



Edison Electric  
INSTITUTE

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# Delivering America's Energy Future

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Electric Power Industry Outlook  
Edison Electric Institute Wall Street Briefing  
February 6, 2019 | New York, NY



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# Opening Remarks & Industry Priorities

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# Creating Value in America's Economy

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Contribute  
**\$865 billion**  
annually to U.S. GDP or  
**5%**  
of total GDP



Support  
**7 million+**  
jobs across the  
United States



Invest  
**\$100 billion+**  
per year to build  
smarter, cleaner, stronger,  
and more secure  
energy infrastructure

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# Our Industry Vision Is Customer-Driven

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Value-  
Focused



More Dynamic,  
More Secure  
Energy Grid



Clean  
Energy



Innovative  
Energy  
Solutions

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# 2019 Industry Priorities

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Energy  
Infrastructure



Clean  
Energy



Wildfire Mitigation  
& Adaptation



Grid Security  
& Resilience



Electric  
Transportation



Enhanced Customer  
Experience

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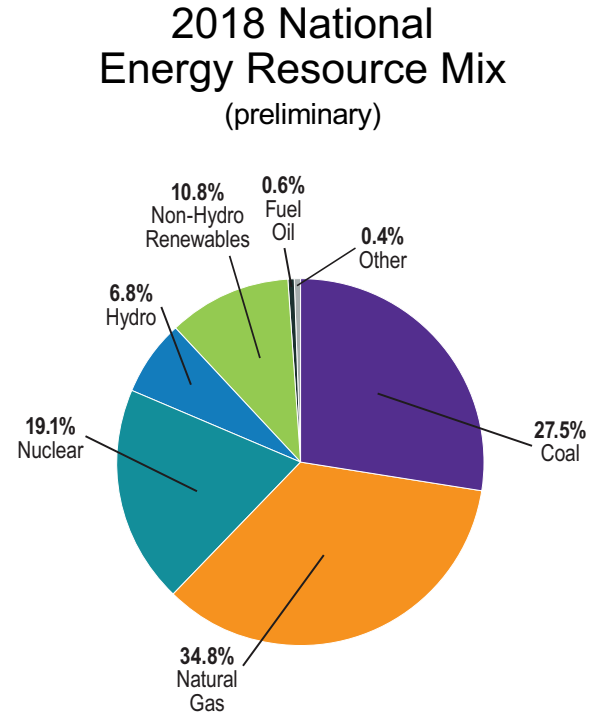
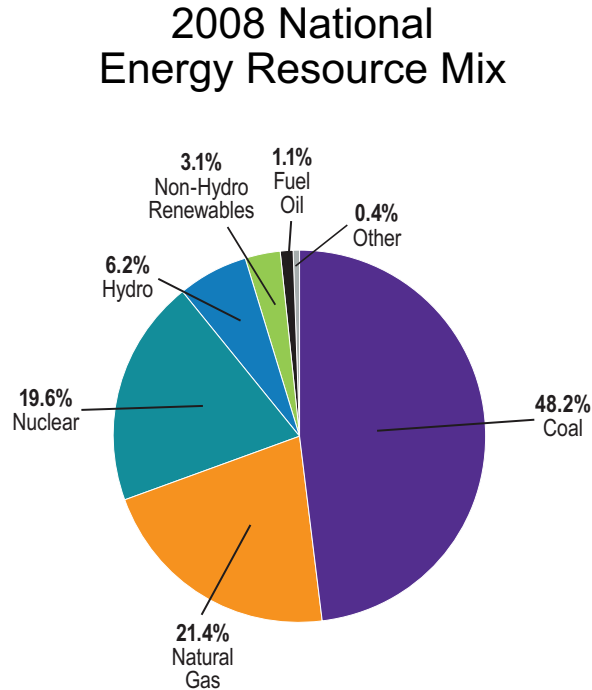
# The Clean Energy Transformation

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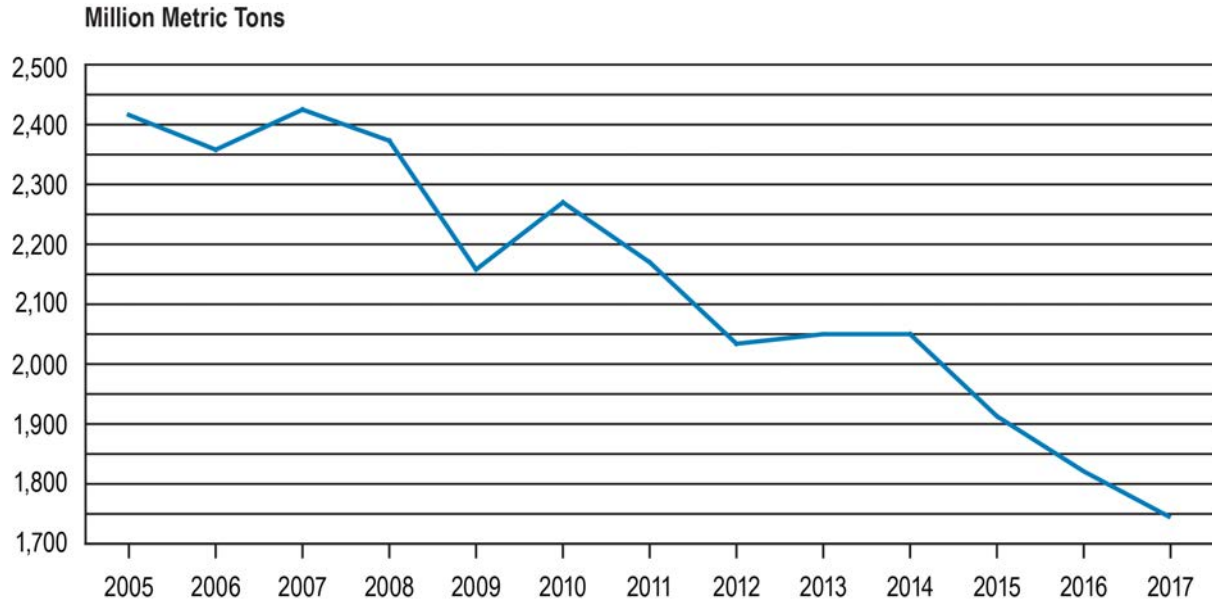




# Mix of Resources Used To Generate Electricity Has Changed Dramatically 2008–2018



# U.S. Power Sector Carbon Dioxide Emissions 2005–2017



- More than 1/3 of U.S. electricity comes from carbon-free sources
- As of 2017, industry CO<sub>2</sub> emissions were 28 percent below 2005 levels
- Trajectory is expected to continue based on current trends

Source: Developed from U.S. Energy Information Administration, *Monthly Energy Review*, October 2018.



# Electric Companies Are Leading On Clean Energy



Changing U.S. Energy Mix

**>1/3**

**CARBON-FREE**



Increasing Investments

**\$100 Billion+**

**PER YEAR IN SMARTER ENERGY INFRASTRUCTURE**



**>1/2**

Of the Industry's New Electricity Generation Capacity Each Year Is

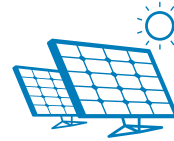
**WIND AND SOLAR ENERGY**



Expanding Access to EVs

**95,000+**

**CHARGING STATIONS NATIONWIDE**



Providing

**69%**

of the **SOLAR ENERGY** in the Country



Using

**90%+**

**OF ALL U.S. ENERGY STORAGE**

## Cutting Emissions

**CO<sub>2</sub> ↓ 28%**

**BELOW 2005 LEVELS AS OF 2017**

**NO<sub>x</sub> ↓ 84%**

**BETWEEN 1990–2017**

**SO<sub>2</sub> ↓ 92%**

**BETWEEN 1990–2017**

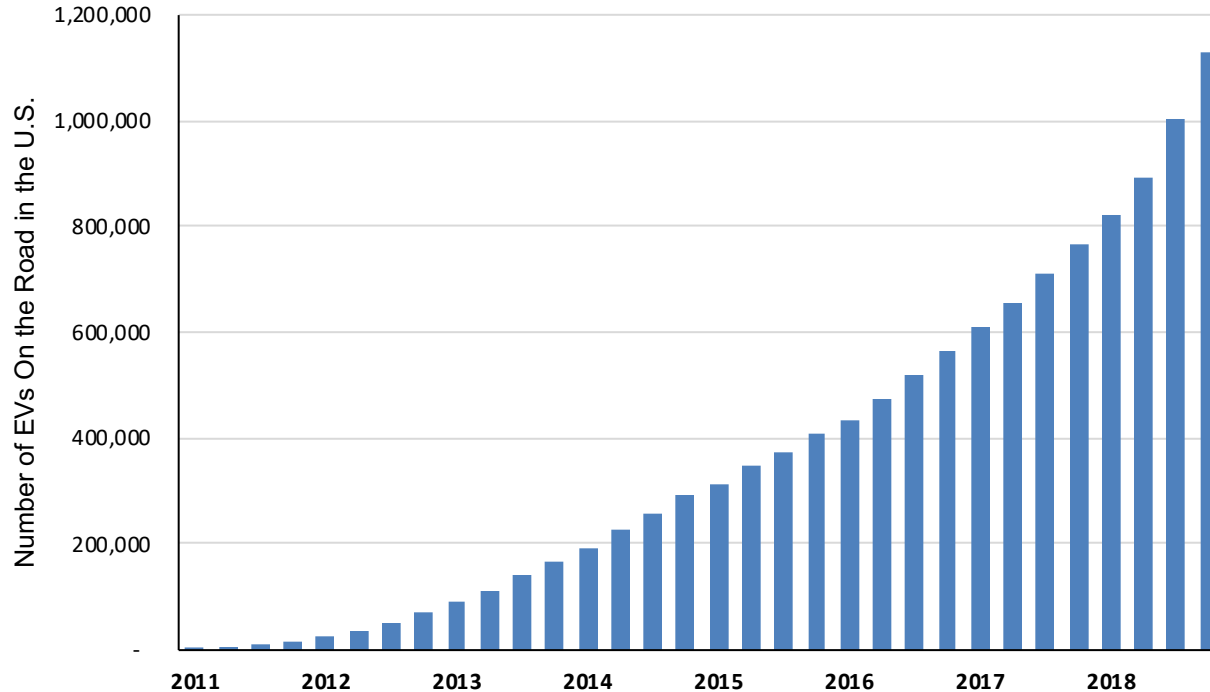
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# The Benefits of Electric Transportation

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# Electric Transportation: Growing Momentum



EVs on the road

**>1 million**

EV sales increase,  
2017 to 2018

**+81%**

EV availability  
in 2018

**41 models**

**21 brands**

Battery price\*

**-85%**

\*Bloomberg New Energy Finance. Battery price 2010-2018.

# Electric Transportation Trends

TODAY



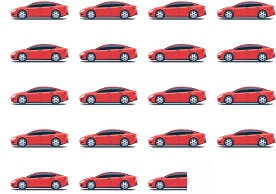
There are more than

**1 million**

electric vehicles on U.S. roads.



