

# **FINANCIAL** AND **OPERATING RATIOS** of Public Power Utilities

JANUARY 2024

# ABOUT THIS REPORT

This is the latest annual report on financial and operating ratios prepared by the American Public Power Association. Many of the ratios in this report were suggested by APPA's former Performance Management Committee and its predecessor, the Task Force on Performance Indicators.

We encourage members to comment on the content and format of this report. Please direct comments or questions to Lindsey Buttel, Manager, Research and Statistics, at LButtel@PublicPower.org.

Copyright © 2024 by the American Public Power Association All rights reserved. Published by the American Public Power Association



Contact MediaRelations@PublicPower.org or 202-467-2900.

The American Public Power Association is the voice of not-for-profit, community-owned utilities that power 2,000 towns and cities nationwide. We represent public power before the federal government to protect the interests of the more than 49 million people that public power utilities serve, and the 96,000 people they employ. Our association advocates and advises on electricity policy, technology, trends, training, and operations. Our members strengthen their communities by providing superior service, engaging citizens, and instilling pride in community-owned power.

# TABLE OF CONTENTS

I.	INTRODUCTION	2
	REPORT FORMAT	2
	UTILITIES IN THIS REPORT	3
	DEFINITIONS, DATA SOURCES AND COMPUTATIONS	5
	FACTORS INFLUENCING RATIOS	5
II	. SUMMARY TABLES	6
	MEDIAN VALUES BY CUSTOMER COUNT	7
	MEDIAN VALUES BY REGION	8
	MEDIAN VALUES BY POWER GENERATION CLASS	9
111	. DETAILED TABLES	10
	1. REVENUE PER KILOWATT-HOUR	11
	2. DEBT TO TOTAL ASSETS	13
	3. OPERATING RATIO	14
	4. CURRENT RATIO	15
	5A. TIMES INTEREST EARNED	16
	5B. DEBT SERVICE COVERAGE	17
	6. NET INCOME PER REVENUE DOLLAR	18
	7. UNCOLLECTIBLE ACCOUNTS PER REVENUE DOLLAR	19
	8. RETAIL CUSTOMERS PER NON-POWER-GENERATION EMPLOYEE	20
	9. TOTAL OPERATION AND MAINTENANCE EXPENSE PER KILOWATT-HOUR SOLD	21
	10. TOTAL OPERATION AND MAINTENANCE EXPENSE PER RETAIL CUSTOMER	22
	11. TOTAL POWER SUPPLY EXPENSE PER KILOWATT-HOUR SOLD	23
	12. PURCHASED POWER COST PER KILOWATT-HOUR	24
	13. RETAIL CUSTOMERS PER METER READER	25
	14. DISTRIBUTION OPERATION AND MAINTENANCE EXPENSES PER RETAIL CUSTOMER	26
	15. DISTRIBUTION OPERATION AND MAINTENANCE EXPENSES PER CIRCUIT MILE	27
	16. CUSTOMER ACCOUNTING, CUSTOMER SERVICE AND SALES EXPENSE PER RETAIL CUSTOMER	28
	17. ADMINISTRATIVE AND GENERAL EXPENSES PER RETAIL CUSTOMER	29
	18. LABOR EXPENSE PER WORKER-HOUR	30
	19. ENERGY LOSS PERCENTAGE	31
	20. SYSTEM LOAD FACTOR	32
	21. CAPITAL EXPENDITURES TO DEPRECIATION EXPENSES	33
AF	PENDIX A: 2022 PERFORMANCE INDICATORS SURVEY	34
AF	PPENDIX B: DATA SOURCES AND COMPUTATIONAL PROCEDURES	37
AF	PENDIX C: REGIONAL DEFINITIONS	41
AF	PENDIX D: UTILITIES INCLUDED IN THE 2022 REPORT	42

# **I. INTRODUCTION**



his report presents data for 21 categories of financial and operating ratios for 147 community-owned electric utilities in the United States that had at least 150,000 MWh in sales and approximately over 50 percent retail sales in 2021. The ratios can be a useful tool in assessing electric utility performance. However, they do not provide definitive information, nor should the level of any indicator be taken as the "correct" level of performance.

It is important that users be familiar with definitions of ratios and the variables that may affect them. Although the groupings of the ratios by customer count, region, and net power generation adjust for major variables, other factors may also influence the ratios. The financial and operating ratios provide a useful starting point for analyses and may be used to pinpoint areas in need of further investigation. The ratios should be analyzed in conjunction with other information and should not be the sole basis for broad conclusions.

## **Report Format**

Section II lists the median values of the ratios in summary tables by customer count, region, and net power generation. Section III presents detailed breakdowns for each ratio with the number of utilities, means, medians and first and third quartile values. The information is organized by customer count, region, and net generation. Definitions and descriptive information precede each set of tables. A copy of the 2022 Performance Indicator Survey, as well as formulas, data sources, definitions of regions, and the utilities included in the report can be found in Appendices A through D.

The following table presents medians and number of responses for each ratio for all regions, customer counts, and generation classes.

FINANCIAL RATIOS	UTILITIES	MEDIAN
1. Revenue per KWH		
a. All Retail Customers	147	\$0.105
b. Residential Customers	137	\$0.120
c. Commercial Customers	137	\$0.111
d. Industrial Customers	122	\$0.079
2. Debt to Total Assets	146	0.289
3. Operating Ratio	142	0.856
4. Current Ratio	147	2.72
5a. Times Interest Earned	116	4.93
5b. Debt Service Coverage	120	3.80
6. Net Income per Revenue Dollar	146	\$0.054
7. Uncollectible Accounts per Revenue Dollar	147	\$0.0012

#### **OPERATING RATIOS**

8. Retail Customer per Non-Power Generation Employee	144	325
9. Total O&M Expense per KWH Sold	144	\$0.087
10. Total O&M Expense (Excluding Power Supply Exp.) per Retail Customer	140	\$605
11. Total Power Supply Expense per KWH Sold	134	\$0.065
12. Purchased Power Cost per KWH	136	\$0.065
13. Retail Customers per Meter Reader*	91	8,618
14. Distribution O&M Expense per Retail Customer	133	\$197
15. Distribution O&M Expense per Circuit Mile	133	\$7,987
16. Customer Accounting, Service, and Sales Expense per Retail Customer	133	\$72
17. Administrative and General Expense per Retail Customer	133	\$195

#### **OTHER RATIOS**

18. Labor Expense per Worker-Hour	143	\$48.76
19. Energy Loss Percentage	134	3.41%
20. System Load Factor	137	56.4%
21. Capital Expenditures to Depreciation Expense	144	1.21

\*Only includes utilities with at least one meter reader. For changes to the methodology of this ratio, see the detailed breakdown in Section III.

## **Utilities in this Report**

The utilities included in this report are those that responded to the American Public Power Association's 2022 Performance Indicators Survey. The survey was sent to all public power utilities with sales to consumers that account for approximately 50% or more of their total sales, and that have retail sales or sales for resale of 150,000 megawatt-hours or more.

Direct comparisons with previous ratio reports should not be made because the composition of utilities included may have changed. Although 147 utilities are included in this report, not all utilities were incorporated into each ratio. Many utilities did not have or did not provide information necessary for certain ratios. Also, data are excluded from calculations if there is reason to believe the information is incorrect (e.g., extreme values). Furthermore, the Department of Energy's Energy Information Administration (EIA) changed the sales threshold for utilities to complete EIA Form 861, so for utilities with 150,000-200,000 MWh in total sales, data from the EIA Form 861S was used, which contains fewer data points.

The respondents are grouped into six classes based on customer count. Mean, median, and first and third quartile values are calculated for each of these classes. Medians and quartiles are calculated based on each utility's ratio and therefore each utility is represented equally. Means are weighted — calculated by summing



the values for all utilities, and then computing the ratio from these totals. Since large utilities heavily influence the mean (particularly when there are only a small number of utilities in the sample), medians provide a better measure of the typical utility. Figure 1 shows the number of responses in each class. All positions with fewer than five responses in a category are not shown within their subcategory as it is not possible to compute summary data for such few responses. Because of this, utilities with a customer count of 2,000 to 5,000 are included in the total but cannot be broken out further.

Utilities are also grouped based on geographic location. The five regions are based on combined regions of the North American Electric Reliability Corporation (see Appendix C). Figure 2 shows the number of utilities in each region.

Finally, respondents are grouped into categories based upon the percentage of total power requirements generated by the utility. The classes range from "No generation" to "50%-100%" generation. Figure 3 shows the number of utilities in each category. Utilities that had negative generation are classified as "No generation."

## Definitions, Data Sources and Computations

Section III, "Detailed Tables," provides definitions for each ratio and Appendix B outlines information on data sources and computations. The data in this report come from two sources: EIA's 2022 report Forms EIA-861 and EIA-861S and APPA's 2022 Performance Indicators Survey.

## **Factors Influencing Ratios**

Each of the ratios in this report may be influenced by a variety of economic, environmental, and technical factors. Aggregating the data may mask significant differences. When making comparisons, users of the data should attempt to understand the various factors that might affect a particular ratio. An individual utility with a high or low value for a given ratio relative to the median for a group is not necessarily indicative of a performance problem but might be due to policies or situations faced by the utility.

The groupings in this report adjust for regional variations, differences in the number of customers served, and differences

in operations based on the proportion of power requirements generated by the utility. Other factors that might influence the ratios include:

- Composition of customers served;
- Geographic location;
- Population density;
- Source of power supply (and physical, economic, or institutional barriers to acquiring alternative power supply);
- Amount of taxes, payments in lieu of taxes, contributions and free electricity or services that a utility makes to or receives from local government;
- Number of contract employees used (e.g., consultants, contract labor for maintenance, tree trimming);
- Financial policies (e.g., proportion of major capital expenditures financed by long-term debt versus current revenue);
- Management policies (e.g., the extent to which a utility focuses on customer service or other programs);
- Regulatory policies;
- Relatively small number of utilities reporting data on a particular ratio (small numbers of utilities frequently appear in the detailed breakdowns);
- Degree of precision of the data component; or
- Differences in utility reporting periods.

