BEFORE THE STATE CORPORATION COMMISSION
OF THE STATE OF KANSAS

DIRECT TESTIMONY OF

ALBERT R. BASS, JR.

ON BEHALF OF
KANSAS CITY POWER & LIGHT COMPANY

IN THE MATTER OF THE APPLICATION OF
KANSAS CITY POWER & LIGHT COMPANY
TO MAKE CERTAIN CHANGES IN
ITS CHARGES FOR ELECTRIC SERVICE

DOCKET NO. 18-KCPE-____-RTS

Q: Please state your name and business address.

A: My name is Albert R. Bass, Jr. My business address is 1200 Main, Kansas City, Missouri 64105.

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

A: I am employed by Kansas City Power & Light Company ("KCP&L" or "Company") as Sr. Manager of Energy Forecasting and Analytics.

Q: On whose behalf are you testifying?

A: I am testifying on behalf of KCP&L.

Q: What are your responsibilities?

A: My responsibilities include responsibility for short-term electric load forecasting, long-term electric load forecasting, weather normalization, and various other analytical tasks.

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

A: I received a Bachelor of Science in Business Administration degree with emphasis in Marketing from Missouri Western State University in 1989. I earned a Master of Business Administration degree from William Woods University in 1995.

Prior to joining KCP&L, I worked for APS Technologies developing product forecast models and conducting market analysis. In June 1998, I joined KCP&L as a Technical Professional. In this role, I conducted market analysis, developed market options studies, and research. In May 2000, I assumed the responsibilities for short-term budget forecasting, long-term load forecasting for the Integrated Resource Plan, monthly kilowatt-hour ("kWh") sales and peak weather normalization, and weather normalization for rate case filings. As part of these duties, I assisted with the creation of the weather normalization testimony filed by KCP&L. In July 2013, I was promoted to Manager of Market Assessment. In March 2017, I was promoted to my current position as Sr. Manager of Energy Forecasting and Analytics.

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

A: Yes, I provided written testimony in KCP&L's rate case before the KCC – (Docket No. 15-KCPE-116-RTS). Additionally, I have filed written testimony before the Missouri Public Service Commission in KCP&L Greater Missouri Operation Company's rate case (MPSC – Case No. ER-2016-0156 and MPSC – Case No. ER-2018-0146) and KCP&L's rate cases (MPSC – Case No. ER-2014-0370 and MPSC – Case No. ER-2018-0145).

I. WEATHER NORMALIZATION

Q: What is the purpose of your testimony?

A: The purpose of my testimony is to ask the Commission to adopt my weather normalization of monthly kWh sales and peak loads as set forth in the attached Exhibits ARB-1 through ARB-3. These weather-normalized sales and peak loads are used as the basis for the Company's analysis of test year revenue which, in turn, is the basis for determining the Company's revenue requirement. In support of my position I describe the impact weather can have on a utility's rates, the purpose of weather normalization adjustments, and the methodology I utilized in conducting my analysis. I recommend that the Commission adopt my 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 test-year revenues and incremental costs (*i.e.*, fuel and purchased power). Weather-normalized sales and peak loads are also used to allocate costs between jurisdictions and different rate groups.

During the test year, October 2016 through September 2017, there were 24% fewer heating degree days at 55 degrees and 3% fewer cooling degree days at 65 degrees than normal at the Kansas City International Airport ("KCI"). Thus, heating load was significantly less than normal while cooling load was slightly below normal.

Q: What method was used to weather-normalize kWh sales?

A: KCP&L uses a six-step Commission-approved[1] process to weather-normalize kWh sales. Our method is based on load research 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, and Large General Service classes. The ratio analysis methodology applied uses the ratio of demand to billed energy for each interval, expanded by the sum of the class billed energy to obtain class total estimates.

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"). NSI is the power generated and purchased to serve KCP&L's total customer load. The difference between this sum and the NSI was then allocated back to the load research data in proportion to the hourly precisions that were calculated for the load research data.

In the third step, regression analysis was used to model the hourly loads for each rate class. These models included a piecewise linear temperature response function of a two-day weighted mean temperature that describes how the loads in each class are affected by changes in 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 National Oceanic and Atmospheric Administration (NOAA) 30-year normal temperatures representing average weather conditions over the 1981-2010 time period at "KCI".

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.

Q: Why was 1981-2010 time period used to weather-normalize electric sales?

A: NOAA computes normal weather statistics using the last three decades, which is currently 1981-2010. NOAA recomputes and publishes normal weather statistics every ten years at the end of a decade.

In addition to finding KCP&L's six-step analytical weather-normalization methodology appropriate in Docket No. 10-KCPE-415-RTS, the Commission also ordered use of the NOAA 30-year time interval to define normal weather.[2]

Q: Does KCP&L weather normalize general service and all electric customers separately.

A: Yes, KCP&L weather normalized the residential general service and residential all electric classes separately. This was only done for the residential class since it is the most weather sensitive.

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[1] Docket No. 10-KCPE-410-RTS, *Order: 1) Addressing Prudence; 2) Approving Application, in Part; & 3) Ruling on Pending Requests*, §14, p. 99, (stating, "[b]ased on the foregoing, the Commission concludes that KCPL's weather normalization is fair and reasonable."

