

1 weight by lenders is that financial performance demonstrates the
2 cooperative's ability to service its obligations, which could have a direct
3 impact on the value of the lender's investment. For example, a
4 downgrade in a credit rating of a cooperative could decrease the value of
5 that cooperative's bonds held in a bondholder's portfolio. The
6 bondholder is concerned about a cooperative's credit at both the time of
7 issuance and on an ongoing basis. Compared to an IOU, STEC's
8 financial performance is significantly lower than that of an IOU.

9 Flexibility to Change Rates/Regulatory Environment

10 Most of the cost exposure for cooperatives, such as construction costs,
11 is unregulated in the U.S. The cooperative needs the flexibility to raise
12 or lower rates in order to track dramatic changes in cost levels. This
13 holds true also for environmental requirements and capital investments
14 to provide service. Very few cooperatives are rate regulated.
15 Cooperatives that serve in states that are rate regulated have more
16 difficulty raising rates compared to peers that are subject only to their
17 boards of directors for authority to change rates. An unsupportive
18 regulatory jurisdiction is a credit negative and leaves cooperatives with
19 less flexibility to raise rates if needed. Of the 26 rated G&T
20 cooperatives, only four are state regulated for generation rates, and
21 three are regulated by the Federal Energy Regulatory Commission
22 (FERC). The FERC regulated G&Ts use a flexible automatic adjustment
23 formula to adjust rates which is a credit positive. Texas is the only state

1 I am aware of that separately regulates transmission rates for G&Ts. In
2 Moody's evaluation of risk, financial performance and rate flexibility
3 account for 60% of the credit evaluation. STEC credit evaluation in this
4 rating category is considered a "mixed bag". While STEC doesn't have
5 the flexibility to adjust transmission rates as enjoyed by some G&Ts,
6 Texas regulation is considered positive by the rating agencies.

7 Long-term Wholesale Contracts

8 The contracts between cooperatives and their members provide a high
9 degree of assurance that costs and capital investments can be
10 recovered in rates. The trend in the industry is to extend existing
11 contracts for 30 or more years. Cooperatives such as Oglethorpe have
12 extended their member contract to 2050. Most lenders, either in the
13 capital market or RUS, are generally not issuing new loans beyond the
14 maturity date of existing wholesale power contracts. Shorter maturities
15 result in fewer numbers of years to recover fixed costs, thus increasing
16 the cost per year. This situation is considered a credit negative by the
17 rating agencies. Generally, the longer the contract, the greater the
18 assurance that the cost of assets will be recovered and the debt repaid.
19 For STEC and other G&Ts, the long term contracts help mitigate the
20 lower financial metrics earned by cooperatives. Without these
21 assurances of cash flow cooperatives could not finance in the capital
22 markets.

1 Member Profile

2 The member profile is important because it is the members that are the
3 primary source of cash flow. The credit strength of the members,
4 whether they are "end-of-line" member consumers or purchase for resale
5 distribution members of a G&T cooperative, is an important factor to the
6 credit strength of the cooperative. If a cooperative has members with
7 poor credit fundamentals, it is a credit negative for the system. STEC's
8 members are in good financial health resulting in a credit positive for
9 STEC.

10 Size

11 This factor, while the least important, still matters, the larger the entity,
12 the greater ability to withstand unexpected events. Also, the greater the
13 size, the greater the ability an entity has to take advantage of economic
14 diversity such as fuel mix and new generation. On the other hand,
15 smaller utilities or utilities that experience substantial load loss have
16 difficulty adjusting to significant events. Compared to a number of
17 G&Ts, STEC's small size is considered a credit negative.

18 Q. WOULD YOU EXPLAIN HOW CREDIT POSITIVES AND CREDIT
19 NEGATIVES WORK IN PARTICULAR APPLICATIONS?

20 A. Each utility has its own "basket of risks" to manage and still provide
21 service on a daily basis. Most experts would agree that each utility has
22 a collection of factors that are either credit positives or credit negatives.
23 Since the credit crisis in 2008, and the preceding collapse of Enron, the

1 ability to maintain credit standing has become demanding and difficult.
2 In 2002, subsequent to the Enron collapse, there were substantially
3 more downgrades than upgrades by S&P. The challenges for a utility
4 are to mitigate credit negatives and improve credit positives when
5 possible. Unfortunately, each utility has some credit negatives that are
6 outside its ability to control. Weather and unexpected economic
7 conditions that impact demand are good examples.

8 Within a rating category each cooperative has different credit negatives
9 and positives. For example, two cooperatives may have the exact same
10 credit rating. One cooperative may build into its rates a higher coverage
11 ratio that could be a credit positive; however, the same cooperative may
12 have a credit negative in that rate flexibility may be limited such as with
13 rate regulation. Although both cooperatives have the same rating, the
14 key in any credit evaluation is whether the credit negatives outweigh the
15 credit positives and to what degree the lenders are exposed to a
16 cooperative's risk.

17 Q. HOW IMPORTANT IS IT TO MAINTAIN A GOOD CREDIT POSITION?

18 A. Failure to maintain financial integrity is contrary to the interests of
19 consumers as well as lenders.

"An immediate effect of low earnings and earnings of low quality is to increase the financial risks of investors, and thus lead to the downgrading of securities by the rating agencies. Downgrading, in turn, means that the bonds must carry higher interest rates, a charge which is passed along to customers. Such downgrading has become a familiar phenomenon in the utility scene The bonds of many utilities are now rated at levels so low that many institutional investors are barred by law

from purchasing them, and interest rates must be raised in order to sell the securities within a much smaller market. These additional capital costs force rate increases which otherwise would not be necessary, without improving the financial condition of the utilities or their ability to raise money on a low cost basis. An equally serious result of limited capability to raise money is the inability of the utilities to make the investments required in order to achieve the optimum economics of service."²

1 In STEC's case, a credit downgrade would certainly increase the debt
2 cost and encourage the financial institution to impose constraining
3 covenants and requirements. Any debt issued when ratings are lower
4 would carry higher costs for the life of the debt.

5 In today's utility credit environment, the basis for capital attraction is the
6 credit evaluation process. Whether the lenders are program lenders
7 (CFC, CoBank), bond investors, commercial banks, or trade vendors, all
8 rely on an evaluation of credit to determine if capital or credit should be
9 advanced. In addition, this evaluation may also determine the nature of
10 terms and conditions for capital or credit.

11

12 VI.

13 RATING AGENCIES AND BONDHOLDERS FOCUS ON DSC

14 Q. WHAT ARE THE KEY FINANCIAL RATIOS RELIED ON BY THE
15 RATING AGENCIES?

16 A. Rating agencies and bondholders often construct a "peer group" of
17 utilities to compare financial performances. Exhibit DMW-2 of my

² Report of an Informal Task Force to the Energy Transition Team, "Recommendations for Restoration of Financial Health to the U.S. Electric Power Industry" (mimeographed, December 17, 1980), pp. 11-12.

1 testimony, a publication named "Fitch Rating US Public Power Peer
2 Study", states on page 2 of that report:

"The ratios highlighted in this report are some of the primary financial calculations used in comparing utility systems in Fitch's committee process, and can be used by market participants to assist in making their own comparison."

3 Q. WAS TIER USED IN THE FITCH ANALYSIS?

4 A. No. TIER is not an important financial indicator in the credit evaluation
5 process for capital market cooperatives such as STEC. On page 16 of
6 Exhibit DMW-2, Fitch lists 7 financial metrics used in their credit
7 evaluation process. The TIER ratio is not listed in this report. The key
8 financial indicator used by Fitch, S&P, and bondholders is DSC. The
9 reason it is important is the DSC ratio measures the cooperative's ability
10 to pay total debt service, both principal and interest.

11 Q. HOW DOES USING DSC FOR RATEMAKING RELATE TO DSC USED
12 BY THE RATING AGENCIES AND BONDHOLDERS?

13 A. Financial performance as demonstrated by DSC is a key indication of the
14 cooperatives ability to pay debt service and relate directly to STEC's
15 ability to attract the capital it needs to provide power and transmission
16 services to its members. Thus, DSC must be used in ratemaking to
17 ensure that ratemaking and the capital markets requirement are in
18 alignment. Without earning a fair return for ratemaking, STEC will not be
19 able to raise the necessary capital it needs.

VII.

DSC REQUIREMENTS

1
2
3 Q. WHAT MINIMUM COVERAGE REQUIREMENT MUST STEC
4 MAINTAIN?

5 A. STEC has several base financial documents that address minimal
6 financial performance. Exhibits of these documents are included in the
7 attached working papers. First, STEC has a CFC loan document that
8 states it must earn a DSC of no less than 1.00x. An excerpt showing that
9 part of the agreement is attached to the TCOS-RFP as workpaper WP/C-
10 2/3.1. Another financial document is its market indenture, an excerpt of
11 which is workpaper WP/C-2/3.2, that states that it must set rates to
12 achieve a margin for interest ("MFI") of 1.10x. Other indicators of STEC's
13 debt service obligations are shown by the excerpts included as
14 workpapers WP/C-2/3.3, WP/C-2/3.4, WP/C-2/3.5, and WP/C-2/3.6.

15 Q. CAN STEC ATTRACT CAPITAL WITH AN ACHIEVED DSC OF 1.00 OR
16 A MFI OF 1.10X?

17 A. No. These indicators are considered default levels of financial
18 performance. I am not aware of any cooperative that has issued debt in
19 the capital markets with financial performance at or near these default
20 levels. In other words STEC must set rates to earn margins higher than
21 these default "levels" to attract capital it needs to both repair and build new
22 plants.

23 Q. WHAT LEVEL OF DSC WOULD YOU RECOMMEND?

1 A. First of all, STEC's financial objective is to improve its debt rating to the
2 "A" level. Again on page 16 of Exhibit DMW-2, the median DSC for "A"
3 rated G&T Cooperative is 1.46x. STEC is requesting a DSC of 1.50x or
4 equivalent to the median level in the Fitch report for a "A" rated utility.

5 Q. DO YOU BELIEVE STEC'S REQUESTED DSC OF 1.50X IS
6 REASONABLE?

7 A. Absolutely. First, I believe, for STEC, a DSC of 1.50x earned on a
8 consistent basis represents the financial performance needed to maintain
9 its credit quality and is the level expected by both the rating agencies and
10 bondholders.

11 Second, the second most important financial indicator for a G&T is the
12 ratio of equity capital compared to capitalization. As a result of adding a
13 new plant in recent years to meet load growth, STEC's 17% equity level
14 is considered very low when compared to other cooperatives. Again, the
15 Fitch report states that the median level of equity to capitalization is 23%.
16 As such, the STEC level of equity is a credit negative. A DSC of 1.50x
17 would help STEC repair its equity level.

18 Third, STEC is planning to complete substantial transmission projects
19 over the next three years. Without the ability to recover its investment
20 plus earn a DSC level of 1.50x, STEC will suffer even further
21 degeneration of its equity level. A DSC of 1.50x will not completely
22 mitigate this issue but will help to maintain STECs credit profile.

1 Fourth, the PUC's Transmission Cost of Service Rate Filing Package for
2 Non-Investor Owned Transmission Service Providers in the Electric
3 Reliability Council of Texas ("Non-IOU TCOS-RFP"), Schedule C-2, page
4 15, provides that a return corresponding to coverage of 50 basis points
5 above the mortgage default criterion is presumed to be a reasonable
6 level, as stated above. An authorized DSC of 1.50x would place STEC is
7 within this guideline.

8 Q. DO YOU HAVE ANY OTHER COMMENTS?

9 A. Yes. The Texas transmission tariff structure has been recognized by
10 credit analysts as a reasonable method to compensate a utility for the
11 use of transmission assets. A key part of the formula, for STEC, is the
12 use of a DSC of 1.50x to allow STEC to continue to maintain its credit
13 profile in order to attract necessary capital to construct new transmission
14 investments.

15 Q. DOES THAT COMPLETE YOUR TESTIMONY?

16 A. Yes.

PROFESSIONAL BACKGROUND

DANIEL M. WALKER

7106 University Drive
Richmond, Virginia 23229

SUMMARY

Thirty years of management experience includes Executive Management, Capital Market Financing, Investment Analysis, Acquisitions, Auditing, Risk Management, Internal Control, Corporate Policy and Staff Development, Personnel Management, and Utility Analysis.

PROFESSIONAL HISTORY

WALKER AND ASSOCIATES; Richmond, Virginia

Financial Advisor – Provided financial advisory services in negotiating, structuring, and implementing almost \$3 billion of capital market transactions. Served as an expert witness before Federal and state jurisdictions on finance and regulatory issues.

OLD DOMINION ELECTRIC COOPERATIVE; Glen Allen, Virginia

Senior Vice President and CFO - Responsible for the accounting and financial integrity of Old Dominion and its subsidiaries and the development of financial resources to meet its obligations and objectives. Member of Senior Management team for over 20 years.

VIRGINIA STATE CORPORATION COMMISSION; Richmond, Virginia

Director, Accounting and Finance - Supervised a large staff of accountants, auditors, and financial analysts in their analysis of public utility matters under the jurisdiction of the Virginia State Corporation Commission. In charge of task force responsible for policy recommendation for the Virginia State Corporation Commission on deregulation in the electric and telecommunication industry.

