



a PPL company

**Louisville Gas and Electric  
Company**

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**VIA ELECTRONIC TARIFF FILING SYSTEM**

Ms. Gwen R. Pinson  
Executive Director  
Kentucky Public Service Commission  
211 Sower Boulevard  
Frankfort, Kentucky 40602

February 28, 2019

**RE: *Adjustments to Demand-Side Management Balance Adjustment  
Component (DBA) of the Demand-Side Management Cost  
Recovery Mechanism for Louisville Gas and Electric Company***

Dear Ms. Pinson:

Louisville Gas and Electric Company ("LG&E") files herewith LG&E Tariff P.S.C. Electric No. 11, Second Revision of Original Sheet No. 86.7, effective with service rendered on and after April 1, 2019.

LG&E is making revisions to the DSM Balance Adjustment Component ("DBA") of LG&E's Demand Side Management Cost Recovery Component ("DSMRC") to reflect over- and under-recoveries experienced in the 12-month period of January 1, 2018, through December 31, 2018.

The KPSC order in Case No. 2018-00005 increased the number of participants allowed in the Companies' Advanced Metering Systems ("AMS") Customer Service Offering from 10,000 to 20,000. In order to support the additional participants in the AMS program, the Companies are proposing new rates to mitigate the impact to the 2020 DBA. The AMS funds will only affect Residential Service and General Service rate customers through the DSM Capital Cost Recovery ("DCCR") component of the DSMRC.

Ms. Gwen R. Pinson  
February 28, 2019

The attached supporting documentation contains:

- LG&E Electric DSM Rate Comparison
- LG&E Electric DSM DBA Support
- Summary of 2019 DSM Budget
- LG&E Electric DSM AMS Opt-In 2019 Budget Support

Please contact me if you have any questions concerning this filing.

Sincerely,



Michael E. Hornung

Enclosures

**Louisville Gas and Electric Company  
Electric Service**

**Supporting Documentation:**

**LGE DSM Rate Comparison**

**LGE DSM DBA Support**

**Summary of 2019 DSM Budget AMS Opt-In**

**LGE DSM AMS Opt-In 2019 Budget Support**

**Attachment 1**

**Louisville Gas and Electric Company  
Electric Service**

**LGE DSM Rate Comparison**

**Comparison**

									¢/kWh
LGE EL	New Feb 2019 Rates to be filed by 2/28/2019 (AMS post DBA)	¢/kWh	DCR	DRLS	DSMI	DCCR	DBA	DSMRC	DSMRC Variances
	Residential Service	RS, RTOD, VFD	0.060	0.008	-	0.089	(0.007)	0.1500	(0.002)
	General Service	GS	0.035	0.039	-	0.026	0.017	0.1170	0.013
	Power Service	PS	0.063	0.055	-	0.012	0.016	0.1460	0.028
	Time-of-Day et al	TODS, TODP	0.018	0.006	-	0.012	-	0.0360	0.006
<b>2019 Rates (Current)</b>		¢/kWh	DCR	DRLS	DSMI	DCCR	DBA	DSMRC	
	Residential Service	RS, RTOD, VFD	0.060	0.008	-	0.077	0.007	0.1520	
	General Service	GS	0.035	0.039	-	0.021	0.009	0.1040	
	Power Service	PS	0.063	0.055	-	0.012	(0.012)	0.1180	
	Time-of-Day et al	TODS, TODP	0.018	0.006	-	0.012	(0.006)	0.0300	

									¢/kWh
KU	New Feb 2019 Rates to be filed by 2/28/2019 (AMS post DBA)	¢/kWh	DCR	DRLS	DSMI	DCCR	DBA	DSMRC	DSMRC Variances
	Residential Service	RS, RTOD, VFD	0.048	0.006	-	0.055	(0.041)	0.0680	(0.043)
	General Service	GS	0.035	0.026	-	0.012	(0.028)	0.0450	(0.043)
	All Electric Schools	AES	0.074	0.107	-	0.103	(0.017)	0.2670	(0.017)
	Power Service, TOD, RTS	PS, TODS, TODP, RTS	0.029	0.023	-	0.010	(0.002)	0.0600	0.001
<b>2019 Rates (Current)</b>		¢/kWh	DCR	DRLS	DSMI	DCCR	DBA	DSMRC	
	Residential Service	RS, RTOD, VFD	0.048	0.006	-	0.046	0.011	0.1110	
	General Service	GS	0.035	0.026	-	0.007	0.020	0.0880	
	All Electric Schools	AES	0.074	0.107	-	0.103	-	0.2840	
	Power Service, TOD, RTS	PS, TODS, TODP, RTS	0.029	0.023	-	0.010	(0.003)	0.0590	

									¢/Ccf
LGE GAS	New Feb 2019 Rates to be filed by 2/28/2019 (AMS post DBA)	¢/Ccf	DCR	DRLS	DSMI	DCCR	DBA	DSMRC	DSMRC Variances
	Residential Gas Service	RGS, VFD	0.202	0.042	-	-	(0.449)	(0.2050)	(0.650)
	Commercial Gas Service	CGS, AAGS, SGSS, IGS, FT	0.062	0.010	-	-	(0.051)	0.0210	(0.064)
<b>2019 Rates (Current)</b>		¢/Ccf	DCR	DRLS	DSMI	DCCR	DBA	DSMRC	
	Residential Gas Service	RGS, VFD	0.202	0.042	-	-	0.201	0.4450	
	Commercial Gas Service	CGS, AAGS, SGSS, IGS, FT	0.062	0.010	-	-	0.013	0.0850	

**Louisville Gas and Electric Company  
Electric Service**

**LGE DSM DBA Support**

**LOUISVILLE GAS & ELECTRIC COMPANY**

**Supporting Calculations for the  
DSM Cost Recovery Mechanism  
DSM Balance Adjustment Component (DBA)  
ELECTRIC SERVICE**

**Twelve-Month Period Beginning April 1, 2019  
and Ending March 31, 2020**

Louisville Gas and Electric - Electric Service  
 Summary

**Summary of DSM Balance Adjustment Component (DBA)**  
**12-Month Period Beginning April 1, 2019**

Rate Schedule		Exhibit Reference	Balance Adjustment (DBA)	
Residential Service, Volunteer Fire Dept., & Residential Time-of-Day Energy and Demand	RS, VFD, RTOD-Energy & RTOD-Demand	D1	(0.007)	¢/kWh
General Service	GS	D2	0.017	¢/kWh
Power Service	PS	D3	0.016	¢/kWh
Time-of-Day - Primary & Secondary, Retail Transmission Service, Fluctuating Load Service, Outdoor Sports Lighting Service	TODP, TODS, RTS, FLS, & OSL	D4	0.000	¢/kWh

**Summary of Total DSM Cost Recovery Component (DSMRC)**  
**9-Month Period Beginning April 1, 2019**

Rate Schedule		Cost Recovery Component (DCR)	Lost Sales Component (DRLS)	Incentive Component (DSMI)	Capital Cost Recovery Component (DCCR)	Balance Adj Component (DBA)	DSM Recovery Component (DSMRC)	
Residential Service, Volunteer Fire Dept., & Residential Time-of-Day Energy and Demand	RS, VFD, RTOD-Energy & RTOD-Demand	0.060	0.008	0.000	0.077	(0.007)	0.138	¢/kWh
General Service	GS	0.035	0.039	0.000	0.021	0.017	0.112	¢/kWh
Power Service	PS	0.063	0.055	0.000	0.012	0.016	0.146	¢/kWh
Time-of-Day - Primary & Secondary, Retail Transmission Service, Fluctuating Load Service, Outdoor Sports Lighting Service	TODP, TODS, RTS, FLS, & OSL	0.018	0.006	0.000	0.012	0.000	0.036	¢/kWh

Louisville Gas and Electric - Electric Service  
 Method

**Methodology of DSM Balance Adjustment Component (DBA)**  
**12-Month Period Beginning April 1, 2019**

The Demand-Side Management Cost Recovery Mechanism (DSMRM) includes a provision for the recovery of demand-side management (DSM) program and administrative costs. The DSMRM further provides a balancing mechanism for reconciling differences in the costs recovered through the DSMRM and the expected DSM recovery.

