installation, operation, and
20 maintenance of the natural gas distribution systems of Duke Energy Kentucky and
21 Duke Energy Ohio. Approximately 800 Duke Energy and contractor personnel
22 are involved in these activities on behalf of Duke Energy Kentucky and Duke
23 Energy Ohio.

1 Q. **HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE KENTUCKY**
2 **PUBLIC SERVICE COMMISSION?**

3 A. Yes. I have testified before the Kentucky Public Service Commission
4 (Commission) on several occasions, most recently as part of Duke Energy
5 Kentucky's last base natural gas rate case, Case No. 2009-00202.

6 Q. **WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS**
7 **PROCEEDING?**

8 A. The purpose of my testimony is to discuss and support Duke Energy Kentucky's
9 proposed Accelerated Service Replacement Program (ASRP). In doing so, I
10 describe the Company's highly successful AMRP program, the predecessor to the
11 ASRP, and detail the Company's proposal to implement a new replacement
12 program for service lines. Throughout my testimony, I describe the safety and
13 reliability drivers for the ASRP initiative. Finally, I describe how Duke Energy
14 Kentucky will implement and execute the ASRP initiative, including but not
15 limited to construction specifications and schedule, budgeting, cost management
16 strategies, and ongoing annual reporting to the Commission.

II. OVERVIEW OF THE AMRP

17 Q. **PLEASE BRIEFLY EXPLAIN THE HISTORY OF THE COMPANY'S**
18 **COMPLETED AMRP.**

19 A. Duke Energy Kentucky instituted the AMRP in 2000, with this Commission's
20 approval, to accelerate its replacement rate of cast iron and bare steel mains and
21 the associated metallic services associated with the above-mentioned mains in
22 order to improve the safety and reliability of its natural gas distribution system.

1 When Duke Energy Kentucky adopted this program, some of its cast iron
2 pipe in service dated back to 1887 and some of its bare steel pipe in service dated
3 back to 1906. Cast iron and bare steel pipe, however, are more prone to leaks
4 than plastic and coated or cathodically protected steel which are now the material
5 of choice for main and service construction throughout the United States. In
6 1971, the U.S. Department of Transportation adopted regulations removing cast
7 iron from its list of approved materials for new pipe construction.

8 Duke Energy Kentucky adopted formal cast iron and bare steel main
9 replacement programs in 1988 and 1989, respectively. An in-house developed
10 program was used in conjunction with two commercially available programs,
11 known respectively as CIMOS[®] and BSMOS[®]. These programs identified certain
12 factors associated with cast iron and bare steel main activities, such as year
13 installed, operating pressure, length of pipe, and number of prior activities such as
14 leaks and corrosion deterioration. The programs then developed a ranking system
15 that Duke Energy Kentucky used to determine which sections of cast iron and
16 bare steel main to replace.

17 Under the CIMOS[®] and BSMOS[®] programs, Duke Energy Kentucky was
18 replacing the cast iron and bare steel mains at a replacement rate that would have
19 taken approximately 50 years to complete. By that time, the mains that Duke
20 Energy Kentucky would have been replacing would have been over 150 years old.

21 Duke Energy Kentucky performed a detailed review of its own operation
22 and maintenance practices, including the leak rates for the different types of pipe
23 materials. The Company also retained Stone & Webster in 2000 to independently

1 review the background, operation, and maintenance of Duke Energy Kentucky's
2 cast iron and bare steel mains, including the Company's CIMOS[®] and BSMOS[®]
3 programs, as well as the proposed AMRP.

4 Stone & Webster's ultimate recommendation was that Duke Energy
5 Kentucky should "become much more aggressive in replacing both cast iron and
6 bare steel mains for safety and risk considerations." Stone & Webster based this
7 conclusion on the leak rates for the various types of pipe and on Duke Energy
8 Kentucky's then-existing rate of cast iron and bare steel main replacement.

9 The Commission approved a tracking mechanism known as Rider AMRP
10 in its January 31, 2002, Order in Case No. 2001-00092, which permitted Duke
11 Energy Kentucky to timely recover the costs related to the AMRP.

