

2019 Financial Review

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



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2019 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 2019 Financial Review is a comprehensive source for critical financial data covering 40 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 for one of the following reasons-they are subsidiaries of an independent power producer; they are subsidiaries of foreign-owned companies; or they were acquired by other investment firms. These 45 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.



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Highlights of 2019

U.S. INVESTOR-OWNED ELECTRIC UTILITIES

FINANCIAL (\$ Millions)	2019	2018r	% Change
Total Operating Revenues	364,895	364,383	0.1%
Utility Plant (Net)	1,244,443	1,147,970	8.4%
Total Capitalization	1,128,491	1,022,415	10.4%
Earnings Excluding Non-Recurring and			
Extraordinary Items	51,461	47,644	8.0%
Dividends Paid, Common Stock	27,938	25,726	8.6%

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 Oxides
NOAA	National Oceanic & Atmospheric Administration
NRC	Nuclear Regulatory Commission
0&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 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

2019 Financial Review

As I write this, the Edison Electric Institute's (EEI's) member companies-America's investor-owned electric companies-are addressing the unprecedented crisis caused by the COVID-19 pandemic with courage and commitment. We are determined to meet the new challenges that confront us, as we continue to deliver the safe, reliable, affordable, and clean energy our customers need and expect. Through our industry's efforts and dedication, we will play an instrumental role in our nation's recovery, and we will light the way forward to a brighter future.

At the same time, EEI's member companies continue to lead a profound transformation of America's energy. This long-term transformation already is delivering positive dividends for customers, communities, employees, and investors. Our dramatic reductions in carbon emissions; our broad deployment of renewables and of smarter energy infrastructure; the physical and cybersecurity protections we are implementing-these are three unmistakable examples of the enormous strides EEI's members have made just over the past decade.

We are proud that we stand on a strong foundation, and we look

forward to our continued work together to deliver value to our customers, to our investors, and to all industry stakeholders. Our goal is to give our customers an energy future that is cleaner, smarter, stronger, and more secure than any they have known before.

Across the industry, there is strong evidence of our commitment to get as clean as we can, as fast as we can, while keeping customer reliability and affordability front and center as always. Over the past eight years, more than half of new electricity generation capacity was wind and solar. Today, nearly 40 percent of all U.S. power generation comes from carbon-free sources, including nuclear energy and hydropower and other renewables. Overall, emissions from the electric power sector are at their lowest level since 1987 and are down by a third (32.9 percent to be exact) compared to 2005 levels. Among EEI's member companies, emissions have been reduced even more and were 45 percent below 2005 levels as of year-end 2019.

Our industry long has been the nation's most capital-intensive industry, and, over the past decade, we have sustained a record-high level of capital expenditures. Since 2010, EEI's member companies have invested nearly \$1 trillion to build smarter energy infrastructure and to integrate new generation.



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

We know that our stakeholders need a clear and consistent way to measure our progress on delivering the clean energy future. That is why EEI, working with our member companies and the investment community, created the first-of-its-kind, industry-wide environmental, social, governance, and sustainability (ESG/ sustainability) reporting template. Launched in 2018, the template helps member companies provide investors, Wall Street analysts, and other key stakeholders with more consistent and uniform ESG/sustainability data and information. We expanded the template in 2019 to include a qualitative disclosure

on cybersecurity governance and to formally integrate the American Gas Association's (AGA's) members.

Building on the work of the ESG/ sustainability template and recognizing the important role that natural gas has-and will continue to have—in our clean energy future, EEI and AGA now are focused on the Natural Gas Sustainability Initiative (NGSI). The NGSI is an overarching framework that enables the natural gas industry to measure, disclose, and recognize individual company and industry-wide progress and innovation on key sustainability metrics. The NGSI framework initially is focused on methane emissions and will incorporate additional ESG topics over time.

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 sixth straight year in 2019, 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 another record high of \$124.1 billion in 2019.

The EEI Index gained 25.8 percent in 2019, and our industry extended its long-term trend of widespread dividend increases. A total of 37 companies, or 93 percent of the industry, increased their dividend in 2019, matching the record-high percentage set in 2018. The industry's average dividend yield at the end of 2019 stood at 3.0 percent, while its dividend payout ratio was 64.1 percent for calendar year 2019. Among the primary U.S. business sectors, those results only trailed the energy sector. As of December 31, 2019, 39 of the 40 companies in the EEI Index were paying a common stock dividend.

I know that the COVID-19 pandemic has impacted all Americans. I also know that EEI's member companies have a strong track record of coming together to help their customers and communities during times of need. We will be there every step of the way as our nation forges a path to recovery. And, we will build upon our longterm record of service, resilience, and success.

EEI and our member companies are demonstrating Power by Association, and we are committed to delivering a cleaner, smarter, stronger energy future.

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

Thomas R. Kuhn

Thomas R. Kuhu

President Edison Electric Institute

Capital Markets

Stock Performance

The EEI Index trailed a surging stock market throughout 2019's final quarter, returning 0.4% versus the Dow Jones Industrial Average's 6.7%, the S&P 500 Index's 9.1% and the tech-heavy Nasdaq Composite's 12.2% gain. The market's multi-year rally resumed as growth fears ebbed with improving economic data, easing trade war tensions and another U.S. Federal Reserve rate cut - the third in 2019. Some market watchers also cited the Fed's aggressive intervention in the repo market late in the year as a trigger for liquidity-induced market gains. Otherwise, the 10-year Treasury yield pushed higher in Q4 after a year-long decline; this likely pressured utility shares relative to sectors that are more sensitive to economic conditions.

The EEI Index returned nearly 26% for full-year 2019, its strongest annual performance since 2014's 28.9%. But the broad market performance was even stronger. The Dow returned 25.3% for the year, the S&P 500 Index returned 31.5% and the Nasdaq climbed 35.2%. Beginning and ending dates powerfully shape relative return comparisons. The broad market's 15% fall in

2019 Index Comparison

EEI Index	25.8
Dow Jones Industrials	25.3
S&P 500	31.5
Nasdaq Composite Index*	35.2

* 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 1/1/15–12/31/19

REFLECTS REINVESTED DIVIDENDS



Note: Assumes \$100 invested at closing prices December 31, 2014.

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

2019 Returns By Quarter

Index	Q1	Q2	Q3	Q4
EEI Index	11.1	4.1	8.2	0.4
Dow Jones Industrial Average	11.8	3.2	1.8	6.7
S&P 500	13.7	4.3	1.7	9.1
Nasdaq Composite*	16.5	3.6	(0.1)	12.2
Category	Q1	Q2	Q3	Q4
Category All Companies	Q1 10.6	Q2 4.9	Q3 6.5	Q4 (0.4)
Category All Companies Regulated	Q1 10.6 10.6	Q2 4.9 5.9	Q3 6.5 6.5	Q4 (0.4) (0.1)
Category All Companies Regulated Mostly Regulated	Q1 10.6 10.6 10.5	Q2 4.9 5.9 1.3	Q3 6.5 6.5 6.6	Q4 (0.4) (0.1) (1.2)

* 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.

Sector Comparison 2019 Total Shareholder Return

Sector	Total Return %
Technology	47.5%
Industrials	32.8%
Financials	32.6%
Consumer Goods	28.7%
Telecommunications	27.9%
Consumer Services	26.9%
EEI Index	25.8%
Utilities	24.9%
Healthcare	21.3%
Basic Materials	19.8%
Oil & Gas	10.4%

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

Q4 2018 — when utility shares were flat — created a favorable 2019 starting point. Adding 2018's Q4 to 2019 results raises utility returns for the 15-month period well above those of the major averages.

Slow Growth but No Recession

Utilities' short-term relative performance as a group typically results from shifting macroeconomic sentiment rather than changes in the industry's fundamental outlook. Indeed, Q4 2019 simply reversed Q3's pattern, when trade-war fears and worrisome economic data kept the broad averages flat while safehaven utilities gained 8%.

U.S. real gross domestic product (GDP) growth slowed to a 2.0% rate in Q2 and 2.1% in Q3 from 3.1% in Q1. S&P 500 company profits (aggregate rather than per share) were about flat year-to-year in Q2 and Q3 with revenue up 4% each quarter, according to Zack's Investment Research data. Zack's pegs Q4 revenue up 3.5% and income down 2%. The Trump Administration's economic stimulus and tax cuts made 2018 corporate after-tax profits soar, somewhat distorting 2019's yearto-year comparison. And analysts expected revenue and profit growth to strengthen again in 2020. That bullish outlook contributed to Q4's market rally.

Falling interest rates through much of 2019 supported utilities' strong absolute return as well as the broad market's rise. The U.S. Federal Reserve cut short-term rates twice during Q3 citing continued low inflation and the spillover effect from slowing growth overseas, and again in late October. The Fed Funds target fell from a 2.25% to 2.50% range in early July to a 1.50% to 1.75% range after the October rate cut. The 10-year Treasury bond yield fell from a recent peak of 3.2% in late 2018 to 1.5% in early September before edging up to 1.9% as the year ended.



EEI Index Annual Return (%) EEI Index Cumulative Return (\$)	2015 (2.05) 97.95	2016 22.21 119.70	2017 11.56 133.54	2018 4.28 139.25	2019 23.06 171.36
Regulated EEI Index Annual Return	(0.67)	21.16	11.66	4.55	24.56
Regulated EEI Index Cumulative Return	99.33	120.34	134.37	140.48	174.99
Mostly Regulated EEI Index Annual Return	(3.67)	24.57	11.32	3.62	17.87
Mostly Regulated EEI Index Cumulative Return	96.33	119.99	133.58	138.41	163.15
Diversified EEI Index Annual Return Diversified EEI Index Cumulative Return	(14.43) 85.57	25.59 107.47	-	-	-

- 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, 2014.

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

2019 Category Comparison

Category	Return (%)
EEI Index	23.1
Regulated	24.6
Mostly Regulated	17.9

* Returns shown here are unweighted averages of constituent company returns. The EEI Index return shown in the 2019 Index Comparison table is cap-weighted.

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

U.S. Electric Output Declines

The multi-year flattening in electric power demand persisted in 2019. Full-year demand fell 1.7% from 2018's level and annual nationwide generation is largely unchanged from its level in 2007. U.S. electric output declined 0.6% year-to-year in Q3 and 4.4% in Q2. Part of the shortfall in both quarters was weather-related. Cooling degree days fell 11.2% year-to-year nationwide in Q2 and 2.1% in Q3. Cooling degree days were off 4.9% for the year as a whole while heating degree days were flat. Analysts cited the impact of trade tariffs on U.S. industrial demand as well as years of energy efficiency initiatives nationwide as other reasons for the demand weakness.

Growth Outlook Remains Healthy

Despite the lackluster demand trend, there was little change in the industry's stable business fundamentals in 2019. Most stakeholders across the political spectrum support investments that advance renewable energy goals, decarbonization, reliability, job creation and the enlarged tax base that comes with it. Utility investment programs include new renewables generation, new gas-fired generation, transmission and distribution modernization and expansion, smart-grid deployment, and reliability-related network hardening among other projects.

Analysts seem to view state regulatory relations as generally fair, balancing the interests of ratepayers, utilities and other stakeholders. Some utilities have successfully advocated for changes to rate design — such as forward test years, rate mechanisms and adjustment clauses — that allow timely recovery of costs associated with big-ticket capital investment programs and offer some protection from lethargic demand.

The prospect of electric vehicle (EV) adoption gained some analytical traction in 2019 as a potential longer-term source of demand growth that also supports decarbonization when powered by emission-free generation. While technological evolution is notoriously difficult to accurately predict, some estimates suggested widespread EV adoption could boost load by 1% annually over the next few decades.

Favorable Cost Trends

Another favorable trend for regulated utilities is low fuel costs. Coal prices have declined steadily since 2011, natural gas prices have changed little in recent years and the growing amounts of wind and solar generation added to the grid have zero fuel cost. The low level of interest rates is also beneficial. Since regulated utilities pass fuel and interest expense through to customers (and fuel can account for 40% or more of the customer's bill), cost stability in these key areas helps keep bill inflation down and makes it easier to gain regulatory approval for large investment programs. Despite years of capex growth, the average nationwide cost of electricity for residential customers has risen from \$0.1151/kilowatt hour (kWh) in 2009 to \$0.1289/kWh in 2018, which was unchanged from 2017 and only marginally higher than 2014's \$0.1252, according to EIA data.

Top EEI Index Gainers

Several utilities gained 30% to 40% in 2019, in some cases rebounding from previous weakness. Southern Company gained 51.3% as investor gained confidence in the outlook for completion and commercial operation of its new Vogtle nuclear units and it completed a Georgia rate case near year-end. Entergy (+44.0%) gained on its reduced exposure to wholesale operations and transition back to a regulated utility with several regulatory outcomes that support its investment plans. FirstEnergy (+33.9%) exited its formerly large competitive generation operations and is focused on earnings growth from regulated transmission and distribution investments. Sempra (+43.9%) has also divested non-core assets and is focused on high-growth U.S. re-



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Source: S&P Global Market Intelligence.

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Source: S&P Global Market Intelligence.

EEI Index Top 10 Performers Twelve-month period ending 12/31/2019

Company	Total Return %	Category
Southern Company	51.3	R
Entergy Corporation	44.0	R
Sempra Energy	43.9	R
NextEra Energy, Inc.	42.6	MR
El Paso Electric Company	38.6	R
Edison International	37.6	R
WEC Energy Group, Inc.	36.8	R
Eversource Energy	34.4	R
MGE Energy, Inc.	33.9	R
FirstEnergy Corp.	33.9	R

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

Market Capitalization at December 31, 2019 (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	116,697	12.89%	CenterPoint Energy, Inc.	CNP	13,696	1.51%
Dominion Energy, Inc.	D	67,333	7.44%	Alliant Energy Corporation	LNT	13,084	1.45%
Southern Company	SO	66,758	7.38%	NiSource Inc.	NI	10,415	1.15%
Duke Energy Corporation	DUK	66,492	7.35%	Pinnacle West Capital Corporation	PNW	10,114	1.12%
American Electric Power Company, Inc.	AEP	46,673	5.16%	OGE Energy Corp.	OGE	8,903	0.98%
Exelon Corporation	EXC	44,359	4.90%	MDU Resources Group, Inc.	MDU	5,922	0.65%
Sempra Energy	SRE	42,014	4.64%	PG&E Corporation	PCG	5,750	0.64%
Xcel Energy Inc.	XEL	32,951	3.64%	IDACORP, Inc.	IDA	5,393	0.60%
Consolidated Edison, Inc.	ED	30,054	3.32%	Hawaiian Electric Industries, Inc.	HE	5,106	0.56%
Public Service Enterprise Group Inc.	PEG	29,761	3.29%	Portland General Electric Company	POR	4,986	0.55%
WEC Energy Group, Inc.	WEC	29,089	3.21%	Black Hills Corporation	BKH	4,789	0.53%
Eversource Energy	ES	27,566	3.05%	ALLETE, Inc.	ALE	4,196	0.46%
Edison International	EIX	26,167	2.89%	PNM Resources, Inc.	PNM	4,057	0.45%
FirstEnergy Corp.	FE	26,147	2.89%	NorthWestern Corporation	NWE	3,615	0.40%
PPL Corporation	PPL	25,915	2.86%	Avista Corporation	AVA	3,187	0.35%
Entergy Corporation	ETR	23,832	2.63%	El Paso Electric Company	EE	2,757	0.30%
DTE Energy Company	DTE	23,766	2.63%	MGE Energy, Inc.	MGEE	2,733	0.30%
Ameren Corporation	AEE	18,885	2.09%	Otter Tail Corporation	OTTR	2,037	0.23%
CMS Energy Corporation	CMS	17,784	1.97%	Unitil Corporation	UTL	921	0.10%
AVANGRID, Inc.	AGR	15,834	1.75%				
Evergy, Inc.	EVRG	15,270	1.69%		Total Indust	ry 905,009	100%

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

gions; in addition, it was impacted less than other California utilities by the devastating wildfires in 2017 and 2018. NextEra (+42.6%) continues to produce strong earnings and dividend growth from its large renewables portfolio and regulated electric/gas pipeline operations in the southeastern U.S.

Elevated Valuations

At year-end, Wall Street analysts generally viewed utility stock valuations as high when measured by price/earnings (PE) ratios relative to the S&P 500 and to history. One reason for high PEs is the very low level of interest rates both in the U.S. and overseas. The U.S. 10-year Treasury yield was about 6% in the late 1990s, more than triple today's level, while bond markets in Europe and Japan sport widespread negative yields that drive global investors into relatively safe positive-yielding investments like utilities. Another reason is the strong fundamentals that underpin prospects for total returns in excess of 8% (5% from earnings growth and 3% from the dividend). While PEs seem high, utilities may offer enough value to lift multiples higher still if global economic growth turns down and interest rates fall to new lows.

Other Risks

A sharp rise in interest rates is widely seen as the biggest macro threat facing utility investors. Although that has been said for years and interest rates just seem to fall. Inflation held near 2% throughout 2018 even as the economy roared and didn't move in 2019 either. The main risk to the very long-lived eco-

EEI Index Market Capitalization 2010–2019





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, 2015–December 31, 2019





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



nomic expansion seems to be weakness rather than red-hot growth.

A second, less discussed risk is pushback on rate increases needed to fund capex programs. Stable fuel costs and low interest rates have kept bill pressures muted. Industry analysts expect that trend will continue. But if the economy enters recession and consumer incomes fall, managing regulatory risk and financing needed capex through customer rates may become more challenging than it has been in recent years.

Source: U.S. Federal Reserve.

Dividends

The investor-owned electric utility industry continued its long-term trend of widespread dividend increases in 2019. A total of 37 companies increased or reinstated their dividend compared to 39 in 2018, 38 in 2017, 40 in 2016 and 36 to 40 companies annually from 2012 through 2015.

The percentage of companies that raised or reinstated their dividend in 2019 was 93%, matching 2018's record high. This exceeded 2017's 88% and the previous record of 91% in 2016, the next two highest historical results. These followed results of 85% in 2015 and a range of 73% to 79% back to 2012. 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 record high of 93% in both 2018 and 2019 is based on data beginning in 1988. (Note: M&A activity reduced the number of publicly traded utilities tracked by EEI from 65 in 2003 to 40 at year-end 2019).

As shown in the Dividend Patterns table, 39 of the 40 publicly traded utilities in the EEI Index were paying a common stock dividend as of December 31, 2019. 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. Companies generally use the same quarter each year for dividend changes, with the first being the most common for electric utilities.







Source: EEI Finance Department.



Source: EEI Finance Department.

