

FitchRatings

U.S. Public Power — Peer Review



# U.S. Public Power — Peer Review

## Overview

Fitch Ratings presents the 2021 edition of its annual *U.S. Public Power — Peer Review*. 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 financial calculations used in comparing utility systems in Fitch's committee process, and can assist market participants in making their own comparisons. 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 [U.S. Public Power Rating Criteria](#).

The *U.S. Public Power — Peer Review* is a point-in-time assessment of Fitch-rated public power utilities. The ratios for each issuer are calculated using audited information. While more than half the audits used in this study are dated Dec. 31, 2020, different audit dates may skew the ratio distribution.

Financial ratios and metrics detailed in the report may occasionally differ from those reported in new issue and 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 and 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.

## 2020 Performance Highlights

- Coverage of full obligations improved for both wholesale and retail systems, sustaining an upward trend.
- The median capex-to-depreciation ratio for wholesale systems continued its downward trend falling to 71%. The median ratio has been at or below 100% for five of the last seven years. The median ratio for retail systems improved to 149%, a level last observed in 2010.
- Cash on hand medians for retail and wholesale systems improved yet again, rising to the highest levels observed in a decade. This accumulation of excess cash likely remains attributable to muted levels of capital investment, stronger than anticipated demand throughout the coronavirus pandemic and disciplined rate-setting initiatives.
- Leverage metrics across the entire portfolio of rated credits were largely unchanged. A modest increase in leverage metrics for retail systems was offset by a modest decline in metrics for wholesale systems. The 2020 figures continue a trend of deleveraging that began over a decade ago.

## FACT — 2021

The *U.S. Public Power: Peer Review* is accompanied by the release of the [Public Power - Fitch Analytical Comparative Tool \(FACT\) - 2020](#). The interactive FACT provides enhanced trend analysis and peer comparison tables to improve the peer review's use as a tool for investors and other market participants. In addition to its historical capabilities of graphically plotting financial ratios and metrics, as well as operating data for prior fiscal years (2016–2020) and the current fiscal year for each of the public power and cooperative issuers included in the peer review, this year's edition will also allow for peer comparisons based on Fitch's key rating driver assessments.

The FACT also features dynamic charting applications and peer analysis that allow users to compare trends in operational and financial data for up to four systems and against medians calculated on a notch-specific rating basis, within the same rating category (i.e. AA, A, BBB), against the entire portfolio of Fitch-rated issuers or against an entirely customized peer group.

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## What's New?

This year's *U.S. Public Power – Peer Review* and FACT will continue to include publication of the current key rating driver assessments for each issuer as determined by Fitch. The FACT will also inform users if an Asymmetric Rating Factor Consideration has been identified in the assignment of a key rating driver, and if an Asymmetric Additive Risk Factor has been considered in the determination of a final rating. Asymmetric Rating Factors include customer concentration, significant counterparty exposure and exposure to technological risk. Asymmetric Additive Risk Factors typically relate to debt structure, management and governance issues. These risk factors are not scaled, but weaker than standard characteristics could lower an assessment or rating.

## 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.

### Retail Systems

Retail utility systems derive the majority of their revenues from sales to end-user customers. Some retail systems, typically larger entities, own and operate generating facilities to meet system power demands, while others receive contractual power supply from wholesale suppliers. Many systems meet power supply needs through a combination of owned generation and purchased power.

### Wholesale Systems

Wholesale public power systems represent utilities whose revenues are primarily derived from sales to municipally owned retail power systems, 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). JAAs may be organized to own one generating unit, a diverse portfolio of resources or contract for

power. Wholesale providers not organized as JAAs, including state or federally owned suppliers, are also included in this category.

### 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.

## Commentary

### Medians Are Not Targets

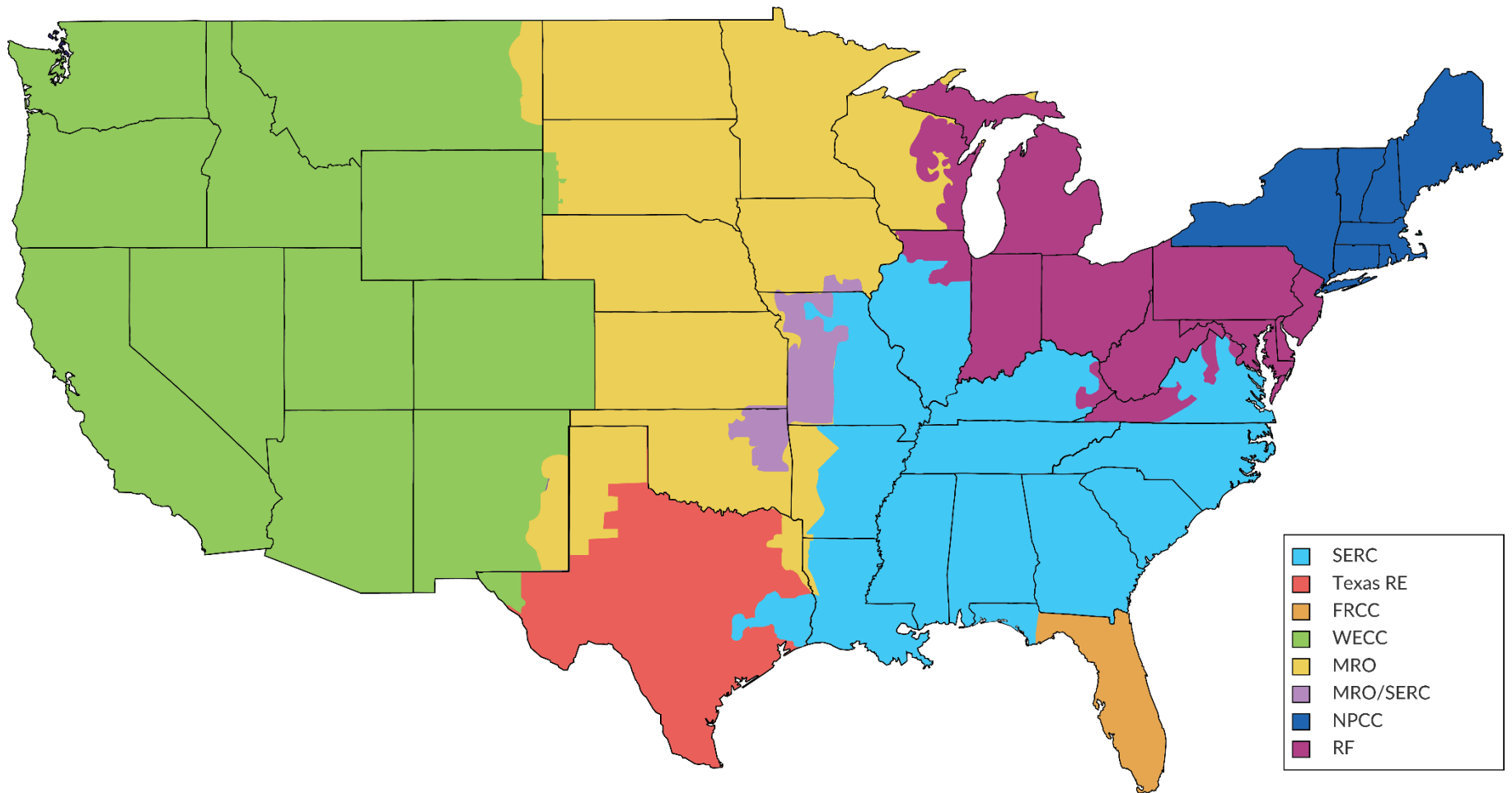
While the peer review includes median calculations for financial ratios by rating category, these should not be construed as targets for specific ratios or ratings. The medians reflect a single point in time, may not reflect relevant adjustments, and in many instances, are based on a small sampling of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

NERC Regions

NERC Regions



NERC - North American Electric Reliability Corporation. SERC - Southeastern Electric Reliability Corporation. Texas RE - Texas Reliability Entity. FRCC - Florida Reliability Coordinating Council. WECC - Western Electricity Coordinating Council. MRO - Midwest Reliability Organization. NPCC - Northeast Power Coordinating Council. RF - Reliability First Corporation.

Note: NERC regions are shown within U.S. geographical boundaries only. As of mid-2019, FRCC issuers are now classified under SERC.

Source: Fitch Ratings, NERC.

Public Power Operating Profiles

Obligor	Rating	Outlook/ Watch	Revenue Defensibility	Operating Risk	Financial Profile	System Type	Self- Regulated?	2020 Total Debt (\$000)	2020 Total Adjusted Debt (\$000)	Wholesale Customers	Retail Electric Customers
<b>Electric Reliability Council of Texas (ERCOT)</b>											
Austin Electric, TX	AA	RWN	aa	a	aa	Retail	Yes	2,063,291	2,523,131	–	507,660
Brownsville Public Utilities Board, TX	A+	RWN	a	a	a	Retail	Yes	334,779	351,986	–	51,406
Bryan Utilities City Electric System, TX	AA-	Negative	aa	a	aa	Retail	Yes	245,611	397,031	–	39,536
Bryan Utilities Rural Electric System, TX	AA-	Negative	aa	a	aa	Retail	Yes	37,131	111,312	–	22,911
City of Denton – Combined Utility System, TX	A+	RWN	aa	a	a	Retail	Yes	748,798	951,763	–	56,395
CoServ Electric, TX	A	RWN	aa	a	a	Retail	Yes	582,715	1,276,479	–	263,950
Garland Electric Fund, TX	AA-	RWN	aa	a	aa	Retail	Yes	599,687	903,537	–	72,295
Guadalupe Valley Electric Cooperative Inc., TX	A+	Negative	a	a	a	Retail	Yes	268,006	599,636	–	87,425
Lower Colorado River Authority – Consolidated, TX	AA-	Negative	aa	a	aa	Wholesale	Yes	4,054,700	4,471,100	33	–
New Braunfels Utilities, TX	AA	RWN	aa	aa	aa	Retail	Yes	231,781	424,412	–	45,893
Pedernales Electric Cooperative Inc., TX	AA-	RWN	aa	a	aa	Retail	Yes	839,092	1,695,578	–	348,280
Sam Rayburn Municipal Power Agency, TX	BBB+	Stable	bbb	a	aa	Wholesale	Yes	29,374	63,625	3	–
San Antonio City Public Service (CPS Energy), TX	AA-	Negative	aa	a	aa	Retail	Yes	6,084,174	6,934,144	–	884,811
Seguin Utility Fund, TX	A-	Stable	a	a	bbb	Retail	Yes	59,217	101,879	–	8,555
South Texas Electric Cooperative Inc., TX	A+	Negative	aa	a	a	G&T Coop	Yes	964,455	1,693,570	8	–
<b>Florida Reliability Coordinating Council (FRCC)</b>											
Florida Municipal Power Agency - All-Requirements Project, FL	AA-	Stable	a	a	aa	Wholesale	Yes	974,486	1,045,308	13	–
Fort Pierce Utilities Authority, FL	A+	Stable	bbb	a	a	Retail	Yes	58,912	159,340	–	28,749
Gainesville Regional Utilities, FL	A+	Stable	aa	a	a	Retail	Yes	1,756,836	1,771,554	–	99,200
Jacksonville Beach Combined Utility Funds, FL	AA	Stable	aa	a	aa	Retail	Yes	2,150	125,791	–	35,171
JEA – Electric System and Bulk Power Supply System, FL	AA	Stable	aa	aa	aa	Retail	Yes	1,793,292	2,057,714	–	485,000
Keys Energy Services, FL	A+	Stable	a	a	a	Retail	Yes	113,425	216,227	–	31,034
Kissimmee Utility Authority, FL	AA	Stable	a	a	aa	Retail	Yes	38,200	300,827	–	79,761
Lakeland Energy System, FL	AA	Stable	a	aa	aa	Retail	Yes	409,256	473,134	–	133,636
Leesburg Electric System, FL	A+	Stable	a	a	a	Retail	Yes	34,176	120,026	–	26,667
New Smyrna Beach Utilities Commission, FL	AA	Stable	aa	a	aa	Retail	Yes	80,379	132,178	–	29,574
Orlando Utilities Commission, FL	AA	Stable	aa	aa	aa	Retail	Yes	1,489,838	1,605,664	–	210,846
Reedy Creek Improvement District – Utility Fund, FL	A	Stable	a	aa	aa	Retail	Yes	150,818	243,407	–	1,412
Tallahassee Electric Fund, FL	AA	Stable	aa	aa	aa	Retail	Yes	588,156	610,301	–	91,805

