#### MISSOURI PUBLIC SERVICE COMMISSION

# STAFF REPORT COST OF SERVICE APPENDICES

# **EMPIRE DISTRICT ELECTRIC COMPANY The-Investor (Electric)**

CASE NO. ER-2010-0130

Jefferson City, Missouri February, 2010

#### MISSOURI PUBLIC SERVICE COMMISSION

STAFF REPORT
COST OF SERVICE

**APPENDIX 1 Staff Credentials** 

#### EMPIRE DISTRICT ELECTRIC COMPANY

**The-Investor (Electric)** 

**CASE NO. ER-2010-0130** 

### **APPENDIX 1**

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#### **SHANA ATKINSON**

#### **Educational and Employment Background and Credentials**

I am currently employed as a Utility Regulatory Auditor I for the Missouri Public Service Commission (Commission). I accepted the position of Utility Regulatory Auditor I in December 2008.

In May 2007, I earned a Bachelor of Science in Accountancy and a Master of Accountancy degree from the University of Missouri-Columbia. My accounting degree required an understanding of financial concepts, including the cost of capital.

I sponsored the Rate of Return section of the Cost of Service Report in the Empire District Gas rate case, Case No. GR-2009-0434 and the Lake Region Water & Sewer Company rate cases, Case Nos. WR-2010-0111 and SR-2010-0110. I assisted with the preparation of schedules in the Missouri Gas Energy rate case, Case No. GR-2009-0355. I sponsored recommendations in two finance cases, Case Nos. GF-2009-0331 and EF-2009-0266. I have developed rate of return recommendations for numerous small water and sewer rate cases and have assisted as needed in small water and sewer certificate cases.

#### MATTHEW J. BARNES

#### EDUCATIONAL AND EMPLOYMENT BACKGROUND AND CREDENTIALS

I am currently employed as a Utility Regulatory Auditor III for the Missouri Public Service Commission (Commission). I accepted the position of Utility Regulatory Auditor I in June 2003 and have since been promoted.

Previously, I was employed by the Missouri Department of Natural Resources (MDNR). Prior to MDNR I was employed by the Missouri Department of Conservation as an Auditor Aide.

I have earned a Bachelor of Science degree in Business Administration with an emphasis in Accounting from Columbia College in December 2002. I earned a Masters in Business Administration with an emphasis in Accounting from William Woods University in May 2005.

#### SUMMARY OF CASE PARTICIPATION

Date Filed	Issue	Case Number	Exhibit	Case Name
10/06/2006	Rate of Return/ Cost of Capital	ER20060314	Surrebuttal	Kansas City Power & Light Company
09/08/2006	Rate of Return	ER20060314	Rebuttal	Kansas City Power & Light Company
09/13/2006	Rate of Return	GR20060387	Direct	Atmos Energy Corporation
10/15/2004	Rate of Return	TC20021076	Supplemental Direct	BPS Telephone Company
11/07/2006	Rate of Return	ER20060314	True-Up	Kansas City Power & Light Company

Date Filed	Issue	Case Number	Exhibit	Case Name
11/07/2006	Cost of Capital	ER20060314	True-Up	Kansas City Power & Light Company
08/08/2006	Rate of Return	ER20060314	Direct	Kansas City Power & Light Company
11/13/2006	Rate of Return	GR20060387	Surrebuttal	Atmos Energy Corporation
03/08/2006	Transaction Structure	TM20060272	Rebuttal	Alltel Missouri, Inc.
01/12/2007	Rate of Return	WR20060425	Surrebuttal	Algonquin Water Resources of Missouri LLC
12/28/2006	Rate of Return	WR20060425	Rebuttal	Algonquin Water Resources of Missouri LLC
12/01/2006	Rate of Return	WR20060425	Direct	Algonquin Water Resources of Missouri LLC
11/15/2005	Transaction Structure	IO20060086	Rebuttal	Sprint Nextel Corporation
11/13/2006	Rate of Return	GR20060387	Rebuttal	Atmos Energy Corporation
05/04/2007	Rate of Return	GR20070208	Direct	Laclede Gas Company
07/24/2007	Rate of Return	ER20070291	Direct	Kansas City Power and Light Company
08/30/2007	Rate of Return	ER20070291	Rebuttal	Kansas City Power and Light Company

Date Filed	Issue	Case Number	Exhibit	Case Name
09/20/07	Rate of Return	ER20070291	Surrebuttal	Kansas City Power and Light Company
02/22/08	Rate of Return	ER20080093	Staff Report Cost of Service	Empire District Electric Company
04/04/08	Rate of Return	ER20080093	Rebuttal	Empire District Electric Company
04/25/08	Rate of Return	ER20080093	Surrebuttal	Empire District Electric Company
08/18/08	Rate of Return	WR20080311	Staff Report Cost of Service	Missouri-American Water Company
09/30/08	Rate of Return	WR20080311	Rebuttal	Missouri-American Water Company
10/16/08	Rate of Return	WR20080311	Surrebuttal	Missouri-American Water Company
12/01/08	Fuel Adjustment Clause Prudence Review	EO20090115	Staff Memorandum	Kansas City Power and Light Company Greater Missouri Operations Company
06/25/09	Fuel Adjustment Clause 1 <sup>st</sup> True- up	EO20090431	Staff Memorandum	Kansas City Power and Light Company Greater Missouri Operations Company
01/22/10	Fuel Adjustment Clause 2 <sup>nd</sup> True-up	EO20100191	Staff Memorandum	Kansas City Power and Light Company Greater Missouri Operations Company

#### ALAN J. BAX

I graduated from the University of Missouri - Columbia with a Bachelor of Science degree in Electrical Engineering in December 1995. Concurrent with my studies, I was employed as an Engineering Assistant in the Energy Management Department of the University of Missouri – Columbia from the Fall of 1992 through the Fall of 1995. Prior to this, I completed a tour of duty in the United States Navy, completing a course of study at the Navy Nuclear Power School and a Navy Nuclear Propulsion Plant. Following my graduation from the University of Missouri - Columbia, I was employed by The Empire District Electric Company (Empire or Company) as a Staff Engineer until August 1999, at which time I began my employment with the Staff of the Missouri Public Service Commission (Staff). I am a member of the Institute of Electrical/Electronic Engineers (IEEE).

#### ALAN J. BAX

# TESTIMONY AND REPORTS BEFORE THE MISSOURI PUBLIC SERVICE COMMISSION

<u>COMPANY</u>	CASE NUMBER
Aquila Networks – MPS	ER-2004-0034
Union Electric Company d/b/a AmerenUE	EO-2004-0108
Empire District Electric Company	ER-2002-0424
Kansas City Power and Light	EA-2003-0135
Union Electric Company d/b/a AmerenUE	EO-2003-0271
Aquila Networks – MPS	EO-2004-0603
Union Electric Company d/b/a AmerenUE	EC-2002-0117
Three Rivers and Gascosage Electric Coops	EO-2005-0122
Union Electric Company d/b/a AmerenUE	EC-2002-1
Empire District Electric Company	ER-2001-299
Aquila Networks – MPS	EA-2003-0370
Union Electric Company d/b/a AmerenUE	EW-2004-0583
Union Electric Company d/b/a AmerenUE	EO-2005-0369
Trigen Kansas City	HA-2006-0294
Union Electric Company d/b/a AmerenUE	EC-2005-0352
Missouri Public Service	ER-2001-672
Aquila Networks – MPS	EO-2003-0543
Kansas City Power and Light	ER-2006-0314
Macon Electric Coop	EO-2005-0076
Aquila Networks – MPS	EO-2006-0244
Union Electric Company d/b/a AmerenUE	EO-2003-0271
Union Electric Company d/b/a AmerenUE	EC-2004-0556
Union Electric Company d/b/a AmerenUE	EC-2004-0598
Empire District Electric Company	ER-2004-0570
Union Electric Company d/b/a AmerenUE	EC-2005-0110
Union Electric Company d/b/a AmerenUE	EC-2005-0177
Union Electric Company d/b/a AmerenUE	EC-2005-0313
Empire District Electric Company	EO-2005-0275
Aquila Networks – MPS	EO-2005-0270
Union Electric Company d/b/a AmerenUE	EO-2006-0145
Empire District Electric Company	ER-2006-0315
Aquila Networks – MPS	ER-2005-0436
Union Electric Company d/b/a AmerenUE	EO-2006-0096
Union Electric Company d/b/a AmerenUE	EO-2008-0031
Empire District Electric Company	ER-2008-0093
Missouri Rural Electric Cooperative	EO-2008-0332
Grundy Electric Cooperative	EO-2008-0414
Osage Valley Electric Cooperative	EO-2009-0315
Union Electric Company d/b/a AmerenUE	EO-2008-0310
Aquila Networks – MPS	EA-2008-0279
West Central Electric Cooperative	EO-2008-0339
Empire District Electric Company	EO-2009-0233
Union Electric Company d/b/a/ AmerenUE	EO-2009-0272
Empire District Electric Company	EO-2009-0181
Union Electric Company d/b/a AmerenUE	ER-2008-0318
Kansas City Power and Light	ER-2009-0089
Kansas City Power and Light – GMO	ER-2009-0090
Union Electric Company d/b/a AmerenUE	ER-2010-0036

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#### WALT CECIL

#### PRESENT POSITION:

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

#### EDUCATIONAL BACKGROUND AND WORK EXPERIENCE:

I hold a B.A. in Business Administration from Baylor University and a M.A. in Economics from the University of Kansas. I joined the Commission's Telecommunications Department Staff in 1999 and was assigned to the Energy Department in June 2008.

#### Cases in which Testimony was Filed and/or Cross Examination was Stood

<u>Case No.</u> ER-2010-0036	<u>Issues</u> Weather Normalization of Sales (In progress)
ER-2009-0090	Weather Normalization of Sales and Rate Design
ER-2009-0089	Weather Normalization of Sales
TX-2008-0090	In the Matter of a Proposed Rulemaking to Amend 4 CSR 240-33.0160, Customer Proprietary Network Information
CO-2006-0464	Eligible Telecommunications Carrier Designation
IO-2006-0551	In the Matter of Embarq Missouri, Inc., for Competitive Classification under Section 392.245.5, RSMo 2005
TO-2005-0308	Recommendation Concerning the Surcharge for Deaf Relay Service and Equipment Distribution Program Fund
TO-2005-0035	Directory Assistance
TO-2004-0207	Geographic Market Definition
TO-2002-227	Term Discounts

<u>Case No.</u> TO-2002-222	<u>Issues</u> Arbitration Issues 9, 13, 15, 16, 17, 19, 20, 21, 23, 24, 26, 29, 30, 33, 48, 49, 50		
TT-2002-108 and TT-2002-130	Tariff Winback Provisions; Multi-Year Contracts—Consolidated Cases		
TO-2001-455	Physical Network Interconnection Issues; Inter-Carrier Compensation; Operations Support Services		
TO-2001-347	Geographic Deaveraging		
TO-2000-374	NPA Relief Plan for the 314 and 816 Area Codes		

#### Keith D. Foster

#### **Educational and Employment Background and Credentials**

I am currently employed as a Utility Regulatory Auditor III for the Missouri Public Service Commission (Commission). I was employed by the Commission in January 2008. After a 27-year career in the Information Systems (IS) industry, I returned to college and earned a Bachelor of Science degree in Business Administration, major in Accounting from Columbia College. I graduated summa cum laude in October 2007.

Most recently, I was employed by IBM as a Project Manager from March 1991 to December 1998 and as a Project Executive from January 1999 until April 2002. In my capacity as Project Executive, I managed the development and implementation of welfare reform and other system enhancements, ongoing operations and maintenance activities, warranty support, application help desk, and system turnover for the Missouri Automated Child Support System (MACSS), a statewide integrated financial and case management system. I managed all budget, revenue, and profit objectives; developed and maintained detailed spreadsheets to prepare project budgets and revenue projections, to track and manage project costs and revenue daily, and to reconcile with corporate accounting.

I am a member of the Institute of Internal Auditors (IIA) as well as the Project Management Institute (PMI) including the local chapters. I am currently a board member of the Mid-Missouri PMI chapter, serving as Vice-President of Financial Affairs. In addition, I am a PMI-certified Project Management Professional (PMP), a credential I have held since January 2000.

As a Utility Regulatory Auditor, I perform rate audits and prepare miscellaneous filings as ordered by the Commission. In addition, I review all exhibits and testimony on assigned

issues, develop accounting adjustments and issue positions which are supported by workpapers and written testimony. For cases that do not require prepared testimony, I prepare Staff Recommendation Memorandums.

Other cases I have been assigned are listed below:

Case/Tracking Number	Company Name - Issue
QW-2008-0010	Tri-States Utility, Inc Property Taxes; Fuel & Electricity Expense; Telephone Expense; Rent Expense; Plant in Service; Depreciation Schedule, Reserve, Rates, and Expense; Transportation Expense; Chemicals Expense; Waste Disposal; Insurance Expense; Contractual Services; Bad Debt Expense; Miscellaneous Expenses
WR-2008-0311	Missouri-American Water Company - Advertising & Promotional Items; Dues and Donations; Cash Working Capital; Plant in Service; Depreciation Expense; Depreciation Reserve; Franchise Tax; Property Taxes; Fuel & Electricity Expense; Telephone Expense; Postage Expense; Purchased Water; Prepayments; Materials & Supplies; Customer Advances; Contributions in Aid of Construction (CIAC)
WR-2009-0098	Raytown Water Company - Materials & Supplies; Prepayments; Customer Deposits; Revenues; Insurance Expense; Utilities Expense; Directors Fees; Office Supplies Expense; Postage Expense; Laboratory Fees; Transportation Expenses; Rate Case Expense; Regulatory Commission Expense
GO-2009-0302	Missouri Gas Energy - Infrastructure Service Replacement Surcharge (ISRS)
SA-2009-0319	Mid-MO Sanitation, LLC – Certificate Case; All Revenue and Expenses; Plant in Service; Depreciation Reserve; Other Rate Base Items
GR-2009-0355	Missouri Gas Energy – Payroll, Payroll Taxes, 401(k), and Other Employee Benefit Costs; Incentive Compensation and Bonuses; Medical and Dental Expense; Bad Debt Expense; Rate Case Expense; Pension Expense; FAS106/OPEBs; Prepaid Pension Asset (PPA); Franchise Tax Expense; Income Tax Expense
SR-2010-0095	Mid-MO Sanitation, LLC (in progress) – Full Audit of All Revenue and Expenses; Plant in Service; Depreciation Reserve; Other Rate Base Items

#### **Carol Gay Fred**

#### **Educational and Employment Background and Credentials**

I am currently employed as the Consumer Services Manager for the Missouri Public Service Commission (Commission). I was employed by the Commission in January 1987. Prior to my employment with the Commission, I was employed by United Telephone Company, now known as CenturyLink, from 1977 to 1987, with primary functions that consisted of call center supervision, credit and collections, outside plant compliance audits, cable assignment specialist and central office switch conversion assistant.

In May 2002, I graduated from Almeda University, Wauconda, IL, with a Bachelor of Science degree in Business Administration. In December 1999, I received my Certification in Project Management from Boston University, in Boston, MA.

During my employment with the Commission I have filed testimony before the Commission on several occasions in my previous capacity as a Rate and Tariff Examiner II in the Telecommunications Department under the Operations Division of the Commission and in my current capacity as Manager of Consumer Services. I have acquired general knowledge on various topics through my experience and analyses in prior rate, complaint, merger, rulemaking and working group cases before this Commission.

I am an active member of the NARUC Subcommittee on Consumer Affairs. I am also an active member of the Missouri to End Poverty and the Committee to Keep Missourians Warm. I have also participated in and supervised the work on a number of informal and formal complaint proceedings.

#### **Empire District Electric Company**

#### ER-2010-0130

#### **Education, Background and Case Participation**

#### Paul R. Harrison

I am a Utility Regulatory Auditor IV with the Missouri Public Service Commission (PSC or Commission). I have performed duties as a Utility Regulatory Auditor within the Auditing Department at the Commission since January 18, 2000. I have also been responsible for the supervision of other Audit Department employees in rate cases and other regulatory proceedings before the Commission.

I graduated from Park College, Kansas City, Missouri, where I earned Bachelor of Science degrees in both Accounting and Management with Magna Cum Laude honors in July 1995. I also earned an Associate degree in Missile Maintenance Technology from the Community College of the Air Force in June 1990.

Prior to coming to work at the Commission, I was the manager for Tool Warehouse Inc. for four and one-half years. As the manager, I managed; supervised, coordinated and scheduled daily activities of personal assigned to the Tool Warehouse. In addition, I created and maintained corporate monthly budgets; performed monthly inventory and generated inventory loss reports to corporate headquarters. I was also responsible for the daily sales volume and ordered all merchandise, (\$2.5million), for the tool warehouse in accordance with Tool Warehouse policy and procedures.

Prior to being the manager of the Tool Warehouse Inc, I was in the United States Air Force (USAF) for twenty-three years. During my career in the USAF, I was assigned many different duty positions with various levels of responsibility. I retired from active duty on May

1, 1994 as Superintendent of the 321st Strategic Missile Wing Missile Mechanical Flight. In that capacity, I supervised 95 missile maintenance technicians and managed assets valued in excess of \$50 million.

