Edison Electric
INSTITUTE

2022 Financial Review

Annual Report of the U.S. Investor-Owned Electric Utility Industry

Thank you to the following EEI Power Member for sponsoring the 2022 Financial Review.

From the leading provider of financial reporting technology for asset-intensive industries.

Cloud Managed Services

Reduce risk. Accelerate time to value.
Move to the cloud with confidence and gain the freedom to focus on what you do best.

Fixed-Asset Accounting | Income Tax | Property Tax |
Lease Regulatory Reporting | Capital Budgeting and Planning

info@powerplan.com | (678) 223-2800

powerplan.com

Edison Electric
INSTITUTE

2022
FINANCIAL REVIEW

ANNUAL REPORT
OF THE U.S. INVESTOR-OWNED
ELECTRIC UTILITY INDUSTRY

About EEI and the Financial Review

The Edison Electric Institute (EEI) is the association that represents all U.S. investor-owned electric companies. Our U.S. members provide electricity for 220 million Americans and operate in all 50 states and the District of Columbia. As a whole, the electric power industry supports more than 7 million jobs in communities across the U.S. and contributes 5 percent to the nation's GDP. The 2022 Financial Review is a comprehensive source for critical financial data covering 39 investor-owned electric companies whose stocks are publicly traded on major U.S. stock exchanges. The report also includes data on five additional companies that provide regulated electric service in the United States but are not listed on U.S. stock exchanges because they are owned by holding companies not primarily engaged in the business of providing retail electric distribution services in the United States. These 44 companies are referred to throughout the publication as the U.S. Investor-Owned Electric Utilities. Please refer to page 76 for a list of these companies.

Contents

Highlights of 2022

U.S. INVESTOR-OWNED ELECTRIC UTILITIES

FINANCIAL ($ Millions)	2022	2021r	% Change
Total Operating Revenues	$424,428	$366,615	15.8%
Utility Plant (Net)	$1,418,389	$1,335,697	6.2%
Total Capitalization	$1,368,875	$1,293,058	5.9%
Earnings Excluding Non-Recurring and Extraordinary Items	$51,221	$51,335	(0.2%)
Dividends Paid, Common Stock	$31,016	$30,075	3.1%

r = revised Note: Percent changes may reflect rounding.

Abbreviations and Acronyms

AFUDC	Allowance for Funds Used During Construction
BTU	British Thermal Unit
CFTC	Commodity Futures Trading Commission
CPI	Consumer Price Index
DOE	Department of Energy
DOJ	Department of Justice
DPS	Dividends per share
EEI	Edison Electric Institute
EIA	Energy Information Administration
EITF	Emerging Issues Task Force
EPA	Environmental Protection Agency
EPS	Earnings per share
FASB	Financial Accounting Standards Board
FERC	Federal Energy Regulatory Commission
GDP	Gross Domestic Product
GW	Gigawatt
GWh	Gigawatt-hour
IPP	Independent Power Producer
IRS	Internal Revenue Service
ISO	Independent System Operator
ITC	Independent Transmission Company
kWh	Kilowatt-hour
M&A	Mergers & Acquisitions
MW	Megawatt
MWh	Megawatt-hour
NARUC	National Association of Regulatory Utility Commissioners
NERC	North American Electric Reliability Corporation
NOx	Nitrogen Oxide
NOAA	National Oceanic & Atmospheric Administration
NRC	Nuclear Regulatory Commission
O&M	Operations and Maintenance
PSC	Public Service Commission
PUC	Public Utility Commission
PUHCA	Public Utility Holding Company Act
PURPA	Public Utility Regulatory Policies Act
ROE	Return on Equity
RTO	Regional Transmission Organization
SEC	Securities and Exchange Commission
SO_2	Sulfur Dioxide
T&D	Transmission & Distribution

Company Categories

Two categories are used throughout this publication that group companies based on their percentage of total assets that are regulated. These categories are used to provide an informative framework for tracking financial trends:

Regulated: 80% or more of total assets are regulated.

Mostly Regulated: Less than 80% of total assets are regulated.

Note: In prior editions of the Financial Review, a "Diversified" category was included for companies with less than 50% of total assets that are regulated. Some tables with historical data therefore include a "Diversified" category.

President's Letter

2022 Financial Review

In January 1933, EEI began representing America's investor-owned electric companies, just as electricity truly was beginning to revolutionize daily life and to propel our nation's economy. Ninety years later, we stand at a global energy inflection point—and demand for electricity continues to grow. In fact, U.S. electricity output hit a record annual high last year: an astonishing 4,142,901 gigawatt-hours, up 2.8 percent from 2021, and 0.7 percent above the previous record year of 2018.

Today, EEI's member companies remain focused on ensuring that customers have the energy they need when and where they need it, affordably and reliably, as we work to get this energy as clean as we can as fast as we can. And, we have fully embraced a strategy that will deliver secure and resilient clean energy across our economy.

In 2021, Congress delivered a once-in-a-generation investment in America's infrastructure with passage of the Bipartisan Infrastructure Law. Last year, lawmakers reaffirmed this commitment to addressing climate change with passage of the Inflation Reduction Act and its nearly $272 billion in clean energy tax credits. EEI strongly supported both laws, and we continue to lead implementation efforts to ensure that electric companies and state governments are taking advantage of these crucial investments in America's infrastructure.

While we continue to highlight the significance of these monumental new laws for our customers and for our member companies, we recognize that we face headwinds as well. Our suppliers and our customers continue to experience inflation levels that we have not seen for decades. At the same time, geopolitical tensions remain high with Russia's ongoing war in Ukraine. This continues to create fuel supply risks, while also impacting supply chains and significantly increasing cyber and physical security threats.

Despite these challenges and others, we are focused on the opportunities before us—and we are certain that our industry's future is bright. Today—just as we were 90 years ago—we are committed to demonstrating Power by Association℠ and to seizing the moment to deliver enduring benefits for our customers.

Thanks largely to the clean energy leadership of EEI's member companies, carbon emissions from the U.S. electric power sector today are as low as they were almost 40 years ago, while electricity use has climbed 73 percent since then. Already, 50 EEI member companies have announced ambitious emissions reduction commitments, 41 of which aim for net-zero or equivalent by 2050 or sooner. We are proud that more than 40 percent of our nation's electricity now comes from clean, carbon-free sources, including nuclear energy, hydropower, wind, and solar energy.

EEI's long-held position is that we need to take an economy-wide approach to reducing carbon emissions. This means transitioning more of the U.S. economy to clean, efficient electric energy—starting with the industrial and transportation sectors, especially as the latter has been the leading source of carbon emissions in the United States since 2016.

There are more than 3 million EVs already on U.S. roads, and EEI projects there will be at least 26 million on our roadways in 2030. That increase will require approximately 140,000 EV fast charging ports across the country—a 10-fold increase over today. EEI's member companies are investing more than $4 billion in programs to accelerate electric transportation, including the deployment of EV charging infrastructure.

For electric companies, the EEI-AGA ESG Sustainability Template lends itself to telling the story of our member companies' clean energy transition, the risks and opportunities that lie ahead, and their plans to manage them. Almost 7 years ago, EEI established the first-of-its-kind, sector-wide ESG reporting template working with our member companies, investors, and other key stakeholders. Today, our industry's ESG leadership has enabled EEI to work with the U.S. Securities and Exchange Commission as it establishes workable ESG climate reporting and cyber reporting and governance rules.

We also are working every day to improve energy grid security, reliability, and resiliency, and we continue to strengthen cyber and physical defenses and to enhance preparedness. Our strong industry-government partnership, coordinated through the CEO-led Electricity Subsector Coordinating Council, continues to be critical to accomplishing our shared goal of protecting the grid against all threats.

Recent events, including extreme weather events, reinforce the continued need for strategic and responsible investments in adaptation, hardening, and resilience (AHR). Over the past decade, EEI's member companies have invested more than $1 trillion in critical energy infrastructure. And, in 2022 alone, nearly $30 billion was invested in AHR initiatives to strengthen the nation's transmission and distribution infrastructure.

While investments in AHR have increased significantly over the past decade, more investments are needed to meet the challenges of climate change and to enhance the overall reliability and resilience of the grid. The benefits of smart investments in AHR are clear and allow electric companies, communities, and customers to be better equipped to operate through challenging conditions. In Florida, for example, the state's hardened energy infrastructure largely withstood a direct hit by Hurricane Ian last year. Moreover, the investments made in smarter energy infrastructure at the distribution level helped to avoid hundreds of thousands of customer outages—and significantly sped restoration times for customers who were impacted.

It is critical that electric companies can continue to make needed investments today that will help them to deliver a resilient clean energy future. EEI continues our advocacy for stable, constructive policies that support our member companies' infrastructure investments. Related to this, we are asking the U.S. Treasury Department to implement the Corporate Alternative Minimum Tax without unduly impacting electricity customers or undermining needed investment in grid infrastructure.

As you will see in this year's Financial Review, EEI's member companies continue to build upon a strong financial foundation. The industry's average credit rating was BBB+ for the ninth straight year in 2022, after increasing from the BBB average that previously had held since 2004. This improved credit quality greatly supports the continued level of elevated capital expenditures, which set an eleventh consecutive record high of $147.7 billion in 2022. We continue to be America's most capital-intensive industry.

The EEI Index returned 1.2 percent for 2022, outperforming the major averages. The S&P 500 Index returned -18.3 percent, the Dow Jones Industrial Average returned -7.0 percent, and the Nasdaq Composite saw a steep -33.5 percent decline. The EEI Index has produced a positive total return in 17 of the last 20 years, with returns of greater than 10 percent in 13 of the 17 positive years.

Our industry also extended its long-term trend of widespread and consistent dividend increases last year, with a total of 34 companies increasing their dividend in 2022. The percentage of companies that raised or reinstated their dividend in 2022 was 87 percent, up from 82 percent in 2021 and aligned with the 85 percent to 93 percent range seen from 2015 through 2020. Our industry's dividend payout ratio was 73.0 percent for the 12 months ended December 31, 2022, leading among the other major U.S. business sectors. As of December 31, 2022, 38 of the 39 companies in the EEI Index were paying a common stock dividend.

As we celebrate 90 years of Power by Association—and as we begin our next 90 years by engaging on our ambitious agenda—EEI and our

member companies will be the catalyst for delivering resilient clean energy and for achieving a clean energy economy quickly and affordably.

Earlier this year, I announced my plans to step down as EEI President after more than 30 years. Few people have been as fortunate as I have to be associated with such a talented and dedicated team and to be part of such a vital industry. I am incredibly proud of what EEI and our member companies have accomplished together during my tenure.

EEI's mission to deliver Power by Association will remain unchanged. I am excited by what the future holds for our customers, our country, and our member companies—and I am excited to remain actively involved in our industry.

Over the years I have been involved in our industry, I have seen incredible transformation and progress—and I know that this transformation and this progress will never stop. Our industry's focus on our customers remains our North Star, and, by keeping them at the forefront, we will achieve amazing things.

We truly value the partnership that we share with the financial community.

Thomas R. Kuhn

President
Edison Electric Institute

Capital Markets

Stock Performance

Major market indices rebounded later in the year after three straight quarters of losses. The Dow Jones Industrial Average, a composite of 30 underlying large-capitalization companies, gained 15.8% while the more broadly diversified S&P 500 Index gained 7.3%. The tech-heavy Nasdaq, the epicenter of late 2021's market froth, edged down a modest 1.6%. Utilities were right in the middle; the EEI Index gained 8.8% for the quarter.

The full-year 2022 picture shows utilities far ahead of major indices on a relative basis. The Dow Jones Industrial Average returned -7.0% in 2022, the S&P 500 returned -18.3% and the Nasdaq fell deep into a bear market with a 33.5% decline.

Economic Growth Rebounds After Weak First Half

Markets in the second half of the year were powered higher in part by evidence that economic strength rebounded from weakness in 2022's first half. In late October, the Bureau of Economic Analysis (BEA) released its first estimate of Q3 2022 real GDP at positive 2.6%; this compared to -1.6% in Q1 and -0.6% for

2022 Index Comparison

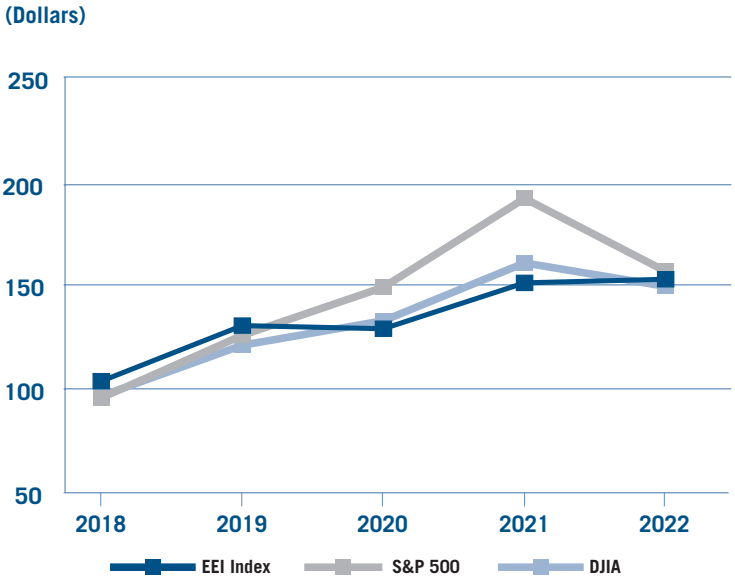
EEI Index	**1.2**
Dow Jones Industrials	(7.0)
S&P 500	(18.3)
Nasdaq Composite Index*	(33.5)

* Price gain/(loss) only. Other indices show total return.

Source: EEI Finance Department and S&P Global Market Intelligence.

Comparison of the EEI Index, S&P 500, and DJIA Total Return 1/1/18–12/31/22

REFLECTS REINVESTED DIVIDENDS



All returns are annual.
Note: Assumes $100 invested at closing prices December 31, 2017.

Source: EEI Finance Department and S&P Global Market Intelligence.

EEI Index Top 10 Performers
Twelve-month period ending 12/31/2022

Company	Total Return %	Category
PG&E Corporation	33.9	R
Sempra Energy	20.3	R
Consolidated Edison, Inc.	15.6	R
Unitil Corporation	15.1	R
Pinnacle West Capital Corporation	12.9	R
American Electric Power Company, Inc.	10.4	R
PNM Resources, Inc.	10.2	R
CenterPoint Energy, Inc.	10.1	R
Avista Corporation	8.8	R
NorthWestern Corporation	8.5	R

Note: Return figures include capital gains and dividends.
Source: EEI Finance Department.

Sector Comparison 2022 Total Shareholder Return

Sector	Total Return %
Oil & Gas	61.5%
Utilities	2.9%
EEI Index	**1.2%**
Healthcare	-4.7%
Telecommunications	-6.5%
Basic Materials	-6.9%
Financials	-13.3%
Industrials	-13.5%
Consumer Goods	-23.2%
Consumer Services	-30.6%
Technology	-34.9%

Source: EEI Finance Dept., Dow Jones & Company, Yahoo! Finance.

Q2. The Q3 figure was revised upward to 2.9% in the late November release and higher again to 3.2% in the BEA's third estimate, released on December 22.

Headline Inflation Moderates

Investor sentiment was also lifted by hints that inflation may be moderating. Inflation measured by the headline consumer price index (CPI) for urban consumers peaked in June at 8.9% and held above 8% in July, August, and September. Data released in Q4 showed a steady decline to 7.8% in October, 7.1% in November and 6.4% in December. The CPI excluding volatile food and energy (which economists often cite as a more meaningful inflation metric) hovered near 6% all year and peaked in September at 6.6%, yet it too eased to a December reading of 5.7%.

Fed Hikes but Bond Yields Ease

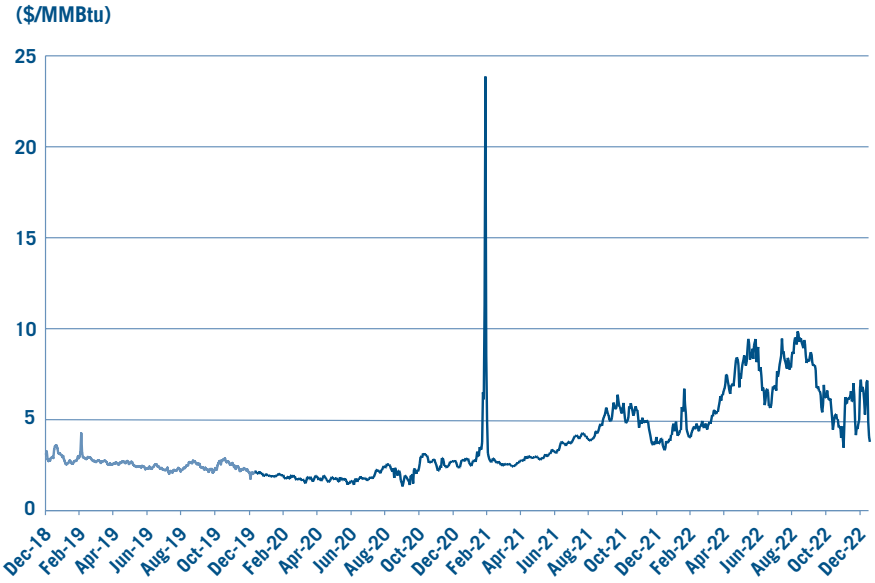
Persistently sticky inflation data was enough to cause the U.S. Federal Reserve to extend it's 2022 rate hike campaign, hiking the overnight federal funds rate by 75 basis points on November 2 and 50 basis points on December 14. The Fed's seven rate hikes in 2022 took the fed funds rate from near 0% in March to 4.3% in late December, making for one of the steepest rate-hike campaigns in modern history.

Bond markets spent Q4 wondering how to react to Fed hikes and cooler inflation data. The U.S. 10-year Treasury yield rose in October, reaching 4.2%, but then fell steadily to 3.4% by early December before climbing back to 3.8% at year-end, and corporate bond yields were steady for the quarter. Falling inflation numbers and steady bond yields gave investors enough confidence to push markets up after three quarters of losses.

Fuel Cost Inflation Drives up Power Prices

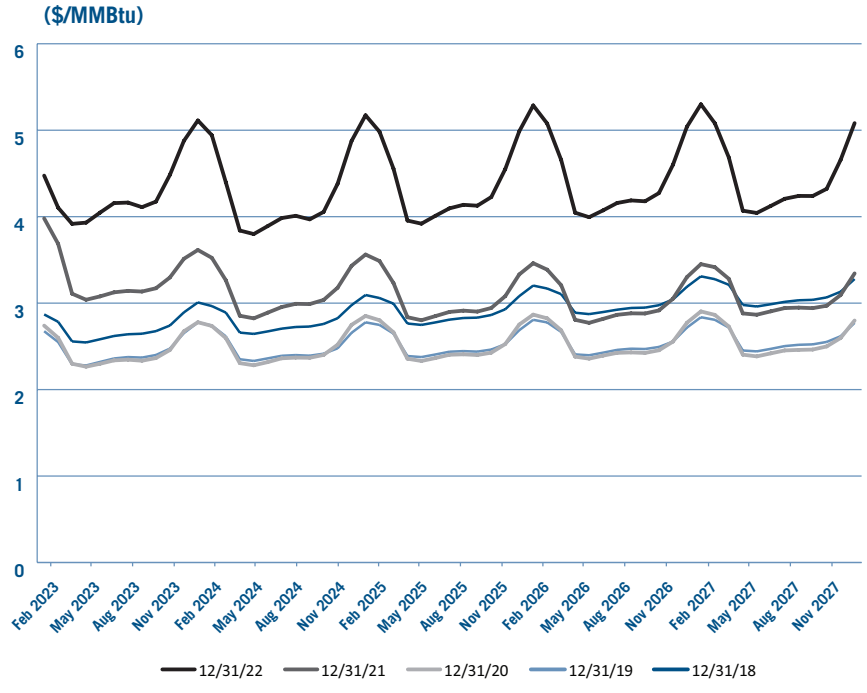
While surging inflation and higher energy costs are a global phenomenon, the trend is impacting U.S. electricity costs. Natural gas powers about 38% of generation nation-

Natural Gas Spot Prices - Henry Hub
12/31/18 through 12/31/22



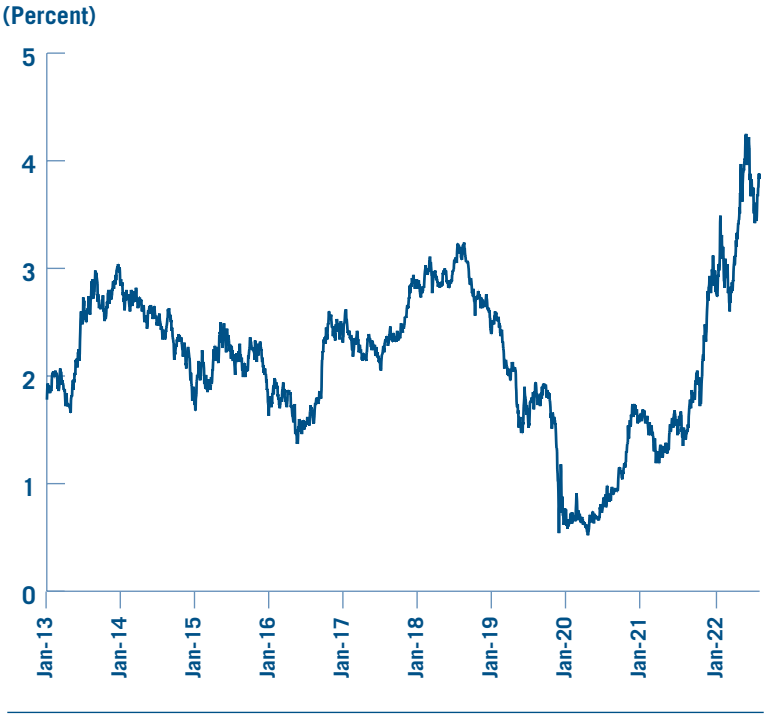
Source: S&P Global Market Intelligence.

NYMEX Natural Gas Futures
February 2023 through December 2027



Source: S&P Global Market Intelligence.

10-Year Treasury Yield
1/1/13 through 12/31/22



Source: U.S. Federal Reserve.

wide and coal about 22%. Natural gas prices have been rising since the middle of 2020 and jumped in 2022 to their highest levels since 2013. Regulated utilities pass fuel costs through to rates under state regulation and have little near-term control over the fuel element of the utility bill. EIA data shows the average cost of natural gas for electricity generation rose 110% year-to-year in Q2 and 86% in Q3. EIA data shows that comparable coal costs rose 11% year-to-year in Q1, 16% in Q2 and 22% in Q3.

Natural gas comparisons eased in tandem with CPI inflation in Q4, echoed by the decline in spot gas prices seen in the graph *Natural Gas Spot Prices*. The average cost of natural gas for electric generation rose only 5.0% in October and was unchanged year-to-year in November. However, inflation in the average cost of coal for electricity generation remained high, at 22.0% in October and 25.9% in November.

While electricity rates in aggregate nationwide were mostly flat from 2008 through 2019, the average retail price of electricity nationwide according to EIA data rose 7% year-to-year in 2022's Q1, more than 12% in Q2 and almost 17% in Q3. Cost pressures continued in Q4 with year-to-year increases at 14.0% in October and at 11.8% in November.

Utility managements and Wall Street analysts are closely watching rate reviews and regulators' reactions to integrated resource plans to see if cost pressures on utility bills spoil consumers' or regulators' support for the clean energy capex that drives earnings growth.

Conference Season

Wall Street analysts produce considerable reporting on utility management presentations at the investment conferences that populate the fall season. EEI's Financial Conference in November is one of these. In recent years, Wall Street's take has been consistently upbeat, focusing on the virtuous cycle that enabled low natural gas prices, stable customer bills, growing public support for clean energy and for CO2 emissions cuts, federal clean renewable energy tax incentives, and operations and maintenance (O&M) cost savings from smart-grid investments to fund the growing capital spending that translates into earnings growth. Projected secular earnings growth rates analysts cited for utilities steadily edged higher over the past decade from 4%-5% up to 5%-7% and 6%-8% in some cases.

This year's conference season produced widespread discussion of inflation, higher interest rates, higher fuel costs, pension costs pressures, regulatory concern over the impacts of aggressive capex on customer bills, and the stability of long-term earnings growth rates across the industry. Several analyst reports used the phrase "non-linearities" to reference the modest cuts in 2023 earn-

ings guidance or longer-term growth outlooks that came out of earnings calls and conference presentations by a handful of utilities. The phrase was also a buzzword for investors' new scrutiny of company outlooks for risks of earnings speed bumps or downshifts to expected growth rates.

Secular Tailwinds

Yet despite scattered earnings outlook cuts, Wall Street research coverage also affirmed the industry's fundamental growth picture remains robust.

The Inflation Reduction Act of 2022 (IRA) offers broad support to the nation's clean energy agenda and may add to pre-existing rate base growth opportunities for electric utilities. In EEI's view, the IRA places the United States at the forefront of global efforts to drive down carbon emissions, especially when paired with the historic funding included in the bipartisan infrastructure law. It also provides much-needed certainty to electric utilities over the next decade, as they work to deploy clean energy and carbon-free technologies.

Analysts noted that, despite regulatory scrutiny of customer bill pressures in some regions, there is little evidence that commissions are generally any less supportive of the nation's clean energy agenda and the economic stimulus that clean energy and reliability-related capex brings to service territories. The potential boost to secular load growth from widespread adoption of electric vehicles also remains a possibly strong tailwind. Several utilities have cited the onshoring of U.S. manufacturing and economic development as drivers of strong load growth in their service territories. A few cited electricity demand from large data centers.

Long-term growth rarely occurs without occasional setbacks and challenges. And utilities offered investors a relative safe haven and a positive total return in 2022's market weakness — that's more or less what they're expected to do. It's impossible to predict what inflation and interest rates will do in 2023, but as the year begins it seems reasonable to believe the nation's clean energy revolution is still in the early innings with investor-owned utilities as key players in the game.

2022 Returns By Quarter

Index	Q1	Q2	Q3	Q4
EEI Index	4.8	(4.9)	(6.7)	8.8
Dow Jones Industrial Average	(4.0)	(10.9)	(6.2)	15.8
S&P 500	(4.6)	(16.1)	(4.9)	7.3
Nasdaq Composite*	(9.0)	(23.0)	(3.5)	(1.6)
Category	**Q1**	**Q2**	**Q3**	**Q4**
All Companies	5.2	(3.8)	(8.3)	10.7
Regulated	6.4	(3.6)	(8.2)	10.0
Mostly Regulated	(0.0)	(5.0)	(9.0)	14.3

* Price gain/loss only. Other indices show total return.
For the Category comparison, straight, equal-weight averages are used (i.e., not market-cap-weighted).

Source: EEI Finance Department, S&P Global Market Intelligence.

2022 Category Comparison

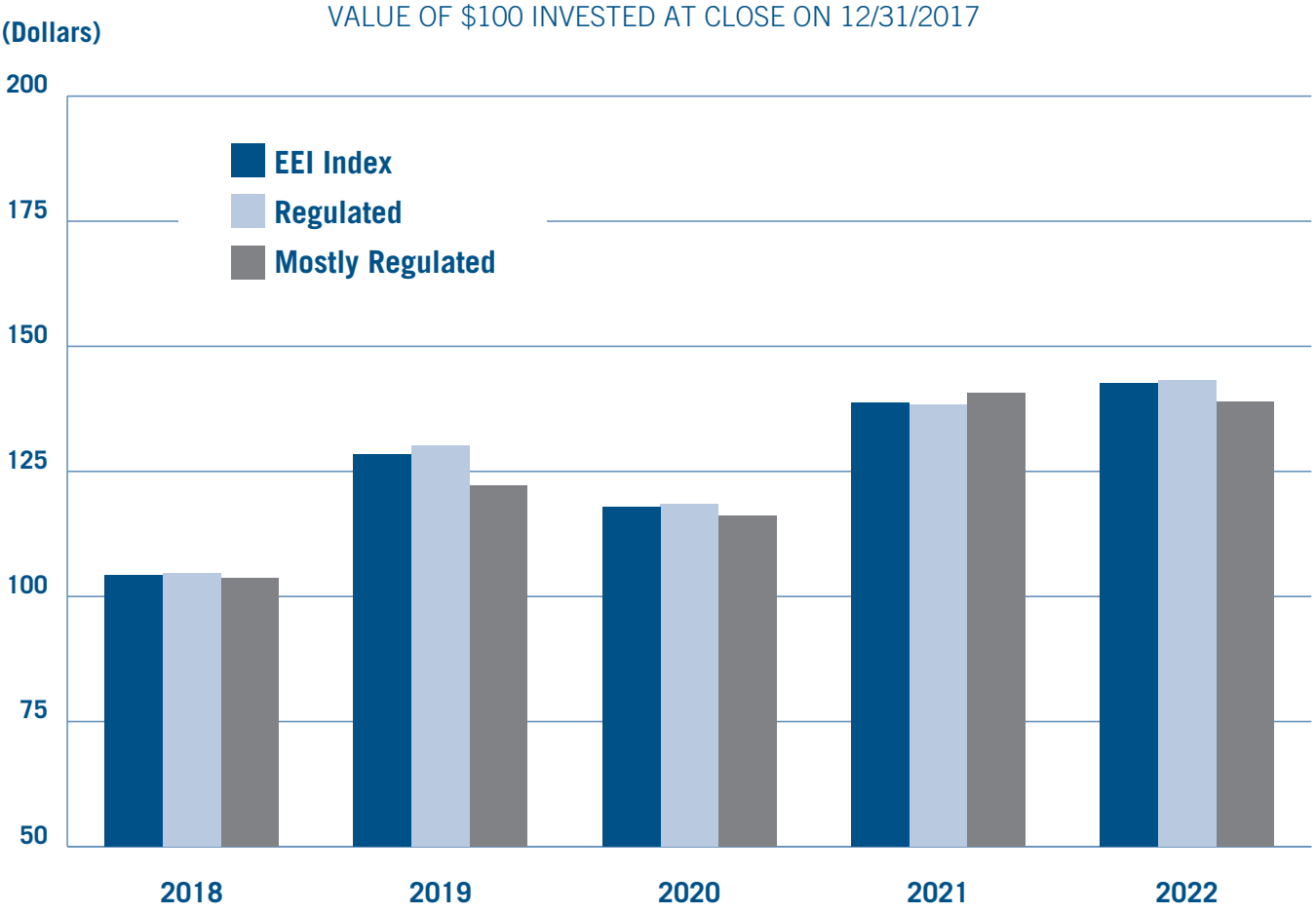
Category	Return (%)
EEI Index	**2.7**
Regulated	3.6
Mostly Regulated	(1.1)

* Returns shown here are unweighted averages of constituent company returns. The EEI Index return shown in the 2022 Index Comparison table is cap-weighted.

Source: EEI Finance Department, S&P Global Market Intelligence, and company annual reports.

Comparative Category Total Annual Returns 2018–2022

U.S. INVESTOR-OWNED ELECTRIC UTILITIES,
VALUE OF $100 INVESTED AT CLOSE ON 12/31/2017



	2018	2019	2020	2021	2022
EEI Index Annual Return (%)	4.28	23.06	(8.07)	17.62	2.74
EEI Index Cumulative Return ($)	104.28	128.32	117.96	138.74	142.55
Regulated EEI Index Annual Return	4.55	24.56	(9.01)	16.72	3.59
Regulated EEI Index Cumulative Return	104.55	130.22	118.49	138.30	143.26
Mostly Regulated EEI Index Annual Return	3.62	17.87	(4.95)	21.09	(1.15)
Mostly Regulated EEI Index Cumulative Return	103.62	122.14	116.09	140.58	138.97

- For the Category Comparison, straight, equal-weight averages are used (i.e., not market-cap-weighted).
- Cumulative Return assumes $100 invested at closing prices on December 31, 2017.

Source: EEI Finance Dept., S&P Global Market Intelligence.

Market Capitalization at December 31, 2022 (in $MM)

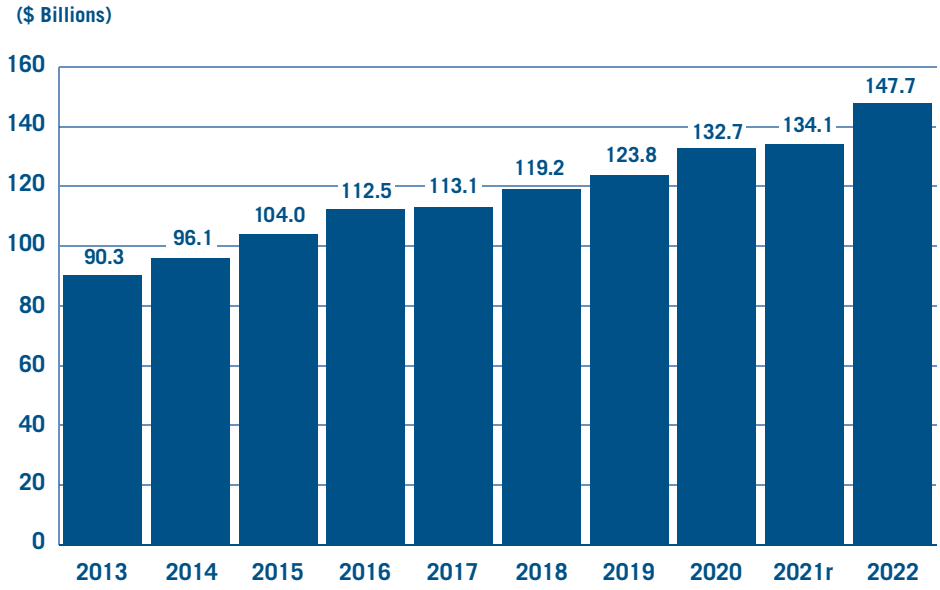
U.S. INVESTOR-OWNED ELECTRIC UTILITIES

Company Name	Ticker	Market Cap.	% of Total	Company Name	Ticker	Market Cap.	% of Total
NextEra Energy, Inc.	NEE	164,901	16.49%	CMS Energy Corporation	CMS	18,340	1.83%
Duke Energy Corporation	DUK	79,302	7.93%	AVANGRID, Inc.	AGR	16,622	1.66%
Southern Company	SO	77,266	7.73%	Evergy, Inc.	EVRG	14,468	1.45%
Dominion Energy, Inc.	D	51,055	5.11%	Alliant Energy Corporation	LNT	13,858	1.39%
American Electric Power Company, Inc.	AEP	48,779	4.88%	NiSource Inc.	NI	11,146	1.11%
Sempra Energy	SRE	48,637	4.86%	Pinnacle West Capital Corporation	PNW	8,609	0.86%
Exelon Corporation	EXC	42,711	4.27%	OGE Energy Corp.	OGE	7,918	0.79%
Xcel Energy Inc.	XEL	38,420	3.84%	MDU Resources Group, Inc.	MDU	6,170	0.62%
Consolidated Edison, Inc.	ED	33,797	3.38%	IDACORP, Inc.	IDA	5,465	0.55%
PG&E Corporation	PCG	32,309	3.23%	Hawaiian Electric Industries, Inc.	HE	4,581	0.46%
Public Service Enterprise Group Inc.	PEG	30,451	3.05%	Black Hills Corporation	BKH	4,563	0.46%
WEC Energy Group, Inc.	WEC	29,572	2.96%	Portland General Electric Company	POR	4,374	0.44%
Eversource Energy	ES	29,117	2.91%	PNM Resources, Inc.	PNM	4,201	0.42%
Edison International	EIX	24,303	2.43%	ALLETE, Inc.	ALE	3,684	0.37%
FirstEnergy Corp.	FE	23,948	2.40%	NorthWestern Corporation	NWE	3,341	0.33%
Ameren Corporation	AEE	22,977	2.30%	Avista Corporation	AVA	3,247	0.32%
Entergy Corporation	ETR	22,888	2.29%	MGE Energy, Inc.	MGEE	2,546	0.25%
DTE Energy Company	DTE	22,683	2.27%	Otter Tail Corporation	OTTR	2,442	0.24%
PPL Corporation	PPL	21,513	2.15%	Unitil Corporation	UTL	822	0.08%
CenterPoint Energy, Inc.	CNP	18,879	1.89%				
				Total Industry		**999,904**	**100%**

Source: EEI Finance Department and S&P Global Market Intelligence.

