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## 2016 Recognitions

- For the 11th consecutive year, Duke Energy was named to the Dow Jones Sustainability Index for North America.
- The Newsweek Green Rankings, “Top Green Companies in the U.S. 2016,” ranked Duke Energy No. 107 (No. 5 in our industry, in the top quartile of electric utilities), up from 111 in 2015.
- Black Enterprise Magazine named Duke Energy to its “2016 50 Best Companies for Diversity.”
- Site Selection magazine named Duke Energy to its “Top Utilities in Economic Development” list for the 12th consecutive year.
- The Progressive Policy Institute named Duke Energy to the Top 25 “Investment Heroes 2016: Fighting Short-Termism,” with the No. 10 rank for long-term domestic capital spending that is helping raise productivity and wages.
- Duke Energy, a founding member of the Electric Utility Industry Sustainable Supply Chain Alliance, was recognized as that organization’s 2016 Member of the Year.



Diane Denton / Director Environmental & Energy Policy and Sustainability

## About This Report

Duke Energy's 11th Sustainability Report continues our tradition of disclosure and transparency about how we do business – and how we strive to benefit the communities we serve.

Anticipating changes in the industry drives us at Duke Energy. We are currently expanding renewable generation, transitioning from coal to natural gas, reducing our environmental footprint and modernizing our energy grid to support new technologies. We have public goals in this report to make sure we head down the right path – the one to a cleaner, more affordable and reliable energy future.

But just as important as our operational activities, is our engagement with stakeholders. They remind us that Duke Energy touches many areas of our society outside of delivering energy. There are many examples in this year's report where partnering with others yielded notable results.

Sustainability is engrained at Duke Energy. We continue to fine-tune our business approach to take advantage of new technologies and improve innovation to make sure we exceed customer expectations. This goes hand-in-hand with our focus on the communities we serve, operational excellence, employee engagement and development.

There is one difference with this year's report. In keeping pace with leading companies, we are producing it as a web-only document, with a PDF version available for printing. This will lower the report's overall environmental impact. It may be a small change, but every little bit helps.

As always, you can find a detailed Global Reporting Initiative (GRI) Index on our website. The GRI is a recognized international framework for sustainability reporting.

Enjoy our new report. Thank you for your interest in Duke Energy.

**Diane Denton**  
*Director Environmental &  
Energy Policy and Sustainability*



Lynn J. Good / Chairman, President and Chief Executive Officer

## A Message From Our CEO

Providing safe, reliable and affordable power is at the heart of what we do. But thanks to changing social priorities, new technologies and alternative energy sources, customers have new and higher expectations of what they want from their energy provider.

Today, how we make energy matters. People expect that we will produce and deliver power in ways that protect the environment and the communities we serve.

Duke Energy has a clear, compelling strategy to deliver value to our stakeholders in this environment and our commitment to sustainability is woven throughout our approach.

## Maintaining Safe Operations

Our dedication to safety, operational and environmental excellence is unwavering. Any success starts here. We improved on our industry-leading performance from 2015. We had no work-related fatalities last year and reduced our total incident case rate. Also, we reduced the number of significant injuries. That's a record of performance to be proud of and I have our employees to thank.

Our employees improved our safety performance while meeting the energy needs of our customers. They did this despite demanding weather and a summertime usage record in the Carolinas. In 2016, our nuclear fleet increased its capacity factor to 95.7 percent. That's a new record and the 18th consecutive year our capacity factor was above 90 percent.

This commitment to excellence also extends to environmental stewardship. Our reportable environmental events dropped by 17 percent in 2016. We increased our recycling efforts last year and remain on track to recycle 80 percent of our solid waste by 2018. We also made tremendous progress closing our coal ash basins. Last year, we excavated and stored over 5 million tons of coal ash in North Carolina. We also published basin closure plans across our service areas and announced two coal ash reprocessing locations, with one more to come.

## Modernizing Our Grid

Our energy grid, the largest in the United States, is a critical part of our nation's infrastructure. We are investing \$25 billion over 10 years to create a smarter, more modern grid that delivers the services our customers expect. Today, the grid stands as a one-way road. In the future, it must become a multilane highway, sending energy and information in both directions.

Our investment will help us reduce outages and accelerate restoration, and allow customers to better manage their energy usage. It will also enable the system to support more renewable energy resources and emerging technologies such as battery storage.

*Duke Energy has a clear, compelling strategy to deliver value to our stakeholders in this environment and our commitment to sustainability is woven throughout our approach.*

We have installed smart meters in the Midwest, have deployed the technology in the Carolinas and will start in Florida soon. So far, we have saved millions of dollars for customers by automating processes and reducing trips to start and stop service. Last year alone, we saved over 50 million outage minutes for customers, a twofold increase.

## Generating Cleaner Energy

More and more, we're generating cleaner energy. We have retired older coal units and invested in natural gas generation and renewables. And we continue to operate our carbon-free nuclear plants. Since 2005, our efforts have reduced our carbon dioxide emissions by 29 percent.

And we are not finished. By 2030, we plan to reduce our carbon emissions by 40 percent from our 2005 levels. We also plan to reduce our carbon intensity – the amount of carbon dioxide emitted per kilowatt-hour of energy produced – by 45 percent.

We will meet these goals, in part, by investing \$11 billion in natural gas and renewables over the next 10 years, as well as in the infrastructure necessary to supply our plants and customers with cleaner, low-cost fuel.

These investments complement our expanding renewable portfolio. We have spent more than \$5 billion over the past 10 years in commercial renewables. When combined with our regulated renewables, we're one of the nation's top five renewable energy companies. As of year-end 2016, we owned or had under contract over 5,400 megawatts of wind, solar and biomass energy.

## Focusing on Customers and Communities

The customer remains at the center of everything we do. We are updating our technology infrastructure to give our customers smarter, more advanced solutions. For example, they can now receive proactive outage updates via voice, text or email as well as high bill alerts.

Even as we transform Duke Energy, we continue to keep energy costs low. Last year, our electric rates were below the national average for customers in all six states we serve. We are also helping customers save energy. Our energy efficiency programs, from in-home energy reports to free LED bulbs, have played a part in reducing customer energy consumption by more than 12,000 gigawatt-hours as of year-end 2016.

*We are committed to powering the lives of our customers and the vitality of our communities. That's our purpose, and our focus on sustainability helps us keep this promise.*

Our commitment extends beyond the services we provide. We are proud to be an economic engine for our communities we call home. Last year, we helped attract \$4.1 billion in capital investment in our service territories. That led to the creation of over 14,000 jobs. We are also active through our philanthropic efforts. In 2016, Duke Energy and Piedmont's total charitable giving was over \$53 million. This included \$33.5 million in direct giving by our Foundations, as well as company contributions and in-kind gifts, volunteer hours and contributions from employees and retirees to our communities.

Our focus on the customer has led to improvements in customer satisfaction. Yet we have more to do. Our goal is simple: we want to move into the first quartile in the next five years. We have a plan to do that and maintain that position for years to come.

## Today's Duke Energy

We are committed to powering the lives of our customers and the vitality of our communities. That's our purpose, and our focus on sustainability helps us keep this promise.

Today's Duke Energy is leading the way in a dynamic environment. How we are responding is delivering results and defining the future of our company and the communities we serve. This is our path forward and we are charging ahead with confidence.

Sincerely,



**Lynn J. Good**  
Chairman, President and  
Chief Executive Officer

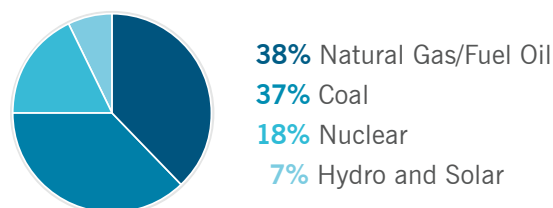
April 7, 2017



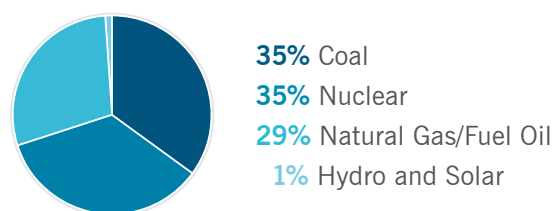
# Duke Energy At A Glance

## Electric Utilities and Infrastructure

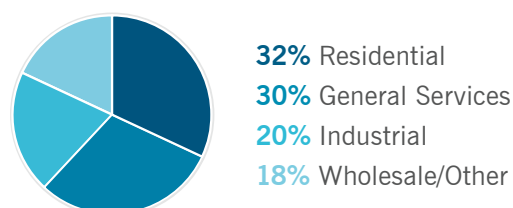
Generation Diversity (percent owned capacity)<sup>1</sup>



Generated (net output gigawatt-hours (GWh))<sup>2</sup>



Customer Diversity (in billed GWh sales)<sup>2</sup>



Electric Utilities and Infrastructure conducts operations primarily through the regulated public utilities of Duke Energy Carolinas, Duke Energy Progress, Duke Energy Florida, Duke Energy Indiana and Duke Energy Ohio.

### Electric Operations

- Owns approximately 49,300 megawatts (MW) of generating capacity
- Service area covers about 95,000 square miles with an estimated population of 24 million
- Service to approximately 7.5 million residential, commercial and industrial customers
- 268,700 miles of distribution lines and a 32,200-mile transmission system

<sup>1</sup> As of December 31, 2016.

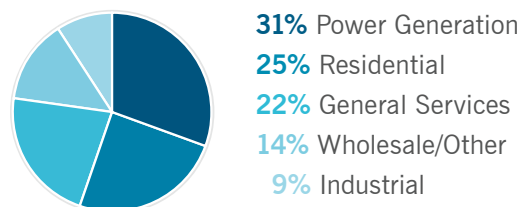
<sup>2</sup> For the year ended December 31, 2016.

<sup>3</sup> Chart reflects the three months for which Piedmont was owned by Duke Energy in 2016, and 12 months for other existing Duke Energy natural gas operations.

## Natural Gas Customer Diversity

Gas Utilities and Infrastructure conducts natural gas distribution operations primarily through the regulated public utilities of Piedmont Natural Gas and Duke Energy Ohio.

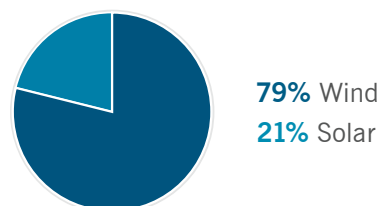
Natural Gas Operations<sup>3</sup>



- Regulated natural gas transmission and distribution services to approximately 1.6 million customers in the Carolinas, Tennessee, southwestern Ohio and northern Kentucky
- Maintains more than 32,900 miles of natural gas transmission and distribution pipelines, and 26,600 miles of natural gas service pipelines

## Duke Energy Renewables

Generation Diversity (percent owned capacity)<sup>1</sup>



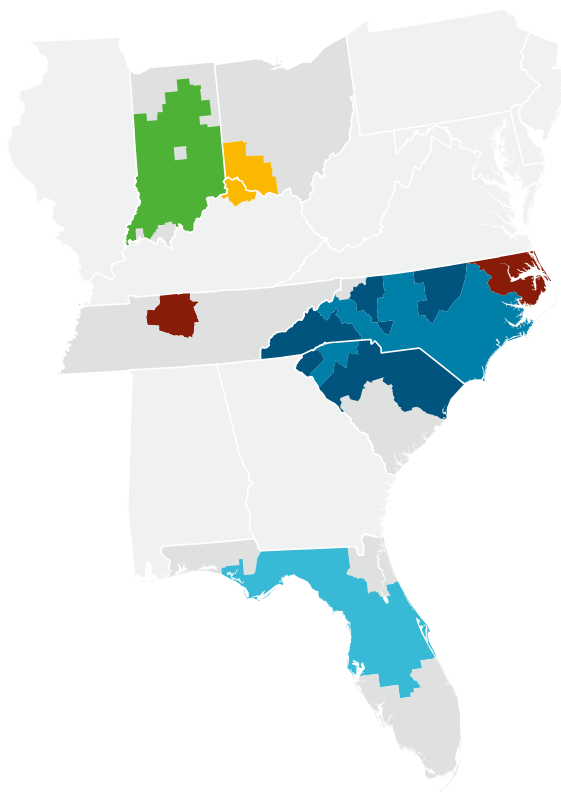
Duke Energy Renewables primarily acquires, develops, builds and operates wind and solar renewable generation throughout the continental U.S. The portfolio includes nonregulated renewable energy and energy storage assets.

Duke Energy Renewables, part of the Commercial Renewables business segment, includes utility-scale wind and solar generation assets, which total 2,900 MW across 14 states from 21 wind and 63 solar projects. The power produced from renewable generation is primarily sold through long-term contracts to utilities, electric cooperatives, municipalities and commercial and industrial customers.

As part of its growth strategy, Duke Energy Renewables has expanded its investment portfolio through the addition of distributed solar companies and projects, energy storage systems and energy management solutions specifically tailored to commercial businesses and other institutions.

# Duke Energy At A Glance *continued*

## Maps of Operations



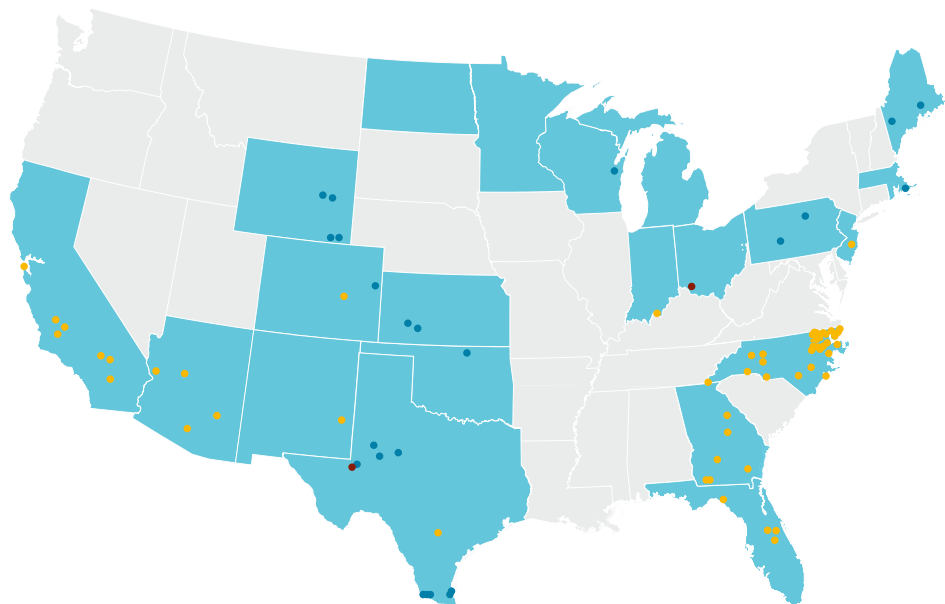
### Service Territories

- Counties Served\***
- Duke Energy Indiana
  - Duke Energy Ohio/Kentucky
  - Duke Energy Carolinas/Progress
  - Piedmont Natural Gas
  - Overlapping territory
  - Duke Energy Florida

\*Portions may be served by other utilities.

### Commercial Renewable Projects

- Solar and Wind**
- Solar power projects
  - Wind power projects
  - Battery storage facility





# Management Approach to Sustainability

## Sustainability Governance

### Board of Directors

Provides risk management oversight and regular reviews of key sustainability issues.

### Chief Executive Officer

Ultimate responsibility for the company's sustainability strategy and long-term success.

### Vice President, Federal Government Affairs and Strategic Policy

Responsible for sustainability initiatives and coordination with senior business leaders to integrate sustainable business practices across the company.

### Senior Business Leaders

Accountable for applicable sustainability goals and integrating sustainability into respective areas.

### Sustainability Corps Members

Specially trained employees who provide local support and advocacy for sustainable business practices.

### Employees

Implement departmental initiatives and identify local sustainability opportunities.

## About Our Data

This report contains the best data available at time of publication. Environmental and social data can be challenging to accurately measure. We correct and report errors in prior-year data when found, and we work to continually improve our data measurement, gathering and reporting processes to increase the integrity of information presented. Although we did not complete the acquisition until October 3, 2016, this report includes Piedmont Natural Gas data where applicable, except where noted.