The expected DSM recovery includes the actual expenditure incurred during the year and a proportion of lost sales and incentive which is adjusted according to actual expenditure versus budget expenditure. Over- or under-recovery is calculated as the actual revenues received versus the expected revenues.

Interest at a rate equal to the average of the "3-Month Commercial Paper Rate" for the immediately preceding 12-month period is applied to any over- or under-recovery of revenues as part of the adjustment. The interest is applied monthly to the average balance of the cumulative net (over-) under-recovery revenues.

**Summary of DSM Balance Adjustment Component (DBA)**  
**Over / Under Collection through 2018**

Rate Schedule		Actual Collection	Expected Collection	(over) Variance	Interest	Net Variance	
Residential Service, Volunteer Fire Dept., & Residential Time-of-Day Energy and Demand	RS, VFD, RTOD- Energy & RTOD-Demand	11,280,492	10,995,918	(284,574)	(1,522)	(286,096)	\$
General Service	GS	1,950,265	2,165,240	214,974	(55)	214,919	\$
Power Service	PS	1,155,366	1,459,760	304,394	(59)	304,336	\$
Time-of-Day - Primary & Secondary, Retail Transmission Service, Fluctuating Load Service, Outdoor Sports Lighting Service	TODP, TODS, RTS, FLS, & OSL	294,243	302,248	8,005	(31)	7,973	\$

Louisville Gas and Electric - Electric Service  
 Incentive

**Summary of DSM Balance Adjustment Component (DBA)**  
**Incentive Adjustment**

Rate Class	Program	Budgeted Expenditures	Actual Expenditures	Percent	Budgeted Incentive	Adjusted Incentive	
	Residential Audit	633,618	970,750		0	0	\$
	Residential WeCare	1,513,695	2,159,268		0	0	\$
	Residential Lighting	0	0		0	0	\$
	Residential HVAC	0	0		0	0	\$
	Residential Construction	0	0		0	0	\$
	Residential Demand	0	0		0	0	\$
	Responsive Smart Meters	0	0		0	0	\$
	Dealer Referral Network	0	0		0	0	\$
	Education & Information	1,060,889	702,830		53,044	59,327	\$
	Development & Admin	375,971	242,266		0	0	\$
	Residential Incentives	516,596	1,095,959		0	0	\$
	Smart Energy Profile	198,299	206,876		7,199	8,052	\$
	Fridge & Freezer Recycling	1,105,462	666,732		0	0	\$
<b>RS, RTOD-Energy RTOD-Demand &amp; VFD</b>		<b>5,404,530</b>	<b>6,044,682</b>	<b>111.8%</b>	<b>60,244</b>	<b>67,380</b>	<b>\$</b>
	Dealer Referral Network	0	0		0	0	\$
	Commercial Conservation	864,715	1,240,316		5,436	6,341	\$
	Commercial HVAC	0	0		0	0	\$
	Commercial Demand	0	0		0	0	\$
	Education & Information	128,853	85,364		6,443	7,516	\$
	Development & Admin	45,665	29,425		0	0	\$
	KSBA	121,950	(533)		0	0	\$
<b>GS</b>		<b>1,161,182</b>	<b>1,354,573</b>	<b>116.7%</b>	<b>11,878</b>	<b>13,857</b>	<b>\$</b>
	Dealer Referral Network	0	0		0	0	\$
	Commercial Conservation	552,014	791,789		3,470	4,323	\$
	Commercial HVAC	0	0		0	0	\$
	Commercial Demand	0	0		0	0	\$
	Education & Information	8,590	5,691		430	535	\$
	Development & Admin	3,044	1,962		0	0	\$
	KSBA	77,850	(340)		0	0	\$
<b>PS</b>		<b>641,498</b>	<b>799,101</b>	<b>124.6%</b>	<b>3,900</b>	<b>4,858</b>	<b>\$</b>
	Dealer Referral Network	0	0		0	0	\$
	Commercial Conservation	178,686	256,302		1,123	1,411	\$
	Commercial HVAC	0	0		0	0	\$
	Commercial Demand	0	0		0	0	\$
	Education & Information	0	0		0	0	\$
	Development & Admin	0	0		0	0	\$
	KSBA	25,200	(110)		0	0	\$
<b>TODP, TODS, RTS, FLS, &amp; OSL</b>		<b>203,886</b>	<b>256,191</b>	<b>125.7%</b>	<b>1,123</b>	<b>1,411</b>	<b>\$</b>
<b>Total</b>							
<b>Louisville Gas and Electric (Electric)</b>		<b>7,411,097</b>	<b>8,454,547</b>		<b>77,145</b>	<b>87,506</b>	<b>\$</b>

