Exhibit No.:
Issue: Fuel and Purchased Power
Witness: Brad P. Beecher
Sponsoring Party: The Empire District Electric Co.
Type of Exhibit: Supplemental Testimony
Case No.: ER-2001-299
Date Testimony Prepared: June 1, 2001

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

SUPPLEMENTAL TESTIMONY OF BRAD P. BEECHER REGARDING EMPIRE'S CHANGE IN POSITION ON FUEL & PURCHASED POWER EXPENSE CALCULATION AND METHODOLOGY ON BEHALF OF THE EMPIRE DISTRICT ELECTRIC COMPANY

Case No. ER-2001-299

Jefferson City, Missouri

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. Brad P. Beecher. My business address is 602 Joplin Street, Joplin, Missouri.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. The Empire District Electric Company ("Empire" or "Company"). I am Vice President - Energy Supply.

Q. ARE YOU THE SAME BRAD P. BEECHER WHO PREVIOUSLY FILED REBUTTAL AND SURREBUTTAL TESTIMONY IN THIS CASE?

A. Yes, I am.

Q. WHAT IS THE PURPOSE OF YOUR SUPPLEMENTAL TESTIMONY?

A. The purpose of my supplemental testimony is to describe a change Empire has made regarding its original filed position on fuel and purchased power expense. Empire's original position was described in Empire witness Greg Sweet's direct testimony.

Q. WHY ARE YOU FILING THIS TESTIMONY AT THIS TIME?

A. It is my understanding that the Commission indicated on May 31, 2001, that it prefers that parties who wish to change their position file testimony explaining that change, rather than offer it in the form of a stipulation and agreement. I have prepared this testimony as quickly as possible in response to that indication by the Commission. Since the fuel and purchased power issue is scheduled to be heard by the Commission next week, I wanted to put forth our position and the details as quickly as possible under the circumstances.

Q. WHY HAS EMPIRE CHANGED ITS POSITION ON FUEL AND PURCHASED POWER?

A. During the week of April 16, 2001, and in accordance with the procedural schedule adopted by the Commission in an Order issued January 4, 2001, the parties to this case met for the purpose of clarifying, narrowing, and exploring settlement possibilities for the numerous issues raised in the case. As a result of those discussions and subsequent negotiations, Empire has changed its position with respect to fuel and purchased power expense to be included in the Company's cost of service. We believe that the position presented by Empire in my supplemental testimony is supported by Staff and OPC. Although a representative of Praxair, Inc. ("Praxair"), the only other party to this case, participated in the pre-hearing conference discussions and subsequent negotiations on this matter, the representative of Praxair indicated to us on May 10, 2001, that it would not support this approach.

Q. PLEASE GENERALLY DESCRIBE EMPIRE'S CHANGED POSITION.

A. Instead of the approach to fuel and purchased power found in our prefiled direct testimony, Empire proposes the inclusion of a specific amount for fuel and purchased power expense in the cost of service on a permanent (i.e., not subject to refund) basis and the inclusion of another additional amount on an interim and subject to true up and refund basis. The specific amount which would be included in the Missouri jurisdictional cost of service on a permanent basis is $91,599,932. This figure is meant to encompass all retail Missouri jurisdictional charges by Empire which are accumulated in the FERC account numbers 501, 547 and 555, and would be updated, pursuant to our understanding of the position of Staff and Public Counsel, in the true up portion of this case that has already been ordered by the Commission. The other portion I will refer to as an "Interim Energy Charge." Generally, the Interim Energy Charge (IEC) and the concept underlying it is

designed to attempt to address the potential volatility in natural gas and wholesale electricity prices.

Q. HOW DO YOU PROPOSE THAT THE INTERIM ENERGY CHARGE APPEAR ON THE RATE SCHEDULES OF EMPIRE?

A. The IEC would be reflected separately on all Empire Missouri rate schedules. The revenue from the IEC would be collected on an interim and subject to true-up and refund basis under the terms outlined in this testimony. Empire proposes that the IEC, to be effective October 1, 2001, appear on each Empire rate schedule and will indicate that a separate charge of 0.54 ¢ for each kWh will be made, but the amount collected by Empire pursuant to the 0.54 ¢ charge is subject to true up and refund. The 0.54 ¢ / kwh is based on the difference between a base amount of 2.52 ¢ / kWh and a forecast amount of 3.06 ¢ / kWh. The derivation of the base and forecast figures is shown in the attached Schedule BPB-3. Empire would bill the IEC for all usage occurring during the period it is effective.

Q. EMPIRE HAS SOME RATE SCHEDULES THAT DO NOT HAVE PER KILOWATT HOUR CHARGES MENTIONED ON THEM NOW, SUCH AS SOME OUTDOOR LIGHTING SCHEDULES. HOW DOES EMPIRE PROPOSE THAT THE IEC BE CHARGED FOR THOSE RATE SCHEDULES?

A. Empire rate schedules PL and SPL will contain a flat charge which will be interim and subject to refund under the terms of this proposed methodology, but based on the assumed kWh usage underlying the charge. The amount of the assumed usage for each applicable situation is shown in the attached Schedule BPB-4.