## Global Reporting Initiative

The Global Reporting Initiative (GRI) is a recognized international framework for economic, environmental and social performance disclosure. We provide a detailed response to GRI indicators on our website, including indicators in GRI's Electric Utilities Sector Supplement. Sections of this report with information responsive to the GRI indicators/disclosures include the following:

- General/Standard: [Introduction Section](#) (See pages 2-13), [Our Sustainability Plan and Goals Section](#) (See pages 14-15)
- Economic: [Customers Section](#) (See pages 16-23), [Growth Section](#) (See pages 24-31)
- Environmental: [Operations Section](#) (See pages 32-43), [Growth Section](#) (See pages 24-31)
- Social: [Employees Section](#) (See pages 44-49), [Customers Section](#) (See pages 16-23)

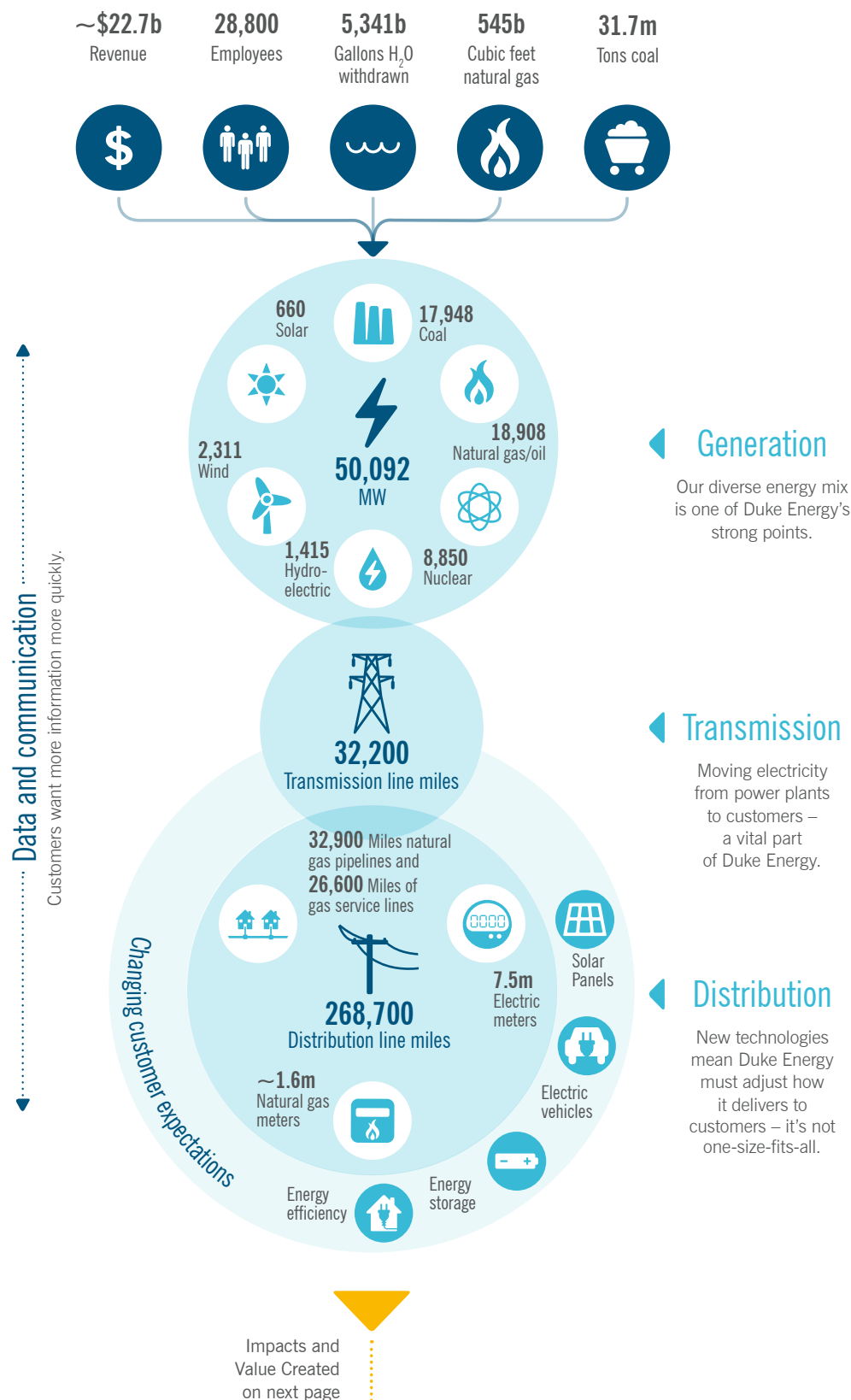
# Our Value Creation Model

## Major Resources

Creating value starts with the basics. It takes materials and water from the earth, and dedicated employees who create the value chain for Duke Energy.

## Evolving Business Model

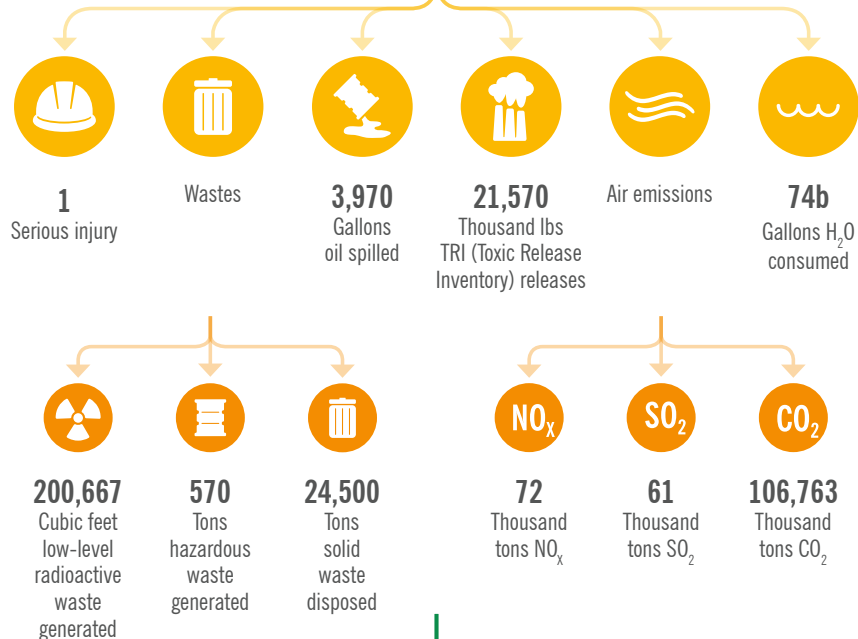
As technology and customers' expectations evolve, Duke Energy is also evolving by investing in innovative new solutions that help customers use energy more wisely and reduce their overall consumption. The company is focused on providing the convenience and control that customers want.



## Our Value Creation Model *continued*

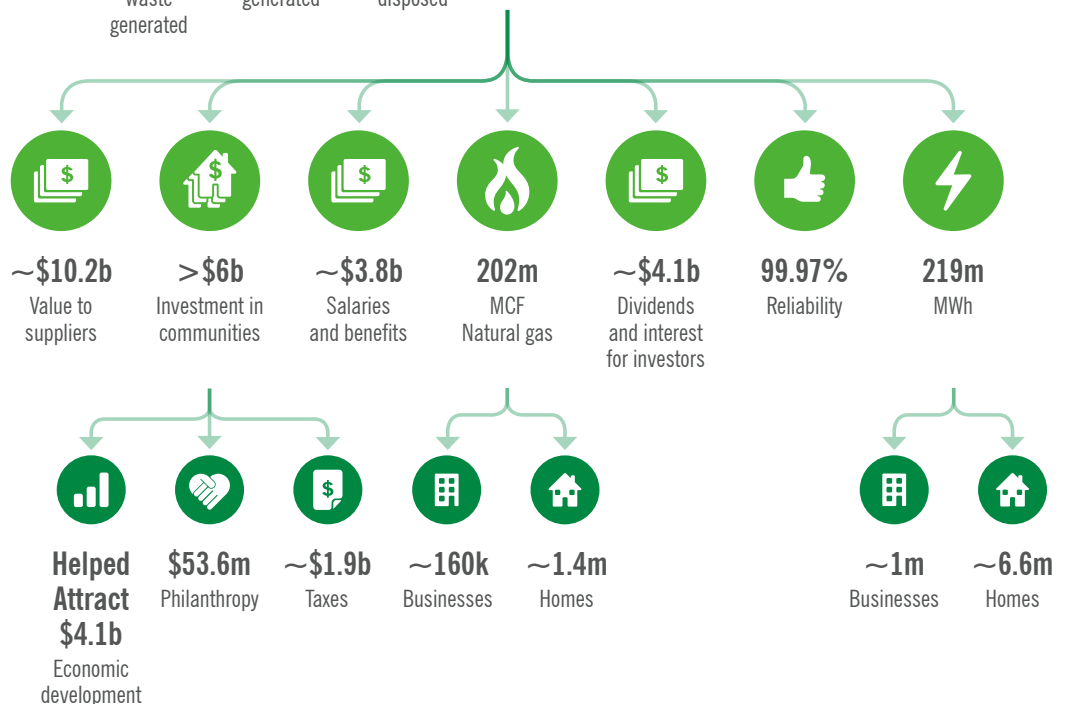
### Impacts

Generating energy creates environmental and other impacts. Duke Energy works hard to minimize them. Our track record over the past decade is good, but there's always room for improvement.



### Value Created

We power the lives of our customers and the vitality of our communities. In 2016, Duke Energy's revenues were \$22.7 billion. Duke Energy also supports communities with the taxes it pays, as well as through philanthropic contributions and employee volunteerism.



The information presented here is meant to provide an overview of Duke Energy and is not meant to be precise or inclusive of all the company's inputs and outputs. Please see the 2016 Duke Energy Annual Report on Form 10-K for detailed notes and further explanations of financial information and this Sustainability Report for more social and environmental information.

# Stakeholder Engagement and What Matters Most

The **safety** of our employees, customers and communities is our number one priority.

## Stakeholder Engagement

Stakeholder engagement is a key to Duke Energy's success, and a vital tool to help make our company an even stronger community partner.

During 2016, we updated and expanded our stakeholder engagement tools and deployed them companywide. We also created an External Relations Council comprised of company leaders to improve coordination and alignment of stakeholder interactions at the national, state and local levels.

A key challenge is our stakeholders often have divergent views. What is a high priority to some isn't as important to others.

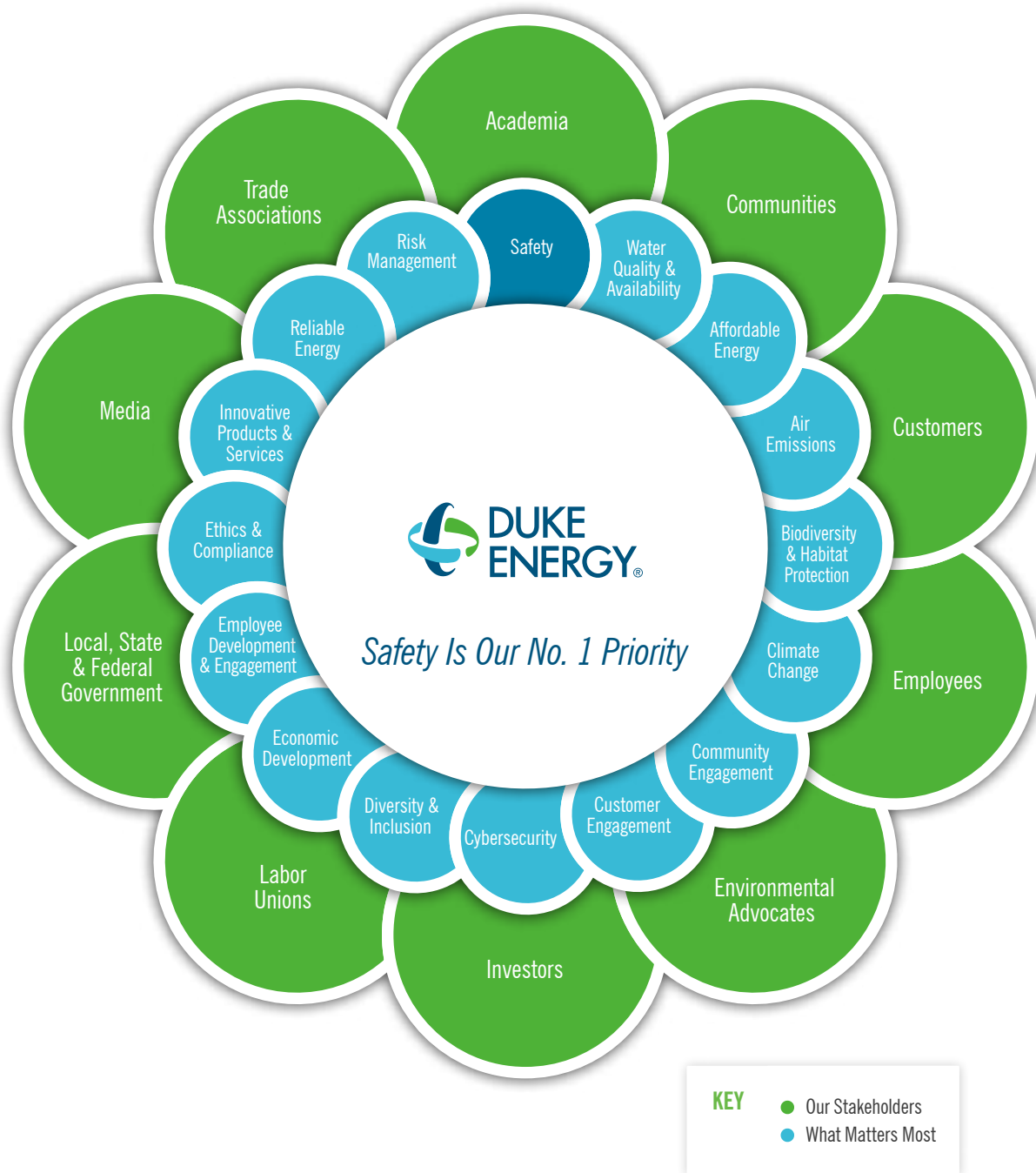
But our experience shows that collaborating with stakeholders leads to better outcomes. No matter how complex the issue, we aim for the right long-term balance that will strengthen trust and confidence in our company and help us transition to cleaner, smarter energy solutions for our customers and communities.

## What Matters Most

Duke Energy's approach to sustainability focuses on the issues that are most important to our stakeholders and to us. We identify issues from a variety of sources such as surveys, stakeholder feedback, thought leader perspectives, social and traditional media coverage, and shareholder proposals in our sector.

The graphic depicts the relationship among Duke Energy, its stakeholders and the most important issues as overlapping circles within circles to show that they are interconnected. The stakeholders and issues are both arranged alphabetically to make it clear that they are all important while safety, as always, is number one.

What Matters Most *continued*



# Our Sustainability Plan and Goals

**GOAL STATUS**

- Achieved or on track
- Currently not on track
- Goal not achieved

## 1 CUSTOMERS

Improve the lives of our customers and vitality of our communities.

### GOALS:

- **Affordable energy:** Maintain electric rates lower than the national averages.  
**2016 status:** Duke Energy's electric rates in all six states we serve were lower than the national average in all three customer categories (residential, commercial and industrial). (See related graphic on page 18: "Duke Energy's Electric Rates: Below U.S. Average.")
- **Energy efficiency – consumption:** Achieve a cumulative reduction in customer energy consumption of 15,000 GWh (equivalent to the annual usage of 1.25 million homes) by 2020.  
**2016 status:** As of year-end 2016, energy consumption was reduced by more than 12,000 GWh.
- **Energy efficiency – peak demand (previous goal):** Achieve a cumulative reduction in peak demand of 4,800 MW (equivalent to eight 600-MW power plants) by 2020.  
**2016 status:** As of year-end 2016, peak demand was reduced by more than 4,800 MW.  
**New goal:** Achieve a cumulative reduction in peak demand of 5,250 MW (equivalent to nearly nine 600-MW power plants) by 2020.  
Potential changes in state energy efficiency rules and requirements, and changes to utility avoided costs may have an impact on our future energy efficiency goals.
- **Charitable giving:** During 2016, the Duke Energy Foundation will invest over \$30 million in charitable giving.  
**2016 status:** The Duke Energy and Piedmont Natural Gas Foundations contributed \$33.5 million. Total 2016 Charitable Giving was \$53.6 million. (See related graphic on page 20: "2016 Charitable Giving.")
- **Community leader ratings:** During 2016, conduct a community leader study across all of our service territories to maintain insight into our performance with this important customer segment.  
**2016 status:** The Community Leader Study was launched in October 2016 and achieved reasonably high response rates. Community Leaders reported overall satisfaction ratings ranging from 84 to 98% across all Duke Energy jurisdictions. Results showed high satisfaction with our reliable service, customer service and community support. Areas for improvement included rates/high bills, outage performance and environmental performance.