EDUCATION

- **MBA** University of Richmond
- **B.S.** Appalachian State University

PROFESSIONAL ACTIVITY

- President, National G&T Accounting and Finance Association
- Member of G&T Alternative Finance Task Force
- Director National Society of Rates of Return Analysts
- Member of FERC-EEI Accounting Liaison Committee
- Member of NARUC Accounting Committee
- Published Article: *Public Utilities Fortnightly*
- Published Article: *William & Mary Business Review*
- Addressed Price Waterhouse's Global Structured Finance Conference in Ireland in 1999 and 2000, and in Portugal in 2001 and 2002.
- Addressed Mercedes Conference on Infrastructure Financing in Berlin, Germany in 2003.
- Adjunct faculty in Accounting and Finance, Virginia Commonwealth University
- Guest lecturer, University of Virginia, William & Mary College, Duke University and Virginia Commonwealth University
- Lecturer on various accounting and finance issues before professional groups in the United States and Europe

U.S. Public Power Peer Study

June 2012



Corporate Headquarters

Fitch Group

Fitch Ratings www.fitchratings.com
Fitch Solutions www.fitchsolutions.com

New York

One State Street Plaza
New York, NY 10004
USA
+1 212 908 0500
+1 800 75 FITCH

London

30 North Colonnade
Canary Wharf
London E14 5GN
UK
+44 20 3530 1000

Analysts

Dennis M. Pidherny

+1 212 908-0738

dennis.pidherny@fitchratings.com

Kathy Masterson

+1 415 732-5622

kathy.masterson@fitchratings.com

Alan Spen

+1 212 908-0594

alan.spen@fitchratings.com

Ryan A. Greene

+1 212 908-0593

ryan.greene@fitchratings.com

Editorial Advisers

Executive

Paul Taylor

President, Chief Executive Officer

Editorial

Katie Pirkle, Editor

Natalia Espinosa, Publishing Specialist

Production Services

Madeline J. O'Connell, Director

Stephanie Deshpande, Production Manager

Publisher

John Forde, Managing Director

Inside

	Page
Overview	2
2011 Performance Highlights	2
What's New:	2
Ratios	2
Excel Addendum	3
Medians Are Not Targets	3
Comments Welcome	3
Utility Systems Included in Report	3
Wholesale Utilities	3
Retail Systems	3
Rural Electric Cooperatives — Generation and Transmission	3
Fitch Designated Regions	4
Public Power Operating Profiles	5
Retail Electric Trends	9
Wholesale Electric Trends	10
Financial Ratios by Rating Category	11
All Retail Systems	11
All Wholesale Systems	14
G&T Cooperative Systems	16
Glossary of Terms	17
Ratio Definitions	18

Related Research

Revenue-Supported Rating Criteria, June 12, 2012

U S Public Power Rating Criteria, Jan 11, 2012

2012 Outlook U S. Public Power and Electric Cooperative Sector, Dec 7, 2011

U S Public Power Peer Study Addendum. June 2012, June 20, 2011

Summary

- This report highlights the financial performance of Fitch-rated public power utilities.
- The report utilizes eight financial ratios that are calculated from the most recent annual audits.
- The ratios are presented by utility type, rating category, and region.
- A utility's financial measures, relative to Fitch-designated regional and national peer groups, constitute an important component of Fitch's credit analysis.

Overview

Fitch Ratings presents the 2012 edition of its annual "U.S. Public Power Peer Study." This report compares the recent financial performance of wholesale and retail public power systems, as well as rural electric cooperatives. The ratios highlighted in this report are some of the primary financial calculations used in comparing utility systems in Fitch's committee process, and can be used by market participants to assist in making their own comparisons. It is important to note that financial metrics represent only one key component, among others, in Fitch's utility credit analysis. To review Fitch's full public power criteria, please see the report, "U.S. Public Power Rating Criteria," dated Jan. 11, 2012.

The U.S. Public Power Peer Study is a point-in-time assessment of Fitch-rated public power utilities. The ratios for each issuer are determined using audited information. While more than half of the audits used in this study are dated Dec. 31, 2011, different audit dates may skew the distribution of the ratios.

Also, financial ratios and metrics detailed in the report may occasionally differ from those reported in new issue and full rating reports. This can be a result of adjustments made by Fitch during the rating review process to reflect additional information received from the issuer, as well as circumstances unique to the credit. In each case, Fitch seeks to highlight these adjustments for the benefit of the reader in the reports and press releases it publishes during the rating process.

2011 Performance Highlights

- Debt service coverage was slightly lower for wholesale systems, but slightly higher for retail systems, reflecting lower revenues from off-system sales and wholesale rate increases that have lagged increased debt service costs.
- Cash on hand medians increased uniformly for all systems, confirming broadly stronger liquidity throughout the sector.
- The ratio of capital expenditures to depreciation continued to decline, particularly for wholesale systems. This trend, together with increased cash on hand, is likely attributable to the deferral of certain capital expenditures.
- Leverage metrics normalized between 'AA' and 'A' rated systems, with ratios for 'A' rated systems ending the year weaker than comparable 'AA' rated systems.

What's New?

Ratios

Fitch often reviews the appropriateness of its ratios, taking into account the changing environment and revising the methodology when necessary. This year, Fitch will again publish its ratio for coverage of full obligations, which includes a portion of purchase power payments as fixed charges. In the absence of detailed, issuer-specific information, Fitch includes 30% of purchased power expenses as fixed charges. The specific ratio is detailed on pages 17 and 18.

The decision to include the coverage ratio for full obligations, which was excluded in 2011, is designed to better facilitate the comparison of electric systems. Fitch believes that the coverage metric is particularly helpful when comparing retail systems that elect to acquire, own, and finance generation resources to those systems that elect to purchase their entire power supply. The ratio will be calculated for both retail and wholesale systems.

Included Ratios

- Coverage of full obligations — adjusting for a portion of purchased power payments as fixed charges (retail and wholesale).

Excel Addendum

Fitch has again released the peer comparison tables in spreadsheet form to improve the peer study's use as a tool for investors and other market participants. In this year's release of the excel addendum, financial ratios and metrics for prior fiscal years (2009 and 2010), as well as the current fiscal year, will again be included to move beyond a point-in-time comparison of utilities and allow for an accessible review of historical trends.

In an effort to make the Excel addendum as useful and timely as possible, Fitch began updating the addendum in December, with audited figures from issuers whose fiscal years end between Jan. 31 and June 30. The remaining issuers are updated during the regular production of the peer study and addendum in early June, as usual. This addendum is available by clicking here.

Medians Are Not Targets

While the peer study includes median calculations for financial ratios by rating category, these should not be construed as targets for specific ratios or ratings. The medians reflect a single point in time, may not reflect relevant adjustments, and in many instances are based on a small sampling of public power issuers.

Comments Welcome

As always, Fitch welcomes comments, ideas, and suggestions from users to improve the value of the U.S. Public Power Peer Study.

Utility Systems Included in Report

The majority of utility systems rated by Fitch's public power group fall into three categories: wholesale systems, retail systems, and generation and transmission (G&T) cooperative systems. The following is a brief description of each of the sectors.

Wholesale Systems

Wholesale systems represent utilities whose revenues are primarily derived from sales to other systems or its members, and are typically organized as joint action agencies (JAAs). The number of members in JAAs can vary from three (Northern Illinois Municipal Power Agency) to more than 100 (American Municipal Power). Additionally, JAAs may be organized to own one generating unit or a diverse portfolio of resources. Wholesale providers that are not organized as JAAs, some of which are quasi-state agencies, are also included in this category.

Retail Systems

Retail utility systems derive the majority of their revenues from sales to end-user customers, who are also the "owners" of the system. Retail systems may be fully integrated utilities or distribution-only systems.

Rural Electric Cooperatives

G&T Cooperatives

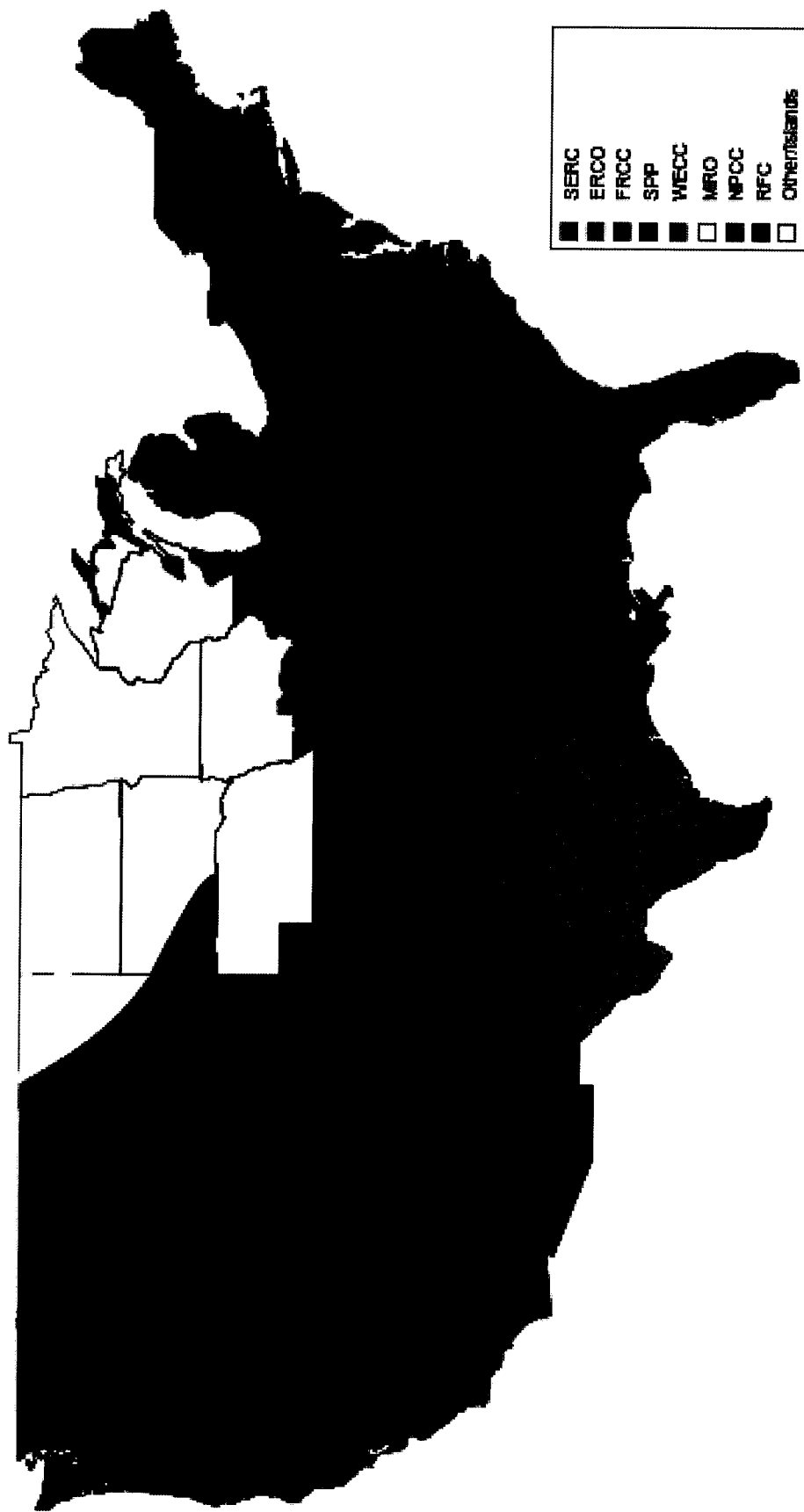
G&T cooperatives typically provide wholesale power supply and transmission services to their member distribution cooperatives. G&T revenues are primarily derived from sales and services provided to members, but may also include payments from third-party market participants. G&T cooperatives are generally organized as not-for-profit entities that operate for the benefit of their owner members.

Metrics for G&T cooperatives are included in the calculation of medians for wholesale systems, and are also presented separately in this report.

Distribution Cooperatives

Distribution cooperatives sell power to their owner members (or end-user customers), and are included in the retail category.

Fitch-Designated Regions



SERC – Southeastern Electric Reliability Council. ERCOT – Electric Reliability Council of Texas. FRCC – Florida Reliability Coordinating Council.
 SPP – Southwest Power Pool. WECC – Western Electricity Coordinating Council. MRO – Midwest Reliability Council. NPCC – Northeast Power Coordinating Council. RFC – Reliability First Corporation. Other Islands – Alaska, Guam, Puerto Rico, and U.S. Virgin Islands. Note: NERC regions are shown within U.S. geographical boundaries only.
 Source: Fitch and NERC (North American Reliability Corporation).

