

MISSOURI PUBLIC SERVICE COMMISSION

STAFF REPORT

REVENUE REQUIREMENT

APPENDIX 2

**Support for Staff
Cost of
Capital Recommendations**

THE EMPIRE DISTRICT ELECTRIC COMPANY

CASE NO. ER-2016-0023

*Jefferson City, Missouri
March 2016*

AN ANALYSIS OF THE COST OF CAPITAL
FOR
THE EMPIRE DISTRICT ELECTRIC COMPANY

CASE NO. ER-2016-0023

SCHEDULES

BY

SHANA GRIFFIN

COMMISSION STAFF DIVISION - OPERATIONAL ANALYSIS

FINANCIAL ANALYSIS UNIT

MISSOURI PUBLIC SERVICE COMMISSION

**The Empire District Electric Company
Case No. ER-2016-0023**

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Federal Reserve Discount Rate and Federal Reserve Funds Rate Changes

Date	Federal Reserve Discount Rate	Federal Reserve Funds Rate	Date	Federal Reserve Discount Rate	Federal Reserve 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%		11/06/02	0.75%	1.25%
01/09/91		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		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		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		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		4.50%	03/22/05	3.75%	2.75%
12/20/91	3.50%	4.00%	05/03/05	4.00%	3.00%
04/09/92		3.75%	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%	09/20/05	4.75%	3.75%
01/01/93			11/01/05	5.00%	4.00%
12/31/93	No Changes	No Changes	12/13/05	5.25%	4.25%
02/04/94		3.25%	01/31/06	5.50%	4.50%
03/22/94		3.50%	03/28/06	5.75%	4.75%
04/18/94		3.75%	05/10/06	6.00%	5.00%
05/17/94	3.50%	4.25%	06/29/06	6.25%	5.25%
08/16/94	4.00%	4.75%	08/17/07	5.75%	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%
12/19/95		5.50%	01/22/08	4.00%	3.50%
01/31/96	5.00%	5.25%	01/30/08	3.50%	3.00%
03/25/97		5.50%	03/16/08	3.25%	
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%		10/08/08	1.75%	1.50%
09/29/98		5.25%	10/29/08	1.25%	1.00%
10/15/98	4.75%	5.00%	12/16/08	0.50%	0% - .25%
11/17/98	4.50%	4.75%	02/19/10	0.75%	
			12/17/15	1.00%	0.25%-0.50%

* Staff began tracking the Federal Funds Rate.

**Revised discount window program begins. Reflects rate on primary credit. This revised discount window policy results in incomparability of the discount rates after January 9, 2003 to discount rates before January 9, 2003.

Source:

Federal Reserve Discount rate <http://www.newyorkfed.org/markets/statistics/dlyrates/fedrate.html>

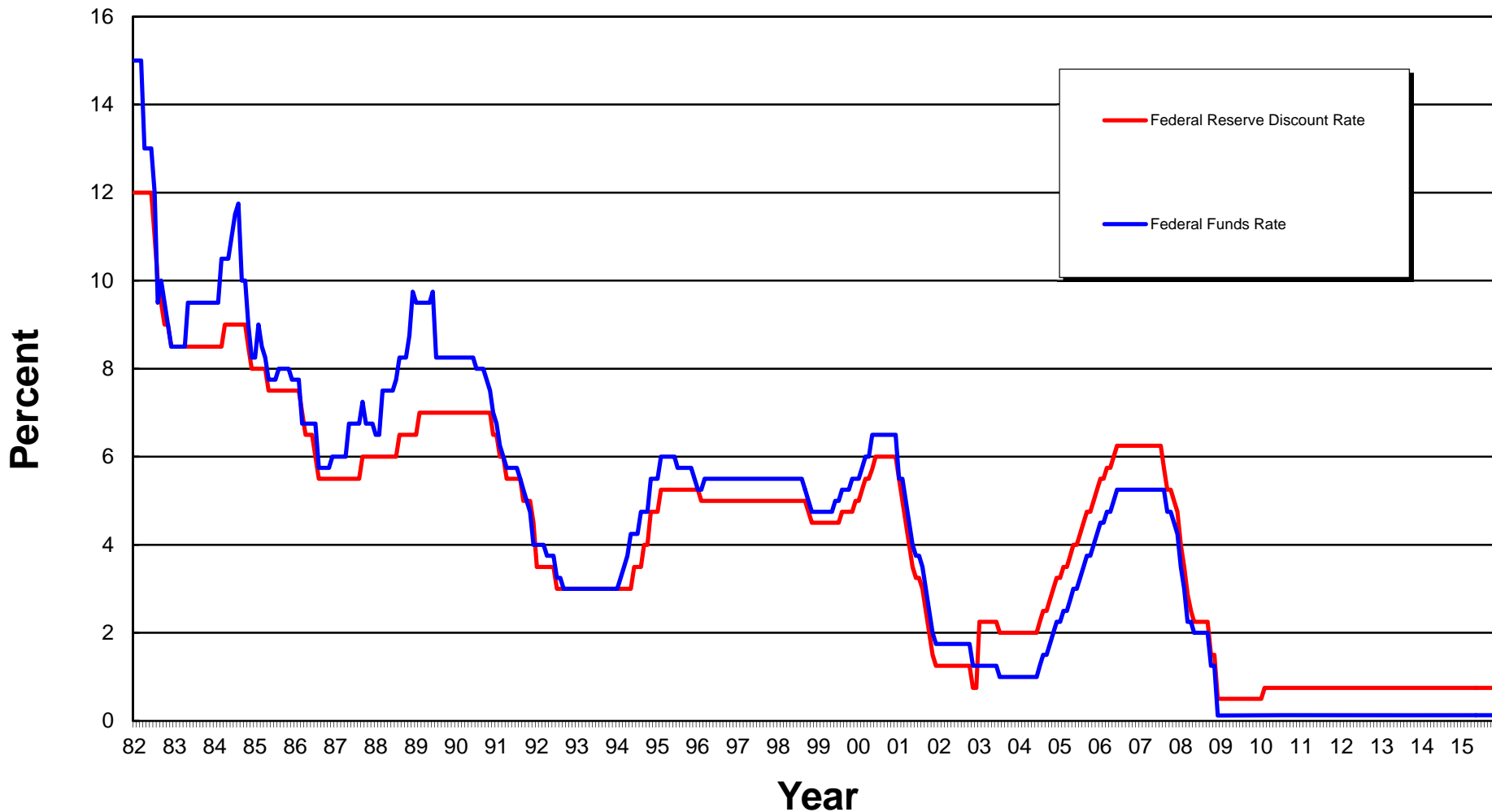
Federal Reserve Funds rate <http://www.newyorkfed.org/markets/statistics/dlyrates/fedrate.html>

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

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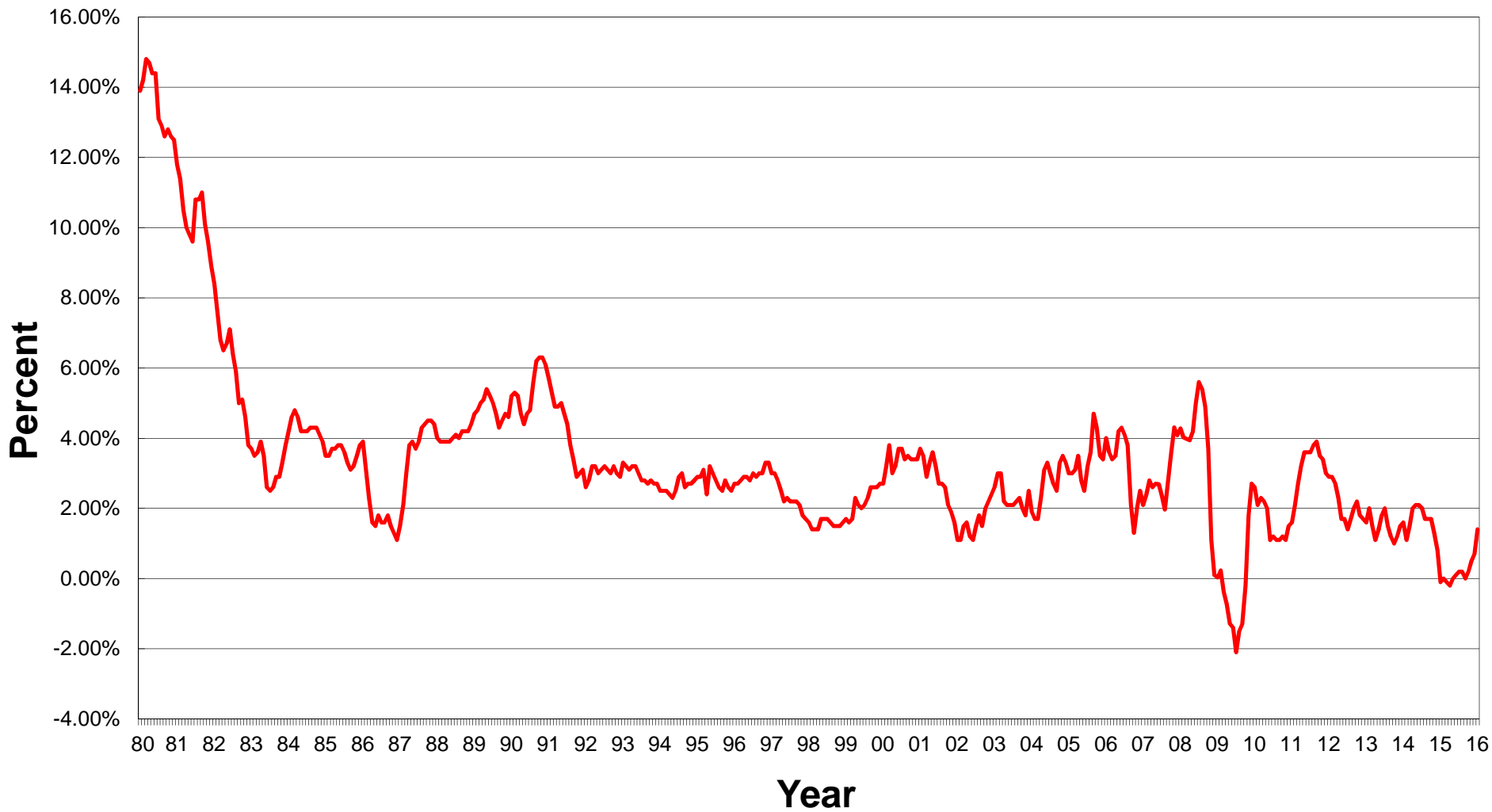
Federal Reserve Discount Rates and Federal Funds Rates Changes

1982 - 2016



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Rate of Inflation
1980 - 2016



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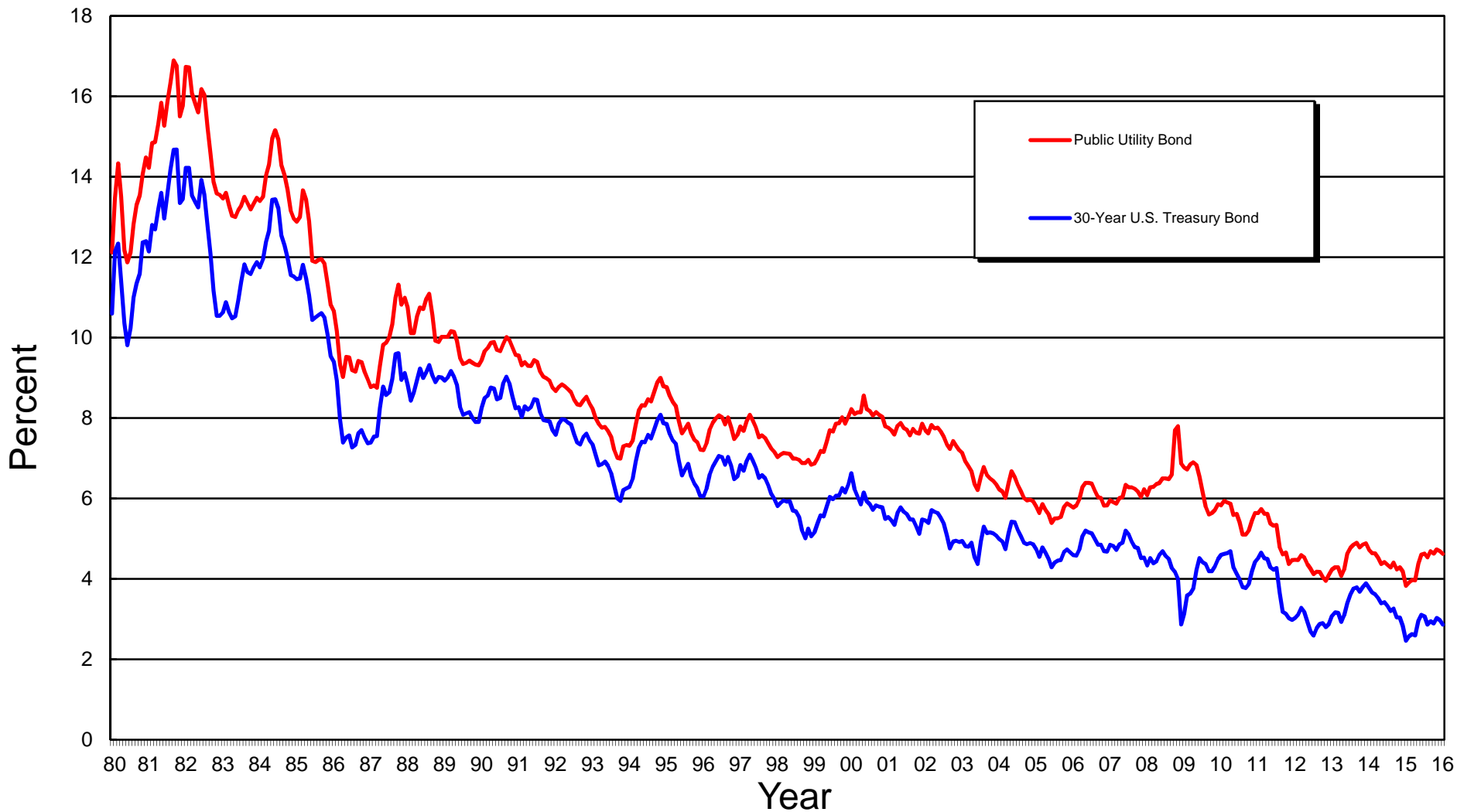
Average Yields on AA, A and BBB Public Utility Bonds

Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)
Jan 1980	12.12	Jan 1984	13.40	Jan 1988	10.75	Jan 1992	8.67	Jan 1996	7.20	Jan 2000	8.22	Jan 2004	6.23	Jan 2008	6.08	Jan 2012	4.48	Jan 2016			4.62
Feb	13.48	Feb	13.50	Feb	10.11	Feb	8.77	Feb	7.37	Feb	8.10	Feb	6.17	Feb	6.28	Feb	4.47				
Mar	14.33	Mar	14.03	Mar	10.11	Mar	8.84	Mar	7.72	Mar	8.14	Mar	6.01	Mar	6.29	Mar	4.59				
Apr	13.50	Apr	14.30	Apr	10.53	Apr	8.79	Apr	7.88	Apr	8.14	Apr	6.38	Apr	6.36	Apr	4.54				
May	12.17	May	14.95	May	10.75	May	8.72	May	7.99	May	8.55	May	6.68	May	6.38	May	4.36				
Jun	11.87	Jun	15.16	Jun	10.71	Jun	8.64	Jun	8.07	Jun	8.22	Jun	6.53	Jun	6.50	Jun	4.26				
Jul	12.12	Jul	14.92	Jul	10.96	Jul	8.46	Jul	8.02	Jul	8.17	Jul	6.34	Jul	6.50	Jul	4.12				
Aug	12.82	Aug	14.29	Aug	11.09	Aug	8.34	Aug	7.84	Aug	8.05	Aug	6.18	Aug	6.48	Aug	4.18				
Sep	13.29	Sep	14.04	Sep	10.56	Sep	8.32	Sep	8.01	Sep	8.16	Sep	6.01	Sep	6.59	Sep	4.17				
Oct	13.53	Oct	13.68	Oct	9.92	Oct	8.44	Oct	7.76	Oct	8.08	Oct	5.95	Oct	7.70	Oct	4.04				
Nov	14.07	Nov	13.15	Nov	9.89	Nov	8.53	Nov	7.48	Nov	8.03	Nov	5.97	Nov	7.80	Nov	3.95				
Dec	14.48	Dec	12.96	Dec	10.02	Dec	8.36	Dec	7.58	Dec	7.79	Dec	5.93	Dec	6.87	Dec	4.10				
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	Jan 2013	4.24				
Feb	14.84	Feb	13.00	Feb	10.02	Feb	8.00	Feb	7.68	Feb	7.69	Feb	5.64	Feb	6.72	Feb	4.29				
Mar	14.86	Mar	13.66	Mar	10.16	Mar	7.85	Mar	7.92	Mar	7.59	Mar	5.86	Mar	6.85	Mar	4.29				
Apr	15.32	Apr	13.42	Apr	10.14	Apr	7.76	Apr	8.08	Apr	7.81	Apr	5.72	Apr	6.90	Apr	4.08				
May	15.84	May	12.89	May	9.92	May	7.78	May	7.94	May	7.88	May	5.60	May	6.83	May	4.24				
Jun	15.27	Jun	11.91	Jun	9.49	Jun	7.68	Jun	7.77	Jun	7.75	Jun	5.39	June	6.54	Jun	4.63				
Jul	15.87	Jul	11.88	Jul	9.34	Jul	7.53	Jul	7.52	Jul	7.71	Jul	5.50	July	6.15	Jul	4.78				
Aug	16.33	Aug	11.93	Aug	9.37	Aug	7.21	Aug	7.57	Aug	7.57	Aug	5.51	Aug	5.80	Aug	4.85				
Sep	16.89	Sep	11.95	Sep	9.43	Sep	7.01	Sep	7.50	Sep	7.73	Sep	5.54	Sep	5.60	Sep	4.90				
Oct	16.76	Oct	11.84	Oct	9.37	Oct	6.99	Oct	7.37	Oct	7.64	Oct	5.79	Oct	5.64	Oct	4.78				
Nov	15.50	Nov	11.33	Nov	9.33	Nov	7.30	Nov	7.24	Nov	7.61	Nov	5.88	Nov	5.71	Nov	4.86				
Dec	15.77	Dec	10.82	Dec	9.31	Dec	7.33	Dec	7.16	Dec	7.86	Dec	5.83	Dec	5.86	Dec	4.88				
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	Jan 2010	5.83	Jan 2014	4.72				
Feb	16.72	Feb	10.16	Feb	9.66	Feb	7.44	Feb	7.09	Feb	7.62	Feb	5.83	Feb	5.94	Feb	4.64				
Mar	16.07	Mar	9.33	Mar	9.75	Mar	7.83	Mar	7.13	Mar	7.83	Mar	5.98	Mar	5.90	Mar	4.64				
Apr	15.82	Apr	9.02	Apr	9.87	Apr	8.20	Apr	7.12	Apr	7.74	Apr	6.28	Apr	5.87	Apr	4.52				
May	15.60	May	9.52	May	9.89	May	8.32	May	7.11	May	7.76	May	6.39	May	5.59	May	4.37				
Jun	16.18	Jun	9.51	Jun	9.69	Jun	8.31	Jun	6.99	Jun	7.67	June	6.39	June	5.62	Jun	4.42				
Jul	16.04	Jul	9.19	Jul	9.66	Jul	8.47	Jul	6.99	Jul	7.54	July	6.37	July	5.41	Jul	4.35				
Aug	15.22	Aug	9.15	Aug	9.84	Aug	8.41	Aug	6.96	Aug	7.34	Aug	6.20	Aug	5.10	Aug	4.28				
Sep	14.56	Sep	9.42	Sep	10.01	Sep	8.65	Sep	6.88	Sep	7.23	Sep	6.03	Sep	5.10	Sep	4.40				
Oct	13.88	Oct	9.39	Oct	9.94	Oct	8.88	Oct	6.88	Oct	7.43	Oct	6.01	Oct	5.20	Oct	4.24				
Nov	13.58	Nov	9.15	Nov	9.76	Nov	9.00	Nov	6.96	Nov	7.31	Nov	5.82	Nov	5.45	Nov	4.29				
Dec	13.55	Dec	8.96	Dec	9.57	Dec	8.79	Dec	6.84	Dec	7.20	Dec	5.83	Dec	5.64	Dec	4.18				
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	Jan 2011	5.64	Jan 2015	3.83				
Feb	13.60	Feb	8.81	Feb	9.31	Feb	8.56	Feb	7.00	Feb	6.92	Feb	5.91	Feb	5.73	Feb	3.91				
Mar	13.28	Mar	8.75	Mar	9.39	Mar	8.41	Mar	7.18	Mar	6.80	Mar	5.87	Mar	5.62	Mar	3.97				
Apr	13.03	Apr	9.30	Apr	9.30	Apr	8.30	Apr	7.16	Apr	6.68	Apr	6.01	Apr	5.62	Apr	3.96				
May	13.00	May	9.82	May	9.29	May	7.93	May	7.42	May	6.35	May	6.03	May	5.38	May	4.38				
Jun	13.17	Jun	9.87	Jun	9.44	Jun	7.62	Jun	7.70	Jun	6.21	June	6.34	June	5.32	June	4.60				
Jul	13.28	Jul	10.01	Jul	9.40	Jul	7.73	Jul	7.66	Jul	6.54	July	6.28	July	5.34	July	4.63				
Aug	13.50	Aug	10.33	Aug	9.16	Aug	7.86	Aug	7.86	Aug	6.78	Aug	6.28	Aug	4.78	Aug	4.54				
Sep	13.35	Sep	11.00	Sep	9.03	Sep	7.62	Sep	7.87	Sep	6.58	Sep	6.24	Sep	4.61	Sep	4.69				
Oct	13.19	Oct	11.32	Oct	8.99	Oct	7.46	Oct	8.02	Oct	6.50	Oct	6.17	Oct	4.66	Oct	4.63				
Nov	13.33	Nov	10.82	Nov	8.93	Nov	7.40	Nov	7.86	Nov	6.44	Nov	6.04	Nov	4.37	Nov	4.73				
Dec	13.48	Dec	10.99	Dec	8.76	Dec	7.21	Dec	8.04	Dec	6.36	Dec	6.23	Dec	4.47	Dec	4.69				

Source:
Mergent Bond Record

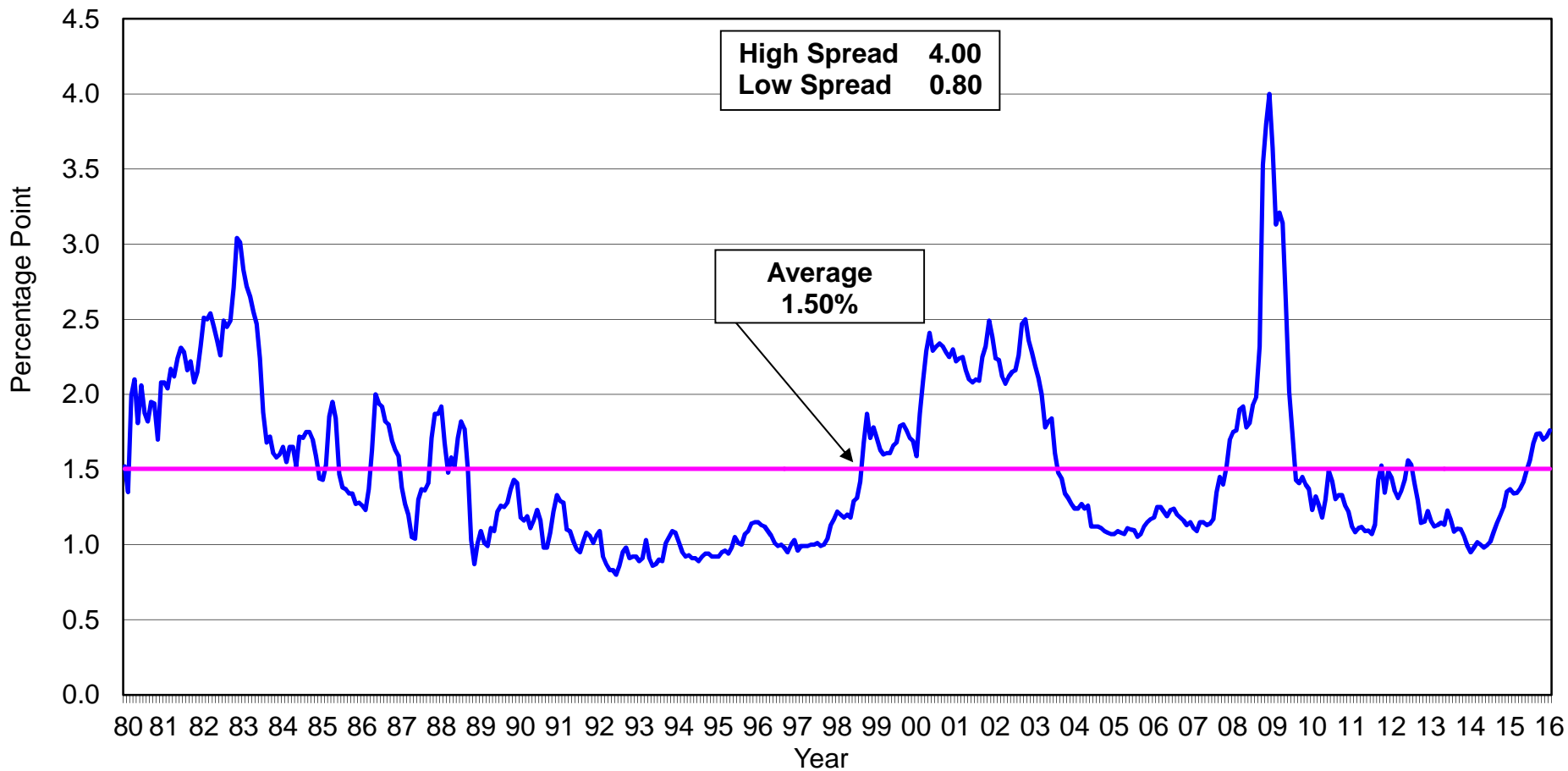
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Average Yields on Public Utility Bonds and
Thirty-Year U.S. Treasury Bonds (1980 - 2016)



