

**FILED**  
JAN 16 2018

**BEFORE THE CORPORATION COMMISSION OF OKLAHOMA**

**COURT CLERK'S OFFICE - OKC  
CORPORATION COMMISSION  
OF OKLAHOMA**

IN THE MATTER OF THE APPLICATION OF )  
OKLAHOMA GAS AND ELECTRIC COMPANY )  
FOR AN ORDER OF THE COMMISSION )  
AUTHORIZING APPLICANT TO MODIFY ITS )  
RATES, CHARGES, AND TARIFFS FOR RETAIL )  
ELECTRIC SERVICE IN OKLAHOMA )

CAUSE NO. PUD 201700496

Direct Testimony

of

William H. Wai

on behalf of

Oklahoma Gas and Electric Company

January 16, 2018

William H. Wai  
*Direct Testimony*

1    **Q.    Please state your name and business address.**

2    A.    My name is William H. Wai. My business address is 321 North Harvey, Oklahoma City,  
3           Oklahoma 73102.

5    **Q.    By whom are you employed and in what capacity?**

6    A.    I am currently employed by Oklahoma Gas and Electric Company (“OG&E” or  
7           “Company”) as Manager of Pricing. I am responsible for retail electricity pricing, rate  
8           design and tariffs. In that capacity, I direct and supervise the Company’s pricing team  
9           that develops and supports pricing structures, charges and service provisions of tariffs,  
10          product platforms, pilot programs and other retail electricity pricing initiatives. On a  
11          normal day, the pricing depart collects customer usage and revenue data, analyzes various  
12          cost information, researches different regulated retail electricity pricing practices, and  
13          studies the impacts of OG&E’s pricing practices on customers. My responsibilities also  
14          include overseeing implementation of the Company’s retail electricity rate and pricing  
15          plans.

17   **Q.    Please summarize your educational background and professional qualifications.**

18   A.    I earned my Bachelor of Science in Economics from Guangdong Institute for Nationals in  
19          Guangdong, China. I have a Masters of Business Administration from the University of  
20          Oklahoma awarded in 2000. My current responsibility includes directing and supervising  
21          the research of retail customers, and developing appropriate pricing schedules for  
22          incorporation into the retail tariffs. Prior to assuming my current position in OG&E, I  
23          have worked with the Company in various positions in Investor Relations, Corporate  
24          Risk, and Structured Services. Within Structured Services, I was initially hired as Senior  
25          Quantitative Analyst and consequently promoted to be the Director of the department.  
26          During the 12 years I worked with the Structured Services group, my responsibilities  
27          included valuating and pricing complex commercial transactions across various financial  
28          engineering frameworks, and quantifying various financial risk measures in the  
29          Company’s business management efforts. I am a Financial Risk Manager (“FRM”) and

1 an Energy Risk Professional (“ERP”) both certified by the Global Association of Risk  
2 Professionals (“GARP”). I also hold the Chartered Financial Analyst (“CFA”)  
3 designation. I am a member of the Global Association of Risk Professionals (“GARP”),  
4 and a member of the Chartered Financial Analyst (“CFA”) Oklahoma Society.  
5

6 **Q. Have you previously filed testimony before the Oklahoma Corporation Commission**  
7 **(“Commission”)?**

8 A. Yes. I testified in OG&E’s general rate case, PUD 201500273. I also submitted testimony  
9 before the Arkansas Public Service Commission in Docket No. 16-052-U.  
10

11 **Q. What is the purpose of your testimony?**

12 A. The purpose of my testimony is three-fold. First, I will describe the process of  
13 developing pricing for the tariffs proposed by the Company in this application. Second, I  
14 show comparisons between the current and proposed rates, and discuss customer impact  
15 associated with these changes and updates. Finally, I sponsor OG&E’s Proof of Revenue  
16 (Schedules M-1 through M-5 as well as Schedule N) and proposed rate design.  
17

18 **Q. How is your testimony organized?**

19 A. I have organized my testimony in two sections: Section I briefly describes the process of  
20 developing pricing for the tariffs proposed by the Company in this application. In  
21 Section II, I compare the current rates with the proposed rates and also discuss the  
22 minimal customer impact associated with these changes.  
23

#### 24 Section I. Developing Proposed Rates

25 **Q. What is the first step in developing the rates requested in a general rate case?**

26 A. The first step is to accumulate data identifying the revenue actually collected by the  
27 Company during the test year as well as information related to the customer consumption  
28 of electricity which generated that revenue. The revenue data comes from the booked  
29 revenues reported by the Company during the test year and the associated customer  
30 consumption information, referred to as billing determinants. Billing determinants  
31 include customer count, kWh usage and kW demand.

1 Q. **What happens next?**

2 A. The historic information must be adjusted so that the rates, which go into effect at the  
3 conclusion of the rate case, can be designed based on the revenues, expenses and  
4 customer consumption which are expected to occur in a normal year of operations. The  
5 results of the “normalizing” revenue, expense and billing determinant adjustments are  
6 typically referred to as the *pro forma* year data. The specific revenue, expense and billing  
7 determinant normalizing adjustments for the test year used in this application are  
8 presented in W/P H-2 of OG&E’s Application Package and discussed by OG&E witness  
9 Seth Knight.

10  
11 Q. **What are the next steps?**

12 A. The Company next determines the revenues it would expect to receive if the rates  
13 approved in the Company’s previous rate case were applied to the *pro forma* billing  
14 determinants. I sponsor the Proof of Revenue, W/P M-4, which includes the calculation  
15 of current rate revenue for each rate class. Simultaneously, the *pro forma* year data along  
16 with other inputs are also used to develop the cost for serving each customer class for the  
17 *pro forma* year. The Cost of Service Study (“COSS”) for the *pro forma* year is described  
18 in the direct testimony of OG&E witness Shawna Satterwhite. Elements of the Cost of  
19 Service Study serve as the foundation for rate design. The cost of providing service  
20 developed in the COSS is compared to the *pro forma* revenue from current rates and the  
21 difference between the two results is identified as either a revenue deficiency or a  
22 revenue surplus for the total Company as well as by customer class or service level. In  
23 this cause, the difference between the two is a revenue deficiency of \$1,856,573.