2019 Increases Average 5.1%

The average dividend increase in 2019 was 5.1%, with a range of 0.6% to 12.6% and a median increase of 4.9%. NextEra (+12.6% in Q1), Dominion (+9.9% in Q1), Sempra (+8.1% in Q1) and DTE (+7.1% in Q4) posted the largest percentage increases. NextEra Energy, headquartered in Juno Beach, Florida, raised its quarterly dividend from \$1.11 to \$1.25 per share in Q1. The increase is consistent with its plan, announced in 2018, to target 12% to 14% annual growth in dividends per share through at least 2020, off a 2017 base. NextEra recorded the industry's 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).

Dominion Energy, based in Richmond, Virginia, increased its quarterly dividend from \$0.835 to

		Div	vidend P	atterns	1995–20	19				
		U.S	. INVESTOR-	OWNED ELE	CTRIC UTILITII	ES			Div	vidend
	Raised	No Change	e Lowered	Omitted*	Reinstated	Not Paying	Total		Payo	ut Rati
1995	52	40	3	_	_	3	98		75	5.3%
1996	48	44	2	1	1	2	98		70).7%
1997	40	45	6	2	_	3	96		84	1.2%
1998	40	37	7	_	_	5	89		82	2.1%
1999	29	45	4	_	3	2	83		74	1.9%
2000	26	39	3	1	_	2	71		63	3.9%*
2001	21	40	3	2	_	3	69		64	1.1%
2002	26	27	6	3	_	3	65		67	7.5%
2003	26	24	7	2	1	5	65		63	3.7%
2004	35	22	1	_	_	7	65		67	7.9%
2005	34	22	1	1	2	5	65		66	5.5%
2006	41	17	_	_	_	6	64		63	3.5%
2007	40	15	_	_	3	3	61		62	2.1%
2008	36	20	1	_	1	1	59		66	5.8%
2009	31	23	3	_	_	1	58		69	9.6%
2010	34	22	_	_	_	1	57		62	2.0%
2011	31	22	_	1	1	_	55		62	2.8%
2012	36	14	_	_	1	_	51		64	1.2%
2013	36	12	1	_	_	_	49		6	1.5%
2014	38	9	1	_	_	_	48		60).4%
2015	39	7	_	_	_	_	46		6	7.0%
2016	40	4	_	_	_	_	44		62	2.9%
2017	38	4	_	1	_	_	43		64	1.0%
2018	39	1	1	_	_	1	42		63	3.9%
2019	37	2	_	-	-	1	40		62	2.6%
		2010 2	2011 201	2 2013	2014	2015 2016	2017	2	018	2019
Average of the Increased Dividend	Actions ***	8.2%	6.8% 7.2	% 5.3%	5.7%	5.8% 5.6%	5.6%	5	.7%	5.1%
Average of the Declining Dividend	Actions ***	NA (10	0.0%) N/	A (41.0%) (34.5%)	NA NA	NA	(79	9.8%)	NA

* 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.

2019 current year figures reflect dividend changes (raised, lowered, etc.) through 12/31/2019 and earnings and dividends through 12/31/2019 (payout ratio).

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

\$0.9175 per share in Q1. As a result, 2019 marked the 16th consecutive year in which Dominion increased its dividend.

Sempra Energy, based in San Diego, California, announced in Q1 a quarterly increase from \$0.895 to \$0.9675 per share; 2019 was the ninth consecutive year that Sempra increased its dividend, which has grown by more than 47 percent since 2014.

DTE Energy, headquartered in Detroit, Michigan, raised its quarterly dividend from \$0.945 to \$1.0125 per share during Q4. DTE has issued a cash dividend for more than 100 years.

The industry's average and median increases have been relatively consistent in recent years. The average increase was 5.7% in 2018 and 5.6% in both 2017 and 2016. The median was 5.5% in 2018 and 2017 and 5.1% in 2016.

Payout Ratio and Dividend Yield

The industry's dividend payout ratio was 64.1% for the twelve months ended December 31, 2019, trailing only the Energy sector's 80.0% among U.S. business sectors. The industry's payout ratio was 62.6% when measured as an un-weighted average of individual company ratios; 64.1% represents an aggregate figure. From 2000 through 2019, 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-

Sector Comparison Dividend Payout Ratio

For 12-month period ending 12/31/19

Sector	Payout Ratio (%)
EEI Index Companies*	64.1%
Energy	80.0%
Utilities	63.6%
Consumer Staples	55.9%
Materials	42.1%
Industrial	36.1%
Consumer Discretionary	32.7%
Technology	29.9%
Health Care	28.6%
Financial	28.0%

* 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 2019E dividends and earnings per share (estimates as of 12/31/2019).

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.

recurring and extraordinary items from earnings. We use the following approach when calculating the industry's dividend payout ratio:

- Non-recurring and extraordinary items are eliminated from earnings.
- 2. Companies with negative adjusted earnings are eliminated.
- 3. Companies with a payout ratio in excess of 200% are eliminated.

The industry's average dividend yield was 3.0% on December 31, 2019, trailing only the Energy sector's 3.8% and the broader Utilities sector's 3.1%. The year-end yield was 3.4% in each of the three previous years. In 2019, the industry's strong dividend activity was more than offset by stock price gains, resulting in the lower average yield. The market cap-weighted EEI Index increased by 25.8% in 2019.

Sector Comparison, Dividend Yield As of December 31, 2019

Sector	Dividend Yield (%)
EEI Index Companies	3.0%
Energy	3.8%
Utilities	3.1%
Consumer Staples	2.6%
Financial	2.0%
Materials	2.0%
Industrial	1.9%
Health Care	1.6%
Consumer Discretionary	1.4%
Technology	1.3%

Assumptions:

1. EEI Index Companies' yield based on last announced, annualized dividend rates (as of 12/31/2019); S&P sector yields based on 2019E cash dividends (estimates as of 12/31/2019).

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.

We calculate the industry's aggregate dividend yield using an unweighted 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. The Tax Cuts and Jobs Act, signed into law in December 2017, maintained preexisting tax rates for dividends and capital gains. This is crucial to avoid a capital raising disadvantage for highdividend companies.

Business Category Comparison

The Regulated category's dividend payout ratio was 62.1% for the 12 months ended December 31, 2019 compared to 64.1% for the Mostly Regulated category. The Regulated group produced the highest annual payout ratio in 2017, 2015, 2011, 2010 and in each year from 2003 through 2008. It was exceeded by the Mostly Regulated group in 2018, 2016, 2014, 2013, 2012 and 2009; weaker earnings from competitive power likely contributed to the higher payout ratio for the Mostly Regulated group in those years. The Regulated and Mostly Regulated groups' average dividend yields were 3.0% and 3.1%, respectively, on December 31, 2019. Both had a 3.4% average dividend yield at year-ends 2018 and 2017. The yields for the Regulated and Mostly Regulated categories were 3.4% and 3.5%, respectively, on December 31, 2016.

Category Comparison, Dividend Payout Ratio

Category	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
EEI Index	62.0	62.8	64.2	61.5	60.4	67.0	62.9	64.0	63.9	62.6
Regulated	64.1	63.4	62.1	60.5	59.4	68.7	61.1	68.7	60.1	62.1
Mostly Regulated	60.7	63.1	69.7	64.7	63.8	62.6	68.0	53.3	72.8	64.1
Diversified	49.7	54.7	53.4	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

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

Category Comparison, Dividend Yield As of December 31, 2019

Category	Dividend Yield
EEI Index	3.0%
Regulated	3.0%
Mostly Regulated	3.1%

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, 2019

U.S. INVESTOR-OWNED ELECTRIC UTILITIES

Company Name	Stock	Company Category	Annualized Dividends	Payout Ratio	Yield (%)	Last Action	То	From	Date Announced
ALLETE Inc	ALE	MR	\$2 35	75.0%	29%	Raised	\$2 35	\$2.24	2019.01
Alliant Energy Corporation	INT	R	\$1.42	59.5%	2.5%	Raised	\$1.42	\$1 34	2019 Q1
Ameren Corporation	ΔFF	R	\$1.92	56.6%	2.6%	Raised	\$1 Q2	\$1.04 \$1.00	2019 Q1
American Electric Power Company Inc	AFP	R	\$2.80	65.0%	3.0%	Raised	\$2.80	\$2.68	2019 Q4
AVANGRID Inc	AGR	MR	\$1.76	102.1%	3.4%	Raised	\$1.76	\$1.73	2019 Q7
Avista Corporation		R	\$1.55	90.6%	3.2%	Raised	\$1.55	\$1.79	2019 01
Black Hills Corporation	BKH	R	\$2.14	53.5%	2.7%	Raised	\$2.14	\$2.02	2019 Q1
CenterPoint Energy Inc	CNP	MR	\$1.15	56.3%	4.2%	Raised	\$1.15	\$1.11	2018 04
CMS Energy Corporation	CMS	R	\$1.53	63.9%	2.4%	Raised	\$1.53	\$1.43	2019 01
Consolidated Edison Inc	FD	R	\$2.96	64.2%	3.3%	Raised	\$2.96	\$2.86	2019 Q1
Dominion Energy Inc	D	R	\$3.67	73.0%	4.4%	Raised	\$3.67	\$3.34	2019 01
DTF Energy Company	DTF	MR	\$4.05	58.3%	3.1%	Raised	\$4.05	\$3.54 \$3.78	2019 Q1
Duke Energy Corporation		R	\$3.78	74 7%	4.1%	Raised	\$3.78	\$3.70	2019 Q4
Edison International	FIX	R	\$2.55	40.6%	3.4%	Raised	\$2.55	\$2.45	2019 Q3
El Paso Electric Company	FF	R	\$1.54	45.0%	2.3%	Raised	\$1.50	\$1.40	2019 Q4
Entergy Corporation	FTR	R	\$3.72	46.0%	3.1%	Raised	\$3.72	\$3.64	2019 Q2
Evergy Inc	FVRG	R	\$2.02	64.5%	3.1%	Raised	\$2.02	\$1.90	2019 Q4
Eversource Energy	ES	R	\$2.02	57.4%	2.5%	Raised	\$2.02	\$2.02	2019 Q1
Exelon Corporation	FXC	MR	\$1.45	44.4%	3.2%	Raised	\$1.45	\$1.38	2019 01
FirstEnergy Corp	FF	R	\$1.56	90.0%	3.2%	Raised	\$1.56	\$1.52	2019 Q1
Hawaijan Electric Industries Inc	HF	MR	\$1.28	66.7%	2.7%	Raised	\$1.28	\$1.24	2019 Q1
IDACORP Inc	IDA	R	\$2.68	55.6%	2.5%	Raised	\$2.68	\$2.52	2019 Q4
MDU Resources Group Inc.	MDU	MR	\$0.83	47.8%	2.8%	Raised	\$0.83	\$0.81	2019 Q4
MGE Energy Inc.	MGEE	R	\$1.41	55.1%	1.8%	Raised	\$1.41	\$1.35	2019 Q3
NextFra Energy Inc.	NFF	MR	\$5.00	81.0%	2.1%	Raised	\$5.00	\$4 44	2019 Q1
NiSource Inc.	NI	R	\$0.80	37.4%	2.9%	Raised	\$0.80	\$0.78	2019 Q1
NorthWestern Corporation	NWE	R	\$2.30	57.0%	3.2%	Raised	\$2.30	\$2.20	2019 Q1
OGE Energy Corp.	OGE	R	\$1.55	69.0%	3.5%	Raised	\$1.55	\$1.46	2019 Q3
Otter Tail Corporation	OTTR	R	\$1.40	64.2%	2.7%	Raised	\$1.40	\$1.34	2019 Q1
PG&E Corporation	PCG	R	\$-	0.0%	0.0%	Lowered	\$-	\$2.12	2017 Q4
Pinnacle West Capital Corporation	PNW	R	\$3.13	59.1%	3.5%	Raised	\$3.13	, \$2.95	2019 Q4
PNM Resources. Inc.	PNM	R	\$1.23	38.0%	2.4%	Raised	\$1.23	\$1.16	2019 Q4
Portland General Electric Company	POR	R	\$1.54	62.6%	2.8%	Raised	\$1.54	\$1.45	2019 Q2
PPL Corporation	PPL	R	\$1.65	68.3%	4.6%	Raised	\$1.65	\$1.64	2019 Q1
Public Service Enterprise Group Incorporated	PEG	MR	\$1.88	45.3%	3.2%	Raised	\$1.88	\$1.80	2019 Q1
Sempra Energy	SRE	R	\$3.87	50.2%	2.6%	Raised	\$3.87	\$3.58	2019 Q1
Southern Company	SO	R	\$2.48	106.6%	3.9%	Raised	\$2.48	\$2.40	2019 Q2
Unitil Corporation	UTL	R	\$1.48	71.8%	2.4%	Raised	\$1.48	\$1.46	2019 Q1
WEC Energy Group, Inc.	WEC	R	\$2.36	65.6%	2.6%	Raised	\$2.36	\$2.21	2019 Q1
Xcel Energy Inc.	XEL	R	\$1.62	57.7%	2.6%	Raised	\$1.62	\$1.52	2019 Q1
Industry Average				62.6%	3.0%				

NOTES

Business Segmentation: Assets as of 12/31/2018

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 12/31/2019.

Dividend Payout Ratio: Dividends paid for 12 months ended 12/31/2019 divided by net income before nonrecurring and extraordinary items for 12 months ended 12/31/2019. 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 12/31/2019 divided by stock price at market close on 12/31/2019.

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 credit rating remained at BBB+ for a sixth straight year in 2019, although five parent-level downgrades versus one upgrade produced a slight weakening in holding-company credit quality after years of steady gains.

There were 90 total actions across all holding companies and under-

lying subsidiaries, above the 72 average of the previous ten years. Upgrades were 61.1% of the total. The five-year period 2013 through 2017 produced the five-highest upgrade percentages in our historical data. Over the past ten years, upgrades outnumbered downgrades in seven years with an annual average upgrade percentage of 64.4%.

EEI captures upgrades and downgrades at both the parent and

subsidiary levels. Multiple actions within a parent holding company are included in the upgrade/downgrade totals. However, the industry's average credit rating and outlook are based on the unweighted average of all Standard & Poor's (S&P) parent holding company ratings and outlooks.

On December 31, 2019, 79.5% of holding company ratings outlooks were "stable" and 2.3% were

Direction of Rating Actions

U.S. INVESTOR-OWNED ELECTRIC UTILITIES



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



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

	Cre	edit Ratiı	ig Age	ncy Upgr	ades a	nd Down	grades	2015 Q1-2	019 Q 4	
	2015 2016 2017 2018 2019									
	Total Upgrades	Total Downgrades	Total Upgrades	Total Downgrades	Total Upgrades	Total Downgrades	Total Upgrades	Total Downgrades	Total Upgrades	Total Downgrades
Fitch		-		-		· ·		•		-
Q1	0	0	5	(1)	2	0	1	(5)	3	(7)
Q2	4	(5)	4	(2)	1	0	2	(3)	7	0
Q3	0	0	3	0	5	(4)	1	(11)	3	0
Q4	2	0	1	0	3	0	8	(2)	13	(3)
Total	6	(5)	13	(3)	11	(4)	12	(21)	26	(10)
Moody										
01	2	0	2	(2)	Δ	0	0	(A)	2	(6)
02	4	(1)	2	0	3	0	2	0	2	(2)
03	1	(1)	1	(5)	3	(2)	0	(9)	5	(1)
Q4	2	(1)	Ō	(1)	0	0	1	(7)	Õ	(2)
Total	9	(3)	5	(8)	10	(2)	3	(20)	9	(11)
6 9 D										
5&P	0	0	G	(2)	7	(4)	F	(2)	0	(0)
02	10	(1)	6	(2)	2	(4)	2	(2)	9	(6)
03	0	(1)	10	(1)	0	(1)	16	(4)	1	(4)
04	2	(1)	0	(1)	7	(3)	10	(2)	6	(2)
Total		(1)	- 21	(1)	17	(9)		$\frac{(2)}{(11)}$	- 20	(14)
Total	20	(7)	31	(7)	17	(8)	26	(11)	20	(14)

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.

"positive" or "watch-positive". Only 18.2% were "negative" or "watchnegative", down from 23.4% at yearend 2018.

Credit Actions at Parent Level

Total ratings actions at the parent holding company level in 2019 included one upgrade and five downgrades compared to six upgrades and two downgrades in 2018. Over the past ten years, aggregate parentlevel credit quality has experienced a steady strengthening, having declined in only two calendar years (2019 and 2012). Our universe of 45 U.S. parent company electric utilities at December 31, 2019 included 40 publicly-traded utilities and five that are either a subsidiary of an independent power producer, a subsidiary of a foreign-owned company, or that have been acquired by an investment firm.

CenterPoint Energy

On February 1, S&P downgraded CenterPoint Energy, citing its recently completed merger with Vectren, lowering the combined company CenterPoint's rating to BBB+ from A-. S&P said Vectren's construction business increased the risk profile of CenterPoint's nonutility operations; in particular, the acquisition debt would increase leverage and weaken financial measures over the next several years. S&P also lowered the ratings of subsidiaries CenterPoint Energy Houston Electric and CenterPoint Energy Resources to BBB+ from A-. Likewise, S&P downgraded Vectren and its subsidiaries Vectren Utility Holdings, Indiana Gas, and Southern Indiana Gas and Electric to BB+ from A- to align the ratings of Vectren and its subsidiaries with CenterPoint's group credit profile.

DPL Inc.

On November 26, S&P downgraded DPL Inc. and subsidiary Dayton Power and Light (DP&L) to BB from BBB-, a two-notch decrease, after Ohio regulators ordered DP&L to terminate its distribution modernization rider. The Public Utilities Commission of Ohio's (PUCO) decision was in response to a June 19 decision by the Supreme Court of Ohio that found PUCO's approval of an annual distribution charge by FirstEnergy's Ohio utilities was "unlawful and unreasonable" and must be removed for their electric security plans.

Eversource Energy

On July 25, S&P lowered Eversource Energy's rating to Afrom A+, a two-notch decrease, due to the company's decision to pursue growth through riskier contracted renewable assets. The action followed a win in New York's offshore wind solicitation by Sunrise Wind, Eversource's 880-MW offshore wind venture with Danish power company Orsted. S&P views contracted offshore wind as considerably riskier than the rest of Eversource's low-risk transmission and distribution portfolio. Even with the downgrade, Eversource remains among the top-rated parent companies in the industry at A-; only Berkshire Energy Holdings had a higher A rating at year-end 2019. S&P also lowered the ratings of subsidiaries Yankee Gas Services, NSTAR Gas, and Aquarian by two notches, to A- from A+, while subsidiaries NSTAR Electric, Connecticut Power & Light and Public Service Co. of New Hampshire received one-notch downgrades, to A from A+.

