Exhibit No.: Issues: Witness: Type of Exhibit: Sponsoring Party:

Case No.:

Date Testimony Prepared:

750

Revenue Requirement Steve W. Chriss Direct Testimony Wal-Mart Stores East, LP

and Sam's East, Inc. ER-2014-0258

December 5, 2014

Filed
March 24, 2015
Data Center
Missouri Public
Service Commission

MISSOURI PUBLIC SERVICE COMMISSION

In the Matter of Union Electric Company, d/b/a)	
Ameren Missouri's Tariff to Increase Its Revenues)	Case No. ER-2014-0258
For Electric Service)	

DIRECT TESTIMONY AND SCHEDULES OF STEVE W. CHRISS

ON BEHALF OF

WAL-MART STORES EAST, LP AND SAM'S EAST, INC.

Date 3 64 15 Reporter *F

File No. F. R. 2014-0258

Dated: December 5, 2014

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1 Introduction

- Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND OCCUPATION.
- 3 A. My name is Steve W. Chriss. My business address is 2001 SE 10th St., Bentonville,
- 4 AR 72716-0550. I am employed by Wal-Mart Stores, Inc. as Senior Manager,
- 5 Energy Regulatory Analysis.
- 6 Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS DOCKET?
- A. I am testifying on behalf of Wal-Mart Stores East, LP and Sam's East, Inc. (collectively
- 8 "Walmart").

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- 9 Q. PLEASE DESCRIBE YOUR EDUCATION AND EXPERIENCE.
- In 2001, I completed a Master of Science in Agricultural Economics at Louisiana State A. 10 University. From 2001 to 2003, I was an Analyst and later a Senior Analyst at the 11 Houston office of Econ One Research, Inc., a Los Angeles-based consulting firm. My 12 duties included research and analysis on domestic and international energy and 13 regulatory issues. From 2003 to 2007, I was an Economist and later a Senior Utility 14 Analyst at the Public Utility Commission of Oregon in Salem, Oregon. My duties 15 included appearing as a witness for PUC Staff in electric, natural gas, and 16 telecommunications dockets. I joined the energy department at Walmart in July 2007 17 as Manager, State Rate Proceedings, and was promoted to my current position in June 18

2011. My Witness Qualifications Statement is included herein as Schedule SWC-1.

1	Q.	HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY BEFORE THE MISSOURI PUBLIC
2		SERVICE COMMISSION ("THE COMMISSION")?
3	A.	Yes. I submitted testimony in Case Nos. ER-2010-0036, EO-2012-0009, and EC-2014-
4		0224.
5	Q.	HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY BEFORE OTHER STATE
6		REGULATORY COMMISSIONS?
7	A.	Yes. I have submitted testimony in over 110 proceedings before 34 other utility
8		regulatory commissions and before the Missouri House Committee on Utilities, the
9		Missouri Senate Veterans' Affairs, Emerging Issues, Pensions, and Urban Affairs
10		Committee, and the Kansas House Standing Committee on Utilities and
11		Telecommunications. My testimony has addressed topics including, but not limited
12		to, cost of service and rate design, revenue requirement, ratemaking policy, qualifying
13		facility rates, telecommunications deregulation, resource certification, energy
14		efficiency/demand side management, fuel cost adjustment mechanisms, decoupling,
15		and the collection of cash earnings on construction work in progress.
16	Q.	ARE YOU SPONSORING ANY SCHEDULES WITH YOUR TESTIMONY?
17	Α.	Yes. I am sponsoring the following schedules:
18		Schedule SWC-1 – Witness Qualifications Statement.
19		Schedule SWC-2 – Calculation of FERC Form 1 reported Large General
20		Service ("LGS") revenue per kWh sold.

1		Schedule SWC-3 — Exhibit 551 from Case No. ER-2011-0028, revenue
2		neutral cost shifts per Ameren's cost of service studies in Case Nos. ER-
3		2007-0002, ER-2008-0318, ER-2010-0036, and 2011-0028.
4		Schedule SWC-4 – Determination of revenue change, per Ameren's cost of
5		service study results, required to move LGS and Small Primary Service
6		("SP") to cost of service, Case No. ER-2012-0166.
7		Schedule SWC-5 — Calculation of proposed LGS and SP increases in excess
8		of cost of service levels.
9		Schedule SWC-6 - Calculation of the estimated revenue requirement
lO		impact of Ameren's return on equity ("ROE") increase request.
L1		Schedule SWC-7 — Reported authorized returns on equity, electric utility
12		rate cases completed, 2012 to present.
L3	Q. WH	AT IS THE PURPOSE OF YOUR TESTIMONY?
L4	. A. The	purpose of my testimony is to respond to revenue requirement issues related to
L 5	the	rate case filing of Union Electric Company d/b/a Ameren Missouri ("Ameren" or
16	"the	e Company").
L 7	Q. PLE	ASE BRIEFLY DESCRIBE WALMART'S OPERATIONS IN MISSOURI.
L8	A. Wa	lmart operates 145 retail units and employs 40,011 associates in Missouri. ¹

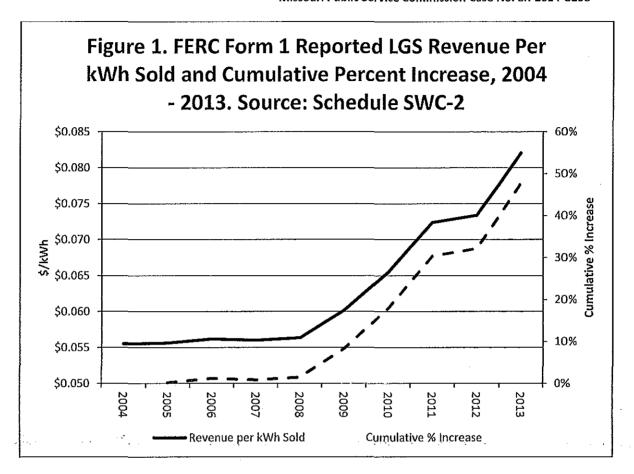
¹ http://corporate.walmart.com/our-story/locations/united-states#/united-states/missouri

Q. PLEASE BRIEFLY DESCRIBE WALMART'S OPERATIONS WITHIN AMEREN'S MISSOURI 1 SERVICE TERRITORY. 2 Walmart has approximately 48 stores and a distribution center serviced by Ameren. 3 A. primarily on the LGS and SP rate schedules. 4 5 6 **Summary of Recommendations** 7 Q. PLEASE SUMMARIZE YOUR RECOMMENDATIONS TO THE COMMISSION. My recommendations to the Commission are as follows: A. 8 1) The Commission should consider the impact on customers thoroughly and 9 carefully in examining of revenue requirement and return on equity ("ROE"), 10 in addition to all other facets of this case, to ensure that any increase in 11 Ameren's rates is only the minimum amount necessary for the utility to 12 provide adequate and reliable service. 13 The Commission should closely examine the Company's proposed increase in 14 2) ROE, especially when viewed in light of (a) the resulting revenue requirement 15 increases, (b) ROEs authorized by the Commission in the last Ameren rate case 16 and those authorized in recent Kansas City Power & Light ("KCP&L") and 17 18 KCP&L Greater Missouri Operations ("GMO") rate cases, and (c) rate case ROEs approved by commissions nationwide. Unless the Commission determines 19 that Ameren has sufficiently and substantially demonstrated that the 20 economic environment faced by the Company has significantly changed in the 21

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time elapsed from the Commission's Report and Order in Case No. ER-2012-

1		0166, the Commission should approve a ROE no higher than the currently
2		allowed ROE of 9.8 percent.
3		The fact that an issue is not addressed herein or in related filings should not be
4		construed as an endorsement of any filed position.
5		
6	General (Concerns Regarding Ameren's Proposed Revenue Requirement Increase
7	Q.	WHAT IS YOUR UNDERSTANDING OF THE COMPANY'S PROPOSED REVENUE
8		REQUIREMENT?
9	A.	My understanding is that the Company proposes a total revenue requirement
10		increase of approximately \$264 million, or 9.7 percent above current retail revenues.
11		See Direct Testimony of Michael Moehn, page 5, line 8 to line 9.
12 ·	Q.	DOES THE COMPANY INDICATE IN ITS FILING THAT IT HAS RECEIVED FIVE RATE
13		INCREASES IN THE PAST SEVEN YEARS?
14	Α.	Yes. The instant request, if approved, would represent the sixth rate increase in
15		relatively quick succession. Id., page 11, line 3 to line 4.
16	Q.	HAVE LGS CUSTOMERS BEEN PARTICULARLY IMPACTED BY PAST RATE INCREASES?
17	Α.	Yes. Analysis of FERC Form 1 data shows that between 2004 and 2013, Ameren's
18		reported revenue per kWh sold to the LGS class has increased from \$0.0555/kWh to



\$0.082/kWh, or 47.8 percent. Figure 1 shows the increase in revenue per kWh sold and the cumulative percent increase over the period.

Q. HAVE LGS AND SP CUSTOMERS PAID RATES IN EXCESS OF COST OF SERVICE DURING THIS PERIOD AS WELL?

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A. Yes. As I will discuss in more detail in my testimony on class cost of service and rate design, LGS and SP customers have paid rates in excess of cost of service for much of the time period shown in Figure 1.