24  
25 Q. **How does this information lead to the rates proposed by the Company in this**  
26 **Cause?**

27 A. Current rates are then adjusted or new rates designed in order to recover the overall cost  
28 of service provided to our customers. The process of adjusting the existing rates or  
29 designing new rates is iterative and broadly guided by the Company’s rate design  
30 objectives.

1 Q. **What are the Company's broad objectives when adjusting current rates or**  
2 **designing new rates?**

3 A. The Company's rate design proposals are primarily driven by the following objectives:

- 4 • consideration of the impact of rate adjustments on customers,
  - 5 • recovery of the total authorized costs for providing energy to our customers,
  - 6 • providing pricing product choices that meet customers' pricing preferences, and
  - 7 • promoting efficient consumption of electricity.
- 8

9 Q. **How did the Company apply its rate design objectives in developing the rates**  
10 **proposed in this Cause?**

11 A. The rates we propose in this Cause meet each of the objectives. First, because the  
12 Company implemented new rates in May of this year, we elected to avoid any major  
13 changes to customer rates in this Cause. Consequently, with a few exceptions, we left the  
14 existing rate structures intact. Second, as shown in the Schedule M-1 of the Application  
15 Package, the proposed rates are expected to recover the total cost of serving its Oklahoma  
16 customers as shown in the Company's COSS. Third, in addition to standard rates, OG&E  
17 continues to offer the time variable rate options to its customers, as well as Guaranteed  
18 Flat Bill ("GFB") rate schedules for its residential and small commercial customers, and,  
19 wind and solar energy subscription opportunities. Among the Company's residential  
20 customers in Oklahoma, approximately 109,894 of them enrolled in time variable rates  
21 and 46,622 in the residential GFB program. Lastly, our Demand Program Rider and  
22 Smart Grid enabled education continue to promote the efficient consumption of  
23 electricity.

24

25 Q. **Could you elaborate on how OG&E goes about developing proposed rates for each**  
26 **customer class or service level?**

27 A. In general, the rate design is the final element of the rate development process I described  
28 earlier and includes (i) development of unit costs for each rate class and service level, (ii)  
29 consideration of marginal costs, where appropriate, to create initial price levels, and (iii)  
30 an iterative process which adjusts cost recovery between and among rate classes and/or  
31 service levels based on the Company rate design objectives referenced previously.

1 Q. **What are unit costs?**

2 A. Unit costs are the cost for the attributes of electric service. Customer costs are those costs  
3 associated with metering, billing, customer care, and local distribution facilities. Demand  
4 costs are those costs associated with wires (transmission and distribution system) fixed  
5 cost, and can also include fixed production costs. Energy costs are costs associated with  
6 electricity supply such as fuel and other variable cost. Unit costs are these costs by each  
7 billing determinant, i.e. customer count, kWh usage, and kW demand.

8 Unit costs are developed from the functionalized and classified cost components  
9 in the Cost of Service Study ("COSS") and are calculated by dividing the revenue  
10 requirements of these components by the associated billing units (e.g. demand; time-  
11 differentiated kWh) for each class and service level of customers.

12  
13 Q. **Do you set prices using only unit costs?**

14 A. No. Unit costs provide an embedded cost basis for each rate and represent the simplest  
15 division of costs among customer classes; however, it does not effectively recognize the  
16 variations of costs by time periods (*i.e.* hourly marginal costs) which encourage more  
17 efficient allocation of resources to customers. OG&E's proposed prices attempt to strike  
18 a balance between embedded cost, marginal cost, and recovery of the proposed revenue  
19 requirement without undue impacts on customers.

20  
21 Q. **Did you rely on unit costs to develop rates in this Cause?**

22 A. No. The Company just implemented new rates in May of 2017, and the primary goal of  
23 this filing is rate stability as opposed to strictly following the unit cost. Therefore, unit  
24 costs did not play a significant role in developing rates for this Cause.

25  
26 Q. **Are you recommending changes to the pricing of existing tariffs?**

27 A. Yes. I am proposing minimal price changes to select rate schedule tariffs.

Residential Rate Design

Q. As compared to existing rates, what is the overall result of the proposed rate design changes to R-1, R-TOU, and R-VPP residential customers?

A. The overall average impact to R-1 residential customer bills is a monthly bill increase of 0 percent or \$0.01 per month per customer.

Q. Please briefly describe the proposed changes to OG&E's current residential rates.

A. The price changes to the residential tariffs include an increase in energy charge to recover a portion of the Demand Program Rider ("DPR") that will no longer recover through the rider. Specifically, OG&E witness Cash explains incorporating the Integrated Volt Var Control ("IVVC") portion of the DPR in base rates and the corresponding reduction to the DPR factors. The proposed rate changes are presented in Table 1, below.

**Table 1. Comparison of Proposed Residential Prices**

Residential (R-1) Monthly Prices					
			Proposed	Current	Change
<b>Customer Charge</b>					
	<i>\$/per Month</i>		\$13.00	\$13.00	\$ -
<b>Energy Charge</b>					
Summer Season		Jun-Oct		Jun-Oct	
	<i>First 1,400 kWh</i>	\$0.066 Per kWh		\$0.0654 Per kWh	\$0.0002 Per kWh
	<i>Over 1,400 kWh</i>	\$0.073 Per kWh		\$0.0730 Per kWh	\$ -
Winter Season		Nov-May		Nov-Apr	
	<i>First 600 kWh</i>	\$0.066 Per kWh		\$0.0654 Per kWh	\$0.0002 Per kWh
	<i>Over 600 kWh</i>	\$0.025 Per kWh		\$0.0250 Per kWh	\$ -

