Exhibit No.:	
Issues:	*Fuel Expense, Off-System Sales, Fuel Stock Inventory*
Witness:	*Janis E. Fischer*
Sponsoring Party:	*MoPSC Staff*
Type of Exhibit:	*Direct Testimony*
Case No.:	*ER-2006-0315*
Date Testimony Prepared:	*June 23, 2006*

MISSOURI PUBLIC SERVICE COMMISSION

UTILITY SERVICES DIVISION

DIRECT TESTIMONY

OF

JANIS E. FISCHER

THE EMPIRE DISTRICT ELECTRIC COMPANY

CASE NO. ER-2006-0315

Jefferson City, Missouri
June 2006

** **Denotes Highly Confidential Information** **

NP

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 JANIS E. FISCHER

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

Janis E. Fischer, of lawful age, on her oath states: that she has participated in the preparation of the foregoing Direct Testimony in question and answer form, consisting of 31 pages to be presented in the above case; that the answers in the foregoing Direct Testimony were given by her; that she has knowledge of the matters set forth in such answers; and that such matters are true and correct to the best of her knowledge and belief.

Janis E. Fischer

Janis E. Fischer

Subscribed and sworn to before me this 27th day of June 2006.

Toni M Charlton

TONI M. CHARLTON NOTARY SEAL STATE OF MISSOURI NOTARY PUBLIC

TONI M. CHARLTON
Notary Public - State of Missouri
My Commission Expires December 28, 2008
Cole County
Commission #04474301

TABLE OF CONTENTS OF

DIRECT TESTIMONY OF

JANIS E. FISCHER

THE EMPIRE DISTRICT ELECTRIC COMPANY

CASE NO. ER-2006-0315

DIRECT TESTIMONY

OF

JANIS E. FISCHER

THE EMPIRE DISTRICT ELECTRIC COMPANY

CASE NO. ER-2006-0315

Q. Please state your name and business address.

A. Janis E. Fischer, Governor Office Building, P. O. Box 360, Jefferson City, Missouri 65102.

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

A. I am a Regulatory Auditor with the Missouri Public Service Commission (Commission or PSC).

Background of Witness

Q. Please describe your educational background.

A. I graduated from Peru State College, Peru, Nebraska, and received a Bachelor of Science degree in Education (Basic Business) and Business Administration. In May 1985, I completed course work and earned a Bachelor of Science degree in Accounting. I passed the Uniform Certified Public Accountant examination in May 1994 and received my license to practice in March 1997.

Q. Please describe your work background.

A. Prior to my employment at the Commission, I worked for more than six years as the office and accounting supervisor for the Falls City, Nebraska Utilities Department (Utilities Department). While with the Utilities Department, I completed water and electric rate reviews, developed procedures for PCB monitoring and disposal, implemented a program to verify the accuracy of remote water meters, supervised office staff and handled customer complaints. I assisted with the acquisition of Falls City's natural gas distribution system from Kansas Power and Light Company by compiling asset records, nominating gas supplies for the municipal power plant and monitoring gas transportation customer loads. I was appointed by the Board of Public Works to the Nebraska Public Gas Agency (NPGA) Board and later elected Vice Chairperson of the Board. NPGA is comprised of members from municipal natural gas systems who collectively purchase natural gas and acquire natural gas wells to supply gas to municipal gas systems and power plants at reduced costs.

I also was employed as a staff accountant with the accounting firm of Cuneo, Lawson, Shay and Staley, PC, in Kansas City, Missouri, for approximately two years. Prior to that, I worked in the business office of the Falls City Community Hospital and as the accountant for the Sac and Fox Tribe of Missouri.

Q. What has been the nature of your duties while employed by the Commission?

A. Since I began employment with the Commission in 1996, I have directed and assisted with various audits and examinations of the books and records of public utilities operating within the state of Missouri under the jurisdiction of the Commission. I assumed my present position of Regulatory Auditor IV in December 2001.

Q. Have you previously filed testimony before this Commission?

A. Yes. Please refer to Schedule 1, attached to this direct testimony, for a list of the major audits and issues on which I have assisted and filed testimony.

Purpose of Testimony

Q. With reference to Case No. ER-2006-0315, have you examined and studied the books and records of The Empire District Electric Company (Empire or Company) relevant to the filing in this case?

A. Yes, with the assistance of other members of the Commission Staff (Staff). I have examined the cost of service to Empire electric customers through analysis and review of Empire's filing, Staff data request responses, Security Exchange Commission (SEC) filings, documents available to the Staff through prior Empire case filings and prior Commission case workpapers of the Auditing Department Staff.

Q. Did you supervise the examination and analysis of the books and records of the Company in regard to matters relevant to this case?

A. Yes. As an Auditor IV and Lead Auditor in this case, I supervised the examination and analysis of the books and records of Empire completed by the other Auditing Department Staff assigned to this case. Please refer to the testimony of Auditing Department witnesses Kofi Agyenim Boateng, Dana E. Eaves, Paul R. Harrison, Amanda C. McMellen and Paula Mapeka for a complete listing of the issues filed in this case for which I had supervisory responsibility. The supervision included attendance at meetings related to case issues. Numerous meetings were held between the Staff and Company employees to gain additional information relevant to Empire's filing in this case and Empire responses to Staff data requests. I assisted Auditing Department witnesses during fieldwork at Empire by providing additional issue support based on my knowledge and experience with the Staff's positions.

Q. What matters will you address in your testimony?

A. I will discuss the Staff's methodology for determining fuel and purchased power expense in the context of this case. I will also discuss Empire's current Interim Energy Charge (IEC) that was stipulated and approved by the Commission in ER-2004-0570 and the various IECs that have been implemented by Missouri utility companies during recent years. In addition, I will discuss fuel inventory levels, including gas stored underground. I will also explain the Staff's position with regard to the appropriate level of off-system sales to be included in revenues.

Q. What knowledge, skill, experience, training or education do you have in these matters?

A. I have reviewed testimony previously filed before this Commission and Report and Orders from past cases regarding IECs and fuel costs as well as other topics discussed in this testimony. In addition to my work experience at the Commission, I have attended numerous regulatory conferences and in house training sessions, reviewed various journals and trade articles and had many interactions with members of the utility regulatory profession.

