	CUI	RRENT RAT	ΓES						PROPOS	ED RATES				
	Excess	Off Peak					Excess							
Demand	<u>KVAR</u>	Excess	Energy	Customer	Demand	% Chang	e KVA/KVAR	% Change	Excess	% Change	Energy	% Change	Customer	% Change
(2) \$/kW or kVA	(3) \$/kVAR	(4) \$/kW	(5) c/kWh	(6) \$/mo	(7) \$/kW	(8)	(9) \$/kVA/KVAR	(10)	(11) \$/kW	(12)	(13) c/kWħ	(14)	(15) \$/mo	(16)
			8.606	3.00							11.388	32.3%	3.00	0.0%
			3.059								2.793	-8.7%		
				11.60							11.388	32.3%	14.30	23.3%
			3.059								2.793	-8.7%		
2.97			4.078	85,00				-			5.107	25.2%	85.00	0.0%
			3.419				2.97	-			4.374	27.9%	127.50	0.0%
								-			3.274	13.3%		0.0%
0.00			0.000	0.00	3.32	-	2.97	•			2.861	-	535.50	-
				81.80										0.0%
			2.414								2.767	14.6%		
0.00	0.00		0.000	0.00			0.72	-			2.162	-	276.00	-
0.00					5.00	•								
	0.57		1.726	276.00				26.3%			2.107	22.1%	276.00	0.0%
0.50					3.40	284.4%	0							
8 51	0.57		1 677	662.00	9 60	12.8%	0.72	26 3%			2.076	73 8%	662.00	0.0%
	0.57		1.01.	002.00				20.570			2,070	25.070	002.00	0.07
7.88	0.57		1.661	1,353.00	8.13	3.2%	0.72	26.3%			2.050	23.4%	1,353.00	0.0%
0.85					0.80	-5.9%	b							
	0.60		1.726	276.00				20.0%			1.725	-0.1%	276,00	0.0%
2.02					3.84	90.1%	b							
	0.60		1.677	662.00				20.0%			1.699	1.3%	662.00	0.0%
1.23					1.03	-10.3%	1							
714	0.60		1 661	1 252 00	10.11	27 70/	0.77	70.007			1 (77	1.00/	1262.00	0.007
	0.00		1.001	1,333.00				20.0%			1.0//	1.0%	1333.00	0.0%
1.05					0.89	-13.2%	3							
OR 0					15 25	60.30/								
8.32														(
	(2) \$/kW or kVA 2.97 2.97 2.97 0.00 0.00 9.29 0.90 8.51 0.86 7.88 0.85 8.60 2.02 7.89 1.23 7.34 1.05	Excess   KVAR	Demand   Excess   Off Peak   Excess	Excess Off Peak   Energy	Demand   Excess   Off Peak   Excess   Energy   Customer	Demand   Excess   Demand   Excess   Energy   Customer   Demand	Excess Off Peak   Every   Customer   Demand % Change   City   C	Excess   Energy   Customer   Demand   Ye Change   KVAK   Excess   Energy   Customer   Demand   Ye Change   KVAK   KVAK   (2) (3) (4) (5) (6) (7) (8) (9)	Excess   Demand   Excess   Energy   Customer   Demand   % Change   KVA/KVAR % Change   Change   KVA/KVAR % Change   KVA/KVAR	Excess Off Peak   Excess   Energy Customer   Demand   & Change   KVA/KVAR   & Change   Excess   Exce	Excess Of Peak   Excess   Energy Customer   Demand   St. Change KVAKVAR % Change   Excess % Change	Excess Off Peak   Excess   Energy   Customer   Demand   Excess   Off Peak   Excess   Schunge   Excess   Sc	Excess   Off Peak   Excess   Energy   Customer   Demand   St.Change   Excess   Off Peak   Change   St.Change   Excess   Excess   Excess   St.Change   Excess   St.Change   Excess   Excess   Excess   St.Change   Excess   Excess	Excess   Off Peak   Excess   Energy   Customer   Demmand   KVAR   Excess   Energy   Excess   KyARKVAR   Excess   Excess   KyARKVAR   Excess   Excess   KyARKVAR   KyARKVAR

KPSC Case No. 2005-00341
Commission Staff First Set Data Request
Order Dated September 21, 2005
Item #8-c
Page 3 of 54

	CURRENT RATES				PROPOSED RATES										
	Demand/Lamp		Off Peak			Demand/Lam	p	Excess		Off Peak					
<u>Tarit</u> T	Charge	KVAR	Excess	Energy	Customer		% Change	KVAR	% Change	Excess	% Change	Energy	% Change	Customer	% Change
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	\$/kVA or mo		\$/kW	c/kWh	\$/mo	\$/kVA or mo		\$/kVAR	(,	\$/kW	(	c/kWh	<b>Vr</b>	\$/mo	(/
MW															
				1.65	.0 22.00							E (77	21.00/	22.00	0.00/
All Energy				4.65	58 22.90							5.677	21.9%	22.90	0.0%
Minimum Charge	3,05					3.65	19.7%								
OL															
Mercury Vapor															
175 Watt	5.36					8.40	56.7%								
400 Watt	8.95					14.00	56.4%								
Hist passes Cadions															
High Pressure Sodium	6.33					7.00	45.60/								
100 Watt	5.22					7.60	45.6%								
150 Watt	6.18					8.40	35.9%						_		
200 Watt	7.89					10.10	28.0%								
400 Watt	12,75					15.35	20.4%								
Floodlights															
200 Watt HPS	9.17					11.55	26.0%								_
400 Watt HPS	12,61					15.30	21.3%								
250 Watt MH	14.37					17.25	20.0%								
400 Watt MH	18.81					22.60	20.1%								
1000 Watt MH	40.37					48.55	20.3%	••			**				
Post Top															
175 Watt MV	6.24					9.75	56 30/								
	8,99						56.3%		***				***		
100 Watt HPS						10.80	20.1%	**			_				
150 Watt HPS	14.69					17.65	20.1%								
Wood Pole	1.80					2.30	27.8%								
Overhead Wire	1.00					1.30	30.0%								
Underground Wire	5,35					5.35	0.0%								
SL															
Overhead Service on Existing Distribution Poles															
High Pressure Sodium															
100 Watt	4.56					5.60	22.8%								
150 Watt	5.10					6.35	24.5%								
200 Watt	5,93					7.80	31.5%								
400 Watt	8.22					11.20	36.3%				-				

		CUI	RENT RAT	ES					1	PROPOS	ED RATES				
	Lamp/Demanc	Excess	Off Peak			Lamp/Deman		Excess		Off Peak					
<u>Tariff</u>	Charge	<b>KVAR</b>	Excess	Energy	Customer	<u>Charge</u>		KVA/KVAR			% Change		% Change		% Change
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	\$/mo or kW	\$/kVAR	\$/kW	c/kWh	\$/mo	\$/mo or kW		\$/kVAR		\$/kW		c/kWh		\$/mo	
SL (Cont.)															
Service on New Wood Distribution Poles															
High Pressure Sodium															
100 Watt	7.19					8.95									
150 Watt	7.85					9.70			-						
200 Watt	9.17					11.20	22.1%					***			
400 Watt	11.47					14.55	26.9%							**	**
Service on New Metal or Concrete Poles															
High Pressure Sodium															
100 Watt	14.63					14.65					-				
150 Watt	15.20					15.20			-				-		
200 Watt	19.20					19.20									
400 Watt	20.02					20.00	-0.1%	**							
CATV														10.40	110.00/
Charge for attachments on a two-user pole						er pole / year								10.63	113.9%
Charge for attachments on a three-user pole					\$5.53 pe	er pole / year								6.59	19.2%
COGEN/SPP I														. 7.	1.4.407
Standard Measurement						ingle Phase								6.75	
					\$11.20 Pc									8.45	
TOD Measurement					\$15.00 Si \$20.25 Pc	ingle Phase								7.55 8.85	
					\$20.23 FG	orynase								0.00	50.570
Energy Credit															
Standard Meter				1.5	7							2.81	79.0%	1	
TOD Meter					_							2.64	105.00/		
On-Peak KWH				1.7								3.54	105.8% 57.9%		
Off-Peak KWH				1.4	5							2.29	57.9%	1	
Capacity Credit															
Standard Energy Meter	0.95	Per kW / N	lo.			0.78									
TOD Energy Meter	2.10	Per kW / N	lo.			1.87	-11.0%								
COGEN/SPP II															
Standard Measurement						ingle Phase								6.75	
					\$11.20 Po									8.45	
TOD Measurement						ingle Phase								7.55	
					\$20.25 Pe	olyhase								8.85	-56.3%

		CURRENT RATES				PROPOSED RATES									
		Excess	Off Peak					Excess		Off Peak					
Tariff	Demand	<u>KVAR</u>	Excess	Energy	Customer	Demand	% Change	<u>KVAR</u>	% Change	Excess	% Change	Energy	% Change	Customer	
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	\$/kW	\$/kVAR	\$/kW	c/kWh	\$/mo	\$/kW		\$/kVAR		\$/kW		c/kWh		\$/mo	
COGEN/SPP II (Cont.)															
Energy Credit															
Standard Meter				1.:	57							2.81	79.0%		
TOD Meter															
On-Peak KWH					72							3.54	105.8%		
Off-Peak KWH				1.4	45							2.29	57.9%		
Capacity Credit															
Standard Energy Meter	0.95	Per kW / N	Λo.			0.78									
TOD Energy Meter	2.10	Per kW / N	Лo.			1.87	-11.0%								
NUG															
- Subtransmission	3,25	0.60				4.59		0.72							
- Transmission	2.28	0.60				2.54	11.4%	0.72	20.0%						

		CU	RRENT RA	TES						PROPOS	ED RATES				
		Excess	Off Peak			<u> </u>		Excess		Off Peak					
Ts & Cs	<u>Demand</u>	<u>KVAR</u>	<u>Excess</u>	Energy	Other	Demand	% Change	<u>KVAR</u>	% Change	<u>Excess</u>	% Change	Energy	% Change	<u>Other</u>	% Change
	(2) \$/kW	(3) \$/kVAR	(4) \$/kW	(5) c/kWh	(6) \$/mo	(7) \$/kW	(8)	(9) \$/kVAR	(10)	(11) \$/kW	(12)	(13) c/kWh	(14)	(15) \$/mo	(16)
Reconnect & Disconnect Charges															
Reconnect for non-payment - regular hours					9.00									38.00	322.2%
Reconnect for non-payment - overtime hours					12.00									42.00	250.0%
Reconnect for non-payment - call out					25.00									76,00	204.0%
Reconnect for non-payment - double time					31.00									100.00	222.6%
Termination or field trip					6.00									23.00	283.3%
Returned Check Charge					5.00									7.00	40.0%
Meter Test Charge					10.00									69.00	590.0%

RS Rate Design.xls Page 1 of 3

#### KENTUCKY POWER COMPANY RS Rate Design Twelve Months Ended June 30, 2005

KPSC Case No. 2005-00341 Commission Staff First Set Data Request Order Dated September 21, 2005 Item #8-c Page 8 of 54

i.	Proposed Revenue  Total RS Revenue Requirement Demand Energy Customer Total	Billed & Accrued Revenue 112,180,313 38,457,396 14,960,925 \$165,598,634	Fuel <u>Revenue</u> \$0 (1,392,220) 0 (\$1,392,220)	14,960,925	Employee <u>Discount</u> \$46,767 16,613 6,237 \$69,617	Adjusted Base Revenue \$112,227,080 39,866,229 14,967,162 \$167,060,471
H.	Customer Charge Full Cost Customer Revenue	\$14,967,162	/ Current charge	1,723,161	=	\$8.69 /mo. \$4.25 /mo.
		!	Proposed Custor	ner Charge	= [	\$5.50 /mo.
	Proposed Customer Charge	1,723,161	x	\$5.50	=	\$9,477,386
Ш.	Off-Peak Energy Charge					
	Energy Revenue Requirement Total Energy (kWh)	\$39,866,229 2,343,504,821				
	Total Secondary Energy Charge Fixed Cost Adder	\$0.01701 \$0.01000				
	Proposed Off-Peak Energy Charge	\$0.02701	/kWh			
	Off-Peak % Usage Off-Peak kWh Energy	55.61% 1,303,223,031				
	Off-Peak Revenue	1,303,223,031	x	\$0.02701	=	\$35,200,054
IV.	On-Peak Energy Charge  Total RS Base Revenue Less: Customer Revenue Less: Off-Peak Energy Revenue On-Peak Revenue	\$167,060,471 9,477,386 35,200,054 \$122,383,031				
	Total RS Energy Less: Off-Peak kWh Energy On-Peak kWh Energy	2,343,504,821 1,303,223,031 1,040,281,790				
	Proposed On-Peak Energy Charge	\$0.11764	/kWh			
V.	Revenue Verification	Units	Rate		Revenue	Difference
	On-Peak Off-Peak Customer	1,040,281,790 kWh 1,303,223,031 kWh 1,723,161 Bills	\$0.11764 \$0.02701 \$5.50		\$122,378,750 35,200,054 9,477,386	
	Total	2,343,504,821 kWh			\$167,056,190	(4,281)

RS Rate Design.xls Page 2 of 3

\*Revised after revenue verification

#### KENTUCKY POWER COMPANY RS Rate Design Twelve Months Ended June 30, 2005

KPSC Case No. 2005-00341 Commission Staff First Set Data Request Order Dated September 21, 2005 Item #8-c Page 9 of 54