Capital Expenditures 2013–2022

U.S. INVESTOR-OWNED ELECTRIC UTILITIES

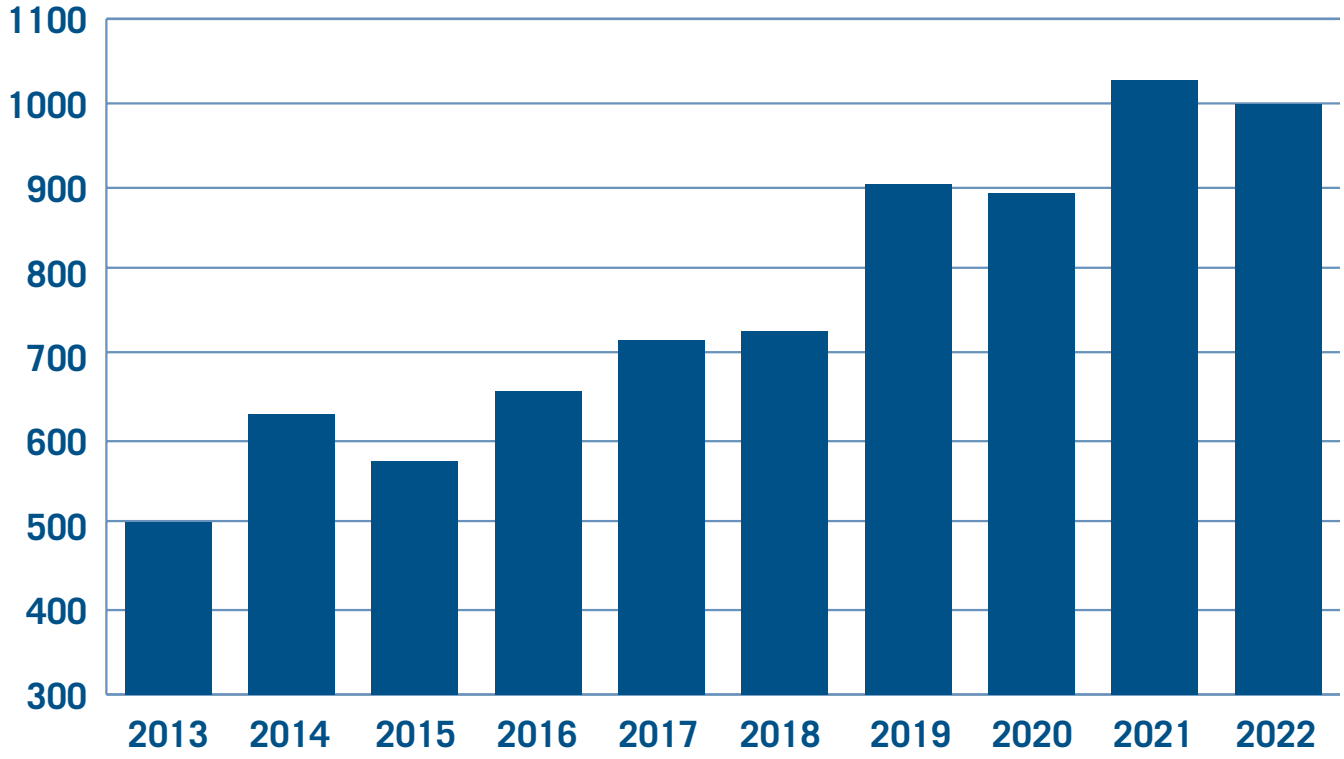


r = revised

Source: S&P Global Market Intelligence, company reports, and EEI Finance Department.

EEI Index Market Capitalization 2013–2022

($ Billions)

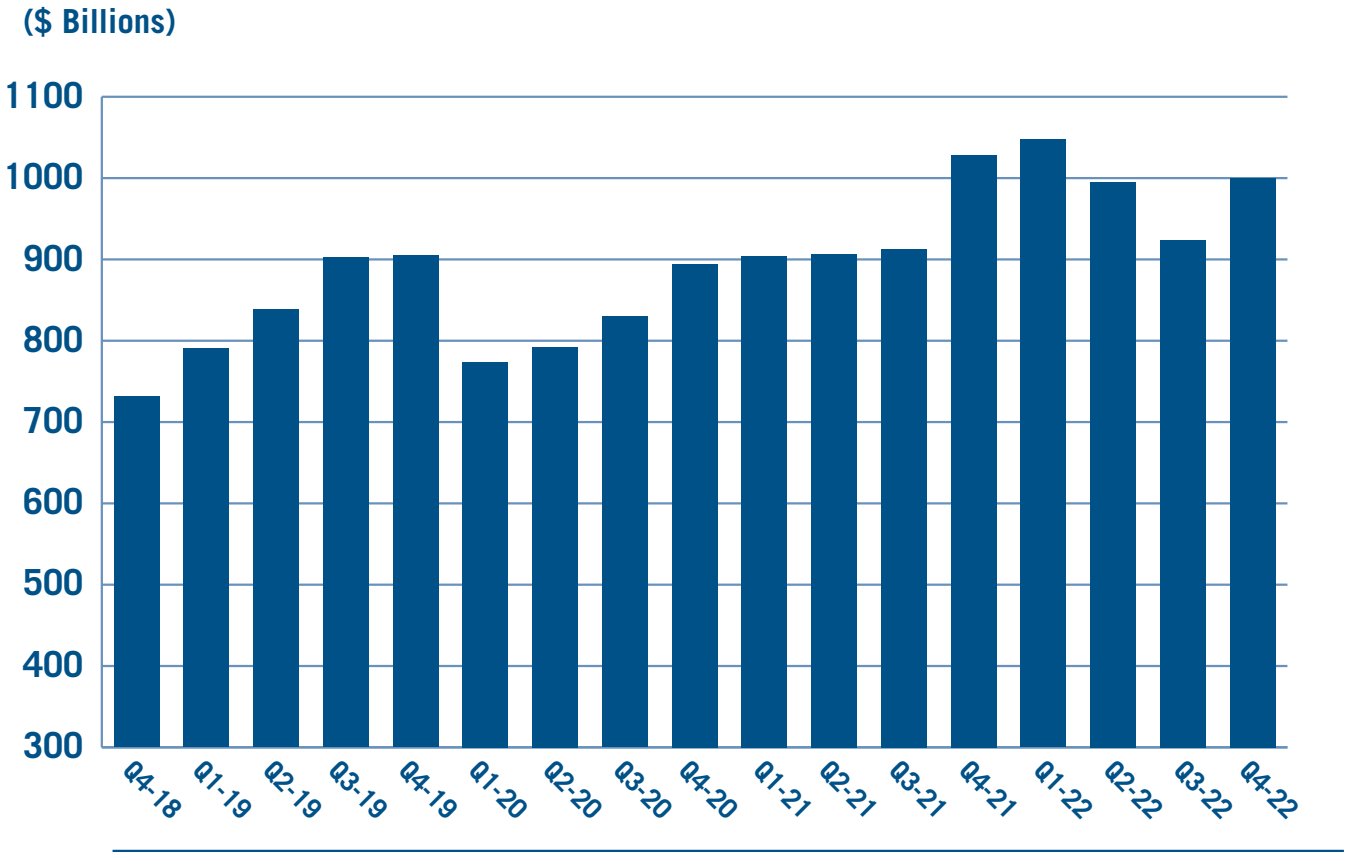


Note: Results are as of December 31 of each year.

Source: EEI Finance Department and S&P Global Market Intelligence.

EEI Index Market Capitalization

December 31, 2018–December 31, 2022



Source: EEI Finance Department and S&P Global Market Intelligence.

Dividends

The investor-owned electric utility industry continued its long-term trend of widespread dividend increases in 2022. A total of 34 companies increased or reinstated their dividend compared to 32 in 2021, 34 in 2020, 37 in 2019, 39 in 2018 and 36 to 40 companies annually from 2012 through 2017. There was one dividend reduction compared to zero in 2021 and two in 2020.

The percentage of companies that raised or reinstated their dividend in 2022 was 87%, up from 82% in 2021 and aligned with the 85% to 93% range seen from 2015 through 2020. By contrast, only 27 of the 65 utilities tracked by EEI increased their dividend in 2003, just prior to the passage of legislation that reduced dividend tax rates. The percentages noted above are drawn

Dividend Patterns 1996–2022

U.S. INVESTOR-OWNED ELECTRIC UTILITIES

	Raised	No Change	Lowered	Omitted*	Reinstated	Not Paying	Total	Dividend Payout Ratio
1996	48	44	2	1	1	2	98	70.7%
1997	40	45	6	2	–	3	96	84.2%
1998	40	37	7	–	–	5	89	82.1%
1999	29	45	4	–	3	2	83	74.9%
2000	26	39	3	1	–	2	71	63.9%
2001	21	40	3	2	–	3	69	64.1%**
2002	26	27	6	3	–	3	65	67.5%
2003	26	24	7	2	1	5	65	63.7%
2004	35	22	1	–	–	7	65	67.9%
2005	34	22	1	1	2	5	65	66.5%
2006	41	17	–	–	–	6	64	63.5%
2007	40	15	–	–	3	3	61	62.1%
2008	36	20	1	–	1	1	59	66.8%
2009	31	23	3	–	–	1	58	69.6%
2010	34	22	–	–	–	1	57	62.0%
2011	31	22	–	1	1	–	55	62.8%
2012	36	14	–	–	1	–	51	64.2%
2013	36	12	1	–	–	–	49	61.5%
2014	38	9	1	–	–	–	48	60.4%
2015	39	7	–	–	–	–	46	67.0%
2016	40	4	–	–	–	–	44	62.9%
2017	38	4	–	1	–	–	43	64.0%
2018	39	1	1	–	–	1	42	63.9%
2019	37	2	–	–	–	1	40	62.6%
2020	34	2	2	–	–	1	39	65.3%
2021	32	6	–	–	–	1	39	62.7%
2022	34	3	1	–	–	1	39	70.8%

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Average of the Increased Dividend Actions ***	5.3%	5.7%	5.8%	5.6%	5.6%	5.7%	5.1%	5.1%	4.8%	5.2%
Average of the Declining Dividend Actions ***	(41.0%)	(34.5%)	NA	NA	NA	(79.8%)	NA	(40.6%)	NA	(51.8%)

* Omitted in current year. This number is not included in the Not Paying column.

** * Prior to 2000: Total industry dividends/total industry earnings. Starting in 2000: Average of all companies paying dividend.

*** Excludes companies that omitted or reinstated dividends.

2022 current year figures reflect dividend changes (raised, lowered, etc.) through 12/31/2022 and earnings and dividends through 12/31/2022 (payout ratio).

Source: S&P Global Market Intelligence and EEI Finance Department

from a dataset that begins in 1988. Mergers and acquisitions reduced the number of publicly traded utilities included in the EEI Index from 65 in 2003 to 39 at year-end 2022.

As shown in Dividend Patterns table, 38 of the 39 publicly traded utilities in the EEI Index were paying a common stock dividend as of December 31, 2022. Each company is limited to one action per year in the table. For example, if a company raised its dividend twice during a year that counts as one in the Raised column. Electric utilities generally use the same quarter each year for dividend changes, with Q1 being the most common.

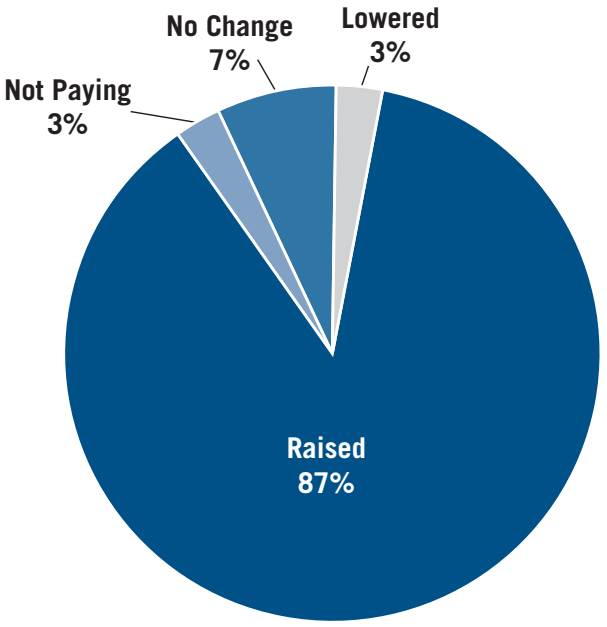
2022 Increases Average 5.2%

The average dividend increase in 2022 was 5.2%, with a range of 1.0% to 12.2% and a median increase of 5.6%. PNM Resources (12.2% including both its Q1 and Q4 raises), CenterPoint Energy (11.8% including both its Q3 and Q4 increases) and NextEra Energy (+10.4% in Q1) posted the largest percentage increases.

PNM Resources, headquartered in Albuquerque, New Mexico, raised its quarterly dividend from $0.3275 to $0.3475 and then to $0.3575 per share. The increases are consistent with the company's target to pay out 55% of annual ongoing earnings. CenterPoint Energy, based in Houston, Texas, increased its quarterly dividend from $0.17 to $0.18 and then to $0.19 per share. The increases align the company for an annual dividend growth rate of 9% in 2023 when compared to dividends paid in 2022. NextEra Energy,

2022 Dividend Patterns

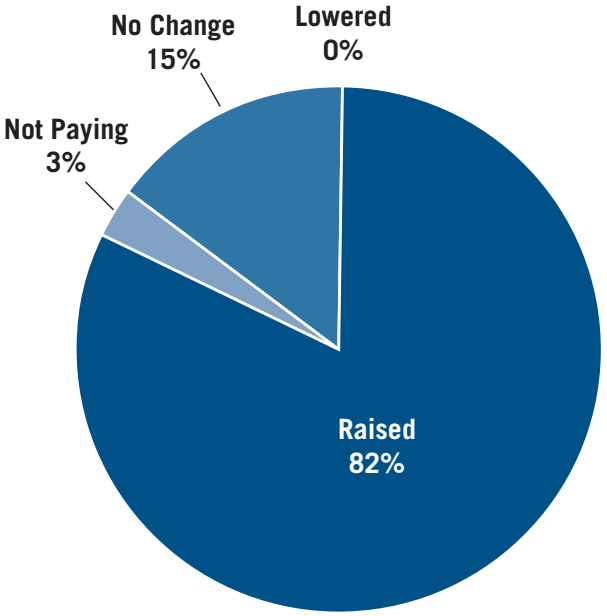
U.S. INVESTOR-OWNED ELECTRIC UTILITIES



Source: EEI Finance Department.

2021 Dividend Patterns

U.S. INVESTOR-OWNED ELECTRIC UTILITIES



Source: EEI Finance Department.

based in Juno Beach, Florida, increased its quarterly dividend from $0.385 to $0.425 per share. The increase is consistent with its plan, announced in 2020, to target roughly 10% annual growth in dividends per share through at least 2022, off a 2020 base. NextEra recorded the industry's highest percentage increases in 2021 (+10.0%), 2020 (+12.0%) and 2019 (+12.6%), which followed the second-highest percentage increase in 2018 (+13.0%) and the largest percentage increases in both 2017 (+12.9%) and 2016 (+13.0%, along with Edison International and DTE Energy).

PPL reduced its quarterly dividend from $0.415 to $0.20 in Q1 as part of a strategic repositioning and dividend reset. The company completed a targeted $1 billion share repurchase program on December 31, 2021, which returned value to existing shareholders in a different manner than dividends. During 2022, PPL completed the sale of its U.K. business (Western Power Distribution) and purchased Narragansett Electric Company, which is Rhode Island's primary electric and gas utility. PPL subsequently increased its dividend by 12.5% during Q2 2022 to a quarterly rate of $0.225 per share.

The industry's average and median increases have been relatively consistent in recent years. The average was 4.8% in 2021 and ranged between 5.1% and 5.7% from 2016 through 2020. The median increase was 5.4% in 2021 and ranged between 4.9% and 5.5% from 2017 through 2020.

Payout Ratio and Dividend Yield

The industry's dividend payout ratio was 73.0% for the twelve months ended December 31, 2022, exceeding all other U.S. business sectors. The industry's payout ratio was 70.8% when measured as an un-weighted average of individual company ratios; 73.0% represents an aggregate figure. From 2000 through 2021, the industry's annual payout ratio ranged from 60.4% to 69.6%.

While the industry's net income has fluctuated from year to year, its payout ratio has remained relatively consistent after eliminating non-recurring and extraordinary items from earnings. We use the following approach when calculating the industry's dividend payout ratio:

1. Non-recurring and extraordinary items are eliminated from earnings.
2. Companies with negative adjusted earnings are eliminated.

Sector Comparison Dividend Payout Ratio

For 12-month period ending 12/31/22

Sector	Payout Ratio (%)
EEI Index Companies*	**73.0%**
Utilities	59.3%
Consumer Staples	54.3%
Industrial	34.5%
Financial	29.1%
Materials	29.0%
Consumer Discretionary	27.6%
Energy	26.7%
Health Care	26.1%
Technology	23.0%

* For this table, EEI (1) sums dividends and (2) sums earnings of all index companies and then (3) divides to determine the comparable DPR.

Assumptions:
1. EEI Index Companies payout ratio based on LTM common dividends paid and income before nonrecurring and extraordinary items.

2. S&P sector payout ratios based on 2022E dividends and earnings per share (estimates as of 12/31/2022).

For more information on constituents of each S&P sector, see http://www.sectorspdr.com/.

Source: AltaVista Research, S&P Global Market Intelligence, and EEI Finance Department.

Sector Comparison, Dividend Yield
As of December 31, 2022

Sector	Dividend Yield (%)
EEI Index Companies	**3.4%**
Energy	3.2%
Utilities	3.0%
Consumer Staples	2.5%
Financial	2.1%
Materials	2.1%
Industrial	1.7%
Health Care	1.6%
Technology	1.1%
Consumer Discretionary	1.0%

Assumptions:
1. EEI Index Companies' yield based on last announced, annualized dividend rates (as of 12/31/2022); S&P sector yields based on 2022E cash dividends (estimates as of 12/31/2022).

For more information on constituents of each S&P sector, see http://www.sectorspdr.com/.

Source: AltaVista Research, S&P Global Market Intelligence and EEI Finance Department.

3. Companies with a payout ratio in excess of 200% are eliminated.

The industry's average dividend yield was 3.4% on December 31, 2022, leading all U.S. business sectors. The yield reached 3.8% on June 30, 2020 and has since fallen due to a rise in utility stock prices and consistent dividend activity. The market cap weighted EEI Index had a total return of 1.2% in 2022. The industry's year-end dividend yield was 3.3% in 2021, 3.6% in 2020, 3.0% in 2019 and 3.4% in each of the three previous years.

We calculate the industry's average dividend yield using an un-weighted average of the yields of EEI Index companies paying a dividend. The strong yields prevalent among most electric utilities have helped support their share prices over the past decade, particularly given the period's historically low interest rates.

Business Category Comparison

The Regulated category's dividend payout ratio was 69.2% for the 12 months ended December 31, 2022, compared to 77.4% for the Mostly Regulated category. The Regulated group produced the higher annual payout ratio in 2020, 2017, 2015, 2011, 2010 and in each year from 2003 through 2008.

The Regulated and Mostly Regulated average dividend yields were 3.4% and 3.3% on December 31, 2022, compared to 3.3% and 3.0% at year-end 2021, 3.6% and 3.4% at year-end 2020 and 3.0 and 3.1% at year-end 2019. The dividend yields for both categories at year-end 2018 and 2017 were 3.4%.

Electric Utilities' History of Strong Dividends

For more than a century, the investor-owned electric utility industry has stood out among U.S. business sectors for its steady and rising dividends. This reputation is founded on:

- A steady stream of income from a product that is universally needed with low elasticity of demand.
- A highly regulated industry that provides reasonable returns on investment with associated low business risk.
- A mature industry comprised of companies with very long track records of maintaining and/or steadily increasing their dividends over time.

These characteristics are especially attractive to an aging population of investors who seek a combination of growth and income. A typical total return model for electric utilities is approximately 4-5% annual earnings growth and a 3-4% dividend yield, producing a highly visible and relatively stable 7-9% annualized long-term total return potential.

Category Comparison, Dividend Payout Ratio

Category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
EEI Index	**61.5**	**60.4**	**67.0**	**62.9**	**64.0**	**63.9**	**62.6**	**65.3**	**61.6**	**70.8**
Regulated	60.5	59.4	68.7	61.1	68.7	60.1	62.1	65.3	59.5	69.2
Mostly Regulated	64.7	63.8	62.6	68.0	53.3	72.8	64.1	65.2	69.0	77.4
Diversified	44.7	56.4	64.9	64.6	–	–	–	–	–	–

Regulated: 80% or more of total assets are regulated
Mostly Regulated: Less than 80% of total assets are regulated
Diversified: Prior to 2017, less than 50% of total assets are regulated

*2022 figures reflect earnings and dividends through 12/31/2022.

Source: S&P Global Market Intelligence, company reports, and EEI Finance Department

The market's valuation of that return stream, of course, will shift with investor sentiment.

IRA Brings No Change to Dividend Tax Rate

An increase in dividend tax rates for the highest individual tax bracket was considered a potential revenue source for the Biden Administration's Build Back Better Act (BBBA) legislation until BBBA evolved into the passage of the Inflation Reduction Act of 2022 (IRA) in August. Due to the need to significantly reduce the size of this legislation in order to have a chance at success, the IRA passed as a slimmed down version of BBBA, retaining its robust clean energy tax package while maintaining current capital gains and dividend tax parity.

The top tax rate for dividends and capital gains is currently 20%, applying to 2022 income thresholds of $517,200 for couples and $459,750 for individuals. For taxpayers below these thresholds, dividends and capital gains are currently taxed at rates of 15% or 0%, depending on a filer's income. A 3.8% Medicare tax that was included in 2010 health care legislation is also applied to all investment income for couples earning more than $250,000 ($200,000 for singles).

Low dividend tax rates support the industry's ability to attract capital for investment. Maintaining parity between dividend and capital gains tax rates is crucial to avoid a disadvantage for companies that rely on a strong dividend to attract investors.

Category Comparison, Dividend Yield
As of December 31, 2022

Category	Dividend Yield
EEI Index	**3.4%**
Regulated	3.4%
Mostly Regulated	3.3%

Regulated: 80% or more of total assets are regulated
Mostly Regulated: Less than 80% of total assets are regulated
Source: S&P Global Market Intelligence, company reports and EEI Finance Department

Dividend Summary

As of December 31, 2022

U.S. INVESTOR-OWNED ELECTRIC UTILITIES

Company Name	Stock	Company Category	Annualized Dividends	Payout Ratio	Yield (%)	Last Action	To	From	Date Announced
ALLETE, Inc.	ALE	MR	$2.60	111.1%	4.0%	Raised	$2.60	$2.52	2022 Q1
Alliant Energy Corporation	LNT	R	$1.71	62.5%	3.1%	Raised	$1.71	$1.61	2022 Q1
Ameren Corporation	AEE	R	$2.36	56.5%	2.7%	Raised	$2.36	$2.20	2022 Q1
American Electric Power Company, Inc.	AEP	R	$3.32	67.3%	3.5%	Raised	$3.32	$3.12	2022 Q4
AVANGRID, Inc.	AGR	MR	$1.76	81.9%	4.1%	Raised	$1.76	$1.73	2018 Q3
Avista Corporation	AVA	R	$1.76	83.2%	4.0%	Raised	$1.76	$1.69	2022 Q1
Black Hills Corporation	BKH	R	$2.50	57.9%	3.6%	Raised	$2.50	$2.38	2022 Q4
CenterPoint Energy, Inc.	CNP	R	$0.76	NM	2.5%	Raised	$0.76	$0.72	2022 Q4
CMS Energy Corporation	CMS	R	$1.84	66.0%	2.9%	Raised	$1.84	$1.74	2022 Q1
Consolidated Edison, Inc.	ED	R	$3.16	59.4%	3.3%	Raised	$3.16	$3.10	2022 Q1
Dominion Resources, Inc.	D	R	$2.67	96.6%	4.4%	Raised	$2.67	$2.52	2022 Q1
DTE Energy Company	DTE	R	$3.81	66.8%	3.2%	Raised	$3.81	$3.54	2022 Q4
Duke Energy Corporation	DUK	R	$4.02	78.4%	3.9%	Raised	$4.02	$3.94	2022 Q3
Edison International	EIX	R	$2.95	43.6%	4.6%	Raised	$2.95	$2.80	2022 Q4
Entergy Corporation	ETR	R	$4.28	98.8%	3.8%	Raised	$4.28	$4.04	2022 Q4
Evergy, Inc.	EVRG	R	$2.45	69.3%	3.9%	Raised	$2.45	$2.29	2022 Q4
Eversource Energy	ES	R	$2.55	60.2%	3.0%	Raised	$2.55	$2.41	2022 Q1
Exelon Corporation	EXC	MR	$1.35	61.7%	3.1%	Raised	$1.35	N/A	2020 Q1
FirstEnergy Corp.	FE	R	$1.56	149.5%	3.7%	Raised	$1.56	$1.52	2019 Q4
Hawaiian Electric Industries, Inc.	HE	MR	$1.40	65.2%	3.3%	Raised	$1.40	$1.36	2022 Q1
IDACORP, Inc.	IDA	R	$3.16	59.4%	2.9%	Raised	$3.16	$3.00	2022 Q4
MDU Resources Group, Inc.	MDU	MR	$0.89	48.2%	2.9%	Raised	$0.89	$0.87	2022 Q4
MGE Energy, Inc.	MGEE	R	$1.63	51.8%	2.3%	Raised	$1.63	$1.55	2022 Q3
NextEra Energy, Inc.	NEE	MR	$1.70	98.6%	2.0%	Raised	$1.70	$1.54	2022 Q1
NiSource Inc.	NI	R	$0.94	55.5%	3.4%	Raised	$0.94	$0.88	2022 Q1
NorthWestern Corporation	NWE	R	$2.52	76.5%	4.2%	Raised	$2.52	$2.48	2022 Q1
OGE Energy Corp.	OGE	R	$1.66	NM	4.2%	Raised	$1.66	$1.64	2022 Q3
Otter Tail Corporation	OTTR	R	$1.65	24.2%	2.8%	Raised	$1.65	$1.56	2022 Q1
PG&E Corporation	PCG	R	$-	0.0%	0.0%	Lowered	$-	$2.12	2017 Q4
Pinnacle West Capital Corporation	PNW	R	$3.46	75.7%	4.6%	Raised	$3.46	$3.40	2022 Q4
PNM Resources, Inc.	PNM	R	$1.47	62.1%	3.0%	Raised	$1.47	$1.39	2022 Q4
Portland General Electric Company	POR	R	$1.81	67.8%	3.7%	Raised	$1.81	$1.72	2022 Q2
PPL Corporation	PPL	R	$0.90	110.2%	3.1%	Raised	$0.90	$0.80	2022 Q2
Public Service Enterprise Group Incorporated	PEG	MR	$2.16	74.9%	3.5%	Raised	$2.16	$2.04	2022 Q1
Sempra Energy	SRE	R	$4.58	56.5%	3.0%	Raised	$4.58	$4.40	2022 Q1
Southern Company	SO	R	$2.72	68.0%	3.8%	Raised	$2.72	$2.64	2022 Q2
Unitil Corporation	UTL	R	$1.56	60.6%	3.0%	Raised	$1.56	$1.52	2022 Q1
WEC Energy Group, Inc.	WEC	R	$2.91	63.5%	3.1%	Raised	$2.91	$2.71	2022 Q1
Xcel Energy Inc.	XEL	R	$1.95	58.3%	2.8%	Raised	$1.95	$1.83	2022 Q1
Industry Average				**70.8%**	**3.4%**				

NOTES

Business Segmentation: Assets as of 12/31/2021

R = Regulated: 80% or more of total assets are regulated. **MR = Mostly Regulated:** Less than 80% of total assets are regulated.

Dividend Per Share: Per share amounts are annualized declared figures as of 12/31/2022.

Dividend Payout Ratio: Dividends paid for 12 months ended 12/31/2022 divided by net income before nonrecurring and extraordinary items for 12 months ended 12/31/2022. While net income is after-tax, nonrecurring and extraordinary items are pre-tax, as there is no consistent method of gathering these items on a tax adjusted basis under current reporting guidelines. On an individual company basis, the Payout Ratio in the table could differ slightly from what is reported directly by the company.

"NM" applies to companies with negative earnings or payout ratios greater than 200%.

Dividend Yield: Annualized Dividends Per Share at 12/31/2022 divided by stock price at market close on 12/31/2022.

By Business Segment: Average of Dividend Payout Ratios and Dividend Yields for companies within these business segments.

Source: EEI Finance Department and S&P Global Market Intelligence.

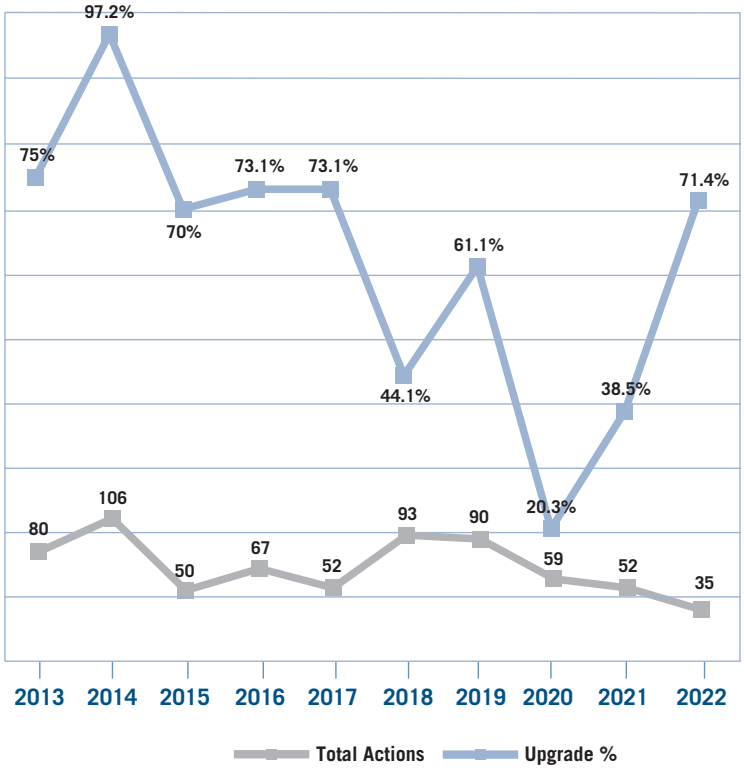
Credit Ratings

The industry's average parent company credit rating in 2022 remained at BBB+ for the ninth straight year, although one parent-level downgrade caused a slight weakening in aggregate holding company credit quality. There were only 35 total actions — 25 upgrades and 10 downgrades — affecting both parents and subsidiaries. This pace was far below the 73-action annual average of the previous ten calendar years and is the lowest annual total in our historical dataset (back to 2000).

On December 31, 2022, 77.3% of parent company ratings outlooks were "stable", 9.1% were "positive" or "watch-positive", and 2.3% were "developing". Only 11.4% of outlooks were "negative" or "watch-negative"; that was down from 22.7% at year-end 2021.

Direction of Rating Actions

U.S. INVESTOR-OWNED ELECTRIC UTILITIES

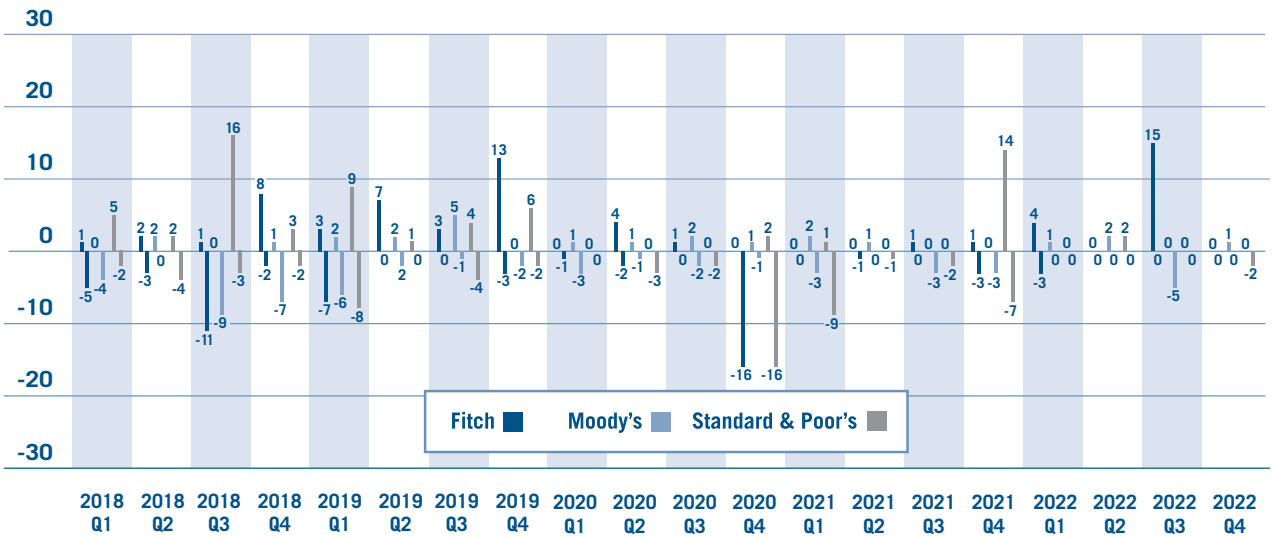


Source: Fitch Ratings, Moody's, and Standard & Poor's.