While working with the Utilities Department I reviewed electric generation reports, conversed regularly with power plant operators, and nominated and purchased natural gas from gas marketers for the power plant combustion turbines based upon projected monthly generation.

Q. With reference to Case No. ER-2006-0315, what is the purpose of this direct testimony?

A. The purpose of this direct testimony is to explain and sponsor the following adjustments which appear on Accounting Schedule 10, Adjustments to Income Statement:

Production-Fuel Annualization	S-7.3 and S-28.2
Purchased Power Energy Annualization	S-36.2
Purchased Power Demand Charge Annualization	S-36.1
Off-System Sales	S-3.1

Additionally, I am sponsoring Accounting Schedule 1, Accounting Schedule 9 and Accounting Schedule 10, which are Revenue Requirement, Income Statement and Adjustment to Income Statement, respectively, contained in Staff's Accounting Schedules.

EXECUTIVE SUMMARY

Q. Please summarize the testimony you have prepared for direct filing in this case.

A. My testimony explains the Staff's adjustments to the test year fuel expense and fuel stock inventory levels resulting from the generation or purchase of electric power to serve Empire's customers. In more specific terms, this testimony addresses:

- Variable fuel costs associated with the generation of electricity at Empire's coal and natural gas fired plants were calculated based upon an analysis of actual costs for each fuel type. This information is input into the Staff's RealTime® production cost model (fuel model).
- Demand charges associated with capacity contracts were annualized/normalized and added to the results of the Staff's fuel model.
- Other fixed costs associated with natural gas transportation, capacity release, gas sales and undistributed and other costs were also annualized/normalized and added to the results of the Staff's fuel model.

- The annualization/normalization of off-system sales that were added to the results of the Staff's fuel model.
- Fuel stock inventories included as rate base components.

TEST YEAR, UPDATE AND TRUE-UP PERIODS

Q. What test year and update period is the Staff using in this case?

A. The Commission issued an Order Concerning Test Year and True-up and Adopting Procedural Schedule on April 11, 2006, approving the use of the twelve months January 1, 2005, through December 31, 2005, as the test year for this case. The Commission also approved updates for known and measurable changes through March 31, 2006 and a true-up through June 30, 2006 for a specific list of rate base and income statement items and rate of return/capital structure.

Q. Please describe what a test year is and how it is used.

A. The test year is a twelve-month period used to determine the cost of providing service. The test year is the basis for the audit of a general rate increase filing or an earnings/revenues investigation. This period serves as the starting point for review and analysis of the utility's operations in determining the reasonableness and appropriateness of the utility's rates and rate levels. The test year financial statements form the basis for any adjustments necessary to remove abnormalities that have occurred during the period and to reflect any increase or decrease to the accounts of the utility. Adjustments are made to the test year levels of revenue, expense and investment to determine the proper cost of service and level of investment on which the utility is allowed to earn a return. A recommended rate of return range is determined for the utility, and a review of existing rates is made to determine if any additional revenues are necessary or if existing revenues are excessive. If the Staff determines that the utility's earnings/revenues are deficient, it may make a recommendation that rates need to be increased. If existing rates generate earnings/revenues in excess of what are deemed to be just and reasonable levels, this may indicate the need for rate reductions. The test year is the vehicle used to evaluate and determine the proper relationship among revenue, expense and investment. This relationship is essential to determine the appropriate level of earnings/revenues for the utility for the setting of just and reasonable rates, which will permit the utility to provide safe and adequate service.

Q. When is the use of an update period appropriate?

A. The use of an update period is advisable in most circumstances to allow a test year to remain current; i.e., to continue to reflect a proper matching of revenue, expense and investment items. An update period beyond the test year allows for the inclusion of material changes in items that are known and measurable. Such items could include plant additions and retirements, pay increases, customer growth, changes in fuel prices, etc. The Staff has proposed a number of adjustments to reflect Empire's electric revenues and expenses as of March 31, 2006.

Q. What specific items will be included in the true-up audit for this case?

A. The Commission approved a true-up of the following items through June 30, 2006:

Q. Please explain the difference between an update and a true-up.

A. An update period covers a time period immediately following the test year. This test year as updated, or the updated test year, includes material changes to the Staff's case through a date near the conclusion of the Staff's field audit. In contrast, a true-up of a test year requires a re-audit, if not of the entire case, of most ratemaking items (including all significant items) through a specific time period following the Staff's direct filing date. The true-up addresses all material items to ensure that the proper relationship of rate base, expenses and revenues is maintained.

Q. Please describe Income Statement adjustments S-3.1, S-7.3, S-28.2, S-36.1 and S-36.2.

A. These items reflect the Staff's fuel and purchased power expense adjustments to the test year, as well as the revenue impact of off-system sales. I will provide a more detailed discussion of these adjustments later in my direct testimony.

ACCOUNTING SCHEDULES

Q. Please discuss the Accounting Schedules you are sponsoring.

A. Accounting Schedule 1, Revenue Requirement, is the Staff's calculation of the Revenue Requirement based on the rates of return sponsored by Staff witness David Murray of the Financial Analysis Department.

Accounting Schedule 9 is the Income Statement for the test year ending December 31, 2005, updated through March 31, 2006. It depicts the test year total electric income statement as recorded for the test year (Column B), the Staffs adjustments to Total Company (Column C) and Missouri Jurisdictional operations (Column E) and the Missouri jurisdictional adjusted income statement (Column G). The Total Company test year amounts in Column (B) and the Total Company adjustment in Column (C) were allocated to Missouri based on the allocation factors listed in Column (D). The Total Company test year and adjustment amounts, as allocated, were added to the Missouri jurisdictional adjustments to determine the Missouri Adjusted Jurisdictional income statement in Column (G).

Each adjustment reflected on Accounting Schedule 9 in columns (C) and (E) is a summary of the individual adjustments proposed by the Staff itemized on Accounting Schedule 10, Adjustments to Income Statement.