VI.	Time-of-Day Customer Charges		Standard Cust. Charge	TOD Cust. Charge	Differential		
	Current Charges		\$4.25	\$6.75	\$2.50		
	Proposed Standard Charge Current Differential	\$5.50 \$2.50					
	Proposed RS-LM-TOD	\$8.00					
VII.	RS-TOD Proposed Revenue	Units		Rate		Revenue	
	RS-LM-TOD On-Peak Off-Peak Customer	1,602,966 k 4,063,552 k 2,373 E	(Wh	\$0.11764 /I \$0.02701 /I \$8.00 /I	kWh	\$188,573 109,757 18,984	
	Total	5,666,518 k	:Wh			\$317,314	
VIII.	Revenue  Total RS Revenue Requirement		Base Revenue		Revised Revenue		
	Demand Energy Customer		\$112,227,080 \$39,866,229 \$14,967,162		\$112,013,916 39,790,507 14,938,733		
	Total Less RS-TOD Revenue	_	\$167,060,471 \$317,314		\$166,743,156		
	Revised RS Revenue		\$166,743,157				
IX.	<u>Customer Revenue</u> Customer Charge Revenue		1,720,788	Bills x	\$5,50 /n	no.	\$9,464,334
	Residual Customer Revenue		\$14,938,733	÷	\$9,464,334	=	\$5,474,399
X.	<u>Standard Energy Rates</u> Storage Water Heating Revenue		451,141	kWh x	\$0.02701 /k	(Wh (Off-Pk)	\$12,185
	Residual Customer Revenue First 500 kWh Residual Customer Differential	e e	\$5,474,399 714,122,566 \$0.00767				
	Revised RS Revenue Less: Customer Revenue Less: Storage Water Htg Revenue Less: Residual Customer Revenue		166,743,157 9,464,334 12,185 5,474,399				
	Energy Charge Revenue - All Blocks All kWh		\$151,792,239 2,337,387,162				
	Standard Energy Rate - All Blocks		\$0.06494	/kWh			
	Rates	Energy	Residual Customer	Total			
	First 500 Over 500	0.06494 0.06494	0.00767	0.07261 0.06494			
XI.	RS Revenue Verification	Units		Rate		Revenue	Difference
	First 500 kWh Over 500 kWh Storage Water Heating Customer	714,122,566   1,623,264,596   451,141   1,720,788	⟨₩ħ ⟨₩ħ	\$0.07260 // \$0.06494 // \$0.02701 // \$5.50 //	kWh kWh	\$51,845,298 105,414,803 12,185 9,464,334	
	Total	2,337,838,303	<b>cVV</b> h			\$166,736,620	(6,537)

RS Rate Design.xls Page 3 of 3

#### KENTUCKY POWER COMPANY RS Rate Design Twelve Months Ended June 30, 2005

KPSC Case No. 2005-00341 Commission Staff First Set Data Request Order Dated September 21, 2005 Item #8-c Page 10 of 54

XII.	Revenue Verification - Employee						
	Billed on Employee Rates:	Units		Rate		Revenue	
	All Standard kWh Customer Storage Water Heating	13,646,527 kWh 1,846 Bills 33,944 kWh		\$0.06494 /kWh \$2.75 /mo. \$0 02701 /kWh		\$886,205 5,077 917	
	Total	13,680,471 kWh				\$892,199	
	Time of Day: On-Peak kWh Off-Peak kWh Customer	97,669 kWh 291,495 Bills 171 kWh		\$0.11764 /kWh \$0.02701 /kWh \$0.00 /mo		\$11,490 7,873 0	
	Total	97,840 kWh				\$19,363	
	Total Employee	\$892,199	+	\$19,363	=	\$911,562	
XIII.	Revenue Verification - Employee Discount						
	Billed on Standard Rates:	Units		Rate		Revenue	
	First 500 kWh Over 500 kWh Customer Storage Water Heating	3,886,500 kWh 9,760,027 kWh 7,919 Bills 33,944 kWh		\$0.07260 /kWh \$0.06494 /kWh \$5.50 /mo. \$0.02701 /kWh		\$282,160 633,816 43,555 917	
	Total	13,680,471 kWh				\$960,448	
	Time of Day: On-Peak kWh Off-Peak kWh Customer	97,669 kWh 291,495 kWh 171 Bills		\$0.11764 /kWh \$0.02701 /kWh \$8.00 /mo.		\$11,490 7,873 1,368	
	Total	389,164 kWh				\$20,731	
	Total Employee	\$960,448	+	\$20,731	=	\$981,179	
	Total Employee Discount:	\$981,179	-	\$911,562	=	\$69,617	
XIV.	Residential Summary						
	Schedule	Bills		k₩h		Revenue	Difference
	RS RS-TOD Employee Discount	1,720,788 2,373		2,337,838,303 5,666,518		\$166,736,620 317,314 (69,617)	
	Total Billed	1,723,161		2,343,504,821		\$166,984,317	(\$6,537)

SGS Rate Design.XLS Page 1 of 3

#### KENTUCKY POWER COMPANY SGS Rate Design Twelve Months Ended June 30, 2005

KPSC Case No. 2005-00341 Commission Staff First Set Data Request Order Dated September 21, 2005 Item #8-c Page 11 of 54

1.	Proposed Revenue			Billed & Accrued Revenue		Fuel Revenue		Base Revenue		
	Demand Energy Customer			\$3,690,695 1,210,677 2,473,264		\$0 -41,948 0		\$3,690,695 1,252,625 2,473,264		_
	Total			\$7,374,636		-\$41,948		\$7,416,584		
	Less: SGS-TOD			\$3,106		(\$19)		\$3,125		
	SGS - Excl. TOD Demand Energy Customer Total			\$3,689,141 1,210,167 2,472,222 \$7,371,530		\$0 -41,929 0 -\$41,929		\$3,689,141 1,252,096 2,472,222 \$7,413,459		
	iotai			Ψ1,011,000		-φτι,υ2υ		Ψ7,-101-10		
11.	Non-Metered Customer Charge									
	Meter Plant (370) Net Plant/Gross Plant Percentage Depreciated Meter Plant Return on Rate Base Income GRCF	\$3,791,663 69.00% 2,616,331 11.78% 308,204 1.665645			Less: Adj. C / Bills	mer Base Reve Meter Plant Re Meter O&M Ex Meter Reading ustomer Reven	evenu kpens J Expe lue	e (586 & 597) ense (902)		\$2,473,264 513,358 104,668 203,075 1,652,163 221,360
	Meter Plant Revenue	513,358			Propos	sed Non-Meter	ed Cı	istomer Charge		7.46
					U	se:				\$7.50
111.	Standard Customer Charge Customer Revenue Less: Non-Metered Customer Rev. Residual Customer Revenue	\$2,472,222 124,253 \$2,347,969	. 1	204,721	Bills		=	\$11.47		
							Use:	\$11.50	/mo	
	Standard Non-Metered	\$11.50 \$7.50	x x	204,721 16,567			==			\$2,354,292 \$124,253
IV.	Energy Charges	Current <u>Rate</u>		Overall Increase		Proposed <u>Rate</u>		<u>Units</u>		
	Over 500 kWh Charge	0.04114	×	19.21%	=	0.04904	x	31,572,306	=	\$1,548,306
	Revenue Requirement Less: Standard Customer Revenue Less: Non-Metered Customer Revenue Less: Over 500 kWh Charge Revenue	\$7,413,459 2,354,292 124,253 1,548,306 \$3,386,608								
	First 500 kWh Charge	\$3,386,608	1	39,007,247	=	\$0.08682				
V.	Revenue Verification	<u>Units</u>		Rate		Revenue		Difference		
	Energy - First 500 kWh - Over 500 kWh Standard Customer Non-Metered Customer	39,007,247 31,572,306 204,721 16,567	kWh Bills	\$0.08682 \$0.04904 \$11.50 \$7.50	/kWh /mo	\$3,386,609 \$1,548,306 2,354,292 124,253				
	Total Base Revenue					\$7,413,460		\$1		

SGS Rate Design XLS Page 2 of 3

#### KENTUCKY POWER COMPANY SGS Rate Design Twelve Months Ended June 30, 2005

KPSC Case No. 2005-00341 Commission Staff First Set Data Request Order Dated September 21, 2005 Item #8-c Page 12 of 54

#### VI. Off-Peak Energy Charge

Energy Revenue Requirement	\$1,252,625	1	70,611,070 kwh	\$0.01774
Fixed Cost Adder				0.01000
Calculated Off-Peak Energy Charge				\$0.02774
Use: Residential Off-Peak Energy Charge				\$0.02701
Off-Peak % Usage Off-Peak kWh				55.28% 39,033,799
Off-Peak Revenue				\$1,054,303

#### VII. On-Peak Energy Charge

Total SGS Base Revenue	\$7,416,584
Less: Standard Customer Revenue	2,354,292
Non-Metered Customer Revenue	124,253
Time-of-Day Customer Revenue	1,087
Time-of-Day Off-Peak Revenue	1,054,303
On-Peak Revenue	\$3,882,649
On-Peak kWh Energy	31,577,271
Proposed On-Peak Energy Charge	\$0.12296 /kWh

VIII	Povenue	Verification
VIII.	Revenue	verification

Revenue Vernication	<u>Units</u>	Rate	Revenue	Difference
On-Peak	31,577,271 kWh	\$012295 •	\$3,882,425	
Off-Peak	39,033,799 kWh	\$0.02701	1,054,303	
Standard Customer	204,721 Bills	\$11.50	2,354,292	
Non-Metered Customer	16,567 Bills	\$7.50	124,253	
Time-of-Day Customer Charge	72 Bills	\$15.10	1,087	
Total Base Revenue			\$7,416,360	(\$224)

<sup>\*</sup>Revised after revenue verification.

#### IX. Revenue From Existing TOD Customers

200 705	<u>Units</u>	<u>Rate</u>	Proposed <u>Revenue</u>
SGS-TOD			
On-Peak Energy	12,369	\$0.12295	1,521
Off-Peak Energy	19,148	\$0.02701	517
Customer	72	\$15.10 *	1,087
Total			\$3,125

<sup>\*</sup>Use current

SGS Rate Design.XLS Page 3 of 3

X. Rate Design Reclassification Adjustment

Energy Charge Adjustments to Meet Target Revenue:

#### KENTUCKY POWER COMPANY SGS Rate Design Twelve Months Ended June 30, 2005

KPSC Case No. 2005-00341 Commission Staff First Set Data Request Order Dated September 21, 2005 Item #8-c Page 13 of 54

\$0.08762

\$0.04984

Proposed Billing Determinant Summary	Proposed	Rate Design Reclassification (To SGS From MGS)	Adjusted <u>Proposed</u>	
Energy - First 500 kWh	39,007,247	14,553,857	53,561,104 kWh	
- Over 500 kWh	31,572,306	26,678,117	58,250,423 kWh	
Standard Customer	204,721	37,154	241,875 Bills	
Non-Metered Customer	16,567	0	16,567 Bills	
		Proposed <u>Rates</u>	Adj. To <u>Meet Target</u>	Adjusted <u>Rates</u>

\$0.08682

\$0.04904

0.00080

0.00080

Reclassification Revenue Verification	<u>Units</u>	<u>Rate</u>	Revenue	Target Revenue	Difference
	Onics	Mate	revenue	revenue	Difference
Energy - First 500 kWh	53,561,104 kWh	\$0.08761 /kWh*	\$4,692,488		
- Over 500 kWh	58,250,423 kWh	\$0.04984 /kWh	\$2,903,201		
Standard Customer	241,875 Bills	\$11.50 /mo	2,781,563		
Non-Metered Customer	16,567 Bills	\$7.50 /mo	124,253		
T.15				4222241 Street of 14 Health Marie	
Total Base Revenue			\$10,501,505	\$10,502,122	(\$617)

MGS Rate Design.XLS Page 1 of 5

## KENTUCKY POWER COMPANY MGS Rate Design Twelve Months Ended June 30, 2005

KPSC Case No. 2005-00341 Commission Staff First Set Data Request Order Dated September 21, 2005 Item #8-c Page 14 of 54

	TWOITE MONE	ilo Eliaca valle ou, 2000	,		age 14 or
Proposed Revenue		Billed & Accrued <u>Revenue</u>	Fuel <u>Revenue</u>	Base <u>Revenue</u>	
Secondary		a Charles Suddan care of the Suns			
Demand		\$31,635,529	\$0	\$31,635,529	
Energy		10,290,814	-352,468	10,643,282	
Customer		1,828,336	0	1,828,336	
Total		\$43,754,679	-\$352,468	\$44,107,147	
Secondary TOD		\$132,848	L\$1,172	\$134,020	
Secondary LM-TOD		\$89,571	-\$952	\$90,523	
Secondary AF		\$75,261	-\$583	\$75,844	
Occasion Foot TOP IN TOP and A	_				
Secondary - Excl. TOD, LM-TOD, and Al Demand	<u>r</u>	\$31,420,300	<b>*</b> 0	\$31,420,300	
		10,220,802	\$0 -349,761		
Energy		1,815,897	-349,761 0	10,570,563 1,815,897	
Customer			-\$349,761		
Total		\$43,456,999	-\$349,761	\$43,806,760	
Primary				****	
Demand		\$864,029	\$0	\$864,029	
Energy		351,146	-12,132	363,278	
Customer		86,072	0	86,072	
Total		\$1,301,247	-\$12,132	\$1,313,379	
Subtransmission					
Demand		\$156,468	\$0	\$156,468	
Energy		68,748	-2,545	71,293	
Customer		99,510	0	99,510	
Total		\$324,726	-\$2,545	\$327,271	
Total MGS - Excl. TOD, LM-TOD, AF					
Demand		\$32,440,797	\$0	\$32,440,797	
Energy		10,640,696	-364,438	11,005,134	
Customer		2,001,479	0	2,001,479	
Total		\$45,082,972	-\$364,438	\$45,447,410	
Billing Determinant Summary					
		Secondary	<u>Primary</u>	Subtransmission	
Standard Billing Demand		2,564,381	68,856	13,003	
Mining Minimum Billing Demand		3,840	7,791	8,845	
First 200 kWh per kW		409,640,852	14,136,074	2,684,041	
Over 200 kWh per kW		179,004,069	6,073,390	1,357,286	
Bills		134,804	1,039	240	
Proposed Customer Charges and Revenu	<u>ie</u>				
	Customer		Full Cost	Current	Proposed
Proposed Customer Charge	Revenue	Bills	<u>Rate</u>	<u>Rate</u>	Rate*
Secondary	\$1,815,897	134,804	\$13,47	\$10.80	\$13.
Primary	86,072	1,039	82.84	\$16.20	\$21.
Subtransmission	99,510	240	414.63	\$119.00	\$153.
				********	e no comentar do com
Total	\$2,001,479	136,083			
* Minimum of full cost or 1.5 x overall in	ncrease of 19.21%.				
	Proposed		Customer		
Proposed Customer Revenue	Rate	Bills	Revenue		
Secondary	\$13.50	134,804	\$1,819,854		
Primary	\$21.00	1,039	21,819		
Subtransmission	\$153.00	240	36,720		
	7.00.00		00,120		
Total		136,083	\$1,878,393		

MGS Rate Design.XLS Page 2 of 5

#### KENTUCKY POWER COMPANY MGS Rate Design Twelve Months Ended June 30, 2005

KPSC Case No. 2005-00341 Commission Staff First Set Data Request Order Dated September 21, 2005 Item #8-c Page 15 of 54

