Exhibit No.: GMO-27
Issue: Weather Normalization, Customer Growth, Other Revenue Normalization
Witness: George M. McCollister
Type of Exhibit: Direct Testimony
Sponsoring Party: KCP&L Greater Missouri Operations 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

KCP&L GREATER MISSOURI OPERATIONS COMPANY

Kansas City, Missouri
June 2010

KCPL Exhibit No GMO27
Date 2/4/11 Reporter LMB
File No ER-2010-0356

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 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 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 August 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 GMO's customers representing the Residential, Small General Service, Large General Service and Large Power Service classes. The hourly loads for the sample were expanded to the tariff class using Ratio Analysis, which is the ratio of demand to billed energy for each interval, expanded by the sum of class billed energy.

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, 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 using data through December 2010 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 GMO 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 KCP&L Greater Missouri Operations Company to Modify Its Electric Tariffs to Effectuate a Rate Increase	)))	Docket No. ER-2010-____

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 KCP&L Greater Missouri Operations 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.

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	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	Dec 2010 Customer Growth	Total Adjustments
SJLP	Residential	-1,324	3,599	2,869	-292	-657	-324	4,820	10,357	6,330	1,114	35	4,799	31,326	-1,724	29,602
	Small GS	-53	171	111	-26	-24	-48	360	736	489	110	72	188	2,088	76	2,164
	Large GS	-118	485	238	-85	-54	-155	983	1,726	1,115	376	377	423	5,311	136	5,446
	Large Power	42	152	-147	4	-35	-234	1,236	1,107	777	637	84	-44	3,580	0	3,580
	Total	-1,453	4,408	3,070	-398	-770	-760	7,399	13,926	8,711	2,238	568	5,366	42,304	-3,024	39,280
MPS	Residential	-3,331	8,548	6,728	-775	-2,489	-2,307	19,526	45,253	28,226	10,538	1,579	11,617	123,113	6,783	129,896
	Small GS	-334	1,131	647	-207	-170	-510	3,010	5,713	3,778	1,194	808	1,135	16,195	2,270	18,466
	Large GS	-218	994	92	-104	-8	-405	2,395	3,800	2,686	1,443	907	446	12,028	624	12,652
	Large Power	35	208	-278	29	-201	-437	2,584	3,493	2,728	1,465	200	-20	9,806	0	9,806
	Total	-3,848	10,882	7,188	-1,057	-2,868	-3,658	27,516	58,259	37,417	14,639	3,494	13,178	161,142	9,677	170,819

Schedule GMM2010-1

WEATHER NORMALIZED MONTHLY PEAK LOADS (MW)

WEATHER NORMALIZED MONTHLY PEAK LOADS WITH CUSTOMER GROWTH THROUGH DECEMBER 2010 (MW)

	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	Oct08 -Sep09
SJ LP	Residential	121	177	237	236	219	171	146	140	202	218	230	165	237
	Small GS	19	20	25	28	28	23	22	25	27	26	25	23	28
	Large GS	71	72	82	84	83	74	68	71	85	83	85	82	85
	Large Power	126	121	123	126	124	119	119	127	130	134	137	132	137
	Lighting	5	5	5	6	6	6	6	6	6	6	6	6	6
MPS	Residential	457	569	713	673	615	496	490	615	838	946	967	657	967
	Small GS	154	133	158	161	156	137	142	163	205	227	217	191	227
	Large GS	163	137	165	170	163	145	160	174	196	196	190	191	196
	Large Power	211	195	193	192	185	191	197	217	233	238	243	226	243
	Lighting	11	11	11	12	12	12	12	12	12	12	12	12	12

Note: These numbers include losses.

WEATHER NORMALIZED MONTHLY COINCIDENT PEAK LOADS (MW)

WEATHER NORMALIZED MONTHLY COINCIDENT PEAK LOADS WITH CUSTOMER GROWTH THROUGH DECEMBER 2010 (MW)

	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	Oct08 -Sep09
SJLP	Residential	114	160	215	236	219	167	139	100	190	209	230	157	236
	Small GS	13	15	19	23	21	17	14	22	23	23	18	22	23
	Large GS	57	61	74	78	74	67	59	61	75	71	67	71	78
	Large Power	116	113	118	124	120	116	112	111	124	128	128	126	128
	Lighting	0	0	1	1	0	0	0	0	0	0	1	0	1
	Total Retail	300	349	426	462	434	368	324	293	413	432	445	376	462
MPS	Residential	457	545	696	660	581	429	437	603	828	939	954	657	954
	Small GS	95	114	129	134	139	116	98	122	167	189	175	148	189
	Large GS	96	119	156	168	163	145	113	131	166	176	172	159	176
	Large Power	158	179	181	186	182	177	164	169	218	231	231	215	231
	Lighting	11	11	11	2	0	0	12	0	0	0	0	1	12
	Total Retail	817	968	1,173	1,151	1,064	867	823	1,026	1,380	1,534	1,532	1,181	1,534
	Sales for Resale	3	4	5	5	5	4	4	4	6	7	7	5	7
	Total System	821	973	1,178	1,156	1,069	871	827	1,030	1,386	1,541	1,538	1,185	1,541

Note: These numbers include losses.