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Issues:	Revenues
Witness:	Curt Wells
Sponsoring Party:	MO PSC Staff
Type of Exhibit:	Direct Testimony
Case No.:	ER-2006-0315
Date Testimony Prepared:	June 23, 2006

MISSOURI PUBLIC SERVICE COMMISSION

UTILITY OPERATIONS DIVISION

DIRECT TESTIMONY

OF

CURT WELLS

THE EMPIRE DISTRICT ELECTRIC COMPANY

CASE NO. ER-2006-0315

Jefferson City, Missouri
June 2006

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the matter of The Empire District Company of Joplin, Missouri for authority to file tariffs increasing rates for electric service provided to customers in Missouri service area of the Company.	))))	Case No. ER-2006-0315

AFFIDAVIT OF CURT WELLS

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

Curt Wells, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Direct Testimony in question and answer form, consisting of 11 pages to be presented in the above case; that the answers in the foregoing Direct Testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true and correct to the best of his knowledge and belief.

Curt Wells

Subscribed and sworn to before me this 22nd day of June 2006.

Notary Public

NOTARY PUBLIC NOTARY SEAL STATE OF MISSOURI

DAWN L. HAKE
My Commission Expires
March 16, 2009
Cole County
Commission #05407643

My commission expires

DIRECT TESTIMONY

OF

CURT WELLS

THE EMPIRE DISTRICT ELECTRIC COMPANY

CASE NO. ER-2006-0315

Q. Please state your name and business address.

A. My name is Curt Wells and my business address is Missouri Public Service Commission, P. O. Box 360, Jefferson City, Missouri 65102.

Q. What is your present position with the Missouri Public Service Commission (Commission)?

A. I am a Regulatory Economist in the Economic Analysis Section, Energy Department, Operations Division.

Q. Would you please review your educational background and work experience?

A. I have a Bachelor's degree in Economics from Duke University, a Master's degree in Economics from The Pennsylvania State University, and a Master's degree in Applied Economics from Southern Methodist University. I have been employed by the Commission since February, 2006. Prior to joining the Commission, I completed a career in the U.S. Air Force, first as navigator, and later in the Purchasing/Contracting area as Contract Negotiator and Administrator, Contracting Policy Manager, Installation Purchasing Department Chief, and Contracting Program Manager.

Q. What is the purpose of your direct testimony in this filing?

A. The following explains the purpose of my testimony.

EXECUTIVE SUMMARY

The purpose of this testimony is to provide a general description of adjustments the Missouri Public Service Commission Staff (Staff) made to Empire District Electric Company's (EDE or Company) Missouri retail kilowatt-hour (kWh) sales and revenue. Adjustments include normalization and annualization. Revenues, with these adjustments, are shown in Schedule CW-1; Schedule CW-2 reflects adjustments to sales; and Schedule CW-3 provides an explanation of the basic concepts used in making these revenue and sales adjustments.

Normalizations

Revenue and sales figures provided by the Company were normalized to remove the effects of deviations in the test year from normal weather, and to adjust the 12 test year billing months to a 365 day calendar year.

Annualizations

The Staff performed three annualizations on revenue and sales data. The first increased rate revenues to reflect a March 27, 2005 rate increase. The second accounted for gains and losses of customers during the test year; while the third continued the treatment of Praxair's interruptible credits in accordance with Case No. ER-2001-299.

Recommendation:

That the Commission adopt Staff's adjustments to EDE booked revenues and kWh sales shown in Schedules CW-1 and CW-2.

Q. What test year and update period did you use for these adjustments?

A. The adjustments were based upon a test year of January 1, 2005 – December 31, 2005, updated for known and measurable changes through March 31, 2006.

Q. Are you sponsoring any adjustments to Staff's Accounting Schedule 1?

A. Yes. Certain adjustments to EDE's Missouri rate revenues shown on Schedule CW-1 are also shown as Permanent Rate Adjustment (S-1.5), Large Customer Annualizations (S-1.8), Imputed Interruptible Credit for Praxair (S-1.9), and adjustments to Excess Facilities (S-1.10). I also calculated the revenues that would have been collected had the Interim Energy Charge been in effect during the entire year (S-1.11). In addition, Shawn Lange and myself jointly sponsored Weather Adjustments (S-1.6), and Days Adjustments (S-1.7).in the Staff's Adjustments to Income Statement-Accounting Schedule 9.

