BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of the tariff filing of The Empire District Electric Company to implement a general rate increase for retail electric service provided to customers in its Missouri service area.	)))))	Case No. ER-2004-0570

PROPOSED FINDINGS OF FACT AND CONCLUSIONS OF LAW OF THE EMPIRE DISTRICT ELECTRIC COMPANY

COMES NOW The Empire District Electric Company ("Empire" or "Company"), by counsel, and respectfully offers its Proposed Findings of Fact and Conclusions of Law to the Commission.

INTRODUCTION

A Nonunanimous Stipulation and Agreement Regarding Rate Design was entered into on December 16, 2004, by and between the Company, the Office of Public Counsel ("Public Counsel"), the Staff of the Commission ("Staff"), and intervenors Praxair, Inc., and Explorer Pipeline Company. A Stipulation and Agreement as to Certain Issues was entered into on December 22, 2004, by and between the Company, Public Counsel, Staff, and intervenors the Missouri Department of Natural Resources-Energy Center, Praxair, Inc., and Explorer Pipeline Company. Intervenors Union Electric Company and Aquila, Inc. did not join in the December 22 agreement, but do not oppose said agreement.

As a result of the stipulations and agreements, and assuming approval by the Commission of the same, three issues remain in dispute: (1) the appropriate cost of capital/rate of return for Empire; (2) the proper calculation of depreciation; and (3) the appropriate level of total Company on-system fuel and purchased power expense, including the appropriate cost recovery method with regard to fuel and purchased power (i.e., base rates and/or an interim energy charge

("IEC")). With regard to these contested issues, Empire offers the following Proposed Findings of Fact and Conclusions of Law:

PROPOSED FINDINGS OF FACT

The Missouri Public Service Commission ("Commission") is a state administrative agency created and established by the Missouri General Assembly to regulate water, sewer, gas, electric, telephone and steam heating utilities operating within the State of Missouri, pursuant to RSMo. Chapters 386, 392 and 393.

Empire is a Kansas corporation with its principal office and place of business at 602 Joplin Street, Joplin, Missouri 64801. Empire is qualified to conduct business and is conducting business in Missouri, as well as other states, and is engaged generally in generating, purchasing, transmitting, distributing, and selling electric energy in portions of said states. Empire is certificated to operate as a utility in portions of Missouri pursuant to the jurisdiction of the Commission.

Office of the Public Counsel ("Public Counsel") is designated by statute "to represent and protect the interests of the public in any proceeding before or appeal from the public service commission." RSMo. §386.710.2.

Procedural History

On April 30, 2004, Empire filed with the Commission proposed tariff sheets designed to implement a general rate increase for retail electric service provided by the Company. The new retail electric service rates are designed to produce an additional $38,282,294 in gross annual electric revenues excluding gross receipts, sales, franchise, and occupational taxes, a 14.82% increase over existing revenues.

The Commission issued its Suspension Order and Notice on May 5, 2004, whereby, among other things, it suspended all the proposed tariff sheets for 120 days until September 27, 2004 (Section 393.150.1, RSMo). The Commission's Order further suspended the tariff sheets an additional six months until March 27, 2005 (Section 393.150.2, RSMo), the maximum amount of time allowed by law.

On May 5, 2004, Praxair, Inc., an industrial customer of Empire, filed its Application to Intervene. No party objected to Praxair's application, and the Commission granted intervention by order of May 20, 2004. Explorer Pipeline Company applied to intervene on May 20, 2004. The Missouri Department of Natural Resources, represented by the Missouri Attorney General, applied to intervene on May 25, 2004. No party opposed either of these applications, and they were granted at the prehearing conference on June 3, 2004. On June 17, 2004, Union Electric Company, doing business as AmerenUE, filed its Application to Intervene. On June 22, Aquila, Inc., filed an Application to Intervene. Both applications were granted by order of June 12, 2004.

On May 14, 2004, Empire filed its recommendation that the test year for this proceeding be the twelve-month period ending December 31, 2003, adjusted and updated for known and measurable changes through June 30, 2004. The other parties timely filed their Joint Concurrence on June 2. The Commission adopted the test year recommended by Empire, updated and adjusted for known and measurable changes through June 30, 2004.

By order of June 17, 2004, the Commission adopted a procedural schedule. Pursuant to that schedule, direct, rebuttal, surrebuttal, and cross-surrebuttal testimony was filed, the parties filed a List of Issues, Order of Witnesses, and Order of Cross-examination, and the parties filed a

Reconciliation and Statements of Positions on Issues. An evidentiary hearing was held on December 6-10 and 13-17, 2004. Initial Briefs were filed by the parties by January 21, 2005, and Reply Briefs and Proposed Findings of Fact and Conclusions of Law were filed by February 4, 2005.

The Partial Stipulations and Agreements

A Nonunanimous Stipulation and Agreement Regarding Rate Design was entered into on December 16, 2004, by and between the Company, Public Counsel, the Staff of the Commission ("Staff"), and intervenors Praxair, Inc., and Explorer Pipeline Company. A Stipulation and Agreement as to Certain Issues was entered into on December 22, 2004, by and between the Company, Public Counsel, Staff, and intervenors the Missouri Department of Natural Resources-Energy Center, Praxair, Inc., and Explorer Pipeline Company. Intervenors Union Electric Company and Aquila, Inc. did not join in the December 22 agreement, but do not oppose said agreement.

Cost of Capital/Rate of Return

A. Return on Equity

The Commission must use its judgment to establish a rate of return on equity that will be attractive enough to investors to allow the utility to fairly compete for the investors' dollar in the capital market, without permitting an excessive rate of return on equity that would drive up rates for Empire's ratepayers. In order to obtain guidance about what rate of return on equity is appropriate, the Commission must turn to the expert advice offered by financial analysts.

The United States Supreme Court has held that the return authorized a utility by a regulatory body should be "commensurate with returns on investments in other enterprises having corresponding risks." In addition, the return should be "sufficient to assure confidence in the financial integrity of the enterprises, so as to maintain its credit and to attract capital." *See, Federal*

Power Commission v. Hope Natural Gas Company, 320 US 591, 603 (1944); *see also, Bluefield Waterworks v. Public Service Commission,* 262 US 679 (1923).

Empire is at a significant financial juncture in its corporate history. In order to make necessary capital investments and provide reliable, high-quality electric service to its customers, Empire will be required to go to the capital markets in the near future. The Commission finds that it is in the interest of all stakeholders that Empire have access to those markets at the lowest possible cost.

1. Empire's Testimony

Empire recommends a return on common equity ("ROE") of 11.65 percent. The 11.65 percent recommendation is the average of the recommendations of Empire's two cost of capital witnesses, Donald A. Murry, Ph.D, and James H. Vander Weide, Ph.D.

The evidence shows that Dr. Vander Weide estimated Empire's cost of equity in two steps. (Vander Weide Direct, Exh. 14, p. 5) First, he applied several standard cost of equity methods to market data for a proxy group of comparable companies. (*Id.*) Second, he adjusted the average cost of equity for his proxy group for the difference between the average capital structure of his proxy group and Empire's capital structure. (*Id.* at 5-6) In order to reduce the uncertainty of the estimate of the cost of equity for Empire, Dr. Vander Weide used a reasonably large sample of proxy companies, instead of applying cost of equity methods solely to Empire. (*Id.* at 6) Although the method applied by Dr. Vander Weide is unique to this Commission, the Commission finds nothing improper about Dr. Vander Weide's decision not to apply the DCF method to Empire.