## 2 GROWTH

Grow and adapt the business and achieve our financial objectives.

### GOALS:

- **Economic development (previous goal):** Stimulate growth in our communities and help attract at least 40,000 jobs and \$10 billion in capital investments from 2013 to 2017.  
**2016 status:** Since 2013, Duke Energy helped our communities attract more than 50,000 jobs and over \$14 billion in capital investments to our service territories.  
**New goal:** Stimulate growth in our communities and help attract at least 40,000 jobs and \$10 billion in capital investments from 2017 to 2021.
- **Total shareholder return (TSR):** Outperform other investor-owned utilities in TSR, annually and over a three-year period, as measured by the Philadelphia Utility Index (UTY).  
**2016 status:** Duke Energy's TSR was 13.5% in 2016, compared to the UTY return of 17.4%. Over three years, our annualized TSR was 8.6%, compared to the annualized UTY return of 12.4%. Despite solid returns to our investors, we have trailed the UTY due to the uncertainty associated with our portfolio transition. With our portfolio transition complete, we are now focused on executing our regulated growth strategy for years to come.
- **Renewables:** Own or contract 8,000 MW of wind, solar and biomass by 2020.  
**2016 status:** As of year-end 2016, Duke Energy owned or had under contract over 5,400 MW of wind, solar and biomass.
- **Governance:** Keep abreast of developments regarding corporate governance principles and recommend internal improvements as appropriate.  
**2016 status:** We continued to enhance our engagement with shareholders on environmental, social and governance issues. To open participation to shareholders worldwide, we are holding Duke Energy's 2017 Annual Meeting of Shareholders exclusively online via webcast. We are also providing an online, interactive proxy statement to make it easier for our shareholders to access and review the information in the proxy statement.
- **Transparency:** Achieve top-quartile performance in disclosure, as measured by Bloomberg Environmental, Social and Governance (ESG) Disclosure Scores for our industry.  
**2016 status:** As of April 6, 2017, Duke Energy had a Bloomberg ESG Disclosure Score of 61.5, the highest score among our peer U.S. utilities in the Bloomberg listing.



# Our Sustainability Plan and Goals *continued*

## GOAL STATUS

- Achieved or on track
- Currently not on track
- Goal not achieved

## 3

### OPERATIONS

Excel in safety, operational performance and environmental stewardship.

#### GOALS:

● **Safety – fatalities:** Achieve zero work-related fatalities.

**2016 status:** In 2016, there were no work-related employee or contractor fatalities.

● **Safety – incident rate:** Maintain top-decile safety performance in employee Total Incident Case Rate (TICR).

**2016 status:** We improved employee TICR to 0.40 in 2016 from 0.41 in 2015, and were in the top decile of our industry peers in 2015 (when latest industry data were available).

**Reliable energy – generation:** During 2016, maintain the high reliability of our generation fleet with a nuclear capacity factor of at least 94.1%, fossil commercial availability of at least 86.9%, and renewables commercial availability of at least 96%.

**2016 status:** The generation fleet consistently met customer demand, but did not meet all of its goals.

● **Nuclear:** Capacity factor improved to 95.7%, from 94.2% in 2015.

● **Fossil:** Commercial availability was 84.7%, down from 87.4% in 2015.

● **Commercial renewables:** Commercial availability improved to 94.2%, up from 93.3% in 2015.

● **Reliable energy – power delivery:** During 2016, maintain the high reliability of our distribution system with an average number of outages\* of 1.14 or less, and an average time without power\* of 126 minutes or less.

**2016 status:** Average number of outages was 1.17, and average time without power was 144 minutes.

\* Outages longer than 5 minutes, per customer.

● **Carbon – emissions (previous goal):** Reduce or offset carbon dioxide (CO<sub>2</sub>) emissions from our generation fleet 17% from 2005 emissions by 2020.

**2016 status:** Our generation fleet emitted about 107 million tons of CO<sub>2</sub>, a reduction of 29%.

**New goal:** Reduce the CO<sub>2</sub> emissions from our generation fleet by 40% from the 2005 level by 2030.

● **Carbon – intensity (previous goal):** Reduce the carbon intensity (pounds of CO<sub>2</sub> emitted per net kilowatt-hour (kWh) of electricity produced) of our generation fleet from 1.29 in 2005 to 0.94 by 2020.

**2016 status:** Generation carbon intensity was 0.97 in 2016, a reduction of nearly 25%.

**New goal:** Reduce the carbon intensity (pounds of CO<sub>2</sub> emitted per net kWh of electricity produced) of our generation fleet by 45% from the 2005 level by 2030 (equates to a reduction from 1.29 to 0.71 pounds of CO<sub>2</sub> per net kWh).

● **Solid waste:** Increase the percentage of solid waste that is recycled from 69% in 2013 to 80% in 2018. (This goal excludes Duke Energy Renewables and Piedmont Natural Gas.)

**2016 status:** About 76% of solid waste produced was recycled.

● **Coal ash management (updated goal):** Complete development and assessment of closure options, implement site closure plans in accordance with regulatory requirements, and safely move and store 20 million tons of coal ash from the high priority N.C. sites by 2019.

**2016 status:** At year-end 2016, 24 closure site plans had been developed, as tentative closure solutions, pending regulatory approvals. During 2016, we safely moved over 5 million tons of coal ash bringing the total amount removed from high priority N.C. sites and stored in approved facilities to 8.7 million tons.

## 4

### EMPLOYEES

Develop and engage employees and strengthen leadership.

#### GOALS:

**Overall goal:** Foster a high-performance and inclusive culture built on strong leadership and highly engaged and diverse employees.

#### Employee engagement:

**New goal:** Strive for employee and manager engagement levels of 70% and 75%, respectively, by 2020, based on survey results.

● **Employee enablement and performance:** Implement tools that promote employee recognition, performance and accountability.

**2016 status:** Improved the performance management system with a new rating scale and an increased emphasis on collaborative goal setting, development planning and ongoing conversations. The online tool has also been simplified to be more user-friendly and efficient.

● **Diversity and inclusion:** Strengthen our diversity and inclusion framework as well as support a workforce in transition.

**2016 status:** Developed a new diversity and inclusion strategy that is more aligned and integrated into the business. Piloted a successful program on unconscious bias with 75 leaders across the company that will be expanded in 2017. In response to civil unrest in Charlotte, N.C., hosted a series of facilitated conversations with employees, called “Pathways to Inclusion.”

● **Leadership:** Advance leadership capabilities and bench strength.

**2016 status:** Introduced “Leading the Duke Energy Way,” a document that describes the leadership imperatives and associated behaviors all employees must embody to achieve the company’s strategy. Also launched the Duke Energy Leadership Academy to offer a variety of learning and development opportunities aligned to the leadership imperatives.



# 1 CUSTOMERS

Improve the Lives  
of Our Customers  
and Vitality of  
Our Communities

## 2016 Highlights

- As of year-end 2016, customer energy consumption and peak demand were reduced by more than 12,000 gigawatt-hours and 4,800 megawatts, respectively.
- Customers benefited from electric rates below the national average in all customer classes and all service areas for the third consecutive year.
- During 2016, the Duke Energy and Piedmont Natural Gas Foundations contributed \$33.5 million to our communities.

## Challenges and Opportunities

- Relentlessly pursue our goal of achieving and sustaining top quartile customer satisfaction, placing the customer at the center of everything we do.
- Invest \$25 billion over the next 10 years to create a more modern, smarter energy grid that is also more resilient and better prepared for severe weather events.
- Continue to work with stakeholders to identify positive outcomes to issues important to our communities.



Julie Mayfield / Asheville City Councilwoman    Joan Walker / MountainTrue Campaigns Director  
Jason Walls / Local Government and Community Relations Manager    Jeremiah LeRoy / Buncombe County Sustainability Officer

## Working with Stakeholders on Future Generation Plans

In a unique partnership, Duke Energy is working closely with environmentalists, community leaders, business owners and government officials in Asheville, N.C., to produce an energy efficiency plan specifically designed to delay the need for a new electricity generating unit.

Duke Energy has committed to close a half-century-old, coal-fired power plant in Asheville in 2019 – and replace it with a cleaner, natural gas-fired power plant, consisting of two generating units.

The company also might need to build a third generating unit to meet the fast-growing region's future electricity demand. But, in an unusual move, the company is seeking active community participation in energy efficiency programs to delay the need for the third generating unit.

“Many folks in Asheville and Buncombe County have said, ‘Give us a chance to demonstrate our ability to reduce energy use locally – with the goal of avoiding, or significantly delaying, construction of that third unit,’” says Jason Walls, Duke Energy’s government and community relations manager in Asheville.

Moving toward that goal, Duke Energy, Buncombe County and the city of Asheville created an Energy Innovation Task Force to develop a long-term energy plan for the region.

A key objective: encourage Duke Energy customers to reduce their electricity usage – especially during peak demand periods (extremely hot or cold days) – through the company’s many existing customer-focused energy efficiency programs.

Those programs include free energy audits for homes, businesses and industrial plants to identify energy-saving opportunities; financial incentives to buy or construct energy-efficient homes and other buildings; and partial rebates for installing advanced, low-energy heating and cooling systems.

Duke Energy also can install a device that cycles a customer’s air conditioner or water heater on and off during peak demand periods, saving money for the customer (with little or no comfort impact) while reducing energy consumption on the electric grid.

The task force in 2017 will draft a detailed report on its initial, two-year energy savings proposal.

Says Walls: “This initiative is a national model for constructive and effective collaboration between a utility and the community it serves.”

In addition to energy efficiency programs, Duke Energy has committed to build at least 15 megawatts of solar energy and 5 megawatts of energy storage in the region.

## A Smarter, Stronger Grid: Benefiting Customers

Duke Energy is rapidly upgrading and strengthening its largest-in-the-nation “electric grid” – the power lines, substations, meters and other equipment that help deliver electricity from power plants to customers.

The company is investing \$25 billion in a 10-year grid modernization plan that will save energy, give customers more control over their electricity use, reduce power outages, accommodate additional solar energy, and lay the groundwork for energy storage and other new technologies.

The plan includes initiatives to “harden” the grid against extreme weather, such as hurricanes, by elevating substations in flood-prone areas, replacing and strengthening utility poles, and relocating vulnerable overhead power lines underground.

*Duke Energy is rapidly upgrading and strengthening its largest-in-the-nation “electric grid” – the power lines, substations, meters and other equipment that help deliver electricity from power plants to customers.*

Additionally, we are working toward proactively predicting equipment failures before they happen so that equipment can be replaced, and unplanned outages avoided.

The plan also includes installation of advanced technologies that can better detect a power outage and pinpoint its cause, such as a damaged power line or equipment failure. Once problems are located on the power grid, these systems automatically trigger remote switches to immediately isolate the problem and reroute electricity around the trouble spot using other nearby power lines – greatly reducing the number of customers impacted.

## Duke Energy’s Electric Rates: Below U.S. Average

In effect as of July 1, 2016 (cents per kilowatt-hour)

### Residential

Duke Energy Kentucky	8.97
Duke Energy Progress-SC	10.33
Duke Energy Carolinas-NC	10.72
Duke Energy Florida	11.13
Duke Energy Indiana	11.48
Duke Energy Progress-NC	11.65
Duke Energy Carolinas-SC	11.66
Duke Energy Ohio	11.83
<b>U.S. AVERAGE</b>	<b>13.53</b>

### Commercial

Duke Energy Kentucky	8.33
Duke Energy Progress-SC	8.40
Duke Energy Progress-NC	8.45
Duke Energy Indiana	8.71
Duke Energy Florida	8.89
Duke Energy Ohio	9.26
Duke Energy Carolinas-NC	9.40
Duke Energy Carolinas-SC	9.64
<b>U.S. AVERAGE</b>	<b>11.48</b>

### Industrial

Duke Energy Progress-SC	7.01
Duke Energy Kentucky	7.54
Duke Energy Progress-NC	7.91
Duke Energy Indiana	8.07
Duke Energy Florida	8.28
Duke Energy Ohio	8.32
Duke Energy Carolinas-NC	8.42
Duke Energy Carolinas-SC	8.62
<b>U.S. AVERAGE</b>	<b>9.60</b>

Notes: Residential typical bill based on 1,000 kWh per month usage. Commercial typical bill based on 40 kW demand and 14,000 kWh per month usage. Industrial typical bill based on 1,000 kW demand and 400,000 kWh per month usage.

Source: Edison Electric Institute Typical Bills and Average Rates Reports, Summer 2016 (latest available).

These technologies will also help Duke Energy provide more accurate power restoration time estimates to customers during outages.

Another key part of the plan: digital “smart” meters that help customers save electricity and money.

Duke Energy replaced nearly all of its Ohio customers’ aging analog meters with the first generation of smart meters earlier this decade.

Similar meter replacement programs, now with even more advanced smart meters, are underway or planned for Duke Energy customers in Indiana, Kentucky, North Carolina, South Carolina and Florida, with targeted completion in all states by 2022.

Smart meters give customers easy online access to detailed information about their household electricity use – including daily and hourly consumption data – so they can adjust their usage to save energy and money.

The meters also enable Duke Energy to:

- Remotely turn power on for new customers, eliminating the need for customers to wait for a Duke Energy technician to come to their home or business;
- Provide new payment options such as prepaid energy services and customized due dates.

*Smart meters give customers easy online access to detailed information about their household electricity use so they can adjust their usage to save energy and money.*

The “electric grid” – the equipment that delivers electricity from power plants to customers – is a critical part of America’s backbone infrastructure, vital to the nation’s security, economy and public health.

## Electric Grid: Maintaining Security for Our Customers

The “electric grid” – the equipment that delivers electricity from power plants to customers – is a critical part of America’s backbone infrastructure, vital to the nation’s security, economy and public health.

In the U.S., grid security is a shared responsibility of public-private partnerships that leverage the strengths of all parties. The electric utility industry has operated at a heightened state of security since the 2001 U.S. terrorist attacks in New York and Washington, working closely with multiple entities to safeguard the grid from intrusion, sabotage and attack – whether cyber, physical or both.

Those entities include the North American Electric Reliability Corporation, Federal Energy Regulatory Commission, U.S. Department of Homeland Security, U.S. Department of Energy, federal intelligence and law enforcement agencies, state and local law enforcement departments, and web security firms.

Duke Energy uses comprehensive, multilayered cybersecurity measures to protect its computer systems, both software and hardware. The company’s highly skilled information technology specialists monitor the grid around the clock, searching for abnormal cyber activity and quickly responding to any incident.