\$0.05213

\$70,750

\$39,803,003

#### IV.

IV. Proposed Demand Charges and Revenue					-
Proposed Demand Charge					
Demand Revenue Requirement	\$32,440,797				
	<u>Units</u>	Current <u>Rate</u>	Current <u>Revenue</u>	Proposed Revenue	Initial Proposed <u>Rate</u>
Standard Demand Mining Minimum Demand	2,646,240 20,476	\$1.16 \$4.82	\$3,069,638 98,694	\$31,430,261 \$1,010,536	\$11.88 \$49.35
			\$3,168,332	\$32,440,797	
	Current <u>Rate</u>	19.21% <u>Increase</u>	Revised Proposed <u>Rate</u>		
Standard Demand Mining Minimum Demand	\$1.16 \$4.82	\$0.22 \$0.93	\$1.38 \$5.75		
	Secondary <u>Rate</u>	Loss <u>Factor</u>	Proposed <u>Rate</u>		
Standard Demand Secondary	\$1.38	1.000	\$1,38		
Primary	\$1.38	0.974	\$1.34		
Subtransmission	\$1.38	0.953	\$1.32		
Proposed Demand Revenue	Revised				
	Proposed <u>Rate</u>	<u>Units</u>	Demand <u>Revenue</u>		
Secondary					
Standard Demand Mining Minimum Demand Primary	\$1.38 \$5.75	2,564,381 3,840	\$3,538,846 \$22,080		
Standard Demand Mining Minimum Demand	\$1.34 \$5.75	68,856 7,791	\$92,267 \$44,798		
Subtransmission Standard Demand	\$1.32	13,003	\$17,164		
Mining Minimum Demand	\$5.75	8,845	50,859 \$3,766,014		
V. Proposed Energy Charges and Revenue			\$5,70 <u>0,</u> 014		
1 Toposed Energy Onlarges and Nevertue					
Total Base Revenue	\$45,447,410				
Less: Customer Revenue  Demand Revenue	\$1,878,393 \$3,766,014				
Proposed Energy Revenue	\$39,803,003				
Proposed Energy Charges	<u>Units</u>	Current <u>Charges</u>	Current Energy Revenue	Proposed Energy Revenue	Proposed Charges
Secondary	Orms	Gilaiges	1.040HdG		<u>Unui guo</u>
<= 200 x Demand	409,640,852	\$0.05736	\$23,496,999	\$28,149,963	\$0.06872
> 200 x Demand	179,004,069	\$0.04768	\$8,534,914	\$10,225,030	\$0.05712
Primary	44 400 074	#C 05470	6700 407	6077 000	BO 00000
<= 200 x Demand > 200 x Demand	14,136,074 6,073,390	\$0.05179 \$0.04521	\$732,107 \$274,578	\$877,082 \$328,951	\$0.06205 \$0.05416
2 200 A Demailu	0,010,000	ΨΟ.0432.1	Ψ2171,010	ψυΖυ,συ ι	Ψυ.υυ-10
Subtransmission		00.0.000	0.422		
<= 200 x Demand > 200 x Demand	2,684,041 1,357,286	\$0.04703 \$0.04351	\$126,230 \$59,056	\$151,227 \$70,750	\$0.05634 \$0.05213

1,357,286

\$0.04351

\$59,056

\$33,223,884

> 200 x Demand

Total Energy Revenue

MGS Rate Design.XLS Page 3 of 5

#### KENTUCKY POWER COMPANY MGS Rate Design Twelve Months Ended June 30, 2005

KPSC Case No. 2005-00341 Commission Staff First Set Data Request Order Dated September 21, 2005 Item #8-c Page 16 of 54

VI. Revenue Verification Target Units Rate Difference Revenue Revenue Secondary Demand - Standard 2,564,381 kW \$1.38 /kW \$3,538,846 - Minimum 3,840 kW \$5.75 /kW \$22,080 Energy - <= 200 x Demand 409,640,852 kWh \$0.06872 /kWh \$28,150,519 - > 200 x Demand 179,004,069 kWh \$0.05712 /kWh \$10,224,712 134,804 bills \$13.50 /bill Customer \$1,819,854 **Primary** Demand - Standard 68,856 kW \$1.34 /kW \$92,267 - Minimum 7,791 kW \$5.75 /kW \$44,798 Energy - <= 200 x Demand 14,136,074 kWh \$0.06205 /kWh \$877,143 - > 200 x Demand 6,073,390 kWh \$0.05416 /kWh \$328,935 Customer 1,039 bills \$21.00 /bill \$21,819 Subtransmission Demand - Standard 13,003 kW \$1.32 /kW \$17,164 8,845 kW - Minimum \$5.75 /kW \$50,859 \$151,219 Energy - <= 200 x Demand 2,684,041 kWh \$0.05634 /kWh - > 200 x Demand 1,357,286 kWh \$0.05213 /kWh \$70,755 Customer 240 bills \$153.00 /bill \$36,720 Total Standard MGS Revenue \$45,447,690 \$45,447,410 280 VII. Off-Peak Energy Charge Energy Revenue Requirement \$10,643,282 / 593,304,089 kwh = \$0.01794 Fixed Cost Adder 0.01000 Calculated Off-Peak Energy Charge \$0.02794 Use: \$0.02794 Off-Peak % Usage 49.58% Off-Peak kWh 294,160,167 Off-Peak Revenue \$8,218,835 VIII. On-Peak Energy Charge Total MGS Secondary Base Revenue \$44,107,147 Less: Standard Customer Revenue 1,819,854 Off-Peak Energy Revenue 8,218,835 On-Peak Revenue \$34,068,458 On-Peak kWh Energy 299,143,922 Proposed On-Peak Energy Charge

\$0.11389 /kWh

MGS Rate Design XLS Page 4 of 5

Overal MGS Class Proposed Increase

Proposed Energy Charge

Energy

Customer

Total Base Revenue

Revenue from Recreational Lighting

## KENTUCKY POWER COMPANY MGS Rate Design Twelve Months Ended June 30, 2005

KPSC Case No. 2005-00341 Commission Staff First Set Data Request Order Dated September 21, 2005 Item #8-c Page 17 of 54

		Twelve Months E	Ended June 30, 2005		
IX.	Revenue Verification				
		<u>Units</u>	<u>Rate</u>	Revenue	<u>Difference</u>
	On-Peak	299,143,922 kWh	\$0.11388 *	\$34,066,510	
	Off-Peak	294,160,167 kWh	\$0.02793 *	8,215,893	
	Standard Customer	134,804 Bills	\$13.50	1,819,854	
	Non-Metered Customer	0 Bills	\$0.00	0	
	Total Base Revenue			\$44,102,257	(\$4,890)
	*Revised after revenue verification				
Χ.	Time-of-Day Customer Charges				
			Standard	TOD	Charge
	MGS-TOD		Cust. Charge	Cust. Charge	Differential
	Current Charges		\$10.80	<sup>*</sup> \$11.60	\$0.80
	Proposed Standard Charge Current Differential	\$13.50 \$0.80			
	Proposed MGS-TOD Charge	\$14.30			
	Use:			\$14.30	
	MGS-LM-TOD				
	Separate Meter Customer Charge		Current	Proposed	
			\$3.00	\$3.00	
VI	Boundary From Evipting TOD Customers				
AI.	Revenue From Existing TOD Customers				
				Proposed	
		<u>Units</u>	Rate	Revenue	
	MGS-TOD				
	On-Peak Energy	768,184	\$0.11388	\$87,481	
	Off-Peak Energy Customer	1,204,434 902	\$0.02793 \$14.30	33,640	
	Customer	902	Ψ14.30	12,899	
	Total			\$134,020	
	MGS-LM-TOD				
	On-Peak Energy	509,032	\$0.11388	\$57,969	
	Off-Peak Energy	1,093,594	\$0.02793	30,544	
	Customer	670	\$3.00	2,010	
	Total			\$90,523	
XII.	Recreational Lighting				
	Customer Charge	Use: Proposed	MGS Secondary	\$13.50	
	Current Energy Charge		\$0.05754		

<u>Units</u>

981,039 kWh

880 Bills

13.31% \$0.06520

\$0.06520 /kWh

\$13.50 /mo

Revenue

\$63,964

11,880

\$75,844

Rate

MGS Rate Design.XLS Page 5 of 5

#### KENTUCKY POWER COMPANY MGS Rate Design Twelve Months Ended June 30, 2005

KPSC Case No. 2005-00341 Commission Staff First Set Data Request Order Dated September 21, 2005 Item #8-c Page 18 of 54

#### XIII Rate Design Reclassification Adjustment

Proposed	Billing	Determinant	Summan	u

Demand - Standard	2,564,381	kW
- Minimum	3,840	kW
Energy - <= 200 x Demand	409,640,852	kWh
<ul> <li>&gt; 200 x Demand</li> </ul>	179,004,069	kWh
Customer	134,804	bills

#### Rate Design Reclassification Adjustment (From MGS to SGS)

#### Secondary

Demand - Standard	238,442 kW
- Minimum	0 kW
Energy - <= 200 x Demand	31,114,413 kWh
- > 200 x Demand	10,117,562 kWh
Customer	37,154 bills

#### Adjusted Billing Determinant Summary

#### Secondary

Demand - Standard	2,325,939 kW
- Minimum	3,840 kW
Energy - <= 200 x Demand	378,526,439 kWh
<ul> <li>&gt; 200 x Demand</li> </ul>	168,886,507 kWh
Customer	97,650 bills

Energy Charge Adjustment to Meet Target Revenue:

0.00080

#### XIV. Reclassification Revenue Verification

					Target	
	<u>Units</u>		Rate	Revenue	Revenue	Difference
Secondary						
Demand - Standard	2,325,939	ŔW	\$1.38 /kW	\$3,209,796		
- Minimum	3,840	kW	\$5.75 /kW	\$22,080		
Energy - <= 200 x Demand	378,526,439	kWh	\$0.06951 /kWh*	\$26,311,373		
- > 200 x Demand	168,886,507	kWh	\$0.05792 /kWh	\$9.781,906		
Customer	97,650		\$13.50 /bill	\$1,318,275		
Primary						
Demand - Standard	68,856	kW	\$1.34 /kW	\$92,267		
- Minimum	7.791		\$5.75 /kW	\$44,798		
Energy - <= 200 x Demand	14,136,074	kWh	\$0,06283 /kWh*	\$888,170		
- > 200 x Demand	6,073,390		\$0.05497 /kWh*	\$333.854		
Customer	1,039		\$21.00 /bill	\$21,819		
Subtransmission						
Demand - Standard	13,003		\$1.32 /kW	\$17,164		
- Minimum	8,845	kW	\$5.75 /kW	\$50,859		
Energy - <= 200 x Demand	2,684,041	kWh	\$0.05714 /kWh	\$153,366		
<ul> <li>&gt; 200 x Demand</li> </ul>	1,357,286	kWh	\$0.05292 /kWh*	\$71,828		
Customer	240	bills	\$153.00 /bill	\$36,720		
Total Standard MGS Revenue				\$42,354,275	\$42,358,747	(4,472)

<sup>\*</sup>Revised after revenue verification.

Kentucky Power Company Migration Energy Charge Adjustment Twelve Months Ended June 30, 2005

#### Customers moving from MGS to SGS

	Billing	Initial Proposed	Initial Proposed			
	<u>Units</u>	Rate	Revenue			
Billing on MGS:						
Demand - Standard	238,442	1.38	329,050			
Energy <= 200 x Demand	31,114,413	0.06871	2,137,871			
Energy > 200 x Demand	10,117,562	0.05712	577,915			
Bills	37,154	13.50	501,579			
Total			3,546,415			
Billing on SGS:						
First 500 kWh	14,553,857	0.08682	1,263,566			
Over 500 kWh	26,678,118	0.04904	1,308,295			
Bills	37,154	11.50	427,271			
Total			2,999,132			
Difference:			547,283			
		Energy		Initial		Revised
	Billing	Charge	Allocated	Target	Migrating	Target
	Energy	<u>Adjustment</u>	Difference	Revenue	Revenue	Revenue
	(1)	(2)	(3)	(4)	(5)	(6)=(3+4+5)
Total SGS	111,811,528		89,531	7,413,459	2,999,132	10,502,122
Total MGS	571,663,737		457,752	45,447,410	(3,546,415)	42,358,747
Total	683,475,265	\$ 0.00080	547,283	52,860,869	(547,283)	52,860,869

	Historic Data on Year-End <u>Tariff</u>	Year-End <u>Customer</u>	Historic Data - Restructured <u>Tariff</u>	Year-End Restructured <u>Tariff</u>
	(1)	(2)	(3)	(4)=(3)*(2)/(1)
MGS-Sec to SGS-Sec Billing Demand (kW)	236,188		236,188	238,442
Mining Minimum kW Energy - First 200 kWh per kW	0 30,213,762		0 30,213,762	0 31,114,413
Energy - Over 200 kWh per kW	9,825,102		9,825,102	10,117,562
Energy - Mining Minimum	0		0	0
Energy - First 500 kWh	0		14,132,719	14,553,857 *
Energy - Over 500 kWh	0		25,906,145	26,678,118 •
Total Metered Energy	40,038,864		40,038,864	41,231,975
Bills Customers	35,656 35,798		35,656 35,798	37,154 37,300
MOD O WAS MOD O				
MGS-Sec to MGS-Sec Billing Demand (kW)	2,301,421		2,303,955	2,325,939
Mining Minimum kW	4,651		3,800	3,840
Energy - First 200 kWh per kW	367,558,685		367,569,149	378,526,439
Energy - Over 200 kWh per kW	163,999,619		164,004,650	168,886,507
Energy - Mining Minimum	114,311		98,816	102,884
Total Metered Energy	531,672,615		531,672,615	547,515,830
Bills	93,712		93,712	97,650
Customers	93,938		93,938	97,880
Total MGS-Sec Billing Demand (kW)	2,537,609	2,561,823	2,540,143	2,564,381
Mining Minimum kW	4,651	4,700	3,800	3,840
Energy - First 200 kWh per kW	397,772,447	409,629,899	397,782,911	409,640,852
Energy - Over 200 kWh per kW	173,824,721	178,998,888	173,829,752	179,004,069
Energy - Mining Minimum	114,311	119,017	98,816	102,884
Total Metered Energy	571,711,479	588,747,805	571,711,479	588,747,805
Bills	129,368	134,804	129,368	134,804
Customers	129,736	135,180	129,736	135,180
MGS-Pri				
Billing Demand (kW)	63,938	66,405	66,298	68,856
Mining Minimum kW	4,642	4,812	7,516	7,791
Energy - First 200 kWh per kW Energy - Over 200 kWh per kW	11,710,155 5,231,009	13,855,780 6,468,066	11,918,947 4,911,817	14,136,074 6,073,390
Energy - Over 200 kvvn per kvv Energy - Mining Minimum	94,560	97,971	204,960	212,353
Total Metered Energy	17,035,724	20,421,817	17,035,724	20,421,817
Bills	887	1,039	887	1,039
MGS-Sub				
Billing Demand (kW)	15,751	14,759	13,877	13,003
Mining Minimum kW	4,965	4,570	9,610	8,845
Energy - First 200 kWh per kW	2,945,605	3,039,121	2,600,405	2,684,041
Energy - Over 200 kWh per kW	1,069,320	1,116,681	1,299,720	1,357,286
Energy - Mining Minimum Total Metered Energy	128,450 4,143,375	128,086 4,283,888	243,250 4,143,375	242,561 4,283,888
Bills	218	240	218	240
LGS-Sec	4 000 40:	4 740 011	4 555 515	4044
Billing Demand	1,680,184	1,713,341	1,583,515	1,614,764
Billing Reactive	635 330 044	0 545,794,014	27,269	27,887 * 563,128,318 **
Billing Energy Metered Energy	535,220,944 550,640,729	563,128,318	550,640,729 550,640,729	563,128,318
Bills	8,103	8,322	8,103	8,322
LGS-Pri				
Billing Demand	579,998	631,445	488,735	532,087
Billing Reactive	0	0	75,527	82,141 *
Billing Energy	118,297,858	128,864,399	114,728,005	124,772,297 **
Metered Energy	114,697,501	124,741,547	114,697,501	124,741,547
Compensated Energy	114,728,005	124,772,297	114,728,005	124,772,297
Bills	1,112	1,245	1,112 30,504	1,245 30,750
LGS-Sub	404.074	457 005		440 404
Billing Demand	431,971 0	457,965 0	392,505	416,124
Billing Reactive Billing Energy	107,821,473	114,248,096	33,575 109,627,375	35,609 * 116,269,405 **
Metered Energy	109,627,375	116,269,405	109,627,375	116,269,405
Bills	667	719	667	719
	-			