Ratios are calculated from fiscal year and calendar year data.

## II. SUMMARY TABLES



The following tables present summary data on the 21 financial and operating ratios by customer count (Table A), by region (Table B), and by generation class (Table C). These tables present medians for each of the ratios. Section III includes definitions and detailed data on means, medians, and quartiles. Appendix B includes data sources and calculation procedures.

The average number of retail customers reported by each utility on the 2022 Performance Indicators Survey determines customer count. Responding utilities are grouped into five geographic regions: Northeast, Southeast, North Central/Plains, Southwest, and West. The regions correspond to combined regions of the North American Electric Reliability Corporation. See Appendix C for a detailed description of the regions.

Generation refers to the power a utility produces and is based upon the utility's net generation as a percent of total sources of energy as reported on Form EIA-861.

TABLE A. FINANCIAL & OPERATING RATIOS: MEDIAN VALUES BY CUSTOMER COUNT						
Ratio	5,000 to 10,000 Customers	10,000 to 20,000 Customers	20,000 to 50,000 Customers	50,000 to 100,000 Customers	More than 100,000 Customers	
1. Revenue per KWH						
a. All Retail Customers	\$0.105	\$0.100	\$0.103	\$0.114	\$0.113	
b. Residential Customers	\$0.121	\$0.119	\$0.113	\$0.122	\$0.122	
c. Commercial Customers	\$0.113	\$0.110	\$0.110	\$0.106	\$0.112	
d. Industrial Customers	\$0.081	\$0.082	\$0.077	\$0.085	\$0.078	
2. Debt to Total Assets	0.133	0.252	0.243	0.350	0.560	
3. Operating Ratio	0.901	0.870	0.857	0.827	0.760	
4. Current Ratio	2.91	2.14	2.94	4.12	1.73	
5a. Times Interest Earned	11.02	6.72	7.17	2.86	2.85	
5b. Debt Service Coverage	4.93	4.69	4.47	3.26	3.14	
6. Net Income per Revenue Dollar	\$0.041	\$0.061	\$0.071	\$0.059	\$0.048	
7. Uncollectible Accounts per Revenue Dollar	\$0.0005	\$0.0011	\$0.0015	\$0.0009	\$0.0022	
8. Retail Customer per Non-Power Generation Employee	272	340	355	311	328	
9. Total O&M Expense per KWH Sold	\$0.091	\$0.088	\$0.081	\$0.090	\$0.070	
10. Total O&M Expense (Excluding Power Supply Exp.) per Retail Customer	\$616	\$536	\$551	\$605	\$568	
11. Total Power Supply Expense per KWH Sold	\$0.073	\$0.067	\$0.064	\$0.065	\$0.054	
12. Purchased Power Cost per KWH	\$0.071	\$0.066	\$0.062	\$0.059	\$0.059	
13. Retail Customers per Meter Reader	7,260	8,900	8,406	8,677	20,709	
14. Distribution O&M Expense per Retail Customer	\$192	\$211	\$188	\$229	\$160	
15. Distribution O&M Expense per Circuit Mile	\$6,772	\$8,146	\$7,109	\$11,133	\$10,565	
16. Customer Accounting, Service, and Sales Expense per Retail Customer	\$75	\$57	\$68	\$76	\$100	
17. Administrative and General Expense per Retail Customer	\$218	\$176	\$172	\$204	\$200	
18. Labor Expense per Worker-Hour	\$44.67	\$48.32	\$47.94	\$59.27	\$52.78	
19. Energy Loss Percentage	3.31%	3.21%	3.99%	3.33%	3.50%	
20. System Load Factor	56.6%	56.6%	51.7%	56.4%	58.0%	
21. Capital Expenditures to Depreciation Expense	0.94	1.37	1.10	1.33	1.35	

b Means and Medians are not calculated for fewer than 5 responses

TABLE B. FINANCIAL & OPERATING RATIOS: MEDIAN VALUES BY REGION						
Ratio	Northeast	Southeast	North Central/ Plains	Southwest	West	
1. Revenue per KWH						
a. All Retail Customers	\$0.142	\$0.108	\$0.098	\$0.113	\$0.087	
b. Residential Customers	\$0.158	\$0.121	\$0.117	\$0.122	\$0.101	
c. Commercial Customers	\$0.145	\$0.115	\$0.106	\$0.106	\$0.089	
d. Industrial Customers	\$0.120	\$0.077	\$0.082	\$0.087	\$0.067	
2. Debt to Total Assets	0.226	0.313	0.165	0.449	0.315	
3. Operating Ratio	0.880	0.868	0.844	0.865	0.798	
4. Current Ratio	2.29	2.68	2.70	2.85	2.97	
5a. Times Interest Earned	9.22	5.05	4.35	2.86	5.57	
5b. Debt Service Coverage	3.18	4.15	3.48	3.94	3.63	
6. Net Income per Revenue Dollar	\$0.050	\$0.040	\$0.061	\$0.081	\$0.124	
7. Uncollectible Accounts per Revenue Dollar	\$0.0030	\$0.0014	\$0.0005	\$0.0025	\$0.0014	
8. Retail Customer per Non-Power Generation Employee	333	292	332	337	322	
9. Total O&M Expense per KWH Sold	\$0.118	\$0.092	\$0.083	\$0.083	\$0.067	
10. Total O&M Expense (Excluding Power Supply Exp.) per Retail Customer	\$835	\$524	\$649	\$610	\$636	
11. Total Power Supply Expense per KWH Sold	\$0.071	\$0.075	\$0.064	\$0.063	\$0.049	
12. Purchased Power Cost per KWH	\$0.066	\$0.072	\$0.064	\$0.056	\$0.044	
13. Retail Customers per Meter Reader	8,515	7,193	9,989	10,989	10,097	
14. Distribution O&M Expense per Retail Customer	\$166	\$198	\$196	\$185	\$208	
15. Distribution O&M Expense per Circuit Mile	\$12,324	\$9,365	\$7,072	\$7,685	\$7,771	
16. Customer Accounting, Service, and Sales Expense per Retail Customer	\$103	\$69	\$62	\$55	\$91	
17. Administrative and General Expense per Retail Customer	\$207	\$177	\$259	\$238	\$181	
18. Labor Expense per Worker-Hour	\$55.80	\$41.97	\$50.11	\$47.24	\$58.96	
19. Energy Loss Percentage	3.20%	3.56%	3.13%	5.01%	3.08%	
20. System Load Factor	52.0%	53.4%	62.2%	58.7%	56.4%	
21. Capital Expenditures to Depreciation Expense	0.85	1.10	1.50	1.21	1.49	

#### TABLE C. FINANCIAL & OPERATING RATIOS: MEDIAN VALUES BY POWER GENERATION CLASS\*

Ratio	No Generation	More than 0 but less than 10%	10%-50%	50%-100%
1. Revenue per KWH				
a. All Retail Customers	\$0.107	\$0.101	\$0.091	\$0.142
b. Residential Customers	\$0.120	\$0.115	\$0.116	\$0.141
c. Commercial Customers	\$0.106	\$0.122	\$0.099	\$0.112
d. Industrial Customers	\$0.078	\$0.083	\$0.078	\$0.093
2. Debt to Total Assets	0.236	0.270	0.486	0.521
3. Operating Ratio	0.877	0.846	0.814	0.709
9. Total O&M Expense per KWH Sold	\$0.091	\$0.086	\$0.079	\$0.072
11. Total Power Supply Expense per KWH Sold	\$0.072	\$0.065	\$0.063	\$0.056
12. Purchased Power Cost per KWH	\$0.070	\$0.061	\$0.066	\$0.049
17. Administrative and General Expense per Retail Customer	\$177	\$208	\$223	\$236
18. Labor Expense per Worker-Hour	\$48.16	\$47.36	\$53.49	\$54.97
19. Energy Loss Percentage	3.54%	3.00%	3.27%	3.42%
21. Capital Expenditures to Depreciation Expense	1.20	1.71	1.13	0.88

 $^{\ast}$  Only those ratios affected by power generation are included in this table

## III. DETAILED TABLES



he following tables present a detailed breakdown of each of the 21 ratios. Each table includes the ratio by customer count, region, and generation class. The numbers of responses are presented along with the mean, median, and first and third quartiles of the ratio for each class.

### 1. Revenue per Kilowatt-hour

**a.** All retail customers – The ratio of total electric operating revenues from sales to ultimate customers to total kilowatt-hour sales. This ratio measures the revenue received for each kilowatt-hour of electricity sold to all classes of customers, including residential, commercial, industrial, public street and highway lighting, and other customers.

**b.** Residential customers – The ratio of residential revenue to residential sales. This ratio measures the revenue received for each kilowatt-hour of electricity sold to residential customers.

**c. Commercial customers** – The ratio of commercial revenue to commercial sales. This ratio measures the revenue received for each kilowatt-hour of electricity sold to commercial customers.

**d. Industrial customers** – The ratio of industrial revenue to industrial sales. This ratio measures the revenue received for each kilowatt-hour of electricity sold to industrial customers.

The definition of commercial and industrial customers may vary between utilities, with the resulting classification based on specific load characteristics or demand rather than on a popular definition of "commercial" or "industrial." Revenue and sales data include only full-service (bundled sales), thus data for customers who purchase power from an alternative supplier are excluded.

More detailed revenue-per-kilowatt hour data, including data for all retail electric utilities in the United States, can be found on APPA's stats and facts page at

www.PublicPower.org/Public-Power/Stats-and-Facts.