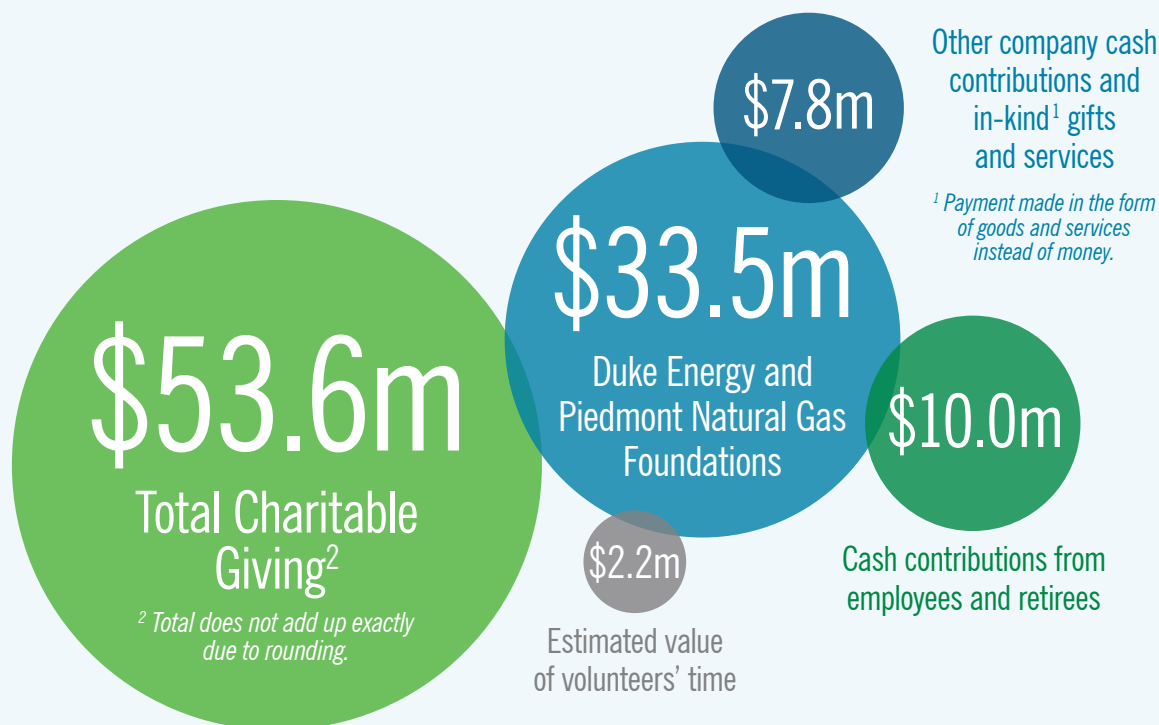
Also, Duke Energy is continuously strengthening the grid’s resiliency by installing multilayered, backup defense systems – so that if one section of the grid is interrupted, another section often can keep power flowing to customers.

To ensure it is doing all it can to be prepared, the company conducts simulated real-life drills and comprehensive employee training for any type of emergency.





## 2016 Charitable Giving



### Crowdsourcing Helps Teachers Make a Difference

Duke Energy is partnering with DonorsChoose.org to help teachers in Ohio, Kentucky, North Carolina and South Carolina fund projects that support literacy programs and foster a growing interest in science and technology fields.

The concept, helping teachers turn classroom projects into a reality, has been quite popular. Nationwide, teachers at 75 percent of public schools have used the concept – raising more than a half-billion dollars for education. Within Duke Energy's service territories, thousands of projects have been completed with our help.

#### Here is how it works:

Teachers submit proposals for projects related to literacy or science, technology, engineering and math (STEM) on the DonorsChoose website. Once on the site, the public can read about each project and fund the ones they find interesting.

Up to a set limit that varies by state, Duke Energy will then match, dollar-for-dollar, all donations made toward eligible literacy and STEM projects at public schools in the company's service area. Overall, Duke Energy will provide \$475,000 in matching donations.

The end result is that local teachers have the tools they need to teach and inspire our next generation of leaders. And the combination of public and Duke Energy support make sure needed projects are funded.



## Diverse Supplier Spending (in millions)

	2012	2013	2014	2015	2016 <sup>3</sup>
Spending with Tier I diverse suppliers <sup>1</sup>	\$725	\$691	\$578	\$633	<b>\$681</b>
Spending with Tier II diverse suppliers <sup>2</sup>	\$212	\$212	\$412	\$405	<b>\$494</b>
<b>Total</b>	<b>\$937</b>	<b>\$903</b>	<b>\$990</b>	<b>\$1,038</b>	<b>\$1,175</b>

1 Tier I represents direct purchases from diverse suppliers.

2 Tier II consists of diverse businesses working with Tier I suppliers.

3 Piedmont Natural Gas Tier I data from the first three quarters are included.

## Saving Energy & Money: It's Easy

Saving money is important to customers. That's why Duke Energy is continually working to help them use energy more efficiently.

The company offers programs in which trained energy experts inspect customers' homes and share a tailored report on ways to save energy. Customers also receive a free energy efficiency starter kit to begin saving right away. In 2016, more than 54,000 homes received the free in-home energy assessment.

Small to medium-sized business customers can also take control of energy spending by participating in a similar energy audit. They receive a comprehensive report detailing the findings and potential projects that would result in paybacks. Since 2013, over 31,000 energy audits have been performed on businesses, with nearly 13,000 customers participating in the program.

Another way Duke Energy has helped customers reduce energy consumption is through more energy-efficient lightbulbs. Since 2009, the company has provided nearly 72 million energy-efficient lightbulbs through various programs, including free giveaways, its Online Savings Store, and through participating retailers.

*Since 2009, the company has provided nearly 72 million energy-efficient lightbulbs through various programs.*

In 2016, Duke Energy started offering free LED bulbs to residential customers, phasing out the free CFL bulb program. LEDs last 25 times longer than traditional bulbs and are free of mercury and lead – a safer choice for customers.

Duke Energy's programs, products and services, which vary by state, recognize that our customers' needs and expectations are changing. That's why the company will continue to develop new and easy ways to help them get the most value for their money.

Find out more by visiting [duke-energy.com/SaveEnergy](http://duke-energy.com/SaveEnergy).

## Meter Recycling Helps People & the Environment

New smart meters are being installed throughout the Duke Energy service territories.

These new meters can collect the same data as the old ones, but unlike the old meters that were read once a month, smart meters relay data hourly, giving customers more insight into their energy usage than ever before.

Great innovation. But what happens to the old meters?

Nearly every day for the last several months, a team of employees at the 160,000-square-foot Goodwill Opportunity Campus in Charlotte has been dismantling old meters and parsing their pieces into recycling bins. Eventually, the work could grow to 1 million meters a year.

For the Goodwill team, the work is clean, environmentally sound and appreciated by those seeking employment. Plus, it advances the Goodwill mission of helping people reach their potential in the workplace.

The contract between Duke Energy and Goodwill began in June 2016 with the hiring of about a half-dozen employees, who now dismantle about 2,500 meters a day. As Duke Energy's upgrade expands, the workforce could grow to nine employees moving 4,500 meters a day, with a payroll that could eventually total in the hundreds of thousands of dollars.

Gaining employment and learning new skills are just a few of the positives this program provides for employees.

The skills learned on the floor go beyond simple meter deconstructing. The employees must report on time, be productive and learn teamwork – skills that will make them attractive to future employers.

## Satisfaction Scores Rise; Still Room for Improvement

While Duke Energy's customer satisfaction scores improved for both business and residential segments in 2016, our rankings show there is still room for improvement.

All Duke Energy utilities are implementing plans to achieve top-quartile performance among large utilities in the J.D. Power Electric Utility Residential Study by the end of 2018.

Satisfaction scores increased for all four Duke Energy companies in the 2016 calendar year J.D. Power Electric Utility Business Study.

- Duke Energy Progress was up an impressive 61 points to 764, moving from third quartile to first quartile.

Large business customers continue to give Duke Energy high marks for the service they receive, with 91 percent “highly satisfied” with Duke Energy as their utility.

- Duke Energy Midwest was up 45 points to 753, moving into the second quartile.
- Duke Energy Carolinas was up 22 points to 750, but dropping from first quartile to third quartile.
- Duke Energy Florida was up 44 points to 734, its highest score in more than nine years, but remains in the fourth quartile.

The study rates companies on six factors: power quality and reliability, billing and payment, corporate citizenship, price, communications and customer service.

Large business customers continue to give Duke Energy high marks for the service they receive, with 91 percent “highly satisfied” with Duke Energy as their utility, according to internal data and surveys.

Among residential customers, 79 percent were highly satisfied with the service they received from Duke Energy in 2016.

In the residential study, J.D. Power reported Duke Energy's satisfaction scores were up for all four operating companies in 2016

- Duke Energy Progress was up 25 points to 680, placing it in the second quartile nationally among all large utilities.
- Duke Energy Midwest was up 15 points to 679, placing it in the second quartile nationally among all large utilities.
- Duke Energy Carolinas was up 6 points to 669, placing it in the third quartile nationally among all large utilities.
- Duke Energy Florida was up 32 points to 654, placing it in the fourth quartile among all large utilities.





Customers can get the latest power outage information on their personal mobile devices by signing up for phone or email alerts without having to first report the outage.

## Meeting Customer Expectations for Timely Communications

In today's world, customers expect utilities to offer the same amount of communication as other companies with whom they do business.

Duke Energy has been adapting to this and has a number of communications programs underway. Two popular programs have been available to all customers since late 2015.

### Proactive outage alerts

Customers can get the latest power outage information on their personal mobile devices by signing up for phone or email alerts without having to first report the outage.

Duke Energy notifies customers enrolled in the program by text, email or voice message when there is a planned or unplanned outage in their area. Key status updates are also provided throughout the outage to notify customers of estimated restoration times, crew status, cause of outage, number of customers impacted and when power has been restored.

About 1.6 million customers have enrolled in the program.

### High bill alerts

Customers are notified when weather may cause their bill to be higher than the previous month. These alerts are sent half-way through the customer's billing cycle, allowing them to take steps to adjust their usage before their bill arrives.

Duke Energy notifies customers if their bill is projected to be higher than usual by 30 percent or more, based on their historical usage and whether temperatures are predicted to be much different than the previous month. The alerts include energy-saving tips to help customers alter their behavior to reduce energy usage.

Eligible customers are automatically enrolled into the program and the unsubscribe rate is very low. About 1.1 million alerts have been sent to customers to help prepare them and to provide money-saving advice.

*Customers are notified when weather may cause their bill to be higher than the previous month. These alerts are sent half-way through the customer's billing cycle, allowing them to take steps to adjust their usage before their bill arrives.*



## 2 GROWTH

Grow and Adapt  
the Business  
and Achieve Our  
Financial Objectives

### 2016 Highlights

- Met our five-year (2013 to 2017) economic development goals a year early by helping attract more than 50,000 jobs and over \$14 billion in capital investments to our service territories since 2013.
- Achieved adjusted diluted earnings per share of \$4.69, near the high end of our earnings guidance to Wall Street.
- Increased the quarterly dividend by 4 percent; 2017 will mark the 91st consecutive year Duke Energy has paid a quarterly dividend.
- As of year-end 2016, owned or had under contract over 5,400 MW of wind, solar and biomass.
- Completed the acquisition of Piedmont Natural Gas, tripling the number of natural gas customers we serve.

### Challenges and Opportunities

- Continue to help attract jobs and capital investments in our communities through our economic development programs.
- Deliver value to our customers and grow our business by investing \$37 billion in growth capital over the next five years.
- Continue to take advantage of new technologies to find better ways to meet customer expectations.
- Maintain our position as an industry leader in environmental, social and governance disclosure.



Thomas Fenimore / Technology Development Manager

## Green Microgrids Could be a New Growth Initiative

Microgrids aren't new. But Duke Energy's efforts to power them with renewable energy have caught the attention of the industry.

In simple terms, a microgrid is an energy system consisting of distributed energy sources – like solar and batteries – that can operate in parallel with, or independently from, the main power grid.

It promotes energy security – giving customers a reliable energy supply without the need of the full energy grid, or even fossil fuels.

For the past few years, Duke Energy engineer Tom Fenimore has been perfecting a research project in Charlotte that provides backup power to a city fire station. Using a solar array and a large battery system, the system supports the overall grid most of the time.

But when storms rolled through Charlotte this summer, the system provided power to the fire station twice – without any action by the company. The system was so fast that the fire station didn't notice the microgrid was providing power.

Duke Energy's work is leading to future projects. At Mount Sterling in the Great Smoky Mountains National Park in North Carolina, a proposed microgrid will provide 24-hour-a-day service to a communications tower.

In this case, the microgrid concept will be more reliable and less costly for the company than traditional poles and wires. In addition, about 13 acres of park land currently maintained as a utility corridor could be allowed to return to a natural state.

In Maryland, Duke Energy Renewables and Schneider Electric will partner with Montgomery County to construct two microgrids for public safety facilities. The two systems, which will be owned by Duke Energy, will include solar and combined heat and power, which saves energy by using waste heat from on-site generation to heat and cool buildings.

In Mount Holly, N.C., the company continues to research future microgrid developments – examining how the technology works in a future where distributed energy resources like solar and batteries are on nearby electrical circuits.

It's part of the company's innovation that may change how energy is delivered to customers in the future.





Commander Timothy Craddock / Commanding Officer, Naval Support Activity Crane   Mark Mullinix / Site Superintendent

## Duke Energy Adding More Wind & Solar Resources

Renewable energy technologies are advancing and prices are decreasing. Duke Energy is leveraging those advancements to expand its renewable energy portfolio and deliver cleaner energy to its customers.

In total, the company has more than 20 wind projects and 60 solar facilities in operation in over a dozen states, totaling about 3,000 megawatts (MW) of generating capacity.

For wind energy, the company completed two more projects last year – one in Texas and the other in Oklahoma. Duke Energy now harvests the wind in seven states.

Solar continues to expand, too. In California, Duke Energy Renewables acquired three solar power plants totaling 55 MW in January 2017. In December 2016, Duke Energy Renewables also completed its 20-MW solar project in San Bernardino County, California. In addition, the company acquired its first solar projects in Colorado and Georgia and began operating its first solar facility in New Mexico during 2016.

*The company acquired its first solar projects in Colorado and Georgia and began operating its first solar facility in New Mexico during 2016.*

In our regulated states, the company continues to make strategic investments to benefit customers. In Indiana, construction is complete on the 17-MW solar facility at the Naval Support Activity Crane. The facility is helping power the military base and the surrounding community – similar to a project at Camp Lejeune in North Carolina, which was completed in 2015.

In North Carolina, Duke Energy invested in 100 MW of solar capacity during the year – including plants in five counties that welcomed the jobs created during construction. Overall, Duke Energy has about 35 solar facilities in North Carolina, which represents the company's top solar state. The company also purchased and connected around 500 MW of solar capacity for customers in 2016 that was built by other developers.

In Florida, the company announced its 8.8-MW Suwannee Solar Facility in early 2017 and expects to break ground in the spring, with full operation by the end of 2017. Duke Energy already owns and operates solar projects in three other Florida counties, with plans for more in the future.

In South Carolina, the company's solar rebate program paid nearly \$12 million to customers last year. The rebates help with the upfront cost of installing solar panels, making the technology more accessible to customers.



## Tomorrow: Investing in a Changing Energy Future

The electric and natural gas utility industry is undergoing rapid transformation as it pivots to meet rising customer service expectations, utilize the latest technological developments and produce energy in the most environmentally benign way available.

For Duke Energy, this transformative period presents a great opportunity to move forward in four key areas:

- **Strengthen the company's energy delivery system.**

Duke Energy has developed a 10-year, \$25-billion plan to create a more modern, smarter energy grid. In this era of transformation, the demands on the grid have never been greater.

While the grid is reliable, recent events, such as Hurricane Matthew in North Carolina, have highlighted opportunities to strengthen it. ([See related article on page 18: "A Smarter, Stronger Grid: Benefiting Customers."](#))

- **Generate cleaner energy using natural gas and renewables.** In the next 10 years, Duke Energy will invest \$11 billion in highly efficient natural gas generation and renewable energy sources. By 2030, Duke Energy estimates that 36 percent of its electricity will be generated using natural gas and 9 percent will be generated using renewables – hydro, wind and solar.

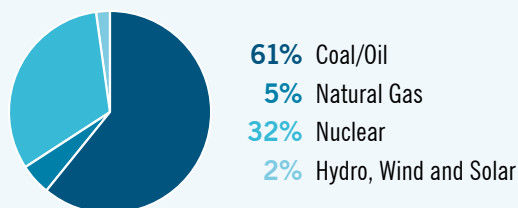
These investments, coupled with the retirement of older coal units, will help reduce the company's carbon dioxide emissions by 40 percent from the 2005 level by 2030. In addition to commercial renewables, Duke Energy also will invest in regulated renewable assets.

- **Expand the company's natural gas infrastructure to meet customer needs.** Natural gas will continue to play a major role in the future generation needs of Duke Energy and the entire electric utility industry.

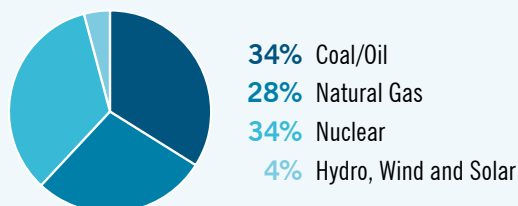
With its 2016 acquisition of Piedmont Natural Gas, Duke Energy now operates a five-state gas distribution business. The company also is a part owner of the Atlantic Coast, Sabal Trail and Constitution natural gas pipelines. The first two –

## Moving Toward a Cleaner Generation Fleet and Increased Fuel Diversity (MWh Output)

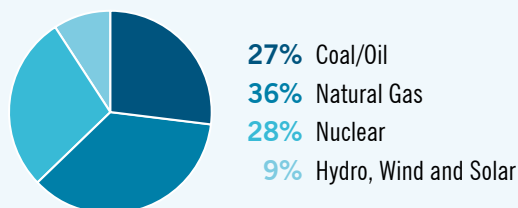
2005<sup>(1)</sup>



2016<sup>(1)</sup>



2030<sup>(2)</sup>



1. 2005 and 2016 data based on Duke Energy's ownership share of generation assets as of Dec. 31, 2016.

