BEFORE THE STATE CORPORATION COMMISSION
OF THE STATE OF KANSAS

DIRECT TESTIMONY OF

GEORGE M. McCOLLISTER

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. 10-KCPE-415-RTS

Q: Please state your name and business address.

A: My name is George M. McCollister, Ph.D. My business address is 1200 Main Street, Kansas City, Missouri 64105.

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

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

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 specialized in 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 before the Kansas Corporation Commission ("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 the weather normalization of monthly Kilowatt-hour ("kWh") sales and peak loads in Schedules GMM2010-1 through GMM2010-3. I recommend that the Commission adopt these results in the current case.

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.

During the test year, there were 2.2% fewer heating degree days and 15.9% fewer cooling degree days than normal at the Kansas City International Airport. Thus, both heating and cooling loads were less than normal.

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 KCP&L's customers representing the Residential, Small General Service, Medium General Service, Large General Service and Large Power Service tariff groups. 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 representing 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 were then summed by billing month and added to billed kWh sales to weather-normalize that data.

Q: Why was 1971-2000 time period used to weather normalize electric sales?

A: Most public utility commissions have traditionally used the period that is used by the U.S. National Oceanic and Atmospheric Administration ("NOAA") to compute normal weather statistics. NOAA computes normal weather statistics using the last three decades, which is currently 1971-2000. NOAA recomputes and publishes normal weather statistics every ten years at the end of a decade.

Scientists at NOAA have discussed alternatives to this 30-year period, but no official decisions have been made to change this methodology.

Q: What are the results of these normalizations?

A: Schedule GMM2010-1 shows the adjustments for weather normalization on kWh sales. Schedule GMM2010-2 shows weather-normalized peak loads by class and Schedule GMM2010-3 shows weather-normalized loads by class at the time of the monthly system peak load.

Q: Why did you use data from the weather station at the Kansas City International Airport ("KCI")?

A: To employ its weather normalization methodology, KCP&L needs 30 years of daily minimum and maximum temperature data for a weather station located near its service territory. KCI is a first order weather station, which means that the data is collected by the national weather service using trained professionals and this data is checked and edited to ensure accuracy. KCI is the nearest first order weather station to our service area in Kansas.

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 Continue the Implementation of Its Regulatory Plan	)))	Docket No. 10-KCPE-___-RTS

AFFIDAVIT OF GEORGE M. McCOLLISTER

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. 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 five (5) pages, 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

Subscribed and sworn before me this 17th day of December, 2009.

Nicole A. Wehry
Notary Public

My commission expires: Feb. 4, 2011

" NOTARY SEAL "
Nicole A. Wehry, Notary Public
Jackson County, State of Missouri
My Commission Expires 2/4/2011
Commission Number 07391200

ADJUSTMENTS TO MONTHLY BILLED SALES

	Weather Adjustments to Monthly Billed Sales												
Tariff	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Test Year
Residential	13,515	-2,593	-5,954	-1,105	10,481	4,692	-2,199	-1,867	-5,057	32,350	44,270	31,441	117,972
Small GS	705	-220	-311	-71	496	126	-92	-51	-270	1,473	2,164	1,562	5,513
Medium GS	1,504	-354	-354	-63	444	-117	-60	-77	-580	2,996	4,520	3,254	11,114
Large GS	3,473	-454	-929	-474	2,043	-23	-240	-40	-1,074	5,373	9,562	6,669	23,887
Large Power	61	-6	-121	7	240	-15	-2	-4	-38	152	179	140	594
Total	19,259	-3,628	-7,669	-1,705	13,705	4,662	-2,593	-2,039	-7,019	42,344	60,695	43,067	159,080

WEATHER NORMALIZED MONTHLY PEAK LOADS (MW)

WEATHER NORMALIZED MONTHLY PEAK LOADS (MW)

Tariff	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep08 −Aug09
Residential	863	455	563	732	668	613	504	489	668	905	1,005	1,012	1,012
Small GS	93	55	53	64	76	68	51	54	71	91	89	89	93
Medium GS	192	143	128	125	131	126	119	133	156	175	195	193	195
Large GS	459	369	348	394	395	384	346	358	423	437	461	463	463
Large Power	32	28	29	36	36	36	31	31	27	30	30	29	36
Street Lights	4	4	4	4	4	4	4	4	4	4	4	4	4
Traffic Signals	0	0	0	0	0	0	0	0	0	0	0	0	0
Area Lights	1	1	1	1	1	1	1	1	1	1	1	1	1
Off Peak Lighting	8	8	8	8	9	9	9	9	9	9	9	9	9
Total Retail	1,470	885	992	1,251	1,243	1,199	982	895	1,162	1,534	1,706	1,707	1,707

Note: These numbers include losses.

WEATHER NORMALIZED MONTHLY COINCIDENT PEAK LOADS (MW)

WEATHER NORMALIZED MONTHLY COINCIDENT PEAK LOADS (MW)

Tariff	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep08 −Aug09
Residential	698	455	514	676	633	611	469	381	668	877	987	1,003	1,003
Small GS	93	37	39	50	63	59	48	42	45	65	72	66	93
Medium GS	192	100	94	113	114	112	97	104	125	157	173	171	192
Large GS	459	256	305	366	395	380	339	323	306	413	448	439	459
Large Power	28	16	26	33	36	36	29	28	17	22	25	27	36
Street Lights	0	4	4	4	1	0	0	0	0	0	0	0	4
Traffic Signals	0	0	0	0	0	0	0	0	0	0	0	0	0
Area Lights	0	1	1	1	0	0	0	0	0	0	0	0	1
Off Peak Lighting	0	8	8	8	1	0	0	0	0	0	0	0	8
	1470	878.1	991.81	1251.5	1243	1198.6	982.37	877.74	1162.2	1,534	1,706	1,707	1,707

Note: These numbers include losses.