The Missouri retail kWh sales shown on Schedule CW-2 support both the Missouri rate revenues in Staff's Income Statement-Accounting Schedule 9 and in Schedule CW-1.

Q. Is there a relationship between the Missouri rate revenues shown on Schedule CW-1 and the Missouri operating revenues shown on Accounting Schedule 9-Income Statement?

A. Yes. The total operating revenues shown on Accounting Schedule 9-Income Statement, consists of two components: the revenue the Company collects from sales of electricity to Missouri retail customers (rate revenues), which is shown on Schedule CW-1; and the revenue the Company receives from other sources (other or non-

rate revenues). Non-rate revenues are generated by charges such as reconnect fees, returned check fees, late payment fees, etc. Another source of non-rate revenue may be off-system sales of electricity.

Q. How does your testimony relate to the testimony of other Staff witnesses in this case?

A. I compiled Schedule CW-1, which summarizes the results of Staff's work relating to EDE's Missouri electric rate revenues. I address the methodologies the Staff used to calculate annualized, normalized rate revenues for each affected rate schedule. Staff Witness Dana E. Eaves of the Auditing Department addresses the effect that growth (or decline) in the number of customers had on rate revenues. Staff Witnesses Janis E. Fischer and Dana Eaves of the Auditing Department are responsible for proposing any Staff adjustments to EDE non-rate revenues.

I also compiled Schedule CW-2, which summarizes the results of Staff's work relating to EDE Missouri retail sales (measured in kWh). In addition to the adjustments to Missouri kWh sales addressed in my testimony, Staff Witness Shawn Lange of the Energy Department addresses the Staff's normalization of kWh sales to account for the effects of deviations from normal weather in the test year and for adjustments to reflect a 365-day billing year. Mr. Eaves addresses the effect that growth (or decline) in the number of customers had on kWh sales.

Q. Do you have a description of the Staff's ratemaking treatment of rate revenues and kWh sales?

A. Yes. Schedule CW-3 attached to this testimony contains an explanation of the basic ratemaking concepts the Staff used in treating rate revenues and kWh sales.

Q. How have you applied these concepts to this case?

A. I first developed the Missouri rate revenues and kWh sales presented here by rate schedule using information provided by the Company. In accordance with the concepts outlined in Schedule CW-3, I normalized the kWh sales to remove the effects of deviations from normal weather in the test year, and adjusted billing month data to a calendar year (i.e., 365-day) basis. I then annualized the data to reflect conditions at the end of the update period. Each of these adjustments to Missouri kWh sales created a corresponding adjustment to Missouri rate revenues.

Q. How did the Staff normalize test year billed kWh sales in this case?

A. Mr. Lange calculated the Staff's weather adjustments and days adjustments to Missouri and non-Missouri kWh sales for the weather-sensitive rate schedules. The weather normalization restates test year kWh sales on a "normal weather" basis; *i.e.*, to the level of kWh sales that would have occurred in the test year if test year weather had been normal. Please refer to Mr. Lange's testimony for a more complete description of the weather normalization concept and methodology.

The days adjustment represents the change in kWh sales associated with adjusting the 12 test year billing months to the equivalent of 365 days. Mr. Lange computed days adjustments for the Residential (RG), Commercial (CB), Small Heating (SH), General Power (GP), and Total Electric Building (TEB) rate schedules as part of the weather normalization process. I computed a days adjustment for each of the Large Power customers. EDE's computation of annual unbilled sales was used as the days adjustment for the remaining rate schedules. The normalization adjustments to kWh sales are shown by rate schedule on Schedule CW-2.

Q. How did you normalize Missouri retail test year rate revenues in this case?

A. I calculated the adjustments to Missouri retail rate revenues that are associated with Mr. Lange's weather and days adjustments to kWh sales. The assumption underlying my normalization of revenue is that the weather normalization process has no effect on either the number of customers, or on the fixed charges those customers currently pay, or on billing adjustments. I assumed that weather normalization only affects the energy usage of each existing customer and thus only affects those charges directly related to kWh usage.

Q. What methodology did you use to normalize rate revenues for the Residential (RG), Commercial (CB), and Small Heating (SH) rate schedules?