Credit Rating Agency Upgrades and Downgrades 2018 Q1–2022 Q4

U.S. INVESTOR-OWNED ELECTRIC UTILITIES

(Number of Occurrences)



Note: Data presents the number of occurrences and includes each event, even if multiple actions occurred for a single company.

Source: Fitch Ratings, Moody's, and Standard & Poor's.

Credit Rating Agency Upgrades and Downgrades 2018 Q1–2022 Q4

	2018		2019		2020		2021		2022	
	Total Upgrades	Total Downgrades	Total Upgrades	Total Downgrades	Total Upgrades	Total Downgrades	Total Upgrades	Total Downgrades	Total Upgrades	Total Downgrades
Fitch										
Q1	1	(5)	3	(7)	0	(1)	0	0	4	(3)
Q2	2	(3)	7	0	4	(2)	0	(1)	0	0
Q3	1	(11)	3	0	1	0	1	0	15	0
Q4	8	(2)	13	(3)	0	(16)	1	(3)	0	0
Total	**12**	**(21)**	**26**	**(10)**	**5**	**(19)**	**2**	**(4)**	**19**	**(3)**
Moody's										
Q1	0	(4)	2	(6)	1	(3)	2	(3)	1	0
Q2	2	0	2	(2)	1	(1)	1	0	2	0
Q3	0	(9)	5	(1)	2	(2)	0	(3)	0	(5)
Q4	1	(7)	0	(2)	1	(1)	0	(3)	1	0
Total	**3**	**(20)**	**9**	**(11)**	**5**	**(7)**	**3**	**(9)**	**4**	**(5)**
S&P										
Q1	5	(2)	9	(8)	0	0	1	(9)	0	0
Q2	2	(4)	1	0	0	(3)	0	(1)	2	0
Q3	16	(3)	4	(4)	0	(2)	0	(2)	0	0
Q4	7	0	3	(2)	2	(16)	14	(7)	0	(2)
Total	**17**	**(8)**	**26**	**(11)**	**2**	**(21)**	**15**	**(19)**	**2**	**(2)**

Note: Chart depicts the number of occurrences and includes each event, even if multiple downgrades occurred for a single company.
Source: Fitch Ratings, Moody's, and Standard & Poor's.

Electric utility industry credit quality generally improved over the past decade. The industry's average parent level rating has held at BBB+ since increasing from BBB in 2014. A closer look at the underlying calculation of this average shows a steady strengthening from 2013 through 2018, followed by a slight decline in 2019, 2020, 2021, and 2022. Across the larger universe that includes both parents and subsidiaries, the five-year period 2013 through 2017, along with 2022, produced the six highest upgrade percentages in our 23 years of historical data. Moreover, upgrades outnumbered downgrades in seven of the past ten calendar years with an annual average upgrade percentage of 62% over the decade.

EEI captures upgrades and downgrades at both the parent and subsidiary levels. The industry's average credit rating and outlook are the unweighted averages of all Standard & Poor's (S&P) parent holding company ratings and outlooks. However, our upgrade/downgrade totals reflect all actions by the three major ratings agencies including both parent holding companies as well as individual subsidiaries. Our universe of 44 U.S. parent company electric utilities on December 31, 2022 included 39 that are publicly traded and 5 that are either a subsidiary of an independent power producer, a subsidiary of a foreign owned company, or owned by an investment firm.

The three major rating agencies stressed similar themes in their outlooks for 2023. S&P maintained a negative outlook, Moody's revised its U.S. regulated utility outlook to negative from stable, and Fitch revised its North American utilities outlook to deteriorating from neutral. All three agencies cited higher natural gas prices, inflation, rising interest rates, and increased capital spending as key concerns. While the agencies noted regulatory relations are broadly constructive, all said that utilities' efforts to manage the regulatory risk associated with residential customer affordability issues will be a key area of scrutiny.

Credit Actions at Parent Level

Parent-level ratings actions in 2022 by S&P included only one downgrade. By comparison, there were three downgrades and one upgrade in 2021, three downgrades, one upgrade and one reinstatement in 2020, and five downgrades and one upgrade in 2019.

DPL

On December 21, S&P downgraded DPL Inc. and subsidiary Dayton Power and Light (DP&L) to BB from BB+. Dayton Power & Light received an order from the Public Utilities Commission of Ohio (PUCO) that authorized it to increase its distribution rates by $75 million. However, the increase will not go into effect until the company has a new Electric Security Plan (ESP) in place, which is not anticipated until mid-2023. S&P said the companies may be adversely impacted by cash flow pressures due to the delay.

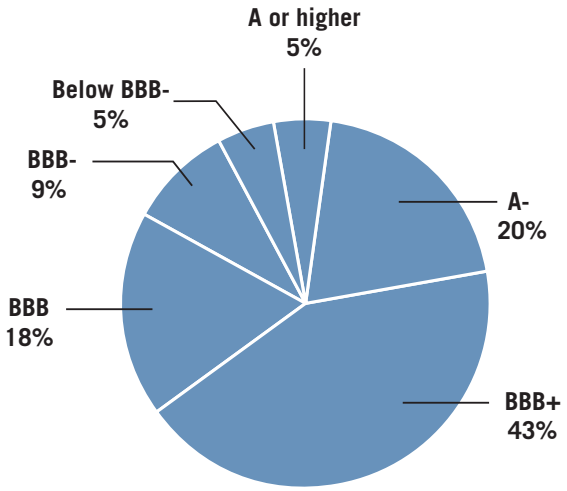
Ratings Activity Remained Slow in 2022

The 35 rating changes during 2022 (upgrades plus downgrades), 17 fewer than in 2021, was the lowest total of any year back to our dataset's inception in 2000. By comparison, there were 59 actions in 2020, 90 in 2019, and an annual average of 73 over the previous decade.

The industry's 25 upgrades in 2022 versus 10 downgrades produced an upgrade percentage of 71.4%, up from 38.5% in 2021 and 20.3% in 2020. Upgrades outnumbered downgrades in seven of the past ten calendar years, with an annual average upgrade percentage of 62%.

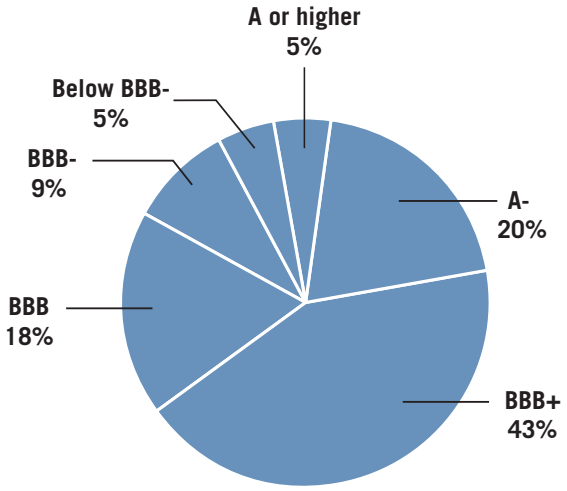
Bond Ratings December 31, 2022
as rated by Standard & Poor's

U.S. INVESTOR-OWNED ELECTRIC UTILITIES



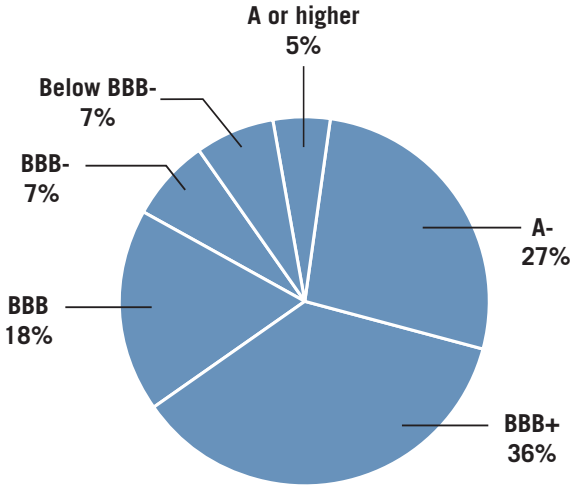
Bond Ratings December 31, 2021
as rated by Standard & Poor's

U.S. INVESTOR-OWNED ELECTRIC UTILITIES



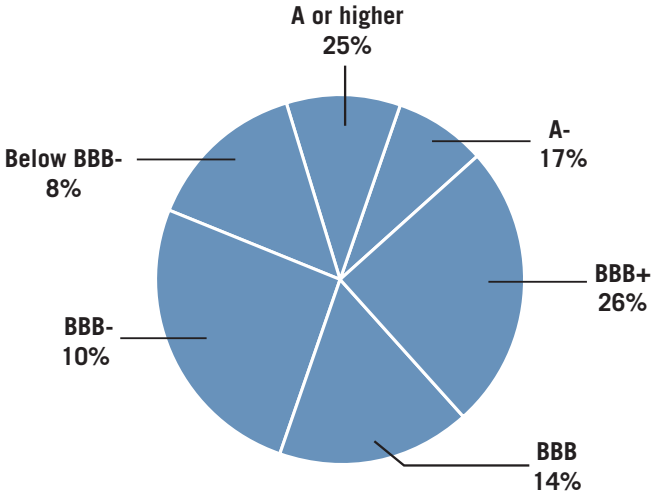
Bond Ratings December 31, 2020
as rated by Standard & Poor's

U.S. INVESTOR-OWNED ELECTRIC UTILITIES



Bond Ratings December 31, 2001
as rated by Standard & Poor's

U.S. INVESTOR-OWNED ELECTRIC UTILITIES



The Credit Rating Agency Upgrades and Downgrades table presents quarterly activity by all three ratings agencies. Following are full-year totals for 2022:

- Fitch (19 upgrades, 3 downgrades)
- Moody's (4 upgrades, 5 downgrades)
- Standard & Poor's (2 upgrades, 2 downgrades)

Upgrades in 2022

Many of the year's upgrades came after favorable regulatory outcomes or strengthened financial metrics under new ownership. Upgrades were also driven by the use of asset sale proceeds to reduce parent company debt.

On January 14, Fitch upgraded Pepco Holdings, Pepco, and Atlantic City Electric to BBB+ from BBB due to improved credit profiles from supportive regulatory decisions.

On January 28, Moody's upgraded Entergy Texas to Baa2 from Baa3, following improved legislative and regulatory support. Moody's cited as reasons for the upgrade a recent authorization to securitize $250 million of storm costs, expedited cost recovery for a combined-cycle plant that recently began operations, and an upcoming rate case proceeding.

On March 30, Fitch upgraded Public Service Company of North Carolina (PSNC) to A- from BBB+ citing its strengthened financial condition as a result of equity contributions under Dominion's ownership since 2019 and a favorable re-

Rating Agency Activity

U.S. INVESTOR-OWNED ELECTRIC UTILITIES

Total Ratings Changes	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Fitch	23	14	11	16	15	33	36	24	6	22
Moody's	17	85	12	13	12	23	20	12	12	9
Standard & Poor's	40	7	27	38	25	37	34	23	34	4
Total	**80**	**106**	**50**	**67**	**52**	**93**	**90**	**59**	**52**	**35**

Source: Fitch Ratings, Moody's, Standard & Poor's, S&P Global Market Intelligence, and EEI Finance Department.

cent rate case outcome. The North Carolina commission approved a settlement with an ROE of 9.6% and equity capitalization of 51.6%. This was the first PSNC rate case under Dominion ownership. Fitch also cited strong service territory customer growth that support improved credit metrics.

On May 27, S&P upgraded PPL Electric Utilities (PPLEU), the Pennsylvania transmission and distribution subsidiary of PPL, to A from A-. The upgrade reflects S&P's view that PPLEU's financial performance, funding arrangements and operational independence are sufficient to support this rating.

On June 2, S&P Global Ratings raised the issuer credit rating of Narragansett Electric Co. (NECO) by one notch to A-. S&P cited the resolution of legal issues in Rhode Island that cleared the way for PPL to finalize its acquisition of Narragansett Electric. S&P assessed NECO's business risk profile as excellent due to supportive regulatory mechanisms in Rhode Island as well as electric transmission assets that benefit from a very supportive FERC regulatory framework.

On June 6, Moody's upgraded PPL Corporation to Baa1 from Baa2, based on its improved business risk profile; PPL reduced parent company debt by $3.5 billion using proceeds from the sale in 2021 of its U.K. utility business, Western Power Distribution, to National Grid for net cash proceeds of $10.4 billion. Moody's stable outlook reflects PPL's new business mix with its four U.S. utilities all operating in supportive regulatory environments. Moody's also upgraded Narragansett Electric Company to A3 from Baa1.

On July 22, Fitch upgraded FirstEnergy (FE) to BBB from BB+ based on FE's completed sale in May 2022 of a 20% ownership interest in FirstEnergy Transmission for $2.4 billion, FE's issuance of $1 billion of new equity, and a regulatory settlement in Ohio that provide rate certainty through May 2024. FirstEnergy used proceeds from its asset sales and equity issuance to pay down $2.4 billion of parent company debt. Fitch also raised the rating for fourteen subsidiaries.

On December 15, Moody's upgraded Dominion Energy South Carolina (DESC) to Baa1 from Baa2. The upgrade followed a series of rate orders by the South Carolina Public Service Commission (SCPSC) in 2022 that will help DESC recover higher costs, including under-recovered fuel balances, and improve cash flow. The SCPSC approved a settlement in December between DESC and various intervenors that provides $167 million of additional revenue to improve DESC's fuel cost recovery.

Downgrades in 2022

Many downgrades focused on increased debt and cash flow pressures that impacted credit metrics. The slow recovery of planned capital expenditures also drove several downgrades. Project delays related to a large nuclear project were cited also.

On January 14, Fitch downgraded Exelon to BBB from BBB+ due to higher leverage after the company's separation from its unregulated generation subsidiary, despite a resulting improved risk profile. Fitch observed that an expected equity issuance will not offset the loss of cash from the generation subsidiary and will result in increased parent debt.

On February 22, Fitch downgraded Georgia Power Company to BBB from BBB+ following an announced three- to six-month delay of the

projected in-service dates for Vogtle nuclear units 3 and 4. The downgrade reflects continued uncertainty regarding the completion schedule and remaining costs for these nuclear generating facilities, with Georgia Power bearing a larger portion of cost increases under a 2018 modified co-owner agreement.

On March 24, Fitch downgraded NorthWestern Corporation to BBB from BBB+, primarily due to weaker credit metrics from expected regulatory lag during a period of extensive capital expenditures. The company's credit metrics are being pressured by a challenging regulatory framework, which is largely backward-looking, and a series of unfavorable rulings by the Montana commission that deny or delay recovery of expenses.

On July 6, Moody's downgraded IDACORP to Baa2 from Baa1 and subsidiary Idaho Power Company (IPC) to Baa1 from A3. Approximately 90% of IDACORP's cash flow is generated by IPC. Moody's observed that credit metrics would improve with more timely rate relief through riders or cost tracking mechanisms, quicker asset recovery via depreciation rates, and more frequent rate case filings. IPC's last rate increase under a general rate review occurred in 2011.

On August 22, Moody's downgraded AEP subsidiary Ohio Power Company to Baa1 from A3. Moody's cited weakened credit metrics from increased debt used to finance Ohio Power's significant investments in transmission and distribution infrastructure. Ohio Power's cash flow has also been negatively impacted by the expiration of legacy riders associated with the transition to competition in Ohio.

On September 13, Moody's downgraded the ratings of First Energy subsidiaries Cleveland Electric Illuminating Company (to Baa3 from Baa2) and Toledo Edison (to Baa2 from Baa1). Moody's said the companies will be adversely impacted by cash flow pressures caused by customer refunds stipulated in a 2021 regulatory settlement in Ohio. Both companies are expected to file rate cases by May 2024, when their current Electric Security Plans (ESP) expire.

Ratings by Company Category

The S&P Utility Credit Ratings Distribution by Company Category chart presents the distribution of credit ratings over time by company category (Regulated, Mostly Regulated and Diversified) for the investor-owned electric utilities. The Diversified category was eliminated in 2017 due to its dwindling number of companies. Ratings are based on S&P's long-term issuer ratings at the holding company level, with only one rating assigned per company. On December 31, 2022, the average rating for both the Regulated and Mostly Regulated categories was BBB+.

Rating Agency Credit Outlooks

The three major ratings agencies held similar utility industry credit outlooks as 2023 began. S&P maintained a negative outlook, Moody's revised its U.S. regulated utility outlook to negative from stable, and Fitch revised its North American utilities outlook to deteriorating from neutral. The agencies cited inflation, rising interest rates and higher natural gas prices and related customer bill impacts as key themes they are watching. It should be noted that the groups of underlying companies vary slightly across the three agency outlooks.

Standard & Poors (S&P)

Published in late January 2023, S&P's report "Industry Top Trends 2023 – North America Regulated Utilities" maintained the agency's negative industry outlook. The report noted that downgrades outpaced upgrades for the third consecutive year. While the percentage of negative outlooks decreased to 12% from 20% at year-end 2021, S&P stated that prolonged inflation or a deeper-than-expected recession could harm the industry's credit quality in 2023. Only 7% of the industry had a positive outlook.

S&P's base case assumes inflation will moderate during 2023 and the industry's credit measures will generally remain stable. However, persistent inflation could put additional pressure on customer bills and decrease regulatory support.

The report also cited potential risks related to the industry's aggressive reduction of greenhouse gas (GHG) emissions. S&P noted industry capital spending in 2022 reached an all-time high with an even higher total expected in 2023 with future investment focused on renewables and related infrastructure. As bills increase, regulators may

S&P Utility Credit Ratings Distribution by Company Category

U.S. INVESTOR-OWNED ELECTRIC UTILITIES

	2018		2019		2020		2021		2022	
	#	%	#	%	#	%	#	%	#	%
Regulated										
A or higher	1	3%	1	3%	1	3%	1	3%	1	3%
A-	11	32%	11	31%	11	32%	8	23%	8	22%
BBB+	11	32%	11	31%	10	29%	14	40%	15	42%
BBB	7	21%	8	23%	7	21%	7	20%	7	19%
BBB-	4	12%	2	6%	2	6%	3	9%	3	8%
Below BBB-	0	0%	2	6%	3	9%	2	6%	2	6%
Total	34	100%	35	100%	34	100%	35	100%	36	100%
Mostly Regulated										
A or higher	2	15%	1	10%	1	10%	1	11%	1	13%
A-	2	15%	1	10%	1	10%	1	11%	1	13%
BBB+	7	54%	7	70%	6	60%	5	56%	4	50%
BBB	1	8%	0	0%	1	10%	1	11%	1	13%
BBB-	1	8%	1	10%	1	10%	1	11%	1	13%
Below BBB-0	0	0%	0	0%	0	0%	0	0%	0	0%
Total	13	100%	10	100%	10	100%	9	100%	8	100%

Note: Totals may not equal 100.0% due to rounding.
Refer to page v for category descriptions.
Source: Standard & Poor's, S&P Global Market Intelligence, and EEI Finance Department.

ask the industry to slow the pace of the energy transition, possibly delaying the achievement of net-zero carbon emissions. In addition, large renewable projects (such as offshore wind) could become more challenging as timelines and budgets are affected by supply chain delays and rising interest rates. While much of the S&P report focused on the increased regulatory scrutiny that often accompanies higher customer bills, it also noted the average electric bill represents only about 2.5% of after-tax household income.

Moody's

In its "2023 Outlook – Regulated Electric and Gas Utilities – US" (released November 2022), Moody's revised its outlook for the sector to negative from stable. The report cited risks related to inflation, rising interest rates and higher natural gas prices as areas of concern. These developments could lead to customer affordability challenges and increased uncertainty related to the timely recovery of fuel and purchased power costs. The report also stated that capital spending and dividends will likely be sustained at a steady rate, possibly weighing on near-term credit metrics. The sector's aggregate industry funds from operations (FFO) to debt ratio will likely be 14% in 2023, according to the report, but may fall below this level if cost recovery is delayed.

Moody's listed several factors that could change its outlook back to stable: 1) if the sector's regulatory support remains intact, 2) if natural gas prices settle at a level that allows most utilities to fully recover fuel and purchased power costs within 12 months, 3) if inflation moderates and interest rates stabilize, and

Long-Term Credit Rating Scales

U.S. INVESTOR-OWNED ELECTRIC UTILITIES

	Moody's	Standard & Poor's	Fitch
Investment Grade	Aaa	AAA	AAA
	Aa1	AA+	AA+
	Aa2	AA	AA
	Aa3	AA-	AA-
	A1	A+	A+
	A2	A	A
	A3	A-	A-
	Baa1	BBB+	BBB+
	Baa2	BBB	BBB
	Baa3	BBB-	BBB-
Speculative Grade	Ba1	BB+	BB+
	Ba2	BB	BB
	Ba3	BB-	BB-
	B1	B+	B+
	B2	B	B
	B3	B-	B-
	Caa1	CCC+	CCC+
	Caa2	CCC	CCC
	Caa3	CCC-	CCC-
	Ca	CC	CC
	C	C	C
Default	C	D	D

Source: Fitch Ratings, Moody's, and Standard & Poor's.

4) if the sector's aggregate FFO-to-debt ratio remains between 14% and 15%. Factors that could change its outlook to positive were: 1) if utility regulation turns broadly more credit supportive resulting in quicker cash flow recovery, and 2) if the sector's aggregate FFO-to-debt ratio rises above 17% on a sustained basis.

Fitch Ratings

In its "North American Utilities, Power & Gas Outlook 2023" (released December 2022), Fitch Ratings revised its outlook for the sector to deteriorating from neutral. The move primarily reflects growing cost pressures for utilities due to higher commodity prices, inflation, and rising interest rates. These factors, combined with high capital expenditures and storm restoration costs from extreme weather, are driving customer bills higher. Fitch noted that deferred fuel balances are increasing, which may affect credit metrics as utilities try to spread the recovery of these costs over an extended time period to mitigate the impact on customer bills.

The report also noted positive tailwinds that could offset these concerns. Retail electricity sales continue to show resilience and remain above pre-pandemic levels. Fitch expects authorized ROEs to start trending up in reaction to the recent rise in interest rates. Many utilities are increasingly using tools such as securitization for under-recovered fuel balances. The Inflation Reduction Act provides tax incentives for clean generation that may offset inflationary bill pressures. Finally, many companies are using asset monetization, such as the sale of non-regulated re-

newable businesses and the partial or full sale of regulated subsidiaries, to replace equity needs.

With 88% of companies at a stable ratings outlook, Fitch expects little ratings movement in 2023. The agency noted that higher-than-expected natural gas prices remains the largest risk to credit metrics since increases in deferred fuel balances can impair the timely recovery of capital expenditures.

Business Strategies

Business Segmentation

The industry's regulated business segments — regulated electric and natural gas distribution — grew their combined assets by $128.5 billion, or 7.8%, in 2022, extending a multi-year trend and driving a $78.2 billion, or 4.0%, increase in total industry assets. Regulated assets were 84.9% of the industry total at year-end, rising from 81.7% at year-end 2021. The Regulated Electric segment's share of total industry assets increased to 70.9% from 68.6% at year-end 2021 while the segment's total assets grew $98.8 billion, or 7.2%. Natural Gas Distribution assets rose $29.7 billion, or 11.4%, and Competitive Energy assets decreased $47.4 billion, or 22.7%. Assets for the Natural Gas Pipeline segment increased by $2.7 billion, or 8.2%. A record-high $147.7 billion of capital expenditures and generally constructive regulatory relations supported the significant growth in Regulated assets.

The Regulated Electric business segment's revenue increased by $38.3 billion, or 14.1%, as power demand rose 2.8% and inflationary pressures drove up fuel costs. Natural Gas Distribution revenue increased $14.0 billion, or 26.1%. Competitive Energy revenue decreased $14.3 billion, or 30.6%. Natural Gas Pipeline revenue increased by $1.0 billion, or 19.0%. Overall, total industry revenue increased $38.9 billion, or 10.1%, in 2022.

2022 Revenue by Segment

Regulated Electric revenue increased by $38.3 billion, or 14.1%, to $309.7 billion from $271.5 billion in 2021. The segment's share of total industry revenue rose to 71.3% from 68.4% in 2021, remaining well above its level at the start of the industry's two-decade-long migration back to a regulated focus (Regulated Electric's share was only 51.9% in 2005).

Business Segmentation—Revenues

U.S. INVESTOR-OWNED ELECTRIC UTILITIES

($ Millions)	2022	2021r	Difference	% Change
Regulated Electric	309,739	271,451	38,288	14.1%
Competitive Energy	32,480	46,800	(14,320)	-30.6%
Natural Gas Distribution	67,426	53,469	13,957	26.1%
Natural Gas Pipeline	6,518	5,478	1,040	19.0%
Other	18,128	19,498	(1,370)	-7.0%
Discontinued Operations	—	—	—	0.0%
Eliminations/Reconciling Items	(9,863)	(11,197)	1,333	-11.9%
Total Revenues	**424,428**	**385,500**	**38,928**	**10.1%**

r = revised

Note: Difference and percent change columns may reflect rounding. Totals may reflect rounding.

Business Segmentation—Assets

U.S. INVESTOR-OWNED ELECTRIC UTILITIES

($ Millions)	12/31/2022	12/31/2021	Difference	% Change
Regulated Electric	1,476,245	1,377,457	98,788	7.2%
Competitive Energy	161,501	208,901	(47,400)	-22.7%
Natural Gas Distribution	291,443	261,706	29,736	11.4%
Natural Gas Pipeline	35,373	32,691	2,682	8.2%
Other	117,515	126,527	(9,012)	-7.1%
Discontinued Operations	1	1	-	0.0%
Eliminations/Reconciling Items	(63,257)	(66,629)	3,372	-5.1%
Total Assets	**2,018,820**	**1,940,653**	**78,167**	**4.0%**

r = revised

Note: Difference and percent change columns may reflect rounding. Totals may reflect rounding.

Natural Gas Distribution revenue rose $14.0 billion, or 26.1%, to $67.4 billion from $53.5 billion in 2021. This followed an increase of 18.0% in 2021, a decrease of 3.3% in 2020, and increases of 4.4% in 2019, 3.0% in 2018, 17.6% in 2017 and 8.9% in 2016; the sharp gains in 2016 and 2017 were due in part to the completion in 2016 of four large acquisitions of natural gas distribution businesses.

Total regulated revenue — the sum of the Regulated Electric and Natural Gas Distribution segments — increased by $52.2 billion, or 16.1%, to $377.2 billion in 2022. The industry's focus on regulated operations has driven a steady growth in these business segments' share of industry revenue in recent years. Regulated revenue accounted for 86.8% of total industry revenue in 2022 compared to 81.9% in 2021, totals well above 2005's 65.3% share.

Eliminations and reconciling items are added back to total revenue to arrive at the denominator for the segment percentage calculations shown in the graphs *Revenue Breakdown 2022 and 2021*.

2022 Assets by Segment

Regulated Electric assets increased $98.8 billion, or 7.2%, during 2022. The segment's share of total industry assets was 70.9% at year-end, above its 68.6% share at year-end 2021. Natural Gas Distribution assets increased by $29.7 billion, or 11.4%, while Competitive Energy assets decreased by $47.4 billion, or 22.7%. The Natural Gas Pipeline segment's relatively small asset total grew slightly, increasing by $2.7 billion, or 8.2%, to $35.4 billion at year-end 2022 and representing 1.7% of industry assets.

Total regulated assets (Regulated Electric and Natural Gas Distribution) grew $128.5 billion, or 7.8% in 2022, increasing their share of total industry assets to 84.9% at year-end from 81.7% at year-end 2021.

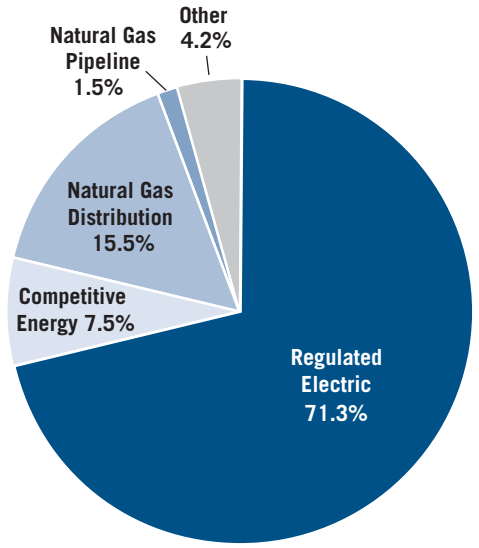
This aggregate measure has risen steadily from 61.6% at year-end 2002, underscoring the significant regulated rate base growth and widespread divestitures of non-core businesses over that 20-year period. Twenty-nine of the industry's 44 constituent companies (66%) either increased regulated assets as a percent of total assets or maintained a 100% regulated structure in 2022.

Regulated Electric

Regulated Electric segment operations include the generation, transmission and distribution of electricity under state regulation for residential, commercial and industrial custom-

Revenue Breakdown 2022

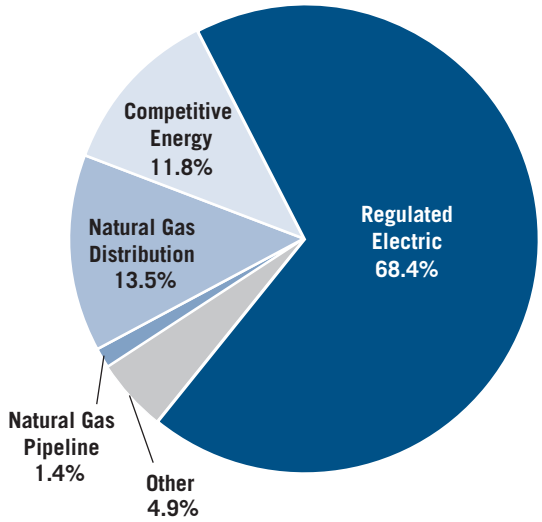
U.S. INVESTOR-OWNED ELECTRIC UTILITIES



Source: EEI Finance Department and company annual reports.

Revenue Breakdown 2021r

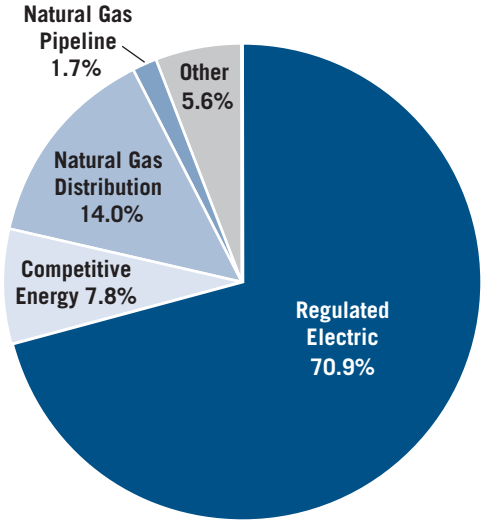
U.S. INVESTOR-OWNED ELECTRIC UTILITIES



Source: EEI Finance Department and company annual reports.

Asset Breakdown
As of December 31, 2022

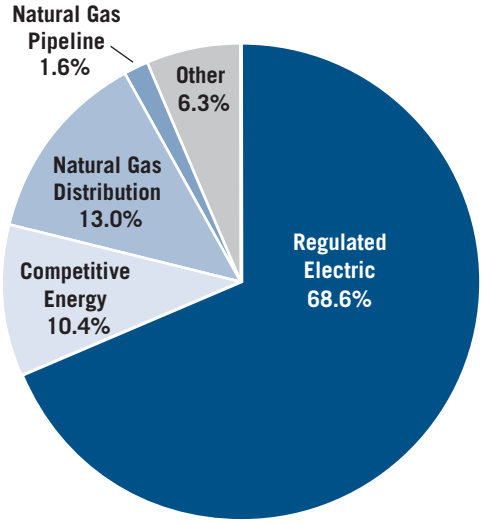
U.S. INVESTOR-OWNED ELECTRIC UTILITIES



Source: EEI Finance Department and company annual reports.

Asset Breakdown
As of December 31, 2021

U.S. INVESTOR-OWNED ELECTRIC UTILITIES



Source: EEI Finance Department and company annual reports.

ers. Regulated Electric revenue increased significantly in 2022, rising $38.3 billion, or 14.1%. Forty-two companies, or 95% of the industry, had higher Regulated Electric revenue than the prior year. Regulated Electric revenue increased by 8.0% in 2021, fell by 0.8% in 2020 and by 0.5% in 2019, was unchanged in 2018, and grew by 0.8% in 2017.

Total nationwide electric output increased 2.8% in 2022, in line with a 2.8% increase in 2021. On a weather-adjusted basis, electric output rose 1.3% in 2022. Electric output has risen in only eight of the past fifteen years. Prior to this period, a year-to-year output decline was a rare event in an industry that typically experienced low-single-digit percent demand growth. Energy efficiency initiatives, demand-side management programs, and the off-shoring of formerly U.S.-based manufacturing and heavy industry are all forces that have suppressed the growth of electricity demand since the late 20th century.

Regulated Electric assets increased by $98.8 billion, or 7.2%, in 2022, representing the largest asset growth in dollar terms of all business segments. The industry's record-high $147.7 billion of capital expenditures in 2022 and generally constructive regulatory relations supported the increase in regulated assets. The 2022 capital expenditure total was the eleventh consecutive annual record high, with the expansion well represented across the industry's Regulated Electric and Natural Gas Distribution segments. Asset growth is also evident in the industry's net property, plant, and equipment in service, which rose 4.4% from year-end 2021 and 21.6% over the level at year-end 2018. Such robust growth in assets reflects the size of the industry's build-out of new renewable and clean generation, new transmission, reliability-related infrastructure, and other capital projects in recent years.