Louisville Gas and Electric - Electric Service  
 Lost Sales

**Summary of DSM Balance Adjustment Component (DBA)**  
**Lost Sales Adjustment**

Rate Class	Program	Budgeted Expenditures	Actual Expenditures	Percent	Budgeted Lost Sales	Adjusted Lost Sales	
	Residential Audit	633,618	970,750	111.8%	36,253	40,547	\$
	Residential WeCare	1,513,695	2,159,268	111.8%	40,178	44,938	\$
	Residential Lighting	0	0		0	0	\$
	Residential HVAC	0	0		0	0	\$
	Residential Construction	0	0		0	0	\$
	Residential Demand	0	0		0	0	\$
	Responsive Smart Meters	0	0		0	0	\$
	Dealer Referral Network	0	0		0	0	\$
	Education & Information	1,060,889	702,830		0	0	\$
	Development & Admin	375,971	242,266		0	0	\$
	Residential Incentives	516,596	1,095,959	111.8%	25,645	28,683	\$
	Smart Energy Profile	198,299	206,876	111.8%	323,696	362,037	\$
	Fridge & Freezer Recycling	1,105,462	666,732	111.8%	107,813	120,583	\$
<b>RS, RTOD-Energy RTOD-Demand &amp; VFD</b>		<b>5,404,530</b>	<b>6,044,682</b>	<b>111.8%</b>	<b>533,585</b>	<b>596,786</b>	<b>\$</b>
	Dealer Referral Network	0	0		0	0	\$
	Commercial Conservation	864,715	1,240,316	116.7%	375,027	437,486	\$
	Commercial HVAC	0	0		0	0	\$
	Commercial Demand	0	0		0	0	\$
	Education & Information	128,853	85,364		0	0	\$
	Development & Admin	45,665	29,425		0	0	\$
	KSBA	121,950	(533)	116.7%	65,444	76,343	\$
<b>GS</b>		<b>1,161,182</b>	<b>1,354,573</b>	<b>116.7%</b>	<b>440,471</b>	<b>513,830</b>	<b>\$</b>
	Dealer Referral Network	0	0		0	0	\$
	Commercial Conservation	552,014	791,789	124.6%	211,373	263,304	\$
	Commercial HVAC	0	0		0	0	\$
	Commercial Demand	0	0		0	0	\$
	Education & Information	8,590	5,691		0	0	\$
	Development & Admin	3,044	1,962		0	0	\$
	KSBA	77,850	(340)	124.6%	36,886	45,948	\$
<b>PS</b>		<b>641,498</b>	<b>799,101</b>	<b>124.6%</b>	<b>248,259</b>	<b>309,251</b>	<b>\$</b>
	Dealer Referral Network	0	0		0	0	\$
	Commercial Conservation	178,686	256,302	125.7%	49,709	62,461	\$
	Commercial HVAC	0	0		0	0	\$
	Commercial Demand	0	0		0	0	\$
	Education & Information	0	0		0	0	\$
	Development & Admin	0	0		0	0	\$
	KSBA	25,200	(110)	125.7%	8,674	10,900	\$
<b>TODP, TODS, RTS, FLS, &amp; OSL</b>		<b>203,886</b>	<b>256,191</b>	<b>125.7%</b>	<b>58,384</b>	<b>73,361</b>	<b>\$</b>
<b>Total</b>							
	Louisville Gas and Electric (Electric)	<b>7,411,097</b>	<b>8,454,547</b>		<b>1,280,699</b>	<b>1,493,229</b>	<b>\$</b>

Louisville Gas and Electric - Electric Service  
DCCR

**Summary of DSM Balance Adjustment Component (DBA)**  
**DCCR Adjustment**

Weighted Average Cost of Capital (WACC)

LG&E Electric Company	<b>9.19%</b>	<i>See DCCR2 attachment for WACC calculation detail.</i>
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The Adjusted DCCR expenses are derived as follows by company and by rate class: The actual capital expenditures, weighted average adjusted by month, is multiplied by the WACC to compute the return. The return is then combined with the actual depreciation values by month, and actual O&M expenses to compute the expected E(M) for the DCCR mechanism for the year's balancing adjustment.

**Adjusted DCCR Expenses by Rate Class**

Rate Class	Program(s)	Weighted Average Monthly Capital	Return on Capital	Depreciation and O&M Expenses	Adjusted DCCR	
	Residential Demand / Residential AMS	3,562,598	327,403	3,758,829	4,086,232	\$
RS, VFD, RTOD-Energy & RTOD-Demand		3,562,598	327,403	3,758,829	4,086,232	\$
	Commercial Demand / Commercial AMS	72,963	6,705	134,616	141,321	\$
GS		72,963	6,705	134,616	141,321	\$
	Commercial Demand	272,447	25,038	503,463	528,501	\$
PS		272,447	25,038	503,463	528,501	\$
	Commercial Demand	19,404	1,783	35,000	36,783	\$
TODP, TODS, RTS, FLS, & OSL		19,404	1,783	35,000	36,783	\$
<b>Total</b>						
Louisville Gas and Electric (Electric)		3,927,412	360,929	4,431,908	4,792,837	\$



**Adjustments to Demand-Side Management Adjustment Component (DBA)**  
**Attachment 1**  
**Page 11 of 29**

Louisville Gas and Electric - Electric Service  
 Exhibit D1

**Calculation of Over/Under Collection and Interest for RS, VFD, RTOD-Energy & RTOD-Demand**

\$	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	TOTAL
DCR	659,644	530,494	572,348	552,076	691,051	372,530	352,285	462,538	490,267	533,791	501,873	325,785	6,044,682
DRLS	49,732	49,732	49,732	49,732	49,732	49,732	49,732	49,732	49,732	49,732	49,732	49,732	596,786
DSMI	5,615	5,615	5,615	5,615	5,615	5,615	5,615	5,615	5,615	5,615	5,615	5,615	67,380
DCCR	247,794	226,513	250,643	287,219	266,298	563,440	595,099	545,515	521,811	208,488	179,401	194,013	4,086,232
DBA	(2,733)	(2,733)	(2,733)	23,226	23,226	23,226	23,226	23,226	23,226	23,226	23,226	23,226	200,838
Expected Revenue	960,052	809,621	875,605	917,868	1,035,922	1,014,543	1,025,958	1,086,626	1,090,651	820,853	759,847	598,371	10,995,918
Actual Revenue	1,250,124	812,584	665,857	687,275	787,493	1,107,923	1,313,332	1,177,960	1,115,038	889,061	655,426	818,419	11,280,492
<b>Variance</b>	(290,072)	(2,963)	209,748	230,593	248,430	(93,380)	(287,374)	(91,334)	(24,386)	(68,209)	104,421	(220,048)	<b>(284,574)</b>
Cumulative Variance	(290,072)	(293,035)	(83,287)	147,306	395,736	302,356	14,981	(76,352)	(100,739)	(168,947)	(64,527)	(284,574)	
Average Monthly Balance	(145,036)	(291,554)	(188,161)	32,010	271,521	349,046	158,669	(30,686)	(88,546)	(134,843)	(116,737)	(174,550)	
Interest Rate	1.14%	1.21%	1.30%	1.39%	1.48%	1.56%	1.64%	1.72%	1.80%	1.90%	1.99%	2.08%	
Interest Payable	(138)	(294)	(204)	0	0	0	0	(44)	(133)	(214)	(194)	(303)	<b>(1,522)</b>
												<b>TOTAL</b>	<b>(286,096)</b>

**Calculation of DBA Component for RS, VFD, RTOD-Energy, & RTOD-Demand**

	Forecast kWh	Collection and Interest Adjustment (DBA)	DBA Factor ¢ / kWh
Apr-19	255,285,690		
May-19	253,226,308		
Jun-19	352,228,562		
Jul-19	464,352,351		
Aug-19	475,107,200		
Sep-19	421,520,134		
Oct-19	289,750,899		
Nov-19	249,087,734		
Dec-19	308,234,423		
Jan-20	365,054,080		
Feb-20	331,020,838		
Mar-20	313,572,538		
<b>TOTAL</b>	<b>4,078,440,757</b>	<b>(\$286,096)</b>	<b>(0.007)</b>