Q. Has the Company proposed any change to the current customer charge for Oklahoma residential customers?

A. No. the customer charge for Oklahoma residential customer remains at \$13.00 per month.

Q. Did you conduct a customer impact analysis on the R-1 class?

A. As shown in Table 2 below, the standard R-1 impact is between 0% and 0.1%

**Table 2. R-1 Standard Residential Customer Impact**

<b>Residential Standard % Change Distribution (A)</b>								
% Change Range	Customer Count	Annual kWh	Prop R - 1 Cust	Current R - 1 Cust	\$ Difference	% Difference	\$ Difference per Customer	Average kWh per Customer
Less than -0.5%	-	-	\$ -	\$ -	\$ -	0.0%	\$ -	-
-0.5% to -0.5%	-	-	\$ -	\$ -	\$ -	0.0%	\$ -	-
-0.4% to -0.4%	-	-	\$ -	\$ -	\$ -	0.0%	\$ -	-
-0.3% to -0.3%	-	-	\$ -	\$ -	\$ -	0.0%	\$ -	-
-0.2% to -0.2%	552	55,942,770	\$ 4,752,185	\$ 4,757,895	\$ (5,710)	-0.1%	\$ (10.35)	101,346
-0.1% to -0.1%	74,965	1,819,949,369	\$ 170,943,405	\$ 171,008,310	\$ (64,905)	0.0%	\$ (0.87)	24,277
0% to 0%	290,549	2,947,871,368	\$ 331,177,681	\$ 331,062,188	\$ 115,493	0.0%	\$ 0.40	10,146
0.1% to 0.1%	-	-	\$ -	\$ -	\$ -	0.0%	\$ -	-
0.2% to 0.2%	-	-	\$ -	\$ -	\$ -	0.0%	\$ -	-
0.3% to 0.3%	-	-	\$ -	\$ -	\$ -	0.0%	\$ -	-
0.4% to 0.4%	-	-	\$ -	\$ -	\$ -	0.0%	\$ -	-
0.5% to 0.5%	-	-	\$ -	\$ -	\$ -	0.0%	\$ -	-
0.6% and Greater	-	-	\$ -	\$ -	\$ -	0.00%	\$ -	-
<b>Total</b>	366,066	4,823,763,507	\$ 506,873,271	\$ 506,828,393	\$ 44,878	0.0%	\$ 0.12	13,177

General Service Rate Design

Q. What are the proposed changes to the General Service (“GS”) tariffs?

A. OG&E proposes adding 0.07 cent to the rate for the summer second block of the GS standard tariff because of rolling a portion of the DPR into base rate as described above.

Q. What is the impact of these changes to GS customers?

A. The GS customers will experience a minimal change as a result of the IVVC change noted above.

Oil and Gas, Public Schools and Municipal Pumping

Q. What changes are you proposing to the Oil and Gas, Public Schools, and Municipal Pumping Time-of-Use (“TOU”) tariffs?

A. I am proposing no changes to these classes.



Variable Peak Pricing Rate Design

Q. Are you proposing changes to the VPP program?

A. No. The Company proposes to update the energy prices of the residential VPP rate schedule to recover the revenue requirement attributable to rider rolling into base rate, which will produce a minimal increase to the R-VPP class. No change are proposed to the GS-VPP, OGP-VPP, PS-SM-VPP and PM-VPP classes.

Q. What are the proposed rate changes to the VPP rates?

A. The proposed pricing for the VPP tariff is shown in Table 3 below.

**Table 3. Comparison of VPP Rates**

Residential Service VPP (R-VPP) Monthly Prices									
			Proposed	Current		Change			
Customer Charge									
		<i>\$/ per Month</i>		\$13.00		\$13.00		\$	-
Energy Charge									
Summer Season			Jun- Oct		Jun- Oct				
		<i>Off- Peak</i>		\$0.0292 Per kWh		\$0.0290 Per kWh		\$0.0002 Per kWh	
		<i>Critical Peak</i>		\$0.3800 Per kWh		\$0.3800 Per kWh		\$	-
		<i>On Peak tier 1</i>		\$0.0292 Per kWh		\$0.0290 Per kWh		\$0.0002 Per kWh	
		<i>On Peak tier 2</i>		\$0.0730 Per kWh		\$0.0730 Per kWh		\$	-
		<i>On Peak tier 3</i>		\$0.1750 Per kWh		\$0.1750 Per kWh		\$	-
		<i>On Peak tier 4</i>		\$0.3800 Per kWh		\$0.3800 Per kWh		\$	-
Winter Season			Nov-May		Nov-May				
		<i>First 600 kWh</i>		\$0.0656 Per kWh		\$0.0654 Per kWh		\$0.0002 Per kWh	
		<i>Over 600 kWh</i>		\$0.0250 Per kWh		\$0.0250 Per kWh		\$	-

General Service VPP (GS-VPP) SL- 2 thru 5 Monthly Prices									
			Proposed	Current		Change			
Customer Charge									
		<i>\$/ per Month</i>		\$24.70		\$24.70		\$	-
Energy Charge									
Summer Season			Jun- Oct		Jun- Oct				
		<i>Off- Peak</i>		\$0.027 Per kWh		\$0.027 Per kWh		\$	-
		<i>Critical Peak</i>		\$0.430 Per kWh		\$0.430 Per kWh		\$	-
		<i>On Peak tier 1</i>		\$0.027 Per kWh		\$0.027 Per kWh		\$	-
		<i>On Peak tier 2</i>		\$0.080 Per kWh		\$0.080 Per kWh		\$	-
		<i>On Peak tier 3</i>		\$0.223 Per kWh		\$0.223 Per kWh		\$	-
		<i>On Peak tier 4</i>		\$0.430 Per kWh		\$0.430 Per kWh		\$	-
Winter Season			Nov-May		Nov-May				
		<i>First 1,000 kWh</i>		\$0.070 Per kWh		\$0.070 Per kWh		\$	-
		<i>Over 1,000 kWh</i>		\$0.033 Per kWh		\$0.033 Per kWh		\$	-