<sup>\*</sup> Used Metered kWh Ratio \*\* Used Compensated kWh Ratio

**Proposed Picture Tariff Data** 

Kentucky Power Company Reclassification Billing Determinant Adjustment Twelve Months Ended June 30, 2005

	<u>Cu</u>	rrent Picture	l arını Da	<u>.a</u>	Pro	posea Pictu	re rariit D	<u>ata</u>
MGS-Sec to SGS-Sec Billing Demand (kW)	<b>215</b> 234,940	<b>216</b> 0	<u>218</u> 1,248	<u>Total</u> 236,188	<b>215</b> 0	<b>216</b> 0	<b>218</b> 0	<u>Total</u> 0
Mining Minimum kW	0	0	0	0	0	0	0	0
Energy - First 200 kWh per kW	29,974,089	0	239,673	30,213,762	0	0	0	0
Energy · Over 200 kWh per kW	9,671,468	0	153,634	9,825,102	0	0	0	0
Energy - Mining Minimum	0	0	0	0	0	0	0	0
Energy - First 500 kWh	0	0	0	0	14,043,087	0	89,632	14,132,719
Energy - Over 500 kWh	0	0	0	0	25,602,470	0	303,675	25,906,145
Total Metered Energy Bills	39,645,557 35,476	0	393,307 180	40,038,864 35,656	39,645,557 35,476	0	393,307 180	40,038,864 35,656
Customers	35,618	0	180	35,798	35,618	0	180	35,798
MGS-Sec to MGS-Sec	<u>215</u>	216	<u>218</u>	<u>Total</u>	<u>215</u>	216	<u>218</u>	<u>Total</u>
Billing Demand (kW)	2,271,451	28,810	1,160	2,301,421	2,275,106	27,689	1,160	2,303,955
Mining Minimum kW	0	4,651	0	4,651	0	3,800	0	3,800
Energy - First 200 kWh per kW	362,316,675	5,010,169		367,558,685	362,405,328	4,931,900		367,569,149
Energy - Over 200 kWh per kW	160,484,910	3,393,109		163,999,619	160,396,257	3,486,873		164,004,650
Energy - Mining Minimum	0	114,311	0	114,311	0	98,816	0	98,816
Total Metered Energy Bills	522,801,585	8,517,589 997	36	531,672,615	522,801,585	8,517,589		531,672,615
Customers	92,679 92,902	1,000	36	93,712 93,938	92,679 92,902	997 1,000	36 36	93,712 93,938
			30				30	
MGS-Pri	217	220		<u>Total</u>	217	<u>220</u>		<u>Total</u>
Billing Demand (kW)	14,503	49,435		63,938	14,634	51,664		66,298
Mining Minimum kW Energy - First 200 kWh per kW	2 226 545	4,642		4,642 11,710,155	2 229 565	7,516 9,590,382		7,516
Energy - Over 200 kWh per kW	2,326,545 1,711,859	9,383,610 3,519,150		5,231,009	2,328,565	3,201,978		11,918,947 4,911,817
Energy - Mining Minimum	0	94,560		94,560	1,709,839 0	204,960		204,960
Total Metered Energy		12,997,320		17,035,724		12,997,320		17,035,724
Bills	382	505		887	382	505		887
- ···· <b>-</b>					-			
MGS-Sub-236				<u>Total</u>				Total
Billing Demand (kW)				15,751				13,877
Mining Minimum kW				4,965				9,610
Energy - First 200 kWh per kW				2,945,605				2,600,405
Energy - Over 200 kWh per kW				1,069,320				1,299,720
Energy - Mining Minimum				128,450				243,250
Total Metered Energy Bills				4,143,375 218				4,143,375
Lills				210				218
LGS-Sec	<u>240</u>	242		<u>Total</u>	<u>240</u>	242		<u>Total</u>
Billing Demand	1,661,584	18,600		1,680,184	1,565,062	18,453		1,583,515
Billing Reactive	0	0		0	27,269	0		27,269
Billing Energy	527,768,026	7,452,918		535,220,944	542,847,369	7,793,360		550,640,729
Metered Energy Bills	542,847,369	7,793,360 84		550,640,729	542,847,369	7,793,360		550,640,729
	8,019			8,103	8,019	84		8,103
LGS-Pri	<u>244</u>	246		<u>Total</u>	<u>244</u>	246		<u>Total</u>
Billing Demand	578,552	1,446		579,998	487,402	1,333		488,735
Billing Reactive	0	0		0	75,518	9		75,527
Billing Energy	117,724,348	573,510		118,297,858	114,139,945	588,060		114,728,005
Metered Energy Bills	114,109,441	588,060		114,697,501	114,109,441	588,060		114,697,501
Dillo	1,100	12		1,112	1,100	12		1,112
LGS-Sub-248				<u>Total</u>				Total
Billing Demand				431,971				392,505
Billing Reactive				0				33,575
Billing Energy				107,821,473				109,627,375
Metered Energy				109,627,375				109,627,375
Bills				667				667

**Current Picture Tariff Data** 

LGS Rate Design.XLS Page 1 of 5

#### KENTUCKY POWER COMPANY LGS Rate Design Twelve Months Ended June 30, 2005

KPSC Case No. 2005-00341 Commission Staff First Set Data Request Order Dated September 21, 2005 Item #8-c Page 22 of 54

I.	Proposed Revenue		Billed and Accrued <u>Revenue</u>	Fuel <u>Revenue</u>	Base <u>Revenue</u>
	Secondary Demand Energy Customer		\$25,698,882 9,667,005 210,194	\$0 (336,311) 0	\$25,698,882 10,003,316 210,194
	Total		\$35,576,081	(\$336,311)	\$35,912,392
	Secondary LM-TOD		\$173,344	(\$1,770)	\$175,114
	Secondary Excl. LM-TOD Demand Energy Customer		\$25,573,664 9,619,903 209,170	\$0 (334,541) 0	\$25,573,664 9,954,444 209,170
	Total		\$35,402,737	(\$334,541)	\$35,737,278
	Primary Demand Energy Customer		\$4,843,400 2,078,148 92,213	\$0 (74,106) 0	\$4,843,400 2,152,254 92,213
	Total		\$7,013,761	(\$74.106)	\$7,087,867
	Subtransmission Demand Energy Customer		\$3,523,513 1,901,774 340,053	\$0 (69,073) 0	\$3,523,513 1,970,847 340,053
	Total		\$5,765,340	(\$69,073)	\$5,834,413
	Transmission Demand Energy Customer		\$0 0 0	\$0 0 0	\$0 0 0
	Total		\$0	\$0	\$0
	Total LGS Demand Energy Customer		\$33,940,577 13,599,825 641,436	\$0 (477,720) 0	\$33,940,577 14,077,545 641,436
	Total		\$48,181,838	(\$477,720)	\$48,659,558
11.	Billing Determinant Summary	Secondary	Primary	<u>Subtransmission</u>	Transmission
	Billing Demand Billing Reactive Billing kWh Bills	1,614,764 27,887 563,128,318 8,322	532,087 82,141 124,772,297 1,245	35,609 116,269,405 719	0 0 0 0

LGS Rate Design.XLS Page 2 of 5

#### KENTUCKY POWER COMPANY LGS Rate Design Twelve Months Ended June 30, 2005

KPSC Case No. 2005-00341 Commission Staff First Set Data Request Order Dated September 21, 2005 Item #8-c Page 23 of 54

#### III. Proposed Customer Charges & Revenue

	Proposed Customer Charge	Customer <u>Revenue</u>		<u>Bills</u>	Full Cost <u>Rate</u>		Use: Current <u>Rate</u>
	Secondary Primary Subtransmission Transmission	\$210,194 92,213 340,053 0		8,322 1,245 719 0	\$25.26 \$74.07 \$472.95		\$85.00 \$127.50 \$535.50 \$535.50
	Total	\$642,460		10,286			
	Proposed Customer Revenue	Proposed <u>Rate</u>		Bills	Customer <u>Revenue</u>		
	Secondary Primary Subtransmission Transmission Total	\$85.00 \$127.50 \$535.50 \$535.50		8,322 1,245 719 0	\$707,370 158,738 385,025 0 \$1,251,133		
IV.	Proposed Excess KVA Charges & Reve	nue		Excess			
	Proposed KVA Revenue	Rate		KVA	Revenue		
	Secondary Primary Subtransmission Transmission	\$2.97 \$2.97 \$2.97 \$2.97		27,887 82,141 35,609 0	\$82,824 243,959 105,759 0		
	Total			145,637	\$432,542		
V.	Proposed Demand Charges and Revenu	ıe					
	Current Secondary Charge:	\$2.97	x	Overall Increase of	19.21%	=	\$3.54
	Demand Charges	Secondary <u>Rate</u>		Loss <u>Factor</u>	Proposed Demand <u>Rate</u>		
	Secondary Primary Subtransmission Transmission	\$3.54 \$3.54 \$3.54 \$3.54		1:000 0.974 0.953 0.939	\$3.54 \$3.45 \$3.37 \$3.32		
	Proposed Demand Revenue	Billing <u>Demand</u>		Proposed <u>Rate</u>	Demand <u>Revenue</u>		
	Secondary Primary Subtransmission Transmission	1,614,764 532,087 416,124 0		\$3.54 \$3.45 \$3.37 \$3.32	\$5,716,265 1,835,700 1,402,338 0		
	Total	2,562,975			\$8,954,303		

LGS Rate Design.XLS Page 3 of 5

#### KENTUCKY POWER COMPANY LGS Rate Design Twelve Months Ended June 30, 2005

KPSC Case No. 2005-00341 Commission Staff First Set Data Request Order Dated September 21, 2005 Item #8-c Page 24 of 54

VI. Pr	oposed	Energy	Charges	and	Revenue
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Proposed Energy Cha	rges and Revenu				
Loss Adjusted Energy		Billing <u>Energy</u>	Loss <u>Factor</u>	Loss Adj <u>Energy</u>	
Secondary Primary Subtransmission Transmission		563,128,318 124,772,297 116,269,405	1.000 0.975 0.960 0.948	563,128,318 121,652,990 111,618,629 0	
Total		804,170,020		796,399,937	
Equipment Credit Rev	enue	Billing Energy	Equipment <u>Credit</u>	Credit <u>Revenue</u>	
Secondary Primary Subtransmission Transmission		563,128,318 124,772,297 116,269,405 0	(0.00604) (0.01632) (0.01980)	0 (753,625) (1,897,517) 0	
Total		804,170,020		(\$2,651,142)	
Total Revenue Less: Customer Rev Excess KVAR Demand Reve Equipment Cre	Revenue nue	\$48,659,558 1,251,133 432,542 8,954,303 (2,651,142)			
Energy Revenue Loss Adjusted Billing	Energy	\$40,672,722 796,399,937			
Secondary Energy Cl	harge	\$0.05107			
	Secondary <u>Rate</u>	Loss <u>Factor</u>	Energy <u>Rate</u>	Equipment <u>Credit</u>	Proposed <u>Rate</u>
Secondary Primary Subtransmission Transmission	\$0.05107 0.05107 0.05107 0.05107	1.000 0.975 0.960 0.948	\$0.05107 \$0.04979 \$0.04903 \$0.04841	0.00000 (0.00604) (0.01632) (0.01980)	\$0.05107 \$0.04375 \$0.03271 \$0.02861

LGS Rate Design.XLS Page 4 of 5

#### KENTUCKY POWER COMPANY LGS Rate Design Twelve Months Ended June 30, 2005

KPSC Case No. 2005-00341 Commission Staff First Set Data Request Order Dated September 21, 2005 Item #8-c Page 25 of 54

VII.	Revenue Verification	on	<u>Units</u>	Rate	Revenue
	Secondary	Demand Excess KVA Energy Customer	1,614,764 kW 27,887 KV 563,128,318 kW 8,322 Bill	'A 2.97 /KVA /h 0.05107 /kWh	
		Total Billed			\$35,265,422
	Primary	Demand Excess KVA Energy Customer Total Billed	532,087 kW 82,141 KV 124,772,297 kW 1,245 Bill	'A 2.97 /KVA /h 0.04374 /kWh	,
	Subtran	Demand Excess KVA Energy Customer	416,124 kW 35,609 KV 116,269,405 kW 719 Bill	'A 2.97 /KVA In 0.03274 /kWh	•
		Total Billed			\$5,699,782
	Tran	Demand Excess KVA Energy Customer	0 kW 0 KV 0 kW 0 Bill	'A 2.97 /KVA In 0.02861 /kWh	
		Total Billed			\$0
	Total Tariff LGS				\$48,661,141
	Target				\$48,659,558
	Difference				\$1,583
	*Revised after reve	nue verification			
VIII	Off-Peak Energy C	harge For LM-TOD			
	Secondary Energy	y Revenue Reqt	\$10,003,316	/ 566,107,473 kwh	<b>\$0.01767</b>
	Fixed Cost Adder				0.01000
	Calculated Off-Pe	ak Energy Charge			\$0.02767
	Use:				\$0.02767
	Off-Peak % Usage Off-Peak kWh	Э			49.69% 281,298,803
	Off-Peak Revenue	Э			\$7,783,538