Louisville Gas and Electric - Electric Service  
 Exhibit D2

**Calculation of Over/Under Collection and Interest for GS**

\$	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	TOTAL
DCR	126,565	11,000	85,312	294,921	148,555	174,882	128,841	112,178	119,949	13,934	31,794	106,642	1,354,573
DRLS	42,819	42,819	42,819	42,819	42,819	42,819	42,819	42,819	42,819	42,819	42,819	42,819	513,830
DSMI	1,155	1,155	1,155	1,155	1,155	1,155	1,155	1,155	1,155	1,155	1,155	1,155	13,856
DCCR	5,702	8,935	5,074	7,970	6,714	6,300	7,230	8,244	7,162	6,655	5,565	65,770	141,321
DBA	17,943	17,943	17,943	9,759	9,759	9,759	9,759	9,759	9,759	9,759	9,759	9,759	141,660
Expected Revenue	194,184	81,852	152,304	356,624	209,002	234,914	189,804	174,154	180,844	74,322	91,092	226,145	2,165,240
Actual Revenue	167,322	155,937	140,943	142,518	154,569	183,317	201,994	190,389	184,867	162,916	127,264	138,230	1,950,265
<b>Variance</b>	26,862	(74,084)	11,361	214,106	54,433	51,597	(12,190)	(16,235)	(4,023)	(88,594)	(36,173)	87,915	<b>214,974</b>
Cumulative Variance	26,862	(47,222)	(35,861)	178,245	232,677	284,274	272,084	255,849	251,826	163,232	127,059	214,974	
Average Monthly Balance	13,431	(10,180)	(41,542)	71,192	205,461	258,476	278,179	263,966	253,838	207,529	145,145	171,017	
Interest Rate	1.14%	1.21%	1.30%	1.39%	1.48%	1.56%	1.64%	1.72%	1.80%	1.90%	1.99%	2.08%	
<b>Interest Payable</b>	0	(10)	(45)	0	0	0	0	0	0	0	0	0	<b>(55)</b>
<b>TOTAL</b>													<b>214,919</b>

**Calculation of DBA Component for GS**

	Forecast kWh		DBA Factor ¢ / kWh
Apr-19	93,555,548		
May-19	95,339,858		
Jun-19	113,552,996		
Jul-19	128,506,022		
Aug-19	129,660,960		
Sep-19	124,858,811		
Oct-19	102,827,351		
Nov-19	91,647,912		
Dec-19	95,326,424		
Jan-20	104,650,393		
Feb-20	99,632,223		
Mar-20	101,032,674		
<b>TOTAL</b>	<b>1,280,591,172</b>	<b>Collection and Interest Adjusment (DBA)</b>	<b>0.017</b>
		<b>\$214,919</b>	

Louisville Gas and Electric - Electric Service  
 Exhibit D3

**Calculation of Over/Under Collection and Interest for PS**

\$	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	TOTAL
DCR	76,880	4,318	48,796	184,230	85,747	108,864	79,130	66,015	68,324	5,469	7,096	64,231	799,101
DRLS	25,771	25,771	25,771	25,771	25,771	25,771	25,771	25,771	25,771	25,771	25,771	25,771	309,251
DSMI	405	405	405	405	405	405	405	405	405	405	405	405	4,858
DCCR	21,322	33,415	18,974	29,804	25,108	23,557	27,038	30,828	26,782	24,886	20,810	245,977	528,501
DBA	(6,149)	(6,149)	(6,149)	(18,167)	(18,167)	(18,167)	(18,167)	(18,167)	(18,167)	(18,167)	(18,167)	(18,167)	(181,951)
Expected Revenue	118,229	57,760	87,797	222,042	118,863	140,429	114,176	104,852	103,114	38,364	35,916	318,217	1,459,760
Actual Revenue	116,963	95,638	89,827	88,425	87,369	104,108	105,426	107,287	99,747	96,527	80,025	84,025	1,155,366
<b>Variance</b>	1,266	(37,878)	(2,029)	133,617	31,495	36,322	8,750	(2,435)	3,367	(58,162)	(44,110)	234,192	<b>304,394</b>
Cumulative Variance	1,266	(36,612)	(38,641)	94,976	126,470	162,792	171,542	169,107	172,474	114,312	70,202	304,394	
Average Monthly Balance	633	(17,673)	(37,627)	28,167	110,723	144,631	167,167	170,325	170,791	143,393	92,257	187,298	
Interest Rate	1.14%	1.21%	1.30%	1.39%	1.48%	1.56%	1.64%	1.72%	1.80%	1.90%	1.99%	2.08%	
<b>Interest Payable</b>	0	(18)	(41)	0	0	0	0	0	0	0	0	0	<b>(59)</b>
<b>TOTAL</b>												<b>304,336</b>	

**Calculation of DBA Component for PS**

	Forecast kWh		
Apr-19	141,924,493		
May-19	145,515,206		
Jun-19	162,889,542		
Jul-19	172,398,049		
Aug-19	174,666,841		
Sep-19	174,295,394		
Oct-19	150,224,590		
Nov-19	137,973,060		
Dec-19	143,876,704		
Jan-20	153,871,526		
Feb-20	144,156,213		
Mar-20	143,632,209		
<b>TOTAL</b>	<b>1,845,423,827</b>	<b>Collection and Interest Adjusment (DBA)</b>	<b>DBA Factor ¢ / kWh</b>
		<b>\$304,336</b>	<b>0.016</b>

Louisville Gas and Electric - Electric Service  
 Exhibit D4

**Calculation of Over/Under Collection and Interest for TODP, TODS, RTS, FLS, & OSL**

\$	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	TOTAL	
DCR	24,738	1,296	15,582	59,482	27,413	35,134	25,497	21,158	21,805	1,641	1,799	20,647	256,191	
DRLS	6,113	6,113	6,113	6,113	6,113	6,113	6,113	6,113	6,113	6,113	6,113	6,113	73,361	
DSMI	118	118	118	118	118	118	118	118	118	118	118	118	1,411	
DCCR	1,486	2,327	1,323	2,075	1,749	1,641	1,883	2,147	1,865	1,734	1,450	17,104	36,783	
DBA	(1,051)	(1,051)	(1,051)	(6,927)	(6,927)	(6,927)	(6,927)	(6,927)	(6,927)	(6,927)	(6,927)	(6,927)	(65,499)	
Expected Revenue	31,404	8,802	22,084	60,862	28,466	36,079	26,683	22,608	22,974	2,678	2,553	37,054	302,248	
Actual Revenue	31,359	25,881	24,936	25,839	20,934	24,037	25,646	25,232	26,106	23,260	19,810	21,204	294,243	
<b>Variance</b>	45	(17,079)	(2,852)	35,022	7,532	12,042	1,038	(2,623)	(3,132)	(20,582)	(17,257)	15,850	<b>8,005</b>	
Cumulative Variance	45	(17,034)	(19,886)	15,136	22,668	34,710	35,748	33,125	29,993	9,412	(7,845)	8,005		
Average Monthly Balance	22	(8,495)	(18,460)	(2,375)	18,902	28,689	35,229	34,437	31,559	19,702	783	80		
Interest Rate	1.14%	1.21%	1.30%	1.39%	1.48%	1.56%	1.64%	1.72%	1.80%	1.90%	1.99%	2.08%		
Interest Payable	0	(9)	(20)	(3)	0	0	0	0	0	0	0	0	(31)	
													<b>TOTAL</b>	<b>7,973</b>

