Delivering America’s Energy Future

Electric Power Industry Outlook

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Welcome & Opening Remarks

THOMAS R. KUHN
President

Good afternoon. Welcome to the Edison Electric Institute’s (EEI’s) annual briefing on the state of the electric power industry. Thank you for coming. We are pleased that you all can be with us today.

I am Tom Kuhn, president of EEI. With me today are four members of EEI’s officer team—Brian Wolff, David Owens, Phil Moeller, and Richard McMahon. My colleagues and I look forward to this event each year, and we are proud to represent EEI’s member companies. Our members, America’s investor-owned electric companies, serve nearly 70 percent of our nation’s industries, businesses, and residential customers. Our industry contributes more than 2 percent of America’s real GDP, and we directly and indirectly provide jobs for more than one million men and women across the country.

Just weeks ago, EEI held its winter Board of Directors meeting, which attracted more than 250 CEOs and senior industry executives from around the country. We identified our policy priorities for 2017 and discussed some of the key trends driving change in our industry. Also, as you may have heard, David Owens announced during that meeting that he will retire later this year, on June 30, following 36 years of distinguished and exemplary service to EEI and to our member companies.
Over these nearly four decades, David has provided outstanding leadership to EEI and to our member companies across the country and throughout the world. David has contributed to so many important EEI successes over the years, and he is an invaluable partner and dear friend to me personally. I hope you will join me in wishing David well, as he will be sorely missed by our team, our member companies, and by a legion of friends and admirers, including you in the financial community.

2017 certainly is a year of change. At EEI. In Washington. And, in the states. One thing remains constant, however—our industry’s commitment to meeting customers’ needs by building and using smarter energy infrastructure, by providing even cleaner energy, and by creating the energy solutions they want. This commitment guides us, and also provides opportunities to collaborate and make progress on key policy priorities.

Not surprising, we expect a very busy policy agenda in 2017, with the new Administration and new Congress in Washington, as well as many new governors, legislators, and regulators in the states. President Trump’s stated support for modernizing and enhancing our nation’s infrastructure (including the energy grid), creating jobs, enacting comprehensive tax reform, and streamlining regulations to help unleash our country’s entrepreneurial potential is positive for our industry and our economy.

EEI will work with President Trump and with key policymakers on both sides of the political aisle to develop an agenda that supports investments in infrastructure, grows the economy, and recognizes the vital role of the energy grid and the importance of maintaining reliable, affordable, secure, and increasingly clean energy for all customers.

Last year, I focused my remarks on the profound transformation that our industry is leading to benefit our customers. As you will hear today, there are a number of factors driving this transformation. Chief among them are declining costs for natural gas and renewable energy resources that are developed at scale; changing customer expectations; environmental regulations; and the growth of distributed energy resources, including energy storage, private (or rooftop) solar, microgrids, demand response, energy efficiency, and electric vehicles.

Importantly, this transformation is more evolutionary than revolutionary, as companies work to deliver the energy future that customers want and expect in ways that continue to enhance reliability and affordability.

Today, EEI’s member companies are making significant investments to make the energy grid smarter, more dynamic, more flexible, and more secure to integrate and deliver a mix of both central station and distributed energy resources to customers. They are investing in cleaner generation sources that make business sense. And, they are partnering with leading technology companies to create innovative energy solutions that give customers more control over their energy use.

Equally important is the security of the energy grid. Let me be clear. Protecting the energy grid is our top priority, and every day we are working to improve grid security, reliability, and resiliency. Our security strategies constantly evolve and are closely coordinated with the federal government through a partnership called the Electricity Subsector Coordinating Council (ESCC). By working together through the ESCC, industry and government greatly enhance our nation’s ability to defend and protect against cyber and physical security threats.

Last year, a number of situations tested the industry’s security posture—and, each time, we rose to the challenge and responded.

Phil will discuss our grid security efforts in detail, but I will use Hurricane Matthew as an example of how our industry is strengthening the energy grid’s resilience. By applying the lessons we learned from Superstorm Sandy and the tools we developed—including the industry-government partnership and cross-sector coordination—we were able to streamline response and restoration efforts during and following Hurricane Matthew. As part of this rapid
response effort, EEI facilitated the sharing of member company mutual assistance resources using our new web-based Resource Allocation Management Program for Utility Personnel, or RAMP-UP, tool.

There was widespread recognition that our members’ investments in the energy grid, their streamlined and enhanced storm response, and their enhanced coordination resulted in a much faster, successful restoration effort for 3.1 million customers impacted by Matthew. Also making a difference were two key policy changes that EEI successfully championed, allowing companies to use robocalls and texts to communicate with customers and expanding the use of drones in the restoration process.

After a natural disaster like Hurricane Matthew, our industry’s mutual assistance network comes together to respond quickly. It’s a hallmark of our industry. As cybersecurity risks proliferate, the industry is organizing itself to similarly pool resources in the face of cyber incidents or attacks that exceed the capacity of individual companies to respond. In partnership with the ESCC, the industry has developed a cyber mutual assistance program. To date, more than 80 companies are participating, and we will continue to expand and to exercise the cyber mutual assistance program throughout the year.

**INDUSTRY CAPITAL EXPENDITURES**

The electric power industry is the most capital-intensive industry in America. EEI’s member companies invest more than $100 billion each year (with $120.8 billion projected in 2016) to build smarter energy infrastructure and to transition to even cleaner generation sources. This is more than twice the level of investment of just a decade ago. Our investments create jobs and make the energy grid more robust, more dynamic, and more secure for all customers.

Generation constitutes more than one-third of our industry’s total capital expenditures and was the functional category expected to see the largest year-over-year increase. This includes our industry’s considerable investments in clean energy resources, such as natural gas, nuclear, wind, and solar.

Together, the transmission and distribution (T&D) segments comprise 43 percent of our industry’s total capital expenditures. The elevated and ongoing level of investment in T&D is primarily being driven by efforts to modernize the energy grid and by the expansion of renewable energy resources. The natural gas-related segment also is growing, and we expect this trend to continue into the near future. Our companies are investing in natural gas pipelines, and they are expanding their regulated businesses by acquiring natural gas distribution companies.

As a whole, the electric power industry outperformed the broader market indices in 2016. Total shareholder return for the EEI Index in 2016 was 17.4 percent, which compared to a total return of 16.5 percent by the Dow Jones Industrial Average, 12 percent by the S&P 500, and 7.5 percent by the Nasdaq.

I will now turn it over to Brian and the rest of our panel to address some of the major policy and financial issues that we feel are most significant for our business this year.
EEI’s 2017 Policy Priorities

BRIAN L. WOLFF
Executive Vice President, Public Policy and External Affairs

PRESIDENTIAL TRANSITION AND POLICY PRIORITIES

As Tom indicated, we have a new Administration with a lot of new players, new priorities, and a decidedly new direction. We also have a new Congress and many new state policymakers. On a multitude of issues, 2017 will be a year of opportunity and continued leadership for EEI and our members. And, as we all know, a unified Republican government in Washington offers the potential for more congressional action.

One major opportunity that will emerge quickly is comprehensive tax reform. EEI’s member companies support comprehensive tax reform because we believe that a simpler tax code, broader tax base, and lower tax rates will grow the economy and increase U.S. competitiveness, support job creation, and benefit our customers.