LGS Rate Design.XLS Page 5 of 5

#### KENTUCKY POWER COMPANY LGS Rate Design Twelve Months Ended June 30, 2005

KPSC Case No. 2005-00341 Commission Staff First Set Data Request Order Dated September 21, 2005 Item #8-c Page 26 of 54

#### IX. On-Peak Energy Charge

Total LGS Secondary Base Revenue	\$35,912,392
Less: Customer Revenue	707,370
Time-of-Day Customer Revenue	7,853
Off-Peak Energy Revenue	7,783,538
On-Peak Revenue	\$27,413,631
On-Peak kWh Energy	284,808,670

Proposed On-Peak Energy Charge

\$0.09625 /kWh

#### X. Revenue Verification

110101	140 70 1110 4110 11	<u>Units</u>	Rate	Revenue	<u>Difference</u>
On-Pe	eak	284,808,670 kWh	\$0.09625	\$27,412,834	
Off-Pe	eak	281,298,803 kWh	\$0.02767	7,783,538	
Custo	omer	8,322 Bills	\$85.00	707,370	
Total	Base Revenue			\$35,903,742	(\$8,650)

<sup>\*</sup>Revised after revenue verification

#### XI. Revenue From Existing TOD Customers

	<u>Units</u>	Rate	Proposed <u>Revenue</u>
LGS-LM-TOD		#0.0000F	#440.0F4
On-Peak Energy	1,236,929	\$0.09625	\$119,054
Off-Peak Energy	1,742,226	\$0.02767	48,207
Customer	1,742,226 96	\$81.80 *	7,853
Total			\$175,114

<sup>\*</sup>Use Current

1.	Proposed Revenue		Billed and Accrued <u>Revenue</u>	Fuel <u>Revenue</u>	Base <u>Revenue</u>
	Demand Energy	,	\$27,996,890 15,864,860	\$0 (570,449)	\$27,996,890 16,435,309
	Customer		369,253	0	369,253
	Total		\$44,231,003	(\$570,449)	\$44,801,452
11.	Billing Determinant Summary	Secondary	<u>Primary</u>	Subtransmission	Transmission
	On-Peak Billing Demand Off-Peak Excess Billing Demand Billing Reactive Billing kWh Bills	0 0 0 0	517,778 2,854 43,209 225,424,236 346	1,757,249 9,791 427,412 708,227,374 639	72,166 2,324 7,369 26,576,043 24
111.	Proposed Customer Charges & Re	venue			
	Proposed Customer Charge	Customer <u>Revenue</u>	<u>Bills</u>	Full Cost <u>Rate</u>	Use: Current <u>Rate</u>
	Secondary Primary Subtransmission Transmission	0 37,870 311,125 20,258	0 346 639 24	\$109.45 \$486.89 \$844.08	\$276 \$276 \$662 \$1,353
	Total	\$369,253	1,009		
	Proposed Customer Revenue		Proposed <u>Rate</u>	<u>Bills</u>	Customer <u>Revenue</u>
	Secondary Primary Subtransmission Transmission		\$276.00 \$276.00 \$662.00 \$1,353.00	0 346 639 24	0 95,496 423,018 32,472
	Total			1,009	\$550,986
IV.	Proposed Excess KVAR Charges 8	& Revenue			
	Proposed KVAR Revenue	Use: CIP-TOD Proposed Rate	Excess KVAR	Revenue	
	Secondary Primary Subtransmission Transmission	\$0.72 \$0.72 \$0.72 \$0.72	0 43,209 427,412 7,369	0 31,110 307,737 5,306	
	Total		477,990	\$344,153	
V.	Proposed Off-Peak Excess Demar	d Charges and Revenue			
		Off-peak Excess <u>Demand</u>	Proposed <u>Rate</u>	<u>Revenue</u>	
	Cacandany	0	\$5.00	0	
	Secondary Primary	0 2,854	\$5.00 \$3.46	0 9,875	
	Subtransmission	9,791	\$0.93	9,106	
	Transmission	2,324	\$0.80	1,859	
	Total	14,969		\$20,840	

VI.	Proposed Energy Charges and Rever			
	Loss Adjusted Energy	Billing <u>Energy</u>	Loss <u>Factor</u>	Loss Adj <u>Energy</u>
	Secondary Primary Subtransmission Transmission	0 225,424,236 708,227,374 26,576,043	1.000 0.975 0.960 0.948	0 219,788,630 679,898,279 25,194,089
	Total	960,227,653		924,880,998
	Energy Revenue Shortfall due to < Full Cost Demand	16,435,309 3,563,300		
	Energy Revenue Loss Adjusted Billing Energy	\$19,998,609 924,880,998		
	Secondary Energy Charge	\$0.02162		
		Secondary <u>Rate</u>	Loss <u>Factor</u>	Proposed <u>Rate</u>
	Secondary Primary Subtransmission Transmission	0.02162 0.02162 0.02162 0.02162	1.000 0.975 0.960 0.948	0.02162 0.02108 0.02076 0.02050
	Proposed Energy Revenue	Billing Energy	Proposed <u>Rate</u>	Revenue
	Secondary Primary Subtransmission Transmission	0 225,424,236 708,227,374 26,576,043	\$0.02162 \$0.02108 \$0.02076 \$0.02050	0 4,751,943 14,702,800 544,809
	Total	960,227,653		\$19,999,552
VII.	Proposed On-Peak Demand Charges	and Revenue		
	Calculation of Loss Adj Demand	Billing <u>Demand</u>	Loss <u>Factor</u>	Loss Adj <u>Demand</u>
	Secondary Primary Subtransmission Transmission	0 517,778 1,757,249 72,166	1.000 0.974 0.953 0.939	0 504,316 1,674,658 67,764
	Total	2,347,193		2,246,738
	Equipment Credit Revenue	Billing <u>Demand</u>	Equipment <u>Credit</u>	Credit <u>Revenue</u>
•	Secondary Special - Primary Primary Subtransmission Transmission	0 6,735 517,778 1,757,249 72,166	0.00 (0.51) (1.46) (4.01) (5.27)	\$0 -\$3,435 -\$755,956 -\$7,046,568 -\$380,315
	Total	2,347,193		(\$8,182,839)

QP Rate Design.XLS Page 3 of 4

Total

#### KENTUCKY POWER COMPANY QP Rate Design Twelve Months Ended June 30, 2005

\$44,801,452

2,347,193

KPSC Case No. 2005-00341 Commission Staff First Set Data Request Order Dated September 21, 2005 Item #8-c Page 29 of 54

#### VII. Proposed On-Peak Demand Charges and Revenue (continued)

Total Required Base Revenue

Less: Customer Revenue	\$550,986				
Excess KVAR Revenue	344,153				
Off-peak Excess Revenue	20,840				
Energy Revenue	16,435,309				
Equipment Credit Revenue	(8,182,839)				
Demand Revenue	\$35,633,003				
Loss Adjusted Billing Demand	2,246,738				
Full Cost Demand Charge	\$15.86				
% of Full Cost 90%	\$14.27				
	Secondary	Loss	Demand	Equipment	Proposed
Demand Charges	Rate	<u>Factor</u>	Rate	Credit	Rate
Secondary	\$14.27	1.000	\$14.27	0.00	\$14.27
Primary	\$14.27	0.974	\$13.90	(1.46)	\$12.44
Subtransmission	\$14.27	0.953	\$13.60	(4.01)	\$9.59
Transmission	\$14.27	0.939	\$13.40	(5.27)	\$8.13
Proposed On-Peak Demand Revenue	:				
	On-Peak	Proposed			
	Demand	Rate	Revenue		
Secondary	0	\$14.27	0		
Primary	517,778	\$12.44	6,441,158		
Subtransmission	1,757,249	\$9.59	16,852,018		
Transmission	72,166	\$8.13	586,710		

\$23,879,886

QP Rate Design.XLS Page 4 of 4

#### KENTUCKY POWER COMPANY QP Rate Design Twelve Months Ended June 30, 2005

KPSC Case No. 2005-00341 Commission Staff First Set Data Request Order Dated September 21, 2005 Item #8-c Page 30 of 54

VIII. Revenue Verifi	cation	<u>Units</u>	Rate	Revenue	Target	Difference
Secondary	On-Peak Demand Off-peak Excess Excess KVAR Energy Customer	0 kW 0 kW 0 KVAR 0 kWh 0 Bills	\$14.27 /kW 5.00 /kW 0.72 /KVAR 0.02162 /kWh 276.00 /Mo	\$0 0 0 0 0		
	i otai biileu			φυ		
Primary	On-Peak Demand Off-peak Excess Excess KVAR Equip. Credit Energy Customer	517,778 kW 2,854 kW 43,209 KVAR 6,735 kW 225,424,236 kWh 346 Bills	\$12.44 /kW 3.46 /kW 0.72 /KVAR -0.51 /kW 0.02107 /kWh * 276.00 /Mo	\$6,441,158 9,875 31,110 -3,435 4,749,689 95,496		
	Total Billed			\$11,323,893		
Subtran	On-Peak Demand Off-peak Excess Excess KVAR Energy Customer	1,757,249 kW 9,791 kW 427,412 KVAR 708,227,374 kWh 639 Bills	\$9.60 /kW * 0.93 /kW 0.72 /KVAR 0.02076 /kWh 662.00 /Mo	\$16,869,590 9,106 307,737 14,702,800 423,018 \$32,312,251		
	Total billed	^		ψ0 <u>Σ</u> ,0 , <u>Σ,</u> μ0 ,		
Tran	On-Peak Demand Off-peak Excess Excess KVAR Energy Customer	72,166 kW 2,324 kW 7,369 KVAR 26,576,043 kWh 24 Bills	\$8.13 /kW 0.80 /kW 0.72 /kVAR 0.02050 /kWh 1,353.00 /Mo	\$586,710 1,859 5,306 544,809 32,472		
	Total Billed			\$1,171,156		
Total Tariff QP				\$44,807,300	\$44,801,452	\$5,848

<sup>•</sup> Revised after revenue verification

KPSC Case No. 2005-00341 Commission Staff First Set Data Request Order Dated September 21, 2005 Item #8-c Page 31 of 54

#### KENTUCKY POWER COMPANY CIP Rate Design Twelve Months Ended June 30, 2005

	I Welve Months Linded Julie 30, 2003						
1.	Proposed Revenue		Billed and Accrued <u>Revenue</u>	Fuel <u>Revenue</u>	Base <u>Revenue</u>		
	Demand Energy Customer		\$47,870,736 35,725,679 92,824	\$0 -1,295,917 0	\$47,870,736 37,021,596 92,824		
	Total		\$83,689,239	(\$1,295,917)	\$84,985,156		
11.	Billing Determinant Summary		Primary	Subtransmission	Transmission		
	On-Peak Billing Demand Off-Peak Billing Demand Minimum Billing Demand Billing Reactive Billing kWh Bills		0 0 0 0 0	3,187,134 3,177,830 77,268 153,824 1,935,314,378	494,853 545,714 65,467 40,411 246,085,254 36		
III.	Proposed Customer Charges & F	Revenue					
	Proposed Customer Charge	Customer <u>Revenue</u>	<u>Bills</u>	Full Cost <u>Rate</u>	Use: Current <u>Rate</u>		
	Primary Subtransmission Transmission	0 67,107 25,717	0 132 36	\$508.39 \$714.36	\$276 \$662 \$1,353		
	Total	\$92,824	168				
	Proposed Customer Revenue		Proposed <u>Rate</u>	<u>Bills</u>	Customer <u>Revenue</u>		
	Primary Subtransmission Transmission		\$276 \$662 \$1,353	0 132 36	0 87,384 48,708		
	Total			168	\$136,092		
IV.	Proposed Excess KVAR Charge:	s & Revenue					
	Proposed KVAR Revenue	Current <u>Rate</u>	19.21% Increase	Proposed <u>Rate</u>	Excess <u>KVAR</u>	Revenue	
	Primary Subtransmission Transmission	\$0.60 \$0.60 \$0.60	0.12 0.12 0.12	\$0.72 \$0.72 \$0.72	0 153,824 40,411	0 110,753 29,096	
	Total				194,235	\$139,849	
V.	Proposed Off-Peak Demand Cha	arges and Revenue					
		Off-peak <u>Demand</u>	Proposed <u>Rate</u>	Revenue			
	Primary Subtransmission Transmission	0 3,177,830 545,714	\$3.84 \$1.03 \$0.89	0 3,273,165 485,685			
	Total	3,723,544		\$3,758,850			

KPSC Case No. 2005-00341 Commission Staff First Set Data Request Order Dated September 21, 2005 Item #8-c Page 32 of 54

#### VI. Proposed Minimum Demand Charges and Revenue

Calculation of Loss Adj Demand	Maximum <u>Demand</u>	Loss <u>Factor</u>	Loss Adj <u>Demand</u>		
Primary Subtransmission Transmission	0 3,213,228 576,723	1.000 0.978 0.964	0 3,142,537 555,961		
Total	3,789,951		3,698,498		
Equipment Credit Revenue	Maximum <u>Demand</u>	Equipment <u>Credit</u>	Credit Revenue		
Primary Subtransmission Transmission	0 3,187,134 494,853	0.00 (2.77) (4.13)	\$0 (8,828,361) (2,043,743)		
Total	3,681,987		(\$10,872,104)		
Total Demand Revenue Less: Excess KVAR Revenue Equipment Credit Revenue Demand Revenue	\$47,870,736 139,849 (10,872,104) \$58,602,991				
Loss Adjusted Demand  Full Cost Demand Charge % of Full Cost 100%	3,698,498 \$15.85 \$15.85				
Demand Charges	Primary Rate	Loss <u>Factor</u>	Demand <u>Rate</u>	Equipment <u>Credit</u>	Proposed <u>Rate</u>
Primary Subtransmission Transmission	\$15.85 \$15.85 \$15.85	1.000 0.978 0.964	\$15.85 \$15.50 \$15.28	0.00 (2.77) (4.13)	\$15.85 \$12.73 \$11.15
Proposed Minimum Demand Revenue	Minimum <u>Demand</u>	Proposed <u>Rate</u>	<u>Revenue</u>		
Primary Subtransmission Transmission	0 77,268 65,467	\$15.85 \$12.73 \$11.15	0 983,622 729,957		
Total	142,735		\$1,713,579		
VII. Proposed On-Peak Demand Charges	and Revenue				
Calculation of Loss Adj Demand	Billing <u>Demand</u>	Loss <u>Factor</u>	Loss Adj <u>Demand</u>		
Primary Subtransmission Transmission	0 3,187,134 494,853	1.000 0.978 0.964	0 3,117,017 477,038		
Total	3,681,987		3,594,055		
Equipment Credit Revenue	Billing <u>Demand</u>	Equipment <u>Credit</u>	Credit <u>Revenue</u>		
Primary Subtransmission Transmission	0 3,187,134 494,853	0.00 (2.77) (4.13)	\$0 (8,828,361) (2,043,743)		
Total	3,681,987		(\$10,872,104)		