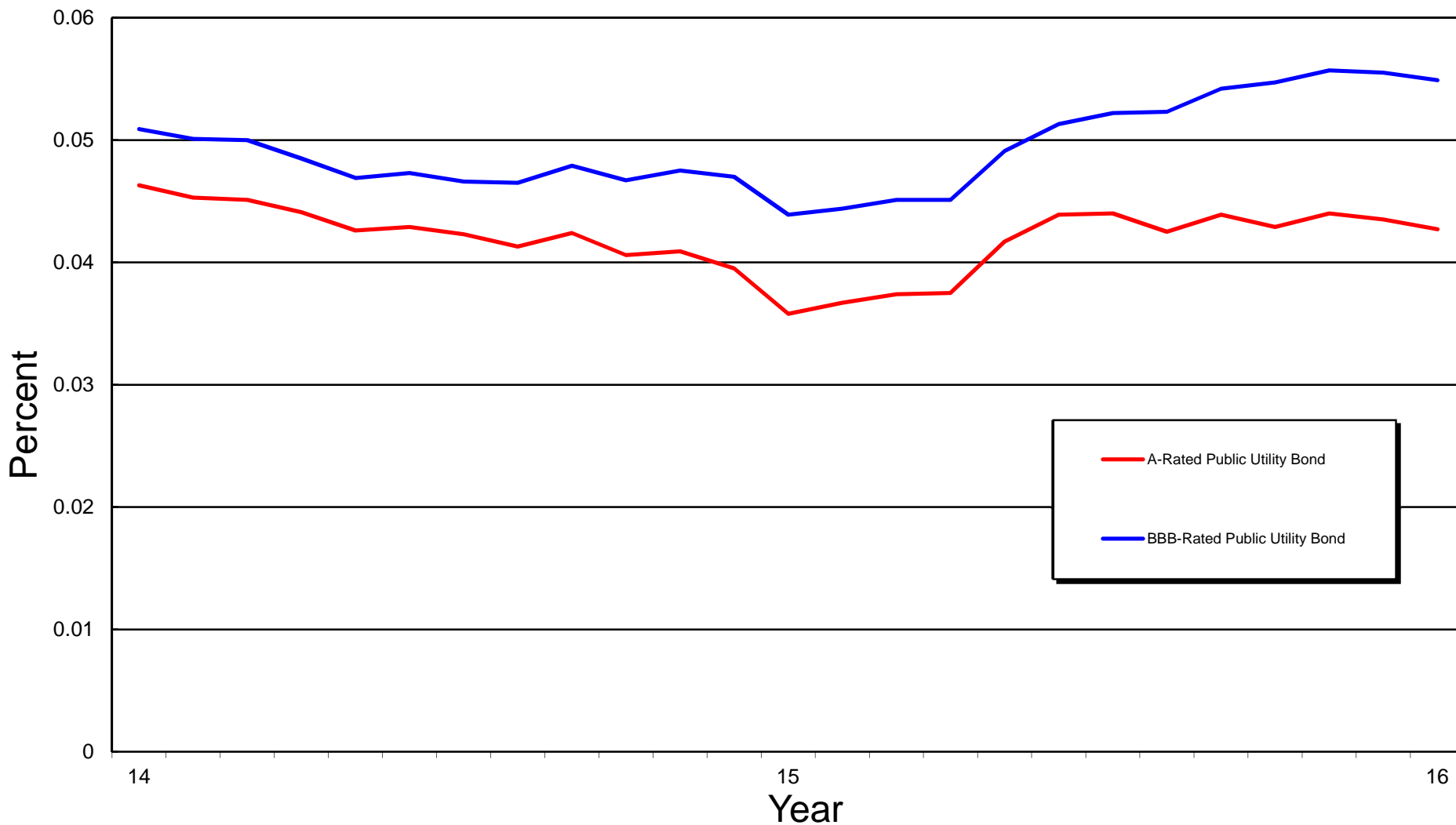
The Empire District Electric Company
Case No. ER-2016-0023

Monthly Spreads Between Yields on Public Utility Bonds and
Thirty-Year U.S. Treasury Bonds (1980 - 2016)

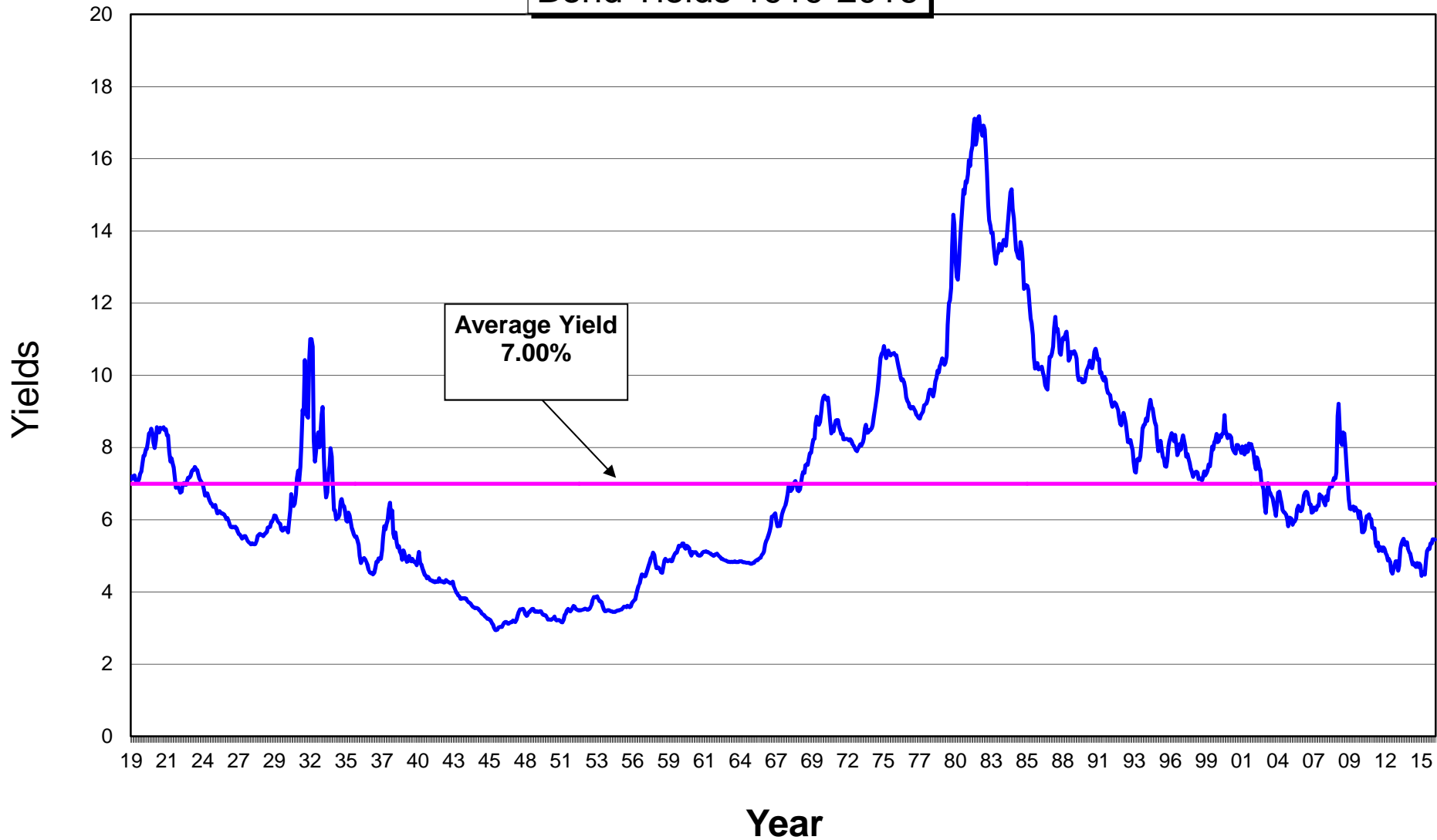


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Average Yields on A-rated and
BBB-rated Pulic Utility Bonds (2014-present)



Moody's Baa Corporate
Bond Yields 1919-2016



**The Empire District Electric Company
Case No. ER-2016-0023**

Historical Consolidated Capital Structures for The Empire District Electric Company

Capital Components	2011	2012	2013	2014	2015	5-Year Average
Common Equity	\$693,989,000.0	\$717,798,000.0	\$750,123,000.0	\$783,298,000.0	\$802,730,000.0	\$749,587,600.0
Preferred Stock	0.0	0.0	0.0	0.0	0.0	\$0.0
Long-Term Debt	692,259,000.0 *	691,626,714.0 *	743,428,274.0 *	803,189,292.0 *	837,972,310.0 *	\$753,695,118.0
Short-Term Debt	12,000,000.0	24,000,000.0	4,000,000.0	44,000,000.0	25,000,000.0	\$21,800,000.0
Total	<u>\$1,398,248,000.0</u>	<u>\$1,433,424,714.0</u>	<u>\$1,497,551,274.0</u>	<u>\$1,630,487,292.0</u>	<u>\$1,665,702,310.0</u>	<u>\$1,525,082,718.0</u>

Capital Components	2011	2012	2013	2014	2014	5-Year Average
Common Equity	49.63%	50.08%	50.09%	48.04%	48.19%	49.21%
Preferred Stock	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Long-Term Debt	49.51%	48.25%	49.64%	49.26%	50.31%	49.39%
Short-Term Debt	0.86%	1.67%	0.27%	2.70%	1.50%	1.40%
Total	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>

Source: Empire District Electric Company's 2011, 2012, 2013, 2014 and 2015 10-Ks.

Note: * The amount of long-term debt includes current maturities and capital leases.

**The Empire District Electric Company
Case No. ER-2016-0023**

**Embedded Cost of Long-Term Debt
as of September 30, 2015 For The Empire District Electric Company**

	Amount Outstanding	Annual Cost
Bonds and Unsecured Notes Series:		
7.2% Series, Due 2016	\$25,000,000	\$1,800,000
6.375% Series due 2018	\$90,000,000	\$5,737,500
5.2% Series, due in 2040	\$50,000,000	\$2,600,000
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
4.65% Series, Due 6/1/2020	\$100,000,000	\$4,650,000
5.875%, Due 2037	\$80,000,000	\$4,700,000
6.82% Series, Due 6/1/2036-EDG	\$55,000,000	\$3,751,000
3.58% Series, due 4-2-2027	\$88,000,000	\$3,150,400
3.73% Series, Due 5/30/2033	\$30,000,000	\$1,119,000
4.32% Series, Due 5/30/2043	\$120,000,000	\$5,184,000
4.27% Series, due 12-1-2044	\$60,000,000	\$2,562,000
3.59% FMB Series due 8-20-2030	\$60,000,000	\$2,154,000
Premium, Discount and Expense	-\$15,838,953 ¹	\$1,143,559 ¹
Total	\$844,161,047	\$45,025,459

Embedded Cost of Long-term Debt

5.33%

Source: Response to DR Nos. 0090 and 0089

¹ Adjustment made for disallowance associated with Empire's debt expenses incurred to amend its mortgage bond indenture in order to provide additional flexibility to pay its dividend.

The Empire District Electric Company
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Capital Structure as of September 30, 2015
for The Empire District Electric Company

Capital Component	Dollar Amount (000's)	Percentage of Capital
Common Stock Equity	\$ 802,462,963	48.73%
Preferred Stock	\$ -	0.00%
Long-Term Debt	\$ 844,161,047	51.27%
Short-Term Debt	\$ -	0.00%
Total Capitalization	\$ 1,646,624,010	100.00%

Source: Response to Staff DR Nos. 0090 and 0089.