Q. IS THERE A PROPOSED DURATION FOR THE IEC?

A. Yes. The rate schedules to be filed by Empire pursuant to this proposal will indicate that the IEC itself (as opposed to the terms and conditions applying to the IEC true up and potential refund contained in this testimony) will expire at 12:01 a.m. on October 1, 2003.

Q. PLEASE EXPLAIN THE PROPOSAL FOR A TRUE UP OF THE REVENUES COLLECTED UNDER THE IEC.

A. Subsequent to the expiration of the IEC, a true up audit would commence ("the IEC true up audit"). This true up audit should not be confused with the true up audit that is already scheduled in this case. There would be a separate true up audit for the IEC in which the Staff and the Public Counsel will have the opportunity to audit Empire's actual fuel costs for the period during which the IEC was in effect under the same terms and conditions that apply to audits in general rate cases before the Commission. If the IEC true up audit determines that all or a portion of the revenue collected by Empire pursuant to the IEC exceeds Empire's actual and prudently incurred costs for fuel and purchased power (as recorded in the FERC accounts 501, 547 and 555) on a retail Missouri jurisdictional basis during the IEC period, Empire will refund the excess above the greater of the actual or the base, plus interest, pursuant to the terms I am outlining in this testimony. No refund will be made if Empire's actual and prudently incurred costs for fuel and purchased power during the IEC period equal or exceed the forecast amount.

Q. WHAT IF A DISPUTE ARISES DURING THE TRUE UP AUDIT OF THE IEC?

A. If a dispute arises in the IEC true up audit as to the prudence of Empire's fuel or purchased power costs under the IEC, Empire believes that the dispute should be presented to the Commission in a timely fashion, consistent with the due process rights of the respective parties to adequately prepare their case. It would not be appropriate to

make a refund as to the amount in dispute until there is a final determination of that dispute. However, we believe it would be appropriate to allow interest to continue to accrue on any disputed funds during the litigation of the dispute. The interest and principal would then be payable by Empire to the extent it is finally determined that Empire is required to make a refund of all or a portion of the amount in dispute. If the dispute is resolved in Empire's favor, Empire will retain the funds.

Q. HOW WILL THE AMOUNT OF ANY REFUND UNDER THE IEC APPROACH BE CALCULATED?

A. The amount of the IEC to be refunded will be calculated by subtracting the greater of 1) Empire's actual retail Missouri jurisdictional fuel and purchase power expense or 2) the base fuel and purchase power expense (2.52 ¢ / kWh times actual retail Missouri jurisdictional kWh sales) from the forecast fuel and purchase power expense (3.06 ¢ / kWh times actual retail Missouri jurisdictional kWh sales). This amount, if positive, is the amount of the IEC to be refunded. Each customer's refund (if there is to be a refund) will be calculated by multiplying the amount of the IEC to be refunded, expressed as a percentage of the total IEC charged to customers, by the total IEC charged to that customer. Examples of the refund process under different assumptions can be found in the attached Schedule BPB-5.

Q. WHAT INTEREST RATE IS PROPOSED FOR THE REFUND, IF THERE IS ANY?

A. The interest rate to be used for purposes of this proposal will be the same as the prime rate of interest (as found in the Money Rates section of the Wall Street Journal) in effect on the day the IEC expires and will be applied to the amount to be refunded. Interest (if there is a refund) will be applied for the period from the end of the first twelve months the

IEC is in effect through the end of the calendar month prior to the billing month in which bill credits for the refund appear on customers' bills. For the purposes of this calculation, it is assumed that the total amount of any refund accrues during the first year and interest applies thereafter.

Q. WILL ALL CUSTOMERS BE ELIGIBLE FOR A REFUND, IF ONE IS REQUIRED?

A. All Empire Missouri retail customers with electric usage during the period in which the IEC is in effect are potentially eligible to receive a refund, including interest and all applicable taxes and fees.

Q. HOW WOULD THE REFUND BE MADE?

A. Generally, any refund would appear as a one-time credit on the customer's bill, except in cases where a customer is no longer a customer in the billing month in which bill credits appear on the bills of remaining customers. In that instance, Empire will mail to the last known address of such former customer a check for the amount of the refund owed that former customer. No checks will be issued to customers for refund amounts of less than $3.00. Empire may set off the amount of any refund owed a particular former customer against any amounts owed Empire by that former customer. After the bill credits have been made and checks issued, any amount of the total refund plus interest which may remain in Empire's possession six months after the end of the application of the bill credits, for example, due to the inability to locate a former customer, shall be donated by Empire promptly to the Joplin, Missouri chapter of the American Red Cross to help fund its Project Help.

Q. IS EMPIRE WILLING TO PROVIDE ADDITIONAL INFORMATION TO STAFF AND PUBLIC COUNSEL DURING THE PERIOD THE IEC IS IN EFFECT IN

ORDER TO AID THEM IN THEIR ABILITY TO PERFORM THE TRUE-UP AUDIT OF THE IEC?