BY 2030



The number of EVs on the road is projected to reach

**18.7 million.**

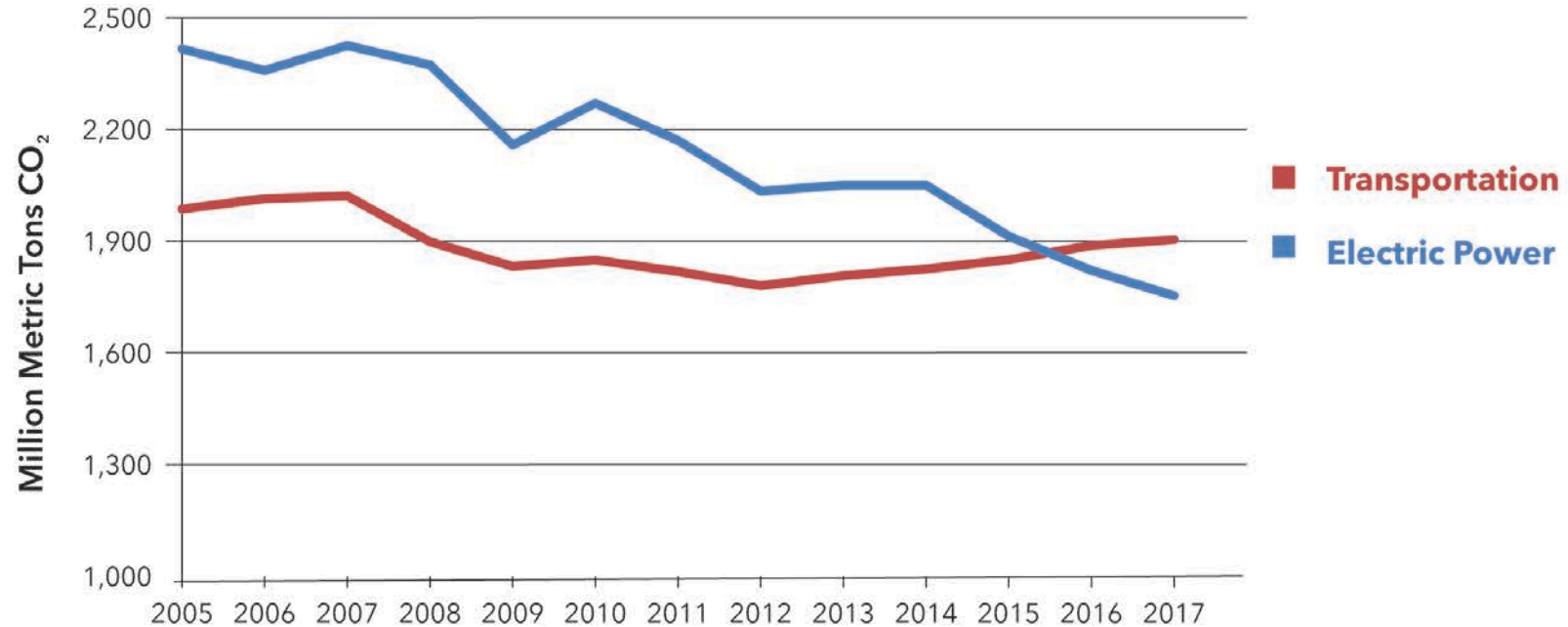


**~9.6 million**

charge ports will be needed to support this number.



# CO<sub>2</sub> Emissions: Electric Power and Transportation Sectors

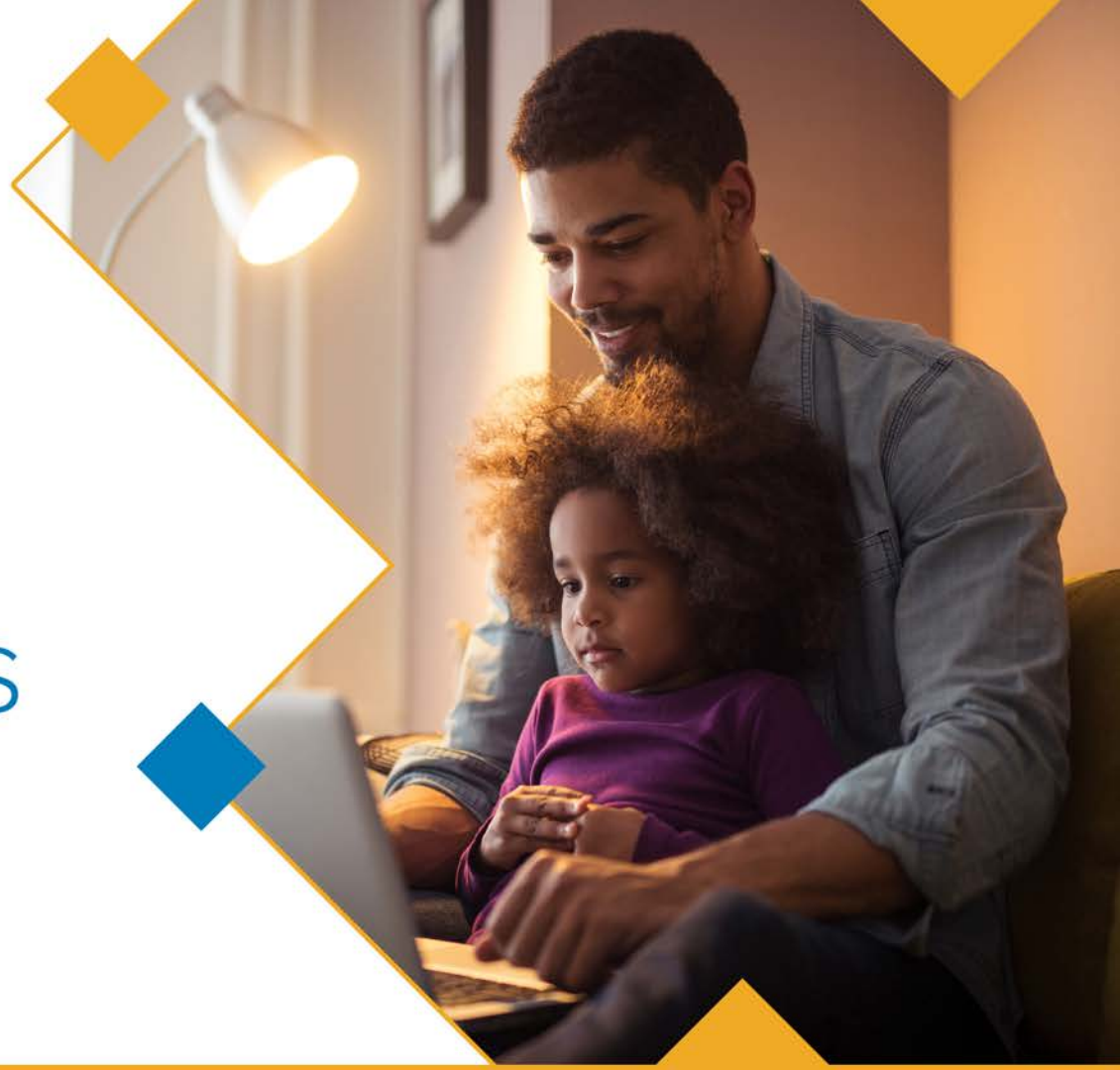


Source: U.S. Energy Information Administration, *Monthly Energy Review*, October 2018.

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# Meeting Customers' Expectations

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# Having a Customer Focus Is Most Important



believe it's more important for a company  
to be customer-focused than innovative

amazon Zappos  
Zappos.com

WESTIN®  
HOTELS & RESORTS

COSTCO  
WHOLESALE

Kroger



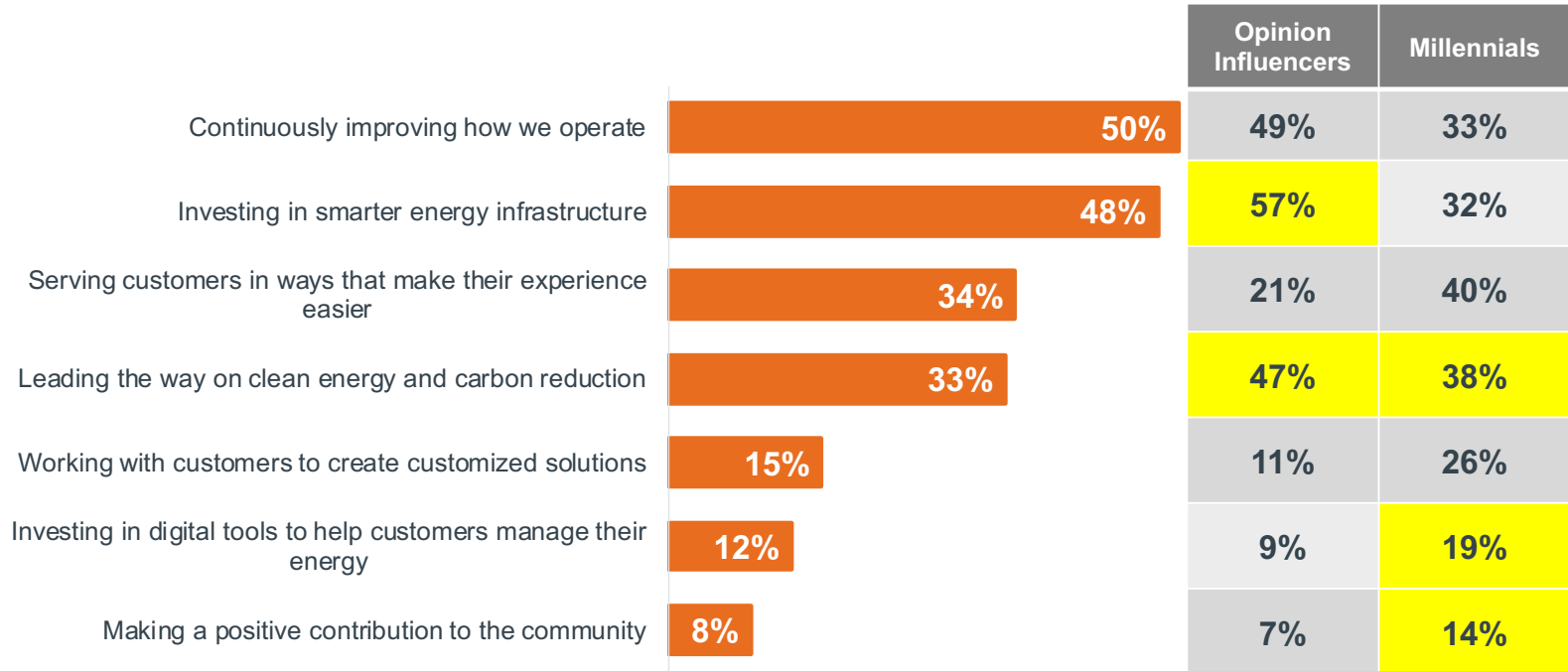
# Respect My Time. Respect My Money.