Public Power Operating Profiles

Issuer	Rating	Type	Self-Regulated	Primary Fuel Exposure	Total Debt 2011 (\$000)	Total Customers/ Members 2011	Total Energy Sales Growth 2011 (%)
Reliability First Corporation (RFC)							
Buckeye Power Inc., OH	A	G&T-Coop	Yes	Coal	1,497,535	28	3.4
Delaware Municipal Electric Corporation	A-	Wholesale	Yes	Gas	66,038	9	(1.2)
Dover Electric Revenue Fund, DE	A+	Retail	Yes	Gas	30,084	23,795	0.0
Indiana Municipal Power Agency	A+	Wholesale	Yes	Coal	1,306,366	55	(1.0)
Old Dominion Electric Cooperative, VA	A	G&T-Coop	No (FERC)	Coal/Nuclear	764,480	11	4.1
Electric Reliability Council of Texas (ERCOT)							
Austri Energy, TX	AA-	Retail	Yes	Coal/Nuclear	1,410,000	417,865	6.7
Boerne Utility System, TX	A	Retail	Yes	Coal	47,120	4,807	4.3
Brazos Electric Power Cooperative, TX	A	G&T-Coop	Yes	Gas	2,545,125	18	6.6
Brownsville Public Utilities Board, TX	A	Retail	Yes	Gas	349,777	45,500	2.5
Bryan Utilities City Electric System, TX	A+	Retail	Yes	Coal/Gas	105,160	32,553	15.5
Bryan Utilities Rural Electric System, TX	A+	Retail	Yes	Coal/Gas	8,945	16,033	6.2
Florioville Electric Light & Power System, TX	AA-	Retail	Yes	Coal/Nuclear	24,889	13,992	7.5
Garland Electric Fund, TX	AA-	Retail	Yes	Coal	296,396	68,043	1.7
Georgetown Utility Funds, TX	AA-	Retail	Yes	Coal/Gas	64,840	21,230	6.5
Golden Spread Electric Cooperative, TX	A	G&T-Coop	No (FERC)	Gas	512,746	16	17.8
Granbury Municipal Utilities, TX	A+	Retail	Yes	Nuclear	15,000	3,199	4.2
Guadalupe Valley Electric Cooperative Inc., TX	AA-	Retail	Yes	Coal	155,741	68,928	5.8
Karville Public Utility Board, TX	AA-	Retail	Yes	Coal	6,741	21,812	(0.3)
Lower Colorado River Authority — Consolidated	A+	Wholesale	No	Coal	3,219,184	43	(1.5)
New Braunfels Utilities, TX	AA	Retail	Yes	Coal	38,055	75,176	7.9
Pedernales Electric Cooperative Inc., TX	AA-	Retail	Yes	Coal	732,089	242,331	(1.7)
San Mayburn Municipal Power Agency, TX	BBB+	Wholesale	Yes	Coal	144,787	1	20.2
San Antonio City Public Service, TX (CPS Energy)	AA+	Retail	Yes	Coal	4,883,654	728,307	13.2
San Miguel Electric Cooperative, TX	A-	G&T-Coop	Yes	Coal	201,198	2	3.3
Saginaw Utility Fund, TX	A+	Retail	Yes	Coal	22,764	8,210	4.1
South Texas Electric Cooperative Inc.	A-	G&T-Coop	Yes	Coal	686,786	6	11.5
Texas Municipal Power Agency	A+	Wholesale	Yes	Coal	853,214	4	(4.2)
Florida Reliability Coordinating Council (FRCC)							
Florida Municipal Power Agency — All-Requirements Project	A+	Wholesale	Yes	Gas	1,318,932	14	(5.5)
Fort Pierce Utilities Authority, FL	A+	Retail	Yes	Gas	103,407	27,752	(2.9)
Gainesville Regional Utilities, FL	AA	Retail	Yes	Coal	1,025,180	92,272	(3.5)
Jacksonville Beach Combined Utility Funds, FL	AA-	Retail	Yes	Gas	34,470	33,147	(2.1)
JEA — Electric System and Bulk Power Supply System, FL	AA-	Retail	Yes	Coal	3,220,454	419,705	(5.4)
Kissimmee Utility Authority, FL	AA-	Retail	Yes	Gas	192,420	62,873	(0.9)
Lakeland Electric Utility, FL	AA-	Retail	Yes	Gas	511,502	121,377	(3.4)
Leesburg Electric System, FL	A+	Retail	Yes	Gas	37,970	22,516	(4.7)
Ocala, FL Combined Utility Funds	AA-	Retail	Yes	Gas	188,871	50,329	(5.7)
Orlando Utilities Commission, FL	AA	Retail	Yes	Coal	1,675,790	188,430	(1.1)
Reedy Creek Improvement District — Utility Fund, FL	A	Retail	Yes	Gas	303,653	1,306	(1.5)
Tallahassee Electric Fund, FL	AA-	Retail	Yes	Gas	618,353	114,094	0.4
Vero Beach Electric System, FL	AA-	Retail	Yes	Gas	69,000	35,951	(3.1)
Winter Park Electric Services Fund, FL	AA-	Retail	Yes	Coal/Gas	71,506	13,864	(3.0)

N A. - Not available. G&T - Generation and transmission. FERC - Federal Energy Regulatory Commission. Note: Total energy sales include retail and wholesale sales. Continued on next page.
Source: Fitch Ratings.

Public Power Operating Profiles (Continued)

Issuer	Rating	Type	Self-Regulated	Primary Fuel Exposure	Total Debt 2011 (\$000)	Total Customers/ Members 2011	Total Energy Sales Growth 2011 (%)
Midwest Reliability Organization (MRO)							
Basin Electric Power Cooperative, ND	A+	G&T-Coop	Yes	Coal	3,938,000	135	4.3
Batavia Electric Fund, IL*	A-	Retail	Yes	Coal	25,985	10,813	8.1
Big Rivers Electric Corp., KY	BBB-	G&T-Coop	No	Coal	786,399	3	10.7
Central Iowa Power Cooperative	A	G&T-Coop	Yes	Coal	371,088	13	0.3
East Kentucky Power Cooperative	BBB	G&T-Coop	No	Coal	2,714,404	16	(4.6)
Great River Energy, MN	A-	G&T-Coop	Yes	Coal	2,789,370	28	(0.4)
Illinois Municipal Electric Agency	A+	Wholesale	Yes	Coal	1,262,766	32	7.3
Municipal Energy Agency of Nebraska	A	Wholesale	Yes	Coal	172,575	68	3.6
Rochester Public Utilities, MN	AA-	Retail	Yes	Coal	86,887	49,407	(2.0)
Western Minnesota Municipal Power Agency	AA-	Wholesale	Yes	Coal	283,594	61	6.1
WPPI Energy (Wisconsin Public Power Inc.)	A+	Wholesale	Yes	Coal	397,501	61	0.5
Northeast Power Coordinating Council (NPCC)							
Connecticut Municipal Electric Energy Cooperative*	A+	Wholesale	Yes	Gas	84,363	5	(0.1)
Hydro-Quebec	AA-	Retail	Yes	Hydro	42,102,000	4,060,195	2.1
Long Island Power Authority, NY	A	Retail	Yes	Gas	9,688,611	1,100,000	(1.0)
Massachusetts Municipal Wholesale Electric Company— Consolidated	A+	Wholesale	Yes	Nuclear	371,594	28	(22.3)
New York Power Authority	AA	Wholesale	Yes	Hydro	3,038,000	800	8.4
Vermont Electric Cooperative, VT	BBB+	Retail	No	Purchased	60,816	37,792	0.5
Southern Electric Reliability Council (SERC)							
Arkansas Electric Cooperative Corporation	A+	G&T-Coop	Yes	Coal	774,177	490,000	5.5
Associated Electric Cooperative Inc., MO	AA	G&T-Coop	Yes	Coal	1,969,911	51	0.4
Bristol Utilities Authority, VA	A-	Retail	Yes	Coal	43,572	16,376	5.2
Chattanooga Electric Power Board— Electric System, TN	AA	Retail	Yes	Coal	290,602	171,975	3.8
City of Greenville (NC)	A+	Retail	Yes	Coal/Nuclear	115,166	148,429	3.5
Concord Utility Funds, NC	AA	Retail	Yes	Coal	105,815	27,447	2.2
Greer Commission of Public Works, SC	A+	Retail	Yes	Nuclear	90,622	17,816	0.2
Memphis Light, Gas & Water Division— Electric Division, TN	AA+	Retail	Yes	Coal	788,788	417,687	(3.1)
Municipal Electric Authority of Georgia	A+	Wholesale	Yes	Coal/Nuclear	6,261,536	49	(2.6)
Municipal Gas Authority of Georgia	A+	Wholesale	Yes	Gas	286,841	78	0.0
Nashville Electric Service, TN	AA+	Retail	Yes	Coal	482,141	363,305	3.0
North Carolina Eastern Municipal Power Agency	A-	Wholesale	Yes	Nuclear/Coal	2,281,318	32	(4.4)
North Carolina Electric Membership Corporation	A-	G&T-Coop	Yes	Nuclear	1,145,904	25	(12.8)
North Carolina Municipal Power Agency No. 1	A	Wholesale	Yes	Nuclear	1,588,755	19	(3.0)
Oglethorpe Power Corporation, GA	A	G&T-Coop	Yes	Coal	6,475,665	39	(13.6)
Piedmont Municipal Power Agency, SC	A-	Retail	Yes	Coal/Gas	170,178	20,500	3.1
PowerSouth Energy Cooperative and Subsidiaries, AL	A-	Wholesale	Yes	Nuclear	1,094,232	10	(3.4)
South Carolina Public Service Authority (Santee Cooper)	AA-	G&T-Coop	Yes	Coal	1,413,386	20	(5.5)
South Mississippi Electric Power Association	A-	Wholesale	Yes	Coal	5,456,333	164,647	(2.2)
Tennessee Valley Authority	AAA	G&T-Coop	Yes	Coal/Gas	959,830	11	(3.6)
		Wholesale	Yes	Coal	24,431,000	185	(3.4)

*Fiscal 2011 figures are unaudited. N.A. – Not available G&T – Generation and transmission. Note: Total energy sales include retail and wholesale sales. Continued on next page.
Source: Fitch Ratings

Public Power Operating Profiles (Continued)

Issuer	Rating	Type	Self-Regulated	Primary Fuel Exposure	Total Debt 2011 (\$000)	Total Customers/ Members 2011	Total Energy Sales Growth 2011 (%)
Southwest Power Pool (SPP)							
Grand River Dam Authority, OK	A	Wholesale	Yes	Coal	998,808	24	2.8
Kansas City Board of Public Utilities, KS	A+	Retail	Yes	Coal	448,348	63,376	(4.8)
Lincoln Electric System, NE	AA	Retail	Yes	Coal	676,392	129,163	2.3
Lubbock Power & Light Fund, TX	A+	Retail	Yes	Coal	143,327	99,660	49.7
Nebraska Public Power District	A+	Wholesale	Yes	Coal	2,218,375	59,107	5.7
Springfield Public Utility, MO	AA	Retail	Yes	Coal	761,160	109,469	15.8
Western Farmers Electric Cooperative, OK	A-	G&T-Coop	Yes	Coal	865,449	24	5.6
Western Electric Coordinating Council (WECC)							
Alameda Municipal Power — Electric Services, CA	A+	Retail	Yes	Geo/Hydro	33,325	34,281	(0.1)
Anaheim Electric Utilities Fund, CA	AA-	Retail	Yes	Coal	725,191	114,662	(11.0)
Benton CO Public Utility District No. 1, WA	A+	Retail	Yes	Hydro	59,638	48,197	3.5
Boise Kuna Irr Dist ADA and Canyon Counties (ID)	A-	Retail	Yes	Hydro	20,950	4,589	17.7
Bonneville Power Administration, WA	AA	Wholesale	Yes	Hydro	13,555,534	146	22.2
Bountiful Light and Power, UT	AA-	Retail	Yes	Coal/Hydro	15,280	16,527	(1.3)
Chelan CO Public Utility District No. 1 — Consolidated, WA	AA+	Retail	Yes	Hydro	958,815	48,251	36.3
Clark County Public Utility District — Electric System, WA	A+	Retail	Yes	Hydro	226,385	184,488	2.0
Colorado Springs Utilities, CO	AA	Retail	Yes	Coal	2,252,458	212,966	(2.0)
Cowlitz County Public Utility District No. 1 — Electric, WA	A	Retail	Yes	Hydro	256,825	48,194	6.7
Eagle Mountain Electric and Gas Funds (UT)	A	Retail	Yes	Coal/Gas	19,618	11,064	6.8
Eugene Electric Board, OR	AA-	Retail	Yes	Hydro	286,607	87,400	20.5
Farmington Utility Funds, NM	A+	Retail	Yes	Gas	23,912	43,730	0.7
Gallup Joint Utilities Fund, NM	AA-	Retail	Yes	Coal	23,400	10,507	(0.8)
Glendale Electric Funds, CA	A+	Retail	Yes	Coal	119,619	84,962	50.2
Grant CO Public Utility District No. 2 — Consolidated, WA	AA	Retail	Yes	Hydro	160,405	46,351	4.1
Grays Harbor County Public Utility District No. 1, WA	A	Retail	Yes	Hydro	122,245	41,888	13.1
Heber Light & Power Company, UT	AA-	Retail	Yes	Hydro/Coal/Gas	10,428	9,867	5.7
Imperial Irrigation District — Energy, CA*	A+	Retail	Yes	Gas	376,913	149,646	(2.9)
Klickitat CO Public Utility District No. 1, WA*	A-	Retail	Yes	Hydro	143,412	12,157	N.A.
Lodi Electric Fund, CA	AA-	Retail	Yes	Gas	77,856	26,384	(3.0)
Los Alamos County Joint Utility System Fund, NM	A-	Retail	Yes	Coal/Hydro	67,936	29,644	3.4
Los Angeles Department of Water & Power — Power System, CA	AA-	Retail	Yes	Coal	6,676,599	1,491,000	(5.6)
Modesto Irrigation District, CA	A	Retail	Yes	Gas	836,645	113,650	1.3
Overton Power District No. 6, NV	BBB+	Retail	Yes	Hydro/Gas	56,796	13,702	(7.1)
Pasadena Water & Power, CA	AA	Retail	Yes	Coal	153,165	63,950	(1.5)
Pend Oreille County Public Utility District No. 1 — Combined, WA	A-	Retail	Yes	Hydro	32,105	8,809	6.0
Platte River Power Authority, CO	AA	Wholesale	Yes	Coal	273,167	148,102	0.1
Redding Electric Utility Fund, CA	A	Retail	Yes	Coal/Gas	168,897	43,144	(0.3)
Riverside Electric Utility, CA	AA-	Retail	Yes	Coal	615,553	106,855	(3.4)
Roseville Electric Fund, CA	A+	Retail	Yes	Gas	260,127	53,457	(3.6)
Sacramento Municipal Utility District, CA	A+	Retail	Yes	Gas	2,906,825	599,826	6.2
Silicon Valley Power, CA	A+	Retail	Yes	Gas	216,460	52,496	2.1
Snohomish CO Public Utility District No. 1, WA	AA-	Retail	Yes	Hydro	381,655	322,228	11.9

*Fiscal 2010 audit. N.A. — Not available. G&T — Generation and transmission. Note: Total energy sales include retail and wholesale sales. Continued on next page.
Source: Fitch Ratings.