HISTORICAL PERSPECTIVE OF IECS

Q. Please provide a general explanation of the interim energy charge (IEC) mechanism that has been utilized in the State of Missouri.

A. The IEC utilized in the State of Missouri is a mechanism that allows a range of fuel and purchased power prices to be used in determining an interim rate for variable fuel and purchased power, that is subject to refund with interest after a true-up audit. The IEC represents the amount of variable fuel and purchased power above the amount that is built into permanent rates. A base amount of variable fuel and purchased power costs establishes the IEC "floor" and is included in permanent rates. An additional estimated amount of variable fuel and purchased power costs establishes the IEC "ceiling." The difference between the "floor" and the "ceiling" is the IEC, and is set as an interim rate subject to refund. The fixed cost portion of fuel and purchased power expense is a component of the permanent rates and is not subject to true-up or refund.

Q. How does an IEC work?

A. The interim charge is generally in effect for a period of time beginning with the effective date of the rates as determined by the Commission in a rate case. At the conclusion of the IEC period, a true-up audit would be performed to identify the actual prudently incurred variable fuel and purchased power costs to determine if the utility over- or under-collected amounts during this period. If the utility over-collected its actual prudently incurred variable cost for fuel and purchase power, then it would refund, with interest, the amount of such over-collection, up to the entire interim amount collected from its customers. Conversely, if the utility under-collected prudently incurred variable costs associated with fuel and purchased power, the utility would not have to refund any amounts to customers; rather, the utility would absorb the under-collected amount, above the ceiling. If a utility can keep its fuel and purchased power costs below the base, or permanent level, the utility will retain those collected revenues for its shareholders.

Q. Please describe the IEC mechanisms that the Commission has approved for Empire.

A. Empire has twice had a Commission approved IEC mechanism. The first IEC was approved by the Commission in 2001 (Case No. ER-2001-299) and the second IEC was approved by the Commission in Case No. ER-2004-0570. In Case No. ER-2001-299, Empire received an amount in excess of $19 million for the IEC. The first IEC included all fuel and purchased power costs, both variable and fixed. The last IEC included only variable fuel and purchased power costs.

Q. What was one of the main factors that necessitated the use and Commission approval of an IEC mechanism for Empire in Case Nos. ER-2001-299 and ER-2004-0570?

A. The IECs were approved and used during a time when natural gas and purchased power prices were higher than previously seen "normals". The natural gas market was in a state of upheaval during the summer of 2000 through the winter of 2000/2001, culminating in a then record high natural gas price on the NYMEX (New York Mercantile Exchange) of $9.98 per MMBtu for January 2001. Utilities experienced high natural gas and purchased power prices during that time period. Higher than "normal" natural gas and purchased power prices were also present during the calendar year 2003 test year and the six months ending June 30, 2004 update period of the last Empire rate case, No. ER-2004-0570.

Q. What was the result of Empire's first IEC mechanism?

A. In Case No. ER-2002-424, Empire refunded, with interest, all of the monies collected under its first IEC, after having agreed to a reduction of the amount collected under the IEC by some $7 million annually in Case No. ER-2002-1074. This happened because the price for natural gas fell substantially after implementation of the IEC.

Q. Did Empire return to its customers all of the monies it collected under the IEC in excess of its prudently incurred variable fuel and purchased power costs?

A. Yes. Empire did not retain any of the 2001 IEC revenues. It returned the entire $19 million with interest to its customers. Empire was able to retain the difference between actual fuel and purchased power expense and the amount built into permanent rates

Q. Was the Staff concerned about allowing Empire to retain monies collected in rates from its customers, even though the fuel costs were under the base (permanent) amount?

A. No. A primary feature of the IEC is the incentive provided to the utilities that gives them the potential to keep a portion of the monies collected in excess of actual fuel and purchased power costs. The IEC base amount provides utility companies using an IEC an economic incentive to drive fuel costs down sufficiently to keep some of the collected revenues. Utility companies also have an incentive to keep their fuel costs below the IEC ceiling amount so that shareholders are not required to pay for actual fuel prices that exceed the ceiling. When negotiations in the context of a rate case are used to set a ceiling for the IEC it is important to set the IEC ceiling amount at an appropriate level. If the IEC ceiling amount is too low, in a rising energy market the company will not have a reasonable opportunity to collect sufficient revenues to cover its fuel and purchased power costs. If the IEC ceiling is set too high, the utility company may not have necessary incentives to keep fuel and purchased power costs low. An IEC ceiling amount set too high is nothing more than a pass-through of fuel and purchased power costs. Thus, it is very important to establish the proper base and ceiling amount in the IEC mechanism. It is these inherent incentives built into the IEC mechanism that has allowed Staff to support their approval in past cases.

Q. What was the amount of IEC revenues approved in Empire's last rate case, Case No. ER-2004-0570?

A. In Case No. ER-2004-0570, Empire was allowed to collect through an IEC $8,249,000 (Missouri jurisdiction) for variable fuel and purchased power costs that went into effect March 27, 2005.

Q. What other Missouri utilities have had an IEC mechanism approved by the Commission?

A. Aquila, Inc. (Aquila), in Case No. ER-2004-0034, had an IEC approved by the Commission through a Unanimous Stipulation and Agreement (Stipulation) for both the Aquila Networks -MPS and Aquila Networks - L&P divisions. In that case, the term of the IEC was a two-year period from April 22, 2004 through April 21, 2006. The beginning of the IEC term coincided with the effective date of the tariffs-April 22, 2004. The Stipulation provided for recovery by Aquila from its customers of a base amount of fuel and purchased power plus an interim amount that was subject to refund with interest. The base amount was determined using actual natural gas and purchased power costs.

The interim amount was determined using Aquila's forecasted natural gas and purchased power costs. As with Empire's IECs, the refund provision of the IEC agreement was intended to provide a "safety net" for both Aquila and its customers.