We believe that tax reform legislation must support investments in America’s critical energy infrastructure and keep energy bills as affordable and predictable as possible for all Americans. And, we plan to work with Congress and the Administration to find tax reform solutions that help to keep our cost of capital as low as possible. This, in turn, will benefit customers and encourage much-needed investment in critical energy infrastructure. Richard will walk you through our tax reform priorities in more detail later in this presentation.

In addition to tax reform, there is a lot of discussion under way about our nation’s infrastructure. From a policy standpoint, we fully support streamlining and expediting the process for permitting and siting energy infrastructure—including transmission, natural gas facilities and pipelines, and renewable energy facilities—to ensure that energy can get where it is needed, when it is needed. We also support hydropower relicensing reform and better electric–natural gas coordination.

We recognize that many of the barriers to expedited permitting and siting of energy infrastructure are a result of underlying federal statutes that need to be updated. We look forward to working with Congress and the Administration to modernize federal laws and to streamline their implementation to ensure that we are protecting the environment and also are removing unnecessary barriers to the energy production so essential to economic growth and prosperity.

As policymakers focus on modernizing our nation’s infrastructure, we also will be reminding them of the importance of electrifying our cities and transportation systems to make them smarter and more energy efficient. Smart energy technologies and smart cities offer tremendous opportunities, and they can significantly help drive efficiencies, improve sustainability, and enhance the quality of life in a city or region.

On the environmental front, there clearly is a lot of focus on what will happen at the Environmental Protection Agency (EPA) and land management agencies under the new Administration. EEI is tracking developments closely and remains engaged on a number of environmental policy issues, including regional haze and other air regulations, Endangered Species Act reform, water regulations, and coal ash.

With regard to coal ash, EEI achieved a favorable outcome in December with congressional passage of the Water Infrastructure Improvements for the Nation Act. The legislation contains an important provision that supports states’ ability to implement and to enforce EPA-approved coal ash permitting programs in lieu of the self-implementing federal coal combustion residuals (CCR) rule.

For states that choose to implement and enforce EPA-approved coal ash permitting programs in lieu of the self-implementing federal CCR rule, the legislation provides more clarity on the process for doing so, including deadlines for EPA to act. Making this process more efficient for states has been a...
A CLEAN AND AFFORDABLE ENERGY FUTURE

Our industry is committed to a clean and affordable energy future. In just 10 years, the mix of sources used to generate electricity has changed dramatically and is increasingly clean.

Natural gas use surpassed coal as a main source of electricity in the U.S. in 2016, the first time that a fuel other than coal has supplied the bulk of the nation’s power. Natural gas generated 34 percent of the country’s electricity, while coal generated 30 percent, according to the Energy Information Administration’s Short Term Energy Outlook (January 2017).

Today, one-third of U.S. power generation comes from zero-emissions sources—nuclear energy and renewables, such as hydropower, wind, and solar. As of 2015, industry carbon dioxide emissions were nearly 21 percent below 2005 levels. With declining prices for natural gas, renewable energy, and other technologies, this trajectory will continue.

The industry is making significant investments in diverse energy resources, including clean coal, natural gas, nuclear, solar, wind, and energy efficiency. A diverse energy mix is critical to the reliable, affordable electricity our customers expect. On the renewable front, electric companies own or contract for virtually all of the wind energy in the United States. In a report issued in December, GTM Research forecasted that new solar photovoltaic installations in 2016 would grow 88 percent over 2015. Large-scale or universal solar projects were expected to drive the majority of demand, accounting for more than 70 percent of new capacity.

From a policy perspective, EEI will continue to advocate for policies that support and maintain a balanced and diverse energy mix. We also will remain focused on increasing awareness of the vital role that 24/7 power (or baseload) sources, including nuclear energy, play in sustaining a diverse, reliable, and resilient energy mix.

JOBS & WORKFORCE DEVELOPMENT

Another area where we have an opportunity to align with the new Administration is in the area of job creation and workforce development. Building a diverse, highly skilled energy workforce is a critical component of meeting customers’ evolving energy needs.
Tom mentioned it, but it bears repeating. Our industry today creates well-paying jobs for more than one million Americans, directly and indirectly, in communities large and small. We continue to collaborate with our labor partners to advance constructive policies and to ensure that the value of our industry and our workforce is understood by policymakers and stakeholders. And, from new skills training to STEM education to resources for veterans, women, youth, and adults, we are providing the knowledge, skills, and ability for our workforce to adapt and grow.

One way we do this is through the Center for Energy Workforce Development (CEWD), which was formed in 2006 to develop scalable workforce solutions. No other industry has an organization that facilitates open collaboration among companies to build a trained and competitive workforce, making CEWD a testament to the industry’s commitment.

Since its inception, CEWD has built partnerships with multiple federal agencies and national organizations to advance energy education, career awareness, and support for critical energy jobs. For example, the Utility Industry Workforce Initiative brings together four federal agencies (U.S. Departments of Defense, Energy, Labor, and Veterans Affairs), along with labor partners, and the national associations that are members of CEWD (EEI, the Nuclear Energy Institute, the National Rural Electric Cooperative Association, the American Public Power Association, and the American Gas Association) specifically to address workforce issues in the industry, beginning with veterans.

One area where we are seeing results, for example, is in our military outreach. Our industry has a long history of employing military veterans because they have the training and skills that match those required for technical, engineering, support, and leadership positions in energy companies. Through our Troops to Energy Jobs program, we have created a road-map for veterans to enter energy careers and for companies to support their transition, retention, and professional development in the energy industry.

EDUCATION AND ADVOCACY STRATEGIC INITIATIVE

Noted author and historian Walter Isaacson spoke to our CEOs during our January meeting. In his book, “The Innovators,” Isaacson explains the Internet’s beginnings—how the growth of the Internet and the boom in home computers didn’t actually come together until the late 1980s. Before that, there was this mindset of, “I finally have a personal computer of my very own. Why would I want to be connected?” That was just about 30 years ago. Fast-forward to today’s “Internet of Things,” which, of course, makes us all super-connected.

As we become increasingly connected, it becomes more important than ever that we are aligned on all fronts. As you heard from Tom, our industry is leading a profound transformation, and we are focused on three core areas—smarter energy infrastructure, cleaner energy, and customer solutions.

A year ago, EEI launched an industry Education and Advocacy Strategic Initiative with national communications, inside-the-Beltway, and beyond-the-Beltway components. The initiative is designed to tell the story of our industry’s leadership, while also promoting the value of our industry overall—to our everyday lives, our economy, and our national security—and the innovation we are driving. With the new Administration, new Congress, and many new elected officials in the states, our job of telling our industry story and educating policymakers will be more important than ever as we work to achieve favorable policy outcomes.

A critical component of our initiative is to establish a common language for the industry, ensuring that we speak in a common industry voice. We laid the foundation with the rollout of our lexicon project last March, and we continue to expand our work around messaging and language.

We have many opportunities to advance this initiative this year—both in Washington and in the states—and I know my colleagues share my enthusiasm for what’s to come for our industry.

With that, I will turn it over to David.
I am going to focus my remarks on what I see as key themes of today’s briefing—smarter energy infrastructure, our industry’s investments, innovation, and, of course, making sure that we have the right policies in place to drive all three.

SMARTER ENERGY INFRASTRUCTURE
The energy grid provides tremendous value to all customers and businesses across the nation. It truly is the backbone of our economy and our electric system. Today, electric companies are developing a smart grid that empowers customers, ensures reliability, reinforces resiliency, and integrates distributed energy resources (DERs). As part of their efforts to build smarter energy infrastructure, companies are deploying advanced digital technologies, improving power lines and substations, hardening the system against severe weather, and enhancing cyber and physical security.

