



# TRANSFORMING THE **FUTURE**

Duke Energy 2018 Sustainability Report



## A TRIBUTE TO A LEADING VOICE FOR SUSTAINABILITY

Jim Rogers (1947-2018) was a leading voice for sustainability. As CEO of Cinergy (a predecessor company of Duke Energy), he steered the company to produce its first-ever Sustainability Report in 2003. After merging with Duke Energy in 2006, he carried on that legacy as CEO of the new company.

His message in the 2003 report still rings true today: “Sustainability is about providing for the energy needs of our customers without compromising the potential of future generations to inherit a better, more productive society.”



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## 2018 | 2019 RECOGNITIONS

- For the 13th consecutive year, Duke Energy was named to the Dow Jones Sustainability Index for North America.
- Duke Energy was named to Fortune magazine’s 2019 “World’s Most Admired Companies” list for the second year in a row. Duke Energy was ranked 5th among gas and electric utilities.
- Forbes magazine named Duke Energy as one of the “World’s Best Employers” – making the 2018 and 2019 list for U.S. electric utilities.
- Duke Energy received the Edison Electric Institute’s “Emergency Recovery Award” for the company’s power restoration efforts after Hurricane Florence hit North Carolina and South Carolina in September 2018.
- Black Enterprise magazine named Duke Energy to its 2018 “50 Best Companies for Diversity.”
- Duke Energy received the 2018 Secretary of Defense Employer Support Freedom Award, the highest honor the U.S. Department of Defense gives to companies for their outstanding support for employees who serve in the National Guard and Reserve.
- The NAACP named Duke Energy an inaugural member of its Equity Inclusion and Empowerment Index, identifying Duke Energy as a corporate leader in fostering an equitable, just and inclusive workplace.
- Duke Energy was named to the Human Rights Campaign’s 2019 “Best Place to Work for LGBTQ Equality” list with a perfect score of 100 percent in its Corporate Equality Index.
- For the 14th consecutive year, Duke Energy has been named to Site Selection magazine’s annual list of “Top Utilities in Economic Development.”

MEMBER OF  
**Dow Jones  
Sustainability Indices**  
In Collaboration with RobecoSAM

# 2018

## A year of achievement



**LYNN J. GOOD**

| Chairman, President  
and Chief Executive Officer

### A MESSAGE FROM OUR CEO

Sustainability has steadily transformed over the years from concept to reality; from a good idea to a great way to do business. Today, sustainability is integral to how any smart company operates.

Duke Energy has been leading the charge to a cleaner energy future while helping our communities thrive. We've made significant progress on all fronts – from conservation and energy efficiency to the sustainable use of natural resources and generation of cleaner energy. We've reduced our carbon emissions by 31 percent from our 2005 levels and remain on track to reach our goal of 40 percent by 2030. All the while, we've kept rates for all customer classes below the national average.

And that's just the start.

We're looking at ways to accelerate the move to cleaner energy because we know it's right for our customers, our communities and society at large. The lower-carbon future we all want requires a delicate balancing act with no one-size-fits-all solution, as it must be safe, reliable and affordable for all customers regardless of where they live.

Last year, we captured our commitment to reduce carbon emissions in our [Climate Report](#) – consistent with the goals of the Paris Accord. Our comprehensive plan through 2030 includes the retirement of coal and the investment in renewables, battery technologies, energy efficiency and natural gas. Our plan is also founded in a firm belief that carbon-free nuclear power – the workhorse of our fleet – is an essential part of any equation for a low-carbon future.

As we look decades beyond 2030, innovation and collaboration will be key as the industry moves toward a carbon-neutral energy supply that will support electrification and help reduce carbon emissions across all sectors of the economy. We are strong proponents of research and development focused on discovering the solutions that will allow us to make progress while maintaining the round-the-clock reliability our customers depend on.



#### LEADING THE CHARGE

Duke Energy has been leading the charge to a cleaner energy future while helping our communities thrive.



### SMARTER ENERGY DECISIONS

We installed 1.6 million smart meters last year, giving 62 percent of our total customers access to real-time information to help make smarter energy decisions.