**The Empire District Electric Company
Case No. ER-2016-0023**

Criteria for Selecting Comparable Electric Utility Companies

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
SNL Financial Power Companies	Ticker	Stock Publicly Traded	Regulated Utility (EET)	At least 50% of Plant from Electric Utility	At least 25% of Electric Plant Generation	At Least 80% of Income from Regulated Utility Operations	No Reduced Dividend Since 2013	At Least Investment Grade Credit Rating (2 of 3 agencies)	L- T Growth Coverage from at least 2 equity analysts in last 90 days and Current L-T Growth Available	No Announced Merger or Acquisition	Comparable Company Met All Criteria
Spoin3 Energy Partners LP	CAFD	Yes	NA								
AES Corporation	AES	Yes	NA								
ALLETE, Inc.	ALE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Alliant Energy Corporation	LNT	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ameren Corporation	AEE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
American Electric Power Compan	AEP	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Atlantic Power Corporation	ATP	Yes	NA								
Avangrid, Inc.	AGR	Yes	Yes	NA							
Avista Corporation	AVA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No		
Black Hills Corporation	BKH	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	
Calpine Corporation	CPN	Yes	NA								
CenterPoint Energy, Inc.	CNP	Yes	No								
Chesapeake Utilities Corporation	CPK	Yes	NA								
Cleco Corporation	CNL	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No		
CMS Energy Corporation	CMS	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Consolidated Edison, Inc.	ED	Yes	Yes	Yes	No						
Covanta Holding Corporation	CVA	Yes	NA								
Dominion Resources, Inc.	D	Yes	No								
DTE Energy Company	DTE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Duke Energy Corporation	DUK	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	
Dynegy Inc.	DYN	Yes	NA								
Edison International	EIX	Yes	Yes	Yes	No						
El Paso Electric Company	EE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No		
Empire District Electric Company	EDE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No		
Energy Corporation	ETR	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Eversource Energy	ES	Yes	Yes	Yes	No						
Exelon Corporation	EXC	Yes	No								
First Solar, Inc.	FSLR	Yes	NA								
FirstEnergy Corp.	FE	Yes	No								
Great Plains Energy Inc.	GXP	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Hawaiian Electric Industries, Inc.	HE	Yes	No								
IDACORP, Inc.	IDA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No		
InfraREIT, Inc.	HIFR	Yes	NA								
ITC Holdings Corp.	ITC	Yes	NA								
MDU Resources Group, Inc.	MDU	Yes	No								
MGE Energy, Inc.	MGEE	Yes	No								
NextEra Energy, Inc.	NEE	Yes	No								
NiSource Inc.	NI	Yes	No								
NorthWestern Corporation	NWE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NRG Energy, Inc.	NRG	Yes	NA								
OGE Energy Corp.	OGE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Omat Technologies, Inc.	ORA	Yes	NA								
Otter Tail Corporation	OTTR	Yes	Yes	Yes	Yes	No					
Pattern Energy Group Inc.	PEGI	Yes	NA								
Pepco Holdings, Inc.	POM	Yes	Yes	Yes	No						
PG&E Corporation	PCG	Yes	Yes	Yes	No						
Finnacle West Capital Corporation	PNW	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PNM Resources, Inc.	PNM	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Portland General Electric Compar	POR	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PPL Corporation	PPL	Yes	No								
Public Service Enterprise Group Inc	PEG	Yes	No								
SCANA Corporation	SCG	Yes	No								
Sempra Energy	SRE	Yes	No								
SolarCity Corporation	SCTY	Yes	NA								
Southern Company	SO	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	
Spark Energy, Inc.	SPKE	Yes	NA								
SunEdison, Inc.	SUNE	Yes	NA								
Talen Energy Corporation	TLN	Yes	NA								
TECO Energy, Inc.	TE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	
TerraForm Power, Inc.	TERP	Yes	NA								
UGI Corporation	UGI	Yes	NA								
Unitil Corporation	UTL	Yes	Yes	No							
Vectren Corporation	VVC	Yes	No								
WEC Energy Group, Inc.	WEC	Yes	Yes	No							
Westar Energy, Inc.	WR	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Xcel Energy Inc.	XEL	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Sources: Columns 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 and 11 = SNL Financial.

Column 4 = Edison Electric Stock Performance Q4 2015 Financial Update Quarterly Report of the U.S. Shareholder Owned Electric Utility Industry

NA = Not available.

**The Empire District Electric Company
Case No. ER-2016-0023**

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

Number	Ticker Symbol	Company Name	S&P Corporate Credit Rating
1	ALE	ALLETE, Inc.	BBB+
2	LNT	Alliant Energy	A-
3	AEE	Ameren Corp.	BBB+
4	AEP	American Electric Power	BBB
5	CMS	CMS Energy Corporation	BBB+
6	DTE	DTE Energy Company	BBB+
7	ETR	Entergy Corporation	BBB
8	GXP	Great Plains Energy	BBB+
9	NWE	NorthWestern Corporation	BBB
10	OGE	OGE Energy Corp.	A-
11	PNW	Pinnacle West Capital	A-
12	PNM	PNM Resources, Inc.	BBB+
13	POR	Portland General Electric Company	BBB
14	WR	Westar Energy, Inc.	BBB+
15	XEL	Xcel Energy	A-
Average			<u>BBB+</u>
The Empire District Electric Company			BBB

**The Empire District Electric Company
Case No. ER-2016-0023**

**Dividends Per Share
for the Fifteen Comparable Electric Utility Companies**

Company Name	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003
ALLETE, Inc.	2.14	2.08	2.14	2.02	1.96	1.90	1.84	1.78	1.76	1.76	1.72	1.64	1.45	1.25	2.84	3.39
Alliant Energy	2.48	2.34	2.48	2.20	2.04	1.88	1.80	1.70	1.58	1.50	1.40	0.95	1.47	1.05	1.01	1.00
Ameren Corp.	1.83	1.74	1.83	1.66	1.61	1.60	1.60	1.56	1.54	1.54	2.54	2.54	2.54	2.54	2.54	2.54
American Electric Power	2.36	2.25	2.36	2.15	2.03	1.95	1.88	1.85	1.71	1.64	1.64	1.58	1.50	1.42	1.40	1.65
CMS Energy Corp.	1.33	1.24	1.33	1.16	1.08	1.02	0.96	0.84	0.66	0.50	0.36	0.20	0.00	0.00	0.00	0.00
DTE Energy Company	3.13	2.98	3.13	2.84	2.69	2.59	2.42	2.32	2.18	2.12	2.12	2.12	2.08	2.06	2.06	2.06
Entergy Corporation	3.49	3.43	3.49	3.34	3.32	3.32	3.32	3.32	3.24	3.00	3.00	2.58	2.16	2.16	1.89	1.60
Great Plains Energy	1.18	1.10	1.18	1.00	0.94	0.88	0.86	0.84	0.83	0.83	1.66	1.66	1.66	1.66	1.66	1.66
NorthWestern Corporation	2.10	2.01	2.10	1.92	1.60	1.52	1.48	1.44	1.36	1.34	1.32	1.28	1.24	1.00	0.00	0.00
OGE Energy Corp.	NA	NA	NA	1.05	0.95	0.85	0.80	0.76	0.73	0.71	0.70	0.68	0.67	0.67	0.67	0.67
Pinnacle West Capital	2.65	2.53	2.65	2.44	2.33	2.23	2.67	2.10	2.10	2.10	2.10	2.10	2.03	1.93	1.83	1.73
PNM Resources, Inc.	0.98	0.88	0.98	0.82	0.76	0.68	0.58	0.50	0.50	0.50	0.61	0.92	0.88	0.79	0.67	0.61
Portland General Electric Company	1.35	1.26	1.35	1.18	1.12	1.10	1.08	1.06	1.04	1.01	0.97	0.93	0.68	NA	NA	NA
Westar Energy, Inc.	1.61	1.51	1.61	1.44	1.40	1.36	1.32	1.28	1.24	1.20	1.16	1.08	1.00	0.92	0.80	0.76
Xcel Energy	1.42	1.35	1.42	1.28	1.20	1.11	1.07	1.03	1.00	0.97	0.94	0.91	0.88	0.85	0.81	0.75

	<u>10-Year Historical</u>	<u>5-Year Historical</u>	<u>3-Year Projected</u>
ALLETE, Inc.	-2.37%	2.33%	1.94%
Alliant Energy	7.17%	6.44%	4.09%
Ameren Corp.	-4.39%	-2.84%	3.36%
American Electric Power	3.21%	4.20%	3.21%
CMS Energy Corp.	NM	16.49%	4.56%
DTE Energy Company	2.76%	4.80%	3.34%
Entergy Corporation	5.85%	1.55%	1.52%
Great Plains Energy	-5.55%	-3.25%	5.61%
NorthWestern Corporation	17.56%	4.63%	3.05%
OGE Energy Corp.	3.64%	5.87%	NA
Pinnacle West Capital	2.47%	2.10%	2.81%
PNM Resources, Inc.	0.89%	7.04%	6.21%
Portland General Electric Company	NA	2.37%	4.65%
Westar Energy, Inc.	5.41%	3.13%	3.74%
Xcel Energy	4.05%	4.24%	3.63%
Average	3.13%	3.94%	3.69%
Average without Entergy and OGE	2.84%	3.97%	3.86%

**The Empire District Electric Company
Case No. ER-2016-0023**

**Earnings Per Share
for the Fifteen Comparable Electric Utility Companies**

Company Name	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003
ALLETE, Inc.	3.64	3.31	3.64	2.92	2.91	2.64	2.59	2.66	2.20	1.89	2.82	3.09	2.78	0.65	1.37	1.08
Alliant Energy	4.01	3.78	4.01	3.38	3.48	3.29	2.93	2.92	2.62	1.00	2.54	3.78	2.90	0.48	1.93	1.54
Ameren Corp.	2.83	2.57	2.83	2.39	2.42	2.11	2.13	1.79	0.58	2.78	2.88	2.98	2.66	3.13	2.84	3.14
American Electric Power	3.90	3.70	3.90	3.59	3.24	3.04	2.60	3.25	2.53	2.97	3.40	2.87	2.52	2.64	2.85	1.35
CMS Energy Corp.	2.17	2.02	2.17	1.90	1.76	1.71	1.43	1.65	1.50	0.87	1.25	-0.62	-0.66	-0.71	0.68	-0.30
DTE Energy Company	5.27	4.95	5.27	4.05	5.11	3.76	3.89	4.21	3.75	3.24	3.22	4.62	2.19	3.30	2.67	2.87
Entergy Corporation	5.17	5.15	5.17	-0.99	5.24	3.99	4.77	7.59	6.72	6.39	6.39	5.77	5.46	4.49	4.01	3.55
Great Plains Energy	1.83	1.75	1.83	1.37	1.57	1.62	1.36	1.27	1.55	1.16	1.16	1.41	1.74	2.18	2.39	2.72
NorthWestern Corporation	3.48	3.33	3.48	3.20	3.01	2.46	2.67	2.55	2.14	2.03	1.78	1.45	1.06	1.73	NA	-2.31
OGE Energy Corp.	1.96	1.83	1.96	1.36	1.99	1.96	1.80	1.75	1.52	1.34	1.25	1.33	1.24	0.90	0.84	0.83
Pinnacle West Capital	4.20	4.00	4.20	3.94	3.59	3.69	3.54	3.01	3.05	2.34	2.59	2.83	2.67	NA	2.70	2.47
PNM Resources, Inc.	1.91	1.63	1.91	0.20	1.46	1.26	1.32	1.98	-0.49	0.58	-3.66	0.77	1.55	1.00	1.45	0.99
Portland General Electric Company	2.42	2.28	2.42	2.05	2.24	1.36	1.87	1.95	1.66	1.31	1.39	2.33	1.14	NA	NA	NA
Westar Energy, Inc.	2.54	2.44	2.54	2.11	2.40	2.29	2.15	1.95	1.81	1.28	1.69	1.83	1.88	1.54	1.19	2.24
Xcel Energy	2.33	2.21	2.33	1.94	2.03	1.91	1.86	1.72	1.62	1.49	1.47	1.38	1.39	1.23	1.30	1.31

	<u>10-Year Historical</u>	<u>5-Year Historical</u>	<u>3-Year Projected</u>
ALLETE, Inc.	10.57%	4.16%	7.64%
Alliant Energy	9.90%	10.50%	5.86%
Ameren Corp.	-2.71%	2.09%	5.78%
American Electric Power	3.74%	2.09%	2.80%
CMS Energy Corp.	NM	8.21%	4.60%
DTE Energy Company	3.87%	4.82%	9.15%
Entergy Corporation	-3.73%	-15.83%	NM
Great Plains Energy	-4.58%	3.34%	10.13%
NorthWestern Corporation	NA	7.82%	2.84%
OGE Energy Corp.	7.57%	5.28%	12.86%
Pinnacle West Capital	3.76%	7.05%	2.15%
PNM Resources, Inc.	-1.63%	NM	NM
Portland General Electric Company	NA	5.32%	5.65%
Westar Energy, Inc.	3.18%	7.30%	6.44%
Xcel Energy	4.35%	5.12%	6.33%
Average	2.86%	4.09%	6.33%
Average without Entergy and OGE	3.05%	5.65%	5.78%