## Public Power Operating Profiles

Obligor	Rating	Outlook/ Watch	Revenue Defensibility	Operating Risk	Financial Profile	System Type	Self- Regulated?	2020 Total Debt (\$000)	2020 Total Adjusted Debt (\$000)	Wholesale Customers	Retail Electric Customers
Winter Park Electric Services Fund, FL	A+	Stable	aa	a	a	Retail	Yes	56,958	94,744	–	15,584
<b>Midwest Reliability Organization (MRO)</b>											
Alexandria Light and Power, MN	AA-	Stable	a	aa	aa	Retail	Yes	7,765	46,600	–	10,263
Basin Electric Power Cooperative, ND	A	Stable	a	aa	a	G&T Coop	No (FERC)	5,049,742	6,021,745	141	–
Big Rivers Electric Corp., KY	BBB-	Positive	bbb	a	bbb	G&T Coop	No	696,742	782,556	3	–
Central Iowa Power Cooperative, IA	A	Stable	a	a	a	G&T Coop	Yes	434,422	570,592	13	–
Connexus Energy, MN	A-	Stable	aa	a	a	Retail	Yes	176,402	592,158	–	138,394
Great River Energy, MN	A-	Stable	a	a	a	G&T Coop	Yes	2,539,613	3,172,605	28	–
Illinois Municipal Electric Agency, IL	A+	Positive	aa	a	aa	Wholesale	Yes	940,809	1,129,577	32	–
Minnesota Municipal Power Agency, MN	A+	Positive	aa	a	aa	Wholesale	Yes	201,975	271,474	12	–
Municipal Energy Agency of Nebraska, NE	A+	Stable	aa	a	a	Wholesale	Yes	159,379	321,223	69	–
Northern Illinois Municipal Power Agency, IL	A-	Stable	a	a	bbb	Wholesale	Yes	448,173	450,208	3	–
Rochester Public Utilities, MN	AA	Stable	aa	a	aa	Retail	Yes	182,080	387,694	–	57,634
Southern Illinois Power Cooperative, IL	BBB	Stable	a	a	bbb	G&T Coop	Yes	518,010	558,711	7	–
Southern Minnesota Municipal Power Agency, MN	AA-	Stable	aa	a	aa	Wholesale	Yes	572,067	735,664	18	–
WPPI Energy (Wisconsin Public Power Inc.), WI	A+	Stable	a	a	a	Wholesale	Yes	339,348	960,644	51	–
Western Minnesota Municipal Power Agency, MN	AA-	Stable	aa	a	aa	Wholesale	Yes	647,829	841,737	61	–
<b>Northeast Power Coordinating Council (NPCC)</b>											
Connecticut Municipal Electric Energy Cooperative	AA-	Stable	aa	a	aa	Wholesale	Yes	98,474	250,188	6	–
Long Island Power Authority, NY	A	Stable	aa	bbb	a	Retail	Yes	12,222,990	13,905,483	–	1,142,640
New York Power Authority, NY	AA	Stable	a	a	aa	Wholesale	Yes	3,211,000	4,321,400	–	–
<b>Reliability First Corporation (RFC)</b>											
Buckeye Power Inc., OH	A	Positive	a	a	a	G&T Coop	Yes	1,132,613	1,243,613	25	–
Dover Electric Revenue Fund, DE	AA	Stable	a	a	aa	Retail	Yes	16,115	114,667	–	24,481
Indiana Municipal Power Agency, IN	A+	Stable	aa	a	a	Wholesale	Yes	1,438,441	1,764,762	61	–
Marquette Board of Light & Power, MI	AA-	Stable	a	a	aa	Retail	Yes	69,006	77,331	–	16,851
Old Dominion Electric Cooperative, VA	A+	Stable	aa	a	a	G&T Coop	No (FERC)	1,118,365	1,719,675	11	–
<b>Southern Electric Reliability Council (SERC)</b>											
Alabama Municipal Electric Authority, AL	AA-	Stable	aa	a	aa	Wholesale	Yes	26,270	419,526	11	–
Arkansas Electric Cooperative Corporation, AR	AA-	Stable	a	aa	aa	G&T Coop	No	1,009,986	1,480,336	17	–

## Public Power Operating Profiles

Obligor	Rating	Outlook/ Watch	Revenue Defensibility	Operating Risk	Financial Profile	System Type	Self- Regulated?	2020 Total Debt (\$000)	2020 Total Adjusted Debt (\$000)	Wholesale Customers	Retail Electric Customers
Associated Electric Cooperative Inc., MO	AA-	Stable	a	aa	aa	G&T Coop	Yes	1,649,533	2,066,994	51	–
BVU Authority, VA	A	Stable	a	a	a	Retail	Yes	3,089	83,482	–	16,331
Brunswick Electric Membership Corporation, NC	A+	Stable	a	a	a	Retail	Yes	218,448	490,553	–	98,750
Chattanooga Electric Power Board – Electric System, TN	AA+	Stable	aa	aa	aa	Retail	Yes	273,042	1,273,945	–	187,058
Cobb Electric Membership Corporation, GA	A+	Stable	a	a	a	Retail	Yes	557,415	1,266,805	–	214,156
Concord Utility Funds, NC	AA+	Stable	aa	a	aa	Retail	Yes	40,198	134,767	–	32,368
Cooperative Energy, MS	A	Stable	aa	a	a	G&T Coop	Yes	1,147,776	1,876,558	11	–
East Kentucky Power Cooperative, KY	BBB+	Stable	a	a	bbb	G&T Coop	No	2,552,670	2,814,827	16	–
Fayetteville Public Works Commission, NC	AA	Stable	a	a	aa	Retail	Yes	322,290	682,035	–	83,475
City of Greenville, NC	AA-	Stable	a	aa	aa	Retail	Yes	163,918	503,060	–	70,073
Greer Commission of Public Works, SC	AA-	Stable	aa	a	aa	Retail	Yes	56,353	164,266	–	34,331
Kentucky Municipal Energy Agency, KY	A	Stable	a	a	a	Wholesale	Yes	0	146,474	8	–
Nashville Electric Service, TN	AA+	Stable	aa	a	aa	Retail	Yes	554,063	2,684,613	–	416,346
North Carolina Electric Membership Corporation, NC	A	Positive	a	a	a	G&T Coop	Yes	1,206,684	2,924,580	25	–
Oglethorpe Power Corporation, GA	BBB+	Negative	aa	a	bbb	G&T Coop	Yes	10,498,682	10,663,044	38	–
Piedmont Municipal Power Agency, SC	A-	Stable	a	a	aa	Wholesale	Yes	705,477	811,391	10	–
PowerSouth Energy Cooperative and Subsidiaries, AL	BBB+	Negative	a	a	bbb	G&T Coop	Yes	1,342,752	1,613,930	20	–
Sikeston Board of Municipal Utilities, MO	BBB+	Stable	bbb	a	aa	Retail	Yes	45,937	62,075	4	8,676
South Carolina Public Service Authority (Santee Cooper), SC	A-	Stable	a	aa	a	Wholesale	Yes	7,159,203	7,570,354	5	193,957
Tennessee Valley Authority, TN	AA	Stable	aa	a	aa	Wholesale	Yes	21,637,000	23,749,000	153	–
<b>Southwest Power Pool (SPP)</b>											
Coffeyville, KS	BBB+	Stable	bbb	a	bbb	Retail	Yes	63,810	149,604	–	5,989
Fort Collins, CO	AA-	Stable	a	aa	aa	Retail	Yes	142,204	368,474	–	75,656
Golden Spread Electric Cooperative, TX	AA-	Stable	aa	aa	aa	G&T Coop	No (FERC)	553,621	783,550	16	–
Grand River Dam Authority, OK	A+	Stable	a	aa	aa	Wholesale	Yes	990,671	1,154,262	23	85
Heartland Consumers Power District, SD	A-	Stable	a	a	a	Wholesale	Yes	38,260	116,150	33	–
Kansas Power Pool, KS	A-	Stable	a	a	a	Wholesale	Yes	40,604	113,537	24	–
Lincoln Electric System, NE	AA	Stable	aa	aa	aa	Retail	Yes	741,007	921,468	8	143,797
Lubbock Power & Light Fund, TX	A+	Stable	aa	a	aa	Retail	Yes	295,648	597,736	–	107,899
Nebraska Public Power District, NE	A+	Stable	bbb	aa	a	Wholesale	Yes	1,538,547	1,942,304	75	92,267
Oklahoma Municipal Power Agency, OK	A	Stable	aa	a	a	Wholesale	Yes	594,736	677,572	42	–



## Public Power Operating Profiles

Obligor	Rating	Outlook/ Watch	Revenue Defensibility	Operating Risk	Financial Profile	System Type	Self- Regulated?	2020 Total Debt (\$000)	2020 Total Adjusted Debt (\$000)	Wholesale Customers	Retail Electric Customers
Springfield Public Utility, MO	AA	Stable	a	aa	aa	Retail	Yes	563,736	872,861	–	117,075
Stillwater Utilities Authority, OK	AA-	Stable	a	a	aa	Retail	Yes	103,908	159,812	–	21,470
Kansas City Board of Public Utilities, KS	A	Stable	a	aa	a	Retail	Yes	688,599	825,560	–	66,587
Western Farmers Electric Cooperative, OK	A-	Positive	aa	a	a	G&T Coop	Yes	971,509	1,878,116	22	–
<b>Western Electric Coordinating Council (WECC)</b>											
Alameda Municipal Power, CA	AA-	Positive	aa	bbb	aa	Retail	Yes	21,455	98,846	–	36,067
Anaheim Electric Utilities Fund, CA	AA-	Stable	aa	a	aa	Retail	Yes	736,380	1,373,882	–	121,226
Arizona Electric Power Cooperative, Inc., AZ	A	Stable	a	a	a	G&T Coop	No	194,085	266,743	6	–
Arkansas River Power Authority, CO	BBB-	Stable	a	a	bbb	Wholesale	Yes	138,412	179,182	6	–
Benton CO Public Utility District No. 1, WA	AA-	Stable	a	aa	aa	Retail	Yes	53,038	304,372	–	54,581
Bonneville Power Administration, WA	AA-	Stable	aa	aa	aa	Wholesale	Yes	14,886,500	15,183,380	142	–
Chelan CO Public Utility District No. 1 – Consolidated, WA	AA+	Stable	a	aa	aa	Retail	Yes	534,673	633,531	37	52,850
Clark County Public Utility District – Elec. and Generation, WA	AA	Stable	aa	aa	aa	Retail	Yes	455,205	772,334	–	216,391
Colorado Springs Utilities, CO	AA	Stable	aa	aa	aa	Retail	Yes	2,278,775	2,538,301	–	241,133
Cowlitz County Public Utility District No. 1 – Electric, WA	A	Stable	bbb	aa	a	Retail	Yes	164,034	684,161	–	51,159
Eugene Electric Board, OR	AA-	Stable	a	aa	aa	Retail	Yes	235,116	558,143	–	95,000
Glendale Electric Funds, CA	A+	Stable	aa	a	a	Retail	Yes	154,088	384,789	–	90,030
Grant County Public Utility District No. 2, WA	AA	Stable	a	aa	aa	Retail	Yes	1,301,649	1,301,649	–	52,212
Grays Harbor County Public Utility District No. 1, WA	A	Stable	a	aa	a	Retail	Yes	133,693	333,229	–	43,268
Heber Light & Power Company, UT	AA-	Stable	aa	a	aa	Retail	Yes	23,327	48,343	–	13,175
Idaho Falls Power, ID	AA	Stable	a	aa	aa	Retail	Yes	0	63,343	–	29,174
Klickitat County Public Utility District No. 1 – Combined, WA	A-	Stable	bbb	a	a	Retail	Yes	164,397	196,245	–	13,261
Los Angeles Department of Water & Power – Power System, CA	AA-	Stable	aa	bbb	aa	Retail	Yes	10,707,524	13,688,487	–	1,538,000
Modesto Irrigation District, CA	AA-	Stable	a	a	aa	Retail	Yes	615,528	1,014,108	–	131,601
Overton Power District No. 5, NV	A	Stable	a	aa	aa	Retail	Yes	34,766	82,861	–	16,579
Pasadena Water & Power, CA	AA	Stable	aa	bbb	aa	Retail	Yes	232,038	453,051	–	67,440
Pend Oreille County Public Utility District No. 1 – Combined, WA	A-	Negative	bbb	aa	a	Retail	Yes	155,761	182,142	–	9,530
Platte River Power Authority, CO	AA	Stable	a	aa	aa	Wholesale	Yes	178,353	293,623	4	–