12 This project consisted of replacing 209 miles of cast iron and bare steel
13 main and the associated metallic services over a 10-year period. Approximately
14 25,000 services were replaced under the AMRP. This project started in 2001 and
15 was completed in 2010.

16 **Q. WAS THE AMRP SUCCESSFUL IN IMPROVING THE RELIABILITY**
17 **OF THE SYSTEM?**

18 **A.** The AMRP has been quite successful in allowing Duke Energy Kentucky to
19 reduce the amount of cast iron and bare steel mains in its distribution system.
20 This has resulted in substantial benefits to the Company's customers and to the
21 public at large by improving the overall safety and reliability of the gas delivery
22 system.

1 As of December 31, 2010, Duke Energy Kentucky had replaced all of the
2 approximately 209 miles of cast iron and bare steel mains. Duke Energy
3 Kentucky completed its AMRP installations in 2010 on schedule as submitted
4 originally in 2000. In addition, the program was completed on budget as
5 submitted using the Handy-Whitman index converting the annual spend to 2000
6 dollars, excluding the cost associated with camera inspections that the Company
7 began to perform during the latter part of the program. The procedure for
8 installing facilities changed in 2006 and the cost associated with camera
9 inspections was not submitted as part of the original AMRP estimate.

10 Customers and the public at large benefit from the improved safety and
11 reliability of Duke Energy Kentucky's natural gas distribution service. One key
12 safety measure of the AMRP's success is the leak rate for Duke Energy
13 Kentucky's gas distribution system. The incidence of leaks repaired has
14 decreased 40% from a peak in 2002 to 2010.

15 This reduced incidence of leaks resulted in a corresponding reduction in
16 Duke Energy Kentucky's Account 887 "Maintenance of Mains" expense from
17 approximately \$1.5 million in 1999, to \$436,729.83 in 2010.

18 **Q. PLEASE EXPLAIN THE COMPANY'S SUCCESS IN MANAGING ITS**
19 **CAPITAL COSTS THROUGH THE AMRP OR OTHER PROGRAMS.**

20 **A.** Despite the suspension of Rider AMRP as a result of appeals, Duke Energy
21 Kentucky efficiently executed the program. Prior to suspension, Duke Energy
22 Kentucky's annual Rider AMRP filings included the necessary cost information
23 to allow the Commission to process these cases efficiently. Additionally, Duke

1 Energy Kentucky operated the program such that it was completed on schedule.
2 Duke Energy Kentucky maintained a replacement rate that allowed it to complete
3 the program by 2010, as originally anticipated. Additionally, Duke Energy
4 Kentucky efficiently managed the program by awarding the construction contracts
5 for the AMRP through an annual bidding process. This allowed Duke Energy
6 Kentucky to reduce the program costs.

III. OVERVIEW OF THE PROPOSED ASRP

7 **Q. PLEASE DESCRIBE THE COMPANY'S ASRP PROPOSAL.**

8 A. Duke Energy Kentucky proposes to implement the ASRP to replace certain of its
9 customers' service lines that have statistically demonstrated, due to age or
10 material, a high risk of leak or failure. The natural gas service lines situated in
11 Duke Energy Kentucky's service territory are comprised of various materials
12 (e.g., steel, copper, cast-iron, copper, plastic), based on the general operating
13 practices of the relevant time. Certain of these materials, although standard and
14 widely accepted as safe and reliable at the time of installation, are now considered
15 obsolete. Duke Energy Kentucky witness Edward McGee, with Lummus
16 Consultants International (Lummus), discusses the upward trending of service line
17 leaks more thoroughly in his testimony, as well as in support of the report
18 prepared by Lummus regarding Condition Analysis of Kentucky Service Lines
19 (Lummus Report) (Application, Exhibit 4). For example, cast iron is subject to
20 graphitization and breaking and is influenced by large temperature deviations in
21 ground movement. Corrosion is a concern for metallic pipe; a concern that has
22 been addressed through mitigation efforts, mostly in the form of cathodic
23 protection. But because cathodic protection was not mandated until the 1970's,

1 there are existing metallic service lines that are not so protected. Under the
2 proposed ASRP, Duke Energy Kentucky will replace existing metallic service
3 lines that do not have cathodic protection that have demonstrated a risk to the
4 system integrity.