Public Power Operating Profiles (Continued)

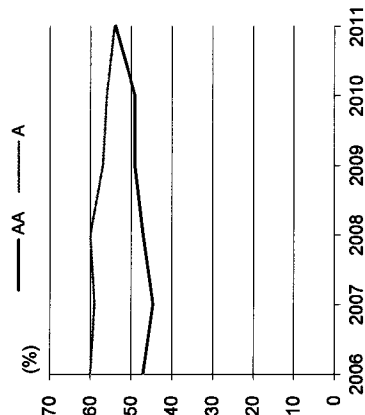
Issuer	Rating	Type	Self-Regulated	Primary Fuel Exposure	Total Debt 2011 (\$000)	Total Customers/ Members 2011	Total Energy Sales Growth 2011 (%)
Western Electric Coordinating Council (WECC)							
(Continued)							
Tacoma Power, WA	AA-	Retail	Yes	Hydro	582,795	169,112	10.5
Tri-State Generation & Transmission Association Inc.	A	G&T-Coop	Yes	Coal	2,897,207	44	2.8
Turlock Irrigation District, CA	A+	Retail	Yes	Gas/Hydro	1,225,361	99,932	1.8
Other/Islands							
Anchorage Electric Utility Fund, AK	A+	Retail	No	Gas	240,320	30,599	5.4
Chugach Electric Association Inc., AK	A-	Retail	No	Gas	604,450	66,941	(0.1)
Guam Power Authority	BBB-	Retail	No	Oil	665,171	48,047	(1.2)
Puerto Rico Electric Power Authority	BBB+	Retail	Yes	Oil	8,085,988	1,475,126	(3.8)
Virgin Islands Electric System	BB	Retail	No	Oil	271,739	28,571	(2.2)
N.A. - Not available. G&T - Generation and transmission. Note: Total energy sales include retail and wholesale sales.							
Source: Fitch Ratings							

Retail Electric

Below, the trends of 'AA' and 'A' medians for retail electric systems are displayed for eight of the financial metrics used in Fitch's analysis.

Equity/Capitalization

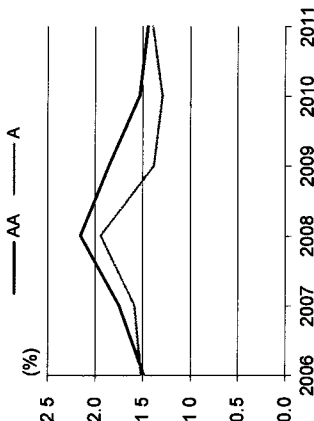
Indicates leverage level



Source: Fitch

Capex/Depreciation and Amortization

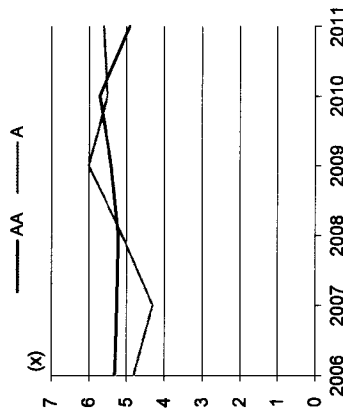
Indicates amount of capital spending relative to asset depreciation.



Source: Fitch

Debt/FADS

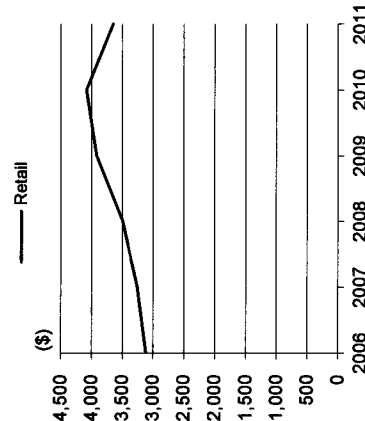
Indicates size of debt compared to the margin available for debt service.



Source: Fitch

Debt/Customer

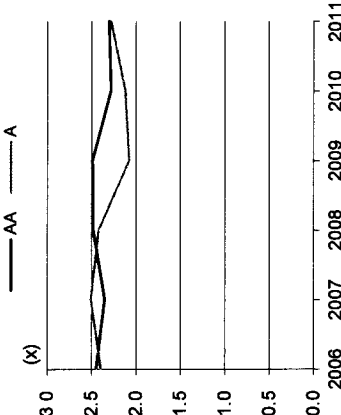
Indicates debt burden to ratepayers.



Source: Fitch

Debt Service Coverage

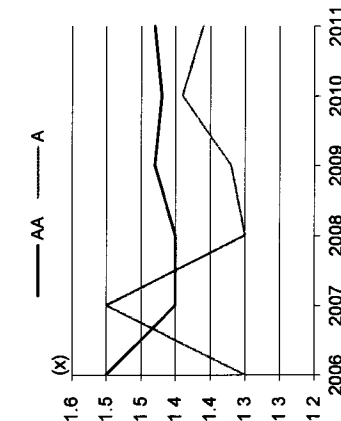
Indicates the margin available to meet current debt service requirements



Source: Fitch

Coverage of Full Obligations

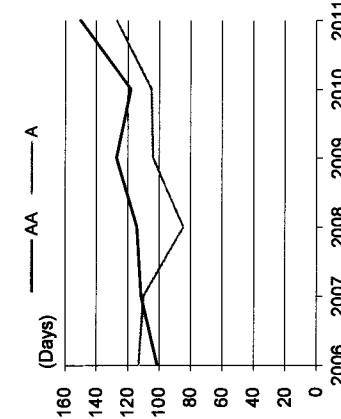
Indicates the margin available to meet current debt service requirements and fixed charges.



Source: Fitch

Days Cash on Hand

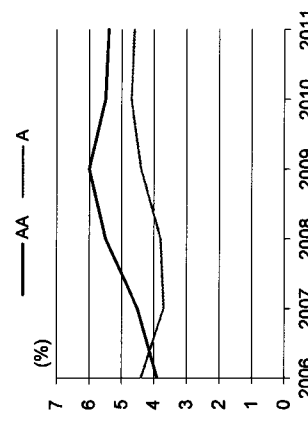
Indicates financial flexibility, specifically liquidity relative to expenses.



Source: Fitch

Transfer Payments/Operating Revenues

Indicates percentages of utility revenues that support GF operations.



Source: Fitch

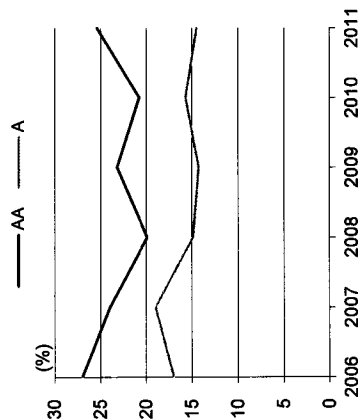
FADS – Funds available for debt service. Note: Please see pages 17 and 18 for "Glossary of Terms" and "Ratio Definitions."

Wholesale Electric

Below, the trends of 'AA' and 'A' medians for wholesale electric systems are displayed for six of the financial metrics used in Fitch's analysis.

Equity/Capitalization

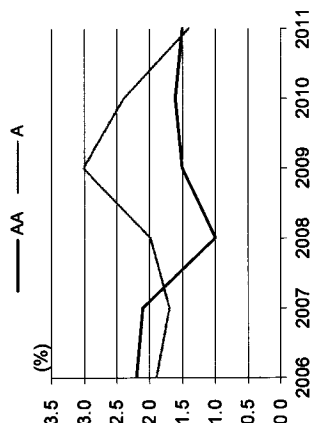
Indicates leverage level



Source: Fitch

Capex/Depreciation and Amortization

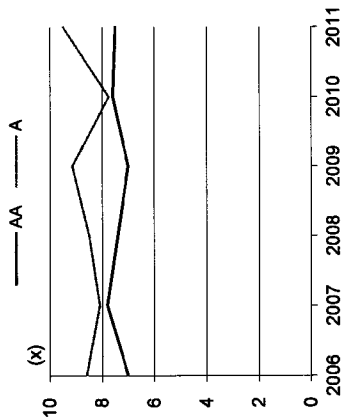
Indicates amount of capital spending relative to asset depreciation.



Source: Fitch.

Debt/FADS

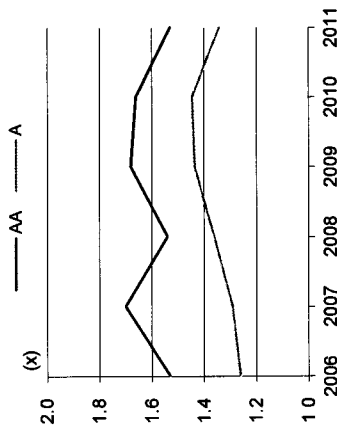
Indicates size of debt compared to the margin available for debt service.



Source: Fitch.

Debt Service Coverage

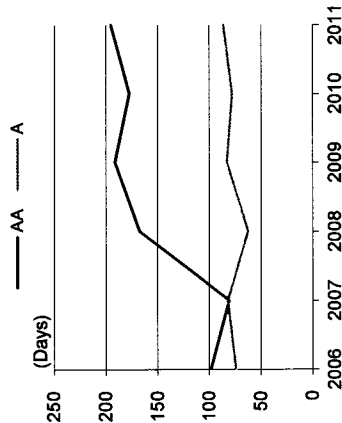
Indicates the margin available to meet current debt service requirements.



Source: Fitch.

Days Cash on Hand

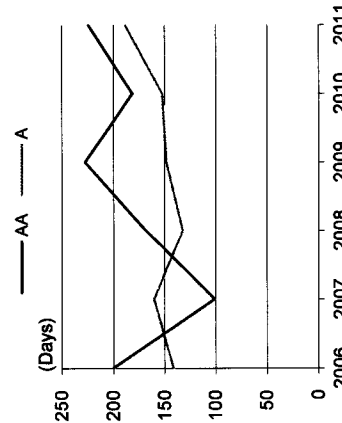
Indicates financial flexibility, specifically liquidity relative to expenses.



Source: Fitch.

Days Liquidity on Hand

Indicates financial flexibility, specifically liquidity relative to expenses.



Source: Fitch.

FADS – Funds available for debt service. Note: Please see pages 17 and 18 for "Glossary of Terms" and "Ratio Definitions."