It is critical that state and federal policymakers adopt policies that recognize the value of the grid and support its ongoing transformation through increased investment and cost recovery.

INDUSTRY INVESTMENT
Investing in a digital, robust, flexible, dynamic, and secure energy grid is essential. According to projections, EEI’s member companies invested $52.8 billion in the grid’s transmission and distribution infrastructure in 2016. This level of investment is more than twice what it was a decade ago. These investments have a direct economic impact in every state in the form of jobs created and taxes paid. Grid modernization is a multi-billion dollar, multi-year effort that is already making the energy grid more dynamic, more reliable, more secure, cleaner, and smarter by using an array of new technologies.

Regulatory and market structures that support continued access to capital markets at affordable levels are needed. And, preserving the industry’s ability to deliver the clean energy future and energy solutions that customers want in ways that enhance reliability and resiliency, as well as promote affordability, is essential.

INNOVATION
The smart grid is the enabling platform for integrating more clean and distributed energy resources; providing the services and solutions customers want; and improving reliability and resilience. By year-end 2016, it was projected that 70 million smart meters—the digital link between electric companies and customers—would be installed across the United States. That means nearly 60 percent of U.S. households have a smart meter. The continued deployment of digital smart meters is one key building block of the smart grid. Others include energy storage; microgrids; advanced communication and data management systems; digital sensing, monitoring, and control capabilities; and data analytics.

Data analytics are enabling new technical capabilities and new customer products and services.

Electric companies are progressing from gathering, and possibly drowning in, data to developing actionable intelligence. A key component of this is prioritizing flexibility—by using standards-based tools and grid-edge analytics—in their data analytics strategy. Data produced by smart meters, DERs, and other grid-connected devices are being used primarily in two areas today: to improve customer services and to manage a more complex distribution grid.

Data analytics at the edge of the grid, including inside the home, are exciting. Moving beyond the artificial boundary of the customer meter is an essential step for electric companies to take given increasing customer expectations and interest in effective DER
solutions. Using data from a multitude of sources to develop a deeper understanding of individual customers, to predict with accuracy who wants what, and to offer the right products and services to each customer is just getting underway.

In addition to data analytics, an innovation I always identify as the most transformative in grid modernization is energy storage. Energy storage offers multiple benefits for the energy grid and electricity customers. It facilitates the integration of renewable energy resources such as wind and solar into the energy grid by keeping supply and demand balanced at all times. Energy storage also helps to improve reliability by providing grid stability services, reducing transmission constraints, and meeting peak demand.

The electric power industry uses more than 90 percent of all energy storage. Investment in energy storage is growing rapidly, with more than 220 megawatts installed in 2015 alone, up 243 percent from 2014. While pumped hydropower represents more than 95 percent of installed storage capacity in the United States, battery storage is a key driver of the energy storage market today.

Many public policies and regulations must be updated to encourage the deployment of energy storage. Current policies were created before new forms of energy storage were developed, and they do not recognize the flexibility of storage systems or allow them a level playing field.

Grid modernization innovations, including data analytics and energy storage, change the nature of the energy grid so profoundly that distribution system regulatory policies must evolve as well. As policymakers look to update our nation's infrastructure, it will be important to consider the technologies of the future and our energy needs. The right public policies are needed to ensure an equal opportunity for all technologies and all parties to ultimately provide the best solutions for customers.

STATE REGULATORY ISSUES

In all of these areas, the ultimate beneficiaries are customers. The ability of customers and other entities to self-generate, sell, and store power and to provide other services to the energy grid will affect the future electric distribution system profoundly. These changes are transforming the distribution grid from a one-way delivery system to a more complex distribution network that customers and other entities will use in different ways.

This transformation requires new regulatory approaches for planning, pricing, and allocating the costs of the distribution system and flexibility in pricing customer services, including grid services. Smart grid technologies already are available and in place in many areas of the country, and regulatory changes are needed sooner rather than later.

Regulators have several possible tools available today. They can implement time-varying rates; develop formula- or performance-based rate structures; or allow incumbents, as well as new entrants, to compete in providing some of the desired services. Although all of these tools are in use today to varying degrees in different regions, there is no general agreement on next steps forward. At the end of the day, it is essential that regulators ensure that all customers who use the energy grid continue to share equitably in the costs of operating and enhancing the grid.

Many states throughout the country are continuing to explore the future role of electric companies and the energy grid. EEI is engaged in these conversations at the state level, and we believe the energy grid will continue to serve as a platform for a wide range of technologies that will benefit customers. Any rate and regulatory reform must balance the need for affordable, reliable, secure, and increasingly clean energy with the ability to provide customized services to those customers who want them—and basic commodity service to those who do not. While we do not expect a one-size-fits-all regulatory solution, there is an urgent need for regulation to change now.
State commissions also are continuing to evaluate net energy metering policies when it comes to distributed energy resources, particularly private solar. We believe it is important to balance the needs of all customers, and we continue to advocate and support reforming net energy metering policies to ensure owners of private solar are paid the same competitive price that electric companies pay for other forms of power, instead of above-market rates that result in higher costs for all customers.

This is why EEI and our member companies continue to drive the national and state-level conversation about the importance of reforming net energy metering policies to eliminate a cost shift. The need to eliminate the cost shift was recognized in the National Association of Regulatory Utility Commissioners’ (NARUC’s) Distributed Resources Rate Design Manual, finalized in November. In addition to recognizing the value of the energy grid, the Manual also acknowledges the need to reform net energy metering policies through improved rate design.

Another success is the Arizona Corporation Commission’s action late last year to restructure how distributed generation is compensated and paid for in Arizona, which appropriately tied that compensation more closely to wholesale market prices for renewable energy. Just last week, the state of Maine also decided to reduce net energy metering subsidies. These actions lay the foundation for the continued growth of renewable energy, while providing equity to all customers.

As the electric power industry continues to build smarter energy infrastructure, it is important that we do so in a way that ensures that electricity remains reliable—and prices predictable—for all customers. Continued engagement at the state regulatory level will be important to our shared success in delivering America’s energy future.

The FERC Landscape, Customer Solutions & Grid Security

PHILIP D. MOELLER
Senior Vice President, Energy Delivery and Chief Customer Solutions Officer

FEDERAL ENERGY REGULATORY COMMISSION

We have a truly unique situation right now at the Federal Energy Regulatory Commission (FERC). While I expect significant activity from the Commission, Norman Bay’s recent departure injects temporary uncertainty for near-term FERC actions. With three new Republican commissioners and a new chair to be named in the months ahead, though, I anticipate that FERC will take a balanced approach focused on infrastructure and on making energy markets work better.

A major focus of a new FERC likely will be on improving the functioning of wholesale markets. This could include policies that better compensate the reliability attributes of certain generation sources and that provide continued improvement of price formation in these markets. The Commission will be ruling on state efforts—most notably in Illinois, New York, and Ohio—to promote the existing nuclear fleet. Order 745, the Demand Response Rule, could be revisited. In addition, FERC could revisit its current approach toward the Public Utility Regulatory Policies Act, or PURPA, which needs to be updated.

Regarding transmission investments, of particular interest will be FERC’s efforts to modify the existing discounted cash flow (DCF) methodology relating to returns on equity (ROEs). There is widespread concern that the existing model needs revision, and we will be working with the Commission on ways to improve the existing DCF to attract additional capital to the transmission system. Order 1000 is likely to
at least be revisited given that it has not provided the certainty for transmission planning that FERC intended when the Order was issued.