My duties at the Commission include performing audits of the books and records of regulated public utilities under the jurisdiction of the MoPSC, in conjunction with other Commission Staff (Staff) members. In this capacity, I am required to prepare testimony and serve as a Staff expert witness on rate cases concerning the ratemaking philosophy and methodology of issues that I am assigned.

I have acquired general knowledge of these topics through my experience and analyses in prior rate cases before this Commission. I have also acquired knowledge of these topics through review of Staff work papers for prior rate cases brought before this Commission. I have reviewed prior Commission decisions with regard to these areas. I have reviewed the Company's testimony, work papers and responses to Staff's data requests addressing these topics. In addition, my college coursework included accounting and auditing classes. Since commencing employment with the Commission in January 2000, I have attended various in house training seminars and National Association of Regulatory Utility Commission (NARUC) conferences. I have participated in approximately twenty-four formal rate case proceedings. I have also participated in and supervised the work on a number of informal rate proceedings. As a senior auditor and the Lead Auditor on a number of cases, I have participated in the supervision and instruction of new accountants and auditors within the Utility Services Division.

The Schedule below lists the rate cases in which I filed testimony, the issues that I have completed and the small informal cases that I have been assigned.

#### CASE PROCEEDING/PARTICIPATION

#### PAUL R. HARRISON

COMPANY	CASE NO.	TESTIMONY/ISSUES
	SUMMARY OF	FORMAL CASES
The Empire District Electric Company	ER-2010-0130	In Progress  Cost of Service Report- Allocations; Pensions & OPEBS; DSM Program; Amortization Rate Base & Expense; Revenues; Bad Debt; Banking Fees; Infrastructure & Tree Trimming Expense; Employee Benefits; Lease Expense; O&M Expenses New Plant; Carrying Cost New Plant; Current Income & Deferred Taxes.
The Empire District Gas Company	GR-2009-0434	October 2009 Cost of Service Report- Allocations/Rents; Right-of-Way Clearing; AAO-MGP Costs; Franchise Fees; Reconciliation; Current Income & Deferred Taxes.  Lead Auditor
Kansas City Power & Light (KCPL)	ER-2009-0089	April 2009 Surrebuttal- Non-Talent Assessment Severance Costs  True-Up - Pensions & OPEBS; Current Income & Deferred Taxes
KCPL-GMO MPS & L&P Electric	ER-2009-0090	April 2009 Surrebuttal-Cost of Removal-Income Taxes, Regulatory Asset Amortization.  True-Up - Pensions & OPEBS; Income & Deferred Taxes  Lead Auditor
Kansas City Power & Light (KCPL)	ER-2009-0089	March 2009 Cost of Service Report- Pensions & OPEBS; Non-Talent Assessment Severance Costs; Officer Expenses; Meals & Entertainment Expense; Employee Relocation Expense; Lobbying Expense; Lease Expenses; Non-Operating Cost Adjustment; Income & Deferred Taxes
KCPL-GMO MPS & L&P Electric	ER-2009-0090	March 2009 Cost of Service Report- Pensions & OPEBS; Miscellaneous Adjustments; SJLP Merger Transition Costs; Employee Relocation Expense; Lease Expenses; Income & Deferred Taxes  Lead Auditor

COMPANY	CASE NO.	TESTIMONY/ISSUES
KCPL-GMO L&P Steam	HR-2009-0092	March 2009 Cost of Service Report- Pensions & OPEBS; Miscellaneous Adjustments; Income & Deferred Taxes
		Lead Auditor
Missouri American Water Company	WR-2008-0311	October 2008 Surrebuttal- Belleville Lab Allocations; Compensation for Services MAWC Provided to AWR
		Litigated- Corporate Allocations
		True-Up - Corporate Allocations; Income & Deferred Taxes
		Lead Auditor
Missouri American Water Company	WR-2008-0311	August 2008 Cost of Service Report- Case Reconciliation; Corporate Allocations & Expenses; Belleville Lab Allocations; Compensation for Services MAWC Provided to AWR; Income & Deferred Taxes
		Lead Auditor
Laclede Gas Company		In Progress Investigation of Affiliated Transactions, Corporate Allocations & Appropriate Time Charges Between Laclede's Regulated & Unregulated Subsidiaries
Missouri Gas Energy	GU-2007-0480	July 2008 Rebuttal- AAO Manufactured Gas Plant
		Litigated- Manufactured Gas Plant
Missouri Gas Energy	GU-2007-0480	September 2007 Memorandum – AAO Manufactured Gas Plant
		Lead Auditor
Missouri Gas Utility	GR-2008-0060	February 2008 Cost of Service Report- Revenue Requirement Run (EMS) Merger & Acquisition Costs (Start-Up Costs); Corporate Allocations; Income & Deferred Taxes
		Lead Auditor
Missouri Gas Energy	GR-2006-0422	November 2006 Rebuttal- Environmental Response Fund, Manufactured Gas Plant Litigated- Manufactured Gas Plant

COMPANY	CASE NO.	TESTIMONY/ISSUES
Missouri Gas Energy	GR-2006-0422	October 2006 Direct—Revenues; Purchased Gas Adjustments; Bad Debt Expense; ECWR AAO Bad Debt: Rent; Pensions & OPEBS; Income Taxes; Franchise Taxes; Manufactured Gas Plant, and Case Reconciliation  Litigated-Emergency Cold Weather Rule
		True-Up - Revenues; Bad Debt Expense; Pensions & OPEBS; Income Taxes
Empire Electric Company	ER-2006-0315	July 2006 Rebuttal- Storm Damage Tracker
Empire Electric Company	ER-2006-0315	June 2006  Direct- Tree Trimming Expense and Construction Over-Run Costs
Missouri Pipeline & Missouri Gas Company LLC	GC-2006-0378	November 2006  Plant in Service, Depreciation Reserve, Depreciation Expense, Transactions & Acquisition Costs and Income Taxes
New Florence Telephone	TC-2006-0184	October 2006  Plant in Service; Depreciation Reserve; Depreciation Expense; Plant Overage; and Materials & Supplies
Cass County Telephone	TC-2005-0357	July 2006  Plant in Service; Depreciation Reserve; Depreciation Expense; Plant Overage; Plant Held for Future Use and Missouri Universal Service Fund
Cass County Telephone & New Florence Telephone Fraud Investigation Case	TO-2005-0237	May 2006 Fraud Investigation case involving Cass County Telephone and New Florence Telephone
Missouri Gas Energy	GR-2004-0209	June 2004 Surrebuttal - Revenues and Bad Debt Expense True-Up - Revenues; Bad Debt Expense; Income Taxes
Missouri Gas Energy	GR-2004-0209	May 2004 Rebuttal - Revenues; Bad Debt Expense; and Manufactured Gas Plant Litigated- Manufactured Gas Plant

COMPANY	CASE NO.	TESTIMONY/ISSUES
Missouri Gas Energy	GR-2004-0209	April 2004  Direct – Revenues; Purchased Gas Adjustments; Bad Debt Expense; Medical Expense; Rents; and Income Taxes
Union Electric Company d/b/a AmerenUE (Gas)	GR-2003-0517	October 2003  Direct – Corporate Allocations; UEC Missouri Gas Allocations; CILCORP Allocations; Rent Expense; Maintenance of General Plant Expense; Lease Agreements; and Employee Relocation Expense
Union Electric Company d/b/a AmerenUE	EC-2002-1	June 2002 Surrebuttal - Coal Inventory; Venice Power Plant Fire; Tree Trimming Expense; and Automated Meter Reading Service
Laclede Gas Company	GR-2002-356	June 2002  Direct - Payroll; Payroll Taxes; 401k Pension Plan; Health Care Expenses; Pension Plan Trustee Fees; and Clearing Account:  True- Up – Payroll; Payroll Taxes; and Clearing Accounts
Union Electric Company d/b/a AmerenUE (2 <sup>nd</sup> period, 3 <sup>rd</sup> EARP)	EC-2002-1025	April 2002  Direct - Revenue Requirement Run; Plant in Service; Depre Reserve; Other Rate Base items;  Venice Power Plant Fire expenditures;  Tree Trimming Expense; and Coal Inventory
2 <sup>nd</sup> Complaint Case, Union Electric Company d/b/a AmerenUE  New Test Year ordered by the Commission.	EC-2002-1	March 2002  Direct - Materials and Supplies; Prepayments; Fuel Inventory; Customer Advances for Construction; Customer Deposits; Plant in Service; Depreciation Reserve; Venice Power Plant Fire Expenditures; Tree-Trimming Expense; Automated Meter Reading Expense; Customer Deposit Interest Expense; Year 2000 Computer Modification Expense; Regulatory Advisor's Consulting Fees; and Property Taxes
		Deposition – April 11, 2002

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COMPANY	CASE NO.	TESTIMONY/ISSUES
1 <sup>st</sup> Complaint Case, Union Electric Company d/b/a AmerenUE	EC-2002-1	July 2001  Direct - Materials and Supplies; Prepayments; Fuel Inventory; Customer Advances for Construction; Customer Deposits; Plant in Service; Depreciation Reserve; Power Plant Maintenance Expense; Tree-Trimming Expense; Automated Meter Reading Expense; Customer Deposit Interest Expense; Year 2000 Computer Modification Expense; Computer Software Expense; Regulatory Advisor's Consulting Fees; Board of Directors Advisor's Fees and Property Taxes.  Deposition – November 27 2001
Union Electric Company d/b/a AmerenUE (2 <sup>nd</sup> period, 2 <sup>nd</sup> EARP)	EC-2001-431	February 2001 Coal Inventory
Union Electric Company d/b/a AmerenUE (Gas)	GR-2000-512	August 2000  Direct - Cash Working Capital; Advertising Expense; Missouri PSC Assessment; Dues and Donations; Automated Meter Reading Expenses; Computer System Software Expenses (CSS); Computer System Software Expenses (Y2K); Computer System Software Expenses (EMPRV); Generation Strategy Project Expenses; Regulatory Advisor's Consulting fees and Board of Directors Advisor's fees.
	SUMMARY OF I	NFORMAL CASES
Noel Water Company	WR-2009-0395	August 2009 Cost of Service; All Revenues & Expenses related to Noel Water Company; Plant in Service; Depreciation Reserve & other Rate Base Items.  Lead Auditor
Tri-State Water Company	WR-2009-0058	May 2008 Payroll; rent expense; miscellaneous maintenance expenses; Rate Base and Income Taxes.  Lead Auditor

COMPANY	CASE NO.	TESTIMONY/ISSUES
Big Island Water & Sewer	WA-2006-0480 SA-2006-0482	January 2007  Direct - Certificate of Necessitate Application Case: Cost of Service; All Revenues & Expenses related to Big Island Water & Sewer; Plant in Service; Depreciation Reserve & other Rate Base Items.
		Lead Auditor
Aqua Missouri Water and Sewer	QS-2005-0008 QW-2005-0009 QS-2005-0010 QW-2005-0011	October 2006  All Revenues & Expenses related to Aqua MO Water & Sewer; Plant in Service; Depreciation Reserve & other Rate Base Items.
		Lead Auditor
Lake Region Water and Sewer Certificate Case	WA-2005-0463	October 2006 Certificate of Necessitate Application Case
		Lead Auditor
Tri-State Utility Inc.	WA-2006-0241	May 2006 Certificate of Necessitate Application Case
		Lead Auditor
Osage Water Company Environmental Utilities	WO-2005-0086	February 2005 Rate Base; Cost of Service; Income Statement Items; Pre-Post Sale of OWC, Sale of EU Assets to MAWC
Missouri American Water		
North Suburban Water & Sewer	WF-2005-0164	December 2004 Sale of All Stocks of Lake Region Water & Sewer to North Suburban Water & Sewer, Value of Rate Base Assets, Acquisition Premium
		Lead Auditor
Mill Creek Sewer	SR-2005-0116	December 2004 Cost of Service; All Revenues & Expenses related to Mill Creek Sewer; Plant in Service; Depreciation Reserve & other Rate Base Items.
		Lead Auditor

COMPANY	CASE NO.	TESTIMONY/ISSUES
Roark Water and Sewer	WR-2005-0153 SR-2005-0154	September 2004 Cost of Service; All Revenues & Expenses related to Roark Water & Sewer; Plant in Service; Depreciation Reserve & other Rate Base Items.  Lead Auditor
Osage Water Company	WT-2003-0583 SR-2003-0584	December 2003  Cost of Service; All Revenues & Expenses related to Osage Water; Plant in Service; Depreciation Reserve & other Rate Base Items

#### SUMMARY OF NON-CASE RELATED AUDITS

**January 2006** – Environmental Utilities and Osage Water Company Audit Concerning

Provision of Service to Eagle Woods Subdivision and Disconnect Notice

**November 2004 -** Internal Audit of Public Service Commission (PSC) Fixed Assets, Physical Inventory Control Process and Location of Assets

Manisha Lakhanpal

**Present Position:** Regulatory Economist III

I joined Missouri Public Service Commission in August 2007 as a Regulatory Economist II in the

Economic Analysis Section of the Energy Department, Operations Division.

**Educational Background:** 

In December 2005, I graduated with a Masters of Science in Applied Economics, specializing in

Electricity, Natural Gas and Telecommunication, from Illinois State University, Normal, Illinois. I have a

Post Graduate Diploma in Business Management from Chetana's Institute of Management and Research,

Mumbai, India and an undergraduate degree in Political Science and History from University of Delhi,

New Delhi, India.

**Work Experience:** 

I first joined Missouri Public Service Commission as an intern in 2006 (May 2006-August 2006). Prior to

returning to PSC I was employed by the Indiana Utility Regulatory Commission, Indianapolis, as a Utility

Analyst (September 2006- August 2007). During my time in Indiana I worked on a variety of cases and

projects, including a major rate case, wholesale power cost trackers for municipal utilities, environmental

cost recovery cases, a certificate of need for the first wind power project in Indiana as well as a related

case involving the purchase of output from the facility, and annual report to the legislature on the state of

the industry in Indiana.

In the summer of 2005 (May 2005-July 2005), I worked as an Intern at CommonWealth Edison (ComEd),

Chicago, on projects related to deregulation of electric markets in Illinois.

In India I have worked **Operations** Executive company as an for an insurance

(June 2001 - December 2003).

**Case Proceeding Participation** 

Company	Case Number	Issue
Missouri Gas Utility	GR-2008-0060	Weather normal variables for weather normalization
Empire District Electric Company	ER-2008-0093	Weather normal variables for weather normalization, Revenue for Large Power and Large Transmission rate class

Company	Case Number	Issue
Trigen-Kansas City Energy Corporation-(Steam/Heat)	HR-2008-0300	Weather normal variables and weather normalization factors
Ameren UE	ER-2008-0318	Weather normal variables for weather normalization, Revenue for Large Power and Large Transmission rate class
Kansas City Power & Light Company	ER-2009-0089	Weather normal variables for weather normalization, Retail Rate Revenue
KCP&L GMO Company	ER-2009-0090	Weather normal variables for weather normalization
MGE (filed rebuttal and surrebuttal testimony)	GR-2009-0355	Weather normal variables for weather normalization
Ameren UE	ER-2010-0036	Weather normal variables for weather normalization, Revenue for Large Power and Large Transmission rate class
Empire Gas	GR-2009-0434	Weather normal variables for weather normalization
Laclede Gas	GR-2010-0171	Weather normal variables for weather normalization
Atmos Energy	GR-2010-0192	Weather normal variables for weather normalization

Publications: "Educational Attainment and AIDS Incidence: A Cross-Country Study", coauthored with Dr. Rati Ram, Department of Economics, Illinois State University, Economics of Education Review, 2008, vol. 27, issue 1, pages 14-21.

#### SHAWN E. LANGE

#### PRESENT POSITION:

I am a Utility Engineering Specialist III in the Engineering Analysis Section, Energy Department, Utility Operations Division.

#### EDUCATIONAL BACKGROUND AND WORK EXPERIENCE:

In December 2002, I received a Bachelor of Science Degree in Mechanical Engineering from the University of Missouri, at Rolla now known as the Missouri University of Science and Technology. I joined the Commission Staff in January 2005. I am a registered Engineer-in-Training in the State of Missouri.