The evidence shows that Dr. Vander Weide, using the quarterly DCF model, the ex ante risk premium method, and the ex post risk premium method, found the average cost of equity for his

proxy companies to be 10.7 percent. (*Id.* at 7, 23, 48-49) Because Empire's recommended capital structure contains more leverage than the average capital structures of Dr. Vander Weide's proxy companies, Dr. Vander Weide adjusted upward the cost of equity in order to allow Empire's investors an opportunity to earn a commensurate return on their investment. (*Id.* at 7) Dr. Vander Weide recommends that Empire be allowed a rate of return on equity equal to 11.3 percent. (*Id.* at 8, 52)

The evidence shows that Dr. Murry estimated the cost of common equity for Empire using alternative methodologies and then compared those results to results from similar calculations for a group of comparable companies. (Murry Direct, Exh. 11, p. 7) Dr. Murry's comparable companies were selected on the basis of being financially healthy electric utilities with financial and business risk similar to those of Empire. (*Id.* at 9) Dr. Murry put all of his calculations in the perspective of current market conditions and the financial circumstances of Empire. (*Id.* at 7-8)

The evidence shows that, in developing his recommended return for Empire's common stock, Dr. Murry relied primarily on the results of his DCF analyses using forecasted earnings per share information and current market prices. (*Id.* at 29-30) He then utilized the Capital Asset Pricing Model as a verification of his DCF analysis and as a longer-term view of the market relationships. (*Id.* at 29-30; Tr. 974) Because of the high risk associated with Empire and the marginal-cost nature of the DCF method, Dr. Murry then looked to the high end of his calculated ROE range. (Murry Direct, Exh. 11, p. 29) Ultimately, Dr. Murry recommended an allowed return on common stock equity of 12.0 percent.

Empire witness Dr. Vander Weide holds a Ph.D. in Finance and is a Research Professor of Finance and Economics at the Fuqua School of Business of Duke University. (Vander Weide Direct,

Exh. 14, p. 2) He has extensive teaching experience, is a member in various professional associations, and has been published numerous times. As an expert on financial and economic theory, Dr. Vander Weide has testified in the areas of cost of capital, competition, risk, incentive regulation, forward-looking economic cost, economic pricing guidelines, depreciation, accounting, valuation, and other financial and economic issues in approximately 350 proceedings. (*Id.* at 3-5)

Empire witness Dr. Murry holds a M.A. and a Ph.D. in Economics, is an economist with C.H. Guernsey & Company, and is a Professor Emeritus of Economics at the University of Oklahoma. (Murry Direct, Exh. 11, p. 2) Like Dr. Vander Weide, Dr. Murry has extensive teaching, research, and consulting experience and has been published numerous times. (*Id.* at 2-3) Dr. Murry's first regulatory experience was when he was hired as a consultant for this Commission, and Dr. Murry first provided testimony before this Commission in 1966. (Tr. 1083) Since that time, Dr. Murry has testified numerous times as an expert witness in proceedings before regulatory bodies in approximately 40 states, not only on behalf of utilities, but also on behalf of intervenors, consumer advocates, and regulatory bodies. (Murry Direct, Exh. 11, pp. 3-4; Tr. 1085-1086)

Staff and Public Counsel put forth certain criticisms of the testimony and recommendations of Empire's cost of capital witnesses. The Commission is not persuaded by these criticisms. The Commission finds the testimony of Empire's witnesses, Dr. Murry and Dr. Vander Weide, to be reliable and credible, and the Commission finds that their recommendations in this proceeding are adequately supported by the evidence.

2. Staff's Testimony

Staff proposes a ROE range of 8.29 to 9.29 percent, with a midpoint of 8.79 percent. David A. Murray testified on behalf of Staff on cost of capital/rate of return issues.

To arrive at his ROE recommendation, Staff witness Murray used a "company specific" DCF approach to determine the cost of common equity for Empire. (Murray Direct, Exh. 62, p. 26) A "company specific" DCF approach is one in which only the facts involving the subject company are plugged into the DCF formula. The Commission finds that no real consideration was given to other companies with corresponding risks in Murray's DCF analysis of Empire.

Empire's expert, Dr. Murry, testified that the result of a company specific DCF analysis cannot be relied upon. (Tr. 1132-1133) He stated that the analysis is an important tool, but the result cannot be an answer in and of itself. (*Id.*) Empires's expert, Dr. Vander Weide, also found fault with Staff witness Murray's "company-specific" DCF approach. (Vander Weide Surrebuttal, Exh. 16, p. 2) Dr. Vander Weide also noted errors with the growth component of Staff witness Murray's DCF analysis. (Vander Weide Rebuttal, Exh. 15, p. 5) Dr. Vander Weide, in discussing Murray's partial use of historical growth rates to estimate investors' expectations, stated that "historical growth rates are inherently inferior to analysts' forecasts because analysts' forecasts already incorporate all relevant information regarding historical growth rates and also incorporate the analysts' knowledge about current conditions and expectation regarding the future." (*Id.*)

The evidence in this proceeding demonstrates that if Staff witness Murray would have used a growth rate of at least 4 percent, coupled with a quarterly DCF model and three-month average prices for the period of May through July, 2004, Murray's DCF analysis would have resulted in a DCF estimate of Empire's cost of equity at 10.9 percent. (Vander Weide Rebuttal, Exh. 15, p. 6)

Staff witness Murray has attained a Bachelor of Science degree in Business Administration and a Masters in Business Administration. Working for the Commission since June of 2000 is the extent of Murray's work experience in the field of regulatory finance. (Exhibit 122)

The Commission finds that none of Dr. Murry's and Dr. Vander Weide's criticisms of the testimony presented by Staff witness Murray have been refuted by Staff. The Commission has historically endorsed usage of the DCF model, and all parties appear to agree that the DCF model is a useful tool. The issue, however, is whether that tool is used properly and whether the results of a "company specific" DCF analysis, standing alone, satisfy the comparability requirements of the *Hope* and *Bluefield* decisions. Other tools, such as an analysis of comparable companies, should be used to check the result of a DCF analysis, and this is conceded by the Staff. The Commission finds, however, that Staff witness Murray failed to adjust the result of his "company specific" DCF analysis, and he ignored the earnings of comparable companies.

3. Public Counsel's Testimony

Public Counsel recommends an ROE between the mid-point and high-end of its recommended range of 8.96 to 9.41 percent. Travis Allen testified on behalf of Public Counsel on cost of capital/rate of return issues.

To arrive at his recommendation, Allen performed a DCF analysis and a CAPM analysis on Empire and a comparable group of publicly traded electric utility companies. (Allen Direct, Exh. 81, p. 4) To arrive at the growth component of his DCF model, Allen relied on the "br + sv" input. (Vander Weide Rebuttal, Exh. 15, p. 20) The "br + sv" method estimates future growth by examining growth in two components, internal growth and external growth, with "b" equal to the company's retention rate, "r" equal to the company's expected rate of return on equity, "v" equal to the fraction of new common stock sold that accrues to the current shareholder, and "s" equal to the funds raised from the sale of stock as a fraction of existing equity. (*Id.*)

Empire's expert, Dr. Vander Weide, stated that this method is widely used for non-utility companies, but problems arise when it is applied to rate-regulated companies such as Empire. Dr. Vander Weide also testified that use of the "br + sv" component in the DCF model is circular: ". . . the expected rate of return on equity is one of the key inputs in calculating internal growth. Yet the growth rate that is being calculated using the "br + sv" method will be used to estimate the cost of equity for a rate-regulated company, which, in turn, determines the company's allowed rate of return on equity. Since the company is generally expected to earn its allowed rate of return on equity, the "br + sv" method requires knowledge of the allowed rate or return before the allowed rate of return can be calculated, a logical impossibility." (Vander Weide Rebuttal, Exh. 15, p. 21)

Public Counsel witness Allen has attained a Bachelor of Science Degree and Master of Science Degree in Business Economics and Finance. He first filed testimony on cost of capital issues on April 15, 2004. (Exhibit 123)

4. Conclusion

Despite the fact that a large part of the expert testimony in this proceeding relies on essentially similar DCF models, there is a very wide range in recommended return on equity between Empire's witness and those of Staff and Public Counsel. The Commission must rely, to some extent, on expert testimony when determining an appropriate return on common equity to authorize for a regulated utility. The Commission must also consider the national average in establishing an appropriate return on equity. The Commission finds that the national average is a good indicator of the capital market in which Empire will have to compete for the equity needed to finance Empire's operations. According to the Regulatory Research Associates, the average allowed return for electric utilities during the first quarter of 2004 was 11 percent. (Murry Surrebuttal, Exh. 13, p. 9) Staff's

and Public Counsel's recommendations for Empire are far below industry averages, and the Commission finds that adoption of the same by this Commission could cause investors in Empire to lose millions in revenues that investors in other companies of comparable risks will receive.