**CUSTOMER SOLUTIONS**

Much of the work we are doing at the federal and state levels ties into our focus on providing customers the energy solutions and control they want. These solutions include onsite power generation, 100-percent renewable energy options, efficiency, timing and control over power usage, improved reliability, and more. Our companies are providing these options and are working with state regulators to gain approval for offering these customer solutions.

Today, many commercial and industrial customers continue to request renewable options that meet sustainability goals.

Last year, EEI announced a partnership with the World Wildlife Fund and World Resources Institute to initiate a Utility-Corporate Buyer Collaborative Forum to provide a platform for dialogue and cooperation between electric companies and their corporate customers. Through the collaboration, we have developed a shared understanding of participants’ respective needs and constraints and are working to identify collaborative opportunities for improving large-scale, or universal, renewable energy products.

Like large customers, some residential customers also want tools to manage, control, and choose their energy use. For example, smart thermostats have taken off in popularity, as customers become more interested in being able to harness the data they generate. This interactive technology opens the door to more personalized services. Other technology companies are providing a responsive customer experience with actionable advice on ways to lower energy bills and other service options. This is all being driven by new technologies like cloud software and data analytics to help electric companies foster improved customer relationships.

New technologies and innovations in the growing smart cities movement are helping to drive efficiencies, improve sustainability, and enhance quality of life. EEI’s member companies are leading the smart city movement in cities like Charlotte, Columbus, Miami, Pittsburgh, San Diego, and Spokane, just to name a few. These companies are not the only players in the smart city movement, but— as managers of the energy grid—they may be the most indispensable.

For the first time in nearly 40 years, transportation-sector greenhouse gas (GHG) emissions have surpassed those from the electric power industry. As the electric power industry continues to reduce its emissions, it’s becoming clear that transportation will be an area of focus for state GHG-reduction targets.

This brings us to another growing trend in customer solutions—electric transportation and electrification more broadly. Electric vehicle sales were up 37 percent in 2016 over 2015, a significant number made even more remarkable by continued low gasoline prices. There are now 30 electric vehicle models available from 17 major brands across a wider range of vehicle segments.

Automaker announcements point to more long-range battery electric vehicles coming to market—refueled by higher-power charging infrastructure—making the electric power industry’s role in supporting infrastructure even more important. Our members are investing $250 million in customer programs and projects to deploy charging infrastructure and to accelerate electric transportation.

In addition, EEI’s initiative to expand the adoption of plug-in electric vehicles (PEVs) in electric company fleets has exceeded the anticipated $50 million annual industry commitment. In 2016, electric companies committed $128 million toward the initiative and increased the number of PEVs in their fleets by 18 percent.

Beyond personal cars, transportation electrification is taking hold in public transit, commercial delivery vehicles, and ride-sharing applications. Electric transportation is a critical component as cities and communities seek smart, sustainable mobility solutions. It is also synergistic with the rise of autonomous vehicle technology.
Again, EEI’s member companies are committed to meeting customers’ changing needs and to creating the energy solutions they want. However, this will require the ability to provide more individualized customer solutions and access to more flexible retail pricing options. As technologies that enable smart cities, electric transportation, and other new customer solutions are introduced, they have the potential to enable greater reliability and resiliency, and they require cybersecurity protections, especially as our economy becomes increasingly electrified.

GRID SECURITY

Grid security and resiliency certainly will receive additional attention in the Trump Administration and new Congress. Investments in cybersecurity will continue to be a major focus, as the industry continues its successful partnership with senior government officials through the ESCC.

The ESCC has been held up by the National Infrastructure Advisory Council as a model for how critical infrastructure sectors can partner more effectively with government. In fact, the ESCC has been a catalyst for major initiatives that are improving the security posture of the industry and, by extension, the nation.

Electric companies understand that reliable and secure electricity is essential to the nation’s economy and our way of life. Providing reliable service is a responsibility electric companies take very seriously. Importantly, companies also understand that they cannot protect all assets from all threats and, instead, must manage risk. Rather than trying to achieve the impossible task of protecting every asset from every conceivable threat, the electric sector follows a multi-layered risk management approach to grid protection known as “defense-in-depth.”

The key to this strategy involves setting priorities to protect the most critical energy grid components against the most likely threats. If we frame risk as a function of likelihood and consequence, then we can allocate resources more effectively to meet those threats.

The ESCC is an important partnership that has developed between government and industry to ensure the sector and our nation are secure. Man-made events (such as coordinated cyber and physical attacks) and natural phenomena (like solar flares, major earthquakes, or weather events on the scale of Superstorm Sandy) require coordination between government and industry, as well as across the critical infrastructure sectors. Every critical infrastructure industry is dependent upon each other to provide services to customers.

Grid operators prioritize risk in order to enhance protection around critical assets, engineer redundancy to avoid single points of failure, stockpile spare equipment for hard-to-replace components, and develop other contingencies to minimize impact regardless of the nature of the incident.

By exercising and applying lessons from actual events, electric companies are able to enhance grid protection, resiliency, and restoration efforts. Invaluable insights have been gained from events such as Hurricane Katrina, Superstorm Sandy, the April 2013 Metcalf Substation attack in California, Hurricane Matthew, and events in Ukraine, where industry experts accompanied a Department of Energy (DOE) after-action assessment team.

It is this flexibility and adaptability in the face of an always-evolving threat environment that are positioning the industry to be prepared to manage risk and to respond to all hazards. While there will continue to be examples of adversaries and natural disasters impacting energy grid operations, I would like to suggest that the best metric is not whether we are a target or whether we are vulnerable, but how prepared we are to respond and to recover.

The electric power sector’s defense-in-depth approach to protecting grid assets includes several tools that, when taken together, provide a more comprehensive approach to the industry’s security posture. Specifically, the industry is subject to rigorous, mandatory, and enforceable reliability regulations; closely coordinates with industry and government
partners at all levels; and has efforts in place to prepare, respond, and recover should energy grid operations be impacted.

One of the issues to watch relates to cybersecurity at the distribution level—an area that is not subject to federal regulation. The outgoing Administration released the second installment of the *Quadrennial Energy Review* in January, calling for greater federal regulation of cybersecurity at the distribution level. Despite the controversial nature of this proposal, we expect extensive policy discussion on this concept. We will emphasize the need for electric companies—through grid modernization investments—to have necessary visibility into their distribution systems to ensure cybersecurity, as millions of devices with unique Internet addresses are added to the grid every day.

Continued investments in resiliency are likely as well. Tom’s account of the successful restoration of power in the Southeast after Hurricane Matthew cannot be overstated. Crew restoration efforts truly demonstrated the effectiveness of resiliency investments—and the far-sighted nature of those decisions are better appreciated by the regulatory community.

Industry Investment, Financial Overview & Tax Reform Priorities

**RICHARD F. MCMAHON, JR.**
Vice President, Energy Supply and Finance

As you’ve heard from my colleagues, the electric power industry is in the midst of a profound transformation, presenting both opportunities and challenges in the coming year.

**FINANCIAL HIGHLIGHTS**

The industry continues to face the challenge of an ongoing and projected slow growth in electricity demand. Although demand rose slightly in 2016, it remained below its 2010 level. We are confident that as the economy continues to improve, electric demand will grow as well. Importantly, regardless of the short-run sales outlook, electric companies are growing earnings by investing in the most attractive opportunities to better serve customers.