5 In addition, for those services targeted under the ASRP, Duke Energy
6 Kentucky intends to relocate, where applicable and permissible, any interior
7 meters to an exterior location on the premises. The feasibility of such relocations
8 will be determined with regard to local municipality permit requirements or safety
9 issues, such as exposure to pedestrian traffic along sidewalks. Finally, the
10 Company is proposing to continue its existing authority to take ownership of
11 customer-owned services as they are replaced under this program.

12 **Q. WILL THE ASRP RESULT IN ANY WASTEFUL DUPLICATION OF**
13 **FACILITIES OR COMPETE WITH ANY OTHER ENTITIES?**

14 A. No. The ASRP is a replacement program. That means Duke Energy Kentucky
15 will be abandoning older and at-risk equipment, taking it out of service, and
16 replacing it with new equipment using current industry standards and best
17 practices. Because it is a replacement program, there will be no wasteful
18 duplication. Also, Duke Energy Kentucky will not be infringing upon the service
19 territories of any other local natural gas delivery companies. The ASRP initiative
20 will be implemented throughout Duke Energy Kentucky's natural gas service
21 territory and will only target Duke Energy Kentucky customers who currently
22 have these older, obsolete, and more risky service installations, replacing this
23 equipment with safer and current industry standard facilities.

1 **Q. PLEASE EXPLAIN THE NEED TO RELOCATE THESE INTERIOR**
2 **METERS TO AN EXTERIOR LOCATION ON THE PREMISES.**

3 A. By starting to relocate natural gas meters from inside a building to an acceptable
4 outside location, Duke Energy Kentucky will be in a position to avoid some costs
5 associated with the operation and maintenance of inside jurisdictional piping and
6 to reduce the costs of compliance with the mandatory inspections and surveys of
7 such piping and meters. In addition, relocating meters to an external location will
8 substantially reduce customer inconvenience as the Company will no longer have
9 to enter a customer's premises to, among other things, conduct mandatory
10 atmospheric corrosion inspections and leak surveys. Further, incorporating this
11 relocation activity into a larger, planned program is an economical approach
12 intended to mitigate additional costs to customers. The Company is not proposing
13 to relocate all interior meters within its service territory. It is only intending to
14 relocate those meters with corresponding services targeted for replacement under
15 the ASRP and only in those instances where local municipalities requirements do
16 not prohibit relocating the interior meters to an exterior location or if relocating
17 would not create a safety concern.

18 **Q. PLEASE BRIEFLY EXPLAIN THE HISTORY OF THE COMPANY**
19 **TAKING OVER CUSTOMER-OWNED SERVICES UPON**
20 **REPLACEMENT.**

21 A. Duke Energy Kentucky has been responsible for the regulatory requirements
22 associated with the services to the outlet of the meter. However, prior to the
23 AMRP, the customer owned the curb-to-meter portion of the service line and was

1 responsible for the cost of the replacement of the facility. A replacement would
2 not take place until the line leaked causing an emergency replacement. At the
3 beginning of the AMRP, Duke Energy Kentucky was replacing the curb-to-meter
4 service and assuming the maintenance on the facility. But later in the program,
5 Duke Energy Kentucky assumed actual ownership of the curb-to-meter service
6 line when installing a new service, replacing an existing service, or renewing a
7 riser. Prior to Duke Energy Kentucky assuming ownership, the customer would
8 not have any knowledge or expertise to determine when their equipment needed
9 to be replaced until a leak or incident occurred. Any repairs or replacements were
10 at the customer's sole expense because they owned the facilities. Now with Duke
11 Energy Kentucky owning the facility, the Company maintains records of these
12 facilities and can develop programs such as the AMRP, Accelerated Riser
13 Replacement Program, ASRP, and other Integrity Management Programs to
14 reduce the safety risk to the customer. And once the Company takes ownership of
15 these services, the individual customer is no longer directly responsible for any
16 repairs or maintenance for its own service lines. Rather, these facilities are
17 maintained by the Company and the costs of such maintenance are embedded in
18 the Company's gas rates.

