Exhibit No.:
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-2012-0174
Date Testimony Prepared: February 27, 2012

MISSOURI PUBLIC SERVICE COMMISSION

CASE NO.: ER-2012-0174

DIRECT TESTIMONY

OF

GEORGE M. McCOLLISTER

ON BEHALF OF

KANSAS CITY POWER & LIGHT COMPANY

Kansas City, Missouri
February 2012

DIRECT TESTIMONY

OF

GEORGE M. McCOLLISTER

Case No. ER-2012-0174

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: 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 Ph.D. program were microeconomics and econometrics.

I previously was 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 next 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 also was 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 or statistical analysis. I also have been employed by several consulting firms that specialized in regulated industries, including Resource Management International and Spectrum Economics, Inc. 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 GMM-1 through GMM-3.

Q: What normalizations are you making to kWh sales and peak loads?

A: Both monthly and hourly kWh sales are adjusted to reflect normal weather conditions. This is called a weather adjustment. KWh sales are further adjusted for customer growth that occurs between the test year and the true-up date, and for customers who were switched from one rate to another during or after the test year. These customers are known as rate switchers.

Q: What adjustment did you make for rate switchers?

A: Each year a small percentage of customers are switched from their current tariff to another that is expected to reduce their electric bills. We adjusted kWh sales for the Large Power tariff for customers that switched into or out of this tariff. The customer growth adjustment accounted for rate switchers in the other tariffs.

Q: What adjustment did you make for customer growth?

A: For each month in the test year, the weather-normalized sales per customer was multiplied by the number of customers projected for the true-up date. This adjustment is made to weather-normalized sales to the Residential, Small General Service ("GS"), Medium GS, and Large GS classes. When the numbers become available, I will revise this adjustment using the actual number of customers as of the true-up date. Sales to Large Power customers are adjusted by plotting each customer's month kWh sales and looking for any changes in sales that appear to be or are known to be permanent. If any such changes are identified, sales during the test year are adjusted to reflect the change. The adjustments for growth to Large Power sales will be revised using the most current data when the Staff requests an update to our initial filing and again for the true up.

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. Weather normalized sales and peak loads are also used to allocate costs between different rate groups.

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 GS, Medium GS, Large GS, and Large Power 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 then was 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 1981-2010 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 then are summed by billing month and added to billed kWh sales to weather-normalize that data.

In my direct testimony, I am using the regression results from the previous rate case to compute the weather adjustments because the load research data was not available for the test year in time for me to use it. When the Staff requests an update to our filing, I will update the regression models using the load research data for the test year and the 12 months prior to the test year as we typically do in a rate case.

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 customer annualized monthly peaks by class, and Schedule GMM-3 shows weather-normalized customer annualized loads by class at the time of the monthly system peak load.

Q: Does that conclude your testimony?

A: Yes, it does.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Kansas City Power & Light Company's Request for Authority to Implement A General Rate Increase for Electric Service	)))	Case No. ER-2012-0174

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 27th day of February, 2012.

Notary Public

My commission expires: Feb. 4 2015

NICOLE A. WEHRY
Notary Public - Notary Seal
State of Missouri
Commissioned for Jackson County
My Commission Expires: February 04, 2015
Commission Number: 11391200

ADJUSTMENTS TO MONTHLY BILLED SALES OF KCP&L MISSOURI

NORMALIZATIONS TO MONTHLY MWH SALES

	Weather Adjustments to Monthly Billed Sales													August 2012 Customer	Total
Tariff	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Test Year	Growth	Adjustments
Residential	3,484	5,341	-414	-10,345	-15,171	-4,676	-1,179	-3,190	-16,383	-40,682	-36,827	915	-119,127	-16,593	-135,720
Small GS	-201	104	-36	-862	-1,304	-440	-92	197	-686	-2,605	-2,304	311	-7,917	-137	-8,055
Medium GS	-385	-228	-84	-784	-1,191	-512	-99	353	-1,544	-5,913	-5,399	323	-15,463	-3,004	-18,467
Large GS	-379	297	-107	-4,594	-7,057	-2,150	-352	755	-1,956	-7,716	-7,027	502	-29,784	-17,624	-47,408
Large Power	-694	-427	50	25	-116	-6	17	197	-1,941	-5,072	-2,647	1,621	-8,995	-18,279	-27,274
Total	1,825	5,086	-590	-16,559	-24,838	-7,786	-1,704	-1,689	-22,510	-61,988	-54,204	3,672	-181,285	-55,638	-236,923

WEATHER NORMALIZED MONTHLY PEAK LOADS (MW)

WEATHER NORMALIZED MONTHLY PEAK LOADS WITH CUSTOMER GROWTH THROUGH AUGUST 2012 (MW)

Tariff	Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	2010
Residential	595	508	454	363	552	788	885	825	700	408	483	610	885
Small GS	84	81	73	74	91	102	97	105	87	70	74	86	105
Medium GS	177	180	167	194	209	257	250	246	229	194	164	176	257
Large GS	402	403	361	362	388	424	424	429	419	359	351	428	429
Large Power	295	292	282	299	325	343	364	353	335	327	298	276	364
Street Lights	17	17	17	17	17	17	17	17	17	17	17	17	17
Traffic Signals	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

Note: These numbers include losses.

WEATHER NORMALIZED MONTHLY COINCIDENT PEAK LOADS (MW)

WEATHER NORMALIZED MONTHLY COINCIDENT PEAK LOADS WITH CUSTOMER GROWTH THROUGH AUGUST 2012 (MW)

Tariff	Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	2010
Residential	595	466	454	278	499	711	741	786	680	353	483	610	741
Small GS	63	66	55	72	91	92	97	93	85	70	54	63	97
Medium GS	142	154	135	177	187	256	238	221	214	180	137	131	238
Large GS	350	391	290	333	353	389	418	361	378	325	289	301	418
Large Power	273	284	254	278	318	334	362	321	326	315	248	223	362
Street Lights	17	0	15	0	0	0	0	0	0	0	17	17	0
Traffic Signals	0	0	0	0	0	0	0	0	0	0	0	0	0
Area Lights	4	0	3	0	0	0	0	0	0	0	4	4	0
Total Retail	1,444	1,361	1,207	1,138	1,447	1,783	**1,857**	1,782	1,683	1,244	1,233	1,349	1,857

Note: These numbers include losses.