Q. PLEASE EXPLAIN.

A. An examination of the "revenue neutral" results² of the Ameren class cost of service studies from the past five rate cases show that rates for LGS and SP have been set well in excess of cost of service since the 2007 rate case. Table 1 summarizes the Company's final class cost of service study results in each case.

Table 1. Summary of Revenue Changes, Per Ameren Cost of Service Study Results, Required to Move LGS and SP to Cost of Service in Previous Ameren Rate Cases.

Rate Case	Revenue Change Required to Mo	ove LGS/SP to Cost of Service
	(\$)	(%)
ER-2007-0002		
LGS	(\$43,441,000)	10.2%
SP-	(\$8,148,000)	4.5%
ER-2008-0318 (LGS & SP)	(\$47,863,000)	-7.66%
ER-2010-0036 (LGS & SP) 🚟	(\$64,785,000)	量達 · 9.74% ·
ER-2011-0028 (LGS & SP)	(\$63,653,000)	-8.94%
ER-2012-0166 (LGS & SP)	(\$59,937,000)	7.99%
Source: Schedule SWC-3 and	Schedule SWC-4	

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Q. HAS AMEREN AGAIN PROPOSED AN INCREASE FOR LGS AND SP CUSTOMERS IN EXCESS OF THE COST TO SERVE THOSE CLASSES?

Yes. Per Ameren's cost of service study results in this case, at the Company's proposed revenue requirement LGS and SP should receive a 1.1 percent increase. However, the Company has proposed a 9.64 percent increase for both LGS and SP – about 8.5 percent above the cost of service-based level at the Company's proposed revenue requirement. See Direct Testimony of William R. Davis, page 15, line 1, and page 17, line 1. As such, Ameren is proposing that LGS rates be set approximately \$49.2 million

² "Revenue neutral" results represent the revenue change for each class necessary to bring that class to its cost of service level per the cost of service study results, as determined prior to any rate increase granted to the utility.

1		above cost of service for the LGS class and that SP rates be set approximately \$19.4
2		million above cost of service for the SP class. See Schedule SWC-5. I will address this
3		issue in more detail in my testimony on class cost of service and rate design.
4	Q.	SHOULD THE COMMISSION GENERALLY CONSIDER THE IMPACT OF THE PROPOSED
5		RATE INCREASE ON LGS AND SP CUSTOMERS IN SETTING THE REVENUE
6		REQUIREMENT CHANGE AND ROE FOR AMEREN?
7	A.	Yes. Electricity represents a significant portion of a retailer's operating costs. When
8	,	rates increase, that increase in cost to retailers puts pressure on consumer prices and
9		on the other expenses required by a business to operate. The Commission should
10		consider the impact on customers thoroughly and carefully in their examination of
11		revenue requirement and ROE, in addition to all other facets of this case, to ensure
12		that any increase in Ameren's rates is only the minimum amount necessary for the
13		utility to provide adequate and reliable service.
14		
15	Return on	Equity
16.	Q.	WHAT IS THE COMPANY'S PROPOSED ROE IN THIS DOCKET?
17	, A.	The Company is proposing an ROE of 10.4 percent based on a range of 10.2 percent
18		to 10.6 percent. See Direct Testimony of Robert B. Hevert, page 2, line 18 to line 21.
19		This results in a proposed overall rate of return of 8.045 percent. See Direct Testimony
20		of Ryan J. Martin, page 11, line 18 to line 20.

1	Q.	IS THE COMPANY'S PROPOSED ROE HIGHER THAN THE ROE CURRENTLY APPROVED
2		FOR THEIR BUSINESS?
3	A.	Yes. The proposed ROE represents an increase of 60 basis points from the Company's
4		currently approved ROE of 9.8 percent. See Case No. ER-2012-0166, Report and Order,
5		December 12, 2012, page 73.
6	Q.	WHAT IS THE REVENUE REQUIREMENT IMPACT OF THE PROPOSED 60 BASIS POINT
7		INCREASE IN ROE?
8	A.	The revenue requirement impact on the Company's rates of the proposed increase in
9		ROE is approximately \$37 million. The requested increase related to ROE constitutes
10		about 14 percent of the Company's increase request. See Schedule SWC-6.
11	Q.	ARE YOU CONCERNED THAT THE PROPOSED ROE IS EXCESSIVE?
12	A.	Yes. I am concerned that the Company's proposed ROE is excessive, especially when
13		viewed in light of (a) the resulting revenue requirement increases as I discuss above,
14		(b) ROEs authorized by the Commission in the last Ameren rate case and those
15		authorized in recent KCP&L and GMO rate cases, and (c) rate case ROEs approved by
16		commissions nationwide.
17	Q.	WHAT ROE DID THE COMMISSION AUTHORIZE FOR KCP&L AND GMO IN THE MOST
18		RECENT COMPLETED RATE CASES FOR THOSE COMPANIES?
19	Α.	The Commission authorized an ROE of 9.7 for both KCP&L and GMO. See Case Nos.
20		ER-2012-0174 and ER-2012-0175, January 9, 2013, Report and Order, page 23. The
21		Company's proposed ROE in this case exceeds these ROEs by 70 basis points.

Ŧ	ų.	13 THE COMPANY 3 PROPOSED ROE HIGHER THAIN THE AVERAGES OF THOSE
2		APPROVED BY OTHER UTILITY REGULATORY COMMISSIONS?
3	A.	Yes. The proposed ROE is higher than the averages of ROEs approved by other utility
4		regulatory commissions in 2012, 2013, and so far in 2014.
5	Q.	HAS THE COMMISSION ESTABLISHED THE USE OF NATIONAL AVERAGES AS A
6		FACTOR IN THE "ZONE OF REASONABLENESS" TEST FOR THE EXAMINATION OF AN
7		APPLICANT'S PROPOSED ROE?
8	A.	Yes. In the last Ameren rate case, the Commission stated in its Report and Order:
9 10 11 12 13 14		"The Commission mentions the average allowed return on equity not because the Commission should, or would slavishly follow the national average in awarding a return on equity to Ameren Missouri. However, Ameren Missouri must compete with other utilities all over the country for the same capital. Therefore, the average allowed return on equity provides a reasonableness test for the recommendations offered by the return on equity experts."
L6		See Case No. ER-2012-0166, Report and Order, December 12, 2012, page 67.
17		Additionally, in the most recent KCP&L and GMO cases, the Commission stated:
18 19 20 21 22 23 24		"The national marketplace is also among the factors that help the Commission establish a zone of reasonableness for Applicants' ROE. Based on the downward trend in national averages of other state commissions' ROE awards, the continuing downward pressure on interest rates nationally, the slower-than average recovery in Missouri, and the copious testimony of the many experts, the Commission has found a reasonable opportunity for Applicants to earn a reasonable return on their investment exists at 9.7%."
26 27		See Case Nos. ER-2012-0174 and ER-2012-0175, Report and Order, January 9, 2013 page 23.

1	Q.	WHAT IS YOUR UNDERSTANDING OF THE RETURNS ON EQUITY APPROVED FOR
2		ELECTRIC UTILITIES BY COMMISSIONS NATIONWIDE IN 2012, 2013, AND SO FAR IN
3		2014?
4	A.	According to data from SNL Financial ³ , a financial news and reporting company, the
5		average of the 113 reported electric utility rate case ROEs authorized by commissions
6		to investor-owned electric utilities in 2012, 2013, and so far in 2014, is 9.9 percent.
7		The range of reported authorized ROEs for the period is 8.72 percent to 10.95 percent,
8		and the median authorized ROE is 9.88 percent. See Schedule SWC-7, page 3.
9	Q.	SEVERAL OF THE REPORTED AUTHORIZED ROES ARE FOR DISTRIBUTION-ONLY
10		UTILITIES OR FOR ONLY A UTILITY'S DISTRIBUTION SERVICE RATES. WHAT IS THE
11		AVERAGE AUTHORIZED ROE IN THE REPORTED GROUP FOR THE VERTICALLY
12		INTEGRATED UTILITIES SUCH AS AMEREN?
13	A.	In the group reported by SNL Financial, the average authorized ROE for vertically
14		integrated utilities from 2012 to present is 10.02 percent, which is 38 basis points
15		below the Company's proposed ROE. Id. However, there is a declining trend for
16		vertically integrated utilities from 2012 to present.
17	Q.	PLEASE EXPLAIN.
18	A.	The average authorized ROE for vertically integrated utilities in 2012 it was 10.1
19		percent, in 2013 it was 9.97 percent, and so far in 2014 it is 9.91 percent. It should be
20		noted that three of the four 2014 authorized ROEs in excess of 10 percent were

 $^{^{\}rm 3}$ Regulatory Research Associates in part of SNL Financial.