<u>Exelon</u>

On March 1, S&P upgraded Exelon's issuer credit rating to BBB+ from BBB, citing the successful execution of its utility-focused growth strategy. S&P noted that Exelon has reduced its business risk by implementing zero-emission credits (ZECs) in New York and Illinois and said it expects Exelon will implement ZECs in New Jersey later in 2019. S&P also cited the continuous growth of Exelon's lowerrisk regulated businesses, relative to other segments, as a reason for the upgrade. S&P expects Exelon's utility operations and ZECs will consistently account for about 75% of its consolidated EBITDA. S&P also upgraded subsidiaries Exelon Generation, Commonwealth Edison and PECO Energy to BBB+ from BBB; Pepco Holdings, Atlantic City Electric, Delmarva Power & Light and Potomac Electric Power to Afrom BBB+; and Baltimore Gas and Electric to A from A-.

<u>PG&E</u>

In January 2019, S&P lowered the issuer credit rating for PG&E Corporation and subsidiary Pacific Gas and Electric in three actions related to the devastating California wildfires in 2017 and 2018. On January 7, S&P cited an eroding political and regulatory environment in its downgrade to B from BBB-. On January 14, the ratings were lowered to CC from B after PG&E announced plans to seek Chapter 11 bankruptcy protection related to billions of dollars of potential liabilities. On January 29, S&P lowered ratings for PG&E and Pacific Gas and Electric to D from CC when PG&E made its voluntary Chapter 11 bankruptcy filing.

Other California Utilities

On January 21, S&P downgraded Edison International and its subsidiary Southern California Edison (along with Sempra Energy subsidiary San Diego Gas & Electric), stating the companies remain at high risk from catastrophic wildfires due to climate change and lack sufficient regulatory protection because of California's common law application of the legal doctrine of inverse condemnation. Edison International and Southern California Edison's ratings were lowered to BBB from BBB+, while San Diego Gas & Electric's rating was downgraded to BBB+ from A-.

FirstEnergy

Although FirstEnergy's parent-level rating with S&P remained at BBB throughout the year, 23 total actions (all upgrades) at the operating utility level were the industry's most, by far, for any single holding company.

On March 21, Moody's upgraded subsidiaries American Transmission Systems and Mid-Atlantic Interstate Transmission to A3 from Baa1, citing robust capital investment programs supported by the Federal Energy Regulatory Commission (FERC) regulatory framework. On July 23, Moody's upgraded subsidiaries Ohio Edison and Pennsylvania Power to A3 from Baa1, Toledo Edison to

Bond Ratings December 31, 2019 as rated by Standard & Poor's

U.S. INVESTOR-OWNED ELECTRIC UTILITIES



Bond Ratings December 31, 2018 as rated by Standard & Poor's



Baa1 from Baa3, and Cleveland Electric Illuminating to Baa2 from Baa3, stating that FirstEnergy's Ohio utilities benefit from a constructive regulatory environment for rate base growth over the next several years. On April 18, Fitch upgraded FirstEnergy subsidiaries Monongahela Power, Allegheny Generating, Potomac Edison and Jersey Central Power & Light to BBB from BBB- stating that First Energy's core utility and transmission operations benefit from relatively low business risk and predictable earnings and cash flows. On November 8, Fitch upgraded parent company FirstEnergy to BBB from BBB-, along with upgrades for 12 of its subsidiaries; these included its Ohio, Pennsylvania and New Jersey operating utility distribution subsidiaries and FirstEnergy Transmission, along with its operating transmission utility subsidiaries.

Bond Ratings December 31, 2017 as rated by Standard & Poor's



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



Upgrades Outnumber Downgrades

The industry's 55 upgrades outnumbered its 35 downgrades in 2019. The 61.1% upgrade percentage is up from 45.3% in 2018, the only year since 2013 that upgrades did not outnumber downgrades. The five-year period 2013 through 2017 produced the five-highest upgrade percentages in our historical data.

Over the past ten years, upgrades outnumbered downgrades in seven years, with an annual average upgrade percentage of 64.4%. In 2019, FirstEnergy (23 upgrades) and Exelon (14 upgrades) accounted for 37, or two-thirds, of the industry's upgrades; these were spread across the three ratings agencies and throughout all four quarters.

A comparison of activity by all three ratings agencies is shown in the Rating Agency Activity table, with the following breakdown in 2019:

- Fitch (26 upgrades, 10 downgrades)
- Moody's (9 upgrades, 11 downgrades)
- Standard & Poor's (20 upgrades, 14 downgrades)

Rating Agency Activity

	0.3.	INVESTO	R-OWNER	JELEUIR		IES				
Total Ratings Changes	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Fitch	24	25	26	23	14	11	16	15	33	36
Moody's	20	11	20	17	85	12	13	12	23	20
Standard & Poor's	36	30	30	40	7	27	38	25	37	34
Total	80	66	76	80	106	50	67	52	93	90
Source, Fitch Ratings Moody's St	andard & Poor's	S&P Glob	al Market Ir	Itelligence	and EELE	inance Der	artment			

Primary reasons for upgrades were favorable regulatory/rate activity, increased regulated focus across business models, and improved financial metrics. Primary reasons for downgrades were the California wildfire crisis, M&A activity, unfavorable regulatory/rate activity, and decreased percentage of regulated operations.

Ratings by Company Category

The table S&P Utility Credit Rating Distribution by Company Category 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. At December 31, 2019, the average rating for both the Regulated and Mostly Regulated categories was BBB+.

S&P Utility Credit Ratings Distribution by Company Category **U.S. INVESTOR-OWNED ELECTRIC UTILITIES** 2015 2016 2018 2019 2017 % % # # % # % # # % Regulated A or higher 1 3% 2 6% 2 6% 1 3% 1 3% 12 32% A-8 22% 10 28% 34% 11 11 31% BBB+ 12 33% 13 36% 10 29% 11 32% 11 31% 22% 7 7 8 23% BBB 12 33% 8 20% 21% 4 2 BBB-1 3% 3 8% 11% 4 12% 6% 2 2 Below BBB-6% 0 0% 0 0% 0 0% 6% 100% 100% Total 36 100% 36 100% 35 34 35 100% **Mostly Regulated** A or higher 1 8% 1 8% 1 7% 2 15% 1 10% 2 2 14% 2 А-5 38% 17% 15% 1 10% 7 BBB+ 5 38% 58% 7 50% 7 54% 7 70% 2 BBB 1 8% 0 0% 14% 1 8% 0 0% BBB-1 8% 1 8% 1 7% 1 8% 1 10% Below BBB-0 0 0% 1 8% 1 7% 0 0% 0 0% Total 13 100% 12 100% 14 100% 13 100% 10 100% Diversified *removed this category after 2016 A or higher 0 0% 0 0% A-0 0% 0 0% BBB+ 1 50% 0 0% BBB 0 0% 1 50% 1 50% 1 50% BBB-0 0 Below BBB-0% 0% Total 2 100% 2 100%

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.

Long-Term Credit Rating Scales

U.S. INVESTOR-OWNED ELECTRIC UTILITIES

	Moody's	Standard & Poor's	Fitch
	Aaa	AAA	AAA
Investment	Aal	AA+	AA+
	Aa2	AA	AA
	Aa3	AA-	AA-
Grade	A1	A+	A+
	A2	A	A
	A3	A-	A-
	Baa1	BBB+	BBB+
	Baa2	BBB	BBB
	Baa3	BBB-	BBB-

	Moody's	Standard & Poor's	Fitch
	Ba1 Ba2 Ba3	BB+ BB BB-	BB+ BB BB-
Speculative Grade	B1 B2 B3	B+ B B-	B+ B B-
	Caa1 Caa2 Caa3	CCC+ CCC CCC-	CCC+ CCC CCC-
	Са	CC	CC
	С	С	С

	Moody's	Standard & Poor's	Fitch	
Default	С	D	D	

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

Business Strategies

Business Segmentation

The industry's regulated business segments - regulated electric and natural gas distribution — grew their combined assets by \$112.7 billion, or 8.2%, in 2019, extending a multi-year trend and driving a \$132.0 billion, or 8.1%, increase in total industry assets. Regulated assets remained at about 81.7% of the industry total, essentially matching their share at year-end 2018. The Regulated Electric segment's share of total industry assets edged down from 69.0% at year-end 2018 to 68.7% at year-end 2019, despite rising \$89.3 billion, or 7.7%, in absolute terms as the industry's three other primary business segments experienced even higher percentage growth. Competitive Energy assets rose by \$16.8 billion, or 9.5%, driven largely by growth in merchant renewable generation while the industry's natural gas operations also saw strong asset growth. A recordhigh \$124.1 billion of capital expenditures and generally constructive regulatory relations supported the growth in regulated assets - both electric and natural gas-related.

The Regulated Electric business segment's revenue fell by \$1.3 billion, or 0.5%, as power demand was almost 2% lower in 2019 than in 2018. Competitive Energy revenue declined by \$2.8 billion, or 5.1%. Natural Gas Distribution was the only primary business segment with higher revenue, growing by \$2.0 billion, or 4.4%. As a result, total industry revenue was nearly unchanged versus 2018, falling by \$1.1 billion, or 0.3%. The Natural Gas Distribution segment has led the industry in revenue growth over the last four years, partly a result of several major gas acquisitions that closed during 2016.

2019 Revenue by Segment

Regulated Electric revenue decreased slightly in 2019, falling by \$1.3 billion, or 0.5%, to \$253.5 billion from \$254.8 billion in 2018. The segment's share of total industry revenue was unchanged at 67.5%, remaining well above its level near the beginning of the industry's migration back to a regulated focus (its share was 51.9% in 2005).

Natural Gas Distribution revenue rose by \$2.0 billion, or 4.4%, to \$47.4 billion from \$45.3 billion in 2018. This followed annual increases of 3.0% in 2018, 17.6% in 2017 and 8.9% in 2016, gains 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 \$685 million, or 0.2%, to \$300.9 billion in 2019. The industry's focus on regulated operations has driven a steady growth in these two business segments' share of industry revenue. Regulated revenue in total accounted for 80.1% of industry revenue in 2019, up from 79.5% in 2018 and well above 2005's 65.3% share.

Eliminations and reconciling items were added back to total revenue to arrive at the denominator for the segment percentage calculations shown in the graphs *Revenue Breakdown 2019 and 2018*.

2019 Assets by Segment

Regulated Electric assets increased by \$89.3 billion, or 7.7%, during 2019. However, the segment's share of total industry assets declined to 68.7% at year-end from 69.0% at year-end 2018 as the industry's other primary business segments experienced even higher percentage growth. Competitive Energy assets increased by \$16.8 billion, or 9.5%. Natural Gas Distribution assets showed the highest percentage growth among the industry's three largest segments for the fourth consecutive year, gaining \$23.3 billion, or 11.0%. Natural Gas Pipeline assets experienced an increase of \$5.0 billion, or 19.3%.

Busines	Business Segmentation—Revenues									
U.S. IN	U.S. INVESTOR-OWNED ELECTRIC UTILITIES									
(\$ Millions)	2019	2018r	Difference	% Change						
Regulated Electric	253,505	254,836	(1,331)	-0.5%						
Competitive Energy	51,400	54,154	(2,754)	-5.1%						
Natural Gas Distribution	47,356	45,340	2,016	4.4%						
Natural Gas Pipeline	5,292	5,415	(123)	-2.3%						
Other	18,174	17,692	482	2.7%						
Discontinued Operations	—	_		0.0%						
Eliminations/Reconciling Items	(10,832)	(11,463)	631	-5.5%						
Total Revenues	364,895	365,975	(1,079)	-0.3%						

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)	12/31/2019	12/31/2018r	Difference	% Change						
Regulated Electric	1,244,310	1,155,008	89,302	7.7%						
Competitive Energy	194,521	177,719	16,803	9.5%						
Natural Gas Distribution	235,592	212,243	23,349	11.0%						
Natural Gas Pipeline	30,999	25,986	5,012	19.3%						
Other	106,755	103,717	3,038	2.9%						
Discontinued Operations	3,960	3	3,957	NM						
Eliminations/Reconciling Items	(59,200)	(49,706)	(9,494)	19.1%						
Total Assets	1,756,936	1,624,969	131,967	8.1%						

r = revised

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

Total regulated assets (Regulated Electric and Natural Gas Distribution) grew by \$112.7 billion, or 8.2%, in 2019, maintaining the same share of total industry assets as last year, at just

under 81.7%. This aggregate measure has risen steadily from 61.6% at yearend 2002, underscoring the significant regulated rate base growth and widespread divestitures of non-core businesses over the 17-year period. Two-thirds of companies (30 of 45) either increased regulated assets as a percent of total assets or maintained a 100% regulated structure in 2019.

Regulated Electric

Regulated Electric segment operations include the generation, transmission and distribution of electricity under state regulation for residential, commercial and industrial customers. Regulated Electric revenues were slightly lower in 2019, falling by \$1.3 billion, or 0.5%. Twenty-four companies, or 53% of the industry, had lower Regulated Electric revenue versus the prior year. Regulated Electric revenue was unchanged in 2018, grew 0.8% in 2017 and declined slightly in 2016 (-0.1%) and in 2015 (-2.6%).

Annual electric output decreased by 1.7% in 2019 and has risen in only six of the last 12 years. Previously, 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 continue to constrain growth in electricity demand.

Regulated Electric assets increased by \$89.3 billion, or 7.7%, in 2019, showing the largest asset growth in dollar terms of all business segments. A record-high \$124.1 billion of capital expenditures in 2019 and generally constructive regulatory relations supported the increase in regulated assets. The 2019 capital expenditures represent the eighth consecutive annual record high, with this expansion well represented across the four primary business segments. Asset growth is also evident in the industry's property, plant and equipment in service, which rose 7.3% from year-end 2018 and 26.4% over the level at year-end 2015. Such strong growth in assets reflects the magnitude 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 increased by \$16.8 billion, or 9.5%, to \$194.5 billion in 2019 from \$177.7 billion in 2018 due largely to new renewable generation. However, weaker pricing drove the segment's revenue down by \$2.8 billion, or 5.1%, from \$54.2 billion in 2018 to \$51.4 billion in 2019, its lowest annual total in data going back to 2000. Despite the segment's 2019 asset growth, its total assets remain below their overall level of about a decade ago; the segment's year-end





Source: EEI Finance Department and company annual reports.

Source: EEI Finance Department and company annual reports.

2007 assets were \$206.0 billion and its annual revenue peaked at \$113.2 billion in 2008. 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 seeking to supplement generation capacity. Competitive Energy also includes the trading and marketing of natural gas. Of the 21 companies that maintain Competitive Energy operations, 15 (71%) grew these assets during 2019 and 57% had revenue gains from this segment.

NextEra Energy (NEE), a world leader in renewable generation, produced the largest Competitive Energy segment asset growth among all companies, increasing its NextEra Energy Resources assets (which includes its wholesale power generation and energy-related services business) by \$7.0 billion, or 15.7%. The NEE parent also grew Regulated Electric segment assets by \$9.5 billion, or 17.8%, which balanced NEE's overall asset growth of \$14.0 billion, or 13.5%, in 2019. The growth in NEE's Regulated Electric segment was due to the acquisition of regulated utility Gulf Power from Southern Company in January 2019 and growth at FPL, NEE's primary rate-regulated utility.

AVANGRID had the second-highest asset growth in the Competitive Energy segment, growing its renewables business by \$2.5 billion, or 23.0%, in 2019. This business line includes mainly wind energy generation and related renewable energy trading activities. Another notable expansion of Competitive Energy assets occurred at Cleco, which added Cleco Cajun as a new business segment with assets of \$1.0 billion at year-end 2019. Cleco Cajun owns eight generating assets with a rated capacity of 3,555 MW and supplies wholesale power and capacity in Arkansas, Louisiana and Texas.

The largest decrease in Competitive Energy assets came from Sempra Energy, at \$2.3 billion, an approximate 50% decline. Sempra completed the sale of its U.S. renewables business in 2019. As of year-end 2019, it had also announced the sale of its Sempra South American Utilities business, completing that divestiture in April 2020. Both sales support Sempra's focus on growth opportunities at its California and Texas utilities.



Asset Breakdown As of December 31, 2018r

U.S. INVESTOR-OWNED ELECTRIC UTILITIES



Source: EEI Finance Department and company annual reports.

Source: EEI Finance Department and company annual reports.

Natural Gas

Natural Gas Distribution revenue rose by \$2.0 billion, or 4.4%, the only primary business segment with revenue growth in 2019. This followed revenue growth of 3.0% in 2018, 7.6% in 2017 and 8.9% in 2016. The large gas acquisitions that were completed in 2016 -Southern Company's purchase of AGL Resources, Dominion's purchase of Questar, Duke Energy's acquisition of Piedmont Natural Gas and Black Hills' acquisition of SourceGas Holdings - set a foundation for the segment's revenue growth in 2016, 2017, 2018 and 2019. Total gas distribution revenue for these four acquiring companies increased more than six-fold over the last four years, rising to \$8.50 billion in 2019 from \$1.26 billion in 2015. Overall, 19 of the 27 companies (70%) that report gas distribution revenue showed a yearto-year increase in 2019. This followed increases at 86% and 93%, respectively, of reporting companies in 2018 and 2017.

Natural Gas Distribution includes the delivery of natural gas to homes, businesses and industrial customers throughout the United States. 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 \$28.4 billion, or 11.9%, in 2019 and produced revenue of \$52.6 billion, up from \$50.8 billion in 2018. In percentage terms, the contribution to total industry revenue from these two natural gas activities increased to 14.0% in 2019 from 13.4% in 2018.

Elimination of the Natural Gas and Oil Exploration & Production Business Segment

The Natural Gas and Oil Exploration & Production business segment has steadily declined in size over the past decade. No companies had revenue there in 2019, and only one still carries a small asset amount for the segment. Therefore, we have eliminated this segment from our reporting and shifted its small remaining asset amount to the Other segment.

2019 Year-End List of Companies by Category

Early each calendar year, EEI updates our list of investor-owned electric utility holding companies organized by business category. The list is based on previous year-end business segmentation data presented in 10-Ks and supplemented by discussions with parent companies. Our categories are as follows: Regulated (80% or more of holding company assets are regulated) and Mostly Regulated (less than 80% of holding company assets are regulated). As of January 1, 2017, the Diversified category, which represented companies whose regulated assets were less than 50% of total assets, was eliminated due to its dwindling number of members.