Q. Did the Aquila IEC approved in Case No. ER-2004-0034 provide the "safety net" as was intended?

A. Yes. A true-up audit will determine if any portion of the revenues collected exceeded Aquila's actual and prudently incurred costs for fuel and purchased power during the term of the IEC. It is known that Aquila under-recovered costs in the millions of dollars under its IEC, yet the under-recovery had little to do with price volatility. A scheduled outage at Sibley that extended from the original estimate of four weeks to almost eight weeks and an issue with CW Mining were the main causes of Aquila's under-recovery of fuel costs. The Aquila IEC approved by the Commission in Case No. ER-2004-0034 ended on the date that the Case No. ER-2005-0436 rates went into effect, March 1, 2006.

Q. Did the Commission approve an IEC for Aquila in its most recent rate case, Case No. ER-2005-0436?

A. No. While parties to the case proposed various IEC mechanisms, ultimately through discussion and negotiation, the parties recommended to the Commission that no IEC be included in Aquila's rates and the Commission did not approve an IEC in its Report and Order in Case No. ER-2005-0436.

Q. What is Staff's view of the IEC mechanism in this proceeding?

A. Currently, Empire is operating under a Commission approved IEC mechanism. Empire has requested the termination of that IEC and would prefer to have fuel and purchased power treated in the traditional manner. There have been various pleadings filed by the Office of the Public Counsel and the intervenors Praxair, Inc. and Explorer Pipeline Company arguing that the current IEC should remain in effect for the duration of its term, through March 2008.

The Staff would be willing to work with Empire and the other parties to this case to develop a new or modified IEC mechanism within certain parameters. Staff Auditing Department witness Mark L. Oligschlaeger addresses the Staff's position on the use of an IEC mechanism in his direct testimony.

Q. What approach to fuel/purchased power expense is reflected in the Staff's filed Accounting Schedules?

A. The "IEC Termination" scenario is reflected in the Staff's filed Accounting Schedules. Please refer to the testimony of Staff witness Oligschlaeger for a discussion of this approach.

OVERVIEW OF ELECTRIC GENERATION

Q. What generating facilities does Empire own and use for the production of electric power?

A. Empire owns or co-owns the following generating facilities:

Iatan Plant Unit 1

Asbury Plant Units 1 and 2

Riverton Plant Units 7, 8, 9, 10 and 11

Empire Energy Center Units 1, 2, 3 and 4

State Line Unit 1

State Line Combined Cycle Unit

Ozark Beach Hydro Plant

Q. Please describe each facility including the type of units and the primary and secondary fuel sources for each unit.

A. The Iatan power plant located in Weston, Missouri is jointly owned by Kansas City Power & Light Company (KCPL), Aquila and Empire, with ownership percentages of 70%, 18% and 12%, respectively. KCPL began running the plant, as operating partner, in May 1980. The Iatan plant is a 670 megawatt (MW) base-load power plant, which utilizes pulverized low sulfur western coal from the Powder River Basin of Wyoming (PRB) as the main boiler fuel. No. 2 fuel oil is required for boiler start-ups and flame stabilization. Empire's ownership percentage entitles it to approximately 80 MW of Iatan's generation.

The Asbury generating station located near Asbury, Missouri consists of one cyclone steam boiler that burns a blend of PRB coal and Kansas high sulfur coal as the primary fuel and No. 2 fuel oil for flame stabilization and boiler start-ups. The Asbury plant received permission from the Missouri Department of Natural Resources (MoDNR) to burn tire derived fuels (TDF) at a maximum rate of 2% of total fuel input. In 2002, Empire began burning TDF. The consumption of TDF at Asbury for purposes of determining the fuel costs in this case have been combined with coal.

Asbury Unit 1 operates at 193 MW as a base load unit and Asbury Unit 2 has a 17 MW capacity. However, Unit 1 must be running in order to operate Unit 2. This requirement, combined with the costs of operating Unit 2 results in Empire generally operating Unit 2 only as a peaking unit during the summer months. Empire has indicated that Asbury is not able to run on a continuous basis at 210 MW due to operational issues. The Asbury plant was completed in 1970.

The Riverton plant located near Riverton, Kansas consists of five units. Riverton Units 7 (38 MW) and 8 (54 MW) are base-load pulverized coal units that burn a blend of PRB coal and petroleum coke as the primary fuel and natural gas for boiler start-ups, flame stabilization and as a topping fuel to reach maximum generating capacity. The use of petroleum coke as a blend fuel reduces the capacity to 23 MW for Riverton Unit 7 and 45 MW for Riverton Unit 8. The remainder of the capacity can be obtained by over-firing natural gas. Riverton Units 9 (12 MW), 10 (16 MW) and 11 (16 MW) are combustion turbine (CT) peaking units that burn natural gas as the primary fuel and are capable of using No. 2 oil as a secondary fuel and for testing.

Because of recent western coal conservation procedures put into place at Empire resulting from railroad transportation constrictions, Empire has increased the blend percentage of Kansas coal burned at Asbury and petroleum coke burned at Riverton Units 7 and 8. Physical traits of the petroleum coke limit the ability to maintain a large supply on site and therefore Empire typically burns straight PRB coal in Riverton Unit 8 on weekends.

The Empire Energy Center, located near La Russell, Missouri, Units 1 (86 MW) and 2 (85 MW) are CT intermediate/peaking units that burn natural gas as the primary fuel and Jet A fuel oil as a secondary fuel. These units were installed in 1978 and 1982. In April 2003, Empire added Units 3 and 4, which are CT peaking units powered by jet engine technology that allows for prompt response to demand changes. These units are capable of burning either natural gas or Jet A fuel oil and each unit has a capacity of 50 MW.

The Ozark Beach Plant consists of four base-load hydro generators (16 combined MW) and is located between Lake Taneycomo and Tablerock Lake.

Empire's use of the hydro units depends upon the lake levels and the operation of surrounding dams that are under the direction of the Army Corps of Engineers. The Ozark Beach Plant generates less than 2 percent of Empire's generation requirements.

State Line located near Joplin, Missouri Unit 1 is an 89 MW CT peaking unit that uses natural gas as the primary fuel and Jet A fuel oil as a secondary fuel and was completed for service in June 1995.