A. Yes. During the period in which the IEC is in effect, Empire will provide the Staff and the Public Counsel with Empire's routine monthly revenue and sales reports which include the following data : (1) actual kWh sales for each Missouri retail rate code by billing month and by calendar month, and (2) the revenues from kWh sales, exclusive of taxes, for each Missouri retail rate code by billing month and by calendar month. The routine reports shall also specifically identify the revenues associated with the IEC. Empire will submit this data in electronic format to the Commission's Electric Department on a quarterly basis by no later than one month after the end of each calendar quarter. Empire also proposes for the purposes of the IEC, to submit the following information for the duration of the IEC to the Commission's Accounting Department and Public Counsel:

1. monthly operating reports

2. monthly fuel reports

3. monthly purchase power and interchange sales report

4. monthly outage reports including Iatan outages

5. monthly fuel prices for a). coal and freight, b). natural gas (commodity and transportation separately) and c). oil

6. monthly statement identifying significant changes in fuel/rail contracts, capacity agreements and unusual operating conditions such as significant power plant outages, unusually high purchase power prices and natural gas prices, etc.

Q. WHEN WOULD YOU BEGIN SUPPLYING THIS INFORMATION?

A. Commencing with the calendar quarter beginning October 1, 2001, and continuing during the course of the expected twenty-four month duration of the IEC, Empire will provide quarterly reports to the Staff and the Public Counsel relating to Empire's analysis and record keeping for any and all natural gas capacity release and off-system natural gas sales opportunities and transactions. In this report, Empire will provide information showing the amount of natural gas capacity that was available for its own use, the amount used, the amount available for capacity release, the amount released, the party to whom the capacity was released, the price of the release, and its duration, along with any other relevant information related to the transaction. This quarterly report shall also provide information showing the amount of off-system natural gas sales, the party to whom the off-system natural gas sale was made, the price of the sale, and its duration, along with any other relevant information related to the transaction. This report will also include Empire's analysis as to the natural gas market conditions during the time period covered, with explanations as to why Empire did or did not make any natural gas capacity releases or off-system natural gas sales. Any revenues collected by Empire due to the release of unused natural gas capacity or net revenues from off-system sales of natural gas during the duration of the IEC will be used to offset the calculation of the cost of fuel and purchased power supplied to Empire's ratepayers on a dollar-for-dollar basis.

Q. WHAT EFFECT WOULD LEGISLATION, AND IN PARTICULAR SENATE COMMITTEE SUBSTITUTE FOR SENATE BILL 387, HAVE ON THE PROPOSED IEC?

A. If the Commission approves the implementation of the IEC in this proceeding in the manner that Empire and others have proposed, or something substantially similar to

which Empire does not object, then for the entire period the IEC would be in effect, Empire states to the Commission that it will voluntarily forego any right it may have to request the use of, or to use, any other procedure or remedy, available under current Missouri statute or subsequently enacted Missouri statute, in the form of a fuel adjustment clause, a natural gas cost recovery mechanism, or other energy related adjustment mechanism to which Empire would otherwise be entitled. This temporary and limited waiver by Empire should not be construed to prevent Empire from filing a general rate case during the period the IEC is in use, or from seeking what is commonly referred to as "interim" or "emergency" relief to increase its Missouri rates, if in the judgment of Empire's management, such a remedy is appropriate due to extraordinary or unanticipated circumstances, such as, but not limited to, the failure of a major power plant. By approving this proposed methodology, Empire does not believe that the Commission is waiving the right to determine whether Empire qualifies for "interim" or "emergency" rate relief. Any party to such a future case would be able to contest whether Empire should receive such relief.

Q. WHAT BENEFITS MIGHT EMPIRE DERIVE FROM THIS CHANGE IN METHODOLOGY TO THE IEC APPROACH?

A. The proposed methodology does a better job of recognizing and addressing the fact that volatility in purchased power and natural gas costs is difficult to predict with any certainty, compared to the approach contained in Empire's direct case, or any recommendation that seeks to set rates based on the assumption of just one, fixed price. The volatility of natural gas prices has placed significant risk on Empire. Empire predicts it will burn approximately 12 million MMBTU of natural gas per year after the addition

of State Line Combined Cycle, scheduled for operation during June 2001.

Q. HOW WOULD CHANGES IN THE COMMODITY PRICE OF NATURAL GAS AFFECT EMPIRE?

A. Because we will be burning so much more natural gas as a fuel source for electricity than we were before the construction of State Line Combined Cycle, the combination of the increased volume and a change in price can have a very significant effect on Empire. A change in price of only one dollar per MMBTU in natural gas prices would impact Empire by $12 million dollars per year before tax effect, or approximately 50% of Empire's 2000 net income.

Q. COULD YOU PLEASE EXPLAIN THE DERIVATION OF THE BASE AND FORECAST AMOUNTS YOU REFERRED TO EARLIER?

A. The proposed methodology was developed by setting the base rate using historical natural gas prices and the IEC by using recently experienced natural gas prices. Implementation of the IEC approach results in rates that allow Empire to recover at least the level of fuel and purchased power expenses which it has experienced on an historical basis, and at most, costs which were recently prevalent in the market. Within the range between what we have called base and forecast, however, the IEC will only allow Empire to ultimately recover Empire's actual prudently incurred fuel and purchased power costs. This is because the true-up procedure provides a method to refund any revenues above the prudently incurred actual expenses, with interest.