The Commission has an obligation under the law to allow Empire an opportunity to earn a return that will allow it to compete in the capital market. No one, including ratepayers, benefits if Empire is starved for capital. Whatever return on equity the Commission authorizes in this case will have a significant impact on the Company's earnings, and will send a message to the investment community and impact the relationship of Empire with that community.

The Commission finds that Staff's and Public Counsel's recommendations do not satisfy the standards of *Hope* and *Bluefield* regarding an authorized return being "commensurate with returns on investments in other enterprises having corresponding risks" and being "sufficient to assure confidence in the financial integrity of the enterprises, so as to maintain its credit and to attract capital." Testimony filed by Staff with its recommended return for Empire in this proceeding contributed to Empire being placed on Standard and Poor's CreditWatch (Murry Rebuttal, Exh. 12, p. 1), and the Commission finds that adoption of Staff's recommended return will result in financial ratios below S&P's published guidelines and medians, which could lead to a lowering of Empire's financial rating. The evidence shows that such a downgrade could in turn increase Empire's cost of debt and cost of equity and weaken Empire's ability to attract capital at a reasonable cost. The Commission also finds that Allen's recommended ROE is insufficient to assure the financial integrity of Empire.

In the recent MGE rate case, Case No. GR-2004-0209, *In the Matter of Missouri Gas Energy's Tariffs to Implement a General Rate Increase for Natural Gas Service*, the Commission

recognized the limited experience on the part of Staff's and Public Counsel's cost of capital witnesses. The Commission finds that the shortcomings present in the work of those individuals continue today. The Commission thus finds that their cost of capital testimony should be given little or no weight by the Commission.

The Commission, therefore, finds and concludes that it should adopt the recommendations of Empire's expert witnesses and authorize a ROE of 11.65 percent for Empire. The Commission finds that 11.65 percent is a fair and reasonable return on equity for Empire that will allow the Company an opportunity to compete in the capital market for the funds needed to keep it healthy.

B. Capital Structure

Empire witness Dr. Murry testified that the appropriate capital structure for Empire for purposes of this proceeding is the Company's pro forma capital structure as of December 31, 2003, consisting of long-term debt of $336,496,611 or 43.89 percent; trust preferred securities of $48,292,848 or 6.3 percent; and common stock equity of $381,935,258 or 49.81 percent of total capital.

Staff urges the use of Empire's June 30, 2004 consolidated capital structure, consisting of 49.14 percent common stock equity, 6.32 percent trust preferred stock, and 44.53 percent long-term debt.

Public Counsel recommends that the Commission utilize Empire's "actual capital structure" as of June 30, 2004.

The Commission finds and concludes that it will adopt the recommendations of Empire's expert witnesses on this issue.

C. Cost of Debt

Empire asserts that its embedded cost of long-term debt is 7.25 percent. Staff asserts that the embedded cost of long-term debt for Empire was 7.22 percent as of June 30, 2004. Public Counsel asserts that the appropriate embedded cost rate for Empire's long-term debt as of June 30, 2004, was 7.23 percent. The Commission finds and concludes that Empire's embedded cost of long-term debt is 7.25 percent.

Depreciation

A. Introduction

Depreciation accounting is a system of accounting which aims to distribute costs or other basic value of tangible capital assets, less salvage (if any), over the estimated useful life of the unit, or group of assets, in a systematic and rational manner.[1] It is a process of allocation, not of valuation. "The fundamental goal of depreciation accounting is to allocate the full cost of an asset, including its net salvage costs, over its economic or service life so that utility customers will be charged for the cost of the asset in proportion to the benefit they receive from its consumption."[2] In this case, the parties disagree as to: 1) the service lives over which the costs of Empire's assets should be depreciated, and 2) the inclusion of an allowance for future net salvage (i.e., salvage less cost of removal) in the development of Empire's depreciation rate.

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[1] *In the Matter of the Investigation Into Straight-Line Equal Life Group and Remaining Life Depreciation Methods for Missouri Jurisdictional Telephone Utilities*, Case No. TO-82-3, *Report and Order*, 25 Mo.P.S.C. (N.S.) 331 at 334-335.

[2] *In the Matter of Laclede Gas Company's Tariff to Revise Natural Gas Rate Schedules*, Case No. GR-99-315, *Third Report & Order*, issued Jan. 11, 2004, p. 9 (hereinafter "*Laclede Third Report and Order*").

B. Summary of Empire's Proposed Depreciation Rates

Empire witness Donald S. Roff, a director with the Public Accounting Firm of Deloitte & Touche LLP, performed Empire's depreciation study. Mr. Roff is a registered Professional Engineer in Pennsylvania, a member of the Society of Depreciation Professionals, and a Certified Depreciation Professional. He is a Technical Associate of the American Gas Association ("A.G.A.") Depreciation Committee, and he currently serves as the lead instructor for the A.G.A.'s Principles of Depreciation course. Mr. Roff has over thirty years of experience in the conduct and preparation of depreciation studies for electric, gas, water, and steam heat utilities, pipelines, railroad, and telecommunications companies in over thirty states, several Canadian provinces, and Puerto Rico. (Roff Direct, Exh. 18, Exh. DSR-1)

Mr. Roff's depreciation study, which was based on plant as of December 31, 2003, recommended an increase in annual depreciation expense of approximately $25.6 million. (Roff Direct, Exh. 18, p. 4) Mr. Roff's initial depreciation study: (1) developed depreciation rates using a remaining life technique (as opposed to a whole life technique); (2) developed average service lives for mass property accounts based on mortality data, and for production plant accounts using a life span analysis; and (3) included an allowance for future net salvage based on the "traditional" method of accruing for net salvage (i.e., using a ratio of net salvage costs as a percentage of the original cost of retirements). (Tr. 1728-1730)

However, for purposes of its rate case, Empire believed that an annual increase in depreciation expense of $25 million would be too much to ask its customers to bear, and therefore Empire reduced its request for additional depreciation expense by approximately $14.1 million. (Gipson Direct, Exh. 1, p. 5; Tr. 1777) Accordingly, Empire now only seeks an increase in annual

depreciation expense accruals of approximately $10.2 million. Mr. Roff's alternative proposal, and the one which Empire is pursuing for purposes of this case: (1) developed recommended depreciation rates using a whole life technique; (2) developed average service lives for mass property accounts based on mortality data and for production plant accounts using the life span method, but changed the anticipated retirement date for the Asbury Plant from 2014 to 2020; and (3) incorporated an accrual for net salvage using the traditional method, but capped the net salvage percent at 100% for those accounts where negative net salvage factors exceeded 100%. (Roff Rebuttal, Exh. 19, pp. 35-37; Tr. 1765-1766)

As a result, the only issues remaining between the Company, on the one hand, and Staff and Public Counsel, on the other hand, are: (1) the average service lives for mass property accounts; (2) the use of the life span analysis for determining average service lives for production plant; and (3) the accrual of net salvage as part of the depreciation rate. Empire, Staff and Public Counsel have quantified their differences as follows:[3]

	Staff	Public Counsel
Mass Property B Difference in Average Service Lives	415,792	0
Production Plant B Average Service Lives vs. Life Span	(3,030,808)	(3,004,210)
Production Plant B Terminal Net Salvage	(700,259)	(700,259)
Production Plant B Interim Net Salvage	450,682	450,682
Mass Property B Net Salvage	(5,170,565)	(5,043,961)

[3] *See* Staff's Second Updated Reconciliation, filed Jan. 19, 2005. Since the depreciation and other issues are interrelated, exact values cannot be determined. A final revised set of accounting schedules will be required to determine the revenue requirement associated with the Commission's decisions.

