BEFORE THE STATE CORPORATION COMMISSION
OF THE STATE OF KANSAS

DIRECT TESTIMONY OF

GEORGE M. MCCOLLISTER, PH.D

ON BEHALF OF
KANSAS CITY POWER & LIGHT COMPANY

IN THE MATTER OF THE APPLICATION OF
KANSAS CITY POWER & LIGHT COMPANY
TO MODIFY ITS TARIFFS TO CONTINUE THE
IMPLEMENTATION OF ITS REGULATORY PLAN

DOCKET NO. 07-KCPE-____-RTS

Q: Please state your name and business address.

A: My name is George M. McCollister, Ph.D. My business address is 1201 Walnut, Kansas City, Missouri 64106-2124.

Q: By whom and in what capacity are you employed?

A: I am the Manager of Market Assessment at Kansas City Power & Light Company ("KCPL").

Q: Please describe your education, experience and employment history.

A: I earned three degrees from the University of California at San Diego. These include a Bachelor of Arts degree in mathematics and chemistry, a Master of Arts degree in mathematics, and a Ph.D. in economics. My specialties in the economics program were microeconomics and econometrics.

I was previously employed at three electric and natural gas utilities. I was employed as an Energy Economist at Pacific Gas and Electric Company where I

was responsible for developing end-use models of electric and natural gas sales and for analyzing responses to energy-use surveys of our customers. I was employed as a Senior Forecast Analyst at San Diego Gas and Electric Company where I developed models of customer choice, energy sales and system reliability. I was also employed by UtiliCorp United, Inc. as the Forecast Leader where I was responsible for end-use forecasting in integrated resource plans; budget forecasts; weather normalization; variance analysis; and for statistical analysis. I have also been employed by several consulting firms including Resource Management International and Spectrum Economics, Inc. that focused on regulated industries. The majority of my consulting projects focused on energy forecasting issues and modeling for electric and natural gas utilities.

Q: Have you previously testified in a proceeding at the State Corporation Commission for the State of Kansas ("KCC" or "Commission") or before any other utility regulatory agency?

A: Yes, I have testified before the KCC, the Missouri Public Service Commission ("MPSC"), the Oklahoma Corporation Commission, and the Public Utilities Commission in Colorado.

Q: What is the purpose of your testimony?

A: I am sponsoring several normalizations to monthly Kilowatt hour ("kwh") sales and peak loads in Schedules GMM-1 through GMM-3. I recommend that the Commission adopt these results in the current case.

Q: What are normalizations of kwh sales and hourly loads?

A: Both kwh sales and hourly loads are adjusted to reflect normal weather conditions. This is called a weather adjustment. Kwh sales are further adjusted to restate the sales on a calendar month or accrued basis rather than on a billing month basis.

Q: What is the purpose of making a weather adjustment?

A: Abnormal weather can increase or decrease a utility company's revenues, fuel costs and rate of return. Therefore, revenues and expenses are typically adjusted to reflect normal weather to determine a company's future electric rates. These adjustments are made by first adjusting kwh sales and hourly loads and then using these results to adjust revenues and fuel costs.

In 2006, there were 23% fewer heating degree days and 30% more cooling degree days than normal at the Kansas City International Airport. Thus, heating loads were less than normal and cooling loads were greater than normal.

Q: What is the purpose of restating kwh sales on a calendar month or accrued basis?

A: Fuel costs are typically measured over calendar months whereas revenues are measured and invoiced daily throughout the month. Because it is important to measure revenues and fuel costs over the same time period, it is customary to adjust revenues to a calendar month basis. This is accomplished by first adjusting kwh billed sales to a calendar month basis and then determining how this change affects revenues. Because the test year consists of a 12-month period, this

adjustment is computed by adding unbilled sales from the end of the period and subtracting unbilled sales at the beginning of the period.

Q: What method was used to weather normalize kwh sales?

A: Our method was based on load research ("LR") data, which was derived by measuring hourly loads for a sample of KCPL's customers representing the Residential, Small General Service, Medium General Service, Large General Service and Large Power Service classes. The hourly loads were grossed up by the ratio of the number of customers in each of these classes divided by the number sampled.

In the first step, the hourly loads for the sample were calibrated to the annual billed sales of all customers in each class. The ratio of the billed sales divided by the sum of the hourly loads was multiplied by the load in each hour.

In the second step, the hourly loads were estimated for lighting tariffs, and then the loads for all tariffs, including sales for resale, were grossed up for losses and compared to Net System Input ("NSI"). The difference between this sum and the NSI was then allocated back to the LR data in proportion to the hourly precisions that were estimated for the load research data.

In the third step, regression analysis was used to model the hourly loads for each tariff. These models included a piecewise linear temperature response function of a two-day weighted mean temperature.

In the fourth step, this temperature response function was used to compute daily weather adjustments as the difference between loads predicted with normal weather and loads predicted with actual weather. Normal weather was derived

using spreadsheets provided by the MPSC Staff. The normal weather represents average weather conditions over the 1971-2000 time period.

In the fifth step, the daily weather adjustments were split into hourly adjustments and these were added to NSI to weather normalize that series.

In the sixth step, the daily weather adjustments were split into billing months based on the percentage of sales in each billing cycle and the meter reading schedule for the test year period. These weather adjustments are then summed by billing month and added to billed kwh sales to weather normalize that data.

Q: What method was used to adjust weather normalized monthly <u>billed</u> sales to a <u>calendar</u> month test period?