The actual numbers that form the base and forecast amounts under this approach were developed with the exact same methodology Empire utilized in its direct filing in this case and also in previous cases, so that aspect is not new or different. Empire's

methodology is fully outlined in the direct testimony of Empire witness Mr. Greg Sweet. In essence, our methodology utilizes normalized heat rates, scheduled maintenance outage rates, forced outage rates, and an estimate of the fuel costs at the time of true up in this case.

Q. WHAT LEVELS OF NATURAL GAS PRICES DID EMPIRE UTILIZE IN ESTABLISHING THE BASIS FOR $20 PER MEGAWATTHOUR (MWH) AND $25 PER MWH?

A. Empire utilized the gas prices used by Staff in its own models, and as filed in its direct testimony, in establishing the base of $20 per MWH. The Staff's natural gas prices were based on a three year average historical burn price and averaged about $3.50/MMBtu in the output of Empire's fuel model. Empire utilized a natural gas price of $5.64/MMBtu to establish the forecast. This number was derived by multiplying Empire's forecasted burn by the futures prices available during the pre-hearing conference.

Q. DOES THIS APPROACH REMIND YOU OF ANY OTHER MISSOURI REGULATORY PROCESS?

A. Yes, as a matter of fact, it does. The Commission's Integrated Resource Planning (IRP) rulemaking of the early 1990's recognized that the future was indeed uncertain. The IRP rulemaking required utilities to examine a range of future outcomes utilizing a formal decision analysis method when developing future plans. The thought process embodied in the IRP rulemaking is very similar to that embodied in the IEC proposal. If we are forced to "pick the right point or die," all parties know that the point we pick will be wrong. If we are allowed to "pick a range" based on ranges that a reasonable person would expect, then our probability of being correct and living is greatly improved. In this

case, picking the wrong "point" could indeed be disastrous for Empire because of the significant impact that natural gas prices have on Empire's overall financial health.

Q. WHO BEARS THE RISK OF HIGHER FUEL AND PURCHASED POWER COSTS UNDER THE IEC APPROACH EMPIRE IS RECOMMENDING NOW BY CHANGING ITS POSITION?

A. This IEC approach I have described shares the burden of the price risk between Empire and its customers.

Q. SHOULD THE COMMISSION ADOPT THE INTERIM ENERGY CHARGE METHOD AND COMPONENTS THAT YOU HAVE DESCRIBED?

A. Yes. Empire believes that the IEC provides a fair balance for both the Company and its customers. It also provides continued oversight by the Commission via monthly reports and subsequent audits by the Staff and the Office of Public Counsel. The IEC approach recognizes the reality that the volatility in natural gas prices and the wholesale power market makes it impossible to precisely predict fuel and purchased power costs. This is especially important to a utility of Empire's size and generation mix.

Q. DOES THIS CONCLUDE YOUR SUPPLEMENTAL TESTIMONY?

A. Yes, at this time.

STATE OF MISSOURI)
)ss
COUNTY OF COLE)

AFFIDAVIT OF BRAD P. BEECHER

Brad P. Beecher, being of lawful age and being first duly sworn, states that he has participated in the preparation of the foregoing prepared testimony in question and answer form to be presented in the indicated proceeding; that the answers in the foregoing testimony were given by him and that such answers are true and correct to the best of his knowledge, information and belief.

Brad P. Beecher

Brad P. Beecher

Subscribed and sworn to before me this first day of June, 2001.

Doris K. Adams

Notary Public

DORIS K. ADAMS
NOTARY PUBLIC - NOTARY SEAL
STATE OF MISSOURI
COUNTY OF COLE
My Commission Expires May 20, 2002

Calculation of Interim Energy Charge Provision rate

Total Company	Base	Forecast	Increment
Price $/MWH	$20.00	$25.00	$5.00
MWH	4,803,523.00	4,803,523.00	
Fuel & Purchased Power	$96,070,460	$120,088,075	
Capacity Charge on Purchase	$16,193,520	$16,193,520	
Fuel & Purchased Power Expense	$112,263,980	$136,281,595	
MWH	4,803,523.00	4,803,523.00	
Price $/MWH	$23.37	$28.37	$5.00
Allocation Factor Missouri Retail			
0.8184 Fuel & Purchased Power	$78,624,064	$98,280,081	
0.8013 Capacity Charge on Purchase	$12,975,868	$12,975,868	
Fuel & Purchased Power Expense	$91,599,932	$111,255,948	
Retail kWh Sales	3,636,036,241	3,636,036,241	
Price $/kWh	$0.0252	$0.0306	