**The Empire District Electric Company
Case No. ER-2016-0023**

**Book Value Per Share
for the Fifteen Comparable Electric Utility Companies**

Company Name	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003
ALLETE, Inc.	38.01	37.56	38.01	37.09	35.04	32.44	30.50	28.77	27.25	26.39	25.38	24.11	21.90	20.03	21.23	50.18
Alliant Energy	37.35	35.15	37.35	32.82	31.00	29.58	28.25	27.14	26.09	25.06	25.56	24.30	22.83	20.85	22.13	21.37
Ameren Corp.	30.54	29.49	30.54	28.63	27.67	26.97	27.27	32.64	32.15	33.09	32.80	32.41	31.86	31.09	29.71	26.73
American Electric Power	39.84	37.94	39.84	36.44	34.37	32.98	31.37	30.33	28.33	27.49	26.33	25.17	23.73	23.08	21.51	19.93
CMS Energy Corp.	16.53	15.42	16.53	14.21	13.34	12.98	12.10	11.92	11.19	11.42	10.94	9.46	10.03	10.53	10.63	9.84
DTE Energy Company	53.59	51.23	53.59	48.88	47.05	44.73	42.78	41.41	39.67	37.96	36.77	35.86	33.02	32.44	31.85	31.36
Entergy Corporation	59.24	57.66	59.24	51.89	55.83	54.00	51.72	50.81	47.53	45.54	42.07	40.71	40.45	37.34	38.26	38.02
Great Plains Energy	24.90	24.20	24.90	23.68	23.26	22.58	21.75	21.74	21.26	20.62	21.39	18.18	16.70	16.51	15.35	13.82
NorthWestern Corporation	35.85	34.31	35.85	33.22	31.50	26.60	25.09	23.68	22.64	21.86	21.25	21.12	20.84	20.71	19.92	-15.55
OGE Energy Corp.	NA	16.35	NA	16.65	16.27	15.30	14.01	13.06	11.73	10.52	10.14	9.16	8.79	7.59	7.14	6.87
Pinnacle West Capital	44.46	42.71	44.46	41.30	39.50	38.07	36.20	34.98	33.86	32.69	34.16	35.15	34.48	34.58	32.14	30.97
PNM Resources, Inc.	22.69	21.75	22.69	20.78	21.61	21.01	20.19	19.76	17.73	19.03	19.03	22.03	22.24	18.89	18.19	17.84
Portland General Electric Company	27.78	26.58	27.78	25.43	24.43	23.29	22.87	22.07	21.14	20.50	21.64	21.05	19.58	19.15	29.91	27.69
Westar Energy, Inc.	27.88	26.87	27.88	25.87	25.02	23.88	22.89	22.03	21.25	20.59	20.18	19.14	17.61	16.31	16.13	13.98
Xcel Energy	22.98	22.04	22.98	20.89	20.20	19.21	18.19	17.44	16.76	15.92	15.35	14.70	14.28	13.37	12.99	12.95

	<u>10-Year Historical</u>	<u>5-Year Historical</u>	<u>3-Year Projected</u>
ALLETE, Inc.	1.98%	5.76%	0.82%
Alliant Energy	4.35%	4.01%	4.40%
Ameren Corp.	-0.19%	-3.22%	2.18%
American Electric Power	5.41%	4.79%	3.02%
CMS Energy Corp.	3.24%	3.85%	5.16%
DTE Energy Company	4.37%	4.22%	3.11%
Entergy Corporation	3.20%	3.66%	4.51%
Great Plains Energy	4.51%	1.90%	1.69%
NorthWestern Corporation	NM	6.79%	2.57%
OGE Energy Corp.	8.74%	8.28%	NA
Pinnacle West Capital	2.41%	3.37%	2.49%
PNM Resources, Inc.	1.27%	2.59%	2.98%
Portland General Electric Company	-0.06%	2.94%	2.99%
Westar Energy, Inc.	5.27%	3.81%	2.53%
Xcel Energy	4.77%	4.66%	3.24%
Average	3.52%	3.83%	2.98%
Average without Entergy and OGE	3.11%	3.50%	2.86%

**The Empire District Electric Company
Case No. ER-2016-0023**

**Ten-Year Dividends Per Share, Earnings Per Share & Book Value Per Share Growth Rates
for the Fifteen Comparable Companies**

Company Name	----- 10-Year Annual Compound Growth Rates -----			Average of 10 Year Annual Compound Growth Rates
Company Name	DPS	EPS	BVPS	Growth Rates
ALLETE, Inc.	-2.37%	10.57%	1.98%	3.39%
Alliant Energy	7.17%	9.90%	4.35%	7.14%
Ameren Corp.	-4.39%	-2.71%	-0.19%	-2.43%
American Electric Power	3.21%	3.74%	5.41%	4.12%
CMS Energy Corp.	NM	NM	3.24%	NM
DTE Energy Company	2.76%	3.87%	4.37%	3.66%
Entergy Corporation	5.85%	-3.73%	3.20%	1.77%
Great Plains Energy	-5.55%	-4.58%	4.51%	-1.87%
NorthWestern Corporation	17.56%	NA	NM	NM
OGE Energy Corp.	3.64%	7.57%	8.74%	6.65%
Pinnacle West Capital	2.47%	3.76%	2.41%	2.88%
PNM Resources, Inc.	0.89%	-1.63%	1.27%	0.18%
Portland General Electric Company	NA	NA	-0.06%	NM
Westar Energy, Inc.	5.41%	3.18%	5.27%	4.62%
Xcel Energy	4.05%	4.35%	4.77%	4.39%
Average	3.13%	2.86%	3.52%	2.88%
Average without Entergy and OGE	2.84%	3.05%	3.11%	2.61%

Source: SNL Financial.

**The Empire District Electric Company
Case No. ER-2016-0023**

**Five-Year Dividends Per Share, Earnings Per Share & Book Value Per Share Growth Rates
for the Fifteen Comparable Companies**

Company Name	----- 5-Year Annual Compound Growth Rates -----			Average of 5 Year Annual Compound Growth Rates
Company Name	DPS	EPS	BVPS	Growth Rates
ALLETE, Inc.	2.33%	4.16%	5.76%	4.08%
Alliant Energy	6.44%	10.50%	4.01%	6.99%
Ameren Corp.	-2.84%	2.09%	-3.22%	-1.32%
American Electric Power	4.20%	2.09%	4.79%	3.69%
CMS Energy Corp.	16.49%	8.21%	3.85%	9.52%
DTE Energy Company	4.80%	4.82%	4.22%	4.61%
Entergy Corporation	1.55%	-15.83%	3.66%	-3.54%
Great Plains Energy	-3.25%	3.34%	1.90%	0.66%
NorthWestern Corporation	4.63%	7.82%	6.79%	6.41%
OGE Energy Corp.	5.87%	5.28%	8.28%	6.48%
Pinnacle West Capital	2.10%	7.05%	3.37%	4.17%
PNM Resources, Inc.	7.04%	NM	2.59%	4.81%
Portland General Electric Company	2.37%	5.32%	2.94%	3.55%
Westar Energy, Inc.	3.13%	7.30%	3.81%	4.75%
Xcel Energy	4.24%	5.12%	4.66%	4.67%
Average	3.94%	4.09%	3.83%	3.97%
Average without Entergy and OGE	3.97%	5.65%	3.50%	4.35%

Source: SNL Financial.

**The Empire District Electric Company
Case No. ER-2016-0023**

**Historical and Projected Growth Rates for the
Fifteen Comparable Electric Utility Companies**

Company Name	(1) 10-Year Historical Growth Rate (DPS, EPS and BVPS)	(2) 5-Year Historical Growth Rate (DPS, EPS and BVPS)	(3) Projected 5-Year EPS Growth FactSet (Mean) (%)
ALLETE, Inc.	3.39%	4.08%	5.67%
Alliant Energy	7.14%	6.99%	5.50%
Ameren Corp.	-2.43%	-1.32%	6.14%
American Electric Power	4.12%	3.69%	5.52%
CMS Energy Corp.	NM	9.52%	6.88%
DTE Energy Company	3.66%	4.61%	5.45%
Entergy Corporation	1.77%	-3.54%	0.49%
Great Plains Energy	-1.87%	0.66%	5.32%
NorthWestern Corporation	NM	6.41%	5.00%
OGE Energy Corp.	6.65%	6.48%	4.50%
Pinnacle West Capital	2.88%	4.17%	4.84%
PNM Resources, Inc.	0.18%	4.81%	6.76%
Portland General Electric Company	NM	3.55%	4.98%
Westar Energy, Inc.	4.62%	4.75%	4.66%
Xcel Energy	4.39%	4.67%	5.07%
Average	2.88%	3.97%	5.12%
Average without Entergy and OGE	2.61%	4.35%	5.52%

Sources: Column 1 = Schedule 9-4

Column 2 = Schedule 9-5.

Column 3 = SNL Financial

**The Empire District Electric Company
Case No. ER-2016-0023**

**Average High / Low Stock Price for December 2015 through February 2016
for the Comparable Electric Utility Companies**

Company Name	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	-- December 2015 --		-- January 2016 --		-- February 2016 --		Average High/Low Stock Price (12/15 - 2/16)
	High Stock Price	Low Stock Price	High Stock Price	Low Stock Price	High Stock Price	Low Stock Price	
ALLETE, Inc.	51.85	47.93	53.74	48.26	54.96	50.83	51.26
Alliant Energy	64.25	58.13	65.35	60.75	70.25	64.76	63.92
Ameren Corp.	44.44	41.33	44.97	41.50	48.22	44.69	44.19
American Electric Power	59.44	54.08	61.08	56.75	63.90	60.33	59.26
CMS Energy Corp.	36.82	34.18	39.10	34.96	40.79	37.57	37.24
DTE Energy Company	81.93	77.35	85.18	78.01	87.84	82.93	82.21
Entergy Corporation	69.49	64.18	71.57	65.38	74.58	69.34	69.09
Great Plains Energy	27.94	25.57	28.08	25.87	29.88	27.80	27.52
NorthWestern Corporation	55.65	51.95	55.85	52.16	60.76	55.49	55.31
OGE Energy Corp.	27.04	24.15	26.52	23.37	27.81	24.39	25.55
Pinnacle West Capital	65.51	60.70	66.49	62.51	71.40	66.02	65.44
PNM Resources, Inc.	31.23	27.90	31.41	29.22	33.34	31.24	30.72
Portland General Electric Company	37.80	35.04	39.02	35.27	40.48	37.40	37.50
Westar Energy, Inc.	43.56	40.00	43.59	40.01	46.67	42.96	42.80
Xcel Energy	36.72	34.33	38.26	35.19	40.42	36.25	36.86

Notes:

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

Source: <http://finance.yahoo.com>

**The Empire District Electric Company
Case No. ER-2016-0023**

**Constant-Growth Discounted Cash Flow (DCF) Estimated Costs of Common Equity
for the Comparable Electric Utility Companies**

	(1)	(2)	(3)
<u>Company Name</u>	<u>Expected Annual Dividend</u>	<u>Average High/Low Stock Price</u>	<u>Projected Dividend Yield</u>
ALLETE, Inc.	\$2.08	\$51.262	4.06%
Alliant Energy	\$2.34	\$63.915	3.66%
Ameren Corp.	\$1.74	\$44.192	3.93%
American Electric Power	\$2.25	\$59.263	3.80%
CMS Energy Corp.	\$1.24	\$37.237	3.33%
DTE Energy Company	\$2.98	\$82.207	3.62%
Entergy Corporation	\$3.43	\$69.090	4.96%
Great Plains Energy	\$1.10	\$27.523	4.00%
NorthWestern Corporation	\$2.01	\$55.310	3.64%
OGE Energy Corp.	\$1.13	\$25.547	4.42%
Pinnacle West Capital	\$2.53	\$65.438	3.87%
PNM Resources, Inc.	\$0.88	\$30.723	2.86%
Portland General Electric Company	\$1.26	\$37.502	3.36%
Westar Energy, Inc.	\$1.51	\$42.798	3.53%
Xcel Energy	\$1.35	\$36.862	3.66%
Average			3.78%
Average without Entergy and OGE			3.64%
Average without ALLETE, Entergy, OGE and Northwestern			3.60%
		Proposed Dividend Yield:	3.80%
		Proposed Range of Growth:	3.50 - 4.50%
		Estimated Proxy Cost of Common Equity:	7.30 - 8.30%

Notes: Column 1 = Expected Annual Dividend based on each company's 2016 fiscal year FactSet projected dividends per share according to SNL Financial.
OGE Energy Corp did not have a 2016 fiscal year FactSet DPS therefore Staff applied OGE's Dividends Declared 5 year CAGR(%) to OGE's 2015 Dividends Declared Per Share.

Column 3 = (Column 1 / Column 2).

Sources: Column 1 = SNL Financial

Column 2 = Schedule 11.