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

There was minimal movement between categories in 2019. The Regulated category decreased from 37 to 35 companies as a result of one addition and three deletions, two of which were merger-related. CenterPoint Energy was added as its regulated asset percentage rose above 80% while Vectren was removed due to its acquisition by CenterPoint. SCANA was removed due to its acquisition by Dominion Energy, and Sempra Energy migrated to the Mostly Regulated category as its regulated asset percentage fell below 80%. Sempra's exit from its Sempra South American Utilities business, which had been part of the Regulated Electric segment, outweighed the sale of its U.S. renewables business, which was classified as Competitive Energy, thus driving the overall lower regulated percentage.

The Mostly Regulated category remained at ten companies based on the addition of Sempra Energy and the loss of CenterPoint Energy.

The total number of parent companies in the EEI universe fell from 47 at year-end 2018 to 45 at year-end
List of Companies by Category at December 31, 2019

Regulated (35)

Alliant Energy Corporation Ameren Corporation American Electric Power Company, Inc. Avista Corporation Black Hills Corporation CenterPoint Energy, Inc. *Cleco Corporation** CMS Energy Corporation Consolidated Edison, Inc. Dominion Energy, Inc. *DPL Inc.** Duke Energy Corporation

Mostly Regulated (10)

ALLETE, Inc. AVANGRID, Inc. *Berkshire Hathaway Energy** DTE Energy Company Edison International El Paso Electric Company Entergy Corporation Evergy, Inc. Eversource Energy FirstEnergy Corp. IDACORP, Inc. *IPALCO Enterprises, Inc.** NiSource Inc. NorthWestern Corporation MGE Energy, Inc. OGE Energy Corp. Otter Tail Corporation

Exelon Corporation Hawaiian Electric Industries, Inc. MDU Resources Group, Inc.

NextEra Energy, Inc. Public Service Enterprise Group Incorporated Sempra Energy

PG&E Corporation

Pinnacle West Capital

PNM Resources, Inc.

Portland General Electric

Corporation

Company PPL Corporation

Puget Energy, Inc.*

Southern Company

WEC Energy Group, Inc.

Unitil Corporation

Xcel Energy Inc.

Note:* Non-publicly traded companies.

2019, a result of the CenterPoint/ Vectren and Dominion/SCANA mergers. In January 2019, Dominion Energy completed its merger with SCANA and in February CenterPoint Energy completed its merger with Vectren. At year-end 2019, the EEI universe included 35 Regulated and 10 Mostly Regulated utility holding companies. (*see List of Companies by Category at December* 31, 2019).

Mergers and Acquisitions

M&A activity — when defined as mergers or acquisitions of whole operating companies with a regulated service territory - produced only two announced transactions in 2019: the proposed sale of Emera Maine to Canadian utility ENMAX and a J.P. Morgan-advised infrastructure fund's bid for El Paso Electric. Note that the charts and tables in this section are based on changes that affect the U.S. Investor-Owned Electric Utilities, as defined on the cover page of this document, and therefore only one announcement (El Paso Electric) is included in those figures. The previous six years — 2013 through 2018 — saw 27 mergers proposed and 20 completed. Utilities spent 2019 in a consolidation phase and successfully closed five of the mergers announced in 2018, so it is not surprising that 2019 was the quietest year for announced deals since 2012, when only one merger was announced.

M&A is now being constrained by the industry's steady consolidation. There were 40 investor-owned utilities at year-end 2019, down from 58 ten years earlier and more than 70 at the turn of the century. And the competitive power side of the business has largely completed its wave of divestitures and restructurings. Analysts commentary also suggested the need for M&A to achieve the earnings growth investors demand is perhaps lower than it was several years ago. Most utilities are now focused on internal growth through regulated capex programs. And the price demanded by targets rose in 2019 as utility priceearnings (PE) multiples climbed higher. A 20% buyout premium added to PEs in the high teens and low twenties can make deal arithmetic difficult for many buyers. But high PEs are produced in part by very low interest rates and those continued to drive financial buyers to look hard at regulated as-

Status of Mergers & Acquisitions 1995–2019



U.S. INVESTOR-OWNED ELECTRIC UTILITIES

Source: EEI Finance Department.

sets as a way of generating income. A third announced deal in 2019 saw a Canadian pension plan bid for renewable power producer Pattern Energy, based in San Francisco, CA, while other Canadian pension investors boosted their stake in Puget Sound in one of the year's completed deals.

State regulators blocked one deal in 2019, Avista and Canadian utility Hydro One's plan to merge, the seventh withdrawn deal of the past eight years. The large number of completed deals in recent years shows mergers can get done if they can show ratepayer benefits, respect the acquired utility's local presence and offer investment programs that support clean energy and economic development. But many of those completed deals weren't easy to close and analysts noted that deal politics is always a potential headwind to any proposed utility M&A.

Announced Transactions

<u>Canadian utility ENMAX Seeks to</u> <u>Buy Emera Maine</u>

On March 25, two Canadian utilities - Calgary-based ENMAX and Nova Scotia's Emera - announced a plan for ENMAX to buy Emera Maine, Emera's regulated electric transmission and distribution subsidiary in Maine, for \$959 million USD or \$1,286 million Canadian (CAD). Including assumed debt, the deal would have an aggregate enterprise value of \$1.3 billion USD (\$1.8 billion CAD) on closing. ENMAX, with \$5.6 billion CAD in assets and revenue of \$2.4 billion CAD, provides electricity, natural gas, renewable energy and other services to approximately 670,000 residential and commercial customers across

L	I.S. INVESTOR-OWNE	D ELECTRIC UTILIT	IES
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	T
2015	2	5	_
2016	9	6	1
2017	1	3	2
2018	2	3	- 1
2019	3	1	1
Totals	119	147	32

Status of Announced Mergers & Acquisitions

Alberta, Canada. The company is wholly owned by the City of Calgary, Alberta. Nova Scotia-based Emera serves 2.5 million customers in Canada, the U.S. and the Caribbean with more than \$32 billion CAD in assets and approximately \$6.5 billion in revenue. Its U.S. subsidiaries include Tampa Electric, TECO People's Gas and New Mexico Gas in addition to Emera Maine, which provides transmission and distribution services to 154,000 residential, commercial and industrial customers in Maine. Emera said the proposed sale supports its three-year plan to raise \$2.1 billion CAD in equity proceeds, reduce corporate debt, optimize its asset portfolio and fund its \$6.5 billion CAD regulated capex program. In March 2019, Emera sold its 1,100 MW New England gas generation portfolio, composed of three gas-fired electricity generating facilities, to Revere Power, an affiliate of The Carlyle Group, for \$590 million USD (\$792 million CAD). ENMAX said the proposed purchase supports its plan to grow through expansion of its regulated utility business in North America and would add approximately \$900 million CAD in regulated rate base assets to ENMAX's portfolio, a 50% increase. ENMAX would derive 70% of future cash flow from regulated and non-commodity sources. ENMAX said the purchase would be funded with debt and immediately accretive to earnings and cash flow.

While the deal is relatively small by industry standards, it showcases the political and regulatory challenges often attendant with utility M&A. According to news reports, local politicians and stakeholders in Calgary criticized the planned \$1.8 billion expenditure and assumption of new debt by a city-owned entity when city budgets are being cut and local commercial property prices are in steep decline. Others questioned why a city-owned utility should expand far outside its local jurisdiction and suggested the city should instead raise funds through a sale of the utility to private ownership, which could better accommodate any growth ambitions. In early October, S&P cut ENMAX's issuer credit rating to 'BBB' from 'BBB+' and placed the company on CreditWatch Negative, in part as a result of the acquisition's proposed debt financing.

In Maine, local politicians and stakeholders worried about potential rate hikes and job cuts. The Maine Public Utility Commission said it was concerned that debt service costs might force cuts to operating budgets and about the potential influence Calgary's city government could have over Emera Maine's management. In June, Maine passed a law subjecting utility M&A to a net benefit standard for approval rather than simply no net harm. Maine regulators rejected the deal in early March 2020, but gave it their blessing a few weeks later when ENMAX agreed to a negotiated settlement that offers direct benefits to Emera Maine customers; these include holding customer distribution rates at current levels until October 2021, implementing customer service quality and reliability performance standards, offering customer rate credits, and increasing levels of community investment. The deal closed successfully on March 24.

<u>Infrastructure Fund to Buy</u> <u>El Paso Electric</u>

Financial buyers made an appearance in 2019 M&A action in the form of a buyout offer for west Texas and southern New Mexico regulated utility El Paso Electric. On June 3, the utility announced it had agreed to be purchased by Infrastructure Investments Fund (IIF), an infrastructure fund advised by J.P. Morgan Investment Management, for \$68.25 per share, a cash deal valued at \$4.3 billion including debt. The purchase price was a 17% premium to El Paso's closing price before the announcement, representing a PE multiple of nearly 29 times 12-month earnings through March 31. El Paso said IIF's renewable energy expertise makes it an ideal partner to help the Texas utility navigate a rapidly changing industry that requires significant long-term investments in renewable energy and sustainability. New Mexico has said it wants its power carbon-free by 2045. El Paso Electric said the agreement would leave it independently operated with headquarters in El Paso and commitments that its management and workforce would remain in place. The announcement said EPE and IIF would offer \$21 million in rate credits over 36 months and invest \$100 million over 20 years in a community economic sustainability fund for El Paso's service area. IIF, which calls itself a long-term owner of utilities, said El Paso would be its flagship investment in the U.S. Analysts cited the strong customer growth and need for investment in El Paso's service territory as points of attraction for IIF.

El Paso Electric provides generation, transmission and distribution service to approximately 428,000 retail and wholesale customers across the Rio Grande Valley in west Texas and southern New Mexico. IIF's 19 portfolio companies are located primarily in the United States, Western Europe and Australia, and include 11 energy, utility and electric generation companies. IIF also has significant experience developing renewable energy sources, with \$3 billion in renewable power generation assets that collectively provide 3.4 GW of renewable capacity.

The companies hope to close the deal, which requires approval from state regulators in Texas and New Mexico, along with the FERC, and in the first half of 2020. Texas state regulators approved the deal in January 2020.

Merger	Impacts 1	995–2019
U.S. INVESTO	R-OWNED ELE	CTRIC UTILITIES
Date	No. of Utiliti	es 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%)

Number of Companies Declined by 59% since Dec.'95

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

Source: EEI Finance Department.

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			U.S. INVESTOR	-OWNED ELECTF	RIC UTILITI	ES		
Ann'cd	Buyer	Seller/Acquired/Merged	Status New Co	mpany Complete Date	d Months to complet	Bus.	Terms	Est. Trans Value (\$MM)
6/3/19	JP Morgan Investment Management	El Paso Electric	N				JPMorgan pays \$68.25/share in cash for each share of El Paso Electric Co. common stock	4,285.7
5/21/2018	NextEra Energy, Inc.	Gulf Power Company	C	1/1/2019	2	Ш	NEE to pay \$4.35 billion in cash to acquire Gulf Power Company from Southern Company	4,350.0
4/23/2018	CenterPoint Energy	Vectren Corporation	U	2/1/2019	10	EG	CNP pays \$72.00/share in cash for each share of Vectren common stock	6,000.0
1/3/2018	Dominion Energy, Inc.	SCANA Corporation	O	1/1/2019	12	Ш Ш	\$6.7B debt + \$7.9 stock (per share value of \$55.35, roughly 31% premium)	14,600.0
8/21/2017	Sempra Energy	Oncor Electric Delivery Company	C	3/8/2018	9	Ш	\$9.5B cash	9,450.0
7/19/2017	Hydro One Limited	Avista Corporation	~	1/23/201	0		\$5.3B cash (per share value of \$53.00, roughly 24% premium)	5,300.0
7/7/2017	Berkshire Hathaway Energy	Oncor Electric Delivery Company	~	8/21/201	2		\$9.0B cash	9,000.0
9/28/2016	DTE Energy	Appalachia Gathering System / Stonewall Gas Gathering	O	10/20/201	6 1	Б	Undisclosed	1,300.0
7/29/2016	NextEra Energy	Oncor Electric Delivery Company	~	10/31/201	7		\$9.5B debt + additional cash and common stock	11,178.0
5/31/2016	Great Plains Energy	Westar Resources	C Evergy, li	nc. 6/5/2018	24	Ш	\$3.6B debt + \$8.6 stock and cash (per share value of \$60.00)	12,200.0
2/9/2016	Fortis Inc.	ITC Holdings Corp.	O	10/14/201	8	E	\$4.4B debt + \$6.9B common shares and cash (per share value of \$44.90, roughly 33% premium)	11,300.0
2/9/2016	Algonquin Power & Utilities	Empire District Electric Company	O	1/1/2017	11	Ш	\$1.6B debt + additional debt and equity (per share value of \$34.00, roughly	2,400.0
2/1/2016	Dominion Resources	Questar Corporation	0	9/16/201	00	Ŭ	21% premium) \$1.5B debt + \$2.4B cash + \$500M equity (per share value of \$25.00.	4.400.0
							roughly 30% premium)	
10/26/2015	Duke Energy	Piedmont Natural Gas	U	10/3/201	5 12	Б	\$3.3B debt + \$1.0B cash + \$625M equity (per share value of \$60.00, roughly 40% premium)	4,900.0
9/4/2015	Emera	TECO Energy, Inc.	O	7/1/2016	10	Ш	\$6.5B debt + \$3.9B equity (per share value of \$27.55, roughly 48%	10,400.0
3100/10/0			c		6	Ċ	A 1 D debt - A OD control - control - control - control - control - CO	
GTU2/42/8	southern company	AGL KESOUICES	0	9107/1//	DI	و ل	\$4.1B debt + \$8.0B equity (per snare value of \$00.00, rougnly 30% premium)	12,000.4
7/12/2015	Black Hills Corporation	SourceGas Holdings	O	2/12/201	5 10	99	\$760M debt + \$1.13B cash	1,890.0
2/25/2015	Iberdrola USA	UIL	C AVANGR	ID, Inc. 12/16/201	5 10	EE	\$1.8B debt + \$0.6B cash + \$2.4B equity (per share value of \$52.75, concepto 25% economium of which \$10.60 will be each?	4,756.0
12/3/2014	NextEra Energy	Hawaiian Electric	×	7/18/201	10		Note: Note: The premium, or which structor will be cosh. NEE to acquire HE for \$2.6B equity + \$1.4B debt (fixed exchange ratio of 0.2413 NEE shares)	3,963.0
10/20/2014	Macquarie-led Consortium	Cleco	U	4/13/201	5 18	Ш	\$3.4B equity (all Cleco shares at \$55.37 / share in cash (~15% premium))	4,700.0
							+ \$1.3 debt	
6/23/2014	Winsconsin Energy	Integrys	C WEC Ene Group, Ir	rgy 6/30/201 nc.	5 12	Ш	WEC to acquire TEG for \$5.758B equity + \$3.374B debt (fixed exchange ratio of 1.128 WEC shares + \$18.58)	9,100.0
5/1/2014	Berkshire Hathaway Energy	AltaLink (Canadian)	0	12/1/201	1 7	ET	BHE to acquire AL for \$3.2B cash + \$2.7B debt	5,927.0
4/30/2014 3/3/2014	Exelon UIL Holdings	Pepco Philadelphia Gas Works	0 ≥	3/23/201 12/4/201	5 24 4	Ш	EXC to acquire POM for \$6.8B in cash (\$27.25 per POM share) UIL to acquire assets & liabilities of PGW from city of Philadelphia for \$1.86	12,337.0 1,860.0
)	-					billion in cash	
12/12/2013	Fortis Inc.	UNS Energy	C	8/15/201	8	Ш	Fortis pays \$60.25 / share (31% premium to announcement day's close) + \$1.8B in debt	4,578.1
11/4/2013	Avista	Alaska Energy & Resources Company	C	7/1/2014	∞	Ш	AVA to acquire Alaska Energy & Resources Company for \$145MM equity + \$24.5MM debt	169.5
5/29/2013	MidAmerican Energy Holdings Co.	NV Energy	C Berkshire Hathawa	е 12/19/201 v Fnerøv	3 7	EE	MidAmerican pays \$23.75 / share + assume \$4.8 billion debt	10,494.3
5/25/2013	TECO Energy, Inc.	New Mexico Gas Intermediate, Inc.	O	9/2/2014		Ш	TECO will pay \$950 million, including assume \$200 million debt to Continental Energy Systems LLC	950.0
2/20/2012	Fortis Inc.	CH Energy Group	O	6/27/201	3 16	Ш	Fortis pays \$65.00/share cash & assumes approx. \$687.37 MM debt.	1,609.7
5/27/2011	Fortis Inc.	Central Vermont Public Service Corp	×	7/11/201		Ш	Fortis pays approx. \$35.10/share cash & assumes approx. \$226.4 mill in debt.	701.6
1/8/2011	Duke Energy	Progress Energy	C	7/3/2012	18	Ш	0.87083 Duke shares (after 1-3 reverse split) for each Progress share + assume \$12.1 billion net debt.	32,000.0
7/11/2011	Gaz Metro LP	Central Vermont Public Service Corp	O	6/27/201:	2 12	GE	Gaz Métro pays \$35.25/share for each CVPS share & assumes \$226 million debt.	704.2