U.S. Public Power Peer Study
June 18, 2012

Retail Systems — 2011

Retail	Region	Total Revenues (\$000)	Debt Service Coverage (x)	Coverage of Full Obligations (x)	Debt/FADS (x)	Days Cash on Hand	Liquidity on Hand	Days	Transfer Payment as % of Operating Revs	Capex/Depreciation (%)	Equity/Capitalization (%)	Debt Per Customer (\$)
'AA-' Rated Senior Debt												
Chelan CO Public Utility District No. 1 — Consolidated, WA	WECC	230,543	1.55	1.52	8.2	527	527	527	3.1	91.7	28.8	19,871
Memphis Light, Gas and Water Division — Electric Division, TN	SERC	1,319,030	1.77	1.14	3.4	55	55	55	3.0	157.3	58.6	1,888
Nashville Electric Service, TN	SERC	1,199,809	3.01	1.25	3.6	54	54	53	2.3	120.8	52.4	1,327
San Antonio City Public Service, TX (CPS Energy)	ERCOT	2,068,686	2.33	1.36	5.8	243	243	243	13.4	143.6	39.4	6,705
Median		1,266,330	2.05	1.32	4.7	149	149	163	3.1	132.2	46.9	4,297
'AA' Rated Senior Debt												
Chattanooga Electric Power Board — Electric System, TN	SERC	549,533	2.08	1.04	12.9	72	72	82	2.5	455.6	47.5	1,690
Colorado Springs Utilities, CO	WECC	830,522	1.88	1.58	11.0	56	56	138	3.8	178.4	37.2	10,577
Concord Utility Funds, NC	SERC	109,491	2.16	1.45	4.3	301	301	301	0.5	96.9	67.0	3,648
Gainesville Regional Utilities, FL	FRCC	368,471	1.92	1.47	6.9	164	164	242	9.6	244.2	32.0	11,110
Grant CO Public Utility District No. 2 — Consolidated, WA	WECC	247,163	3.71	3.71	2.5	247	247	247	4.9	458.2	77.0	3,461
Lincoln Electric System, NE	SPP	269,043	2.10	1.57	7.0	171	171	216	5.0	102.0	29.1	5,237
New Braunfels Utilities, TX	ERCOT	115,815	5.88	1.51	1.5	91	91	91	4.9	164.3	88.1	467
Orlando Utilities Commission, FL	FRCC	876,009	1.93	1.55	6.2	354	354	354	8.8	87.6	38.1	8,893
Pasadena Water and Power, CA	WECC	185,993	4.44	1.65	3.1	450	450	450	7.2	136.3	77.1	2,398
Springfield Public Utility, MO	SPP	418,354	1.75	1.44	9.1	119	119	119	3.2	165.0	54.4	6,953
Median		318,767	2.09	1.53	6.6	167	167	229	4.9	189.7	51.0	4,542
'AA-' Rated Senior Debt												
Anahaim Electric Utilities Fund, CA	WECC	351,496	1.74	1.41	8.5	71	71	71	4.2	145.5	31.4	6,325
Austin Energy, TX	ERCOT	1,249,139	1.87	1.27	4.3	83	83	98	8.3	129.2	53.7	3,377
Bountiful Light and Power, UT	WECC	25,916	55.55	2.10	2.1	228	228	228	8.5	675.4	73.5	925
Eugene Electric Board, OR	WECC	254,689	2.58	1.41	4.7	103	103	128	5.3	128.1	53.2	3,279
Flintville Electric Light & Power System, TX	ERCOT	29,895	2.76	1.23	6.1	93	93	93	2.7	159.4	55.6	1,763
Gallup Joint Utilities Fund, NM	WECC	90,950	3.60	2.85	2.5	378	378	378	6.3	115.8	74.4	2,227
Garland Electric Fund, TX	ERCOT	223,805	4.13	2.24	3.2	849	849	849	9.1	114.2	54.1	4,356
Georgetown Utility Funds, TX	ERCOT	85,678	3.21	1.38	3.1	93	93	93	7.9	172.2	77.0	3,040
Guadalupe Valley Electric Cooperative Inc., TX	ERCOT	185,574	4.11	1.57	4.4	60	60	338	0.0	219.2	55.7	2,260
Heber Light & Power Company, UT	WECC	12,551	2.90	1.65	4.2	111	111	111	1.6	233.3	67.7	1,057
Hydro-Quebec	NPCC	12,392,000	1.75	1.31	5.4	179	179	335	15.8	133.7	30.9	10,369
Jacksonville Beach Combined Utility Funds, FL	FRCC	96,514	3.51	1.30	2.1	215	215	215	4.7	155.8	82.9	1,040
JEA — Electric System and Bulk Power Supply System, FL	FRCC	1,487,778	2.66	1.76	6.5	107	107	166	10.2	106.5	16.2	7,973
Kerrville Public Utility Board, TX	ERCOT	46,951	1.69	1.03	1.5	76	76	76	3.1	163.2	85.3	309
Kissimmee Utility Authority, FL	FRCC	174,279	0.84	0.93	8.6	193	193	233	4.9	135.0	47.4	3,060
Lakeland Electric Utility, FL	FRCC	340,882	2.27	1.74	4.8	190	190	190	7.3	190.4	38.3	4,213
Los Angeles Department of Water & Power — Power System, CA	WECC	3,125,957	2.05	1.24	8.2	167	167	167	6.3	207.4	42.5	4,670
Ocala, FL Combined Utility Funds	FRCC	166,336	2.49	1.13	5.8	224	224	224	6.4	81.4	64.5	3,113
Pedernales Electric Cooperative Inc., TX	ERCOT	687,802	2.40	1.51	5.1	63	63	145	1.0	177.5	36.4	3,021
Riverside Electric Utility, CA	WECC	312,682	2.02	1.20	6.3	273	273	273	10.6	638.7	42.2	5,761
Rochester Public Utilities, MN	MRO	142,413	3.72	1.37	3.0	135	135	135	5.9	85.9	63.7	1,759
Snohomish CO Public Utility District No. 1, WA	WECC	586,087	3.14	1.46	4.8	280	280	280	5.4	151.7	75.1	1,184
Tacoma Power, WA	WECC	364,325	1.97	1.34	5.4	348	348	348	11.2	107.1	66.8	3,446
Tallahassee Electric Fund, FL	FRCC	314,856	1.61	0.97	8.4	120	120	120	9.4	61.0	38.5	5,420
Vero Beach Electric System, FL	FRCC	84,282	1.93	1.03	4.1	93	93	93	6.6	49.8	67.7	1,952
Winter Park Electric Services Fund, FL	FRCC	53,033	3.48	2.78	5.0	—	—	75	5.4	10.6	10.6	5,158
Median		204,639	2.84	1.38	4.8	125	125	162	6.4	135.5	54.9	3,087

FADS — Funds available for debt service. Continued on next page.
Source: Fitch Ratings.

Retail Systems — 2011 (Continued)

Retail	Region	Total Debt Service Revenues (\$000)	Coverage of Full Obligations (x)	Debt/FADS (x)	Days Cash on Hand	Liquidity on Hand	Days	Transfer Payment as % of Operating Revs	Capex/Depreciation (%)	Equity/Capitalization (%)	Debt Per Customer (\$)
'A+' Rated Senior Debt											
Alameda Municipal Power — Electric Services, CA	WECC	50,770	6.44	1.88	3.1	272	10.8	49.8	62.8	972	7,854
Anchorage Electric Utility Fund, AK	Other	134,417	1.69	1.33	4.3	128	8.9	324.6	49.9	1,237	5,069
Benton CO Public Utility District No. 1, WA	WECC	134,441	4.28	1.81	2.9	170	8.1	112.3	66.5	558	1,227
Bryan Utilities City Electric System, TX	ERCOT	153,517	1.52	1.01	5.8	88	5.9	276.3	33.7	1,265	3,726
Bryan Utilities Rural Electric System, TX	ERCOT	31,851	10.05	1.46	2.1	60	0.0	215.5	83.0	1,408	4,690
City of Greenville (NC)	SERC	271,373	2.35	1.23	3.3	102	2.0	96.9	73.0	5,087	2,570
Clark County Public Utility District — Electric System, WA	WECC	355,779	2.08	1.86	3.0	47	5.7	68.6	46.1	7,074	2,074
Dover Electric Revenue Fund, DE	RFC	101,903	4.79	1.25	1.6	73	10.6	70.9	78.4	1,686	4,866
Farmington Utility Funds, NM	WECC	110,619	4.98	1.96	0.6	380	9.1	129.3	94.4	2,773	4,123
Fort Pierce Utilities Authority, FL	FRCC	98,084	2.43	1.43	4.0	151	5.2	49.0	63.5	12,292	2,671
Glendale Electric Funds, CA	WECC	188,174	3.58	1.17	4.2	182	10.3	268.9	74.7	9,802	5,329
Granbury Municipal Utilities, TX	ERCOT	18,706	2.55	1.46	3.8	37	5.9	17.7	62.4	8,990	7,392
Greer Commission of Public Works, SC	SERC	70,632	2.08	1.41	6.7	125	1.5	55.0	61.0	232,514	7,362
Imperial Irrigation District — Energy, CA*	WECC	436,746	4.29	1.52	6.1	211	0.0	346.3	70.7	2,403	4,565
Kansas City Board of Public Utilities, KS	SPP	271,763	2.21	1.37	6.6	90	10.4	180.1	47.7	2,061	9,030
Leesburg Electric System, FL	FRCC	60,621	4.45	1.24	3.3	148	9.5	140.2	63.0	11,797	3,059
Lubbock Power & Light Fund, TX	SPP	201,459	2.07	1.13	3.7	188	8.2	488.3	54.3	64.9	61.3
Roseville Electric Fund, CA	WECC	163,235	2.35	1.22	5.7	93	9.2	38.3	48.8	70.1	2,061
Sacramento Municipal Utility District, CA	WECC	1,360,008	1.83	1.63	6.8	129	0.0	222.1	17.5	21.1	2,061
Sequin Utility Fund, TX	ERCOT	43,211	5.41	4.87	2.5	252	2.1	165.3	72.5	49.3	0.7
Silicon Valley Power, CA	WECC	277,769	2.73	1.41	5.7	261	5.6	189.9	73.5	20.4	2,671
Turlock Irrigation District, CA	WECC	295,940	1.29	1.29	15.9	237	0.0	222.2	20.4	165.0	8.9
Median		143,979	2.49	1.39	3.9	134	5.9	160.0	62.8		
'A-' Rated Senior Debt											
Boerne Utility System, TX	ERCOT	21,360	1.87	1.81	10.4	161	7.4	341.6	47.8	9,802	5,329
Brownsville Public Utilities Board, TX	ERCOT	168,083	2.40	2.10	5.8	265	4.5	124.2	52.3	7,687	5,329
Cowlitz County Public Utility District No. 1 — Electric, WA	WECC	223,882	1.24	1.07	9.8	75	5.0	159.8	49.8	1,773	2,932
Eagle Mountain Electric and Gas Funds (UT)	WECC	11,551	1.88	1.12	6.7	252	0.0	14.1	37.5	8,990	7,392
Grays Harbor County Public Utility District No. 1, WA	WECC	110,408	1.62	1.24	7.0	84	8.2	138.7	53.9	2,932	5,329
Long Island Power Authority, NY	NPCC	3,684,596	1.21	0.94	19.0	61	8.2	98.0	3.9	8,990	7,392
Modesto Irrigation District, CA	WECC	370,969	1.41	1.24	8.9	170	0.0	149.9	5.6	3,915	11,797
Redding Electric Utility Fund, CA	WECC	168,305	1.57	1.12	8.1	77	3.5	113.7	38.8	232,514	7,362
Reedy Creek Improvement District — Utility Fund, FL	FRCC	193,300	1.17	1.12	6.8	52	0.0	40.3	12.7	38.8	12.7
Median		168,305	1.57	1.12	8.1	84	4.5	124.2	38.8		
'A-' Rated Senior Debt											
Batavia Electric Fund, IL*	MRO	39,066	4.41	1.50	4.1	125	1.9	213.4	64.9	2,403	4,565
Boise Kuna Irr Dist ADA and Canyon Counties (ID)	WECC	50,229	3.54	1.30	3.9	89	0.9	231.0	61.3	4,565	2,061
Bristol Utilities Authority, VA	SERC	61,390	4.34	1.67	3.2	100	0.0	182.6	70.1	2,061	9,030
Chugach Electric Association Inc., AK	Other	283,618	2.46	2.10	10.1	313	0.0	324.7	21.1	11,797	3,059
Klickitat CO Public Utility District No. 1, WA*	WECC	40,600	1.27	1.17	14.6	150	2.1	92.9	49.3	0.7	
Lodi Electric Fund, CA	WECC	62,167	1.38	0.99	7.9	35	4.7	16.5			

*Fiscal 2010 audit. *Fiscal 2011 figures are unaudited. FADS — Funds available for debt service. N.A. — Not available. Continued on next page.
Source: Fitch Ratings.

Retail Systems — 2011 (Continued)

Retail	Region	Total Debt Service Revenues (\$000)	Coverage (x)	Coverage of Full Obligations (x)	Debt/FADS (x)	Days Cash on Hand	Liquidity on Hand	Days Hand	Transfer Payment as % of Operating Revs	Capex/ Depreciation (%)	Equity/ Capitalization (%)	Debt Per Customer (\$)
'A-' Rated Senior Debt (Continued)												
Los Alamos County Joint Utility System Fund, NM	WECC	58,235	1.53	1.43	4.2	188	106	106	1.8	105.8	69.8	2,292
Paducah Power System, KY	SERC	63,866	0.91	N.A.	22.2	17	17	17	2.4	83.2	15.5	8,301
Pend Oreille County Public Utility District No. 1 — Combined, WA	WECC	44,525	2.39	1.36	4.6	154	270	270	0.0	80.2	62.2	3,645
Median		58,235	2.39	1.40	4.6	100	125	125	1.8	182.5	61.3	3,645
'BBB+' Rated Senior Debt												
Overton Power District No. 6, NV	WECC	36,637	0.99	0.99	11.3	98	157	157	0.0	185.4	36.2	4,145
Puerto Rico Electric Power Authority	Other	4,422,997	1.42	0.91	11.9	16	23	23	5.6	120.9	(2.1)	5,484
Vermont Electric Cooperative, VT	NPCC	72,867	2.25	1.41	5.1	11	93	93	1.0	281.7	45.0	1,804
Median		72,867	1.42	0.99	11.3	16	93	93	1.0	165.4	36.2	4,145
'BBB-' Rated Senior Debt												
Guam Power Authority	Other	393,536	1.12	1.12	10.4	30	30	30	0.0	66.0	17.3	13,907
'BB' Rated Senior Debt												
Virgin Islands Electric System	Other	282,584	0.90	0.90	10.9	(2)	16	16	0.2	184.4	22.8	9,511

^aFiscal 2010 audit. ^bFiscal 2011 figures are unaudited. FADS — Funds available for debt service. N.A. — Not available. Continued on next page.
Source: Fitch Ratings