C. Average Service Lives

1. Mass Property Accounts (i.e., Transmission, Distribution, and General Plant)

Empire and Staff disagree over the appropriate average service lives for mass property accounts. For purposes of this discussion, mass property accounts include assets in the transmission, distribution and general plant accounts. (Tr. 1734) Generally speaking, Empire witness Roff developed longer average service lives for the mass property accounts than Staff. Mr. Roff's proposed rates for Empire would decrease annual depreciation expense and revenue requirement by $415,792 annually over Staff's proposal. Public Counsel accepted Mr. Roff's proposed average service lives for mass property accounts. (Majoros Direct, Exh. 89, p. 5; Rebuttal, Exh. 90, p. 33) Both Empire and Staff developed their recommended average service lives for mass property accounts by performing a life analysis of Empire's plant. Essentially, a life analysis measures history (i.e., mortality data) and results in a determination of an estimate of average service life for each asset category. (Roff Direct, Exh. 18, p. 22)

Mr. Roff's life analysis collected and analyzed retirement experience from inception through 2003, and he updated the historical data files used for the prior depreciation study. Life tables were then developed and Iowa Curves were fitted to the historical summaries. (Roff Direct, Exh. 18, p. 22) A single average service life and Iowa Curve was selected for each asset category reflecting the combination of the historical results and the additional information obtained from Empire's engineering, accounting, and operations personnel. (Roff Direct, Exh. 18, p. 27) Thus, Mr. Roff's evaluation process combined the results of historical analyses with information regarding the age of property retired, the age of property surviving, knowledge of the types of assets surviving and being retired, and company experience and expectations, all coupled with his knowledge, experience, and

judgment of the depreciation analyst. Both Mr. Roff and Empire personnel participated in this evaluation phase, and they thoroughly discussed the specific types of equipment being retired and added, the relative age of property surviving and retiring, and Company plans and expectations regarding the property being evaluated. (Roff Direct, Exh. 18, pp. 27-28)

Staff also engaged an analysis of historical or mortality data and the "fitting" of Iowa Curves. However, there is no indication that Staff engaged in any evaluation of the raw historical data or the results produced by the mechanical fitting of the Iowa Curves, and there appears to be little or no interpretation of results, consideration of asset mix, or evaluation of Company plans and expectations. (Roff Rebuttal, Exh. 19, pp. 3-4) It is therefore unclear what, if any, independent judgment Staff brought to bear on the fitting of Iowa Curves. Staff's interaction with Empire personnel was limited, and the information Staff received from Empire personnel was consistent with that provided by Mr. Roff in his study. (Tr. 1809-1810)

Accordingly, the Commission finds that the life analysis performed by Mr. Roff in this case is more thorough and thoughtful and, as a result, is supported by competent and substantial evidence. Therefore, Empire's recommended average service lives will be adopted by the Commission.

2. Production Plant Accounts

The Parties disagree over the appropriate service lives for the production plant accounts. Here, however, the Company has taken a different approach to estimating the appropriate service lives for its production plant accounts than that taken by both Staff and Public Counsel. As a result, the Company has generally proposed shorter lives for its production plant accounts than Staff and Public Counsel and, if accepted, would increase the annual depreciation expense and revenue requirement by $3,030,808 over Staff's proposal and $3,004,210 over Public Counsel's proposal.

The Commission finds that utility companies' production plant facilities are unique in that all assets tend to retire at one point in time – the estimated retirement date. Empire's engineers provided an estimated retirement date for each of the Company's production units.[4] These estimated retirement dates effectively define the period over which depreciation is to be accomplished. The estimated retirement dates assume normal maintenance and routine capital replacements, but they do not include major investments that may be required for environmental regulations. For each primary account, a forecast worksheet was prepared showing the existing investment and accumulated depreciation, and a projection of interim retirements, as well as the terminal retirement amount. These amounts were utilized in the development of a depreciation rate that provides for full recovery of these surviving and retiring amounts over the life of the facility. (Roff Direct, Exh. 18, p. 18)

Both Staff and Public Counsel performed a life analysis of production plant similar to that utilized in determining average service lives for mass property accounts. However, these life analyses and, more importantly, the data on which they are based are much more limited and therefore less reliable. For example, the number of surviving units contained in the life analysis performed by Public Counsel of the steam production function is no more than five. In other words, there are only five generating units contained in the actuarial population. This is a limited sample and makes reliance on the output results tenuous at best.

The Commission finds that while Staff and Public Counsel life analyses for production plant may reflect what little history has occurred, they are simply not conclusive or predictive for estimating service lives to be used for calculating future depreciation rates. In fact, on several of his

[4] The retirement dates for each plant used by Mr. Roff are contained in Schedule 5 of DSR-1. (Exh. 18)

workpapers, Public Counsel witness Majoros included notes that state, "not enough data for actuarial analysis" or "insufficient retirements/exposures." (Roff Rebuttal, Exh. 19, p. 7) The Commission finds that a life span forecast approach best matches what happens in real life (i.e. generation facilities die/retire at one point in time).

The Commission finds that the life span approach employed by Mr. Roff properly reflects the survival relationship of these assets groups and, in turn, develops more appropriate depreciation rates than those developed by Staff and Public Counsel based on an actuarial analysis.[5] Mr. Roff's retirement dates are predicated upon "lengthy and thoughtful" discussions with Company personnel. The retirement dates were based upon consideration of economic and operating factors in force today and represent Empire's best estimate of a life span for cost allocation purposes for depreciation expense determination recognizing routine maintenance and normal capital expenditures. The types of factors influencing the lives of Empire's facilities include fuel supply, the cost of fuel, the age of the plant, the operation of the facility, environmental requirements, and capital requirements. Thus, these retirement dates represent Empire's particular experience and planning. (Roff Rebuttal, Exh. 19, p. 8; Tr. 1595-1596; 1735-1736) The Commission further finds that Mr. Roff did not simply accept Empire's proposed retirement dates at face value. Mr. Roff also compared these life spans

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[5] For example, Public Counsel witness Majoros has recommended an average service life of 93 years for Account 311 B Steam-Structures and Improvements -- based solely on history. This indicates a final retirement for this asset group at age 172 years. Similarly, over 54% of the original asset base will attain an age of 93 years prior to retirement. Such results are illogical, and the associated life is excessive for the determination of appropriate depreciation rates.