Interim Energy Charge provision $0.0054

SCHEDULE BPB-3

Missouri Private Lighting and Street Lighting						
PL-Private Lighting						
	Monthly		Increase			
Light Size/Type	kWhs	X $0.0054	Amount			
6,800 Lumen Standard Mercury	65	0.0054	$ 0.35			
20,000 Lumen Standard Mercury	156	0.0054	$ 0.84			
54,000 Lumen Standard Mercury	373	0.0054	$ 2.01			
6,000 Lumen Standard Sodium	31	0.0054	$ 0.17			
16,000 Lumen Standard Sodium	58	0.0054	$ 0.31			
27,500 Lumen Standard Sodium	106	0.0054	$ 0.57			
50,000 Lumen Standard Sodium	157	0.0054	$ 0.85			
12,000 Lumen Standard Metal Halide	59	0.0054	$ 0.32			
20,500 Lumen Standard Metal Halide	85	0.0054	$ 0.46			
36,000 Lumen Standard Metal Halide	135	0.0054	$ 0.73			
20,000 Lumen Mercury Flood	156	0.0054	$ 0.84			
54,000 Lumen Mercury Flood	373	0.0054	$ 2.01			
27,500 Lumen Sodium Flood	106	0.0054	$ 0.57			
50,000 Lumen Sodium Flood	157	0.0054	$ 0.85			
140,000 Lumen Sodium Flood	359	0.0054	$ 1.94			
12,000 Lumen Metal Halide Flood	59	0.0054	$ 0.32			
20,500 Lumen Metal Halide Flood	85	0.0054	$ 0.46			
36,000 Lumen Metal Halide Flood	135	0.0054	$ 0.73			
110,000 Lumen Metal Halide Flood	338	0.0054	$ 1.83			

SPL-Municipal Street Lighting						
	Annual		Usage	Monthly		Increase
Light Size/Type	kWh	Month	Factor	kWhs	X $0.0054	Amount
4,000 Lumen Incandescent	1088	Jan	0.103	112.064	0.0054	$ 0.61
	1088	Feb	0.089	96.832	0.0054	$ 0.52
	1088	Mar	0.087	94.656	0.0054	$ 0.51
	1088	Apr	0.075	81.6	0.0054	$ 0.44
	1088	May	0.07	76.16	0.0054	$ 0.41
	1088	Jun	0.064	69.632	0.0054	$ 0.38
	1088	Jul	0.067	72.896	0.0054	$ 0.39
	1088	Aug	0.073	79.424	0.0054	$ 0.43
	1088	Sep	0.079	85.952	0.0054	$ 0.46
	1088	Oct	0.091	99.008	0.0054	$ 0.53
	1088	Nov	0.098	106.624	0.0054	$ 0.58
	1088	Dec	0.104	113.152	0.0054	$ 0.61
Total				**1088**		**$ 5.88**
	Annual		Usage	Monthly		Increase
Light Size/Type	kWh	Month	Factor	kWhs	X $0.0054	Amount
10,000 Lumen Incandescent	2331	Jan	0.103	240.093	0.0054	$ 1.30
	2331	Feb	0.089	207.459	0.0054	$ 1.12
	2331	Mar	0.087	202.797	0.0054	$ 1.10
	2331	Apr	0.075	174.825	0.0054	$ 0.94
	2331	May	0.07	163.17	0.0054	$ 0.88
	2331	Jun	0.064	149.184	0.0054	$ 0.81
	2331	Jul	0.067	156.177	0.0054	$ 0.84
	2331	Aug	0.073	170.163	0.0054	$ 0.92
	2331	Sep	0.079	184.149	0.0054	$ 0.99
	2331	Oct	0.091	212.121	0.0054	$ 1.15
	2331	Nov	0.098	228.438	0.0054	$ 1.23
	2331	Dec	0.104	242.424	0.0054	$ 1.31
Total				**2331**		**$ 12.59**
	Annual		Usage	Monthly		Increase
Light Size/Type	kWh	Month	Factor	kWhs	X $0.0054	Amount
7,000 Lumen Mercury Vapor	784	Jan	0.103	80.752	0.0054	$ 0.44
	784	Feb	0.089	69.776	0.0054	$ 0.38
	784	Mar	0.087	68.208	0.0054	$ 0.37
	784	Apr	0.075	58.8	0.0054	$ 0.32
	784	May	0.07	54.88	0.0054	$ 0.30
	784	Jun	0.064	50.176	0.0054	$ 0.27
	784	Jul	0.067	52.528	0.0054	$ 0.28
	784	Aug	0.073	57.232	0.0054	$ 0.31
	784	Sep	0.079	61.936	0.0054	$ 0.33
	784	Oct	0.091	71.344	0.0054	$ 0.39
	784	Nov	0.098	76.832	0.0054	$ 0.41
	784	Dec	0.104	81.536	0.0054	$ 0.44
Total				**784**		**$ 4.23**