Wholesale Systems — 2011

Issuer	Region	Total Revenues (\$000)	Debt Service Coverage (x)	Coverage of Full Obligations (x)	Debt/FADS (x)	Days Cash on Hand	Days Liquidity on Hand	Capex/Depreciation (%)	Equity/Capitalization (%)
'AAA' Rated Senior Debt Tennessee Valley Authority	SERC	11,841,000	1.51	1.43	7.0	22	105	149.1	17.6
'AA' Rated Senior Debt Associated Electric Cooperative Inc., MO Bonneville Power Administration, WA New York Power Authority Platte River Power Authority, CO Median	SERC WECC NPCC WECC	1,053,734 3,284,774 2,855,000 181,443 1,869,387	1.88 2.26 2.82 1.53 1.97	1.58 1.05 2.24 1.52 1.84	7.9 9.6 5.0 4.7 6.5	36 219 185 207 201	285 352 224 207 285	148.2 200.0 66.2 82.9 104.6	18.8 15.6 52.0 63.0 36.4
'AA-' Rated Senior Debt South Carolina Public Service Authority (Santee Cooper) Western Minnesota Municipal Power Agency Median	SERC MRO	1,914,889 151,854 1,033,172	1.50 1.42 1.46	1.42 1.42 1.43	9.6 7.5 9.6	97 316 207	150 316 233	185.1 280.0 232.6	25.7 25.4 26.6
'A+' Rated Senior Debt Arkansas Electric Cooperative Corporation Basin Electric Power Cooperative, ND Connecticut Municipal Electric Energy Cooperative* Florida Municipal Power Agency - All-Requirements Project Illinois Municipal Electric Agency Indiana Municipal Power Agency Lower Colorado River Authority - Consolidated Massachusetts Municipal Wholesale Electric Company - Consolidated Municipal Electric Authority of Georgia Municipal Gas Authority of Georgia Nebraska Public Power District Texas Municipal Power Agency WPPI Energy (Wisconsin Public Power Inc.) Median	SERC MRO NPCC FRCC MRO RFC ERCOT NPCC SERC SPP ERCOT MRO	657,811 1,706,066 198,758 501,789 178,835 374,526 1,185,848 304,949 782,914 374,277 998,691 180,586 445,517 445,517	1.64 3.28 1.34 1.11 1.26 1.28 1.40 1.18 0.88 1.16 1.28 0.98 1.24	1.40 3.28 N.A. 1.11 1.10 1.13 1.34 1.12 0.88 1.16 1.24 0.89 1.07 1.12	6.7 13.3 8.9 13.9 43.3 20.2 8.1 4.2 13.5 1.8 8.2 21.5 9.5 9.5	71 92 85 84 84 93 119 124 104 86 146 51 79 86	298 167 173 172 84 151 119 164 184 188 283 51 110 164	128.9 343.4 654.2 116.8 4,942.0 557.6 206.0 141.0 429.3 2.4 142.9 210.9 65.9 206.0	39.0 20.0 9.3 0.0 5.8 11.5 24.3 0.0 13.6 31.2 5.7 32.0 11.5
'A' Rated Senior Debt Brazos Electric Power Cooperative, TX Buckeye Power Inc., OH Central Iowa Power Cooperative Golden Spread Electric Cooperative, TX Grand River Dam Authority, OK Municipal Energy Agency of Nebraska North Carolina Municipal Power Agency No. 1 Oglethorpe Power Corporation, GA Old Dominion Electric Cooperative, VA Tri-State Generation & Transmission Association Inc. Median	ERCOT RFC MRO ERCOT SPP MRO SERC SERC RFC WECC	1,011,946 580,697 178,926 456,970 394,467 145,018 478,125 1,390,278 891,539 1,178,793 839,411	1.19 1.04 1.72 4.13 1.12 1.41 1.45 1.60 1.46 1.09 1.43	1.08 1.04 1.62 1.76 1.11 1.13 1.16 1.57 1.13 1.07 1.13	16.9 12.0 5.4 6.1 6.7 10.3 7.5 11.0 7.4 9.6 8.6	26 20 193 114 201 101 263 195 49 47 108	201 148 491 292 201 128 263 727 281 197 232	424.6 255.0 183.1 567.0 84.3 20.1 65.1 425.8 110.9 137.5 190.3	14.5 18.7 28.1 37.0 32.2 24.2 6.3 8.9 31.4 23.3 23.7

*Fiscal 2011 figures are unaudited. FADS - Funds available for debt service. N.A. - Not available. Continued on next page.
Source: Fitch Ratings.

Wholesale Systems — 2011 (Continued)

Issuer	Region	Total Revenues (\$000)	Debt Service Coverage (x)	Coverage of Full Obligations (x)	Debt/FADS (x)	Days Cash on Hand	Days Liquidity on Hand	Capex/Depreciation (%)	Equity/Capitalization (%)
'A-' Rated Senior Debt									
Delaware Municipal Electric Corporation	RFC	115,159	2.31	1.14	7.5	5	15	2,555.3	11.2
Great River Energy, MN	MRO	864,308	1.19	1.16	10.4	235	509	134.0	13.0
North Carolina Eastern Municipal Power Agency	NERC	704,040	1.40	1.34	6.2	215	215	110.0	3.4
North Carolina Electric Membership Corporation	SERC	1,008,926	1.76	1.76	7.1	37	86	91.5	7.1
Piedmont Municipal Power Agency, SC	NERC	200,112	1.64	1.60	11.3	224	224	146.6	3.6
PowerSouth Energy Cooperative and Subsidiaries, AL	SERC	640,183	1.31	1.21	9.6	96	224	77.2	14.0
San Miguel Electric Cooperative, TX	ERCOT	140,527	1.37	1.37	6.7	8	118	69.7	16.9
South Mississippi Electric Power Association	SERC	761,120	1.34	1.14	8.2	18	154	349.4	19.9
South Texas Electric Cooperative Inc.	ERCOT	320,402	1.77	1.34	9.5	58	552	155.1	17.0
Western Farmers Electric Cooperative, OK	SPP	482,895	1.18	1.11	10.6	24	246	129.7	17.8
Median		551,539	1.39	1.27	9.8	47	231	131.9	13.6
'BBB+' Rated Senior Debt									
Sam Rayburn Municipal Power Agency, TX	ERCOT	34,570	1.24	1.19	7.3	16	16	0.0	(5.2)
'BBB' Rated Senior Debt									
East Kentucky Power Cooperative	MRO	877,604	1.25	1.24	10.4	93	134	220.0	10.2
'BBB-' Rated Senior Debt									
Big Rivers Electric Corp., KY	MRO	551,959	2.29	1.69	6.8	35	108	102.5	33.1

FADS — Funds available for debt service. N.A. — Not available.
Source: Fitch Ratings.

G&T Cooperative Systems — 2011

Issuer	Region	Total Revenues (\$000)	Debt Service Coverage (x)	Coverage of Full Obligations (x)	Debt/FADS (x)	Days Cash on Hand	Days Liquidity on Hand	Depreciation (%)	Capex/ Capitalization (%)	Equity/ Capitalization (%)
'AA' Rated Senior Debt										
Associated Electric Cooperative Inc., MO	SERC	1,083,734	1.88	1.58	7.9	36	285	146.2	18.6	18.6
'A+' Rated Senior Debt										
Arkansas Electric Cooperative Corporation	SERC	667,811	1.84	1.40	6.7	71	296	128.9	39.0	39.0
Basin Electric Power Cooperative, ND	MRO	1,706,066	3.28	3.28	13.3	92	167	343.4	20.0	20.0
Median		1,181,939	2.46	2.34	10.0	82	232	236.2	29.6	29.6
'A' Rated Senior Debt										
Brazos Electric Power Cooperative, TX	ERCOT	1,011,948	1.19	1.08	16.6	26	201	424.6	14.5	14.5
Buckeye Power Inc., OH	RFC	580,697	1.04	1.04	12.0	20	148	255.0	18.7	18.7
Central Iowa Power Cooperative	MRO	176,926	1.72	1.62	6.4	193	481	163.1	28.1	28.1
Golden Spread Electric Cooperative, TX	ERCOT	456,970	4.13	1.76	6.1	114	292	567.0	37.0	37.0
Oglethorpe Power Corporation, GA	SERC	1,390,276	1.80	1.57	11.0	185	727	428.8	8.9	8.9
Old Dominion Electric Cooperative, VA	RFC	891,538	1.46	1.13	7.4	49	281	110.9	31.4	31.4
Tri-State Generation & Transmission Association Inc.	WECC	1,178,793	1.09	1.07	9.8	47	197	137.5	23.3	23.3
Median		891,539	1.46	1.13	9.6	49	281	255.0	23.3	23.3
'A-' Rated Senior Debt										
Great River Energy, MN	MRO	864,308	1.19	1.16	10.4	235	509	134.0	13.0	13.0
North Carolina Electric Membership Corporation	SERC	1,008,926	1.76	1.76	7.1	37	86	91.5	7.1	7.1
PowerSouth Energy Cooperative and Subsidiaries, AL	SERC	940,183	1.27	1.21	9.6	96	224	77.2	14.0	14.0
San Miguel Electric Cooperative, TX	ERCOT	140,527	1.37	1.37	6.7	8	118	89.7	16.9	16.9
South Mississippi Electric Power Association	SERC	761,120	1.34	1.14	8.2	18	164	349.4	19.9	19.9
South Texas Electric Cooperative Inc.	ERCOT	320,402	1.77	1.34	9.5	56	562	156.1	17.0	17.0
Western Farmers Electric Cooperative, OK	SPP	462,895	1.18	1.11	10.6	24	246	126.7	17.8	17.8
Median		640,183	1.34	1.21	9.5	37	224	129.7	16.9	16.9
'BBB-' Rated Senior Debt										
East Kentucky Power Cooperative	MRO	877,604	1.25	1.24	10.4	63	134	220.0	10.2	10.2
'BBB-' Rated Senior Debt										
Big Rivers Electric Corp., KY	MRO	561,989	2.29	1.69	6.8	35	108	102.6	33.1	33.1

FADS – Funds available for debt service
Source: Fitch Ratings.

Financial Summary Glossary of Terms

Capitalization

Total debt plus total equity.

Debt to Customer

A measurement of leverage. Total debt divided by total customers.

Fund Available for Debt Service (FADS)

Operating income plus depreciation and amortization (taken from cash flow statement) plus interest income (taken from cash flow statement). FADS does not include any benefit from the use of (or deposit to) the rate-stabilization funds, non-operating connection fees, or capital contributions.

Full Obligations

An obligation proxy that includes annual debt service and a fixed charge related to purchase power expense. Fixed charge is calculated as 30% of purchase power expense and is an estimate of the portion of purchase power costs that are associated with debt service.

Transfer Payments

Transfer payments include payments to the general fund, payments in lieu of taxes (PILOT), free services provided and other taxes paid.

Operating Income

Operating revenue less operating expenses.

Restricted Funds

Cash and investments that are restricted in use (e.g. debt service reserve funds, debt service funds, and construction funds) and not deemed to be available to meet short-term liquidity needs.

Total Annual Debt Service

Sum of scheduled long-term principal and total annual cash interest payments (includes interest on long-term and short-term debt). Does not generally include principal amounts paid as a part of a refinancing or voluntary prepayments. Additionally, capitalized interest may be excluded for systems undertaking large construction programs.

Unrestricted Funds

Cash and short-term investments that are available for short-term liquidity needs with no limitations on use. Funds restricted solely by board or management policy may also be included.

Total Debt

Sum of long-term debt, capital leases, outstanding commercial paper, notes payable, and current maturities of long-term debt and capital leases. No adjustments are made for unamortized discounts or premiums.

Total Equity

Net assets (retained earnings plus contributed capital plus patronage capital).

Ratio Definitions

Ratio	Calculation	Significance
Cash Flow FADS (\$)	Operating Revenues – Operating Expenses + Depreciation + Amortization + Interest Income FADS/Total Annual Debt Service	Provides available, current cash resources.
Debt Service Coverage (x)		Indicates the margin available to meet current debt service requirements
Coverage of Full Obligations (x)	(FADS + Fixed Charges – Transfer Payments Excluded from Operating Expenses)/(Annual Debt Service + Fixed Charges)	Indicates the margin available to meet current debt service requirements and proxy obligations related to purchased power.
Debt to FADS (x)	Total Debt/FADS	Indicates the size of debt compared to the margin available for debt service
Liquidity		
Days Cash on Hand	Unrestricted Funds/(Operating Expenses – Depreciation+ Amortization)*365	Indicates financial flexibility, specifically cash and short-term investments, relative to expenses.
Days Liquidity on Hand	(Unrestricted Funds + Available Lines of Credit and Commercial Paper Capacity)/(Operating Expenses – Depreciation + Amortization)*365	Indicates financial flexibility, including all available sources of cash, short-term investments, and liquidity, relative to expenses.
Capital Structure		
Equity to Capitalization (%)	Total Equity/Capitalization	Provides a measure of cost recovery, leverage, and debt capacity.
Debt to Customer (\$)	Total Debt/Total Customers	Provides a measure for relative comparison of leverage.
Other		
Capex to Depreciation and Amortization (%)	Capex/Depreciation + Amortization	Indicates whether annual capital spending keeps pace with depreciation.
Transfer Payments to Operating Revenues (%)	(General Fund Transfers + PILOT + Other taxes)/Operating Revenues	Indicates the degree to which a utility supports city or county general fund, or other governmental operations.
Source: Fitch Ratings.		

ALL FITCH CREDIT RATINGS ARE SUBJECT TO CERTAIN LIMITATIONS AND DISCLAIMERS. PLEASE READ THESE LIMITATIONS AND DISCLAIMERS BY FOLLOWING THIS LINK: [HTTP://FITCHRATINGS.COM/UNDERSTANDINGCREDITRATINGS](http://FITCHRATINGS.COM/UNDERSTANDINGCREDITRATINGS). IN ADDITION, RATING DEFINITIONS AND THE TERMS OF USE OF SUCH RATINGS ARE AVAILABLE ON THE AGENCY'S PUBLIC WEB SITE AT WWW.FITCHRATINGS.COM. PUBLISHED RATINGS, CRITERIA, AND METHODOLOGIES ARE AVAILABLE FROM THIS SITE AT ALL TIMES. FITCH'S CODE OF CONDUCT, CONFIDENTIALITY, CONFLICTS OF INTEREST, AFFILIATE FIREWALL, COMPLIANCE, AND OTHER RELEVANT POLICIES AND PROCEDURES ARE ALSO AVAILABLE FROM THE CODE OF CONDUCT SECTION OF THIS SITE.