#### **TESTIMONY FILED:**

Case Number	Utility	Testimony	Issue
ER-2005-0436	Aquila Inc.	Direct	Weather Normalization
		Rebuttal	Weather Normalization
		Surrebuttal	Weather Normalization
ER-2006-0314	Kansas City Power &	Direct	Weather Normalization
	Light Company	Rebuttal	Weather Normalization
ER-2006-0315	Empire District Electric	Direct	Weather Normalization
	Company	Surrebuttal	Weather Normalization
ER-2007-0002	Union Electric	Direct	Weather Normalization
	Company d/b/a		
	AmerenUE		
ER-2007-0004	Aquila Inc.	Direct	Weather Normalization
ER-2007-0291	Kansas City Power &	Staff Report	Weather Normalization
	Light Company	Rebuttal	Weather Normalization
ER-2008-0093	Empire District Electric	Staff Report	Weather Normalization
	Company		
ER-2008-0318	Union Electric	Staff Report	Weather Normalization
	Company d/b/a		
	AmerenUE		
ER-2009-0089	Kansas City Power &	Staff Report	Net System Input
	Light Company		
ER-2009-0090	KCP&L Greater	Staff Report	Net System Input
	Missouri Operations		
	Company		
ER-2010-0036	Union Electric	Staff Report	Net System Input
	Company d/b/a		
	AmerenUE		

#### **Erin Maloney**

#### **Education**

Bachelor of Science Mechanical Engineering University of Las Vegas Nevada, May 1992

#### **Professional Experience**

Missouri Public Service Commission, Jefferson City, MO January 2005 – Present Utility Engineering Specialist II Electronic Data Systems, Kansas City, Missouri August 1995 – November 2002 System Engineer

#### **Previous Testimony Filed Before the Commission**

Case Number	Type of Testimony	Issue
ER-2005-0436	Direct	Reliability
ER-2006-0315	Direct	System Losses and Jurisdictional Demand and Energy Allocation
ER-2006-0314	Direct, Rebuttal, Surrebuttal, True- up Direct	System Losses and Jurisdictional Demand and Energy Allocation
ER-2007-0002	Direct	System Losses and Jurisdictional Demand and Energy Allocation
ER-2007-0004	Direct	System Losses and Jurisdictional Demand and Energy Allocation
ER-2007-0291	Staff Report	System Losses and Jurisdictional Demand and Energy Allocation
ER-2008-0093	Staff Report	System Losses and Jurisdictional Demand and Energy Allocation
ER-2008-0318	Staff Report, Rebuttal, Surrebuttal	Fuel and Purchased Power Prices
ER-2009-0090	Staff Report	Purchased Power Prices
ER-2009-0089	Staff Report	Allocation Factor for Fuel & Purchased Power
ER-2010-0036	Staff Report	Fuel and Purchased Power Prices

# CASE PARTICIPATION OF MARK L. OLIGSCHLAEGER

Company Name	Case Number	Issues
Western Resources	GR-90-40 and	Take-Or-Pay Costs
	GR-91-149	
Missouri-American Water	WR-91-211	True-up; Known and Measurable
Company		
Missouri Public Service	EO-91-358 and	AAO
	EO-91-360	
Generic Telephone	TO-92-306	Revenue Neutrality; Accounting
		Classification
Generic Electric	EO-93-218	Preapproval
Western Resources & Southern	GM-94-40	Regulatory Asset Transfer
Union Company	WD 05 145	D. I.
St. Louis County Water	WR-95-145	Policy
Union Electric Company	EM-96-149	Merger Savings; Transmission Policy
St. Louis County Water	WR-96-263	Future Plant
Missouri Gas Energy	GR-96-285	Riders; Savings Sharing
The Empire District Electric	ER-97-82	Policy
Company		
Missouri Public Service	ER-97-394	Stranded/Transition Costs; Regulatory
		Asset Amortization; Performance Based Regulation
Western Resources & Kansas	EM-97-515	Regulatory Plan; Ratemaking
City Power & Light		Recommendations; Stranded Costs
United Water Missouri	WA-98-187	FAS 106 Deferrals
Laclede Gas Company	GR-99-315 (remand)	Depreciation and Cost of Removal
Missouri-American Water	WM-2000-222	Conditions
UtiliCorp United & St. Joseph	EM-2000-292	Staff Overall Recommendations
Light & Power		
UtiliCorp United & The Empire District Electric Company	EM-2000-369	Overall Recommendations
Green Hills Telephone	TT-2001-115	Policy
IAMO Telephone Company	TT-2001-116	Policy

# CASE PARTICIPATION OF MARK L. OLIGSCHLAEGER

Company Name	Case Number	Issues
Ozark Telephone Company	TT-2001-117	Policy
Peace Valley Telephone	TT-2001-118	Policy
Holway Telephone Company	TT-2001-119	Policy
KLM Telephone Company	TT-2001-120	Policy
Missouri Gas Energy	GR-2001-292	SLRP Deferrals; Y2K Deferrals; Deferred Taxes; SLRP and Y2K CSE/GSIP
The Empire District Electric	ER-2001-299	Prudence/State Line
Company		Construction/Capital Costs
Ozark Telephone Company	TC-2001-402	Interim Rate Refund
Gateway Pipeline Company	GM-2001-585	Financial Statements
Missouri Public Service	ER-2001-672	Purchased Power Agreement; Merger Savings/Acquisition Adjustment
Union Electric Company	EC-2002-1	Merger Savings; Criticisms of Staff's Case; Injuries and Damages; Uncollectibles
Laclede Gas Company	GA-2002-429	AAO Request
Aquila, Inc., d/b/a Aquila Networks-MPS-Electric and Aquila Networks-L&P-Electric and Steam	ER-2004-0034 and HR-2004-0024 (Consolidated)	Aries Purchased Power Agreement; Merger Savings
Missouri Gas Energy	GR-2004-0209	Revenue Requirement Differences; Corporate Cost Allocation Study; Policy; Load Attrition; Capital Structure
Empire District Electric	ER-2006-0315	Fuel/Purchased Power; Regulatory Plan Amortizations; Return on Equity; True-Up
Missouri Gas Energy	GR-2006-0422	Unrecovered Cost of Service Adjustment; Policy
Laclede Gas Company	GR-2007-0208	Case Overview; Depreciation Expense/Depreciation Reserve; Affiliated Transactions; Regulatory Compact

# CASE PARTICIPATION OF MARK L. OLIGSCHLAEGER

Company Name	Case Number	Issues
Missouri Gas Utility	GR-2008-0060	Report on Cost of Service; Overview of Staff's Filing
The Empire District Electric Company	ER-2008-0093	Case Overview; Regulatory Plan Amortizations; Asbury SCR; Commission Rules Tracker; Fuel Adjustment Clause; ROE and Risk; Depreciation; True-up; Gas Contract Unwinding
Missouri Gas Energy, a Division of Southern Union	GR-2009-0355	Staff Report Cost of Service; Direct Report on Cost of Service; Overview of the Staff's Filing; Rebuttal Kansas Property Taxes/AAO; Bad Debts/Tracker; FAS 106/OPEBs; Policy; Surrebuttal Environmental Expense, FAS 106/OPEBs

#### Cases prior to 1990 include:

Kansas City Power and Light Company	ER-82-66
Kansas City Power and Light Company	HR-82-67
Southwestern Bell Telephone Company	TR-82-199
Missouri Public Service Company	ER-83-40
Kansas City Power and Light Company	ER-83-49
Southwestern Bell Telephone Company	TR-83-253
Kansas City Power and Light Company	EO-84-4
Kansas City Power and Light Company	ER-85-128 & EO-85-185
KPL Gas Service Company	GR-86-76
Kansas City Power and Light Company	HO-86-139
Southwestern Bell Telephone Company	TC-89-14

#### John A. Rogers

#### **Educational Background and Work Experience**

I have a Master of Business Administration degree from the University of San Diego and a Bachelor of Science degree in Engineering Science from the University of Notre Dame and am a registered professional engineer. My work experience includes 34 years in energy utility engineering, system operations, strategic planning, regulatory affairs and management. From 1974 to 1985, I was employed by San Diego Gas & Electric with responsibilities in gas engineering, gas system planning and gas system operations. From 1985 to 2000, I was employed by Citizens Utilities in leadership roles for gas operations in Arizona, Colorado and Louisiana. From 2000 to 2003, I was an executive consultant for Convergent Group (a division of Schlumberger) providing management consulting services to energy companies. From 2004 to 2008, I was employed by Arkansas Western Gas and was responsible for strategic planning and resource planning. I have provided expert testimony before the California Public Utilities Commission, Arizona Corporation Commission, Arkansas Public Service Commission and Missouri Public Service Commission in general rate cases, applications for special projects and demand-side management programs and gas resource plan filings. I have been employed by the Missouri Public Service Commission since December 2008 and am responsible for Staff's review of electric utility resource planning compliance filings, demand-side management programs and fuel adjustment clauses.

#### **Testimony Submitted or Given In Last Ten Years**

#### o Arkansas Public Service Commission

Docket No. 05-111-P, prepared testimony and rebuttal testimony in the matter of Arkansas Western Gas Company for approval of a gas conservation home weatherization program.

Docket No. 07-041-P, prepared testimony in the matter of the application of Arkansas Western Gas Company for approval of a special contract for Arkansas Electric Cooperative Corporation's Elkins peaking plant.

Docket No. 07-078-TP, prepared testimony and rebuttal testimony in the matter of application for approval of Arkansas Western Gas Company's initial energy efficiency program plan.

Docket No. 07-079-TF, prepared testimony and rebuttal testimony in the matter of the application for approval of the Arkansas Weatherization Program.

#### o Missouri Public Service Commission

Case No. ER-2009-2009, surrebuttal testimony concerning fuel adjustment clause tariff in general rate case of KCP&L Greater Missouri Operations Company.

Case No. ER-2010-0036, rebuttal testimony concerning customer demand-side programs, regulatory asset and fuel adjustment clause tariff in the general rate case of AmerenUE.

#### Contributed to Missouri PSC Staff Direct Testimony Report

Case No. ER-2009-0090, Staff Report Class Cost of Service and Rate Design concerning fuel adjustment clause tariff in general rate case of KCPL Greater Missouri Operations Company.

Case No. EE-2009-0237, Staff Report Electric Utility Resource Planning Compliance Filing of KCPL Greater Missouri Operations Company.

Case No. ER-2010-0036, Staff Revenue Requirement Cost of Service Report and Staff Class Cost-of-Service and Rate Design Report concerning customer demand-side programs, regulatory asset and fuel adjustment clause tariff in the general rate case of AmerenUE.

#### **CURT WELLS**

#### **Present Position:**

I am a Regulatory Economist in the Economic Analysis Section, Energy Department, Operations Division of the Missouri Public Service Commission.

#### **Educational Background and Work Experience:**

I have a Bachelor's degree in Economics from Duke University, a Master's degree in Economics from The Pennsylvania State University, and a Master's degree in Applied Economics from Southern Methodist University. I have been employed by the Missouri Public Service Commission since February, 2006. Prior to joining the Commission, I completed a career in the U.S. Air Force, which included assignments as an aircraft navigator, and later in the Purchasing/Contracting area as Contract Negotiator and Administrator, Installation Purchasing Department Chief, Contracting Policy Manager, Director of the Air Force warranty center, and Program Manager responsible for developing and awarding technical support contracts.

#### **CURT WELLS**

## TESTIMONY/REPORTS FILED BEFORE THE MISSOURI PUBLIC SERVICE COMMISSION

Case Number	Company	<u>Issue</u>
ER-2006-0314 Direct/ True-up Direct	Kansas City Power & Light Company	Calculation of Normal Weather, Revenue
ER-2006-0315 Direct/Rebuttal	Empire District Electric	Revenue
GR-2006-0387 Direct	ATMOS Energy Corporation	Calculation of Normal Weather
GR-2006-0422 Direct/Rebuttal/ Surrebuttal	Missouri Gas Energy	Calculation of Normal Weather
ER-2007-0002 Direct/Rebuttal	Union Electric d/b/a AmerenUE	Calculation of Normal Weather, Large Customer Annualization
GR-2007-0003 Direct	Union Electric d/b/a AmerenUE	Calculation of Normal Weather
ER-2007-0004 Direct/ Supplemental Direct	Aquila, Inc	Calculation of Normal Weather, Revenue
GR-2007-0208 Direct	Laclede Gas Company	Calculation of Normal Weather
ER-2007-0291 Direct/Rebuttal	Kansas City Power & Light Co.	Calculation of Normal Weather, Large Power Revenue
ER-2008-0093 Direct(Report)/ Surrebuttal True-up Direct	Empire District Electric	Revenue, Rate Design

Case Number	Company	<u>Issue</u>
HR-2008-0300 Direct(Report)	Trigen-Kansas City Energy Corp.	Rate Design
ER-2008-0318 Direct(Report)	Union Electric d/b/a AmerenUE	Revenue
ER-2009-0089 Direct	Kansas City Power & Light Co.	[Coordinator]
ER-2009-0090 Direct(Report)	KCP&L Greater Missouri Operations	Revenue, [Coordinator]
HR-2009-0092 Direct	KCP&L Steam Greater Missouri Operations	[Coordinator]
ER-2010-0036 Direct(Report)	Union Electric d/b/a AmerenUE	Revenue

#### **Casey Westhues**

#### **Educational and Employment Background and Credentials**

I am currently employed with the Missouri Public Service Commission as a Utility Regulatory Auditor I. I accepted this position in January 2009.

I graduated from Missouri State University located in Springfield, MO with my Masters

Degree in Accounting in December 2009. Prior to obtaining my Masters degree, I earned my

Bachelors of Science degree in Accounting from William Woods University located in Fulton,

MO.

In my short time at the commission I have participated in the Empire District Electric rate case, Case No. ER-2010-0130. While working on this case I sponsored recommendations in the following areas: outside services, materials and supplies, prepayments, customer deposits, rate case expense, insurance expense, postage, injuries and damages, advertising, property taxes, cash working capital, plant in service, depreciation reserve, and dues and donations.

#### **David Williams**

#### **Educational and Employment Background and Credentials**

I am currently employed as a Utility Engineering Specialist II for the Missouri Public Service Commission (Commission). I was employed by the Commission in July of 2008. I received a Master of Science degree in Industrial Engineering from the University of Missouri - Columbia in 1967, and undergraduate degrees in engineering and business management in 1965.

From 1967 until 2000 I was employed by the University of Missouri in engineering, research and information technology capacities.

### **Case Participation:**

Company	Case No.
Aqua Missouri (CU)	SR-2010-0026
Aqua Missouri (CU)	WR-2010-0027
Aqua Missouri (Development)	SR-2010-0023
Aqua Missouri (Development)	SC-2010-0150
Aqua Missouri, Inc.	SC-2010-0152
Aqua Missouri, Inc.	WC-2010-0151
Aqua Missouri (RU)	WC-2010-0153
Aqua Missouri (RU)	WR-2010-0025
Citizens Telephone Company	IO-2009-0032
Empire District Electric	ER-2010-0130
Empire District Gas	GR-2009-0434
Hickory Hills Water & Sewer	WR-2009-0151
Hickory Hills Water & Sewer	SR-2009-0154

Company	Case No.
Kansas City Power and Light	HR-2009-0092
Laclede Gas	GR-2010-0171
Lake Region Water & Sewer	WR-2010-0111
Lake Region Water & Sewer	SR-2010-0110
Mid-Missouri Telephone	IU-2010-0164
Missouri Gas Energy	GR-2009-0355
Missouri Gas Energy	GE-2010-0030
Missouri Utilities	WR-2009-0150
Missouri Utilities	SR-2009-0153
Osage Water	WR-2009-0149
Osage Water	SR-2009-0152
Suburban Water and Sewer	WR-2009-0197
Swiss Villa Utilities	WO-2007-0410
Whiteside Hidden Acres	WA-2009-0261
Whiteside Hidden Acres	SA-2009-0262
Woodland Acres	WA-2009-0031

#### MISSOURI PUBLIC SERVICE COMMISSION

## STAFF REPORT COST OF SERVICE

# APPENDIX 2 Support for Staff Cost of Capital Recommendations

### EMPIRE DISTRICT ELECTRIC COMPANY

**The-Investor (Electric)** 

CASE NO. ER-2010-0130

#### Attachment A

The DCF model is a market-oriented approach for deriving the cost of common equity. The cost of common equity calculated from the DCF model is inherently capable of attracting capital. This results from the theory that security prices adjust continually over time, so that an equilibrium price exists and the stock is neither undervalued nor overvalued. It can also be stated that stock prices continually fluctuate to reflect the required and expected return for the investor.

The constant-growth form of the DCF model was used in this analysis. This model relies upon the fact that a company's common stock price is dependent upon the expected cash dividends and upon cash flows received through capital gains or losses that result from stock price changes. The interest rate which discounts the sum of the future expected cash flows to the current market price of the common stock is the calculated cost of common equity. This can be expressed algebraically as:

where k equals the cost of equity. Since the expected price of a stock in one year is equal to the present price multiplied by one plus the growth rate, equation (1) can be restated as:

Present Price = 
$$\frac{\text{Expected Dividends}}{(1+k)}$$
 +  $\frac{\text{Present Price } (1+g)}{(1+k)}$  (2)

where g equals the growth rate and k equals the cost of equity. Letting the present price equal  $P_0$  and expected dividends equal  $D_1$ , the equation appears as:

$$P_0 = \frac{D_1}{(1+k)} + \frac{P_0(1+g)}{(1+k)}$$
(3)

The cost of equity equation may also be algebraically represented as:

$$k = \frac{D_1}{\underline{\phantom{a}}} + g \tag{4}$$

Thus, the cost of common stock equity, k, is equal to the expected dividend yield  $(D_1/P_0)$  plus the expected growth in dividends (g) continuously summed into the future. The growth in dividends and implied growth in earnings will be reflected in the current price. Therefore, this model also recognizes the potential of capital gains or losses associated with owning a share of common stock.