We must work together to find solutions. Everything we collectively do – from championing research and development to finding consensus with legislators and stakeholders – is paramount in realizing this important vision.

## 2018 Results

2018 marked significant progress on our sustainability goals. Highlights include:

- We continued to transition from coal to natural gas, bringing online two new combined-cycle natural gas plants and retiring two coal units. We also retrofitted two coal units at our Rogers Energy Complex to run on natural gas and coal – rather than coal only.
- As of year-end 2018, we owned or contracted over 7,100 megawatts of wind, solar and biomass energy. This includes 500 megawatts of solar added in North Carolina during the year, which helped the state remain second in the nation for solar capacity.
- Our energy efficiency initiatives helped customers reduce energy consumption and peak demand by more than 16,700 gigawatt-hours and 5,900 megawatts, respectively, since 2008. This reduction in consumption is more than the annual usage of 1.25 million homes, and the peak demand reduction is equivalent to 10 power plants each producing 600 megawatts.
- We installed 1.6 million smart meters last year, giving 62 percent of our total customers access to real-time information to help make smarter energy decisions.
- We issued \$1 billion in green bonds to finance green energy projects in North Carolina and South Carolina – one of the largest green bond transactions in our industry.

- Our nuclear fleet achieved a 93 percent capacity factor, marking the 20th consecutive year above 90 percent.
- We outlined plans to deploy 300 megawatts of battery storage projects in the Carolinas over the next 15 years.
- We safely removed 4.9 million tons of coal ash this year and recycled nearly 80 percent of what was produced at operating power plants.

## A New Era of Energy

Moving forward, it is essential we have the right strategy, the right pace of change and the right people to meet our goals, especially in the rapidly evolving sustainability landscape. It's the only way we'll find solutions to anticipate and meet our customers' needs.

I invite you to learn more about our progress in the following pages. I'm proud of how our 30,000 employees are executing our strategy and responding to change to build a smarter energy future.

Our results in 2018 have set the stage to achieve our long-term vision. Societal change is never easy, but we recognize it is our responsibility to leave a lasting, positive impact. Our work continues, and I look forward to ushering in this new era for the betterment of those we serve today and future generations.

Lynn J. Good  
Chairman, President and Chief Executive Officer

April 11, 2019

# Duke Energy's sustainability goals reflect a continued need to improve and excel.



## CARI BOYCE

| Senior Vice President,  
Stakeholder Strategy and  
Sustainability / President,  
Duke Energy Foundation

## ABOUT THIS REPORT

Change is constant in the energy industry. Whether it's technology, policy or customer expectations, the spectrum of issues in Duke Energy's 13th Sustainability Report is much different than when the first publication was issued in 2007.

Successful companies are those that recognize and adapt to the changing landscape of today's energy industry. The facts and figures in the annual Sustainability Report are key measures of the progress being made in this transformation. The numbers continue to show a company shifting from coal to natural gas, relying more on renewable energy, reducing environmental impact and modernizing the energy grid to support new technologies.

Duke Energy's sustainability goals reflect a continued need to improve and excel. The company's approach to business is complemented with efforts to engage stakeholders, embrace innovation, exceed customer expectations and positively impact communities.

In this year's report, you will read real-life examples of how Duke Energy is living up to its sustainability principles. As always, we aim to make sure our information is clearly presented and paints an accurate picture of the company. We are proud of the positive results we have achieved and are focused on further opportunities for improvement.

In addition to this Sustainability Report, you can find a detailed [Global Reporting Initiative Index](#) on our website. Duke Energy is also participating in the Edison Electric Institute and American Gas Association [sustainability reporting initiative](#).

Thank you for your interest in the 2018 Sustainability Report and Duke Energy.

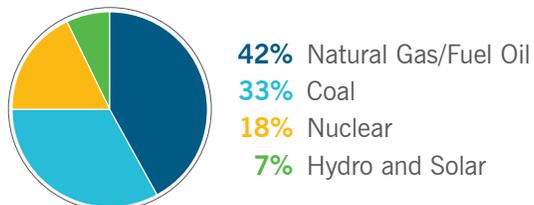
A handwritten signature in black ink that reads "Cari Boyce". The signature is fluid and cursive, with a long horizontal stroke at the end.