SPL-Municipal Street Lighting						
	Annual		**Usage**	**Monthly**		**Increase**
Light Size/Type	**kWh**	**Month**	**Factor**	**kWhs**	**X $0.0054**	**Amount**
11,000 Lumen Mercury Vapor	1186	Jan	0.103	122.158	0.0054	$ 0.66
	1186	Feb	0.089	105.554	0.0054	$ 0.57
	1186	Mar	0.087	103.182	0.0054	$ 0.56
	1186	Apr	0.075	88.95	0.0054	$ 0.48
	1186	May	0.07	83.02	0.0054	$ 0.45
	1186	Jun	0.064	75.904	0.0054	$ 0.41
	1186	Jul	0.067	79.462	0.0054	$ 0.43
	1186	Aug	0.073	86.578	0.0054	$ 0.47
	1186	Sep	0.079	93.694	0.0054	$ 0.51
	1186	Oct	0.091	107.926	0.0054	$ 0.58
	1186	Nov	0.098	116.228	0.0054	$ 0.63
	1186	Dec	0.104	123.344	0.0054	$ 0.67
Total				**1186**		**$ 6.40**
	Annual		**Usage**	**Monthly**		**Increase**
Light Size/Type	**kWh**	**Month**	**Factor**	**kWhs**	**X $0.0054**	**Amount**
20,000 Lumen Mercury Vapor	1868	Jan	0.103	192.404	0.0054	$ 1.04
	1868	Feb	0.089	166.252	0.0054	$ 0.90
	1868	Mar	0.087	162.516	0.0054	$ 0.88
	1868	Apr	0.075	140.1	0.0054	$ 0.76
	1868	May	0.07	130.76	0.0054	$ 0.71
	1868	Jun	0.064	119.552	0.0054	$ 0.65
	1868	Jul	0.067	125.156	0.0054	$ 0.68
	1868	Aug	0.073	136.364	0.0054	$ 0.74
	1868	Sep	0.079	147.572	0.0054	$ 0.80
	1868	Oct	0.091	169.988	0.0054	$ 0.92
	1868	Nov	0.098	183.064	0.0054	$ 0.99
	1868	Dec	0.104	194.272	0.0054	$ 1.05
Total				**1868**		**$ 10.09**
	Annual		**Usage**	**Monthly**		**Increase**
Light Size/Type	**kWh**	**Month**	**Factor**	**kWhs**	**X $0.0054**	**Amount**
53,000 Lumen Mercury Vapor	4475	Jan	0.103	460.925	0.0054	$ 2.49
	4475	Feb	0.089	398.275	0.0054	$ 2.15
	4475	Mar	0.087	389.325	0.0054	$ 2.10
	4475	Apr	0.075	335.625	0.0054	$ 1.81
	4475	May	0.07	313.25	0.0054	$ 1.69
	4475	Jun	0.064	286.4	0.0054	$ 1.55
	4475	Jul	0.067	299.825	0.0054	$ 1.62
	4475	Aug	0.073	326.675	0.0054	$ 1.76
	4475	Sep	0.079	353.525	0.0054	$ 1.91
	4475	Oct	0.091	407.225	0.0054	$ 2.20
	4475	Nov	0.098	438.55	0.0054	$ 2.37
	4475	Dec	0.104	465.4	0.0054	$ 2.51
Total				**4475**		**$ 24.17**

SPL-Municipal Street Lighting						
	Annual		**Usage**	**Monthly**		**Increase**
Light Size/Type	**kWh**	**Month**	**Factor**	**kWhs**	**X $0.0054**	**Amount**
6,000 Lumen High Pressure Sodium	374	Jan	0.103	38.522	0.0054	$ 0.21
	374	Feb	0.089	33.286	0.0054	$ 0.18
	374	Mar	0.087	32.538	0.0054	$ 0.18
	374	Apr	0.075	28.05	0.0054	$ 0.15
	374	May	0.07	26.18	0.0054	$ 0.14
	374	Jun	0.064	23.936	0.0054	$ 0.13
	374	Jul	0.067	25.058	0.0054	$ 0.14
	374	Aug	0.073	27.302	0.0054	$ 0.15
	374	Sep	0.079	29.546	0.0054	$ 0.16
	374	Oct	0.091	34.034	0.0054	$ 0.18
	374	Nov	0.098	36.652	0.0054	$ 0.20
	374	Dec	0.104	38.896	0.0054	$ 0.21
Total				**374**		**$ 2.02**
	Annual		**Usage**	**Monthly**		**Increase**
Light Size/Type	**kWh**	**Month**	**Factor**	**kWhs**	**X $0.0054**	**Amount**
16,000 Lumen-High Pressure Sodium	694	Jan	0.103	71.482	0.0054	$ 0.39
	694	Feb	0.089	61.766	0.0054	$ 0.33
	694	Mar	0.087	60.378	0.0054	$ 0.33
	694	Apr	0.075	52.05	0.0054	$ 0.28
	694	May	0.07	48.58	0.0054	$ 0.26
	694	Jun	0.064	44.416	0.0054	$ 0.24
	694	Jul	0.067	46.498	0.0054	$ 0.25
	694	Aug	0.073	50.662	0.0054	$ 0.27
	694	Sep	0.079	54.826	0.0054	$ 0.30
	694	Oct	0.091	63.154	0.0054	$ 0.34
	694	Nov	0.098	68.012	0.0054	$ 0.37
	694	Dec	0.104	72.176	0.0054	$ 0.39
Total				**694**		**$ 3.75**
	Annual		**Usage**	**Monthly**		**Increase**
Light Size/Type	**kWh**	**Month**	**Factor**	**kWhs**	**X $0.0054**	**Amount**
27,500 Lumen High-Pressure Sodium	1271	Jan	0.103	130.913	0.0054	$ 0.71
	1271	Feb	0.089	113.119	0.0054	$ 0.61
	1271	Mar	0.087	110.577	0.0054	$ 0.60
	1271	Apr	0.075	95.325	0.0054	$ 0.51
	1271	May	0.07	88.97	0.0054	$ 0.48
	1271	Jun	0.064	81.344	0.0054	$ 0.44
	1271	Jul	0.067	85.157	0.0054	$ 0.46
	1271	Aug	0.073	92.783	0.0054	$ 0.50
	1271	Sep	0.079	100.409	0.0054	$ 0.54
	1271	Oct	0.091	115.661	0.0054	$ 0.62
	1271	Nov	0.098	124.558	0.0054	$ 0.67
	1271	Dec	0.104	132.184	0.0054	$ 0.71
Total				**1271**		**$ 6.86**

