Exhibit No.:
Issue: Regulatory Plan
Witness: Lois J. Liechti
Sponsoring Party: St. Joseph Light & Power Company
and UtiliCorp United Inc.
Case No.: EM-2000-292
Date Prepared: June 26, 2000

MISSOURI PUBLIC SERVICE COMMISSION
Case No. EM-2000-292

Surrebuttal Testimony

of

Lois J. Liechti

Jefferson City, Missouri

1   Q.   Please state your name and business address.

2   A.   Lois J. Liechti, 520 Francis Street, St. Joseph, Missouri.

3   Q.   What is your position and experience with the St. Joseph Light & Power Company

4   ("SJLP")?

5   A.   I am employed by SJLP as Supervisor, Pricing & Market Research. I have been

6   employed by SJLP for 26 years, and previously served as Demand Side Management

7   Analyst, Economic Research Analyst, Engineering Technician, and Mapping Supervisor.

8   Q.   What is your educational and professional background?

9   A.   In addition to public schools, I received a Master's Degree in Business Administration

10   from Northwest Missouri State University in Maryville, Missouri. I did my

11   undergraduate study at Missouri Western State College in St. Joseph, Missouri. I received

12   a Bachelor of Science Degree in Engineering Technology, and an Associate of Science

13   Degree in Drafting & Design. In addition, I have taken short courses during my

14   employment pertaining to rates and rate design, computer applications and management

15   skills.

16   Q.   What is the nature of your duties while in the employ of SJLP?

17   A.   One of my primary responsibilities is the direction and supervision of the preparation of

18   unit sales, sales revenue, system requirements and peak forecasts for the Electric, Gas,

19   and Steam Departments.

1   Q.   What issue will you be addressing in your surrebuttal testimony?

2   A.   I will address the Regulatory Plan - Overall and specifically the question: "Should the

3   Companies' proposed regulatory plan for treating merger related savings and costs in rates

4   be adopted in total as not detrimental to the public interest?"

5   Q.   What is the purpose of your surrebuttal testimony in this proceeding?

6   A.   The purpose of my surrebuttal testimony is to support SJLP's electric unit sales, sales

7   revenue, system requirements, and peak forecasts used by SJLP in the long range

8   forecast. This support is intended to provide evidence in response to certain matters

9   raised in Staff rebuttal testimony by witnesses Michael Proctor (page 16) and Cary

10   Featherstone (page 79) where they contend that SJLP's cost will continue to decline.

11 Q.   Why is it important to support and describe this methodology?

12 A.   SJLP witness Janet Pullen is filing surrebuttal testimony in this case to respond to the

13   claim made by Staff witnesses Proctor and Featherstone. Her testimony provides the

14   results and conclusions of the long range forecast prepared by SJLP and provided to the

15   Missouri Public Service Commission Staff ("Staff"). My testimony supports the electric

16   unit sales, sales revenue, system requirements, and peaks used as inputs to the long range

17   forecast.

18 Q.   What period does the forecast cover?

19 A.   The forecast I will be discussing covers the years 2000 through 2004. Please see

20   Schedule LJL-1.

21 Q.   Please describe how the unit sales forecast was prepared.

22 A.   The forecast is prepared by class of customer. The specific classes are residential,

23   commercial, industrial, lighting, and other.

1   The residential class numbers of customers were modeled as a function of total

2   employment, real per household income, population, and trend. The numbers of

3   customers forecasts were calibrated for consistency between the actual data and the

4   projection. Residential use per customer by rate class was modeled as a function of

5   heating degree days base 65, cooling degree days base 72, and trend. Regression was used

6   to analyze the relationship between numbers of customers and use per customer and the

7   driver variables previously mentioned.

8   The commercial class total number of customers was modeled as a function of

9   employment in transportation, communications, public utilities, retail, finance, insurance

10   and real estate. The percentage of commercial customers in each class was modeled as a

11   function of trend. The number of customers forecasts were adjusted to align the actual

12   and forecast periods. Use per commercial customer was modeled as a function of real per

13   household income, cooling degree days base 55, and heating degree days base 70.

14   Large industrial customers were modeled and forecast separately. The individual

15   customer models were basic trend models. The results of these trend forecasts were

16   examined and adjusted by the Key Account Representatives, the Manager of Customer

17   Operations, and the Sr. Economic Research Analyst. A separate model was estimated for

18   the "other" industrials. The individual industrial customer forecasts and the "other"

19   industrial forecast were then combined to create the industrial forecast.

20   Private Area Lighting sales for residential, commercial, and industrial class models were

21   basic trend models.

22   Street lighting, Public Authorities and Company use models were basic trend models with

23   heating degree days base 65, and cooling degree days base 72, included as driver

1   variables.

2 Q. Several times in your discussion, you mention "heating degree days" and "cooling degree

3   days". What do these terms mean?

4 A. A heating degree day is the accumulation of each whole degree that the average daily

5   temperature is below some base for a period of time. Heating degree days define

6   temperature differences that can be related to energy consumption for space heating. The

7   most commonly used heating degree day base is 65.

8   Cooling degree days are also based on the day's average and some base. They relate the

9   day's temperature to the energy demands of air conditioning. For example, if the day's

10   high is 90 and the day's low is 70, the day's average temperature is 80. Eighty degrees

11   minus 72 is 8 cooling degree days. For most applications, SJLP uses a cooling degree day

12   base of 72.