The State Line Combined Cycle Unit consists of two gas fired CTs that, when operated together with heat recovery steam generators and a 200 MW steam generator, have a combined capacity of 500 MW. Empire owns 60% (300 MW) of this capacity, with Westar Inc., a subsidiary of Western Resources, owning the rest. One of these CTs was the former State Line Unit 2, completed in June 1997, and originally operated as a 150 MW CT. It was converted, along with a new 150 MW CT to operate as a combined cycle unit in June 2001.

Q. How are quantities expressed for the various types of fuel?

A. Coal, TDF and pet coke are purchased in tons; natural gas is purchased in MMBtus; fuel oil is purchased in either gallons or barrels (42 gallons per barrel). The actual quantities purchased for coal, TDF, pet coke and natural gas are converted into a Btu energy content for purposes of calculating the cost of Btu content.

Q. What is the meaning of Btu content?

A. Btu stands for British thermal unit. MMBtu stands for one million Btus. One decatherm is equal to one MMBtu. The Btu content of fuel is a measure of its energy content available for electrical generation when the fuel is combusted.

FUEL AND PURCHASED POWER EXPENSE

Q. What was your responsibility in this case with regard to the determination of fuel expense?

A. I determined representative levels for the following: a) unit costs for coal, TDF, petroleum coke, natural gas and fuel oil used to produce electricity, and b) annualized demand charge costs from purchased power contracts. Staff witness David W. Elliott of the Energy Department input this data into the fuel model to prepare the fuel and purchased power variable cost calculations used in the Staff's direct filing. The Staff's fuel model calculates the majority of overall variable fuel and purchased power costs.

Q. Please explain how the Staff examined fuel prices in this case.

A. The Staff reviewed the coal, rail freight and trucking transportation contracts, invoices and inventory worksheets. The Staff also reviewed natural gas transportation contracts, transaction details for physical and financial hedges and spot gas purchases. In addition, the Staff examined historical information regarding the operations of individual generating units and the prices paid for fuel and transportation charges by each unit and fuel type through the update period, March 31, 2006. The Staff examined the monthly operating reports and invoices to determine TDF prices and inventory worksheets, invoices and purchase orders to determine petroleum coke prices.

Q. How did the Staff use fuel prices in determine the total annualized fuel expense?

A. Staff witness Elliott used these various fuel prices in the Staff's fuel model to compute the level of normalized variable net system fuel and purchased power expense, exclusive of purchased power demand charges, cost of off-system sales (sales to other electric utilities) and cost of energy exchanged. I subsequently added costs associated with purchased power demand charges, off-system sales and energy exchanged to the production cost model results. I also added the production cost model's results to arrive at an overall total annualized level of fuel and purchased power expense. The use of the fuel model is explained in the direct testimony of Staff witness Elliott.

Q. Were there any fuel related transactions recorded by Empire during the test year or update period to this case that the Staff has addressed beyond what has previously been mentioned in your testimony?

A. Yes. During the third quarter of 2005 Empire elected to "unwind" a forward natural gas contract that resulted in a recognized gain of over $5 million. As stated in Empire's response to Staff Data Request No. 260:

> A. Empire originally purchased this gas from British Petroleum ("BP") for physical delivery in a future period, July-August of 2009-2011. The volume involved was originally purchased November 18, 2004 when it was determined that the strike price was likely to be low given the long term supply and demand projections available at the time the transaction was completed. Natural gas was purchased in amounts for the July-August period to cover weekday running of Stateline Combined Cycle. This involved the purchase of 944,000 Dth per month for July-August of 2009-2011.
>
> B. The decision to unwind this purchase in 2005 was made due to the extremely high prices for natural gas in 2005 and Empire's desire to hedge more natural gas in the near term. This transaction also lowered Empire's overall exposure to BP and enabled the placing of near term hedges. Finally, this transaction lowered Empire's energy costs in the third quarter of 2005, which had increased unexpectedly due to the unexpected fly up in natural gas and spot energy prices and warmer than normal weather.
>
> C. The decision to enter into the unwinding transaction was discussed and approved by the Risk Management Oversight Committee as part of an overall hedge structure to meet near term expected natural gas use and cover year end

hedge targets for periods covered in Empire's Risk Management Policy

D. Any decisions with respect to future transactions in this area will depend upon the specific circumstances faced by Empire, including Empire's continued ability to use FAS 133 accounting. Empire options in this area are limited by FAS 133.

Q. What does the term "unwinding" mean in the context of forward hedge contracts?

A. The term "unwinding" refers to a transaction that has the effect of undoing or canceling an earlier transaction.

Q. What treatment does the Staff recommend for the recognized gain from the unwinding of this forward natural gas contract?

A. The Staff is recommending that the recognized gain from the unwinding of the forward natural gas contract be amortized over a five year period and netted against fuel expense. Empire's current hedging program for its natural gas costs is directly related to provision of regulated electric service to its customers. Gains and losses are recognized by Empire routinely during hedging transactions. However, the amount of the gain related to the unwinding of this forward natural gas contract is exceptionally large. For that reason the Staff recommends "smoothing out" this gain over five years. Empire shareholders benefited from the inclusion of the gain on the 2005 Empire income statement. Inclusion of the gain to offset natural gas costs allows ratepayers to also benefit from the unwinding of the future physical hedges.

Empire's hedging program will be discussed in more detail later in this testimony.

<u>FUEL COSTS</u>

Q. How did the Staff determine the cost of coal used at Empire's plants?

A. The Staff examined the specific contract prices of the coal burned at each plant. The Staff also examined all coal rail freight and trucking contracts in effect as of the end of the update period, March 31, 2006. Total coal costs include the commodity costs, rail freight and trucking costs, where applicable. For each generating unit, the Staff examined historical information for each individual component of the total coal cost and then added the individual cost components to derive the total coal cost for each plant. The total coal cost was converted from a dollar-per-ton basis to cents-per-MMBtu based upon the contract Btu energy content of the coal.

The Staff reviewed coal/freight/trucking contracts in force as of March 31, 2006. At the Asbury plant, Empire burns a mix or blend of western low sulfur coal and Kansas high sulfur coal in order to achieve acceptable environmental results and as a method of coal conservation. Through data requests and discussions with Company employees the Staff determined that the reasonable mix proportions are 82.61% PRB coal to 17.39% Kansas coal for the Asbury units, 80.29% PRB coal to 17.39% petroleum coke for Riverton 7 and 82.81% PRB coal to 17.19% petroleum coke for Riverton 8. I provided the computed coal costs and mix information to Staff witness Elliott.