10/16/2010	Northeast Utilities	NSTAR	С	4/10/2012	18	Ш	1.312 NU shares for each NSTAR	shr, plus \$3.36 bill assume debt	7,566.7
4/28/2011	Exelon Corp.	Constellation Energy Group Inc.	C	3/12/2012	11	Ш	CEG receive 0.93 shares of EXC fo	each CEG share. EXC assumes approx.	10,623.2
4/19/2011	AFS Corporation	DPI Inc	Ċ	11/28/2011	7	LL LL	φ∠:3 bill thet debt AFS navs 30 00/share cash & assi	imes approx \$1 1 hillion of net deht	4 613 2
4/28/2010	PPI Corporation	FON LLS		11/1/2010	, c		\$6.83 hillion cash + \$764.0 million	n in assumed debt	7.625.0
3/12/2010	Fmera Inc	Maine & Maritimes		12/21/2010	σ	J LL J LL	\$76 mm cash + \$28 6 mm debt +	Consistent accurate the set of	1174
2/10/2010	EirstEnerøv	Alleghenv Fnerøv		2/25/2011	, <u>c</u>		\$4.3 hillion in equity + \$4.7 hillion	in assumed debt	9 273 2
9/17/2008	Berkshire Hathawav	Constellation Energy Group Inc.		12/17/2008			\$4.7 bill cash + \$4.4 bill net debt	ind adjustments	9.152.5
7/25/2008	Sempra Energy	EnergySouth Inc.	C	10/1/2008	m	БП	\$499 million cash + 283 million de	bt	771.9
7/1/2008	MDU Resources Group, Inc.	Intermountain Gas Co.	С	10/1/2008	С	Б	\$245 million cash + \$82 million de	bt	327.0
6/25/2008	Duke Energy	Catamount Energy Corp.	С	9/15/2008	с	Ч	\$240 million cash + \$80 million as	sumed debt	320.0
2/15/2008	Unitil Corp.	Northen Utilities / Granite State Gas	C	12/1/2008	10	EG	\$160 million cash		160.0
		Transmission							
1/12/2008	PNM Resources, Inc.	Cap Rock Holding Corp.	×	7/22/2008		Ш	\$202.5 million		202.5
10/26/2007	Macquarie Consortium	Puget Energy	0	2/6/2009	16	Ш	\$3.5 billion cash + \$3.02 billion ne	t debt	6,520.2
6/25/2007	Iberdrola S.A.	Energy East Corp.	O	9/16/2008	15	Ш	\$4.5 billion cash + \$4.1 billion net	debt	8,600.0
2/26/2007	KKR & Texas Pacific Group	TXU Corp. ¹	C Energy Future Holdings Corn	10/10/2007	00	ЪЕ	\$31.8 billion cash + \$12.1 billion r	et debt	43,882.0
2/7/2007	Black Hills Corp. / Great Plains	Aquila Inc. (CO elec. util. + CO, KS, NE, IA	C C	7/14/2008	17	G	\$940 million cash +working capita	l and other adjustments	940.0
	Energy Inc. ²	gas utils.)					•	·	
7/8/2006	MDU Resources Group, Inc.	Cascade Natural Gas Corporation	С	7/2/2007	12	g	\$305.2mm in cash + (\$173.6 in d	ebt - \$13.0 in cash equivalents)	465.8
7/8/2006	WPS Resources Corporation	Peoples Energy Corporation	C Integrys Energy Group	2/21/2007	7	Б	\$2.47 billion		2,472.4
7/5/2006	Macquarie Consortium	Duquesne Light Holdings	a and b	5/31/2007	10	LL. LL	\$1.59 hillion cash + \$1.09 hillion t	ntal debt	2,674,4
6/22/2006	Gaz Metro LP	Green Mountain Power Corp.		4/12/2007	10		\$187 million in cash + (\$100.8 del	ot - \$9.1mm in cash equivalents)	279.5
5/11/2006	ITC Holdings Corp	Michigan Electric Transmission Co.		10/10/2006	LC LC		\$485.6mm cash + \$70mm comm	on stock + \$311mm assumed debt	866.6
4/25/2006	Babcock and Brown Infrastructure	NorthWestern Corp.		7/24/2007)		\$2.2 billion cash		2.200.0
2/27/2006	National Grid	KevSpan Corp.	: 0	8/24/2007	18		\$74 billion cash + \$4.5 billion lone	-term debt	11.877.5
12/19/2005	FPL Group Inc.	Constellation Energy Inc.		10/25/2006)		\$11.3 billion equity + \$4.1 billion r	et debt and pension liabilities	15.311.5
5/24/2005	MidAmerican Energy Holdings Co.	Pacificorp	: 0	3/21/2006	10		\$5.1 billion cash + \$4.3 billion in r	et debt and preferred stock	9.300.0
5/9/2005	Duke Energy Corp.	Cinergy Corp.	0	4/3/2006	11	Ш	\$9.1 billion equity + \$5.5 billion ne	t debt and pension liabilities	14.600.0
12/20/2004	Exelon Corp.	Public Service Enterprise Group		9/14/2006	1		\$12.3 billion in equity + \$13.4 billi	on in net debt and pension liabilities	25,700.0
7/25/2004	PNM Resources	TNP Enterprises	C	6/6/2005	12	Ш	\$189 million in stock and cash and	\$835 million in debt	1,024.0
2/3/2004	Ameren Corp	Illinois Power ³	0	10/1/2004	00	Ш	\$1.9 billion in debt, pref stock, & o	ther liab + \$400 million in cash	2,300.0
11/24/2003	Saguaro Utility Group L.P.	UniSource Energy	M	12/30/2004		ЪЕ	\$850 million cash + \$2 billion in d	ebt	2,850.0
11/3/2003	Exelon Corp.	Illinois Power	M	11/22/2003		Ш	\$275 million cash + \$1.8 billion in	debt + \$150 million promissory note	2,225.0
4/30/2002	Aquila Inc	Cogentrix Energy Inc	M	8/2/2002		EIPP	\$415 million cash + \$1.125 billion	in assumed debt	1,540.0
4/29/2002	Ameren Corp	CILCOR P4	С	1/31/2003	6	Ш	\$541 million cash + \$781 in assun	ned debt + \$41 million in pref stock	1,400.0
10/8/2001	Northwest Natural Gas	Portland General	M	5/16/2002		ЧÖ	\$1.55 billion cash + \$250mm in st	ock	1,800.0
9/20/2001	Duke Energy	Westcoast Energy	C	3/14/2002	9	g	Equity + cash valued at \$27.90 pe	· Westcoast share	8,500.0
9/10/2001	Dominion Resources	Louis Dreyfus Natural Gas	O	11/1/2001	0	Б	\$890mm cash + \$900mm stock +	\$505mm debt	2,295.0
2/20/2001	Energy East	RGS Energy	C	6/28/2002	16		\$1.4 bill. cash & equity + \$1.0 bill.	net debt	2,400.0
2/12/2001	PEPCO	Conectiv	C	8/1/2002	18		\$2.2 bill cash & equity + \$2.8 bill.	net debt	5,000.0
11/9/2000		Western Kesources	A (1/8/2002	C F		Stock transfer		4,442.0
10/2/2000			ہ د	ZUUZ/CI/Z	0 r	U L U L			1,100.0
0000/0/6	National Grid Group	Niagara Monawk C bi i iac		11/31/2002	Q I		\$19 per snare		8,900.0
8/8/2000		GPUINC.	2	1002///11	ΩT	IJ L IJ L	430.00 per snare		12,000.0
0002/12//	A FS Corroration	Entergy	≥ 0	1002/2/4	0		I/I - FPL, U.385/I - ЕТК Ф.Л. тот сћого		0.000,12
0000/00/5				1002/12/2	οç		¢⊃c FO ====		3,040.0
0002/05/0	IND FOWER	bangor hydro	C Emera	1002/01/01	Q		\$20.00 per silare		0.002
¹ TXU (now Ent Limited Partner	ergy Future Holdings Corp.) was acqu ship (TEF) on 10/10/2007.	ired by the Texas Energy Future Holdings	⁴ Ameren purchased CILC 1999.	ORP from AES Cor	poration.	AES CO	rrp acquired CILCORP in October	C = Completed E = Electric	
TEF was forme. Group to facilits	d by a group of investors led by Kohlt ate the merger.	erg Kravis Roberts and Texas Pacific	⁵ PNM purchased Western	n Resources' electr	ic operati	ons incl	uding generation, transmission,	W = Withdrawn G = Gas	
² Aquila was div	vided with Black Hills Corp. acquiring	the electric utility in Colorado and NG	and distribution.		C			PIN = Pending U = UI	+
utilities in CO, I and other corpo	A, KS, and NE. Great Plains Energy Ir orate assets.	nc. acquired the MI electric utility, stock,	and distribution assets.	n purcnaseu iviui.	ana ruwe	SLS EIEU	nc and natural gas transmission	Power P	uerit oducer
³ Ameren purch	nased Illinois Power from Dynegy Corp	poration. Dynegy Corp acquired Illinois	Source: EEI Finance Depa	rtment, S&P Globa	al Market	Intellige	lce.	P = Privatized	

Power in February 2000.

Withdrawn Transaction

<u>Avista and Hydro One Terminate</u> <u>Merger Plans</u>

While technically a 2019 withdrawn deal, the events that caused the merger to be abandoned largely occurred during 2018. On January 23, 2019, Washington State utility Avista and Canadian utility Hydro One jointly terminated their plan for Hydro One to acquire Avista. The deal, announced on July 19, 2017, called for Hydro One to pay \$53 in cash per common share, a 24% premium to Avista's closing price the previous day. Hydro One said the acquisition offered geographic and regulatory diversification while adding complementary and growing natural gas distribution operations as well as exposure to regulated and predominantly clean generation. Avista said combining with Hydro One would enable it to define and control its future in a consolidating industry through greater scale and financial flexibility. Avista planned to maintain its management team, employees, Spokane headquarters and its own board of directors and said no workforce reductions would result from the merger. However, both Washington and Idaho state regulators vetoed the merger in late 2018 citing concern about the province of Ontario's political influence over Hydro One. Ontario owns 47% of the Canadian utility. In July 2018, the newly elected premier of Ontario forced changes to Hydro One's senior management and board of directors. In December 2018, the Washington commission found that the proposed deal was not in the public interest since decisions affecting Hydro One's business operations and financial integrity were subject to overrule by Canadian politicians. Idaho denied the merger on January 3, 2019.

Completed Transactions

Five deals announced in 2018 were completed in 2019.

NextEra Acquires Gulf Power

On January 1, 2019 NextEra completed its acquisition of Gulf Power. On May 21, 2018 NextEra Energy and Southern Company announced that NextEra would purchase Gulf Power, Florida City Gas and Southern Company's interest in two natural gas generating plants in Florida in transactions valued at \$6.475 billion, including the assumption of approximately \$1.4 billion of Gulf Power debt. NextEra said the acquisition complements its existing operations in Florida and that it would employ its long-term strategy of advancing affordable, reliable and clean energy through smart infrastructure investments at both acquired utilities. Analysts noted Gulf Power's generation fleet is mostly coal-fired, potentially offering NextEra the chance to grow regulated rate-base through conversion to gas and renewable generation along with energy storage. Southern said it would use the proceeds to pay down debt and strengthen its balance sheet. NextEra announced the completion of the Florida Gas acquisition on July 30, 2018.

Dominion Buys SCANA

Dominion Energy closed its acquisition of SCANA (2018's biggest announced deal) on January 2, 2019. On January 3, 2018, Virginia's Dominion Energy and South Carolina-based SCANA said they hope to merge in a stock-forstock transaction that represented an approximate 31 percent premium for SCANA shareholders, who would own 13 percent of the combined company.

Dominion called the merger a strategic combination and termed SCANA a natural fit, noting Dominion's presence in the Carolinas — through its Dominion Energy Carolina Gas Transmission, electric utility Dominion Energy North Carolina, and Atlantic Coast Pipeline operations — complements those of SCANA's South Carolina regulated electric and gas subsidiary SCE&G and North Carolina gas utility PSNC Energy. Dominion said the deal supports new expansion opportunities in the southeast U.S. and can boost its earnings growth rate through 2020 to eight percent or higher.

The companies said a key benefit for SCANA is Dominion's ability — given its larger size and financial strength — to fully resolve the July 2017 decision to cease construction of two new nuclear units at the V.C. Summer Nuclear Station in Jenkinsville, South Carolina. SCANA was part owner of the project, which it deemed prohibitively expensive to complete following the bankruptcy of the nuclear plants' contractor (Westinghouse) and a venture partner's move to abandon the project. SCANA said a merger with Dominion Energy would strengthen the company and enable it to focus on core operations.

<u>CenterPoint Acquires Vectren</u>

CenterPoint completed its acquisition of Vectren on February 1, approximately nine months after the April 23, 2018 announcement. The companies said the deal was motivated by opportunities for synergistic growth in their natural gas utility businesses rather than costsaving synergies. Both companies are targeting growth through regulated gas infrastructure in their service territories. CenterPoint is reducing its exposure to the midstream energy business while Vectren has said it wants to transition its generation away from coal to reduce emissions and adapt to changing customer preferences and regulations. The companies said the merger would leverage best practices for service, reliability and deployment of new technologies across a larger U.S. footprint. At the time of announcement, CenterPoint had natural gas operations in Arkansas, Louisiana, Minnesota, Mississippi, Oklahoma and Texas that served more than 3.4 million customers. The company also delivered electricity to more than 2.4 million customers in the greater Houston area. CenterPoint Energy's competitive natural gas sales and services business served more than 100,000 customers in 33 states. Evansville, Indiana-based Vectren provided natural gas to more than 1 million customers in Indiana and Ohio, and electricity to 145,000 customers in Indiana. The combined company retained the CenterPoint Energy name and Houston corporate headquarters.

<u>Canadian Pensions Buy</u> <u>Macquarie's Puget Sound Stake</u>

On April 29, 2019, global infrastructure investor Macquarie closed the sale of its stake in Puget Energy to a group of Canadian pension funds. In August 2018, Puget Sound Energy (PSE) announced that long-time private equity investor Macquarie Infrastructure Partners would sell its 44% position in the company to a group of Canadian pension funds, including two who raised their ownership stake in the Washington state utility. Alberta Investment Management Corporation (AIMCo) and the British Columbia Investment Management Corporation (BCI) increased positions they've held since 2009 by six percent and four percent to 13.6 percent and 20.9 percent, respectively. Two new investors, OMERS (the defined benefit pension plan for municipal employees in Ontario, Canada) and Dutch pension fund manager PGGM will have 23.9 percent and 10 percent positions. The Canada Pension Plan Investment Board (CPPIB), an investor since 2009, continues its 31.6 percent position. The Macquarie infrastructure funds, which invested in PSE in 2009, are reaching the end of their terms and the sale was widely expected. Puget Sound Energy provides regulated electric service to 1.1 million customers and natural gas distribution services to about 790,000 customers in the Puget Sound region of Washington state.

BCI called the Puget equity stake a strong fit with the long-term investment objectives of its pension plan clients. OMERS said owning Puget aligns with its principles as a patient, long-term investor in highquality infrastructure assets. Dutch investor PGGM said the purchase is consistent with its policy of investing long-term pension capital in companies actively involved in the transition to a low-carbon energy future. Analysts noted that pension funds have a very long-term investment horizon and don't require an exit strategy to accommodate the ten-year life cycle common in private equity funds. Canadian pensions have been active buyers of contracted power and renewable assets in recent years in the U.S. and globally.

Sempra/Oncor Buys InfraREIT

In a complex deal announced October 18, 2018, Sempra and its 80% owned Texas-based regulated transmission and distribution utility Oncor said they agreed to acquire New York Stock Exchange publicly traded InfraREIT for \$1.275 billion or \$21 per share. InfraREIT, structured as a real estate investment trust (REIT), owns and leases rate-regulated electricity delivery infrastructure assets to Sharyland Utilities, a Texas-based regulated electric utility. Sempra said it will also acquire a 50 percent limited-partnership interest in a holding company that will own Sharyland Utilities for approximately \$98 million. Sempra/Oncor said the transaction enlarges its regulated utility platform in the growing Texas market, calling InfraREIT's assets highly desirable beneficiaries of Texas' strong economic growth, demographic attractive trends and increased demand for electric transmission. In summer 2018, Sempra said it would sell its entire portfolio of U.S. wind and solar assets as part of a portfolio optimization initiative to focus the company's strategy on earnings growth from regulated assets. Sempra said it would use the proceeds to fund its share of the InfraREIT purchase. The companies completed the deal on May 16, 2019.

Deal Talk: Santee Cooper and JEA

The scarcity of announced deals during the year focused more attention than usual on potential but not actual deals. News reports and analysis centered on two large government-owned utilities as buyout candidates — South Carolina's Cooper **Florida's** Santee and northeast regional utility JEA, based in and owned by the city of Jacksonville. Both narratives showcase familiar themes coloring utility M&A in recent years.

South Carolina's state-owned electric and water utility Santee Cooper was created during the 1930s New Deal as a rural electrification and public works project. It has been in the news since 2017 as a potential sale candidate after abandoning the V.C. Summers nuclear expansion project in July of that year, which was planned to come online in 2016-2017 and left the utility with 45% of the project's roughly \$10 billion in debt. In late 2018, the state hired a consulting firm to evaluate buyout proposals. News reports in 2019 said Santee Cooper received four offers ranging from \$7.9 billion to \$9.2 billion, including bids by neighboring investor-owned utilities Duke and NextEra, although with no details about the handling of Santee Cooper's debt. The state said bidders will need to outline plans for rates and capital investment for 20 years and any plans for job cuts over five years. The state's governor and legislature are also considering a plan for another neighboring investorowned utility, Dominion Energy, to run Santee Cooper while the state retains ownership (New Jersey-based, investor-owned utility Public Service Enterprise Groups operates New York State-owned Long Island Power Authority's transmission system under a long-term contract). A third possibility is continued state ownership with a reform plane executed by current Santee Cooper management. The state's legislators are expected to choose a path forward in 2020.

News surrounding JEA's potential for privatization also began in 2017, when a consultant hired to explore the company's options valued the utility in a range of \$7.5 billion to \$11 billion. But the utility reportedly ended privatization talks in May of 2018 following opposition to privatization from Jacksonville's mayor. JEA executives reawakened the concept in May 2019 with warnings the utility could face a cash gap of \$2 billion by 2030, requiring severe staffing cuts and 40% to 50% rate hikes if there is no significant change to its business approach. In late July 2019, JEA's board authorized management to again solicit interest in new ownership structures. News reports said the board and management team leaders were concerned JEA's status as a government-owned utility severely limits its ability to make investments that respond to the technological disruptions impacting the industry, such as growth in renewable generation, increasing use of rooftop solar power, the need for grid modernization, smart-grid deployment and operating and maintenance cost reduction. JEA reportedly opened solicitation in August with the requirement that buyout offers exceed \$3 billion and offer at least \$400 million in customer benefits. Investor-owned utilities Duke, NextEra and Emera reportedly were among nine bidders that also included water utilities and global infrastructure investors. But political differences with the City of Jacksonville again surfaced, with the city's mayor, city councilors and other stakeholders objecting that JEA favored privatization over other potential ownership structures. In February 2020, JEAs board rescinded its July directive, terminated the JEA CEO who oversaw the process and board members suggested that any decision on JEAs future would be up to the mayor and Jacksonville city administration.

Utility M&A, even in the best circumstances, must carefully respect the standards imposed by state commissions and the sensibilities of wary stakeholders, whose opposition can scuttle the best-formed plans. The Santee Cooper and JEA stories suggest privatizing a governmentowned utility may require even more political skill and the sensitivity to clearly and plainly spell out the advantages of any proposed deal to all concerned parties.

Construction

The electric utility industry brought 25,643 MW of new capacity online in 2019, a 25% decrease from the 34,838 MW total of 2018, which was the largest since 2012's 31,503 MW. Capacity added by new plants fell 21% versus last year while capacity from plant expansions declined 34%. Wind power led new capacity additions and accounted for 9,441 MW or 37% of the total. Natural gas was second at 9,301 MW, or 36%, while solar generation contributed 6,188 MW or 24%.