Under Mr. Majoros' analysis, the investments in Account 311 for the Iatan Plant, installed in 1980, will not become fully depreciated until the year 2152, and will only become 50% depreciated some 34 years from today. Staff's average service life recommendation for Account 311 is even longer than Mr. Majoros' selection. By comparison, the life span procedure utilized by Mr. Roff results in the Iatan plant being fully depreciated in the year 2020. Taking the production plant accounts as a whole, the composite average service life developed by Staff in this proceeding is over 49 years. This is exceeded by the composite average service life of over 52 years developed by the Public Counsel. By comparison, the Company's composite average service life is just under 36 years. (Roff Rebuttal, Exh. 19, pp. 6-7)

to other facilities with which he has been involved during his career and determined that Empire's proposed retirement dates produce reasonable life spans. (Tr. 1595)

Finally, the Commission will note the consequences of adopting service lives based on Empire's life span approach versus lives determined by Staff's and Public Counsel's actuarial approach. If Empire's life spans are incorrect and the units remain in service longer than anticipated, ratepayers may have paid for the plant too quickly, but they will not have paid any more than the original cost of the plant because once an asset is fully depreciated, even though it is not retired, depreciation expense stops. (Tr. 1739, 1755) Secondly, the customer receives compensation for the depreciation expense they pay to the Company through an accrual to the reserve which is then deducted from rate base, thereby reducing the amount of return the customer is otherwise required to pay. (Tr. 1742-1743) On the other hand, if Staff and Public Counsel average service lives are incorrect, and the plant is retired sooner than their recommended service life, there will be an undepreciated and unrecovered amount of original cost associated with that plant for which the Company has not been compensated.

In light of the foregoing, the Commission finds that the average service lives for production plant proposed by the Company and supported by its life span approach are reasonable and supported by competent and substantial evidence.

D. Net Salvage

1. Description of the Issue

When plant is removed from service, there typically is a cost to remove the plant and, in some instances, there is a salvage value associated with the retired plant. It is the difference between these two (i.e., salvage less cost of removal) that has generally been referred to as net salvage cost.

In many instances, costs of removal will exceed salvage and "negative" net salvage factors will be calculated. Net salvage costs can be broken down further into net salvage costs associated with the retirement of mass property and net salvage costs associated with the retirement of production plant. Further net salvage for production plant occurs in two forms: interim net salvage and terminal net salvage. Interim net salvage refers to the salvage and removal costs associated with interim retirements. Terminal net salvage refers to the ultimate dismantlement of plant facilities, which includes both salvage and removal costs. (Roff Direct, Exh. 18, p. 20)

Empire's proposal to accrue net salvage as part of its depreciation rates will increase Empire's depreciation expense and revenue requirement by $700,259 for terminal net salvage and by $5,170,565 for mass property accounts over Staff's and Public Counsel's proposals. Empire's proposal for net salvage for interim retirements will decrease expense and revenue requirement by $450,682 compared to Staff's and Public Counsel's proposal.

2. Empire's Proposal to Accrue Net Salvage

Under the accrual method, the depreciation rate for a particular asset or group of assets is calculated as follows:

$$\text{Depreciation Rate} = \frac{100\% - \%\ \text{Net Salvage}}{\text{Average Service Life (years)}}$$

In this formula, net salvage equals the gross salvage value of the asset minus the cost of removing the asset from service. The net salvage percentage is determined by dividing the net salvage experienced for a period of time by the original cost of the property retired at the same period of time. Many assets will have a negative net salvage value and corresponding negative net salvage

value percentage because the cost of removing the asset from service frequently exceeds its gross salvage value.[6]

Empire proposes to accrue for future net salvage costs by calculating a net salvage factor from its historical records and including the factor in the development of its proposed depreciation rate. Staff and Public Counsel, on the other hand, have proposed to account for net salvage on a current or cash basis essentially by looking at the net salvage cost experienced by the Company in the last five years and developing an average expense based on that historical information. In Staff's proposal, the average historical expense is then included in the cost of service as a separate, line-item expense amount. In Public Counsel's case, the historical average cost is included as part of the depreciation expense.

The Commission finds that the Company and its investors are entitled to recovery of both prudently incurred costs in the installation of plant as well as costs incurred in removing plant from service. Indeed, this Commission recently found in the *Laclede case* that "the fundamental goal of depreciation accounting is to allocate the full costs of an asset, including its net salvage cost, over its economic or service life so that utility customers will be charged for the cost of the asset in proportion to the benefit they receive from its consumption." *Third Report & Order*, p. 9 (emphasis added) Accordingly, the Commission finds that Empire and its investors are entitled to recovery of future net salvage costs as a component of depreciation rates.

Moreover, the Commission notes that recovery of future net salvage costs is consistent with industry standard and accepted definitions of depreciation. For example, the National Association of Regulatory Utility Commissioners (NARUC) defines depreciation as

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[6] See *Laclede Third Report and Order*, p. 8.

> . . . the loss in service value not restored by current maintenance, incurred in connection with the consumption or prospective retirement of utility plant in the course of service from causes that are known to be in current operation, against which the company is not protected by insurance, and the effect of which can be forecast with reasonable accuracy. Among the causes to be considered are wear and tear, decay, action of the elements, inadequacy, obsolescence, changes in the art, changes in demand and the requirement of public authorities.

(Roff Direct, Exh. DSR-1, App. B, p. 30) "Service value" is then defined as "(t)he original cost of an asset less its estimated net salvage." (Roff Direct, Exh. DSR-1, App. B, p. 36) These regulatory definitions clearly include net salvage as a component of depreciation.

The Commission further finds that accruing for future net salvage costs as part of the depreciation rate promotes intergenerational equity. Net salvage is an appropriate component of depreciation and inclusion into the development of an appropriate depreciation rate results in a fair and equitable allocation of these costs. From a ratemaking perspective, inclusion of net salvage and depreciation expense fulfills the regulatory precept of having customers pay their fair share of costs over the life of the property devoted to their service. By properly including net salvage in the development of a depreciation rate, the potential for intergenerational cross subsidy is eliminated.

As a matter of sound public policy, there is no reason to impose the cost of net salvage on future electric customers. This produces an economically inefficient allocation of resources across time to the detriment of all customers. (Roff Direct, Exh. 18, p. 11) In the recent *Laclede case,* the Commission found that "the accrual method comes closer to matching the costs to the benefits derived, . . . [and] intergenerational equity will be promoted by the continued use of the accrual method." (*Third Report & Order*, pp 12-13)

The Commission finds that the accrual method enjoys the support of the vast majority of regulatory jurisdictions. Mr. Roff was aware of only two other jurisdictions that have approved an

approach similar to that taken by Staff and Public Counsel in this case. (Roff Rebuttal, Exh. 19, p. 30) Staff and Public Counsel witnesses were unable to name more than two jurisdictions, other than Missouri, that have approved their approach. (Tr. 1816, 1945) Public Counsel witness Majoros candidly admitted that his approach had recently been rejected by the Indiana and Kentucky Utilities Commissions. (Tr. 1934, 1936) Thus, the record in this case is consistent with the Commission's finding in the recent *Laclede case:* "It is undisputed that using the accrual method for this purpose is supported by the overwhelming weight of authority on such matters." *Third Report & Order*, p. 8.

The Commission finds that Mr. Roff's salvage factors were determined in a manner consistent with standard industry practices. Net salvage is defined by NARUC in its text, *PUBLIC UTILITY DEPRECIATION PRACTICES* (1996 edition) at page 18:

> "Net salvage is expressed as a percentage of plant retired by dividing the dollars of net salvage by the dollars of original cost of plant retired."