The discounted cash flow method is a continuous stock valuation model. The DCF theory is based on the following assumptions:

- 1. Market equilibrium;
- 2. Perpetual life of the company;
- 3. Constant payout ratio;
- 4. Payout of less than 100% earnings;
- 5. Constant price/earnings ratio;
- 6. Constant growth in cash dividends;
- 7. Stability in interest rates over time;
- 8. Stability in required rates of return over time; and,
- 9. Stability in earned returns over time.

Flowing from these, it is further assumed that an investor's growth horizon is unlimited and that earnings, book values and market prices grow hand-in-hand. Although the entire list of the above assumptions is rarely met, the DCF model is a reasonable working model describing an actual investor's expectations and resulting behaviors.

#### Attachment B

The CAPM describes the relationship between a security's investment risk and its market rate of return. This relationship identifies the rate of return which investors expect a security to earn so that its market return is comparable with the market returns earned by other securities that have similar risk. The general form of the CAPM is as follows:

$$k = R_f + \beta (R_m - R_f)$$

where:

k = the expected return on equity for a specific security;

 $R_f$  = the risk-free rate;

 $\beta$  = beta; and

 $R_m \;$  -  $\; R_f \;\; = \;\; \; \; \; the \; market \; risk \; premium.$ 

The first term of the CAPM is the risk-free rate (Rf). The risk-free rate reflects the level of return that can be achieved without accepting any risk. In reality, there is no such risk-free asset, but it is generally represented by U.S. Treasury securities.

The second term of the CAPM is beta  $(\beta)$ . Beta is an indicator of a security's investment risk. It represents the relative movement and relative risk between a particular security and the market as a whole (where beta for the market equals 1.00). Securities with betas greater than 1.00 exhibit greater volatility than do securities with betas less than 1.00. This causes a higher beta security to be less desirable to a risk-averse investor and therefore requires a higher return in order to attract investor capital away from a lower beta security.

The final term of the CAPM is the market risk premium  $(R_m - R_f)$ . The market risk premium represents the expected return from holding the entire market portfolio less the expected return from holding a risk-free investment.

### AN ANALYSIS OF THE COST OF CAPITAL

#### **FOR**

### THE EMPIRE DISTRICT ELECTRIC COMPANY

### CASE NO. ER-2010-0130 SCHEDULES

#### $\mathbf{BY}$

### **SHANA ATKINSON**

#### **UTILITY SERVICES DIVISION**

### MISSOURI PUBLIC SERVICE COMMISSION

#### **FEBRUARY 2010**

#### **List of Schedules**

Schedule Number	Description of Schedule
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1 2-1	List of Schedules  Federal Reserve Discount Rete and Federal Reserve Funds Rete Changes
2-1	Federal Reserve Discount Rate and Federal Reserve Funds Rate Changes Graph of Federal Reserve Discount Rates and Federal Funds Rates Changes
3-1	Rate of Inflation
3-1	Graph of Rate of Inflation
3-2 4-1	Average Yields on Mergent's Public Utility Bonds
4-1	Average Yields on Thirty-Year U.S. Treasury Bonds
4-3	Graph of Average Yields on Mergent's Public Utility Bonds and Thirty-
4-3	Year U.S. Treasury Bonds
4-4	Graph of Monthly Spreads Between Yields on Mergent's Public Utility
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17	Constant-Growth Discount Cash Flow (DCF) Estimated Costs of Common Equity for the Comparable
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	for the Comparable Electric Utility Companies and Empire
19	Multiple-Stage Discounted Cash Flow (DCF) Estimated Costs of Common Equity
	for the Comparable Electric Utility Companies and Empire
20	Selected Financial Ratios for the Comparable Electric Utility Companies and Empire
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#### Federal Reserve Discount Rates Changes and Federal Reserve Funds Rates Changes

	Federal Reserve	Federal Reserve		Federal Reserve	Federal Reserve
Date	Discount Rate	Funds Rate	Date	Discount Rate	Funds Rate
01/01/83	8.50%		06/30/99	4.50%	5.00%
12/31/83	8.50%		08/24/99	4.75%	5.25%
04/09/84	9.00%		11/16/99	5.00%	5.50%
11/21/84	8.50%		02/02/00	5.25%	5.75%
12/24/84	8.00%		03/21/00	5.50%	6.00%
05/20/85	7.50%		05/19/00	6.00%	6.50%
03/07/86	7.00%		01/03/01	5.75%	6.00%
04/21/86	6.50%		01/04/01	5.50%	6.00%
07/11/86	6.00%		01/31/01	5.00%	5.50%
08/21/86	5.50%		03/20/01	4.50%	5.00%
09/04/87	6.00%		04/18/01	4.00%	4.50%
08/09/88	6.50%		05/15/01	3.50%	4.00%
02/24/89	7.00%		06/27/01	3.25%	3.75%
07/13/90		8.00%*	08/21/01	3.00%	3.50%
10/29/90		7.75%	09/17/01	2.50%	3.00%
11/13/90		7.50%	10/02/01	2.00%	2.50%
12/07/90		7.25%	11/06/01	1.50%	2.00%
12/18/90		7.00%	12/11/01	1.25%	1.75%
12/19/90	6.50%	7.0070	11/06/02	0.75%	1.25%
01/09/91	0.5070	6.75%	01/09/03	2.25%**	1.25%
02/01/91	6.00%	6.25%	06/25/03	2.00%	1.00%
03/08/91	0.0070	6.00%	06/30/04	2.25%	1.25%
04/30/91	5.50%	5.75%	08/10/04	2.50%	1.50%
08/06/91	3.3070	5.50%	09/21/04	2.75%	1.75%
09/13/91	5.00%	5.25%	11/10/04	3.00%	2.00%
10/31/91	3.0076	5.00%	12/14/04	3.25%	2.25%
11/06/91	4.50%	4.75%	02/02/05	3.50%	2.50%
12/06/91	4.5076	4.50%	03/22/05	3.75%	2.75%
12/20/91	3.50%	4.00%	05/03/05	4.00%	3.00%
04/09/92	3.30 //	3.75%	06/30/05	4.25%	3.25%
07/02/92	3.00%	3.25%	08/09/05	4.50%	3.50%
09/04/92	3.00%	3.00%	09/20/05	4.75%	3.75%
01/01/93		3.00%	11/01/05	5.00%	4.00%
12/31/93	No Changes	No Changes	12/13/05	5.25%	4.25%
02/04/94	No Changes	No Changes 3.25%	01/31/06	5.50%	4.50%
03/22/94					
04/18/94		3.50% 3.75%	03/28/06 05/10/06	5.75% 6.00%	4.75% 5.00%
	2 500/				
05/17/94 08/16/94	3.50% 4.00%	4.25% 4.75%	06/29/06 08/17/07	6.25% 5.75%	5.25% 5.25%
11/15/94	4.75%	5.50%	09/18/07	5.25%	4.75%
02/01/95	5.25%	6.00%	10/31/07	5.00%	4.50%
07/06/95		5.75%	12/11/07	4.75%	4.25% 3.50%
12/19/95	F 000/	5.50%	01/22/08	4.00%	
01/31/96	5.00%	5.25%	01/30/08	3.50%	3.00%
03/25/97	E 000/	5.50%	03/16/08	3.25%	0.050/
12/12/97	5.00%		03/18/08	2.50%	2.25%
01/09/98	5.00%		04/30/08	2.25%	2.00%
03/06/98	5.00%	5.050/	10/08/08	1.75%	1.50%
09/29/98	4.750/	5.25%	10/28/08	1.25%	1.00%
10/15/98	4.75%	5.00%	12/30/08	0.50%	0%25%
11/17/98	4.50%	4.75%			

<sup>\*</sup> Staff began tracking the Federal Funds Rate.

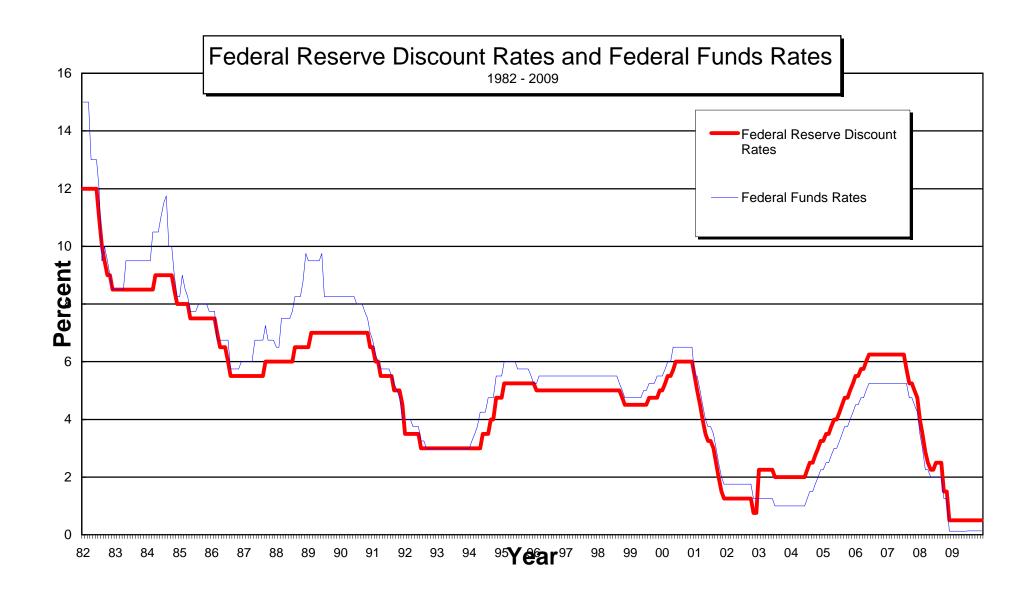
Source:

Federal Reserve Discount rate
Federal Reserve Funds rate

http://www.newyorkfed.org/markets/statistics/dlyrates/fedrate.html
http://www.newyorkfed.org/markets/statistics/dlyrates/fedrate.html

Note: Interest rates as of December 31 for each year are underlined.

<sup>\*\*</sup>Revised discount window program begins. Reflects rate on primary credit. This revised discount window policy results in incomparat of the discount rates after January 9, 2003 to discount rates before January 9, 2003.

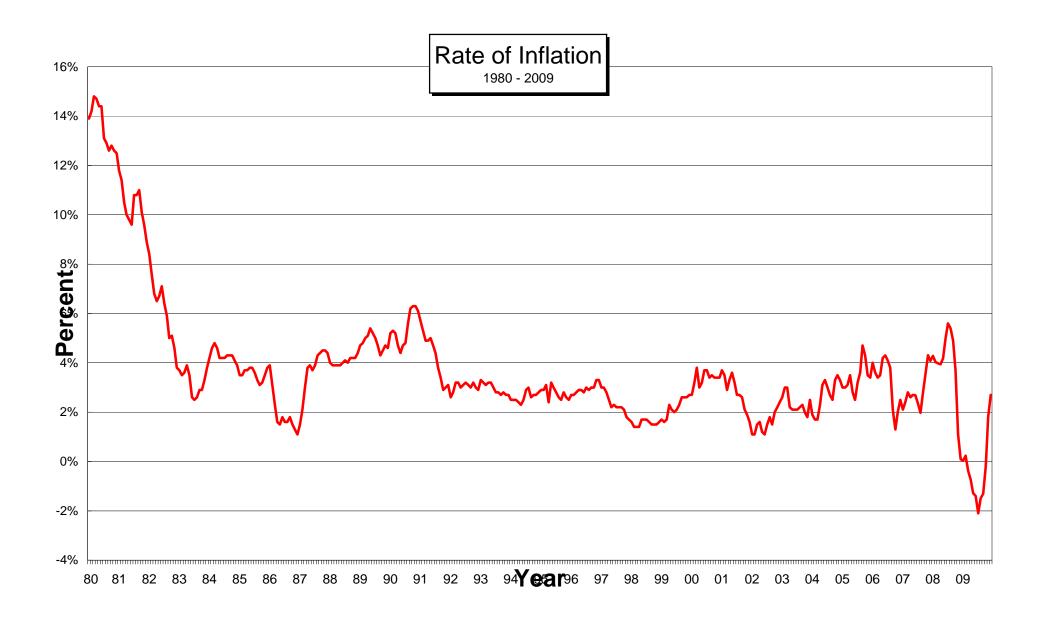


#### Rate of Inflation

Mo/Year Jan 1980	Rate (%)	Mo/Year Jan 1984	Rate (%) 4.20	Mo/Year Jan 1988	Rate (%) 4.00	Mo/Year Jan 1992	Rate (%) 2.60	Mo/Year Jan 1996	Rate (%) 2.70	Mo/Year Jan 2000	Rate (%)	Mo/Year Jan 2004	Rate (%)	Mo/Year Jan 2008	Rate (%) 4.30
Feb	14.20	Feb	4.60	Feb	3.90	Feb	2.80	Feb	2.70	Feb	3.20	Feb	1.70	Feb	4.00
Mar	14.80	Mar	4.80	Mar	3.90	Mar	3.20	Mar	2.80	Mar	3.70	Mar	1.70	Mar	4.00
Apr	14.70	Apr	4.60	Apr	3.90	Apr	3.20	Apr	2.90	Apr	3.00	Apr	2.30	Apr	3.90
May	14.40	May	4.20	May	3.90	May	3.00	May	2.90	May	3.20	May	3.10	May	4.20
Jun	14.40	Jun	4.20	Jun	4.00	Jun	3.10	Jun	2.80	Jun	3.70	Jun	3.30	Jun	5.00
Jul	13.10	Jul	4.20	Jul	4.10	Jul	3.20	Jul	3.00	Jul	3.70	Jul	3.00	Jul	5.60
Aug	12.90	Aug	4.30	Aug	4.00	Aug	3.10	Aug	2.90	Aug	3.40	Aug	2.70	Aug	5.40
Sep	12.60	Sep	4.30	Sep	4.20	Sep	3.00	Sep	3.00	Sep	3.50	Sep	2.50	Sep	4.90
Oct	12.80	Oct	4.30	Oct	4.20	Oct	3.20	Oct	3.00	Oct	3.40	Oct	3.30	Oct	3.70
Nov	12.60	Nov	4.10	Nov	4.20	Nov	3.00	Nov	3.30	Nov	3.40	Nov	3.50	Nov	1.10
Dec	12.50	Dec	3.90	Dec	4.40	Dec	2.90	Dec	3.30	Dec	3.40	Dec	3.30	Dec	0.10
Jan 1981	11.80	Jan 1985	3.50	Jan 1989	4.70	Jan 1993	3.30	Jan 1997	3.00	Jan 2001	3.70	Jan 2005	3.00	Jan 2009	0.00
Feb	11.40	Feb	3.50	Feb	4.80	Feb	3.20	Feb	3.00	Feb	3.50	Feb	3.00	Feb	0.20
Mar	10.50	Mar	3.70	Mar	5.00	Mar	3.10	Mar	2.80	Mar	2.90	Mar	3.10	Mar	-0.40
Apr	10.00	Apr	3.70	Apr	5.10	Apr	3.20	Apr	2.50	Apr	3.30	Apr	3.50	Apr	-0.70
May	9.80	May	3.80	May	5.40	May	3.20	May	2.20	May	3.60	May	2.80	May	-1.28
Jun	9.60	Jun	3.80	Jun	5.20	Jun	3.00	Jun	2.30	Jun	3.20	Jun	2.50	Jun	-1.40
Jul	10.80	Jul	3.60	Jul	5.00	Jul	2.80	Jul	2.20	Jul	2.70	Jul	3.20	Jul	-2.10
Aug	10.80	Aug	3.30	Aug	4.70	Aug	2.80	Aug	2.20	Aug	2.70	Aug	3.60	Aug	-1.50
Sep	11.00	Sep	3.10	Sep	4.30	Sep	2.70	Sep	2.20	Sep	2.60	Sep	4.70	Sep	-1.30
Oct	10.10	Oct	3.20	Oct	4.50	Oct	2.80	Oct	2.10	Oct	2.10	Oct	4.30	Oct	-0.20
Nov	9.60	Nov	3.50	Nov	4.70	Nov	2.70	Nov	1.80	Nov	1.90	Nov	3.50	Nov	1.80
Dec	8.90	Dec	3.80	Dec	4.60	Dec	2.70	Dec	1.70	Dec	1.60	Dec	3.40	Dec	2.70
Jan 1982	8.40	Jan 1986	3.90	Jan 1990	5.20	Jan 1994	2.50	Jan 1998	1.60	Jan 2002	1.10	Jan 2006	4.00		
Feb	7.60	Feb	3.10	Feb	5.30	Feb	2.50	Feb	1.40	Feb	1.10	Feb	3.60		
Mar	6.80	Mar	2.30	Mar	5.20	Mar	2.50	Mar	1.40	Mar	1.50	Mar	3.40		
Apr	6.50	Apr	1.60	Apr	4.70	Apr	2.40	Apr	1.40	Apr	1.60	Apr	3.50		
May	6.70	May	1.50	May	4.40	May	2.30	May	1.70	May	1.20	May	4.20		
Jun	7.10	Jun	1.80	Jun	4.70	Jun	2.50	Jun	1.70	Jun	1.10	June	4.30		
Jul	6.40	Jul	1.60	Jul	4.80	Jul	2.90	Jul	1.70	Jul	1.50	July	4.10		
Aug	5.90	Aug	1.60	Aug	5.60	Aug	3.00	Aug	1.60	Aug	1.80	Aug	3.80		
Sep	5.00	Sep	1.80	Sep	6.20	Sep	2.60	Sep	1.50	Sep	1.50	Sep	2.10		
Oct	5.10	Oct	1.50	Oct	6.30	Oct	2.70	Oct	1.50	Oct	2.00	Oct	1.30		
Nov	4.60	Nov	1.30	Nov	6.30	Nov	2.70	Nov	1.50	Nov	2.20	Nov	2.00		
Dec	3.80	Dec	1.10	Dec	6.10	Dec	2.80	Dec	1.60	Dec	2.40	Dec	2.50		
Jan 1983	3.70	Jan 1987	1.50	Jan 1991	5.70	Jan 1995	2.90	Jan 1999	1.70	Jan 2003	2.60	Jan 2007	2.10		
Feb	3.50	Feb	2.10	Feb	5.30	Feb	2.90	Feb	1.60	Feb	3.00	Feb	2.40		
Mar	3.60	Mar	3.00	Mar	4.90	Mar	3.10	Mar	1.70	Mar	3.00	Mar	2.80		
Apr	3.90	Apr	3.80	Apr	4.90	Apr	2.40	Apr	2.30	Apr	2.20	Apr	2.60		
May	3.50	May	3.90	May	5.00	May	3.20	May	2.10	May	2.10	May	2.70		
Jun	2.60 2.50	Jun	3.70 3.90	Jun	4.70 4.40	Jun Jul	3.00 2.80	Jun	2.00 2.10	Jun	2.10 2.10	Jun Jul	2.70 2.40		
Jul	2.50	Jul	4.30	Jul	3.80		2.60	Jul	2.10	Jul	2.10		2.40		
Aug Sep	2.60	Aug Sep	4.30 4.40	Aug Sep	3.40	Aug Sep	2.50	Aug	2.30	Aug Sep	2.20	Aug Sep	2.80		
Oct	2.90	Oct	4.40	Oct	2.90	Oct	2.80	Sep Oct	2.60	Oct	2.00	Oct	3.50		
Nov	3.30	Nov	4.50	Nov	3.00	Nov	2.60	Nov	2.60	Nov	1.80	Nov	4.30		
Dec	3.80	Dec	4.40	Dec	3.10	Dec	2.50	Dec	2.70	Dec	1.90	Dec	4.30		
200	5.50	200	7.70	200	5.10	200	2.00	200	2.70	200	1.30	200	7.10		