1		awarded in Wisconsin, which tends to skew the resulting average in favor of that
2		jurisdiction. Excluding those three dockets results in an average of 9.76 percent for
3		the rest of the country in 2014. As such, the Company's proposed ROE increase in this
4		case is a move counter to broader industry trends.
5	Q.	HAS THE COMMISSION PREVIOUSLY RECOGNIZED THE IMPACT ON CUSTOMER
6		RATES IN THE ROE DETERMINATION PROCESS?
7	A.	Yes. In the Report and Order in the last Ameren rate case, the Commission stated:
8 9 10 11 12		"Instead, the Commission must use its judgment to establish a rate of return on equity attractive enough to investors to allow the utility to fairly compete for the investors' dollar in the capital market, without permitting an excessive rate of return on equity that would drive up rates for Ameren Missouri's customers."
13		See Case No. ER-2012-0166, Report and Order, December 12, 2012, page 64.
1.14	Q. ; ;	HAVE ANY OTHER STATES RECOGNIZED THE IMPORTANCE OF CONSIDERING
15		RATEPAYER IMPACTS IN THE ROE DETERMINATION PROCESS?
16	A.	Yes. While I am not an attorney, it is my understanding that the North Carolina Supreme
17		Court has determined that impacts on ratepayers from any proposed utility rate increase
18		should be carefully considered in an ROE analysis for that utility. Specifically, the Court stated:
19 20 21 22 23 24		"Given the legislature's goal of balancing customer and investor interests, the customer-focused purpose of Chapter 62, and this Court's recognition that the Commission must consider all evidence presented by interested parties, which necessarily includes customers, it is apparent that customer interests cannot be measured only indirectly or treated as mere afterthoughts and that Chapter 62's ROE provisions cannot be read in isolation as only protecting public utilities and
25 26 27 28 29		their shareholders. Instead, it is clear that the Commission must take customer interests into account when making an ROE determination. Therefore, we hold that in retail electric service rate cases the Commission must make findings of fact regarding the impact of changing economic conditions on customers when determining the proper ROE for a public utility."

1 See State Ex Rel. Utils. Comm'n v. Cooper, 366 N.C. 484, 739 S.E.2d 541, 547 (2013) 2 (emphasis in original). Q. GENERALLY, WHAT IS YOUR RECOMMENDATION TO THE COMMISSION ON THE 3 COMPANY'S PROPOSED INCREASES IN REVENUE REQUIREMENT AND ROE? 4 A. The Commission should closely examine the Company's proposed revenue 5 requirement increase and the associated proposed increase in return on equity, 6 7 especially when viewed in light of (a) the resulting revenue requirement increases as I discuss above, (b) ROEs authorized by the Commission in the last Ameren rate case 8 and those authorized in recent KCP&L and GMO rate cases, and (c) rate case ROEs 9 approved by commissions nationwide. Unless the Commission determines that 10 Ameren has sufficiently and substantially demonstrated that the economic 11 environment faced by the Company has changed significantly in the time elapsed from 12 . the Commission's Report and Order in Case No. ER-2012-0166, the Commission 13 . . should approve a ROE no higher than the currently allowed ROE of 9.8 percent. 14 DOES THIS CONCLUDE YOUR DIRECT TESTIMONY? 15 Q. 16 A. Yes.

Steve W. Chriss

Senior Manager, Energy Regulatory Analysis

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Business Phone: (479) 204-1594

EXPERIENCE

July 2007 – Present Wal-Mart Stores, Inc., Bentonville, AR Senior Manager, Energy Regulatory Analysis (June 2011 - Present) Manager, State Rate Proceedings (July 2007 - June 2011)

June 2003 – July 2007 Public Utility Commission of Oregon, Salem, OR Senior Utility Analyst (February 2006 – July 2007) Economist (June 2003 - February 2006)

January 2003 - May 2003 North Harris College, Houston, TX Adjunct Instructor, Microeconomics

June 2001 - March 2003 Econ One Research, Inc., Houston, TX Senior Analyst (October 2002 – March 2003) Analyst (June 2001 - October 2002)

EDUCATION

2001

Louisiana State University

1997-1998

University of Florida

M.S., Agricultural Economics

Graduate Coursework, Agricultural Education

and Communication

1997

Texas A&M University

B.S., Agricultural Development

B.S., Horticulture

TESTIMONY BEFORE REGULATORY COMMISSIONS

2014

Pennsylvania Public Utility Commission Docket No. R-2014-2428742; Pennsylvania Public Utility Commission v. West Penn Power Company.

Pennsylvania Public Utility Commission Docket No. R-2014-2428743: Pennsylvania Public Utility Commission v. Pennsylvania Electric Company.

Pennsylvania Public Utility Commission Docket No. R-2014-2428744: Pennsylvania Public Utility Commission v. Pennsylvania Power Company.

Pennsylvania Public Utility Commission Docket No. R-2014-2428745: Pennsylvania Public Utility Commission v. Metropolitan Edison Company.

Washington Utilities and Transportation Commission Docket No. UE-141368: In the Matter of the Petition of Puget Sound Energy to Update Methodologies Used to Allocate Electric Cost of Service and For Electric Rate Design Purposes.

Washington Utilities and Transportation Commission Docket No. UE-140762: 2014 Pacific Power & Light Company General Rate Case.

West Virginia Public Service Commission Case No. 14-0702-E-42T: Monongahela Power Company and the Potomac Edison Company Rule 42T Tariff Filing to Increase Rates and Charges.

Ohio Public Utilities Commission Case No. 14-841-EL-SSO: In the Matter of the Application of Duke Energy Ohio for Authority to Establish a Standard Service Offer Pursuant to Section 4928.143, Revised Code, in the Form of Case No. 14-841-EL-SSO an Electric Security Plan, Accounting Modifications and Tariffs for Generation Service.

Colorado Public Utilities Commission Docket No. 14AL-0660E: Re: In the Matter of the Advice Letter No. 1672-Electric Filed by Public Service Company of Colorado to Revise its Colorado PUC No. 7-Electric Tariff to Implement a General Rate Schedule Adjustment and Other Rate Changes Effective July 18, 2014.

Maryland Case No. 9355: In the Matter of the Application of Baltimore Gas and Electric Company for Authority to Increase Existing Rates and Charges for Electric and Gas Service.

Mississippi Public Service Commission Docket No. 2014-UN-132: In Re: Notice of Intent of Entergy Mississippi, Inc. to Modernize Rates to Support Economic Development, Power Procurement, and Continued Investment.

Nevada Public Utilities Commission Docket No. 14-05004: Application of Nevada Power Company d/b/a NV Energy for Authority to Increase its Annual Revenue Requirement for General Rates Charged to All Classes of Electric Customers and for Relief Properly Related Thereto.

Utah Public Service Commission Docket No. 14-035-T02: In the Matter of Rocky Mountain Power's Proposed Electric Service Schedule No. 32, Service From Renewable Energy Facilities.

Florida Public Service Commission Docket No. 140002-EG: In Re: Energy Conservation Cost Recovery Clause.

Wisconsin Docket No. 6690-UR-123: Application of Wisconsin Public Service Corporation for Authority to Adjust Electric and Natural Gas Rates.

Connecticut Docket No. 14-05-06: Application of the Connecticut Light and Power Company to Amend its Rate Schedules.

Virginia Corporation Commission Case No. PUE-2014-00026: Application of Appalachian Power Company for a 2014 Biennial Review for the Provision of Generation, Distribution and Transmission Services Pursuant to § 56-585.1 A of the Code of Virginia.

Virginia Corporation Commission Case No. PUE-2014-00033; Application of Virginia Electric and Power Company to Revise its Fuel Factor Pursuant to Va. Code § 56-249.6.

Arizona Corporation Commission Docket No. E-01345A-11-0224 (Four Corners Phase): In the Matter of Arizona Public Service Company for a Hearing to Determine the Fair Value of Utility Property of the Company for Ratemaking Purposes, to Fix and Just and Reasonable Rate of Return Thereon, to Approve Rate Schedules Designed to Develop Such Return.

Minnesota Public Utilities Commission Docket No. E-002/GR-13-868: In the Matter of the Application of Northern States Power Company, for Authority to Increase Rates for Electric Service in Minnesota.

Utah Public Service Commission Docket No. 13-035-184: In the Matter of the Application of Rocky Mountain Power for Authority to Increase its Retail Electric Utility Service Rates in Utah and for Approval of its Proposed Electric Service Schedules and Electric Service Regulations.

Missouri Public Service Commission Case No. EC-2014-0224: In the Matter of Noranda Aluminum, Inc.'s Request for Revisions to Union Electric Company d/b/a Ameren Missouri's Large Transmission Service Tariff to Decrease its Rate for Electric Service.

Oklahoma Corporation Commission Cause No. PUD 201300217: Application of Public Service Company of Oklahoma to be in Compliance with Order No. 591185 Issued in Cause No. PUD 201100106 Which Requires a Base Rate Case to be Filed by PSO and the Resulting Adjustment in its Rates and Charges and Terms and Conditions of Service for Electric Service in the State of Oklahoma.

Public Utilities Commission of Ohio Case No. 13-2386-EL-SSO: In the Matter of the Application of Ohio Power Company for Authority to Establish a Standard Service Offer Pursuant to §4928.143, Ohio Rev. Code, in the Form of an Electric Security Plan.

2013

Oklahoma Corporation Commission Cause No. PUD 201300201: Application of Public Service Company of Oklahoma for Commission Authorization of a Standby and Supplemental Service Rate Schedule.

Georgia Public Service Commission Docket No. 36989: Georgia Power's 2013 Rate Case.

Florida Public Service Commission Docket No. 130140-El: Petition for Rate Increase by Gulf Power Company.

Public Utility Commission of Oregon Docket No. UE 267: In the Matter of PACIFICORP, dba PACIFIC POWER, Transition Adjustment, Five-Year Cost of Service Opt-Out.

Illinois Commerce Commission Docket No. 13-0387: Commonwealth Edison Company Tariff Filing to Present the Illinois Commerce Commission with an Opportunity to Consider Revenue Neutral Tariff Changes Related to Rate Design Authorized by Subsection 16-108.5 of the Public Utilities Act.