The nation's aggressive build-out of renewable energy is evident in

wind and solar energy's 60% share of 2019's new capacity and the 18% growth in each fuel's total capacity added versus their total in 2018. The year-to-year decline in total new capacity was driven primarily by natural gas. Gas capacity installed in 2019 was down 54% after a record year in 2018 that resulted from new gas plants in the PJM region. Approximately 78% of 2019's new gas capacity is combined-cycle while 17% is combustion turbine.

New plants accounted for 3,696 MW, or 40%, of the total new gas capacity online in 2019 while 4,260 MW or 46%, resulted from expansions at existing facilities and 14% were re-rates. A re-rate at Alabama's Brown's Ferry nuclear plant, a Tennessee Valley Authority (TVA) facility, added 155 MW of new nuclear capacity.

Investor-owned utilities that brought the most renewable capacity online, either as new plants or expansions at existing facilities, were NextEra Energy (681MW solar and 1,293 MW wind), Berkshire Hathaway Energy (741 MW, nearly all wind power), Xcel Energy (12 MW solar and 640 MW wind), Duke Energy (247 MW solar and 202 MW wind), WEC Energy (300 MW of wind) and TECO Energy (259 MW of solar). NextEra also



New Capacity Online 2015–2019

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

Source: Velocity Suite, ABB Enterprise Software; EEI Finance Department, March 2020



Note: Includes all new capacity placed on the grid by 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, wood, and energy storage. Totals may reflect rounding.

Source: Velocity Suite, ABB Enterprise Software; EEI Finance Department, March 2020

led natural gas additions, with 2,451 MW of new combined-cycle capacity. Entergy was next, at 914 MW, also combined-cycle. Pinnacle West added 809 MW of combustion turbine capacity and PSEG added 592 MW of new combined-cycle power.

New Capacity Online by Region

The Texas Reliability Entity (TRE) saw the biggest year-to-year growth in capacity additions, at 80% over 2018's level, boosted by 4,101 MW of new wind capacity, 3,524 MW of gas and 768 MW of solar. Hawaii (HCC) saw 38% growth from 2018's level, driven by 180 MW of new solar capacity. The Reliability First Corporation (RFC) saw the largest decline in added capacity, down 67% from 2018's total, as gas capacity added there dropped from 10,431 MW in 2018 to 2,552 MW in 2019. Capacity added in the Southwest Power Pool (SPP) region was down 45% versus 2018, largely because new wind additions declined to 954 MW in 2019 from 1,856 MW in 2018. The Northeast Power Coordinating Council (NPCC) region also saw new capacity additions fall, dropping 42% versus 2018's total, mostly because of a decline in new natural gas-powered capacity from 2,535 MW in 2018 to 1,122 MW in 2019. Note that the Florida Reliability Coordinating Council (FRCC) region was incorporated into the SERC region in 2019.

New Ca	pacity On	line by Re	gion (MW) 2019
Region	Online 2016	Online 2017	Online 2018	Online 2019
ASCC	156	111	1	25
FRCC	1,815	2,408	2,532	See SERC
HCC	34	48	136	187
MRO	2,473	1,998	3,116	3,257
NPCC	868	529	2,948	1,704
RFC	3,927	5,358	10,606	3,475
SERC	4,763	3,720	6,428	6,966
SPP	3,702	3,411	1,947	1,072
TRE	2,958	6,522	2,882	5,189
WECC	7,926	3,111	3,530	3,768
Total	28,622	27,216	34,126	25,643

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

Source: Velocity Suite, ABB Enterprise Software; EEI Finance Department, March 2020



			Astual					Exported		
Total	21,025	27,216	27,216	34,126	25,643	13,272	15,317	8,672	6,468	5,444
Other	556	(734)	861	456	496	66	15	20	6	14
Nuclear	0	1,291	102	350	155	20	_	_	_	_
Solar	6,316	9,287	7,456	8,031	6,188	8,821	9,501	5,876	5,363	1,850
Wind	8,179	8,045	6,222	5,246	9,441	4,366	4,366	1,027	1,098	3,580
Natural Gas	5,971	9,282	12,530	20,033	9,301	—	1,435	1,749	—	—
Coal	3	45	45	10	62	—	—	—	—	—

Notes: Data includes new plants and expansions of existing plants, including nuclear uprates. Data includes projects with an expected online date through 2024. Other includes biomass, disee/fuel oil, fuel cells, geothermal, landfill gas, pet coke, waste heat, water, wood, and energy storage. Totals may reflect rounding. 2015-2019 is actual plants brought online. 2020-2024 data is from announced projects as of March 2020. Source: Velocity Suite, ABB Enterprise Software EEI Finance Department

Announced New Capacity by Region and Fuel Type in 2019 (MW)

Fuel Type	Electric 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	Total
Coal						10			10
Natural Gas	1,897		49	65	1,107	1,333	8	304	4,762
Nuclear						20			20
Wind	1,267		2,461	4,641	1,739	350	3,789	1,934	16,181
Solar	2,007	283	1,156	7,342	4,469	7,651	590	7,911	31,411
Hydro	10		2	13	14	57		15	110
Other			4	31	15	59		45	154
Total	5,182	283	3,671	12,091	7,345	9,480	4,387	10,209	52,648

Notes: Data includes new plants and expansions of existing plants announced, including nuclear uprates in 2019 for years 2020–2025. Other includes biomass, diesel/fuel oil, fuel cells, geothermal, landfill gas, pet coke, waste heat, water, wood, and energy storage. Totals may reflect rounding.

Source: Velocity Suite, ABB Enterprise Software; EEI Finance Department, March 2020

Announcements by Region and Fuel Type

Announced new capacity totaled 52,688 MW in 2019, down 22% from 2018's 68,003 MW. Renewable generation accounted for more than 90% of 2019's announcements, with solar contributing 60%, wind 31% and natural gas 9% of the total. Only 10 MW of new coal capacity was announced, and this was due to rerates and fuel conversions.

Solar power once again accounted for all of Hawaii's announced new capacity. The Northeast Power Coordinating Council (NPCC) produced the highest total announced new capacity in 2019, at 12,091 MW, nearly all renewable with approximately 61% of the total solar and 38% wind. Last year, the Western Electricity Coordinating Council (WECC) region dominated announcements, with 16,045 MW, also largely solar and wind generation. In 2019, WECC took second place with 10,209 MW of announced capacity, 77% of which was solar power.

Announced natural gas capacity was 55% lower in 2019 versus 2018, in part because 2018 was a record year. About 20 MW of nuclear capacity was announced, all due to repowers/rerates in Alabama, Michigan, North Carolina and Pennsylvania.

Stage of Announced Capacity Additions (MW) 2020–2024

			Application			Under		
Fuel	Proposed	Feasibility	Pending	Permitted	Site Prep	Construction	Testing	Total
Coal	—	—		—		_	_	0
Natural Gas	13,289	713	14,658	16,438	8	11,060	3,615	59,780
Nuclear	—	1,900	—	—	—	2,200	—	4,100
Wind	54,780	1,745	20,673	10,80	543	16,447	390	105,382
Solar	69,067	247	24,554	11,41	223	10,578	49	116,583
Other	4,175	10,691	1,183	2,146	—	334	13	18,542
Total	141,310	15,296	61,068	40,807	773	40,619	4,514	304,387

Notes: Other includes biomass, diesel/fuel oil, fuel cells, geothermal, landfill gas, pet coke, waste heat, water, wood, and energy storage. 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 2024.

Source: Velocity Suite, ABB Enterprise Software; EEI Finance Department, March 2020

Expected Capacity Additions

Based on projections at year-end 2019, capacity additions expected to come online through 2024 totaled 49,172 MW, with the bulk of that (28,589 MW) scheduled for 2020 or 2021. Solar accounts for 64% of the 49 GW total and most of that, at 18,322 MW, is also set to come online in 2020 or 2021. The amount of projected natural gas capacity is notably lower than in recent years, accounting for only 6% of total projected capacity additions through 2024.

No new natural gas capacity is set to come online in 2020 and only 1,435 MW is expected in 2021, with only slightly more, at 1,749 MW, in 2022. A projected 20 MW of nuclear capacity in 2020 results from a rerate at FPL's Turkey Point facility. In NPCC, 6,320 MW of offshore wind was announced with plans to come online by 2024 or 2025.

A total of 304,387 MW of new capacity were in various stages of planning at year-end 2019. Slightly less than half of this, at 46%, was in the proposal stage. Of that 46%, 88% is either wind or solar generation and only 9% is natural gas. Out of the grand total 304 GW, 38% is solar and 35% is wind. Natural gas accounts for just under 20% of the



2019 New Capacity Announcements by Fuel Type



Source: Velocity Suite, ABB Enterprise Software; EEI Finance Department, March 2020

304 GW at all stages of planning, 28% of the total that is in the permitted stage and just under 19% of the total under construction.

Retirements

At year-end 2019, 84 GW of capacity was scheduled to retire at some point from 2020 through 2024. While annual coal retirements taper off from their near-14 MW level in 2018 and 2019, they still dominate at 36% of total planned retirements through 2024, followed by gas at 35% and fuel oil at 20%. Gas retirements are expected to peak in 2021 at 10,715 MW, the fuel's highest annual level during the 2015-2024 period.

Wind and solar retirements remain minimal given their recent buildout; no solar is slated for retirement while wind retirements, at a mere 0.3% of the total, result from two plants that started operation in 2008 and 2011 in Texas and Illinois, respectively. Hydro retirements are also minimal, at only 0.1% of the total, and are largely associated with the Logan hydroelectric plant in Utah and the Cornell plant in Wisconsin.

Heating oil capacity retirements are expected to total 7,708 MW in 2021, the highest level reached by this fuel during the 2015-2024 period, following little retirement activity in 2019 and 2020. Annual oil capacity retirements are expected to run between roughly 2,000 MW and 4,000 MW from 2022 through 2024.



Actual and Planned Retirements 2015-2024

			Actual					Pla	anned		
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total
Coal	16,002	8,946	8,529	13,876	13,797	10,236	2,996	8,160	7,567	1,129	30,086
Gas	6,883	7,811	5,887	8,270	2,936	3,502	10,715	5,276	4,746	5,352	29,590
Nuclear	_	577	_	550	1,641	2,031	3,097	823	_	1,159	7,111
Oil	1,311	1,652	854	2,424	444	86	7,708	4,206	1,866	2,621	16,486
Solar	14	35	_	1	_	_	_	_	_	_	_
Wind	359	8	60	80	88	249	_	_	_	_	249
Hydro	147	127	125	54	142	1	6	_	37	6	50
Other	303	619	204	352	462	93	139	37	76	—	344
Total	25.019	19.854	15.658	25.606	19.508	16.200	24.660	18.500	14.292	10.266	83.917

Notes: Other includes biomass, diesel/fuel oil, fuel cells, geothermal, landfill gas, pet coke, waste heat, water, wood, and energy storage. Totals may reflect rounding. 2015-2019 is actual plants retired. 2020-2024 data is from announced retirements as of March 2020.

Source: ABB Inc., The Velocity Suite; EEI Finance Department, March 2020

Transmission

According EEI's 2019 to Transmission Capital Investment Survey, investor-owned electric utilities and stand-alone transmission companies invested \$22.2 billion in transmission assets in 2018, a 1.4% increase versus the \$21.9 billion invested in 2017. The increase reflects the industry's efforts to meet changing customer expectations while providing low-cost, reliable service. EEI members continue to invest in the transmission system in order to

provide access to clean energy; to increase the reliability, security and resiliency of the energy grid; and to reduce congestion so that lowerpriced resources can meet customer needs now and in the future.

Actual & Projected Transmission Investment* 2013–2022

(\$ Billions)



r = revised

*Investment of investor-owned electric companies and stand-alone transmission companies. Actual Investment figures were obtained from the EEI Property & Plant Capital Investment Survey supplemented with FERC Form 1 data. Projected investment figures were obtained from the EEI Transmission Capital Budget & Forecast Survey supplemented with data obtained from company 10-k reports and investor presentations.

Source: EEI Business Analytics.

Updated November 2019.

Fuel Sources

Three primary trends that have impacted fuel use over the last decade persisted in 2019: natural gas prices drifted further down from already very low levels, renewable generation capacity continued to grow, and electricity demand remained lethargic, dropping 1.4% from its 2018 level partly due to milder weather in 2019.

Natural gas maintained its position, established in 2016, as the nation's primary generation fuel. Its share of total generation increased 3.2 percentage points, to 38.4% in 2019 from 35.2% in 2018. Coal's share fell 4.0 percentage points, to 23.5%, extending a relatively steady long-term decline since the late 1990s. In 1998, coal plants produced over half the nation's electricity. Nuclear generation continued its stable long-term contribution,

of Total Electric Generation 2011–2019 (%) U.S. ELECTRIC UTILITY AND NON-UTILITY 60 50 Coal 40 Natural Gas 30 20 Nuclear Other Renewables 10 **Conventional Hydro** 0il 0 2011 2012 2013 2014 2015 2016 2018 2019 2017

Fuel Sources as a Percentage

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 gualifying 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), March 2020.

	Fuel Sc	ources for	Net Elect
		U.S. ELECTRIC (JTILITY AND N
	2018	2019	Note: Tot
Coal	27.5%	23.5%	NOLE. TO
Gas	35.2%	38.4%	U.S. Elec
Nuclear	19.3%	19.7%	transmiss
Oil	0.6%	0.5%	use by th
Hydro	7.0%	6.7%	New URIT
Renewables	9.9%	10.9%	qualifying
Biomass	1.5%	1.4%	other nor
Geothermal	0.4%	0.4%	
Solar	1.8%	1.8%	Source:
Wind	6.5%	7.3%	,
Other fuels	0.5%	0.5%	
Total	100%	100%	

ric Generation

ON-UTILITY

als may not equal 100% due to rounding.

tric Utility: Owns and/or operates facilities within the tates, its territories, or Puerto Rico for the generation, sion, distribution, or sale of electric energy primarily for ne public. This includes investor-owned utilities, public nd cooperatives.

ty Power Producer: Non-utility power producers include g cogenerators, qualifying small power producers, and n-utility generators (including independent power s) without a designated franchised service area.

U.S. Department of Energy, Energy Information Administration (EIA). March 2020.

accounting for 19.7% of the nation's power in 2019, up marginally from its 19.3% share in 2018. Nuclear power has supplied between 19% to 20% of the nation's electricity for two decades. Hydro's share of generation edged down to 6.7% in 2019 from the record-high 7.0% in 2018 caused by high precipitation levels that year. Other renewables — wind, solar, geothermal and biomass — saw their collective share continue to rise. Together, they accounted for 10.9% of total generation in 2019 up from 9.9% in 2018.

The nation's fuel mix has changed markedly over the past decade

and EEI member companies have been leaders in implementing this change. As a result, the power sector has reduced its carbon emissions significantly and renewable generation has achieved strong, ongoing growth. Approximately 40% of the nation's electricity now comes from carbon-free sources (including nuclear energy, hydropower and other renewables).

Zero-carbon generation produced 37.2% of the nation's electric power in 2019. The electric power industry's 2019 carbon dioxide emissions were down 8% from 2018's total, 33% below the level in 2005 and at their lowest point over the past three decades (since 1987). Other benchmarks of progress include:

- EEI member companies' 2019 carbon emissions were approximately 45% below 2005 levels (Source: 2019 EPA, CEMS data; 2020 ABB Energy Velocity).
- 40 EEI members that account for approximately 90% of EEImember generation have set near- and long-term greenhouse gas (GHG) reduction goals, with many aiming for reductions of 80% or more by 2050.
- Almost half of those goals include a net-zero by 2050 or earlier target date.

Roughly two-thirds of the emissions reductions achieved to date are a result of switching from coal to natural gas generation; since 2005, coal use has been cut by more than half. This shift has allowed EEI member companies to take advantage of the lower cost, aroundthe-clock reliability and easier dispatchability of natural gas to achieve deeper and faster emissions reductions. At the same time, EEI's member companies have aggressively increased their deployment and use of renewables. The amount of energy they have generated from non-hydro renewable sources has risen four-fold since 2005.

U.S. Power Sector Carbon Dioxide Emissions (2005-2019)



Source: U.S. Energy Information Administration, Monthly Energy Review, March 2020.

Electric Companies with 100 Percent Net Zero Emissions Goals

Climate/Carbon Goal
100% carbon neutral by 2035
100% clean electricity by 2045
Net-zero CO2 emissions by 2050
Net-zero carbon emissions by 2050*
Net-zero CO2 and methane emissions by 2050
Attain net-zero CO2 emissions by 2050
Carbon neutral by 2030
100% carbon-free electricity by 2025, 100% renewable energy by 2030
100% renewable energy by 2045
Provide 100% clean energy by 2045
Net-zero carbon electricity by 2050
Net zero emissions by 2050
100% carbon-free electricity by 2050
100% carbon-free electricity by 2040
Net-zero carbon emissions by 2050*
100% clean electricity by 2045
Carbon neutrality by 2045
Low- to no-carbon operations by 2050
Carbon-free electricity by 2050

Source: EEI, March 2020

Coal

Coal fueled 23.5% of U.S. generation in 2019, down four percentage points from its 27.5% share in 2018. Coal's once-dominant position as the nation's primary generation fuel has been eroded by the abundant supply of low-cost natural gas from the shale revolution, low wholesale market prices for natural gas and stricter environmental regulations. As a result of fuel switching and retirements, New York will have no coal-fired generation once the 686 MW Somerset plant is retired in the first half of 2020. Connecticut's 385 MW Bridgeport station coalfired plant is scheduled for retirement in 2021; this will leave New England with only four operational coal-fired power plants — the 439 MW Merrimack and 138 MW Schiller plants in New Hampshire and Maine's 85 MW Rumford Cogeneration plant and 56 MW S.D. Warren Westbrook plant.

Electric utilities paid an average \$2.08 per million British Thermal Units (MMBtu) for coal in 2019, three cents less than in 2018 and 35 cents (or 14%) less than 2012's \$2.43/MMBtu, which was the highest level in a decade. The average cost of producing electricity from coal in 2019 remained the highest of all fuel types, at \$32.05/MWh, although the fuel component of this total cost was \$22.38/MWh, down 7% from \$24.03/MWh in 2015.

Natural Gas

Natural gas maintained its lead over coal as the primary fuel used for electricity generation in the U.S. The share of total generation fueled

Average Cost to Produce Electricity 2015–2019

U.S. ELECTRIC UTILITY AND NON-UTILITY



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.

*2019 results are preliminary. All years based on modeled data from Velocity Suite, ABB Enterprise Software March 2020

Average Cost of Fossil Fuels 2010–2019

U.S. ELECTRIC UTILITIES

(\$/mmBTU)



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.