Q. Please explain the ** ______________ ** pricing (as amended April 14, 2006) of the Kansas coal purchased from Phoenix Coal Sales Company.

A. The amended contract for the Kansas coal used at Asbury provides for ** ____

____

____________________________ **, the Staff has used a weighted average price for the Kansas coal based upon the amended contract.

Q. Did the calculation of coal prices require any further analysis?

NP

A. Yes. Through the review of invoices and transportation contracts the Staff identified gasoline adjustments that had been invoiced throughout the test year and update period. The Staff calculated an average gasoline adjustment per ton associated with the trucking of coal between Asbury and Riverton. This additional transportation cost above the contract base rate was included in the Staff's calculation of Riverton coal costs.

Q. Please describe how the Staff determined the total coal cost for the Iatan plant that was used as an input to the fuel model.

A. The Staff analyzed and developed a cost per ton for each component of the total coal cost based upon review of invoices received from KCPL during March 2006. As discussed previously, the total coal cost includes the commodity cost of the coal itself and all freight costs. The individual cost components were combined to derive the total coal cost per ton. The total cost on a dollar per ton basis was then converted to cents per MMBtu based upon the contractual Btu content of the coal.

Q. How does Empire take delivery of coal supplies at its generating facilities?

A. Empire leases an aluminum unit train for coal deliveries to its Asbury plant. This same coal is then trucked to its Riverton generating units. Empire also has a Company-owned steel unit train that it does not use for coal deliveries but leases to another entity. Empire is also responsible for its 12% ownership share of the unit trains leased by KCPL for the Iatan station.

Q. How did the Staff treat unit train costs in this case?

A. The Staff added the property taxes, net leased train charges and miscellaneous operations and maintenance (O&M) charges for the test year to the output results from the fuel model as a separate component, since the unit train costs were not included as an input to the fuel model. The Staff also added non-labor "undistributed and other" fuel related costs to the fuel model output. The Staff included the unit train O&M costs and the non-labor undistributed and other fuel rated costs based on the 12 months ending December 31, 2005. The Staff totaled the annualized dollars for each of these cost components and included these amounts in arriving at total fuel expense.

Q. How did the Staff calculate the fuel costs for the State Line Combined Cycle plant, State Line Unit 1, Energy Center Units 1, 2, 3 and 4 as well as Riverton Units 9, 10 and 11?

A. As natural gas fired units, the fuel costs associated with operating these units is determined by the Staff's fuel model, using the gas costs I provided as an input to Staff witness Elliott.

Q. What price for No. 2/Jet A fuel oil did the Staff include in its fuel model?

A. The Staff used the most recent prices for No. 2/Jet A fuel oil purchased at each of Empire's plants except for State Line. Since State Line maintains an inventory level well in excess of the normal annual usage of oil, the Staff included a weighted cost of oil based upon the actual costs of the oil in inventory at State Line. The test year consumption at each plant was then multiplied by the price established for that specific plant to calculate a weighted average cost per barrel for oil for Empire's generation fleet.

Q. What natural gas costs did the Staff use in developing its total fuel cost for each plant?

A. Staff examined the hedging reports provided by Empire in response to Staff Data Request No. 199, including the transaction trade detail, to develop monthly weighted hedged and spot prices based upon the delivery dates, quantities and transaction prices that occurred throughout the test year, update period and hedges the end of 2007.

The Staff included both of Empire's actual financial and physical hedge data in calculating a 21 month (delivery dates from April 2006 through December 2007) average hedge price. The weighted average spot natural gas price calculated by the Staff was based upon Empire's actual monthly spot purchases for the twelve months ending March 31, 2006. The Staff then applied the weighted hedged natural gas price to 80% of the Dths purchased by Empire during the test year and the weighted spot natural gas price to 20% of the Dths purchased. (80% is the maximum percentage of Empire's gas purchases to be hedged on an annual basis, under the Company's current hedging policies.) From this calculation the Staff arrived at a natural gas price of ** _____ ** per MMBtu (excluding transportation costs).

Q. What additional information was reviewed by the Staff in developing its natural gas cost in this rate case?

A. The Staff reviewed a variety of source documents from the Company and through research of natural gas prices from published sources to analyze natural gas prices. The graphs attached to my direct testimony as JEF-Schedule 2 plot the natural gas prices for the First-of-month (FOM) natural gas prices on the Southern Star (SSC) interstate pipeline system and the monthly expiration natural gas prices from the NYMEX. NYMEX pricing is based on physical delivery from Henry Hub. The prices that Staff reviewed were for the months of April 2001 through March 2006. Empire purchases natural gas from marketers and producers and then transports the natural gas through SSC's interstate pipelines to Empire's generating facilities. Because of the physical location of the SSC pipelines in the mid-continent region of the United States, Empire purchases natural gas that is produced in Oklahoma, Kansas and Texas.

NP

NYMEX prices are representative of gas flowing from the Henry Hub which is located in Louisiana. The majority of the Henry Hub natural gas is produced in the Gulf of Mexico. Market forces including supply and demand create variances between the SSC and Henry Hub prices for delivered gas.

Q. Is this difference in the delivered price of gas on the SSC pipeline system and Henry Hub normal?

A. Yes. The difference between the price of natural gas from one pricing point (SCC) and another pricing point (Henry Hub) is known as basis differential. Empire tracks the basis differential between FOM SSC prices and NYMEX/Henry Hub natural gas prices as part of its analysis of natural gas prices for its hedging program.

Q. Please describe Empire's hedging program.

A. Empire purchases the majority if not all of its financial hedges from NYMEX. Empire also purchases physical hedges from suppliers for actual future deliveries of natural gas at prices established on the day of the transaction. Empire's hedging program is used to remove some of the risk associated with natural gas price volatility. By locking in a natural gas price today for certain volumes, Empire can guarantee a set price for its natural gas fuel costs for the associated volumes.