TABLE 1A. REVENUE P	ER KILOWATT-HOUR: AL	L RETAIL CUSTOMERS

	Utilities	Mean (weighted)	First Quartile	Median	Third Quartile
Total	147	\$0.125	\$0.088	\$0.105	\$0.122
1. Customer Count					
5,000 to 10,000 Customers	28	0.097	0.089	0.105	0.122
10,000 to 20,000 Customers	37	0.092	0.087	0.100	0.116
20,000 to 50,000 Customers	35	0.103	0.089	0.103	0.117
50,000 to 100,000 Customers	20	0.100	0.097	0.114	0.124
More than 100,000 Customers	23	0.137	0.097	0.113	0.125
2. Region					
Northeast	12	0.215	0.118	0.142	0.170
Southeast	55	0.135	0.100	0.108	0.118
North Central/Plains	37	0.093	0.084	0.098	0.122
Southwest	13	0.108	0.098	0.113	0.120
West	30	0.106	0.076	0.087	0.108
3. Generation					
No generation	88	0.110	0.089	0.107	0.119
More than 0 but less than 10%	25	0.152	0.089	0.101	0.120
10%-50%	17	0.105	0.084	0.091	0.101
50%-100%	17	0.135	0.092	0.121	0.146

#### TABLE 1B. REVENUE PER KILOWATT-HOUR: RESIDENTIAL CUSTOMERS

	Utilities	Mean (weighted)	First Quartile	Median	Third Quartile
Total	137	\$0.143	\$0.106	\$0.120	\$0.135
1. Customor Count					
5,000 to 10,000 Customers	21	0.112	0.097	0.121	0.135
10,000 to 20,000 Customers	36	0.114	0.109	0.119	0.131
20,000 to 50,000 Customers	35	0.114	0.100	0.113	0.124
50,000 to 100,000 Customers	20	0.121	0.109	0.122	0.140
More than 100,000 Customers	23	0.153	0.117	0.122	0.146
2. Region					
Northeast	11	0.236	0.099	0.158	0.174
Southeast	53	0.148	0.113	0.121	0.131
North Central/Plains	33	0.117	0.103	0.117	0.133
Southwest	13	0.121	0.109	0.122	0.138
West	27	0.123	0.090	0.101	0.124
3. Generation					
No generation	78	0.120	0.109	0.120	0.131
More than 0 but less than 10%	25	0.189	0.099	0.115	0.133
10%-50%	17	0.123	0.097	0.116	0.123
50%-100%	17	0.152	0.117	0.141	0.163

TABLE 1C. REVENUE PER KWH: COMMERCIAL CUSTOMERS					
	Utilities	Mean (weighted)	First Quartile	Median	Third Quartile
Total	137	\$0.132	\$0.094	\$0.111	\$0.123
1. Customer Count					
5,000 to 10,000 Customers	21	0.109	0.095	0.113	0.120
10,000 to 20,000 Customers	36	0.108	0.090	0.110	0.120
20,000 to 50,000 Customers	35	0.109	0.089	0.110	0.124
50,000 to 100,000 Customers	20	0.107	0.096	0.106	0.124
More than 100,000 Customers	23	0.141	0.101	0.112	0.123
2. Region					
Northeast	11	0.208	0.107	0.145	0.166
Southeast	53	0.146	0.105	0.115	0.121
North Central/Plains	33	0.098	0.092	0.106	0.117
Southwest	13	0.105	0.099	0.106	0.116
West	27	0.115	0.077	0.089	0.108
3. Generation					
No generation	78	0.115	0.095	0.113	0.122
More than 0 but less than 10%	25	0.165	0.095	0.106	0.120
10%-50%	17	0.110	0.089	0.099	0.105
50%-100%	17	0.141	0.094	0.112	0.146

#### TABLE 1D. REVENUE PER KWH: INDUSTRIAL CUSTOMERS

	Utilities	Mean (weighted)	First Quartile	Median	Third Quartile
Total	122	\$0.080	\$0.067	\$0.079	\$0.094
1. Customer Count					
5,000 to 10,000 Customers	20	0.075	0.072	0.081	0.091
10,000 to 20,000 Customers	31	0.068	0.063	0.082	0.093
20,000 to 50,000 Customers	29	0.073	0.066	0.077	0.090
50,000 to 100,000 Customers	19	0.062	0.065	0.085	0.102
More than 100,000 Customers	21	0.090	0.069	0.078	0.097
2. Region					
Northeast	10	0.094	0.066	0.120	0.129
Southeast	47	0.088	0.071	0.077	0.090
North Central/Plains	31	0.069	0.068	0.082	0.098
Southwest	10	0.077	0.071	0.087	0.093
West	24	0.076	0.059	0.067	0.091
3 Generation					
No generation	69	0.078	0.069	0.078	0.093
More than 0 but less than 10%	22	0.062	0.065	0.083	0.091
10%-50%	16	0.074	0.068	0.078	0.092
50%-100%	15	0.092	0.071	0.093	0.108

### 2. Debt to Total Assets

The ratio of long-term debt, plus current and accrued liabilities, to total assets and other debits. This ratio measures a utility's ability to meet its current and long-term liabilities based on the availability of assets.

Long-term debt includes bonds, advances from the municipality, other long-term debt, any unamortized premium on long-term debt, and any unamortized discount on long-term debt. Current and accrued liabilities include warrants, notes and accounts payable, payables to the municipality, customer deposits, taxes accrued, interest accrued, and miscellaneous current and accrued liabilities. Total assets and other debits include utility plant, investments, current and accrued assets, and deferred debits.

This ratio may be influenced by the extent to which its components include information applicable to a non-electric portion of the utility (e.g., gas or water). In addition, the ratio may be influenced by a utility's financial policies.

#### TABLE 2. DEBT TO TOTAL ASSETS

	Utilities	Mean (weighted)	First Quartile	Median	Third Quartile
Total	146	0.667	0.146	0.289	0.482
1. Customer Count					
5,000 to 10,000 Customers	27	0.162	0.079	0.133	0.234
10,000 to 20,000 Customers	37	0.288	0.115	0.252	0.387
20,000 to 50,000 Customers	35	0.297	0.175	0.243	0.428
50,000 to 100,000 Customers	20	0.408	0.252	0.350	0.532
More than 100,000 Customers	23	0.754	0.481	0.560	0.749
2. Region					
Northeast	12	0.696	0.108	0.226	0.532
Southeast	54	0.826	0.165	0.313	0.514
North Central/Plains	37	0.412	0.093	0.165	0.383
Southwest	13	0.619	0.324	0.449	0.634
West	30	0.571	0.215	0.315	0.387
3. Generation					
No generation	87	0.397	0.133	0.236	0.392
More than 0 but less than 10%	25	0.644	0.103	0.270	0.536
10%-50%	17	0.608	0.249	0.486	0.561
50%-100%	17	0.758	0.377	0.521	0.698

## 3. Operating Ratio

The ratio of total electric operation and maintenance expenses to total electric operating revenues. This ratio measures the proportion of revenues received from electricity sales, rate adjustments, and other electric activities required to cover the operation and maintenance costs associated with producing and selling electricity. Operation and maintenance expenses include the costs of power production, purchased power, transmission, distribution, customer accounting, customer service, sales, and administrative and general expenses. This ratio may be influenced by the availability of alternative power options and the costs of purchased power.

### TABLE 3. OPERATING RATIO

	Utilities	Mean (weighted)	First Quartile	Median	Third Quartile
Total	142	0.880	0.764	0.856	0.917
1. Customer Count					
5,000 to 10,000 Customers	26	0.902	0.838	0.901	0.931
10,000 to 20,000 Customers	37	0.881	0.803	0.870	0.917
20,000 to 50,000 Customers	33	0.841	0.806	0.857	0.913
50,000 to 100,000 Customers	20	0.852	0.732	0.827	0.856
More than 100,000 Customers	22	0.888	0.691	0.760	0.853
2. Region					
Northeast	11	1.293	0.852	0.880	1.042
Southeast	52	0.908	0.819	0.868	0.923
North Central/Plains	37	0.798	0.766	0.844	0.892
Southwest	13	0.736	0.746	0.865	0.905
West	29	0.755	0.709	0.798	0.871
3. Generation					
No generation	83	0.887	0.823	0.877	0.936
More than 0 but less than 10%	25	1.162	0.776	0.846	0.913
10%-50%	17	0.800	0.766	0.814	0.880
50%-100%	17	0.788	0.664	0.709	0.755

## 4. Current Ratio

The ratio of total current and accrued assets to total current and accrued liabilities. This is a measure of the utility's short-term liquidity (i.e., the ability to pay bills). The current ratio takes a snapshot of the utility's liquidity at a point in time and thus may vary considerably at other times of the year.

Total current and accrued assets include cash and working funds, temporary cash investments, notes and accounts receivable,

receivables from the municipality, materials and supplies, prepayments, and miscellaneous current and accrued assets. Total current and accrued liabilities include warrants, notes and accounts payable, payables to the municipality, customer deposits, taxes accrued, interest accrued, and miscellaneous current and accrued liabilities.

#### **TABLE 4. CURRENT RATIO**

	Utilities	Mean (weighted)	First Quartile	Median	Third Quartile
Total	146	1.40	1.80	2.72	4.98
1. Customer Count					
5,000 to 10,000 Customers	28	4.56	1.86	2.91	6.43
10,000 to 20,000 Customers	36	1.94	1.51	2.05	6.24
20,000 to 50,000 Customers	35	2.96	2.20	2.94	4.07
50,000 to 100,000 Customers	20	4.10	2.92	4.12	5.90
More than 100,000 Customers	23	1.12	1.13	1.73	2.32
2. Region					
Northeast	11	1.83	1.80	2.24	4.50
Southeast	55	1.07	1.46	2.68	4.77
North Central/Plains	37	3.11	1.87	2.70	6.50
Southwest	13	1.43	1.80	2.85	4.08
West	30	1.34	2.37	2.97	4.19

## 5a. Times Interest Earned

The ratio of net income, plus interest on long-term debt, to interest on long-term debt. This ratio measures the ability of a utility to cover interest charges and is indicative of the safety margin to lenders. Utilities that do not report any long-term debt are excluded from this ratio.