Source: U.S. Dept of Labor, Bureau of Labor Statistics, Consumer Price Index - All Urban Consumers, Change for 12-Month Period, Bureau of Labor Statistics,

http://www.bls.gov/schedule/archives/cpi\_nr.htm



#### Average Yields on Mergent's Public Utility Bonds

Mo/Year Jan 1980	Rate (%)	Mo/Year Jan 1984	Rate (%)	Mo/Year Jan 1988	Rate (%)	Mo/Year Jan 1992	Rate (%) 8.67	Mo/Year Jan 1996	Rate (%) 7.20	Mo/Year Jan 2000	Rate (%) 8.22	Mo/Year Jan 2004	Rate (%) 6.23	Mo/Year Jan 2008	Rate (%) 6.08
Feb	13.48	Feb	13.50	Feb	10.73	Feb	8.77	Feb	7.20	Feb	8.10	Feb	6.17	Feb	6.28
Mar	14.33	Mar	14.03	Mar	10.11	Mar	8.84	Mar	7.72	Mar	8.14	Mar	6.01	Mar	6.29
Apr	13.50	Apr	14.30	Apr	10.53	Apr	8.79	Apr	7.88	Apr	8.14	Apr	6.38	Apr	6.36
May	12.17	May	14.95	May	10.75	May	8.72	May	7.99	May	8.55	May	6.68	May	6.38
Jun	11.87	Jun	15.16	Jun	10.71	Jun	8.64	Jun	8.07	Jun	8.22	Jun	6.53	Jun	6.50
Jul	12.12	Jul	14.92	Jul	10.96	Jul	8.46	Jul	8.02	Jul	8.17	Jul	6.34	Jul	6.50
Aug	12.82	Aug	14.29	Aug	11.09	Aug	8.34	Aug	7.84	Aug	8.05	Aug	6.18	Aug	6.48
Sep	13.29	Sep	14.04	Sep	10.56 9.92	Sep	8.32	Sep	8.01	Sep	8.16	Sep	6.01	Sep	6.59 7.70
Oct	13.53	Oct	13.68	Oct		Oct	8.44 8.53	Oct	7.76	Oct	8.08	Oct	5.95 5.07	Oct	7.70
Nov Dec	14.07 14.48	Nov Dec	13.15 12.96	Nov Dec	9.89 10.02	Nov Dec	8.36	Nov Dec	7.48 7.58	Nov Dec	8.03 7.79	Nov Dec	5.97 5.93	Nov Dec	6.87
Jan 1981	14.22	Jan 1985	12.88	Jan 1989	10.02	Jan 1993	8.23	Jan 1997	7.79	Jan 2001	7.76	Jan 2005	5.80	Jan 2009	6.77
Feb	14.84	Feb	13.00	Feb	10.02	Feb	8.00	Feb	7.79	Feb	7.69	Feb	5.64	Feb	6.72
Mar	14.86	Mar	13.66	Mar	10.02	Mar	7.85	Mar	7.92	Mar	7.59	Mar	5.86	Mar	6.85
			13.42				7.76								
Apr	15.32	Apr		Apr	10.14	Apr		Apr	8.08	Apr	7.81	Apr	5.72	Apr	6.90
May	15.84	May	12.89	May	9.92	May	7.78	May	7.94	May	7.88	May	5.60	May	6.83
Jun	15.27	Jun	11.91	Jun	9.49	Jun	7.68	Jun	7.77	Jun	7.75	Jun	5.39	June	6.54
Jul	15.87	Jul	11.88	Jul	9.34	Jul	7.53	Jul	7.52	Jul	7.71	Jul	5.50	July	6.15
Aug	16.33	Aug	11.93	Aug	9.37	Aug	7.21	Aug	7.57	Aug	7.57	Aug	5.51	Aug	5.80
Sep	16.89	Sep	11.95	Sep	9.43	Sep	7.01	Sep	7.50	Sep	7.73	Sep	5.54	Sep	5.60
Oct	16.76	Oct	11.84	Oct	9.37	Oct	6.99	Oct	7.37	Oct	7.64	Oct	5.79	Oct	5.64
Nov	15.50	Nov	11.33	Nov	9.33	Nov	7.30	Nov	7.24	Nov	7.61	Nov	5.88	Nov	5.71
Dec	15.77	Dec	10.82	Dec	9.31	Dec	7.33	Dec	7.16	Dec	7.86	Dec	5.83	Dec	5.86
Jan 1982	16.73	Jan 1986	10.66	Jan 1990	9.44	Jan 1994	7.31	Jan 1998	7.03	Jan 2002	7.69	Jan 2006	5.77		
Feb	16.72	Feb	10.16	Feb	9.66	Feb	7.44	Feb	7.09	Feb	7.62	Feb	5.83		
Mar	16.07	Mar	9.33	Mar	9.75	Mar	7.83	Mar	7.13	Mar	7.83	Mar	5.98		
Apr	15.82	Apr	9.02	Apr	9.87	Apr	8.20	Apr	7.12	Apr	7.74	Apr	6.28		
May	15.60	May	9.52	May	9.89	May	8.32	May	7.11	May	7.76	May	6.39		
Jun	16.18	Jun	9.51	Jun	9.69	Jun	8.31	Jun	6.99	Jun	7.67	June	6.39		
Jul	16.04	Jul	9.19	Jul	9.66	Jul	8.47	Jul	6.99	Jul	7.54	July	6.37		
Aug	15.22	Aug	9.15	Aug	9.84	Aug	8.41	Aug	6.96	Aug	7.34	Aug	6.20		
Sep	14.56	Sep	9.42	Sep	10.01	Sep	8.65	Sep	6.88	Sep	7.23	Sep	6.03		
Oct	13.88	Oct	9.39	Oct	9.94	Oct	8.88	Oct	6.88	Oct	7.43	Oct	6.01		
Nov	13.58	Nov	9.15	Nov	9.76	Nov	9.00	Nov	6.96	Nov	7.31	Nov	5.82		
Dec	13.55	Dec	8.96	Dec	9.57	Dec	8.79	Dec	6.84	Dec	7.20	Dec	5.83		
Jan 1983	13.46	Jan 1987	8.77	Jan 1991	9.56	Jan 1995	8.77	Jan 1999	6.87	Jan 2003	7.13	Jan 2007	5.96		
Feb	13.60	Feb	8.81	Feb	9.31	Feb	8.56	Feb	7.00	Feb	6.92	Feb	5.91		
Mar	13.28	Mar	8.75	Mar	9.39	Mar	8.41	Mar	7.18	Mar	6.80	Mar	5.87		
Apr	13.03	Apr	9.30	Apr	9.30	Apr	8.30	Apr	7.16	Apr	6.68	Apr	6.01		
May	13.00	May	9.82	May	9.29	May	7.93	May	7.42	May	6.35	May	6.03		
Jun	13.17	Jun	9.87	Jun	9.44	Jun	7.62	Jun	7.70	Jun	6.21	June	6.34		
Jul	13.28	Jul	10.01	Jul	9.40	Jul	7.73	Jul	7.66	Jul	6.54	July	6.28		
Aug	13.50	Aug	10.33	Aug	9.16	Aug	7.75	Aug	7.86	Aug	6.78	Aug	6.28		
Sep	13.35	Sep	11.00	Sep	9.03	Sep	7.62	Sep	7.87	Sep	6.58	Sep	6.24		
Oct	13.19	Oct	11.32	Oct	9.03 8.99	Oct	7.62	Oct	8.02	Oct	6.50	Oct	6.24		
			10.82										6.04		
Nov	13.33	Nov		Nov	8.93	Nov	7.40	Nov	7.86	Nov	6.44	Nov			
Dec	13.48	Dec	10.99	Dec	8.76	Dec	7.21	Dec	8.04	Dec	6.36	Dec	6.23		

Source:

Mergent Bond Record

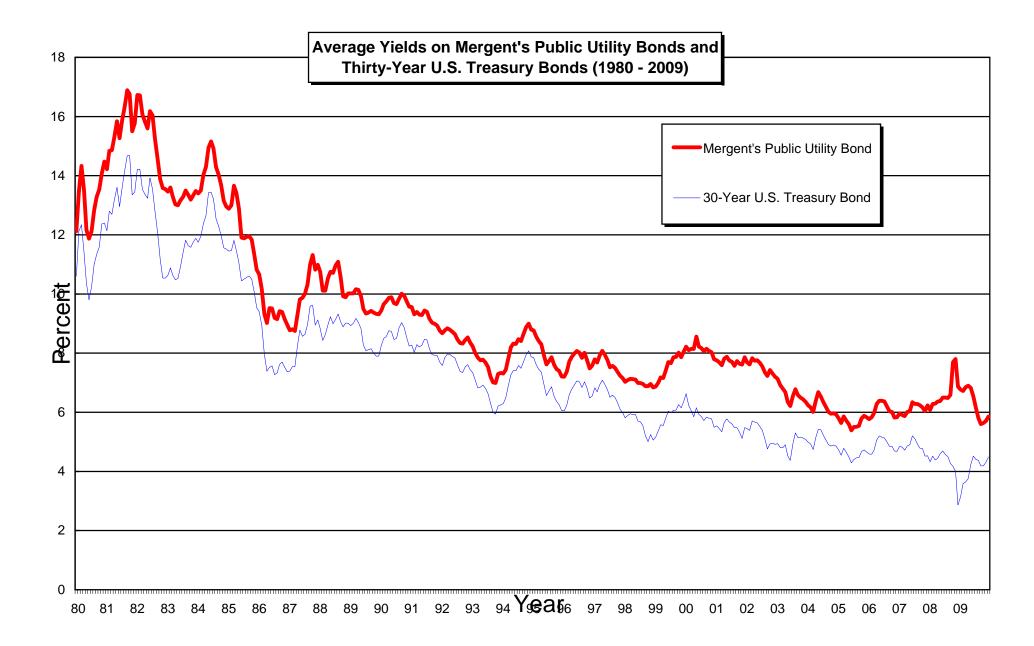
#### Average Yields on Thirty-Year U.S. Treasury Bonds