Competitive Energy

Competitive Energy assets decreased by $47.4 billion, or 22.7%, to $161.5 billion at year-end 2022 from $208.9 billion at year-end 2021. The large decrease was primarily driven by the spin-off of Constellation Energy, Exelon's power generation and competitive energy business, in February 2022. Competitive Energy revenue decreased by $14.3 billion, or 30.6%, to $32.5 billion from $46.8 billion in 2021. Competitive Energy covers the generation and/or sale of electricity in competitive markets, including both wholesale and retail transactions. Wholesale buyers are typically regional power pools, large industrial customers, and electric utilities looking to supplement generation capacity. Competitive Energy also includes the trading and marketing of natural gas. Of the 18 companies that maintain Competitive Energy operations, 11 (61%) grew these assets during 2022 and 16 (89%) had revenue gains from this segment.

Natural Gas

Natural Gas Distribution assets increased by $29.7 billion, or 11.4%, to $291.4 billion at year-end 2022 from $261.7 billion at year-end 2021. The segment's revenue increased by $14.0 billion, or 26.1%, to $67.4 billion from $53.5 billion in 2021. This followed revenue growth of 18.0% in 2021 and a revenue decline of 3.3% in 2020. All 27 companies that report gas distribution revenue showed a year-to-year increase in 2022, consistent with the identical 100% of reporting companies that did so in 2021. This followed increases at 26%, 70%, 86% and 93% of reporting companies in 2020, 2019, 2018 and 2017, respectfully. Natural Gas Distribution includes the delivery of natural gas to homes, businesses and industrial customers throughout the United States.

Natural Gas Pipeline assets increased by $2.7 billion, or 8.2%, to $35.4 billion at year-end 2022 from $32.7 billion at year-end 2021. Five of the six companies that report this segment showed asset growth. Higher natural gas prices enabled the segment's revenue to increase by $1.0 billion, or 19.0%, to $6.5 billion in 2022 from $5.5 billion in 2021. The Natural Gas Pipeline business concentrates on the transmission and storage of natural gas for local distribution companies, marketers and traders, electric power generators and natural gas producers.

Added together, the Natural Gas Distribution and Natural Gas Pipeline segments increased assets by $32.4 billion, or 11.0%, in 2022 and produced revenue of $73.9 billion, up from $58.9 billion in 2021. The contribution to total industry revenue from these two natural gas activities increased to 17.0% in 2022 from 14.9% in 2021.

Strategic Moves Completed in 2022

Several companies completed strategic transactions in 2022 that notably affected their business segmentation reporting.

- Exelon completed the separation of its regulated and competitive businesses into two publicly traded companies. Exelon said the separation gives each company the financial and strategic independence to focus on its specific customer needs while executing its core business strategy.
- PPL Corporation completed its acquisition of Rhode Island regulated utility Narragansett Electric Company from National Grid. PPL said the move finalized its strategic repositioning as a U.S.-focused energy company. The Narragansett Electric operations were renamed Rhode Island Energy.
- Public Service Enterprise Group (PSEG) completed the sale of its 6,750 MW portfolio of fossil generation units in New Jersey, Connecticut, Maryland, and New York to subsidiaries of ArcLight Energy Partners Fund. With this sale, PSEG concluded its transition to a 90% regulated company with a focus on clean energy and infrastructure investments.

Strategic Announcements in 2022

In addition to 2022's completed transactions, several announcements were made that, if completed, will impact business segment reporting in 2023 and beyond.

- Dominion Energy announced the sale of its West Virginia natural gas utility, Hope Gas (also called Dominion Energy West Virginia) for $690 million to an infrastructure fund owned by insurance company Ullico. The Ullico infrastructure fund said it would integrate Hope Gas with Hearthstone Utilities, a portfolio company that owns and operates gas utilities in Indiana, Maine, Montana, North Carolina, and Ohio.
- AEP said it would divest unregulated commercial renewables businesses over the next two years and focus on transmission and regulated renewable investments.
- Eversource announced it would look to exit its joint venture with Danish wind energy developer Orsted, which was formed to develop offshore wind in New England. Eversource said potential proceeds would support the strengthening, modernizing, and decarbonizing of its regulated energy assets.
- Con Edison announced it would sell its wholly owned commercial renewables subsidiary, Con Edison Clean Energy Businesses, to RWE Renewables Americas for $6.8 billion. Con Edison said it will focus on its core utility businesses and the investments needed to lead New York's ambitious clean energy transition.
- Duke Energy announced that it would sell its commercial renewable energy business in response to strong investor demand for renewable energy infrastructure. Duke said the sale of its wind and solar portfolio will help reduce debt and fund growth in its regulated businesses.

2022 Year-End List of Companies by Category

Early each calendar year, we update our list of investor-owned electric utility holding companies organized by business category. The list is based on the prior year-end business segmentation data presented in 10-Ks. Our two categories are Regulated (80% or more of holding company assets are regulated) and Mostly Regulated (less than 80% of holding company assets are regulated).

We use assets rather than revenue for determining category membership because we believe assets provide a clearer picture of strategic trends; fluctuating commodity prices for natural gas and power can impact revenue so greatly that a company's strategic approach to business segmentation may be distorted by reliance on revenue data alone. Comparing the list of companies from year to year reveals company migrations between categories and shows the general trend in industry business models. We also base our quarterly category financial data during the year on this list.

In 2022, Exelon and Public Service Enterprise Group moved from the Mostly Regulated to the Regulated category. Exelon's regulated asset percentage rose above 80% due to the spin-off of Constellation Energy, Exelon's former power generation and competitive energy business. The transaction was completed on February 1, 2022. Public Service Enterprise Group's regulated asset

List of Companies by Category at December 31, 2022

Regulated (38)

Alliant Energy Corporation
Ameren Corporation
American Electric Power Company, Inc.
Avista Corporation
Black Hills Corporation
CenterPoint Energy, Inc.
*Cleco Corporate Holdings LLC**
CMS Energy Corporation
Consolidated Edison, Inc.
Dominion Energy, Inc.
*DPL Inc.**
DTE Energy Company
Duke Energy Corporation
Edison International
Entergy Corporation
Evergy, Inc.
Eversource Energy
Exelon Corporation
FirstEnergy Corp.
IDACORP, Inc.
*IPALCO Enterprises, Inc.**
NiSource Inc.
NorthWestern Corporation
MGE Energy, Inc.
OGE Energy Corp.
Otter Tail Corporation
PG&E Corporation
Pinnacle West Capital Corporation
PNM Resources, Inc.
Portland General Electric Company
PPL Corporation
Public Service Enterprise Group Incorporated
*Puget Energy, Inc.**
Sempra Energy
Southern Company
Unitil Corporation
WEC Energy Group, Inc.
Xcel Energy Inc.

Mostly Regulated (6)

ALLETE, Inc.
AVANGRID, Inc.
*Berkshire Hathaway Energy**
Hawaiian Electric Industries, Inc.
MDU Resources Group, Inc.
NextEra Energy, Inc.

Note:* Non-publicly traded companies.

percentage rose above 80% with the sale of PSEG's fossil generation units in New Jersey, Connecticut, Maryland, and New York. These two changes increased the number of Regulated companies to 38 from 36 and reduced the Mostly Regulated group to six companies from eight.

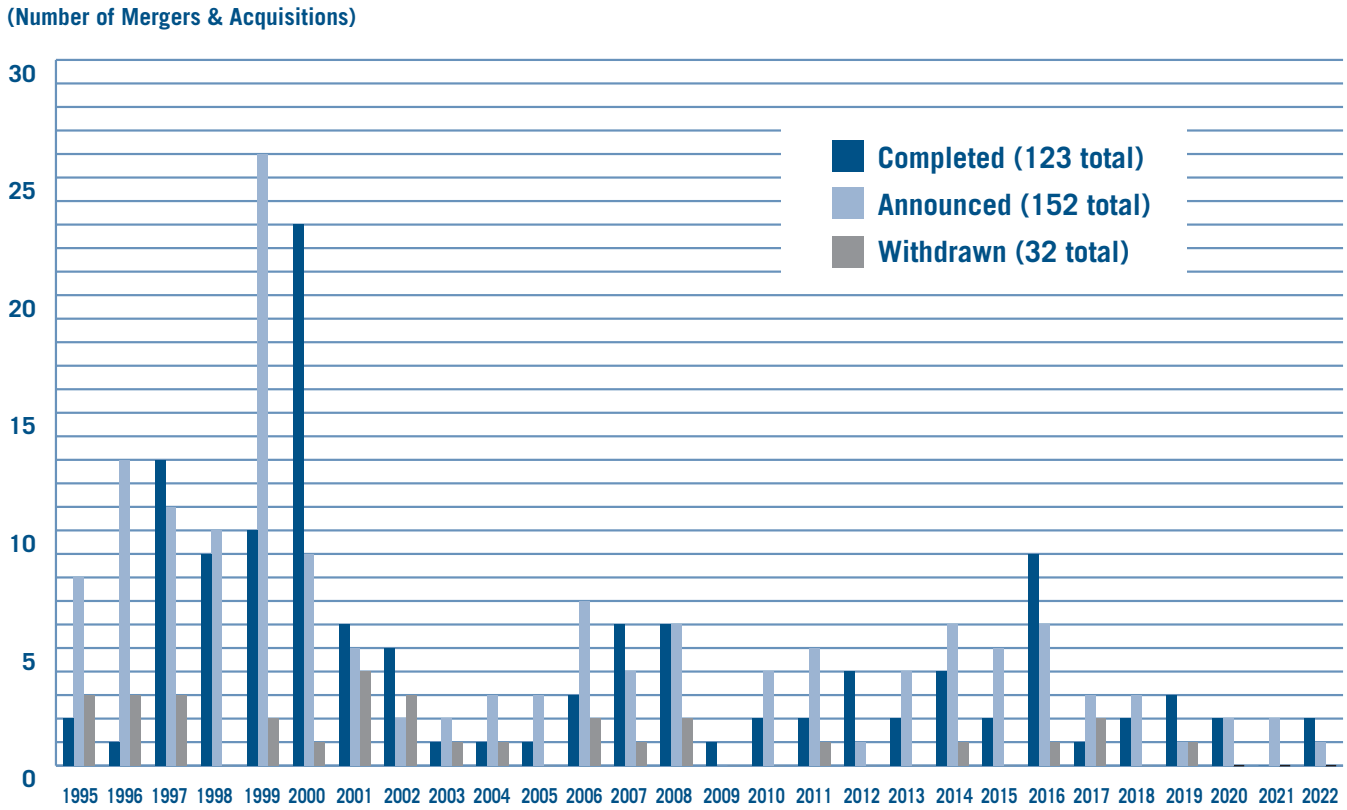
The number of parent companies in the EEI universe remained at 44, the same as the year-end 2021 total. (*See List of Companies by Category on December 31, 2022*).

Mergers & Acquisitions

Utility merger and acquisition (M&A) activity involving whole operating companies with regulated service territories remained quiet in 2022. The only new announcement was Dominion's move to sell its West Virginia natural gas utility, Hope Gas, to an infrastructure fund owned by insurance company Ullico. In fact, the year-end number of publicly traded utilities tracked by EEI was 39 for a third straight year. By contrast, consolidation from the mid-1990s through 2019 reduced the number of utility holding companies by more than half, from 98 to 40. The reduced number of holding companies alone constrains the opportunity set for new M&A. But industry fundamentals do as well. Most utilities are focused on ambitious investment programs that seek internal earnings and dividend growth through expansion of regulated rate base focused on clean energy infrastructure. The Inflation Reduction Act (IRA), passed in August 2022, provided a strong public policy tailwind for clean energy investment, which already was strongly incentivized by state renewable portfolio standards, carbon mitigation programs and overwhelming policy support for clean energy from state regulators and the general public. Most of the now-smaller group of utilities don't see M&A as a priority — particularly given the well-known challenges steering deals through a potentially complex state and federal regulatory approval process. These challenges were evident in two of the five deals announced since the end of 2019. AVANGRID's October 2020 bid to acquire New Mexico-based PNM Resources remained stalled during 2022 after New Mexico regulators

Status of Mergers & Acquisitions 1995–2022

U.S. INVESTOR-OWNED ELECTRIC UTILITIES



Source: EEI Finance Department.

rejected the proposed transaction in late 2021. The sale of AEP's regulated subsidiary Kentucky Power to Liberty Utilities, a subsidiary of Canadian company Algonquin Power & Utilities, was blocked by the Federal Energy Regulatory Commission (FERC) in December 2022 due to concern over potentially higher transmission rates.

Infrastructure Fund to Buy Dominion's Hope Gas

On February 11, 2022, Dominion Energy announced it planned to sell its West Virginia natural gas utility, Hope Gas (also called Dominion Energy West Virginia) for $690 million to an infrastructure fund owned by insurance company Ullico Inc., which provides insurance services to union employees across the U.S. Ullico's infrastructure business said it would integrate Hope Gas with Hearthstone Utilities, a portfolio company that owns and operates gas utilities in Indiana, Maine, Montana, North Carolina, and Ohio. As part of the agreement, Hearthstone said it will move its headquarters to West Virginia. Ullico said that Hope Gas is an example of a core infrastructure business that provides essential services, creates high quality jobs, and is a stabilizing force in the West Virginia economy. It noted the acquisition is consistent with its investment philosophy that favors long-term ownership, responsible labor policies and a commitment to local economic development. The transaction was completed on September 1, 2022. The sale of Hope Gas follows Dominion's 2021 sale of Questar, a natural gas pipeline business, to Southwest Gas Holdings for $1.975 billion, including the assumption of $430 million of existing debt.

Status of Announced Mergers & Acquisitions
1995–2022

U.S. INVESTOR-OWNED ELECTRIC UTILITIES

Year	Completed	Announced	Withdrawn
1995	2	8	3
1996	1	13	3
1997	13	11	3
1998	9	10	–
1999	10	26	2
2000	23	9	1
2001	6	5	4
2002	5	2	3
2003	1	2	1
2004	1	3	1
2005	1	3	–
2006	3	7	2
2007	6	4	1
2008	6	6	2
2009	1	–	–
2010	2	4	–
2011	2	5	1
2012	4	1	–
2013	2	4	–
2014	4	6	1
2015	2	5	–
2016	9	6	1
2017	1	3	2
2018	2	3	–
2019	3	1	1
2020	2	2	–
2021	–	2	–
2022	2	1	–
Totals	**123**	**152**	**32**

Source: EEI Finance Department.

PPL Completes Narragansett Electric Purchase

On May 25, 2022, PPL Corporation said it closed its acquisition of Rhode Island regulated utility Narragansett Electric Company, taking a little more than one year from the March 18, 2021 announcement date. Pennsylvania-based PPL Corporation announced in August 2020 it would seek to sell its U.K. utility distribution business, Western Power Distribution (WPD), and become a U.S. utility holding company focused on advancing the nation's clean energy goals with rate-regulated assets. That plan materialized in March 2021 when PPL announced an agreement to sell its

U.K. utility business, Western Power Distribution (WPD), to National Grid plc for £7.8 billion and, in a separate transaction, acquire National Grid's Rhode Island regulated utility business, The Narragansett Electric Company (NEC), for $3.8 billion. PPL said the strategic repositioning would refocus its strategy on strong, rate-regulated U.S. utilities, strengthen credit metrics and enhance long-term earnings growth and earnings predictability.

The agreement called for PPL to sell WPD to National Grid in an all-cash transaction valued at £14.4 billion, including assumption of £6.6 billion of debt, for net cash proceeds of approximately $10.2 billion. Separately, PPL planned to acquire Narragansett Electric from National Grid in a transaction valued at $5.3 billion, including the assumption of approximately $1.5 billion of Narragansett Electric debt. PPL said it planned to use a portion of the proceeds from the sale of WPD to finance the acquisition. PPL also highlighted its plan to play a key role in advancing Rhode Island's decarbonization goals, noting that its experience in automating electricity networks can help the state achieve its target of 100% renewable energy by 2030.

PPL said the closing of the Narragansett Electric acquisition completes its strategic repositioning as a U.S.-focused energy company. The Narragansett Electric operations were renamed Rhode Island Energy.

Two Recent Announcements Face Regulatory Headwinds

The sole 2020 announcement that made EEI's list of whole company deals was AVANGRID's offer to acquire PNM Resources. AVANGRID said the transaction would support its U.S. growth strategy focused on regulated businesses and renewables in states with legal and regulatory stability and predictability. PNM, which operates regulated utilities in Texas and New Mexico, called the move a strategic fit that will help the utility invest in clean energy distribution and transmission and expand its position in renewables.

Despite widespread stakeholder support and approvals by PNM shareholders, Texas regulators and the FERC, the New Mexico Public Regulation Commission rejected the merger on December 8, 2021. News reports cited concern about reliability, potential rate increases and slower development of renewable resources by PNM as reasons for the move. Reports also noted nearly all intervening customers and clean energy advocates supported the merger, and that the PRC staff had said they would not oppose it. AVANGRID expressed disappointment with the decision but said it will evaluate next steps and hoped the merger could eventually succeed.

The deal remained in limbo throughout 2022 after media reports said PNM and Avangrid had appealed the rejection to the New Mexico Supreme Court. In early 2023, news reports said the New Mexico Public Regulation Commission had joined PNM and AVANGRID in requesting the Supreme Court to send the case back to the commission for a "rehearing and reconsideration" following a move by the state's governor to replace the previous five-member commission with a new three-member body.

In the other announcement, AEP announced in April 2021 that it was conducting a strategic review of its Kentucky operations. On October 26, 2021, the company announced a sale, which included Kentucky Power and AEP Kentucky Transco, to Liberty Utilities, a regulated subsidiary of Canadian utility holding company Algonquin Power & Utilities. AEP said it plans to use the expected $1.45 billion cash proceeds to eliminate equity needs as it boosts investment in regulated renewable energy infrastructure. However, in December 2022 the FERC, which rarely rejects proposed utility mergers, said the companies failed to show the deal would not have an adverse effect on transmission rates. In February 2023, the two companies said they were committed to completing the sale and filed a revised application with FERC.

Exelon/Constellation Complete Separation

While not listed in the EEI mergers table, Exelon's move to separate its regulated and competitive businesses into two separate companies was a prominent industry event in 2021. The separation was completed on February 2, 2022. On February 24, 2021, Exelon announced a plan to split its six regulated utilities from its competitive power generation and

customer-facing energy businesses, creating two publicly traded companies. Exelon said the separation gives each company the financial and strategic independence to focus on its specific customer needs while executing its core business strategy.

Exelon Corporation will continue as parent company for the fully regulated transmission and distribution utilities, which deliver electricity and natural gas to more than 10 million customers across five states and the District of Columbia. Constellation Energy Corporation will be the nation's largest supplier of clean energy with more than 31,000 megawatts of generating capacity consisting of nuclear, wind, solar, natural gas and hydro assets. Constellation will produce about 12 percent of the nation's carbon-free energy.

Exelon shareholders retained their shares of Exelon stock and received a pro-rata dividend of shares of Constellation. After the transaction closed on February 2, 2022, the regulated company retained the familiar EXC stock symbol while Constellation began trading under the symbol CEG.

Exelon noted the regulatory business is a high-quality utility asset with strong earnings growth of 6% to 8% annually and a diversified rate base across seven jurisdictions with constructive regulation. Exelon said the combination of strong operations and attractive ESG attributes provides a platform that supports transition to a clean energy economy without owning generation. The competitive business operates 18.7 gigawatts of nu-

Merger Impacts 1995–2022

U.S. INVESTOR-OWNED ELECTRIC UTILITIES

Date	No. of Utilities	Change
12/31/95	98	–
12/31/96	98	–
12/31/97	91	(7.14%)
12/31/98	86	(5.49%)
12/31/99	83	(8.79%)
12/31/00	71	(14.46%)
12/31/01	69	(2.82%)
12/31/02	65	(5.80%)
12/31/03	65	–
12/31/04	65	–
12/31/05	65	–
12/31/06	64	(1.54%)
12/31/07	61	(4.69%)
12/31/08	59	(3.28%)
12/31/09	58	(1.69%)
12/31/10	56	(3.45%)
12/31/11	55	(1.79%)
12/31/12	51	(7.27%)
12/31/13	49	(3.92%)
12/31/14	48	(2.04%)
12/31/15	47	(2.08%)
12/31/16	44	(6.38%)
12/31/17	43	(2.27%)
12/31/18	42	(2.33%)
12/31/19	40	(4.76%)
12/31/20	39	(2.50%)
12/31/21	39	–
12/31/22	39	–

Number of Companies Declined by 60% since Dec.'95

Note: Based on completed mergers in the EEI Index group of electric utilities.

Source: EEI Finance Department.

clear generation and 12.3 gigawatts of natural gas, hydro, solar and wind energy. Constellation Energy also includes a retail business with a strong share of commercial and industrial energy customers in the nation's competitive energy markets.

Asset Sales Fund Regulated Clean Energy Capital Expenditures

Asset sales rather than merger activity seemed to be the focus of utility corporate strategies in 2022. Many utilities sold assets to finance ambitious investment programs focused on clean energy infrastructure, transmission and reliability investments, to eliminate the need to raise equity capital, to avoid or reduce debt, or to accomplish restructurings.

Duke Energy and ConEd both announced plans to sell commercial renewable energy subsidiaries in the face of strong investor demand for renewable energy infrastructure. Duke said the sale of its 5,100 MW wind and solar portfolio would help reduce debt and fund growth in its regulated businesses, and said it hoped to complete a transaction during 2023.

On October 1, 2022, ConEdison announced it would sell its wholly owned commercial renewables subsidiary, Con Edison Clean Energy Businesses, to RWE Renewables Americas for $6.8 billion. Con Edison said it would cancel plans to issue up to $850 million of common equity in 2022 and focus on its core utility businesses and the investments needed to lead New York's ambitious clean energy transition.

In February 2022, AEP said it would divest unregulated commercial renewables businesses over the next two years and focus on transmission and regulated renewable investments. In February 2023, AEP announced it agreed to sell its 1,365-megawatt (MW) unregulated, contracted renewables portfolio to IRG Acquisition Holdings, a partnership owned by Invenergy, CDPQ and funds managed by Blackstone Infrastructure, at an enterprise value of $1.5 billion including project debt.

And in May 2022, Eversource announced it would look to exit its joint venture with Danish wind energy developer Orsted, which was formed to develop offshore wind off the New England coast. Eversource said potential proceeds would support the strengthening, modernizing and decarbonizing of its regulated energy assets.

At year-end 2022, Wall Street research suggested that M&A discussions across the industry were focused on financial sponsors rather than strategic buyers. With most utilities focused on organic growth through regulated clean energy capital expenditures, it would appear that viable strategic M&A would have to advance that agenda while also offering tangible benefits to rate payers. The Inflation Reduction Act of 2022 along with strong policy support from state renewable portfolio standards has convinced most industry observers that the long-term growth opportunities inherent in the clean energy transition have a long way to run. Deals that create synergies and lower costs may succeed, but the diminished number of utilities makes those combinations rarer than they once were. An economic downturn and/or persistent inflation may change the calculus for some companies, who may decide going it alone no longer makes sense if a larger parent can help fund capital expenditures at a lower cost to customers. Yet utility M&A is inherently a highly political process, and it's hard to translate those truisms into confident predictions. About the only thing certain as 2023 commences is the inevitability of the clean energy revolution and utilities' front and center role making it happen.

Mergers & Acquisitions Announcements Updated through December 31, 2022

U.S. INVESTOR-OWNED ELECTRIC UTILITIES

Ann'cd	Buyer	Seller/Acquired/Merged	Status	New Company	Complet-ed Date	Months to complete	Bus.	Terms	Est. Trans Value ($MM)
2/11/22	Ullico Inc.	Hope Gas, Inc.	Completed		8/31/22	6	EG	Ullico Inc. paid $690 million in cash to acquire Hope Gas Inc. (parent company Dominion Energy)	690.0
10/26/21	Algonquin Power & Utilities Corp	Kentucky Power Company & AEP Kentucky Transmission Company Inc	Pending				EE	$1.221 billion debt + $1.625 billion cash (valuation multiple of 1.3x rate base)	2,846.0
3/18/21	PPL Energy Holdings, LLC	Narragansett Electric Company	Completed		5/25/22	14	EG	$1.5 billion debt + 3.8 billion cash (valuation multiple of 1.7x rate base)	5,270.0
10/21/20	AVANGRID	PNM Resources	Pending				EE	AGR to pay $50.30/share in cash (roughly 10% premium) for PNM common stock	4,300.0
7/5/20	Berkshire Hathaway Energy	Dominion Energy Natural Gas Transportation and Storage	Completed		11/1/20	4	EG	$5.7 billion debt + $4.0 billion cash	9,700.0
6/3/19	JP Morgan Investment Management	El Paso Electric	Completed		7/29/20	13	EE	JPMorgan pays $68.25/share in cash for each share of El Paso Electric Co. common stock	4,285.7
5/21/18	NextEra Energy, Inc.	Gulf Power Company	Completed		1/1/19	7	EE	NEE to pay $4.35 billion in cash to acquire Gulf Power Company from Southern Company	4,350.0
4/23/18	CenterPoint Energy	Vectren Corporation	Completed		2/1/19	10	EG	CNP pays $72.00/share in cash for each share of Vectren common stock	6,000.0
1/3/18	Dominion Energy, Inc.	SCANA Corporation	Completed		1/1/19	12	EE	$6.7B debt + $7.9 stock (per share value of $55.35, roughly 31% premium)	14,600.0
8/21/17	Sempra Energy	Oncor Electric Delivery Co	Completed		3/8/18	6	EE	$9.5B cash	9,450.0
7/19/17	Hydro One Limited	Avista Corporation	Withdrawn		1/23/19			$5.3B cash (per share value of $53.00, roughly 24% premium)	5,300.0
7/7/17	Berkshire Hathaway Inc.	Oncor Electric Delivery Co	Withdrawn		8/21/17			$9.0B cash	9,000.0
9/28/16	DTE Energy	Appalachia Gathering System / Stonewall Gas Gathering	Completed		10/20/16	1	EG	Undisclosed	1,300.0
7/29/16	NextEra Energy, Inc.	Oncor Electric Delivery Co	Withdrawn		10/31/17			$6.8B debt + $4.4B cash	11,178.0
5/31/16	Great Plains Energy	Westar Resources	Completed	Evergy, Inc.	6/5/18	24	EE	$3.6B debt + $8.6 stock and cash (per share value of $60.00)	12,200.0
2/9/16	Fortis Inc.	ITC Holdings Corp.	Completed		10/14/16	8	EE	$4.4B debt + $6.9B common shares and cash (per share value of $44.90, roughly 33% premium)	11,300.0
2/9/16	Algonquin Power & Utilities	Empire District Electric Co	Completed		1/1/17	11	EE	$1.6B debt + additional debt and equity (per share value of $34.00, roughly 21% premium)	2,400.0
2/1/16	Dominion Resources, Inc.	Questar Corporation	Completed		9/16/16	8	EG	$1.5B debt + $2.4B cash + $500M equity (per share value of $25.00, roughly 30% premium)	4,400.0
10/26/15	Duke Energy	Piedmont Natural Gas	Completed		10/3/16	12	EG	$3.3B debt + $1.0B cash + $625M equity (per share value of $60.00, roughly 40% premium)	4,900.0
9/4/15	Emera	TECO Energy, Inc.	Completed		7/1/16	10	EE	$6.5B debt + $3.9B equity (per share value of $27.55, roughly 48% premium)	10,400.0
8/24/15	Southern Company	AGL Resources	Completed		7/1/16	10	EG	$4.1B debt + $8.0B equity (per share value of $66.00, roughly 36% premium)	12,060.4
7/12/15	Black Hills Corporation	SourceGas Holdings	Completed		2/12/16	10	GG	$760M debt + $1.13B cash	1,890.0
2/25/15	Iberdrola USA	UIL Holdings	Completed	AVANGRID, Inc.	12/16/15	10	EE	$1.8B debt + $0.6B cash + $2.4B equity (per share value of $52.75, roughly 25% premium, of which $10.50 will be cash)	4,756.0
12/3/14	NextEra Energy, Inc.	Hawaiian Electric	Withdrawn		7/18/16		EE	NEE to acquire HE for $2.6B equity + $1.4B debt (fixed exchange ratio of 0.2413 NEE shares)	3,963.0
10/20/14	Macquarie-led Consortium	Cleco	Completed		4/13/16	18	EE	$3.4B equity (all Cleco shares at $55.37 / share in cash (~15% premium)) + $1.3 debt	4,700.0
6/23/14	Wisconsin Energy	Integrys	Completed	WEC Energy Group	6/30/15	12	EE	WEC to acquire TEG for $5.758B equity + $3.374B debt (fixed exchange ratio of 1.128 WEC shares + $18.58)	9,100.0
5/1/14	Berkshire Hathaway Energy	AltaLink (Canadian)	Completed		12/1/14	7	ET	BHE to acquire AL for $3.2B cash + $2.7B debt	5,927.0
4/30/14	Exelon	Pepco	Completed		3/23/16	24	EE	EXC to acquire POM for $6.8B in cash ($27.25 per POM share)	12,337.0
3/3/14	UIL Holdings	Philadelphia Gas Works	Withdrawn		12/4/14		EG	UIL to acquire assets & liabilities of PGW from city of Philadelphia for $1.86 billion in cash	1,860.0
12/12/13	Fortis Inc.	UNS Energy	Completed		8/15/14	8	EE	Fortis pays $60.25 / share (31% premium to announcement day's close) + $1.8B in debt	4,578.1
11/4/13	Avista	Alaska Energy & Resources Company	Completed		7/1/14	8	EE	AVA to acquire Alaska Energy & Resources Company for $145MM equity + $24.5MM debt	169.5
5/29/13	MidAmerican Energy Holdings Co.	NV Energy	Completed	Berkshire Hathaway Energy	12/19/13	7	EE	MidAmerican pays $23.75 / share + assume $4.8 billion debt	10,494.3
5/25/13	TECO Energy, Inc.	New Mexico Gas Intermediate, Inc.	Completed		9/2/14	15	EE	TECO will pay $950 million, including assume $200 million debt to Continental Energy Systems LLC	950.0
2/20/12	Fortis Inc.	CH Energy Group	Completed		6/27/13	16	EE	Fortis pays $65.00/share cash & assumes approx. $687.37 MM debt.	1,609.7
5/27/11	Fortis Inc.	Central Vermont Public Service Corp	Withdrawn		7/11/11		EE	Fortis pays approx. $35.10/share cash & assumes approx. $226.4 mill in debt.	701.6
1/8/11	Duke Energy	Progress Energy	Completed		7/3/12	18	EE	0.87083 Duke shares (after 1-3 reverse split) for each Progress share + assume $12.1 billion net debt.	32,000.0
7/11/11	Gaz Metro LP	Central Vermont Public Service Corp	Completed		6/27/12	12	GE	Gaz Métro pays $35.25/share for each CVPS share & assumes $226 million debt.	704.2
10/16/10	Northeast Utilities	NSTAR	Completed		4/10/12	18	EE	1.312 NU shares for each NSTAR shr, plus $3.36 bill assume debt	7,566.7
4/28/11	Exelon Corp.	Constellation Energy Group Inc.	Completed		3/12/12	11	EE	CEG receive 0.93 shares of EXC for each CEG share. EXC assumes approx. $2.9 bill net debt	10,623.2
4/19/11	AES Corporation	DPL Inc.	Completed		11/28/11	7	EE	AES pays 30.00/share cash & assumes approx $1.1 billion of net debt	4,613.2
4/28/10	PPL Corp.	E.ON U.S.	Completed		11/1/10	6	EE	$6.83 billion cash + $764.0 million in assumed debt	7,625.0
3/12/10	Emera Inc	Maine & Maritimes	Completed		12/21/10	9	EE	$76 mm cash + $28.6 mm debt + $13.8mm postretirement benefits	117.4
2/10/10	FirstEnergy	Allegheny Energy	Completed		2/25/11	12	EE	$4.3 billion in equity + $4.7 billion in assumed debt	9,273.2
9/17/08	Berkshire Hathaway	Constellation Energy Group Inc.	Withdrawn		12/17/08		PE	$4.7 bill cash + $4.4 bill net debt and adjustments	9,152.5
7/25/08	Sempra Energy	EnergySouth Inc.	Completed		10/1/08	3	EG	$499 million cash + 283 million debt	771.9
7/1/08	MDU Resources Group, Inc.	Intermountain Gas Co.	Completed		10/1/08	3	EG	$245 million cash + $82 million debt	327.0

6/25/08	Duke Energy	Catamount Energy Corp.	Completed		9/15/08	3	EP	$240 million cash + $80 million assumed debt	320.0
2/15/08	Unitil Corp.	Northen Utilities / Granite State Gas Transmission	Completed		12/1/08	10	EG	$160 million cash	160.0
1/12/08	PNM Resources, Inc.	Cap Rock Holding Corp.	Withdrawn		7/22/08		EE	$202.5 million	202.5
10/26/07	Macquarie Consortium	Puget Energy	Completed		2/6/09	16	EE	$3.5 billion cash + $3.02 billion net debt	6,520.2
6/25/07	Iberdrola S.A.	Energy East Corp.	Completed		9/16/08	15	EE	$4.5 billion cash + $4.1 billion net debt	8,600.0
2/26/07	KKR & Texas Pacific Group	TXU Corp.[1]	Completed	Energy Future Holdings Corp.	10/10/07	8	PE	$31.8 billion cash + $12.1 billion net debt	43,882.0
2/7/07	Black Hills Corp. / Great Plains Energy Inc.[2]	Aquila Inc. (CO elec. util. + CO, KS, NE, IA gas utils.)	Completed		7/14/08	17	EG	$940 million cash +working capital and other adjustments	940.0
7/8/06	MDU Resources Group, Inc.	Cascade Natural Gas Corporation	Completed		7/2/07	12	EG	$305.2mm in cash + ($173.6 in debt - $13.0 in cash equivalents)	465.8
7/8/06	WPS Resources Corporation	Peoples Energy Corporation	Completed	Integrys Energy Group	2/21/07	7	EG	$2.47 billion	2,472.4
7/5/06	Macquarie Consortium	Duquesne Light Holdings	Completed		5/31/07	10	EE	$1.59 billion cash + $1.09 billion total debt	2,674.4
6/22/06	Gaz Metro LP	Green Mountain Power Corp.	Completed		4/12/07	10	EE	$187 million in cash + ($100.8 debt - $9.1mm in cash equivalents)	279.5
5/11/06	ITC Holdings Corp	Michigan Electric Transmission Co.	Completed		10/10/06	5	EE	$485.6mm cash + $70mm common stock + $311mm assumed debt	866.6
4/25/06	Babcock and Brown Infrastructure	NorthWestern Corp.	Withdrawn		7/24/07		EE	$2.2 billion cash	2,200.0
2/27/06	National Grid	KeySpan Corp.	Completed		8/24/07	18	EE	$7.4 billion cash + $4.5 billion long-term debt	11,877.5
12/19/05	FPL Group Inc.	Constellation Energy Inc.	Withdrawn		10/25/06		EE	$11.3 billion equity + $4.1 billion net debt and pension liabilities	15,311.5
5/24/05	MidAmerican Energy Holdings Co.	Pacificorp	Completed		3/21/06	10	EE	$5.1 billion cash + $4.3 billion in net debt and preferred stock	9,300.0
5/9/05	Duke Energy Corp.	Cinergy Corp.	Completed		4/3/06	11	EE	$9.1 billion equity + $5.5 billion net debt and pension liabilities	14,600.0
12/20/04	Exelon Corp.	Public Service Enterprise Group	Withdrawn		9/14/06		EE	$12.3 billion in equity + $13.4 billion in net debt and pension liabilities	25,700.0
7/25/04	PNM Resources	TNP Enterprises	Completed		6/6/05	12	EE	$189 million in stock and cash and $835 million in debt	1,024.0
2/3/04	Ameren Corp	Illinois Power[3]	Completed		10/1/04	8	EE	$1.9 billion in debt, pref stock, & other liab + $400 million in cash	2,300.0
11/24/03	Saguaro Utility Group L.P.	UniSource Energy	Withdrawn		12/30/04		PE	$850 million cash + $2 billion in debt	2,850.0
11/3/03	Exelon Corp.	Illinois Power	Withdrawn		11/22/03		EE	$275 million cash + $1.8 billion in debt + $150 million promissory note	2,225.0
4/30/02	Aquila Inc	Cogentrix Energy Inc	Withdrawn		8/2/02		EIPP	$415 million cash + $1.125 billion in assumed debt	1,540.0
4/29/02	Ameren Corp	CILCORP[4]	Completed		1/31/03	9	EE	$541 million cash + $781 in assumed debt + $41 million in pref stock	1,400.0
10/8/01	Northwest Natural Gas	Portland General	Withdrawn		5/16/02		GE	$1.55 billion cash + $250mm in stock	1,800.0
9/20/01	Duke Energy	Westcoast Energy	Completed		3/14/02	6	EG	Equity + cash valued at $27.90 per Westcoast share	8,500.0
9/10/01	Dominion Resources	Louis Dreyfus Natural Gas	Completed		11/1/01	2	EG	$890mm cash + $900mm stock +$505mm debt	2,295.0
2/20/01	Energy East	RGS Energy	Completed		6/28/02	16	EE	$1.4 bill. cash & equity + $1.0 bill. net debt	2,400.0
2/12/01	Pepco	Conectiv	Completed		8/1/02	18	EE	$2.2 bill cash & equity + $2.8 bill. net debt	5,000.0
11/9/00	PNM	Western Resources[5]	Withdrawn		1/8/02		EE	Stock transfer	4,442.0
10/2/00	NorthWestern	Montana Power[6]	Completed		2/15/02	16	EE	$1.1 billion in cash	1,100.0
9/5/00	National Grid Group	Niagara Mohawk	Completed		1/31/02	16	EE	$19 per share	8,900.0
8/8/00	FirstEnergy	GPU Inc.	Completed		11/7/01	15	EE	$35.60 per share	12,000.0
7/31/00	FPL Group	Entergy	Withdrawn		4/2/01		EE	1/1 - FPL, 0.585/1 - ETR	27,000.0
7/17/00	AES Corporation	IPALCO	Completed		3/27/01	8	IPPE	$25 per share	3,040.0
6/30/00	NS Power	Bangor Hydro	Completed	Emera	10/10/01	16	EE	$26.50 per share	206.0
5/30/00	WPS Resources	Wisconsin Fuel and Light	Completed		4/2/01	11	EG	1.73 shares of WPSR	55.0
2/28/00	PowerGen plc	LG&E	Completed		12/11/00	10	EE	$24.85 per share	5,400.0
8/8/00	FirstEnergy	GPU Inc.	Completed		11/7/01	15	EE	$35.60 per share	12,000.0
7/31/00	FPL Group	Entergy	Withdrawn		4/2/01		EE	1/1 - FPL, 0.585/1 - ETR	27,000.0
7/17/00	AES Corporation	IPALCO	Completed		3/27/01	8	IPPE	$25 per share	3,040.0
6/30/00	NS Power	Bangor Hydro	Completed	Emera	10/10/01	16	EE	$26.50 per share	206.0
5/30/00	WPS Resources	Wisconsin Fuel and Light	Completed		4/2/01	11	EG	1.73 shares of WPSR	55.0
2/28/00	PowerGen plc	LG&E	Completed		12/11/00	10	EE	$24.85 per share	5,400.0

[1] TXU (now Energy Future Holdings Corp.) was acquired by the Texas Energy Future Holdings Limited Partnership (TEF) on 10/10/2007. TEF was formed by a group of investors led by Kohlberg Kravis Roberts and Texas Pacific Group to facilitate the merger.