Oil and Gas Producers VPP (OGP-VPP) SL 2 thru 5 Monthly Prices									
			Proposed	Current		Change			
Customer Charge									
		<i>\$/ per Month</i>		\$22.95		\$22.95		\$	-
Energy Charge									
Summer Season			Jun- Oct		Jun- Oct				
		<i>Off- Peak</i>		\$0.027 Per kWh		\$0.027 Per kWh		\$	-
		<i>Critical Peak</i>		\$0.430 Per kWh		\$0.430 Per kWh		\$	-
		<i>On Peak tier 1</i>		\$0.027 Per kWh		\$0.027 Per kWh		\$	-
		<i>On Peak tier 2</i>		\$0.080 Per kWh		\$0.080 Per kWh		\$	-
		<i>On Peak tier 3</i>		\$0.223 Per kWh		\$0.223 Per kWh		\$	-
		<i>On Peak tier 4</i>		\$0.430 Per kWh		\$0.430 Per kWh		\$	-
Winter Season			Nov-May		Nov-May				
		<i>First 1,000 kWh</i>		\$0.020 Per kWh		\$0.020 Per kWh		\$	-
		<i>Over 1,000 kWh</i>		\$0.020 Per kWh		\$0.020 Per kWh		\$	-

Public Schools Small VPP (PS SM VPP) SL 2 thru 5 Monthly Prices									
			Proposed	Current		Change			
Customer Charge									
		<i>\$/ per Month</i>		\$15.65		\$15.65		\$	-
Energy Charge									
Summer Season			Jun- Oct		Jun- Oct				
		<i>Off- Peak</i>		\$0.027 Per kWh		\$0.027 Per kWh		\$	-
		<i>Critical Peak</i>		\$0.430 Per kWh		\$0.430 Per kWh		\$	-
		<i>On Peak tier 1</i>		\$0.027 Per kWh		\$0.027 Per kWh		\$	-
		<i>On Peak tier 2</i>		\$0.080 Per kWh		\$0.080 Per kWh		\$	-
		<i>On Peak tier 3</i>		\$0.223 Per kWh		\$0.223 Per kWh		\$	-
		<i>On Peak tier 4</i>		\$0.430 Per kWh		\$0.430 Per kWh		\$	-
Winter Season			Nov-May		Nov-May				
		<i>First 1,000 kWh</i>		\$0.070 Per kWh		\$0.070 Per kWh		\$	-
		<i>Over 1,000 kWh</i>		\$0.033 Per kWh		\$0.033 Per kWh		\$	-

Municipal Water Pumping VPP (PM-VPP) SL 2 thru 5 Monthly Prices									
			Proposed	Current		Change			
Customer Charge									
		<i>\$/ per Month</i>		\$23.80		\$23.80		\$	-
Energy Charge									
Summer Season			Jun- Oct	Jun- Oct					
		<i>Off- Peak</i>		\$0.027 Per kWh		\$0.027 Per kWh		\$	-
		<i>Critical Peak</i>		\$0.430 Per kWh		\$0.430 Per kWh		\$	-
		<i>On Peak tier 1</i>		\$0.027 Per kWh		\$0.027 Per kWh		\$	-
		<i>On Peak tier 2</i>		\$0.080 Per kWh		\$0.080 Per kWh		\$	-
		<i>On Peak tier 3</i>		\$0.223 Per kWh		\$0.223 Per kWh		\$	-
		<i>On Peak tier 4</i>		\$0.430 Per kWh		\$0.430 Per kWh		\$	-
Winter Season			Nov-May	Nov-May					
		<i>First 1,000 kWh</i>		\$0.021 Per kWh		\$0.021 Per kWh		\$	-
		<i>Over 1,000 kWh</i>		\$0.021 Per kWh		\$0.021 Per kWh		\$	-

Public Schools Small (“PS-S”) and Public Schools Large (“PS-L”) Rate Design

Q. What are the proposed rate changes to the PS-S rates?

A. The Company proposes no changes to the rates for Public Schools Small, as shown in Table 4 below.

**Table 4. Comparison of current and proposed Public Schools Small rates**

Public Schools Small (PS SM) SL-2 thru 5 Monthly Prices							
			Proposed			Current	Change
Customer Charge							
		<i>\$/per Month</i>		\$15.65		\$15.65	\$ -
Energy Charge							
Summer Season		Jun-Oct		Jun-Oct			
		<i>All kWh</i>		\$0.080 Per kWh		\$0.080 Per kWh	\$ -
Winter Season		Nov-May		Nov-May			
		<i>First 1,000 kWh</i>		\$0.070 Per kWh		\$0.070 Per kWh	\$ -
		<i>Over 1,000 kWh</i>		\$0.033 Per kWh		\$0.033 Per kWh	\$ -

Q. What are the proposed rate changes to the PS-L rates?

A. The Company is proposing no change to the PS-L rates, as shown in Table 5 below.

**Table 5. Comparison of current and proposed Public Schools Large SL5 rates**

Public Schools Large (PS LG) SL-5 Monthly Prices									
				Proposed		Current		Change	
Customer Charge									
		<i>\$/ per Month</i>		\$70.00			\$70.00		\$ -
KW Demand Charge									
		<i>Summer kW</i>		\$9.00 Per kW			\$9.00 Per kW		\$ -
		<i>Winter kW</i>		\$3.80 Per kW			\$3.80 Per kW		\$ -
Energy Charge									
Summer Season			Jun-Oct			Jun-Oct			
		<i>All kWh</i>		\$0.026 Per kWh			\$0.026 Per kWh		\$ -
Winter Season			Nov-May			Nov-May			
		<i>All kWh</i>		\$0.026 Per kWh			\$0.026 Per kWh		\$ -

Oil & Gas Producers (“OGP”) Rate Design

Q. What are the proposed rate changes to the OGP rates?

A. The Company is proposing no changes to the prices for OGP classes as presented in Table 6 below.

**Table 6. Comparison of current and proposed OGP rates**

Oil Gas Producers (OGP) SL-2 thru 5 Monthly Prices									
				Proposed		Current		Change	
Customer Charge									
		\$/per Month		\$22.95		\$22.95		\$	-
Energy Charge									
Summer Season			Jun-Oct		Jun-Oct				
		All kWh		\$0.048 Per kWh		\$0.048 Per kWh		\$	-
Winter Season			Nov-May		Nov-May				
		All kWh		\$0.020 Per kWh		\$0.020 Per kWh		\$	