Q: Please rate each based on how **important** it is to you. (TOP 2)



# What Customers Want

Q: Which is most important? That your energy company is... ? (TOP 2)



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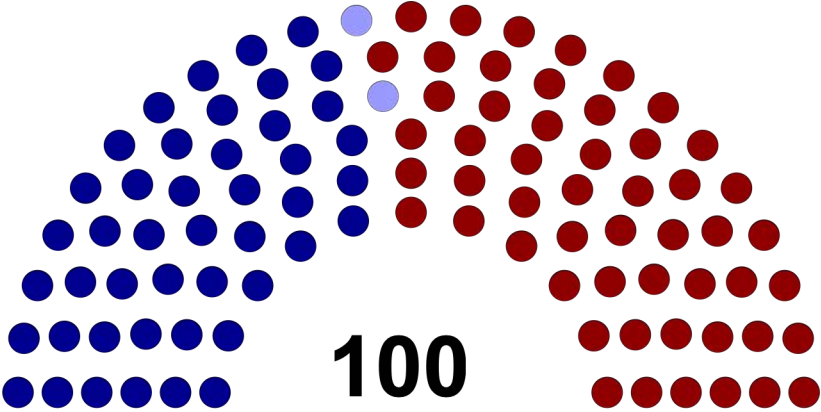
# The Political Backdrop

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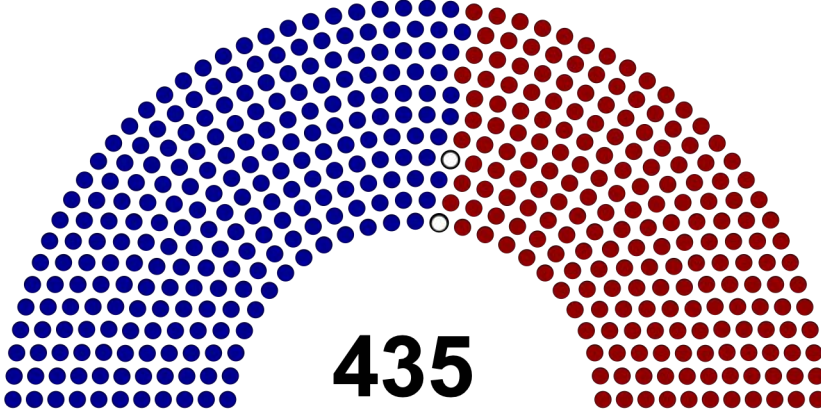
# The 116<sup>th</sup> Congress

Senate



- Republicans (53)
- Democrats (45)
- Independents (2)

House of Representatives

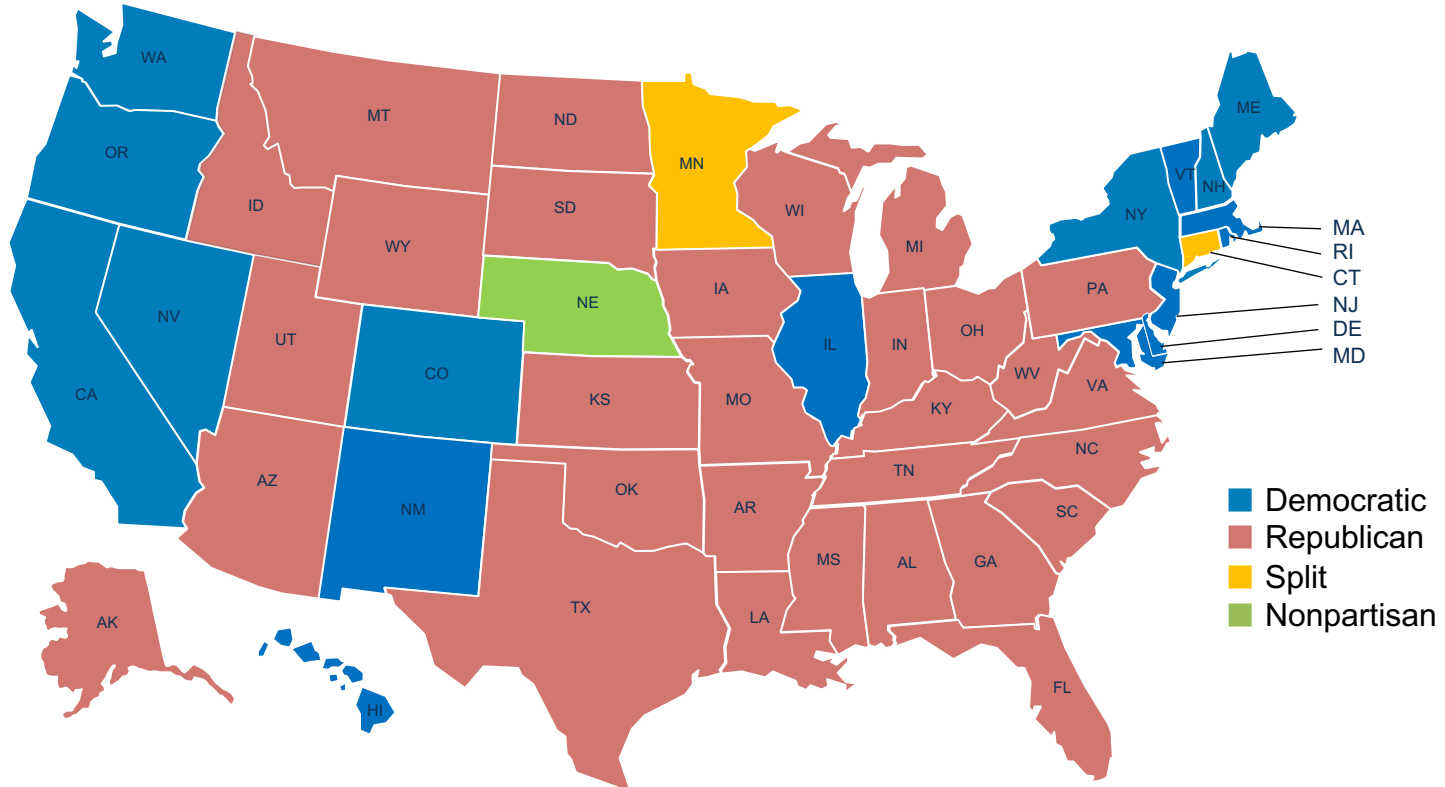


- Democrats (235)
- Republicans (198)
- Vacant (2)





# The Midterm Elections: Control of State Legislatures



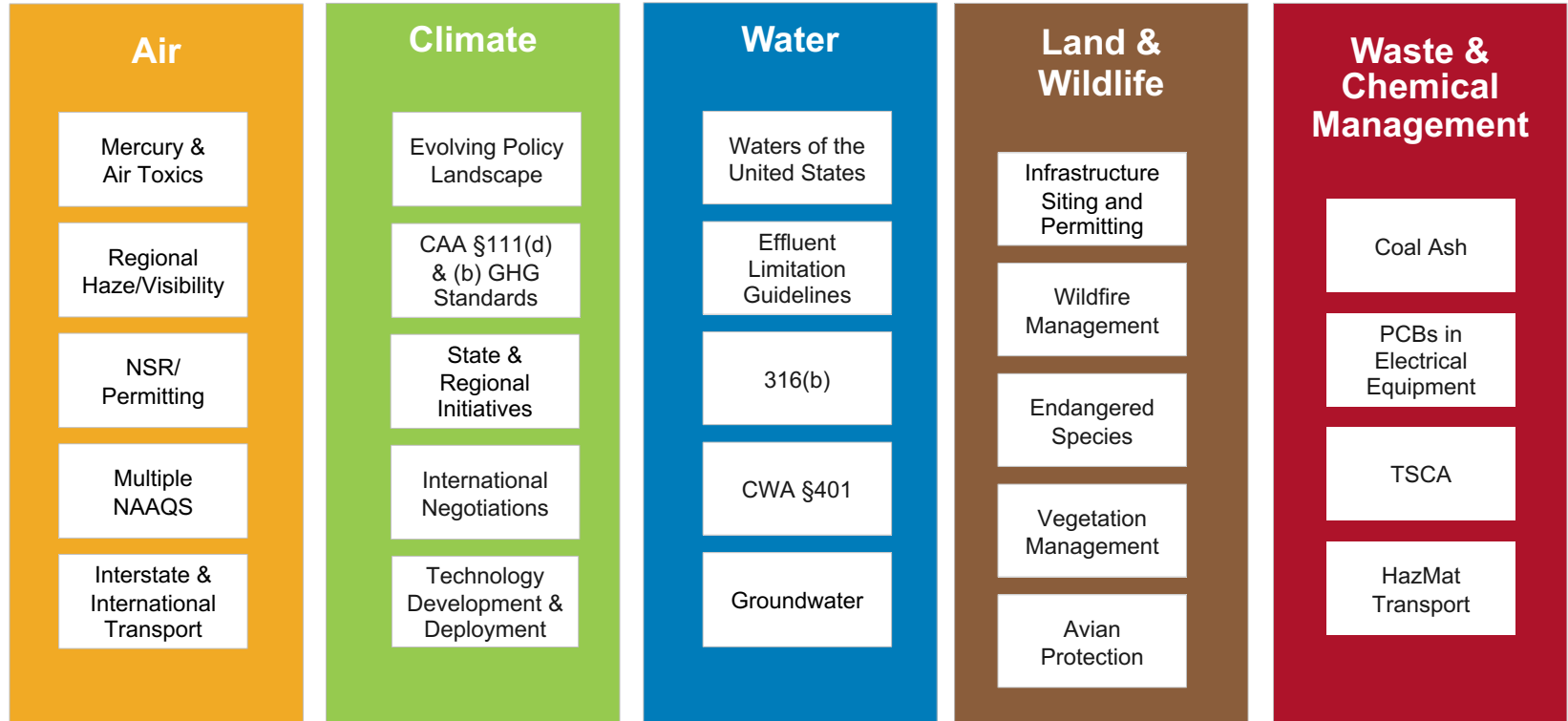
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# The Regulatory Landscape

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# Environment and Natural Resources Challenges: 2019 and Beyond





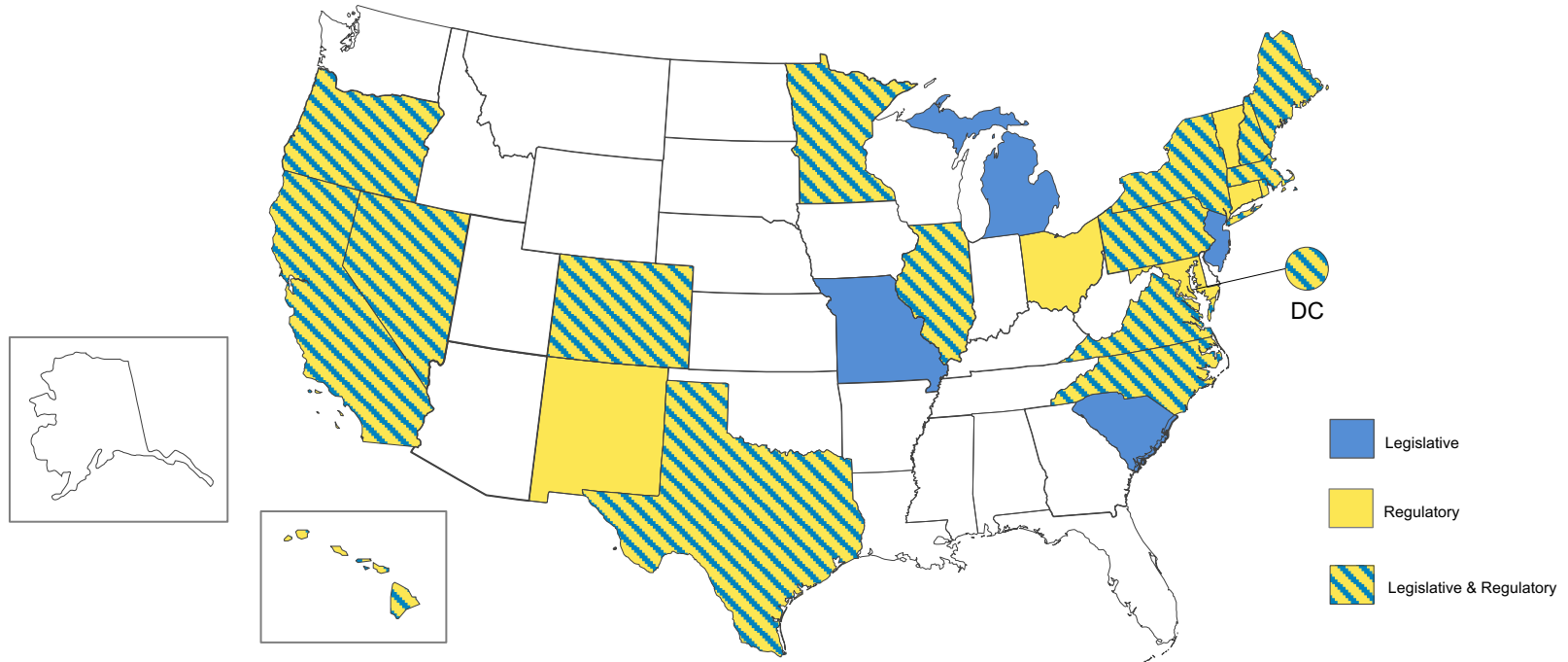
# FERC Priorities

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- Holistic PURPA Reform
- ROE Policy
- Transmission Incentives
- Order 1000
- Energy Price Formation Issues
- Resiliency
- Natural Gas Pipeline Policy Statement Review