This is the exact way in which Mr. Roff has performed his net salvage analysis for every asset category in his study. (Roff Rebuttal, Exh. 19, pp. 28-29) In the *Laclede case*, the Commission dismissed Staff's and Public Counsel's contention that such factors are not sufficiently reliable as they are estimates of future expenses to be incurred well in the future:

> The Commission finds that no evidence or satisfactory explanation exists as to why it is inappropriate or unreasonable to use estimates for purposes of determining net salvage costs, but is appropriate to use them for deriving equity returns, allowances for pension costs, decommissioning costs, and the service lives used to allocate the recovery of up-front capital expenditures over many years. Given these considerations, the Commission finds that Laclede's net salvage estimates as derived under the accrual method are reasonable. (Third Report & Order, p. 12)

This reasoning is equally applicable here, and the record clearly reflects that Empire's net salvage estimates as derived under the accrual method are reasonable. In fact, to the extent Mr. Roff has voluntarily capped negative net salvage percentages at 100%, this further demonstrates the reasonableness of Empire's estimates. Accordingly, the Commission finds that Empire's net salvage estimates are reasonable and supported by competent and substantial evidence.

Finally, the Commission finds that the inclusion of net salvage in development of a depreciation rate improves cash flow, and all other things being equal, improves certain financial ratios upon which a utility's credit rating is based and therefore reduces its cost of capital. A utility, such as Empire, suffering from a less than full recovery of cost will be assessed a higher cost of borrowing in the financial markets. This became apparent when Standard & Poor's ("S&P"), in July of 2002, lowered its credit rating for Empire to BBB from A-. S&P specifically cited Missouri's "low plant depreciation allowances" as one of three factors in the downgrade. (Knapp Rebuttal, Exh. 28, p. 4; GAK-Exh. 1)

The Commission finds that Staff's and Public Counsel's depreciation methodologies lead to depreciation rates that are significantly lower than levels allowed in other states.[7] The unfortunate result is that infrastructure additions now, and in the future, will cost Empire more to finance than might have been the case. This is because the unreasonable deferral to some future period of net salvage costs of assets being consumed today increases the risk of recovery for the utility and certainly increases the costs of future customers. To the extent credit ratings are damaged, costs will be even higher. (Knapp Rebuttal, Exh. 28, pp. 5-6)

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[7] *See* Mr. Roff's comparative analysis attached to his Direct Testimony (Exh. 18) as Schedule DSR-4 and discussed previously.

In the *Laclede* case, the Commission concurred with Empire's assessment of the impact of Staff's and Public Counsel's proposal on credit ratings when it stated:

> The Commission also finds that Staff's method significantly decreases the cash flows available to the utilities to meet their infrastructure and other public service obligations. This, in turn, has a negative financial impact on both the utility and its customers by requiring that such obligations be met with more expensive sources of external financings and by driving up the cost generally of obtaining money in the capital markets.[8]

3. Safeguards in the Accrual Method

The Commission finds that there are inherent safeguards in the depreciation process such that if current estimates of service lives and net salvage factors deviate from actual experience, those changes can be taken into consideration so that ratepayers and investors are not harmed and can be made whole. First, depreciation studies are periodically prepared and submitted to the Commission by the Company, usually in the context of a rate case or earnings investigation. Commission rules requires that, at a minimum, depreciation studies be performed no less frequently than every five years. (4 CSR 240-3.175(1)(B)2) (Tr. 1675; 1814) Second, through the ratemaking process, as a utility accrues depreciation expense, the depreciation reserve is credited accordingly. Therefore, if a utility company accrues more in depreciation expense than it actually incurs, the rate base is reduced and the customer receives the benefit of a lower rate base upon which it is required to pay a return. Conversely, if the accruals are less than actual costs, the reserve is less, rate base is increased and the Company's investors earn a return on that increased rate base. (Tr. 1676; 1743)

[8] *Third Report & Order*, p. 14.

By comparison, the expensing method advocated by Staff provides no way to track over- or under-accruals and account for such in future ratemaking cases. (Tr. 1744) These safeguards were recently discussed by the Commission in the *Laclede case*.

> Laclede's evidence shows that because the accrual method incorporates net salvage costs as a part of the depreciation rate, any difference between actual and estimated net salvage cost will be reflected in adjustments to the depreciation reserve. The depreciation reserve, in turn, acts as a kind of balancing account that tracks over- and under- accruals of net salvage costs. In this way, the depreciation rates can be subsequently adjusted to insure that the utility will not over- or under-collect such costs and that the ratepayer will not over- or under- pay for such costs. The Commission's rule requiring the submission of depreciation studies no less frequently than every five years provides a mechanism for monitoring the depreciation reserve so that this balancing can occur . . .
>
> The evidence also showed that any temporary difference between estimated and actual net salvage cost is reflected in the depreciation reserve that, in turn, is deducted from the utility's rate base pursuant to standard Commission practice. As a result, ratepayers are compensated at the utility's overall rate of return for the "use" of their money during those time when the utility's outlays for net salvage are less than what has been included in depreciation rates. In contrast, in the Staff's expense method, any difference between its estimates of net salvage costs and actual net salvage costs are either absorbed by the utility or borne by the customer. (Third Report & Order, pp. 13-14)

In the *Laclede case*, the Commission adopted a further safeguard and required Laclede to track and account for net salvage amounts received in rates separately from other components of depreciation expense. (Third Report & Order, p. 16) Empire's brief indicates that Empire has no objection to this additional safeguard. Therefore, the Commission finds that it is appropriate for purposes of this case as well.

E. Conclusion

The Commission finds that Empire has provided credible and complete evidence in this proceeding in support of its depreciation request. The requested depreciation expense level is

reasonable and based upon sound and nearly universally accepted techniques. Accordingly, the Commission finds that Empire's request relative to depreciation expense in this proceeding should be granted.

On-System Fuel and Purchased Power Expense

The Commission in this case is required to adopt an appropriate level of total Company on-system fuel and purchased power expense for Empire as part of Empire's overall revenue requirement. It is undisputed that Empire is heavily dependent on natural gas to fuel its generation to serve its native load (Exh. 5, Beecher Direct, p. 6) and that the market for natural gas is extremely volatile (Tr. 506, Exh. 5, Beecher Direct, p. 11, Exh. 6, Beecher Rebuttal, p. 5, Exh. 34, Cassidy Direct, p. 8, Exh. 115, Brubaker Direct (9/20/04) p. 5). No party has raised any issues with respect to the prudence of Empire's fuel expenses or its existing fuel purchasing practices. Empire has implemented a successful natural gas hedging program which is designed to mitigate against the volatility of the natural gas market. (Tr. 631, Exh. 5, Beecher Direct, pp. 8-9). Empire's evidence is undisputed that Empire currently is not recovering its prudently incurred fuel and purchased power expense in current rates.

Due to the volatility of the current natural gas market, two of the parties, the Staff and Empire, have recommended that the Commission consider implementing an alternative ratemaking cost recovery mechanism for fuel and purchased power expense known as an Interim Energy Charge ("IEC"). While Staff and Empire differ as to the details of their respective IEC proposals, an IEC mechanism in essence would allow Empire to charge an additive to its permanent or base rates for a stated period of time with the revenues collected above the base rates being subject to true up and refund once Empire's actual fuel and purchased power expenses became known. While Empire has

recommended an IEC mechanism as an alternative to the traditional method of setting rates for fuel and purchased power expense and also has filed a proposal under the traditional method, the Staff has exclusively supported an IEC and did not file a case based on the traditional method.

The Public Counsel, Intervenors Praxair/Explorer Pipeline and the Attorney General's office do not support implementation of an IEC mechanism and have argued that the Commission lacks the legal authority to implement an IEC. (Tr. 461, 470, 475, 834, 855-856). In fact, these parties have indicated or at least have strongly implied that they are likely to pursue litigation should the Commission implement an IEC in this case. (*See, e.g.* Tr. 834). In response, Empire has argued that this threat of litigation, if successfully pursued, could have devastating financial consequences for Empire since such litigation places any revenues collected under an IEC at risk pending the conclusion of the litigation. As Empire witness Beecher testified, if an IEC is adopted, litigation itself regarding the IEC will cause uncertainty in the financial markets, and collecting the IEC revenues under bond or paying them into a court ordered escrow will cause Empire serious cash problems on its interest coverage ratios. (Tr. 597).