CIP-TOD Rate Design.XLS Page 3 of 4

#### KENTUCKY POWER COMPANY CIP Rate Design Twelve Months Ended June 30, 2005

KPSC Case No. 2005-00341 Commission Staff First Set Data Request Order Dated September 21, 2005 Item #8-c Page 33 of 54

> Equipment Credit

> > 0.00

(2.77) (4.13) Proposed Rate

\$14.78

\$11.68 \$10.12

#### VII. Proposed On-Peak Demand Charges and Revenue (continued)

Total Demand Revenue Less: Excess KVAR Revenue Off-peak Demand Revenue Minimum Demand Revenue Equipment Credit Revenue	\$47,870,736 139,849 3,758,850 1,713,579 (10,872,104)		
Demand Revenue Loss Adjusted Billing Demand	\$53,130,562 3,594,055		
Full Cost Demand Charge % of Full Cost 100%	\$14.78 \$14.78		
Demand Charges	Primary <u>Rate</u>	Loss <u>Factor</u>	Demand <u>Rate</u>
Primary Subtransmission Transmission	\$14.78 \$14.78 \$14.78	1.000 0.978 0.964	\$14.78 \$14.45 \$14.25
Proposed On-Peak Demand Revenue	on-Peak <u>Demand</u>	Proposed <u>Rate</u>	<u>Revenue</u>
Primary Subtransmission Transmission	0 3,187,134 494,853	\$14.78 \$11.68 \$10.12	0 37,225,725 5,007,912
Total	3,681,987		\$42,233,637
VIII. Proposed Energy Charges and Rever	nue		
Loss Adjusted Energy	Billing <u>Energy</u>	Loss <u>Factor</u>	Loss Adj <u>Energy</u>
Primary Subtransmission Transmission	0 1,935,314,378 246,085,254	1.000 0.985 0.973	0 1,906,284,662 239,440,952
Total	2,181,399,632		2,145,725,614
Total Required Base Revenue Less: Customer Revenue Excess KVAR Revenue Off-peak Demand Revenue Minimum Demand Revenue On-peak Demand Revenue	\$84,985,156 \$136,092 \$139,849 \$3,758,850 \$1,713,579 \$42,233,637		
Energy Revenue Loss Adjusted Billing Energy	\$37,003,149 2,145,725,614		
Primary Energy Charge	\$0.01725		
	Primary <u>Rate</u>	Loss <u>Factor</u>	Proposed <u>Rate</u>
Primary Subtransmission	0.01725		

CIP-TOD Rate Design.XLS Page 4 of 4

#### KENTUCKY POWER COMPANY CIP Rate Design Twelve Months Ended June 30, 2005

KPSC Case No. 2005-00341 Commission Staff First Set Data Request Order Dated September 21, 2005 Item #8-c Page 34 of 54

VIII.	Revenue Verifica	ation	<u>Units</u>	<u>Rate</u>	Revenue	<u>Target</u>	Difference
	Primary	On-Peak Demand Off-peak Demand Minimum Demand Excess KVAR Energy Customer Total Billed	0 kW 0 kW 0 kW 0 KVAR 0 kWh 0 Bills	\$14.78 /kW 3.84 /kW 15.85 /kW 0.72 /KVAR 0.01725 /kWh 276.00 /Mo	\$0 0 0 0 0 0		
	Subtran	On-Peak Demand Off-peak Demand Minimum Demand Excess KVAR Energy Customer	3,187,134 kW 3,177,830 kW 77,268 kW 153,824 KVAR 1,935,314,378 kWh 132 Bills	\$11.68 /kW 1.03 /kW 12.73 /kW 0.72 /KVAR 0.01699 /kWh 662.00 /Mo	\$37,225,725 3,273,165 983,622 110,753 32,880,991 87,384 \$74,561,640		
	Tran	On-Peak Demand Off-peak Demand Minimum Demand Excess KVAR Energy Customer	494,853 kW 545,714 kW 65,467 kW 40,411 KVAR 246,085,254 kWh 36 Bills	\$10.11 /kW * 0.89 /kW 11.15 /kW 0.72 /KVAR 0.01677 /kWh * 1,353.00 /Mo	\$5,002,964 485,685 729,957 29,096 4,126,850 48,708 \$10,423,260		
	Total Tariff CIP				\$84,984,900	\$84,985,156	(\$256)

<sup>\*</sup> Revised after revenue verification

#### KENTUCKY POWER COMPANY Equipment Credits Relative to Secondary Twelve Months Ended June 30, 2005

KPSC Case No. 2005-00341 Commission Staff First Set Data Request Order Dated September 21, 2005 Item #8-c Page 35 of 54

Current Billing Demand Summar			Bulk		
	Secondary	Primary	Subtran	Tran	Production
MGS	2,586,385	71,217	19,329		
LGS	1,722,405	631,445	457,965		
QP	1,722,400	517,778	1,757,249	72,166	
CIP	ő	0	3,264,402	560,320	
Total	4,308,790	1,220,440	5,498,945	632,486	
Relative Loss Factor	1.000	0.974	0.953	0.939	
Loss Adj Demand	4,308,790 78%	1,188,709 78%	5,240,495	593,904	
Demand Served by Subtran :	3,360,856	927,193	5,240,495		
Functional Demand Rev	6,997,112	15,636,399	13,380,643	19,846,908	86,728,385
Functional Demand	4,308,790	5,497,499	9,528,544	11,331,898	11,331,898
Functional Cost	1.62	2.84	1.40	1.75	7.65
Full Cost Equipment Credits (Re		ary)			
	Secondary	Primary	Subtran	Total	
Primary	1.62			1.62	
Subtransmission	1.62	2.84		4.46	
Transmission	1.62	2.84	1.40	5.86	
Full Cost Equipment Credits (Re	elative to Primary				
Loss Factor Secondary to Prima	ıry	Primary 0.974	Subtran 0.974	Total	
Subtransmission		2.77		2.77	
Transmission		2.77	1.36	4.13	

TOD and AF Demands	Standar	rd	Other			
	Metered kWh	Billing Demand	Metered kWh	Billing Demand		
MGS-Sec MGS-TOD MGS-LM-TOD MGS-AF	588,747,805	2,566,523	1,972,619 1,602,626 981,039	8,599 6,986 4,277		
LGS-Sec LGS-LM-TOD	563,128,318	1,713,341	2,979,155	9,064		

Equipment Credit.xls Energy Basis

#### KENTUCKY POWER COMPANY Equipment Credits Relative to Secondary Twelve Months Ended June 30, 2005

KPSC Case No. 2005-00341 Commission Staff First Set Data Request Order Dated September 21, 2005 Item #8-c Page 36 of 54

Current Metered Energy Sumr	mary			Bulk	,
	Secondary	Primary	Subtran	Tran	Production
MGS	593,304,089	20,421,817	4,283,888		
l.GS	566,107,473	124,741,547	116,269,405		
QP	0	225,424,236	708,227,374	26,576,043	
CIP	0		1,935,314,378	246,085,254	
Total	1,159,411,562		2,764,095,045	272,661,297	
Relative Loss Factor	1.000	0.975	0.960	0.948	
Loss Adj Energy	1,159,411,562 78%	361,322,910 78%	2,653,531,243	258,482,910	
Energy Served by Subtran \$	904,341,018		2,653,531,243		
Functional Demand Rev	6,997,112	15,636,399	13,380,643	19,846,908	86,728,385
Functional Energy	1,159,411,562	1,520,734,472	3,839,704,131	4,432,748,625	4,432,748,625
Functional Cost	0.00604	0.01028	0.00348	0.00448	0.01957
Full Cost Equipment Credits	Secondary	Primary	Subtran	Total	
Primary	0.00604	•		0.00604	
Subtransmission	0.00604	0.01028		0.01632	
Transmission	0.00604	0.01028	0.00348	0.01980	
TOD and AF Energy	Metered kWh				
MCC C	500 747 005				
MGS-Sec	588,747,805				
MGS-TOD	1,972,619				
MGS-LM-TOD	1,602,626				
MGS-AF	981,039				
Total MGS-Sec	593,304,089				
LGS-Sec	563,128,318				
LGS-LM-TOD	2,979,155				
Total LGS-Sec	566,107,473				

Equipment Credit.xls
Off Peak Excess

# KENTUCKY POWER COMPANY Full Cost Off-Peak Excess Demand Charges Twelve Months Ended June 30, 2005

KPSC Case No. 2005-00341 Commission Staff First Set Data Request Order Dated September 21, 2005 Item #8-c Page 37 of 54

	Demand Loss	Distribu	ution		Bulk		Full Cost
	<u>Factors</u>			Subtran		Production	Charges
Functional Demand Cost		1.62	2.84	1.40	1.75	7.65	
Off-Peak Recovery %		100%	100%	10%	10%1	10%	
Off Peak Demand Cost		1.62	2.84	0.14	0.18	0.77	
Secondary Charge	1.000	1.62	2.84	0.14	0.18	0.77	\$5.55
Primary Charge	0.974		2.77	0.14	0.18	0.75	\$3.84
Subtran Charge	0.953			0.13	0.17	0.73	\$1.03
Transmission Charge	0.939				0.17	0.72	\$0.89

#### KENTUCKY POWER COMPANY

#### TWELVE MONTHS ENDED JUNE 30, 2005

#### COMPOSITE LOSS FACTOR SUMMARY

	M	ETERED	AT GE	NERATION	- LOSS FACTOR   -TO GENERATION		
VOLTAGE	DEMAND	ENERGY	DEMAND	ENERGY	DEMAND	ENERGY	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	
SECONDARY	657,814	3,627,512,222	721,962	3,934,430,243	1.09752	1.08461	
,,,			57,737	406.314.030	1.06908	1.05733	
PRIMARY	54,006	384,284,803		, ,			
SUBTRANSMISSION	345,721	2,742,575,071	361,641	2,857,102,898	1.04605	1.04176	
TRANSMISSION	30,780	281,519,990	31,720	289,576,589	1.03056	1.02862	

VOLTAGE		I									
	- TO SECONDARY - DEMAND ENERGY		TO PRIMARY  DEMAND ENERGY		TO SUBTRAN  DEMAND ENERGY		I TO T	RAN			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	. (9)			
SECONDARŶ	1.00000	1.00000	1.02660	1.02580	1.04920	1.04113	1.06497	1.05443			
PRIMARY	0.97409	0.97485	1.00000	1.00000	1.02202	1.01495	1.03738	1.02791			
SUBTRANSMISSION	0.95310	0.96049	0.97846	0.98527	1.00000	1.00000	1.01503	1.01277			
TRANSMISSION	0.93899	0.94838	0.96397	0.97285	0.98519	0.98739	1.00000	1.00000			

# KENTUCKY POWER COMPANY

# TWELVE MONTHS ENDED JUNE 30, 2005

# GENERATION ENERGY SUMMARY

			METERED			SS FACTOR	s		- LOSS ADJUSTED	
	CLASS	PEAK	OFFPEÁK	TOTAL	PEAK	OFFPEAK	TOTAL	PEAK	OFFPEAK	TOTAL
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	RS - SECONDARY	1,041,118,307	1,304,299,115	2,345,417,422	1.08605	1.08422	1.08503	1,130,702,633	1,414,147,033	2,544,849,666
•	SGS - SECONDARY	31,009,689	38,332,458	69,342,147	1.08520	1.08360	1.08431	33,651,561	41,537,098	75,188,659
•	MGS - SECONDARY	298,759,379	293,748,582	592,507,961	1.08456	1.08326	1.08392	324,023,524	318,205,805	642,229,329
<b>(</b>	MGS - PRIMARY	9,840,055	9,701,509	19,541,564	1.05942	1.05661	1.05802	10,424,762	10,250,695	20,675,457
	MGS - SUBTRAN	2,406,227	2,306,041	4,712,268	1.04209	1.04107	1.04159	2,507,504	760,760	4,908,264
0	LGS - SECONDARY	283,793,390	280,285,529	564,078,919	1.08426	1.08315	1.08371	307,706,362	303,592,218	611,298,580
	LGS - PRIMARY	62,174,434	61,598,073	123,772,507	1.05892	1.05616	1.05754	65,837,474	65,057,258	130,894,732
9	LGS - SUBTRAN	58,620,945	57,971,433	116,592,378	1.04243	1.04144	1.04194	61,108,462	60,373,992	121,482,454
	QP - PRI-CONSOL	747,144	538,835	1,285,979	1.05913	1.05589	1.05777	791,323	568,948	1,360,271
۹	QP - PRIMARY	112,181,182	127,503,571	239,684,753	1.05877	1.05573	1.05715	118,774,276	134,609,294	253,383,570
	QF - SUBTRAN	350,679,770	335,276,276	685,956,046	1.04233	1.04133	1.04184	365,524,431	349,134,007	714,658,438
0	QP - TRAN	15,727,253	19,707,495	35,434,748	1.02876	1.02856	1.02865	16,179,623	20,270,289	36,449,912
	CIP - SUBTRAN	830,014,555	1,105,299,824	1,935,314,379	1.04233	1.04126	1.04172	865,148,786	1,150,904,956	2,016,053,742
9	CIP - TRAN	96,848,810	149,236,432	246,085,242	1.02875	1.02853	1.02861	99,633,086	153,493,591	253,126,677
٠,	MW - SECONDARY	3,113,995	4,134,588	7,248,583	1.08421	1.08296	1.08350	3,376,226	4,477,588	7,853,814
<b>6</b>	OL - SECONDARY	.5,010,485	35,693,545	40,704,030	1.08523	1.08341	1.08363	5,437,538	38,670,764	44,108,302
	SL - SECONDARY	1,022,950	7,190,210	8,213,160	1.08562	1.08361	1.08386	1,110,534	7,791,359	8,901,893
	TOTAL	3,203,068,570	3,832,823,516	7,035,892,086	1.06521	1,06331	1.06418	3,411,938,105	4,075,485,655	7,487,423,760

# KPSC Case No. 2005-00341 Commission Staff First Set Data Request Order Dated September 21, 2005 Item #8-c Page 40 of 54