[2] Aquila was divided with Black Hills Corp. acquiring the electric utility in Colorado and NG utilities in CO, IA, KS, and NE. Great Plains Energy Inc. acquired the MI electric utility, stock, and other corporate assets.

[3] Ameren purchased Illinois Power from Dynegy Corporation. Dynegy Corp acquired Illinois Power in February 2000.

[4] Ameren purchased CILCORP from AES Corporation. AES Corp acquired CILCORP in October 1999.

[5] PNM purchased Western Resources' electric operations including generation, transmission, and distribution.

[6] NorthWestern Corporation purchased Montana Power's electric and natural gas transmission and distribution assets.

General Note: sum of Announced, Completed, Withdrawn, and Pending may not total due to inclusion of transactions announced prior to the 1994 window (e.g., a transaction announced in 1993 and completed in 1994 is included as a completion, but not as an announcement).

C = Completed
W = Withdrawn
PN = Pending

E = Electric
G = Gas
O = Oil
IPP = Independent Power Producer
P = Privatized

Source: EEI Finance Department, SNL Financial

Construction

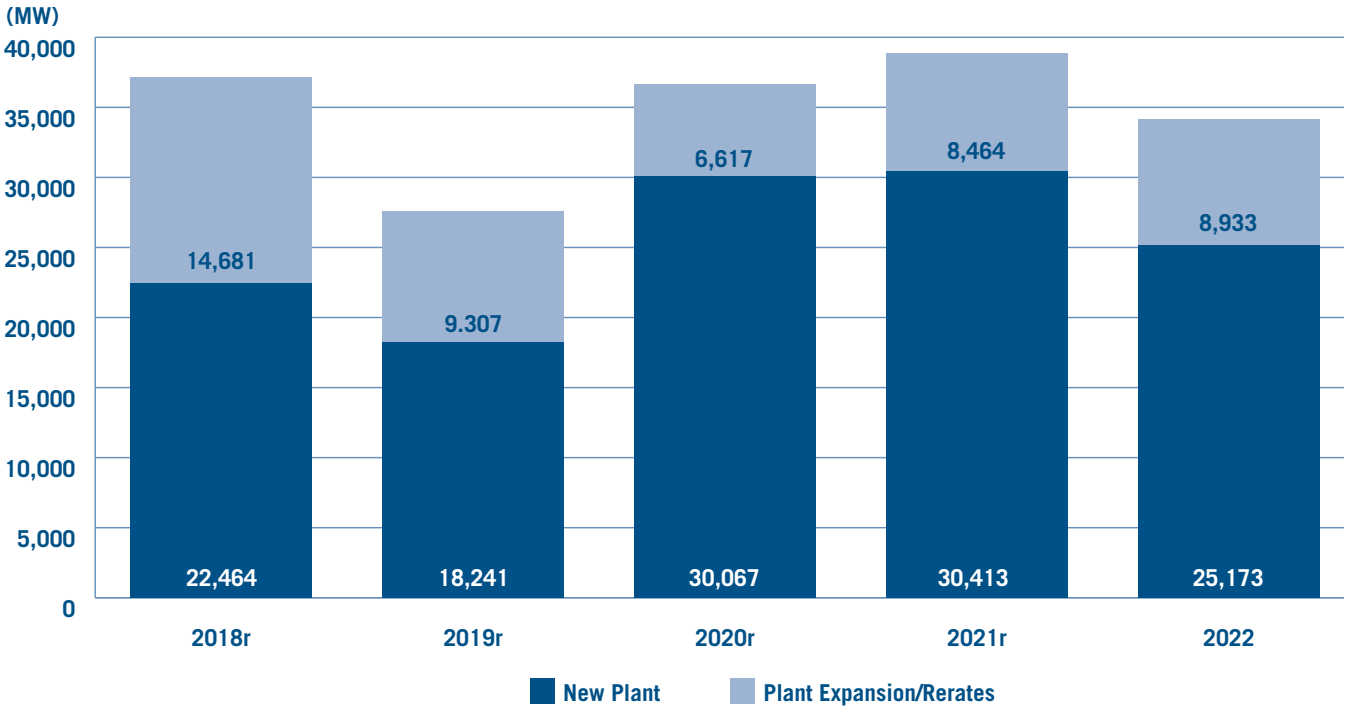
The electric utility industry brought 34,106 MW of new capacity online in 2022, 12% less than 2021's 38,877 MW and 7% less than the 36,684 MW of 2020. The decline from 2021 to 2022 was due to reductions in both solar and wind capacity. Supply chain issues continuously plagued wind and solar projects in 2022, causing many to be delayed. As a result, new wind capacity brought online decreased from 12,875 MW in 2021 to 10,148 MW in 2022. Solar capacity installation decreased 22%, from 15,370 MW in 2021 to 11,953 MW in 2022, marking the first annual decline for solar since 2018. Despite supply chain challenges, new natural gas capacity brought online increased from 6,924 MW in 2021 to 7,067 MW in 2022, marking natural gas's first annual increase since 2018.

New plants comprised 74% of 2022's total new capacity. Expansions and rerates accounted for the remaining 26%. The percentage of new plants slightly declined from 2021's rate of 78%.

Renewables continued to lead capacity additions, accounting for 65% of new capacity in 2022 versus 73% in 2021, even though supply chain challenges pushed some of 2022's scheduled projects into 2023. Supported by continually declining costs, wind and solar have powered more than half of the new capacity in each of the last four years. Solar led new capacity additions in 2022, accounting for 11,953 MW or 35% of the total across all fuels. Wind was second with 10,148 MW, or 30%. Investor-owned utilities that brought the most new renewable capacity online were NextEra Energy (2,682 MW of wind, 1,322 MW of solar), American Electric Power (999 MW of wind, 22 MW of solar), Duke Energy (207 MW of wind, 694 MW

New Capacity Online (MW) 2018–2022

U.S. ELECTRIC UTILITY AND NON-UTILITY



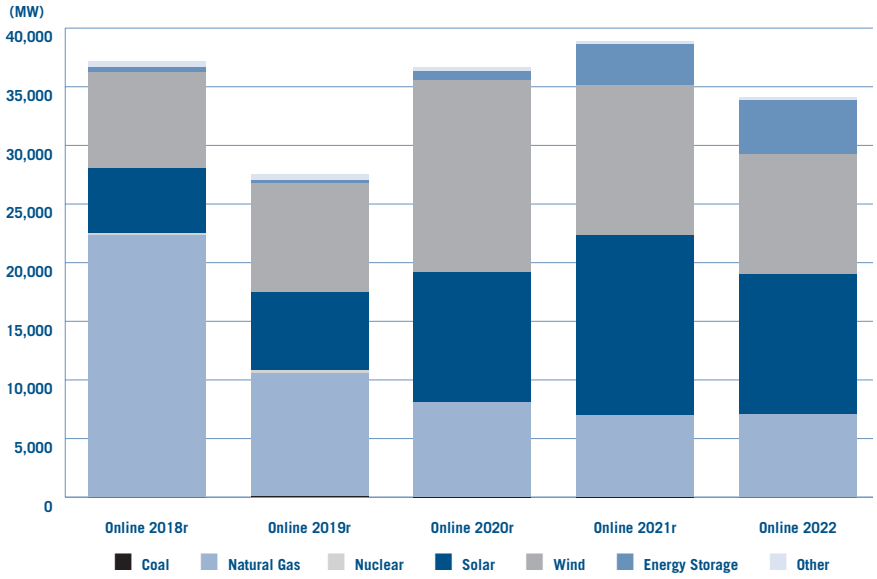
r = revised

Note: Includes all new capacity placed on the grid by U.S. investor-owned utilities, independent power producers, municipals, co-ops, government authorities and corporations. Totals may reflect rounding.

Source: The Velocity Suite, Hitachi Energy, EEI Energy Supply and Finance Department, April 2023

New Capacity Online by Fuel Type (MW) 2018–2022

U.S. ELECTRIC UTILITY AND NON-UTILITY



Fuel Type	2018r	2019r	2020r	2021r	2022
Coal	0	62	30	11	0
Natural Gas	22,320	10,549	8,078	6,924	7,067
Nuclear	192	175	20	0	17
Solar	5,542	6,714	11,083	15,370	11,953
Wind	8,187	9,232	16,343	12,875	10,148
Energy Storage	381	306	767	3,483	4,676
Other	524	510	362	215	246
Total	**37,145**	**27,548**	**36,684**	**38,877**	**34,106**

r = revised

Note: Includes all new capacity placed on the grid by U.S. investor-owned utilities, independent power producers, municipals, co-ops, government authorities and corporations. Other includes biomass, diesel/fuel oil, fuel cells, geothermal, landfill gas, pet coke, waste heat, water, and wood. Totals may reflect rounding.

The Velocity Suite, Hitachi Energy, EEI Energy Supply and Finance Department, April 2023

of solar), Xcel (322 MW of wind), AES (67 MW of wind, 252 MW of solar), ALLETE (304 MW of wind, 7 MW of solar), WEC Energy Group (300 MW of wind, 8 MW of solar), National Grid (275 MW of solar), Alliant Energy (254 MW of solar), and Ameren Corporation (202 MW of wind, 8 MW of solar).

Natural gas accounted for 21% of new capacity added in 2022; the year's 7,067 MW total was 2% higher than 2021's 6,924 MW. Combined cycle technology accounted for 78% of 2022's new natural gas capacity compared with 44% in 2021. Combustion turbines powered 20%. New plants represented 51% of the year's natural gas total, expansions accounted for 45% and the remaining 4% were rerates. DTE Energy led natural gas additions with 1,267 MW in new combined cycle gas plants, followed by NextEra Energy, whose gas turbine expansions totaled 1,163 MW. Third was Northwestern Corp. with 69 MW of new gas turbine capacity.

Energy storage accounted for nearly all the remaining 14% of new capacity added in 2022; a total of 4,676 MW was brought online, a 34% increase from 2021. Investor-owned utilities that brought the most energy storage capacity online included NextEra Energy (547 MW), AES Corporation (257 MW), PG&E Corporation (183 MW), and National Grid (125 MW).

New Capacity Online by Region

The Western Electricity Coordinating Council (WECC) brought the most capacity online of any region; WECC's 8,751 MW total for 2022 was 867 MW, or 11%, higher than 2021's 7,884 MW. An increase in new energy storage, from 1,993 MW to 2,992 MW, was the primary contributor to the gain. The Alaska Systems Coordinating Council (ASCC) also increased new capacity compared to 2021, rising from 9 MW in 2021 to 54 MW in 2022. The Hawaiian Coordinating Council (HCC) was the third and last region where new capacity brought online rose compared to 2021; new capacity in the HCC totaled 63 MW in 2021 and 81 MW in 2022. The year-to-year increase in HCC was driven by new solar additions, at 42 MW compared to 17 MW in 2021, which was slightly offset by a 7 MW decline in energy storage additions.

The SERC Reliability Corporation had the largest absolute decrease in new capacity added, from 8,054 MW in 2021 to 5,807 MW in 2022. The decline resulted from reduced additions of solar (4,746 MW to 3,834 MW), wind (887 MW to 121 MW), and energy storage (582 MW to 91 MW). New capacity added in The Electric Reliability Council of Texas (ERCOT) also declined more than 1,300 MW, falling 14% from

New Capacity Online by Region (MW) 2018–2022

U.S. ELECTRIC UTILITY AND NON-UTILITY

Region	Online 2018r	Online 2019r	Online 2020r	Online 2021r	Online 2022
ASCC	2	34	8	9	54
HCC	155	221	60	63	81
MRO	3,320	3,321	5,068	2,921	2,374
NPCC	3,386	2,267	1,693	1,566	1,038
RFC	11,980	4,047	2,783	6,150	5,175
SERC	9.577	7,322	8,970	8,054	5,807
SPP	1,922	1,142	3,366	2,740	2,705
TRE/ERCOT	2,935	5,312	5,997	9,490	8,121
WECC	3,868	3,883	8,739	7,884	8,751
Total	**37,145**	**27,548**	**36,684**	**38,877**	**34,106**

r = revised

Note: Data includes U.S. new plants, rerates, and expansions of existing plants, including nuclear uprates. Totals may reflect rounding.

Source: The Velocity Suite, Hitachi Energy, EEI Energy Supply and Finance Department, April 2023

Announced New Capacity by Region and Fuel Type in 2022 (MW)

U.S. ELECTRIC UTILITY AND NON-UTILITY

Fuel Type	Alaska Systems Coordinating Council	Reliability Council of Texas	Hawaiian Coordinating Council	Midwest Reliability Organization	Northeast Power Coordinating Council	Reliability First	SERC Reliability Corp	Southeast Power Pool Inc.	Western Electricity Coordinating Council
Coal	-	-	-	-	-	-	-	-	-
Natural Gas	-	361	-	132	-	65	780	-	-
Nuclear	-	-	-	-	-	-	-	-	-
Wind	-	-	-	1,212	2,209	1,046	763	453	5,801
Solar	-	4,622	79	2,271	4,029	5,222	11,854	1,065	7,947
Hydro	-	-	-	-	1	1	-	32	8
Energy Storage	-	5,306	157	344	8,477	162	518	-	7,560
Other	-	-	-	-	-	329	-	9	7
Total	**-**	**10,289**	**236**	**3,958**	**14,715**	**6,825**	**13,915**	**1,559**	**21,323**

r = revised

Notes: Data includes new plants and expansions of existing plants announced, including nuclear uprates. Other includes biomass, diesel/fuel oil, fuel cells, geothermal, landfill gas, pet coke, waste heat, and wood. Totals may reflect rounding.

Source: The Velocity Suite, Hitachi Energy, EEI Energy Supply and Finance Department, April 2023

Stage of Announced Capacity Additions (MW) 2023–2027

U.S. ELECTRIC UTILITY AND NON-UTILITY

Fuel	Proposed	Feasibility	Application Pending	Permitted	Site Prep	Under Construction	Testing	Total
Natural Gas	13,699	497	5,129	7,484	175	6,564	3,978	37,525
Nuclear	1,753	-	-	-	-	-	2,200	3,953
Solar	105,689	200	41,616	43,734	100	31,101	5,197	227,638
Wind	63,858	2,212	13,239	11,256	352	10,772	1,963	103,652
Energy Storage	41,368	8,971	27,634	13,537	-	8,657	953	101,121
Other	1,340	1,943	66	316	-	233	2	3,900
Grand Total	**227,707**	**13,823**	**87,684**	**76,327**	**627**	**57,328**	**14,292**	**477,789**

Notes: Other includes biomass, diesel/fuel oil, fuel cells, geothermal, landfill gas, pet coke, waste heat, hydroelectric turbines, and wood. Totals may reflect rounding. Data includes new plants and expansions of existing plants, including nuclear uprates. Data includes projects with an expected online date up to 2027.

Source: The Velocity Suite, Hitachi Energy, EEI Energy Supply and Finance Department, April 2023

9,490 MW in 2021 to 8,121 MW in 2022. That decline was led by lower solar (4,204 MW to 2,414 MW), gas (1,242 MW to 1,011 MW), and wind (3,393 MW to 3,332 MW) and was partially offset by an increase in energy storage capacity (641 MW to 1,364 MW).

Announcements by Region and Fuel Type

New capacity announced in 2022 totaled 72,819 MW, an increase of 43% over 2021's 51,032 MW. Renewable capacity accounted for 67% of 2022's total, with solar at 51%, wind at 16%, and hydro at 0.1%. Energy storage accounted for 31%. The remaining 2% was natural gas. As in 2021, no new coal or nuclear capacity was announced in 2022.

Energy storage produced the strongest year-to-year growth in announced new capacity with 22,522 MW announced in 2022. Northeast Power Coordinating Council (NPCC), Western Electricity Coordinating Council (WECC), and Electric Reliability Council of Texas (ERCOT) together accounted for 95%, or 21,342 MW, of the total new storage capacity announcements in 2022.

Higher wind and solar announcements also contributed to the growth in 2022 versus 2021. Announced new wind capacity increased 32%, from 8,668 MW in 2021 to 11,484 MW in 2022. New solar capacity announcements rose 6%, from 35,107 MW in 2021 to 37,089 MW in 2022. Federal government support for clean energy investment included in the Inflation Reduction Act (August 2022) and in the Infrastructure Investment and Jobs Act (November 2021) may have contributed to higher renewable capacity announcements in 2022 compared to 2021.

Announced new natural gas capacity decreased for the third year in a row, falling 56% from 3,060 MW in 2021 to 1,337 MW in 2022. Only four regions had new announcements: SERC Reliability Corporation (SERC), Electric Reliability Council of Texas (ERCOT), Midwest Reliability Organization (MRO), and Reliability First Corporation (RFC).

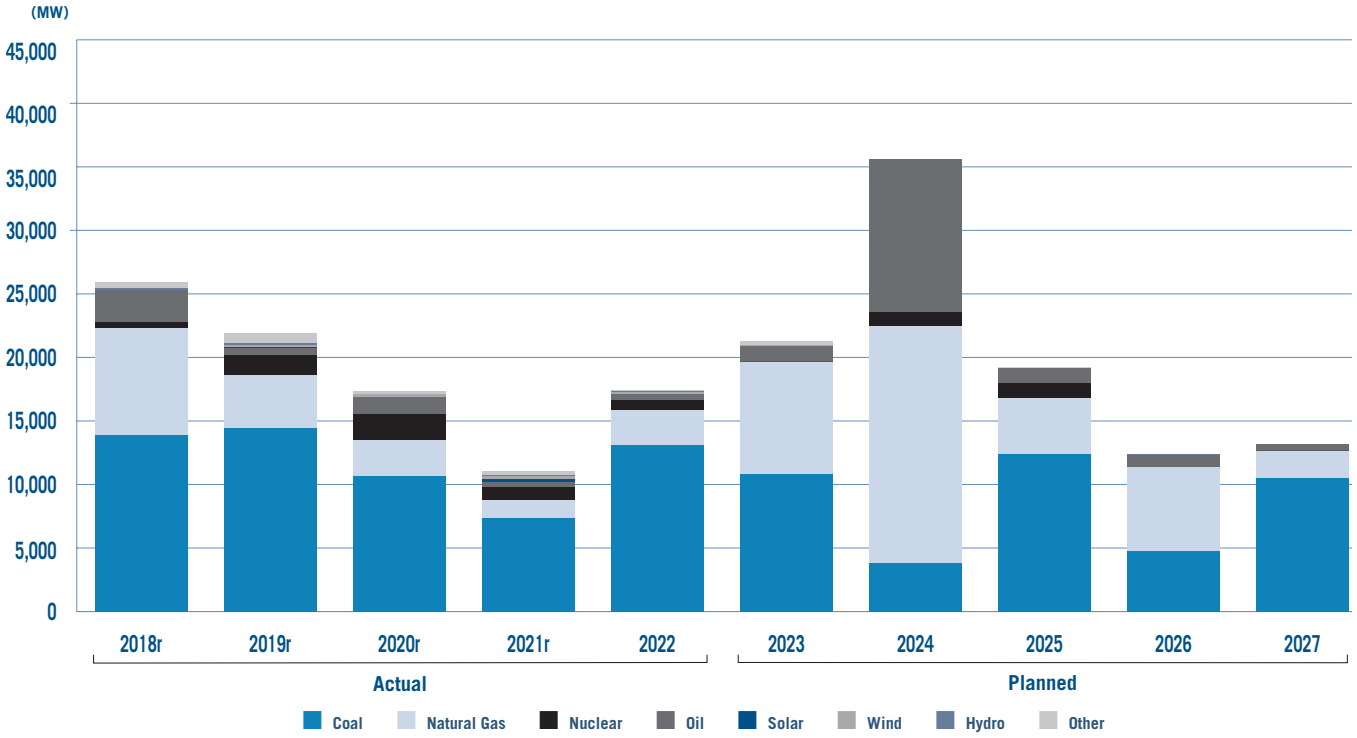
The Western Electricity Coordinating Council (WECC) saw the most announced new capacity of any region for the third year in a row, at 21,323 MW; 65% of that is renewable, with 37% solar, 27% wind, and less than 1% hydro. The remaining 35% is energy storage. The Northeast Power Coordinating Council (NPCC) region saw the second-highest amount of announced new capacity in 2022, at 14,715 MW; 58% is energy storage while the remaining 42% is renewable (27% solar and 15% wind).

Projected Capacity Additions

As of April 2023, new capacity expected to come online from 2023 through 2027 totaled 477,789 MW, a 31% increase over the comparable projection one year ago for the 2022 through 2026 five-year period. Renewable capacity accounted for most of the total, with solar representing 48% and wind accounting for 22%. The third-largest category was energy storage, at 21%, followed

Actual 2018-2022 and Projected 2023-2027 Retirements (MW)

U.S. ELECTRIC UTILITY AND NON-UTILITY



	Actual					Planned					
	2018r	2019r	2020r	2021r	2022	2023	2024	2025	2026	2027	Total
Coal	13,877	14,460	10,648	7,361	13,092	10,852	3,826	12,382	4,759	10,546	42,365
Natural Gas	8,400	4,110	2,853	1,357	2,720	8,804	18,593	4,418	6,574	2,092	40,482
Nuclear	550	1,641	2,031	1,074	823	-	1,159	1,164	-	-	2,323
Oil	2,483	546	1,337	383	476	1,232	11,993	1,191	1,004	488	15,908
Solar	3	8	-	275	2	-	-	-	1	4	5
Wind	63	208	229	235	168	41	-	1	-	-	43
Hydro	55	161	9	6	9	38	5	14	10	24	92
Other	481	738	211	379	126	283	67	1	-	50	401
Total	**25,910**	**21,872**	**17,318**	**11,070**	**17,415**	**21,250**	**35,644**	**19,171**	**12,348**	**13,204**	**101,617**

r = revised

Notes: Other includes biomass, diesel/fuel oil, fuel cells, geothermal, landfill gas, pet coke, waste heat, wood, and energy storage. Totals may reflect rounding. 2018-2022 is actual plants retired. 2023-2027 is projected based on announced or expected retirements.

Source: The Velocity Suite, Hitachi Energy, EEI Energy Supply and Finance Department, April 2023

by natural gas at 8% and nuclear at 1%. Natural gas and nuclear were 13% and 2%, respectively, of the 2022 through 2026 five-year total. Of the 477,789 MW total, 48% was in the proposal stage as of April 2023. Only 12% of the total was under construction and 3% was in the testing stage.

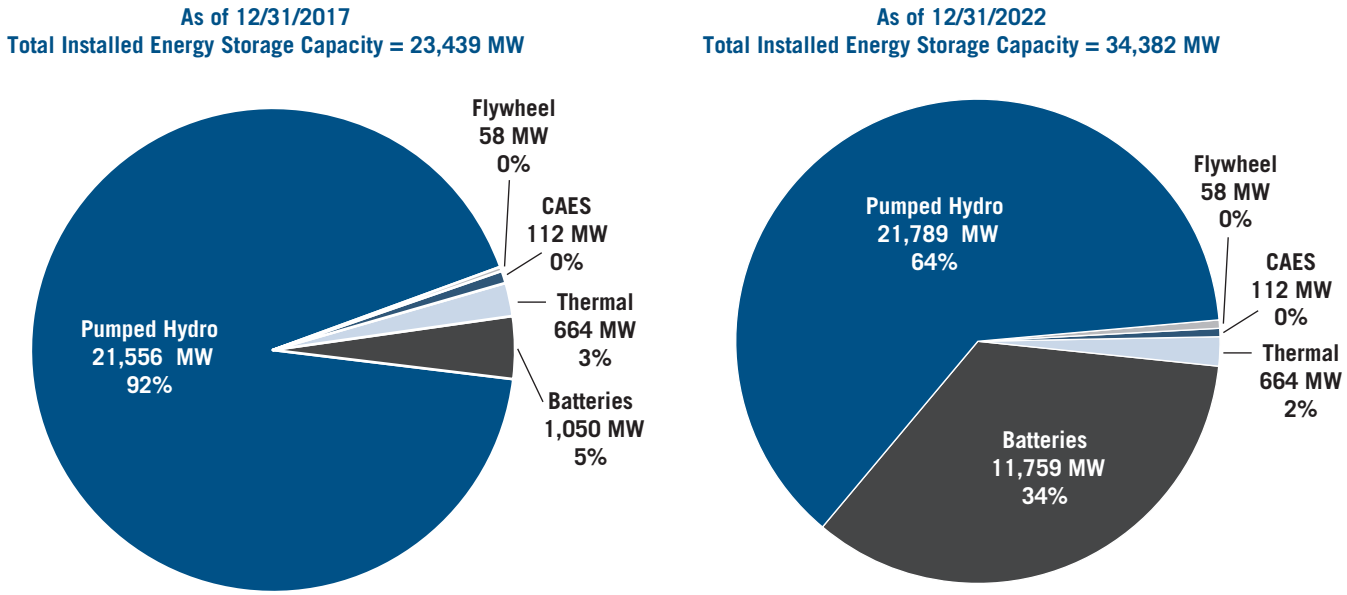
Retirements

As of April 2023, 101,617 MW of capacity was scheduled to be retired from 2023 through 2027. Coal continues to lead retirements, accounting for 42% of the projected total. Coal retirements are expected to reach 10,852 MW in 2023, a 17% decline compared to the actual 13,092 retirements in 2022. Natural gas ranked second and fuel oil third in terms of projected retirements over the full five-year period, at 40% and 16%, respectively.

Natural gas retirements are expected to peak in 2024 at 18,593 MW; this would be the highest actual or projected annual retirement total of any fuel from 2018 through 2027. Wind and solar retirements re-

Total Installed Energy Storage Capacity by Technology (MW)

U.S. ELECTRIC UTILITY AND NON-UTILITY



Sources: The Velocity Suite, Hitachi Energy; Wood Mackenzie Energy Storage Database; U.S. Department of Energy Sandia Energy Storage Dataset, EEI Energy Supply and Finance Department, March 2023

main minimal, together accounting for only a combined 0.05% of total projected retirements from 2023 through 2027. Nuclear retirements peaked in 2020, at 2,031 MW, with the shutdowns of the Duane Arnold Energy Center in Iowa (660 MW) and Indian Point Unit 2 in New York (1,371 MW). The Palisades Power Plant in Michigan (823 MW) was the only nuclear facility to retire in 2022 and accounted for all nuclear capacity retired. An additional 2,323 MW of nuclear capacity is expected to retire over the next three years due to the anticipated shutdown of the 2,323 MW Diablo Canyon Power Plant (CA) in stages between 2024 and 2025.

Energy Storage

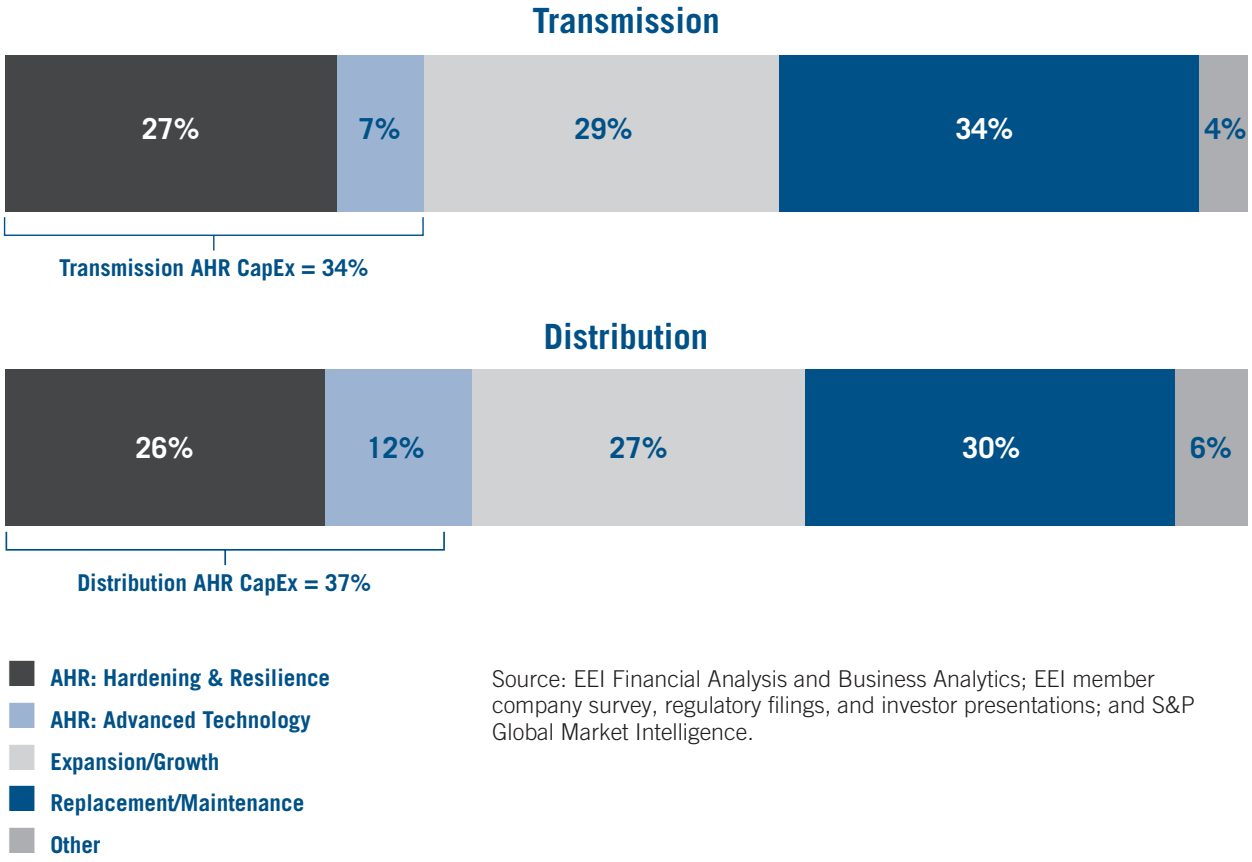
Energy storage continues to be a fast-growing area for the industry. At year-end 2022, utilities owned or operated 31,883 MW of storage capacity, or about 93% of all energy storage in the United States. Since 2017, total installed energy storage capacity nationwide owned or operated by utilities has increased 38%, from about 23,127 MW in 2017 to 31,883 MW in 2022.