Q. Is a utility company's hedging for natural gas done to mitigate energy costs and reduce the risk of volatility in the energy markets?

A. Yes. Generally in the state of Missouri, utility companies, both electric and natural gas local distribution companies (LDCs), use some type of hedging program in their overall natural gas procurement portfolios. This is especially important in today's natural gas market. Utilities use the hedging of natural gas to limit their exposure to the cost effects of expected raising natural gas prices. Staff believes that a well thought out, managed and prudently executed hedging program should be used by utilities purchasing natural gas to reduce the risk of volatility and minimize fuel costs in the current environment.

Q. How does Empire address the remainder of its natural gas needs?

A. The remainder of the natural gas required in the electric generation process by Empire is purchased just prior to when it is consumed. The price of gas purchased on the "spot market" is set based upon the current market conditions.

Q. How does Empire determine the amount of natural gas to physically or financially hedge versus the amount to purchase on the spot market?

A. Empire's risk management program sets parameters for hedging for the current year and going out four years into the future. Currently, Empire's risk management program allows up to eighty percent (80%) of the current year expected natural gas requirements is hedged. At the end of March 2006, Empire had ** ____ ** of its expected remaining 2006 natural gas requirements hedged and ** ____ ** of its 2007 natural gas requirements hedged.

DEMAND CHARGES – CAPACITY CONTRACTS

Q. Please describe the capacity contract that Empire has entered into.

A. During the test year as updated through March 31, 2006, Empire bought electric power through the following capacity contract:

> ** ________ ** of capacity from Western Resources' Jeffrey Energy Center, through May 31, 2010.

These contracts allow Empire to purchase capacity on an annual basis. The Staff added the annual fixed demand charge amount associated with these contracts to the results of

NP

the Staff's production cost model because the model only computes the variable purchased power energy charges.

Q. How did the Staff reflect the contract demand charges in this case?

A. Adjustment S-36.1 annualizes the Company's costs for fixed demand charges under the Western Resources and Elk River Windfarm contracts.

Q. Were there any other fuel and/or purchased power costs that were not calculated in the Staff's production cost model?

A. Yes. The fuel costs and purchased power costs (energy and demand) associated with off-system sales and energy exchanged were added to the results of the Staff's production cost model since the model is based upon net system input only and does not reflect these types of sales.

FIRM GAS TRANSPORTATION COSTS

Q. How are firm natural gas transportation costs included in the Staff's fuel costs in this case?

A. The firm gas transportation costs are fixed costs that are added to the fuel costs independent of the fuel model. These charges are set by contract with SSC and are based upon a reservation charge at a maximum daily quantity (MDQ) for natural gas deliveries and a commodity charge (variable component) applied to each delivered Dth of natural gas. The reservation and commodity rates and MDQ have not changed since the last rate case and the Staff has included this amount as a fuel cost in this case. The commodity charge was calculated based upon the natural gas Dths burned as determined by the Staff's fuel model multiplied by the commodity rate. This amount was also included as a fuel cost in this case.

OFF-SYSTEM SALES

Q. What are off-system sales?

A. Off-system sales are sales of electricity made at times when utilities have met all obligations to serve their native load customers and have excess energy to sell to other utilities. The off-system sale transactions occur between utilities resulting in profits (net margin) to the selling entity, in this case, Empire.

Q. Why is it appropriate to include off-system sales in the current revenue requirement determination for the Company?

A. The same generating facilities, equipment and employee/personnel that are necessary to provide service to Missouri retail electric customers are also needed to make off-system sales. It is appropriate to include the off-system sales in this case because Empire customers are paying for all costs associated with the facilities to produce electricity for the firm retail customers, i.e., native load customers. To the extent that other sales can be made using those facilities, the customers should benefit from these sales. The off-system sales are made at a time when the generating facilities are not needed to serve the native load customers. Off-system sales represent an efficient utilization of the electric system that has been put in place to meet the native load customers' electricity needs.

Q. Does Empire benefit from these off-system sales?

A. Yes. To the extent that increases in off-system sales occur after rates are determined in any given proceeding, the Company will benefit from the growth and increase in net margins (off-system sales less fuel costs) throughout the period until rates are changed by the Commission in a general rate proceeding.

Q. Has the Commission recognized the benefits of including off-system sales in determination of revenue requirements in other cases?

A. Yes. The Staff has consistently included off-system sales in all of the electric cases that I am aware of dating back to the early 1980s and the Commission has agreed with this recommendation.

Q. What analysis did the Staff perform to determine an appropriate level of off-system sales to include in this case?

A. The Staff reviewed five years of off-system sales data and determined that the twelve months ending March 31, 2006 or update period level of off-system sales was representative of an off-system sales level on an ongoing basis. Adjustment S-3.1 reflects the adjustment required to adjust test year off-system sales revenues to the update period level of off-system sales.

FUEL INVENTORY

Q. What coal inventory level have you included in this case for the Iatan, Asbury and Riverton plants?

A. Empire has recently reduced its level of coal reserve maintained at the Asbury and Riverton plants. The Company's March 31, 2006 United States Securities and Exchange Commission (SEC) 10-Q states that currently Empire is maintaining a 47-52 day supply of PRB coal at its Asbury Plant and a 21 day supply of PRB coal at its Riverton Plant. KCPL has also experienced reduced coal inventory levels at the Iatan plant where it previously had a policy to maintain a 45 day supply of coal. Both Empire and KCPL have recently enacted coal conservation programs as a result of rail transportation constrictions. This has resulted in a depleted level of coal on hand at the generation facilities. The Staff has included a 49.5 day supply of coal for Asbury and a 21 day supply for the Riverton plant and a 45 day supply for the Iatan plant based on the

Staff's average daily burn for these facilities, as calculated by the fuel model. Kansas coal and petroleum coke inventory levels were also calculated by the fuel model. The Staff's fuel stock inventory levels reflect the same prices used as inputs to the fuel model.

Q. What fuel oil inventory levels have you included in this case for Empire's Iatan, Asbury, Riverton and Energy Center plants?

A. The Staff examined fuel oil inventory levels on a monthly basis from April 1, 2005 through March 31, 2006. The Staff believes that a 13-month average is representative of ongoing levels at the most current purchase price through March 31, 2006.