2. 2030 estimate will be influenced by customer demand for electricity, weather, fuel availability and prices.

both interstate pipelines – will bring much-needed natural gas to the southeast U.S., spurring economic growth that will benefit workers, families and communities.

Duke Energy now ranks second nationally for natural gas consumption across its electric utilities and local natural gas distribution companies.

[\(See related article on page 30: “Natural Gas: Moving to a Cleaner, Low-Carbon Future.”\)](#)

- **Increase customer satisfaction and continue stakeholder engagement.** Over the next 10 years, Duke Energy will pursue a goal of achieving and sustaining top-quartile customer satisfaction by placing the customer at the center of everything the company does.

Duke Energy also will continue to work collaboratively with its various other stakeholders, including community leaders, environmental groups, business organizations, regulators, elected officials and investors. Such collaboration is critical to the company’s success.

*In the next 10 years, Duke Energy will invest \$11 billion to increase highly efficient natural gas generation to 35 percent of the company’s electricity generation portfolio, and increase renewable energy sources – hydro, wind and solar – to 9 percent.*

## Positioned to Deliver Sustainable Financial Results

In 2016, Duke Energy achieved adjusted diluted earnings per share of \$4.69 compared to \$4.54 for 2015. This increase was driven by continued investment in the company’s regulated utilities and infrastructure business, and a strong focus on reducing operations and maintenance costs across the business.

One of Duke Energy’s primary goals as a sustainable company is delivering attractive long-term returns for its shareholders. 2017 will mark the 91st consecutive year we have paid a dividend to our shareholders. That dividend was increased by 4 percent in 2016.

During 2016, the company completed its five-year portfolio transition with the sale of its Latin America business and acquisition of Piedmont Natural Gas. The company is now a predominately regulated, energy infrastructure business, well-positioned for growth in 2017 and beyond.

With the portfolio transition complete, the company realigned its business into three new segments: Electric Utilities and Infrastructure, Gas Utilities and Infrastructure, and Commercial Renewables.

These three businesses are well-situated to contribute adjusted diluted earnings per share that drive the company’s 4 to 6 percent overall growth objectives from 2017 to 2021.

Duke Energy’s total shareholder return – the change in stock price plus dividends – for 2016 was 13.5 percent, compared to 17.4 percent for

## Financial Highlights

(In millions, except per-share data) <sup>1</sup>	2016	2015 <sup>2</sup>	2014 <sup>2</sup>
Total operating revenues	\$22,743	\$22,371	\$22,509
Income from continuing operations	\$2,578	\$2,654	\$2,538
Reported diluted earnings per share (GAAP)	\$3.11	\$4.05	\$2.66
Adjusted diluted earnings per share (Non-GAAP)	\$4.69	\$4.54	\$4.55
Dividends declared per share	\$3.36	\$3.24	\$3.15
Total assets	\$132,761	\$121,156	\$120,557
Long-term debt including capital leases, less current maturities	\$45,576	\$36,842	\$36,075

<sup>1</sup> See Duke Energy’s Annual Report on Form 10-K for the year ended Dec. 31, 2016 for detailed notes and further explanations.

<sup>2</sup> Prior year data have been recast to reflect the classification of the International Disposal Group as discontinued operations.

the Philadelphia Utility Index (20 U.S. utilities) and 12.0 percent for the S&P 500. Despite solid returns to investors last year, we trailed the Philadelphia Utility Index due to the uncertainty associated with our portfolio transition. Thanks to a great deal of hard work, we put that uncertainty behind us in 2016 and are now focused on executing our regulated growth strategy for years to come.

## Economic Development: Attracting Jobs, Investment

Duke Energy's economic development team in 2016 helped bring approximately 14,000 new jobs and \$4.1 billion in private-sector investment to the six states served by the company's electric utilities – benefiting workers, families and communities. Site Selection magazine named

Duke Energy to its “Top Utilities in Economic Development” list for the 12th consecutive year.

The team recruits new companies from across the nation and around the world, convincing them to open offices, build manufacturing plants and locate other facilities in North Carolina, South Carolina, Florida, Indiana, Ohio and Kentucky. The team also works with existing companies in those states, helping them expand at home rather than look elsewhere.

### 2016 highlights:

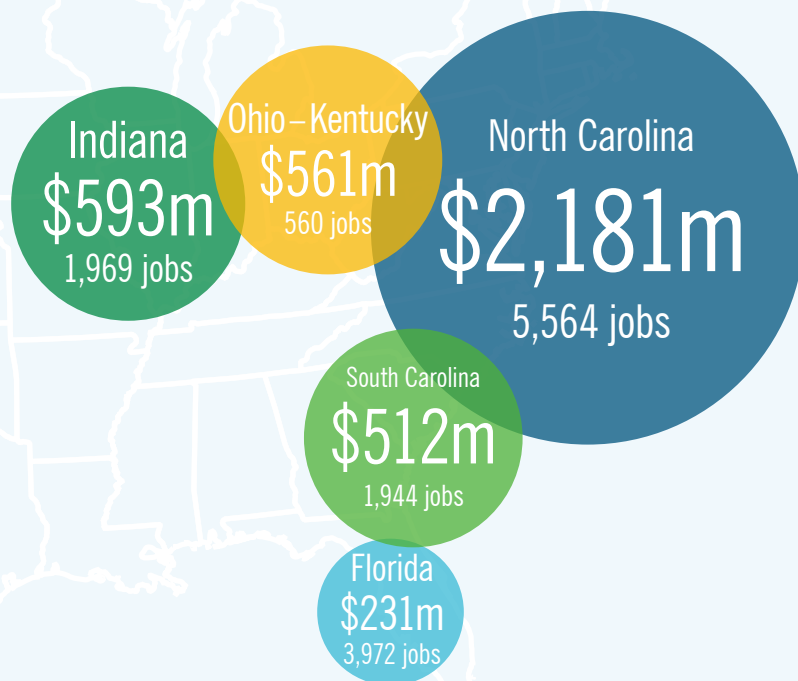
- In **Ohio** and **Kentucky**, Duke Energy distributed \$240,000 in grants to support urban redevelopment projects.
- In **Indiana**, Duke Energy awarded grants ranging from \$2,500 to \$7,500 to 12 economic development groups to attract jobs and businesses.

## Economic Development

Duke Energy works in partnership with state and local authorities to attract business investment and jobs, and promote economic growth in our communities. Duke Energy helped attract approximately 14,000 jobs and \$4.1 billion of investments in 2016.

**\$4.1b**  
Total Capital Investment

**14,000**  
Total Jobs



- In **North Carolina**, Duke Energy invested \$1.4 million in job training initiatives to prepare workers for the jobs of tomorrow.
- In **South Carolina**, Duke Energy helped create approximately 1,900 new jobs and attract \$512 million in investment.
- In **Florida**, Duke Energy helped generate 3,900 new jobs and \$231 million in investment.

## Natural Gas: Moving to a Cleaner, Low-Carbon Future

Natural gas will play a key role as Duke Energy continues to move toward a cleaner, low-carbon future.

The 2016 acquisition of Piedmont Natural Gas added 1 million natural gas customers in North Carolina, South Carolina and Tennessee to Duke Energy's existing customer base of 525,000 natural gas customers and 7.5 million electric customers. Piedmont's Tennessee service territory, including the fast-growing Nashville region, represents a new geographical area for Duke Energy. Piedmont retained its name and now operates as a business unit of Duke Energy.

Two major underground interstate natural gas pipelines, partly owned by Duke Energy, also continue to move forward:

- Construction of the Sabal Trail Pipeline – traversing Alabama, Georgia and Florida – began in 2016

following Federal Energy Regulatory Commission (FERC) approval. The 515-mile project is scheduled to open in 2017.

- FERC staff in 2016 issued a positive draft environmental impact statement for the proposed Atlantic Coast Pipeline, finding that the project can be built in an environmentally responsible way. The approximately 600-mile pipeline – from West Virginia through Virginia to North Carolina – is scheduled to open in 2019, pending final regulatory approval.

In addition, four natural gas-fired power plants are joining Duke Energy's electricity generation fleet. The company acquired an existing plant in Polk County, Fla., in January 2017, and is building new plants in Anderson County, S.C. (opening in 2017); Citrus County, Fla. (opening in 2018); and Buncombe County, N.C. (opening in 2019). The three new plants are replacing older coal-fired plants.

*The 2016 acquisition of Piedmont Natural Gas added 1 million natural gas customers in North Carolina, South Carolina and Tennessee to Duke Energy's existing customer base of 525,000 natural gas customers and 7.5 million electric customers.*

## Governance Ratings

Each year, Duke Energy benchmarks its corporate governance practices against best-in-class and peer companies. Below are the risk ratings for Duke Energy provided by ISS, a leading corporate governance advisory service to the financial community. Duke Energy's overall ISS Governance QualityScore, as of March 1, 2017, was 1, which is the best relative risk rating.

	QuickScore 2015 <sup>1</sup>	QuickScore 2016 <sup>1</sup>	QualityScore 2017 <sup>1</sup>	Rating Scale
Board structure	1	2	3	1 = Lowest risk (best rating) 10 = Highest risk
Compensation	1	2	1	
Shareholder rights	4	4	3	
Audit	2	1	1	
<b>Overall score</b>	<b>1</b>	<b>2</b>	<b>1</b>	

<sup>1</sup> As of March 1<sup>st</sup>

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## Latin America Exit: Focusing on Core U.S. Operations

Duke Energy going forward is focused almost exclusively on its core U.S. operations.

The company in 2016 sold its international assets in Central America and South America in two separate transactions. Selling these assets was an important transition in our goal to deliver more predictable growth.

The company's highly stable U.S. regulated utilities in seven states – combined with its similarly stable renewable energy, electric transmission and natural gas businesses across the U.S. – now comprise almost all of the company's operations.

Duke Energy sold its assets in Brazil to China Three Gorges Corp. Those assets consisted of 10 hydroelectric generation plants – eight plants totaling 2,057 megawatts (MW) on the border between Sao Paulo and Parana states; and two plants totaling 33 MW on the Sapucaí Mirim River in Sao Paulo state.

Duke Energy sold its assets in Peru, Chile, Ecuador, Guatemala, El Salvador and Argentina to I Squared Capital. Those assets consisted of hydroelectric and thermal power plants, totaling 2,300 MW, plus transmission infrastructure and natural gas processing facilities.

Duke Energy continues to hold a 25 percent equity investment in National Methanol Company, a Saudi Arabian producer of a gasoline additive.

*The company's highly stable U.S. regulated utilities in seven states – combined with its similarly stable renewable energy, electric transmission and natural gas businesses across the U.S. – now comprise almost all of the company's operations.*

## Participating in Our Democracy

Duke Energy encourages full participation in our democracy in a variety of ways, including education and engagement efforts, policy advocacy and political activity.

Our [Political Activity Policy](#) requires compliance with laws and regulations governing political contributions, government interaction and lobbying activities. It also includes guidelines and a tiered approval process that governs all political expenditures. Additionally, the company is legally prohibited from making direct contributions to candidates for U.S. federal offices and certain state offices.

Duke Energy's Voices in Politics network educates and activates employees on political and policy issues that could affect our operations, employees or stakeholders. We also engage elected officials and policymakers to make sure they understand the direct impacts of their decisions on Duke Energy and our employees, customers and communities.

In 2016, our reportable federal lobbying expenses (office space, salaries, consulting and event fees, etc.) included \$1,265,149<sup>1</sup> in dues to support policy research and advocacy by trade associations such as the Edison Electric Institute and the Nuclear Energy Institute.

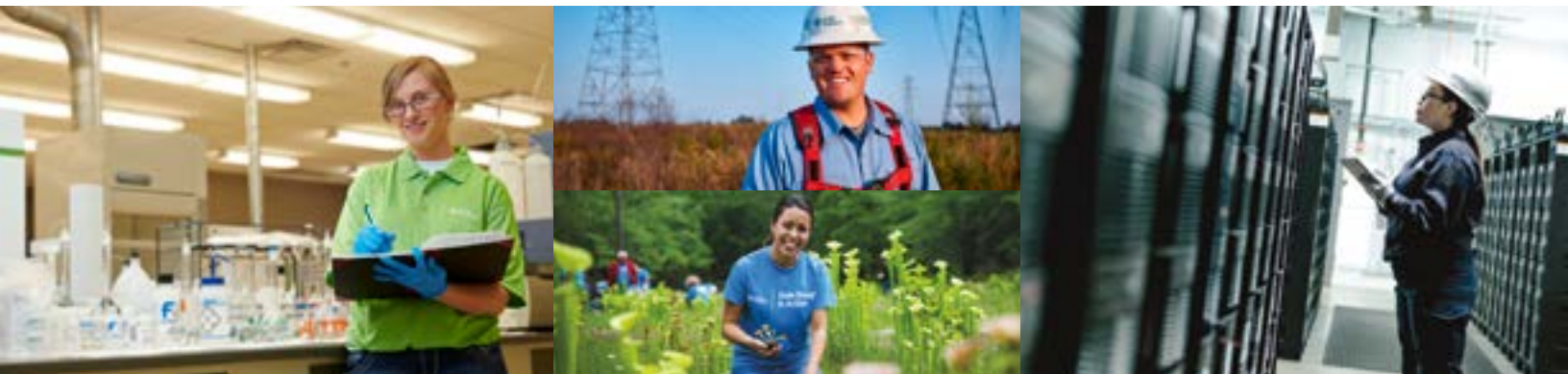
DukePAC is a voluntary, nonpartisan political action committee that pools eligible employees' financial contributions to support political organizations and candidates seeking elected office at the federal and state levels. The candidates supported represent the communities we serve, are leading members of their elected legislative body or serve on relevant committees that impact our business, employees, customers and communities. Policy positions and priorities important to Duke Energy include infrastructure, tax and regulatory reform, renewables, environmental issues and cybersecurity. In 2016, DukePAC contributions totaled approximately \$1,367,400.

Duke Energy also contributed approximately \$1,806,900<sup>2</sup> to 527 organizations created to support the selection, nomination, election, appointment or defeat of a candidate.

<sup>1</sup> Represents trade association dues of more than \$50,000 during 2016.

<sup>2</sup> For contributions in excess of \$1,000.





## 3 OPERATIONS

Excel in Safety,  
Operational  
Performance and  
Environmental  
Stewardship

### 2016 Highlights

- Maintained industry leading safety performance with a Total Incident Case Rate (TICR) of 0.40.
- Set a new fleet record of 95.7 percent for nuclear capacity factor; the 18th consecutive year of attaining a 90-plus percent capacity factor.
- Since 2005, decreased carbon dioxide emissions by 29 percent, sulfur dioxide emissions by 94 percent and nitrogen oxides emissions by 70 percent.
- Received a new operating license for the Keowee-Toxaway Hydroelectric Project from the Federal Energy Regulatory Commission.
- Remained on track to increase the amount of solid waste that is recycled from 69 percent in 2013 to 80 percent in 2018.

### Challenges and Opportunities

- Maintain top-decile safety performance in TICR and continue to focus on the prevention of serious injuries to our employees and contractors.
- Continue to demonstrate our commitment to operational excellence, which is a foundation to any success we achieve.
- Significantly decrease outage frequency and duration for our customers through our grid modernization programs.
- Invest \$11 billion in cleaner generation over the next 10 years.
- Continue to move to a lower-carbon future by reducing our carbon dioxide emissions by 40 percent from the 2005 level by 2030.





Davis Montgomery / Government and Community Relations Manager   Adam Fischer / Greensboro Department of Transportation Director

## Investing in Electric Vehicle Infrastructure

For the past decade, Duke Energy has been active in building hundreds of public charging stations at parking decks, libraries and shopping areas. That infrastructure is needed as electric vehicles (EV) become a growing part of the nation's auto fleet.