A. Each of these rate schedules has a fixed monthly customer charge and a two-block energy charge. One characteristic of a multi-block rate structure is that the proportion of kWhs being priced in the first rate block declines (and the proportion being priced in the remaining rate blocks increases) as average use per customer increases. Using test year data and a statistical technique known as a regression, I modeled the relationship between average use per customer and the percentage of test year kWhs that are priced in the first rate block. I then applied this relationship to the monthly use per customer before and after the weather adjustment that Mr. Lange had provided me. This computation resulted in normalized kWhs by rate block, which were then converted to total normalized revenues by multiplying rate block kWh by the appropriate rates.

Q. What methodology did you use to normalize rate revenues for the General Power (GP) and Total Electric Buildings (TEB) rate schedules?

A. I calculated the weather adjustment to rate revenues for the GP and TEB rate schedules by using an average realization methodology, excluding customer and demand charges. This methodology assumes that the weather adjustment to kWh sales in each month is distributed into the rate blocks in proportion to the distribution of actual test year energy.

Empire's computation of annual unbilled revenues was used for the remaining rate schedules, which are not weather-sensitive and therefore required no adjustments due to weather.

Schedule CW-1 shows the annual normalization adjustment to Missouri rate revenues for each rate schedule. This normalization to rate revenues is shown in aggregate in Adjustments to Income Statement-Accounting Schedule 10, S-1.7.

Q. Why were different methods used for normalizing rate revenue?

A. The choice of revenue normalizing methodology depends on the rate structure of each particular rate schedule. In general, the more complex the rate structure, the more difficult it is to normalize the revenues on an aggregate basis. In this case, the RG, CB, and SH rate schedules have identical rate structures, so a single method will suffice. The TEB and GP rate structure are also identical to one another, but not to the first group, and so, require a separate analysis.

Q. What specific types of annualizations to test year kWh sales and rate revenues did the Staff perform in this case?

A. The Staff performed three annualizations. First, Missouri rate revenues were increased to reflect a rate increase that occurred effective March 27, 2005. Second, kWh sales and rate revenues were increased to reflect gains and losses of customers

during the test year and update period. Lastly, the special treatment of the interruptible credits associated with Praxair's contract stipulated in Case No. ER-2001-299 was continued.

Q. What methods did you use to perform these annualizations?

A. In the first (rate change) annualization, I multiplied test year billing units by current rates. The difference between these revenues and those billed during the test year under the prior rates provided the annualized value..

In the second (customer change), Missouri test year rate revenues and kWh sales were annualized to reflect the gain of customers within the test year and update period. Mr. Eaves is sponsoring the adjustments for those rate schedules serving smaller customers (RG, CB, SH, GP, TEB), which were computed based upon the Staff customer growth methodology. My Schedules CW-1 and CW-2 display Mr. Eaves' results by rate schedule. His customer growth adjustment to Missouri rate revenues is shown in aggregate on Staff's Adjustments to Income Statement-Accounting Schedule 10, S-1.2.

I performed the annualizations to data for large customers (LP and Praxair) in Missouri. These 38 customers use significant amounts of electricity, and are heterogeneous in electric use and load factor. Because of this, I performed annualizations on an individual customer (account) basis. They reflect significant increases or reductions in each customer's electric use, the exit from or transfer into the class by specific customers, and a 365-day calendar adjustment. The annualizations are shown by rate schedule on Schedules CW-1 and CW-2. The large customer annualization to Missouri rate revenues is also shown in aggregate as Adjustment S-1.8 on Staff's Adjustments to Income Statement-Accounting Schedule 10.

Q. What procedures did you use to annualize these individual large customers?

A. The first step was to determine whether each customer account required annualization. Each account's monthly demand and energy use over multiple years prior to the test year, the 12 months of the test year, and the three-month update period were examined graphically to determine changes in the size and usage pattern of the customer. In many cases, EDE provided considerable information on those accounts the Staff identified as having changes over time that were significant enough to likely result in a recognizable change to EDE's total kWh sales and revenues.

For example, annualizing a specific account could be accomplished by replacing, or adjusting, early anomalous months of that customer's 2005 test year billing data using billing data from the January 2006-March 2006 update period and later, where available.

One existing customer who switched into the Large Power class was annualized as a Large Power customer, with corresponding reduction in its previous class. No large customers left EDE's system during the test year or update period.