**The Empire District Electric Company
Case No. ER-2016-0023**

**Multiple-Stage Discounted Cash Flow (DCF) Estimated Costs of Common Equity
for the Comparable Electric Utility Companies**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Company Name	Annualized Quarterly Dividend	Growth Years 1-5	6	7	Growth Years 8	9	10	Growth in Perpetuity	Cost of Equity
ALLETE, Inc.	\$2.08	5.67%	5.23%	4.78%	4.34%	3.89%	3.45%	3.00%	7.93%
Alliant Energy	\$2.35	5.50%	5.08%	4.67%	4.25%	3.83%	3.42%	3.00%	7.43%
Ameren Corp.	\$1.70	6.14%	5.62%	5.09%	4.57%	4.05%	3.52%	3.00%	7.82%
American Electric Power	\$2.24	5.52%	5.10%	4.68%	4.26%	3.84%	3.42%	3.00%	7.56%
CMS Energy Corp.	\$1.24	6.88%	6.23%	5.59%	4.94%	4.29%	3.65%	3.00%	7.38%
DTE Energy Company	\$2.92	5.45%	5.04%	4.63%	4.23%	3.82%	3.41%	3.00%	7.27%
Entergy Corporation	\$3.40	0.49%	0.91%	1.33%	1.75%	2.16%	2.58%	3.00%	7.32%
Great Plains Energy	\$1.05	5.32%	4.93%	4.55%	4.16%	3.77%	3.39%	3.00%	7.55%
NorthWestern Corporation	\$2.00	5.00%	4.67%	4.33%	4.00%	3.67%	3.33%	3.00%	7.23%
OGE Energy Corp.	\$1.10	4.50%	4.25%	4.00%	3.75%	3.50%	3.25%	3.00%	7.87%
Pinnacle West Capital	\$2.50	4.84%	4.53%	4.23%	3.92%	3.61%	3.31%	3.00%	7.42%
PNM Resources, Inc.	\$0.88	6.76%	6.13%	5.51%	4.88%	4.25%	3.63%	3.00%	6.75%
Portland General Electric	\$1.20	4.98%	4.65%	4.32%	3.99%	3.66%	3.33%	3.00%	6.74%
Westar Energy, Inc.	\$1.52	4.66%	4.38%	4.11%	3.83%	3.55%	3.28%	3.00%	7.07%
Xcel Energy	\$1.36	5.07%	4.73%	4.38%	4.04%	3.69%	3.35%	3.00%	7.33%
								Average	7.38%
									Average without Entergy and OGE
									7.34%
									Average without ALLETE, Entergy, OGE and Northwestern
									7.30%

Sources: Column 1 = SNL Financial
Column 2 = Schedule 10-6
Column 8 = See range of averages from Schedules 14-1 through Schedule 14-4.

**The Empire District Electric Company
Case No. ER-2016-0023**

**Multiple-Stage Discounted Cash Flow (DCF) Estimated Costs of Common Equity
for the Comparable Electric Utility Companies**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Company Name	Annualized Quarterly Dividend	Growth Years 1-5	6	7	Growth Years 8	9	10	Growth in Perpetuity	Cost of Equity
ALLETE, Inc.	\$2.08	5.67%	5.31%	4.95%	4.59%	4.22%	3.86%	3.50%	8.31%
Alliant Energy	\$2.35	5.50%	5.17%	4.83%	4.50%	4.17%	3.83%	3.50%	7.82%
Ameren Corp.	\$1.70	6.14%	5.70%	5.26%	4.82%	4.38%	3.94%	3.50%	8.19%
American Electric Power	\$2.24	5.52%	5.18%	4.85%	4.51%	4.17%	3.84%	3.50%	7.94%
CMS Energy Corp.	\$1.24	6.88%	6.32%	5.75%	5.19%	4.63%	4.06%	3.50%	7.76%
DTE Energy Company	\$2.92	5.45%	5.13%	4.80%	4.48%	4.15%	3.83%	3.50%	7.66%
Entergy Corporation	\$3.40	0.49%	0.99%	1.49%	2.00%	2.50%	3.00%	3.50%	7.70%
Great Plains Energy	\$1.05	5.32%	5.02%	4.71%	4.41%	4.11%	3.80%	3.50%	7.93%
NorthWestern Corporati	\$2.00	5.00%	4.75%	4.50%	4.25%	4.00%	3.75%	3.50%	7.61%
OGE Energy Corp.	\$1.10	4.50%	4.33%	4.17%	4.00%	3.83%	3.67%	3.50%	8.24%
Pinnacle West Capital	\$2.50	4.84%	4.62%	4.39%	4.17%	3.95%	3.72%	3.50%	7.80%
PNM Resources, Inc.	\$0.88	6.76%	6.22%	5.67%	5.13%	4.59%	4.04%	3.50%	7.15%
Portland General Electric	\$1.20	4.98%	4.73%	4.49%	4.24%	3.99%	3.75%	3.50%	7.14%
Westar Energy, Inc.	\$1.52	4.66%	4.47%	4.27%	4.08%	3.89%	3.69%	3.50%	7.46%
Xcel Energy	\$1.36	5.07%	4.81%	4.55%	4.29%	4.02%	3.76%	3.50%	7.72%
								Average	7.76%
									Average without Entergy and OGE
									7.73%
									Average without ALLETE, Entergy, OGE and Northwestern
									7.69%

Sources: Column 1 = SNL Financial.

Column 2 = Schedule 10-6

Column 8 = See range of averages from Schedules 14-1 through Schedule 14-4.

**The Empire District Electric Company
Case No. ER-2016-0023**

**Multiple-Stage Discounted Cash Flow (DCF) Estimated Costs of Common Equity
for the Comparable Electric Utility Companies**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Company Name	Annualized Quarterly Dividend	Growth Years 1-5	6	7	Growth Years 8	9	10	Growth in Perpetuity	Cost of Equity
ALLETE, Inc.	\$2.08	5.67%	5.39%	5.11%	4.84%	4.56%	4.28%	4.00%	8.68%
Alliant Energy	\$2.35	5.50%	5.25%	5.00%	4.75%	4.50%	4.25%	4.00%	8.20%
Ameren Corp.	\$1.70	6.14%	5.78%	5.43%	5.07%	4.71%	4.36%	4.00%	8.57%
American Electric Power	\$2.24	5.52%	5.27%	5.01%	4.76%	4.51%	4.25%	4.00%	8.32%
CMS Energy Corp.	\$1.24	6.88%	6.40%	5.92%	5.44%	4.96%	4.48%	4.00%	8.15%
DTE Energy Company	\$2.92	5.45%	5.21%	4.97%	4.73%	4.48%	4.24%	4.00%	8.05%
Entergy Corporation	\$3.40	0.49%	1.08%	1.66%	2.25%	2.83%	3.42%	4.00%	8.09%
Great Plains Energy	\$1.05	5.32%	5.10%	4.88%	4.66%	4.44%	4.22%	4.00%	8.31%
NorthWestern Corporation	\$2.00	5.00%	4.83%	4.67%	4.50%	4.33%	4.17%	4.00%	8.00%
OGE Energy Corp.	\$1.10	4.50%	4.42%	4.33%	4.25%	4.17%	4.08%	4.00%	8.62%
Pinnacle West Capital	\$2.50	4.84%	4.70%	4.56%	4.42%	4.28%	4.14%	4.00%	8.19%
PNM Resources, Inc.	\$0.88	6.76%	6.30%	5.84%	5.38%	4.92%	4.46%	4.00%	7.55%
Portland General Electric	\$1.20	4.98%	4.82%	4.65%	4.49%	4.33%	4.16%	4.00%	7.54%
Westar Energy, Inc.	\$1.52	4.66%	4.55%	4.44%	4.33%	4.22%	4.11%	4.00%	7.85%
Xcel Energy	\$1.36	5.07%	4.89%	4.71%	4.54%	4.36%	4.18%	4.00%	8.10%
								Average	8.15%
								Average without Entergy and OGE	8.12%
								Average without ALLETE, Entergy, OGE and Northwestern	8.08%

Sources: Column 1 = SNL Financial.
Column 2 = Schedule 10-6
Column 8 = See range of averages from Schedules 14-1 through Schedule 14-4.

**The Empire District Electric Company
Case No. ER-2016-0023**

**Multiple-Stage Discounted Cash Flow (DCF) Estimated Costs of Common Equity
for the Comparable Electric Utility Companies**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Company Name	Annualized Quarterly Dividend	Growth Years 1-5	6	7	Growth Years 8	9	10	Growth in Perpetuity	Cost of Equity
ALLETE, Inc.	\$2.08	5.67%	5.46%	5.25%	5.04%	4.82%	4.61%	4.40%	8.98%
Alliant Energy	\$2.35	5.50%	5.32%	5.13%	4.95%	4.77%	4.58%	4.40%	8.51%
Ameren Corp.	\$1.70	6.14%	5.85%	5.56%	5.27%	4.98%	4.69%	4.40%	8.88%
American Electric Power	\$2.24	5.52%	5.33%	5.15%	4.96%	4.77%	4.59%	4.40%	8.63%
CMS Energy Corp.	\$1.24	6.88%	6.47%	6.05%	5.64%	5.23%	4.81%	4.40%	8.46%
DTE Energy Company	\$2.92	5.45%	5.28%	5.10%	4.93%	4.75%	4.58%	4.40%	8.36%
Entergy Corporation	\$3.40	0.49%	1.14%	1.79%	2.45%	3.10%	3.75%	4.40%	8.40%
Great Plains Energy	\$1.05	5.32%	5.17%	5.01%	4.86%	4.71%	4.55%	4.40%	8.62%
NorthWestern Corporatio	\$2.00	5.00%	4.90%	4.80%	4.70%	4.60%	4.50%	4.40%	8.32%
OGE Energy Corp.	\$1.10	4.50%	4.48%	4.47%	4.45%	4.43%	4.42%	4.40%	8.92%
Pinnacle West Capital	\$2.50	4.84%	4.77%	4.69%	4.62%	4.55%	4.47%	4.40%	8.50%
PNM Resources, Inc.	\$0.88	6.76%	6.37%	5.97%	5.58%	5.19%	4.79%	4.40%	7.87%
Portland General Electric	\$1.20	4.98%	4.88%	4.79%	4.69%	4.59%	4.50%	4.40%	7.86%
Westar Energy, Inc.	\$1.52	4.66%	4.62%	4.57%	4.53%	4.49%	4.44%	4.40%	8.17%
Xcel Energy	\$1.36	5.07%	4.96%	4.85%	4.74%	4.62%	4.51%	4.40%	8.42%
								Average	8.46%
								Average without Entergy and OGE	8.43%
								Average without ALLETE, Entergy, OGE and Northwestern	8.39%

Sources: Column 1 = SNL Financial.

Column 2 = Schedule 10-6

Column 8 = Compounding the expected GDP price deflator of 2% with the long term real GDP growth of 2.35% from the 2014 cases.

**The Empire District Electric Company
Case No. ER-2016-0023**

**Multiple-Stage Discounted Cash Flow (DCF) Estimated Costs of Common Equity
for the Comparable Electric Utility Companies**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
Company Name	Annualized Quarterly Dividend	Growth Years 1-5	6	7	Growth Years 8	9	10	Growth in Perpetuity	Cost of Equity	
ALLETE, Inc.	\$2.08	5.67%	5.41%	5.15%	4.89%	4.62%	4.36%	4.10%	8.76%	
Alliant Energy	\$2.35	5.50%	5.27%	5.03%	4.80%	4.57%	4.33%	4.10%	8.28%	
Ameren Corp.	\$1.70	6.14%	5.80%	5.46%	5.12%	4.78%	4.44%	4.10%	8.65%	
American Electric Power	\$2.24	5.52%	5.28%	5.05%	4.81%	4.57%	4.34%	4.10%	8.40%	
CMS Energy Corp.	\$1.24	6.88%	6.42%	5.95%	5.49%	5.03%	4.56%	4.10%	8.23%	
DTE Energy Company	\$2.92	5.45%	5.23%	5.00%	4.78%	4.55%	4.33%	4.10%	8.13%	
Entergy Corporation	\$3.40	0.49%	1.09%	1.69%	2.30%	2.90%	3.50%	4.10%	8.17%	
Great Plains Energy	\$1.05	5.32%	5.12%	4.91%	4.71%	4.51%	4.30%	4.10%	8.39%	
NorthWestern Corporation	\$2.00	5.00%	4.85%	4.70%	4.55%	4.40%	4.25%	4.10%	8.08%	
OGE Energy Corp.	\$1.10	4.50%	4.43%	4.37%	4.30%	4.23%	4.17%	4.10%	8.69%	
Pinnacle West Capital	\$2.50	4.84%	4.72%	4.59%	4.47%	4.35%	4.22%	4.10%	8.27%	
PNM Resources, Inc.	\$0.88	6.76%	6.32%	5.87%	5.43%	4.99%	4.54%	4.10%	7.63%	
Portland General Electric	\$1.20	4.98%	4.83%	4.69%	4.54%	4.39%	4.25%	4.10%	7.62%	
Westar Energy, Inc.	\$1.52	4.66%	4.57%	4.47%	4.38%	4.29%	4.19%	4.10%	7.93%	
Xcel Energy	\$1.36	5.07%	4.91%	4.75%	4.59%	4.42%	4.26%	4.10%	8.18%	
								Average	8.23%	
									Average without Entergy and OGE	8.19%
									Average without ALLETE, Entergy, OGE and Northwestern	8.15%

Sources: Column 1 = SNL Financial.