Even if the Commission would find, as urged by the Staff, that an IEC mechanism is the most effective and currently lawful means by which to balance the interests of consumers and shareholders in this case, the Commission must be cognizant that other parties dispute the lawfulness of an IEC mechanism and that the adoption by the Commission of an IEC mechanism under this threat of litigation could result in significant harm to Empire. The Commission, therefore, finds and concludes that it should set Empire's rates under the traditional (non-IEC) method and declines to adopt an IEC mechanism for purposes of this case.

By declining to adopt an IEC mechanism in this case, the Commission necessarily then must look to the record evidence and determine Empire's fuel and purchased power expense under the traditional method. Empire presented evidence under the traditional method supporting a revenue requirement figure of $137,548,710 for 5,092,000 MWh or, more precisely, 27.01 $/MWh. (Exh. 7NP, Beecher Surrebuttal, p. 5, Sch. BPB-8). The only parties, other than Empire, who presented witnesses or filed testimony addressing the issue of fuel and purchased power expense were Staff, intervenors Praxair/Explorer Pipeline, and the Office of the Public Counsel. None of these parties, however, provided the Commission with evidence supporting a total Company on-system fuel and purchased power expense figure, expressed in terms of dollars per megawatt hour or kilowatt hour. In deciding this issue, the Commission necessarily must determine the appropriate level of total Company on-system fuel and purchased power expense for Empire expressed on a dollars per megawatt hour ($/MWh) or kilowatt hour basis. (Tr. 545-546).

The Commission Staff throughout the proceeding refused to take a position regarding the appropriate level of total Company on-system fuel and purchased power expense under the Commission's traditional rate setting method. Somewhat similarly, the witness for intervenors Praxair/Explorer Pipeline stated at the hearing that he was no longer "advocating the specific level of fuel and purchased power cost recovery numbers that were included in my original September 20th testimony, but instead, my testimony should be read for the procedures and the concepts that go behind IEC structure and class cost recovery" and that he was "not advocating for a particular number" for fuel and purchased power cost. (Tr. 900, 905).

Public Counsel witness Busch supported exclusively using the traditional method to set Empire's rates but only recommended a single gas price number component in his prefiled

testimony. Public Counsel did not file a total Company on-system fuel and purchased power expense figure or a dollars per megawatt hour or kilowatt hour figure in its prefiled testimony. The Commission finds that Public Counsel's gas price figure by itself is insufficient for purposes of setting Empire's rates under the traditional method and further finds, based on the evidence presented, that the weighted average gas price of $4.68 supported by Public Counsel witness Busch is unreasonably low.

At the hearing Mr. Beecher testified that Empire's average hedged price for 2005 gas was $4.78. (Tr. 570). Therefore, Mr. Busch's recommended weighted average gas price is even lower than Empire's current hedged gas; at current prices it would simply not be possible for Empire to bring its 2005 gas price down to the level recommended by Mr. Busch. (Tr. 711).

The Commission further finds that the methodology used by Mr. Busch is seriously flawed, in that he developed the price for the unhedged portion of Empire's gas needs by using an average of four years, two of which were historical and which reflect lower than current market prices. (*See*, Exh. 6NP, Beecher Rebuttal, pp. 11-12). He then blended the resulting average with Empire's average hedged gas position at the time to arrive at his recommended weighted average gas price (*Id.*), thus resulting in an extreme over-reliance on historical gas prices to predict the future, when all parties appear to agree that natural gas prices in the market are very volatile and have for the most part trended upward since Empire first filed its direct testimony. Although Mr. Busch claims confidence that gas prices eventually will fall, he was also confident in the 2003 Aquila rate case that prices would fall to the $3.50 --$4.50 range today (Tr. 713-714), which of course has not been the case. The Commission therefore is not persuaded by Mr. Busch's prognosticating ability with respect to future natural gas prices and finds his recommended price of 4.68 $/MMBtu unreasonable.

While not contained in Public Counsel's prefiled testimony, at the hearing Public Counsel witness Mr. Busch claimed to support a fuel and purchased power revenue requirement figure of slightly over $126,000,000 based on a fuel run prepared for him by Staff. (Tr. 755). However, Mr. Busch admitted that he did not review the inputs used in the fuel run (Tr. 756), did not even know certain of the inputs used in the fuel run (Tr. 799-780), and that he did not provide the fuel run to Empire or conduct a reconciliation of the fuel run with Empire's fuel runs (Tr. 757). In fact, Mr. Busch stated that he is "not supporting" the fuel run which supposedly provides the basis for the total Company on-system fuel and purchased power expense figure which Public Counsel is supporting. (Tr. 758).

The Staff witness who apparently ran the fuel run upon which Mr. Busch purported to rely testified that he had not even read Public Counsel's testimony to make sure that it matched his fuel run (Tr. 790); he further admitted that if the gas price used in the fuel model is changed (as was done when he ran the fuel model with Mr. Busch's gas price) the dispatch order of Empire's generators will change, the amount generated from each generator will change, the amount and cost of non-contract purchased power developed by the model will change, and the projected number of MMBtu's burned will change. (Tr. 795-796). Furthermore, he testified that neither he nor Staff is supporting Public Counsel's gas price generated from Staff's model. (Tr. 797). Finally, unlike Mr. Beecher who filed a fuel run summary supporting his total Company on-system fuel and purchased power expense figure of 27.01 $/MWh (Sch. BPB-8 to Beecher Surrebuttal, Exh. 7NP), Mr. Busch filed no such run summary. (Tr. 755).

The Commission finds that given the volatility in current natural gas prices, in this case a forecast natural gas price should be used and combined with Empire's hedged gas position to arrive

at a combined price to use in the fuel run. This is precisely what Empire did in this case. As shown in Mr. Beecher's surrebuttal testimony, on November 17, 2004 (the date surrebuttal testimony was being prepared), the NYMEX futures price for the period when rates from this case will be in effect was 6.79 $/MMBtu; this price was combined with Empire's 2005 hedged gas position, resulting in a combined price (hedged and unhedged) of 5.69 $/MMBtu. (Exh. 7NP, Beecher Surrebuttal, p. 5). This price was then used in the fuel run which supports Empire's total Company on-system fuel and purchased power expense of 27.01 $/MWh. (Exh. 6NP, Beecher Rebuttal, p. 12).

Empire witness Beecher testified and the Commission finds for purposes of this case that forecast prices, rather than historical prices, should be used because reliance on historical prices in a period of such volatility in natural gas prices could have disastrous results for Empire. The NYMEX futures price is the most appropriate to use for this purpose since, unlike the EIA which is not a market to buy or sell gas (Tr. 613), NYMEX provides a standard contract by which to hedge natural gas commodity risk and is commonly considered the most liquid price transparent pricing point for natural gas in the United States. (Exh. 5, Beecher Direct, p.9) The Commission finds Staff witness Choe's criticism of Empire's use of NYMEX futures prices to be unconvincing, especially since at hearing it was shown and Dr. Choe admitted that Empire's use of year ahead futures prices actually resulted in a conservative prediction of gas costs when compared to actual spot market prices. (Tr. 667-699).

The Commission therefore finds that based on the record before it the only total Company on-system fuel and purchased power expense figure expressed on a dollars per megawatt hour basis of 27.01 $/MWh, as supported by Empire, is the only total Company on-system fuel and purchased power expense figure proposed for use under the traditional method of setting rates which is

supported by competent and substantial evidence in this case. Accordingly, the Commission will adopt Empire's position on this issue.