Iowa Utilities Board Docket No. RPU-2013-0004: In Re: MidAmerican Energy Company.

South Dakota Public Utilities Commission Docket No. EL12-061: In the Matter of the Application of Black Hills Power, Inc. for Authority to Increase its Electric Rates. (filed with confidential stipulation)

Kansas Corporation Commission Docket No. 13-WSEE-629-RTS: In the Matter of the Applications of Wester Energy, Inc. and Kansas Gas and Electric Company for Approval to Make Certain Changes in their Charges for Electric Service.

Public Utility Commission of Oregon Docket No. UE 263: In the Matter of PACIFICORP, dba PACIFIC POWER, Request for a General Rate Revision.

Arkansas Public Service Commission Docket No. 13-028-U: In the Matter of the Application of Entergy Arkansas, Inc. for Approval of Changes in Rates for Retail Electric Service.

Virginia State Corporation Commission Docket No. PUE-2013-00020: Application of Virginia Electric and Power Company for a 2013 Biennial Review of the Rates, Terms, and Conditions for the Provision of Generation, Distribution, and Transmission Services Pursuant to § 56-585.1 A of the Code of Virginia.

Florida Public Service Commission Docket No. 130040-El: Petition for Rate Increase by Tampa Electric Company.

South Carolina Public Service Commission Docket No. 2013-59-E: Application of Duke Energy Carolinas, LLC, for Authority to Adjust and Increase Its Electric Rates and Charges.

Public Utility Commission of Oregon Docket No. UE 262: In the Matter of PORTLAND GENERAL ELECTRIC COMPANY, Request for a General Rate Revision.

New Jersey Board of Public Utilities Docket No. ER12111052: In the Matter of the Verified Petition of Jersey Central Power & Light Company For Review and Approval of Increases in and Other Adjustments to Its Rates and Charges For Electric Service, and For Approval of Other Proposed Tariff Revisions in Connection Therewith; and for Approval of an Accelerated Reliability Enhancement Program ("2012 Base Rate Filing")

North Carolina Utilities Commission Docket No. E-7, Sub 1026: In the Matter of the Application of Duke Energy Carolinas, LLC for Adjustment of Rates and Charges Applicable to Electric Service in North Carolina.

Public Utility Commission of Oregon Docket No. UE 264: PACIFICORP, dba PACIFIC POWER, 2014 Transition Adjustment Mechanism.

Public Utilities Commission of California Docket No. 12-12-002: Application of Pacific Gas and Electric Company for 2013 Rate Design Window Proceeding.

Public Utilities Commission of Ohio Docket Nos. 12-426-EL-SSO, 12-427-EL-ATA, 12-428-EL-AAM, 12-429-EL-WVR, and 12-672-EL-RDR: in the Matter of the Application of the Dayton Power and Light Company Approval of its Market Offer.

Minnesota Public Utilities Commission Docket No. E-002/GR-12-961: In the Matter of the Application of Northern States Power Company for Authority to Increase Rates for Electric Service in Minnesota.

North Carolina Utilities Commission Docket E-2, Sub 1023: In the Matter of Application of Progress Energy Carolinas, Inc. For Adjustment of Rates and Charges Applicable to Electric Service in North Carolina.

2012

Public Utility Commission of Texas Docket No. 40443: Application of Southwestern Electric Power Company for Authority to Change Rates and Reconcile Fuel Costs.

South Carolina Public Service Commission Docket No. 2012-218-E: Application of South Carolina Electric & Gas Company for Increases and Adjustments in Electric Rate Schedules and Tariffs and Request for Mid-Period Reduction in Base Rates for Fuel.

Kansas Corporation Commission Docket No. 12-KCPE-764-RTS: In the Matter of the Application of Kansas City Power & Light Company to Make Certain Changes in its Charges for Electric Service.

Kansas Corporation Commission Docket No. 12-GIMX-337-GIV: In the Matter of a General Investigation of Energy-Efficiency Policies for Utility Sponsored Energy Efficiency Programs.

Florida Public Service Commission Docket No. 120015-El: In Re: Petition for Rate Increase by Florida Power & Light Company.

California Public Utilities Commission Docket No. A.11-10-002: Application of San Diego Gas & Electric Company (U 902 E) for Authority to Update Marginal Costs, Cost Allocation, and Electric Rate Design.

Utah Public Service Commission Docket No. 11-035-200: In the Matter of the Application of Rocky Mountain Power for Authority to Increase its Retail Electric Utility Service Rates in Utah and for Approval of its Proposed Electric Service Schedules and Electric Service Regulations.

Virginia State Corporation Commission Case No. PUE-2012-00051: Application of Appalachian Power Company to Revise its Fuel Factor Pursuant to § 56-249.6 of the Code of Virginia.

Public Utilities Commission of Ohio Case Nos. 11-346-EL-SSO, 11-348-EL-SSO, 11-349-EL-AAM, and 11-350-EL-AAM: In the Matter of the Application of Columbus Southern Power Company and Ohio Power Company for Authority to Establish a Standard Service Offer Pursuant to Section 4928.143, Revised Code, in the Form on an Electric Security Plan and In the Matter of the Application of Columbus Southern Power Company and Ohio Power Company for Approval of Certain Accounting Authority.

New Jersey Board of Public Utilities Docket No. ER11080469: In the Matter of the Petition of Atlantic City Electric for Approval of Amendments to Its Tariff to Provide for an Increase in Rates and Charges for Electric Service Pursuant to N.J.S.A. 48:2-21 and N.J.S.A. 48:2-21.1 and For Other Appropriate Relief.

Public Utility Commission of Texas Docket No. 39896: Application of Entergy Texas, Inc. for Authority to Change Rates and Reconcile Fuel Costs.

Missouri Public Service Commission Case No. EO-2012-0009:In the Matter of KCP&L Greater Missouri Operations Notice of Intent to File an Application for Authority to Establish a Demand-Side Programs Investment Mechanism.

Colorado Public Utilities Commission Docket No. 11AL-947E: In the Matter of Advice Letter No. 1597-Electric Filed by Public Service Company of Colorado to Revise its Colorado PUC No. 7-Electric Tariff to Implement a General Rate Schedule Adjustment and Other Changes Effective December 23, 2011.

Illinois Commerce Commission Docket No. 11-0721: Commonwealth Edison Company Tariffs and Charges Submitted Pursuant to Section 16-108.5 of the Public Utilities Act.

Public Utility Commission of Texas Docket No. 38951: Application of Entergy Texas, Inc. for Approval of Competitive Generation Service tariff (Issues Severed from Docket No. 37744).

California Public Utilities Commission Docket No. A.11-06-007: Southern California Edison's General Rate Case, Phase 2.

2011

Arizona Corporation Commission Docket No. E-01345A-11-0224: In the Matter of Arizona Public Service Company for a Hearing to Determine the Fair Value of Utility Property of the Company for Ratemaking Purposes, to Fix and Just and Reasonable Rate of Return Thereon, to Approve Rate Schedules Designed to Develop Such Return.

Oklahoma Corporation Commission Cause No. PUD 201100087: In the Matter of the Application of Oklahoma Gas and Electric Company for an Order of the Commission Authorizing Applicant to Modify its Rates, Charges, and Tariffs for Retail Electric Service in Oklahoma.

South Carolina Public Service Commission Docket No. 2011-271-E: Application of Duke Energy Carolinas, LLC for Authority to Adjust and Increase its Electric Rates and Charges.

Pennsylvania Public Utility Commission Docket No. P-2011-2256365: Petition of PPL Electric Utilities Corporation for Approval to Implement Reconciliation Rider for Default Supply Service.

North Carolina Utilities Commission Docket No. E-7, Sub 989: In the Matter of Application of Duke Energy Carolinas, LLC for Adjustment of Rates and Charges Applicable to Electric Service in North Carolina,

Florida Public Service Commission Docket No. 110138: In Re: Petition for Increase in Rates by Gulf Power Company.

Public Utilities Commission of Nevada Docket No. 11-06006: In the Matter of the Application of Nevada Power Company, filed pursuant to NRS 704.110(3) for authority to increase its annual revenue requirement for general rates charged to all classes of customers to recover the costs of constructing the Harry Allen Combined Cycle plant and other generating, transmission, and distribution plant additions, to reflect changes in the cost of capital, depreciation rates and cost of service, and for relief properly related thereto.

North Carolina Utilities Commission Docket Nos. E-2, Sub 998 and E-7, Sub 986: in the Matter of the Application of Duke Energy Corporation and Progress Energy, Inc., to Engage in a Business Combination Transaction and to Address Regulatory Conditions and Codes of Conduct.

Public Utilities Commission of Ohio Case Nos. 11-346-EL-SSO, 11-348-EL-SSO, 11-349-EL-AAM, and 11-350-EL-AAM: In the Matter of the Application of Columbus Southern Power Company and Ohio Power Company for Authority to Establish a Standard Service Offer Pursuant to Section 4928.143, Revised Code, in the Form on an Electric Security Plan and In the Matter of the Application of Columbus Southern Power Company and Ohio Power Company for Approval of Certain Accounting Authority.

Virginia State Corporation Commission Case No. PUE-2011-00037: In the Matter of Appalachian Power Company for a 2011 Biennial Review of the Rates, Terms, and Conditions for the Provision of Generation, Distribution, and Transmission Services Pursuant to § 56-585.1 A of the Code of Virginia.