19 **Q. WHAT CAPITAL EXPENDITURES WOULD BE COVERED BY THE**
20 **ASRP?**

21 A. The total capital expenditures covered by the ASRP would be the tap at the main,
22 the installation and testing of the main-to-curb and curb-to-meter service line (if
23 not already replaced by modern materials), testing of piping if already replaced,

1 installation of the meter (including exterior relocation where applicable and
2 permissible), testing and relighting of customer appliances, testing of materials
3 according to code, all restoration, permit fees, contacting customers,
4 administration fees, and all materials associated with the above installations.

5 **Q. EXPLAIN WHY THE COMPANY BELIEVES THAT THE ASRP IS**
6 **NEEDED AT THIS TIME.**

7 A. As more fully explained by Mr. Hill, local distribution companies are required by
8 regulations imposed by the federal government to ensure that infrastructure is fit
9 for service. These regulations apply to operators' infrastructure, including service
10 lines per 49 C.F.R. 192.1007, as well as the totality of 49 C.F.R. Chapter 192.
11 Sections 192.1007 is the Distribution Integrity Management Plan (DIMP) and the
12 definition of service line is explained in 49 C.F.R. 192.3. DIMP requires the
13 operator to identify threats and evaluate and rank risk. Mr. Hill explains that one
14 of the leading risks in Duke Energy Kentucky's system is corrosion and leaks
15 associated with services. This is further explained in the Lummus Study
16 (Application, Exhibit 4).

17 Because the Company has identified the corrosive nature of these services
18 as one of the most significant system risks, as a prudent operator, the Company
19 must respond and take action to address this risk. To do nothing or maintain the
20 current reactive approach of fixing only a limited number of these services
21 annually and when a leak is discovered, does not address the risk itself. And over
22 time, these services will just continue to deteriorate and the number of leak
23 incidents will just continue to rise, thereby increasing the potential for an incident.

1 The ASRP would continue the benefit to customers and public at large of
2 improved safety and reliability of Duke Energy Kentucky's natural gas
3 distribution service and continue the success of the reduced leak and incident rate.

4 **Q. HOW HAS THE COMPANY IDENTIFIED THE NEED FOR THE ASRP?**

5 A. The Company has identified the need for the ASRP by applying the principles of
6 the DIMP as described by Mr. Hill.

7 **Q. HOW WILL A TARGETED AND ACCELERATED REPLACEMENT**
8 **STRATEGY DIFFER FROM THE CURRENT APPROACH?**

9 A. The current approach for replacement is similar to the original reactive
10 replacement program of the cast iron and bare steel main replacement program
11 implemented 1987 & 1988, respectively. The current program is primarily
12 reactive and uses history to identify highest risk to replace services based on
13 certain attributes. Under the current schedule, the services will take
14 approximately fifty years to replace, which over such a long time, will likely
15 come at a much greater expense and potential for increased risk of incidents as the
16 system continues to age before total replacement. To put this into perspective, the
17 Lummus Study identifies just over 300 services that are of a pre-1940 vintage and
18 approximately 800 services that are unknown as to age or material. The
19 deterioration and leak rate is already starting to outpace the replacement rate,
20 meaning the integrity of this portion of the distribution system must be addressed
21 or the potential for incidents will increase. The ASRP is the implementation of a
22 targeted and expedited replacement strategy for these at-risk services that were
23 identified by the Company's DIMP analysis, and prior to a hazardous leak or

1 incident occurring. Duke Energy Kentucky has proven in the AMRP that an
2 accelerated program, as proposed here, will provide a replacement rate to stay
3 ahead of the deterioration rate.