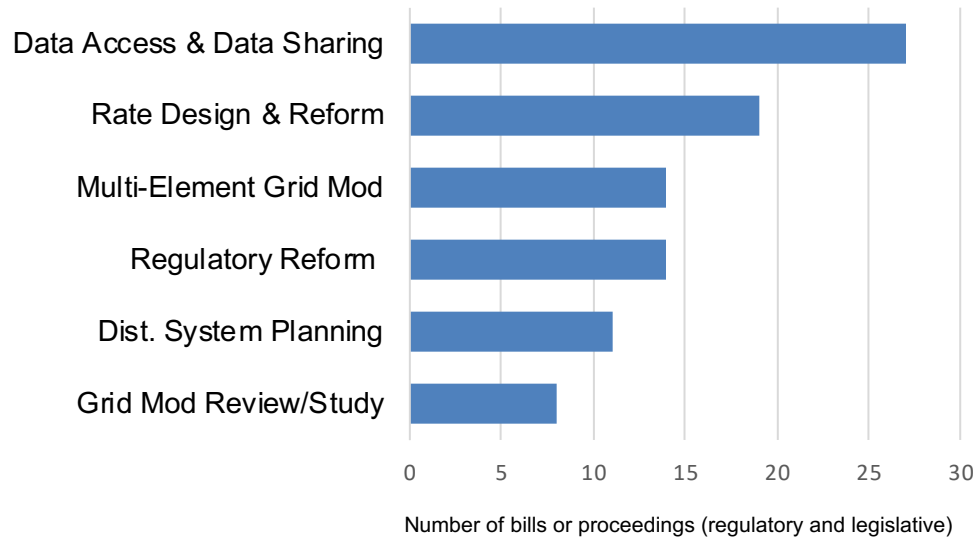
# Grid Modernization State Regulatory & Legislative Activity 2018



Note: Activities related to DG, storage, EVs, cyber/physical security, and rate reviews are extensive enough that EEI tracks them separately.

# Grid Modernization Trends

## Grid Mod Legislative & Regulatory Activity by Type (2018)



## Trending

- Decisions on data
- Transformative rate design
- Regulatory reform
- Mix-and-match grid mod

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# Storm and Wildfire Response & Energy Grid Security

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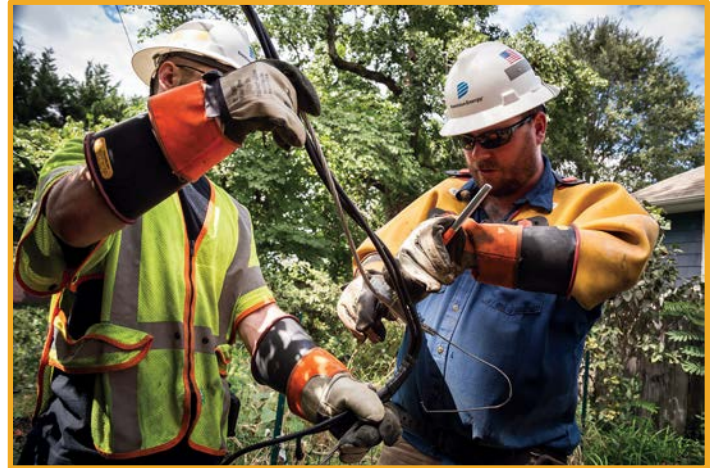




# Storm and Wildfire Response

## New EEI Wildfire Practice Focused On:

- Access issues to perform vegetation management
- Outstanding ROW renewals
- Legal/insurance challenges
- Sharing suggested practices among member companies



# Addressing Threats to the Energy Grid

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## The Electricity Subsector Coordinating Council (ESCC) is focused on improving the security of the energy grid:

- The ESCC plans and exercises coordinated responses to attacks or major disruptions to the energy grid.
- The ESCC makes sure information about threats is communicated quickly between government and industry.
- The ESCC deploys government technologies on electric company systems that improve situational awareness of threats to the energy grid.
- The ESCC coordinates closely with other critical infrastructure sectors.



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# Tax Reform Implementation

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# Key Issues Addressed in the 163(j) Regulations

Requested by EEI/Industry	Proposed by Treasury
Industry exclusion determined at consolidated group	✓
Principle that debt is “fungible”	✓
Asset-based allocation methodology	✓
MACRS or ADS	✓
De Minimis threshold for “regulated % calculation”	✓
Partnership—excepted vs. non-excepted treatment applies	✓



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# ESG/ Sustainability Template & Natural Gas Sustainability Initiative

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# ESG/Sustainability Template

The ESG/Sustainability Steering Committee identified **5 areas of focus** based on discussions with investors

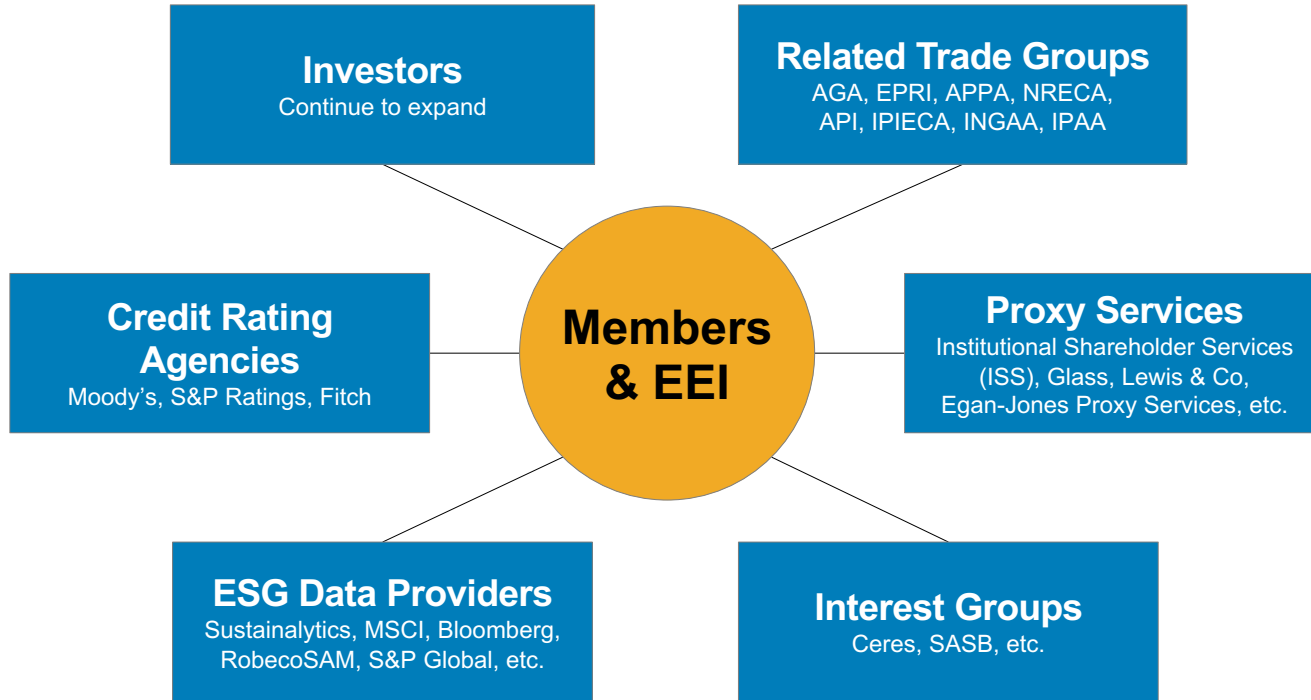
Qualitative	
ESG/Sustainability Governance	Management and oversight of ESG and sustainability.
ESG/Sustainability Strategy	Practices, programs, and initiatives designed to support the company's transition to a lower carbon and increasingly sustainable energy future.
Quantitative	
Portfolio	An Excel-based data reporting template that is customized for electric companies to include metrics on owned and/or purchased generation data by technology/resource type, as well as other metrics related to capital investments, emissions, natural resources, and human resources.
Emissions	
Resources	

Note: data for these areas should include as much historical, current, and forward-looking information as is appropriate.

## Version 2 release in mid-2019 will include LDC Metrics

- EEI and AGA are currently engaging investors to seek guidance on relevant ESG metrics for LDCs.
- A group of AGA pilot companies are currently publishing gas LDC metrics with the Version 1 template.
- These LDC metrics will be fully incorporated into Version 2 to report 2018 data later this year.

# Investor Engagement and Stakeholder Outreach



# Natural Gas Sustainability Initiative

An overarching framework to **recognize and advance the innovative, voluntary sustainability programs** from the wellhead to the burner tip.

NGSI enables the natural gas industry to **measure, disclose, and recognize** industry-wide progress and innovation on key sustainability metrics.



# NGSI Conceptual Design

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## Program Elements

Measure

Disclose

Recognize

## Strategic Goals

Encourage consistent approaches for measuring and tracking key metrics

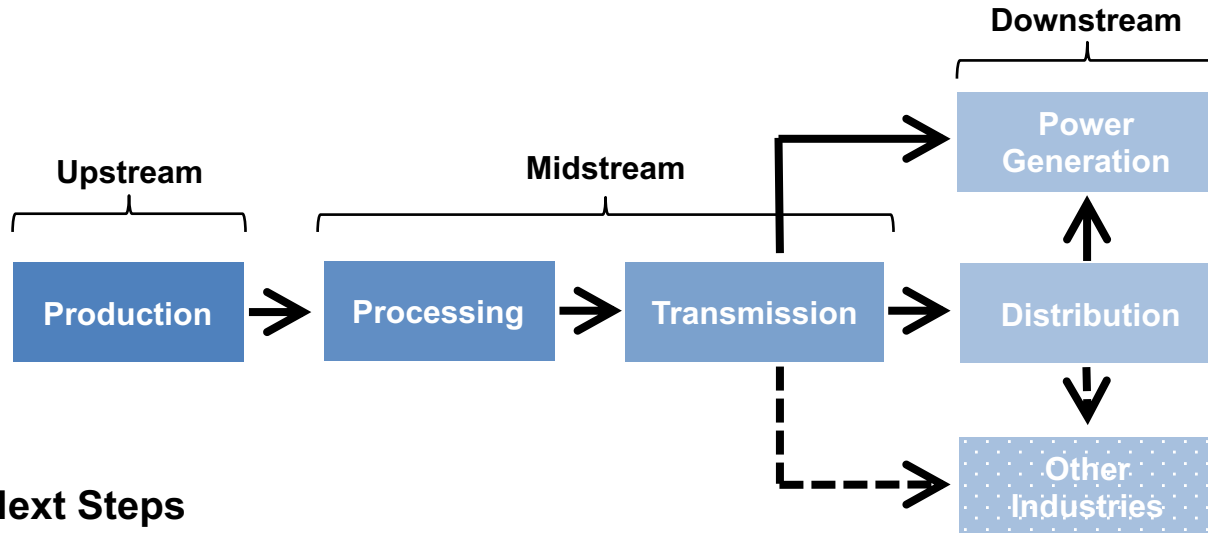
Support and encourage robust reporting across the industry

Encourage environmental performance and sustainability leadership

**Provide cohesive framework for sustainability metrics throughout the natural gas supply chain**

# NGSI Summary

Recognizing voluntary actions and sustainability commitments from industry leaders across the natural gas value chain



## Next Steps

- Engage stakeholders
- Incorporate feedback into NGSI design



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# Industry Financial Highlights