Just as the macro economy drives electricity demand, it also affects the returns that our members earn on their investments. Treasury rates are still low relative to historic norms, and the average state-level return on equity has declined at an overall slower pace than Treasury rates over the last 20 years, resulting in a gradually increasing spread. We expect that spread to revert to more normal levels with the projected gradual rise in interest rates by the Federal Reserve.

Over the longer term, electric companies’ total returns were aligned with those of the broader market. For the 10 years ending December 31, 2016, the EEI Index’s 106-percent return mirrored the Dow Jones Industrial Average’s 106-percent return, and approximated the S&P 500’s 96-percent return and Nasdaq’s 123-percent return. The EEI Index recorded a positive total shareholder return in 12 of the last 14 years.
For the sixth consecutive year, all of the EEI Index companies paid a dividend. Strong dividend yields have supported electric utility stocks in recent years. The industry’s average yield of 3.4 percent at the end of 2016 led all U.S. business sectors. It declined from 3.8 percent at year-end 2015, largely driven by the overall rise in utility stock prices over the past year. Forty electric companies, or 91 percent of the industry, increased their dividend last year, up from 85 percent in 2015 and 79 percent in 2014. This is the highest percentage on record, based on data going back to 1988.

The industry’s dividend payout ratio was 60.3 percent for the year ending December 31, 2016, remaining among the highest of all U.S. business sectors. The average dividend increase during 2016 was 5.6 percent, with a range of 0.7 percent to 13.0 percent and a median of 5.1 percent. Total aggregate industry-wide cash dividends paid to common shareholders rose by $1.1 billion, or 6.5 percent, during the first nine months of 2016 compared with the year-ago period.

Importantly, the industry has continued to strengthen its credit quality, which is currently a BBB+ average (S&P scale). Prior to its increase in 2014, the industry average had remained unchanged at BBB since the early 2000s. Actions were predominantly positive as electric companies continued to build upon their regulatory relationships and to focus on their regulated operations. Of note, 80 percent of the ratings outlooks currently are stable or positive.

This long-term improvement in credit is correlated with the gradual increase to a more regulated business model. It is widely known that electric companies have been pursuing a back-to-basics approach to their businesses since the early 2000s. In fact, between 2003 and 2015, the industry moved from a balance sheet that was 64-percent regulated to one that is 78-percent regulated. This is especially important as our capital investment levels have risen dramatically.

**ESG/SUSTAINABILITY**

There have been a variety of disclosure and divestment initiatives tied to the climate change issue that potentially impact the cost of capital and access to capital markets for electric companies. Some of these have taken the form of investor divestiture initiatives such as Norges Bank, which has lumped electric companies in with major coal and oil producers.

There has been an uptick in proxy initiatives impacting governance. And, many of the groups driving them are discouraging investment in anything involving carbon, not differentiating between companies and industries. Some of these groups are pushing for changes in SEC reporting and Reg. S-K, similar to the conflict minerals rule. We strongly oppose this approach.

There are many ESG/sustainability constituents with various roles. EEI’s goal is to help our industry respond to investors’ needs for more consistency in the metrics that are reported among electric companies.

We are working with our large investors and institutions to understand their informational needs regarding ESG/sustainability. Eventually we want to be viewed as a model industry in our ESG/sustainability reporting and as an industry that is leading the transition to a cleaner and more efficient economy.

Most of our member companies are performing sustainability reporting, providing information and data that generally fall into the three broad ESG categories: Environment, Social, and Governance. In summer 2016, EEI reviewed our member company sustainability reporting and found that the median report vintage was 2015, and the average report length was about 70 pages. While there currently is a significant amount of ESG/sustainability reporting taking place, there is also a lot of variability in the type of information being reported. As an industry, we want to work toward more uniformity and better comparability, with the express purpose of assisting investors and, hence, benefiting electric companies and customers.
TAX REFORM PRIORITIES

As Brian mentioned, tax reform is a major industry priority for 2017. Our industry strongly supports policies that promote a healthy economy for all Americans, and we support comprehensive tax reform.

We know that our customers rely on us to provide reliable, affordable, secure, and increasingly clean energy to power their homes and businesses. That is why we believe it is essential that any tax reform legislation support investments in America’s critical energy infrastructure and keep energy bills as affordable and predictable as possible for all customers.

There are five provisions of tax reform that we believe are critical to achieving these goals: maintaining the federal income tax deduction for interest expense, as well as the federal income tax deduction for state and local taxes; providing for the continuation of normalization, including addressing excess deferred taxes resulting from a reduction in the tax rate; and keeping dividend tax rates low and on par with capital gains.

Each of these provisions helps to keep the cost of capital low so electric companies can continue to invest in the infrastructure necessary to provide American homes and businesses with reliable and affordable electricity. Failure to address these provisions would raise the cost of capital, which, in turn, could raise electricity prices for customers of all sizes.

I would now like to turn the microphone back to Tom to offer some closing remarks before opening the floor to questions.

Conclusion

THOMAS R. KUHN
President

Our industry has a rich history, dating back to that day when the Pearl Street Generating Station first illuminated Wall Street and lower Manhattan 135 years ago.

More than ever, we must remain focused and excited about the changes our industry is facing and our future. It is up to us to deliver the energy future our customers want and expect—it is a great privilege, and one that comes with awesome responsibility. To deliver on this future and our customer-driven vision, we are focused on smarter energy infrastructure, cleaner energy, and innovative energy solutions.

By continuing to lead together on the issues driving the electric power industry’s transformation, EEI and our member companies will demonstrate Power by Association, and we will deliver America’s energy future.

As Winston Churchill famously said, “A pessimist sees the difficulty in every opportunity; an optimist sees the opportunity in every difficulty.” As many of you know, we are eternal optimists at EEI.

We truly value the partnership that we share with each of you, and we look forward to continuing our dialogue throughout the year.

Thank you.
Welcome & Opening Remarks

Thomas R. Kuhn
President
Our Industry Vision Is Customer-Driven

- Value-Focused
- More Dynamic, More Secure Energy Grid
- Cleaner Energy
- Innovative Energy Solutions

Hurricane Matthew Response

Improvements help utilities respond quicker to hurricane storm damage

Bloomberg

10 Days of Blackouts Cut to 2 After U.S. Utility Spends Billions

THE WALL STREET JOURNAL

Hurricane Matthew Tests Electric Grid’s New Storm-Resistant Technology
Industry Capital Expenditures

Notes: Total company spending of U.S. Investor-Owned Electric Companies, consolidated at the parent or appropriate holding company. Projections based on publicly available information and extrapolated for companies reporting fewer than three projected years (11% and 15% of industry for 2017 and 2018). 2015P total does not sum to 100% due to rounding.

Source: EEI Finance Department, company reports, S&P Global Market Intelligence (August 2016).