Copyright © 2012 by Fitch, Inc., Fitch Ratings Ltd. and its subsidiaries. One State Street Plaza, NY, NY 10004. Telephone: 1-800-753-4824, (212) 908-0500. Fax: (212) 480-4435. Reproduction or retransmission in whole or in part is prohibited except by permission. All rights reserved. In issuing and maintaining its ratings, Fitch relies on factual information it receives from issuers and underwriters and from other sources Fitch believes to be credible. Fitch conducts a reasonable investigation of the factual information relied upon by it in accordance with its ratings methodology, and obtains reasonable verification of that information from independent sources, to the extent such sources are available for a given security or in a given jurisdiction. The manner of Fitch's factual investigation and the scope of the third-party verification it obtains will vary depending on the nature of the rated security and its issuer, the requirements and practices in the jurisdiction in which the rated security is offered and sold and/or the issuer is located, the availability and nature of relevant public information, access to the management of the issuer and its advisers, the availability of pre-existing third-party verifications such as audit reports, agreed-upon procedures letters, appraisals, actuarial reports, engineering reports, legal opinions and other reports provided by third parties, the availability of independent and competent third-party verification sources with respect to the particular security or in the particular jurisdiction of the issuer, and a variety of other factors. Users of Fitch's ratings should understand that neither an enhanced factual investigation nor any third-party verification can ensure that all of the information Fitch relies on in connection with a rating will be accurate and complete. Ultimately, the issuer and its advisers are responsible for the accuracy of the information they provide to Fitch and to the market in offering documents and other reports. In issuing its ratings Fitch must rely on the work of experts, including independent auditors with respect to financial statements and attorneys with respect to legal and tax matters. Further, ratings are inherently forward-looking and embody assumptions and predictions about future events that by their nature cannot be verified as facts. As a result, despite any verification of current facts, ratings can be affected by future events or conditions that were not anticipated at the time a rating was issued or affirmed.

The information in this report is provided "as is," without any representation or warranty of any kind. A Fitch rating is an opinion as to the creditworthiness of a security. This opinion is based on established criteria and methodologies that Fitch is continuously evaluating and updating. Therefore, ratings are the collective work product of Fitch and no individual, or group of individuals, is solely responsible for a rating. The rating does not address the risk of loss due to risks other than credit risk, unless such risk is specifically mentioned. Fitch is not engaged in the offer or sale of any security. All Fitch reports have shared authorship. Individuals identified in a Fitch report were involved in, but are not solely responsible for, the opinions stated therein. The individuals are named for contact purposes only. A report providing a Fitch rating is neither a prospectus nor a substitute for the information assembled, verified and presented to investors by the issuer and its agents in connection with the sale of the securities. Ratings may be changed or withdrawn at anytime for any reason in the sole discretion of Fitch. Fitch does not provide investment advice of any sort. Ratings are not a recommendation to buy, sell, or hold any security. Ratings do not comment on the adequacy of market price, the suitability of any security for a particular investor, or the tax-exempt nature or taxability of payments made in respect to any security. Fitch receives fees from issuers, insurers, guarantors, other obligors, and underwriters for rating securities. Such fees generally vary from US\$1,000 to US\$750,000 (or the applicable currency equivalent) per issue. In certain cases, Fitch will rate all or a number of issues issued by a particular issuer, or insured or guaranteed by a particular insurer or guarantor, for a single annual fee. Such fees are expected to vary from US\$10,000 to US\$1,500,000 (or the applicable currency equivalent). The assignment, publication, or dissemination of a rating by Fitch shall not constitute a consent by Fitch to use its name as an expert in connection with any registration statement filed under the United States securities laws, the Financial Services and Markets Act of 2000 of the United Kingdom, or the securities laws of any particular jurisdiction. Due to the relative efficiency of electronic publishing and distribution, Fitch research may be available to electronic subscribers up to three days earlier than to print subscribers.

DOCKET NO. 41527

APPLICATION OF SOUTH TEXAS	§	PUBLIC UTILITY COMMISSION
ELECTRIC COOPERATIVE, INC. TO	§	
CHANGE RATES FOR WHOLESALE	§	OF
TRANSMISSION SERVICE (NON-	§	
IOU)	§	TEXAS

DIRECT TESTIMONY

OF

CORY J. ALLEN

ON BEHALF OF

SOUTH TEXAS ELECTRIC COOPERATIVE, INC.

May 30, 2013

DOCKET NO. 41527

APPLICATION OF SOUTH TEXAS	§	PUBLIC UTILITY COMMISSION
ELECTRIC COOPERATIVE, INC. TO	§	
CHANGE RATES FOR WHOLESALE	§	OF
TRANSMISSION SERVICE (NON-	§	TEXAS
IOU)	§	

DIRECT TESTIMONY

OF

CORY J. ALLEN

ON BEHALF OF SOUTH TEXAS ELECTRIC COOPERATIVE, INC.

TABLE OF CONTENTS

I.	POSITION AND QUALIFICATIONS	84
II.	PURPOSE OF TESTIMONY	85
III.	DESCRIPTION OF ORGANIZATION	86
IV.	CAPITAL IMPROVEMENTS	89
V.	TRANSMISSION DUTIES	96
VI.	TRANSMISSION OPERATIONS AND MAINTENANCE	103
VII.	TARIFF	109

EXHIBITS

CJA-1	TRANSMISSION MAP	112
CJA-2	CAPITAL PROJECTS	113
CJA-3	TRANSMISSION PLANNING CRITERA	139
CJA-4	PERSONNEL ORGANIZATION CHART	146
CJA-5	VEGETATION MANAGEMENT PLAN	147
CJA-6	TARIFF	153
CJA-7	ONE-LINE DIAGRAMS	182

DIRECT TESTIMONY
OF
CORY J. ALLEN
ON BEHALF OF SOUTH TEXAS ELECTRIC COOPERATIVE, INC.

I.

1

POSITION AND QUALIFICATIONS

2

3 Q. PLEASE STATE YOUR NAME, CURRENT EMPLOYMENT POSITION AND
4 BUSINESS ADDRESS.

5 A. My name is Cory J. Allen. I am Assistant General Manager for South Texas
6 Electric Cooperative ("STEC").

7 My business address is 2849 FM 447, PO BOX 119, Nursery, TX 77976.

8 Q. PLEASE DESCRIBE YOUR WORK EXPERIENCE WITH STEC.

9 A. My employment at STEC began with the position of Transmission and
10 Substation Engineer in 1994. In 2003, I became Manager of Operations and
11 Engineering and in 2008 assumed the position of Assistant General
12 Manager.

13 Q. WHAT ARE YOUR PROFESSIONAL QUALIFICATIONS?

14 A. I graduated from Texas A&M University in 1987 with a Bachelor of Science
15 degree in Electrical Engineering. I am a registered Professional Engineer in
16 the State of Texas.

1 Q. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY BEFORE THE
2 PUBLIC UTILITY COMMISSION OF TEXAS ("PUC")?

3 A. Yes. I have submitted testimony in PUC Docket Nos. 32406, 33033, 34108,
4 35528, 35665, 36790, 37535, 38569, 38648, 39298, and 41395.

5

6 II.

7 PURPOSE OF TESTIMONY

8 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

9 A. The purpose of my testimony is to support STEC's filing to change its
10 wholesale rates which is in accordance with the Transmission Cost of
11 Service Rate Filing Package for Non-Investor Owned Transmission Service
12 Providers in the Electric Reliability Council of Texas (the "TCOS-RFP"). I
13 discuss and sponsor changes to STEC's wholesale tariff, generally describe
14 STEC's business organization, provide information supporting approval of
15 STEC's expenses as reasonable and necessary, and identify significant
16 capital projects added since STEC's last TCOS filing.

17 Q. PLEASE GIVE A BRIEF DESCRIPTION OF STEC'S TCOS FILING IN THIS
18 DOCKET.

19 A. STEC's filing proposes transmission and distribution rate changes
20 necessary to recover costs of facility investments and expenses. PUC
21 approval is requested for an increase in STEC's TCOS and the associated
22 Wholesale Transmission Service ("WTS") schedule in its tariff; changes in
23 the Distribution Level Wholesale Transmission Service ("DWS") schedule

1 and the resulting rate; and, replacement all pages of Sections I and III of
2 STEC's tariff because of the extent of the changes made to the organization
3 and to its rules and regulations.

4 This filing is supported by the testimony of Frances J. Nitschmann, STEC's
5 Chief Financial Officer, who sponsors all schedules filed in accordance with
6 the TCOS-RFP and explains supporting workpapers.

7 Daniel J. Walker supports STEC's filing with testimony discussing STEC's
8 rate of return calculation methodology, financial indicators, and reasonable
9 financial targets.

10
11 III.

12 DESCRIPTION OF ORGANIZATION

13 Q. PLEASE BRIEFLY DESCRIBE STEC.

14 A. STEC is a not-for-profit cooperative corporation that provides wholesale
15 generation and transmission ("G&T") services for eight (8) member
16 cooperatives ("Members"); Jackson Electric Cooperative, Karnes Electric
17 Cooperative, Medina Electric Cooperative ("MEC"), Magic Valley Electric
18 Cooperative ("MVEC"), Nueces Electric Cooperative, San Patricio Electric
19 Cooperative, Victoria Electric Cooperative, and Wharton County Electric
20 Cooperative. STEC's member cooperatives provide distribution services in
21 forty-two (42) south Texas counties. STEC owns, operates, and maintains
22 overhead transmission line, transmission switching and autotransformer

1 stations, and delivery point substations that serve its Members. STEC owns
2 no underground transmission line.

3 Listed below are quantities of certain transmission and station assets owned
4 and operated by STEC:

	Qty
Transmission & Distribution Stations	151
Transmission Stations	28
Distribution Stations	4
69-kV Transmission Line	1,396 miles
138-kV Transmission Line	520 miles
345-kV Transmission Line	73 miles

5 STEC utilizes 1,316 MW of generation capacity from natural gas, lignite
6 coal, wind, and hydroelectric resources. Included in that capacity are the
7 STEC owned and operated Sam Rayburn Power Plant and the Pearsall
8 Power Plant.

9 Q. PLEASE DESCRIBE STEC'S MEMBERS' SERVICE AREAS.

10 A. STEC's Members serve in 42 counties, an area of approximately 32,000
11 square miles, providing distribution services to about 182,000 members. A
12 geographic transmission map depicting STEC's 2012 transmission system
13 and locations of stations that serve the Members is attached as Exhibit CJA-
14 1.

15 Q. WHEN WAS STEC FORMED AND WHAT WERE SOME OF THE
16 SIGNIFICANT EVENTS AND CHANGES?

1 A. STEC was formed by ten (10) distribution cooperatives in 1944 to provide
2 wholesale services. Six (6) distribution cooperatives remained as Members
3 as STEC transitioned from a G&T on paper to one with its first transmission
4 lines and substation assets energized in 1960. By 1963, STEC had
5 constructed over 800 miles of 69-kV transmission line and sixty-five (65)
6 stations. The Sam Rayburn power plant was completed in 1964 with two
7 simple cycle natural gas turbine generators. In 1968, STEC added thermal
8 generation utilizing natural gas at its Sam Rayburn facilities, installed its first
9 138-kV transmission line, and made its first transmission connection to
10 another transmission company. The generation produced by the Falcon
11 Dam was acquired in 1977. In 1980, about 170 miles of 138-kV line were
12 installed from the Sam Rayburn Power Plant to Christine then on to Orange
13 Grove in response to the construction of the San Miguel Power Plant. The
14 Amistad Dam hydro generation began operations in 1983. STEC completed
15 its first 345-kV transmission line and 345/138-kV autotransformer and
16 switching station and commissioned the Sam Rayburn combined-cycle
17 power plant addition in 2003. STEC's original six Members, MEC, and
18 MVEC decided to join together to increase STEC's membership to eight, a
19 process begun in 2005 and completed in 2008. Also in 2008, STEC
20 acquired its first wind generation output. In 2010 STEC added
21 approximately 200 MW of natural gas generation capacity at the Pearsall
22 Power Plant.

1 Q. HOW ARE RESPONSIBILITIES DIVIDED BETWEEN STEC AND ITS
2 MEMBERS?

3 A. STEC provides all wholesale generation and transmission services for its
4 Members. STEC owns the step-down delivery point substations providing
5 service to the Members' feeders at nominal distribution voltage levels of
6 24.94-kV, 13.8-kV, 13.2-kV, 12.47-kV and 4.16-kV. The ownership change
7 points in a typical substation are at the attachments of overhead distribution
8 line wires to the substation steel structure. STEC does not own distribution
9 overhead line so its distribution plant consists of its substation facilities that
10 are rated at less than 60 kV.

11 The Members own the overhead distribution lines and associate distribution
12 line mounted equipment, retail meters, and any other facilities related to
13 retail services. Member employees also perform as first responders to
14 substation and transmission line outages. Typically the first responder
15 duties are limited to emergency switching and isolation procedures
16 authorized by STEC's System Operator.

17

18 IV.

19 CAPITAL IMPROVEMENTS

20 Q. DID YOU SUPPLY A LIST OF THE CAPITAL PROJECTS WITH COSTS
21 FOR WHICH STEC REQUESTS INCLUSION IN ITS RATE BASE?

22 A. Yes. A complete list of projects commissioned since STEC's last TCOS
23 filing is attached as Exhibit CJA-2. It lists the projects that were closed by

1 work order number. Projects include multiple work order numbers if the
2 work encompasses both transmission and distribution assets. The closed-
3 out costs for each work order are assigned as shown by Exhibit CJA-2 to the
4 appropriate account number.