This ratio might be influenced by a utility's financial policies.

TABLE 5A. TIMES INTEREST EARNE	D				
	Utilities	Mean (weighted)	First Quartile	Median	Third Quartile
Total	116	1.45	2.16	4.93	10.92
1. Customer Count					
5,000 to 10,000 Customers	16	6.37	2.26	11.02	36.42
10,000 to 20,000 Customers	27	7.90	4.06	6.72	17.79
20,000 to 50,000 Customers	26	5.44	4.44	7.17	10.96
50,000 to 100,000 Customers	20	2.67	1.74	2.86	4.63
More than 100,000 Customers	23	1.13	1.20	2.85	3.69
2. Region					
Northeast	7	1.31	а	9.22	а
Southeast	46	-0.18	1.94	5.05	10.45
North Central/Plains	24	2.14	2.27	4.35	21.75
Southwest	13	2.45	2.05	2.86	7.66
West	26	3.00	3.03	5.57	10.24

a. Quartiles are not calculated for fewer than 9 responses

## 5b. Debt Service Coverage

The ratio of net revenues available for debt service to total longterm debt service for the year. This ratio measures the utility's ability to meet its annual long-term debt obligation. Net revenues available for debt service equal operating electric income plus depreciation expenses plus interest payment on long-term debt. Operating electric income represents operating revenues minus operating expenses.

This ratio might be influenced by a utility's financial policies.

#### TABLE 5B. DEBT SERVICE COVERAGE

_	Utilities	Mean (weighted)	First Quartile	Median	Third Quartile
Total	120	1.90	2.39	3.80	7.41
1. Customer Count					
5,000 to 10,000 Customers	17	2.44	3.47	4.93	13.86
10,000 to 20,000 Customers	27	1.11	2.47	4.69	8.55
20,000 to 50,000 Customers	29	3.41	2.11	4.47	7.10
50,000 to 100,000 Customers	20	0.74	2.09	3.26	5.14
More than 100,000 Customers	23	2.45	2.42	3.14	3.92
2. Region					
Northeast	8	1.83	а	3.18	а
Southeast	48	2.11	2.37	4.15	7.87
North Central/Plains	24	0.67	2.38	3.48	11.64
Southwest	13	3.51	2.39	3.94	11.93
West	27	2.85	2.55	3.63	6.58

a. Quartiles are not calculated for fewer than 9 responses

## 6. Net Income per Revenue Dollar

The ratio of net income to total electric operating revenues. This ratio measures the amount of income remaining after accounting for operation and maintenance expenses, depreciation, taxes and tax equivalents, for every dollar received from sales of electricity.

supply options and by the amount of taxes and tax equivalents that a utility transfers to the municipality or other governmental body. Financial policies and the amount of debt may also affect this ratio (e.g., how a utility finances capital investments).

The ratio might be influenced by the type and availability of power

#### TABLE 6. NET INCOME PER REVENUE DOLLAR

	Utilities	Mean (weighted)	First Quartile	Median	Third Quartile
Total	146	\$0.025	\$0.026	\$0.054	\$0.114
1. Customer Count					
5,000 to 10,000 Customers	28	0.052	0.023	0.041	0.088
10,000 to 20,000 Customers	37	0.081	0.031	0.061	0.120
20,000 to 50,000 Customers	34	0.082	0.034	0.071	0.132
50,000 to 100,000 Customers	20	0.060	0.020	0.059	0.090
More than 100,000 Customers	23	0.008	0.015	0.048	0.096
2. Region					
Northeast	12	0.025	0.015	0.050	0.108
Southeast	55	-0.048	0.020	0.040	0.064
North Central/Plains	37	0.053	0.029	0.061	0.110
Southwest	13	0.091	0.040	0.081	0.121
West	29	0.102	0.048	0.124	0.171

## 7. Uncollectible Accounts per Revenue Dollar

The ratio of total uncollectible accounts to total electric utility operating revenues. This ratio measures the portion of each revenue dollar that will not be collected by the utility. This ratio will be influenced by the financial and customer service policies of the utility.

### TABLE 7. UNCOLLECTIBLE ACCOUNTS PER REVENUE DOLLAR

	Utilities	Mean (weighted)	First Quartile	Median	Third Quartile
Total	147	\$0.0320	\$0.0004	\$0.0012	\$0.0023
1. Customer Count					
5,000 to 10,000 Customers	28	0.0007	0.0000	0.0005	0.0009
10,000 to 20,000 Customers	37	0.0080	0.0004	0.0011	0.0021
20,000 to 50,000 Customers	35	0.0029	0.0007	0.0015	0.0024
50,000 to 100,000 Customers	20	0.0014	0.0003	0.0009	0.0023
More than 100,000 Customers	23	0.0433	0.0011	0.0022	0.0067
2. Region					
Northeast	12	0.0082	0.0014	0.0030	0.0069
Southeast	55	0.0665	0.0005	0.0014	0.0020
North Central/Plains	37	0.0013	0.0001	0.0005	0.0011
Southwest	13	0.0191	0.0006	0.0025	0.0044
West	30	0.0054	0.0003	0.0014	0.0025

## 8. Retail Customers per Non-power-generation Employee

The ratio of the average number of retail customers from all classes to the total number of full-time, part-time, and contract employees not involved in the generation of power. This ratio measures the average number of customers served by each non-generation employee.

The ratio may be influenced by the mix of customers and by population density. It will be influenced by the extent that employees shared with other (non-electric) departments are not properly prorated, or that employees involved in resale transactions are included. Part-time employees are assumed to work halftime (i.e., two part-time employees are counted as one full-time employee). To the extent that this assumption is violated, the ratio will be biased. Contract employees include only those individuals performing regular utility work on an ongoing basis.

#### TABLE 8. RETAIL CUSTOMERS PER NON-POWER-GENERATION EMPLOYEE

	Utilities	Mean (weighted)	First Quartile	Median	Third Quartile
Total	144	366	264	325	422
1. Customer Count					
5,000 to 10,000 Customers	28	271	226	272	365
10,000 to 20,000 Customers	37	317	278	340	457
20,000 to 50,000 Customers	35	343	263	355	456
50,000 to 100,000 Customers	20	295	291	311	370
More than 100,000 Customers	22	391	275	328	419
2. Region					
Northeast	12	402	258	333	388
Southeast	55	419	251	292	409
North Central/Plains	37	275	267	332	466
Southwest	13	302	303	337	389
West	27	374	291	322	455

## 9. Total Operation and Maintenance Expense per Kilowatt-hour Sold

The ratio of total electric utility operation and maintenance expenses, including the cost of generated and purchased power, to total kilowatt-hour sales to ultimate and resale customers. This ratio measures average total operation and maintenance expenses associated with each kilowatt-hour of electricity sold, either for resale or to ultimate customers.

Included in operation and maintenance costs are the expenses associated with power supply (generation and purchased power), transmission, distribution, customer accounting, customer services, sales, and administrative and general functions of the electric utility. Because power supply expenses typically comprise the largest component of total operation and maintenance expenses, this ratio might be influenced by the proportion of power generated by a utility and the availability of alternative power supplies. Kilowatt-hours of electricity produced but not sold (e.g., energy furnished without charge, energy used internally, and energy losses) are not included in the denominator.

#### TABLE 9. TOTAL O&M EXPENSE PER KWH SOLD

	Utilities	Mean (weighted)	First Quartile	Median	Third Quartile
Total	144	\$0.086	\$0.067	\$0.087	\$0.107
1. Customer Count					
5,000 to 10,000 Customers	27	0.100	0.074	0.091	0.107
10,000 to 20,000 Customers	37	0.083	0.071	0.088	0.117
20,000 to 50,000 Customers	34	0.084	0.077	0.081	0.104
50,000 to 100,000 Customers	20	0.056	0.067	0.090	0.101
More than 100,000 Customers	22	0.095	0.058	0.070	0.107
2. Region					
Northeast	12	0.151	0.051	0.118	0.150
Southeast	52	0.097	0.081	0.092	0.105
North Central/Plains	37	0.050	0.071	0.083	0.094
Southwest	13	0.073	0.073	0.083	0.110
West	30	0.080	0.058	0.067	0.087
3. Generation					
No generation	85	0.090	0.075	0.091	0.113
More than 0 but less than 10%	25	0.117	0.065	0.086	0.101
10%-50%	17	0.087	0.071	0.079	0.087
50%-100%	17	0.072	0.058	0.072	0.101

## 10. Total Operation and Maintenance Expense (Excluding Power Supply Expense) per Retail Customer

The ratio of total electric utility operation and maintenance expenses, excluding all costs of power supply, to the total number of ultimate customers.

Operation and maintenance expenses include the costs of transmission, distribution, customer accounting, customer services, sales, and administrative and general expenses. The costs of power supply (generation and purchased power) are excluded from the ratio. This ratio might be affected by population density and the mix of customers between various classes (residential, commercial, industrial, or other). Also, the extent to which a utility services resale customers will influence the ratio.

#### TABLE 10. TOTAL O&M EXPENSE (EXCLUDING POWER SUPPLY EXPENSE) PER RETAIL CUSTOMER

	Utilities	Mean (weighted)	First Quartile	Median	Third Quartile
Total	140	855	402	605	779
1. Customer Count					
5,000 to 10,000 Customers	25	723	521	616	960
10,000 to 20,000 Customers	37	693	404	536	772
20,000 to 50,000 Customers	34	597	384	551	743
50,000 to 100,000 Customers	19	734	459	605	713
More than 100,000 Customers	22	915	330	568	803
2. Region					
Northeast	11	2,643	567	835	1,311
Southeast	51	577	363	524	620
North Central/Plains	37	859	508	649	782
Southwest	12	642	391	610	999
West	29	626	454	636	778

## 11. Total Power Supply Expense per Kilowatt-hour Sold

The ratio of the total costs of power supply to total sales to both ultimate and resale customers. This ratio measures all power supply costs, including generation and purchased power, associated with the sale of each kilowatt-hour of electricity.