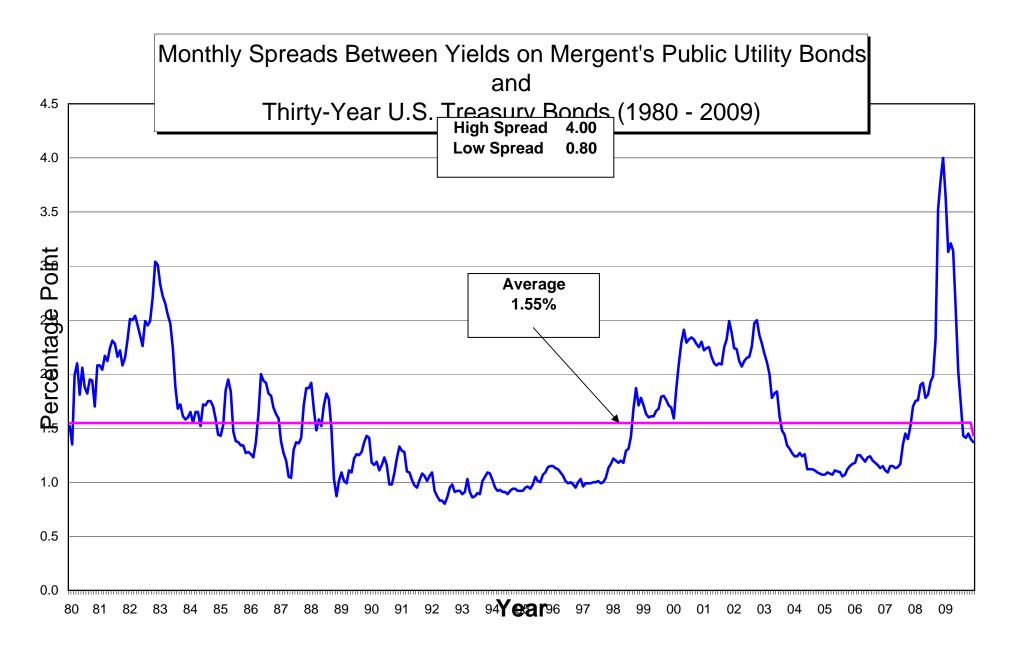
Mo/Year Jan 1980	Rate (%) 10.60	Mo/Year Jan 1984	Rate (%) 11.75	Mo/Year Jan 1988	Rate (%) 8.83	Mo/Year Jan 1992	Rate (%) 7.58	Mo/Year Jan 1996	Rate (%) 6.05	Mo/Year Jan 2000	Rate (%) 6.63	Mo/Year Jan 2004	Rate (%) 4.99	Mo/Year Jan 2008	Rate (%) 4.33
Feb	12.13	Feb	11.75	Feb	8.43	Feb	7.36 7.85	Feb	6.24	Feb	6.23	Feb	4.93	Feb	4.52
Mar	12.13	Mar	12.38	Mar	8.63	Mar	7.83 7.97	Mar	6.60	Mar	6.05	Mar	4.74	Mar	4.39
Apr	11.40	Apr	12.65	Apr	8.95	Apr	7.96	Apr	6.79	Apr	5.85	Apr	5.14	Apr	4.44
May	10.36	May	13.43	May	9.23	May	7.89	May	6.93	May	6.15	May	5.42	May	4.60
Jun	9.81	Jun	13.44	Jun	9.00	Jun	7.84	Jun	7.06	Jun	5.93	Jun	5.41	Jun	4.69
Jul	10.24	Jul	13.21	Jul	9.14	Jul	7.60	Jul	7.03	Jul	5.85	Jul	5.22	Jul	4.57
Aug	11.00	Aug	12.54	Aug	9.32	Aug	7.39	Aug	6.84	Aug	5.72	Aug	5.06	Aug	4.50
Sep	11.34	Sep	12.29	Sep	9.06	Sep	7.34	Sep	7.03	Sep	5.83	Sep	4.90	Sep	4.27
Oct	11.59	Oct	11.98	Oct	8.89	Oct	7.53	Oct	6.81	Oct	5.80	Oct	4.86	Oct	4.17
Nov	12.37	Nov	11.56	Nov	9.02	Nov	7.61	Nov	6.48	Nov	5.78	Nov	4.89	Nov	4.00
Dec	12.40	Dec	11.52	Dec	9.01	Dec	7.44	Dec	6.55	Dec	5.49	Dec	4.86	Dec	2.87
Jan 1981	12.14	Jan 1985	11.45	Jan 1989	8.93	Jan 1993	7.34	Jan 1997	6.83	Jan 2001	5.54	Jan 2005	4.73	Jan 2009	3.13
Feb	12.80	Feb	11.47	Feb	9.01	Feb	7.09	Feb	6.69	Feb	5.45	Feb	4.55	Feb	3.59
Mar	12.69	Mar	11.81	Mar	9.17	Mar	6.82	Mar	6.93	Mar	5.34	Mar	4.78	Mar	3.64
Apr	13.20	Apr	11.47	Apr	9.03	Apr	6.85	Apr	7.09	Apr	5.65	Apr	4.65	Apr	3.76
May	13.60	May	11.05	May	8.83	May	6.92	May	6.94	May	5.78	May	4.49	May	4.23
Jun	12.96	Jun	10.44	Jun	8.27	Jun	6.81	Jun	6.77	Jun	5.67	Jun	4.29	June	4.52
Jul	13.59	Jul	10.50	Jul	8.08	Jul	6.63	Jul	6.51	Jul	5.61	Jul	4.41	July	4.41
Aug	14.17	Aug	10.56	Aug	8.12	Aug	6.32	Aug	6.58	Aug	5.48	Aug	4.46	August	4.37
Sep	14.67	Sep	10.61	Sep	8.15	Sep	6.00	Sep	6.50	Sep	5.48	Sep	4.47	Sept	4.19
Oct	14.68	Oct	10.50	Oct	8.00	Oct	5.94	Oct	6.33	Oct	5.32	Oct	4.67	Oct	4.19
Nov	13.35	Nov	10.06	Nov	7.90	Nov	6.21	Nov	6.11	Nov	5.12	Nov	4.73	Nov	4.31
Dec	13.45	Dec	9.54	Dec	7.90	Dec	6.25	Dec	5.99	Dec	5.48	Dec	4.66	Dec	4.49
Jan 1982	14.22	Jan 1986	9.40	Jan 1990	8.26	Jan 1994	6.29	Jan 1998	5.81	Jan 2002	5.44	Jan 2006	4.59	Jan 2010	4.60
Feb	14.22	Feb	8.93	Feb	8.50	Feb	6.49	Feb	5.89	Feb	5.39	Feb	4.58		
Mar	13.53	Mar	7.96	Mar	8.56	Mar	6.91	Mar	5.95	Mar	5.71	Mar	4.73		
Apr	13.37	Apr	7.39	Apr	8.76	Apr	7.27	Apr	5.92	Apr	5.67	Apr	5.06		
May	13.24	May	7.52	May	8.73	May	7.41	May	5.93	May	5.64	May	5.20		
Jun	13.92	Jun	7.57	Jun	8.46	Jun	7.40	Jun	5.70	Jun	5.52	Jun	5.16		
Jul	13.55	Jul	7.27	Jul	8.50	Jul	7.58	Jul	5.68	Jul	5.38	July	5.13		
Aug	12.77	Aug	7.33	Aug	8.86	Aug	7.49	Aug	5.54	Aug	5.08	Aug	5.00		
Sep	12.07	Sep	7.62	Sep	9.03	Sep	7.71	Sep	5.20	Sep	4.76	Sep	4.85		
Oct	11.17	Oct	7.70	Oct	8.86	Oct	7.94	Oct	5.01	Oct	4.93	Oct	4.85		
Nov	10.54	Nov	7.52	Nov	8.54	Nov	8.08	Nov	5.25	Nov	4.95	Nov	4.69		
Dec	10.54	Dec	7.37 7.39	Dec	8.24	Dec	7.87	Dec	5.06	Dec	4.92	Dec	4.68		
Jan 1983	10.63 10.88	Jan 1987	7.59 7.54	Jan 1991 Feb	8.27 8.03	Jan 1995 Feb	7.85 7.61	Jan 1999 Feb	5.16 5.37	Jan 2003 Feb	4.94 4.81	Jan 2007 Feb	4.85 4.82		
Feb	10.63	Feb Mar	7.54 7.55	Mar	8.29	Mar	7.61	Mar	5.58	Mar	4.80	Mar	4.62		
Mar Apr	10.63	Apr	8.25	Apr	8.21	Apr	7.43	Apr	5.55	Apr	4.90	Apr	4.72		
дрі Мау	10.48	May	8.78	May	8.27	May	6.95	May	5.81	May	4.53	May	4.90		
Jun	10.93	Jun	8.57	Jun	8.47	Jun	6.57	Jun	6.04	Jun	4.37	Jun	5.20		
Jul	11.40	Jul	8.64	Jul	8.45	Jul	6.72	Jul	5.98	Jul	4.93	July	5.11		
Aug	11.82	Aug	8.97	Aug	8.14	Aug	6.86	Aug	6.07	Aug	5.30	Aug	4.93		
Sep	11.63	Sep	9.59	Sep	7.95	Sep	6.55	Sep	6.07	Sep	5.14	Sep	4.79		
Oct	11.58	Oct	9.61	Oct	7.93	Oct	6.37	Oct	6.26	Oct	5.16	Oct	4.77		
Nov	11.75	Nov	8.95	Nov	7.92	Nov	6.26	Nov	6.15	Nov	5.13	Nov	4.52		
Dec	11.88	Dec	9.12	Dec	7.70	Dec	6.06	Dec	6.35	Dec	5.08	Dec	4.53		

#### Sources:

http://finance.yahoo.com/q/hp?s=^TYX

http://research.stlouisfed.org/fred2/data/GS30.txt







1919 1922 1925 1928 1931 1934 1938 1941 1944 1947 1950 1953 1957 1960 1966 1969 1972 1976 1979 1982 1985 1988 1991 1995 1998 2001 2004 2007

#### **Economic Estimates and Projections, 2010-2012**

	In	flation Rat	te	1	Real GDP	•	Un	employme	ent	3-M	o. T-Bill F	Rate	Long-To	erm T-Bo	nd Rate
Source Value Line Investment Survey Selection & Opinion (11-27-09, page 3183)	2010 1.80%	2011	2012	2010	2011 3.10%	3.20%	2010 10.10%	9.00%	2012 8.40%	2010 0.60%	2011	3.00%	2010 4.50%	2011 5.00%	5.10%
The Budget and Economic Outlook FY2010-2020 (January 2010)	2.40%	1.30%	1.20%	2.20%	1.90%	4.60%	10.10%	9.50%	8.00%	0.20%	0.70%	1.90%	N/A	N/A	N/A
Current rate	2.70%			5.70%			9.70%			0.11%			4.62%		

Notes: N/A = Not Available.

Value Line data for 2010-2012 are estimated.

Sources of Current Rates:

Inflation: The Bureau of Labor Statistics, Consumer Price Index - All Urban Consumers, unadjusted 12-Month Period Ending, December 31, 2009 (see first paragraph).

http://www.bls.gov/schedule/archives/cpi nr.htm

GDP: U.S. Department of Commerce, Bureau of Economic Analysis. Percentage change for the Fourth Quarter 2009 (see first paragraph).

http://www.bea.gov/newsreleases/national/gdp/gdpnewsrelease.htm

Unemployment: The Bureau of Labor Statistics, Economy Situation Summary - Unemployment Rate, January 2010.

http://www.bls.gov/news.release/empsit.nr0.htm

3-Month Treasury: St. Louis Federal Reserve website for February 12, 2010 (Weekly).

http://research.stlouisfed.org/fred2/series/TB3MS/22

30-Yr. T-Bond: St. Louis Federal Reserve website for February 12, 2010 (Weekly).

http://research.stlouisfed.org/fred2/series/WGS30YR

Other Sources: ValueLine Investment Survey Selection & Opinion, November 27, 2009, page 3183.

The Congressional Budget Office, The Budget and Economic Outlook: Fiscal Years 2010-2020, January 2010.

http://www.cbo.gov/publications/bysubject.cfm?cat=0

#### **Historical Consolidated Capital Structures for The Empire District Electric Company**

Capital Components	2005	2006	2007	2008	2009	5-Year Average
Common Equity	\$393,411,000.0	\$468,609,000.0	\$539,176,000.0	\$528,872,000.0	\$600,149,912.4	\$467,065,333.3
Preferred Stock	0.0	0.0	0.0	0.0	0.0	\$0.0
Long-Term Debt	408,173,000.0 *	462,539,000.0 *	541,880,000.0 *	611,567,000.0 *	640,156,403.3 *	\$470,864,000.0
Short-Term Debt	30,952,000.0	77,050,000.0	33,040,000.0	102,000,000.0	50,500,000.0	\$47,014,000.0
Total	\$832,536,000.0	\$1,008,198,000.0	\$1,114,096,000.0	\$1,242,439,000.0	\$1,290,806,315.7	\$984,943,333.3
Capital Components	2005	2006	2007	2008	2009	5-Year Average
Common Equity	47.25%	46.48%	48.40%	42.57%	46.49%	46.24%
Preferred Stock	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Long-Term Debt	49.03%	45.88%	48.64%	49.22%	49.59%	48.47%
Short-Term Debt	3.72%	7.64%	2.97%	8.21%	3.91%	5.29%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Source: Empire District Electric Company's 2005, 2006, 2007, 2008 Annual Reports and Response to Staff DR No. 0201.1

Note: \* The amount of long-term debt includes current maturities, capital leases, and \$50 million of trust preferred stock.

### Capital Structure as of December 31, 2009 The Empire District Electric Company

Capital Component	Dollar Amount (000's)	Percentage of Capital
Common Stock Equity	\$ 600,149,912	47.38%
Preferred Stock	\$ 48,638,468	3.84%
Long-Term Debt	\$ 618,007,745	48.79%
Short-Term Debt	\$ -	0.00%
<b>Total Capitalization</b>	\$ 1,266,796,125	100.00%

Notes: 1. Short-term debt balance net of construction work in progress (CWIP) was negative as of December 31, 2009. Therefore, no short-term debt is included in the capital structure.

Source: Responses to Staff DR Nos. 0009 and 0201.1

### Embedded Cost of Long-Term Debt as of December 31, 2009

	Amount Outstanding	Annual Cost
Bonds and Unsecured Notes Series:		
7.2% Series, Due 2016	\$25,000,000	\$1,800,000
5.2% Pollution Control Series, Due 2013	\$5,200,000	\$270,400
5.3% Pollution Control Series, Due 2013	\$8,000,000	\$424,000
7.05% Sr. Notes, Series, Due 2022	\$48,522,000	\$3,420,801
6.7% Sr. Notes, Series, Due 2033	\$62,000,000	\$4,154,000
5.8% Sr. Notes, Series, Due 7/1/2035	\$40,000,000	\$2,320,000
6-1/2 Series, Due 2010	\$50,000,000	\$3,250,000
4.5% Sr. Notes, Series, Due 2013	\$98,000,000	\$4,410,000
5.875%, Due 2037	\$80,000,000	\$4,700,000
6.82% Series, Due 6/1/2036-EDG	\$55,000,000	\$3,751,000
FMB 6.375% Series, Due 6/1/2018	\$90,000,000	\$5,737,500
7.0% Series, Due 2/28/2024	\$74,975,000	\$5,248,250
Premium, Discount and Expense	-\$18,689,255	\$2,255,416
Total	\$618,007,745	\$41,741,367
Embedded Cost of Long-term Debt		6.75%

Source: Response to DR No. 0201.1

### Embedded Cost of Trust Preferred Stock as of December 31, 2009

	Amount Outstanding	Annual Cost
Trust Preferred Series:		
Trust Preferred	\$50,000,000	\$4,250,000
Premium, Discount and Expense	-\$1,361,532	\$62,840
Total	\$48,638,468	\$4,312,840
Embedded Cost of Preferred Stock	[	8.87%

Source: Response to DR No. 0201

#### Criteria for Selecting Comparable Electric Utility Companies

(1)		(2)	(3)	(4)	(5) 10-Year	(6)	(7)	(8)	(9)	(10)
ValueLine		Stock Publicly	Regulated Electric Utility	% Electric Revenues	Value Line Historical Growth	No Reduced Dividend since	Projected Growth Available from Value Line	At Least Investment Grade Credit	Generation	Comparable Company Met All
Electric Utility Companies	Ticker	Traded	(EEI)	≥ 70%	Available	2006	and Reuters	Rating	Assets	Criteria
Allegheny Energy	AYE	Yes	No							
ALLETE	ALE	Yes	Yes	Yes	No					
Alliant Energy	LNT	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Amer. Elec. Power	AEP	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ameren Corp. Avista Corp.	AEE AVA	Yes Yes	Yes Yes	Yes No	Yes	No				
Black Hills	BKH	Yes	No	140						
Cen. Vermont Pub. Serv.	CV	Yes	Yes	Yes	Yes	Yes	No			
CenterPoint Energy	CNP	Yes	No							
CH Energy Group	CHG	Yes	Yes	No						
Cleco Corp.	CNL	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
CMS Energy Corp.	CMS	Yes	Yes	No						
Consol. Edison Constellation Energy	ED CEG	Yes Yes	Yes No	No						
Dominion Resources	D	Yes	No							
DPL Inc.	DPL	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
DTE Energy	DTE	Yes	No							
Duke Energy	DUK	Yes	No							
Edison Int'l	EIX	Yes	No							
El Paso Electric	EE	Yes	Yes	Yes	Yes	No <sup>1.</sup>				
Empire Dist. Elec.	EDE	Yes	Yes	Yes	Yes	Yes	No			
Entergy Corp.	ETR	Yes	No							
Evergreen Energy Inc Exelon Corp.	EEE EXC	Yes Yes	NA No							
FirstEnergy Corp.	FE	Yes	No							
Florida Public Utilities	FPU	Yes	NA NA							
Fortis Inc.	FTS.TO	Yes	NA							
FPL Group	FPL	Yes	No							
G't Plains Energy	GXP	Yes	Yes	Yes	Yes	No				
Hawaiian Elec.	HE	Yes	No	V	V	V	V	V	V	V
IDACORP, Inc. Integrys Energy	TEG	Yes Yes	Yes No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
ITC Holdings	ITC	Yes	NA NA							
Maine & Maritimes Corp	MAM	Yes	Yes	Yes	Yes	No				
MDU Resources	MDU	Yes	No							
MGE Energy	MGEE	Yes	No							
NiSource Inc.	NI	Yes	No							
Northeast Utilities	NU	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NorthWestern Corp NSTAR	NWE NST	Yes Yes	Yes Yes	No Yes	Yes	No				
OGE Energy	OGE	Yes	No	162	165	INU				
Otter Tail Corp.	OTTR	Yes	No							
Pepco Holdings	POM	Yes	No							
PG&E Corp.	PCG	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pinnacle West Capital	PNW	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PNM Resources	PNM	Yes	Yes	Yes	Yes	No				
Portland General PPL Corp.	POR PPL	Yes Yes	Yes No	Yes	No					
Progress Energy	PGN	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Public Serv. Enterprise	PEG	Yes	No	1 33	163	163	163	155	155	163
SCANA Corp.	SCG	Yes	No							
Sempra Energy	SRE	Yes	No							
Sierra Pacific Res.	SRP	Yes	NA							
Southern Co.	<u>so</u>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
TECO Energy	TE	Yes	Yes	No						
U.S. Energy Sys Inc UIL Holdings	USEYQ UIL	Yes Yes	NA Yes	Yes	Yes	Yes	Yes	Yes	No	
UniSource Energy	UNS	Yes	Yes	Yes	Yes	Yes	No	162	INU	
UNITIL Corp.	UTL	Yes	Yes	No	. 00	. 00	.10			
Vectren Corp.	VVC	Yes	Yes	No						
	V V C									
Westar Energy	WR	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Wilmington Capital Management	WR WCM/A.TO	Yes Yes	Yes NA		Yes	Yes	Yes	Yes	Yes	Yes
	WR	Yes	Yes	No Yes	Yes	Yes	Yes Yes	Yes	Yes	Yes

Sources: Columns 1, 2, 5, 6, 7 and 9 = The Value Line Investment Survey: Ratings & Reports Column 3 = Edison Electric Institute 2008 Financial Review Column 4 = January 2010 AUS Utility Reports.

Column 7 = Reuters.com.

Column 8 = S&P RatingsDirect

Notes: 1. No dividends per share.

NA = Not available.