Public Power Operating Profiles

Obligor	Rating	Outlook/ Watch	Revenue Defensibility	Operating Risk	Financial Profile	System Type	Self- Regulated?	2020 Total Debt (\$000)	2020 Total Adjusted Debt (\$000)	Wholesale Customers	Retail Electric Customers
Provo City Power, UT	AA-	Stable	aa	aa	aa	Retail	Yes	16,354	123,481	–	37,725
Redding Electric Utility Fund, CA	AA-	Stable	a	a	aa	Retail	Yes	131,703	221,169	–	44,566
Riverside Electric Utility, CA	AA-	Stable	aa	bbb	aa	Retail	Yes	680,195	1,018,283	–	111,161
Roseville Electric Fund, CA	AA	Positive	aa	a	aa	Retail	Yes	210,257	312,230	–	60,752
Sacramento Municipal Utility District, CA	AA	Stable	aa	a	aa	Retail	Yes	2,646,702	3,481,998	–	644,723
San Francisco Public Utilities Commission, CA	AA-	Stable	a	a	aa	Retail	Yes	127,171	144,993	–	4,077
Silicon Valley Power, CA	AA-	Stable	a	a	aa	Retail	Yes	166,868	925,901	–	57,998
Snohomish CO Public Utility District No. 1 – Combined, WA	AA-	Stable	a	aa	aa	Retail	Yes	417,017	1,110,797	–	361,076
Sulphur Springs Valley Electric Cooperative, AZ	A	Stable	a	a	a	Retail	No	135,789	263,463	–	52,548
Tacoma Power, WA	AA-	Stable	a	aa	aa	Retail	Yes	479,790	866,403	–	182,234
Tri-State Generation & Transmission Association Inc., CO	A-	Stable	aa	a	a	G&T Coop	No (FERC)	3,287,768	4,093,722	42	–
Turlock Irrigation District, CA	AA-	Stable	a	aa	aa	Retail	Yes	1,040,063	1,179,328	–	103,984
Utah Municipal Power Agency, UT	AA-	Stable	aa	aa	aa	Wholesale	Yes	114,045	190,437	6	–
<b>Other</b>											
Chugach Electric Association Inc., AK	A-	Stable	a	bbb	a	Retail	No	1,288,478	1,342,191	1	92,667
Guam Power Authority	BBB	Stable	a	bb	bbb	Retail	No	583,340	598,505	–	51,771

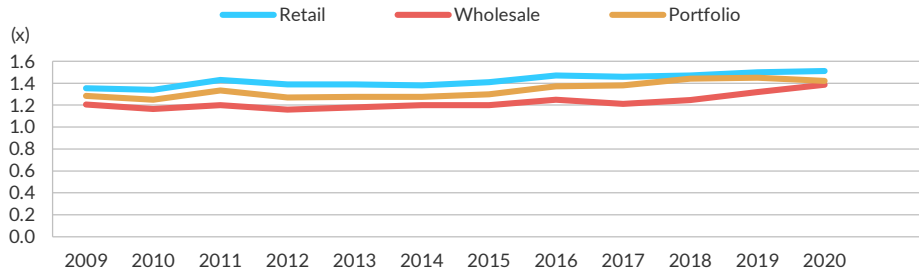
RWN – Rating Watch Negative. G&T – Generation and transmission. FERC – Federal Energy Regulatory Commission. Note: 2019 audits used for Benton County Public Utility District No. 1 (WA), Coffeyville (KS), Cowlitz County Public Utility District No. 1 (WA), Fort Collins (CO), Grant County Public Utility District No. 2 (WA), Grays Harbor County Public Utility District No. 1 (WA), Klickitat County Public Utility District No. 1 (WA) and Roseville (CA). Source: Fitch Ratings.

## Portfolio Trends

Below, the trends of medians for all retail electric systems, wholesale electric systems and the entire electric portfolio are displayed for eight of the financial metrics used in Fitch's analysis.

### Coverage of Full Obligations

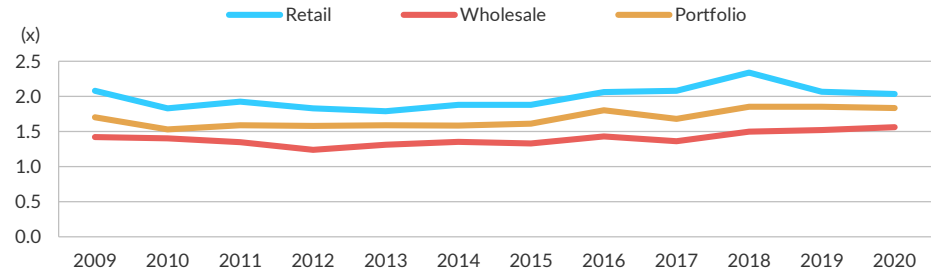
(Indicates the margin available to meet current debt service and other fixed obligations.)



Source: Fitch Ratings.

### Debt Service Coverage

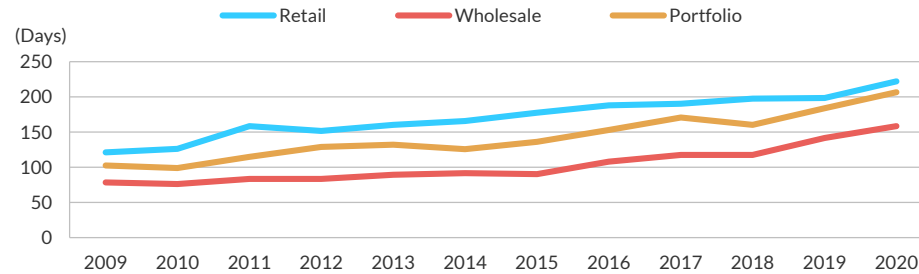
(Indicates the margin available to meet current debt service requirements.)



Source: Fitch Ratings.

### Days Cash on Hand

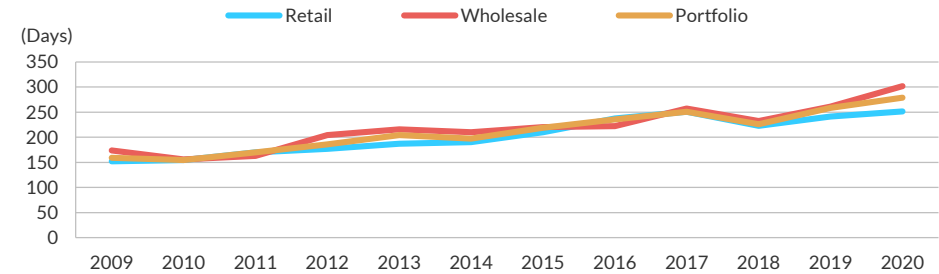
(Indicates financial flexibility, specifically cash and cash equivalents, relative to expenses.)



Source: Fitch Ratings.

### Liquidity Cushion

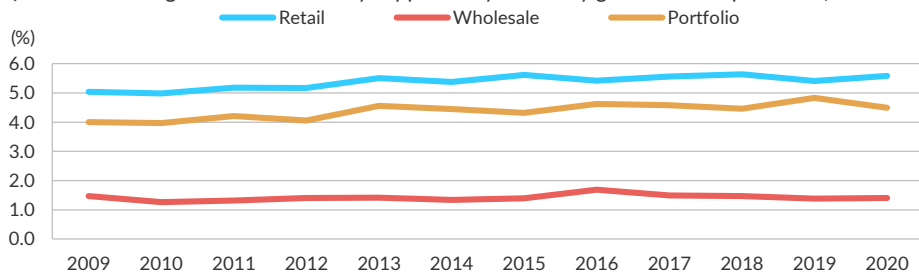
(Indicates financial flexibility, including all available sources of cash and liquidity, relative to expenses.)



Source: Fitch Ratings.

### General Fund Transfers/Operating Revenues

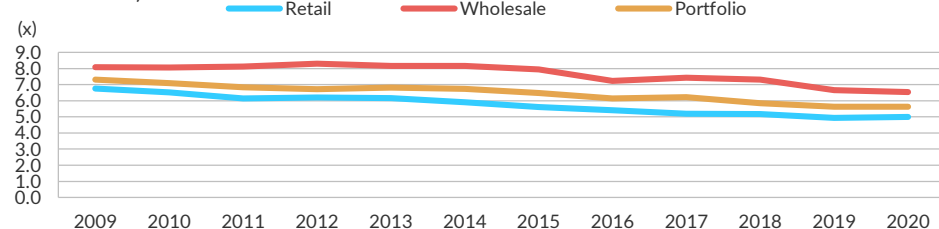
(Indicates the degree to which a utility supports city or county general fund operations.)



Source: Fitch Ratings.

### Net Adjusted Debt/Adjusted FADS (Excluding Pensions)

(Indicates the size of net debt and other fixed obligations compared with the margin available for debt service.)

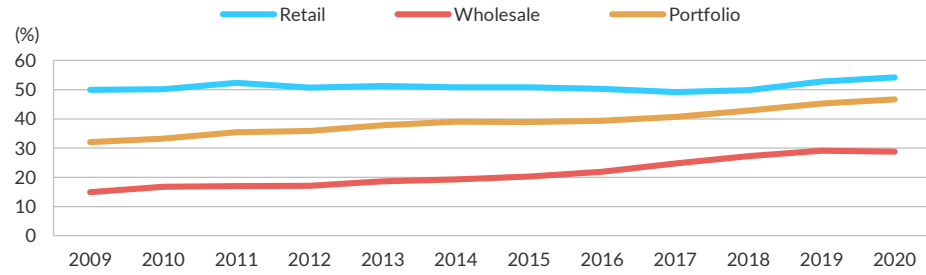


FADS - Funds available for debt service.

Source: Fitch Ratings.