The ratio includes operation and maintenance costs arising from all generation types, including steam, nuclear, hydraulic, and other types of generation. Operation and maintenance expenses include the costs of fuel, labor, supervision, engineering, materials and supplies, and also include the costs of purchased power. The ratio may be influenced by the geographic location of the utility, the availability of alternative power supplies, the degree to which the utility can generate its own power, and access to transmission. The ratio does not include kilowatt-hours produced but not sold (e.g., energy used internally, energy furnished without charge, or energy losses).

## TABLE 11. TOTAL POWER SUPPLY EXPENSE PER KWH SOLD

	Utilities	Mean (weighted)	First Quartile	Median	Third Quartile
Total	134	\$0.059	\$0.049	\$0.065	\$0.077
1. Customer Count					
5,000 to 10,000 Customers	20	0.068	0.061	0.073	0.077
10,000 to 20,000 Customers	36	0.065	0.056	0.067	0.076
20,000 to 50,000 Customers	34	0.062	0.057	0.064	0.080
50,000 to 100,000 Customers	20	0.040	0.050	0.065	0.073
More than 100,000 Customers	22	0.064	0.042	0.054	0.085
2. Region					
Northeast	11	0.065	0.053	0.071	0.084
Southeast	50	0.077	0.066	0.075	0.087
North Central/Plains	33	0.035	0.055	0.064	0.076
Southwest	13	0.050	0.048	0.063	0.067
West	27	0.055	0.039	0.049	0.061
3. Generation					
No generation	75	0.070	0.057	0.072	0.081
More than 0 but less than 10%	25	0.060	0.055	0.065	0.074
10%-50%	17	0.059	0.052	0.063	0.064
50%-100%	17	0.053	0.042	0.056	0.065

## 12. Purchased Power Cost per Kilowatt-hour

The ratio of the cost of purchased power to the kilowatt-hours purchased. This ratio measures the purchased power component of power supply costs.

Purchased power includes purchases from investor-owned utilities, municipalities, cooperatives or other public authorities for subsequent distribution and sale to ultimate customers. It does not include power exchanges. Adjustments to the cost data were made in a few cases to eliminate power exchanges. The cost reflects the amount billed, including adjustments and other charges.

The ratio might be influenced by the geographic location of the utility, availability of alternative power supplies, access to transmission, and the type of purchase agreement, such as firm power, economy power, or surplus sales.

#### TABLE 12. PURCHASED POWER COST PER KWH

	Utilities	Mean (weighted)	First Quartile	Median	Third Quartile
Total	136	\$0.060	\$0.047	\$0.065	\$0.075
1. Customer Count					
5,000 to 10,000 Customers	21	0.064	0.058	0.071	0.076
10,000 to 20,000 Customers	36	0.063	0.055	0.066	0.075
20,000 to 50,000 Customers	35	0.059	0.049	0.062	0.076
50,000 to 100,000 Customers	20	0.049	0.046	0.059	0.070
More than 100,000 Customers	22	0.063	0.041	0.059	0.085
2. Region					
Northeast	11	0.062	0.051	0.066	0.080
Southeast	52	0.071	0.066	0.072	0.079
North Central/Plains	33	0.046	0.051	0.064	0.075
Southwest	13	0.046	0.044	0.056	0.064
West	27	0.058	0.038	0.044	0.056
3. Generation					
No generation	78	0.067	0.053	0.070	0.076
More than 0 but less than 10%	25	0.055	0.047	0.061	0.069
10%-50%	17	0.058	0.049	0.066	0.075
50%-100%	16	0.054	0.041	0.049	0.071

### 13. Retail Customers per Meter Reader

The ratio of retail customers to the number of meter readers employed by the utility. This measures the average number of retail customers served by each meter reader.

The number of meter readers includes the total number of full-time meter readers plus half of all part-time meter readers. It is assumed that all part-time employees work half-time (i.e., one full-time employee is equivalent to two part-time employees). Population density, frequency of meter readings, and the technology or methods used to read meters will influence the ratio.

As more utilities implement advanced meters that can gather usage data without having to send a meter reader to the customer's residence or business, utilities require fewer meter readers to cover their service territories. Some utilities have installed advanced meters across their entire service territory and no longer employ meter readers. These utilities have been excluded from the customer count and region summaries of this ratio. However, utilities with zero meter readers are captured in the last part of this ratio, which shows the percentage of a utility's customers that have advanced meters installed.

The first and third quartile and median figures in this final category still reflect only those utilities with at least one meter reader. The weighted mean in this category does include all utilities, with or without meter readers. Overall, 56 utilities reported zero meter readers, and all of them but one were in the "80% or more" class for advanced meter deployment.

TABLE 13. RETAIL CUSTOMERS PER METER READER					
	Utilities	Mean (weighted)	First Quartile	Median	Third Quartile
Total*	91	11,541	5,606	8,618	14,931
1. Customer Count					
5,000 to 10,000 Customers	12	6,577	6,462	7,260	8,881
10,000 to 20,000 Customers	25	6,783	5,493	8,900	13,975
20,000 to 50,000 Customers	21	6,803	4,849	8,406	10,479
50,000 to 100,000 Customers	12	8,407	6,795	8,677	19,694
More than 100,000 Customers	18	14,008	9,738	20,709	42,074
2. Region					
Northeast	7	20,365	а	8,515	а
Southeast	34	8,426	3,981	7,193	10,964
North Central/Plains	24	19,507	5,332	9,989	25,697
Southwest	6	15,713	а	10,989	а
West	20	9,768	6,098	10,097	15,422
3. Advanced Meter Percent**					
No advanced meters	3	b	a	b	а
More than 0 but less than 40%	7	4,563	а	3,887	а
40 to 80%	9	8,355	6,086	8,406	9,999
80% or more	130	20,878	7,057	10,124	17,508

a Quartiles are not calculated for fewer than 9 responses

b Means and medians are not calculated for fewer than 5 responses

\* Total figure only includes utilities with at least one meter reader

\*\*Weighted Mean and Utility Count includes utilities with zero meter readers

## 14. Distribution Operation and Maintenance Expenses per Retail Customer

The ratio of total distribution operation and maintenance expenses to the total number of retail customers. This ratio measures the average distribution expense associated with delivering power to each retail customer.

Distribution costs include expenses associated with labor, supervision, engineering, materials, and supplies used in the operation and maintenance of the distribution system. Population density and the mix of customer classes served by the utility will influence the ratio.

Utilities that do not allocate expenses to all three categories of (1) distribution expense; (2) customer accounting, customer service, and sales expense; and (3) administrative and general expense are excluded from ratios 14 through 17.

#### TABLE 14. DISTRIBUTION O&M EXPENSES PER RETAIL CUSTOMER

	Utilities	Mean (weighted)	First Quartile	Median	Third Quartile
Total	133	\$198	\$151	\$197	\$276
1. Customer Count					
5,000 to 10,000 Customers	24	221	150	192	258
10,000 to 20,000 Customers	36	251	180	211	317
20,000 to 50,000 Customers	34	215	149	188	254
50,000 to 100,000 Customers	18	237	166	229	319
More than 100,000 Customers	19	184	132	160	204
2. Region					
Northeast	10	199	140	166	251
Southeast	51	205	153	198	285
North Central/Plains	35	212	144	196	252
Southwest	11	167	157	185	235
West	26	201	170	208	321

## 15. Distribution Operation and Maintenance Expenses per Circuit Mile

The ratio of distribution operation and maintenance expenses to the total circuit miles of distribution line. This measures the total distribution costs associated with each circuit mile of distribution line used to deliver power to customers.

Distribution costs include expenses associated with labor, supervision, engineering, materials, and supplies used in the operation and maintenance of the distribution system. The ratio will be affected by population density, the mix of customer classes served by the utility, the dispersion of customers within the utility's service territory, and the proportion of underground and overhead distribution lines.

Utilities that do not allocate expenses to all three categories of (1) distribution expense; (2) customer accounting, customer service, and sales expense; and (3) administrative and general expense are excluded from ratios 14 through 17.

#### TABLE 15. DISTRIBUTION O&M EXPENSES PER CIRCUIT MILE

	Utilities	Mean (weighted)	First Quartile	Median	Third Quartile
Total	133	\$9,703	\$5,280	\$7,987	\$14,611
1. Customer Count					
5,000 to 10,000 Customers	24	5,737	4,950	6,772	10,443
10,000 to 20,000 Customers	36	9,642	5,597	8,146	16,472
20,000 to 50,000 Customers	34	6,546	4,282	7,109	12,065
50,000 to 100,000 Customers	18	10,285	6,512	11,133	19,275
More than 100,000 Customers	19	10,609	6,708	10,565	14,253
2. Region					
Northeast	10	12,487	7,891	12,324	18,835
Southeast	51	9,650	5,692	9,365	14,946
North Central/Plains	35	11,197	4,359	7,072	10,998
Southwest	11	7,924	6,168	7,685	13,144
West	26	10,516	5,286	7,771	13,259

## 16. Customer Accounting, Customer Service, and Sales Expenses per Retail Customer

The ratio of total customer accounting, service, and sales expenses to the total number of retail customers. This ratio measures the average expenses incurred by the utility in handling each customer's account. This includes the costs of obtaining and servicing all retail customers. Uncollectible accounts and meter reading expenses are included in this ratio.

The ratio includes the costs of labor, materials, and other expenses associated with advertising, billing, collections, records, and handling inquiries and complaints. It also includes the costs of promoting and providing customer service programs such as energy services or conservation programs. The ratio will be influenced by the degree to which the utility provides various energy services and other types of customer programs and by the mix of customer classes it serves.