That effort will continue in 2017 as more than 200 public EV charging stations are being installed under Duke Energy's \$1.5 million "EV Charging Infrastructure Project" in North Carolina.

Stations are planned in almost 50 counties around the state. The project received overwhelming interest, with more than 500 charging stations requested.

Recipients have the ability to put the charging stations in a location of their choice – and operate them how they see fit.

*More than 200 public EV charging stations are being installed under Duke Energy's \$1.5 million "EV Charging Infrastructure Project" in North Carolina.*

Also part of the project, a \$450,000 grant from Duke Energy will help Greensboro's Department of Transportation install an electric charging station for a future influx of all-electric buses. The rapid-charging station can replenish a bus battery array in seven to 10 minutes.

The Greensboro Transportation Authority is transitioning its fleet of 47 diesel buses to all-electric vehicles. Over the next 10 years, the city plans to pair \$4.5 million in voter-approved bonds with federal funds to replace diesel buses that have met or exceeded their useful life.

Electric buses have no tailpipe emissions and are up to four times as economical to operate as conventional buses. Greensboro could have its first two or three electric buses on the streets by 2018.

Both programs were part of a 2015 settlement with the U.S. Environmental Protection Agency and various environmental groups.



Aleksandar Vukojevic / Technology Development Manager   Rodney James / Technology Development Manager

## Drones: From Testing to Real-Life Applications

A few years ago, Duke Energy was among a handful of utilities testing what unmanned aerial vehicles (better known as drones) could do for its business.

Through the company's Emerging Technology Office, Duke Energy looks at budding technologies that may be useful in three to 15 years. It investigates a number of possible scenarios to see if these new technologies can lower costs and allow us to work better and safer.

Many rounds of testing has led the company to believe drones have a future at Duke Energy. Today, drone work is being performed under the company's Aviation Department, and is proving to be a valuable resource to Duke Energy's renewable energy program – especially solar power.

*Duke Energy looks at budding technologies that may be useful in three to 15 years.*

Carrying an infrared camera, drones can spot nonworking solar panels at the company's facilities, eliminating time-consuming manual examination and leading to speedier repairs.

About 20 Duke Energy employees are now certified to fly drones for the company, which is exploring additional uses for the devices. These include power line inspections, outage restoration and work inside and outside of large power plants.

Keeping up with technology is a challenge for any company. At Duke Energy, careful testing and investigation has the company on top of promising technologies. In the end, it is all about improving safety and operations, and lowering costs.



Cynthia Embach / Lead Environmental Health and Safety Professional    Brian Powers / Crystal River North Station Manager

## Protecting Florida's Precious Water Resources

Making better use of municipal reclaimed water – or treated wastewater – is a useful and popular sustainability success story.

A great example is Duke Energy's Crystal River coal-fired units 4 and 5 on Florida's Gulf Coast. The units receive between 750,000 and 800,000 gallons of treated wastewater a day from the city of Crystal River.

Instead of releasing reclaimed water over the city's wastewater spray field, underground infrastructure transports the water to the power plant to support the energy generating process.

- It reduces by nearly one-third the amount of fresh water drawn from existing wells to support the on-site pollution control equipment.
- It eliminates wastewater discharges over the city's spray field and reduces the amount of nutrients, such as nitrogen and phosphorus, entering the Crystal River/Kings Bay springshed.

The project is a public-private partnership among the city of Crystal River, Duke Energy, Florida Department of Environmental Protection and Southwest Florida Water Management District.

*During the next several years, as the city of Crystal River upgrades its sewer systems, Duke Energy expects to increase the amount of reclaimed water received to 1.5 million gallons a day.*

During the next several years, as the city of Crystal River upgrades its sewer systems, Duke Energy expects to increase the amount of reclaimed water received to 1.5 million gallons a day.

In addition to Crystal River, three other Duke Energy plants in Florida – the Hines Energy Complex, the Intercession City Plant and the Osprey Energy Center – are using reclaimed water in energy generation, further reducing our water footprint.

# Safety Performance Metrics<sup>1</sup>

	2013	2014	2015	2016
<b>Employee and contractor work-related fatalities</b>	3	4	5	0
<b>Employee Total Incident Case Rate (TICR)<sup>2,3</sup></b>	0.62	0.58	0.41	0.40
<b>Employee Lost Workday Case Rate (LWCR)<sup>2,4</sup></b>	0.20	0.17	0.18	0.15
<b>Contractor Total Incident Case Rate (TICR)<sup>3</sup></b>	1.27	1.05	1.18	0.87 <sup>5</sup>
<b>Contractor Lost Workday Case Rate (LWCR)<sup>4</sup></b>	0.28	0.28	0.21	0.15 <sup>5</sup>

1 Does not include Piedmont Natural Gas.

2 Includes both employees and workforce augmentation contractors.

3 Number of recordable incidents per 100 workers (based on OSHA criteria). Top decile in 2015 for employee TICR was 0.56 (based on latest data available from the Edison Electric Institute).

4 Number of lost workdays per 100 workers.

5 We have a systematic process in place for collecting productive work hours for the majority of the contractor fleet.

## It's All About Safety

At Duke Energy, the safety of our employees, contractors and communities is always our top priority. We strive for zero injuries but recognize that safety is more than a lack of incidents; it's a culture where workers actively care about themselves and the well-being of others.

In 2016, the company launched a five-year plan to focus on event-free operations and each business unit established new safety goals to build on previous successes. Our renewed focus led to important improvements in our safety performance.

Duke Energy had zero work-related fatalities in 2016. Although we had one life-altering injury, we decreased significant injuries from 16 in 2015 to five in 2016, a two-thirds reduction. We also achieved an employee Total Incident Case Rate (TICR) of 0.40, one of the best in our industry.

We are pleased with our continued improvements, but know we still have work to do. In 2017, we plan to integrate Piedmont Natural Gas into Duke Energy's safety processes and programs. We will also continue to focus on prevention of the most serious injuries to our employees and contractors to create an even safer place to work.

## Reaffirming Our Commitment Toward a Lower-Carbon Future

Providing safe, reliable and affordable energy has been at the heart of Duke Energy's mission for more than 100 years. Duke Energy began by harnessing rivers to generate electric power. Today, we use a balanced energy mix including nuclear, natural gas, coal, wind and solar to power the lives of our customers. As we continue to modernize our system and deliver increasingly clean energy, reducing emissions cost-effectively remains an important tenet of our investment strategy.

Reducing greenhouse gas emissions is a global issue and a shared responsibility. For more than a decade, Duke Energy has been planning for an energy future that includes a constraint on carbon dioxide (CO<sub>2</sub>) emissions to address climate change concerns. We established voluntary CO<sub>2</sub> reduction goals in 2010 to benchmark our progress in reducing emissions.

Through our modernization efforts and the retirement of older coal units, we have reduced fleetwide CO<sub>2</sub> emissions by 29 percent since 2005.

Duke Energy has also reduced the CO<sub>2</sub> intensity of our electric generating fleet by 25 percent since 2005, meaning we are producing more electricity with fewer CO<sub>2</sub> emissions.

Looking ahead, we are reaffirming our commitment to a lower-carbon future by updating our goal to reduce CO<sub>2</sub> by 40 percent from the 2005 level by 2030. We will continue to advance promising solutions that modernize our energy system, strengthen our economy, protect our environment and leverage innovative technologies. ([See related article on page 27: “Tomorrow: Investing in a Changing Energy Future.”](#))

## New Hydroelectric License to Benefit Region for Decades

Maintaining and enhancing the quality of the Carolinas’ lakes and rivers has been a Duke Energy tradition for more than a century.

In 2016, the Federal Energy Regulatory Commission issued a new 30-year operating license for Duke Energy’s Keowee-Toxaway Hydroelectric Project, which allows the company to continue operating the Jocassee Pumped Storage Hydro Station, Keowee Hydro Station and associated lakes in North Carolina and South Carolina.

The project was originally licensed in 1966 for 50 years. The new license includes conditions of a relicensing agreement signed by Duke Energy and 16 other stakeholder organizations, following nearly a decade of collaboration. It allows the company to make enhancements to public recreational areas on Lake Jocassee and Lake Keowee.

Proposals in the Recreation Management Plan include adding diver access, a new courtesy dock, a new boat and trailer docking area, access for nonmotorized boating, and bank fishing signs at Devil’s Fork State Park. Duke Energy will also add about 25 acres to Double Springs Campground, build new restrooms and add 12 new campsites.

## Coal Plant Retirements

### Retired Coal Units<sup>1</sup>

	Location	Units	Total capacity (megawatts)	Actual retirement date
Cliffside Steam Station	N.C.	1, 2, 3, 4	198	2011
Buck Steam Station	N.C.	3, 4	113	2011
Edwardsport Generating Station	Ind.	6, 7, 8	160	2011
W.H. Weatherspoon Plant	N.C.	1, 2, 3	177	2011
Gallagher Generating Station	Ind.	1, 3 <sup>2</sup>	280	2012
Cape Fear Plant	N.C.	5, 6	316	2012
Beckjord Station	Ohio	1	94	2012
Dan River Steam Station	N.C.	1, 2, 3	276	2012
H.F. Lee Plant	N.C.	1, 2, 3	382	2012
Robinson Plant	S.C.	1	177	2012
Buck Steam Station	N.C.	5, 6	256	2013
Riverbend Steam Station	N.C.	4, 5, 6, 7	454	2013
Sutton Plant	N.C.	1, 2, 3	575	2013
Beckjord Station	Ohio	2, 3	222	2013
Beckjord Station	Ohio	4, 5, 6	543	2014
W.S. Lee Steam Station	S.C.	1, 2	200	2014
W.S. Lee Steam Station	S.C.	3	170	2015 Converted to natural gas
Miami Fort Station	Ohio	6	163	2015
Wabash River Generating Station	Ind.	2, 3, 4, 5, 6	668	2016
<b>Total</b>			<b>5,424</b>	

### Planned Coal Unit Retirements

	Location	Units	Total capacity (megawatts)	Planned retirement date
Crystal River Energy Center	Fla.	1, 2	766	2018
Asheville Station	N.C.	1, 2	378	2019
Gallagher	Ind.	2, 4	280	Potentially retire or cease burning coal by 2022
Allen Steam Station	N.C.	1, 2, 3	582	2024
<b>Total</b>			<b>2,006</b>	

## TOTAL ACTUAL/PLANNED RETIREMENTS 7,430

- <sup>1</sup> In addition to coal unit retirements, a number of older oil/natural gas generation units have been or will be retired.
- <sup>2</sup> Per a 2009 settlement agreement with the U.S. Environmental Protection Agency.



At Lake Keowee, the company will build new parking areas at three recreation sites, create new trails, add bank fishing signs and develop new campsites, fishing stations and 10 cabins at Mile Creek County Park. The company also will build a canoe/kayak launch, fishing pier and portage at 15-Acre Lake, a recreation site at Keowee-Toxaway State Park.

The company also plans to implement a Habitat Enhancement Program in the watershed and conserve about 2,900 acres of property adjoining the lakes to preserve and protect ecologically and culturally significant resources.

## Water Resources Fund Provides \$5 Million for Waterways

Healthy waterways are vital to the communities Duke Energy serves. But we can't do it alone.

Over the past two years, Duke Energy's Water Resources Fund has helped fund 59 projects by organizations across the Carolinas and Virginia, providing support for the good work done by others.

The fund helps support projects that strengthen water quality, reinforce the importance of conservation, and expand public access to waterways for citizens and visitors across the region.

At the end of 2016, the fund had awarded more than \$5 million – more than halfway to its \$10 million multiyear commitment from Duke Energy. Recipients are selected by an independent body that includes five environmental experts and two Duke Energy employees.

Among the allocations was a \$15,000 grant to Clemson University in South Carolina to sponsor a graduate-level course for K-12 teachers that explores the interrelationship of energy production, water and the environment. This course is taught by Clemson University faculty members, a S.C. Department of Natural Resources wildlife biologist and Duke Energy scientists.

Also, the Conservation Fund received \$100,000 to protect critical acreage that contains the headwaters of the French Broad River in the Headwaters State Forest in North Carolina.

## Putting Rights of Way to Work for Wildlife

Duke Energy manages the land over which more than 30,000 miles of transmission lines traverse – that's more than enough to circle the globe.

With that much property to manage, the company has focused on how to put it to work for imperiled wildlife. Utility rights of way can serve as valuable corridors for threatened wildlife.

To bolster these efforts, the Duke Energy Foundation will provide \$500,000 over the next five years to the National Wild Turkey Federation's (NWTF) Energy for Wildlife program to conserve or enhance more than 6,000 acres of critical habitat across Florida, the Carolinas and Indiana. The project is designed to benefit imperiled pollinators and birds, as well as numerous other wildlife species.

*Duke Energy manages the land over which more than 30,000 miles of transmission lines traverse – that's more than enough to circle the globe.*

Conservation efforts will focus on establishing or enhancing habitat on public lands, such as state or national forests, and nearby areas where Duke Energy's transmission rights of way cross large areas of forested habitat. The enhanced habitat conditions will provide cover and a sustainable food source, while serving as a protective travel corridor for wildlife species that need it most.

Beyond the new collaboration with NWTF, Duke Energy implemented many programs in 2016 with natural resource protection in mind. For instance, in Florida the company piloted a power line design that minimizes risks to birds. The redesigned elements will help prevent birds from getting in between lines and from perching and building nests on electrical lines and poles.

In North Carolina, the company is supporting the Carolina Raptor Center's bald eagle conservation efforts, as well as the development of a new raptor trail and high-tech amphitheater to enhance educational programming for children.



# Crafting Permanent Coal Ash Solutions

Duke Energy is actively working to close its 60 coal ash basins to protect the environment, the public and the costs customers pay.

In 2016, the company announced it would excavate 34 basins and safely cap another 18 basins across its fleet. The company is still finalizing details on the remaining sites.

Flexible ash basin closure options not only ensure Duke Energy can select the right closure options for each site, but also help keep costs lower for customers compared to a one-size-fits-all approach.

The U.S. Environmental Protection Agency (EPA) recognizes that excavation or capping basins, combined with long-term monitoring, can be equally protective of the environment. The EPA also acknowledges that the vast majority of ash in the nation will be safely stored by capping basins in place. Consistent with the industry, Duke Energy plans to safely dispose of almost 70 percent of its ash by capping in place.

*Duke Energy is actively working to close its 60 coal ash basins to protect the environment, the public and the costs customers pay.*

As part of the company's ongoing commitment to its customers, it is closing older, less-efficient coal plants and ash basins, responsibly managing waste, and exploring new opportunities to expand the reuse of coal ash for beneficial purposes.

Duke Energy currently recycles nearly two-thirds of all ash produced and has announced plans to install three reprocessing units to transform even more of this material into useful products.

# Delivering Reliability

Customers expect highly reliable electric service, and Duke Energy delivers. Each year we set power delivery reliability targets for the number and duration of power outages, and generation fleet performance targets.

## Power Delivery

Mid-size storm activity in the Carolinas during July and August (a 1-in-100 year event) caused us to miss our targets for outage frequency and duration. Despite the results in 2016, our long-term trend in outage frequency continues to improve while our long-term trend in outage duration remains stable.

## Outage Statistics

	2013	2014	2015	2016	2016 Target
Average number of outages <sup>1, 2</sup> (occurrences)	1.14	1.13	1.16	1.17	1.14
Average time without power <sup>1, 2</sup> (minutes)	120	122	131	144	126

1 Outages with a duration greater than 5 minutes; statistics are reported per customer.  
2 Lower numbers indicate better performance.

## Generation

Our diverse generation fleet including fossil, nuclear, hydro, wind and solar resources reliably met challenging demands, despite a summertime record for usage in the Carolinas.

Nuclear fleet capacity factor, which is a measure of generation reliability, exceeded 90 percent for the 18th consecutive year, and improved from 94.2 percent in 2015 to 95.7 percent in 2016. The fossil fleet's commercial availability declined from 87.4 percent in 2015 to 84.7 percent in 2016. The commercial renewables fleet's commercial availability increased from 93.3 percent in 2015 to 94.2 percent in 2016 because of reduced unscheduled maintenance activities.