Illinois Commerce Commission Docket No. 11-0279 and 11-0282 (cons.): Ameren Illinois Company Proposed General Increase in Electric Delivery Service and Ameren Illinois Company Proposed General Increase in Gas Delivery Service.

Virginia State Corporation Commission Case No. PUE-2011-00045: Application of Virginia Electric and Power Company to Revise its Fuel Factor Pursuant to § 56-249.6 of the Code of Virginia.

Utah Public Service Commission Docket No. 10-035-124: In the Matter of the Application of Rocky Mountain Power for Authority to Increase its Retail Electric Utility Service Rates in Utah and for Approval of its Proposed Electric Service Schedules and Electric Service Regulations.

Maryland Public Utilities Commission Case No. 9249: In the Matter of the Application of Delmarva Power & Light for an Increase in its Retail Rates for the Distribution of Electric Energy.

Minnesota Public Utilities Commission Docket No. E002/GR-10-971: In the Matter of the Application of Northern States Power Company d/b/a Xcel Energy for Authority to Increase Rates for Electric Service in Minnesota.

Michigan Public Service Commission Case No. U-16472: In the Matter of the Detroit Edison Company for Authority to Increase its Rates, Amend its Rate Schedules and Rules Governing the Distribution and Supply of Electric Energy, and for Miscellaneous Accounting Authority.

2010

Public Utilities Commission of Ohio Docket No. 10-2586-EL-SSO: In the Matter of the Application of Duke Energy Ohio for Approval of a Market Rate Offer to Conduct a Competitive Bidding Process for Standard Service Offer Electric Generation Supply, Accounting Modifications, and Tariffs for Generation Service.

Colorado Public Utilities Commission Docket No. 10A-554EG: In the Matter of the Application of Public Service Company of Colorado for Approval of a Number of Strategic Issues Relating to its DSM Plan, Including Long-Term Electric Energy Savings Goals, and Incentives.

Public Service Commission of West Virginia Case No. 10-0699-E-42T: Appalachian Power Company and Wheeling Power Company Rule 42T Application to Increase Electric Rates.

Oklahoma Corporation Commission Cause No. PUD 201000050: Application of Public Service Company of Oklahoma, an Oklahoma Corporation, for an Adjustment in its Rates and Charges and Terms and Conditions of Service for Electric Service in the State of Oklahoma.

Georgia Public Service Commission Docket No. 31958-U: In Re: Georgia Power Company's 2010 Rate Case.

Washington Utilities and Transportation Commission Docket No. UE-100749: 2010 Pacific Power & Light Company General Rate Case.

Colorado Public Utilities Commission Docket No. 10M-254E: In the Matter of Commission Consideration of Black Hills Energy's Plan in Compliance with House Bill 10-1365, "Clean Air-Clean Jobs Act."

Colorado Public Utilities Commission Docket No. 10M-245E: In the Matter of Commission Consideration of Public Service Company of Colorado Plan in Compliance with House Bill 10-1365, "Clean Air-Clean Jobs Act."

Public Service Commission of Utah Docket No. 09-035-15 *Phase II*: In the Matter of the Application of Rocky Mountain Power for Approval of its Proposed Energy Cost Adjustment Mechanism.

Public Utility Commission of Oregon Docket No. UE 217: In the Matter of PACIFICORP, dba PACIFIC POWER Request for a General Rate Revision.

Mississippi Public Service Commission Docket No. 2010-AD-57: In Re: Proposal of the Mississippi Public Service Commission to Possibly Amend Certain Rules of Practice and Procedure.

Indiana Utility Regulatory Commission Cause No. 43374: Verified Petition of Duke Energy Indiana, Inc. Requesting the Indiana Utility Regulatory Commission to Approve an Alternative Regulatory Plan Pursuant to Ind. Code § 8-1-2.5-1, ET SEQ., for the Offering of Energy Efficiency Conservation, Demand Response, and Demand-Side Management Programs and Associated Rate Treatment Including Incentives Pursuant to a Revised Standard Contract Rider No. 66 in Accordance with Ind. Code §§ 8-1-2.5-1 ET SEQ. and 8-1-2-42 (a); Authority to Defer Program Costs Associated with its Energy Efficiency Portfolio of Programs; Authority to Implement New and Enhanced Energy Efficiency Programs, Including the Powershare® Program in its Energy Efficiency Portfolio of Programs; and Approval of a Modification of the Fuel Adjustment Clause Earnings and Expense Tests.

Public Utility Commission of Texas Docket No. 37744: Application of Entergy Texas, Inc. for Authority to Change Rates and to Reconcile Fuel Costs.

South Carolina Public Service Commission Docket No. 2009-489-E: Application of South Carolina Electric & Gas Company for Adjustments and Increases in Electric Rate Schedules and Tariffs.

Kentucky Public Service Commission Case No. 2009-00459: In the Matter of General Adjustments in Electric Rates of Kentucky Power Company.

Virginia State Corporation Commission Case No. PUE-2009-00125: For acquisition of natural gas facilities Pursuant to § 56-265.4:5 B of the Virginia Code.

Arkansas Public Service Commission Docket No. 10-010-U: In the Matter of a Notice of Inquiry Into Energy Efficiency.

Connecticut Department of Public Utility Control Docket No. 09-12-05: Application of the Connecticut Light and Power Company to Amend its Rate Schedules.

Arkansas Public Service Commission Docket No. 09-084-U: In the Matter of the Application of Entergy Arkansas, Inc. For Approval of Changes in Rates for Retail Electric Service.

Missouri Public Service Commission Docket No. ER-2010-0036: In the Matter of Union Electric Company d/b/a AmerenUE for Authority to File Tariffs Increasing Rates for Electric Service Provided to Customers in the Company's Missouri Service Area.

Public Service Commission of Delaware Docket No. 09-414: In the Matter of the Application of Delmarva Power & Light Company for an Increase in Electric Base Rates and Miscellaneous Tariff Charges.

2009

Virginia State Corporation Commission Case No. PUE-2009-00030: In the Matter of Appalachian Power Company for a Statutory Review of the Rates, Terms, and Conditions for the Provision of Generation, Distribution, and Transmission Services Pursuant to § 56-585.1 A of the Code of Virginia.

Public Service Commission of Utah Docket No. 09-035-15 *Phase I*: In the Matter of the Application of Rocky Mountain Power for Approval of its Proposed Energy Cost Adjustment Mechanism.

Public Service Commission of Utah Docket No. 09-035-23: In the Matter of the Application of Rocky Mountain Power for Authority To Increase its Retail Electric Utility Service Rates in Utah and for Approval of Its Proposed Electric Service Schedules and Electric Service Regulations.

Colorado Public Utilities Commission Docket No. 09AL-299E: Re: The Tariff Sheets Filed by Public Service Company of Colorado with Advice Letter No. 1535 — Electric.

Arkansas Public Service Commission Docket No. 09-008-U: In the Matter of the Application of Southwestern Electric Power Company for Approval of a General Change in Rates and Tariffs.

Oklahoma Corporation Commission Docket No. PUD 200800398: In the Matter of the Application of Oklahoma Gas and Electric Company for an Order of the Commission Authorizing Applicant to Modify its Rates, Charges, and Tariffs for Retail Electric Service in Oklahoma.

Public Utilities Commission of Nevada Docket No. 08-12002: In the Matter of the Application by Nevada Power Company d/b/a NV Energy, filed pursuant to NRS §704.110(3) and NRS §704.110(4) for authority to increase its annual revenue requirement for general rates charged to all classes of customers, begin to recover the costs of acquiring the Bighorn Power Plant, constructing the Clark Peakers, Environmental Retrofits and other generating, transmission and distribution plant additions, to reflect changes in cost of service and for relief properly related thereto.

New Mexico Public Regulation Commission Case No. 08-00024-UT: In the Matter of a Rulemaking to Revise NMPRC Rule 17.7.2 NMAC to Implement the Efficient Use of Energy Act.

Indiana Utility Regulatory Commission Cause No. 43580: Investigation by the Indiana Utility Regulatory Commission, of Smart Grid Investments and Smart Grid Information Issues Contained in 111(d) of the Public Utility Regulatory Policies Act of 1978 (16 U.S.C. § 2621(d)), as Amended by the Energy Independence and Security Act of 2007.

Louisiana Public Service Commission Docket No. U-30192 *Phase II (February 2009)*: Ex Parte, Application of Entergy Louisiana, LLC for Approval to Repower Little Gypsy Unit 3 Electric Generating Facility and for Authority to Commence Construction and for Certain Cost Protection and Cost Recovery.

South Carolina Public Service Commission Docket No. 2008-251-E: In the Matter of Progress Energy Carolinas, Inc.'s Application For the Establishment of Procedures to Encourage Investment in Energy Efficient Technologies; Energy Conservation Programs; And Incentives and Cost Recovery for Such Programs.

2008

Colorado Public Utilities Commission Docket No. 08A-366EG: In the Matter of the Application of Public Service Company of Colorado for approval of its electric and natural gas demand-side management (DSM) plan for calendar years 2009 and 2010 and to change its electric and gas DSM cost adjustment rates effective January 1, 2009, and for related waivers and authorizations.