### **Comparable Electrical Utility Companies** for The Empire District Electric Company

Number	Ticker Symbol	Company Name
1	LNT	Alliant Energy
2	AEP	American Electric Power
3	CNL	Cleco Corp.
4	DPL	DPL Inc.
5	IDA	IDACORP, Inc.
6	NU	Northeast Utilities
7	PCG	PG&E Corp.
8	PNW	Pinnacle West Capital
9	PGN	Progress Energy
10	SO	Southern Company
11	WR	Westar Energy
12	XEL	Xcel Energy

### Ten-Year Dividends Per Share, Earnings Per Share & Book Value Per Share Growth Rates for the Comparable Electric Utility Companies and The Empire District Electric Company

	10-Year	10-Year Annual Compound Growth Rates						
Company Name	DPS	EPS	BVPS	10 Year Annual Compound Growth Rates				
Alliant Energy	-4.50%	3.00%	2.00%	0.17%				
American Electric Power	-4.00%	-0.50%	0.00%	-1.50%				
Cleco Corp.	1.50%	3.00%	6.50%	3.67%				
DPL Inc.	1.50%	3.50%	-1.00%	1.33%				
IDACORP, Inc.	-4.50%	-1.00%	3.50%	-0.67%				
Northeast Utilities	3.50%	0.00%	1.00%	1.50%				
PG&E Corp.	0.50%	4.50%	1.50%	2.17%				
Pinnacle West Capital	6.50%	0.00%	3.50%	3.33%				
Progress Energy	2.50%	-0.50%	5.50%	2.50%				
Southern Company	2.00%	3.00%	1.50%	2.17%				
Westar Energy Inc.	-6.50%	1.50%	-4.00%	-3.00%				
Xcel Energy	-4.00%	-2.50%	-0.50%	-2.33%				
Average	-0.46%	1.17%	1.63%	0.78%				
Standard Deviation	3.89%	2.10%	2.77%	1.99%				
Empire District Electric	0.00%	-1.00%	2.00%	0.33%				

Source: The Value Line Investment Survey, November 27 and December 25, 2009 and February 5, 2010.

### Five-Year Dividends Per Share, Earnings Per Share & Book Value Per Share Growth Rates for the Comparable Electric Utility Companies and The Empire District Electric Company

Company Name		5-Year Annual Compound Growth Rates  DPS EPS BVPS					
Alliant Energy	-5.00%	7.00%	3.00%	Growth Rates 1.67%			
American Electric Power	-6.00%	0.00%	2.50%	-1.17%			
Cleco Corp.	0.50%	0.50%	9.00%	3.33%			
DPL Inc.	2.00%	7.00%	2.50%	3.83%			
IDACORP, Inc.	-8.00%	1.50%	3.00%	-1.17%			
Northeast Utilities	8.50%	3.00%	2.00%	4.50%			
PG&E Corp.	0.00%	NMF	18.00%	9.00%			
Pinnacle West Capital	5.00%	-1.00%	3.00%	2.33%			
Progress Energy	2.00%	-6.50%	2.50%	-0.67%			
Southern Company	3.00%	4.00%	5.50%	4.17%			
Westar Energy Inc.	-0.50%	21.50%	1.00%	7.33%			
Xcel Energy	-4.00%	1.00%	1.00%	-0.67%			
Average	-0.21%	3.45%	4.42%	2.71%			
Standard Deviation	4.61%	6.75%	4.59%	3.19%			
Empire District Electric	0.00%	3.50%	1.50%	1.67%			

Source: The Value Line Investment Survey, November 27 and December 25, 2009 and February 5, 2010.

## Average of Ten- and Five-Year Dividends Per Share, Earnings Per Share & Book Value Per Share Growth Rates for the Comparable Electric Utility Companies and The Empire District Electric Company

Company Name	10-Year Average DPS, EPS & BVPS	5-Year Average DPS, EPS & BVPS	Average of 5-Year & 10-Year Averages
Alliant Energy	0.17%	1.67%	0.92%
American Electric Power	-1.50%	-1.17%	-1.33%
Cleco Corp.	3.67%	3.33%	3.50%
DPL Inc.	1.33%	3.83%	2.58%
IDACORP, Inc.	-0.67%	-1.17%	-0.92%
Northeast Utilities	1.50%	4.50%	3.00%
PG&E Corp.	2.17%	9.00%	5.58%
Pinnacle West Capital	3.33%	2.33%	2.83%
Progress Energy	2.50%	-0.67%	0.92%
Southern Company	2.17%	4.17%	3.17%
Westar Energy Inc.	-3.00%	7.33%	2.17%
Xcel Energy	-2.33%	-0.67%	-1.50%
Average	0.78%	2.71%	1.74%
Empire District Electric	0.33%	1.67%	1.00%

### Five-Year Projected Dividends Per Share, Earnings Per Share & Book Value Per Share Growth Rates for the Comparable Electric Utility Companies and Empire District Electric

	5-Year Pro	ejected Compound Growth	Rates	Average of 5 Year Annual
Company Name	DPS	EPS	BVPS	Compound Growth Rates
Alliant Energy	7.00%	4.00%	4.00%	5.00%
American Electric Power	3.00%	3.00%	5.00%	3.67%
Cleco Corp.	10.00%	9.50%	4.50%	8.00%
DPL Inc.	3.50%	9.00%	5.50%	6.00%
IDACORP, Inc.	2.50%	4.50%	5.00%	4.00%
Northeast Utilities	7.00%	8.00%	4.50%	6.50%
PG&E Corp.	7.50%	6.50%	6.50%	6.83%
Pinnacle West Capital	1.00%	3.00%	1.00%	1.67%
Progress Energy	1.00%	6.00%	2.00%	3.00%
Southern Company	4.00%	4.50%	5.00%	4.50%
Westar Energy Inc.	4.50%	4.00%	6.00%	4.83%
Xcel Energy	3.00%	6.50%	4.50%	4.67%
Average	4.50%	5.71%	4.46%	4.89%
Standard Deviation	2.68%	2.15%	1.49%	1.68%
Empire District Electric	1.00%	6.00%	1.50%	2.83%

Source: The Value Line Investment Survey, November 27 and December 25, 2009 and February 5, 2010.

### Projected EPS Growth Rates for the Comparable Electric Utility Companies and The Empire District Electric Company

	(1)	(2)	(3)
	Projected		
	5-Year	Projected	Average
	<b>EPS Growth</b>	3-5 Year	Projected
	Reuters	<b>EPS Growth</b>	<b>EPS Growth</b>
Company Name	(Mean)	Value Line	Growth
Alliant Energy	4.93%	4.00%	4.47%
American Electric Power	4.67%	3.00%	3.84%
Cleco Corp.	9.00%	9.50%	9.25%
DPL Inc.	11.70%	9.00%	10.35%
IDACORP, Inc.	5.00%	4.50%	4.75%
Northeast Utilities	8.02%	8.00%	8.01%
PG&E Corp.	6.93%	6.50%	6.72%
Pinnacle West Capital	4.40%	3.00%	3.70%
Progress Energy	3.88%	6.00%	4.94%
Southern Company	4.91%	4.50%	4.71%
Westar Energy	4.00%	4.00%	4.00%
Xcel Energy	6.14%	6.50%	6.32%
Average	6.13%	5.71%	5.92%
Standard Deviation	2.28%	2.15%	2.14%
Empire District Electric		6.00%	6.00%

#### Sources:

Column 1 = Analyst Estimates Accessed from Reuters on February 18, 2010.

Column 2 = The Value Line Investment Survey, November 27 and December 25, 2009 and February 5, 2010.

#### Historical and Projected Growth Rates for the Comparable Electric Utility Companies and Empire District Electric

	(1)	(2) Projected 5-Year	(3)	(4)	(5)
	Historical	EPS Growth	Projected	Average	Average of
	Growth Rate	Consensus	3-5 Year	Projected	Historical
	(DPS, EPS and	Estimates	<b>EPS Growth</b>	EPS Growth	& Projected
Company Name	BVPS)	(Mean)	Value Line	Growth	Growth
Alliant Energy	0.92%	4.93%	4.00%	4.47%	2.69%
American Electric Power	-1.33%	4.67%	3.00%	3.84%	1.25%
Cleco Corp.	3.50%	9.00%	9.50%	9.25%	6.38%
DPL Inc.	2.58%	11.70%	9.00%	10.35%	6.47%
IDACORP, Inc.	-0.92%	5.00%	4.50%	4.75%	1.92%
Northeast Utilities	3.00%	8.02%	8.00%	8.01%	5.51%
PG&E Corp.	5.58%	6.93%	6.50%	6.72%	6.15%
Pinnacle West Capital	2.83%	4.40%	3.00%	3.70%	3.27%
Progress Energy	0.92%	3.88%	6.00%	4.94%	2.93%
Southern Company	3.17%	4.91%	4.50%	4.71%	3.94%
Westar Energy	2.17%	4.00%	4.00%	4.00%	3.08%
Xcel Energy	-1.50%	6.14%	6.50%	6.32%	2.41%
Average	1.74%	6.13%	5.71%	5.92%	3.83%
Empire District Electric	1.00%	<del></del>	6.00%	6.00%	3 50%
Empire District Electric	1.00%		6.00%	6.00%	3.50%

**Proposed Range of Growth for Comparables:** 

4.00%-5.00%

#### Sources:

Column 4 = [ (Column 2 + Column 3) / 2 ]

Column 5 = [ ( Column 1 + Column 4 ) / 2 ]

Column 1 = Average of 10-Year and 5-Year Annual Compound Growth Rates from Schedule 12-3.

Column 2 = http://www.reuters.com/finance/stocks/estimates

Column 3 = The Value Line Investment Survey, and November 27 and December 25, 2009 and February 5, 2010.

### Average High / Low Stock Price for November 2009 through January 2010 for the Comparable Electric Utility Companies and The Empire District Electric Company

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	November 2009		Decemb	December 2009		y 2010	Average High/Low
Company Name	High Stock Price	Low Stock Price	High Stock Price	Low Stock Price	High Stock Price	Low Stock Price	Stock Price (11/09 - 1/10)
Alliant Energy	28.07	26.08	31.53	27.54	33.32	30.24	29.46
American Electric Power	32.31	30.23	36.51	32.25	36.86	34.36	33.75
Cleco Corp.	26.26	24.03	28.14	25.53	27.67	25.65	26.21
DPL Inc.	27.86	25.35	28.86	27.00	28.50	26.81	27.40
IDACORP, Inc.	30.28	27.71	32.83	29.75	33.32	31.21	30.85
Northeast Utilities	24.60	22.20	26.48	24.16	26.62	25.10	24.86
PG&E Corp.	43.00	40.40	45.79	42.56	45.63	42.18	43.26
Pinnacle West Capital	35.48	31.08	37.96	35.10	37.81	35.62	35.51
Progress Energy	39.38	36.91	42.20	39.01	41.35	38.32	39.53
Southern Company	32.36	30.89	34.47	32.15	33.73	31.85	32.58
Westar Energy	20.93	18.91	22.30	20.58	22.78	21.06	21.09
Xcel Energy	20.61	18.53	21.94	20.30	21.76	20.41	20.59
Empire District Electric	18.77	17.78	19.36	18.18	19.30	18.26	18.61

Notes:

Column 7 = [ ( Column 1 + Column 2 + Column 3 + Column 4 + Column 5 + Column 6 / 6 ].

Source: <a href="http://finance.yahoo.com">http://finance.yahoo.com</a>

## Constant-Growth Discounted Cash Flow (DCF) Estimated Costs of Common Equity for the Comparable Electric Utility Companies and The Empire District Electric Company

	(1)	(2)	(3)	(4)	(5)
Company Name	Expected Annual Dividend	Average High/Low Stock Price	Projected Dividend Yield	Average of Historical & Projected Growth	Estimated Cost of Common Equity
Alliant Energy	\$1.60	\$29.463	5.43%	2.69%	8.12%
American Electric Power	\$1.66	\$33.753	4.92%	1.25%	6.17%
Cleco Corp.	\$1.00	\$26.213	3.81%	6.38%	10.19%
DPL Inc.	\$1.18	\$27.397	4.31%	6.47%	10.77%
IDACORP, Inc.	\$1.20	\$30.850	3.89%	1.92%	5.81%
Northeast Utilities	\$1.00	\$24.860	4.02%	5.51%	9.53%
PG&E Corp.	\$1.80	\$43.260	4.16%	6.15%	10.31%
Pinnacle West Capital	\$2.10	\$35.508	5.91%	3.27%	9.18%
Progress Energy	\$2.50	\$39.528	6.32%	2.93%	9.25%
Southern Company	\$1.80	\$32.575	5.53%	3.94%	9.46%
Westar Energy	\$1.24	\$21.093	5.88%	3.08%	8.96%
Xcel Energy	\$1.00	\$20.592	4.86%	2.41%	7.27%
Average			4.92%	3.83%	8.75%
Empire District Electric	\$1.28	\$18.608	6.88%	3.50%	10.38%

Proposed Dividend Yield: 4.92%

Proposed Range of Growth: 4.00% - 5.00%

Indicated Cost of Common Equity: 8.92%-9.92%

Empire District Electric Company-Specific Using Value Line EPS Projected Growth

#### Notes:

Column 1 = Estimated Dividend Declared per share represents the projected dividend for 2010.

Column 3 = ( Column 1 / Column 2 ).

Column 5 = ( Column 3 + Column 4 ).

#### Sources:

Column 1 = The Value Line Investment Survey: Ratings and Reports, November 27 and December 25,2009 and February 5, 2010.

Column 2 = Schedule 16.

Column 4 = Schedule 15.

12.88%

### Capital Asset Pricing Model (CAPM) Costs of Common Equity Estimates Based on Historical Return Differences Between Common Stocks and Long-Term U.S. Treasuries for the Comparable Electric Utility Companies and Ameren

	(1)	(2)	(3)	(4)	(5)	(6)
			Arithmetic	Geometric	Arithmetic	Geometric
			Average	Average	CAPM	CAPM
			Market	Market	Cost of	Cost of
	Risk	Company's	Risk	Risk	Common	Common
	Free	Value Line	Premium	Premium	Equity	Equity
Company Name	Rate	Beta	(1926-2008)	(1926-2008)	(1926-2008)	(1926-2008)
Alliant Energy	4.47%	0.70	5.60%	3.90%	8.39%	7.20%
American Electric Power	4.47%	0.70	5.60%	3.90%	8.39%	7.20%
Cleco Corp.	4.47%	0.65	5.60%	3.90%	8.11%	7.00%
DPL Inc.	4.47%	0.60	5.60%	3.90%	7.83%	6.81%
IDACORP, Inc.	4.47%	0.70	5.60%	3.90%	8.39%	7.20%
Northeast Utilities	4.47%	0.70	5.60%	3.90%	8.39%	7.20%
PG&E Corp.	4.47%	0.55	5.60%	3.90%	7.55%	6.61%
Pinnacle West Capital	4.47%	0.75	5.60%	3.90%	8.67%	7.39%
Progress Energy	4.47%	0.65	5.60%	3.90%	8.11%	7.00%
Southern Company	4.47%	0.55	5.60%	3.90%	7.55%	6.61%
Westar Energy	4.47%	0.75	5.60%	3.90%	8.67%	7.39%
Xcel Energy	4.47%	0.65	5.60%	3.90%	8.11%	7.00%
Average		0.66			8.18%	7.05%
Empire District Electric	4.47%	0.75	5.60%	3.90%	8.67%	7.39%

- Column 1 = The appropriate yield is equal to the average 30-year U.S. Treasury Bond yield for November and December 2009 and January 2010 which was obtained from the St. Louis Federal Reserve website at <a href="http://research.stlouisfed.org/fred2/series/GS30/22">http://research.stlouisfed.org/fred2/series/GS30/22</a>.
- Column 2 = Beta is a measure of the movement and relative risk of an individual stock to the market as a whole as reported by the Value Line Investment Survey: Ratings & Reports, November 27 and December 25, 2009 and February 5, 2010.
- Column 3 = The Market Risk Premium represents the expected return from holding the entire market portfolio less the expected return from holding a risk free investment. The appropriate Market Risk Premium for the period 1926 2008 was determined to be 5.60% based on an arithmetic average as calculated in Ibbotson Associates, Inc.'s Stocks, Bonds, Bills, and Inflation: 2009 Yearbook.
- Column 4 = The Market Risk Premium represents the expected return from holding the entire market portfolio less the expected return from holding a risk free investment. The appropriate Market Risk Premium for the period 1926 2008 was determined to be 3.9% based on a geometric average as calculated in Ibbotson Associates, Inc.'s Stocks, Bonds, Bills, and Inflation: 2009 Yearbook.

Column 5 = (Column 1 + (Column 2 \* Column 3))

Column 6 = (Column 1 + (Column 2 \* Column 4))

### Multiple-Stage Discounted Cash Flow (DCF) Estimated Costs of Common Equity for the Comparable Electric Utility Companies and The Empire District Electric Company

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Annualized Quarterly	Growth Years			Growth Years			Growth	Cost of
Company Name	Dividend	1-5	6	7	8	9	10	Perpetuity	Equity
Alliant Energy	\$1.50	4.47%	4.28%	4.09%	3.91%	3.72%	3.54%	3.35%	8.98%
American Electric Power	\$1.64	3.84%	3.75%	3.67%	3.59%	3.51%	3.43%	3.35%	8.52%
Cleco Corp.	\$0.90	9.25%	8.27%	7.28%	6.30%	5.32%	4.33%	3.35%	8.45%
DPL Inc.	\$1.14	10.35%	9.18%	8.02%	6.85%	5.68%	4.52%	3.35%	9.85%
IDACORP, Inc.	\$1.20	4.75%	4.52%	4.28%	4.05%	3.82%	3.58%	3.35%	7.74%
Northeast Utilities	\$0.95	8.01%	7.23%	6.46%	5.68%	4.90%	4.13%	3.35%	8.60%
PG&E Corp.	\$1.68	6.72%	6.15%	5.59%	5.03%	4.47%	3.91%	3.35%	8.29%
Pinnacle West Capital	\$2.10	3.70%	3.64%	3.58%	3.53%	3.47%	3.41%	3.35%	9.59%
Progress Energy	\$2.48	4.94%	4.68%	4.41%	4.15%	3.88%	3.62%	3.35%	10.47%
Southern Company	\$1.75	4.71%	4.48%	4.25%	4.03%	3.80%	3.58%	3.35%	9.37%
Westar Energy	\$1.20	4.00%	3.89%	3.78%	3.68%	3.57%	3.46%	3.35%	9.46%
Xcel Energy	\$0.98	6.32%	5.83%	5.33%	4.84%	4.34%	3.85%	3.35%	9.23%
								Average:	9.05%
							Pro	posed Range: 8	.55% - 9.55%
Empire District Electric	\$1.28	6.00%	5.56%	5.12%	4.68%	4.23%	3.79%	3.35%	11.48%

Sources: Column 1 = The Value Line Investment Survey: Ratings and Reports, November 27 and December 25, 2009 and February 5, 2010.