# Kentucky Power Company MW Rate Design Twelve Months Ended June 30, 2005

t.	Revenue	Billed & Accrued Revenue	Fuel	Base <u>Revenue</u>		
	Demand Energy Customer Total	292,321 125,591 2,898 420,810	0 (4,323) 0 (4,323)	292,321 129,914 2,898 425,133		
11.	Customer Charge					
	Full Cost Customer Charge	\$ 2,898	1	252 b		\$ 11.50 /mo. \$ 22.90 /mo.
	Customer Revenue	252	Bills X	\$22.90 /r	no.	\$ 5,771
111.	Demand Charge					
	Demand Revenue Requirement Monthly Demand (SNCP) Full Cost Demand Charge	\$ 292,321 17,968 16.27				
	Current Minimum Demand Charges Use:	3.05 3.65	X	1.1921%	3.65	
	Minimum kW	2,946				
	Minimum Demand Charge Revenue	\$ 10,753				
IV.	Energy Charge					
	Energy Revenue Requirement Total MW Revenue Requirement Less: Customer Revenue Less: Minimum Demand Revenue Energy Charge Revenue	\$ 425,133 5,771 10,753 \$ 408,609	-			
	Billing kWh	7,196,781				
	Proposed Energy Charge	0.05678				
V.	Revenue Verification	Units	Proposed Charges	Revenue	Target Revenue	Difference
	Energy Demand Customer	7,196,781 2,946 252	\$0.05677 \$ 3.65 \$22.90			
	Total MW Verified Revenues			425,085	425,133	(48)

<sup>\*</sup>Revised after revenue verification

OL Rate Design.xls Page 1 of 2

# Kentucky Power Company OL Rate Design Twelve Months Ended June 30, 2005

KPSC Case No. 2005-00341 Commission Staff First Set Data Request Order Dated September 21, 2005 Item #8-c Page 41 of 54

Lama	Annual	_		Cost	_			
Lamp	Number of		resent	Based		roposed	Annual	Percent
Type & Size	Lamps	Rate	Revenue	Rate	Rate	Revenue	Increase	Increase
(1)	(2)	(3)	(4)=(2*3)	(5)	(6)	(7)=(2*6)	(8)	(9)=(8/4)
High Pressure Sodium								
100 Watt	307,920	\$5.22	\$1,607,342	\$6.32	\$7.60	\$2,340,192	\$732,850	45.59%
150 Watt	203,304	\$6.18	\$1,256,419	\$7.00	\$8.40	\$1,707,754	\$451,335	35.92%
200 Watt	26,856	\$7.89	\$211,894	\$8.42	\$10.10	\$271,246	\$59,352	28.01%
400 Watt	1,668	\$12.75	\$21,267	\$12.06	\$15.35	\$25,604	\$4,337	20.39%
100 Watt Post Top	9,924	\$8.99	\$89,217	\$8.89	\$10.80	\$107,179	\$17,962	20.13%
150 Watt Post Top	528	\$14.69	\$7,756	\$9.52	\$17.65	\$9,319	\$1,563	20.15%
200 Watt Floodlight	21,096	\$9.17	\$193,450	\$9.59	\$11.55	\$243,659	\$50,209	25.95%
400 Watt Floodlight	45,084	\$12.61	\$568,509	\$12.74	\$15.30	\$689,785	\$121,276	21.33%
Metal Halide								
250 Watt Floodlight	111111111111111111111111111111111111111	014.07	£1E 600	644.00	647.05	040.007	00.445	
400 Watt Floodlight	1,092	\$14.37	\$15,692	\$11.06	\$17.25	\$18,837	\$3,145	20.04%
1000 Watt Floodlight	9,660 1,152	\$18.81	\$181,705	\$12.80	\$22.60	\$218,316	\$36,611	20.15%
1000 Watt 1 looding/it	(194) (194)	\$40.37	\$46,506	\$24.14	\$48.55 *	\$55,930	\$9,424	20.26%
Mercury Vapor *	met of continuous to events about a contract	and the second second second			,			
175 Watt	31,692	\$5.36	\$169,869		\$8.40	\$266,213	\$96,344	56.72%
400 Watt	2,184	\$8.95	\$19,547		\$14.00	\$30,576	\$11,029	56.42%
175 Post Top	192	\$6.24	\$1,198		\$9.75 *	\$1,872	\$674	56.25%
Facilities Charge								
Pole	44,904	\$1.80	\$80,827	\$7.75	\$2.30	\$103,279	\$22,452	27.78%
Span	47,172	\$1.00	\$47,172	\$2.06	\$1.30	\$61,324	\$14,152	30.00%
Lateral	744	\$5.35	\$3,980	\$1.58	\$5.35	\$3,980	\$14,132	0.00%
	\$255000 OH, 5750 M, \$250		40,000	Ψ1.00	ΨΟ.ΟΟ	Ψ0,500	ΨΟ	0.0070
Base Revenue						\$6,155,065	\$1,632,714	
Fuel Clause						-\$24,557	Ţ.,==,,·	
Total						\$6,130,508		
Revenue Target						\$6,130,512		
Difference								
Directence						-\$4		
Scale Factor	1.202							

<sup>\*</sup> In process of elimination (2x Increase)

OL Rate Design.xls Page 2 of 2

## Kentucky Power Company OL Rate Design Twelve Months Ended June 30, 2005

KPSC Case No. 2005-00341 Commission Staff First Set Data Request Order Dated September 21, 2005 Item #8-c Page 42 of 54

\$0.03532

Lamp <u>Type &amp; Size</u> (1)	Estimated Installed <u>Cost</u> (2)	Monthly Facility Cost (3)=(2)*FCCR	Annual Maintenance <u>Cost</u> (4)	Consu Annual (5)	imption in kWh  Monthly  (6)	Energy Cost @ \$0.03532 per kWh (7)=(6)*EC	Estimated Monthly <u>Maintenance</u> (8)	Lighting Cost <u>Estimate</u> (9)=(3+7+8)	
High Pressure Sodium (HPS)									
100 Watt 150 Watt 200 Watt 400 Watt 100 Watt Post Top 150 Watt Post Top 200 Watt Floodlight 400 Watt Floodlight  Metal Halide 250 Watt Floodlight	\$243.25 \$244.56 \$275.92 \$321.16 \$527.12 \$525.22 \$348.98 \$364.34	\$3.79 \$3.82 \$4.30 \$5.01 \$6.27 \$6.25 \$5.44 \$5.68	\$13.31 \$13.31 \$13.70 \$13.90 \$14.39 \$14.39 \$14.09	484 704 1,012 2,000 484 704 1,012 2,000	40.3 58.7 84.3 166.7 40.3 58.7 84.3 166.7	\$1 42 \$2.07 \$2.98 \$5.89 \$1.42 \$2.07 \$2.98 \$5.89	\$1.11 \$1.11 \$1.14 \$1.16 \$1.20 \$1.20 \$1.17	\$6.32 \$7.00 \$8.42 \$12.06 \$8.89 \$9.52 \$9.59 \$12.74	
400 Watt Floodlight 1000 Watt Floodlight	\$379.28 \$529.84	\$5.92 \$8.27	\$15.59 \$30.13	1,896 4,540	158.0 378.3	\$5.58 \$13.36	\$1.30 \$2.51	\$12.80 \$24.14	
Fixed Cost CC Rate			Fixed Cost CC Rate <u>Using 20-Yr Inv Life</u> 7.84% 3.05% 1.17% 2.17% 14.23% 1.19%		Outdoor Lighting (OL) Cost of Some Demand Revenue Requirement Energy Revenue Requirement Cust Related Revenue Reqt.  O&M Expenses Payroll Tax Reg. Commission Tax State Income Tax Less: Acct. 598		\$450,657 \$688,282 \$778,538 \$35,355 \$6,297 -\$30,472 \$468,604 \$1,460,053		

Energy Rate (\$/kWh)

SL Rate Design.xls Page 1 of 2

Scale Factor

0.9676

# Kentucky Power Company SL Rate Design Twelve Months Ended June 30, 2005

KPSC Case No. 2005-00341 Commission Staff First Set Data Request Order Dated September 21, 2005 Item #8-c Page 43 of 54

Lamp <u>Type &amp; Size</u> (1)		Rate <u>F</u>	Revenue (4)=(2*3)	Cost E Lamp (5)	Lamp	Rate (7)	Proposed Revenue (8)=(2*5 or 6)	Annual Increase (9)	Percent Increase (10)=(8/4)
		` , ,	. ,	, ,	, ,		, , ,	, ,	, , , ,
Service on Existing		4.50	404.040	<i>5</i> 70		F 00	E47.007	00.004	00.040/
9,500 Lumen HPS	•	4.56 5.10	421,016 3,427	5.79 6.55	n.a.	5.60 6.35	517,037 4,267	96,021 840	22.81% 24.51%
16,000 Lumen HPS 22,000 Lumen HPS		5.10 5.93	3,427 156,694	8.08	n.a. n.a.	7.80	4,267 206,107	49,413	31.53%
50,000 Lumen HPS		8.22	52,181	11.58	n.a.	11.20	71,098	18,917	36.25%
50,000 Lumen nrs	0,340	0.22	52,161	11.56	II.a.	11.20	71,096	10,917	30.23 //
Service on New Wo	od Poles								
9,500 Lumen HPS	5,508	7.19	39,603	5.79	9.27	8.95	49,297	9,694	24.48%
16,000 Lumen HPS	168	7.85	1,319	6.55	10.03	9.70	1,630	311	23.57%
22,000 Lumen HPS		9.17	50,288	8.08	11.56	11.20	61,421	11,133	22.14%
50,000 Lumen HPS	1,476 1	1.47	16,930	11.58	15.06	14.55	21,476	4,546	26.85%
Service on New Met 9,500 Lumen HPS		<u>e Pole</u> 4.63	<u>es</u>	5.79	10.83	14.65	0	0	0.14%
16,000 Lumen HPS		4.63 5.20	0	6.55	11.60	15.20	0	0	0.00%
								-	
22,000 Lumen HPS	768 1		14,746	8.08	13.12	19.20	14,746	0	0.00%
50,000 Lumen HPS	852 2	0.02	17,057	11.58	16.63	20.00	17,040	-17	-0.10%
Subtotal			***************************************			••••••••••••••••••••••••••••••••••••••	\$964,119	\$190,858	
Fuel							-\$4,880		
Total							\$959,239		
Revenue Target							\$959,260		
Difference							-\$21		

SL Rate Design xls Page 2 of 2

#### Kentucky Power Company SL Rate Design Twelve Months Ended June 30, 2005

KPSC Case No. 2005-00341 Commission Staff First Set Data Request Order Dated September 21, 2005 Item #8-c Page 44 of 54

Lamp <u>Type &amp; Size</u> (1)	Estimated Installed <u>Cost</u> (2)	Monthly Facility Cost (3)=(2)*FCCRR	Annual Maintenance <u>Cost</u> (4)	Consump Annual (5)	otion in kWh Monthly (6)	Energy Cost @ \$0.03822 per kWh (7)=(6)*EC	Estimated Monthly <u>Maintenance</u> (8)	Lighting Cost Estimate (9)=(3+7+8)	
High Pressure Sodum (HPS)									
5,800 Lumen	\$254.40	\$3.16	\$13.31	344	28.7	\$1.10	\$1.11	\$5 37	
9,500 Lumen	\$252.55	\$3.14	\$13.31	484	40 3	\$1.54	\$1.11	\$5.79	
16,000 Lumen	\$257.46	\$3.20	\$13.36	704	58 7	\$2 24	\$1.11	\$6.55	
22,000 Lumen	\$299.21	\$3 72	\$13.70	1,012	84.3	\$3.22	\$1.14	\$8.08	
27,000 Lumen	\$327.76	\$4.07	\$13.90	1,012	84.3	\$3.22	\$1.16	\$8 45	
50,000 Lumen	\$326.28	\$4.05	\$13.90	2,000	166.7	\$6.37	\$1.16	\$11.5B	
9,500 Lumen Post Top	\$434.59	\$5.40	\$14 39	484	40.3	\$1.54	\$1.20	\$8.14	

Lamp <u>Type &amp; Size</u> (1)	Lamp <u>Cost</u> (2)	Pole <u>Type</u> (3)	Pole Cost (4)	Estimated Installed Cost (5)	Monthly Facility Cost (6)=(5)*FCCRR	Annual Maintenance	Consumptio Annual (8)		Energy Cost @ \$0.03822 per kWh (10)=(6)*EC	Estimated Monthly <u>Maintenance</u> (11)	Lighting Cost <u>Estimate</u> (12)=(5+10+11)
High Pressure Sodium (	HPS)										
5,800 Lumen	\$254.40		280.08	\$534.48	\$6.64	\$13.31	344	28.7	\$1.10	\$1.11	\$8.85
9,500 Lumen	\$252.55		280.08	\$532 63	\$6.62	\$13 31	484	40.3	\$1.54	\$1.11	\$9.27
16,000 Lumen	\$257.46	New Wood	280.08	\$537.54	\$6.68	\$13.36	704	58.7	\$2 24	\$1.11	\$10.03
22,000 Lumen	\$299.21		280.08	\$579.29	\$7 20	\$13.70	1,012	84.3	\$3.22	\$1.14	\$11.56
50,000 Lumen	\$326 28		280.08	\$606.36	\$7.53	\$13.90	2,000	166.7	\$6 37	\$1.16	\$15.06
High Pressure Sodium (	HPS)										
5,800 Lumen	\$254.40		406.05	\$660.45	\$8.21	\$13.31	344	287	\$1.10	\$1.11	\$10.42
9,500 Lumen	\$252.55	New	406.05	\$658.60	\$8.18	\$13 31	484	40.3	\$1.54	\$1.11	\$10 83
16,000 Lumen	\$257.46	oncrete/Metal	406.05	\$663 51	\$8.24	\$13.36	704	58.7	\$2.24	\$1.11	\$11.60
22,000 Lumen	\$299.21	OURSISHMEIN	406.05	\$705 26	\$8 76	\$13.70	1,012	84.3	\$3 22	\$1.14	\$13.12
50,000 Lumen	\$326.28		406.05	\$732.33	\$9.10	\$13.90	2,000	166.7	\$6.37	\$1.16	\$16.63

		oueer Lightii
	FCCRR	Test Year Er
	20-Yr Inv Life	
		Demand-Rel
Return	7.84%	Energy-Relate
Depreciation	2.91%	Customer-Re
F.I.T.	1.31%	O&M Exper
Prop Taxes, Adm & Gen'l	2.85%	Payroll Tax
Annual Total	14.91%	Reg. Comm
		State Incom
Monthly Total FCCRR	1.24%	Less: Accou
		Accour
		B&A Rev Ex