**Equity/Capitalization**

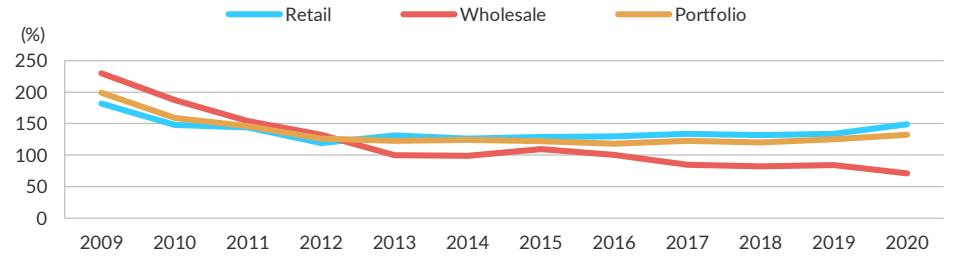
(Provides a measure of cost recovery.)



Source: Fitch Ratings.

**Capex/D&A**

(Indicates whether annual capital spending keeps pace with depreciation.)



D&A - Depreciation and amortization.

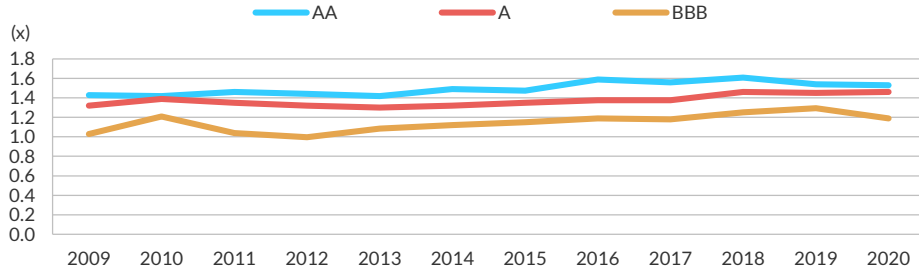
Source: Fitch Ratings.

## Retail Electric Trends

Below, the trends of 'AA' and 'A' medians for retail electric systems are displayed for nine of the financial metrics used in Fitch's analysis. Also included are the trends of 'BBB'/'BB' medians for retail electric systems. However, the sample size is small.

### Coverage of Full Obligations

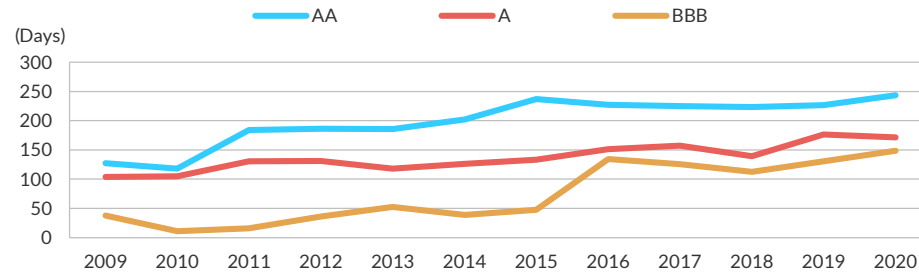
(Indicates the margin available to meet current debt service and other fixed obligations.)



Source: Fitch Ratings.

### Days Cash on Hand

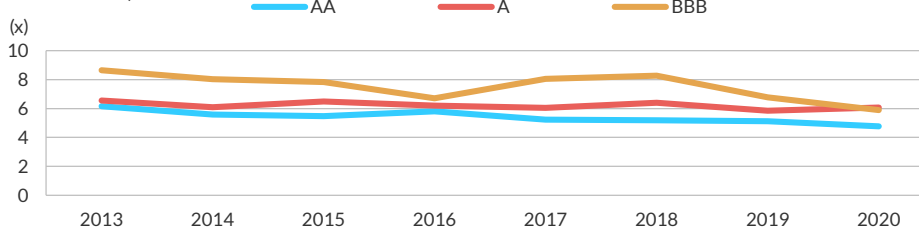
(Indicates financial flexibility, specifically cash and cash equivalents, relative to expenses.)



Source: Fitch Ratings.

### Net Adjusted Debt/Adjusted FADS

(Indicates the size of net debt and other fixed obligations compared with the margin available for debt service.)

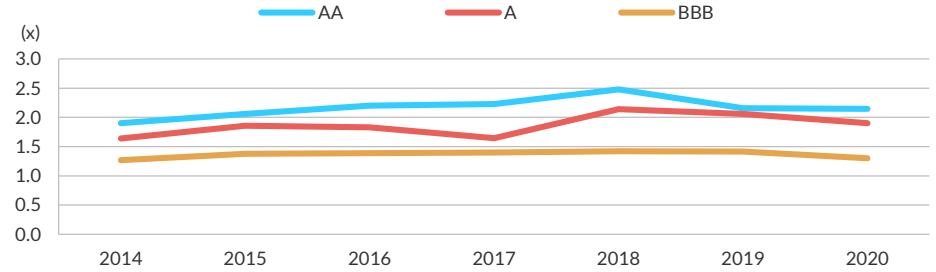


FADS - Funds available for debt service.

Source: Fitch Ratings.

### Debt Service Coverage

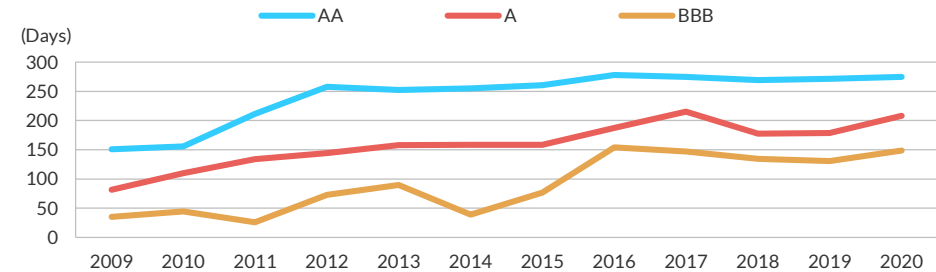
(Indicates the margin available to meet current debt service requirements.)



Source: Fitch Ratings.

### Liquidity Cushion

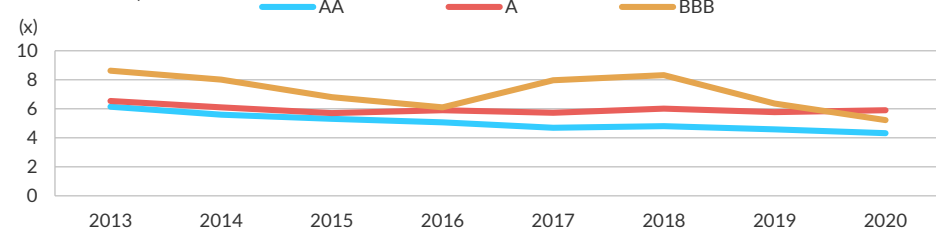
(Indicates financial flexibility, including all available sources of cash and liquidity, relative to expenses.)



Source: Fitch Ratings.

### Net Adjusted Debt/Adjusted FADS (Excluding Pensions)

(Indicates the size of net debt and other fixed obligations compared with the margin available for debt service.)

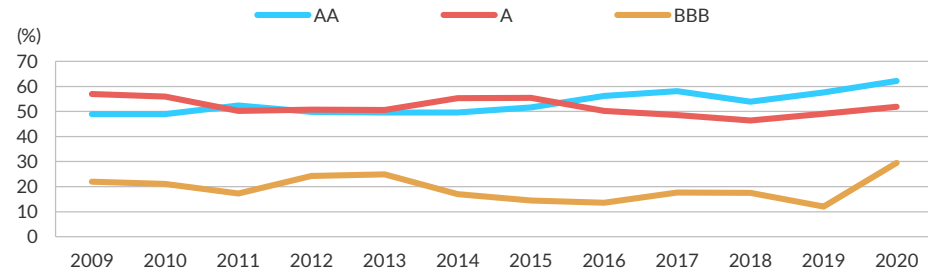


FADS - Funds available for debt service.

Source: Fitch Ratings.

## Equity/Capitalization

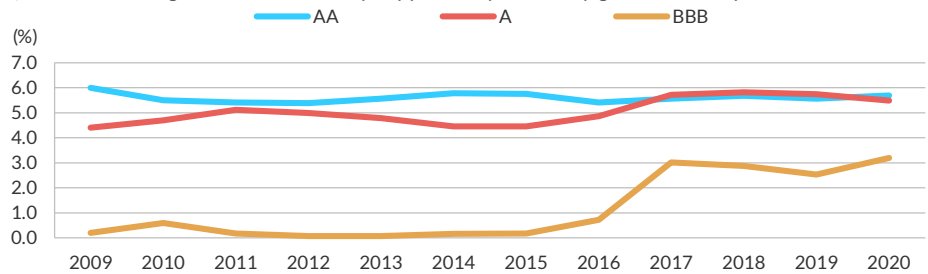
(Provides a measure of cost recovery.)



Source: Fitch Ratings.

## General Fund Transfers/Operating Revenues

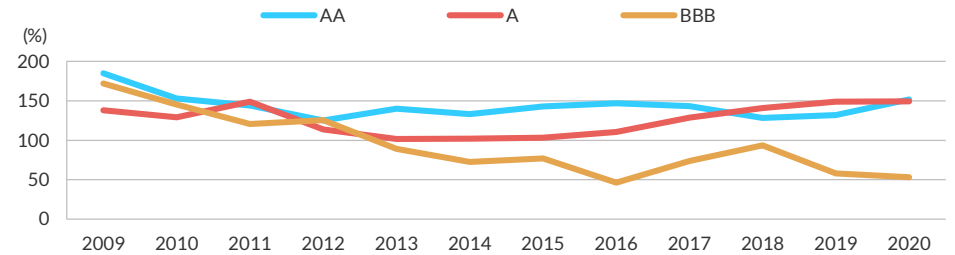
(Indicates the degree to which a utility supports city or county general fund operations.)



Source: Fitch Ratings.

## Capex/D&A

(Indicates whether annual capital spending keeps pace with depreciation.)



D&A - Depreciation and amortization.

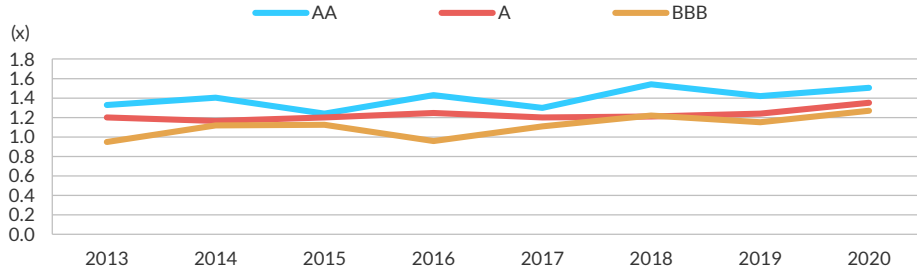
Source: Fitch Ratings.

## Wholesale Electric Trends

Below, the trends of 'AA' and 'A' medians for wholesale electric systems are displayed for eight of the financial metrics used in Fitch's analysis. Also included are the trends of 'BBB'/'BB' medians for wholesale electric systems. However, the sample size is small.

### Coverage of Full Obligations

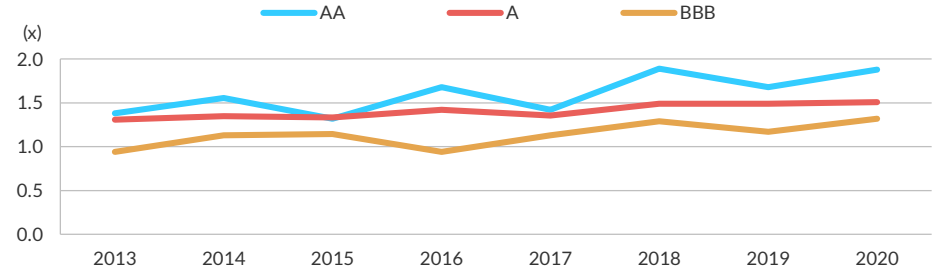
(Indicates the margin available to meet current debt service and other fixed obligations.)