Source: U.S. Department of Energy, Energy Information Administration (EIA), March 2020.

by natural gas rose to 38.4% in 2019 from 35.2% in 2018, driven largely by natural gas-fired capacity additions.

Natural gas production surged 10% year-to-year, to 36,188 billion cubic feet (Bcf) in 2019, while a mild winter caused consumption to increase only 3%, or 31,014 Bcf. Demand for natural gas from the industrial and residential sectors barely changed, increasing only 0.12% and 0.08%, respectively versus 2018 levels. The electric power sector is the nation's single-largest user of natural gas; the sector's total gas consumption rose 7% in 2019 and its share among all sectors increased more than one percentage point, to 36.4%. The industrial sector, the second-largest user, saw its share decrease slightly, from 27.8% to 27.0%. The residential sector accounted for 16% of total consumption.

The average Henry Hub (HH) spot price — a widely watched benchmark — averaged \$2.56 per MMBtu in 2019, down 19% from the prior year. This led to a 17% drop in the average cost to produce electricity from natural gas, to \$27.32/MWh, which made the fuel cost component of coal and natural gas generation about equal. Operations and maintenance costs for natural gas generation also declined, by about 7% versus their 2018 level.

Nuclear

Nuclear power has fueled between 17.8% and 20.6% of total U.S. electric generation since 1988. In 2019, it accounted for 19.7% of the electricity used in the U.S., up less than one percentage point from 2018 and nearly matching the 19.6% annual average for data going back to 2001. High construction costs and lengthy permitting and building processes have made new nuclear plants largely uneconomical. Year-to-year changes in nuclear generation are driven primarily by the duration of downtime at existing plants that result from refueling, maintenance and uprates.

1977, Since the Nuclear Regulatory Commission (NRC) has uprated 164 units, totaling 7, 921 MW of capacity, representing the equivalent of approximately seven new reactors. Almost all U.S. reactors have been uprated; that is, they have received NRC-approved expansions of original capacity. This includes a 2012 approval to add two new units, scheduled for completion in 2021 and 2022, to the two existing pressurized water reactors at Southern Company's Vogtle facility in Georgia, which will augment nameplate capacity by 2,320 MW. These two new nuclear units will be the first nuclear generation built in the U.S. in the last three decades and will also be the first to use the Westinghouse AP1000 advanced pressurized water reactor technology, considered to be the safest, most economical nuclear power plant technology in the world. It allows nuclear cores to be cooled in the absence of operator interventions or mechanical assistance.

In 2020, three plants are expected to have their uprate applications approved, totaling 46.7 MW. The NRC has approved the initial license renewal applications for 93 out of 96 operating reactors it oversees, and only six of these have ceased operation (Fort Calhoun, Kewaunee, Oyster Creek, Pilgrim, Three Mile Island and Vermont Yankee).

Many nuclear plants are now pursuing a second license renewal filing that would extend their operating life another 20 years, to a total of about 80 years. In 2019, the Nuclear Regulatory Commission (NRC) approved an extension for Florida's Turkey Point nuclear plant Units 3 and 4 until 2052 and 2053, respectively. In March 2020, the NRC extended the licenses of Peach Bottom's Atomic Power Station Units 2 and 3 until 2053 and 2054, respectively. Dominion is anticipating the NRC's extension in June 2020 of Dominion's Surry Power Station in Virginia; this would allow operations of Units 1 and 2 to continue to 2052 and 2053, respectively. Dominion is expected to file a second license application in late 2020 for its North Anna Units 1 and 2, while Duke Energy Carolinas is expected to file a second license application in 2021 for its Oconee Units 1,2 and 3. Duke has also announced intentions to file for renewal of its Catawba Nuclear Station Units 1 and 2, and McGuire Nuclear Station Units 1 and 2. Duke Energy Progress announced intentions to extend the life of the Brunswick Steam Electric Plant Units 1 and 2, Shearon Harris Nuclear Power Plant Unit 1, and the H.B. Robinson Steam Electric Plant Unit 2.



- AZ: 15% by 2025; 4.5% DG
- **CA:** 50% by 2026, 60% by 2030, 100% by 2045
- **C0:** 30% by 2020 (10% co-ops, munis), 3% DG and 1.5% customer sited. 100% by 2050
- CT: 40% by 2030
- **DC:** 100% by 2032, 10% solar by 2041
- **DE:** 25% by 2026, 3.5% PV. Triple credit for PV
- **HI:** 30% by 2020, 70% by 2040, 100% by 2045
- **IA:** 105 MW; 1 GW wind goal by 2010
- IL: 25% by 2026; wind 75%, 1.5% PV and 0.25% DG
- IN: 10% by 2025 (goal)
- **KS:** 20% by 2020
- MA: 35% by 2030 (new resources); 1% each year thereafter

- MD: 25% by 2020, 2.5% solar by 2020, 50% by 2030
- ME: 8 GW wind goal by 2030, 100% by 2050MI: 15% by 2021. 3.2 multiplier for solar electric
- **MN:** 26.5% by 2025 (IOUs), 1.5% solar and 0.15% PV DG by 2020.
- MO: 15% by 2021, 0.3% solar
- MT: 15% by 2015
- NC: 12.5% by 2021, 0.2% solar by 2018. (10% by 2018 co-ops, munis)
- ND: 10% by 2015 (goal) NH: 0.3% solar electric by 2014, 25.2%
- by 2025
- NJ: 50% by 2030
- **NM:** 80% by 2040, 100% by 2045 (IOUs)
- NV: 50% by 2030, 1.5% solar by 2025. 2.4 multiplier for PV, 100% by 2050
- NY: 50% by 2030, 0.58% customer sited by 2015

- **OH:** 12.5% by 2026, 0.5% solar by 2027
- **OK:** 15% by 2015 (goal)
- **OR:** 50% by 2040 (5-10% smaller utilities). 20 MW PV by 2025. Double credit for PV
- **PA:** 18% by 2021, 0.5% PV by 2021
- RI: 38.5% by end 2035
- SC: 2% by 2021. 0.25 % DG by 2021 (goal).
- **SD:** 10% by 2015 (goal)
- **TX:** 5,880 MW by 2015, 500 MW non-wind goal, double credit for non wind
- UT: 20% by 2025, 2.4 multiplier for solar electric (goal)
- VA: 100% by 2045 for Dominion Energy Inc, and by 2050 for APCO)
- VT: 55% in 2017, 75% 2032
- WA: 15% by 2020, double credit for DG, 2 MW DG
- WI: 10% by 2015

Updated March 2020.

Abbreviations: EE - Energy Efficiency; RE - Renewable Energy.

Notes: An RPS requires a percent of an electric provider's energy sales (MWh) or installed capacity (MW) to come from renewable resources. Most specify sales (MWh). Map percents are final years' targets. * TVA's goal is not state policy; it calls for 60% clean energy by 2030. ** Nebraska's two largest public power districts have renewable goals. *** Plan introduced by Gov. Cooper (D), requires approval from General Assembly. **** Renewable & carbon free - 14% by 2021, 100% by 2045 for Dominion Energy Inc., Virginia Electric and Power Co.; and 6% by 2021, and 100% by 2050 for American Electric Power Co. Inc. subsidiary Appalachian Power Co., and any retail provider in these territory.

Source: Database of State Incentives for Renewables and Efficiency, http://www.dsireusa.org.

Renewables

Renewable capacity growth continued to break records in 2019. Collectively, renewables (including hydro) accounted for a record-high 17.5%, or 720,435 million MWh, of total U.S. electric generation in 2019, nearly 70% more than in 2010 when renewables generated 427,367 million MWh. Non-hydro renewables also reached a recordhigh 10.9% of total generation in 2019, up one percentage point from 2018. Solar generation continued to grow at a faster rate than wind, but its growth rate slowed to 13% yearto-year in 2019 from a record-high 138% in 2012. Solar's share of total nationwide output remains small, at just under 2%, yet it accounted for 16% of total non-hydro renewable generation in 2019, the same level as in 2018.

Wind generation remained the leading renewable generation source, at 67% of 2019's total non-hydro renewable generation. Total MWh supplied by wind rose 10% relative to 2018. The total electricity generated from wind turbines overtook the total generated by hydro for the first time in 2019. Wind supplied 300,071,000 MWh, or 7.3% of the nation's total generation in 2019, versus hydroelectric's 273,707,000, or 6.7% share. Biomass and geothermal's contribution to nationwide electric generation remained stable in 2019, powering 1.8% of U.S. electric load.

Driven by the increase in renewable capacity, coal retirements and seasonal factors, monthly electric generation from renewables exceeded coal generation by 3% in April 2019, with renewables providing 23% of total electric generation for the month.

0il

Oil supplied only 0.45% of U.S. electric output in 2019, down from 0.6% in 2018 as a result of retirements of oil-fueled electricity generation. Located away from U.S. railroad infrastructure, Hawaii and Alaska (the country's two non-contiguous states) account for more than 60% of the nation's oil-fueled generation. Hawaii, which accounts for about half of all oil used for power generation, plans to produce 100% of its electricity from renewable sources by 2045 and is actively retiring oil generation. Florida and New England also have oil-fueled capacity; this is mostly in the form of dual-fuel power plants built years ago to hedge the region's lack of natural gas infrastructure.

Industry Financial Performance

Income Statement

- Energy Operating Revenue grew just 0.1% versus last year. Nationwide electricity demand fell 1.7% due to cooler summer weather and the impact of trade tariffs on industrial load, which declined almost 5%. The average retail price of electricity nationwide rose less than 1%, according to EIA data.
- Energy Operating Expenses fell 6.7% as Electric Generation and Gas Costs declined. The average cost of natural gas was almost 20% lower for the year and coal costs were marginally lower too. Because reduced hydro generation offset growing solar and wind, the share of total generation from zero-fuel-cost power rose only half a percentage point, resulting in little impact on the industry-wide generation cost decline in 2019.

- The industry's attention to cost controls and productivity from smart-grid investments held Operations and Maintenance (O&M) expense inflation to just 1.0%.
- Depreciation & Amortization (D&A) expenses rose 6.3%, reflecting the industry's ongoing investments in new clean generation and grid modernization.
- Operating Income rose 8.3%, largely a result of lower electrical generation costs and the industry's overall cost management efforts.
- Interest Expense climbed 8.2% due to the increased short and longterm debt required to finance the industry's investment programs.

- Pre-tax Net Income increased 24.5% and Net Income rose 17.4%, yet much of these gains came from declines in Non-Recurring Expenses resulting from company-specific actions, rather than broad business fundamentals impacting the industry as a whole.
- The industry's aggregate declared Common Dividends rose 8.6% versus 2018; these offer a welcome source of income for savings-oriented investors given the meager bond yields throughout the year.

Consolidated Income Statement

U.S. INVESTOR-OWNED ELECTRIC UTILITIES

		led		
(\$ Millions)	12/31/2019	12/31/2018r	% Change	
Energy Operating Revenues	\$364,895	\$364,383	0.1%	
Energy Operating Expenses				
Total Electrical Generation Cost	89,452	96,195	(7.0%)	
Gas Cost	18,758	19,761	(5.1%)	
Total Energy Operating Expenses	108,210	115,956	(6.7%)	
Revenues less energy operating expenses	256,685	248,426	3.3%	
Other Operating Expenses				
Operations & Maintenance	93,921	92,948	1.0%	
Depreciation & Amortization	53,468	50,278	6.3%	
laxes (not income) - lotal	20,086	19,381	3.6%	
Other Operating Expenses	<u>16,525</u> 292 210	<u>18,731</u> 297 295	(11.8%)	
	252,210	207,200	(1.770)	
Operating Income	72,685	67,088	8.3%	
Other Recurring Revenue	1 701	1.040	(0.70)	
Partnership Income	1,781	1,949	(8.7%)	
Allowance for Equity Funds Used for Consti	ruction 1,797	1,900	(5.4%)	
Other Revenue	5,166	3,222	60.3%	
Iotal Other Recurring Revenue	8,744	7,072	23.6%	
Non-Recurring Revenue	0.000	5.070	(45.00())	
Gain on Sale of Assets	2,899	5,272	(45.0%)	
Other Non-Recurring Revenue	3.016	<u> </u>	(10.4%) (44.2%)	
	3,010	5,405	(11.2 /0)	
Interest Expense	26,962	24,918	8.2%	
Other Expenses	159	859	(81.5%)	
Asset Writedowns	3,517	4,121	(14.6%)	
Other Non-Recurring Expenses	14,174	17,841	(20.6%)	
Total Non-Recurring Expenses	17,691	21,962	(19.4%)	
Net Income Before Taxes	39,633	31,824	24.5%	
Provision for Taxes	2,848	738	285.8%	
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 It	ems <u>-</u>	-	NM	
Net Income Before Extraordinary Items	36,786	31,086	18.3%	
Discontinued Operations	424	602	(29.6%)	
Change in Accounting Principles	-	-	NM	
Early Retirement of Debt	-	-	NM	
Other Extraordinary Items		-	NM	
Iotal Extraordinary Items	424	602	(29.6%)	
Net income	37,209	31,688	17.4%	
Preferred Dividends Declared	359	542	(33.7%)	
Other Preferred Dividends after Net Income	2	2	0.0%	
Other Changes to Net Income	(1)	(2)	(39.0%)	
Net Income Attributable to Noncontrolling In	tere <u>sts 60</u>	(300)	NA	
Net Income Available to Common	36,786	31,442	17.0%	
Common Dividends	27,938	25,726	8.6%	

r = revised NM = not meaningful

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



Individual Non-Recurring and Extraordinary Items 2010–2019										
U.S. INVESTOR-OWNED ELECTRIC UTILITIES										
(\$ Millions)	2010	2011	2012	2013	2014	2015	2016	2017	2018r	2019
Net Gain (Loss) on Sale of Assets Other Non-Recurring Revenue	3,410 2,065	891 946	311 264	414 78	996 296	789 (4)	767 888	1,012 493	5,272 131	2,899 117
Total Non-Recurring Revenue	5,475	1,837	576	492	1,292	785	1,655	1,505	5,403	3,016
Asset Writedowns Other Non-Recurring Charges	(8,805) (545)	(2,743) (851)	(5,646) (3,136)	(4,276) (3,510)	(8,762) (2,675)	(5,189) (1,764)	(17,487) (3,109)	(4,166) (5,630)	(4,121) (17,841)	(3,517) (14,174)
Total Non-Recurring Charges	(9,350)	(3,594)	(8,783)	(7,786)	(11,437)	(6,953)	(20,596)	(9,796)	(21,962)	(17,691)
Discontinued Operations Change in Accounting Principles	(476) _	(1,011) _	(4,317) _	(88) _	295 _	(1,148) _	(732) –	(1,554) –	602 -	424 -
Other Extraordinary Items	10	960	-	-	-	-	-	-	-	-
Total Extraordinary Items	(466)	(51)	(4,317)	(88)	295	(1,148)	(732)	(1,554)	602	424
Total Non-Recurring and Extraordinary Items	(4,341)	(1,808)	(12,524)	(7,381)	(9,850)	(7,316)	(19,674)	(9,844)	(15,957)	(14,251)

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) 2019

U.S. INVESTOR-OWNED ELECTRIC UTILITIES

(\$ Millions)			
Company	Gains	Losses	Net Total
PG&E Corp	—	11,781	11,781
Dominion Energy	162	2,870	2,708
Southern Company	2,569	192	2,377
Edison International	—	591	591
NiSource	—	415	415
Public Service Enterprise Group	(402)	_	402
NextEra Energy	461	103	358
Entergy	-	290	290
Berkshire Hathaway Energy	—	288	288
Eversource Energy	0	240	239





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

Net Income Before Non-Recurring and Extraordinary Items 2010-2019

U.S. INVESTOR-OWNED ELECTRIC UTILITIES



U.S. Electric Output (GWh) Periods Ending December 31						
Region	2019	2018	% Change			
New England	117,133	122,211	(4.2%)			
Mid-Atlantic	428,514	440,401	(2.7%)			
Central Industrial	660,478	684,580	(3.5%)			
West Central	329,870	337,891	(2.4%)			
Southeast	1,027,445	1,051,898	(2.3%)			
South Central	769,886	762,943	0.9%			
Rocky Mountain	283,888	281,198	1.0%			
Pacific Northwest	157,502	155,948	1.0%			
Pacific Southwest	268,153	276,654	(3.1%)			
Total United States	4,042,869	4,113,724	(1.7%)			

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

Source: EEI Business Analytics.



U.S. Weather January – December 2019							
	Total	Dev from Norm	% Change	Dev from Last Year	% Change		
Cooling Degree Days							
New England	562	145	35%	(178)	(24%)		
Mid-Atlantic	827	171	26%	(164)	(17%)		
East North Central	839	131	19%	(174)	(17%)		
West North Central	1,006	78	8%	(175)	(15%)		
South Atlantic	2,505	541	28%	61	2%		
East South Central	1,945	397	26%	(24)	(1%)		
West South Central	2,836	387	16%	75	3%		
Mountain	1,371	128	10%	(87)	(6%)		
Pacific	792	88	13%	(101)	(11%)		
United States	1,463	247	20%	(75)	(5%)		
Heating Degree Days	6 401	(1.0.0.)	(00()	101	0.01		
New England	6,491	(120)	(2%)	101	2%		
Mid-Atlantic	5,598	(313)	(5%)	(96)	(2%)		
East North Central	6,332	(165)	(3%)	11	0%		
West North Central	6,977	227	3%	68	1%		
South Atlantic	2,433	(420)	(15%)	(236)	(9%)		
East South Central	3,145	(459)	(13%)	(287)	(8%)		
West South Central	2,177	(110)	(5%)	(95)	(4%)		
Mountain	5,083	(126)	(2%)	303	6%		
Pacific	3,175	(53)	(2%)	321	11%		
United States	4,327	(197)	(4%)	(4)	(0%)		

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.