Public Service Commission of Utah Docket No. 07-035-93: In the Matter of the Application of Rocky Mountain Power for Authority to Increase its Retail Electric Utility Service Rates in Utah and for Approval of its Proposed Electric Service Schedules and Electric Service Regulations, Consisting of a General Rate Increase of Approximately \$161.2 Million Per Year, and for Approval of a New Large Load Surcharge.

Indiana Utility Regulatory Commission Cause No. 43374: Petition of Duke Energy Indiana, Inc. Requesting the Indiana Utility Regulatory Commission Approve an Alternative Regulatory Plan for the Offering of Energy Efficiency, Conservation, Demand Response, and Demand-Side Management.

Public Utilities Commission of Nevada Docket No. 07-12001: In the Matter of the Application of Sierra Pacific Power Company for authority to increase its general rates charged to all classes of electric customers to reflect an increase in annual revenue requirement and for relief properly related thereto.

Louisiana Public Service Commission Docket No. U-30192 *Phase II*: Ex Parte, Application of Entergy Louisiana, LLC for Approval to Repower Little Gypsy Unit 3 Electric Generating Facility and for Authority to Commence Construction and for Certain Cost Protection and Cost Recovery.

Colorado Public Utilities Commission Docket No. 07A-420E: In the Matter of the Application of Public Service Company of Colorado For Authority to Implement and Enhanced Demand Side Management Cost Adjustment Mechanism to Include Current Cost Recovery and Incentives.

2007

Louisiana Public Service Commission Docket No. U-30192: Ex Parte, Application of Entergy Louisiana, LLC for Approval to Repower Little Gypsy Unit 3 Electric Generating Facility and for Authority to Commence Construction and for Certain Cost Protection and Cost Recovery.

Public Utility Commission of Oregon Docket No. UG 173: In the Matter of PUBLIC UTILITY COMMISSION OF OREGON Staff Request to Open an Investigation into the Earnings of Cascade Natural Gas.

2006

Public Utility Commission of Oregon Docket No. UE 180/UE 181/UE 184: In the Matter of PORTLAND GENERAL ELECTRIC COMPANY Request for a General Rate Revision.

Public Utility Commission of Oregon Docket No. UE 179: In the Matter of PACIFICORP, dba PACIFIC POWER AND LIGHT COMPANY Request for a general rate increase in the company's Oregon annual revenues.

Public Utility Commission of Oregon Docket No. UM 1129 *Phase II:* Investigation Related to Electric Utility Purchases From Qualifying Facilities.

2005

Public Utility Commission of Oregon Docket No. UM 1129 *Phase I Compliance*: Investigation Related to Electric Utility Purchases From Qualifying Facilities.

Public Utility Commission of Oregon Docket No. UX 29: In the Matter of QWEST CORPORATION Petition to Exempt from Regulation Qwest's Switched Business Services.

2004

Public Utility Commission of Oregon Docket No. UM 1129 *Phase I*: Investigation Related to Electric Utility Purchases From Qualifying Facilities.

TESTIMONY BEFORE LEGISLATIVE BODIES

2014

Regarding Kansas House Bill 2460: Testimony Before the Kansas House Standing Committee on Utilities and Telecommunications, February 12, 2014.

2012

Regarding Missouri House Bill 1488: Testimony Before the Missouri House Committee on Utilities, February 7, 2012.

2011

Regarding Missouri Senate Bills 50, 321, 359, and 406: Testimony Before the Missouri Senate Veterans' Affairs, Emerging Issues, Pensions, and Urban Affairs Committee, March 9, 2011.

AFFIDAVITS

2011

Colorado Public Utilities Commission Docket No. 11M-951E: In the Matter of the Petition of Public Service Company of Colorado Pursuant to C.R.S. § 40-6-111(1)(d) for Interim Rate Relief Effective on or before January 21, 2012.

ENERGY INDUSTRY PUBLICATIONS AND PRESENTATIONS

Mock Trial Expert Witness, The Energy Bar Association State Commission Practice and Regulation Committee and Young Lawyers Committee and Environment, Energy and Natural Resources Section of the D.C. Bar, Mastering Your First (or Next) State Public Utility Commission Hearing, February 13, 2014.

Panelist, Customer Panel, Virginia State Bar 29th National Regulatory Conference, Williamsburg, Virginia, May 19, 2011.

Chriss, S. (2006). "Regulatory Incentives and Natural Gas Purchasing – Lessons from the Oregon Natural Gas Procurement Study." Presented at the 19th Annual Western Conference, Center for Research in Regulated Industries Advanced Workshop in Regulation and Competition, Monterey, California, June 29, 2006.

Chriss, S. (2005). "Public Utility Commission of Oregon Natural Gas Procurement Study." Public Utility Commission of Oregon, Salem, OR. Report published in June, 2005. Presented to the Public Utility Commission of Oregon at a special public meeting on August 1, 2005.

Chriss, S. and M. Radler (2003). "Report from Houston: Conference on Energy Deregulation and Restructuring." USAEE Dialogue, Vol. 11, No. 1, March, 2003.

Chriss, S., M. Dwyer, and B. Pulliam (2002). "Impacts of Lifting the Ban on ANS Exports on West Coast Crude Oil Prices: A Reconsideration of the Evidence." Presented at the 22nd USAEE/IAEE North American Conference, Vancouver, BC, Canada, October 6-8, 2002.

Contributed to chapter on power marketing: "Power System Operations and Electricity Markets," Fred I. Denny and David E. Dismukes, authors. Published by CRC Press, June 2002.

Contributed to "Moving to the Front Lines: The Economic Impact of the Independent Power Plant Development in Louisiana," David E. Dismukes, author. Published by the Louisiana State University Center for Energy Studies, October 2001.

Dismukes, D.E., D.V. Mesyanzhinov, E.A. Downer, S. Chriss, and J.M. Burke (2001). "Alaska Natural Gas In-State Demand Study." Anchorage: Alaska Department of Natural Resources.

Calculation of FERC Form 1 Reported LGS Revenue per kWh Sold

	Commercial Sales			Industrial Sales			Total LGS Sales			Revenue per		Year-Over-	Cumulative
Year	Sales	les Revenue		evenue Sales	Revenue		Sales		Revenue		Wh Sold	Year	% Increase
	(MWH)		(\$)	(MWH)		(\$)	(MWH)		(\$)		(\$/kWh)	(%)	(%)
	(1)		(2)	(3)		(4)	(5)		(6)		(7)	(8)	(9)
2004	6,750,549	\$	372,818,081	1,198,333	\$	68,446,870	7,948,882	\$	441,264,951	\$	0.0555		
2005	6,902,782	\$	383,068,829	1,210,452	\$	68,457,618	8,113,234	\$	451,526,447	\$	0.0557	0.3%	0.3%
2006	6,825,279	\$	382,443,150	1,138,014	\$	65,138,353	7,963,293	\$	447,581,503	\$	0.0562	1.0%	1.2%
2007	7,209,112	\$	402,488,478	1,136,504	\$	65,058,386	8,345,616	\$	467,546,864	\$	0.0560	-0.3%	0.9%
2008	7,217,909	\$	404,821,983	1,091,791	\$	63,361,204	8,309,700	\$	468,183,187	\$	0.0563	0.6%	1.5%
2009	7,080,575	\$	423,487,422	942,887	\$	59,330,101	8,023,462	\$	482,817,523	\$	0.0602	6.8%	8.4%
2010	7,348,264	\$	479,441,021	981,778	\$	66,527,092	8,330,042	\$	545,968,113	\$	0.0655	8.9%	18.1%
2011	7,273,526	\$	524,713,967	969,043	\$	72,008,088	8,242,569	\$	596,722,055	\$	0.0724	10.5%	30.4%
2012	7,163,079	\$	523,948,387	941,992	\$	70,870,800	8,105,071	\$	594,819,187	\$	0.0734	1.4%	32.2%
2013	7,153,501	\$	584,937,006	923,052	\$	77,741,042	8,076,553	\$	662,678,048	\$	0.0820	11.8%	47.8%
		-											
Five Year	Change							\$	179,860,525				
Ten Year (Change							\$	221,413,097				

Sources

2004 - 2013 2013/Q4 FERC Form 1, Union Electric Company, page 304.

Ameren Missouri Response to MEUA Data Request MPSC Case No. ER-2011-0028

In the Matter of Union Electric Company d/b/a AmerenUE for Authority to File Tariffs Increasing Rates for Electric Service Provided to Customers in the Company's Missouri Service Area

Data Request No.: MEUA 2.1

Please confirm that the final revenue neutral results of UE's Class Cost of Service Studies in Case No. ER-2007-0002 were as follows: Residential: \$70,206,000 +8.3%; SGS: (\$14,996,000) -6.5%; LGS: (\$43,441,000) -10.2%; SP: (\$8,148,000) -4.5%; LPS: \$8,733,000 +5.4%; LTS: (\$12,355,000) -9.1%; *By final results, MUEA means the results after any changes, corrections or modifications that may have taken place through the processing of the case. See Response to MEUA Data Request No. 2 in Case No. ER-2010-0036 also was Exhibit No. 551.

RESPONSE

Prepared By: William M. Warwick

Title: Managing Supervisor - Rate Engineering

Date: May 2, 2011

Yes, these are the Company's final revenue neutral results of its class cost of service study in Case No. ER-2007-0002. By "final" it is meant as filed in AmerenUE witness William M. Warwick's surrebuttal testimony in Case No. ER-2007-0002. AmerenUE did not revise its class cost of service based on the final order in that case.