Q. What fuel oil inventory level did the Staff compute for the State Line generating station?

A. The Staff has calculated the fuel oil inventory level for the State Line generating station in the same manner as the other plants but has used a weighted cost average for determining the price since the fuel oil inventory level at State Line far exceeds the annual usage and no purchases have occurred within the test year or update period.

Q. What petroleum coke and TDF inventory levels did the Staff compute for inclusion in rate base?

A. The Staff used the same methodology to determine inventory levels of petroleum coke and TDF as other fuel stock, a 13-month average at the most current purchase price through March 31, 2006.

Q. Please explain Empire's interruptible gas storage contract and the gas supply level included in rate base.

A. Empire entered into a contract in November 2005 with SSC to allow injection of 900,000 Mcf of natural gas into storage in the production and market zone on the SSC. Empire's intention is to use the interruptible storage capacity to take advantage of lower natural gas prices. The contract restricts usage of the storage during the winter heating season so the storage level will fluctuate during a twelve month period. Since Empire has only had the storage capacity available effectively since December 2005, a 13-month average was not available. The Staff took into consideration the current level of gas supply being stored through March 2006 and applied that level for the update period. The Staff calculated a value for the natural gas inventory by multiplying the weighted cost of the natural gas in storage by the quantity at the end of March 2006.

Q. Does this conclude your direct testimony?

A. Yes it does.

CASE PROCEEDING PARTICIPATION

JANIS E. FISCHER

PARTICIPATION		TESTIMONY
COMPANY	**CASE NO.**	**ISSUES**
St. John's Regional Medical Center	TC-2004-0406	Violation of Annual Report Commission Rules
Heartland Health Systems, Inc.	TC-2004-0390	Violation of Annual Report Commission Rules
Aquila, Inc. d/b/a Aquila Networks-MPS and Aquila Networks-L&P	GR-2004-0072	Rebuttal – Sharing of Merger Savings
Union Electric Company d/b/a AmerenUE	EO-2004-0108	Rebuttal - Affiliated Transactions, Assets/Liabilities
Aquila, Inc. d/b/a Aquila Networks-MPS and Aquila Networks-L&P	ER-2004-0034 & HR-2004-0024	Rebuttal - Sharing of Merger Savings
Osage Water Company	ST-2003-0562 & WT-2003-0563	Rebuttal – EU Operation & Maintenance Agreement, Use of Projected Expenses to Determine Cost of Service for Ratemaking, Utility Plant-Rate Base, Depreciation Expense and Depreciation Reserve
Osage Water Company	ST-2003-0562 & WT-2003-0563	Direct - Test Year, Accounting Schedules, Revenues and Cost of Removal and Salvage
Union Electric Company d/b/a AmerenUE	GR-2003-0517	Direct - Rate Case Expense, Legal Expense, Corporate Franchise Tax, Cost of Removal and Salvage, Pensions and OPEBs
Laclede Gas Company	GR-2002-356	Direct - Pensions and OPEBs, Rate Base Asset, Incentive Compensation
Missouri Gas Energy, Division of Southern Union Company	GR-2002-292	Direct - Pensions and OPEBs, Other Employee Benefits, SERP, COLI Amortization
Missouri-American Water Company	WO-2002-273	Rebuttal - Security Costs, Accounting Authority Order Staff Criteria
Citizens Electric Company	ER-2002-217	Direct - Test Year, Accounting Schedules, Revenues, Purchased Power and Transmission, Other Revenues, Uncollectibles Expense
Union Electric Company d/b/a AmerenUE	EC-2002-1	Surrebuttal - Incentive Compensation
Missouri Public Service, Division of UtiliCorp United, Inc.	ER-2001-672 EC-2002-265	Direct - Pensions and OPEBs, Merger Transition/Transaction Costs, Merger Savings-SJLP, Revenues, Uncollectibles
Missouri Public Service, Division of UtiliCorp United, Inc.	ER-2001-672 EC-2002-265	Rebuttal - Merger Transition/Transaction Costs, Merger Savings-SJLP, Revenues, Uncollectibles

PARTICIPATION		TESTIMONY
COMPANY	CASE NO.	ISSUES
The Empire District Electric Company	ER-2001-299	Direct - Payroll, Pensions and OPEBs, Payroll Related Benefits, Payroll Taxes, Outside Services, Merger Costs, Miscellaneous Expenses True-up Rebuttal – Chemicals, Property Taxes
The Empire District Electric Company	ER-2001-299	Rebuttal - Payroll Expense, Bonuses and Incentive Pay
The Empire District Electric Company	ER-2001-299	Surrebuttal - Payroll Expense, Bonuses and Incentive Pay
The Empire District Electric Company	ER-2001-299	Supplemental Surrebuttal - Incentive Awards
The Empire District Electric Company	ER-2001-299	True-up Direct - Payroll, Payroll Taxes, Payroll Related Benefits
KLM Telephone Company	TT-2001-120	Direct - Revenue Requirement
UtiliCorp United, Inc./ Empire District Electric Company	EM-2000-369	Rebuttal - Merger Savings, Acquisition Adjustment, Tracking of Merger Savings
UtiliCorp United, Inc./ St. Joseph Light & Power Company	EM-2000-292	Rebuttal - Merger Savings, Acquisition Adjustment, Tracking of Merger Savings
Osage Water Company	WA-98-236 WC-98-211	Rebuttal - Financial Viability, Organizational Costs
Western Resources/ Kansas City Power & Light Company	EM-97-515	Rebuttal - Merger Savings, Tracking of Merger Savings, Transaction Costs, Costs to Achieve
Union Electric Company d/b/a AmerenUE	GR-97-393	Direct - Cash Working Capital, Materials/Supplies, Prepayments, Federal/State Income Tax Offset, Purchased Gas Offset, Interest Expense Offset
The Empire District Electric Company	ER-97-81	Direct - Dues and Donations, Advertising, Rate Case Expenses, PSC Assessment, Non-Health Insurance, Miscellaneous Expenses

The Empire District Electric Company
ER-2006-0315