Utilities that do not allocate expenses to all three categories of (1) distribution expense; (2) customer accounting, customer service, and sales expense; and (3) administrative and general expense are excluded from ratios 14 through 17.

#### TABLE 16. CUSTOMER ACCOUNTING, CUSTOMER SERVICE, AND SALES EXPENSE PER RETAIL CUSTOMER

	Utilities	Mean (weighted)	First Quartile	Median	Third Quartile
Total	133	\$102	\$52	\$72	\$103
1. Customer Count					
5,000 to 10,000 Customers	24	75	46	75	98
10,000 to 20,000 Customers	36	73	47	57	86
20,000 to 50,000 Customers	34	84	54	68	101
50,000 to 100,000 Customers	18	91	59	76	108
More than 100,000 Customers	19	108	72	100	128
2. Region					
Northeast	10	142	61	103	169
Southeast	51	84	56	69	96
North Central/Plains	35	103	45	62	90
Southwest	11	79	46	55	104
West	26	156	74	91	125

## 17. Administrative and General Expenses per Retail Customer

The ratio of total electric utility administrative and general expenses to the total number of retail customers. This ratio measures the average administrative and general expenses incurred by the utility on behalf of each retail customer.

Administrative and general expenses are those electric operation and maintenance expenses not allocable to the costs of power production (generation and power purchases), transmission, distribution, or customer accounting, service, and sales. Items which may be included are compensation of officers and executives, office supplies, professional fees, property insurance and claims, pensions and benefits, and other expenses not provided for elsewhere.

Utilities that do not allocate expenses to all three categories of (1) distribution expense; (2) customer accounting, customer service, and sales expense; and (3) administrative and general expense are excluded from ratios 14 through 17.

The amount and type of the utility's generation might affect the ratio.

#### TABLE 17. ADMINISTRATIVE AND GENERAL EXPENSES PER RETAIL CUSTOMER

	Utilities	Mean (weighted)	First Quartile	Median	Third Quartile
Total	133	\$247	\$130	\$195	\$298
1. Customer Count					
5,000 to 10,000 Customers	24	284	182	218	363
10,000 to 20,000 Customers	36	230	111	176	333
20,000 to 50,000 Customers	34	203	126	172	256
50,000 to 100,000 Customers	18	283	159	204	295
More than 100,000 Customers	19	247	128	200	245
2. Region					
Northeast	10	329	153	207	423
Southeast	51	242	129	177	244
North Central/Plains	35	354	170	259	352
Southwest	11	252	143	238	334
West	26	194	127	181	266
3. Generation					
No generation	79	197	129	177	282
More than 0 but less than 10%	23	202	128	208	341
10%-50%	17	284	154	223	276
50%-100%	14	269	169	236	372

### 18. Labor Expense per Worker-hour

The ratio of total annual earnings of full-time, part-time, and contract labor employees to the total number of hours worked during the year by these employees. This ratio measures the actual cost of labor to the utility.

Total annual earnings include all payroll compensation received by full-time, part-time, or contract employees, including straight-time pay, overtime pay, and payment for time not worked, such as sick pay, vacation pay, holiday pay, or other payments. Fringe benefits, such as health care premiums paid by the employer, are excluded. Hours worked includes total productive hours spent at work, including both straight time and overtime hours worked. Hours paid but not worked, such as on holidays or other paid leave, are not included. This is not the same as a wage rate, which is simply the earnings per hour. A wage rate generally includes hours not worked (such as vacation or sick pay).

Part-time, and contract employees without all three categories of (1) number of employees, (2) earnings, and (3) hours worked were dropped from the total number.

	Utilities	Mean (weighted)	First Quartile	Median	Third Quartile
Total	143	\$54.20	\$41.89	\$48.76	\$57.31
1. Customer Count					
5,000 to 10,000 Customers	27	44.19	37.91	44.67	52.19
10,000 to 20,000 Customers	37	46.68	42.01	48.32	51.57
20,000 to 50,000 Customers	34	49.29	42.51	47.94	56.32
50,000 to 100,000 Customers	20	56.10	46.75	59.27	64.79
More than 100,000 Customers	22	54.92	43.81	52.78	59.68
2. Region					
Northeast	12	69.52	53.22	55.80	61.73
Southeast	53	44.56	36.80	41.97	48.90
North Central/Plains	37	59.39	44.84	50.11	53.87
Southwest	13	52.47	40.42	47.24	57.09
West	28	65.50	50.34	58.96	66.72
3. Generation					
No generation	85	46.74	40.91	48.16	53.65
More than 0 but less than 10%	25	59.44	43.45	47.36	60.05
10%-50%	17	59.26	44.77	53.49	58.83
50%-100%	16	54.56	44 46	54.97	64.66

## **19. Energy Loss Percentage**

The ratio of total energy losses to total sources of energy. This ratio measures how much energy is lost in the utility's electrical system and is an indicator of the efficiency of the electrical system. It represents the percentage of electrical energy that is bought or generated by the utility but is not available to be sold to customers (or for the utility's own use). Losses include both physical losses that occur in the distribution system and metering and billing losses. Generation, purchases, net exchanges, and net wheeling are all included in total sources of energy.

#### TABLE 19. ENERGY LOSS PERCENTAGE

	Litilition	Mean	Eirot Quartila	Modion	Third Quartila
	Oundes	(weighted)	First Quartile	weatan	mira Quartile
Total	134	4.05	2.67	3.41	4.44
1. Customer Count					
5,000 to 10,000 Customers	21	2.64	1.68	3.31	4.21
10,000 to 20,000 Customers	35	2.42	2.41	3.21	4.07
20,000 to 50,000 Customers	34	3.79	2.90	3.99	5.46
50,000 to 100,000 Customers	20	3.60	2.65	3.33	4.35
More than 100,000 Customers	22	4.40	3.23	3.50	4.31
2. Region					
Northeast	10	5.43	2.51	3.20	4.18
Southeast	52	4.31	3.08	3.56	4.86
North Central/Plains	32	3.66	1.72	3.13	3.74
Southwest	13	4.14	3.77	5.01	5.55
West	27	3.10	2.35	3.08	4.07
3. Generation					
No generation	77	3.91	2.85	3.54	4.59
More than 0 but less than 10%	24	4.63	1.48	3.00	4.39
10%-50%	17	3.28	2.95	3.27	4.79
50%-100%	16	4.17	2.69	3.42	4.00

## 20. System Load Factor

The ratio of the system average load, total sales plus losses (in megawatt-hours) divided by 8,760 (hours), to system peak demand (typically a summer or winter peak measured during a particular hour at all delivery points and generator busses on a totalized basis).

System load factor is descriptive of the total system load characteristics. It tells system planners how much the overall system load varies diurnally and seasonally. It is a very broad indicator. It also provides financial planners with information about how to spread fixed costs across energy sales. This gives financial planners and rate designers information to support greater unbundling of fixed and variable costs — a goal of competitive rate design.

#### TABLE 20. SYSTEM LOAD FACTOR

		Mean			
	Utilities	(weighted)	First Quartile	Median	Third Quartile
Total	137	59.1	50.5	56.4	64.7
1. Customer Count					
5,000 to 10,000 Customers	21	61.6	52.4	56.6	64.4
10,000 to 20,000 Customers	36	66.3	51.9	56.6	63.8
20,000 to 50,000 Customers	35	53.5	47.7	51.7	60.3
50,000 to 100,000 Customers	20	68.6	51.8	56.4	73.9
More than 100,000 Customers	23	56.6	53.6	58.0	66.7
2. Region					
Northeast	11	42.9	49.0	52.0	56.9
Southeast	53	55.9	49.5	53.4	60.1
North Central/Plains	33	74.0	55.7	62.2	76.5
Southwest	13	63.8	51.0	58.7	63.2
West	27	61.5	49.8	56.4	71.1

## 21. Capital Expenditures to Depreciation Expense

The amount of capital expenditures in a year divided by depreciation expenses.

TTABLE 21. CAPITAL EXPENDITURES TO DEPRECIATION EXPENSES					
	Utilities	Mean (weighted)	First Quartile	Median	Third Quartile
Total	144	\$1.28	\$0.81	\$1.21	\$1.80
1. Customer Count					
5,000 to 10,000 Customers	25	1.60	0.72	0.94	1.83
10,000 to 20,000 Customers	37	1.68	0.88	1.37	1.81
20,000 to 50,000 Customers	35	1.26	0.81	1.10	1.47
50,000 to 100,000 Customers	20	1.40	0.85	1.33	1.58
More than 100,000 Customers	23	1.33	0.88	1.35	1.95
2. Region					
Northeast	12	1.66	0.52	0.85	1.33
Southeast	52	0.92	0.68	1.10	1.44
North Central/Plains	37	2.41	0.88	1.50	1.83
Southwest	13	1.03	0.91	1.21	1.81
West	30	1.32	1.10	1.49	2.29
2 Concretion					
3. Generation		1.10	0.01	1.00	4.05
No generation	85	1.42	0.81	1.20	1.65
More than 0 but less than 10%	25	1.73	1.10	1.71	2.43
10%-50%	17	1.18	0.81	1.13	1.49
50%-100%	17	1.17	0.71	0.88	1.83

## APPENDIX A

## **2022 Performance Indicators Survey**

#### BACKGROUND

Public power utilities with at least 150,000 MWh in total sales and at least 50% retail sales according to your utility's 2022 EIA data, with a few exceptions, are invited to participate in APPA's 2022 Performance Indicators Survey.

Data from this survey will be used to calculate performance indicators published in summary form in the APPA report "Selected Financial and Operating Ratios of Public Power Systems, 2024." The report results may be used to respond to inquiries from congressional offices and committees, federal administrative and regulatory agencies, state and local officials, and the news media. All individual utility responses will remain confidential.