Column 2 = Average Projected Growth from Brokers' Estimates and Value Line Estimates. For Empire District Electric the only projected growth rate available was the Value Line Estimate.

### Selected Financial Ratios for the Comparable Electric Utility Companies and The Empire District Electric Company

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Company Name	Estimated 2009 Common Equity Ratio	Estimated 2009 Long-Term Debt Ratio	2008 Funds From Operations Interest Coverage	2008 Funds From Operations to Total Debt	Market- to-Book Value	Estimated 2009 Return on Common Equity	2010 Projected Return on Common Equity	S&P Corporate Credit Rating
Alliant Energy	55.50%	40.00%	4.60 x	20.0%	1.20 x	7.0%	8.0%	BBB+
American Electric Power	46.50%	53.50%	3.10 x	13.4%	1.27 x	10.5%	10.5%	BBB
Cleco Corp.	44.00%	56.00%	2.60 x	10.0%	1.45 x	9.0%	10.5%	BBB
DPL Inc.	44.00%	56.00%	4.90 x	23.9%	3.02 x	23.5%	23.5%	A-
IDACORP, Inc.	54.00%	46.00%	2.93 x	10.3%	1.06 x	8.0%	7.5%	BBB
Northeast Utilities	40.00%	58.50%	3.10 x	9.8%	1.29 x	9.0%	9.0%	BBB
PG&E Corp.	48.00%	51.00%	4.12 x	22.5%	1.72 x	11.5%	11.5%	BBB+
Pinnacle West Capital	48.50%	51.50%	4.29 x	18.0%	1.11 x	7.5%	8.0%	BBB-
Progress Energy	45.00%	55.00%	2.95 x	12.2%	1.22 x	9.5%	9.5%	BBB+
Southern Company	42.50%	54.00%	4.24 x	17.2%	1.87 x	12.5%	12.5%	Α
Westar Energy	47.50%	52.00%	3.64 x	12.6%	1.06 x	6.5%	7.5%	BBB-
Xcel Energy	47.50%	52.00%	3.85 x	17.1%	<u>1.35</u> x	9.5%	9.5%	BBB+
Average	46.92%	52.13%	<b>3.69</b> x	15.6%	<b>1.47</b> x	10.3%	10.6%	BBB+
Empire District Electric	45.50%	54.50%	<b>3.50</b> x	13.3%	<b>1.15</b> x	7.00%	8.50%	BBB-

#### Sources:

The Value Line Investment Survey Ratings & Reports, November 27 and December 25, 2009 and February 5, 2010. for columns (1), (2), (6) and (7) Standard & Poor's RatingsDirect for columns (3), (4) and (8).

AUS Utility Reports, January 2010 for column (5).

#### Notes:

1. According to most recent S&P published research reports available to Staff when it prepared its testimony in this case.

#### **Public Utility Revenue Requirement**

or

#### **Cost of Service**

The formula for the revenue requirement of a public utility may be stated as follows:

Equation 1: Revenue Requirement = Cost of Service

or

Equation 2: RR = O + (V - D)R

The symbols in the second equation are represented by the following factors :

RR = Revenue Requirement

O = Prudent Operating Costs, including Depreciation and Taxes

V = Gross Valuation of the Property Serving the Public

D = Accumulated Depreciation

(V-D) = Rate Base (Net Valuation)

(V-D)R = Return Amount (\$\$) or Earnings Allowed on Rate Base

R = iL + dP + kE or Overall Rate of Return (%)

i = Embedded Cost of Debt

E = Proportion of Debt in the Capital Structure

d = Embedded Cost of Preferred Stock

P = Proportion of Preferred Stock in the Capital Structure

k = Required Return on Common Equity (ROE)

E = Proportion of Common Equity in the Capital Structure

### Weighted Cost of Capital as of December 31, 2009 for The Empire District Electric Company

Weighted Cost of Capital Using Common Equity Return of:

			Common Equity Neturn of.		
Capital Component	Percentage of Capital	Embedded Cost	8.90%	9.40%	9.90%
Common Stock Equity	47.38%		4.22%	4.45%	4.69%
Preferred Stock	3.84%	8.87%	0.34%	0.34%	0.34%
Long-Term Debt	48.79%	6.75%	3.30%	3.30%	3.30%
Short-Term Debt	0.00%		0.00%	0.00%	0.00%
Total	100.00%		7.85%	8.09%	8.33%

Sources:

See Schedule 7 for the Capital Structure Ratios.

#### MISSOURI PUBLIC SERVICE COMMISSION

## STAFF REPORT COST OF SERVICE

## **APPENDIX 3**Staff Regulatory Plan Amortization Calculation

### EMPIRE DISTRICT ELECTRIC COMPANY

**The-Investor (Electric)** 

CASE NO. ER-2010-0130

### Calculation of Amortization to Meet Financial Ratio Targets Case No. ER-2010-0130, The Empire District Electric Company

		<u>Total</u> <u>Company</u>	<u>Juris.</u> <u>Alloc.</u>		
Additional Net Balance Sheet Investment		238,389,000	198,578,037		
Rate Base	Staff Acct. Schedule 2		769,774,690		
Jurisdictional Allocation for Capital		0.833	0.833		
Total Capital	L5+L6		968,352,727		
Equity	Staff Acct. Schedule 12	0.4738	458,805,522		
Trust Preferred	Staff Acct. Schedule 12	0.0384	37,184,745		
Long-term Debt	Staff Acct. Schedule 12	0.4879	472,459,296		
Cost of Debt	Staff Acct. Schedule 12		6.75%		
Interest Expense	L12*L13(+\$2,125,000(TOPRS))		34,016,002		
Electric Sales Revenue	Staff Acct. Schedule 9, L. 2-3 (plus rate Incre	ase impact)	364,025,051		
Other Electric Operating Revenue	Staff Acct. Schedule 9		6,065,414		
Operating Revenue	L16+L17		370,090,465		
Operating and Maintenance Expense	Staff Acct. Schedule 9		225,029,540		
Depreciation	Staff Acct. Schedule 9		39,718,118		
Amortization	Staff Acct. Schedule 9		8,032,031		
Interest on Customer Deposits	Staff Acct. Schedule 9		371,659		
Taxes Other than Income Taxes	Staff Acct. Schedule 9		13,464,964		
Federal and State Income Taxes	Staff Acct. Schedule 9, L. 162+168 (plus rate	21,222,474			
Gains on Disposition of Plant	-				
Total Water Operating Expenses					
Total Electric/Water Operating Expenses	Sum of L. 21-28		307,838,786		
Operating Income - Electric	L. 19 - L. 21		62,251,679		
Less: Interest Expense	L. 14		34,016,002		
Depreciation	L. 22		39,718,118		
Amortization	L. 23		8,032,031		
Deferred Taxes	Staff Acct. Schedule 9		3,760,468		
Funds from Operations (FFO)	Sum of L. 31-36		79,746,294		
A 1.00 1 E1	of a marable in Nara deed from Calle 1985 and CR 18				
	nformation Needed for Calculation of Ratios	0.000.400	0.000.554		
Capitalized Lease Obligations Short-term Debt Balance	EDE Accounts 227 + 243	2,668,128	2,222,551		
Short-term Debt Interest	EDE Form 10-K, p. 69 EDE Accounts 417.891 + 431.400	50,500,000	42,066,500 937,028		
Cash Interest Paid		1,124,883	·		
AFUDC Debt (capitalized interest)	Information Supplied by EDE 46,778,000 EDE Form 10-K, p. 70 7,924,000		38,966,074 6,600,692		
Imputed PPA Debt Amortization	Information Supplied by EDE	5,261,000	4,382,413		
Adjustments Made by Rating Agencies for Off-Balance Sheet Obligations			7,002,413		
Debt Adj for Off-Balance Sheet Obligs					
Operating Lease Debt Equivalent	Information Supplied by EDE	5,272,000	4,391,576		
Purchase Power Debt Equivalent	Information Supplied by EDE	103,285,000	86,036,405		
Total OSB Debt Adjustment	L. 52 + L. 53	108,557,000	90,427,981		

### Calculation of Amortization to Meet Financial Ratio Targets Case No. ER-2010-0130, The Empire District Electric Company

		<u>Total</u> <u>Company</u>	<u>Juris.</u> <u>Alloc.</u>		
Operating Lease Deprec. Adjustment	Information Supplied by EDE	720,000	599,760		
Interest Adjustments for Off-Balance Sheet					
Present Value of Operating Leases	L. 52 * 6.8%		298,627		
Present Value of Purchased Power	L. 53 * 6.8%		5,850,476		
Total OSB Interest Adjustment	L. 59 + L. 60		6,149,103		
Ratio Calculations					
Adjusted Interest Expense	L. 14 + L. 46 + L. 61		41,102,133		
Adjusted Total Debt 12/31/09	(L11/2) + L. 12 + L. 44 + L. 45 + L. 54		625,768,699		
Adjusted Total Debt 12/31/08	Not Used in Calculation		4 400 000 750		
Adjusted Total Capital	L. 9 + L. 44 + L. 45 + L. 54		1,103,069,759		
Adj. FFO Interest Coverage	(L37+L56+L64+L49)/L64		3.06		
Adj. FFO as a % of Total Debt	(L37+L56+L49)/L65		0.1354		
Adj. Total Debt to Total Capital	L65/L67		0.5673		
Changes Required to	Meet Ratio Targets				
Adj. FFO Interest Coverage Target	Ç		3.20		
FFO Adjustment to Meet Target	(L74-L69) * L64		5,696,225		
Interest Adjustment to Meet Target	L37 * (1/(L74 - 1) - 1/L69 - 1)		-54,825,576		
Adj. FFO as a % of Total Debt			0.195		
FFO Adjustment to Meet Target	(L78 - L70) * L65		37,296,430		
Debt Adjustment to Meet Target	L37 * (1/L78 - L70)		-180,017,121		
Adj. Total Debt to Total Capital Target			56.50%		
Debt Adjustment to Meet Target	(L82 - L71) * L67		-2,534,286		
Total Capital Adjustment to Meet Target	L65/L82 - L67		4,485,462		
Amortization and Revenue Needed to Meet Targeted Ratios					
FFO Adj. Needed to Meet Target Ratios	Maximum of L75, L79 or Zero		37,296,430		
Effective Income Tax Rate	•		0.3839		
Deferred Income Taxes	L87 * L88/(1 - L88)		23,239,895		
Total Amort Requirement for FFO Adj.	L87 - L89		60,536,325		

<sup>\*</sup> All references to Staff Acct. Schedules tie to schedules reflected in the Accounting Schedules filed 2/26/10

### MISSOURI PUBLIC SERVICE COMMISSION

## STAFF REPORT COST OF SERVICE

## **APPENDIX 4**S&P Ratings Analysis of Empire

## EMPIRE DISTRICT ELECTRIC COMPANY The-Investor (Electric)

**CASE NO. ER-2010-0130** 



#### Research

#### **Summary:**

#### Empire District Electric Co.

28-Jan-2010

Credit Rating: BBB-/Stable/A-3

#### Rationale

The ratings on Joplin, Mo.-based utility Empire District Electric Co. reflect a strong business risk profile (business risk profiles are categorized as 'excellent' to 'vulnerable') and an aggressive financial profile (financial profiles are ranked from 'minimal' to 'highly leveraged') that will remain under stress due to an onerous construction program that focuses on new generation sources and environmental compliance. Accordingly, continued conservative financing and the company's ability to control costs and manage its regulatory risk will be essential to support key financial metrics at levels suitable for investment-grade ratings.

Empire's business risk profile benefits from a diverse service territory with limited industrial concentration (approximately 15% of total retail load) and from a cost-conscious management team. Although sales have declined and customer growth is at a very low rate, the service area economy remains healthier than other regions in the country. Importantly, Empire has sold virtually all of its riskier unregulated businesses due to financial underperformance. These characteristics are tempered by generation needs and an historically challenging regulatory environment in Missouri, which appears to be becoming more responsive. Nevertheless, Empire's financial performance will continue to be pressured due to rising costs and heavy spending for its construction program. The company's capital expansion plan revolves around its ownership interest in the latan 2 (expected completion recently slipped two months into the fall of 2010) and Plum Point (slated in-service date July 2010) coal-fired stations and on air quality control systems for its investment in latan 1.

Full realization of \$22 million (6.7%) net electric rate increase in the fall of 2008 has helped to modestly strengthen the company's financial condition. Importantly, the Missouri Public Service Commission (MPSC) granted a fuel adjustment clause (FAC) that enables the company to recover 95% of changes in fuel and purchased power costs in a timely manner, which is crucial for Empire's credit quality given its reliance on a relatively high level of natural gas-fired generation and purchased power.

Currently pending before the MPSC is an application for a \$68.2 million (19.2%) electric rate increase to become effective in the fall of 2010. The company has also asked to continue with the FAC. Additionally the company is awaiting approval for a \$5.2 million (24.6%) rate hike in Kansas and a 4.9% gas rate increase in Missouri. Based on latan 2's previous late summer in-service date, Empire had expected base rates reflecting its investment to be in effect in late 2010. As a result of the two-month delay in the project, timing of receipt of the increase in base rates associated with latan 2 is likely to be delayed.

Constructive rate treatment coupled with credit supportive actions by management, including common stock issuances, will be necessary to sustain bondholder protection parameters at levels commensurate with current ratings. Importantly, Empire increased its offering amount of common stock to \$120 million from \$60 million under its existing equity

Schedule MJB-1, Page 1

distribution program; as of the end of September 2009, nearly \$31 million had been sold. The fact that the state regulators will be reviewing rate hike requests at a time of unusual economic weakness is a credit concern. Therefore, the company's ability to manage regulatory risk will be critical to credit quality.

Empire's adjusted financial ratios are mixed for the 'BBB-' rating, with funds from operations (FFO) interest coverage at a healthy 3.7x, FFO to total debt at nearly 15%, and total debt to total capital at a liberal 60.5% at the end of September 2009. When calculating these ratios, Standard & Poor's considers Empire's trust-preferred securities as having intermediate equity content and adjusts ratios for operating leases, purchased power agreements, and pensions. Net cash flow relative to capital expenditures will likely remain below 60%, requiring reliance on external capital. However, we expect Empire to continue to fund its construction program in a balanced manner.

#### Short-term credit factors

Empire's short-term rating is 'A-3'. As of Sept. 30, 2009, the company had \$5.9 million of cash and cash equivalents. Empire's \$150 million unsecured revolving credit facility increased to \$226 million in March 2006, with the additional \$76 million allocated to support an LOC issued in connection with the company's participation in the Plum Point Energy Station Project. The incremental amount decreases over four years in line with the amount of capital expenditures Empire owes for Plum Point Unit 1. As of Nov. 1, 2009, it had declined to \$10 million. The facility requires total debt be less than 62.5% of total capitalization and EBITDA to be at least 2x. As of the end of September 2009, Empire was in compliance with these ratios. The facility is also subject to cross-default if Empire defaults on more than \$10 million in aggregate on its other debt. There were \$40 million of outstanding borrowings under the \$150 million credit agreement at Sept. 30, 2009. In addition, the company used \$4 million of the availability to back up outstanding commercial paper. On Jan. 26, 2010, EDE entered into an amended and restated credit agreement on its \$150 million revolver, extending the termination date from July 15, 2010 to Jan. 26, 2013.

In addition to the aforementioned credit facility, Empire has a \$50 million credit agreement, which expires on July 15, 2010. The company entered into this new facility on March 11, 2009, to enhance its financial flexibility. There were no borrowings under this agreement at Sept. 30, 2009. Empire's next maturity of \$50 million comes due on April 1, 2010.

#### **Outlook**

Ratings stability for Empire incorporates the expectation of steady financial performance throughout the company's construction program. We also expect Empire to continue to fund its capital needs in a conservative fashion. Standard & Poor's could lower the ratings absent future sufficient rate relief, if construction expenditures materially increase resulting in higher-than-expected reliance on debt, and if cash flow metrics erode. We could raise the ratings if rate recovery is supportive during the company's construction program and if key measures of bondholder protection begin to show sustainable improvement.

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