Source: Fitch Ratings.

### Debt Service Coverage

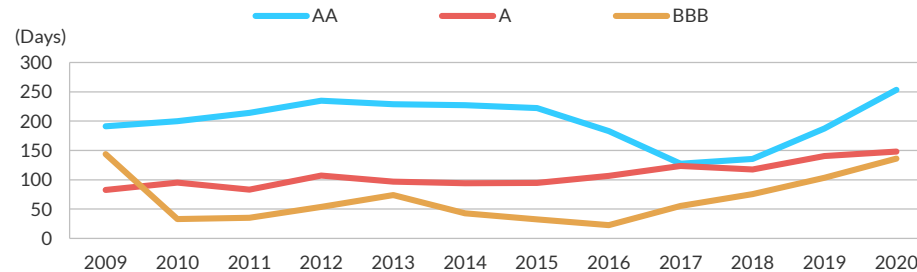
(Indicates the margin available to meet current debt service requirements.)



Source: Fitch Ratings.

### Days Cash on Hand

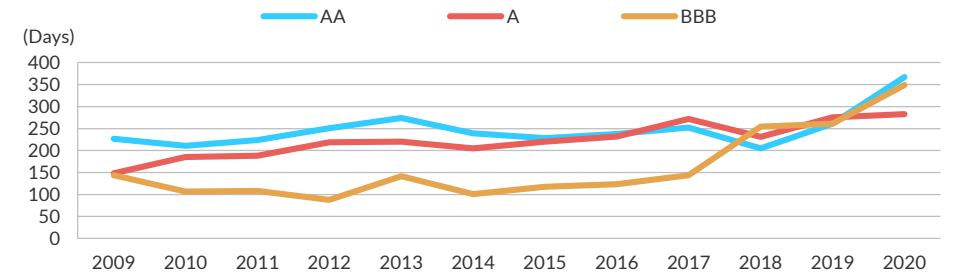
(Indicates financial flexibility, specifically cash and cash equivalents, relative to expenses.)



Source: Fitch Ratings.

### Liquidity Cushion

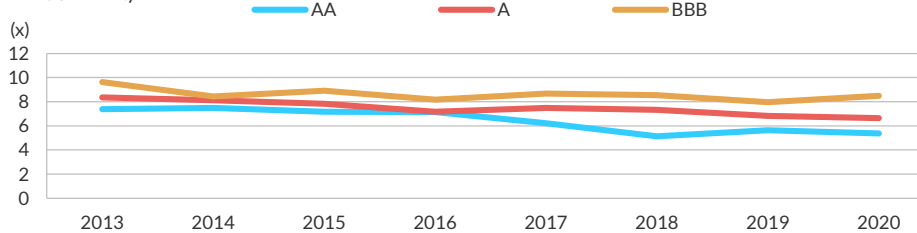
(Indicates financial flexibility, including all available sources of cash and liquidity, relative to expenses.)



Source: Fitch Ratings.

### Net Adjusted Debt/Adjusted FADS

(Indicates the size of net debt and other fixed obligations compared with the margin available for debt service.)

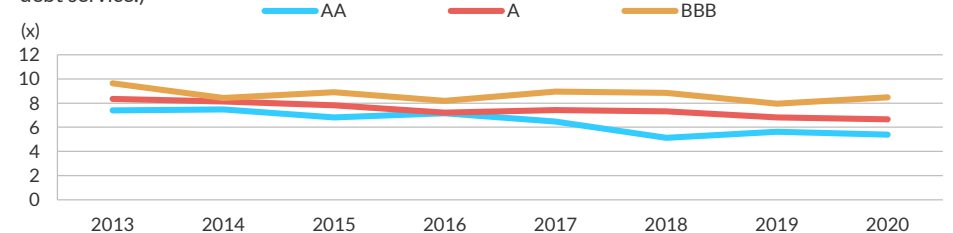


FADS - Funds available for debt service.

Source: Fitch Ratings.

### Net Adjusted Debt/Adjusted FADS (Excluding Pensions)

(Indicates the size of net debt and other fixed obligations compared with the margin available for debt service.)

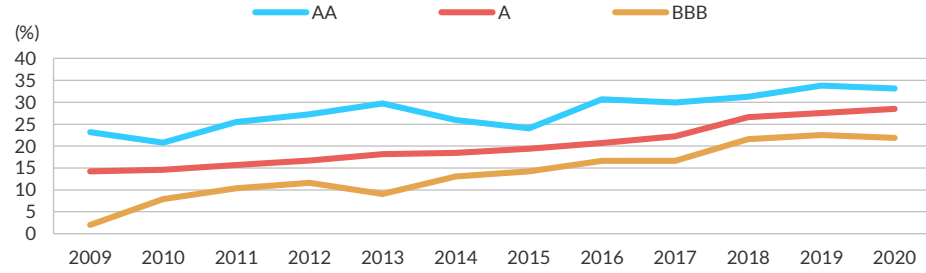


FADS - Funds available for debt service.

Source: Fitch Ratings.

**Equity/Capitalization**

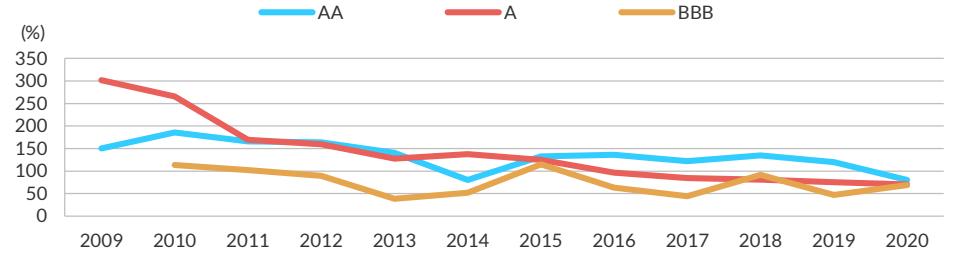
(Provides a measure of cost recovery.)



Source: Fitch Ratings.

**Capex/D&A**

(Indicates whether annual capital spending keeps pace with depreciation.)



D&A - Depreciation and amortization.

Source: Fitch Ratings.



Retail Systems

Obligor	Rating	Outlook/ Watch	Region	Total Operating Revenue (\$000)	Coverage of Full Obligations (x)	Debt Service Coverage (x)	Net Adjusted Debt/Adjusted FADS (x)	Equity/ Capitalization (%)	Days Cash on Hand	Liquidity Cushion (Days)	Transfers/ Operating Revenue (%)	Capex/ D&A (%)
<b>AA+ Rated Credits</b>												
Chattanooga Electric Power Board – Electric System, TN	AA+	Stable	SERC	561,855	1.10	1.72	7.26	52	56	82	3.34	153
Concord Utility Funds, NC	AA+	Stable	SERC	130,405	3.08	6.24	(0.93)	91	857	857	0.52	119
Nashville Electric Service, TN	AA+	Stable	SERC	1,278,700	1.26	2.36	5.65	55	129	138	2.49	266
Chelan CO Public Utility District No. 1 – Consolidated, WA	AA+	Stable	WECC	353,522	2.49	2.87	1.97	69	693	693	2.84	250
<b>AA+ Rated Median</b>				<b>457,689</b>	<b>1.88</b>	<b>2.62</b>	<b>3.81</b>	<b>62</b>	<b>411</b>	<b>415</b>	<b>2.67</b>	<b>202</b>
<b>AA Rated Credits</b>												
Austin Electric, TX	AA	RWN	ERCOT	1,373,556	0.93	0.90	8.52	48	222	222	8.74	93
New Braunfels Utilities, TX	AA	RWN	ERCOT	181,185	1.79	3.53	5.52	67	171	171	4.49	448
JEA – Electric System and Bulk Power Supply System, FL	AA	Stable	FRCC	1,241,789	1.99	2.14	3.77	43	207	207	7.56	103
Kissimmee Utility Authority, FL	AA	Stable	FRCC	175,897	1.49	3.04	3.50	89	240	240	10.21	287
Lakeland Energy System, FL	AA	Stable	FRCC	298,645	2.48	2.87	4.03	47	243	243	13.25	154
New Smyrna Beach Utilities Commission, FL	AA	Stable	FRCC	59,458	1.12	1.24	8.27	72	90	90	6.29	167
Orlando Utilities Commission, FL	AA	Stable	FRCC	866,463	1.75	1.84	4.77	50	270	270	14.07	127
Tallahassee Electric Fund, FL	AA	Stable	FRCC	298,201	1.03	1.03	8.03	45	356	356	16.52	49
Jacksonville Beach Combined Utility Funds, FL	AA	Stable	FRCC	95,003	1.66	3.96	2.22	99	287	287	4.24	323
Rochester Public Utilities, MN	AA	Stable	MRO	169,193	1.73	3.05	4.47	53	275	275	4.95	102
Dover Electric Revenue Fund, DE	AA	Stable	RFC	81,405	2.41	17.18	0.66	89	699	699	13.79	24
Fayetteville Public Works Commission, NC	AA	Stable	SERC	339,147	1.66	2.71	4.19	76	238	238	4.38	277
Lincoln Electric System, NE	AA	Stable	SPP	311,213	1.53	1.74	6.41	37	232	484	6.71	173
Springfield Public Utility, MO	AA	Stable	SPP	429,829	1.84	2.42	3.95	69	331	331	3.46	162
Clark County Public Utility District – Elec. and Generation, WA	AA	Stable	WECC	460,044	1.23	1.37	3.78	54	303	324	5.48	120
Colorado Springs Utilities, CO	AA	Stable	WECC	884,352	1.77	1.90	6.47	46	217	273	4.05	93
Grant County Public Utility District No. 2, WA	AA	Stable	WECC	321,174	2.35	2.35	4.39	49	621	621	5.57	147
Idaho Falls Power, ID	AA	Stable	WECC	57,411	2.75	–	0.76	100	506	506	8.86	145
Pasadena Water & Power, CA	AA	Stable	WECC	217,873	1.70	2.53	2.23	72	760	760	7.95	73
Roseville Electric Fund, CA	AA	Positive	WECC	171,973	2.56	3.94	2.57	65	620	620	4.19	79
Sacramento Municipal Utility District, CA	AA	Stable	WECC	1,587,905	1.79	2.16	5.03	43	278	278	–	155
<b>AA Rated Median</b>				<b>298,645</b>	<b>1.75</b>	<b>2.39</b>	<b>4.19</b>	<b>54</b>	<b>275</b>	<b>278</b>	<b>6.50</b>	<b>145</b>