4 **Q. ARE THERE ANY DIRECT BENEFITS ASSOCIATED WITH ASRP?**

5 A. Yes.

6 **Q. PLEASE EXPLAIN.**

7 A. As explained above, the customers and public at large benefit from the improved
8 safety and reliability of Duke Energy Kentucky's natural gas service. One key
9 safety measure of success is the leak rate for Duke Energy Kentucky's gas
10 distribution system. The incident of leaks repaired for the AMRP decreased by
11 40% from 2002 to 2010. Duke Energy Kentucky anticipates a reduced leak rate
12 due to the ASRP. The ASRP will also have the positive effect of expanding the
13 Company's ownership of service lines – an outcome that going forward, will
14 provide a benefit to customers by insulating them from the personal expense and
15 risk of future repairs on their service lines.

16 The ASRP would also allow an opportunity, where applicable and
17 permissible, to efficiently and economically relocate meters that are currently
18 inside a structure to a suitable external location, where such meters are associated
19 with a service line being replaced. By relocating these natural gas meters, the
20 Company will be able to avoid some future costs associated with the operation
21 and maintenance (O&M) of inside meters related to compliance with the
22 mandatory inspections and surveys on inside jurisdictional piping. Specifically, as
23 federal rules mandate inspections on inside jurisdictional piping, the Company

1 will be able to exclude relocated meters from that scope and provide for a more
2 economical approach. As a result, the triennial inspections will involve a lesser
3 amount of indoor piping, allowing for those inspections to be completed using
4 fewer hours of labor. In addition, relocating meters to an external location will
5 substantially reduce customer inconvenience and will improve the customer's
6 experience, as the Company will no longer have to enter a customer's premises to,
7 among other things, conduct mandatory atmospheric corrosion inspections and
8 leak surveys. Further incorporating this relocation activity into a larger, planned
9 economic program will help to avoid fragmented, expensive relocations in the
10 future.

IV. IMPLEMENTATION OF THE ASRP

11 **Q. WHAT TERRITORY DOES THE COMPANY PROPOSE TO INCLUDE**
12 **IN THE ASRP?**

13 A. The ASRP program will be implemented throughout the Company's natural gas
14 service territory. Because the Company's ASRP initiative will be only in the
15 Company's service territory, the program will not compete with any public
16 utilities, corporations, or persons.

17 **Q. WILL THE COMPANY NEED TO OBTAIN ANY PERMITS FOR**
18 **CONSTRUCTION OF THE ASRP?**

19 A. Duke Energy Kentucky has active natural gas franchises in many of the
20 communities that will be affected by the ASRP program. It is my understanding
21 that those franchises are filed with the Commission. To the extent any of these
22 local communities require additional construction permitting, the Company will
23 follow those local rules and work with the communities to obtain any and all

1 necessary permits prior to beginning actual construction. Because this program is
2 not yet been approved by the Commission, the Company has not yet contacted
3 any of these communities to obtain any necessary construction permits. However,
4 the Company commits to do so once this proceeding is approved and prior to the
5 Company beginning construction in a particular community.

6 **Q. HAS THE COMPANY DEVELOPED CONSTRUCTION**
7 **SPECIFICATIONS TO BE USED IN THE ASRP?**

8 A. Yes.

9 **Q. PLEASE EXPLAIN.**

10 A. Each service line is a unique installation and will require its own individual
11 drawing after actual replacement for record purposes. However, all service
12 installations will be constructed in accordance to Duke Energy Kentucky's work
13 specifications, standards, and procedures. A copy of these work specifications is
14 included as Exhibit 3 to the Company's Application in these proceedings.
15 Company crews and contractor crews are trained on the work and ASRP design
16 specifications prior to installing any facilities. Duke Energy Kentucky personnel
17 will provide oversight to any contractor crews installing facilities on the
18 Company's behalf.