CONCLUSIONS OF LAW

Empire is a public utility engaged in the provision of natural gas service to the general public in the state of Missouri, and, as such, is subject to the general jurisdiction of the Commission under Chapters 386 and 393. All charges made or demanded by Empire for electricity service rendered or to be rendered shall be just and reasonable and not more than allowed by law or by order or decision of the Commission. RSMo. §393.130.

In determining whether the rates proposed by MGE are just and reasonable, the Commission must balance the interests of the investor and the consumer. MGE has the burden of proving that its proposed increase is just and reasonable.

It is a basic tenet of utility ratemaking that a utility company is entitled to recover its prudently incurred expenses. *State ex rel. Associated Natural Gas Company v. Public Service Commission*, 954 S.W.2d 520, 528 (Mo. App. 1997) ("If a utility's costs satisfy the prudence standard, the utility is entitled to recover those costs from its customers.").

It is well-established that the Commission's decisions must be based upon competent and substantial evidence upon the record. *Friendship Village of South County v. Public Service Commission*, 907 S.W.2d 339 (Mo. App. 1995); Mo. Const. Art. V, § 18 (1945).

The Appropriate Cost of Capital/Rate of Return for Empire

The return authorized a utility by a regulatory body should be "commensurate with returns on investments in other enterprises having corresponding risks." The return should be "sufficient to assure confidence in the financial integrity of the enterprises so as to maintain its

credit and to attract capital." *Federal Power Commission v. Hope Natural Gas Company*, 320 US 591, 603 (1944). "The return should be reasonably sufficient to assure confidence in the financial soundness of the utility and should be adequate, under efficient and economical management, to maintain and support its credit and enable it to raise the money necessary for the proper discharge of its public duties." *Bluefield Waterworks v. Public Service Commission,* 262 US 679, 693 (1923).

Based upon the competent and substantial record evidence in this case, the appropriate capital structure for Empire for purposes of this proceeding is the Company's pro forma capital structure as of December 31, 2003, consisting of long-term debt of $336,496,611 or 43.89 percent; trust preferred securities of $48,292,848 or 6.3 percent; and common stock equity of $381,935,258 or 49.81 percent of total capital.

The competent and substantial record evidence in this case demonstrates that Empire's embedded cost of long-term debt is 7.25 percent, with a cost of trust-preferred securities of 8.93 percent.

Based upon its findings of fact, the Commission concludes that 11.65 percent is a fair and reasonable return on equity for Empire that will allow the Company an opportunity to compete in the capital market for the funds needed to keep it healthy. Additionally, the competent and substantial record evidence in this case supports Empire being allowed an overall rate of return of 9.54 percent, as illustrated below.

	Ratio	Cost	Weighted Cost
Long Term Debt	43.89%	7.25%	3.18%
Trust Preferred Securities	6.30%	8.93%	0.56%
Common Equity	49.81%	11.65%	5.80%
Total	100.00%		
Cost of Capital/Rate of Return			9.54%

Depreciation

The Commission's power to establish depreciation accounts and rates is found in Section 393.240 RSMo 2000, which states:

> That the commission shall have the power, after hearing, to require . . . electrical corporations . . . to carry a proper and adequate depreciation account in accordance with such rules, regulations and forms of accounts as the commission may prescribe.
>
> * * *
>
> The Commission may, from time to time, ascertain and determine and by order fix the proper and adequate rates of depreciation of the several classes of property of such corporation, person or public utility.

The Commission has explained the purpose of depreciation accounting as follows:

> Depreciation accounting is generally conceded to be a system of accounting which aims to distribute costs or other basic value of tangible capital assets, less salvage (if any), over the estimated useful life of the unit, or group of assets, in a systematic and rational manner. It is a process of allocation, not of valuation.
>
> A secondary goal of depreciation is to match capital recovery with capital consumption. For years it has been recognized that this goal is difficult to attain, therefore, the emphasis is upon a systematic and rational allocation of the expense of capital consumption. The accounting does not purport to follow the actual rate of consumption of property during individual accounting periods. Therefore, it is equitable and sound as a matter of practical accounting to spread the depreciation expense in equal annual charges over the useful life of the property, but the actual rate of consumption may be different.[9]

More recently, the Commission stated that the fundamental goal of depreciation accounting is "to allocate the full cost of an asset, including its net salvage costs, over its economic or service life so

[9] *In the Matter of the Investigation Into Straight-Line Equal Life Group and Remaining Life Depreciation Methods for Missouri Jurisdictional Telephone Utilities*, Case No. TO-82-3, *Report and Order*, 25 Mo.P.S.C. (N.S.) 331 at 334-335.

that utility customers will be charged for the cost of the asset in proportion to the benefit they receive from its consumption."[10]

Accrual for net salvage as part of the depreciation rate is also required by the Commission's rules. Specifically, 4 CSR 240-20.030(1) requires that ". . . every electrical corporation subject to the Commission's jurisdiction shall keep all accounts in conformity with the Uniform System of Accounts prescribed for public utilities and licensees subject to the provisions of the Federal Power Act, as prescribed by the Federal Energy Regulatory Commission (FERC) . . ." Further, Commission Rule 4 CSR 240-20.030(3)(H) states that when implementing the FERC Uniform System of Accounts, "each electrical corporation subject to the Commission's jurisdiction shall . . . charge original costs less net salvage to Account 108, when implementing the provisions of Part 101 Electric Plant Instructions 10.F. and Paragraph 15.060.10.F." (Emphasis added)

The Commission concludes that the accrual method is consistent with the requirements of the Uniform System of Accounts that this Commission has adopted, and depreciation practices recognized and followed in all but a few regulatory jurisdictions in the United States.

Based upon its findings of fact, the Commission concludes that Empire has met is burden of showing that its depreciation methodology and resulting rates are just and reasonable. The Commission further finds that Public Counsel and Staff have not clearly articulated any convincing reason to deviate from the traditional method of calculating net salvage depreciation value. Accordingly, the Commission concludes that Empire's depreciation calculations, methodologies, and rates should be adopted.

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[10] *In the Matter of Laclede Gas Company's Tariff to Revise Natural Gas Rate Schedules,* Case No. GR-99-315, *Third Report & Order,* issued Jan. 11, 2004, p. 9.

The Commission determines that Empire shall increase its depreciation rates to generate an amount of depreciation expense equal to $10.2 million annually.

The Commission also concludes that in order to ensure the accurate tracking of net salvage accounts, Empire shall keep a separate accounting of the amounts accrued for recovery of its initial investment in plant from the amounts accrued for the cost of removal.

The Appropriate Level of Total Company On-System Fuel and Purchased Power Expense

The competent and substantial record evidence in this case supports a total Company on-system fuel and purchased power expense for Empire in this case of $137,548,710 for 5,092,000 MWh, or 27.01 $/MWh, and this amount should be included in Empire's rates on a going forward basis.

As the Commission has declined to adopt an IEC mechanism as part of this case, the Commission need not address the legal issues raised by the parties respecting the Commission's lawful authority to adopt such a mechanism.

CONCLUSION

WHEREFORE, Empire respectfully requests that the Commission adopt its position on each of the contested issues in this proceeding, adopt the proposed Findings of Fact and Conclusions of Law set forth above, and grant such other and further relief as the Commission deems just and proper.

Respectfully Submitted,

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that a true and correct copy of the foregoing was served upon all attorneys of record for each of the parties to this action on the 4th day of February, 2005, by First Class United States Mail, postage prepaid, by hand-delivery, and/or by electronic transmission.