**Calculation of DBA Component for TODP, TODS, RTS, FLS, & OSL**

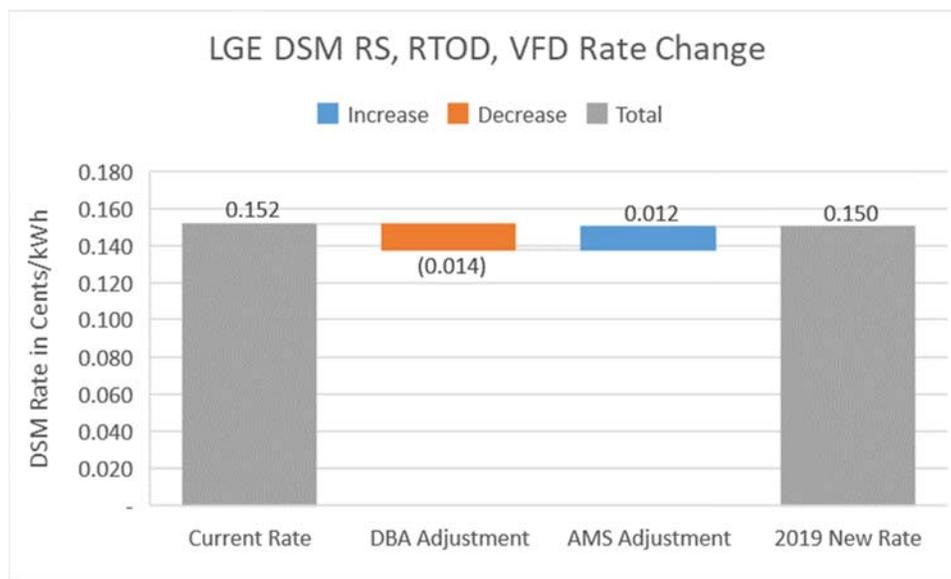
	Forecast kWh	Collection and Interest Adjusment (DBA)	DBA Factor ¢ / kWh
Apr-19	149,412,993		
May-19	154,723,664		
Jun-19	175,265,683		
Jul-19	184,493,628		
Aug-19	187,392,418		
Sep-19	185,108,320		
Oct-19	161,534,353		
Nov-19	151,123,809		
Dec-19	157,805,494		
Jan-20	161,548,472		
Feb-20	150,880,333		
Mar-20	149,068,618		
<b>TOTAL</b>	<b>1,968,357,785</b>	<b>\$7,973</b>	<b>0.000</b>

**Louisville Gas and Electric Company  
Electric Service**

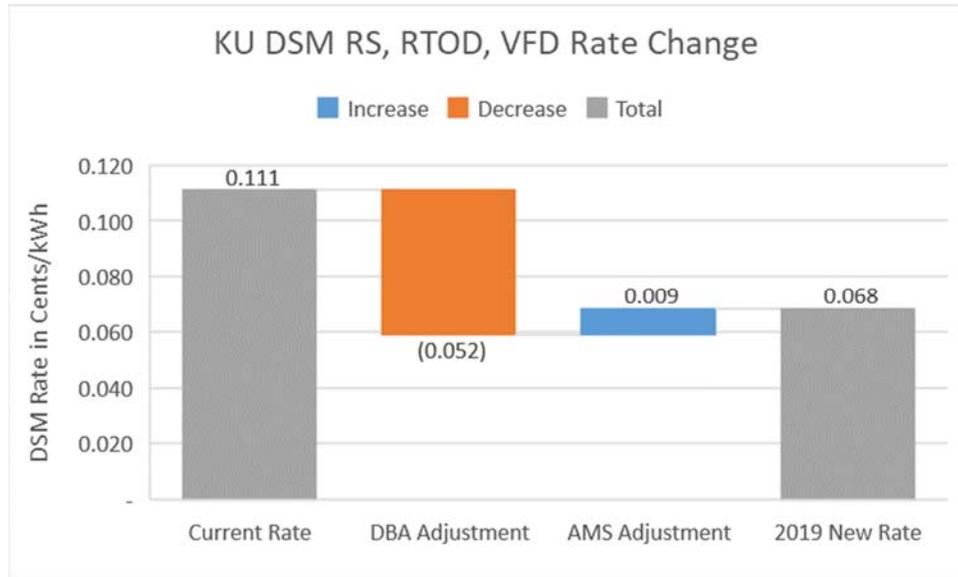
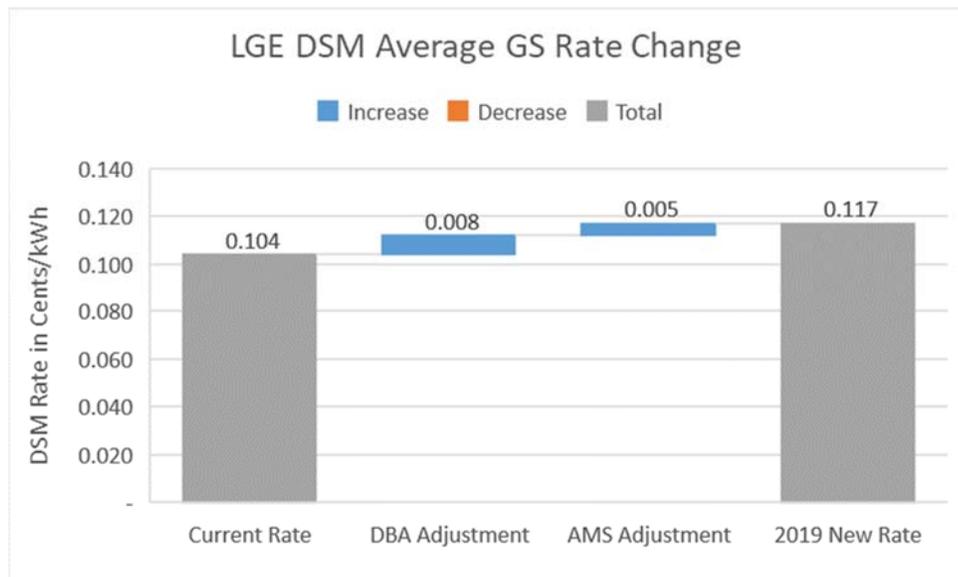
**Summary of 2019 DSM Budget  
AMS Opt-In**