Cari Boyce  
Senior Vice President, Stakeholder Strategy and Sustainability  
President, Duke Energy Foundation

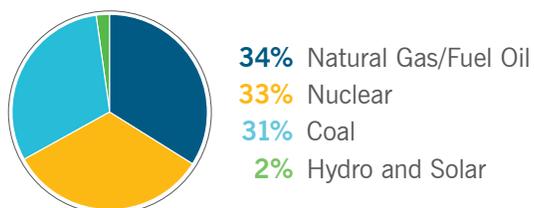
# DUKE ENERGY AT A GLANCE

## Electric Utilities and Infrastructure

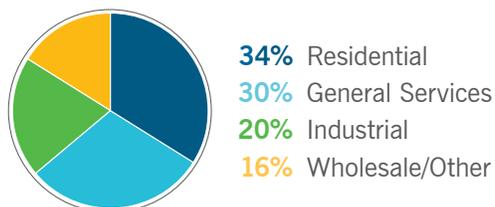
### Generation Diversity (percent owned capacity)<sup>1</sup>



### 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 50,800 megawatts (MW) of generating capacity
- Service area covers about 95,000 square miles with an estimated population of 24 million
- Service to approximately 7.7 million residential, commercial and industrial customers
- 280,200 miles of distribution lines and a 31,400-mile transmission system

<sup>1</sup> As of December 31, 2018.

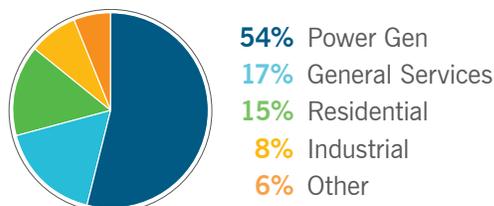
<sup>2</sup> For the year ended December 31, 2018.

<sup>3</sup> Contains projects included in tax equity structures where investors have differing interests in the projects' economic attributes (100 percent of the tax equity projects' capacity is included).

## 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.

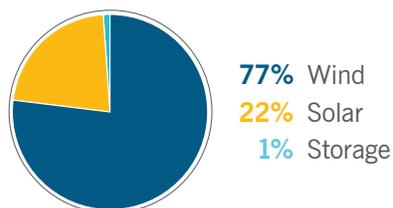
### Natural Gas Operations (throughput)<sup>2</sup>



- 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 33,300 natural gas transmission and distribution pipelines and 27,700 miles of natural gas service pipelines

## Duke Energy Renewables

### Generation Diversity (percent owned capacity)<sup>1,3</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.

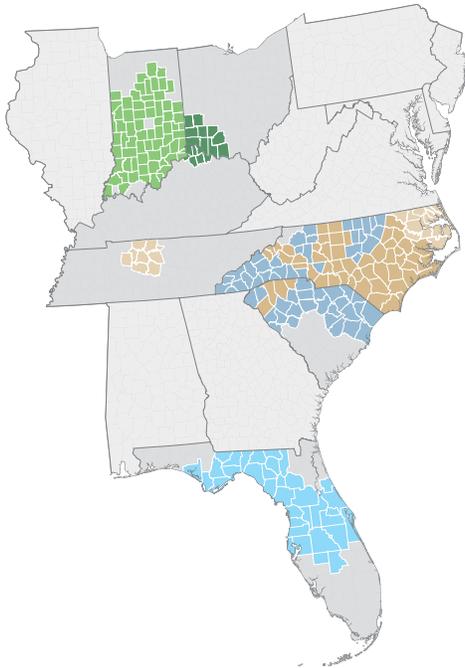
Duke Energy Renewables, part of the Commercial Renewables business segment, includes utility-scale wind and solar and distributed solar generation assets that total 2,991 MW across 18 states from 21 wind projects, 99 solar projects and one energy storage system. The power produced from renewable generation 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.