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# Financial Highlights

as of 12-31-2018

## Stock Performance

	EEI Index	DJIA	S&P 500	NASDAQ
<b>1-year</b>	3.7%	(3.5%)	(4.4%)	(3.9%)
<b>3-year</b>	36.0%	44.0%	30.4%	32.5%
<b>5-year</b>	68.5%	58.8%	50.3%	58.9%
<b>10-year</b>	176.4%	244.3%	243.0%	320.8%

## Dividends

- Yield = 3.4%
- 41 of 42 companies currently paying a dividend
- 39 of 42 companies increased dividend rate in 2018

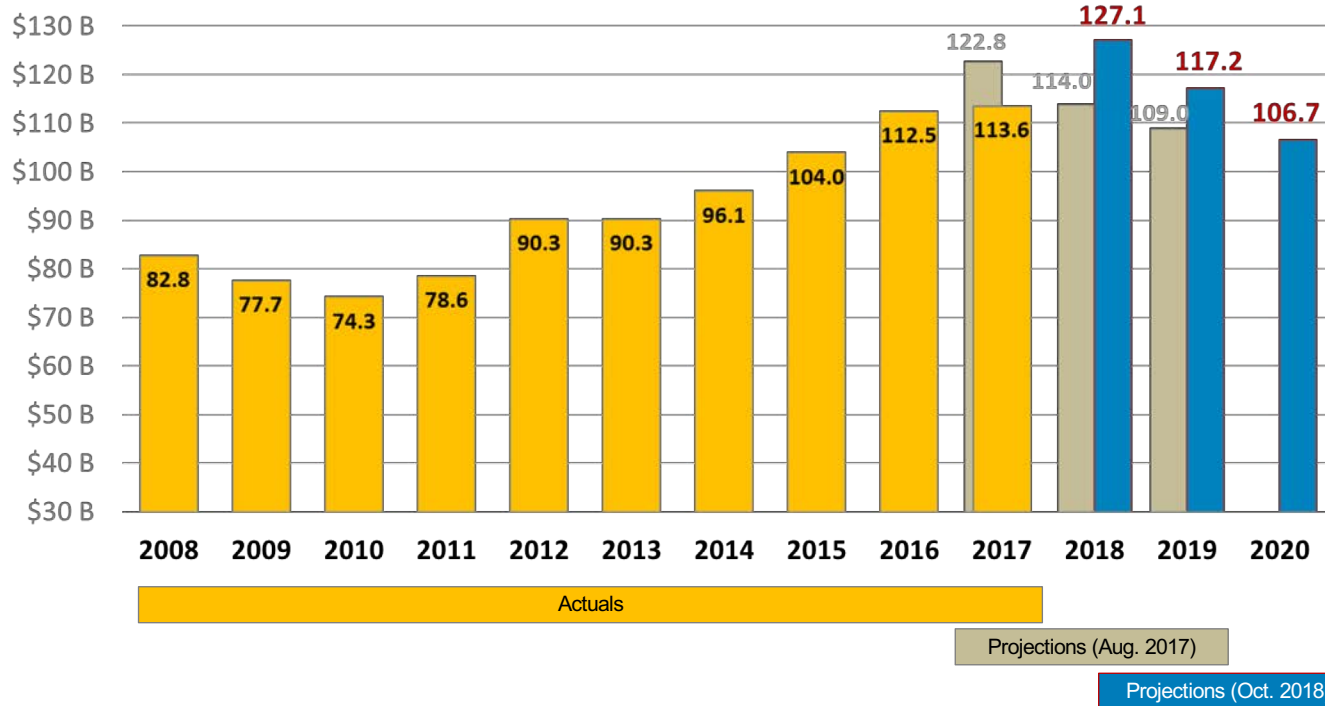
## Credit Ratings

- Strengthening 'BBB+' Average
- Outlook 77% Stable or Positive

Note: Stock returns are total returns, ending 12-31-2018, (i.e., include dividends) except for NASDAQ, which is price appreciation only.

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

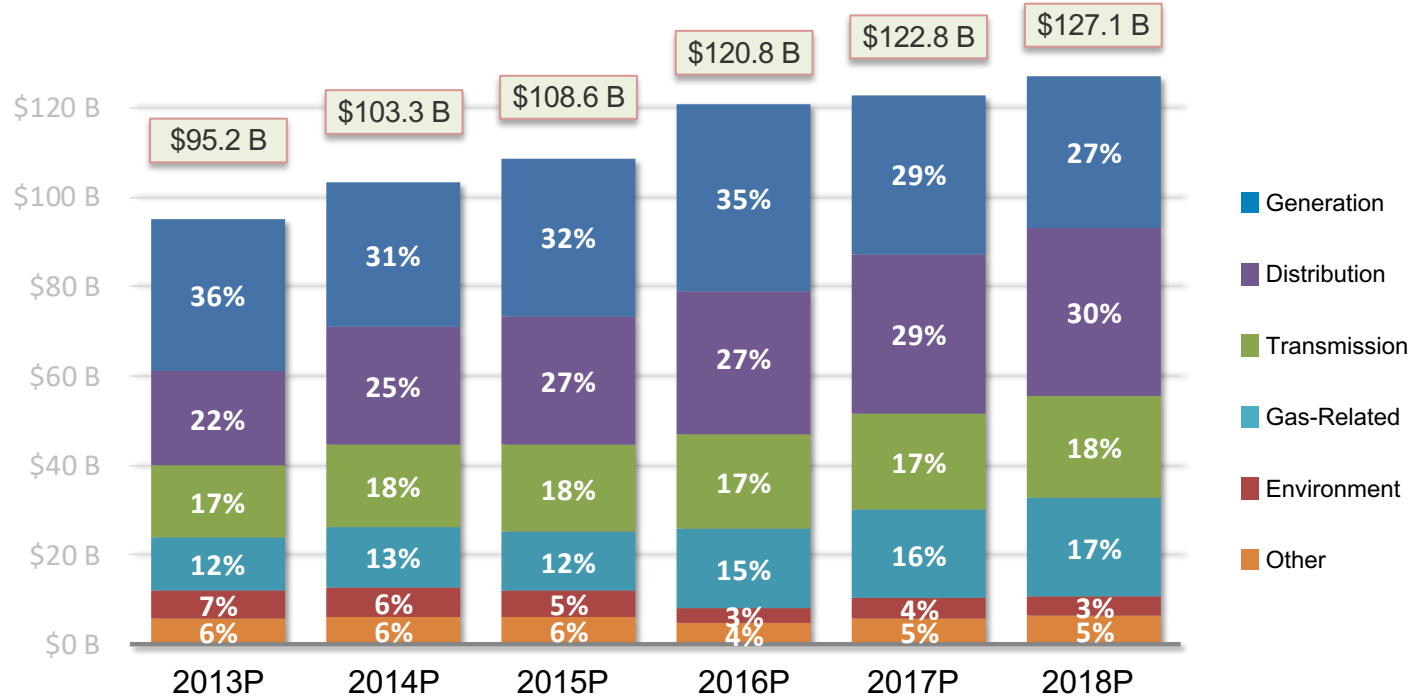
# Industry Capital Expenditures



Notes: Total company spending of U.S. Investor-Owned Electric Utilities, consolidated at the parent or appropriate holding company. Projections based on publicly available information and extrapolated for companies reporting fewer than three projected years (0.1% and 5.7% of the industry for 2019 and 2020, respectively).

Source: EEI Finance Department, company reports, S&P Global Market Intelligence (October 2018).

# Projected Functional CapEx



Notes: Total company functional spending of U.S. Investor-Owned Electric Utilities may not sum to 100% due to rounding error. Projections based on publicly available information and extrapolated for companies not reporting functional detail (1.3%, 1.3%, 1.3%, 0.7%, 0.9%, 0.8% of the industry for 2013, 2014, 2015, 2016, 2017, and 2018 respectively).

Source: EEI Finance Department, company reports, S&P Global Market Intelligence (October 2018).

An aerial night view of a city skyline, likely New York City, with numerous skyscrapers and buildings illuminated by lights. The scene is dominated by a blue color palette, with the lights of the buildings providing a warm contrast. The text is overlaid on the upper portion of the image.

**“What you are will show  
in what you do.”**

*Thomas Alva Edison*

**EEL**





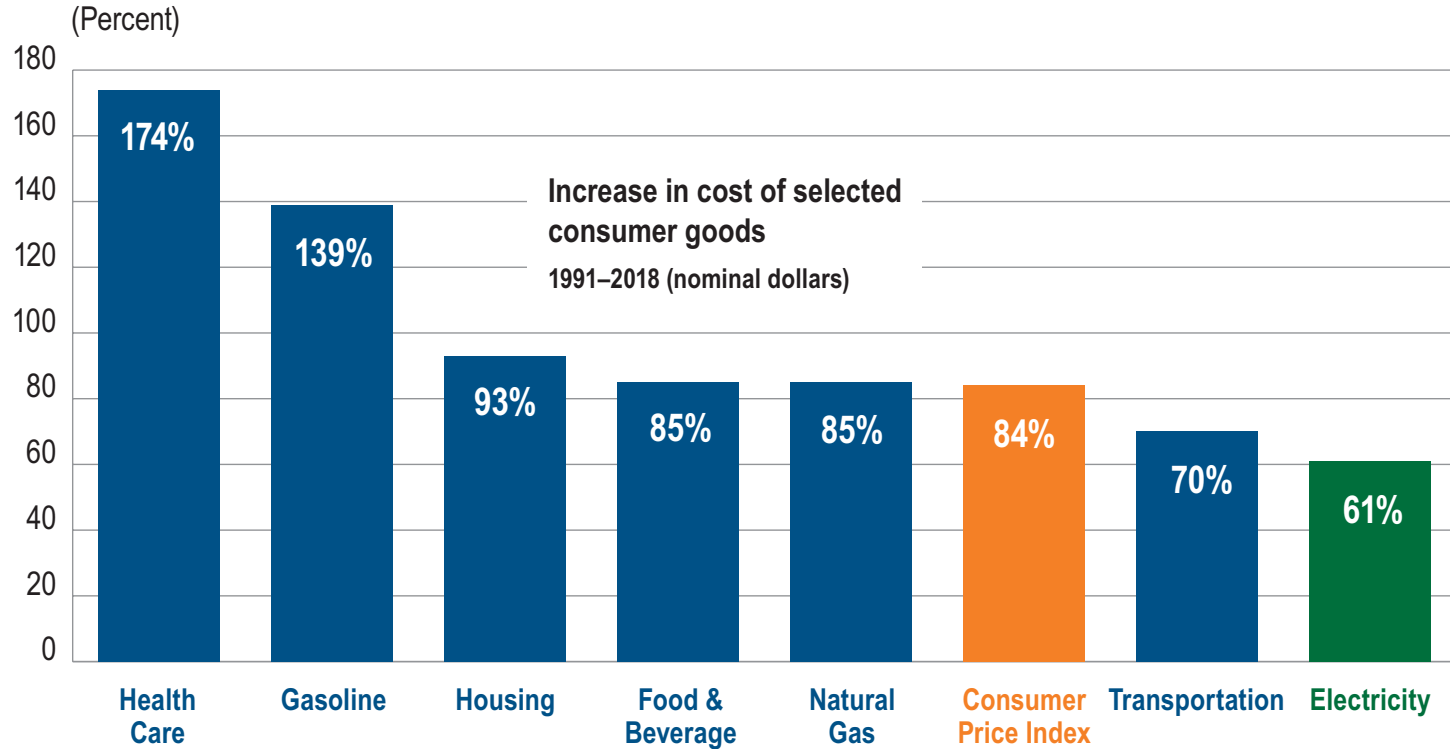
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# Appendix