Retail Systems

Obligor	Rating	Outlook/ Watch	Region	Total Operating Revenue (\$000)	Coverage of Full Obligations (x)	Debt Service Coverage (x)	Net Adjusted Debt/Adjusted FADS (x)	Equity/ Capitalization (%)	Days Cash on Hand	Liquidity Cushion (Days)	Transfers/ Operating Revenue (%)	Capex/ D&A (%)
<b>AA- Rated Credits</b>												
Bryan Utilities City Electric System, TX	AA-	Negative	ERCOT	185,890	1.51	2.01	5.58	51	247	247	17.72	292
Bryan Utilities Rural Electric System, TX	AA-	Negative	ERCOT	45,850	1.97	4.98	3.71	68	243	243	—	419
Garland Electric Fund, TX	AA-	RWN	ERCOT	298,420	1.38	1.63	4.87	42	511	511	7.52	267
Pedernales Electric Cooperative Inc., TX	AA-	RWN	ERCOT	643,059	1.28	1.62	6.69	48	8	330	0.16	218
San Antonio City Public Service (CPS Energy), TX	AA-	Negative	ERCOT	2,509,780	1.52	1.66	7.97	38	232	232	13.65	134
Alexandria Light and Power, MN	AA-	Stable	MRO	26,690	1.87	7.19	3.61	81	221	221	3.59	183
Marquette Board of Light & Power, MI	AA-	Stable	RFC	41,543	3.04	3.43	1.84	51	801	801	5.19	74
City of Greenville, NC	AA-	Stable	SERC	249,173	1.42	2.90	4.67	71	251	251	2.67	256
Greer Commission of Public Works, SC	AA-	Stable	SERC	89,652	1.79	3.48	4.00	79	215	215	1.12	152
Fort Collins, CO	AA-	Stable	SPP	137,235	1.22	2.29	8.13	59	87	87	5.93	269
Stillwater Utilities Authority, OK	AA-	Stable	SPP	84,986	1.63	2.15	2.68	68	645	645	23.33	153
Alameda Municipal Power, CA	AA-	Positive	WECC	67,066	1.37	2.74	1.97	77	591	591	8.25	70
Anaheim Electric Utilities Fund, CA	AA-	Stable	WECC	417,912	1.15	1.38	7.12	35	207	301	5.74	141
Benton CO Public Utility District No. 1, WA	AA-	Stable	WECC	162,497	1.16	1.92	6.32	72	103	127	8.75	186
Eugene Electric Board, OR	AA-	Stable	WECC	243,900	1.18	1.64	6.93	62	148	148	0.08	194
Heber Light & Power Company, UT	AA-	Stable	WECC	20,530	1.38	2.06	6.30	64	117	117	1.46	159
Los Angeles Department of Water & Power – Power System, CA	AA-	Stable	WECC	3,807,291	1.53	1.85	7.70	35	244	285	6.04	150
Modesto Irrigation District, CA	AA-	Stable	WECC	430,902	1.33	1.57	4.80	43	215	215	—	177
Provo City Power, UT	AA-	Stable	WECC	74,753	1.23	3.44	5.42	84	142	142	14.75	105
Redding Electric Utility Fund, CA	AA-	Stable	WECC	151,941	1.02	1.04	7.07	51	279	279	3.66	45
Riverside Electric Utility, CA	AA-	Stable	WECC	367,078	1.21	1.44	7.42	43	381	425	10.78	75
San Francisco Public Utilities Commission, CA	AA-	Stable	WECC	140,871	1.82	2.09	0.63	79	528	528	0.02	422
Silicon Valley Power, CA	AA-	Stable	WECC	466,382	1.29	2.64	4.16	83	334	334	5.25	119
Snohomish CO Public Utility District No. 1 – Combined, WA	AA-	Stable	WECC	692,944	1.65	3.14	4.82	79	167	167	5.69	133
Tacoma Power, WA	AA-	Stable	WECC	461,366	0.94	0.86	9.68	63	161	229	12.16	85
Turlock Irrigation District, CA	AA-	Stable	WECC	341,976	1.76	1.92	4.36	30	541	541	—	96
<b>AA- Rated Median</b>				<b>214,895</b>	<b>1.38</b>	<b>2.04</b>	<b>5.15</b>	<b>63</b>	<b>238</b>	<b>249</b>	<b>5.74</b>	<b>153</b>
<b>A+ Rated Credits</b>												
Brownsville Public Utilities Board, TX	A+	RWN	ERCOT	198,491	1.75	1.81	5.37	59	215	215	5.63	75
City of Denton – Combined Utility System, TX	A+	RWN	ERCOT	286,681	1.22	1.29	6.13	52	383	383	8.98	201

Retail Systems

Obligor	Rating	Outlook/ Watch	Region	Total Operating Revenue (\$000)	Coverage of Full Obligations (x)	Debt Service Coverage (x)	Net Adjusted Debt/Adjusted FADS (x)	Equity/ Capitalization (%)	Days Cash on Hand	Liquidity Cushion (Days)	Transfers/ Operating Revenue (%)	Capex/ D&A (%)
Guadalupe Valley Electric Cooperative Inc., TX	A+	Negative	ERCOT	240,244	1.59	2.92	5.91	56	71	355	2.39	216
Fort Pierce Utilities Authority, FL	A+	Stable	FRCC	101,296	1.52	2.27	4.47	77	116	116	6.20	142
Gainesville Regional Utilities, FL	A+	Stable	FRCC	390,570	1.67	1.69	9.89	19	258	518	9.80	81
Keys Energy Services, FL	A+	Stable	FRCC	97,509	1.98	4.03	5.28	38	179	179	2.82	106
Leesburg Electric System, FL	A+	Stable	FRCC	58,098	1.22	2.06	6.13	74	164	164	9.28	182
Winter Park Electric Services Fund, FL	A+	Stable	FRCC	46,213	2.86	7.59	4.83	46	0	99	5.70	151
Brunswick Electric Membership Corporation, NC	A+	Stable	SERC	186,008	1.30	1.81	6.65	45	72	193	–	181
Cobb Electric Membership Corporation, GA	A+	Stable	SERC	802,432	1.60	2.86	6.17	44	1	176	0.54	159
Lubbock Power & Light Fund, TX	A+	Stable	SPP	213,061	1.24	1.57	6.01	44	281	281	5.39	900
Glendale Electric Funds, CA	A+	Stable	WECC	224,993	1.59	2.86	2.63	69	555	555	8.60	32
<b>A+ Rated Median</b>				<b>205,776</b>	<b>1.59</b>	<b>2.17</b>	<b>5.96</b>	<b>49</b>	<b>171</b>	<b>204</b>	<b>5.70</b>	<b>155</b>
<b>A Rated Credits</b>												
CoServ Electric, TX	A	RWN	ERCOT	530,599	1.35	1.99	6.85	53	26	151	1.39	213
Reedy Creek Improvement District – Utility Fund, FL	A	Stable	FRCC	139,800	1.11	1.15	3.86	64	77	77	1.66	152
Long Island Power Authority, NY	A	Stable	NPCC	3,925,721	1.29	1.35	8.41	4	187	308	8.74	148
BVU Authority, VA	A	Stable	SERC	52,705	1.69	147.25	2.66	97	292	292	–	148
Kansas City Board of Public Utilities, KS	A	Stable	SPP	317,892	1.28	1.37	8.33	41	88	88	10.28	132
Cowlitz County Public Utility District No. 1 – Electric, WA	A	Stable	WECC	286,699	1.07	1.30	5.90	62	201	201	5.59	75
Grays Harbor County Public Utility District No. 1, WA	A	Stable	WECC	137,103	1.23	1.81	7.67	37	60	91	7.30	121
Overton Power District No. 5, NV	A	Stable	WECC	40,954	1.83	3.07	3.96	67	248	312	–	399
Sulphur Springs Valley Electric Cooperative, AZ	A	Stable	WECC	107,145	1.59	2.33	5.52	52	63	152	0.02	151
<b>A Rated Median</b>				<b>139,800</b>	<b>1.29</b>	<b>1.81</b>	<b>5.90</b>	<b>53</b>	<b>88</b>	<b>152</b>	<b>5.59</b>	<b>148</b>
<b>A- Rated Credits</b>												
Seguin Utility Fund, TX	A-	Stable	ERCOT	55,651	1.82	2.87	4.28	60	277	277	0.09	165
Connexus Energy, MN	A-	Stable	MRO	248,385	1.21	2.31	7.91	55	0	126	4.63	144
Chugach Electric Association Inc., AK	A-	Stable	Other	237,429	1.50	1.57	16.16	13	54	479	–	1620
Klickitat County Public Utility District No. 1 – Combined, WA	A-	Stable	WECC	53,975	0.99	0.99	8.76	39	189	289	4.45	79
Pend Oreille County Public Utility District No. 1 – Combined, WA	A-	Negative	WECC	46,870	1.42	1.54	6.70	49	560	560	4.13	41
<b>A- Rated Median</b>				<b>55,651</b>	<b>1.42</b>	<b>1.57</b>	<b>7.91</b>	<b>49</b>	<b>189</b>	<b>289</b>	<b>4.29</b>	<b>144</b>

Retail Systems

Obligor	Rating	Outlook/ Watch	Region	Total Operating Revenue (\$000)	Coverage of Full Obligations (x)	Debt Service Coverage (x)	Net Adjusted Debt/Adjusted FADS (x)	Equity/ Capitalization (%)	Days Cash on Hand	Liquidity Cushion (Days)	Transfers/ Operating Revenue (%)	Capex/ D&A (%)
<b>BBB Category Credits</b>												
Sikeston Board of Municipal Utilities, MO	BBB+	Stable	SERC	80,473	1.02	1.02	0.89	59	144	144	1.13	41
Coffeyville, KS	BBB+	Stable	SPP	57,202	1.19	1.57	7.09	–	149	149	5.26	–
Guam Power Authority	BBB	Stable	Other	335,543	1.30	1.30	5.89	0	196	196	–	65
<b>BBB Category Median</b>				<b>80,473</b>	<b>1.19</b>	<b>1.30</b>	<b>5.89</b>	<b>29</b>	<b>149</b>	<b>149</b>	<b>3.20</b>	<b>53</b>

FADS – Funds available for debt service. D&A – Depreciation and amortization. RWN – Rating Watch Negative. SERC – Southeastern Electric Reliability Corporation. WECC – Western Electricity Coordinating Council. ERCOT – Electric Reliability Council of Texas. FRCC – Florida Reliability Coordinating Council. MRO – Midwest Reliability Organization. RFC – Reliability First Corporation. SPP – Southwest Power Pool. NPCC – Northeast Power Coordinating Council. Note: 2019 audits used for Benton County Public Utility District No. 1 (WA), Coffeyville (KS), Cowlitz County Public Utility District No. 1 (WA), Fort Collins (CO), Grant County Public Utility District No. 2 (WA), Grays Harbor County Public Utility District No. 1 (WA), Klickitat County Public Utility District No. 1 (WA) and Roseville (CA). 2021 audit used for San Antonio City Public Service (CPS Energy), TX. Source: Fitch Ratings.