Municipal Pumping (“PM”) Rate Design

Q. What are the proposed rate changes to the PM rate?

A. The Company is proposing no changes for the prices for PM tariff as shown in Table 7.

**Table 7. Comparison of current and proposed PM rates**

Municipal Water Pumping (PM) SL- 2 Thru 5 Monthly Prices							
			Proposed		Current		Change
Customer Charge							
		<i>\$/ per Month</i>		\$23.80		\$23.80	\$ -
Energy Charge							
Summer Season			Jun-Oct		Jun-Oct		
		<i>All kWh</i>		\$0.039 Per kWh		\$0.039 Per kWh	\$ -
Winter Season			Nov-May		Nov-May		
		<i>All kWh</i>		\$0.021 Per kWh		\$0.021 Per kWh	\$ -

Power & Light (“PL”) and PL Time of Use (“PL-TOU”) Rate Design

Q. What are the proposed prices for the PL and PL-TOU rates?

A. I propose a minimal increase to these classes, simply to recover the portion of DPR rolling base rates, as discussed above. The proposed prices and the prices currently in effect are reflected in Tables 8 and 9.

**Table 8. Comparison of current and proposed PL rates**

Power and Light (PL) SL-3 Monthly Prices								
			Proposed	Current		Change		
Customer Charge								
		<i>\$/per Month</i>		\$121.00		\$121.00	\$	-
KW Demand Charge								
		<i>Summer kW</i>		\$10.96 Per kW		\$10.96 Per kW	\$	-
		<i>Winter kW</i>		\$5.50 Per kW		\$5.43 Per kW		\$0.07 Per kW
Energy Charge								
Summer Season			Jun-Oct		Jun-Oct			
		<i>All kWh</i>		\$0.010 Per kWh		\$0.010 Per kWh	\$	-
Winter Season			Nov-May		Nov-May			
		All kWh		\$0.010 Per kWh		\$0.010 Per kWh	\$	-

Power and Light (PL) SL-4 Monthly Prices								
			Proposed	Current		Change		
Customer Charge								
		<i>\$/per Month</i>		\$91.00		\$91.00	\$	-
KW Demand Charge								
		<i>Summer kW</i>		\$11.10 Per kW		\$11.10 Per kW	\$	-
		<i>Winter kW</i>		\$5.60 Per kW		\$5.55 Per kW		\$0.05 Per kW
Energy Charge								
Summer Season			Jun-Oct		Jun-Oct			
		<i>All kWh</i>		\$0.011 Per kWh		\$0.011 Per kWh	\$	-
Winter Season			Nov-May		Nov-May			
		All kWh		\$0.011 Per kWh		\$0.011 Per kWh	\$	-

Power and Light (PL) SL-5 Monthly Prices							
			Proposed			Current	Change
Customer Charge							
		<i>\$/ per Month</i>		\$79.00		\$79.00	\$ -
KW Demand Charge							
		<i>Summer kW</i>		\$14.85 Per kW		\$14.84 Per kW	\$0.01 Per kW
		<i>Winter kW</i>		\$7.50 Per kW		\$7.45 Per kW	\$0.05 Per kW
Energy Charge							
Summer Season			Jun-Oct		Jun-Oct		
		<i>All kWh</i>		\$0.013 Per kWh		\$0.013 Per kWh	\$ -
Winter Season			Nov-May		Nov-May		
		<i>All kWh</i>		\$0.013 Per kWh		\$0.013 Per kWh	\$ -

**Table 9. Comparison of current and proposed PL-TOU rates**

Power and Light TOU (PL-TOU) SL-3 Monthly Prices							
			Proposed			Current	Change
Customer Charge							
		<i>\$/ per Month</i>		\$121.00		\$121.00	\$ -
KW Demand Charge							
		<i>All kW</i>		\$5.41 Per kW		\$5.39 Per kW	\$0.02 Per kW
Energy Charge							
Summer Season			Jun- Oct		Jun- Oct		
		<i>On Peak</i>		\$0.095 Per kWh		\$0.095 Per kWh	\$ -
		<i>Off- Peak</i>		\$0.010 Per kWh		\$0.010 Per kWh	\$ -
Winter Season			Nov-May		Nov-May		
		<i>All kWh</i>		\$0.010 Per kWh		\$0.010 Per kWh	\$ -



Power and Light TOU (PL-TOU) SL-5 Monthly Prices						
Customer Charge		Proposed		Current		Change
	\$/ per Month		\$79.00		\$79.00	\$ -
KW Demand Charge						
	All kW		\$6.05 Per kW		\$6.00 Per kW	\$0.05 Per kW
Energy Charge						
Summer Season		Jun- Oct		Jun- Oct		
	On Peak		\$0.098 Per kWh		\$0.098 Per kWh	\$ -
	Off- Peak		\$0.013 Per kWh		\$0.013 Per kWh	\$ -
Winter Season		Nov-May		Nov-May		
	All kWh		\$0.0125 Per kWh		\$0.0125 Per kWh	\$ -

#### Large Power & Light (“LPL”) Rate Design

Q. What changes are proposed for the LPL rates?

A. As discussed in more detail by OG&E witness Scott, the COSS indicated that LPL SL 5 would have a price level decrease, while SL 3 and 4 needed minimal increases. The proposed prices and the prices currently in effect are reflected in Table 10.