Column 2 = Schedule 10-6

Column 8 = Compounding the expected GDP price deflator of 2% with the long term real GDP growth of 2.025%.

The Empire District Electric Company
Case No. ER-2016-0023

Central Region Electric Utility Proxy Group
EPS

Ten-Year Compound Growth Rate Averages (1968-1999)

Years	Dayton P & L/ DPL	Detroit Edison/ DTE	Empire	IPALCO	Kansas City P & L	Northern States Power	Okla. Gas & Electric/ OGE Energy Corp.	SJL&P	WPS Resources/ Wisconsin Public Serv.	WI Energy/ WI Electric Power	Average
1968-70 to 1978-80	-1.74%	-0.57%	0.24%	4.13%	1.77%	4.13%	1.16%	1.40%	6.23%	6.32%	2.31%
1969-71 to 1979-81	-0.21%	0.05%	-0.64%	4.30%	2.62%	4.02%	0.48%	1.66%	6.60%	6.79%	2.57%
1970-72 to 1980-82	0.98%	-0.46%	0.41%	3.14%	3.24%	4.48%	1.88%	2.66%	6.41%	7.24%	3.00%
1971-73 to 1981-83	2.72%	0.53%	2.64%	2.87%	4.83%	6.11%	2.90%	4.03%	6.92%	7.77%	4.13%
1972-74 to 1982-84	3.71%	1.48%	5.33%	4.69%	6.44%	7.64%	3.02%	5.65%	7.78%	8.25%	5.40%
1973-75 to 1983-85	4.19%	3.60%	6.21%	5.91%	7.60%	8.08%	2.58%	6.94%	8.54%	9.39%	6.30%
1974-76 to 1984-86	4.19%	4.41%	6.50%	5.86%	5.75%	8.03%	2.81%	7.89%	7.98%	9.60%	6.30%
1975-77 to 1985-87	5.10%	4.69%	5.70%	4.19%	4.26%	7.59%	2.90%	8.10%	6.81%	9.18%	5.85%
1976-78 to 1986-88	5.84%	4.29%	5.68%	5.40%	3.02%	7.24%	3.92%	7.95%	5.98%	8.86%	5.82%
1977-79 to 1987-89	6.16%	3.93%	5.49%	5.09%	4.12%	6.73%	5.22%	8.49%	5.08%	8.96%	5.93%
1978-80 to 1988-90	5.61%	4.41%	5.52%	5.11%	3.09%	6.07%	6.65%	8.20%	4.35%	9.08%	5.81%
1979-81 to 1989-91	3.75%	5.35%	6.06%	4.67%	1.90%	5.45%	6.56%	7.68%	3.70%	8.07%	5.32%
1980-82 to 1990-92	2.46%	6.83%	4.65%	4.43%	0.31%	3.15%	3.63%	5.76%	3.91%	6.16%	4.13%
1981-83 to 1991-93	1.00%	6.06%	2.56%	3.11%	-1.01%	1.58%	1.58%	3.37%	3.45%	4.33%	2.60%
1982-84 to 1992-94	1.31%	4.75%	-0.16%	1.44%	-2.03%	0.83%	0.71%	2.88%	2.19%	2.64%	1.46%
1983-85 to 1993-95	1.36%	2.97%	-1.18%	1.78%	-2.21%	1.85%	1.81%	2.46%	1.03%	2.58%	1.24%
1984-86 to 1994-96	1.71%	1.79%	-1.39%	3.31%	-1.08%	2.26%	2.15%	2.56%	0.20%	2.27%	1.38%
1985-87 to 1995-97	1.65%	0.64%	-1.47%	4.22%	0.35%	1.90%	2.19%	1.90%	0.12%	-0.46%	1.10%
1986-88 to 1996-98	2.28%	0.57%	-0.92%	4.59%	1.57%	1.50%	2.11%	1.34%	-0.86%	-2.24%	0.99%
1987-89 to 1997-99	2.62%	1.08%	-0.46%	5.06%	0.15%	0.40%	2.36%	0.49%	-0.38%	-3.07%	0.83%
Average	2.73%	2.82%	2.54%	4.17%	2.23%	4.45%	2.83%	4.57%	4.30%	5.59%	3.62%

The Empire District Electric Company
Case No. ER-2016-0023
Central Region Electric Utility Proxy Group
DPS

Ten-Year Compound Growth Rate Averages (1968-1999)

Years	Dayton P & L/ DPL	Detroit Edison/ DTE	Empire	IPALCO	Kansas City P & L	Northern States Power	Okla. Gas & Electric/ OGE Energy Corp.	SJL&P	WPS Resources/ Wisconsin Public Serv.	WI Energy/ WI Electric Power	Average
1968-70 to 1978-80	0.90%	1.17%	2.45%	3.52%	3.34%	3.37%	3.79%	1.89%	4.36%	5.46%	3.03%
1969-71 to 1979-81	0.87%	1.43%	2.17%	4.15%	3.03%	3.76%	3.52%	1.89%	4.69%	5.70%	3.12%
1970-72 to 1980-82	1.04%	1.59%	1.90%	4.69%	3.17%	4.02%	3.32%	2.01%	5.13%	5.98%	3.28%
1971-73 to 1981-83	1.41%	1.64%	1.98%	4.92%	3.56%	4.39%	3.35%	2.28%	5.64%	6.23%	3.54%
1972-74 to 1982-84	1.70%	1.60%	2.32%	4.95%	4.13%	4.88%	3.49%	2.82%	6.18%	6.37%	3.84%
1973-75 to 1983-85	1.89%	1.48%	2.86%	5.03%	4.45%	5.60%	3.62%	3.50%	6.72%	6.52%	4.17%
1974-76 to 1984-86	1.89%	1.48%	3.31%	5.19%	4.12%	6.31%	3.75%	4.32%	7.18%	6.78%	4.43%
1975-77 to 1985-87	2.01%	1.44%	3.77%	5.73%	3.40%	6.78%	3.91%	4.97%	7.38%	7.08%	4.65%
1976-78 to 1986-88	2.26%	1.28%	4.14%	5.65%	2.96%	6.95%	4.04%	5.36%	7.30%	7.34%	4.73%
1977-79 to 1987-89	2.56%	0.94%	4.50%	5.49%	3.16%	6.96%	4.14%	5.72%	7.00%	7.51%	4.80%
1978-80 to 1988-90	2.83%	0.86%	4.81%	4.96%	3.58%	6.86%	4.27%	6.10%	6.66%	7.65%	4.86%
1979-81 to 1989-91	2.92%	0.99%	5.08%	4.80%	3.77%	6.72%	4.33%	6.53%	6.26%	7.68%	4.91%
1980-82 to 1990-92	2.83%	1.38%	5.27%	4.53%	3.78%	6.54%	4.30%	6.63%	5.83%	7.59%	4.87%
1981-83 to 1991-93	2.59%	1.70%	5.18%	4.24%	3.47%	6.22%	4.02%	6.49%	5.30%	7.29%	4.65%
1982-84 to 1992-94	2.59%	1.93%	4.80%	3.96%	3.02%	5.75%	3.64%	6.03%	4.65%	6.89%	4.33%
1983-85 to 1993-95	2.89%	2.06%	4.22%	3.75%	2.72%	5.14%	3.21%	5.50%	3.88%	6.44%	3.98%
1984-86 to 1994-96	3.41%	2.06%	3.58%	3.69%	3.14%	4.49%	2.77%	4.90%	3.15%	6.00%	3.72%
1985-87 to 1995-97	3.79%	2.06%	2.92%	1.92%	3.74%	3.91%	2.33%	4.42%	2.63%	5.54%	3.33%
1986-88 to 1996-98	3.95%	2.06%	2.30%	0.76%	3.99%	3.46%	1.87%	3.92%	2.39%	5.00%	2.97%
1987-89 to 1997-99	3.81%	2.06%	1.74%	-0.41%	3.52%	3.11%	1.42%	3.37%	2.31%	4.36%	2.53%
Average	2.41%	1.56%	3.46%	4.08%	3.50%	5.26%	3.46%	4.43%	5.23%	6.47%	3.99%

**The Empire District Electric Company
Case No. ER-2016-0023**

**Central Region Electric Utility Proxy Group
BVPS
Ten-Year Compound Growth Rate Averages (1968-1999)**

Years	Dayton P & L/ DPL	Detroit Edison/ DTE	Empire	IPALCO	Kansas City P & L	Northern States Power	Okl. Gas & Electric/ OGE Energy Corp.	SJL&P	WPS Resources/ Wisconsin Public Serv.	WI Energy/ WI Electric Power	Average
1968-70 to 1978-80	1.40%	0.04%	2.37%	5.21%	1.88%	4.34%	5.76%	1.28%	4.13%	4.03%	3.05%
1969-71 to 1979-81	0.84%	-0.35%	1.93%	4.93%	1.51%	4.19%	4.58%	1.15%	4.37%	3.71%	2.69%
1970-72 to 1980-82	0.28%	-0.88%	1.63%	4.43%	1.19%	4.15%	3.83%	1.13%	4.50%	3.84%	2.41%
1971-73 to 1981-83	0.16%	-1.30%	1.58%	3.84%	1.20%	4.31%	3.00%	1.31%	4.57%	4.09%	2.27%
1972-74 to 1982-84	0.27%	-1.51%	1.89%	3.77%	1.35%	4.72%	2.66%	1.65%	4.89%	4.49%	2.42%
1973-75 to 1983-85	0.25%	-1.27%	2.32%	3.99%	1.88%	5.18%	2.33%	2.36%	5.27%	5.02%	2.73%
1974-76 to 1984-86	0.30%	-0.77%	2.82%	4.47%	2.26%	5.56%	2.43%	3.27%	5.56%	5.52%	3.14%
1975-77 to 1985-87	0.27%	-0.18%	3.17%	4.63%	2.54%	5.73%	2.33%	4.20%	5.57%	5.86%	3.41%
1976-78 to 1986-88	0.66%	-0.61%	3.51%	4.82%	2.32%	5.80%	2.33%	4.89%	5.42%	6.11%	3.53%
1977-79 to 1987-89	1.13%	-1.05%	3.79%	4.77%	2.28%	5.80%	2.30%	5.41%	5.16%	6.38%	3.60%
1978-80 to 1988-90	1.80%	-1.34%	4.17%	4.79%	2.28%	5.74%	2.57%	5.69%	4.77%	6.69%	3.72%
1979-81 to 1989-91	2.31%	-0.30%	4.59%	4.84%	2.44%	5.65%	2.92%	5.82%	4.27%	6.91%	3.95%
1980-82 to 1990-92	2.29%	0.97%	4.88%	4.92%	2.41%	5.43%	2.96%	5.72%	3.96%	6.94%	4.05%
1981-83 to 1991-93	1.97%	2.03%	4.82%	4.84%	2.10%	5.14%	2.75%	5.41%	3.75%	6.74%	3.95%
1982-84 to 1992-94	1.84%	2.72%	4.36%	4.50%	1.71%	4.77%	2.37%	5.01%	3.57%	6.33%	3.72%
1983-85 to 1993-95	2.33%	2.95%	3.83%	4.15%	1.17%	4.46%	2.16%	4.60%	3.29%	5.91%	3.48%
1984-86 to 1994-96	2.78%	2.82%	3.34%	3.73%	0.78%	4.21%	1.91%	4.27%	2.99%	5.48%	3.23%
1985-87 to 1995-97	3.14%	2.52%	2.92%	2.52%	0.41%	4.01%	1.85%	3.99%	2.77%	4.81%	2.89%
1986-88 to 1996-98	3.26%	3.25%	2.56%	1.45%	0.50%	3.81%	1.86%	3.75%	2.43%	3.99%	2.69%
1987-89 to 1997-99	3.42%	4.16%	2.20%	1.19%	0.42%	3.56%	2.04%	3.47%	2.20%	3.17%	2.58%
Average	1.54%	0.60%	3.13%	4.09%	1.63%	4.83%	2.75%	3.72%	4.17%	5.30%	3.18%