5 Q. PLEASE LIST THE MAJOR TRANSMISSION LINE PROJECTS AND THE
6 ASSOCIATED COSTS INCLUDED IN STEC'S TCOS THAT WERE
7 COMPLETED SINCE ITS LAST TCOS FILING.

8 A. Included in Exhibit CJA-2 are the following transmission line installations
9 that cost more than one million dollars:

- | | | | |
|----|---|--|-------------|
| 10 | • | Palo Duro to Dilley | \$6,062,016 |
| 11 | | 14 miles, 138-kV new circuit added to existing 69kV line | |
| 12 | • | Alberta Road to Val Verde | \$2,392,449 |
| 13 | | 4.1 miles, 138-kV line reconductor | |
| 14 | • | Pearsall to Moore | \$2,202,814 |
| 15 | | 11 miles, 138-kV line reconductor | |
| 16 | • | West Edinburg to Palmhurst | \$1,603,217 |
| 17 | | 3.4 miles, 138-kV line reconductor | |
| 18 | • | Port Lavaca to Port O'Connor | \$8,975,905 |
| 19 | | 20 miles, new 69-kV line, Docket No. 32406 | |
| 20 | • | San Miguel to Pawnee | \$2,914,284 |
| 21 | | 6 miles, relocate 138-kV line, part of Docket No. 21747 | |
| 22 | • | San Miguel to Fashing | \$2,102,152 |
| 23 | | 8.5 miles, reconductor 69-kV line | |
| 24 | • | Palmhurst to Merett | \$1,782,886 |
| 25 | | 4.3 miles, reconductor 138-kV line | |

26 Q. WHAT ARE THE CIRCUIT MILES OF TRANSMISSION LINE FOR THE
27 TEST YEAR AND THE FOUR PRECEDING YEARS?

1 A. The annual miles of transmission line in service are as follows:

2 Table 1

Voltage (kV)	Circuit Miles 2008	Circuit Miles 2009	Circuit Miles 2010	Circuit Miles 2011	Circuit Miles 2012
345	31	73	73	73	73
138	379	496	496	520	520
69	1371	1371	1396	1396	1396

3

4 Q. HOW DOES STEC DETERMINE FACILITIES TO BE INCLUDED IN ITS
5 TRANSMISSION RATE BASE?

6 A. STEC defines facilities to be transmission as per P.U.C. SUBST. R.
7 25.192(c)(1)(A)-(E). Summarizing, equipment rated at 60-kV and above and
8 the associated expenses of the installation and commissioning of equipment
9 rated above 60kV are considered transmission capital investment.

10 Q. HOW DOES STEC DETERMINE WHAT TRANSMISSION
11 IMPROVEMENTS ARE NECESSARY?

12 A. Transmission improvements such as new transmission lines, existing line
13 upgrades, breaker additions, and reactive facilities are generally needed in
14 support of load growth, transmission network congestion mitigation, voltage
15 support, connection of new generation capacity, or a combination of the
16 issues. Reliability indices are calculated annually as well so that facility
17 performance is included in improvement decisions.

18 Engineering includes two (2) Transmission Planning Engineers that perform
19 load flow analyses using computer models of multiple future year projections
20 for grid connections and load levels in concert with ERCOT personnel and

1 neighboring transmission service provider personnel. Results are analyzed
2 to determine the most effective and economical future projects in order to
3 assure performance of the transmission service remains within acceptable
4 voltage ranges and line loading capacities. Acceptable voltages, available
5 transmission line capacities, and reliability performance criteria are
6 addressed in STEC's Transmission Planning Criteria, attached as Exhibit
7 CJA-3.

8 When a major transmission improvement is needed, a report with load flow
9 study assumptions, violations expected, and improvement options
10 considered is submitted to Regional Planning Group (RPG) of ERCOT. The
11 RPG keeps transmission service providers (TSPs) informed of transmission
12 projects that may affect them and coordinates an independent review when
13 appropriate. STEC presents all projects requiring approval of a Certificate of
14 Convenience and Necessity ("CCN") and all projects over a certain cost to
15 the RPG. The RPG process concludes with ERCOT support of a proposed
16 improvement or ERCOT's alternative recommendation.

17 New generation capacities requesting connection to the transmission
18 network require system analyses in order to ensure that all expected
19 loading, voltage, and stability performances are assessed prior to choosing
20 appropriate transmission improvements. The generation interconnection
21 process is administered by ERCOT but studies are assigned to the
22 appropriate TSP. This process develops the plan for the necessary
23 transmission improvements to accommodate the generation.

1 Q. HOW MANY STATIONS WERE ADDED BY STEC SINCE ITS LAST TCOS
2 RATE CASE?

3 A. STEC completed 13 new delivery point substations and 2 new transmission
4 switching stations.

5 Q. WHAT ARE THE MAJOR STATION PROJECTS STEC COMPLETED
6 SINCE ITS LAST TCOS FILING?

7 A. Included in Exhibit CJA-2 are the following installations that cost more than
8 one million dollars:

9	• Alberta Road	\$2,816,620
10	New 3-terminal 138-kV switching station	
11	• Palo Duro	\$1,882,760
12	New 3-terminal 138-kV switching station	
13	• Sioux	\$4,737,395
14	New 138/13.2-kV substation with 4-terminal 138-kV bus	
15	• Pearsall	\$1,715,702
16	Upgrade 138/69-kV autotransformer	
17	• Alton	\$1,133,440
18	New 13.2-kV distribution breaker facility	
19	• Las Milpas	\$1,334,203
20	Add 138/13.2-kV transformer	
21	• Montell	\$1,523,862
22	New 69/24.94-kV Substation	
23	• Sunniland	\$1,246,511
24	New 69/24.94-kV substation	
25	• Azteca	\$3,078,856
26	New 138/13.2-kV substation	
27	• Southmost	\$3,955,388

1	New 138/13.2-kV substation	
2	• Botines	\$2,559,444
3	New 138/24.94-kV substation	
4	• Burns	\$1,706,498
5	Add 138/13.2kV transformer	
6	• Weslaco	\$1,548,716
7	Add 138/12.47-kV transformer	
8	• Mobile Substation	\$1,354,580
9	New 14 MVA mobile substation	
10	• Saltdome	\$2,787,650
11	New 69/12.47-kV Substation	
12	• Hondo Creek	\$1,254,059
13	Upgrade 138/69-kV autotransformer	
14	• Pharr	\$1,100,285
15	Add 138/13.2-kV transformer	
16	• Merett	\$1,165,915
17	Add 138/13.2-kV transformer	
18	• Seadrift	\$1,482,447
19	New 69/12.47-kV substation	

20

21 Q. IN STATIONS THAT HAVE EQUIPMENT RATED ABOVE AND BELOW 60

22 KV HOW DOES STEC DETERMINE WHAT MUST BE INCLUDED IN ITS

23 TRANSMISSION RATE BASE?

24 A. STEC's stations that have both transmission and distribution rated assets

25 are charged to Account No. 362. Transmission specific and distribution

26 specific costs are taken from continuing plant records which increase station

27 plant values through entries for installations and decrease them for

1 retirements. Not all costs, though, are specifically related to transmission
2 and distribution equipment. These are the common costs of a station.
3 Items like control houses, station service, site work, ground grids, and
4 security fences are common facilities. Common costs at each station are
5 allocated based upon the ratio of transmission costs to distribution costs at
6 every station that is assigned to account 362. The percentages of
7 transmission plant in each station are listed in the workpaper WP/B-1/1.1.1.
8 One-line diagrams show the divisions between transmission and distribution
9 equipment at each of the Account 362 stations. These are included as
10 Exhibit CJA-7.

11 Q. ARE THERE OTHER MAJOR PROJECTS STEC HAS COMPLETED THAT
12 AFFECT ITS TCOS?

13 A. Yes. STEC constructed satellite offices on its Pearsall Power Plant property
14 and on a new property in Donna, Texas. Both offices house personnel,
15 equipment and materials that support transmission and distribution assets
16 and activities. The Pearsall Office cost \$2,441,469. The Donna Office cost
17 \$3,761,221. The office building construction project costs are charged to
18 Account 390.

19 Q. WHAT IS THE TOTAL CAPITAL COST OF THE ASSETS ADDED TO
20 STEC'S RATE BASE?

21 A. The projects listed in Exhibit CJA-2 represent the investments made in
22 transmission and distribution plant and total \$81,121,783.

1 Q. ARE ALL OF THE CAPITAL PROJECTS INCLUDED IN STEC'S
2 PROPOSED RATE USED BY AND USEFUL TO RATEPAYERS?

3 A. Yes. All of the capital projects are energized and in service.
4

5 V.

6 TRANSMISSION DUTIES

7 Q. HOW MANY EMPLOYEES HAVE TRANSMISSION RELATED DUTIES
8 AND HOW ARE THOSE DUTIES ASSIGNED?

9 A. The number of STEC employees that charged at least some of their time to
10 or performed services partially or completely in support of transmission
11 related functions in 2012 was one hundred and sixty-three (163). Those
12 employees were organized as indicated by Exhibit CJA-4, STEC's
13 Personnel Organization Chart.
14 Eleven (11) employees in the Accounting department headed by the Chief
15 Financial Officer provided services in support of all work, including that
16 related to transmission.

17 Administration personnel provided general support of transmission
18 functions. These personnel included grounds and building maintenance, a
19 Compliance Coordinator, safety trainers, security officers, and clerical
20 support. Thirteen (13) administrative personnel spent at least some time on
21 or in support of transmission-related functions.

22 The Manager of Engineering directed eighteen (18) employees involved in
23 transmission line engineering and design, substation engineering and

1 design, transmission system planning, system protection coordination, CCN
2 application development, project management, right-of-way and land
3 acquisition, project management, and construction inspection. Employees
4 in this department were involved in ERCOT working groups and committees.
5 Two (2) transmission engineers, at least one (1) engineering assistant, and
6 the Transmission Project Coordinator are exclusively assigned to
7 transmission projects and two (2) Distribution Engineers were almost
8 exclusively involved in distribution projects. Most of the remaining
9 Engineering Department personnel split their time between transmission and
10 distribution work by assigning hours to appropriate work order numbers.
11 The Chief System Operator directed 8 employees responsible for the 24-7
12 operation of STEC's transmission and substation assets, all transmission
13 operator compliance measures, and coordination of transmission functions
14 with other transmission owners. All device operations made in the field were
15 authorized by the system operators through switching instructions.
16 There were 58 employees involved in Technical Services. The Manager of
17 Technical Services directed forty-five (45) employees in the Substation,
18 Relaying, Metering, SCADA, Communications, and Pearsall subgroups.
19 Part of the efforts of all technical services employees were in support of
20 transmission services. Responsibilities of these employees included those
21 related to protective relaying, EPS metering, microwave communications,
22 autotransformers, breakers, SCADA and RTU's, computers and networks,

1 and cyber security. There were thirteen (13) employees based at STEC's
2 Valley Office whose functions include technical services responsibilities.
3 Transmission and Substation related work was supervised by the Line
4 Superintendent directing fifty-two (52) employees performing vegetation
5 management, transmission line operations and maintenance ("O&M") and
6 construction, substation O&M and construction, transmission line patrol and
7 inspection, right-of-way access maintenance, and emergency restoration of
8 transmission line and substations. One (1) line crew, the line patrolman,
9 tree trimmers, and right-of-way mowers worked almost exclusively on
10 transmission related projects and services while three (3) other crews, the
11 mechanics, and construction crews split time between transmission and
12 substation work depending upon capital projects in progress by charging
13 appropriate work order numbers with the appropriate labor hours and
14 vehicle expenses.

15 Q. BY DEPARTMENT, HOW MANY FULL TIME STEC EMPLOYEES
16 PERFORMED TRANSMISSION OPERATIONS AND MAINTENANCE
17 RELATED DUTIES DURING 2012 AND HOW MANY DURING THE FOUR
18 PREVIOUS YEARS?

19 A. The numbers of employees in each general function/department listed in
20 Table 2 are those that performed transmission related duties during the
21 indicated year.

1

Table 2

Department/Function	EMPLOYEES BY YEAR				
	2008	2009	2010	2011	2012
Accounting	9	9	10	11	11
Administration	12	13	11	12	13
Engineering	14	14	14	18	18
Management	2	2	2	2	2
System Operations	8	8	9	9	9
Technical Services	36	53	53	56	58
Transmission and Substation	42	49	52	52	52
Totals	123	148	151	160	163

2

3 Q. PLEASE EXPLAIN, BY DEPARTMENT, THE APPARENT EMPLOYEE
4 NUMBER INCREASES SINCE STEC'S LAST FULL TRANSMISSION
5 COST OF SERVICE RATE FILING.

6 A. The Accounting department total increased by two when the position of
7 Benefits and Events Coordinator became necessary and when the Human
8 Resources Manager was moved from Administration to Accounting.
9 Administration personnel increased by one after the Safety Trainer and Lead
10 Security Officer positions were added and the Human Resources Manager
11 was moved to Accounting.
12 Engineering increased with the addition of a Land Agent, Substation
13 Engineer, and two (2) Engineering Assistants. These additional employees
14 were primarily needed to keep up with projects and to support the facilities
15 serving eight (8) Members rather than six (6).
16 System Operations added one operator position due to increased outage
17 scheduling attention made necessary by ERCOT protocols and the increase