Electricity Is a Great Value

EEI’s 2017 Policy Priorities

Brian L. Wolff
Executive Vice President,
Public Policy and External Affairs

Industry Priorities

- Comprehensive Tax Reform
- Infrastructure Investments
- Grid Security
- Preserving Balanced Energy Mix
Key Administration Players

- Steven Mnuchin, Treasury Secretary
- James Mattis, Retired General, Secretary of Defense
- Wilbur Ross, Commerce Secretary
- Ryan Zinke, Rep. (R-MT), Interior Secretary
- Elaine Chao, Secretary of Transportation
- Ben Carson, HUD Secretary
- Ryan Zinke, Rep. (R-MT), Interior Secretary
- Andrew Puzder, Labor Secretary
- Scott Pruitt, EPA Administrator
- Lt. Gen. Michael Flynn (Ret.), National Security Advisor
- Linda McMahon, Small Business Administration
- Robert Lighthizer, Director, USTR
- David Shulkin, Veterans Affairs Secretary
- Betsy DeVos, Education Secretary
- Rick Perry, Energy Secretary
- Linda McMahon, Small Business Administration
- Steve Bannon, Chief Strategist
- Reince Priebus, Chief of Staff
- Kellyanne Conway, Counselor
- Sonny Perdue, Agriculture Secretary
- Ben Carson, HUD Secretary
- David Shulkin, Veterans Affairs Secretary
- Nikki Haley, Ambassador, United Nations
- Reince Priebus, Chief of Staff
- Steve Bannon, Chief Strategist
- Kellyanne Conway, Counselor
- Sonny Perdue, Agriculture Secretary

Committee Chairmanships and Ranking Members of the House

- Minority Leader: Nancy Pelosi (D/CA-12)
- Minority Whip: Steny Hoyer (D/MD-5)
- Ranking Member on Appropriations: Nita Lowey (D/NY-17)
- Ranking Member on Energy and Commerce: Frank Pallone (D/NJ-6)
- Ranking Member on Natural Resources: Raul Grijalva (D/AZ-3)
- Ranking Member on Transportation & Infrastructure: Peter DeFazio (D/OR-4)
- Ranking Member on Ways & Means: Richard Neal (D/MA-1)

- Majority Leader: Kevin McCarthy (R/CA-23)
- Majority Whip: Steve Scalise (R/LA-1)
- Chairman on Appropriations: Rodney Frelinghuysen (R/NJ-11)
- Chairman on Energy and Commerce: Greg Walden (R/OR-2)
- Chairman on Natural Resources: Rob Bishop (R/UT-1)
- Chairman on Transportation & Infrastructure: Bill Shuster (R/PA-9)
- Chairman on Ways & Means: Kevin Brady (R/ TX-8)
Committee Chairmanships and Ranking Members of the Senate

Minority Leader
Charles Schumer (D-NY)

Ranking Member on Finance
Ron Wyden (D-OR)

Ranking Member on Energy and Natural Resources
Maria Cantwell (D-WA)

Ranking Member on Environment and Public Works
Tom Carper (D-DE)

Ranking Member on Appropriations
Patrick Leahy (D-VT)

Majority Leader
Mitch McConnell (R-KY)

Chairman on Senate Finance
Orrin Hatch (R-UT)

Chairman on Energy and Natural Resources
Lisa Murkowski (R-AK)

Chairman on Environment and Public Works
John Barrasso (R-WY)

Chairman on Appropriations
Thad Cochran (R-MS)

1/3 of U.S. Power Generation Comes From Zero-Emissions Sources
(Nuclear and Renewables)

19.7% Nuclear
14.8% Renewables

Source: U.S. Department of Energy, Energy Information Administration. Chart percentages are based on net generation data.
1 Million+
Direct and Indirect Jobs

Education and Advocacy Strategic Initiative

Our Goals

1. Create a Common Language
2. Tell the Industry Story
3. Educate Key Audiences
4. Secure Positive Policy Outcomes

A Comprehensive Strategy

- National Communications
- Beyond-the-Beltway Education and Advocacy
- Inside-the-Beltway Education and Advocacy
Creating a Common Language: The Lexicon Project

Engagement
State commissioners
Consumer advocates
Trade groups
Energy associations
IR, GA, Legal

Increasing Internal Momentum
50+ briefings
100s of examples of language in use:
- web sites
- ads
- government relations
- corp / investor comms

Telling Our Industry Story

www.eei.org/future

The Future of Energy Is Changing and America’s Electric Companies Are Leading the Change

EEI
Powers America
Testing Your Energy IQ
Energy's The Future

We Are Delivering America's Energy Future Today
More than 251,000 advocates stand ready to support fair, effective energy solutions at the national and state level on regulatory and legislative issues.

### ADVOCATES BY STATE

![Map of the United States with states colored in varying shades indicating the number of advocates in each state.]

### DIGITAL PRESENCE
- 3,727 Twitter followers
- 55,948 Facebook fans
- 4.4 million Total social media reach

---

**Smarter Energy Infrastructure & State Regulatory Issues**

David K. Owens

Executive Vice President,
Business Operations Group and Regulatory Affairs
Smarter Energy Infrastructure

**DRIVERS**

1. Customer Wants & Needs
2. Environmental Goals
3. Growth in Distributed Energy Resources
4. New Technologies

**BENEFITS**

1. Enhanced Reliability
2. Increased Resiliency
3. Reduced Carbon Emissions
4. Empowered Customers
5. Flexible & Responsive Energy Grid Platform

**Projected:**

$52.8 Billion Invested in the Energy Grid in 2016 (Transmission and Distribution)
Data Analytics

EARLY GAINS

1. Enhanced Visibility Into Energy Grid
2. Predictive Energy Grid Maintenance
3. Rapid Outage Detection & Restoration
4. New Customer Services

WHAT'S NEXT

1. Next-Generation Energy Grid Management
2. DERs as Energy Grid Resources
3. Tailored Customer Services
4. Smart Cities

Energy Storage: Why Now?

Energy storage can be deployed in all parts of the energy grid, and has applications in all parts of the value chain.

Enhance Electric Company Operations
- Alleviate high energy prices through time shifts
- Reduce the need for new generation

Provide Grid Support
- Regulate frequency
- Reduce spinning, non-spinning, and supplemental reserve requirements
- Voltage support
- Black start electricity restoration

Optimize Power System
- Deferr transmission and distribution upgrades
- Relieve electricity congestion

Enhance Customer Experience
- Higher power quality and reliability
- Retail electric energy time shift

Source: Adapted from DOE/EPRI Handbook, EEI (graphic)
Rate & Regulatory Reform

CHALLENGES

1. Rapid Technology Change
2. Changing Customer Expectations
3. Slow & Inflexible Process
4. One Size Does Not Fit All

WAYS FORWARD

1. Informal Collaboration
2. Performance-Based Ratemaking
3. Flexible Rate Structures
4. Transparent Pricing for Grid & Energy

The FERC Landscape, Customer Solutions & Grid Security

Philip D. Moeller
Senior Vice President, Energy Delivery and Chief Customer Solutions Officer
The Smart City Revolution

Street Lighting

Smart Buildings

Distributed Energy Resources

Smart Transportation

Monitoring & Sensing

EVs: Leading the Charge

Growing Role for Electric Companies

$250 million
in customer projects/programs underway
to deploy charging infrastructure and accelerate electric transportation

$1.5 billion
new projects/programs proposed

Leading by Example

Fleet Electrification
Committed $128 million in 2016 and increased number of PEVs in their fleets by 18%

Employee Engagement
Encouraging workforce to lead adoption and set example in their communities

Electricity Subsector Coordinating Council Stakeholders

**GOVERNMENT**
- Federal Agencies
- Regulators
- PMAs
- Law Enforcement
- State, Local, Tribal, & Territorial
- Canadian Agencies & Provinces