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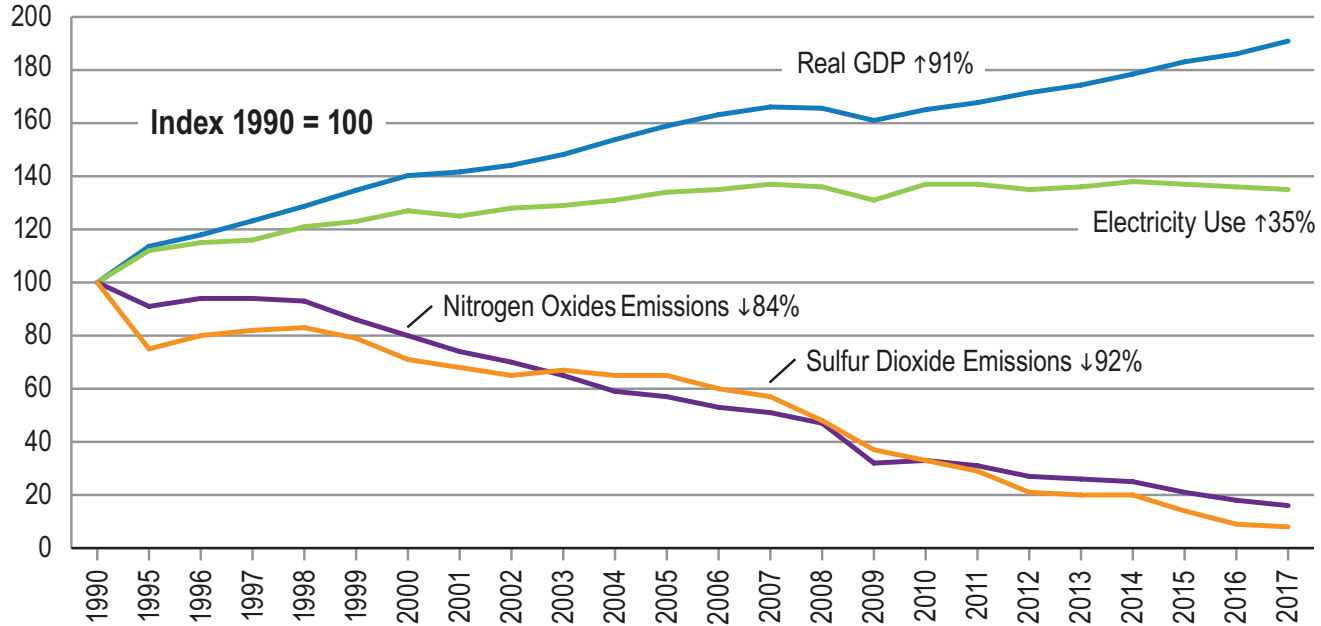


# Electricity Is a Great Value



# Power Plant Emissions Decreasing Significantly

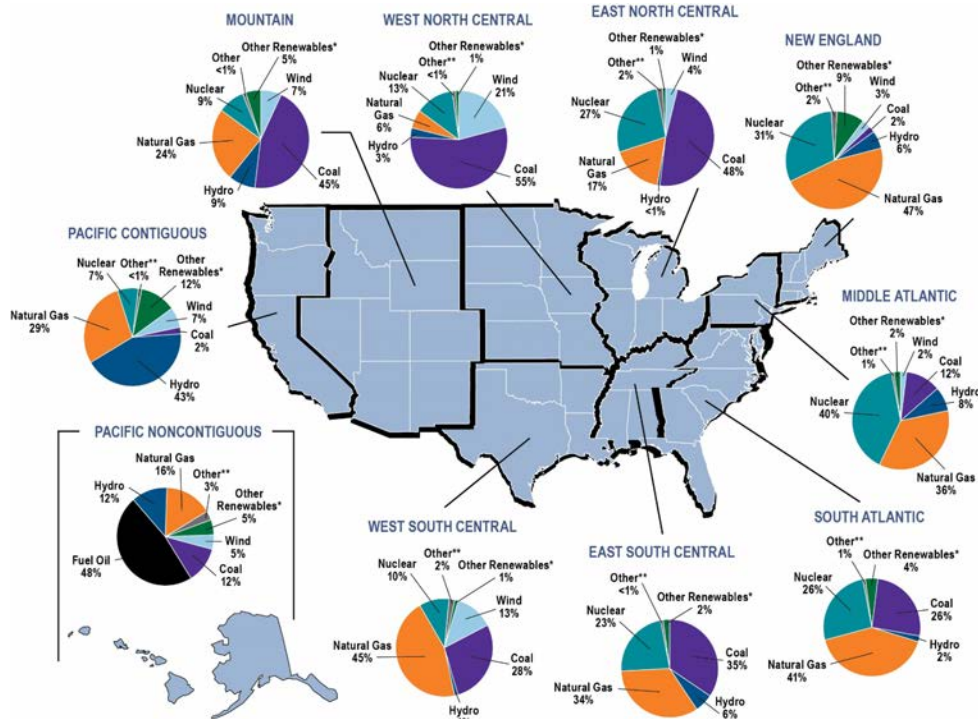
1990–2017



1990 represents the base year. Graph depicts increases or decreases from the base year.

Sources: U.S. Department of Energy, Energy Information Administration (EIA), U.S. Environmental Protection Agency (EPA), and U.S. Bureau of Economic Analysis.

# Electric Companies Use a Diverse Mix Of Resources to Generate Electricity



Measured in Megawatt hours.

\*Includes generation by agricultural waste, landfill gas recovery, municipal solid waste, wood, geothermal, non-wood waste, and solar.

\*\*Includes generation by tires, batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, and miscellaneous technologies.

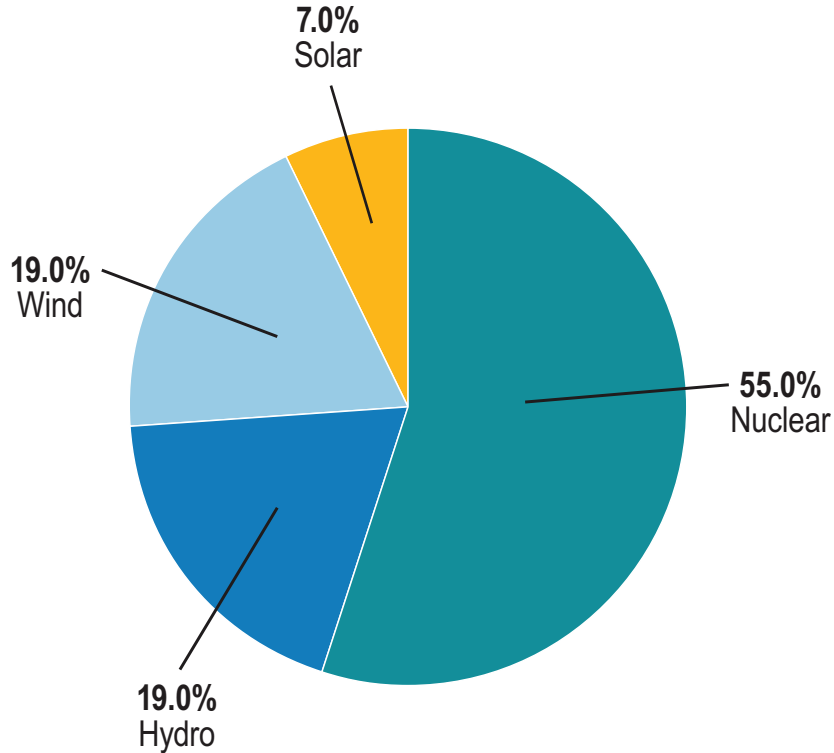
Sum of components may not add to 100% due to independent rounding.

Source: U.S. Department of Energy, Energy Information Administration, Power Plant Operations Report (EIA-923); 2017 preliminary generation data.

Updated March 2018.

# Carbon-Free Electricity Generated

2018 Preliminary



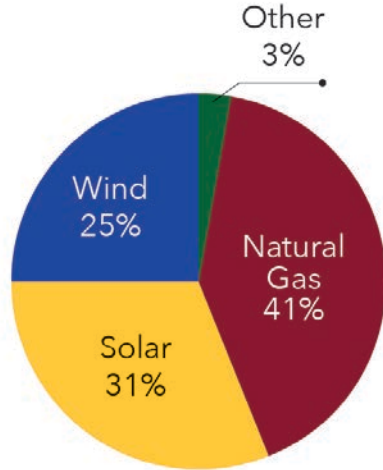
Nuclear energy remains the largest source of carbon-free electricity: Currently, 98 reactors in 30 states produce nearly 20 percent of our nation's electricity and more than 50 percent of our carbon-free electricity.

Source: EIA, Electric Power Monthly (December 2018) and Short-Term Energy Outlook (January 2019).

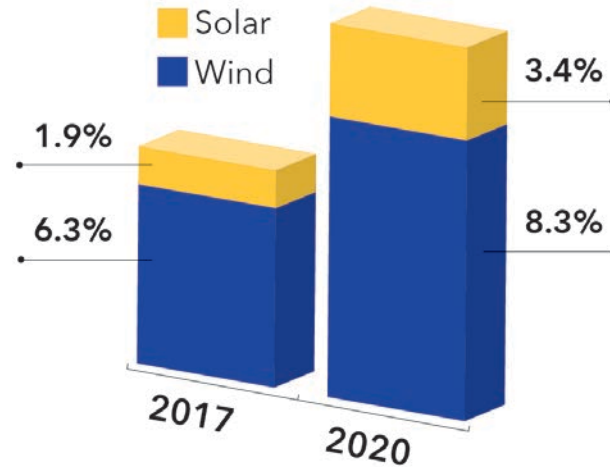
Updated January 2019.

# New Capacity Is Mostly Natural Gas, Wind, Solar; Solar and Wind Production Is Increasing

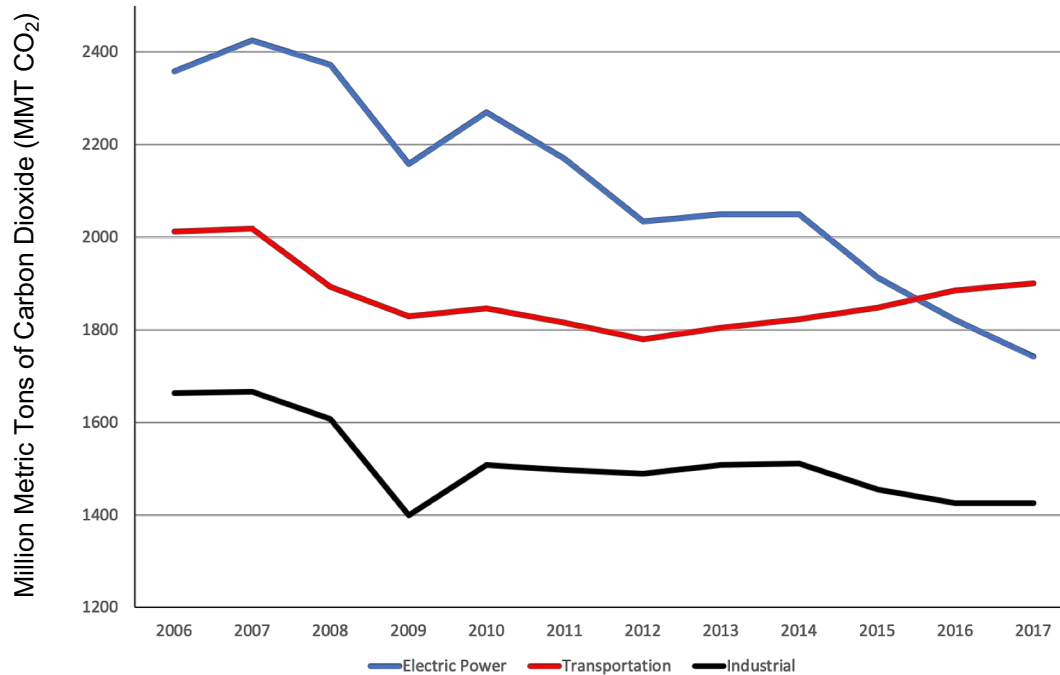
Capacity Additions (2017)