The deadline is November 24, 2023. Please contact Lindsey Buttel at 202-467-2920 or LButtel@PublicPower.org with any questions.

#### **CONTACT INFORMATION**

1) Utility name:	4) First Name:
2) City:	5) Last Name:
3) State:	6) Phone: (Please use format XXX-XXX-XXXX):
	7) Email:

#### PART I. EMPLOYMENT, HOURS AND EARNINGS - CALENDAR YEAR ENDING IN 2021

## Prorate employees allocated to or from other departments or units. Enter amounts in whole numbers.

#### 8) Total Average Number of Employees (Electric Employees)

Average annual employment should be computed by summing the number of employees for all 2022 pay periods, then dividing the sum by the total number of such pay periods in the year. For example, if employees are paid semi-monthly, there would be 24 pay periods. The number of employees on the payroll for each of the 24 periods should be summed up, and the total divided by 24.

Prorate the number of employees allocated to, or from, other departments (e.g., gas or water) of a multiple service utility, or other government units (e.g., general administration). For example, in a multiple service utility (a utility with functions besides electric) that has one accounting department for all municipal utility operations, prorate personnel allocated to electric utility operations. Another example would be a secretary employed by the municipality that handles some electric utility affairs. Only report the hours dedicated to the electric utility.

#### 9) Total Annual Earnings (Electric Employees)

Provide total direct earnings for 2022. Include all wage and salary payments to supervisory and non-supervisory employees. Total earnings should equal gross earnings received by employees from the utility. Prorate earnings of employees whose time is allocated to, or from, other utility or government operations. Please include paid time off. Annual earnings do not include medical coverage or other benefits.

#### 10) Total Annual Hours Worked (Electric Employees)

Provide the total number of hours actually worked during 2022 for all full-time and parttime employees and contract labor. Include only time on duty. Do not include time paid but not worked, such as vacations, sick leave, holidays, etc. Obtain hours worked from payroll or other time records wherever possible. If hours worked data are not maintained separately from hours paid, please enter your best estimate on the basis of scheduled hours. For example: if 10 employees worked an average of 40 hours per week for 50 weeks, total hours worked would be 10 x 40 x 50 = 20,000.

#### 11) Total Average Number of Employees (Contract Labor)

Report information for persons (or full-time equivalent) working under contract to the utility on an on-going basis. This includes work that is ongoing on a limited or as needed basis. This would include jobs such as tree-trimming or facility maintenance, but it would not include consultants or others working on a temporary basis. If an agency is used for contract labor, please include the total amount paid to the agency in the wage figures. For questions regarding contract labor, distinguish between contract employees for whom the utility is responsible for supervising day-to-day activities, and contract employees primarily supervised by the contracting company.

#### 12) Total Annual Hours Worked (Contract Labor)

Full-Time:	Part-Time:
Full-Time:	Part-Time:
Full-Time:	Part-Time:
Contract Employees Supervised by Utility:	Contract Employees Su- pervised by Contracting Company:
Employees Supervised by Utility:	Employees Supervised by Contracting Company:

#### 13) Total Annual Earnings (Contract Labor)

#### 14) Number of Power Production Employees

NOTE: Power Production Employees are those employees who are directly involved in the generation of electricity (generally, power plant employees). Include all employees involved in the operation and maintenance of power generating facilities. If your utility has no electric generation, then you should have no power production employees.

#### 15) Number of Meter Readers

If responsible for meters other than electric, prorate employees allocated to electric only. If you deployed smart meters and no longer employ field meter readers, please enter zero.

#### PART II. SELECTED ELECTRIC UTILITY STATISTICS - CALENDAR YEAR ENDING IN 2022

#### 16) Distribution Lines (up to 69 kV)

Circuit miles include the total length in miles of separate circuits regardless of the number of conductors used per circuit. We are looking for distribution lines as the utility defines it as long as it is not greater than 69 kV.

#### 17) Total Electric Utility Uncollectible Accounts (FERC 904)

#### 18) Total Electric Utility Debt Service Payments on Long-Term Debt

Debt Service - The amount necessary to pay principal and interest on outstanding long-term debt.

19) Capital Expenditures (report capital expenditures for 2022 only)

#### PART III. FINANCIAL DATA

#### 20) Total Current and Accrued Assets

Include cash and working funds, temporary cash investments, notes and accounts receivable, receivables from the municipality, materials and supplies inventory, prepayments, and miscellaneous current and accrued assets.

#### 21) Total Assets and Other Debits

Include utility plant, investments, current and accrued assets, and deferred debits.

#### 22) Total Long-Term Debt

Include bonds, advances from the municipality, other long-term debt, any unamortized premium on long-term debt, and any unamortized discount on long-term debt.

#### 23) Total Current and Accrued Liabilities

Include warrants, notes and accounts payable, payables to the municipality, customer deposits, taxes accrued, interest accrued, and miscellaneous current and accrued liabilities.

#### 24) Electric Operating Revenue

Include only revenue from sales to ultimate customers and sales for resale.

#### 25) Depreciation Expenses

This includes amortization expense.

#### 26) Net Electric Income

Electric Operating Revenue - Electric Operating Expenses

#### 27) Interest payment on Long-Term Debt paid during fiscal year

Include the amount of interest on outstanding long-term debt issued or assumed by the utility.

#### 28) Net Income

Net Electric Income + Other Electric Income - Electric Deductions - Taxes

#### 29) Purchased Power Expenses

Includes purchases from investor-owned utilities, municipalities, cooperatives or other public authorities for subsequent distribution and sale to ultimate customers.

Employees Supervised by Utility:

Full-time:

Contract:

Part-time:

Part-time:

Employees Supervised by Contacting Company:

Contract:

Full-time:

Total Distribution Line Circuit Miles:

#### PART IV. TOTAL ELECTRIC OPERATION AND MAINTENANCE EXPENSES

#### 30) Total Power Supply Expenses

Operating costs for generation must include purchased power expenses as well as all power generation. Therefore, this answer must be greater than or equal to your answer in Q29.

#### 31) Transmission Expenses

#### 32) Distribution Expenses

Include expenses associated with labor, supervision, engineering, materials, and supplies used in the operation and maintenance of the distribution system.

#### 33) Customer Accounting, Service, and Sales Expenses

Include expenses related to handling each customer's account. This includes:

- The cost of obtaining and servicing all retail customers
- Uncollectible accounts and meter reading expenses
- The cost of labor, materials, and other expenses associated with advertising, billing, collections, records, and handling inquiries and complaints
- The cost of promoting and providing customer service programs such as energy services or conservation programs.

#### 34) Administrative and General Expenses

Include electric operation and maintenance expenses not allocable to the costs of power production (e.g., generation and power purchases), transmission, distribution, or customer accounting, service and sales. Items which may be included are compensation of officers and executives, office supplies, professional fees, property insurance and claims, pensions and benefits, and other expenses not provided for elsewhere.

## APPENDIX B Data Sources And Computational Procedures

The financial and operating ratios in this report are calculated using data from APPA's 2022 Performance Indicators Survey in addition to data from the U.S. Department of Energy's Energy Information Administration (EIA). The survey includes data on employees, hours worked, earnings, distribution lines, reliability, lost workdays, and uncollectible accounts. It also includes financial data formerly reported on Form EIA-412, including balance sheet, income statement and operation and maintenance expense information. Data on revenues, kilowatt-hour sales, and customers is obtained from Forms EIA-861 and EIA-861S.

The numbered items below contain data sources and computational procedures for each of the ratios in the report. Definitions are found within the body of the report. All data are for 2022.

#### 1. Revenue per kWh (Dollars)

a. All Retail Customers

Revenue Retail Customers

EIA Form 861 or 861S, Schedule 4, Part A, Total Revenue EIA Form 861 or 861S, Schedule 4, Part A, Total Megawatt-hours

b. Residential Customers

Residential Revenue Residential Customers

ElA Form 861, Schedule 4, Part A, Residential Revenue (column a) ElA Form 861, Schedule 4, Part A, Residential Megawatt-hours (column a)

c. Commercial Customers

Commercial Revenue Commercial Customers

ElA Form 861, Schedule 4, Part A, Commercial Revenue (column b) ElA Form 861, Schedule 4, Part A, Commercial Megawatt-hours (column b)

d. Industrial Customers

Industrial Revenue Industrial Customers

ElA Form 861, Schedule 4, Part A, Industrial Revenue (column c) ElA Form 861, Schedule 4, Part A, Industrial Megawatt-hours (column c)

#### 2. Debt to Total Assets

Long Term Debt + Current and Accrued Liabilities Total Assets and other Debits

> (APPA Survey, 22) + (APPA Survey, 23) APPA Survey, 21

3. Operating Ratio

Total Electric O&M Expense Electric Operating Revenue (APPA Survey, 30) + (APPA Survey, 31) + (APPA Survey, 32) + (APPA Survey, 33) + (APPA Survey, 34)

APPA Survey, 24

#### 4. Current Ratio

Total Current & Accrued Assets Total Current & Accrued Liabilities

> APPA Survey, 20 APPA Survey, 23

#### 5a. Times Interest Earned

Net Income + Interest Payment on Long -Term Debt Interest Payment on Long-Term Debt

> (APPA Survey, 28) + (APPA Survey, 27) APPA Survey, 27

#### 5b. Debt Service Coverage

Operating Electric Income + Depreciation Expenses + Interest Payment on Long-Term Debt Total Electric Utility Debt Service Payments on Long-term Debt

> (APPA Survey, 26) + (APPA Survey, 25) + (APPA Survey, 27) APPA Survey, 18

#### 6. Net Income per Revenue Dollar

Net Income Electric Operating Revenue

> APPA Survey, 28 APPA Survey, 24

#### 7. Uncollectible accounts per Revenue Dollar

Total Electric Utility Uncollectible Accounts Electric Operating Revenue

#### APPA Survey, 17 APPA Survey, 24

#### 8. Retail Customers per Non-power-generation Employee

Total Number of Customers Employees - Power Production Employees

EIA Form 861 or 861S, Schedule 4, Part A Total Number of Customers (column e) ((APPA Survey, 8) + (APPA Survey, 11)) – (APPA Survey, 14)