13 Q. Why is this discussion of temperature important?

14 A. Weather is responsible for a large portion of the variation in electric sales. One way to

15   relate temperature to the demand for energy to heat buildings in the winter or cool them

16   in the summer is to use the concept of degree days. Under "normal" conditions a certain

17   amount of energy will be used. "Normal" weather is used in forecasting customers'

18   energy needs. The difference between "normal" and what actually happens is used to

19   explain variances and to "weather normalize" sales.

20 Q. What is "normal"?

21 A. A weather normal is simply the arithmetic average of the values over some period. The

22   National Oceanic and Atmospheric Administration defines this period as three

23   consecutive decades. SJLP uses thirty-five years.

4

1   Q.   Where is weather for SJLP's service area measured?

2   A.   Weather data comes from the Kansas City International Airport. While the airport is

3   outside of SJLP's service area, it is relatively close and provides a consistent, reliable

4   weather measure that works well for weather-normalizing electric sales.

5   Q.   What weather data does SJLP maintain?

6   A.   Daily high and low temperature data beginning with January 1, 1960 and continuing

7   through the most recent complete month.

8   Q.   Where does SJLP get the data?

9   A.   The numbers for 1960 through 1996 were provided by Dennis Patterson of the Missouri

10   Public Service Commission Staff. For the period January 1, 1997 through current, data

11   compiled and reported by the National Weather Service is used.

12   Q.   How was forecast revenue calculated?

13   A.   Forecast revenue was derived using monthly revenue elasticities for major rate classes.

14   By looking at the percent changes in revenues that have occurred given the actual percent

15   changes in sales, revenue elasticities can be identified. These elasticities were used to

16   estimate the revenue that current tariffs would produce given forecast sales.

17   Q.   How were monthly peak demands calculated?

18   A.   System peaks were forecasted as a function of system requirements and historical

19   monthly load factors.

20   Q.   What is the difference between sales and system requirements?

21   A.   System Requirements include company use and line losses. It is the amount of energy

22   that must be generated to deliver forecast sales to SJLP's customers.

23   Q.   You have described how the various forecasts were derived. Are the methods used by

1   SJLP considered "standard" within the electric utility industry?

2   A.   While each company tends to use different techniques to prepare forecasts the methods

3   used by SJLP in this forecast are consistent with past practices, and the practices of many

4   utilities. SJLP's forecast is prepared using regression modeling incorporating various

5   forecast drivers, tempered with judgement. SJLP has successfully used this method of

6   forecasting for many years.

7   Q.   Does this conclude your surrebuttal testimony?

8   A.   Yes, it does.

St. Joseph Light & Power Company
Electric Forecast

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Total Booked MWH Sales 2000	166457	141175	129619	121134	127742	142879	171886	175952	135200	130497	134218	152979	1729740
Total Booked MWH Sales 2001	171110	145415	133934	124921	131412	146874	176704	180144	138703	134231	138002	157326	1778776
Total Booked MWH Sales 2002	175632	149468	137136	127855	135136	150428	179909	183499	141652	137335	141357	161097	1820604
Total Booked MWH Sales 2003	179967	153200	140401	131010	138174	153588	183214	187632	144284	140581	144596	165034	1861678
Total Booked MWH Sales 2004	184259	156972	143877	134342	142408	157204	187196	191704	148337	144519	147935	168840	1907594
System Requirements 2000	174548	150006	142195	131277	137487	158647	186159	184017	147199	143052	150196	166660	1871442
System Requirements 2001	179408	154487	146893	135363	141424	163072	191362	188387	150980	147115	154409	171372	1924273
System Requirements 2002	184131	158773	150399	138636	145410	167018	194844	191883	154156	150492	158138	175460	1969339
System Requirements 2003	188657	162721	153967	141933	148671	170524	198425	196187	157014	154022	161745	179726	2013592
System Requirements 2004	193134	166707	157758	145525	153201	174547	202736	200428	161371	158312	165486	183858	2063062
Forecasted Peaks 2000	329	299	278	252	285	340	397	369	347	261	288	325	
Forecasted Peaks 2001	339	319	288	259	293	350	408	378	356	269	296	335	
Forecasted Peaks 2002	347	328	294	266	301	358	416	385	364	275	303	342	
Forecasted Peaks 2003	356	336	301	272	308	365	423	394	371	281	310	351	
Forecasted Peaks 2004	364	332	309	279	317	374	433	402	381	289	317	359	
Total Booked Revenue 2000	$7,172,610	$6,258,771	$5,824,852	$5,588,884	$6,582,211	$8,710,205	$10,344,538	$10,668,605	$7,447,990	$6,057,946	$5,902,372	$6,669,826	$87,228,810

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of the Joint Application of)
UtiliCorp United Inc. and St. Joseph)
Light & Power Company for Authority to)
Merger St. Joseph Light & Power Company) Case No. EM-2000-292
with and into UtiliCorp United Inc., and,)
in Connection Therewith, Certain Other)
Related Transactions.)

County of Buchanan)
)
State of Missouri)

AFFIDAVIT OF LOIS J. LIECHTI

Lois J. Liechti, being first duly sworn, deposes and says that she is the witness
who sponsors the accompanying testimony entitled "Regulatory Plan"; that said
testimony was prepared by her and/or under her direction and supervision; that if
inquiries were made as to the facts in said testimony and schedules, she would respond as
therein set forth; and that the aforesaid testimony and schedules are true and correct to the
best of her knowledge, information, and belief.

Lois J. Liechti

Subscribed and sworn before me this 20ᵗʰ day of June , 2000.

Jacqueline F. Finchum
Notary Public

My Commission expires:

6-16-02

NOTARY SEAL