JUN - 8 2011

Missouri Public Service Commission

Ameren Missouri Response to MEUA Data Request MPSC Case No. ER-2011-0028

In the Matter of Union Electric Company d/b/a AmerenUE for Authority to File Tariffs Increasing Rates for Electric Service Provided to Customers in the Company's Missouri Service Area

Data Request No.: MEUA 2.3

Please confirm that the final revenue neutral results of UE's Class Cost of Service Studies in Case No. BR-2008-0318 were as follows: Residential: \$61,693,000 +6.93%; SGS: (\$16,186,000) -6.72%; LGS / SP: (\$47,863,000) -7.66%; LPS: \$5,774,000 +3.58%; LTS: (\$3,418,000) -2.67%; *By final results, MUEA means the results after any changes, corrections or modifications that may have taken place through the processing of the case. See Response to MEUA Data Request No. 2 in Case No. BR-2010-0036 also was Exhibit No. 551.

RESPONSE

Prepared By: William M. Warwick

Title: Managing Supervisor - Rate Engineering

Date: May 2, 2011

Yes, these are the Company's final revenue neutral results of its class cost of service study in Case No. ER-2008-0318. By "final" it is meant as filed in AmerenUE witness William M. Warwick's direct testimony in Case No. ER-2008-0318. AmerenUE did not revise its class cost of service based on the final order of the Commission in that case.

Ameren Missouri Response to MEUA Data Request MPSC Case No. ER-2011-0028

In the Matter of Union Electric Company d/b/a AmerenUE for Authority to File Tariffs Increasing Rates for Electric Service Provided to Customers in the Company's Missouri Service Area

Data Request No.: MEUA 2.5

Please confirm that the final revenue neutral results of UE's Class Cost of Service Studies in Case No. ER-2010-0036 are as follows: Residential: \$78,070,000 +7.99%; SGS: (\$17,649,000) -7.01%; LGS / SP: (\$64,785,000) -9.74%; LPS: \$2,092,000 +1.21%; LTS: \$2,272,000 +1.63%; *By final results, MUEA means the results after any changes, corrections or modifications that may have taken place through the processing of the case. See Response to MEUA Data Request No. 2 in Case No. ER-2010-0036 also was Exhibit No. 551.

RESPONSE

Prepared By: William M. Warwick

Title: Managing Supervisor - Rate Engineering

Date: May 2, 2011

Yes, these are the Company's final revenue neutral results of its class cost of service study in Case No. ER-2010-0036. By "final" it is meant as filed in AmerenUE witness William M. Warwick's direct testimony in Case No. ER-2010-0036. AmerenUE did not revise its class cost of service based on the final order in that case.

Ameren Missouri Response to MEUA Data Request MPSC Case No. ER-2011-0028

In the Matter of Union Electric Company d/b/a AmerenUE for Authority to File Tariffs Increasing Rates for Electric Service Provided to Customers in the Company's Missouri Service Area

Data Request No.: MEUA 2.7

Please provide the revenue neutral results, both in percentage and nominal dollars, of UE's Class Cost of Service Study in this case (Case No. ER-2011-0028).

RESPONSE

Prepared By: William M. Warwick

Title: Managing Supervisor - Rate Engineering

Date: May 2, 2011

The final revenue neutral results of the Company's class cost of service study in this case are as follows:

Residential	\$ 75,995,000	6.95%
Small GS	\$(24,557,000)	-8.77%
Large GS / Small PS	\$(63,653,000)	-8.94%
Large PS	\$ (2,578,000)	-1.42%
Large TS	\$ 7,810,000	5.60%
Lighting	\$ 6,983,000	22.41%

"Final" is meant as filed in Company witness William M. Warwick's direct testimony in this case. The Company has not revised its class cost of service study from that originally filed as part of its direct case.

Determination of Revenue Change, Per Ameren's Cost of Service Study Results, Required to Move LGS and SP to Cost of Service, Case No. ER-2012-0166

(1)		LGS/SP Total Net Original Cost Rate Base	\$ 1,744,893
(2)		LGS/SP Rate of Return	6.32%
(3)	(1) x (2)	Net Operating Income	\$ 110,277
(4)		Total Company Rate of Return	2.89%
(5)	(1) × (4)	Net Operating Income, Total Company Rate of Return	\$ 50,340
(6)	(5) - (3)	Reduction in Revenue Required to Achieve Total Company Rate of Return	\$ (59,937)
(7)		LGS/SP Base Revenue	\$ 749,850
(8)	(6) / (7)	Reduction in Revenue Required to Achieve Total Company Rate of Return	-7.99%

Source:

Case No. ER-2012-0166, Schedule WMW-E1

Calculation of Proposed LGS and SP Increases in Excess of Cost of Service Levels

Customer Class		Current Retail Revenues	Proposed Base Revenue Requirement	Propos Base Rev Adjustn	enue	Ba	st of Service se Revenue djustment	in Ex	ed Increase access of af Service
		(\$) (1)	(\$) (2)	(\$) (3) (2) - (1)	(%) (4) (3) / (1)	(%) (5)	(\$) (6) (1) × (5)		(\$) (7)) - (6)
Large General Service Small Primary Service	\$ \$	576,863,372 227,596,391	\$ 632,477,169 \$ 249,536,714	\$ 55,613,797 \$ 21,940,323		1.1% 1.1%	\$ 6,345,497 \$ 2,503,560	1 1	19,268,300 19,436,763
Total	\$	804,459,763	\$ 882,013,883	\$ 77,554,120	1		\$ 8,849,057	\$ 6	8,705,063

Sources:

^{(1) - (4)} Direct Testimony of William R. Davis, page 17, line 1

⁽⁵⁾ Direct Testimony of William R. Davis, page 15, line 1

(1)		Ameren Requested Rate of Return			8.045%	
		1) Calculate Rate of Return at ROE = 9.8%				
		Capital Component	% of Total		Cost	Weighted Cost
(2)		Long Term Debt	47.31%		5.57%	2.63%
(3)		Short Term Debt	0.00%		0.00%	0.00%
(4)		Preferred Stock	1.07%		4.18%	0.04%
(5)		Common Equity	51.59%		9.80%	5.06%
(6)		Total	100.00%			7.73%
		2) Revenue Requirement Impact				
(7)		Rate Base	\$7,317,909			
(8)	-6	Rate of Return (ROE = 9.8%)	7.73%			
(9)	(7) x (9)	New Operating Income	\$565,911			
(10)		Proposed Operating Income	\$588,726			
(11)	(9) - (10)	Difference in Operating Income	\$22,815			
(12)		Proposed Operating Income		\$	<i>588,726</i>	
(13)		Taxes Other Than Income		\$ \$	165,283	
(14)		Federal and State Income and City Earnings Taxes		\$	220,120	
(15)		Deferred Income Taxes		\$	(6,372)	
(16)	∑ (12) (15)	Total Taxes		\$	379,031	
(17)	(12) / (12) + (16)	Estimated Conversion Factor	0.6083			
(18)	(11) / (17)	Difference in Revenue Requirement	\$37,503			
(19)		Requested Revenue Requirement Increase	\$264,100			
(20)	(18) / (19)	Increase Request from ROE Increase	14%			

Sources:

Schedule RJM-1 Schedule LMM-16

Reported Authorized Returns on Equity, Electric Utility Rate Cases Completed, 2012 to Present