Generation (2017)



# CO<sub>2</sub> Emissions: Electric Power, Transportation, and Industrial Sectors

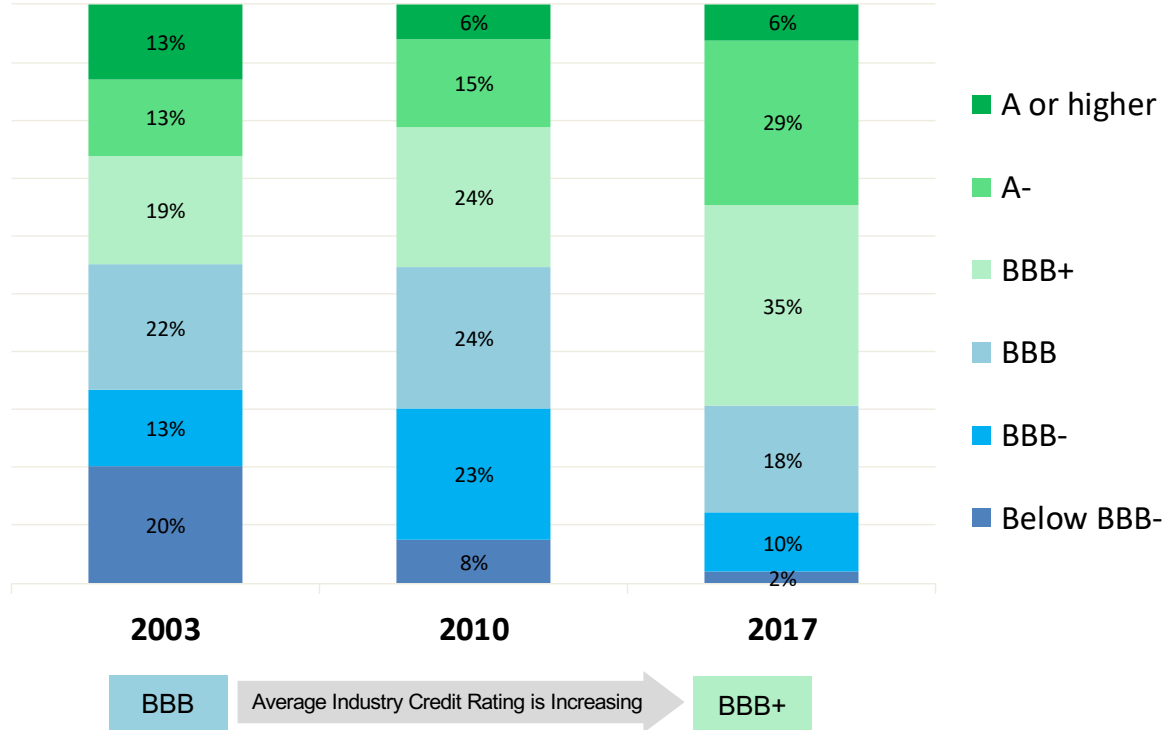


Source: U.S. Energy Information Administration, *Monthly Energy Review*, October 2018.

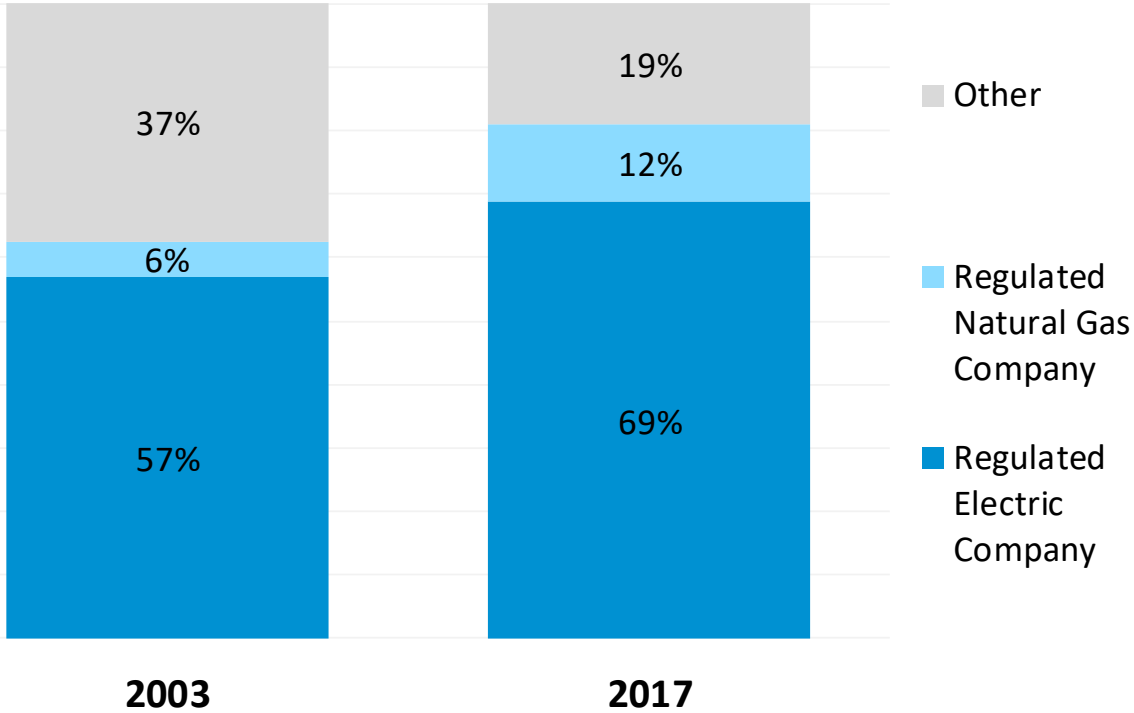


# U.S. Electric IOUs Rating History

2003–2017



# Shift to More Regulated Strategies

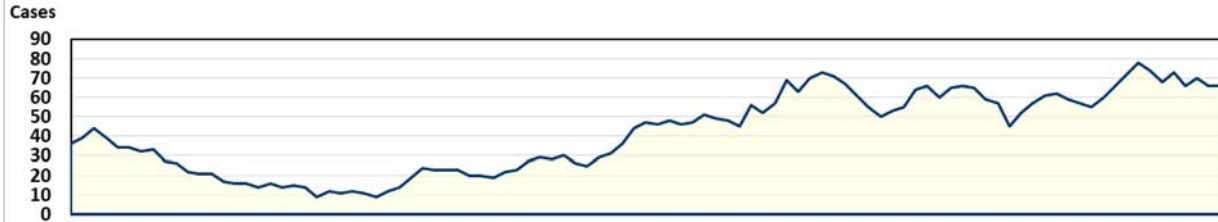


Note: Based on year-end assets.  
 Source: EEI Finance Department.

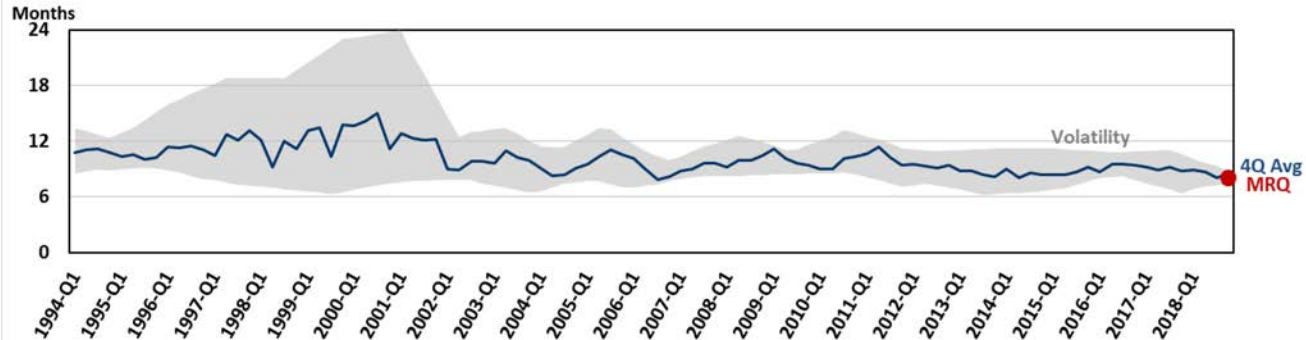
# Rate Review Activity: Volume and Lag

U.S. Investor-Owned Electric Companies

## Number of Electric Rate Reviews Filed (Trailing 12 Months)



## Average Regulatory Lag (Quarterly)\*

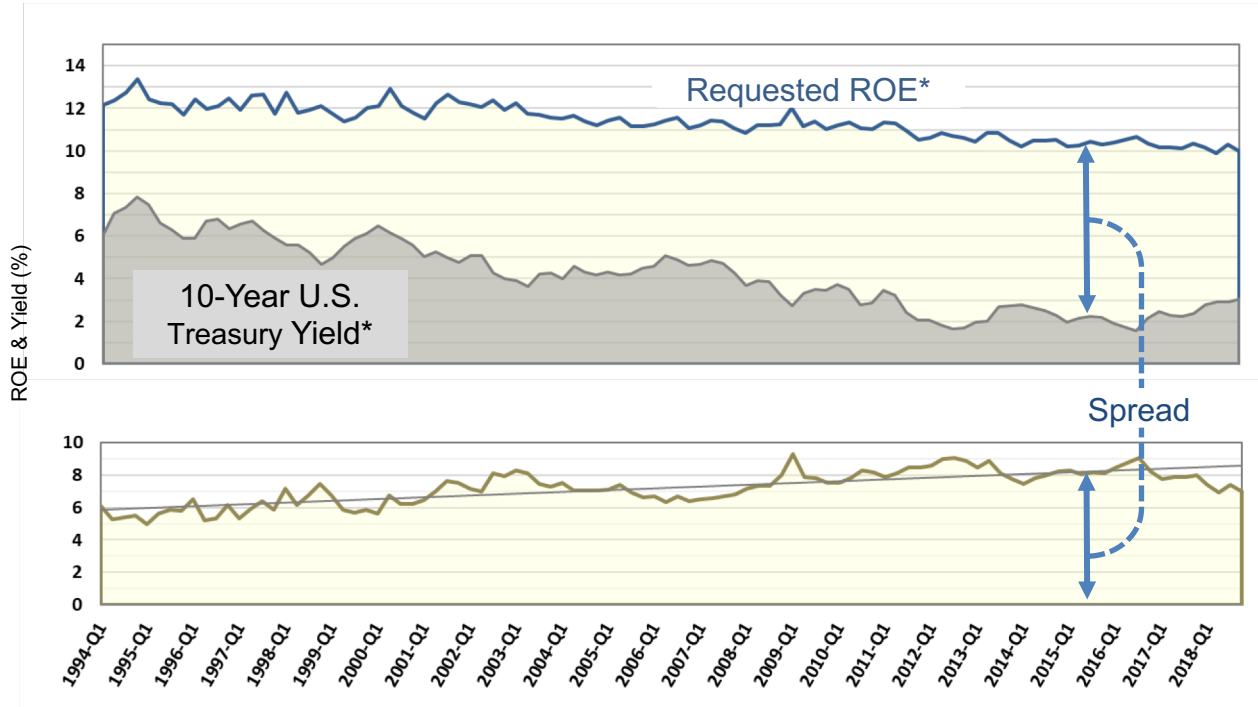


\*Average Regulatory Lag is defined here as the amount of time between the filing of and ruling on a rate review. This does not take into consideration the preparation time leading up to an initial filing. MRQ = Most Recent Quarter. 4Q Avg = Trailing four-quarter average.