Q: What are the results of these normalizations?

A: The results of these normalizations are reflected in my exhibits. Exhibit ARB-1 shows the monthly adjustments for normalization on kWh sales. Exhibit ARB-2 shows weather-normalized customer annualized monthly peaks by class. Exhibit ARB-3 shows weather-normalized customer annualized monthly coincident peaks by class.

Q: How are the results used?

A: The weather normalization results are either added or subtracted from the actual kWh usage of the test year to adjust the test year to be reflective of normal or average temperatures. These results are then used to calculate test year revenues and fuel costs.

Q: Does that conclude your testimony?

A: Yes, it does.

[2] Docket No. 10-KCPE-410-RTS, *Order: 1) Addressing Prudence; 2) Approving Application, in Part; & 3) Ruling on Pending Requests*, §14, pp. 98-99.

BEFORE THE CORPORATION COMMISSION
OF THE STATE OF KANSAS

In the Matter of the Application of Kansas City Power & Light Company to Make Certain Changes in Its Charge for Electric Service	))))	**Docket No. 18-KCPE-____-RTS**

AFFIDAVIT OF ALBERT R. BASS, JR.

STATE OF MISSOURI)
) ss
COUNTY OF JACKSON)

Albert R. Bass, Jr., being first duly sworn on his oath, states:

1. My name is Albert R. Bass, Jr.. I work in Kansas City, Missouri, and I am employed by Kansas City Power & Light Company as Sr. Manager of Energy Forecasting and Analytics.

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.

Albert R. Bass, Jr.

Subscribed and sworn before me this 1st day of May 2018.

Notary Public

My commission expires: 4/26/2021

ANTHONY R WESTENKIRCHNER
Notary Public, Notary Seal
State of Missouri
Platte County
Commission # 17279952
My Commission Expires April 26, 2021

ADJUSTMENTS TO MONTHLY BILLED SALES OF KCP&L KANSAS

NORMALIZATIONS TO MONTHLY MWH SALES

		Weather Adjustments to Monthly Billed Sales												
State	Tariff	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Test Year
KS	Residential GS	-11,088	-1,538	2,984	2,307	8,956	6,327	1,583	67	-3,153	-5,768	25,865	22,358	48,899
KS	Residential Heat	-1,366	5,084	6,164	4,258	15,539	10,813	4,207	581	-935	-1,676	7,127	6,526	56,321
KS	Small GS	-800	-112	505	386	1,413	923	292	81	-134	-331	1,588	1,511	5,323
KS	Medium GS	-2,439	-1,321	474	541	1,806	818	110	77	-166	-709	3,067	2,698	4,957
KS	Large GS	-4,700	-1,866	2,307	1,785	6,478	3,853	1,175	363	-404	-1,786	5,880	5,994	19,078
KS	Large Power	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	-20,393	247	12,435	9,276	34,192	22,733	7,367	1,169	-4,792	-10,270	43,528	39,086	134,578

WEATHER NORMALIZED MONTHLY PEAK LOADS (MW)

State	Tariff	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Test Year
KS	Residential GS	361	346	386	347	334	290	371	532	633	716	780	567	780
KS	Residential Heat	167	226	330	302	309	217	188	206	231	258	295	212	330
KS	Small GS	513	551	705	602	632	469	526	738	859	971	1,075	778	1,075
KS	Medium GS	73	75	79	84	84	77	78	90	88	109	115	92	115
KS	Large GS	146	135	147	154	154	135	170	168	180	189	199	174	199
KS	Large Power	391	370	424	430	431	401	434	417	451	459	483	453	483
KS	Street Lights	3	3	3	1	1	1	1	1	1	1	1	1	3
KS	Area Lights	1	1	1	1	1	1	1	1	1	1	1	1	1
KS	Off Peak Lighting	10	10	10	11	11	11	11	11	11	11	11	11	11
KS	Traffic Signals	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
	Retail	995	1,041	1,238	1,177	1,211	973	1,101	1,299	1,500	1,666	1,670	1,404	1,670

WEATHER NORMALIZED MONTHLY COINCIDENT PEAK LOADS (MW)

WEATHER NORMALIZED MONTHLY COINCIDENT PEAK LOADS (MW)

State	Tariff	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Test Year
KS	Residential GS	270	288	271	231	272	191	347	508	611	693	663	517	663
KS	Residential Heat	118	204	330	302	293	209	129	206	212	251	227	185	227
KS	Small GS	388	492	601	533	565	400	476	714	823	945	890	702	890
KS	Medium GS	73	55	73	73	71	60	72	71	78	90	111	92	111
KS	Large GS	137	102	144	139	143	114	148	143	175	167	191	166	191
KS	Large Power	377	335	417	430	431	389	402	371	423	430	468	438	468
KS	Street Lights	0	3	0	0	0	0	0	0	0	0	0	0	0
KS	Area Lights	0	1	0	0	0	0	0	0	0	0	0	0	0
KS	Off Peak Lighting	0	10	1	2	0	0	0	0	0	0	0	0	0
KS	Traffic Signals	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
KS	Total Retail Coincident Peak	975	997	1,238	1,177	1,211	964	1,098	1,299	1,500	1,632	1,660	1,398	1,660