## Louisville Gas and Electric Company and Kentucky Utilities Company Summary of 2019 DSM-EE Budget Increase

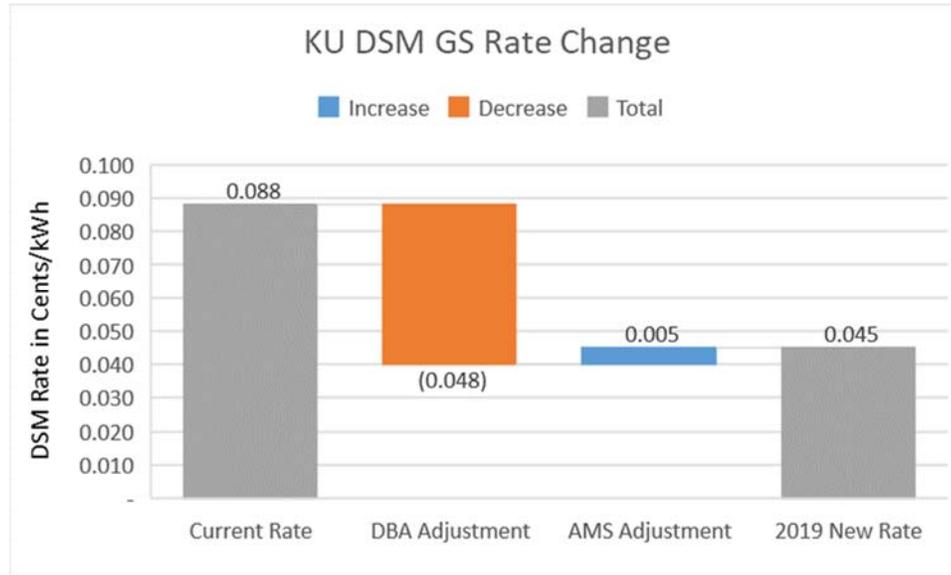
In October 2018, Louisville Gas and Electric Company (“LG&E) and Kentucky Utilities Company (“KU”) (collectively the “Companies”) received approval for their 2019-2025 Demand-Side Management and Energy Efficiency (“DSM-EE”) Program Plan filed in Kentucky Public Service Commission (“KPSC”) Case No. 2017-00441. The DSM-EE tariffs were approved as amended on October 31, 2018. Given the case approval for tariffs effective in January, 2019, the Companies did not make the traditional DSM tariff filing in November 2018 as it was unnecessary. This DSM balancing adjustment (“DBA”) filing adjusts actual spend in 2018 against the amounts collected through the tariffs approved in 2017, effective January 1, 2018. The KPSC order increased the number of participants allowed in the Companies’ Advanced Metering Systems (“AMS”) Customer Service Offering from 10,000 to 20,000. In order to support the additional participants in the AMS program, the Companies are proposing new rates to mitigate the impact to the 2020 DBA. The revised tariffs are being included with the annual DBA filing with proposed effective date of April 1, 2019. AMS only affects rates RS and GS for the Companies based upon the AMS Opt-In approval. The changes for LG&E and KU are shown in the graphs below. KU GS customers and LG&E and KU RS customers will see an overall decrease in their DSM rate. LG&E GS customers will see an increase in their DSM rate of \$0.0013/kWh. Details are included in the paragraphs, spreadsheets, and tariffs which are attached. On average the Companies spent \$458 per meter on the original 10,000 meter opt-in program over four years and are projecting \$423 per meter on the additional 10,000 meters across four years.



## Louisville Gas and Electric Company and Kentucky Utilities Company Summary of 2019 DSM-EE Budget Increase



## Louisville Gas and Electric Company and Kentucky Utilities Company Summary of 2019 DSM-EE Budget Increase



### Advanced Metering Systems (AMS) Customer Service Offering

#### Program Overview

In Case No. 2014-00003, the Commission approved the AMS Customer Service Offering which allows the Companies to offer up to 10,000 advanced meters to those Rate RS or GS customers who elected to participate. In Case No. 2017-00441, the Commission approved an additional 10,000 advanced meters over the previously approved 10,000 meters for those Rate RS or GS customers who elected to participate. As of January 31, 2019, more than 9,600 customers have AMS meters deployed to their residences or places of business. Participants’ consumption is captured, communicated, and stored, allowing participants to monitor their hourly usage through an online portal (MyMeter). To allow customers to participate subject to the 20,000 meter limit, the Companies plan to support and expand as necessary the existing AMS infrastructure, and to continue to permit participants to have the ability to view their hourly usage via the MyMeter online portal. The costs included in this filing are for meters, network infrastructure, the meter data management system, customer education, and expenses of the systems to display consumption data to customers.

#### Program Audience

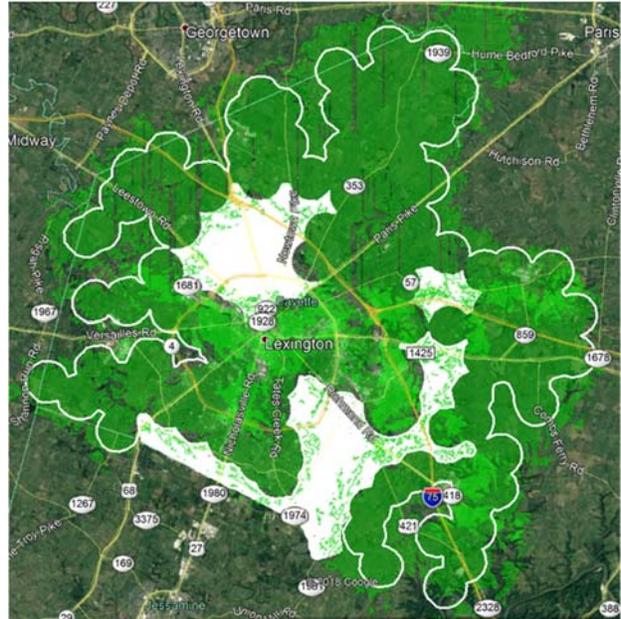
Up to 10,000 LG&E and 10,000 KU RS and GS customers will receive an advanced meter on a voluntary basis.

#### Implementation Plan

The Commission’s provided guidance in its conclusion in Case No. 2018-00005 stating that “The increased investment in AMS will not result in wasteful duplication because the pilot program meters can be used going forward if the Companies refile an application for AMS that satisfies the evidentiary requirements for a CPCN.” For the meters to remain useful going forward it is

## Louisville Gas and Electric Company and Kentucky Utilities Company Summary of 2019 DSM-EE Budget Increase

imperative that the Company deploy meters operating on the mesh network. As such, there are gaps in the existing communication coverage, particularly in Lexington, that limit the number of customers able to receive such a meter. See Figure 1 illustrating the over 41,000 customers in Fayette County without mesh communications today, represented by the white polygons within the figure. To address these gaps the Companies plan to deploy additional routers.



### Pilot Subscription and Engagement Levels

**Figure 1 - Lexington Fayette County Mesh Coverage**

The Companies plan to provide customer

education and marketing of the AMS Opt In program in areas where RF mesh communications is established. Educational materials will be provided multiple times per year through various media channels. Customer education informs customer about the benefits of AMS and has historically proven to produce AMS enrollments. Examples of these customer communications have been provided previously to this commission.

Additionally, the Companies plan to provide customers with "tips" on how to better utilize their smart meter data and the capabilities of MyMeter such as text alerts based upon usage. The goal of this initiative is to create effective customer engagement with MyMeter capabilities to help customers save energy.

### Innovative Programs.

The Company has initiated a rate comparison tool for AMS customers through the MyMeter portal. This tool allows customers to use their actual data to compare how choosing an alternative residential time of day rate to their standard residential electric rate would affect them. Specifically, the rate comparison tool provides two benefits. First, it provides customers with data from their AMS meter that recommends the least cost rate based upon their actual consumption pattern. Second, the tool provides value and education for customers who may not otherwise be interested in or aware of existing alternative rates.

In addition to the rate comparison tool, the Company has implemented a household comparison option for customers through the MyMeter portal. This program is similar to the Smart Energy Profile Program (SEP) the Companies offered through DSM previously, allowing customers to compare their efforts to conserve energy with their "neighbors". The SEP program showed that customers saved energy when engaged in a comparison program with their "neighbors."

## Louisville Gas and Electric Company and Kentucky Utilities Company Summary of 2019 DSM-EE Budget Increase

The Company has implemented a new option for customer within the MyMeter portal to allow customers to authorize third-parties to access their consumption information. This allows a customer to provide access to their consumption without providing access to their full account information within MyAccount. The benefit is that this 3rd party could be for anything from elder care to energy services that provide energy efficiency measures based upon analysis of the customers consumption data.

The Companies are exploring and evaluating additional functionality that includes Green Button Connect, an enhanced mobile app, and a bill prediction tool.

### Timeliness of Data Availability

To improve customer's access to more timely data consumption the Companies are planning to implement a new data process for the customers with mesh AMS meters. This process improves the data availability from its current 24-48 hour latency to every 4 hours. The Companies are evaluating options for AMS customers with cellular connected meters but the current plans are that they will remain at the 24-48 timeframe based on system limitations.