All Wholesale Systems (Includes Wholesale and G&T Cooperatives)

Obligor	Rating	Outlook/ Watch	Region	Total Operating Revenue (\$'000)	Coverage of Full Obligations (x)	Debt Service Coverage (x)	Net Adjusted Debt/ Adjusted FADS (x)	Equity/ Capitalization (%)	Days Cash on Hand	Liquidity Cushion (Days)	Capex/ D&A (%)
<b>AA Rated Credits</b>											
New York Power Authority, NY	AA	Stable	NPCC	2,265,000	1.53	1.85	5.26	60	279	404	190
Tennessee Valley Authority, TN	AA	Stable	SERC	10,249,000	2.05	2.18	5.03	37	34	117	89
Platte River Power Authority, CO	AA	Stable	WECC	240,749	2.17	3.11	1.74	78	377	377	144
<b>AA Rated Median</b>				<b>2,265,000</b>	<b>2.05</b>	<b>2.18</b>	<b>5.03</b>	<b>60</b>	<b>279</b>	<b>377</b>	<b>144</b>
<b>AA- Rated Credits</b>											
Lower Colorado River Authority – Consolidated, TX	AA-	Negative	ERCOT	1,042,700	1.42	1.49	7.19	29	371	371	207
Florida Municipal Power Agency - All-Requirements Project, FL	AA-	Stable	FRCC	433,894	0.90	0.89	7.41	0	98	209	20
Southern Minnesota Municipal Power Agency, MN	AA-	Stable	MRO	239,834	0.96	0.95	4.92	22	274	363	65
Western Minnesota Municipal Power Agency, MN	AA-	Stable	MRO	245,191	1.85	2.46	5.20	36	489	489	499
Connecticut Municipal Electric Energy Cooperative	AA-	Stable	NPCC	97,552	1.08	1.24	5.49	16	277	492	12
Alabama Municipal Electric Authority, AL	AA-	Stable	SERC	194,921	1.13	4.39	5.89	53	145	145	28
Arkansas Electric Cooperative Corporation, AR	AA-	Stable	SERC	739,632	1.48	1.91	7.44	39	60	217	191
Associated Electric Cooperative Inc., MO	AA-	Stable	SERC	1,135,982	1.60	1.83	5.52	31	155	386	153
Golden Spread Electric Cooperative, TX	AA-	Stable	SPP	413,615	1.83	2.30	4.01	45	232	462	58
Bonneville Power Administration, WA	AA-	Stable	WECC	3,683,700	0.97	0.97	9.31	23	148	273	72
Utah Municipal Power Agency, UT	AA-	Stable	WECC	82,206	2.01	3.10	3.37	0	333	333	20
<b>AA- Rated Median</b>				<b>413,615</b>	<b>1.42</b>	<b>1.83</b>	<b>5.52</b>	<b>29</b>	<b>232</b>	<b>363</b>	<b>65</b>
<b>A+ Rated Credits</b>											
South Texas Electric Cooperative Inc., TX	A+	Negative	ERCOT	503,935	1.19	1.42	8.18	29	42	271	141
Illinois Municipal Electric Agency, IL	A+	Positive	MRO	313,016	1.14	1.17	6.98	23	126	188	63
Minnesota Municipal Power Agency, MN	A+	Positive	MRO	136,822	1.78	2.06	3.52	46	208	291	22
Municipal Energy Agency of Nebraska, NE	A+	Stable	MRO	114,426	1.14	1.37	6.75	27	170	244	26
WPPI Energy (Wisconsin Public Power Inc.), WI	A+	Stable	MRO	411,800	1.05	1.15	6.50	48	148	186	30
Indiana Municipal Power Agency, IN	A+	Stable	RFC	463,209	1.45	1.66	7.31	22	266	356	160
Old Dominion Electric Cooperative, VA	A+	Stable	RFC	807,704	1.35	1.62	7.29	29	5	281	113
Grand River Dam Authority, OK	A+	Stable	SPP	397,165	1.67	1.84	3.76	42	496	496	69
Nebraska Public Power District, NE	A+	Stable	SPP	1,103,149	1.39	1.53	4.58	53	286	378	126
<b>A+ Rated Median</b>				<b>411,800</b>	<b>1.35</b>	<b>1.53</b>	<b>6.75</b>	<b>29</b>	<b>170</b>	<b>281</b>	<b>69</b>
<b>A Rated Credits</b>											
Basin Electric Power Cooperative, ND	A	Stable	MRO	2,071,107	1.55	1.76	8.04	23	108	303	57
Central Iowa Power Cooperative, IA	A	Stable	MRO	179,019	1.69	2.08	5.85	35	287	464	302

All Wholesale Systems (Includes Wholesale and G&T Cooperatives)

Obligor	Rating	Outlook/ Watch	Region	Total Operating Revenue (\$000)	Coverage of Full Obligations (x)	Debt Service Coverage (x)	Net Adjusted Debt/ Adjusted FADS (x)	Equity/ Capitalization (%)	Days Cash on Hand	Liquidity Cushion (Days)	Capex/ D&A (%)
Buckeye Power Inc., OH	A	Positive	RFC	670,065	1.38	1.43	6.26	32	35	222	38
Cooperative Energy, MS	A	Stable	SERC	738,836	1.48	2.03	6.60	27	133	417	237
Kentucky Municipal Energy Agency, KY	A	Stable	SERC	80,074	1.54	219.71	4.87	100	47	156	74
North Carolina Electric Membership Corporation, NC	A	Positive	SERC	1,092,169	1.16	1.41	6.65	19	99	283	108
Oklahoma Municipal Power Agency, OK	A	Stable	SPP	172,238	1.10	1.12	7.99	7	174	183	11
Arizona Electric Power Cooperative, Inc., AZ	A	Stable	WECC	178,421	1.41	1.59	6.32	48	54	265	70
<b>A Rated Median</b>				<b>424,542</b>	<b>1.45</b>	<b>1.68</b>	<b>6.46</b>	<b>30</b>	<b>104</b>	<b>274</b>	<b>72</b>
<b>A- Rated Credits</b>											
Great River Energy, MN	A-	Stable	MRO	1,215,153	1.19	1.23	6.89	22	93	255	42
Northern Illinois Municipal Power Agency, IL	A-	Stable	MRO	59,574	1.02	1.02	10.53	3	211	377	25
Piedmont Municipal Power Agency, SC	A-	Stable	SERC	209,353	2.29	2.71	4.86	20	372	372	77
South Carolina Public Service Authority (Santee Cooper), SC	A-	Stable	SERC	1,627,427	1.45	1.51	10.70	23	162	360	57
Heartland Consumers Power District, SD	A-	Stable	SPP	45,351	1.07	1.23	6.10	41	212	301	9
Kansas Power Pool, KS	A-	Stable	SPP	54,136	1.21	1.66	5.69	36	167	213	161
Western Farmers Electric Cooperative, OK	A-	Positive	SPP	665,048	1.18	1.43	7.57	29	108	285	101
Tri-State Generation & Transmission Association Inc., CO	A-	Stable	WECC	1,352,295	1.30	1.43	9.10	25	46	281	77
<b>A- Rated Median</b>				<b>437,201</b>	<b>1.20</b>	<b>1.43</b>	<b>7.23</b>	<b>24</b>	<b>164</b>	<b>293</b>	<b>67</b>
<b>BBB Category Credits</b>											
Sam Rayburn Municipal Power Agency, TX	BBB+	Stable	ERCOT	34,427	0.98	0.98	1.43	52	175	175	7
East Kentucky Power Cooperative, KY	BBB+	Stable	SERC	787,672	1.27	1.32	9.14	23	111	349	192
Oglethorpe Power Corporation, GA	BBB+	Negative	SERC	1,377,618	1.65	1.69	14.39	9	203	799	310
PowerSouth Energy Cooperative and Subsidiaries, AL	BBB+	Negative	SERC	547,219	1.76	2.09	7.23	22	136	404	244
Southern Illinois Power Cooperative, IL	BBB	Stable	MRO	164,455	1.06	1.06	8.48	19	43	268	46
Big Rivers Electric Corp., KY	BBB-	Positive	MRO	328,708	2.12	2.35	5.44	43	49	315	69
Arkansas River Power Authority, CO	BBB-	Stable	WECC	31,095	1.07	1.10	10.20	(341)	358	388	6
<b>BBB Category Median</b>				<b>328,708</b>	<b>1.27</b>	<b>1.32</b>	<b>8.48</b>	<b>22</b>	<b>136</b>	<b>349</b>	<b>69</b>

FADS - Funds available for debt service. D&A - Depreciation and amortization. NPCC - Northeast Power Coordinating Council. SERC - Southeastern Electric Reliability Corporation. WECC - Western Electricity Coordinating Council. ERCOT - Electric Reliability Council of Texas. FRCC - Florida Reliability Coordinating Council. MRO - Midwest Reliability Organization. SPP - Southwest Power Pool. RFC - Reliability First Corporation.  
Source: Fitch Ratings.

Wholesale Systems (Excludes G&T Cooperatives)

Obligor	Rating	Outlook/ Watch	Region	Total Operating Revenue (\$'000)	Coverage of Full Obligations (x)	Debt Service Coverage (x)	Net Adjusted Debt/ Adjusted FADS (x)	Equity/ Capitalization (%)	Days Cash on Hand	Liquidity Cushion (Days)	Capex/ D&A (%)
<b>AA Rated Credits</b>											
New York Power Authority, NY	AA	Stable	NPCC	2,265,000	1.53	1.85	5.26	60	279	404	190
Tennessee Valley Authority, TN	AA	Stable	SERC	10,249,000	2.05	2.18	5.03	37	34	117	89
Platte River Power Authority, CO	AA	Stable	WECC	240,749	2.17	3.11	1.74	78	377	377	144
<b>AA Rated Median</b>				<b>2,265,000</b>	<b>2.05</b>	<b>2.18</b>	<b>5.03</b>	<b>60</b>	<b>279</b>	<b>377</b>	<b>144</b>
<b>AA- Rated Credits</b>											
Lower Colorado River Authority – Consolidated, TX	AA-	Negative	ERCOT	1,042,700	1.42	1.49	7.19	29	371	371	207
Florida Municipal Power Agency - All-Requirements Project, FL	AA-	Stable	FRCC	433,894	0.90	0.89	7.41	0	98	209	20
Southern Minnesota Municipal Power Agency, MN	AA-	Stable	MRO	239,834	0.96	0.95	4.92	22	274	363	65
Western Minnesota Municipal Power Agency, MN	AA-	Stable	MRO	245,191	1.85	2.46	5.20	36	489	489	499
Connecticut Municipal Electric Energy Cooperative	AA-	Stable	NPCC	97,552	1.08	1.24	5.49	16	277	492	12
Alabama Municipal Electric Authority, AL	AA-	Stable	SERC	194,921	1.13	4.39	5.89	53	145	145	28
Bonneville Power Administration, WA	AA-	Stable	WECC	3,683,700	0.97	0.97	9.31	23	148	273	72
Utah Municipal Power Agency, UT	AA-	Stable	WECC	82,206	2.01	3.10	3.37	0	333	333	20
<b>AA- Rated Median</b>				<b>242,513</b>	<b>1.11</b>	<b>1.37</b>	<b>5.69</b>	<b>22</b>	<b>276</b>	<b>348</b>	<b>47</b>
<b>A+ Rated Credits</b>											
Illinois Municipal Electric Agency, IL	A+	Positive	MRO	313,016	1.14	1.17	6.98	23	126	188	63
Minnesota Municipal Power Agency, MN	A+	Positive	MRO	136,822	1.78	2.06	3.52	46	208	291	22
Municipal Energy Agency of Nebraska, NE	A+	Stable	MRO	114,426	1.14	1.37	6.75	27	170	244	26
WPPI Energy (Wisconsin Public Power Inc.), WI	A+	Stable	MRO	411,800	1.05	1.15	6.50	48	148	186	30
Indiana Municipal Power Agency, IN	A+	Stable	RFC	463,209	1.45	1.66	7.31	22	266	356	160
Grand River Dam Authority, OK	A+	Stable	SPP	397,165	1.67	1.84	3.76	42	496	496	69
Nebraska Public Power District, NE	A+	Stable	SPP	1,103,149	1.39	1.53	4.58	53	286	378	126
<b>A+ Rated Median</b>				<b>397,165</b>	<b>1.39</b>	<b>1.53</b>	<b>6.50</b>	<b>42</b>	<b>208</b>	<b>291</b>	<b>63</b>
<b>A/A- Rated Credits</b>											
Kentucky Municipal Energy Agency, KY	A	Stable	SERC	80,074	1.54	219.71	4.87	100	47	156	74
Oklahoma Municipal Power Agency, OK	A	Stable	SPP	172,238	1.10	1.12	7.99	7	174	183	11
Northern Illinois Municipal Power Agency, IL	A-	Stable	MRO	59,574	1.02	1.02	10.53	3	211	377	25
Piedmont Municipal Power Agency, SC	A-	Stable	SERC	209,353	2.29	2.71	4.86	20	372	372	77
South Carolina Public Service Authority (Santee Cooper), SC	A-	Stable	SERC	1,627,427	1.45	1.51	10.70	23	162	360	57
Heartland Consumers Power District, SD	A-	Stable	SPP	45,351	1.07	1.23	6.10	41	212	301	9