Source: S&P Global Market Intelligence / Regulatory Research Associates (RRA), EEI Finance Department, EEI Rate Department.

# Rate Review Activity: Average ROEs

Requested ROE vs. 10-Year U.S. Treasury Yield

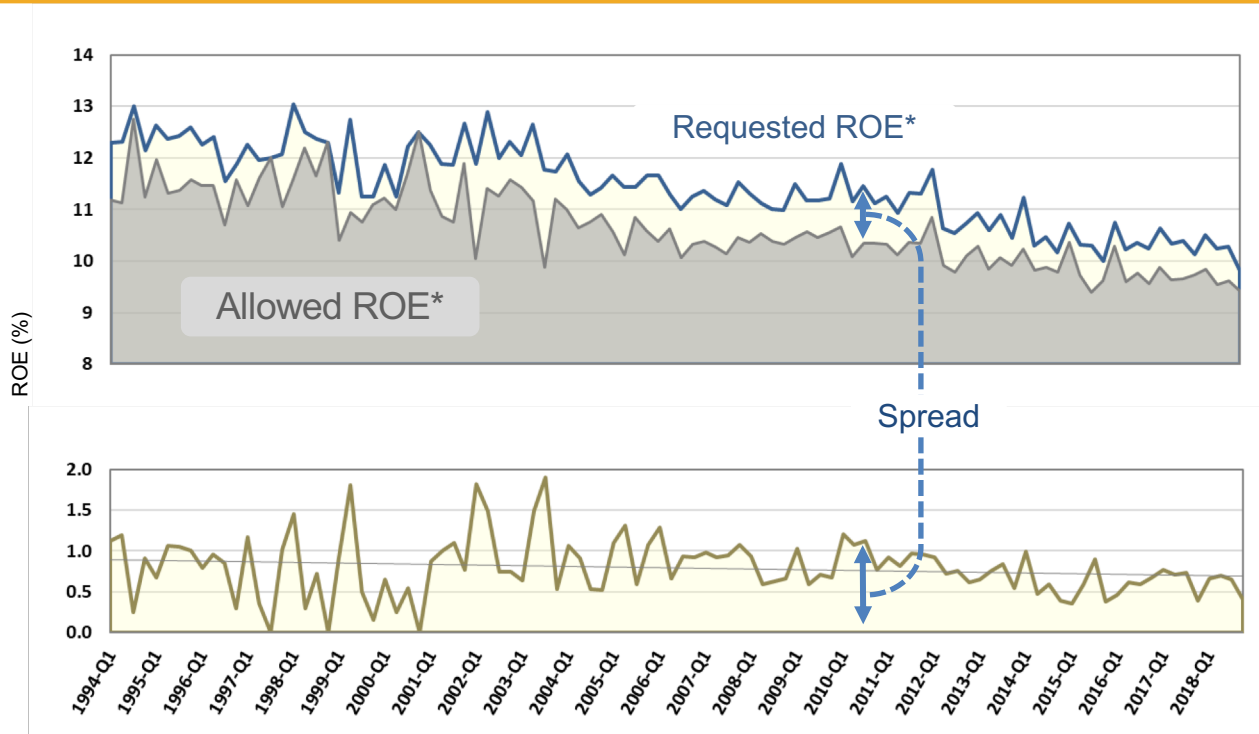


\*Requested ROE represents the equal-weight average of all electric rate reviews filed during the indicated period.  
 10-Year U.S. Treasury Yield is the average of daily reported yields during each period.

Source: S&P Global Market Intelligence / Regulatory Research Associates (RRA), EEI Finance Department, EEI Rate Department.

# Rate Review Activity: Average ROEs

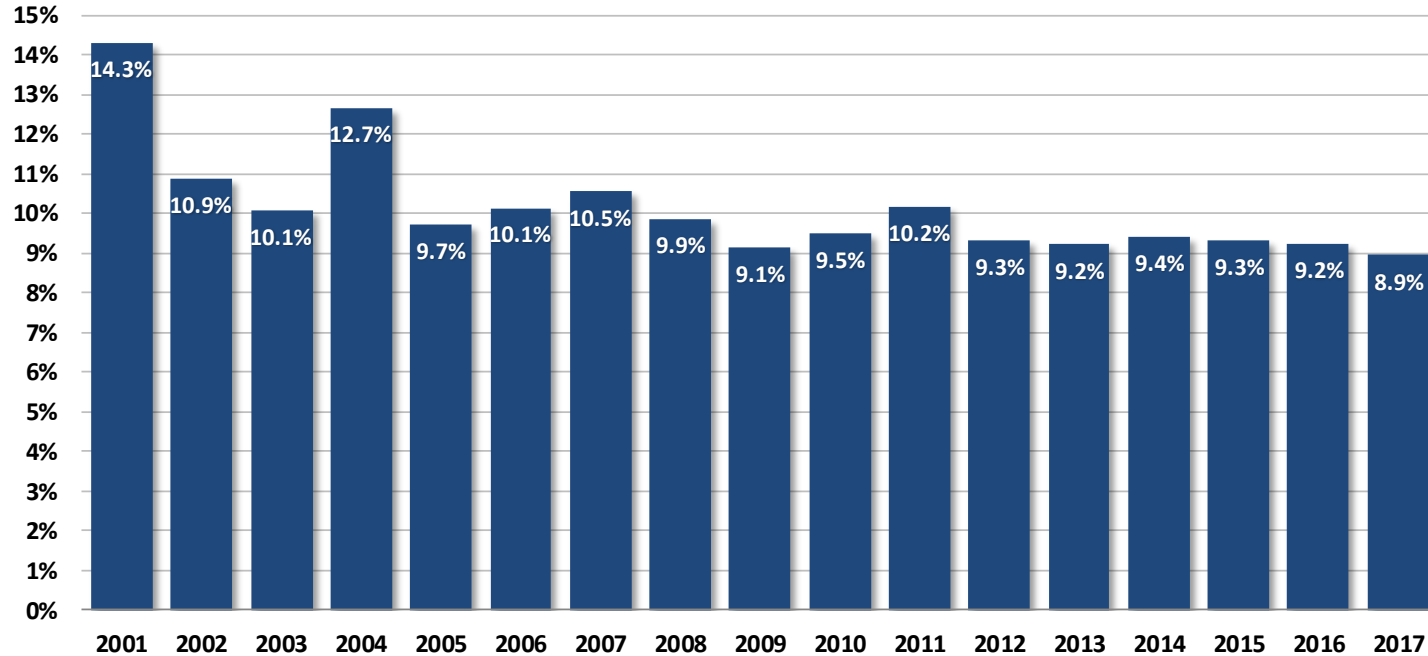
Allowed ROE vs. Corresponding Requested ROE



\*The Allowed ROE represents the electric rate reviews settled during the indicated period while the Requested ROE represents the value requested by the company when the cases were initially filed, generally during an earlier period (i.e., the regulatory lag is not factored in). Average returns are equal-weight.

# Actual Average ROE of Regulated Subsidiaries

U.S. Investor-Owned Electric Companies

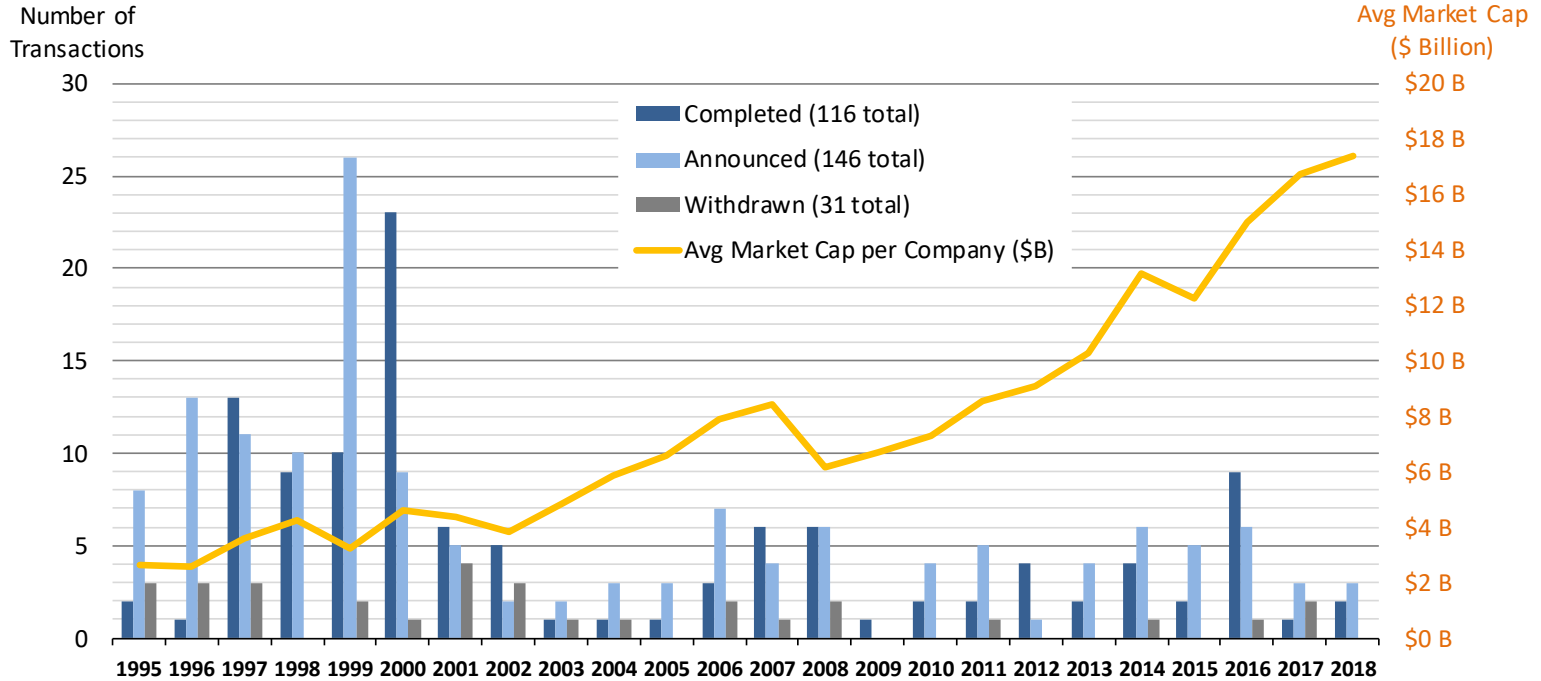


Notes: Based on SEC-reported numbers and may differ from results calculated for other regulatory purposes. Company "universe" is static through history and is defined by active regulated subsidiaries of EEL member companies as of 2017 year-end. Average ROE is a weighted average as it equals the total net income of the industry over the total average common equity balances at the beginning and ending of each year for the industry.



# Status of M&A Activity

U.S. Investor-Owned Electric Companies, 1995–2018



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

# EEI Finance Department Resources

## Examples of EEI Finance Public Reports & Data

Items updated quarterly unless otherwise indicated

### Financial Review (annual)

- Incorporates all of the following reports and additional industry material

### Stock Performance

- Financial market performance (Price, TSR, etc.) of proprietary EEI member index and equity analyst opinions

### Credit Ratings

- Holding company ratings & rating agency activity

### Dividends

- Dividend-related actions of EEI members and relevant issues

### Rate Review Summary

- Regulatory filings during the quarter and recent / current trends

### Industry Consolidated Financial Statements

- Income Statement
- Balance Sheet
- Cash Flow Statement

## EEI Finance Contacts

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**EEI**

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*Power by Association<sup>SM</sup>*