19 **Q. PLEASE BRIEFLY DESCRIBE HOW THE COMPANY WILL EXECUTE**
20 **AND COMPLETE CONSTRUCTION UNDER THE ASRP.**

21 A. Duke Energy Kentucky will use both Company and contractor crews where
22 appropriate to complete this project. If contractor crews are deployed, awarding
23 of contracts will be accomplished through a bidding process similar to that of the

1 AMRP. In either case, modules will be established to maximize efficiencies for
2 crews. The modules will identify services to be replaced within communities to
3 minimize travel time among crews. Duke Energy Kentucky will use industry
4 standard equipment, materials, and designs to construct the service replacements
5 in accordance with the work specifications.

6 **Q. HOW LONG DOES THE COMPANY ANTICIPATE IT WILL TAKE TO**
7 **COMPLETE ALL OF THE TARGETED REPLACEMENTS?**

8 A. Duke Energy Kentucky proposes that the ASRP be implemented over an
9 accelerated period of five years, beginning in 2016.

10 **Q. EXPLAIN ANY PLANS FOR PRIORITIZATION OF SPECIFIC AREAS.**

11 A. The services identified for ASRP have been prioritized based on material type and
12 highest prevalence to fail. The services were regionally grouped into modules
13 and the modules with the largest number of the highest priority services are
14 targeted to be replaced first. While working in the modules with the highest
15 priority services, the other identified ASRP services within that module will be
16 scheduled to be worked the same year. The same scheduling process continues
17 throughout the program.

18 **Q. HAS THE COMPANY CONSIDERED THE FACT THAT LOCAL**
19 **COMMUNITIES MAY HAVE CONCURRENT PLANS FOR**
20 **CONSTRUCTION PROJECTS ON GAS OR ELECTRIC FACILITIES**
21 **AND, IF SO, WILL THE COMPANY MAKE EFFORTS TO**
22 **COORDINATE SUCH PROJECTS WITH THE ASRP?**

1 A. Yes. The Company will have a detailed communication plan with communities to
2 coordinate work efforts to minimize customer impact.

3 **Q. PLEASE EXPLAIN THE INFORMATION THAT THE COMPANY**
4 **PROPOSES TO PROVIDE TO THE COMMISSION IN ANNUAL TRUE-**
5 **UP FILINGS.**

6 A. Company witness Peggy A. Laub describes the Company's proposal to implement
7 and adjust the Rider ASRP. In addition to the rate information Ms. Laub supports
8 in her testimony, Duke Energy Kentucky anticipates also including an update on
9 the status of the program, including the number of services replaced, communities
10 affected, and a general update on the Company's progress.

V. FILING REQUIREMENT SPONSORED BY WITNESS

11 **Q. PLEASE DESCRIBE THE FILING REQUIREMENTS CONTAINED IN**
12 **THE COMPANY'S APPLICATION FOR A CERTIFICATE OF PUBLIC**
13 **CONVENIENCE AND NECESSITY THAT YOU ARE SPONSORING**
14 **AND SUPPORTING.**

15 A. I sponsor the following filing requirements in accordance with 807 KAR 5:001,
16 Section 15(2):

- 17 • 15(2)(a): Testimony supporting the need for the program;
- 18 • 15(2)(b): Permits required for construction;
- 19 • 15(2)(c) and (d)(1)-(2): Full description of the proposed location, route, or
20 routes, including a description of the manner in which the facilities will be
21 constructed, and map of the construction area contained in Exhibit 2 to the
22 Company's Application;

VI. CONCLUSION

1 **Q. WHAT IS YOUR OPINION REGARDING THE REASONABLENESS OF**
2 **THE PROPOSED ASRP?**

3 **A. I believe the Company's proposal is a reasonable approach to continue to improve**
4 **safety and reliability for Duke Energy Kentucky customers. It balances the need**
5 **to continually invest in the system to maintain and improve the natural gas**
6 **delivery system while managing costs and rate impacts to customers.**

7 **Q. WERE EXHIBITS 2 AND 3 TO THE COMPANY'S APPLICATION**
8 **PREPARED BY YOU OR UNDER YOUR DIRECTION AND CONTROL?**

9 **A. Yes.**

10 **Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?**

11 **A. Yes.**