Pumped hydro accounted for 68% of the total energy storage capacity owned by both U.S. investor-owned utilities and non-utilities, at 21,789 MW of capacity. Battery storage is the fastest-growing storage technology in terms of capacity, with total deployed capacity up approximately 1,020% from 2017 to 2022. Between 2017 and 2022, battery energy storage grew from 5% of total energy storage capacity to 34%.

The fast-paced growth of battery storage is likely to continue; 74,271 MW of battery storage capacity is expected to come online from 2023 through 2027, representing 83% of all incremental energy storage during this time period and becoming the dominant energy storage technology. Utilities will continue to lead battery storage deployment, accounting for 60,503 MW of the projected new battery storage capacity from 2023 through 2027.

Pumped hydro accounts for 16% of projected energy storage deployment from 2023 through 2027. Four rerate projects result in 267 MW capacity – Bear Swamp in Massachusetts (33 MW), Bad Creek

Adaptation, Hardening, and Resilience (AHR) as Drivers of T&D Investment
Based on 2022 Survey Results



Source: EEI Financial Analysis and Business Analytics; EEI member company survey, regulatory filings, and investor presentations; and S&P Global Market Intelligence.

in South Carolina (173 MW), Salina in Oklahoma (24 MW), and Cabin Creek in Colorado (37 MW). Two expansion projects account for 1,260 MW capacity – the Mineville Pumped Storage Project in New York (260 MW) and the Swan Lake North Hydro Pumped Storage Project (1,000 MW). The remaining announced projects are new constructions in the early stages of development.

The remaining 1% of new energy storage is compressed air energy storage at one project, the Rosamond CASE project in California at 500 MW. The project is expected to come online in 2024.

Transmission and Distribution

EEI member companies are spending a significant and growing amount of resources on adaptation, hardening, and resilience (AHR) initiatives. In recent years, it is estimated that EEI's member companies have invested almost $30 billion per year in AHR for transmission and distribution infrastructure. Specific examples of AHR investments in the electric grid include undergrounding power lines, installing cement poles, and elevating or relocating transformers. AHR is increasingly becoming an important way for electric companies to fulfill their mission of supplying customers with reliable, affordable, and increasingly sustainable energy. Electric companies also are developing weather predictive services, risk modeling, fire spread modeling, deployment of sensors and high-definition cameras, communication networks, satellite data damage assessment, and other real or near real time situational awareness instruments that can help them better predict and prepare for extreme weather events and wildfires.

Fuel Sources

Net Generation and Electricity Sales

Electric power industry net generation in 2022 totaled 4,301,648 gigawatt hours (GWh), an increase of 3.5% versus 2021. Nationwide retail electricity sales increased 2.7%, showing gains across 45 states and the District of Columbia and rising for the second consecutive year after last year's 2.1% increase. The states with the largest year-to-year percentage increases in retail electricity sales in 2022 were North Dakota (+10.7%), New Mexico (+8.5%), Florida (+7.4%), and Oklahoma (+7.4%). Oregon (-1.3%), New Hampshire (-0.5%), Minnesota (-0.2%), Connecticut (-0.2%), and Massachusetts (-0.1%) were the few states where sales declined.

Total sales to commercial customers increased 3.4%, substantially above the 2.7% overall nationwide sales gain. This is the second consecutive annual increase for commercial sales after last year's 2.9% growth, indicating that business activity has continuously returned to normal following 2020's pandemic-related shutdowns. Almost every state experienced growth in commercial sales in 2022, with North Dakota (+10.7%) experiencing the largest percentage gain. The only states showing a decline were Connecticut (-1.5%) and New Hampshire (-0.6%).

Total electricity sales to industrial customers increased 0.7% year-to-year, producing gains in 31 states. The 2022 percentage increase was lower than 2021's 2.9%, which was likely driven by resumption and expansion of industrial activity after states relaxed their COVID-19 protocols. New Mexico (+15.2%) and Florida (+12.8%) had the highest percentage increases. While the District of Columbia produced the largest percentage increase in 2021, at 29%, it saw the largest percentage decrease in 2022, at -24.2%. Louisiana showed the largest sales gain in absolute terms, at 2,552 GWh, representing a 6.7% increase over 2021's total. Nineteen states – Alabama, California, Delaware, Idaho, Indiana, Kentucky, Maine, Minnesota, New Hampshire, New Jersey, New York, Oregon, Rhode Island, South Dakota, Texas, Utah, Vermont, Virginia, Washington – and the District of Columbia all experienced lower industrial sales compared to 2021's total; decreases ranged from 0.1% (Idaho) to 24.2% (District of Columbia).

Electricity sales to residential customers increased 3.5% in 2022, above last year's 0.8% gain. Texas (+10.7%) and North Dakota (+8.2%) were the states with the highest percentage growth in 2022. Texas also experienced the largest growth in absolute terms, at 16,583 GWh, followed by Florida, at 9,066 GWh. Forty-

Fuel Sources for Net Electric Generation

U.S. ELECTRIC UTILITY AND NON-UTILITY

	2021r	2022
Coal	21.6%	19.3%
Gas	38.0%	39.3%
Nuclear	18.7%	17.9%
Hydro	6.1%	6.1%
Renewables	14.7%	16.5%
Biomass	1.3%	1.2%
Geothermal	0.4%	0.4%
Solar	4.0%	4.7%
Wind	9.1%	10.1%
Other fuels	0.9%	0.9%
Total	100%	100%

r = revised

Note: Other fuels include: Pumped hydro, other gases, and diesel/fuel oil. Totals may not equal 100% due to rounding.

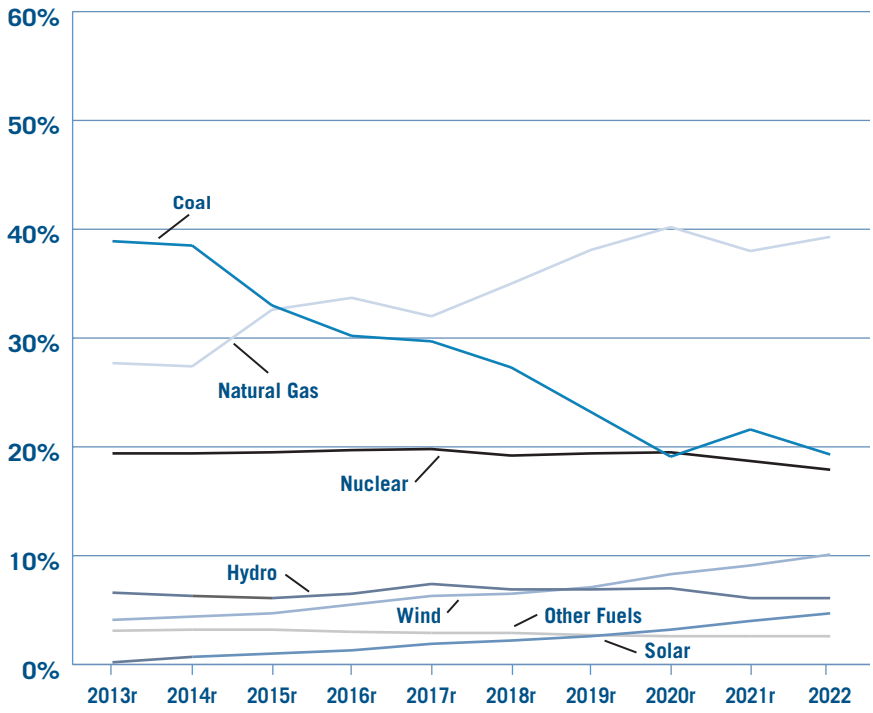
U.S. Electric Utility: Owns and/or operates facilities within the United States, its territories, or Puerto Rico for the generation, transmission, distribution, or sale of electric energy primarily for use by the public. This includes investor-owned utilities, public power, and cooperatives.

Non-Utility Power Producer: Non-utility power producers include qualifying cogenerators, qualifying small power producers, and other non-utility generators (including independent power producers) without a designated franchised service area.

Source: U.S. Department of Energy, Energy Information Administration (EIA), EEI Energy Supply and Finance Department, April 2023

Fuel Sources for Net Electric Generation (Percent of Total Electric Generation) 2013-2022

U.S. ELECTRIC UTILITY AND NON-UTILITY



r = revised

U.S. Electric Utility: Owns and/or operates facilities within the United States, its territories, or Puerto Rico for the generation, transmission, distribution, or sale of electric energy primarily for use by the public. This includes investor-owned utilities, public power, and cooperatives.

Non-Utility Power Producer: Non-utility power producers include qualifying cogenerators, qualifying small power producers, and other non-utility generators (including independent power producers) without a designated franchised service area.

Source: Energy Information Administration (EIA), U.S. Department of Energy; EEI Energy Supply and Finance Department, April 2023

two states saw residential electricity sales rise in 2022. Hawaii (-2.7%) and Michigan (-2.2%) had the largest percentage declines in residential electricity sales.

The variations in year-to-year residential sales trends across states may be due, in part, to the impact of differing protocols and mandates in the aftermath of COVID-19. States with residential electricity sales growth may have seen a continued increase in 2022 in the number of people working from home. Conversely, relatively fewer people may have worked from home in states with residential sales declines in 2022.

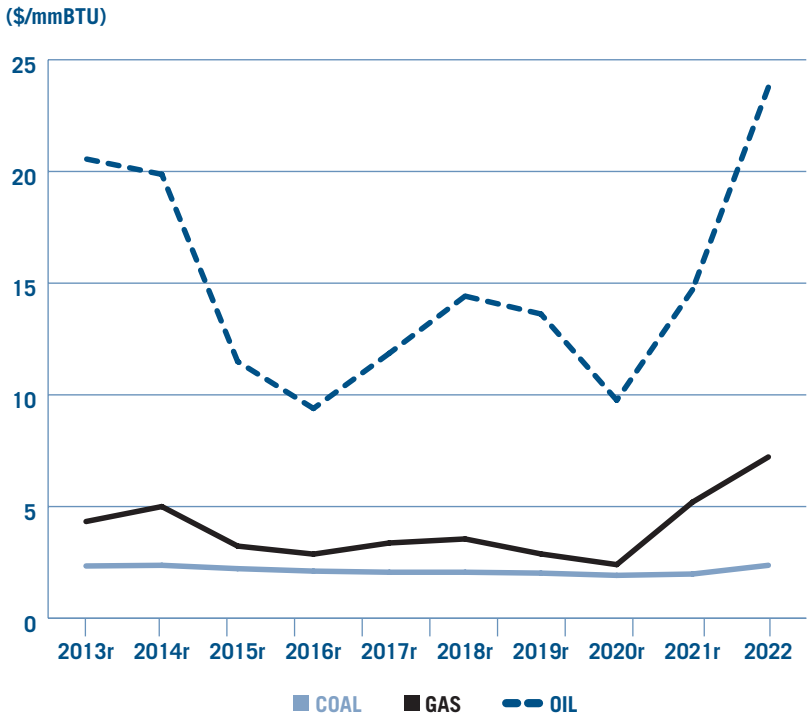
Coal

Generation from coal-fired plants in 2022 was 7.7% below the 2021 total. Coal accounted for 19.3% of total electricity generation nationwide in 2022. Coal's 828,993 GWh of generation placed it second, behind natural gas, among the fuels that contributed to total nationwide generation. The coal fleet's capacity factor decreased from 49% in 2021 to 48% in 2022.

The average cost to produce electricity from coal increased 12.3%, from $33.04/MWh in 2021 to $37.11/MWh in 2022. A 19.7% increase in the average price of coal, from $1.98 per million British

Average Cost of Fossil Fuels 2013–2022

U.S. ELECTRIC UTILITY AND NON-UTILITY



r = revised

U.S. Electric Utility: Owns and/or operates facilities within the United States, its territories, or Puerto Rico for the generation, transmission, distribution, or sale of electric energy primarily for use by the public. This includes investor-owned utilities, public power, and cooperatives.

Non-Utility Power Producer: Non-utility power producers include qualifying cogenerators, qualifying small power producers, and other non-utility generators (including independent power producers) without a designated franchised service area.

Source: Energy Information Administration (EIA), U.S. Department of Energy; EEI Energy Supply and Finance Department, April 2023

Thermal Units (MMBtu) in 2021 to $2.37 MMBtu in 2022, drove up the fuel cost component of coal generation. This increase was offset by a 6.3% decline in average operations and maintenance expenses, which dropped from $10.3/MWh in 2021 to $9.65/MWh in 2022. Because sharply higher natural gas fuel prices have made natural gas generation far more costly than coal, the more muted increase in coal generation costs preserved coal's place as the second-most expensive fuel for electricity generation in 2022 as it was in 2021.

Annual coal generation returned to its previous declining trend after a brief increase in 2021, mainly because of constrained coal supply.

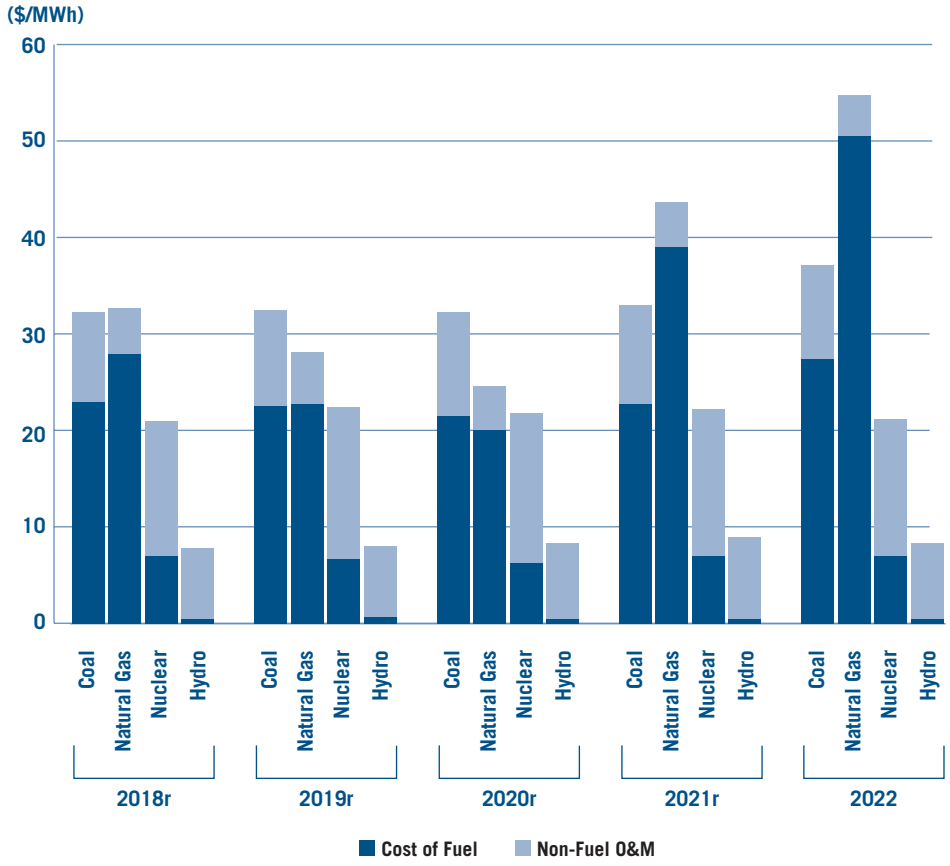
The decline in coal generation in 2022 was accompanied by a decrease in coal plants' average capacity factor along with a significant increase in coal capacity retirements compared to 2021. From 2018 through 2022, only 103 MW of new coal capacity came online compared to 59,437 MW of coal retirements. Another 42,365 MW of coal capacity is projected to retire from 2023 through 2027.

Natural Gas

Natural gas powered 39.3% of 2022's total generation—more than

Average Cost to Produce Electricity 2018–2022

U.S. ELECTRIC UTILITY AND NON-UTILITY



r = revised

Note: 2022 results are preliminary. Totals may reflect rounding.

U.S. Electric Utility: Owns and/or operates facilities within the United States, its territories, or Puerto Rico for the generation, transmission, distribution, or sale of electric energy primarily for use by the public. This includes investor-owned utilities, public power, and cooperatives.

Non-Utility Power Producer: Non-utility power producers include qualifying cogenerators, qualifying small power producers, and other non-utility generators (including independent power producers) without a designated franchised service area.

Source: The Velocity Suite, Hitachi Energy, EEI Energy Supply and Finance Department, April 2023

any other single fuel type. That share increased more than one percentage point from its 2021 level, but it remains below the 40.2% of 2020. The average cost of natural gas for electricity generation rose dramatically, increasing 38.8%, from $5.20/MMBtu in 2021 to $7.22/MMBtu, in 2022, its highest level in recent history. As a result, the average cost to produce electricity from natural gas rose 25.3% in 2022 versus 2021 and was 47.6% higher than the average cost to produce electricity from coal.

Renewables

The electric industry continues to add record amounts of renewable capacity. As a result, electric generation from carbon-free sources increased to 1,742,920 MWh in 2022, representing 40.5% of the electric power industry's total generation. Generation from all renewable sources was 971,383 MWh, or 22.6% of the total in 2022 compared with 864,432 MWh, or 20.8%, in 2021.

Conventional hydroelectric generation rose to 261,999 MWh, a 4.1% increase from 2021's 251,585 MWh. It accounted for 6.1% of electricity generation in 2022, the same as last year but down from 7.0% in 2020. Generation from wind power increased 15%, from 378,197 MWh in 2021 to 434,812 MWh in 2022 and accounted for 10.1% of 2022's total electricity generation. Solar generation increased 24.1%, from 164,423 MWh in 2021 to 204,111 MWh in 2022, reaching 4.7% of total electricity generation. Utility-scale solar accounted for 145,599 MWh, or 71.3%, of solar generation, an increase from 70.1% in 2021.

Nuclear

Nuclear generation decreased 0.8% in 2022 and accounted for 17.9% of total electric power generation, down from 18.7% in 2021. The decline was due to reduced capacity resulting from nuclear plant retirements; 6,120 MW of nuclear capacity was retired from 2018 through 2022, with the retirement of 823 MW at the Palisades power plants in Michigan in 2022 the most recent. Another 2,323 MW is projected to be retired over the next five years through closure of the Diablo Canyon power plant in California. Nuclear power plants had an average capacity factor of 92.6% in 2022 compared to average capacity factors of 47.8% for coal and 36.7% for natural gas.

Nuclear fuel costs increased 0.7%, from $6.99/MWh in 2021 to $7.04/MWh in 2022. However, non-fuel operations and maintenance costs decreased 7.1%, from $15.26/MWh in 2021 to $14.18/MWh in 2022. As a result, the total cost to produce electricity from nuclear power declined 4.7%.

A total of 3,953 MW of nuclear capacity is expected to come online from 2023 through 2027. Two existing plants have planned expansions — 2,200 MW at Vogtle (GA) and 1,213 MW at Bellefonte (AL). At the same time, small modular nuclear reactors (SMRs) will begin to contribute to nuclear capacity increases with 540 MW from the NuScale Small Nuclear Modular Project (ID) expected to come online in 2024. Looking farther into the future, the Tennessee Valley Authority announced an agreement with GE-Hitachi to support the potential deployment of a BWRX-300 SMR at its Clinch River site. In addition, X-energy announced the construction of a TRISO-X Fuel Fabrication Facility (FT3), North America's first commercial-scale facility dedicated to fueling High-Assay Low-Enriched Uranium (HALEU)-based reactors, that is expected to be operational by 2025.

Industry Financial Performance

Income Statement

- Energy Operating Revenues rose 15.8% versus last year. The strong gain was mostly a result of higher fuel commodity prices, which are mostly passed through under rate regulation and do not increase utility profits. Nationwide electricity generation increased 2.7% as residential and commercial sales each gained more than 3% year-to-year. Industrial sales were flat after rising more than 4% in 2021. Driven higher by fuel costs, the average retail price of electricity nationwide increased 12.5%, according to EIA data. By contrast, the average retail price nationwide rose only 7.7% over the entire 2010 through 2020 10-year period. Almost all 44 utilities included in EEI's industry consolidated data reported higher revenue in 2022.
- Inflation pressures drove generation costs sharply higher for the second straight year. The cost of natural gas for electric generation jumped more than 30% while the cost of coal rose about 20%, based on EIA data. As a result, the industry's consolidated Total Electric Generation Cost climbed 29.2% year-to-year while Gas Cost increased 54.3%. These two line items combined to drive the industry's Total Energy Operating Expenses up 33.3%. Slightly less than half the utilities tracked by EEI separately disclose Electric Fuel Expense and Cost of Purchased Power. Based on that data, the industry's aggregate reported Electric Fuel Expense rose 56.5% while Cost of Purchased Power increased 31.1%.
- Operations and Maintenance (O&M) costs rose 7.9% after gaining only 1.0% to 1.5% annually from 2018 through 2020. Utilities' O&M spending is benefitting from smart-grid investment productivity and the industry worked hard to constrain O&M expenses during the pandemic to address revenue declines. Yet O&M costs are also driven by essential reliability needs. Most utilities showed a year-to-year increase in O&M costs for 2022.
- Depreciation & Amortization (D&A) expenses rose 7.5%. This metric increased for 39 of the 44 constituent companies, reflecting the industry's ongoing widespread and diverse investments in new clean generation, transmission, distribution and grid modernization.
- Most of the $4.9 billion, or 23.5%, year-to-year jump in Other Operating Expenses reflects accounting for non-utility costs at one large company. Only six other utilities made small contributions to the industry total. None of these reflect meaningful industry-wide trends.
- Operating Income rose $5.0 billion, or 7.2%, versus 2021. Higher Energy Operating Revenues were offset by sharply higher generation and gas costs while Operations and Maintenance expenses and Depreciation and Amortization expenses also increased. Operating Income rose for 28 companies and declined for 16.
- Total Other Recurring Revenue declined $4.1 billion, or 33.9%, due almost entirely to a $4.3 billion decline in Other Revenue. This in turn was driven mostly by a $3.75 billion decline at just one of the 44 underlying utilities and does not reflect a broad industry trend.

- Total Non-Recurring Revenue was slightly positive after 2021's small deficit, but only a few utilities contributed to the 2022 total. 2021's deficit resulted primarily from the sale of impaired fossil generation assets at one utility. Activity in each year was insignificant in terms of broad industry trends.
- Interest Expense rose by 3.4%, reflecting in part the rise in both short- and long-term interest rates during 2022. However, this line item increased for 35 of the 44 underlying companies and rose markedly for some utilities.
- Net Income Before Taxes increased 6.4%, while Net Income rose 3.1%. These figures are driven by the industry's largest companies and mask a wide variation in company-specific results. Pre-Tax Income rose at 24 companies and declined at 20. Net Income rose at 20 and fell at 24. The year-to-year change in both metrics showed considerable variation across companies.
- The industry's aggregate Common Dividend payments rose 3.1% versus 2021, although the average percentage dividend increase was 5.2%. Nearly all utilities raised their dividend in 2022. The industry's reliable stock dividends continue to offer a welcome source of income for savings-oriented investors.

Consolidated Income Statement

U.S. INVESTOR-OWNED ELECTRIC UTILITIES

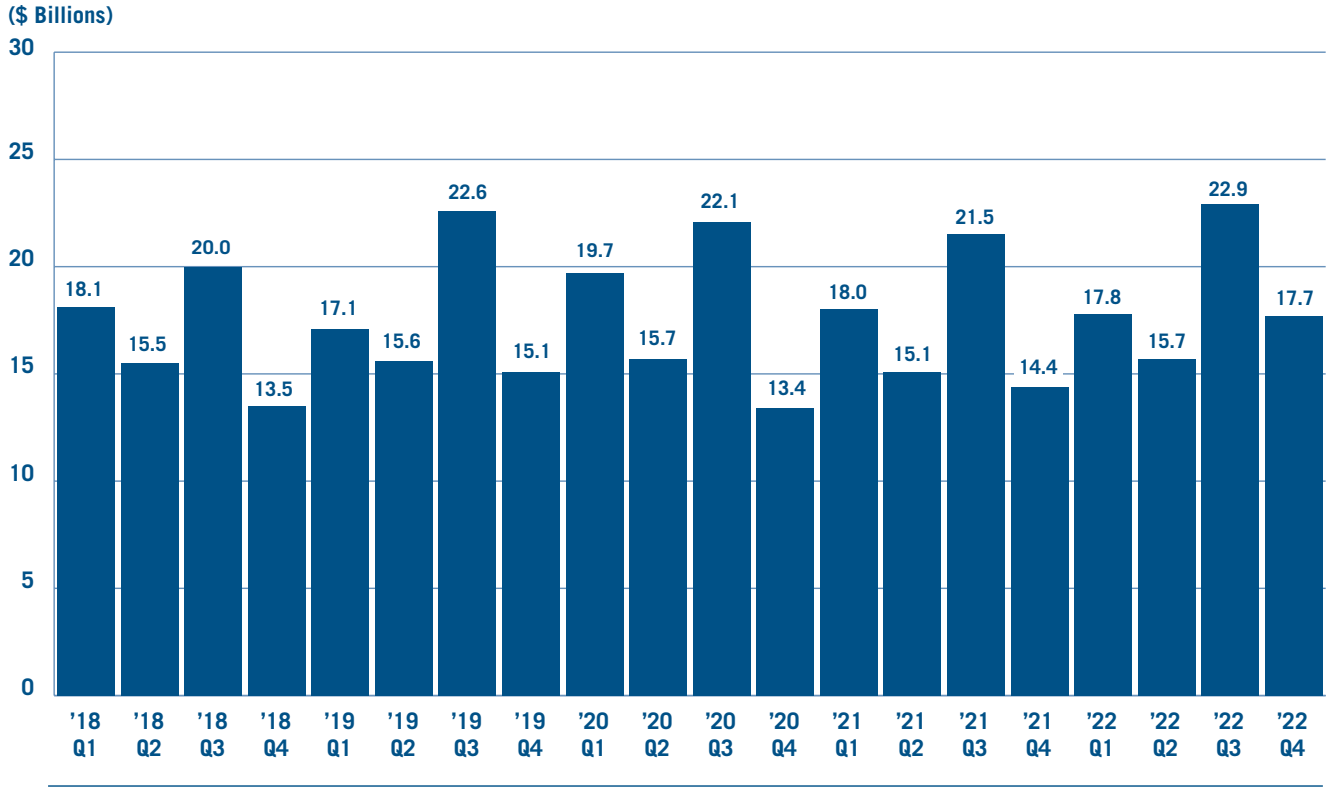
	12 Months Ended		
($ Millions)	**12/31/2022**	**12/31/2021r**	**% Change**
Energy Operating Revenues	$424,428	$366,615	15.8%
Energy Operating Expenses			
Total Electrical Generation Cost	112,572	87,125	29.2%
Gas Cost	26,083	16,910	54.3%
Total Energy Operating Expenses	**138,655**	**104,035**	**33.3%**
Revenues less energy operating expenses	**285,773**	**262,580**	**8.8%**
Other Operating Expenses			
Operations & maintenance	101,242	93,854	7.9%
Depreciation & Amortization	61,458	57,193	7.5%
Taxes (not income) - Total	23,304	21,647	7.7%
Other Operating Expenses	25,746	20,846	23.5%
Total Operating Expenses	**350,405**	**297,574**	**17.8%**
Operating Income	**74,023**	**69,041**	**7.2%**
Other Recurring Revenue			
Partnership Income	2,588	2,621	(1.3%)
Allowance for Equity Funds Used for Construction	2,274	2,085	9.1%
Other Revenue	3,191	7,476	(57.3%)
Total Other Recurring Revenue	**8,052**	**12,182**	**(33.9%)**
Non-Recurring Revenue			
Gain on Sale of Assets	510	(1,902)	(126.8%)
Other Non-Recurring Revenue	341	471	(27.6%)
Total Non-Recurring Revenue	**(851**	**(1,430)**	**(159.5%)**
Interest expense	26,987	26,112	3.4%
Other expenses	822	385	113.3%
Asset Writedowns	2,985	1,199	148.9%
Other Non-Recurring Expenses	4,366	7,221	(39.5%)
Total Non-Recurring Expenses	7,351	8,421	(12.7%)
Net Income Before Taxes	**47,766**	**44,874**	**6.4%**
Provision for Taxes	3,045	3,390	(10.2%)
Dividends on Preferred Stock of Subsidiary	-	-	NM
Other Minority Interest Expense	-	-	NM
Minority Interest Expense	-	-	NM
Trust Preferred Security Payments	-	-	NM
Other After-tax Items	-	-	NM
Total Minority Interest and Other After-tax Items	-	-	NM
Net Income Before Extraordinary Items	**44,721**	**41,485**	**7.8%**
Discontinued Operations	(1,151)	793	(245.2%)
Change in Accounting Principles	-	-	NM
Early Retirement of Debt	-	-	NM
Other Extraordinary Items	-	-	NM
Total Extraordinary Items	(1,151)	793	(245.2%)
Net Income	**43,570**	**42,277**	**3.1%**
Preferred Dividends Declared	508	573	(11.3%)
Other Preferred Dividends after Net Income	2	2	0.0%
Other Changes to Net Income	(4)	(2)	100.0%
Net Income Attributable to Noncontrolling Interests	(513)	(527)	NA
Net Income Available to Common	**43,569**	**42,227**	**3.2%**
Common Dividends	**31,016**	**30,075**	**3.1%**

r = revised NM = not meaningful

Source: S&P Global Market Intelligence and EEI Finance Department.

Quarterly Net Operating Income

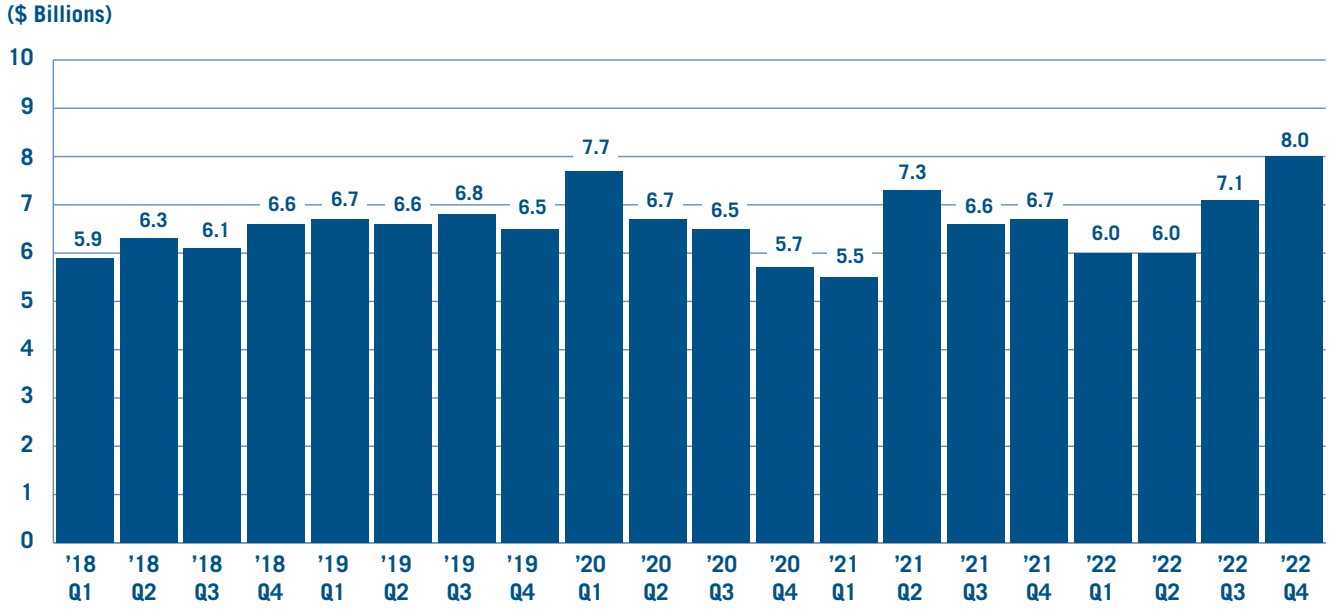
U.S. INVESTOR-OWNED ELECTRIC UTILITIES



Source: S&P Global Market Intelligence and EEI Finance Department.

Quarterly Interest Expense

U.S. INVESTOR-OWNED ELECTRIC UTILITIES



Source: S&P Global Market Intelligence and EEI Finance Department.

Individual Non-Recurring and Extraordinary Items 2013–2022

U.S. INVESTOR-OWNED ELECTRIC UTILITIES

($ Millions)	2013	2014	2015	2016	2017	2018	2019	2020	2021r	2022
Net Gain (Loss) on Sale of Assets	414	996	789	767	1,012	5,272	3,049	**(398)**	(1,902)	510
Other Non-Recurring Revenue	78	296	(4)	888	493	131	117	–	471	341
Total Non-Recurring Revenue	**492**	**1,292**	**785**	**1,655**	**1,505**	**5,403**	**3,167**	**(398)**	**(1,430)**	**851**
Asset Writedowns	(4,276)	(8,762)	(5,189)	(17,487)	(4,166)	(4,121)	(3,470)	6,704	1,199	2,985
Other Non-Recurring Charges	(3,510)	(2,675)	(1,764)	(3,109)	(5,630)	(17,841)	(13,034)	8,504	7,221	4,366
Total Non-Recurring Charges	**(7,786)**	**(11,437)**	**(6,953)**	**(20,596)**	**(9,796)**	**(21,962)**	**(16,504)**	**15,208**	**8,421**	**7,351**
Discontinued Operations	(88)	295	(1,148)	(732)	(1,554)	602	1,243	17	793	(1,151)
Change in Accounting Principles	–	–	–	–	–	–	–	–	–	–
Early Retirement of Debt	–	–	–	–	–	–	–	–	–	–
Other Extraordinary Items	–	–	–	–	–	–	–	–	–	–
Total Extraordinary Items	**(88)**	**295**	**(1,148)**	**(732)**	**(1,554)**	**602**	**1,243**	**17**	**793**	**(1,151)**
Total Non-Recurring and Extraordinary Items	**(7,381)**	**(9,850)**	**(7,316)**	**(19,674)**	**(9,844)**	**(15,957)**	**(12,094)**	**(15,589)**	**(9,058)**	**(7,651)**

r = revised Note: Figures represent net industry totals. Totals may reflect rounding.