**INDUSTRY**
- Electric Companies
- Trade Associations
- ISOs & RTOs
- NERC
- E-ISAC
- Canadian Electric Companies

**EXTERNAL GROUPS**
- Other Critical Sectors
- Vendors
- Critical Customers
- Media

Industry Investment, Financial Overview & Tax Reform Priorities

Richard F. McMahon, Jr.
Vice President,
Energy Supply and Finance
Financial Highlights

as of 12-31-2016

### Stock Performance

<table>
<thead>
<tr>
<th></th>
<th>EEI Index</th>
<th>DJIA</th>
<th>S&amp;P</th>
<th>NASDAQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>YTD</td>
<td>17.4%</td>
<td>16.5%</td>
<td>12.0%</td>
<td>7.5%</td>
</tr>
<tr>
<td>5-year</td>
<td>67.8%</td>
<td>83.6%</td>
<td>98.2%</td>
<td>106.6%</td>
</tr>
<tr>
<td>10-year</td>
<td>106.1%</td>
<td>106.4%</td>
<td>95.7%</td>
<td>122.9%</td>
</tr>
</tbody>
</table>

### Dividends

- Yield = 3.4%
- All companies paying a dividend
- 40 of 44 companies increased dividend in 2016

### Credit Ratings

- Strengthening 'BBB+' Average
- Outlook 80% Stable or Positive

Note: Stock returns are total returns, ending 12-31-2016, (i.e., include dividends) except for NASDAQ, which is price appreciation only.
Source: EEI Finance Department, S&P Global Market Intelligence

---

Current Electric Company Reporting on ESG/Sustainability

- Number of Companies and Level of Reporting
  - Comprehensive: 23 (76%)
  - Minimal: 6 (12%)
  - None: 5 (12%)
  - Minimal: 2 (5%)
  - None: 1 (2%)

- Keyword Occurrence in Report Titles
  - Sustainability: 23 (53%)
  - Responsibility: 9 (22%)
  - Environment: 5 (12%)
  - Citizenship: 3 (7%)
  - Commitment: 1 (2%)
  - Stewardship: 1 (2%)
  - Accountability: 1 (2%)

- Report Content
  - Social: 46%
  - Economic: 37%
  - Environment: 17%

- Year of Most Recent Report (comprehensive reports)
- Number of Companies Using a Common Reporting Framework
  - GRI: 17 (45%)

- Length of Reports (by page count)

Note: Data is current as of August 2016.
Why Regulated Companies Are Different Regarding ESG/Sustainability

Sector Beta vs. S&P 500

U.S. Electric IOUs Credit Rating History

Regulated Strategy

National Fuel Mix

Tax Reform Comparison: Trump Plan vs. House GOP Blueprint

<table>
<thead>
<tr>
<th>Corporate Tax Rate</th>
<th>Trump Tax Reform Proposal</th>
<th>House GOP Blueprint</th>
</tr>
</thead>
<tbody>
<tr>
<td>20%</td>
<td>20%</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Interest Deduction</th>
<th></th>
<th>Allow businesses to deduct interest expense against interest income, with any net interest expense that is not deductible being carried forward indefinitely</th>
</tr>
</thead>
<tbody>
<tr>
<td>No interest deduction if the company elects for 100% expensing. An election once made can be revoked only within the first three years; after three years, the election would be irrevocable.</td>
<td>Allow businesses to fully and immediately expense the cost of investment in tangible property and intangible assets</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Depreciation</th>
<th></th>
<th>Allow businesses to fully and immediately expense the cost of investment in tangible property and intangible assets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elective 100% expensing. The plan allows U.S.-based manufacturing firms to elect to expense capital investment and lower the deductibility of corporate interest expense. An election once made can be revoked only within the first three years; after three years, the election would be irrevocable.</td>
<td>Allow businesses to fully and immediately expense the cost of investment in tangible property and intangible assets</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Normalization/Excess</th>
<th></th>
<th>Allow businesses to fully and immediately expense the cost of investment in tangible property and intangible assets</th>
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<tbody>
<tr>
<td>Deferred Taxes/Transition Rules</td>
<td>Monitoring—no specific language</td>
<td>Monitoring—no specific language</td>
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<tr>
<td>Property Taxes</td>
<td>Monitoring—no specific language</td>
<td>Monitoring—no specific language</td>
</tr>
<tr>
<td>Dividends &amp; Capital Gains</td>
<td>Top rate of 20%, 3.8% ACA surtax is repealed</td>
<td>Top rate of 20%, 3.8% ACA surtax is repealed</td>
</tr>
<tr>
<td>Tax Expenditures</td>
<td>Eliminates most tax expenditures, but specifically keeps R&amp;D credit</td>
<td>Eliminate special interest deductions and credits</td>
</tr>
<tr>
<td>Treatment of NOLs</td>
<td>NOLs to be carried forward indefinitely and indexed for inflation, but no carry back. Carryforwards limited to 90% of the net taxable amount for the year of the carryforward.</td>
<td>NOLs to be carried forward indefinitely and indexed for inflation, but no carry back. Carryforwards limited to 90% of the net taxable amount for the year of the carryforward.</td>
</tr>
<tr>
<td>Corporate AMT</td>
<td>Repairs it</td>
<td>Repairs it</td>
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<tr>
<td>International</td>
<td>Deemed repatriation at 15% rate</td>
<td>Deemed repatriation at 15% rate</td>
</tr>
<tr>
<td>Border Adjustability</td>
<td>Border adjustable tax base (i.e., tax imposed on value of imports; exports would not be subject to tax)</td>
<td>Border adjustable tax base (i.e., tax imposed on value of imports; exports would not be subject to tax)</td>
</tr>
<tr>
<td>Passthrough Business Rate</td>
<td>Effective rate of 15%. Distributions from large passthroughs treated as dividends.</td>
<td>Effective rate of 15%. Distributions from large passthroughs treated as dividends.</td>
</tr>
</tbody>
</table>
Industry Tax Reform Priorities

- Preserve Interest Deductibility
- Preserve Deductibility for State and Local Taxes
  - Largely Property Taxes
- Retain Normalization
- Provide Excess Deferred Tax Transition Rule
- Maintain Low Dividend and Capital Gains Tax Rates and Rate Parity
## Industry Capital Expenditures

### Source:
EEI Finance Department, company reports, S&P Global Market Intelligence (August 2016).

### Notes:
Total company spending of U.S. Investor-Owned Electric Companies, consolidated at the parent or appropriate holding company. Projections based on publicly available information and extrapolated for companies reporting fewer than three projected years (11% and 15% of industry for 2017 and 2018).

### Actuals
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<tr>
<td></td>
<td>59.9</td>
<td>74.1</td>
<td>82.8</td>
<td>77.7</td>
<td>74.3</td>
<td>78.6</td>
<td>90.3</td>
<td>90.3</td>
<td>96.1</td>
<td>103.3</td>
<td>108.6</td>
<td>101.2</td>
<td>104.5</td>
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</table>

### Projections (Sept. 2015)

### Projections (Aug. 2016)

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</table>
### Projected Functional CapEx

#### 2015P

- **Generation**: $35.3B (32%)
- **Distribution**: $28.7B (26%)
- **Transmission**: $19.3B (18%)
- **Gas-Related**: $13.3B (12%)
- **Environment**: $5.7B (5%)
- **Other**: $6.2B (6%)

**Total**: $108.6B

#### 2016P

- **Generation**: $42.0B (35%)
- **Distribution**: $32.0B (26%)
- **Transmission**: $20.8B (17%)
- **Gas-Related**: $17.9B (15%)
- **Environment**: $14.8B (12%)
- **Other**: $6.3B (5%)

**Total**: $120.8B

**Notes**: Total company functional spending of U.S. Investor-Owned Electric Companies. 2015P total does not sum to 100% due to rounding. Projections based on publicly available information and extrapolated for companies not reporting functional detail (1.3% and 0.7% of the industry for 2015 and 2016, respectively).