Q. How did you treat the interruptible credits associated with Praxair's contract?

A. Although Praxair's interruptible credits were increased from $3.76 per kW to $4.86 per kW as a result of Case No. ER-2001-299, I annualized them in this case at the pre-October 2, 2001 rate. This treatment of Praxair's interruptible revenues is in accordance with paragraph 6 of the Unanimous Stipulation And Agreement Regarding Fuel And Purchased Power Expense And Class Cost Of Service And Rate Design, filed in Case No. ER-2001-299, and in accordance with paragraph 2 of Unanimous Stipulation

And Agreement Regarding Fuel And Purchased Power Expense filed in Case No. ER-2004-0570, which states:

> 2. In addition to the rate changes described above, Praxair's monthly credit for interruptible demand, which was increased by $100,000.00 per year through October 2006 in Case No. ER-2001-299, shall be extended through October 2008. This credit extension will be reflected on Empire's tariff P.S.C. Mo. No. 5, Sec. 2, Sheet No. 9b by striking the first five lines describing 5 year contracts for years 1994 through 1998 and adding the following provisions under the sentence stating:
>
> "The following monthly credit on demand reduction per kW of contracted interruptible demand for substation metered customers will be applied":
>
> For 5 year contract October 2001 to October 2006.....$4.86
> For 1 year contract from October 2006 to October 2007.....$4.86
> For 1 year contract from October 2007 to October 2008.....$4.86
>
> **For the purposes of determining Empire's revenue requirement during the period $4.86 per kW credit is in effect, Empire agrees that it will calculate Praxair's revenue as if the credit is $3.76 per kW.** The effect of this extension of Praxair's interruptible credit and Empire's agreement concerning the determination of revenue requirement will be to reduce the revenues collected by Empire by $100,000.00 per year, which $100,000.00 will not affect the rates of Empire's other Missouri retail customers or be recovered from Empire's other Missouri retail ratepayers. [emphasis added]

This adjustment is shown in aggregate as Adjustment **S-**1.9 on Staff's Adjustments to Income Statement-Accounting Schedule 10.

Q. Do you have a recommendation for the Commission regarding EDE's electric rate revenues and kWh sales?

A. I recommend that the Commission adopt the Staff's adjustments to EDE's billed rate revenues and kWh sales that are shown on Schedules CW-1 and CW-2. If adopted, Staff's Missouri retail rate revenues and kWh sales by rate schedule will be used to compute and implement any Commission-ordered revenue change in this case.

Q. Does this conclude your direct testimony on the issue of Missouri Retail Revenues in this case?

A. Yes, it does.

THE EMPIRE DISTRICT ELECTRIC COMPANY - CASE NO. ER-2006-0315
SUMMARY OF ANNUALIZED AND NORMALIZED RATE REVENUE

MISSOURI RETAIL

Rate Schedule	As Billed Rate Rev w/o taxes	Rate Change Annualization	Large Customer Annualizations	Normalization for Weather & Days	Additional Rev from Cust Growth	Total MO Normalized Rev
RG-Residential	$126,103,253	$3,994,474	0	($2,891,387)	$2,392,021	$129,598,362
CB-Commercial	$27,717,632	$728,654	0	($444,381)	$158,050	$28,159,955
SH-Small Heating	$6,563,318	$192,068	0	($14,419)	$187,238	$6,928,204
PFM-Feed Mill/Grain Elev	$55,563	$1,480	0	($349)	0	$56,694
MS-Traffic Signals	$56,168	$1,412	0	($13)	0	$57,566
GP-General Power	$50,942,434	$1,140,913	0	($397,689)	$1,947,949	$53,633,607
TEB-Total Electric Bldg	$21,708,864	$514,964	0	($178,751)	$528,154	$22,573,232
LP-Large Power	$34,699,993	$0	$1,511,710	$0	0	$36,211,703
SC-P PRAXAIR (Firm)	$2,395,456	$40,044	0	$0	0	$2,435,500
SPL-Municipal St Lighting	$1,208,852	$33,550	0	$0	0	$1,242,402
PL-Private Lighting	$3,285,279	$90,841	0	($10,923)	0	$3,365,197
LS-Special Lighting	$158,026	$3,442	0	$40	0	$161,508
Missouri Billed Rate Revenue	$274,894,838	$6,741,842	$1,511,710	($3,937,872)	$5,213,413	$284,423,930
Other Rate Revenue						
CP-Cogeneration Purchase	($165)					($165)
Excess Facilities Charges	$1,721,892		$19,751			$1,741,643
Interruptible Credits	($443,232)		$100,320			($342,912)
MO Other Rate Revenue	$1,278,494	$0	$120,071	$0	$0	$1,398,566
MO Rev from Permanent Rates	$276,173,333	$6,741,842	$1,631,781	($3,937,872)	$5,213,413	$285,822,496
Interim Energy Charges	$6,305,092	$2,461,266				$8,766,358
Accounting Adjustment No.		S-1.5	S1.8,S-1.9,S-1.10	S-1.6,S-1.7	S-1.2	S-1.11

