Exhibit No.
Issue: Weather Data
Witness: Jayna R Long
Type of Exhibit: Supplemental
Direct Testimony
Sponsoring Party: Empire District
Case No. ER-2006-0315

Before the Missouri Public Service Commission

Supplemental Direct Testimony

of

Jayna R. Long

July 2006

SUPPLEMENTAL DIRECT TESTIMONY
OF
JAYNA R. LONG
ON BEHALF OF
THE EMPIRE DISTRICT ELECTRIC COMPANY
BEFORE THE
MISSOURI PUBLIC SERVICE COMMISSION
CASE NO. ER-2006-0315

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Jayna R. Long. My business address is 602 Joplin Street, Joplin, Missouri.

Q. BY WHOM ARE YOU EMPLOYED?

A. I am employed by The Empire District Electric Company. ("Empire" or "Company").

Q. ARE YOU THE SAME JAYNA R. LONG THAT FILED DIRECT TESTIMONY IN THIS CASE?

A. Yes, I am.

Q. WHAT IS THE PURPOSE OF YOUR SUPPLEMENTAL DIRECT TESTIMONY IN THIS CASE BEFORE THE MISSOURI PUBLIC SERVICE ("COMMISSION")?

A. I am filing this testimony in response to a Commission order in this rate case requesting additional information from the parties on fuel and purchased power. Specifically, I am responding to a Commission question concerning the use of weather data to determine Empire's revenue requirement in this rate case.

Q. WHAT IS NORMAL WEATHER?

A. Typically normal weather is defined as simply the long term *average* of weather. The World Meteorological Organization uses a 30-year average to define climatological "normals". However these normals are merely averages and significant year to year variability in weather is likely to occur.

Q. WHAT IS THE DIFFERENCE BETWEEN WEATHER AND CLIMATE?

A. While weather changes daily, climate changes over time. For example during the era of the dinosaurs, scientists believe the Earth was much warmer than it is today. While more recently some argue the recent increase of hurricanes, wild fires and tornadoes are a result of permanent climate changes, others argue we are experiencing merely a cycle in the Earth's history.

Q. WHAT NORMAL WEATHER STATISTICS SHOULD THE COMMISSION USE TO DETERMINE THE REVENUE REQUIREMENT FOR FUEL AND PURCHASED POWER COSTS IN THIS RATE CASE?

A. The Commission's decision should be based upon historical weather statistics.

Q. PLEASE EXPLAIN.

A. No one can predict what the climate or the weather will be over the next several years. As a result, Empire relies on historical averages to compile its rate cases. Below are tables showing several scenarios of cooling and heating degree days based on the NOAA Springfield first order weather station. The NOAA normals are based on the years 1976 to 2000. All other averages are based on the years ending with 2005.

Cooling Degree Days	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	% of NOAA
NOAA Normal	-	-	3	20	83	258	415	379	179	28	1	-	1,366	100%
30 years	-	-	2	22	88	255	418	393	188	28	3	-	1,397	102%
20 years	-	-	2	25	93	258	406	383	174	27	3	-	1,371	100%
10 years	-	-	2	21	98	247	408	392	186	34	5	-	1,393	102%
5 years	-	-	1	36	91	255	417	404	193	35	9	-	1,441	105%
3 years	-	-	2	23	106	245	403	402	197	42	14	-	1,434	105%
Heating Degree Days	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Total**	**% of NOAA**
NOAA Normal	1,034	790	581	300	100	8	1	1	62	248	578	899	4,602	100%
30 years	1,035	782	589	292	98	9	1	2	52	249	570	911	4,590	100%
20 years	964	746	588	291	92	9	1	2	52	250	569	902	4,466	97%
10 years	982	719	628	292	92	13	1	1	40	237	554	906	4,465	97%
5 years	989	771	623	238	94	6	1	3	33	245	500	867	4,370	95%
3 years	992	780	568	262	90	8	1	4	31	210	480	878	4,304	94%

Q. WHAT SHOULD BE DERIVED FROM THESE TABLES?

A. One can conclude that in the short run, the cooling degree days are higher than the long term average and that the heating degree days are lower in the short run than the long term average.

Q. WHAT WEATHER STATISTIC HAS EMPIRE USED IN THE DEVELOPMENT OF ITS REQUEST IN THIS CASE?

A. Empire has chosen to use the NOAA normals in its normal weather calculations. The Company has done so based on no other reason than the consistent historical use of this methodology by both the Company and the Commission Staff in previous rate cases.

Q. WHAT IMPACT CAN THE USE OF THIS WEATHER STATISTIC HAVE ON FUEL AND PURCHASED POWER EXPENSE IN A RATE CASE?

A. Generally, as normal temperatures increase so will normalized sales, revenue and fuel and energy costs. The normalized sales levels will be used to determine the level of fuel and purchased power needed by the utility company. This results in the matching of normalized fuel and purchased power expense to normalized revenues.

Q. WHAT WEATHER STATISTIC DOES THE COMPANY RECOMMEND THE COMMISSION RELY ON TO DEVELOP THE REVENUE REQUIREMENT IN THIS RATE CASE?

A. Empire recommends the continued use of the NOAA weather statistic at this time. This would maintain the consistency of the weather method used to develop the Empire revenue requirement. In addition, the continued use of this weather statistic would maintain the relationship of the Empire normalized weather calculation with those of other utilities in Missouri.

Q. DOES THIS CONCLUDE YOUR SUPPLEMENTAL DIRECT TESTIMONY?

A. Yes.