Employees = Full Time + Part Time/2 + all contract employees (supervised by utility and supervised by contractor)

#### 9. Total O & M Expense per kWh Sold

Total Electric Operation and Maintenance Expenses Retail Sales + Resale Sales

(APPA Survey, 30) + (APPA Survey, 31) + (APPA Survey, 32) + (APPA Survey, 33) + (APPA Survey, 34) (EIA Form 861, Schedule 2, Part B, line 11 + line 12, or EIA Form 861S, Schedule 4A, Total Retail Sales) \*1000

#### 10. Total O & M Expense (Excluding Total Production Expense) per Retail Customer

Total Electric Operation and Maintenance Expenses – Total Production Expenses Total Number of Customers

(APPA Survey, 30) + (APPA Survey, 31) + (APPA Survey, 32) + (APPA Survey, 33) + (APPA Survey, 34) – (APPA Survey, 30) EIA Form 861 or 861S, Schedule 4, Part A, Total Number of Customers (column e)

#### 11. Total Power Supply Expense per kWh Sold

Total Production Expenses Retail Sales + Resale Sales

(EIA Form 861, Schedule 2, Part B, line 11 + line 12, or EIA Form 861S, Schedule 4A, Total Retail Sales) \*1000

#### 12. Purchased Power Cost per kWh

Purchased Power Expenses
Purchases

(EIA Form 861, Schedule 2, Part B, line 2) \* 1000

#### 13. Retail Customers per Meter Reader

Total Number of Customers Meter Readers

ElA Form 861 or 861S, Schedule 4, part A, Total number of customers (column e) APPA Survey, 15

(Number of Meter Readers = Full Time + Part Time/2 + Contract)

#### 14. Distribution O & M Expenses per Retail Customer

Distribution Expenses Total Number of Customers

APPA Survey, 32 EIA Form 861 or 861S, Schedule 4, Part A, Total Number of Customers (column e)

15. Distribution O & M Expenses per Circuit Mile

Distribution Expenses Total Distribution Line Circuit Miles APPA Survey, 32 APPA Survey, 16

#### 16. Customer Accounting, Customer Service and Sales Expense per Retail Customer

Customer Accounts Expenses; Customer Service and Information Expenses; and Sales Expenses Total Number of Customers

APPA Survey, 33 EIA Form 861 or 861S, Schedule 4, Part A, Total Number of Customers (column e)

#### 17. Administrative and General Expenses per Retail Customer

Administrative and General Expenses Total Number of Customers

APPA Survey, 34 EIA Form 861 or 861S, Schedule 4, Part A, Total Number of Customers (column e)

#### 18. Labor Expense per Worker-hour

Total Labor Expense Total Hours Worked

(APPA Survey, 9) + (APPA Survey, 13) (APPA Survey, 10) + (APPA Survey, 12)

Labor Expense = Full-Time Earnings + Part-time Earnings + Contractor Earnings Hours Worked = Full-Time Hours + Part-Time Hours + Contractor Hours (supervised by utility and supervised by contractor)

#### 19. Energy Loss Percentage

Total Energy Losses Total Sources of Energy

EIA Form 861, Schedule 2, Part B, line 15 EIA Form 861, Schedule 2, Part B, line 10

To express as a percent, multiply the result by 100.

#### 20. System Load Factor

((Retail Sales + Resale Sales + Total Energy Losses) / 8760 hrs/yr) Highest Hourly Peak Demand

ElA Form 861, Schedule 2 Part B (line 11 + line 12 + line 15) / 8760 (ElA Form 861, Schedule 2, Part A, line 6)

To express as a percent, multiply the result by 100.

21. Capital Expenditures to Depreciation Expanse

Capital Expenditures Depreciation Expenses

> APPA Survey, 19 APPA Survey, 25

## APPENDIX C Regional Definitions



The regions used for this report correspond to regions of the North American Electric Reliability Corporation as specified below.

Region	Corresponding NERC Region(s)
Northeast	NPCC - Northeast Power Coordinating Council
Southeast **	SERC - Southeastern Electric Reliability Council FRCC - Florida Reliability Coordinating Council
North Central/Plains*	MRO – Midwest Reliability Organization RFC – Reliability First Corporation
Southwest	SPP – Southwest Power Pool TRE – Texas Reliability Entity
West	WECC - Western Electricity Coordinating Council ASCC - Alaska Systems Coordinating Council

\*: MAIN, ECAR, and MAAC joined to become the "Reliability First" NERC region, effective January 2006. However, the Energy Information Administration continues to identify utilities by their former NERC regions. APPA uses the former regions in establishing regional breakdowns to be consistent with prior reports.

\*\*For this report, Puerto Rico and all Missouri utilities are classified as in the Southeast region

## APPENDIX D Utilities Included in the 2022 Report

#### ALABAMA

Decatur Utilities Huntsville Utilities Opelika Power Services Riviera Utilities Scottsboro Electric Power Board

#### ARIZONA

Electrical District No. 4 of Pinal County

#### ARKANSAS

Conway Corporation Hope Water & Light Commission Jonesboro City Water & Light

#### CALIFORNIA

Anaheim Public Utilities City of San Francisco (Hetch Hetchy Water & Power) Roseville Electric Utility Sacramento Municipal Utility District

#### COLORADO

Colorado Springs Utilities Fountain Utilities Loveland Water & Power

#### CONNECTICUT

Groton Utilities Norwich Public Utilities Wallingford Department of Public Utilities

#### FLORIDA

Gainesville Regional Utilities JEA Keys Energy Services Kissimmee Utility Authority Lakeland Electric New Smyrna Beach Utilities Commission Orlando Utilities Commission

#### GEORGIA

Albany Water, Gas & Light Commission Dalton Utilities Marietta Power and Water

ILLINOIS Naperville Department of Public Utilities

#### INDIANA Tell City Electric Department

IOWA Cedar Falls Utilities Muscatine Power & Water

#### KANSAS

Kansas City Board of Public Utilities McPherson Board of Public Utilities

#### KENTUCKY

Glasgow Electric Plant Board Henderson City Utility Commission Murray Electric System Owensboro Municipal Utilities Paducah Power System

### LOUISIANA

Lafayette Utilities System

#### MASSACHUSETTS

Concord Municipal Light Plant Town of Danvers Littleton Electric Light Department Middleborough Gas and Electric Department

#### MARYLAND

Easton Utilities Commission

#### MICHIGAN

Coldwater Board of Public Utilities Grand Haven Board of Light & Power Lansing Board of Water & Light Marquette Board of Light & Power Traverse City Light & Power Zeeland Board of Public Works

#### MINNESOTA

City of Anoka Elk River Municipal Utilities Grand Rapids Public Utilities Commission Marshall Municipal Utilities Moorhead Public Service New Ulm Public Utilities Owatonna Public Utilities Rochester Public Utilities Willmar Municipal Utilities

#### MISSOURI

Carthage Water and Electric Plant City Utilities of Springfield Columbia Water & Light Independence Power & Light Marshall Municipal Utilities Poplar Bluff Municipal Utilities & City Cable

#### NEBRASKA

Cedar-Knox Public Power City of Grand Island City of Hastings Lincoln Electric System Loup Power District Nebraska Public Power District Omaha Public Power District

#### NEW YORK

Village of Fairport Long Island Power Authority Massena Electric Department Plattsburgh Municipal Lighting Department

#### NORTH CAROLINA

City of Kinston City of Monroe City of New Bern Fayetteville Public Works Commission Greenville Utilities Commission New River Light & Power Co. Town of Tarboro Wilson Energy оню

Hudson Public Power Orrville Utilities

#### OREGON

Canby Utility Board Central Lincoln People's Utility District Clatskanie People's Utility District Eugene Water & Electric Board Northern Wasco County People's Utility District Springfield Utility Board

PUERTO RICO Puerto Rico Electric Power Authority

#### SOUTH CAROLINA

City of Greenwood Santee Cooper (South Carolina Public Service Authority)

#### SOUTH DAKOTA

City of Brookings Watertown Municipal Utilities

#### TENNESSEE

Athens Utilities Board Bristol Tennessee Essential Services CDE Lightband Elizabethton Electric System EPB - Chattanooga Electric Power Board Greeneville Light & Power System Lawrenceburg Utility Systems Lewisburg Electric System McMinnville Electric System Memphis Light, Gas and Water Division Morristown Utility Systems Nashville Electric Service Paris Board of Public Utilities Ripley Power and Light Co. Tullahoma Utilities Authority

#### TEXAS

Austin Energy City of College Station CPS Energy Denton Municipal Electric City of Garland Georgetown Utility Systems Kerrville Public Utility Board Lubbock Power & Light New Braunfels Utilities

#### UTAH

Heber Light & Power Co. Provo City Power City of St. George

#### VERMONT

Burlington Electric Department

#### VIRGINIA

BVU Authority Town of Front Royal City of Salem

#### WASHINGTON

Benton PUD Public Utility District No. 1 of Clallam County Clark Public Utilities Public Utility District No. 1 of Cowlitz County City of Ellensburg Franklin PUD Public Utility District No. 1 of Grays Harbor County Public Utility District No. 1 of Lewis County Public Utility District No. 1 of Okanogan County Public Utility District No. 2 of Pacific County Seattle City Light Tacoma Public Utilities Vera Water & Power

#### WISCONSIN

Kaukauna Utilities Marshfield Utilities Menasha Utilities Wisconsin Rapids Water Works & Lighting Commission



2451 Crystal Drive Suite 1000 Arlington, VA 22202-4804

www.PublicPower.org