## Generation Reliability

	2013	2014	2015	2016	2016 Target
Nuclear capacity factor	92.8%	93.2%	94.2%	95.7%	94.1%
Fossil commercial availability <sup>3</sup>	85.7%	85.9%	87.4%	84.7%	86.9%
Renewables commercial availability <sup>3</sup>	94.2%	96.0%	93.3%	94.2%	96.0%

3 Based on units operated by Duke Energy and ownership share.



In 2016, Duke Energy's 11 nuclear generating stations – at six sites in the Carolinas – set a new overall capacity factor of 95.72 percent.

Since the 2014 Dan River coal ash release in North Carolina, Duke Energy has been mindful of any impact coal ash has on the environment and the community.

A two-year study conducted by N.C. State University along a 57-mile stretch of the Dan River showed no impacts of the coal ash release on agricultural crops in the area. The study joins a growing list of scientific data that demonstrate the river is doing well and wildlife is thriving.

In addition, scientific data continue to show ash basins are not impacting neighbors' wells or drinking water supplies near Duke Energy plant sites. This includes a Duke University study that confirmed hexavalent chromium is naturally occurring in drinking water wells across the region and is not originating from ash basins.

## Nuclear Fleet Establishing New Records

Duke Energy has operated nuclear power plants since the early 1970s. And the company's fleet keeps setting new records.

In 2016, Duke Energy's 11 generating stations – at six sites in the Carolinas – set a new overall capacity factor of 95.72 percent. That marks the 18th consecutive year of attaining a 90-plus percent capacity factor. The plants produced 90 billion kilowatt-hours (kWh) of carbon-free electricity.

### Here are some of the highlights:

- The two-unit Brunswick Nuclear Plant generated a record of more than 15 billion kWh over the 12-month period. Brunswick also completed its shortest refueling outage ever.
- Catawba Nuclear Station Unit 1 set a 12-month record, cranking out more than 10 billion kWh of electricity, and Catawba Unit 2 had its longest continuous operating run.
- McGuire Nuclear Station's two units established a station-best 12-month generation record of nearly 20 billion kWh.
- Oconee Nuclear Station Unit 2 provided a record of more than 7 billion kWh of electricity over the last 12 months, and units 1 and 3 completed their shortest refueling outages ever. Over the years, the efficiencies gained in planning and implementing shorter refueling outages have increased the fleet's availability to produce electricity.
- Harris and Robinson nuclear plants each achieved record six-month generation during 2016 – producing more power over that time period than ever before.

As for constructing nuclear plants, the company received licenses from the Nuclear Regulatory Commission for new reactors in South Carolina and Florida. No decisions have been made on proceeding with these projects.

# Environmental Performance Metrics

## 2016 Electricity Generated and Generation Capacity<sup>1</sup>

	Electricity Generated (Net megawatt hours)		Generation Capacity (Megawatts)	
	MWh (thousands)	Percent	MW	Percent
Coal	74,055	33.8%	17,948	34.4%
Natural gas	61,695	28.1%	4,584	8.8%
Oil	97	0.0%	402	0.8%
Natural gas/oil			13,922	26.7%
<b>Total fossil</b>	<b>135,848</b>	<b>62.0%</b>	<b>36,856</b>	<b>70.6%</b>
Nuclear	74,160	33.8%	8,850	16.9%
Wind	6,417	2.9%	2,311	4.4%
Conventional hydro	2,431	1.1%	1,415	2.7%
Solar	1,205	0.5%	660	1.3%
<b>Total carbon-free</b>	<b>84,213</b>	<b>38.4%</b>	<b>13,236</b>	<b>25.3%</b>
Pumped-storage hydro <sup>2</sup>	(776)	-0.4%	2,140	4.1%
<b>Total</b>	<b>219,285</b>	<b>100.0%</b>	<b>52,232</b>	<b>100.0%</b>

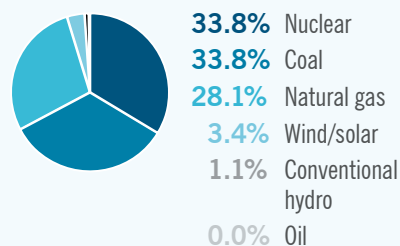
<sup>1</sup> All data based on Duke Energy's ownership share of generating plants as of Dec. 31, 2016. Data exclude the Duke Energy International assets sold in 2016. Totals may not add up exactly because of rounding.

<sup>2</sup> Pumped-storage hydro helps meet peak demand and, like other storage technologies, consumes more energy than it produces.

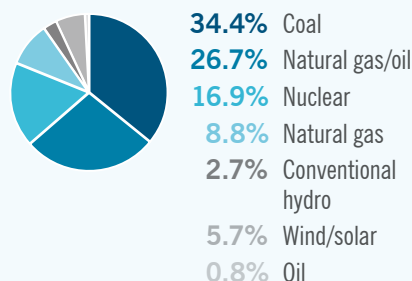
### 2016 electricity generated and generation capacity

Duke Energy has a diverse, increasingly clean generation portfolio. Approximately 38 percent of the electricity we generated in 2016 was from carbon-free sources, including nuclear, wind, hydro and solar. Nuclear generation surpassed coal by a small margin, and over 28 percent was from natural gas, which emits about half as much carbon dioxide as coal when used for electric generation. Duke Energy Renewables sells the electricity and/or Renewable Energy Certificates (RECs) it generates to its customers.

### 2016 Electricity Generated\*



### 2016 Generation Capacity\*



\* Excludes pumped-storage hydro.

## Fuels Consumed For Electric Generation<sup>3</sup>

	2008	2014	2015	<b>2016</b>
Coal (million tons)	63.1	44.0	32.6	<b>31.7</b>
Oil (million gallons)	230.6	53.6	44.1	<b>29.5</b>
Natural gas (billion cubic feet)	163.4	525.3	501.1	<b>545.2</b>

<sup>3</sup> All data based on Duke Energy's ownership share of generating assets as of the end of each calendar year. Data exclude the Duke Energy International assets sold in 2016.

### Fuels consumed for electric generation

Since 2008, the use of coal and oil as generation fuels has significantly decreased. These fuels have been replaced primarily by natural gas, mostly because it has become a relatively less expensive fuel and we have added natural gas generation capacity.

## Environmental Performance Metrics *continued*

### Water withdrawn and consumed for electric generation

*Water withdrawn* is the total volume removed from a water source, such as a lake or a river. Because of the once-through cooling systems on many of our coal-fired and nuclear plants, almost 99 percent of this water is returned to the source and available for other uses. *Water consumed* is the amount of water removed for use and not returned to the source.

### Emissions from electric generation

Many factors influence emissions levels and intensities, including generation diversity and efficiency, demand for electricity, weather, fuel availability and prices, and emissions controls deployed. Since 2005, our carbon dioxide (CO<sub>2</sub>) emissions decreased by 29 percent, sulfur dioxide (SO<sub>2</sub>) emissions decreased by 94 percent and nitrogen oxides (NO<sub>x</sub>) emissions decreased by 70 percent. These decreases are primarily due to addition of pollution control equipment, decreased coal generation, increased natural gas generation, and replacement of higher-emitting plants.

### Methane emissions from pipeline operations

Methane (CH<sub>4</sub>) is the primary component of natural gas, and is a greenhouse gas. We work to minimize methane emissions, but some is released during pipeline operations and maintenance. Duke Energy is a founding partner of the U.S. EPA's Natural Gas Star Methane Challenge program, which is aimed at cost-effective technologies and practices that improve operational efficiency and reduce methane emissions.

### Water Withdrawn and Consumed for Electric Generation<sup>4</sup> (billion gallons)

	2011	2014	2015	2016
<b>Withdrawn</b>	5,900	5,789	5,723	<b>5,341</b>
<b>Consumed</b>	105	92	79	<b>74</b>
<b>Consumption Intensity</b> (gallons per MWh generated)	456	376	361	<b>337</b>

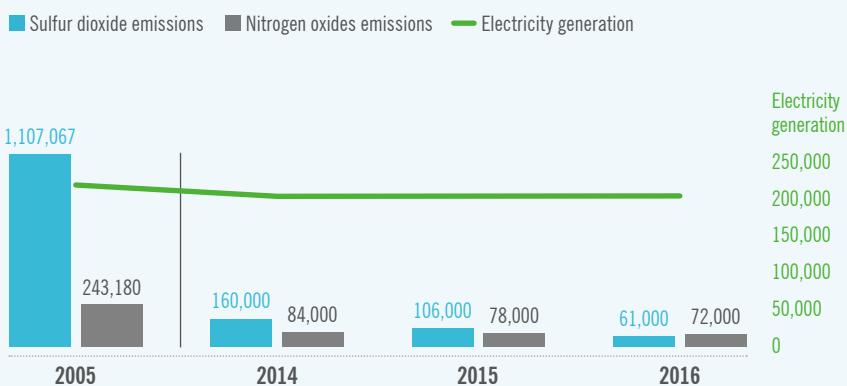
<sup>4</sup> Data exclude the Duke Energy International assets sold in 2016.

### Emissions From Electric Generation<sup>5</sup>

	2005	2014	2015	2016
<b>CO<sub>2</sub> emissions</b> (thousand tons)	152,147	114,854	108,463	<b>106,763</b>
<b>CO<sub>2</sub> emissions intensity</b> (pounds per net kWh)	1.29	1.05	0.99	<b>0.97</b>
<b>SO<sub>2</sub> emissions</b> (tons)	1,107,067	160,000	106,000	<b>61,000</b>
<b>SO<sub>2</sub> emissions intensity</b> (pounds per net MWh)	9.4	1.5	1.0	<b>0.6</b>
<b>NO<sub>x</sub> emissions</b> (tons)	243,180	84,000	78,000	<b>72,000</b>
<b>NO<sub>x</sub> emissions intensity</b> (pounds per net MWh)	2.1	0.8	0.7	<b>0.7</b>
<b>CH<sub>4</sub> emissions</b> (CO <sub>2</sub> equivalent) (thousand tons)	420	281	243	<b>236</b>
<b>N<sub>2</sub>O emissions</b> (CO <sub>2</sub> equivalent) (thousand tons)	731	482	415	<b>401</b>

<sup>5</sup> All data based on Duke Energy's ownership share of generating assets as of Dec. 31, 2016. Data exclude the Duke Energy International assets sold in 2016. Totals may not add up exactly due to rounding.

### Sulfur Dioxide and Nitrogen Oxides Emissions (tons)<sup>6</sup> and Electricity Generation (thousand net megawatt-hours)



<sup>6</sup> SO<sub>2</sub> and NO<sub>x</sub> reported from Duke Energy's electric generation based on ownership share of generating assets.

### Methane Emissions from Pipeline Operations (thousand tons)

	2014	2015	2016
<b>CH<sub>4</sub> emissions</b> (CO <sub>2</sub> equivalent)	201	184	<b>184</b>

## Environmental Performance Metrics *continued*

### Sulfur Hexafluoride Emissions from Electric Transmission and Distribution Operations (thousand tons)

	2014	2015	2016
SF <sub>6</sub> emissions (CO <sub>2</sub> equivalent)	456	291	570

### Toxic Release Inventory (thousand pounds)<sup>7</sup>

	2007	2013	2014	2015
Releases to air	97,969	22,400	18,297	10,396
Releases to water	257	131	152	145
Releases to land	22,052	12,449	12,948	9,666
Off-site transfers	155	2,924	3,579	1,363
<b>Total</b>	<b>120,434</b>	<b>37,904</b>	<b>34,976</b>	<b>21,570</b>

<sup>7</sup> Data pertain to electric generation facilities Duke Energy owns or operates and where Duke Energy is the responsible reporting party. Totals may not add up exactly due to rounding.

### Waste

	2013	2014	2015	2016
<b>Solid waste</b>				
■ Total generated (tons) <sup>8</sup>	84,083	85,490	88,000	102,257
■ Percent recycled	69%	71%	72%	76%
<b>Hazardous waste generated (tons)<sup>9</sup></b>	<b>51</b>	<b>48</b>	<b>317</b>	<b>570</b>
<b>Low-level radioactive waste (Class A, B and C) generated (cubic feet)<sup>10</sup></b>	<b>88,994</b>	<b>104,636</b>	<b>200,667</b>	<b>—</b>

<sup>8</sup> Weights are estimated based on volumes where necessary. Excludes Duke Energy Renewables, Piedmont Natural Gas and large nonreplicable projects such as plant demolitions.

<sup>9</sup> Excludes Duke Energy Renewables and Piedmont Natural Gas.

<sup>10</sup> Total of Class A, B and C waste disposal as reported to the Nuclear Regulatory Commission. Crystal River Unit 3 is not included in these statistics, because it is not part of the operating fleet, and is retired. Data for 2016 will be available later in 2017.

### Reportable Oil Spills<sup>11</sup>

	2012	2013	2014	2015	2016
Spills	48	65	26	23	23
Gallons	10,800	4,823	12,006	3,425	3,970

<sup>11</sup> Excludes Piedmont Natural Gas.

### Environmental Regulatory Citations<sup>12</sup>

	2012	2013	2014	2015	2016
Citations	16	16	33	9	9
Fines/penalties (dollars)	\$ 128,562	\$1,006,935	\$236,058	\$114,585,735	\$7,114,090

<sup>12</sup> Includes international and U.S. federal, state and local citations and fines/penalties. Excludes Piedmont Natural Gas.

#### Sulfur hexafluoride emissions from electric transmission and distribution operations

Sulfur hexafluoride (SF<sub>6</sub>) is an insulating gas used in high voltage electric transmission and distribution switchgear equipment, and is a greenhouse gas. We work to minimize SF<sub>6</sub> emissions, but some is released during transmission and distribution operations and maintenance.

#### Toxic Release Inventory (TRI)

Duke Energy's TRI releases for 2015 were down 82 percent from 2007, primarily due to the significant investments we've made in environmental controls for our power plants, and decreased coal generation. (Data for 2016 will be available in August 2017.)

#### Waste

We are on track to meet our goal of increasing the percentage of solid waste that is recycled from 69 percent in 2013 to 80 percent in 2018. (This goal excludes Duke Energy Renewables and Piedmont Natural Gas.)

#### Reportable oil spills

Oil spills include releases of lubricating oil from generating stations, leaks from transformers, or damage caused by weather or by third parties (typically because of auto accidents).

#### Environmental regulatory citations

Fines/penalties were relatively large in 2013 because of the November 2013 settlement agreement addressing golden eagle fatalities at wind power facilities; in 2015 because of the May 2015 coal ash enforcement agreement; and in 2016 because of a 2014 oil spill at the Beckjord Station in Ohio, and a 2014 coal ash spill. See the "Migratory Bird Settlement Agreement" article in the 2013 Sustainability Report, and "Legal Cases Resolved" article in the 2015 Sustainability Report.



## 4 EMPLOYEES

### Develop and Engage Employees and Strengthen Leadership

## 2016 Highlights

- Black Enterprise Magazine named Duke Energy to its “50 Best Companies for Diversity.”
- To cultivate an inclusive environment, piloted a program on unconscious bias with 75 leaders across the company.
- Enhanced the Duke Energy In Action program to better enable employees and retirees to make a difference in the communities where they live and work.
- Honored a record 48 employees with the James B. Duke Award, adding two new categories – Career Achievement and Heroic Acts.

## Challenges and Opportunities

- Foster a high-performance and inclusive culture built on strong leadership and highly engaged and diverse employees.
- Ensure knowledge transfer as our baby boomers retire.





LaTonya King / Director, Diversity and Inclusion    Melissa Anderson / Executive Vice President, Administration and Chief Human Resources Officer

## Unity and Inclusion, Within and Beyond Our Walls

Duke Energy's commitment to diversity and inclusion extends beyond our own walls and into the community. This commitment was more important than ever in 2016, as several of the communities we serve experienced tragic acts of violence and, in some cases, civil unrest.

In the wake of the civil unrest in Charlotte, N.C., in September, Duke Energy hosted a series of facilitated conversations, called "Pathways to Inclusion," that provided a venue for employees to discuss these events, their impact, and how we can move forward and create unity. "The sessions gave employees a safe space for dialog around complex, emotional issues," said LaTonya King, Duke Energy's director of diversity and inclusion. "They shared feelings of sadness, frustration and anger coming into the sessions, but they left feeling educated, enlightened, and hopeful."

The Duke Energy Foundation made a \$100,000 donation to the Unite Charlotte Fund, a new community fund created in the aftermath of the unrest to support programs focused on healing, rebuilding trust and creating opportunities.