SPL-Municipal Street Lighting						
	Annual		Usage	Monthly		Increase
Light Size/Type	kWh	Month	Factor	kWhs	X $0.0054	Amount
50,000 Lumen High-Pressure Sodium	1880	Jan	0.103	193.64	0.0054	$ 1.05
	1880	Feb	0.089	167.32	0.0054	$ 0.90
	1880	Mar	0.087	163.56	0.0054	$ 0.88
	1880	Apr	0.075	141	0.0054	$ 0.76
	1880	May	0.07	131.6	0.0054	$ 0.71
	1880	Jun	0.064	120.32	0.0054	$ 0.65
	1880	Jul	0.067	125.96	0.0054	$ 0.68
	1880	Aug	0.073	137.24	0.0054	$ 0.74
	1880	Sep	0.079	148.52	0.0054	$ 0.80
	1880	Oct	0.091	171.08	0.0054	$ 0.92
	1880	Nov	0.098	184.24	0.0054	$ 0.99
	1880	Dec	0.104	195.52	0.0054	$ 1.06
Total				**1880**		**$ 10.15**
	Annual		Usage	Monthly		Increase
Light Size/Type	kWh	Month	Factor	kWhs	X $0.0054	Amount
130,000 High-Pressure Sodium	4313	Jan	0.103	444.239	0.0054	$ 2.40
	4313	Feb	0.089	383.857	0.0054	$ 2.07
	4313	Mar	0.087	375.231	0.0054	$ 2.03
	4313	Apr	0.075	323.475	0.0054	$ 1.75
	4313	May	0.07	301.91	0.0054	$ 1.63
	4313	Jun	0.064	276.032	0.0054	$ 1.49
	4313	Jul	0.067	288.971	0.0054	$ 1.56
	4313	Aug	0.073	314.849	0.0054	$ 1.70
	4313	Sep	0.079	340.727	0.0054	$ 1.84
	4313	Oct	0.091	392.483	0.0054	$ 2.12
	4313	Nov	0.098	422.674	0.0054	$ 2.28
	4313	Dec	0.104	448.552	0.0054	$ 2.42
Total				**4313**		**$ 23.29**
	Annual		Usage	Monthly		Increase
Light Size/Type	kWh	Month	Factor	kWhs	X $0.0054	Amount
12,000 Lumen Metal Halide	696	Jan	0.103	71.688	0.0054	$ 0.39
	696	Feb	0.089	61.944	0.0054	$ 0.33
	696	Mar	0.087	60.552	0.0054	$ 0.33
	696	Apr	0.075	52.2	0.0054	$ 0.28
	696	May	0.07	48.72	0.0054	$ 0.26
	696	Jun	0.064	44.544	0.0054	$ 0.24
	696	Jul	0.067	46.632	0.0054	$ 0.25
	696	Aug	0.073	50.808	0.0054	$ 0.27
	696	Sep	0.079	54.984	0.0054	$ 0.30
	696	Oct	0.091	63.336	0.0054	$ 0.34
	696	Nov	0.098	68.208	0.0054	$ 0.37
	696	Dec	0.104	72.384	0.0054	$ 0.39
Total				**696**		**$ 3.76**