**The Empire District Electric Company
Case No. ER-2016-0023**

**Central Region Electric Utility Proxy Group
DPS, EPS, BVPS & GDP
Ten-Year Compound Growth Rate Averages (1968-1999)**

<u>DPS</u>		<u>EPS</u>		<u>BVPS</u>		<u>Average</u>	<u>GDP</u>	
Years	10 yr compound growth rate avgs	Years	10 yr compound growth rate avgs	Years	10 yr compound growth rate avgs	DPS, EPS and BVPS	Years	10 yr compound growth rate avgs
1968-70 to 1978-80	3.03%	1968-70 to 1978-80	2.31%	1968-70 to 1978-80	3.05%	2.79%	1968-70 to 1978-80	10.05%
1969-71 to 1979-81	3.12%	1969-71 to 1979-81	2.57%	1969-71 to 1979-81	2.69%	2.79%	1969-71 to 1979-81	10.41%
1970-72 to 1980-82	3.28%	1970-72 to 1980-82	3.00%	1970-72 to 1980-82	2.41%	2.90%	1970-72 to 1980-82	10.42%
1971-73 to 1981-83	3.54%	1971-73 to 1981-83	4.13%	1971-73 to 1981-83	2.27%	3.32%	1971-73 to 1981-83	10.22%
1972-74 to 1982-84	3.84%	1972-74 to 1982-84	5.40%	1972-74 to 1982-84	2.42%	3.89%	1972-74 to 1982-84	10.03%
1973-75 to 1983-85	4.17%	1973-75 to 1983-85	6.30%	1973-75 to 1983-85	2.73%	4.40%	1973-75 to 1983-85	9.96%
1974-76 to 1984-86	4.43%	1974-76 to 1984-86	6.30%	1974-76 to 1984-86	3.14%	4.63%	1974-76 to 1984-86	9.77%
1975-77 to 1985-87	4.65%	1975-77 to 1985-87	5.85%	1975-77 to 1985-87	3.41%	4.64%	1975-77 to 1985-87	9.34%
1976-78 to 1986-88	4.73%	1976-78 to 1986-88	5.82%	1976-78 to 1986-88	3.53%	4.69%	1976-78 to 1986-88	8.80%
1977-79 to 1987-89	4.80%	1977-79 to 1987-89	5.93%	1977-79 to 1987-89	3.60%	4.77%	1977-79 to 1987-89	8.32%
1978-80 to 1988-90	4.86%	1978-80 to 1988-90	5.81%	1978-80 to 1988-90	3.72%	4.79%	1978-80 to 1988-90	7.92%
1979-81 to 1989-91	4.91%	1979-81 to 1989-91	5.32%	1979-81 to 1989-91	3.95%	4.72%	1979-81 to 1989-91	7.38%
1980-82 to 1990-92	4.87%	1980-82 to 1990-92	4.13%	1980-82 to 1990-92	4.05%	4.35%	1980-82 to 1990-92	7.06%
1981-83 to 1991-93	4.65%	1981-83 to 1991-93	2.60%	1981-83 to 1991-93	3.95%	3.74%	1981-83 to 1991-93	6.72%
1982-84 to 1992-94	4.33%	1982-84 to 1992-94	1.46%	1982-84 to 1992-94	3.72%	3.17%	1982-84 to 1992-94	6.49%
1983-85 to 1993-95	3.98%	1983-85 to 1993-95	1.24%	1983-85 to 1993-95	3.48%	2.90%	1983-85 to 1993-95	6.12%
1984-86 to 1994-96	3.72%	1984-86 to 1994-96	1.38%	1984-86 to 1994-96	3.23%	2.78%	1984-86 to 1994-96	5.89%
1985-87 to 1995-97	3.33%	1985-87 to 1995-97	1.10%	1985-87 to 1995-97	2.89%	2.44%	1985-87 to 1995-97	5.81%
1986-88 to 1996-98	2.97%	1986-88 to 1996-98	0.99%	1986-88 to 1996-98	2.69%	2.22%	1986-88 to 1996-98	5.73%
1987-89 to 1997-99	2.53%	1987-89 to 1997-99	0.83%	1987-89 to 1997-99	2.58%	1.98%	1987-89 to 1997-99	5.63%
Average	3.99%	Average	3.62%	Average	3.18%		Average	8.10%
Average of 10-year Rolling Averages EPS, DPS and BVPS			3.59%					

Sources: Value Line Investment Survey and St. Louis Federal Reserve Website

The Empire District Electric Company
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Multi Stage DCF Cost of Equity Comparisons

Refined Proxy Group from 2014 Electric Rate Cases (less Southern Company due to Announced Acquisition of AGL)
3.5% Perpetual Growth Rate

	Feb-16	UE Rate Case	Empire Rate Case	KCPL Rate Case
Alliant Energy	7.82%	7.51%	7.20%	7.51%
Ameren Corp.	8.19%	9.32%	8.84%	8.26%
American Electric Power	7.94%	8.09%	7.72%	7.57%
CMS Energy Corp.	7.76%	7.83%	7.47%	7.39%
DTE Energy Company	7.66%	7.92%	7.56%	7.31%
Great Plains Energy	7.93%	7.87%	7.59%	7.36%
Pinnacle West Capital	7.80%	8.01%	7.58%	7.45%
PNM Resources, Inc.	7.15%	7.36%	7.23%	6.94%
Portland General Electric Company	7.14%	8.03%	7.66%	7.08%
Westar Energy, Inc.	7.46%	7.53%	7.25%	7.38%
Xcel Energy	7.72%	7.84%	7.55%	7.60%
Average	7.69%	7.94%	7.60%	7.44%

Refined Proxy Group from 2014 Electric Rate Cases (less Southern Company due to Announced Acquisition of AGL)
GDP for Perpetual Growth Rate

	Feb-16	UE Rate Case	Empire Rate Case	KCPL Rate Case
Alliant Energy	8.51%	8.22%	7.92%	8.22%
Ameren Corp.	8.88%	9.96%	9.50%	8.94%
American Electric Power	8.63%	8.77%	8.42%	8.28%
CMS Energy Corp.	8.46%	8.53%	8.18%	8.10%
DTE Energy Company	8.36%	8.62%	8.26%	8.02%
Great Plains Energy	8.62%	8.57%	8.30%	8.07%
Pinnacle West Capital	8.50%	8.70%	8.28%	8.17%
PNM Resources, Inc.	7.87%	8.08%	7.95%	7.67%
Portland General Electric Company	7.86%	8.72%	8.36%	7.81%
Westar Energy, Inc.	8.17%	8.24%	7.96%	8.09%
Xcel Energy	8.42%	8.54%	8.25%	8.31%
Average	8.39%	8.63%	8.31%	8.15%

Current Proxy Group Compared to Refined Proxy Group from 2014 Electric Rate Cases
(less Southern Company due to Announced Acquisition of AGL) 3.5% Perpetual Growth Rate

	Feb-16	UE Rate Case	Empire Rate Case	KCPL Rate Case	
ALLETE, Inc.	8.31%	Alliant Energy	7.51%	7.20%	7.51%
Alliant Energy	7.82%	Ameren Corp.	9.32%	8.84%	8.26%
Ameren Corp.	8.19%	American Electric Power	8.09%	7.72%	7.57%
American Electric Power	7.94%	CMS Energy Corp.	7.83%	7.47%	7.39%
CMS Energy Corp.	7.76%	DTE Energy Company	7.92%	7.56%	7.31%
DTE Energy Company	7.66%	Great Plains Energy	7.87%	7.59%	7.36%
Entergy Corporation	7.70%	Pinnacle West Capital	8.01%	7.58%	7.45%
Great Plains Energy	7.93%	PNM Resources, Inc.	7.36%	7.23%	6.94%
NorthWestern Corporation	7.61%	Portland General Electric Company	8.03%	7.66%	7.08%
OGE Energy Corp.	8.24%	Westar Energy, Inc.	7.53%	7.25%	7.38%
Pinnacle West Capital	7.80%	Xcel Energy	7.84%	7.55%	7.60%
PNM Resources, Inc.	7.15%				
Portland General Electric Company	7.14%		7.94%	7.60%	7.44%
Westar Energy, Inc.	7.46%				
Xcel Energy	7.72%				
Average	7.76%				

Current Proxy Group Compared to Refined Proxy Group from 2014 Electric Rate Cases
(less Southern Company due to Announced Acquisition of AGL) GDP for Perpetual Growth Rate

	Feb-16	UE Rate Case	Empire Rate Case	KCPL Rate Case	
ALLETE, Inc.	8.98%	Alliant Energy	8.22%	7.92%	8.22%
Alliant Energy	8.51%	Ameren Corp.	9.96%	9.50%	8.94%
Ameren Corp.	8.88%	American Electric Power	8.77%	8.42%	8.28%
American Electric Power	8.63%	CMS Energy Corp.	8.53%	8.18%	8.10%
CMS Energy Corp.	8.46%	DTE Energy Company	8.62%	8.26%	8.02%
DTE Energy Company	8.36%	Great Plains Energy	8.57%	8.30%	8.07%
Entergy Corporation	8.40%	Pinnacle West Capital	8.70%	8.28%	8.17%
Great Plains Energy	8.62%	PNM Resources, Inc.	8.08%	7.95%	7.67%
NorthWestern Corporation	8.32%	Portland General Electric Company	8.72%	8.36%	7.81%
OGE Energy Corp.	8.92%	Westar Energy, Inc.	8.24%	7.96%	8.09%
Pinnacle West Capital	8.50%	Xcel Energy	8.54%	8.25%	8.31%
PNM Resources, Inc.	7.87%				
Portland General Electric Company	7.86%		8.63%	8.31%	8.15%
Westar Energy, Inc.	8.17%				
Xcel Energy	8.42%				
Average	8.46%				

**The Empire District Electric Company
Case No. ER-2016-0023**

**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**

	(1)	(2)	(3)	(4)	(5)	(6)
			Arithmetic Average Market Risk Premium (1926-2013)	Geometric Average Market Risk Premium (1926-2013)	Arithmetic CAPM Cost of Common Equity (1926-2014)	Geometric CAPM Cost of Common Equity (1926-2014)
Company Name	Risk Free Rate	Beta				
ALLETE, Inc.	2.82%	0.76	6.00%	4.40%	7.37%	6.15%
Alliant Energy	2.82%	0.72	6.00%	4.40%	7.13%	5.98%
Ameren Corp.	2.82%	0.73	6.00%	4.40%	7.17%	6.01%
American Electric Power	2.82%	0.71	6.00%	4.40%	7.05%	5.92%
CMS Energy Corp.	2.82%	0.71	6.00%	4.40%	7.09%	5.95%
DTE Energy Company	2.82%	0.71	6.00%	4.40%	7.05%	5.92%
Entergy Corporation	2.82%	0.69	6.00%	4.40%	6.93%	5.83%
Great Plains Energy	2.82%	0.76	6.00%	4.40%	7.37%	6.15%
NorthWestern Corporation	2.82%	0.75	6.00%	4.40%	7.29%	6.10%
OGE Energy Corp.	2.82%	0.86	6.00%	4.40%	7.97%	6.60%
Pinnacle West Capital	2.82%	0.74	6.00%	4.40%	7.25%	6.07%
PNM Resources, Inc.	2.82%	0.86	6.00%	4.40%	7.97%	6.60%
Portland General Electric Co.	2.82%	0.75	6.00%	4.40%	7.33%	6.13%
Westar Energy, Inc.	2.82%	0.69	6.00%	4.40%	6.93%	5.83%
Xcel Energy	2.82%	0.63	6.00%	4.40%	6.61%	5.59%
Average		0.73			7.22%	6.05%
Average without Entergy and OGE					7.20%	6.03%
Average without ALLETE, Entergy, OGE and Northwestern					7.18%	6.01%

Column 1 = The appropriate yield is equal to the average 30-year U.S. Treasury Bond yield for December 2015, January 2016, and February 2016, which was obtained from the St. Louis Federal Reserve website at <http://research.stlouisfed.org/fred2/data/GS30.txt>

Column 2 = Beta is a measure of the movement and relative risk of an individual stock to the market as a whole. Staff calculated the unadjusted Beta for each company using an Excel spreadsheet designed specifically to be used with the SNL database market and financial information, then adjusted each Beta using the Blume adjustment formula as used by Value Line: Adjusted Beta = 0.35 + 0.67 * Unadjusted Beta

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 - 2014 was determined to be 6.00% based on an arithmetic average as calculated in Duff & Phelps 2014 Valuation Handbook: A Guide to the Cost of Capital.

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 - 2014 was determined to be 4.40% based on a geometric average; geometric average calculated by using the arithmetic average as calculated in Duff & Phelps 2014 Valuation Handbook: A Guide to the Cost of Capital.

$$R_A = R_f + (\sigma^2/2)$$

R_A = Arithmetic Return Average

R_g = Geometric Return Average

σ = standard deviation of equity returns

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

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

**The Empire District Electric Company
Case No. ER-2016-0023**

**Recommended Allowed Rate of Return as of September 30, 2015
for The Empire District Electric Company**

Allowed Rate of Return Using
Common Equity Return of:

Capital Component	Percentage of Capital	Embedded Cost	9.50%	9.75%	10.00%
Common Stock Equity	48.73%	-----	4.63%	4.75%	4.87%
Long-Term Debt	<u>51.27%</u>	5.33%	<u>2.73%</u>	<u>2.73%</u>	<u>2.73%</u>
Total	<u><u>100.00%</u></u>		<u><u>7.36%</u></u>	<u><u>7.49%</u></u>	<u><u>7.61%</u></u>

Notes:

See Schedule 7 for the Capital Structure Ratios.