Street Lighting (SL) Cost of Service Test Year Ended 6/30/2005

	Control of the Contro
Demand-Related Revenue Reqmt	\$121,647
Energy-Related Revenue Reqmt	142,824
Customer-Related Revenue Requirement	
O&M Expenses	129,534
Payroll Tax	2,844
Reg. Commission Tax	1,026
State Income Tax	13,962
Less: Account 585	11,424
Account 596	86,472
B&A Rev Excl Direct Ltg Cost	\$313,941
Class Metered Energy	8,214,856
Energy Rate (\$/kWh)	\$0 03822

NUG Rate Design.xls

Rate @ Transmission

# Kentucky Power Company Tariff NUG Rate Design Twelve Months Ended June 30, 2005

KPSC Case No. 2005-00341 Commission Staff First Set Data Request Order Dated September 21, 2005 Item #8-c Page 45 of 54

\$2.54

\$2.54

Coincident Demands:	Secondary	Primary	Subtran	Bulk Tran
	<u>Demand</u>	<u>Demand</u>	<u>Demand</u>	<u>Demand</u>
Metered				
LGS	1,057,908	234,012	219,864	
QP		377,472	1,166,136	53,904
CIP-TOD			2,753,544	315,456
Total Metered	1,057,908	611,484	4,139,544	369,360
Composite Loss Factors	to Generation		1.04605	1.03054
Loss Adjusted to Genera	tion			
LGS	1,158,684	250,272	230,100	
QP		403,428	1,219,776	55,560
CIP-TOD			2,880,288	325,080
Total Loss Adjusted	1,158,684	653,700	4,330,164	380,640
Functional Billing Demar	nd @ Generation	1,812,384	5,743,824*	6,523,188
* Distribution Load Served by S	Subtransmission System: 78%			
Sales Revenue:	Generation,			
	Distribution &	0	Bulk	T-1-1
	Customer		Transmission	Total
	Revenue	Revenue	Revenue	Revenue
LGS	41,713,594	2,593,0124,04	8,576	48,355,182
QP	36,826,230	3,088,8124,31	5,961	44,231,003
CIP-TOD	70,647,050	5,338,5917,70	3,598	83,689,239
Total	\$149,186,874	\$11,020,415	\$16,068,135	\$176,275,424
Functional Rates:		Subtran	Bulk Tran	<u>Total</u>
Sales Revenue		\$11,020,415	\$16,068,135	
Functional Demand		5,743,8246,52	3,188	
Rate @ Generation		\$1.92	\$2.46	
Rate @ Subtransmission	(Rate @ Gen x 1.04605)	\$2.01	\$2.58	\$4.59

(Rate @ Gen x 1.03054)

<u>Assumpti</u>	<u>ons</u>	<u>Variable</u>	Value
A)	Capital Cost per kW of Capacity	V	\$198 /kW
B)	Weighted Cost of Capital (Workpaper S-2)	R	7.84%
C)	Carrying Charge Rate	CCR	12.44%
D)	Operation & Maintenance Cost per Year (Fixed & Variable)	0	\$2.61 /kW
E)	Line Losses	L	8.60%
F)	Estimated Unit Life	N	30 years
G)	Present Value of Carrying Charge for \$1 Investment for N years	D	1.4219
H)	Fixed Operation and Maintenance Cost Escalation Rate	Ю	2.10%
1)	Construction Cost Escalation Rate	IP	2.10%

# II. Calculation of Present Value of Carrying Charge

$$D = CCR \times \frac{(1+R)^{N} - 1}{R \times (1+R)^{N}}$$

## III. Calculation of Unadjusted Monthly Avoided Cost of Capacity

$$C = \left(\frac{1}{12}\right) \times \left[\frac{\left(D \times V \times \frac{S1}{S2} \times S3\right) + \left(S4 \times S5\right)}{S6}\right]$$

Where:

$$S1 = 1 - \frac{1 + IP}{1 + R}$$

$$S2 = 1 - \left(\frac{1 + IP}{1 + R}\right)^N$$

$$S3 = (1 + IP)^{(T-1)}$$

$$S4 = O \times \begin{pmatrix} 1 + IO \\ 1 + R \end{pmatrix}$$

$$S5 = (1 + IO)^{(T-1)}$$

$$S6 = 1 - \frac{L}{2}$$

#### Calculation for First Year

Τ=	1	
S1 =	0.0532 S4 =	2.4711
S2 =	0.8062 S5 =	1.0000
S3 =	1.0000 S6 =	0.9570

$$C = \left(\frac{1}{12}\right) \times \left[\frac{\left(1.4219 \times 198 \times \frac{0.0532}{0.8062} \times 1\right) + \left(2.4711 \times 1\right)}{0.9570}\right]$$

C =

\$1.83

# Calculation for Second Year

T =	2	
S1 =	0.0532 S4 =	2.4711
S2 =	0.8062 S5 =	1.0210
S3 =	1.0210 S6 =	0.9570

C =

C=

\$1.87

# Calculation for Third Year

T =	3	
S1 =	0.0532 S4 =	2.4711
S2 =	0.8062 S5 =	1.0424
S3 =	1.0424 S6 =	0.9570
	\$1.91	

Three Year Average Avoided Cost of Capacity =

\$1.87

TOD Measurement

Three Year Average Avoided Cost of Capacity = Standard Measurement

\$0.78

KPSC Case No. 2005-00341 Commission Staff First Set Data Request Order Dated September 21, 2005 Item #8-c Page 48 of 54

## Cost Calculations (Support Page 1, Assumptions A & D)

#### I. Fixed Operations & Maintenance Cost per kW (2004 Dollars)

Fixed Operations & Maintenance Cost		12 41 mills/kWh
Hours per Year	X .	8,760 hours
Unit Size	×	84,000 kW
Planned Outage Rate	x	2.00%
Total Fixed O&M Cost		\$182,635 /year
Unit Size	/	84,000 kW
Per Unit Fixed O&M Cost		\$2.17 /kW

## II. Variable Operations & Maintenance Cost per kW (2004 Dollars)

Variable Operations & Maintenance Cost		2.50 mills/kWh
Hours per Year	x	8,760 hours
Unit Size	×	84,000 kW
Planned Outage Rate	×	2.00%
Total Variable O&M Cost		\$36,792 /year
Unit Size	1	84,000 kW
Per Unit Variable O&M Cost		\$0.44 /kW

#### III. Total Operations & Maintenance Cost per kW (2004 Dollars)

Fixed O&M Cost		\$2.17 /kW
Variable O&M Cost	+	0.44 /kW
Total O&M Cost (Page 1, Assumption D)		\$2.61 /kW

ion of Annual Carrying Charge Rate (Page 1, Ass	umption C)		<u>Variable</u>	<u>Value</u>
Weighted Cost of Capital			R	784%
Property Tax Rate:				
Account 4081005		6,869,713		
Electric Plant in Service		1,319,106,897		*****
Property Tax Rate			а	0.52%
Insurance Rate:				
Account 9240000		314,058		
Electric Plant in Service	/	1,319,106,897		
Insurance Rate			р	0.02%
Depreciation Rate			d	1.69%
Composite Tax Rate			ct	39.96%
Book Depreciation			bd	3.33%
Rate on Debt Capital			b	553%
Debt Ratio			dr	60.46%
$CCR = R + a + p + d + \left[ \left( \frac{ct}{1 - ct} \right) \times \left( R + d - bd \right) \right]$	$(1) \times \left(\frac{R - (b \times dr)}{R}\right)$			

CCR =

12.44%

#### Kentucky Power Company Cogen Rate Design Twelve Months Ended June 30, 2005

KPSC Case No. 2005-00341 Commission Staff First Set Data Request Order Dated September 21, 2005 Item #8-c Page 50 of 54

Energy Payment Calculation *		On-Peak	Off-Peak	Non-TOD	
Α.	Potential Loss Savings				
	Primary Losses				6.40%
	Divided by 2		1		2
	Loss Adjustment (Potential Loss Savings)				3.20%
в.	Time-of-Day Energy Payments				
	Avoided Energy Costs (2006-2008 A verage)		3.43	2.22	¢/kWh
	Divided by (1 - Loss Savings) /		0.9680	0.9680	
	Time-of-Day Energy Payments		3.54	2.29	¢/kWh
C.	Non-Time-of-Day Energy Payment				
	Time-of-Day Energy Payments		3.54	2.29	¢/kWh
	Hours per Year	(	3,654	5,106	hours
	Weighted Average of Hourly TOD Payments		12,935	11,693	24,628
	Hours Per Year				8,760
	Non-Time-of- Day Energy Payment				2.81 ¢/kWh

<sup>\*</sup> On-Peak Period is 7am - 9pm, Monday through Friday Off-Peak Period is all other hours

# II. Demand and Energy Loss Calculations \*\*

<u>System</u>	<u>Demand</u>	Energy
Transmission	3.5%	2.9%
Subtransmission	1.4%	1.0%
Primary	3.5%	2.4%
Compound Loss Factor	8.6%	6.4%

<sup>\*\*</sup> Assuming COGEN/SPP Service at Primary

#### Kentucky Power Company Cogen Rate Design Twelve Months Ended June 30, 2005

KPSC Case No. 2005-00341 Commission Staff First Set Data Request Order Dated September 21, 2005 Item #8-c Page 51 of 54

I.	Annual Ca	arrying Charge Rates	<u>Variable</u>	<u>Value</u>
		Fixed Costs O&M		13.1% 2.8%
		Carrying Costs	CC	15.8%
II.	Charges			
		Contingencies		5%
		Stores Expense		17%
		Total Charges on M aterial	MC	22%
		Labor		68%
		Transportation Expense		60%
		Total Charges on Labor	LC	128%
Ш.	Overhead	<u>s</u>		
		Company Construction Overheads	ос	36%

## IV. Monthly Charge on Incremental Material

IM =

Incremental Material Cost

IL =

Incremental Labor Cost (50% of Material) = 0.5 x IM

Monthly Charge on 
$$IM = (1 + OC) \times [(1 + MC) \times IM + (1 + LC) \times IL] \times \frac{CC}{12}$$

Monthly Charge on IM =

4.23% of Incremental Material Cost

Monthly Meter Charges	Incremental <u>Material (IM)</u>	Monthly Charge 4.23%		Average <u>Charge</u>
Standard Measurement				
Single Phase				
Option 2 - Primary - Transformer Rated	251	\$10.62		
Option 2 - Secondary - Self-Contained	22	0.93		
Option 3 - Primary - Transformer Rated	251	10.62		
Option 3 - Secondary - Transformer Rated	251	10.62		
Option 3 - Secondary - Self Contained	22	0.93		
Total		\$ 33.72	/ 5 =	\$6.74
			Use:	\$6.75
Polyphase				
Option 2 - Primary - Transformer Rated	251	\$10.62		
Option 2 - Secondary - Self-Contained	123	5.2		
Option 3 - Primary - Transformer Rated (or Sec. >200 Amps)	251	10.62		
Option 3 - Secondary - Transformer Rated (Below 200 Amps)	251	10.62		
Option 3 - Secondary - Self Contained (Below 200 Amps)	123	5.2		
Total		\$ 42.26	/ 5 =	\$8.45
			Use:	\$8.45
Time-of-Day Measurement				
Single Phase				
Option 2 - Primary - Transformer Rated	260	\$11.00		
Option 2 - Secondary - Self-Contained	88	3.72		
Option 3 - Primary - Transformer Rated	260			
Option 3 - Secondary - Transformer Rated	260	11		
Option 3 - Secondary - Self Contained	22	0.93		
Total		\$ 37.65	/ 5 = Use:	\$7.53 <b>\$7.55</b>
			ose.	ψ1.55
Polyphase				
Option 2 - Primary - Transformer Rated	260	\$11.00		
Option 2 - Secondary - Self-Contained	132			
Option 3 - Primary - Transformer Rated	260			
Option 3 - Secondary - Transformer Rated	260			
Option 3 - Secondary - Self Contained	132	5.58		
Total		\$ 44.16	/ 5 =	\$8.83
			Use:	\$8.85

# AEP SYSTEM EASTERN ZONE ESTIMATED "AVOIDED COSTS" OF ENERGY FOR ASSUMED LEVELS OF COGENERATION PURCHASES 2005 - 2010

(Cents Per Kilowatt-Hour)

	ASSUMED	COGENERATION	PURCHAS	SE LEVEL	
	Fir	st	Seco	ond	
	100	)-MW	100	-MW	
	Blc	ock	Blo	Block	
	Peak	Off-Peak	<u>Peak</u>	Off-Peak	
2005	3.01	2.30	2.98	2.29	
2006	3.69	2.37	3.66	2.36	
2007	3.40	2.15	3.37	2.14	
2008	3.21	2.13	3.17	2.12	
2009	3.38	2.17	3.34	2.16	
2010	3.76	2.22	3.70	2.21	

- Notes: A. The peak costing period is 0700 to 2100 local time Monday through Friday. All other hours comprise the off-peak costing period.
  - B. Energy costs are expressed in current-year dollars.

Cogen Rate Design.xls Page 9 of 9 Kentucky Power Company Cogen Rate Design Twelve Months Ended June 30, 2005

## I. Calculation of Cost Escalation Rates \*

scalation Rates *		
		Cumulative Escalation
Year	Rate	Rates
2005	2.5%	1.02500
2006	2.7%	1.05268
2007	2.4%	1.07794
2008	2.0%	1.09950
2009	2 1%	1.12259
2010	2.1%	1.14616
2011	2.1%	1.17023
2012	2.1%	1.19481
2013	2.1%	1.21990
2014	2.1%	1.24551
2015	2.1%	1.27167
2016	2.1%	1.29838
2017	2.1%	1.32564
2018	2.1%	1.35348
2019	2.1%	1.38190
2020	2.1%	1.41092
2021	2.1%	1.44055
2022	2.1%	1.47080
2023	2.1%	1.50169
2024	2.1%	1.53323
2025	2.1%	1.56542
2026	2.1%	1.59830
2027	2.1%	1.63186
2028	2.1%	1.66613
2029	2.1%	1.70112

25

Compound Escalation Rate:	2005 to 2029 =	1.70112

Number of Y ears

Average Rate (25th Root) 2.1%

## II. Calculation of Meter O&M Expense as a % of Original Cost

Account 586 - Operation	508,323
Account 597 - Maintenance	70,804
Total O&M	579,127
Account 370 - Meter Plant	20,941,912
O&M Percentage	2.8%

<sup>\*</sup> Based upon Economy.com, Inc., Précis: U.S. Macro, GDP Chain Price Deflator