Additionally the Company is evaluating in-home device ("IHD") types that would provide customers with more real-time types of data access consistent with the KPSC order in Case No. 2018-00005. These devices would be of two types. One that utilizes the customers Wi-Fi network to transmit meter data to the MyMeter portal in real-time. The other type would not be connected to MyMeter portal (it would connect directly to the meter through Zigbee) but would enable those without Wi-Fi, such as low-income customers, to view their usage in real-time from a display which shows consumption information from their meter. The plan is to deploy a limited number of IHDs with a total cost less than \$10,000.

The Companies are providing the following budget to accomplish the mentioned activities.

### **Annual Program Budget**

The original budget, actual expenses and a revised annual budget for the Advanced Metering Systems Customer Service Offering is presented in tables below.

## Louisville Gas and Electric Company and Kentucky Utilities Company Summary of 2019 DSM-EE Budget Increase

### Advanced Metering Systems Approved Budget 2014-00003 and Actual Costs

	(\$1,000)	2015	2016	2017	2018	Total	2015-2018	
							Actuals	Variance
O&M Expenses	\$	442	\$ 549	\$ 556	\$ 333	\$ 1,880	\$ 1,103	\$ 777
Capital Expenses	\$	383	\$ 1,149	\$ 1,149	\$ 1,149	\$ 3,830	\$ 3,475	\$ 355
<b>Total</b>	\$	<b>825</b>	<b>\$ 1,698</b>	<b>\$ 1,705</b>	<b>\$ 1,482</b>	<b>\$ 5,710</b>	<b>\$ 4,578</b>	<b>\$ 1,132</b>

### Advanced Metering Systems Approved Budget 2017-00441

	(\$1,000)	2019	2020	2021	2022	2023	2024	2025	Total
Administration	\$	291	\$ 300	\$ 309	\$ 318	\$ 328	\$ 338	\$ 348	\$ 2,232
Implementation CAPX	\$	500	\$ 61	\$ 63	\$ 65	\$ 67	\$ 69	\$ 71	\$ 896
Implementation OPEX	\$	103	\$ 104	\$ 102	\$ 103	\$ 105	\$ 105	\$ 105	\$ 727
Miscellaneous	\$		\$ 23	\$ 24					\$ 47
<b>Total</b>	\$	<b>894</b>	<b>\$ 488</b>	<b>\$ 474</b>	<b>\$ 510</b>	<b>\$ 500</b>	<b>\$ 512</b>	<b>\$ 524</b>	<b>\$ 3,902</b>

### Estimated Total Expenses for 20,000 meter deployment

	(\$1,000)	2019	2020	2021	2022	Total
Administration	\$	291	\$ 300	\$ 309	\$ 318	\$ 1,218
Implementation CAPX	\$	3,100	\$ 122	\$ 126	\$ 130	\$ 3,478
Implementation OPEX	\$	1,183	\$ 208	\$ 204	\$ 206	\$ 1,801
Miscellaneous	\$	-	\$ 46	\$ -	\$ 48	\$ 94
<b>Total</b>	\$	<b>4,574</b>	<b>\$ 676</b>	<b>\$ 639</b>	<b>\$ 702</b>	<b>\$ 6,591</b>

### Variance from 2017-00441 DSM Case - 10,000 meters

		2019	2020	2021	2022	Total
Administration	\$	-	\$ -	\$ -	\$ -	\$ -
Implementation CAPX	\$	(2,600)	\$ (61)	\$ (63)	\$ (65)	\$ (2,789)
Implementation OPEX	\$	(1,080)	\$ (104)	\$ (102)	\$ (103)	\$ (1,389)
Miscellaneous	\$	-	\$ (23)	\$ -	\$ (24)	\$ (47)
<b>Total</b>	\$	<b>(3,680)</b>	<b>\$ (188)</b>	<b>\$ (165)</b>	<b>\$ (192)</b>	<b>\$ (4,225)</b>

**Louisville Gas and Electric Company  
Electric Service**

**LGE DSM AMS Opt-In 2019 Budget Support**

**LOUISVILLE GAS & ELECTRIC COMPANY**

**Supporting Calculations for the  
DSM Cost Recovery Mechanism**

**ELECTRIC SERVICE**

**Nine-Month Period Beginning April 1, 2019  
and Ending December 31, 2019**

Louisville Gas and Electric - Electric Service  
 DSMRC Summary

**Summary of Total DSM Recovery Component (DSMRC)**  
**9-Month Period Beginning April 1, 2019**

Rate Schedule	Cost Recovery Component (DCR)	Lost Sales Component (DRLS)	Incentive Component (DSMI)	<b>Existing</b> Capital Cost Recovery Component (DCCR)	Balance Adj Component (DBA)	DSM Recovery Component (DSMRC)	
RS, VFD, RTOD- Energy & RTOD- Demand	0.060	0.008	0.000	0.077	(0.007)	0.138	¢/kWh
GS	0.035	0.039	0.000	0.021	0.017	0.112	¢/kWh
PS	0.063	0.055	0.000	0.012	0.016	0.146	¢/kWh
RTS, FLS, TODP, TODS, & OSL	0.018	0.006	0.000	0.012	0.000	0.036	¢/kWh
				<b>Additional - AMS</b> (DCCR)			
RS, VFD, RTOD- Energy & RTOD- Demand				0.012			¢/kWh
GS				0.005			¢/kWh
PS				0.000			¢/kWh
RTS, FLS, TODP, TODS, & OSL				0.000			¢/kWh

**Rates with revised DCCR Rates:**

	(DCR)	(DRLS)	(DSMI)	(DCCR)	(DBA)	(DSMRC)	
RS, VFD, RTOD- Energy & RTOD- Demand	0.060	0.008	0.000	0.089	(0.007)	0.150	¢/kWh
GS	0.035	0.039	0.000	0.026	0.017	0.117	¢/kWh
PS	0.063	0.055	0.000	0.012	0.016	0.146	¢/kWh
RTS, FLS, TODP, TODS, & OSL	0.018	0.006	0.000	0.012	0.000	0.036	¢/kWh

Louisville Gas and Electric - Electric Service  
DCCR Summary

**Summary of DSM Revenues from DSM Capital Cost Recovery (DCCR)**  
**9-Month Period Beginning April 1, 2019**

Rate Schedule	DSM Capital Cost Recovery Total Amount	Estimated Billing Determinants	DSM Capital Cost Recovery Component (DCCR)
RS, VFD, RTOD- Energy & RTOD- Demand	\$ 381,495	3,068,793,301 kWh	0.012 ¢/kWh
GS	\$ 47,151	975,275,882 kWh	0.005 ¢/kWh
PS	\$ -	1,403,763,879 kWh	0.000 ¢/kWh
RTS, FLS, TODP, TODS, & OSL	\$ -	1,506,860,362 kWh	0.000 ¢/kWh
<b>Total DCCR Amount</b>	<b>\$ 428,646</b>		

The DSM Capital Cost Recovery (DCCR), allows the Companies' to earn an approved rate of return on equity exclusively for the capital expenditures. The Companies' return on equity is equal to 10.20%.