A: First, the meter reading schedule was used to compute the number of days in each calendar month that would be billed in the following month for the customers on each billing cycle. Then this result was used to compute the portion of monthly billed sales that was unbilled from the previous month. This computation was performed separately for each billing cycle, tariff group and month. The resulting ratios were then multiplied by the billed sales to compute the amount of unbilled kwh sales. Then from the billed sales for 2006, I added the unbilled sales at the end of 2006 and subtracted the unbilled sales at the end of 2005.

Q. What are the results of these normalizations?

A. Schedule GMM-1 shows the adjustments for each normalization on kwh sales. Schedule GMM-2 shows weather normalized peak loads by class and Schedule

GMM-3 shows weather normalized loads by class at the time of the monthly system peak load.

Q: How are these results used?

A: Weather normalized, customer annualized kwh sales are used to calculate test year revenues.

Q: How are the weather normalized monthly peak loads used?

A: These loads are used to calculate the demand allocator, which is used to allocate certain accounts in the Revenue Requirement Model. The use of the demand allocator is described in the direct testimony of KCPL witness John P. Weisensee.

Q: Does that conclude your testimony?

A: Yes, it does.

BEFORE THE STATE CORPORATION COMMISSION
OF THE STATE OF KANSAS

In the Matter of the Application of Kansas City Power & Light Company to Modify Its Tariffs to Begin the Implementation of Its Regulatory Plan	)))	Docket No. 07-KCPE-____-RTS

AFFIDAVIT OF GEORGE M. MCCOLLISTER, PH.D

STATE OF MISSOURI)
) **ss**
COUNTY OF JACKSON)

George M. McCollister, being first duly sworn on his oath, states:

1. My name is George M. McCollister Ph.D. I work in Kansas City, Missouri, and I am employed by Kansas City Power & Light Company as Manager of Market Assessment.

2. Attached hereto and made a part hereof for all purposes is my Direct Testimony on behalf of Kansas City Power & Light Company consisting of six (6) pages and Schedules GMM-1 through GMM-3, all of which having been prepared in written form for introduction into evidence in the above-captioned docket.

3. I have knowledge of the matters set forth therein. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded, including any attachments thereto, are true and accurate to the best of my knowledge, information and belief.

George M. McCollister

George M. McCollister, Ph.D

Subscribed and sworn before me this 22nd day of February 2007.

Carol Sivils

Notary Public

My commission expires: _____

CAROL SIVILS
Notary Public - Notary Seal
STATE OF MISSOURI
Clay County
My Commission Expires: June 15, 2007

ADJUSTMENTS TO MONTHLY BILLED SALES

	Weather Adjustments to Monthly Billed Sales (mwh)													To	Total
Tariff	Jan-06	Feb-06	Mar-06	Apr-06	May-06	Jun-06	Jul-06	Aug-06	Sep-06	Oct-06	Nov-06	Dec-06	2006	Accrued	Adjustments
Residential	29,166	23,909	6,922	1,030	-3,262	-35,234	-34,709	-47,195	-1,523	-3,075	1,806	15,977	-46,187	352	-45,834
Small GS	1,852	1,537	449	-469	-688	-2,326	-1,818	-2,616	-129	-405	110	892	-3,611	827	-2,784
Medium GS	2,134	1,709	401	-1,635	-1,670	-4,029	-3,097	-4,284	-190	-580	129	923	-10,190	1,658	-8,532
Large GS	6,970	6,437	1,559	-2,331	-2,910	-6,179	-4,967	-7,876	-1,195	-811	645	3,247	-7,412	8,384	972
Large Power	1,068	817	142	-949	-1,002	-1,294	-1,012	-1,415	16	-159	41	277	-3,470	4,855	1,385
Total	41,191	34,410	9,473	-4,355	-9,531	-49,062	-45,603	-63,387	-3,021	-5,031	2,732	21,315	-70,870	16,076	-54,794

WEATHER NORMALIZED MONTHLY PEAK LOADS (MW)

Class	Jan-06	Feb-06	Mar-06	Apr-06	May-06	Jun-06	Jul-06	Aug-06	Sep-06	Oct-06	Nov-06	Dec-06	2006
Residential	626	579	520	426	656	829	946	908	772	516	633	653	946
Small GS	69	58	57	65	70	91	87	92	92	73	64	70	92
Medium GS	123	115	120	140	153	169	182	174	169	138	123	119	182
Large GS	302	288	272	308	325	343	370	363	348	315	283	322	370
Large Power	103	99	102	107	110	114	118	118	111	102	102	101	118
Street Lights	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
Traffic Signals	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35
Area Lights	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Off Peak Lighting	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Total Retail	1,133	1,095	972	926	1,158	1,482	1,655	1,584	1,337	1,080	1,135	1,199	1,655

Note: These numbers include losses.

WEATHER NORMALIZED MONTHLY COINCIDENT PEAK LOADS (MW)

Class	Jan-06	Feb-06	Mar-06	Apr-06	May-06	Jun-06	Jul-06	Aug-06	Sep-06	Oct-06	Nov-06	Dec-06	2006
Residential	610	579	520	327	586	802	946	864	681	449	609	643	946
Small GS	47	42	35	58	55	80	73	87	84	73	52	64	87
Medium GS	101	100	88	130	128	164	168	166	150	136	101	103	168
Large GS	268	263	227	293	286	328	353	351	315	309	271	283	353
Large Power	95	97	91	103	103	108	114	113	103	101	88	93	114
Street Lights	4.2	4.2	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	4.2	4.2
Traffic Signals	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35
Area Lights	0.9	0.9	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9
Off Peak Lighting	7.5	7.5	6.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.5	7.5	7.5

Note: These numbers include losses.