**Table 10. Comparison of current and proposed LPL rates**

Large Power and Light TOU (LPL-TOU) SL-1 Monthly Prices							
			Proposed		Current		Change
Customer Charge							
		<i>\$/ per Month</i>		\$300.00		\$300.00	\$ -
KW Demand Charge							
		<i>All kW</i>		\$6.75 Per kW		\$6.74 Per kW	\$0.01 Per kW
Energy Charge							
Summer Season			Jun- Oct		Jun- Oct		
		<i>On Peak</i>		\$0.045 Per kWh		\$0.045 Per kWh	\$ -
		<i>Off- Peak</i>		\$0.0032 Per kWh		\$0.003 Per kWh	\$ -
Winter Season			Nov-May		Nov-May		
		<i>First 2,000,000 kWh</i>		\$0.0032 Per kWh		\$0.0032 Per kWh	\$ -
		<i>Over 2,000,000 kWh</i>		\$0.0032 Per kWh		\$0.0032 Per kWh	\$ -

Large Power and Light TOU (LPL-TOU) SL-2 Monthly Prices							
Proposed				Current		Change	
Customer Charge							
		<i>\$/ per Month</i>		\$300.00		\$300.00	\$ -
KW Demand Charge							
		<i>All kW</i>		\$7.140 Per kW		\$7.128 Per kW	\$0.012 Per kW
Energy Charge							
Summer Season			Jun- Oct		Jun- Oct		
		<i>On Peak</i>		\$0.045 Per kWh		\$0.045 Per kWh	\$ -
		<i>Off- Peak</i>		\$0.0032 Per kWh		\$0.003 Per kWh	\$ -
Winter Season			Nov-May		Nov-May		
		<i>First 2,000,000 kWh</i>		\$0.0032 Per kWh		\$0.0032 Per kWh	\$ -
		<i>Over 2,000,000 kWh</i>		\$0.0032 Per kWh		\$0.0032 Per kWh	\$ -

Large Power and Light TOU (LPL-TOU) SL-3 Monthly Prices							
			Proposed		Current		Change
Customer Charge							
		<i>\$/ per Month</i>		\$135.00		\$135.00	\$ -
KW Demand Charge							
		<i>All kW</i>		\$8.14 Per kW		\$8.12 Per kW	\$0.02 Per kW
Energy Charge							
Summer Season			Jun- Oct		Jun- Oct		
		<i>On Peak</i>		\$0.08 Per kWh		\$0.08 Per kWh	\$ -
		<i>Off- Peak</i>		\$0.005 Per kWh		\$0.004 Per kWh	\$0.001 Per kWh
Winter Season			Nov-May		Nov-May		
		<i>All kWh</i>		\$0.005 Per kWh		\$0.004 Per kWh	\$0.001 Per kWh

Large Power and Light TOU (LPL-TOU) SL-4 Monthly Prices							
			Proposed			Current	Change
Customer Charge							
		<i>\$/ per Month</i>		\$135.00		\$135.00	\$ -
KW Demand Charge							
		<i>All kW</i>		\$8.15 Per kW		\$8.15 Per kW	\$ -
Energy Charge							
Summer Season			Jun- Oct		Jun- Oct		
		<i>On Peak</i>		\$0.08 Per kWh		\$0.08 Per kWh	\$ -
		<i>Off- Peak</i>		\$0.005 Per kWh		\$0.004 Per kWh	\$0.001 Per kWh
Winter Season			Nov-May		Nov-May		
		<i>All kWh</i>		\$0.005 Per kWh		\$0.004 Per kWh	\$0.001 Per kWh

Large Power and Light TOU (LPL-TOU) SL-5 Monthly Prices							
Proposed				Current		Change	
Customer Charge							
		<i>\$/ per Month</i>		\$77.00		\$77.00	\$ -
KW Demand Charge							
		<i>All kW</i>		\$10.36 Per kW		\$11.51 Per kW	(\$1.15) Per kW
Energy Charge							
Summer Season			Jun- Oct		Jun- Oct		
		<i>On Peak</i>		\$0.09 Per kWh		\$0.09 Per kWh	\$ -
		<i>Off- Peak</i>		\$0.008 Per kWh		\$0.008 Per kWh	\$ -
Winter Season			Nov-May		Nov-May		
		<i>All kWh</i>		\$0.008 Per kWh		\$0.008 Per kWh	\$ -

- 1 Q. What are the impacts to these customer classes under the proposed tariffs?
- 2 A. The class impacts and unit cost analyses results determined by size and load factor are
- 3 contained within Direct Exhibit WHW-1.

LED Lighting ("LED"), Municipal Lighting ("LM") and  
Outdoor Security Lighting ("OSL") Rate Design

Q. **What are the proposed changes for the lighting classes?**

A. As discussed by OG&E witness Scott, OG&E proposes to close LM and OSL to new subscriptions. OG&E also proposes to add options to the LED Tariff, deleting one existing fixture and pole while adding 6 new fixtures and poles. In addition, LED fixture prices were also adjusted to reflect current costs.

Generally, lighting services consist of two components. The first component is the lighting fixture and can also include a separate pole to position the light at the location desired by the customer. The second component is the energy to power the light. OG&E's primary objective is to move the proposed prices closer to current costs of providing for the various fixtures and poles. The resulting components were combined to create the price for each lighting fixture. Prices were adjusted by 1.2% for LM and 8.1% to OSL to reach the assigned revenue requirement including riders rolling into base rates, equaling \$1.7 million for OSL and \$200,000 for LM.

PROOF OF REVENUE

Q. **What is the purpose and the results of the Proof of Revenue section of Minimum Filing Requirements, WP M-4?**

A. The Company must demonstrate that the proposed rate changes result in a level of revenue recovery that is consistent with the total COSS. WP M-4, the Proof of Revenues statement, shows that the proposed prices when applied to the test year *pro forma* billing determinants will produce the revenues requested by the Company as shown in its COSS and Schedule B-1 of the Application Package.

Q. **Please summarize your recommendations to the Commission?**

A. I recommend approval of the Company's proposed price changes as described in my testimony and reflected in the Company's Proof of Revenue submission.