**Source**: EEI Finance Department, company reports, S&P Global Market Intelligence (August 2016).

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### U.S. Investor-Owned Electric Company Ratings History

#### 2003 – 2015

- **2003**: 13% A or higher, 9% A-, 1% BBB, 7% BBB+, 4% BBB-
- **2007**: 13% A or higher, 11% A-, 1% BBB, 9% BBB+, 3% BBB-
- **2011**: 19% A or higher, 26% A-, 1% BBB, 27% BBB+, 4% BBB-
- **2015**: 22% A or higher, 23% A-, 2% BBB, 27% BBB+, 6% BBB-

**Note**: Average Industry Credit Rating Is Improving

**Source**: EEI Finance Department
Shift to More Regulated Strategies

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

<table>
<thead>
<tr>
<th></th>
<th>2003</th>
<th>2015</th>
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<tbody>
<tr>
<td>Regulated Electric Company</td>
<td>57%</td>
<td>69%</td>
</tr>
<tr>
<td>Regulated Natural Gas Company</td>
<td>7%</td>
<td>9%</td>
</tr>
<tr>
<td>Other</td>
<td>36%</td>
<td>22%</td>
</tr>
</tbody>
</table>

Rate Review Activity: Average ROEs

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

*Requested ROE represents the equal-weight average of all electric cases 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 cases 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.

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

Rate Review Activity: Volume and Lag
U.S. Investor-Owned Electric Companies

*Average Regulatory Lag is defined here as the amount of time between the filing of and ruling on a rate case. 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
Status of M&A Activity

Number of Transactions

Completed (111 total)
Announced (140 total)
Withdrawn (29 total)


Source: EEI Finance Department

Results from EEI’s research highlight large variations in the amount of information reported under the three broad sustainability categories

Significant Variability in Current ESG / Sustainability Reporting
Our National Fuel Mix Is Changing

**2006 National Energy Resource Mix**
- 23.1% Natural Gas
- 19.4% Nuclear
- 7.1% Hydro
- 1.6% Fuel Oil
- 0.5% Other
- 2.4% Non-Hydro Renewables

**2016 National Energy Resource Mix (Preliminary)**
- 34.0% Natural Gas
- 30.4% Coal
- 8.3% Fuel Oil
- 6.5% Hydro
- 8.9% Other
- 9.8% Non-Hydro Renewables

Source: U.S. Department of Energy, Energy Information Administration

Chart percentages are based on net generation data.
Evolving Electric Generation Mix

Non-Hydro Renewable Sources More Than Triple Between 2010 and 2040
Power Plant Emissions Decrease Significantly

Graph depicts increases or decreases from the base year.

Sources: U.S. Department of Energy; Energy Information Administration; U.S. Environmental Protection Agency, and U.S. Bureau of Economic Analysis

1/3 of U.S. power generation comes from zero-emissions sources
As of 2015, industry CO2 emissions were almost 21 percent below 2005 levels
Trajectory will continue based on current trends


Environmental Challenges: 2017 and Beyond

Air
- Multiple NAAQS
- Interstate Transport
- Regional Haze/Visibility
- Mercury & Air Toxics
- Modeling, Permitting & Monitoring

Climate
- Evolving Policy Landscape
- State & Regional Initiatives
- International Negotiations
- Prospects for 111(d) & (b) Programs
- Technology Development & Deployment

Water
- Waters of the United States
- Effluent Guidelines Limitations
- Total Maximum Daily Loads
- Waterbody-Specific Standards

Land & Natural Resources
- Infrastructure Siting and Permitting
- Endangered Species
- Avian Protection
- Vegetation Management

Waste & Chemical Management
- Coal Ash
- PCBs in Electrical Equipment
- TSCA
- HazMat Transport

Electric Transportation: Growing Momentum

Cumulative U.S. PEV Sales

- PEV sales increase, 2015 to 2016
  - +37%
- PEV availability
  - 30 models
  - 17 brands
- Battery cost*
  - -71%

*U.S. Department of Energy modeled battery cost reductions 2009-2014
# Financial Meeting Schedule

## 2017

**FEBRUARY 8**  
EEI Wall Street Briefing  
University Club  
New York, New York

**JUNE 20–21**  
Investor Relations Group Meeting  
Xcel Energy, Inc. Headquarters  
Minneapolis, Minnesota

**JUNE/JULY DATE TBD**  
EEI Finance Committee Meeting  
*Location TBA*

**NOVEMBER 5 – 8**  
EEI Financial Conference  
Walt Disney World  
Swan & Dolphin  
Lake Buena Vista, Florida

**NOVEMBER 5**  
Chief Financial Officers Forum  
*(By invitation only)*  
Walt Disney World  
Swan & Dolphin  
Lake Buena Vista, Florida

**DECEMBER 5**  
Investor Relations Planning Group Meeting  
*(By invitation only)*  
Omni Berkshire Place  
New York, New York

**DECEMBER 6**  
Wall Street Advisory Group Meeting  
*(By invitation only)*  
Omni Berkshire Place  
New York, New York

## 2018

**NOVEMBER 11–14**  
EEI Financial Conference  
Hilton San Francisco Union Square  
San Francisco, California

**NOVEMBER 11**  
Chief Financial Officers Forum  
*(By invitation only)*  
Hilton San Francisco Union Square  
San Francisco, California

**NOVEMBER 11**  
EEI Treasury Group Meeting  
*(By invitation only)*  
Hilton San Francisco Union Square  
San Francisco, California

**DECEMBER 6**  
Wall Street Advisory Group Meeting  
*(By invitation only)*  
Omni Berkshire Place  
New York, New York

## 2019

**NOVEMBER 10–13**  
EEI Financial Conference  
Orlando Marriott World Center  
Orlando, Florida

**NOVEMBER 10**  
Chief Financial Officers Forum  
*(By invitation only)*  
Orlando Marriott World Center  
Orlando, Florida

## 2020

**NOVEMBER 8–11**  
EEI Financial Conference  
JW Marriott Desert Ridge Resort & Spa  
Phoenix, Arizona

**NOVEMBER 8**  
Chief Financial Officers Forum  
*(By invitation only)*  
JW Marriott Desert Ridge Resort & Spa  
Phoenix, Arizona

**DECEMBER 7**  
Wall Street Advisory Group Meeting  
*(By invitation only)*  
Omni Berkshire Place  
New York, New York

**DECEMBER 8**  
Wall Street Advisory Group Meeting  
*(By invitation only)*  
Omni Berkshire Place  
New York, New York

**NOVEMBER 10**  
Chief Financial Officers Forum  
*(By invitation only)*  
Orlando Marriott World Center  
Orlando, Florida

**DECEMBER 5**  
Investor Relations Planning Group Meeting  
*(By invitation only)*  
Omni Berkshire Place  
New York, New York

**DECEMBER 6**  
Wall Street Advisory Group Meeting  
*(By invitation only)*  
Omni Berkshire Place  
New York, New York
The Edison Electric Institute (EEI) is the association that represents all U.S. investor-owned electric companies. Our members provide electricity for 220 million Americans, operate in all 50 states and the District of Columbia, and directly and indirectly employ more than one million workers.

Safe, reliable, affordable, and increasingly clean energy powers the economy and enhances the lives of all Americans.

EEI has dozens of international electric companies as International Members, and hundreds of industry suppliers and related organizations as Associate Members.

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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