Source: S&P Global Market Intelligence and EEI Finance Department.

Top Net Non-Recurring and Extraordinary Gains (Losses) 2022

U.S. INVESTOR-OWNED ELECTRIC UTILITIES

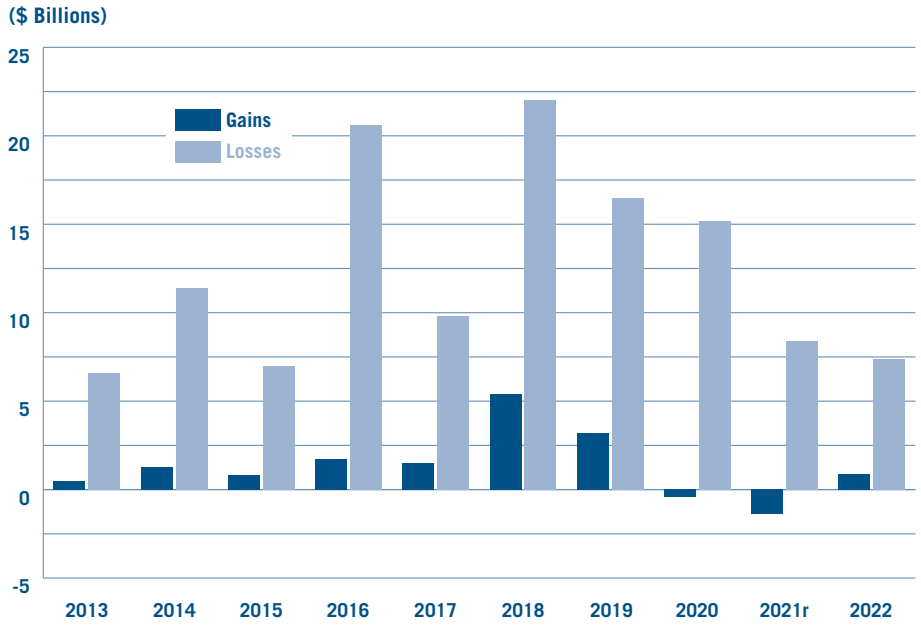
($ Millions)

Company	Gains	Losses	Net Total
Dominion Energy	(404)	2,377	2,781
Edison International	10	1,581	1,571
PG&E Corp	–	1,322	1,322
Duke Energy	22	499	477
Southern Company	57	434	377
CenterPoint Energy	303	–	303
OGE Energy	282	–	282
Sempra Energy	–	259	259
American Electric Power	(210)	49	259
FirstEnergy	–	171	171

Source: S&P Global Market Intelligence and EEI Finance Department.

Aggregate Non-Recurring and Extraordinary Items 2013–2022

U.S. INVESTOR-OWNED ELECTRIC UTILITIES



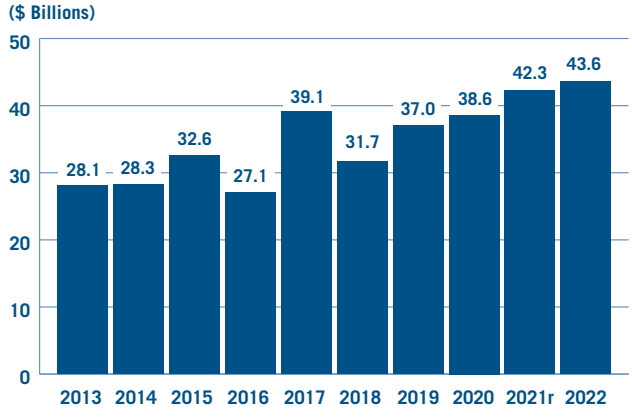
	2013	2014	2015	2016	2017	2018	2019	2020	2021r	2022	Total
Gains	0.5	1.3	0.8	1.7	1.5	5.4	3.2	(0.4)	(1.4)	0.9	13.3
Losses	6.6	11.4	7.0	20.6	9.8	22.0	16.5	15.2	8.4	7.4	124.9
Total	**(6.2)**	**(10.1)**	**(6.2)**	**(18.9)**	**(8.3)**	**(16.6)**	**(13.3)**	**(15.6)**	**(9.9)**	**(6.5)**	**(111.6)**

r = revised Note: Totals may reflect rounding.

Source: S&P Global Market Intelligence and EEI Finance Department.

Net Income 2013–2022

U.S. INVESTOR-OWNED ELECTRIC UTILITIES

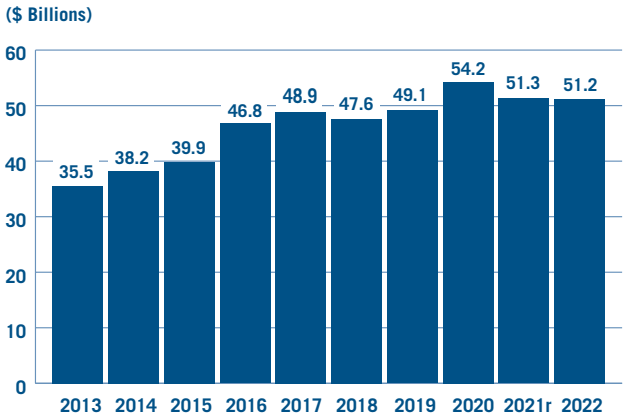


r = revised

Source: S&P Global Market Intelligence and EEI Finance Department.

Net Income Before Non-Recurring and Extraordinary Items 2013-2022

U.S. INVESTOR-OWNED ELECTRIC UTILITIES



r = revised

Source: S&P Global Market Intelligence and EEI Finance Department.

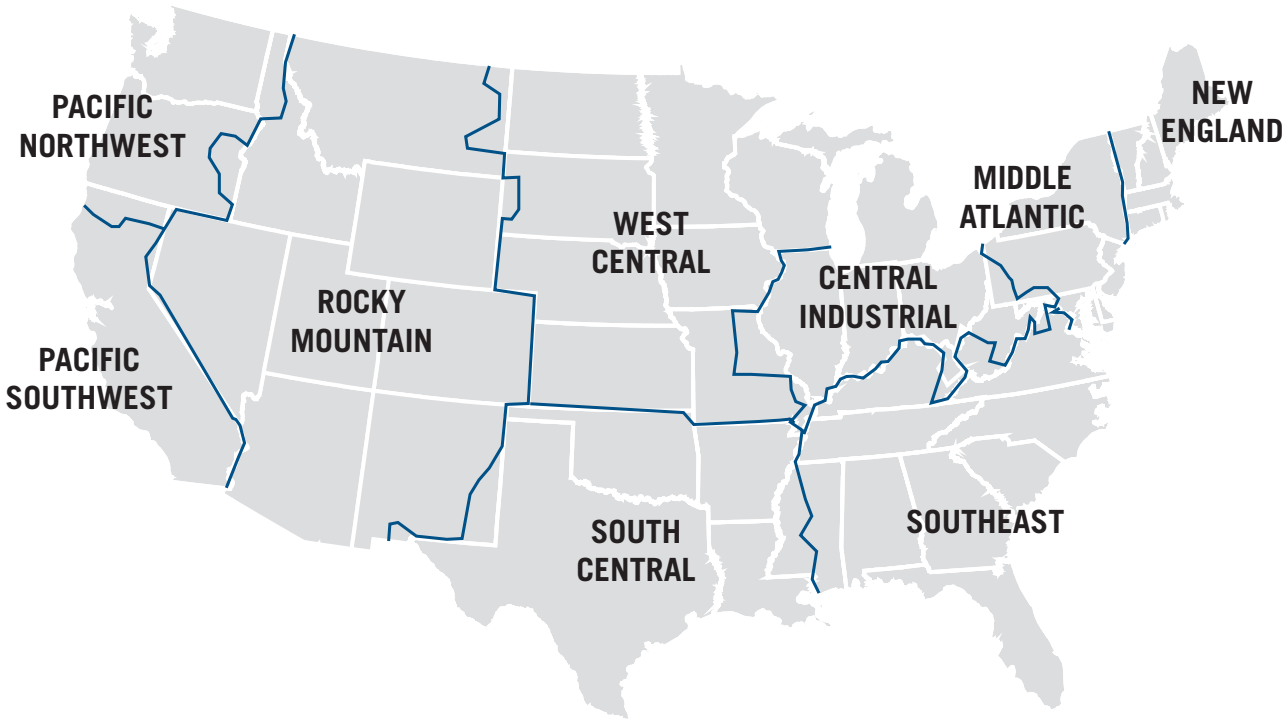
U.S. Electric Output (GWh)
Periods Ending December 31

Region	2022	2021	% Change
New England	115,781	115,930	(0.1%)
Mid-Atlantic	419,466	418,296	0.3%
Central Industrial	657,622	651,041	1.0%
West Central	341,836	335,136	2.0%
Southeast	1,036,554	1,014,838	2.1%
South Central	840,535	778,018	8.0%
Rocky Mountain	296,141	292,947	1.1%
Pacific Northwest	161,364	158,170	2.0%
Pacific Southwest	273,602	268,259	2.0%
Total United States	**4,142,901**	**4,032,635**	**2.7%**

Note: Represents all power placed on grid for distribution to end customers; does not include Alaska or Hawaii.

Source: EEI Business Analytics.

EEI U.S. Electric Output – Regions



Source: EEI Business Analytics.

U.S. Weather
January – December 2022

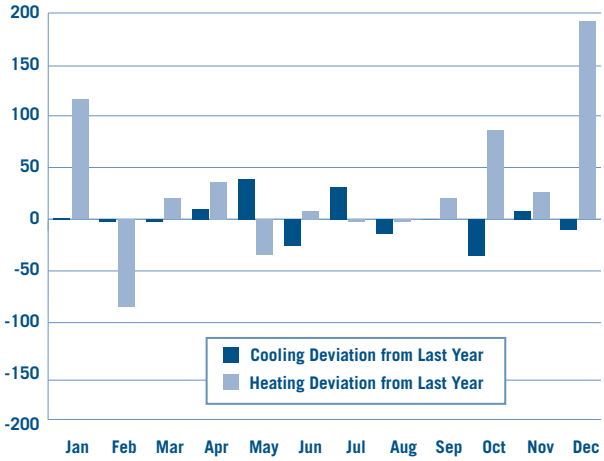
	Total	Dev from Norm	% Change	Dev from Last Year	% Change
Cooling Degree Days					
New England	651	234	56%	(4)	(1%)
Mid-Atlantic	856	200	30%	(56)	(6%)
East North Central	827	119	17%	(141)	(15%)
West North Central	1,090	162	17%	(27)	(2%)
South Atlantic	2,177	213	11%	(50)	(2%)
East South Central	1,725	177	11%	41	2%
West South Central	2,918	469	19%	270	10%
Mountain	1,384	141	11%	(19)	(1%)
Pacific	975	271	38%	69	8%
United States	**1,440**	**224**	**18%**	**0**	**0%**
Heating Degree Days					
New England	6,107	(504)	(8%)	274	5%
Mid-Atlantic	5,554	(357)	(6%)	456	9%
East North Central	6,352	(145)	(2%)	605	11%
West North Central	6,947	197	3%	895	15%
South Atlantic	2,673	(180)	(6%)	220	9%
East South Central	3,489	(115)	(3%)	334	11%
West South Central	2,366	79	3%	402	20%
Mountain	5,207	(2)	(0%)	507	11%
Pacific	3,124	(104)	(3%)	24	1%
United States	**4,392**	**(132)**	**(3%)**	**380**	**9%**

A mean daily temperature (average of the daily maximum and minimum temperatures) of 65 degrees Fahrenheit is the base for both heating and cooling degree day computations. National averages are population weighted.

Source: National Oceanic and Atmospheric Administration, National Weather Service, Climate Prediction Center.

2022 Weather Compared to 2021

AS MEASURED BY DEVIATIONS BETWEEN THE TWO YEARS



Source: National Oceanic and Atmospheric Administration and National Weather Service.

	Cooling Deviation From Last Year	Heating Deviation From Last Year
Jan	1	116
Feb	(2)	(85)
Mar	(2)	20
Apr	10	36
May	39	(34)
Jun	(26)	8
Jul	31	(2)
Aug	(14)	(2)
Sep	0	20
Oct	(35)	86
Nov	8	26
Dec	(10)	191
Total	**0**	**380**

Heating and Cooling Degree Days and Percent Changes

January–December 2022

	COOLING DEGREE DAYS			HEATING DEGREE DAYS			PERCENTAGE CHANGE			
	Total	Deviation From Norm	Deviation From Last Yr	Total	Deviation From Norm	Deviation From Last Yr	Cooling Degree Change From Norm	Cooling Degree Change From Last Yr	Heating Degree Change From Norm	Heating Degree Change From Last Yr
Jan	5	(4)	1	927	10	116	(44.4%)	25.0%	1.1%	14.3%
Feb	8	0	(2)	726	(6)	(85)	0.0%	(20.0%)	(0.8%)	(10.5%)
Mar	18	0	(2)	539	(54)	20	0.0%	(10.0%)	(9.1%)	3.9%
First Quarter	**31**	**(4)**	**(3)**	**2,192**	**(50)**	**51**	**(11.4%)**	**(8.8%)**	**(2.2%)**	**2.4%**
Apr	44	14	10	357	12	36	46.7%	29.4%	3.5%	11.2%
May	140	43	39	127	(32)	(34)	44.3%	38.6%	(20.1%)	(21.1%)
Jun	249	36	(26)	27	(12)	8	16.9%	(9.5%)	(30.8%)	42.1%
Second Quarter	**433**	**93**	**23**	**511**	**(32)**	**10**	**27.4%**	**5.6%**	**(5.9%)**	**2.0%**
Jul	373	52	31	3	(6)	(2)	16.2%	9.1%	(66.7%)	(40.0%)
Aug	340	50	(14)	4	(11)	(2)	17.2%	(4.0%)	(73.3%)	(33.3%)
Sep	190	35	0	59	(18)	20	22.6%	0.0%	(23.4%)	51.3%
Third Quarter	**903**	**137**	**17**	**66**	**(35)**	**16**	**17.9%**	**1.9%**	**(34.7%)**	**32.0%**
Oct	43	(10)	(35)	272	(10)	86	(18.9%)	(44.9%)	(3.5%)	46.2%
Nov	20	5	8	537	(2)	26	33.3%	66.7%	(0.4%)	5.1%
Dec	10	3	(10)	814	(3)	191	42.9%	(50.0%)	(0.4%)	30.7%
Fourth Quarter	**73**	**(2)**	**(37)**	**1,623**	**(15)**	**303**	**(2.7%)**	**(33.6%)**	**(0.9%)**	**23.0%**
Full Year	**1,440**	**224**	**0**	**4,392**	**(132)**	**380**	**18.4%**	**0.0%**	**(2.9%)**	**9.5%**

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Heating Degree Days Percentage Change from Historical Norm	(0.6)	1.1	(9.1)	(14.8)	(14.2)	(4.2)	(4.4)	(11.9)	(11.3)	(2.9)
Cooling Degree Days Percentage Change from Historical Norm	10.9	5.8	19.2	29.4	16.0	26.4	20.3	21.1	18.3	18.4

A mean daily temperature (average of the daily maximum and minimum temperatures) of 65°F is the base for both heating and cooling degree day computations. National averages are population weighted.

Source: National Oceanic and Atmospheric Administration and National Weather Service.

Balance Sheet

- Economic growth slowed in 2022 after 2021's strong post-pandemic rebound. Real gross domestic product (GDP) posted negative readings in 2022's first half — at -1.6% in Q1 and -0.6% in Q2 — spurring widespread debate over whether the U.S. had officially entered a recession. Growth recovered in the year's second half as real GDP gained 3.2% in Q3 and 2.6% in Q4.
- As in 2021, inflation remained well above the U.S. Federal Reserve's (Fed) 2% target. The headline CPI posted monthly readings of 7% to 8% through November and over 6% in December. While the Fed held short-term rates at zero during 2021 to support the post-Covid recovery, in 2022 it raised rates seven times to a 4.25% to 4.50% range at year-end. As a result, short-term corporate borrowing costs reached levels not seen since before the 2008/2009 financial crisis.
- Bond yields climbed steadily but remained far below levels associated with high inflation in previous inflation cycles. Bond investors continued to see inflation as a short-term effect of strained supply chains contending with the post-Covid global economic reopening. The 10-year Treasury yield entered 2022 at 1.6% and ended the year at just 3.9%. Investment-grade corporates (Moody's Baa rating) could borrow long-term for 5% to 6% throughout 2022's second half, even with inflation above 7%.
- The industry's financial condition remained strong in 2022. The multi-year trend toward increased state-regulated utility operations continued, along with leverage appropriate for a lower risk profile. The industry's balance sheet leverage, in aggregate, increased slightly. However, aggregate figures convey only broad, long-term trends and emphasize large utility holding companies. Balance sheet structures vary widely across the industry. Leverage increased more than one percentage point at 18 companies. Leverage was reduced by more than one percentage point at 14 companies and was largely unchanged at the remaining 12 companies.
- The industry's consolidated total debt rose in 2022, a natural consequence of financing the aggressive build-out of clean-energy infrastructure. For the first time in years, rising interest rates meaningfully increased borrowing costs. Nevertheless, most companies managed balance sheet ratios and cash flows to maintain investment-grade credit ratings. Long-term debt increased at 32 utilities and declined at 12. The three largest instances where debt declined were associated with strategic repositioning. Balance sheet management produced scattered smaller debt reductions. Short-term debt rose at 28 companies, decreased at 12 and was unchanged (at zero each year) at four.
- Common equity issuance remained subdued, following three active years from 2018 through 2020. Many utilities sought to fund capex without equity dilution, in some cases with proceeds from asset sales. Just seven large utilities accounted for 80% of the industry's $11.0 billion total; four raised $1 billion to $2 billion during the year while three issued anywhere from $600 million to $1 billion. Another 17 companies issued equity in smaller amounts. Thirty utilities reported equity issuance in 2021. Issuance was strong in both 2020 and 2019 as companies augmented balance sheets and addressed the impact of tax reform. Equity issuance was also strong in 2018 as utilities took advantage of high price-earnings ratios and welcoming capital markets to fund capex and offset debt issuance.
- Property, plant and equipment in service (PPE in Service, net) rose 4.4% from year-end 2021 and 7.5% over the level at year-end 2020. This metric grew at nearly all 44 utilities which constitute EEI's consolidated data. Such broad growth indicates the size and scope of the industry's build-out of new renewable generation, new transmission, reliability-related infrastructure and other capital projects related to the nation's clean energy transition. Construction work in progress (CWIP), a component of the PPE in Service total, jumped nearly 21% over the year-end 2021 total and more than 27% from year-end 2020. CWIP accounts for capital investment in utility infrastructure still under construction and not yet in service. The accelerating

Consolidated Balance Sheet

U.S. INVESTOR-OWNED ELECTRIC UTILITIES

($ Millions)	12/31/2022	12/31/2021r	% Change	$ Change
PP&E in service, gross	1,803,608	1,709,378	5.5%	94,230
Accumulated depreciation	517,398	488,289	6.0%	29,109
PP&E in service, net	1,286,210	1,221,089	5.3%	65,121
Construction work in progress	103,931	85,777	21.2%	18,154
Net nuclear fuel	12,933	12,957	(0.2%)	(24)
Other property	15,315	15,873	(3.5%)	(558)
PP&E, net	1,418,389	1,335,697	6.2%	82,692
Cash & cash equivalents	13,378	17,330	(22.8%)	(3,952)
Accounts receivable	56,653	46,241	22.5%	10,412
Inventories	29,569	23,844	24.0%	5,725
Other current assets	81,301	70,443	15.4%	10,859
Total current assets	180,901	157,857	14.6%	23,044
Total investments	109,004	120,117	(9.3%)	(11,114)
Other assets	310,526	326,970	(5.0%)	(16,444)
Total Assets	**2,018,819**	**1,940,641**	**4.0%**	**78,179**
Common equity	539,825	526,137	2.6%	13,688
Preferred equity	10,071	10,870	(7.4%)	(799)
Noncontrolling interests	28,036	25,939	8.1%	2,097
Total equity	577,931	562,945	2.7%	14,986
Short-term debt	49,672	39,754	24.9%	9,917
Current portion of long-term debt	50,729	36,085	40.6%	14,643
Short-term and current long-term debt	100,400	75,840	32.4%	24,561
Accounts payable	91,703	77,408	18.5%	14,294
Other current liabilities	60,594	60,348	0.4%	246
Current liabilities	252,697	213,596	18.3%	39,100
Deferred taxes	113,287	109,099	3.8%	4,188
Non-current portion of long-term debt	740,215	694,027	6.7%	46,188
Other liabilities	333,109	358,360	(7.0%)	(25,251)
Total liabilities	1,439,308	1,375,082	4.7%	64,226
Subsidiary preferred	421	712	(40.9%)	(291)
Other mezzanine	1,159	1,901	(39.0%)	(742)
Total mezzanine level	1,580	2,613	(39.5%)	(1,033)
Total Liabilities and Owner's Equity	**2,018,819**	**1,940,641**	**4.0%**	**78,179**

r = revised

Source: S&P Global Market Intelligence and EEI Finance Department.

Capitalization Structure

U.S. INVESTOR-OWNED ELECTRIC UTILITIES

Capitalization Structure ($M)	12/31/2022	12/31/2021r	12/31/2020
Common Equity	539,825	526,137	494,872
Noncontrolling Interests & Preferred Equity	38,106	36,808	42,068
Long-term Debt (current & non-current)*	790,944	730,112	695,361
Total	**1,368,875**	**1,293,058**	**1,232,301**
Common Equity %	39.4%	40.7%	40.2%
Noncontrolling Interests & Preferred Equity %	2.8%	2.8%	3.4%
Long-Term Debt (current & non-current)* %	57.8%	56.5%	56.8%
Total	**100.0%**	**100.0%**	**100.0%**

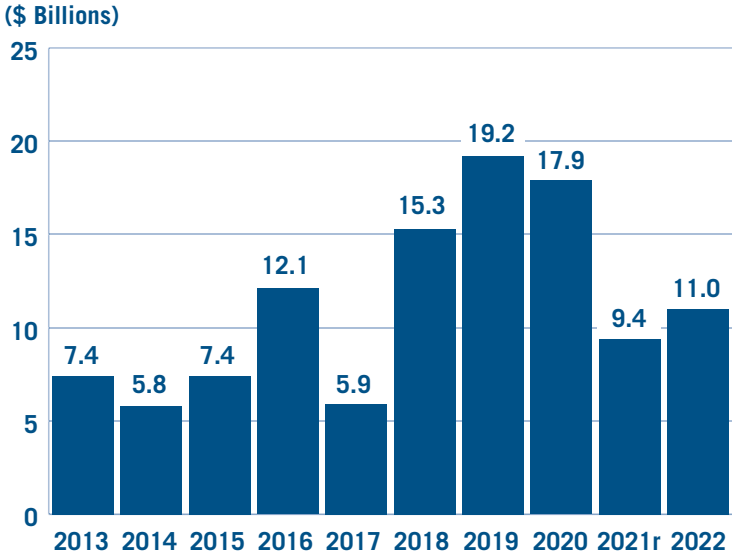
r = revised
Long-term debt not adjusted for (i.e., includes) securitization bonds.
Source: S&P Global Market Intelligence and EEI Finance Department.

growth in CWIP offers another view of the industry's rising clean energy capex.

- The debt-to-capitalization ratio by category data shows the dominance of state-regulated operations in the industry. Companies in EEI's "Regulated" group represent 36 of the 44 parent level companies tracked by EEI. The remaining eight constitute the "Mostly Regulated" group.
- The tendency toward slightly higher balance sheet leverage at the consolidated industry level is not evident across individual company moves. In fact, 13 of the 36 "Regulated" companies reduced leverage in 2022 while 14 increased leverage and 9 showed no meaningful change. Leverage increased at four of the eight "Mostly Regulated" companies, declined at one and was unchanged at three.
- The 3.5 percentage point jump in long-term debt as a percent of total capitalization in the Mostly Regulated group was driven largely by Exelon's separation of its regulated and competitive businesses in 2022 and the large resulting increase in leverage at the restructured Exelon.
- The dispersion across companies in both categories — with some showing higher, some lower and others no change in leverage — indicates why individual company strategies are as meaningful as consolidated totals when assessing industry trends.
- Regulated companies as a group continued to report higher balance sheet leverage than their Mostly Regulated peers. This is to be expected given their lower business risk profile.

Proceeds from Issuance of Common Equity 2013–2022

U.S. INVESTOR-OWNED ELECTRIC UTILITIES

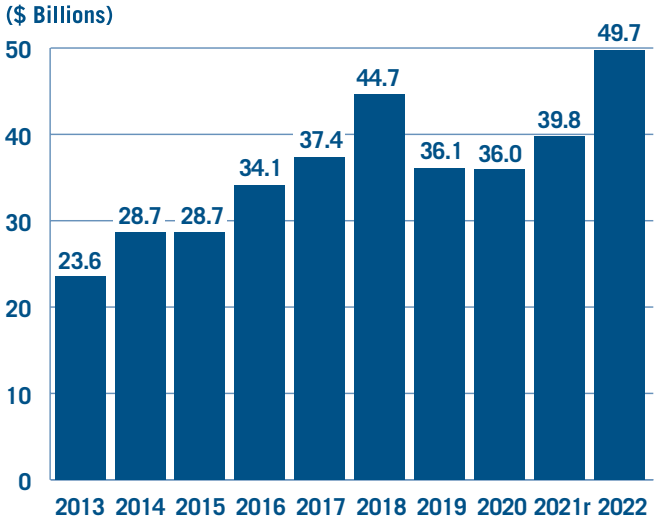


r = revised

Source: S&P Global Market Intelligence and EEI Finance Department.

Short-term Debt 2013–2022

U.S. INVESTOR-OWNED ELECTRIC UTILITIES

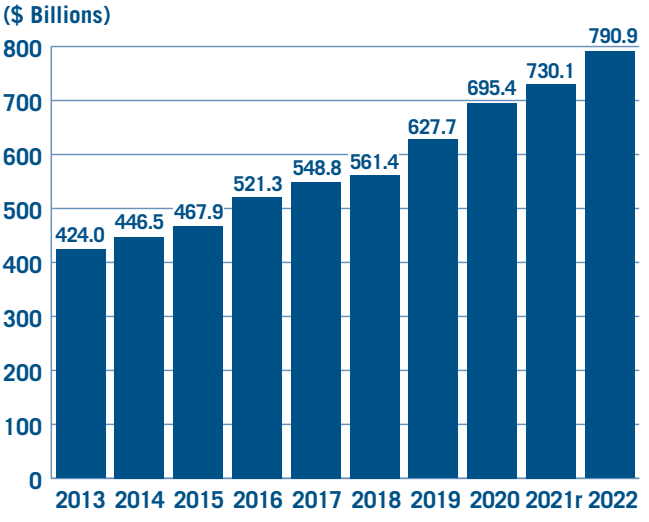


r = revised

Source: S&P Global Market Intelligence and EEI Finance Department.

Long-term Debt 2013–2022

U.S. INVESTOR-OWNED ELECTRIC UTILITIES



r = revised

Source: S&P Global Market Intelligence and EEI Finance Department.

Debt-to-Cap Ratio by Category 2022 vs. 2021r

U.S. INVESTOR-OWNED ELECTRIC UTILITIES

	Regulated		Mostly Regulated		Total Industry	
	Number	%	Number	%	Number	%
Lower	13	36.1%	1	12.5%	14	31.8%
No Change*	9	25.0%	3	37.5%	12	27.3%
Higher	14	38.9%	4	50.0%	18	40.9%
Total	**36**	**100.0%**	**8**	**100.0%**	**44**	**100.0%**

*No change defined as less than 1.0%
Note: December 31, 2022 vs. December 31, 2021. Refer to page v for category descriptions.
Source: S&P Global Market Intelligence and EEI Finance Department.

Capitalization Structure by Category 2022 vs. 2021r

U.S. INVESTOR-OWNED ELECTRIC UTILITIES

	Regulated			Mostly Regulated		
	2022	2021r	Change	2022	2021r	Change
Common Equity ($M)	388,279	367,806	20,473	151,546	158,331	(6,786)
Total Preferred Equity	22,734	21,221	1,513	15,372	15,587	(215)
Long-term Debt (current & non-current)*	603,220	560,191	43,028	187,724	169,921	17,803
Total Capitalization	1,014,233	949,218	65,015	354,642	343,839	10,803
Common Equity %	38.3%	38.7%	-0.5%	42.7%	46.0%	-3.3%
Preferred Equity %	2.2%	2.2%	0.0%	4.3%	4.5%	-0.2%
Long-Term Debt %	59.5%	59.0%	0.5%	52.9%	49.4%	3.5%
Total	**100.0%**	**100.0%**	—	**100.0%**	**100.0%**	—

r = revised
Refer to page v for category descriptions.
Note: Long-term debt not adjusted for (i.e., includes) securitization bonds.
Source: S&P Global Market Intelligence and EEI Finance Department.

PP&E In Service, Net 2018-2022

Date	PP&E in Service, Net ($M)	% Change from 12/31/2018
12/31/2022	1,286,210	21.6%
12/31/2021r	1,221,089	15.4%
12/31/2020	1,196,315	13.1%
12/31/2019	1,129,880	6.8%
12/31/2018	1,058,164	

Source: S&P Global Market Intelligence and EEI Finance Department.

Cash Flow Statement

- Net Cash Provided by Operating Activities increased by $9.9 billion, or 12.0%. Cash provided by Depreciation and Amortization (D&A), a non-cash charge on the income statement, declined by $793 million, or 1.2%, at the consolidated industry level. However, D&A increased at 37 of the 44 utility holding companies that comprise EEI's data set; widespread increases are to be expected given the industry's aggressive clean energy infrastructure buildout. The decline at the consolidated level resulted from accounting at Exelon — the industry's fifth largest utility holding company at year-end 2021 in terms of net property, plant, and equipment in service — for the separation in 2022 of its regulated and competitive operations.

- Cash provided by Deferred Taxes & Investment Credits has leveled off over the last five years compared to much higher amounts previously. Deferred taxes had been at historically high levels due to elevated capex and use of bonus depreciation. The Tax Cuts & Jobs Act (TCJA), passed in late 2017, significantly reduced deferred taxes due to the reduction in the corporate income tax rate from 35% to 21% and the elimination of bonus depreciation.

- Change in Working Capital utilized $5.1 billion more cash in 2022 than in 2021. The difference traced mostly to accounting at one large utility holding company along with smaller contributions from just a few other large utilities. Conversely, Other Operating Changes in Cash used $17.3 billion less cash in 2022 than in 2021; in both years, this activity sourced to corporate actions at just a few large utilities. Neither of these two line items reflects broad-based fundamental industry trends.

- Net Cash Used in Investing Activities increased by $33.6 billion, or 29.0%. The industry's capital spending — by far the largest component of this metric — totaled $147.7 billion in 2022, up $13.7 billion, or 10.2%, from the 2021 total. Industry capex has reached a new record high in each of the past ten years. EEI member companies continue to invest in clean energy resources and the infrastructure necessary to make the power grid more modernized, more resilient, and more secure for all customers. Spending on transmission and distribution continues to increase relative to recent years, as EEI member companies expand their focus on adaptation, hardening, and resilience (AHR) initiatives. Investment in generation continues to be driven by the development of renewable energy and natural gas generation.

- Cash provided by Asset Sales decreased $11.9 billion, or 33.8%, from $35.3 billion in 2021 to $23.4 billion in 2022. The decrease resulted in part from PPL's June 2021 sale of its U.K. utility business, Western Power Distribution (WPD), to National Grid for $10.4 billion (nearly one-third of 2021's consolidated industry total). However, 2022 was not inactive; eight utility holding companies reported asset sales in 2022 in excess of $1 billion and 25 recorded proceeds from asset sales. Cash used for Asset Purchases increased by $2.1 billion, or 12.2%, to $19.7 billion; this was driven by actions at just a few utilities, including PPL's purchase in 2022 of Rhode Island utility Narragansett Electric.

- Net Cash Provided by Financing Activities rose by $20.6 billion, or 59.8%. The large increase resulted primarily from widespread debt issuance to fund aggressive clean energy infrastructure investment programs. Debt issuance is routine in the normal course of financing operations for such a capital-intensive industry. Nearly all of the 44 underlying utility holding companies contributed to the $67.3 billion net increase in the industry's consolidated long-term debt in 2022. The Net Change in Short-term Debt also added to the cash provided by financing activities, but at a relatively lower $8.2 billion amount, up $3.2 billion from the 2021 total. Common equity issuance and share repurchases were close to last year's level in absolute terms and remained below the totals in 2018, 2019 and 2020. No utilities issued preferred equity in 2022, compared to $3.8 billion in 2021. This was the first year without preferred equity issuance since 2010.

- Dividends Paid to Common Shareholders rose 3.7%, to $31.4 billion.