Q. **Does this conclude your direct testimony?**

A. Yes.

LPL-3: % Change Distribution (A)									
% Change Range	Customer Count	Annual kWh	Prop LPL-TOU SL3 \$	Current LPL-TOU SL3 \$	\$ Difference	% Difference	\$ Difference per Customer	Average kWh per Customer	
Less than 1%	-	-	\$ -	\$ -	\$ -	0.0%	\$ -	-	
1% to 1%	-	-	\$ -	\$ -	\$ -	0.0%	\$ -	-	
1.1% to 1.1%	-	-	\$ -	\$ -	\$ -	0.0%	\$ -	-	
1.2% to 1.2%	2	73,715,600	\$ 4,135,195	\$ 4,083,087	\$ 52,108	1.3%	\$ 26,054	36,857,800	
1.3% to 1.3%	8	212,538,400	\$ 11,145,559	\$ 10,996,898	\$ 148,661	1.4%	\$ 18,583	26,567,300	
1.4% to 1.4%	10	290,233,480	\$ 15,088,726	\$ 14,877,017	\$ 211,709	1.4%	\$ 21,171	29,023,348	
1.5% to 1.5%	2	69,038,400	\$ 3,609,003	\$ 3,553,893	\$ 55,110	1.6%	\$ 27,555	34,519,200	
1.6% to 1.6%	2	62,607,600	\$ 3,072,167	\$ 3,022,597	\$ 49,570	1.6%	\$ 24,785	31,303,800	
1.7% to 1.7%	5	99,138,886	\$ 4,580,662	\$ 4,502,335	\$ 78,327	1.7%	\$ 15,665	19,827,777	
1.8% to 1.8%	-	-	\$ -	\$ -	\$ -	0.0%	\$ -	-	
1.9% to 1.9%	-	-	\$ -	\$ -	\$ -	0.0%	\$ -	-	
2% to 2%	-	-	\$ -	\$ -	\$ -	0.0%	\$ -	-	
2.1% and Greater	-	-	\$ -	\$ -	\$ -	0.0%	\$ -	-	
<b>Total</b>	29	807,272,366	\$ 41,631,312	\$ 41,035,827	\$ 595,486	1.5%	\$ 20,534	27,836,978	

Prop LPL- TOU SL3	1-10%	11-20%	21-30%	31-40%	41-50%	51-60%	61-70%	71-80%	81-90%	91+%	Total
Over 21,999 kW	0	0	0	0	0	0	0	0	0	0	0 \$0 0.00%
20,000 to 21,999 kW	0	0	0	0	0	0	0	0	0	0	0 \$0 0.00%
18,000 to 19,999 kW	0	0	0	0	0	0	0	0	0	0	0 \$0 0.00%
16,000 to 17,999 kW	0	0	0	0	0	0	0	0	0	0	0 \$0 0.00%
14,000 to 15,999 kW	0	0	0	0	0	0	0	0	0	0	0 \$0 0.00%
12,000 to 13,999 kW	0	0	0	0	1 \$38,393 1.40%	1 \$40,755 1.28%	0	0	0	0	2 \$79,148 1.34%
10,000 to 11,999 kW	0	0	0	0	0	0	0	1 \$46,533 1.40%	0	0	1 \$46,533 1.40%
8,000 to 9,999 kW	0	0	0	0	0	0	0	1 \$37,681 1.37%	0	0	1 \$37,681 1.37%
6,000 to 7,999 kW	0	0	0	0	2 \$43,654 1.41%	0	1 \$33,685 1.56%	0	0	0	3 \$77,340 1.48%
4,000 to 5,999 kW	0	0	0	0	1 \$12,634 1.42%	2 \$36,172 1.39%	2 \$43,127 1.66%	2 \$44,561 1.55%	0	0	7 \$136,494 1.52%
2,000 to 3,999 kW	0	0	0	0	0	3 \$37,600 1.30%	1 \$11,776 1.37%	4 \$56,906 1.46%	5 \$80,585 1.50%	2 \$31,423 1.76%	15 \$218,290 1.47%
0 to 1,999 kW	0	0	0	0	0	0	0	0	0	0	0 \$0 0.00%
Totals	0 \$0 0.00%	0 \$0 0.00%	0 \$0 0.00%	0 \$0 0.00%	4 \$94,681 1.41%	6 \$114,527 1.32%	4 \$88,588 1.58%	8 \$185,681 1.44%	5 \$80,585 1.50%	2 \$31,423 1.76%	29 \$595,486 1.45%

LPL-4: % Change Distribution (A)									
% Change Range	Customer Count	Annual kWh	Prop LPL-TOU SL4 \$	Current LPL-TOU SL4 \$	\$ Difference	% Difference	Difference per	Average kWh per Customer	
Less than 1%	-	-	\$ -	\$ -	\$ -	0.0%	\$ -	-	
1% to 1%	-	-	\$ -	\$ -	\$ -	0.0%	\$ -	-	
1.1% to 1.1%	1	17,918,400	\$ 1,025,048	\$ 1,013,236	\$ 11,812	1.2%	\$ 11,812	17,918,400	
1.2% to 1.2%	1	16,761,600	\$ 940,931	\$ 929,796	\$ 11,134	1.2%	\$ 11,134	16,761,600	
1.3% to 1.3%	-	-	\$ -	\$ -	\$ -	0.0%	\$ -	-	
1.4% to 1.4%	1	51,501,600	\$ 2,762,698	\$ 2,723,803	\$ 38,895	1.4%	\$ 38,895	51,501,600	
1.5% to 1.5%	1	114,559,760	\$ 5,766,984	\$ 5,679,866	\$ 87,118	1.5%	\$ 87,118	114,559,760	
1.6% to 1.6%	-	-	\$ -	\$ -	\$ -	0.0%	\$ -	-	
1.7% to 1.7%	-	-	\$ -	\$ -	\$ -	0.0%	\$ -	-	
1.8% to 1.8%	-	-	\$ -	\$ -	\$ -	0.0%	\$ -	-	
1.9% to 1.9%	-	-	\$ -	\$ -	\$ -	0.0%	\$ -	-	
2% to 2%	-	-	\$ -	\$ -	\$ -	0.0%	\$ -	-	
2.1% and Greater	-	-	\$ -	\$ -	\$ -	0.0%	\$ -	-	
<b>Total</b>	4	200,741,360	\$ 10,495,661	\$ 10,346,701	\$ 148,960	1.4%	\$ 37,240	50,185,340	