THE EMPIRE DISTRICT ELECTRIC COMPANY - CASE NO. ER-2006-0315
SUMMARY OF ANNUAL KWH SALES

MISSOURI RETAIL

Rate Schedule	As Billed Sales (kWh)	Large Customer Annualizations	Normalization for Weather & Days	Additional kWh from Cust Growth	Total MO Normalized kWh
RG-Residential	1,668,939,740	-	(29,072,567)	31,164,737	1,671,031,910
CB-Commercial	327,678,382	-	(4,652,537)	1,837,643	324,863,488
SH-Small Heating	91,388,568	-	500,031	2,797,950	94,686,549
PFM-Feed Mill/Grain Elev	488,640	-	(7,846)	-	480,794
MS-Traffic Signals	849,752	-	(223)	-	849,529
GP-General Power	826,598,022	-	(7,410,196)	31,944,810	851,132,636
TEB-Total Electric Bldg	346,724,400	-	(1,733,580)	8,487,363	353,478,183
LP-Large Power	708,527,205	17,078,480	(92,062)	-	725,513,623
SC-P PRAXAIR Transmission	59,710,257	-	-	-	59,710,257
SPL-Municipal St Lighting	16,338,005	-	-	-	16,338,005
PL-Private Lighting	16,240,028	-	(180,453)	-	16,059,575
LS-Special Lighting	1,515,911	-	713	-	1,516,624
MO Retail Billed	4,064,998,910	17,078,480	(42,648,721)	76,232,504	4,115,661,173
CP-Cogeneration Purchase	(11,184)	-	-	-	(11,184)
					4,115,649,989

Schedule CW-2

STAFF'S RATEMAKING TREATMENT OF RATE REVENUES AND KWH SALES

Rationale for Making Adjustments

The historical 12-month time period (test year) and update period (if any) that the Commission determines should be used for analyzing the costs of providing service to Missouri retail customers is also used for analyzing kilowatt-hour (kWh) sales and revenue, based on the "matching principle" of ratemaking.

An accurate quantification of total Company kWh sales plus losses is important for determining fuel and purchase power costs. Hourly net system loads, updated for these known and measurable changes in total company kWh sales, are reflected in the production cost simulation model (fuel run) to ensure that sufficient generation and purchases exist to meet total net system requirements.

The intent of adjustments to test year Missouri rate revenues is to estimate the revenue that the Company would have collected on an annual, normal-weather basis, based on information "known and measurable" at the end of the update period. Missouri retail rate revenues and kWh sales will be used to determine the amount of any revenue increase (or decrease) that results from this case, as well as the final rate levels.

Categories of Adjustments

The two major categories of adjustments are known as normalizations and annualizations.

Normalizations deal with test year events that are unusual and unlikely to be repeated in the years when the new rates from this case are in effect. Test year weather is an example. It is unlikely that the weather that occurred in the test year will, on average, be repeated in the future, but what weather will actually occur is not predictable. The objective of the weather normalization process is to re-state test year kWh sales and rate revenues on a "normal-weather" basis.

Annualizations are adjustments that re-state test year results as if conditions known at the end of the update period had existed throughout the entire test year.

Examples of Annualizations

A common example of a revenue annualization is a rate change that occurs during the test year. In this situation, actual test year rate revenues will be understated or overstated by the difference between the amount that was actually billed to customers and the revenue that would have been realized by the Company if the rates in effect at the end of the update period had been in effect throughout the entire test year.

An example of an annualization that affects both kWh sales and rate revenues is a large customer that either begins or ceases taking service during the analysis period. In the situation where a large customer ceases business, in order to accurately reflect revenues going forward, test year revenues should be decreased by the amount of revenue the customer provided the Company. A corresponding reduction to kWh sales and to fuel and purchased power expense should be made to reflect the costs the company will no longer incur. Conversely, when a large customer begins service, test year revenue, kWh sales, and fuel expense should be increased to reflect both the costs and the revenues associated with serving the new customer on an annual basis.

Customer growth adjustments are annualizations that reflect any additional sales and revenues that would have occurred if the total number of customers on the system at the end of the update period had been customers during all 12 months of the test year.