Heating and Cooling Degree Days and Percent Changes January–December 2019

	COOLI	NG DEGREE	DAYS	HEATING DEGREE DAYS PERCENTAGE CHANGE			E 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	867	(50)	(30)	(44.4%)	25.0%	(5.5%)	(3.3%)
Feb	14	6	(3)	726	(6)	99	75.0%	(17.6%)	(0.8%)	15.8%
Mar	15	(3)	0	642	49	34	(16.7%)	0.0%	8.3%	5.6%
First Quarter	34	(1)	(2)	2,235	(7)	103	(2.9%)	(5.6%)	(0.3%)	4.8%
Apr	38	8	16	293	(52)	(137)	26.7%	72.7%	(15.1%)	(31.9%)
May	122	25	(19)	153	(6)	58	25.8%	(13.5%)	(3.8%)	61.1%
Jun	220	7	(45)	30	(9)	8	3.3%	(17.0%)	(23.1%)	36.4%
Second Quarter	380	40	(48)	476	(67)	(71)	11.8%	(11.2%)	(12.3%)	(13.0%)
Jul	378	57	2	3	(6)	(1)	17.8%	0.5%	(66.7%)	(25.0%)
Aug	331	41	(23)	8	(7)	3	14.1%	(6.5%)	(46.7%)	60.0%
Sep	237	82	1	36	(41)	(10)	52.9%	0.4%	(53.2%)	(21.7%)
Third Quarter	946	180	(20)	47	(54)	(8)	23.5%	(2.1%)	(53.5%)	(14.5%)
Oct	79	26	(5)	262	(20)	(9)	49.1%	(6.0%)	(7.1%)	(3.3%)
Nov	14	(1)	(2)	591	52	(7)	(6.7%)	(12.5%)	9.6%	(1.2%)
Dec	10	3	2	716	(101)	(12)	42.9%	25.0%	(12.4%)	(1.6%)
Fourth Quarter	103	28	(5)	1,569	(69)	(28)	37.3%	(4.6%)	(4.2%)	(1.8%)
Full Year	1,463	247	(75)	4,327	(197)	(4)	20.3%	(4.9%)	(4.4%)	(0.1%)

2010 2011 2012 2013 2014 2015 2016 2017 2018 2019

Heating Degree Days Percentage Change from Historical Norm (1.7) (4.5) (16.6) (0.6)1.1 (9.1) (14.8) (14.2) (4.2) (4.4%) Cooling Degree Days Percentage Change from Historical Norm 19.9 21.5 22.4 10.9 5.8 19.2 29.4 16.0 26.4 20.3%

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

- The industry's financial condition remained strong in 2019. Aggregate balance sheet leverage increased slightly as the industry extended its multi-year trend toward a regulated focus with leverage appropriate for a lower risk profile. However, balance sheet structures show wide differentiation across the industry; aggregate figures are only suggestive of broad trends.
- Total debt rose as utilities took advantage of low interest rates and strong demand from investors to fund regulated investment programs, while managing balance sheet ratios and cash flows to maintain investmentgrade credit ratings.
- Common Equity issuance was strong for a second straight year. Last year's issuance addressed the impact of tax reform. In 2019, utilities took advantage of high price-earnings ratios and welcoming capital markets to fund capex, offset debt issuance and strengthen balance sheets.

- U.S. economic growth slowed in 2019 with quarterly real GDP gains at just 2.0% from Q2 through Q4 after rising 3.1% in Q1. Inflation pressures remained muted and interest rates declined from already low levels. The 10year U.S. Treasury yield ended the year under 2.0% from a high near 2.8% in January. Global growth also stalled and widespread negative interest rates persisted in Europe and Japan. As a result, utility debt and equity remained attractive for investors' searching for yield with relatively low business risk exposure.
- Property, Plant and Equipment in service (PPE in Service) rose 7.3% from year-end 2018 and 26.4% over the level at year-end 2015. This strong growth indicates the magnitude of the industry's buildout of new renewable and clean generation, new transmission, reliability-related infrastructure and other capital projects.
- Debt-to-cap ratios by category show the dominance of regulated operations in the industry and a tendency, at the aggregate industry level, toward slightly higher leverage versus 2018. The dispersion of moves across individual companies, with some companies showing higher, some lower and others no change in leverage, indicates why individual company strategies are as meaningful as aggregate totals when assessing industry trends.
- Regulated companies as a group continued to report higher balance sheet leverage then their Mostly Regulated peers. This is to be expected given their lower business risk profile.

Consolidated Balance Sheet							
U.S. INVESTOR-OWNED ELECTRIC UTILITIES							
(\$ Millions)	12/31/2019	12/31/2018r	% Change	\$ Change			
PP&E in service, gross	1,591,259	1,490,766	6.7%	100,493			
Accumulated depreciation	455,800	432,602	5.4%	23,198			
PP&E in service, net	1,135,459	1,058,164	7.3%	77,295			
Construction work in progress	76,266	72,540	5.1%	3,727			
Net nuclear fuel	15,573	15,534	0.3%	40			
Other property	17,144	1,732	890.0%	15,412			
PP&E, net	1,244,443	1,147,970	8.4%	96,473			
Cash & cash equivalents	11,741	16,139	(27.3%)	(4,398)			
Accounts receivable	41,832	43,038	(2.8%)	(1,206)			
Inventories	23,299	22,210	4.9%	1,089			
Other current assets	45,082	43,922	2.6%	1,160			
Total current assets	121,955	125,309	(2.7%)	(3,354)			
Total investments	120,548	106,116	13.6%	14,431			
Other assets	269,991	245,542	10.0%	24,449			
Total Assets	1,756,936	1,624,937	8.1%	131,999			
Common equity	464,217	437,843	6.0%	26,374			
Preferred equity	9,262	4,949	87.1%	4,313			
Noncontrolling interests	20,512	18,214	12.6%	2,297_			
Total equity	493,990	461,006	7.2%	32,984			
Short-term debt	36,275	44,674	(18.8%)	(8,400)			
Current portion of long-term debt	41,788	50,605	(17.4%)	(8,816)			
Short-term and current long-term debt	78,063	95,279	(18.1%)	(17,216)			
Accounts payable	70,441	68,870	2.3%	1,571			
Other current liabilities	42,929	54,148	(20.7%)	(11,220)			
Current liabilities	191,433	218,297	(12.3%)	(26,864)			
Deferred taxes	106,533	98,919	7.7%	7,614			
Non-current portion of long-term debt	592,712	510,805	16.0%	81,907			
Other liabilities	370,961	334,622	10.9%	36,339			
Total liabilities	1,261,639	1,162,643	8.5%	98,996			
Subsidiary preferred	712	712	0.0%	0			
Other mezzanine	596	577	3.3%	19_			
Total mezzanine level	1,307	1,289	1.5%	19			
Total Liabilities and Owner's Equity	1,756,936	1,624,937	8.1%	131,999			

r = revised

Capitalization Structure							
U.S. INVESTOR-OWNED ELECTRIC UTILITIES							
Capitalization Structure	12/31/2019	12/31/2018r	12/31/2017r				
Common Equity	464,217	437,843	424,276				
Preferred Equity & Noncontrolling Interests	29,774	23,163	13,486				
Long-term Debt (current & non-current)*	634,500	561,409	548,813				
Total	1,128,491	1,022,415	986,574				
Common Equity %	41.1%	42.8%	43.0%				
Dreferred Equity %	2.6%	2.0%	1 / %				
Long torm Dobt 9/	2.0%	Z.J /0	55.6%				
		54.9%	05.6%				
Total	100.0%	100.0%	100.0%				

* Long-term debt not adjusted for (i.e., includes) securitization bonds. r = revised

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

Proceeds from Issuance of Common Equity 2010–2019

U.S. INVESTOR-OWNED ELECTRIC UTILITIES


Short-term Debt 2010–2019

U.S. INVESTOR-OWNED ELECTRIC UTILITIES





r = revised

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

Long-term Debt 2010-2019

U.S. INVESTOR-OWNED ELECTRIC UTILITIES



r = revised

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

Debt-to-Cap Ratio by Category 2019 vs. 2018r							
U.S. INVESTOR-OWNED ELECTRIC UTILITIES							
	Regulated		Mostly Regulated		Tota	Total Industry	
	Number	%	Number	%	Number	%	
Lower	4	11.4%	0	0.0%	4	8.9%	
No Change*	13	37.1%	5	50.0%	18	40.0%	
Higher	18	51.4%	5	50.0%	23	51.1%	
Total	35	100.0%	10	100.0%	45	100.0%	

*No change defined as less than 1.0%

Note: December 31, 2019 vs. December 31, 2018. Refer to page v for category descriptions. Source: S&P Global Market Intelligence and EEI Finance Department.

Capitalization Structure by Category 2019 vs. 2018r

	Regulated		Mostly Regulated			
	2019	2018r	Change	2019	2018r	Change
Common Equity	306,562	290,444	16,118	157,654	147,399	10,256
Total Preferred Equity Long-term Debt	20,584	14,939	5,645	9,190	8,224	966
(current & non-current)*	454,743	411,103	43,641	179,757	150,306	29,451
Total Capitalization	781,890	716,486	65,404	346,601	305,929	40,672
Common Equity %	39.2%	40.5%	-1.3%	45.5%	48.2%	-2.7%
Preferred Equity %	2.6%	2.1%	0.5%	2.7%	2.7%	0.0%
Long-term Debt %	58.2%	57.4%	0.8%	51.9%	49.1%	2.7%
Total	100.0%	100.0%	_	 100.0%	100.0%	_

r = revised

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

Date	PP&E in Service, Net (\$Mil)	% Change from 12/31/2015
12/31/2019	\$1,135,459	26.4%
12/31/2018r	\$1,058,164	17.8%
12/31/2017r	\$1,015,100	13.0%
12/31/2016	\$969,838	8.0%
12/31/2015	\$898,152	

Cash Flow Statement

- Net Cash Provided by Operating Activities decreased by \$4.6 billion or 4.6%. An increase in cash supplied by net income, depreciation and amortization was offset by a reduction in cash sourced to changes in working capital.
- Cash provided by Deferred Taxes & Investment Credits has leveled off over the last two years, at about \$3.0 billion per year, 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.
- Net Cash Used in Investing Activities increased by \$13.7 billion or 11.0%. The industry's capital spending — by far the largest component of this metric — totaled \$124.1 billion in 2019, up \$4.9 billion, or 4.1% from 2018. Industry capex has reached a new record high in each of the past eight years.
- Infrastructure investment in the form of Asset Purchases also increased, rising 12.0% to \$25.5 billion. Activity was concentrated in a few large utilities. CenterPoint and NextEra each spent more than \$5 billion, accounting for nearly half the industry total. AEP, Dominion,

and Sempra were other primary contributors.

Cash provided by Asset Sales decreased 21.1%, to \$16.7 billion. Again, activity was driven by a few utilities. Southern Company's sale of Gulf Power to NextEra (recognized by NextEra as a purchase) accounted for nearly one-third of the 2019 total. Dominion, AEP and NextEra were other primary contributors to the industry total.

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- Net Cash Provided by Financing Activities increased by \$2.5 billion or 7.8%. Increased issuance of long-term debt and common equity produced 66.9% and 25.1% respective gains, versus 2018, in the cash provided by these capital sources. Issuance of short-term debt declined as longterm debt issuance was strong.
- Dividends Paid to Common Shareholders rose 9.1%, to \$27.9 billion.

Statement of C	ash Flow	s						
U.S. INVESTOR-OWNED ELECTRIC UTILITIES								
\$ Millions	12 Months Ended							
	12/31/2019	12/31/2018r	% Change					
et Income	\$37,209	\$31,688	17.4%					
epreciation and Amortization	56,437	53,123	6.2%					
eferred Taxes and Investment Credits	3,004	2,986	0.6%					
perating Changes in AFUDC	(1,281)	(1,440)	(11.1%)					
hange in Working Capital	(2,601)	12,363	NM					
ther Operating Changes in Cash	2,777	1,403	97.9%					
et Cash Provided by Operating Activities	95,545	100,123	(4.6%)					
apital Expenditures	(124,140)	(119,248)	4.1%					
sset Sales	16,710	21,186	(21.1%)					
sset Purchases	(25,533)	(22,800)	12.0%					
et Non-Operating Asset Sales and Purchases	(8,823)	(1,614)	446.7%					
hange in Nuclear Decommissioning Trust	(371)	(620)	(40.1%)					
vesting Changes in AFUDC	144	123	17.7%					
ther Investing Changes in Cash	(5,560)	(3,688)	50.8%					
et Cash Used in Investing Activities	(138,750)	(125,047)	11.0%					
et Change in Short-term Debt	(4,815)	7,861	NM					
et Change in Long-term Debt	45,822	27,453	66.9%					
roceeds from Issuance of Preferred Equity	2,786	6,567	(57.6%)					
referred Share Repurchases	(50)	(87)	(42.4%)					
Net Change in Prefered Issues	2,736	6,480	(57.8%)					
roceeds from Issuance of Common Equity	19,171	15,319	25.1%					
ommon Share Repurchases	(2,137)	(1,297)	64.7%					
Net Change in Common Issues	17,035	14,022	21.5%					
ividends Paid to Common Shareholders	(27,938)	(25,616)	9.1%					
ividends Paid to Preferred Shareholders	(362)	(210)	72.2%					
ther Dividends			NM					
Dividends Paid to Shareholders	(28,300)	(25,827)	9.6%					
ther Financing Changes in Cash	2,736	2,684	2.0%					
et Cash (Used in) Provided by Financing Activities	35,215	32,674	7.8%					
ther Changes in Cash	33	(45)	NM					
et increase (decrease) in cash and cash equivalents	\$(7,957)	\$7,706	NM					
ash and cash equivalents at beginning of period	\$19,698	\$8,433	133.6%					
ash and cash equivalents at end of period	\$11,741	\$16,139	(27.3%)					
= revised NM = not meaningful								

Capital Expenditures 2010–2019



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

Capital Spending—Trailing 12 Months U.S. INVESTOR-OWNED ELECTRIC UTILITIES (\$ Billions) 140 109.2 111.5 112.9 112.5 113.1 112.2 112.7 113.1 112.5 ^{114.9} 117.4 ^{119.2}.117.6 118.5 ^{121.1} 120 97.6 99.5 101.0 104.0 100 80 60 40 20 0 '15 **'15 '15** '15 **'16 '16 '16 '16 '17 '17 '17 '17 '18 '18 '18 '18 '19 '19** '19 **'19** Q1 Q2 Q3 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q4 Q1



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

Net Change in Long-term Debt 2010-2019

U.S. INVESTOR-OWNED ELECTRIC UTILITIES



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

Rate Review Summary Charts



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



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



Source: U.S. Federal Reserve.



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



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

Average Regulatory Lag 1995–2019

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 sources at electric utilities.

EEI Index

Quarterly stock performance of the U.S. investor-owned electric utilities. The index, which measures total return and provides company rankings for one- and five-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. The 2013 edition features updated chapters on Tax Depreciation, Accounting for Asset Retirement Obligations (AROs) and includes a new chapter on Depreciation in an IFRS Environment.

Industry directories published by the Business Services and Finance Division:

- Electric Utility Investor Relations
 Executives Directory
- Accounting and Internal Audit Directory

For more information, please visit the EEI website at: www.eei.org.

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 Devin James or Aaron Cope 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 Devin James or 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 Devin James or 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 Devin James or Aaron Cope 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 Devin James or Aaron Cope 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 utilityspecific 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.

EEI Accounting Standards Committee

Provides a forum for technical accounting, accounting research, financial reporting, and other interested member-company accounting leaders and staff, to update their knowledge on emerging accounting standards, implementation issues associated with newly issued standards, and other technical and business issues. This Committee meets in conjunction with the Spring Accounting Conference. Contact Randall Hartman 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 Forecast Committee and the AGA Accounting Services Committee, the conference provides 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.

Tax School

Provides utility tax professionals with a forum to discuss developing tax issues impacting our member companies. This two and half day training is held every other year in the spring and is targeted for intermediate-level personnel. 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 regulated companies in the changing and increasingly competitive environment of the electric and gas utility industries. Contact Randall Hartman or Dave Dougher for more information.

Property Accounting & Depreciation Training Seminar

This is a one and a half day seminar offered jointly with AGA that provides an introduction to property accounting and depreciation in the electric and natural gas utility industries. 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.

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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 to you. For further details, please contact Devin James at (202) 508-5057, Aaron Cope at (202) 508-5127, Randall Hartman (202) 508-5494, or Dave Dougher (202) 508-5570.

August 24-27, 2020

Introduction/Advanced Public Utility Accounting and Internal Auditor's Training Courses

Loews Atlanta Atlanta, Georgia

November 8-10, 2020

EEI Financial Conference

JW Marriott Desert Ridge Resort & Spa Phoenix, Arizona

November 8, 2020

EEI Treasury Group Meeting

(Closed meeting, admittance by invitation only) JW Marriott Desert Ridge Resort & Spa Phoenix, Arizona

November 8, 2020

Chief Financial Officers Forum

(Closed meeting, admittance by invitation only) JW Marriott Desert Ridge Resort & Spa Phoenix, Arizona

November 15–19, 2020

Fall Accounting Conference and Property Accounting & Depreciation Training

Disney's Grand Floridian Lake Bueno Vista, Florida

December 3, 2020

Investor Relations Planning Group Meeting

(Closed meeting, admittance by invitation only) Hyatt Centric Times Square New York New York, New York

December 4, 2020

Wall Street Advisory Group Meeting

(Closed meeting, admittance by invitation only) Hyatt Centric Times Square New York New York, New York

Earnings Twelve Months Ending December 31					
U.S. INVESTOR-OWNED ELECTRIC UTILITIES					
(\$ Millions)	2019	2018r			
and Extraordinary Items	51,461	47,644			
Non-Recurring Items (pre-tax)					
Gain on Sale of Assets	2,899	5,272			
Other Non-Recurring Revenues	117	131			
Asset Write-downs	(3,517)	(4,121)			
Other Non-Recurring Expenses	(14,174)	(17,841)			
Total Non-Recurring Items	(14,675)	(16,559)			
Extraordinary Items (net of taxes)					
Discontinued Operations	424	602			
Change in Accounting Principles					
Early Retirement of Debt		_			
Other Extraordinary Items	—	—			
Total Extraordinary Items	424	602			
Net Income	37,209	31,688			
Total Non-Recurring and Extraordinary Items	(14,251)	(15,957)			
r = revised Note: Totals may reflect rounding.					
Source: S&P Global Market Intelligence and EEI Finance Department.					

U.S. Investor-Owned Electric Utilities

(At 12/31/2019)

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 Corporation * CMS Energy Corporation Consolidated Edison, Inc. Dominion Energy, Inc. DPL Inc. * DTE Energy Company Duke Energy Corporation Edison International El Paso Electric Company Entergy Corporation Evergy, Inc. **Eversource Energy Exelon** Corporation FirstEnergy Corp.

Hawaiian Electric Industries, Inc. IDACORP. Inc. IPALCO Enterprises, 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 Incorporated Puget Energy, Inc. * Sempra Energy Southern Company Unitil Corporation WEC Energy Group, Inc. Xcel Energy Inc.

Note: Includes the 40 publicly traded electric utility holding companies plus an additional five electric utilities (shown in italics) that are not listed on U.S. stock exchanges for one of the following reasons—they are subsidiaries of an independent power producer; they are subsidiaries of foreign-owned companies; or they were acquired by other investment firms.

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**.



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