State	Docket	Utility	Distribution	Authorized ROE	Decision Date
SC	2011-271-E	Duke Energy Carolinas LLC		10.50%	1/25/2012
		2010 2110.81 041011110 4110		20.007	2,20,2022
NC	E-7, Sub 989	Duke Energy Carolinas LLC		10.50%	1/27/2012
Mi	16801	Indiana-Michigan Power Co.		10.20%	2/15/2012
OR	UE 233	ldaho Power Co.		9.90%	2/23/2012
FL	110138	Gulf Power Co.		10.25%	2/27/2012
ND	PU-10-657	Northern States Power Co.		10.40%	2/29/2012
MN	10-971	Northern States Power Co.		10.37%	3/29/2012
HI	2009-0164	Hawaii Electric Light Co.		10.00%	4/4/2012
co	11AL-947E	Public Service Company of Colorado		10.00%	4/26/2012
HI	2009-0163	Maui Electric Company Ltd		10.00%	5/2/2012
WA	UE-111048	Puget Sound Energy Inc.		9.80%	5/7/2012
AZ	E-01345A-11-0224	Arizona Public Service Co.		10.00%	5/15/2012
IL.	11-0721	Commonwealth Edison Co.	Yes	10.05%	5/29/2012
MI	16794	Consumers Energy Co.	163	10.30%	6/7/2012
NY	11-E-0408	Orange & Rockland Utilities Inc.	Yes	9.40%	6/14/2012
WI	6680-UR-118	Wisconsin Power and Light Co.	103	10.40%	6/15/2012
WY	20003-114-ER-11	Chevenne Light Fuel Power Co.		9.60%	6/18/2012
SD	EL11-019	Northern States Power Co.		9.25%	6/19/2012
MI	16830	Wisconsin Electric Power Co.		10.10%	6/26/2012
HI	2009-0080	Hawalian Electric Co.		10.00%	6/29/2012
OK	PUD 201100087	Oklahoma Gas and Electric Co.		10,20%	7/9/2012
WY	20000-405-ER-11	Rocky Mountain Power		9.80%	7/16/2012
MD	9285	Delmarva Power & Light Co.	Yes	9,81%	7/20/2012
MD	9286	Potomac Edison Power Co.	Yes	9.31%	7/20/2012
TX	39896	Entergy Texas Inc.		9,80%	9/13/2012
IL.	12-0001	Ameren Illinois	Yes	10.05%	9/19/2012
UT	11-035-200	Rocky Mountain Power		9.80%	9/19/2012
DC	1087	Potomac Edison Power Co.	Yes	- 9,50%	9/26/2012
NJ	ER-11080469	Atlantic City Electric Co.	Yes	9.75%	10/23/2012
WI	6690-UR-121	Wisconsin Public Service Corp.		10,30%	10/24/2012
WI	3270-UR-118	Madison Gas and Electric Co.		10.30%	11/9/2012
WI	05-UR-106	Wisconsin Electric Power Co.		10.40%	11/28/2012
CA	A12-02-014	California Pacific Electric Co.		9.88%	11/29/2012
DE	D-11-528	Delmarva Power & Light Co.	Yes	9.75%	11/29/2012
IL.	12-0293	Ameren Illinois	Yes	9.71%	12/5/2012
PA	E-2012-2290597	PPL Electric Utilities Corp	Yes	10.40%	12/5/2012
MO	ER-2012-0166	Union Electric Co.		9.80%	12/12/2012
FL	120015	Florida Power & Light		10.50%	12/13/2012
KS	12-KCPE-764-RTS	Kansas City Power & Light		9.50%	12/13/2012
WI	4220-UR-118	Northern States Power Co.		10.40%	12/14/2012
IL	12-0321	Commonwealth Edison Co.	Yes	9.71%	12/19/2012
SC	2012-218-E	South Carolina Electric & Gas		10.25%	12/19/2012
CA	A12-04-018	Pacific Gas & Electric		10.40%	12/20/2012
CA	A12-04-016	San Diego Gas & Electric		10.30%	12/20/2012
CA	A12-04-015	Southern California Edison		10.45%	12/20/2012
KY	2012-00221	Kentucky Utilities		10.25%	12/20/2012
KY	2012-00222	Louisville Gas & Electric		10.25%	12/20/2012
OR	UE 246	PacifiCorp		9.80%	12/20/2012
RI	4323	Narragansett Electric Co.	Yes	9.50%	12/20/2012
NC	E-22, Sub 479	Virginia Electric & Power Co.		10.20%	12/21/2012
WA	UE-120436	Avista Corp.		9.80%	12/26/2012
MO	ER-2012-0174	Kansas City Power & Light		9.70%	1/9/2013
МО	ER-2012-0175	KCP&L Greater Missouri Op Co.		9.70%	1/9/2013
IN	44075	Indiana-Michigan Power Co.		10.20%	2/13/2013
MD	9299	Baltimore Gas and Electric Co.	Yes	9.75%	2/22/2013
LA MV	U-32220	Southwestern Electric Power Co.	Vaa	10.00%	2/27/2013
NY	12-E-0201	Niagara Mohawk Power Corp.	Yes	9.30%	3/14/2013

Reported Authorized Returns on Equity, Electric Utility Rate Cases Completed, 2012 to Present

State	Docket	Utility	Distribution	Authorized ROE	Decision Date
ĪD	AVU-E-12-08	Avista Corp.	<u> </u>	9.80%	3/27/2013
ОН	12-1682-EL-AIR	Duke Energy Ohio Inc.	Yes	9,84%	5/1/2013
MI	U-17087	Consumers Energy Co.		10.30%	5/15/2013
NC	E-2, Sub 1023	Duke Energy Progress Inc.		10.20%	5/30/2013
HI	2011-0092	Maui Electric Company Ltd		9.00%	5/31/2013
ΑZ	E-01933A-12-0291	Tucson Electric Power Co.		10.00%	6/11/2013
NJ	ER-12121071	Atlantic City Electric Co.	Yes	9.75%	6/21/2013
WA	UE-130137	Puget Sound Energy Inc.		9.80%	6/25/2013
MD	9311	Potomac Edison Power Co.	Yes	9.36%	7/12/2013
MN	E-002/GR-12-961	Northern States Power Co.		9.83%	8/8/2013
CT	13-01-19	United Illuminating	Yes	9.15%	8/14/2013
SC	2013-59-E	Duke Energy Carolinas LLC		10.20%	9/11/2013
FL	130040-EI	Tampa Electric Co.		10.25%	9/11/2013
NC	E-7, Sub 1026	Duke Energy Carolinas LLC		10.20%	9/24/2013
TX	40443	Southwestern Electric Power Co.		9.65%	10/3/2013
WI	6690-UR-122	Wisconsin Public Service Corp.		10.20%	11/6/2013
KS	13-WSEE-629-RTS	Westar Energy Inc.		10.00%	11/21/2013
VA	PUE-2013-00020	Virginia Electric & Power Co.		10.00%	11/26/2013
FL	130140-El	Gulf Power Co.		10.25%	12/3/2013
WA	UE-130043	PacifiCorp		9.50%	12/4/2013
WI	4220-UR-119	Northern States Power Co.		10.20%	12/5/2013
IL.	13-0301	Ameren Illinois	Yes	8.72%	12/9/2013
OR	UE 262	Portland General Electric Co.		9.75%	12/9/2013
MD	9326	Baltimore Gas and Electric Co.	Yes	9.75%	12/13/2013
LA	U-32707	Entergy Gulf States Louisiana LLC		9.95%	12/16/2013
LA	U-32708	Entergy Louisiana LLC		9.95%	12/16/2013
NV	13-06002	Sierra Pacific-Power Co.		10.12%	12/16/2013
ΑZ	E-04204A-12-0504	UNS Electric Inc.	• •	9.50%	12/17/2013
GA	36989	Georgia Power Co.		- 10:95%	12/17/2013
IL	13-0318	Commonwealth Edison Co.	Yes	8.72%	12/18/2013
OR	UE 263	PacifiCorp		9.80%	12/18/2013
MI	U-17274	Upper Peninsula Power Co.		10.15%	12/19/2013
NY	13-E-0030	Consolidated Edison Co. of NY	Yes	9.20%	2/20/2014
ND	PU-12-813	Northern States Power Co.		9.75%	2/26/2014
NH	DE-13-063	Liberty Utilities Granite State	Yes	9.55%	3/17/2014
NM	12-00350-UT	Southwestern Public Service		9.96%	3/26/2014
DC	1103-2013-E	Potomac Edison Power Co.	Yes	9,40%	3/26/2014
DE	13-115	Delmarva Power & Light Co.	Yes	9.70%	4/2/2014
TX	41791	Entergy Texas Inc.		9.80%	5/16/2014
MA	13-90	Fitchburg Gas & Electric Light	Yes	9.70%	5/30/2014
Wi	6680-UR-119	Wisconsin Power and Light Co.		10.40%	6/6/2014
ME	2013-00443	Emera Maine	Yes	9.55%	6/30/2014
MD	9336	Potomac Electric Power Co.	. Yes	9.62%	7/2/2014
CNO	UD-13-01	Entergy Louisiana LLC (New Orleans)		9.95%	7/10/2014
NJ	ER-13111135	Rockland Electric Company	Yes	9.75%	7/23/2014
ME	2013-00168	Central Maine Power Co.	Yes	9.45%	7/29/2014
WY	20003-132-ER-13	Cheyenne Light Fuel Power Co.		9.90%	7/31/2014
AR	13-028-U 1	Entergy Arkansas Inc.		9.50%	8/15/2014
NJ	ER-14030245	Atlantic City Electric Co.	Yes	9.75%	8/20/2014
Vī	8190	Green Mountain Power Corp.		9.60%	8/25/2014
UT	13-035-184	PacifiCorp		9.80%	8/29/2014
FL	140025-El	Florida Public Utilities Co.		10.25%	9/15/2014
NV	14-05004	NV Energy South		9.80%	10/9/2014
IL	14-0066	MidAmercian Energy Co.		9.56%	11/6/2014
WI	6690-UR-123	Wisconsin Public Service Corp.		10.20%	11/6/2014
WI	05-UR-107	Wisconsin Electric Power Co.		10.20%	11/14/2014

 $^{^1}$ The Arkansas Public Service Commission originally approved a 9.3% ROE, but increased it to 9.5% on rehearing. See Order No. 35, Arkansas Docket 13-028-U.

Entire Period	
# of Decisions	113
Average (All Utilities)	9.90%
Average (Distribution Only)	9.58%
Average (Vertically Integrated Only)	10.02%
Median	9.88%
Minimum	8.72%
Maximum	10.95%
2012	
# of Decisions	51
Average (All Utilities)	10.02%
Average (Distribution Only)	9.75%
Average (Distribution Only, exc. IL FRP)	9.75%
Average (Vertically Integrated Only)	10.10%
2013	_
# of Decisions	38
Average (All Utilities)	9.83%
Average (Distribution Only)	9.37%
Average (Distribution Only, exc. IL FRP)	9.56%
Average (Vertically Integrated Only)	9.97%
2014	•
# of Decisions	24
Average (All Utilities)	9.76%
Average (Distribution Only)	9.57%
Average (Vertically Integrated Only)	9.91%
Average (Vertically Integrated Only, exc. WI)	9.76%

Source: SNL Financial LC, November 21, 2014