Exhibit No.: KCPL-42
Issue: Weather Normalization, Customer Growth, Other Revenue Normalization
Witness: George M. McCollister
Type of Exhibit: Direct Testimony
Sponsoring Party: Kansas City Power & Light Company
Case No.: ER-2010-____
Date Testimony Prepared: June 4, 2010

MISSOURI PUBLIC SERVICE COMMISSION

CASE NO.: ER-2010-____

DIRECT TESTIMONY

OF

GEORGE M. McCOLLISTER

ON BEHALF OF

KANSAS CITY POWER & LIGHT COMPANY

Kansas City, Missouri
June 2010

KCPL Exhibit No KCPL 42
Date 2/4/11 Reporter LMB
File No ER-2010-0355

DIRECT TESTIMONY

OF

GEORGE M. McCOLLISTER

Case No. ER-2010-____

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 at the Missouri Public Service Commission ("MPSC" or "Commission") or before any other utility regulatory agency?

A: Yes, I have testified before the MPSC, the Oklahoma Corporation Commission, the Kansas 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 GMM2010-1 through GMM2010-3. 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 for expected customer growth through December 2010 and for rate switchers (customers who were switched from one rate to another).

Q: What adjustment was made for rate switchers?

A: Each year a small percentage of customers switch from their current tariff to another that is expected to reduce their electric bills. We adjusted the customer numbers and kWh sales to reflect the switch for the entire test year.

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 when these are used 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 3.4 percent fewer heating degree days and 17.7 percent fewer cooling degree days than normal as measured 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 classes. The hourly loads were grossed up by the ratio of the number of customers for 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 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 on 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 adjustments were made for load and customer growth?

A: The weather normalized kWh sales for the test year were adjusted for expected customer growth by multiplying the weather-normalized sales by the ratio of customers in December 2010 to the actual number of customers for that month. This adjustment was made to the Residential, Small General Service, Medium General Service and Large General Service customer classes. I also adjusted the individual customer loads of some large power customers to reflect permanent changes in their loads that occurred during or after the test year.

Q: Are these your final calculations?

A: After December 2010, I will re-compute the adjustments for customer growth and rate switchers as part of the true-up process in this case. Also, when load research data becomes available for the last quarter of 2009, I will provide weather normalized peak loads for that period.

Q: What are the results of these normalizations?

A: Schedule GMM2010-1 shows the adjustments for each normalization on kWh sales. Schedule GMM2010-2 shows weather-normalized customer annualized monthly peaks by class, and Schedule GMM2010-3 shows weather-normalized customer annualized 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 and fuel costs.

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 Model. The use of the demand allocator is described in the Direct Testimony of KCP&L witness John P. Weisensee.

Q: Does that conclude your testimony?

A: Yes, it does.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of the Application of Kansas City)
Power & Light Company to Modify Its Tariffs to) Docket No. ER-2010-____
Continue the Implementation of Its Regulatory Plan)

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 Six (6) 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 28th day of May, 2010.

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 OF KCP&L MISSOURI

	Weather Adjustments to Monthly Billed Sales													Dec 2010	
Tariff	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Test Year	Customer Growth	Total Adjustments
Residential	-2,536	7,323	4,941	-672	-1,847	-2,674	22,775	45,719	30,016	8,197	2,136	8,856	122,233	5,312	127,545
Small GS	-210	542	267	-122	-19	-197	1,251	2,686	1,884	510	367	588	7,548	315	7,862
Medium GS	-231	586	153	-282	-30	-462	2,969	6,546	4,419	2,118	1,135	483	17,403	-1,976	15,426
Large GS	-1,137	2,903	1,273	-335	8	-581	4,056	8,333	5,811	2,280	1,904	3,124	27,639	18,617	46,256
Large Power	32	-345	-836	358	-78	-898	3,981	4,127	3,089	3,235	73	-436	12,303	15,816	28,119
Total	-4,082	11,008	5,799	-1,053	-1,966	-4,812	35,031	67,411	45,219	16,340	5,614	12,615	187,125	38,084	225,209

Schedule GMM2010-1

WEATHER NORMALIZED MONTHLY PEAK LOADS (MW)

KCP&L Missouri Peaks by Tariff Class (Includes Losses) - With Customer Growth through December 2010 (MW)

Date	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct08-Sept09
Residential	388	503	618	583	549	453	437	549	795	895	903	589	903
Small GS	72	69	78	90	87	66	66	89	111	109	105	93	111
Medium GS	208	180	182	185	183	169	188	210	249	282	263	236	282
Large GS	356	347	407	414	397	351	339	374	417	437	433	402	437
Large Power	319	314	302	314	310	323	336	359	369	393	389	350	393
Street Lights	17	17	17	17	17	17	17	17	17	17	17	17	17
Traffic	0	0	0	0	0	0	0	0	0	0	0	0	0
Area Lights	4	4	4	4	4	4	4	4	4	4	4	4	4
Sales for Resale	3	3	4	4	4	4	3	4	6	6	6	5	6

WEATHER NORMALIZED MONTHLY COINCIDENT PEAK LOADS (MW)

KCP&L Missouri Coincident Peaks by Tariff Class (Includes Losses) - With Customer Growth through December 2010 (MW)

Date	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct08-Sept09
Residential	388	465	561	513	460	384	317	549	762	865	888	546	888
Small GS	48	51	61	78	63	58	53	58	76	86	79	81	86
Medium GS	146	144	165	166	151	142	153	176	217	239	231	215	239
Large GS	239	311	379	414	378	340	322	281	381	415	411	386	415
Large Power	250	271	279	300	303	293	262	272	320	374	373	338	374
Street Lights	17	17	17	3	0	0	0	0	0	0	0	0	17
Traffic	0	0	0	0	0	0	0	0	0	0	0	0	0
Area Lights	4	4	4	1	0	0	0	0	0	0	0	0	4
Retail	1,093	1,263	1,466	1,474	1,355	1,217	1,107	1,336	1,757	1,979	1,983	1,566	1,983
Sales for Resale	3	3	4	4	4	3	3	4	5	6	6	5	6