Prop LPL- TOU SL4	1-10%	11-20%	21-30%	31-40%	41-50%	51-60%	61-70%	71-80%	81-90%	91+%	Total
Over 21,999 kW	0	0	0	0	0	0	0	0	0	0	0 \$0 0.00%
20,000 to 21,999 kW	0	0	0	0	0	0	0	0	0	0	0 \$0 0.00%
18,000 to 19,999 kW	0	0	0	0	0	0	0	1 \$87,118 1.53%	0	0	1 \$87,118 1.53%
16,000 to 17,999 kW	0	0	0	0	0	0	0	0	0	0	0 \$0 0.00%
14,000 to 15,999 kW	0	0	0	0	0	0	0	0	0	0	0 \$0 0.00%
12,000 to 13,999 kW	0	0	0	0	0	0	0	0	0	0	0 \$0 0.00%
10,000 to 11,999 kW	0	0	0	0	0	0	0	0	0	0	0 \$0 0.00%
8,000 to 9,999 kW	0	0	0	0	0	0	1 \$38,895 1.43%	0	0	0	1 \$38,895 1.43%
6,000 to 7,999 kW	0	0	0	0	0	0	0	0	0	0	0 \$0 0.00%
4,000 to 5,999 kW	0	0	0	0	0	0	0	0	0	0	0 \$0 0.00%
2,000 to 3,999 kW	0	0	0	0	0	1 \$11,812 1.17%	1 \$11,134 1.20%	0	0	0	2 \$22,946 1.18%
0 to 1,999 kW	0	0	0	0	0	0	0	0	0	0	0 \$0 0.00%
Totals	0 \$0 0.00%	0 \$0 0.00%	0 \$0 0.00%	0 \$0 0.00%	0 \$0 0.00%	1 \$11,812 1.17%	2 \$50,030 1.37%	1 \$87,118 1.53%	0 \$0 0.00%	0 \$0 0.00%	4 \$148,960 1.44%



LPL-5: % Change Distribution (A)									
% Change Range	Customer Count	Annual kWh	Prop LPL-TOU SL5 \$	Current LPL-TOU SL5 \$	\$ Difference	% Difference	\$ Difference per Customer	Average kWh per Customer	
Less than -4%	-	-	\$ -	\$ -	\$ -	0.0%	\$ -	-	
-4% to -3.85%	-	-	\$ -	\$ -	\$ -	0.0%	\$ -	-	
-3.75% to -3.6%	5	90,613,299	\$ 6,285,196	\$ 6,520,966	\$ (235,770)	-3.6%	\$ (47,154)	18,122,660	
-3.5% to -3.35%	1	32,880,000	\$ 2,181,031	\$ 2,256,064	\$ (75,033)	-3.3%	\$ (75,033)	32,880,000	
-3.25% to -3.1%	8	209,791,280	\$ 13,330,836	\$ 13,761,173	\$ (430,337)	-3.1%	\$ (53,792)	26,223,910	
-3% to -2.85%	1	16,242,040	\$ 1,018,969	\$ 1,050,192	\$ (31,223)	-3.0%	\$ (31,223)	16,242,040	
-2.75% to -2.6%	-	-	\$ -	\$ -	\$ -	0.0%	\$ -	-	
-2.5% to -2.35%	-	-	\$ -	\$ -	\$ -	0.0%	\$ -	-	
-2.25% to -2.1%	-	-	\$ -	\$ -	\$ -	0.0%	\$ -	-	
-2% to -1.85%	-	-	\$ -	\$ -	\$ -	0.0%	\$ -	-	
-1.75% to -1.6%	-	-	\$ -	\$ -	\$ -	0.0%	\$ -	-	
-1.5% to -1.35%	-	-	\$ -	\$ -	\$ -	0.0%	\$ -	-	
-1.25% and Greater	-	-	\$ -	\$ -	\$ -	0.0%	\$ -	-	
<b>Total</b>	15	349,526,619	\$ 22,816,032	\$ 23,588,395	\$ (772,363)	-3.3%	\$ (51,491)	23,301,775	

Prop LPL- TOU SL5	1-10%	11-20%	21-30%	31-40%	41-50%	51-60%	61-70%	71-80%	81-90%	91+%	Total
Over 5,499 kW	0	0	0	0	0	0	3 -\$244,557 -3.21%	0	0	0	3 -\$244,557 -3.21%
5,000 to 5,499 kW	0	0	0	0	0	0	0	0	0	0	0 \$0 0.00%
4,500 to 4,999 kW	0	0	0	0	0	0	0	1 -\$59,464 -3.01%	0	0	1 -\$59,464 -3.01%
4,000 to 4,499 kW	0	0	0	0	0	1 -\$55,358 -3.63%	0	0	0	0	1 -\$55,358 -3.63%
3,500 to 3,999 kW	0	0	0	0	1 -\$40,138 -3.54%	2 -\$94,646 -3.58%	1 -\$42,812 -3.19%	0	1 -\$48,031 -3.05%	0	5 -\$225,626 -3.37%
3,000 to 3,499 kW	0	0	0	0	0	1 -\$45,628 -3.75%	1 -\$39,932 -3.20%	0	0	0	2 -\$85,560 -3.47%
2,500 to 2,999 kW	0	0	0	0	0	0	0	1 -\$38,042 -3.02%	0	0	1 -\$38,042 -3.02%
2,000 to 2,499 kW	0	0	0	0	0	0	0	1 -\$32,532 -3.24%	1 -\$31,223 -2.97%	0	2 -\$63,755 -3.10%
1,500 to 1,999 kW	0	0	0	0	0	0	0	0	0	0	0 \$0 0.00%
1,000 to 1,499 kW	0	0	0	0	0	0	0	0	0	0	0 \$0 0.00%
500 to 999 kW	0	0	0	0	0	0	0	0	0	0	0 \$0 0.00%
0 to 499 kW	0	0	0	0	0	0	0	0	0	0	0 \$0 0.00%
Totals	0 \$0 0.00%	0 \$0 0.00%	0 \$0 0.00%	0 \$0 0.00%	1 -\$40,138 -3.54%	4 -\$195,632 -3.63%	5 -\$327,301 -3.21%	3 -\$130,038 -3.07%	2 -\$79,254 -3.02%	0 \$0 0.00%	15 -\$772,363 -3.27%