Louisville Gas and Electric - Electric Service  
DCCR Summary

**Calculation of Total E(m) and Jurisdictional Surcharge Billing Factor**  
**9-Month Period Beginning April 1, 2019**

**Calculation of Total E(m)**

$E(m) = [(RB) (ROR+(ROR -DR)(TR/(1-TR)))] + OE$ , where

RB	=	DSM Rate Base	=	\$	1,250,675
ROR	=	Rate of Return on the DSM Rate Base	=		7.20%
DR	=	Debt Rate (both short-term and long-term debt)	=		1.87%
TR	=	Composite Federal & State Income Tax Rate	=		24.95%
OE	=	Operating Expenses	=		

**DSM Plans**

RB			=	\$	1,250,675
$(ROR + (ROR - DR) (TR / (1 - TR)))$			=		8.97%
Return on Rate Base			=	\$	112,186
OE			=	\$	316,460
E(m)			=	\$	428,646

**E(m) by Rate Class**

Electric	Residential Service	RS et al		\$	381,495
	General Service	GS		\$	47,151
	Power Service	PS		\$	-
	Time-of-Day	TOD et al		\$	-
	Total			\$	428,646

Louisville Gas and Electric - Electric Service  
DCCR Summary

**Calculation of Base Rate and Operating Expense**  
**9-Month Period Beginning April 1, 2019**

**Determination of DSM Rate Base**

Eligible Plant / Capital Expenditures In Service	\$	1,300,000	
Eligible Accumulated Depreciation	\$	(37,960)	
CWIP Amount Excluding AFUDC	\$	0	
Eligible Net Plant / Capital Expenditures In Service		\$	1,262,040
Deferred Tax Balance as of April 1, 2019		\$	(11,365)
Yearly Depreciation Expense		\$	0
Yearly Property Tax Expense		\$	0
			\$
Total			1,250,675

**Determination of DSM Operating Expenses**

		O&M	Depreciation Expense	Property Tax Expense	
Demand Load Conservation	Residential	\$ -	\$ -	\$ -	-
	Commercial	\$ -	\$ -	\$ -	-
	Total	\$ -	\$ -	\$ -	-
AMS / Smart Grid	Residential	\$ 247,865	\$ 33,784	\$ -	-
	Commercial	\$ 30,635	\$ 4,176	\$ -	-
	Total	\$ 278,500	\$ 37,960	\$ -	-
					<b>Total Operating Expenses</b>
	Residential				\$ 281,649
	Commercial				\$ 34,811
Total Operating Expenses	Total				\$ 316,460

Louisville Gas and Electric - Electric Service  
DCCR Summary

**Calculation of DCCR Component from Forecast Sales**  
**9-Month Period Beginning April 1, 2019**

Forecast Sales kWh	Residential Service RS et al	General Service GS	Power Service PS	Time of Day TOD et al
April 2019	255,285,690	93,555,548	141,924,493	149,412,993
May 2019	253,226,308	95,339,858	145,515,206	154,723,664
June 2019	352,228,562	113,552,996	162,889,542	175,265,683
July 2019	464,352,351	128,506,022	172,398,049	184,493,628
August 2019	475,107,200	129,660,960	174,666,841	187,392,418
September 2019	421,520,134	124,858,811	174,295,394	185,108,320
October 2019	289,750,899	102,827,351	150,224,590	161,534,353
November 2019	249,087,734	91,647,912	137,973,060	151,123,809
December 2019	308,234,423	95,326,424	143,876,704	157,805,494
January 2020	0	0	0	0
February 2020	0	0	0	0
March 2020	0	0	0	0
<b>Total</b>	<b>3,068,793,301</b>	<b>975,275,882</b>	<b>1,403,763,879</b>	<b>1,506,860,362</b>
Total DCCR Program Component	\$ 381,495	\$ 47,151	\$ -	\$ -
DCCR Factor in ¢ per kWh	0.012	0.005	0.000	0.000

Louisville Gas and Electric - Electric Service  
DCCR Summary

**Rate Base by Program**  
**9-Month Period Beginning April 1, 2019**

**Rate Base by Program**

Demand Load Conservation	Residential	\$	0
	Commercial	\$	0
	Total	\$	0

AMS / Smart Grid	Residential	\$	1,113,101
	Commercial	\$	137,574
	Total	\$	1,250,675

Allocation between Residential and Commercial	Residential	\$	1,113,101
	Commercial	\$	137,574
	Total	\$	1,250,675

# Louisville Gas and Electric Company

P.S.C. Electric No. 11, Second Revision of Original Sheet No. 86.7  
Canceling P.S.C. Electric No. 11, First Revision of Original Sheet No. 86.7

## Adjustment Clause

## DSM

### Demand-Side Management Cost Recovery Mechanism

DSM Cost Recovery Component (DSMRC)

#### Monthly Adjustment Factors:

<u>Rates RS, RTOD-Energy, RTOD-Demand VFD</u>	<u>Energy Charge</u>	
DSM Cost Recovery Component (DCR)	\$ 0.00060 per kWh	
DSM Revenues from Lost Sales (DRLS)	\$ 0.00008 per kWh	
DSM Incentive (DSMI)	\$ 0.00000 per kWh	
DSM Capital Cost Recovery Component (DCCR)	\$ 0.00089 per kWh	I
DSM Balance Adjustment (DBA)	\$ (0.00007) per kWh	R
Total DSMRC for Rates RS, RTOD-Energy, RTOD-Demand, and VFD	\$ 0.00150 per kWh	R
<u>Rate GS</u>	<u>Energy Charge</u>	
DSM Cost Recovery Component (DCR)	\$ 0.00035 per kWh	
DSM Revenues from Lost Sales (DRLS)	\$ 0.00039 per kWh	
DSM Incentive (DSMI)	\$ 0.00000 per kWh	
DSM Capital Cost Recovery Component (DCCR)	\$ 0.00026 per kWh	I
DSM Balance Adjustment (DBA)	\$ 0.00017 per kWh	I
Total DSMRC for Rate GS	\$ 0.00117 per kWh	I
<u>Rate PS</u>	<u>Energy Charge</u>	
DSM Cost Recovery Component (DCR)	\$ 0.00063 per kWh	
DSM Revenues from Lost Sales (DRLS)	\$ 0.00055 per kWh	
DSM Incentive (DSMI)	\$ 0.00000 per kWh	
DSM Capital Cost Recovery Component (DCCR)	\$ 0.00012 per kWh	
DSM Balance Adjustment (DBA)	\$ 0.00016 per kWh	I
Total DSMRC for Rate PS	\$ 0.00146 per kWh	I
<u>Rates TODS, TODP, RTS, FLS, OSL</u>	<u>Energy Charge</u>	T
DSM Cost Recovery Component (DCR)	\$ 0.00018 per kWh	
DSM Revenues from Lost Sales (DRLS)	\$ 0.00006 per kWh	
DSM Incentive (DSMI)	\$ 0.00000 per kWh	
DSM Capital Cost Recovery Component (DCCR)	\$ 0.00012 per kWh	
DSM Balance Adjustment (DBA)	\$ 0.00000 per kWh	I
Total DSMRC for Rates TODS, TODP, RTS, FLS, and OSL	\$ 0.00036 per kWh	I

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**DATE EFFECTIVE:** April 1, 2019

**ISSUED BY:** /s/ Robert M. Conroy, Vice President  
State Regulation and Rates  
Louisville, Kentucky