Wholesale Systems (Excludes G&T Cooperatives)

Obligor	Rating	Outlook/ Watch	Region	Total Operating Revenue (\$000)	Coverage of Full Obligations (x)	Debt Service Coverage (x)	Net Adjusted Debt/ Adjusted FADS (x)	Equity/ Capitalization (%)	Days Cash on Hand	Liquidity Cushion (Days)	Capex/ D&A (%)
Kansas Power Pool, KS	A-	Stable	SPP	54,136	1.21	1.66	5.69	36	167	213	161
<b>A/A- Rated Median</b>				<b>80,074</b>	<b>1.21</b>	<b>1.51</b>	<b>6.10</b>	<b>23</b>	<b>174</b>	<b>301</b>	<b>57</b>
<b>BBB Category Credits</b>											
Sam Rayburn Municipal Power Agency, TX	BBB+	Stable	ERCOT	34,427	0.98	0.98	1.43	52	175	175	7
Arkansas River Power Authority, CO	BBB-	Stable	WECC	31,095	1.07	1.10	10.20	(341)	358	388	6
<b>BBB Category Median</b>				<b>32,761</b>	<b>1.03</b>	<b>1.04</b>	<b>5.82</b>	<b>(144)</b>	<b>267</b>	<b>282</b>	<b>7</b>

FADS - Funds available for debt service. D&A - Depreciation and amortization. NPCC - Northeast Power Coordinating Council. SERC - Southeastern Electric Reliability Corporation. WECC - Western Electricity Coordinating Council. ERCOT - Electric Reliability Council of Texas. FRCC - Florida Reliability Coordinating Council. MRO - Midwest Reliability Organization. RFC - Reliability First Corporation. SPP - Southwest Power Pool.  
Source: Fitch Ratings.



G&T Cooperative Systems

Obligor	Rating	Outlook/ Watch	Region	Total Operating Revenue (\$'000)	Coverage of Full Obligations (x)	Debt Service Coverage (x)	Net Adjusted Debt/ Adjusted FADS (x)	Equity/ Capitalization (%)	Days Cash on Hand	Liquidity Cushion (Days)	Capex/D&A (%)
<b>AA-/A+ Rated Credits</b>											
Arkansas Electric Cooperative Corporation, AR	AA-	Stable	SERC	739,632	1.48	1.91	7.44	39	60	217	191
Associated Electric Cooperative Inc., MO	AA-	Stable	SERC	1,135,982	1.60	1.83	5.52	31	155	386	153
Golden Spread Electric Cooperative, TX	AA-	Stable	SPP	413,615	1.83	2.30	4.01	45	232	462	58
South Texas Electric Cooperative Inc., TX	A+	Negative	ERCOT	503,935	1.19	1.42	8.18	29	42	271	141
Old Dominion Electric Cooperative, VA	A+	Stable	RFC	807,704	1.35	1.62	7.29	29	5	281	113
<b>AA-/A+ Rated Median</b>				<b>739,632</b>	<b>1.48</b>	<b>1.83</b>	<b>7.29</b>	<b>31</b>	<b>60</b>	<b>281</b>	<b>141</b>
<b>A/A- Rated Credits</b>											
Basin Electric Power Cooperative, ND	A	Stable	MRO	2,071,107	1.55	1.76	8.04	23	108	303	57
Central Iowa Power Cooperative, IA	A	Stable	MRO	179,019	1.69	2.08	5.85	35	287	464	302
Buckeye Power Inc., OH	A	Positive	RFC	670,065	1.38	1.43	6.26	32	35	222	38
Cooperative Energy, MS	A	Stable	SERC	738,836	1.48	2.03	6.60	27	133	417	237
North Carolina Electric Membership Corporation, NC	A	Positive	SERC	1,092,169	1.16	1.41	6.65	19	99	283	108
Arizona Electric Power Cooperative, Inc., AZ	A	Stable	WECC	178,421	1.41	1.59	6.32	48	54	265	70
Great River Energy, MN	A-	Stable	MRO	1,215,153	1.19	1.23	6.89	22	93	255	42
Western Farmers Electric Cooperative, OK	A-	Positive	SPP	665,048	1.18	1.43	7.57	29	108	285	101
Tri-State Generation & Transmission Association Inc., CO	A-	Stable	WECC	1,352,295	1.30	1.43	9.10	25	46	281	77
<b>A/A- Rated Median</b>				<b>738,836</b>	<b>1.38</b>	<b>1.43</b>	<b>6.65</b>	<b>27</b>	<b>99</b>	<b>283</b>	<b>77</b>
<b>BBB Category Credits</b>											
East Kentucky Power Cooperative, KY	BBB+	Stable	SERC	787,672	1.27	1.32	9.14	23	111	349	192
Oglethorpe Power Corporation, GA	BBB+	Negative	SERC	1,377,618	1.65	1.69	14.39	9	203	799	310
PowerSouth Energy Cooperative and Subsidiaries, AL	BBB+	Negative	SERC	547,219	1.76	2.09	7.23	22	136	404	244
Southern Illinois Power Cooperative, IL	BBB	Stable	MRO	164,455	1.06	1.06	8.48	19	43	268	46
Big Rivers Electric Corp., KY	BBB-	Positive	MRO	328,708	2.12	2.35	5.44	43	49	315	69
<b>BBB Category Median</b>				<b>547,219</b>	<b>1.65</b>	<b>1.69</b>	<b>8.48</b>	<b>22</b>	<b>111</b>	<b>349</b>	<b>192</b>

FADS - Funds available for debt service. D&A - Depreciation and amortization. SERC - Southeastern Electric Reliability Corporation. SPP - Southwest Power Pool. ERCOT - Electric Reliability Council of Texas. RFC - Reliability First Corporation. MRO - Midwest Reliability Organization. WECC - Western Electricity Coordinating Council.

Source: Fitch Ratings.

## Financial Summary Glossary of Terms

### Adjusted FADS

FADS plus fixed charges minus transfers plus pension expense.

### Capitalization

Total debt plus total equity.

### Capitalized Fixed Charges

Fixed charges times multiple for capitalization (currently 8.0x).

### Earnings Before Interest, Depreciation and Amortization (EBITDA)

Operating revenue less cash operating expenses.

### Fixed Charges

Fixed charges include 30% of purchased power expenses, plus operating leases.

### Fixed Purchased Power Charges

Fixed purchased power charges include 30% of purchased power expenses.

### Full Obligations

Total annual debt service plus fixed purchased power charges.

### Fund Available for Debt Service (FADS)

EBITDA plus interest income. FADS may further reflect adjustments for subsidies, noncash expenses, nonrecurring items and non-operating expenses paid ahead of debt service as appropriate. FADS does not include any benefit from the use of (or deposit to) the rate-stabilization funds, non-operating connection fees or capital contributions.

### Funds Restricted for Debt Service

Includes amounts deposited in debt service and debt service reserve funds, as well as the cushion of credit program administered by the Rural Utilities Service.

### Net Adjusted Debt

Total debt plus capitalized fixed charges plus pension obligations, minus unrestricted funds and funds restricted for debt service.

### Pension Expense

Amount recognized in an employer's financial statements as the cost of a pension plan for a period on an accrual basis.

### Pension Obligations

The accrued unfunded portion of an entity's pension obligation. Amounts included are adjusted using methodologies outlined in Fitch's *U.S. Public Finance Tax-Supported Rating Criteria* and *U.S. Public Power Rating Criteria*.

### Total Annual Debt Service

Cash interest paid plus scheduled long-term principal payments (i.e. prior year's current portion of long-term debt). Voluntary prepayments and principal amounts repaid as a part of a refinancing are not included. However, where a borrower incorporates balloon indebtedness, long-term bank facilities, remarketed debt or bullet maturities, Fitch may adjust scheduled debt service to eliminate amounts successfully refinanced, remarketed or renewed, or to include payments on debt obligations reported as operating expenses. Cash interest paid may also be adjusted if payment dates distort cash payments vis-à-vis annualized interest expense, while capitalized interest may be excluded for systems undertaking large construction programs.

### Total Debt

All long- and short-term debt obligations, including capital leases, outstanding CP, notes payable and current maturities. Certain nonrecourse obligations and separately secured obligations may be excluded.

### Total Equity

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

### Transfers

Transfers include payments to the general fund, payments in lieu of taxes (PILOT), free services provided and other taxes, dividends and distributions paid, as applicable.

### Unrestricted Cash

Cash and investments available for short-term liquidity needs, with no limitations on use. Funds restricted solely by board or management policy and/or available for general system purposes, including debt service, may also be included. Funds explicitly limited for construction or other capital investment are not considered unrestricted.

## Ratio Definitions

Ratio	Calculation	Significance
<b>Liquidity</b>		
Coverage of Full Obligations (x)	$(\text{FADS} + \text{Fixed Purchased Power Charges} - \text{Transfers}) / (\text{Total Annual Debt Service} + \text{Fixed Purchased Power Charges})$	Indicates the margin available to meet current debt service requirements and other fixed obligations.
Debt Service Coverage (x)	$(\text{FADS} - \text{Transfers}) / \text{Total Annual Debt Service}$	Indicates the margin available to meet current debt service requirements.
Unrestricted Cash (Days)	$\text{Unrestricted Cash} / (\text{Operating Expenses} - \text{Depreciation} - \text{Amortization}) * 365$	Indicates financial flexibility, specifically cash and short-term investments, relative to expenses.
Liquidity Cushion (Days)	$(\text{Unrestricted Cash} + \text{Available Borrowing Capacity}) / (\text{Operating Expenses} - \text{Depreciation} - \text{Amortization}) * 365$	Indicates financial flexibility, including all available sources of cash, short-term investments and liquidity, relative to expenses.
<b>Leverage</b>		
Net Adjusted Debt to Adjusted FADS (x)	$\text{Net Adjusted Debt} / (\text{FADS} + \text{Fixed Charges} - \text{Transfers})$	Indicates the size of net debt and off-balance-sheet obligations to the margin available to meet all debt service, fixed obligations, and transfers and distributions to owners.
Net Adjusted Debt to Adjusted FADS (x; Excluding Pensions)	$(\text{Net Adjusted Debt} - \text{Pension Obligations}) / (\text{FADS} + \text{Fixed Charges} - \text{Transfers} - \text{Pension Expense})$	Indicates the size of net debt and off-balance-sheet obligations excluding pension obligations to the margin available to meet all debt service, fixed obligations (excluding pension expense), and transfers and distributions to owners. This ratio is used in Fitch's charted Portfolio Trends simply for long-term trend analysis. Long-term data including pension obligations is unavailable.
Equity to Capitalization (%)	$\text{Total Equity} / \text{Capitalization}$	Provides a measure of cost recovery, leverage and debt capacity.
<b>Other</b>		
Capex to Depreciation and Amortization (%)	$\text{Capex} / (\text{Depreciation} + \text{Amortization})$	Indicates the relationship between capital spending and the depreciation of existing assets.
Transfers to Operating Revenues (%)	$\text{Transfers} / \text{Operating Revenues}$	Indicates the degree to which a utility provides financial support to host city, county, members or owners.
FADS - Funds available for debt service. Source: Fitch Ratings.		

## Contacts

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