Statement of Cash Flows

U.S. INVESTOR-OWNED ELECTRIC UTILITIES

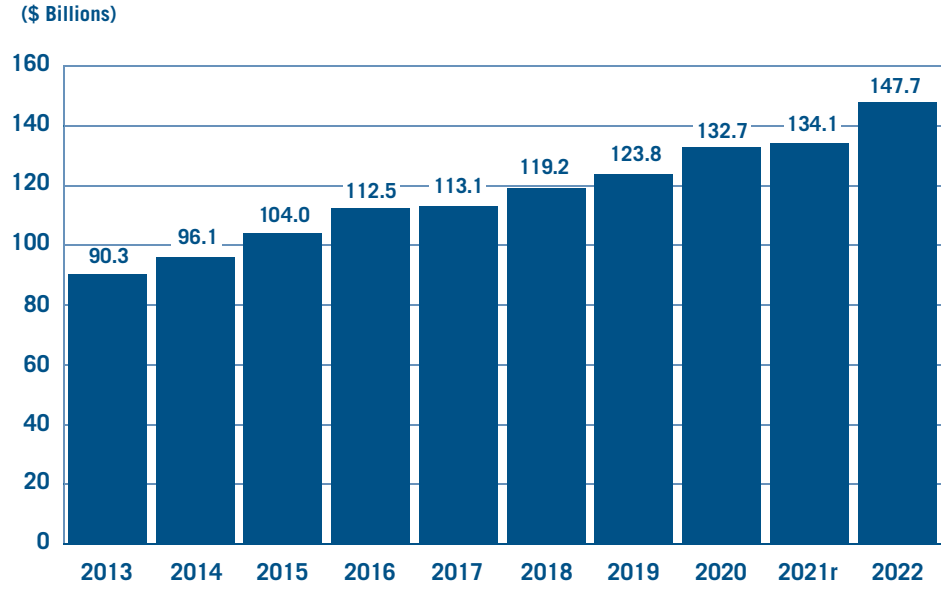
$ Millions	12 Months Ended		
	12/31/2022	12/31/2021r	% Change
Net Income	$43,570	$42,277	3.1%
Depreciation and Amortization	63,274	64,067	(1.2%)
Deferred Taxes and Investment Credits	2,659	5,278	(49.6%)
Operating Changes in AFUDC	(1,599)	(1,453)	10.1%
Change in Working Capital	(12,490)	(7,381)	69.2%
Other Operating Changes in Cash	(3,093)	(20,388)	(84.8%)
Net Cash Provided by Operating Activities	**92,322**	**82,400**	**12.0%**
Capital Expenditures	(147,748)	(134,063)	10.2%
Asset Sales	23,393	35,340	(33.8%)
Asset Purchases	(19,679)	(17,535)	12.2%
Net Non-Operating Asset Sales and Purchases	3,714	17,805	(79.1%)
Change in Nuclear Decommissioning Trust	(698)	(314)	122.2%
Investing Changes in AFUDC	45	49	(9.3%)
Other Investing Changes in Cash	(4,761)	641	NM
Net Cash Used in Investing Activities	**(149,448)**	**(115,881)**	**29.0%**
Net Change in Short-term Debt	8,221	5,043	63.0%
Net Change in Long-term Debt	67,265	45,444	48.0%
Proceeds from Issuance of Preferred Equity	–	3,783	NM
Preferred Share Repurchases	(1,158)	(2,100)	(44.9%)
Net Change in Prefered Issues	(1,158)	1,683	NM
Proceeds from Issuance of Common Equity	10,957	9,432	16.2%
Common Share Repurchases	(2,036)	(1,531)	33.0%
Net Change in Common Issues	8,921	7,901	12.9%
Dividends Paid to Common Shareholders	(31,409)	(30,279)	3.7%
Dividends Paid to Preferred Shareholders	(337)	(475)	(29.0%)
Other Dividends	–	–	NM
Dividends Paid to Shareholders	(31,746)	(30,754)	3.2%
Other Financing Changes in Cash	3,515	5,112	(31.3%)
Net Cash (Used in) Provided by Financing Activities	**55,016**	**34,430**	**59.8%**
Other Changes in Cash	(38)	12	NM
Net increase (decrease) in cash and cash equivalents	$(2,148)	$961	NM
Cash and cash equivalents at beginning of period	$15,526	$16,369	(5.2%)
Cash and cash equivalents at end of period	$13,378	$17,330	(22.8%)

r = revised NM = not meaningful

Source: S&P Global Market Intelligence and EEI Finance Department.

Capital Expenditures 2013–2022

U.S. INVESTOR-OWNED ELECTRIC UTILITIES

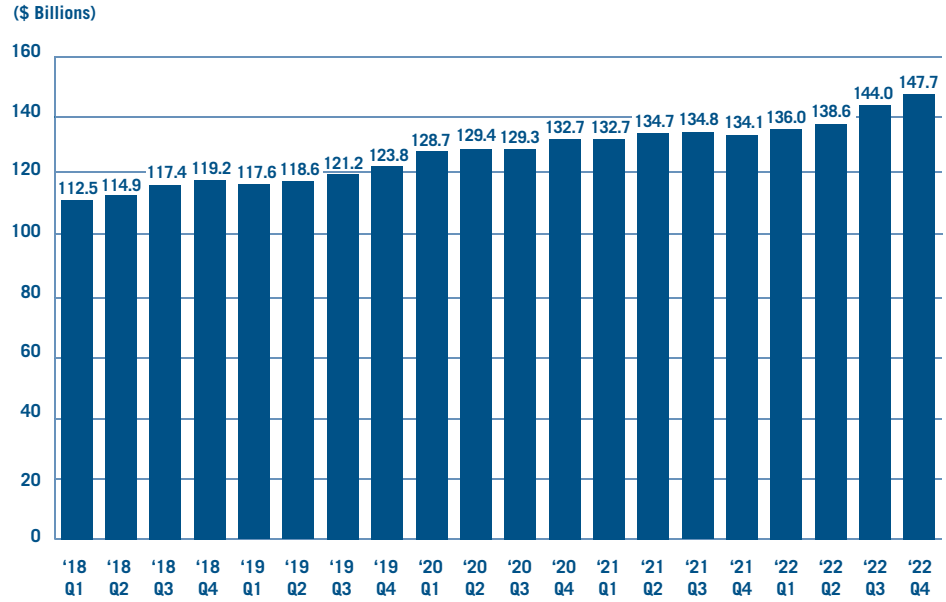


r = revised

Source: S&P Global Market Intelligence, company reports, and EEI Finance Department.

Capital Expenditures—Trailing 12 Months

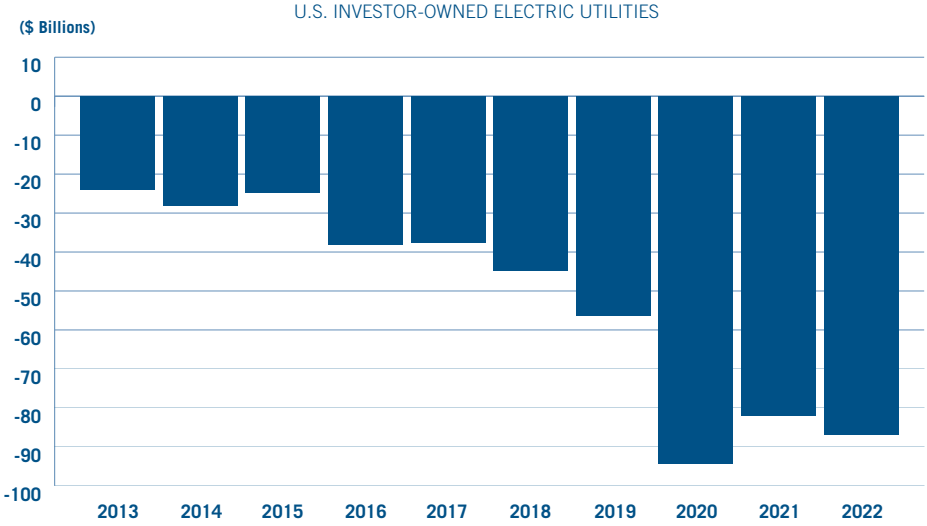
U.S. INVESTOR-OWNED ELECTRIC UTILITIES



Source: S&P Global Market Intelligence and EEI Finance Department.

Free Cash Flow (FCF) 2013–2022

U.S. INVESTOR-OWNED ELECTRIC UTILITIES



($ Billions)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Net Cash Provided by Operating Activities	87.1	89.0	101.6	98.3	101.2	100.1	95.3	67.7	82.4	92.3
Capital Expenditures	(90.3)	(96.1)	(104.0)	(112.5)	(113.1)	(119.2)	(123.8)	(132.7)	(134.1)	(147.7)
Dividends Paid to Common Shareholders	(20.8)	(21.1)	(22.5)	(23.8)	(25.5)	(25.6)	(27.9)	(29.3)	(30.3)	(31.4)
Free Cash Flow	**(24.0)**	**(28.2)**	**(24.8)**	**(38.1)**	**(37.5)**	**(44.7)**	**(56.4)**	**(94.4)**	**(81.9)**	**(86.8)**

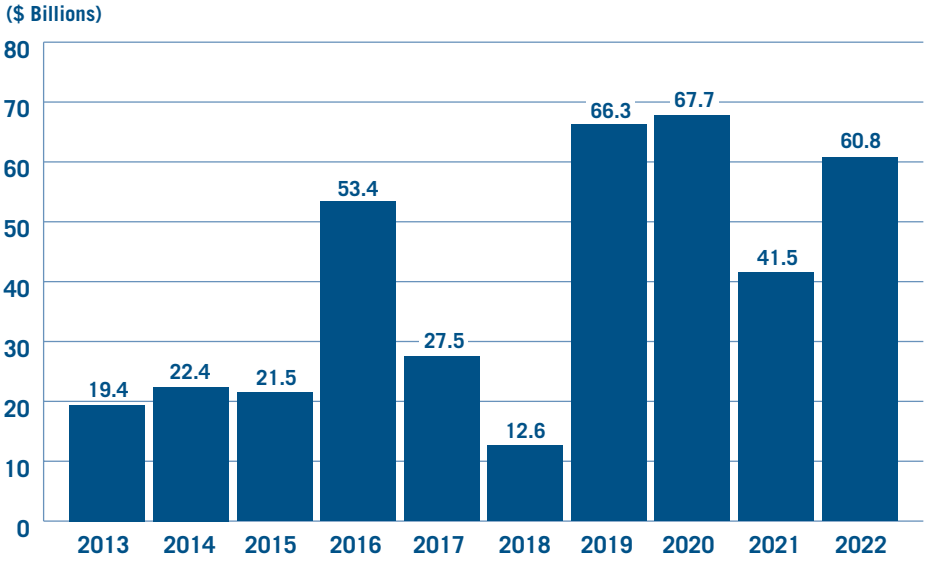
r = revised

Note: Totals may not equal sum of components due to rounding.

Source: S&P Global Market Intelligence and EEI Finance Department.

Net Change in Long-term Debt 2013–2022

U.S. INVESTOR-OWNED ELECTRIC UTILITIES



r = revised

Note: Based on data from industry's consolidated balance sheet.

Source: S&P Global Market Intelligence and EEI Finance Department.

Rate Review Summary

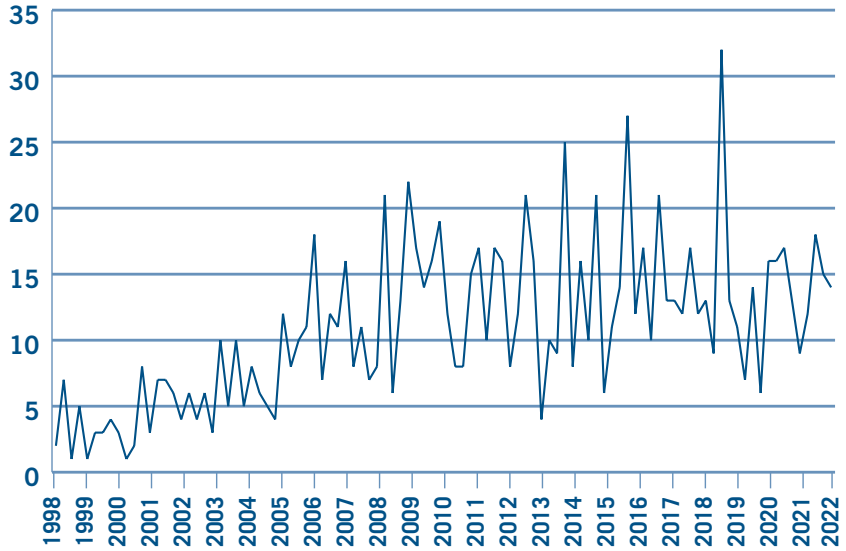
- There were 59 rate reviews filed, with 81 rate reviews decided. This is slightly more than the 55 rate reviews filed and less than the 82 rate reviews decided in 2021.
- Of the decided filings, electric companies requested revenue increases of approximately $6 billion in 2022; with approximately $4 billion approved.
- The average awarded ROE was 9.47 percent, a slight rebound from 2021 of 9.40 percent. For comparison, the average awarded ROE for 2020 was 9.43 percent, and for 2019 was 9.64 percent.
- Regulatory lag hovered around 8.01 months, which is an improvement from 8.41 months in 2021 and 8.93 months in 2020.

Key Highlights from 2022

- **Alternative Regulation** – There are many flavors of alternative regulation, but multiyear rate plans (MYRPs) were a common request in 2022. Some of these requests were the result of legislation–the most recent being Washington, which requires electric companies to request approval of MYRPs of two to four years in length, while other proposals were made to temper rising costs. However, Commissions seem amenable to MYRPs and authorized their use in a handful of decisions throughout the country.

Number of Rate Reviews Filed 1998–2022

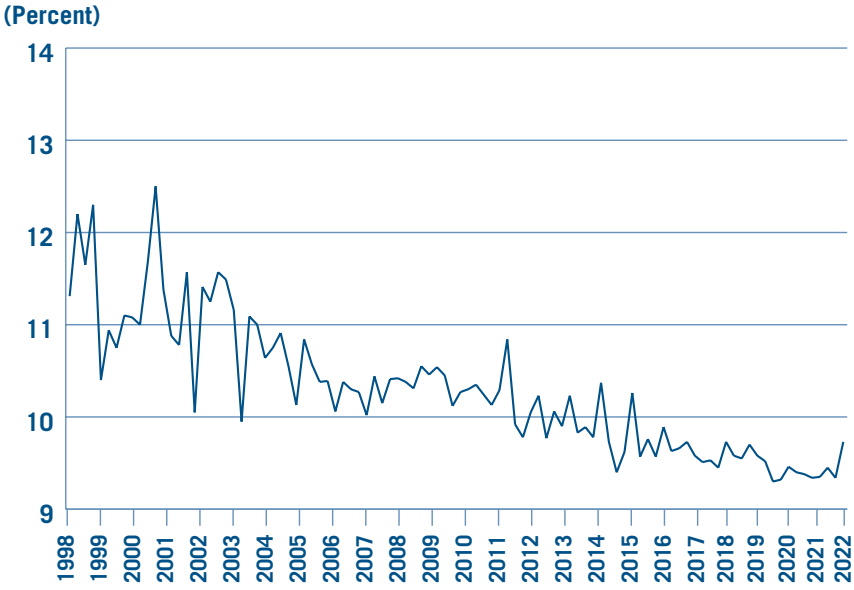
U.S. INVESTOR-OWNED ELECTRIC UTILITIES



Source: S&P Global Market Intelligence/Regulatory Research Assoc. and EEI Finance Department.

Average Awarded ROE 1998-2022

U.S. INVESTOR-OWNED ELECTRIC UTILITIES



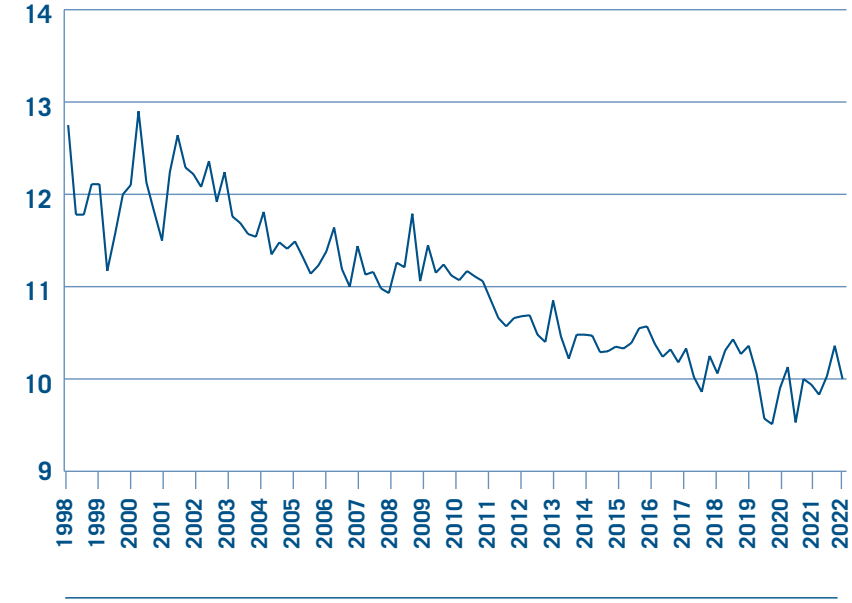
Source: S&P Global Market Intelligence/Regulatory Research Assoc. and EEI Finance Department.

- **Affordability** – The topic of affordability continues to play a significant role in rate review activity. Usually the result of settlement discussions, electric companies have either increased funding for their low-income programs, including arrearage forgiveness, bill credits/discounts, or weatherization programs. Some have even proposed new pilot programs, such as Percentage of Income Payment Plans, to address the increased attention to this issue. Several electric companies are also looking at ways to improve upon current program design and implementation processes by engaging with community action agencies and other interested stakeholders, making enrollment easier, and expanding access to programs.

- **COVID-19 Cost Recovery** – The financial impacts of the pandemic are still being worked out in rate reviews. Many states issued orders allowing for deferral of COVID-related costs, for which electric companies are now seeking recovery. Most commonly, Commissions have authorized amortization of these costs over a two-to-five-year time frame. However, other companies have either been authorized to utilize test years that contain COVID-related costs or create a surcharge to recover costs from customers over a defined period of time. These costs are generally significant and in the millions of dollars, and we expect this issue will continue to come up as more electric companies file post-2020 rate reviews.

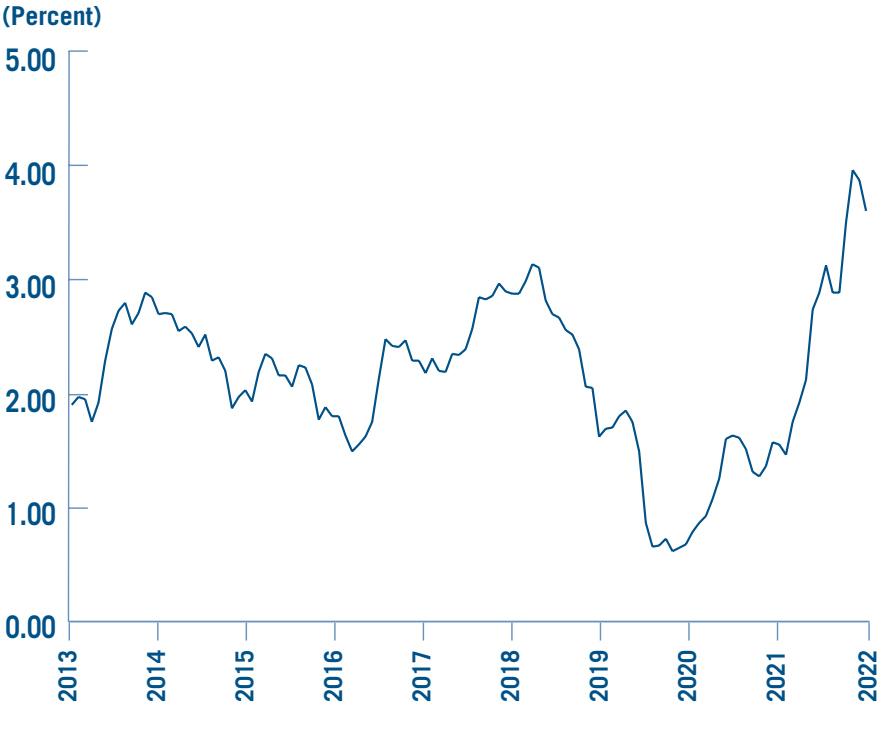
Average Requested ROE 1998–2022

U.S. INVESTOR-OWNED ELECTRIC UTILITIES



Source: S&P Global Market Intelligence/Regulatory Research Assoc. and EEI Finance Department.

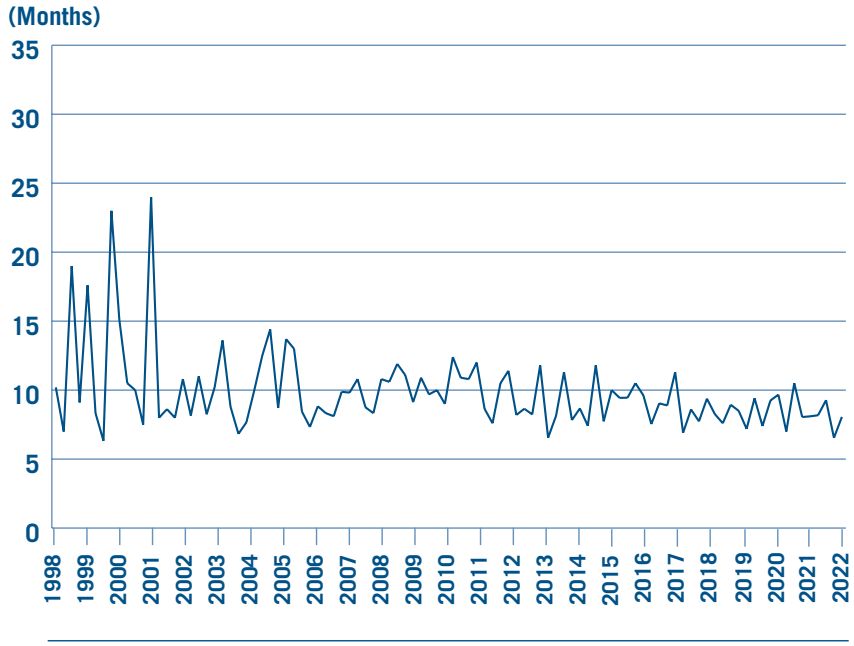
10-Year Treasury Yield
1/1/13 through 12/31/22



Source: U.S. Federal Reserve.

Average Regulatory Lag 1998–2022

U.S. INVESTOR-OWNED ELECTRIC UTILITIES



Source: S&P Global Market Intelligence/Regulatory Research Assoc. and EEI Finance Department.

Finance, Accounting, and Investor Relations

The Finance, Accounting, and Investor Relations teams are part of EEI's Business Operations Group. This division provides the leadership and management for advocating industry policies, technical research, and enhancing the capabilities of individual members through education and information sharing. The division's leadership is used in areas that affect the financial health of the investor-owned electric utility industry, such as finance, accounting, taxation, internal auditing, investor relations, risk management, and budgeting and financial forecasting. If you need research information about these issue areas, please contact an EEI Finance, Accounting, or Investor Relations staff member (listed in this section). Under the direction of both the Finance and the Accounting Executive Advisory Committees, the division provides staff representatives to work with issue area committees. These committees give member company personnel a forum for information exchange and training and an opportunity to comment on legislative and regulatory proposals.

Publications

Quarterly Financial Updates

A series of financial reports on the investor-owned segment of the electric utility industry. Quarterly Financial Update (QFU) reports include stock performance, dividends, credit ratings, and rate review summary.

Financial Review

An annual report that provides a review of the financial performance of the investor-owned electric utility industry including the QFU topics mentioned above as well as the industry's consolidated financial statements. The report also includes an analysis in the areas of business segmentation, mergers & acquisitions, construction and fuel use by electric utilities.

EEI Index

Quarterly stock performance of the U.S. investor-owned electric utilities. The EEI index, which measures total return and provides company rankings for year to date and trailing one-year periods, is widely used in company proxy statements and for overall industry benchmarking.

Executive Accounting News Flash

Published quarterly and distributed to members of accounting committees, this update provides current information about the impact on our companies of evolving accounting and financial reporting issues. The News Flash is prepared jointly with AGA by the Utility Industry Accounting Fellow in coordination with our accounting staff in order to keep members informed on proposed and newly effective requirements from key accounting standard-setters.

Introduction to Depreciation for Utilities and Other Industries

Updated in 2013, the latest edition of this book serves as a primer on the concepts of depreciation accounting including fundamental principles, life analysis techniques, salvage and cost of removal analysis methods and depreciation rate calculation formulas and examples.

Conference Highlights

Financial Conference

This three-day conference is the premier annual fall gathering of utilities and the financial community; it is attended by more than 1,000 senior executives, including utility CEOs, CFOs, treasurers, investor relations executives, and Wall Street investment analysts, portfolio managers, commercial and investment bankers and the rating agencies. The General Sessions cover topics of strategic interest to the industry and financial community. Contact Jacob Moshel for more information.

Chief Financial Officers' Forum

This forum is held once a year in the fall in conjunction with the EEI Financial Conference. The forum provides an opportunity for chief financial officers to identify and discuss critical issues and challenges impacting the financial health of the electric utility industry. The forum is open to member company chief financial officers only. Contact Aaron Cope for more information.

Finance Committee Meeting

This day and a half meeting is held in the spring or summer. The meeting covers current and emerging industry issues critical to the electric power industry. It also provides an opportunity for utility financial officers to identify best practices and share management skills that contribute to financial performance. Contact Aaron Cope for more information.

Investor Relations Meeting

This one-day meeting is held in the spring. Executives gain insight on current and evolving industry issues, analysts' perspectives on the industry and have an opportunity to identify and share IR best practice concepts within and outside the electric utility industry. Contact Jacob Moshel for more information.

Treasury Group Meeting

Half day meetings are held in the spring and the fall annually. Discussion is focused on pension funding, capital markets and economic and regulatory impacts on debt and equity issuances. Members are provided an opportunity to share and identify best practices beneficial to the well-being of the industry. Contact Jacob Moshel for more information.

Accounting Leadership Conference

This annual meeting, held jointly with the Chief Audit Executives and their counterparts from AGA, covers current accounting, finance, business, and management issues for the Chief Accounting Officers and key accounting leadership of EEI member companies. Contact Randall Hartman for more information.

Chief Audit Executives Conference

This annual conference provides a forum for EEI and AGA Chief Audit Executives to discuss issues and challenges and exchange ideas on utility-specific internal auditing topics. The conference is open to members of the Internal Auditing Committee and other employees of EEI/ AGA member companies designated by the CAE. Contact Dave Dougher for more information.

Spring and Fall Accounting Conferences

Hosted by the EEI Corporate Accounting Committee, the Property Accounting & Valuation Committee, the Accounting Standards Committee, the Budgeting & Financial Forecasting Committee and the AGA Corporate Accounting and Property Accounting Committees, these conferences provide a forum for members to discuss current issues and challenges and exchange ideas in the electric and natural gas utility industries. The spring meeting is intended for all aforementioned committees, while the fall meeting is designed for the Corporate Accounting Committee and the Property Accounting & Valuation Committee. The meetings are open to members of the Committees and other employees of EEI/AGA member companies. Contact Dave Dougher for more information.

Taxation Committee Meeting

This three-day meeting is held every June and November, providing an opportunity for member company tax personnel to discuss technical information on utility tax issues. In addition to information exchange, members are briefed on current developments concerning major tax issues through presentations by committee members, outside tax specialists, and EEI staff. Contact Mark Agnew for more information.

Tax School

Hosted by the EEI Taxation Committee, this two- and half-day training is held every other year in the spring (The last two EEI Tax Schools were conducted as virtual meetings). The program is designed for tax managers and tax staff with two-plus years of tax experience or for financial accounting supervisors with tax responsibilities. The school is taught by a faculty of outstanding speakers from the accounting and legal professions as well as others from within the industry. Contact Mark Agnew for more information.

Accounting Courses

Introduction to Public Utility Accounting

This 4-day program, offered jointly with AGA, concentrates on the fundamentals of public utility accounting. It focuses on providing basic knowledge and a forum for understanding the elements of the utility business. It is intended primarily for recently hired electric and gas utility staff in the areas of accounting, auditing, and finance. Contact Randall Hartman or Dave Dougher for more information.

Advanced Public Utility Accounting

This intensive, 4-day course, jointly sponsored with AGA, focuses on complex and specific advanced accounting and industry topics. It addresses current accounting issues including those related to deregulation and competition, as they affect EEI member companies. Contact Randall Hartman or Dave Dougher for more information.

Property Accounting & Depreciation Training Seminar

The content from this seminar has been incorporated into the public utility accounting training courses described above and is no longer offered as a separate seminar. Contact Dave Dougher for more information.

Utility Internal Auditor's Training

Provides utility staff auditors, managers, and directors with the fundamentals of public utility auditing and specific utility audit/accounting issues including advanced internal auditing topics and is presented jointly by EEI and AGA – convenes for two and one-half days. Contact Randall Hartman or Dave Dougher for more information.

Additional Training Opportunities

Provides additional training opportunities as appropriate, such as Accounting for Energy Derivatives and FERC Accounting. Contact Randall Hartman or Dave Dougher for more information.

The EEI Business Services and Finance Division Staff

Richard McMahon
Senior Vice President, Energy Supply & Finance, and Chief ESG Officer
(202) 508-5571
rmcmahon@eei.org

Irene Ybadlit
Senior Coordinator, Energy Supply and Finance
(202) 508-5502
iybadlit@eei.org

Financial Analysis and Business Analytics

Mark Agnew
Senior Director, Financial Analysis
(202) 508-5049
magnew@eei.org

Daniel Foy
Director, Financial Analysis
(202) 508-5970
dfoy@eei.org

Bill Pfister
Managing Director, Business Analytics and Energy Supply
(202) 508-5531
bpfister@eei.org

Steve Frauenheim
Senior Manager, Business Analytics
(202) 508-5580
sfrauenheim@eei.org

Accounting and Investor Relations

Randall Hartman
Senior Director, Accounting
(202) 508-5494
rhartman@eei.org

Dave Dougher
Senior Manager, Accounting
(202) 508-5570
ddougher@eei.org

Aaron Cope
Director, Investor Relations, Finance, & ESG
(202) 508-5127
acope@eei.org

Jacob Moshel
Senior Investor Relations Specialist
(202) 508-5057
jmoshel@eei.org

Kim King
Coordinator, Finance and Tax
(202) 508-5493
kking@eei.org

Edison Electric Institute Schedule of Upcoming Meetings

To assist in planning your schedule, here are upcoming meetings related to finance and accounting that may be of interest. For further details, contact Aaron Cope at (202) 508-5127, Randall Hartman (202) 508-5494, or Dave Dougher (202) 508-5570.

August 15-16, 2023
EEI/AGA Accounting Liaison Committee Meeting with FERC Staff
FERC Office
Washington, DC

August 28-30, 2023
EEI/AGA Utility Internal Auditor's Training Courses
Loews Atlanta Hotel
Atlanta, Georgia

August 28-31, 2023
EEI-AGA Introduction to Public Utility Accounting and Advanced Public Utility Accounting Training Courses
Loews Atlanta Hotel
Atlanta, Georgia

September 13-15, 2023
EEI/AGA Derivatives Training
Hyatt Rosemont
Chicago, Illinois

November 5-8, 2023
EEI/AGA Taxation Committee Meeting
San Diego, California

November 12-14, 2023
EEI Financial Conference
JW Marriott Desert Ridge
Phoenix, Arizona

November 12, 2023
EEI Treasury Group Meeting
(Closed meeting, admittance by invitation only)
JW Marriott Desert Ridge
Phoenix, Arizona

November 12, 2023
Chief Financial Officers Forum
(Closed meeting, admittance by invitation only)
JW Marriott Desert Ridge
Phoenix, Arizona

November 12-15, 2023
EEI/AGA Fall Accounting Conference
The Scott Resort & Spa
Scottsdale, Arizona

December (TBD), 2023
Investor Relations Planning Group Meeting
(Closed meeting, admittance by invitation only)
New York, New York

December (TBD), 2023
Wall Street Advisory Group Meeting
(Closed meeting, admittance by invitation only)
New York, New York

May 19-22, 2024
EEI/AGA Spring Accounting Conference
Philadelphia, Pennsylvania

June 23-26, 2024
EEI/AGA Accounting Leadership and Chief Audit Executives Conferences
TBD

U.S. Investor-Owned Electric Utilities

(At 12/31/2022)

ALLETE, Inc.
Alliant Energy Corporation
Ameren Corporation
American Electric Power Company, Inc.
AVANGRID, Inc.
Avista Corporation
Berkshire Hathaway Energy
Black Hills Corporation
CenterPoint Energy, Inc.
Cleco Corporate Holdings LLC
CMS Energy Corporation
Consolidated Edison, Inc.
Dominion Energy, Inc.
DTE Energy Company
Duke Energy Corporation
Edison International
Entergy Corporation
Evergy, Inc.
Eversource Energy
Exelon Corporation
FirstEnergy Corp.
Hawaiian Electric Industries, Inc.
IDACORP, Inc.
MDU Resources Group, Inc.
MGE Energy, Inc.
NextEra Energy, Inc.
NiSource Inc.
NorthWestern Corporation
OGE Energy Corp.
Otter Tail Corporation
PG&E Corporation
Pinnacle West Capital Corporation
PNM Resources, Inc.
Portland General Electric Company
PPL Corporation
Public Service Enterprise Group Inc.
Puget Energy, Inc.
Sempra Energy
Southern Company
The AES Corporation *
DPL Inc.
IPALCO Enterprices, Inc.
Unitil Corporation
WEC Energy Group, Inc.
Xcel Energy Inc.

Note: This list includes 39 publicly traded U.S. electric utility holding companies plus an additional five electric utilities (shown in italics) that are not listed on U.S. stock exchanges because they are owned by holding companies not primarily engaged in the business of providing retail electric distribution services in the United States.

* The AES Corporation is not included in the count of 39, but rather its two U.S. electric utility subsidiaries are included in the group of five italicized companies.

Other EEI Member Companies

Alaska Power & Telephone Company
American Transmission Company
Central Hudson Gas & Electric Corp.
Cross Texas Transmission
Duquesne Light Company
El Paso Electric
Florida Public Utilities
Green Mountain Power
ITC Holdings Corp.
Liberty Utilities
Mt. Carmel Public Utility Company
National Grid
Ohio Valley Electric Corporation
Sharyland Utilities
Tampa Electric an Emera Company
UGI Corporation
UNS Energy Corporation
Upper Peninsula Power Company
Vermont Electric Power Company

Note: These companies are not included in the EEI Financial Review data sets for one of the following reasons: they do not provide retail electric distribution service (i.e., transmission-only), they are subsidiaries of foreign-owned companies, they are not traded on a major U.S. stock exchange, or they are owned by a non-utility holding company and the granularity of publicly available financial data is insufficient.

The **Edison Electric Institute** (EEI) is the association that represents all U.S. investor-owned electric companies. Our U.S. members provide electricity for 220 million Americans and operate in all 50 states and the District of Columbia. EEI also has dozens of international electric companies as International Members, and hundreds of industry suppliers and related organizations as Associate Members.

Safe, reliable, affordable, and increasingly clean energy enhances the lives of all Americans and powers the economy. As a whole, the electric power industry supports more than 7 million jobs in communities across the United States and contributes 5 percent to the nation's GDP.

Organized in 1933, EEI provides public policy leadership, strategic business intelligence, and essential conferences and forums.

For more information, visit our Web site at **www.eei.org**.

EEI | Edison Electric Institute
701 Pennsylvania Avenue, NW
Washington, DC 20004-2696
202-508-5000 | www.eei.org