SPL-Municipal Street Lighting						
	Annual		**Usage**	**Monthly**		**Increase**
Light Size/Type	**kWh**	**Month**	**Factor**	**kWhs**	**X $0.0054**	**Amount**
20,500 Lumen Metal Halide	1020	Jan	0.103	105.06	0.0054	$ 0.57
	1020	Feb	0.089	90.78	0.0054	$ 0.49
	1020	Mar	0.087	88.74	0.0054	$ 0.48
	1020	Apr	0.075	76.5	0.0054	$ 0.41
	1020	May	0.07	71.4	0.0054	$ 0.39
	1020	Jun	0.064	65.28	0.0054	$ 0.35
	1020	Jul	0.067	68.34	0.0054	$ 0.37
	1020	Aug	0.073	74.46	0.0054	$ 0.40
	1020	Sep	0.079	80.58	0.0054	$ 0.44
	1020	Oct	0.091	92.82	0.0054	$ 0.50
	1020	Nov	0.098	99.96	0.0054	$ 0.54
	1020	Dec	0.104	106.08	0.0054	$ 0.57
Total				**1020**		**$ 5.51**
	Annual		**Usage**	**Monthly**		**Increase**
Light Size/Type	**kWh**	**Month**	**Factor**	**kWhs**	**X $0.0054**	**Amount**
36,000 Lumen Metal Halide	1620	Jan	0.103	166.86	0.0054	$ 0.90
	1620	Feb	0.089	144.18	0.0054	$ 0.78
	1620	Mar	0.087	140.94	0.0054	$ 0.76
	1620	Apr	0.075	121.5	0.0054	$ 0.66
	1620	May	0.07	113.4	0.0054	$ 0.61
	1620	Jun	0.064	103.68	0.0054	$ 0.56
	1620	Jul	0.067	108.54	0.0054	$ 0.59
	1620	Aug	0.073	118.26	0.0054	$ 0.64
	1620	Sep	0.079	127.98	0.0054	$ 0.69
	1620	Oct	0.091	147.42	0.0054	$ 0.80
	1620	Nov	0.098	158.76	0.0054	$ 0.86
	1620	Dec	0.104	168.48	0.0054	$ 0.91
Total				**1620**		**$ 8.75**
	Annual		**Usage**	**Monthly**		**Increase**
Light Size/Type	**kWh**	**Month**	**Factor**	**kWhs**	**X $0.0054**	**Amount**
110,000 Lumen Metal Halide	4056	Jan	0.103	417.768	0.0054	$ 2.26
	4056	Feb	0.089	360.984	0.0054	$ 1.95
	4056	Mar	0.087	352.872	0.0054	$ 1.91
	4056	Apr	0.075	304.2	0.0054	$ 1.64
	4056	May	0.07	283.92	0.0054	$ 1.53
	4056	Jun	0.064	259.584	0.0054	$ 1.40
	4056	Jul	0.067	271.752	0.0054	$ 1.47
	4056	Aug	0.073	296.088	0.0054	$ 1.60
	4056	Sep	0.079	320.424	0.0054	$ 1.73
	4056	Oct	0.091	369.096	0.0054	$ 1.99
	4056	Nov	0.098	397.488	0.0054	$ 2.15
	4056	Dec	0.104	421.824	0.0054	$ 2.28
Total				**4056**		**$ 21.90**

Examples of natural termination of the Agreement on October 1, 2003 and two (2) months processing.

Assumptions:	Prime rate at October 1, 2003	9.00%
	Actual retail Missouri jurisdictional sales (MWH)	7,600,000

First example. Actual F&PP expense falls within the base and forecast, resulting in a partial refund.

Total IEC charged to customers ($0.0054/kWh X sales)	$ 41,040,000	"A"
Base Fuel and Purchase Power ($25.20/MWH X sales)	191,520,000	"B"
Actual retail Missouri jurisdictional fuel and purchase power	228,000,000	"C"
Amount to be refunded prior to interest (A+B-C) *	4,560,000	"D"
Interest for the period (D X 9%)	410,400	"E"
Interest following expiration (9% / 12 X 2) X D))	68,400	"F"
Total to be refunded (D +E + F)	5,038,800	"G"
Refund expressed as a percentage (G / A)	12.28%	
Interest portion of refund expressed as a percentage ((F + E) / A)	1.17%	

Customer X paid $100 under the IEC. His specific refund is $12.28 (of which $1.17 is interest)

* Refund amount cannot exceed "A" and must be positive.

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Second example. Actual F&PP expense falls below the base, resulting in a full refund.

Total IEC charged to customers ($0.0054/kWh X sales)	$ 41,040,000	"A"
Base Fuel and Purchase Power ($25.20/MWH X sales)	191,520,000	"B"
Actual retail Missouri jurisdictional fuel and purchase power	190,000,000	"C"
Amount to be refunded prior to interest (A+B-C) *	41,040,000	"D"
Interest for the period (D X 9%)	3,693,600	"E"
Interest following expiration (9% / 12 X 2) X D))	615,600	"F"
Total to be refunded (D +E + F)	45,349,200	"G"
Refund expressed as a percentage (G / A)	110.50%	
Interest portion of refund expressed as a percentage ((F + E) / A)	10.50%	

Customer X paid $100 under the IEC. His specific refund is $110.50 (of which $10.50 is

* Refund amount cannot exceed "A" and must be positive.

Third example. Actual F&PP expense exceeds the sum of the base and IEC, resulting

Total IEC charged to customers ($0.0054/kWh X sales)	$ 41,040,000	"A"
Base Fuel and Purchase Power ($25.20/MWH X sales)	191,520,000	"B"
Actual retail Missouri jurisdictional fuel and purchase power	235,000,000	"C"
Amount to be refunded prior to interest (A+B-C) *	-	"D"
Interest for the period (D X 9%)	-	"E"
Interest following expiration (9% / 12 X 2) X D))	-	"F"
Total to be refunded (D +E + F)	-	"G"
Refund expressed as a percentage (G / A)	0.00%	
Interest portion of refund expressed as a percentage ((F + E) / A)	0.00%	

Customer X paid $100 under the IEC. His specific refund is $0.00.

* Refund amount cannot exceed "A" and must be positive.