*The company brought in the NeuroLeadership Institute (NLI) to pilot a program on unconscious bias with 75 leaders across the company. Those who participated in the pilot reported they felt better equipped to not only recognize bias, but also overcome it in their day-to-day activities.*

Similarly, following the deadly shooting at an Orlando nightclub in June, the company made a \$100,000 donation to the OneOrlando Fund to help respond to the community's immediate and future needs.

In 2016, we also continued our sharp focus on cultivating an inclusive environment in the workplace. For instance, the company brought in the NeuroLeadership Institute (NLI) to pilot a program on unconscious bias with 75 leaders across the company. Those who participated in the pilot reported they felt better equipped to not only recognize bias, but also overcome it in their day-to-day activities.

"I'm excited about unconscious bias training. We expect to see improvements in the decision-making capabilities of our leaders as a result of this work," says Melissa Anderson, executive vice president of administrative services and chief human resources officer. The unconscious bias training program will continue in 2017, with a focus on the top 400 leaders across the company.



Detective Julie Marzheuser / Lead Negotiator, Edgewood PD and Kenton County Regional SWAT   Steve Hinkel / Director Advanced Technologies, Applications

## Duke Engineer Builds Robots that Protect & Serve

When robots are mentioned, it's easy to conjure up memories of old science fiction movies. But do they have a place in today's energy industry?

Kentucky employee Steve Hinkel is working on it. His innovative efforts teaching and designing robots have already caught the attention of local law enforcement and may have a future at Duke Energy.

One of his recent creations is a rover robot for the Newport, Ky., Police Department, across the river from Cincinnati. Affectionately called SWAT-Bot by officers, the robot can help police access places that might be too risky or too cramped to enter, and can see things they may not ordinarily be able to detect.

*"A technician might also direct a robot to make a repair in an energized electric substation; that way the person can stay in a completely safe zone."*

Hinkel began dabbling in robotics several years ago when his young son showed an interest in robots. Over time, Hinkel became a quasi-expert in the design of robots – now teaching a class on robotics at Northern Kentucky University.

He continues to design new robots. And in addition to the Newport police squad, two other local police departments are adopting Hinkel's robot designs.

As for Duke Energy, robots could be used to handle tasks that could be more dangerous than they first appear – like working in traffic.

"For example, instead of a crew member using a flag to direct traffic in highly congested areas, as when electrical workers are making repairs to a power line, a robot could do it," said Hinkel. "A technician might also direct a robot to make a repair in an energized electric substation; that way the person can stay in a completely safe zone."

## Helping Employees Make an Impact in Their Communities

When Duke Energy's Jamie Lynton and his wife planted some milkweed in their yard that attracted a few butterflies, it gave him an idea. Why not do this on a larger scale to offer a protected habitat for imperiled monarch butterflies as they migrate south?

He first organized a Duke Energy In Action Teams4Good volunteer event and rounded up co-workers to build the first monarch butterfly "waystation" at Lapping Park in Clarksville, Indiana. Lynton even helped Clarksville secure a \$2,500 grant from the Duke Energy Foundation to pay for the plants and supplies.

A few months later, Clarksville Elementary School students returned to the waystation to release monarch butterflies and learn about their migration patterns and the dangers they face.

Teams4Good is part of the enhanced Duke Energy In Action program launched earlier in the year. Designed to empower employees and retirees to make a difference in the communities where they live and work, the program makes it easy for employees to volunteer their time and double their charitable contributions to the causes they're passionate about.

Other opportunities include Dollars4Good, which matches eligible donations made by employees; Hours4Good, through which employees can earn company grants when they volunteer their time; and Relief4Employees, which allows employees to support co-workers in need.

The Duke Energy In Action program has been a hit in other areas of the Duke Energy territory. In Ohio, employees organized an Accounting for Kids Day to introduce financial literacy concepts to Cincinnati Public Schools students in a fun and interactive way. In North Carolina, employees at the Kings Mountain Generation Support Facility organized several volunteer events at the local Gateway Trail to create and maintain a butterfly garden.

## Sharing a Ride; Lowering Our Impact

In 2015, Duke Energy spent almost \$16 million on rental cars and personal mileage for its 28,000 employees.

It led the company to ask, "Is there a better way?"

What resulted was RideShare – an innovative program that matches employees traveling to the same location. If two employees are both renting cars in North Carolina to travel from Raleigh to Asheville – RideShare allows them to connect and take one car instead. It's a great way to meet fellow employees, lower costs and eliminate the need for additional cars on the highway.

Early results have been promising. Employees continue to sign up and test the program. In fact, in 2016, more than 45,000 highway miles were avoided by employees riding together. That number could be higher since many employees were informally sharing rides before the program was introduced.

As the effort continues to expand, Duke Energy will not only be able to save money on mileage and car rentals, but also lower its environmental impact with fewer vehicles and less emissions.

As RideShare continues to expand, Duke Energy will not only be able to save money on mileage and car rentals, but also lower its environmental impact with fewer vehicles and less emissions.





Each year, Duke Energy's James B. Duke Award honors employees who have made an impact on their communities, neighbors and the industry.

## Recognizing Our Heroes

Each year, Duke Energy's James B. Duke Award honors employees who have made an impact on their communities, neighbors and the industry. And there's no bigger impact than saving a life.

Kentucky employees Denny Caple and Chris Thomas were leaving their truck when they were startled by the screech of a quick acceleration in the parking lot. When the Gas Operations employees looked over, they found the driver of the nearby truck slumped over, unresponsive.

Caple and Thomas knew exactly what to do.

They rushed to him and pulled the unresponsive construction worker from the vehicle. After a moment of consciousness, the victim passed out again. Co-workers Cliff Jeffery, Mike Highhouse and Bill Stanforth, also witnessed the incident and rushed to help as the construction worker went into cardiac arrest.

As a team, the men performed CPR until paramedics arrived to take over the compressions and administer four shocks with an automated external defibrillator. At the hospital, the doctor said the construction worker's artery was fully clogged, and, if not for the team's quick action, he would have died.

Throughout its many states, Duke Energy employees have accomplished a number of heroic acts – consistently going above and beyond to help others.

*Throughout its many states, Duke Energy employees have accomplished a number of heroic acts – consistently going above and beyond to help others.*

# Workforce Performance Metrics

## Workforce Statistics

	12/31/14	12/31/15	12/31/16
Full- and part-time employees	28,344	28,905	28,790
Collective bargaining unit members as percent of workforce	19.6%	18.3%	19.1

## Workforce Demographics

	12/31/14	12/31/15	12/31/16
<b>Ethnic diversity as percent of workforce</b>			
■ White	85.2%	84.3%	83.3%
■ Black/African-American	10.7%	11.1%	11.8%
■ Hispanic/Latino	2.1%	2.5%	2.7%
■ Asian	1.3%	1.4%	1.5%
■ American Indian/Alaska Native	0.6%	0.6%	0.6%
■ Native Hawaiian/Other Pacific Islander	0.1%	0.1%	0.1%
■ Not specified	0.0%	0.1%	0.0%
<b>Females/minorities as percent of workforce/management</b>			
■ Females as percent of workforce	22.2%	22.6%	22.8%
■ Females as percent of management	18.0%	17.2%	17.6%
■ Minorities as percent of workforce	14.8%	15.6%	16.7%
■ Minorities as percent of management	10.2%	10.4%	11.1%

## Employee Turnover Summary

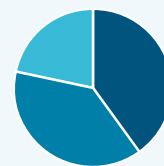
	2014	2015	2016
Turnover as percent of workforce	7.1%	7.5%	9.6%
Percentage of employees eligible to retire in 5 years <sup>1</sup>	48.8%	46.3%	45.1%
Percentage of employees eligible to retire in 10 years <sup>1</sup>	62.0%	59.3%	57.3%

<sup>1</sup> "Eligible to retire" is defined as 55 years of age or older, with at least five years of service.

## A Transforming Workforce

During the past five years, Duke Energy's workforce has transformed from one with approximately 60 percent Baby Boomers and Traditionalists, to one with 60 percent Generation X and Millennials. As this transformation continues, we are working to assure that workers of all generations are engaged and enabled, with the right skills and qualifications to operate and grow Duke Energy's evolving businesses.

## Four Generations of Duke Energy Employees



- 0.2% Traditionalists (born before 1946)
- 39.8% Baby Boomers (born 1946-1964)
- 38.5% Generation X (born 1965-1981)
- 21.5% Millennials (born after 1981)

## FORWARD-LOOKING INFORMATION

### Cautionary statements regarding forward-looking information

This document includes forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. Forward-looking statements are based on management's beliefs and assumptions and can often be identified by terms and phrases that include "anticipate," "believe," "intend," "estimate," "expect," "continue," "should," "could," "may," "plan," "project," "predict," "will," "potential," "forecast," "target," "guidance," "outlook" or other similar terminology. Various factors may cause actual results to be materially different than the suggested outcomes within forward-looking statements; accordingly, there is no assurance that such results will be realized. These factors include, but are not limited to: state, federal and foreign legislative and regulatory initiatives, including costs of compliance with existing and future environmental requirements or climate change, as well as rulings that affect cost and investment recovery or have an impact on rate structures or market prices; the extent and timing of costs and liabilities to comply with federal and state laws, regulations and legal requirements related to coal ash remediation, including amounts for required closure of certain ash impoundments, are uncertain and difficult to estimate; the ability to recover eligible costs, including amounts associated with coal ash impoundment retirement obligations and costs related to significant weather events, and to earn an adequate return on investment through the regulatory process; the costs of decommissioning Crystal River Unit 3 and other nuclear facilities could prove to be more extensive than amounts estimated and all costs may not be fully recoverable through the regulatory process; credit ratings of the company or its subsidiaries may be different from what is expected; costs and effects of legal and administrative proceedings, settlements, investigations and claims; industrial, commercial and residential growth or decline in service territories or customer bases resulting from variations in customer usage patterns, including energy efficiency efforts and use of alternative energy sources, including self-generation and distributed generation technologies; federal and state regulations, laws and other efforts designed to promote and expand the use of energy efficiency measures and distributed generation technologies, such as rooftop solar and battery storage, in our service territories could result in customers leaving the electric distribution system, excess generation resources as well as stranded costs; advancements in technology; additional competition in electric and gas markets and continued industry consolidation; the influence of weather and other natural phenomena on operations, including the economic, operational and other effects of severe storms, hurricanes, droughts, earthquakes and tornadoes, including extreme weather associated with climate change; the ability to successfully operate electric generating facilities and deliver electricity to customers including direct or indirect effects to the company resulting from an incident that affects the U.S. electric grid or generating resources; the ability to complete necessary or desirable pipeline expansion or infrastructure projects in our natural gas business; operational interruptions to our gas distribution and transmission activities; the availability of adequate interstate pipeline transportation capacity and natural gas supply; the impact on facilities and business from

## NON-GAAP FINANCIAL INFORMATION

### Adjusted Diluted Earnings Per Share ("EPS")

Management evaluates financial performance in part based on adjusted diluted EPS, a non-GAAP financial measure. Adjusted diluted EPS represents diluted EPS from continuing operations attributable to Duke Energy Corporation common stockholders, adjusted for the per-share impact of special items. As discussed below, special items include certain charges and credits which management believes are not indicative of Duke Energy's ongoing performance. Management believes the presentation of adjusted diluted EPS provides useful information to investors, as it provides them with an additional relevant comparison of Duke Energy's performance across periods.

Management uses this non-GAAP financial measure for planning and forecasting, and for reporting financial results to the Duke Energy Board of Directors (Board of Directors), employees, stockholders, analysts and investors. Adjusted diluted EPS is also used as a basis for employee incentive bonuses. The most directly comparable GAAP measures for adjusted diluted EPS is reported diluted EPS attributable to Duke Energy Corporation common stockholders.

Special items included in the periods presented include the following items which management believes do not reflect ongoing costs:

- Costs to Achieve Mergers represents charges that result from potential or completed strategic acquisitions.
- Cost Savings Initiatives represents severance charges related to company-wide initiatives to standardize processes and systems, leverage technology and workforce optimization.
- Commercial Renewables Impairment and Asset Impairment represent other-than-temporary impairments.
- Edwardsport Settlement, Ash Basin Settlement and Penalties, and Coal Ash Plea Agreements Reserve represent charges related to Plea Agreements and settlement agreements with regulators and other governmental entities.

Adjusted diluted EPS also includes the operating results of the nonregulated Midwest generation business and Duke Energy Retail Sales (collectively, the Midwest Generation Disposal Group) and the International Disposal Group, which have been classified as

a terrorist attack, cybersecurity threats, data security breaches, and other catastrophic events such as fires, explosions, pandemic health events or other similar occurrences; the inherent risks associated with the operation and potential construction of nuclear facilities, including environmental, health, safety, regulatory and financial risks; the timing and extent of changes in commodity prices, interest rates and foreign currency exchange rates and the ability to recover such costs through the regulatory process, where appropriate, and their impact on liquidity positions and the value of underlying assets; the results of financing efforts, including the ability to obtain financing on favorable terms, which can be affected by various factors, including credit ratings, interest rate fluctuations and general economic conditions; the credit ratings may be different from what the company and its subsidiaries expect; declines in the market prices of equity and fixed income securities and resultant cash funding requirements for defined benefit pension plans, other post-retirement benefit plans, and nuclear decommissioning trust funds; construction and development risks associated with the completion of Duke Energy and its subsidiaries' capital investment projects, including risks related to financing, obtaining and complying with terms of permits, meeting construction budgets and schedules, and satisfying operating and environmental performance standards, as well as the ability to recover costs from customers in a timely manner or at all; changes in rules for regional transmission organizations, including changes in rate designs and new and evolving capacity markets, and risks related to obligations created by the default of other participants; the ability to control operation and maintenance costs; the level of creditworthiness of counterparties to transactions; employee workforce factors, including the potential inability to attract and retain key personnel; the ability of subsidiaries to pay dividends or distributions to Duke Energy Corporation holding company (the Parent); the performance of projects undertaken by our nonregulated businesses and the success of efforts to invest in and develop new opportunities; the effect of accounting pronouncements issued periodically by accounting standard-setting bodies; substantial revision to the U.S. tax code, such as changes to the corporate tax rate or a material change in the deductibility of interest; the impact of potential goodwill impairments; the ability to successfully complete future merger, acquisition or divestiture plans; and the ability to successfully integrate the natural gas businesses following the acquisition of Piedmont Natural Gas Company, Inc. and realize anticipated benefits.

Additional risks and uncertainties are identified and discussed in Duke Energy's and its subsidiaries' reports filed with the SEC and available at the SEC's website at [www.sec.gov](http://www.sec.gov). In light of these risks, uncertainties and assumptions, the events described in the forward-looking statements might not occur or might occur to a different extent or at a different time than described. Forward-looking statements speak only as of the date they are made; Duke Energy expressly disclaims an obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

discontinued operations. Management believes inclusion of the operating results of the disposal groups within adjusted diluted EPS results in a better reflection of Duke Energy's financial performance during the period.

Duke Energy's adjusted diluted EPS may not be comparable to a similarly titled measure of another company because other companies may not calculate the measure in the same manner.

The following table presents a reconciliation of reported diluted EPS to adjusted diluted EPS.

	Years Ended December 31,		
<i>(per diluted share)</i>	2016	2015	2014
Reported EPS	\$3.11	\$4.05	\$2.66
Adjustments to Reported:			
Costs to Achieve Mergers	0.48	0.09	0.18
Cost Savings Initiatives	0.08	0.13	—
Commercial Renewables Impairment	0.07	—	—
Edwardsport Settlement	—	0.08	—
Ash Basin Settlement and Penalties	—	0.02	—
Asset Impairment	—	—	0.08
Coal Ash Plea Agreements Reserve	—	—	0.14
Asset Sales	—	—	(0.01)
Economic Hedges (mark-to-market)	—	—	0.01
Discontinued Operations	0.95	0.17	1.49
Adjusted Diluted EPS	\$4.69	\$4.54	\$4.55

### Adjusted Diluted EPS Outlook

Duke Energy's 2016 Sustainability Report references the five-year, long-term range of annual growth of 4 to 6 percent in adjusted diluted EPS (on a compound annual growth rate ("CAGR") basis). Due to the forward-looking nature of this non-GAAP financial measure for future

periods, information to reconcile it to the most directly comparable GAAP financial measure is not available at this time, as management is unable to project all special items for future periods, such as legal settlements, the impact of regulatory orders or asset impairments.