# 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/Piedmont Natural Gas)
- Duke Energy Florida

\*Portions may be served by other utilities.

## Commercial and Regulated Renewable Projects

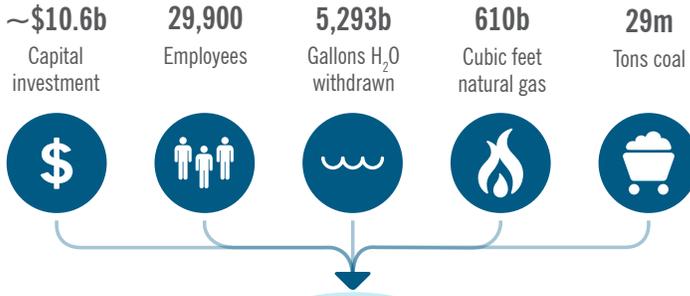
- Solar power projects
- Wind power projects
- Battery storage facility
- Third-party customers



# VALUE CREATION MODEL

## Major Resources

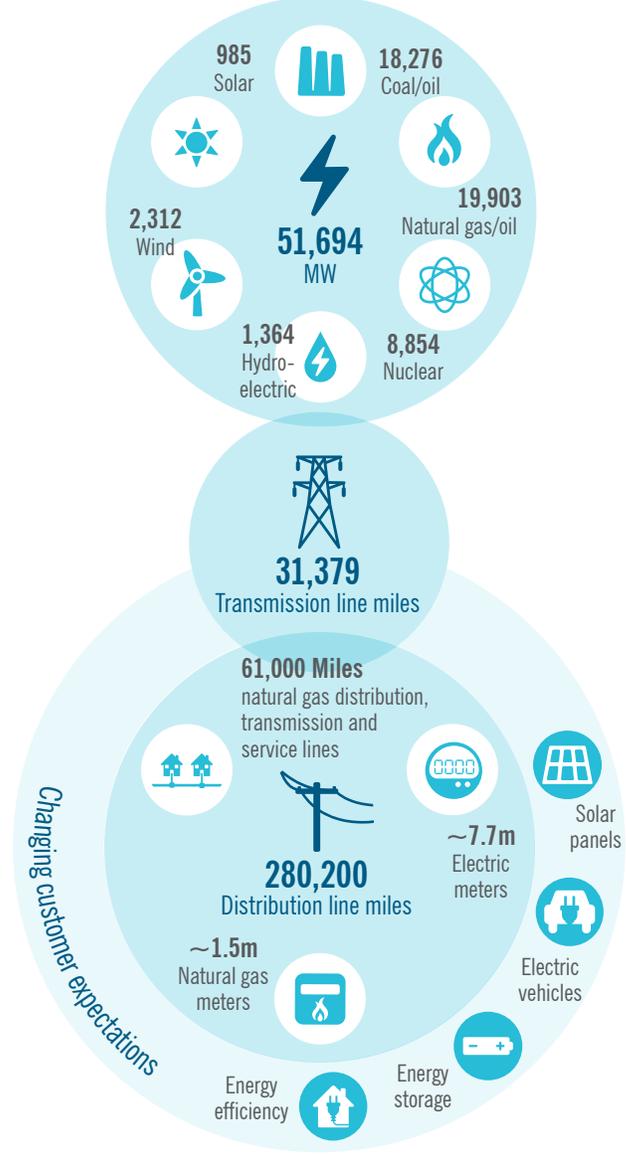
Duke Energy and its employees use natural resources, technology and talent to create an essential product that powers people's lives.



## Evolving Business Model

As customer expectations evolve, Duke Energy is evolving. The company's electric, natural gas and commercial renewables businesses are complemented by its focus on conservation and energy efficiency.

Data and communication  
Customers want more information more quickly.



**Generation**  
Our diverse energy mix is one of Duke Energy's strong points.

**Transmission**  
Moving electricity from power plants to customers – a vital part of Duke Energy.

**Distribution**  
New technologies mean Duke Energy must adjust how it delivers to customers – it's not one-size-fits-all.

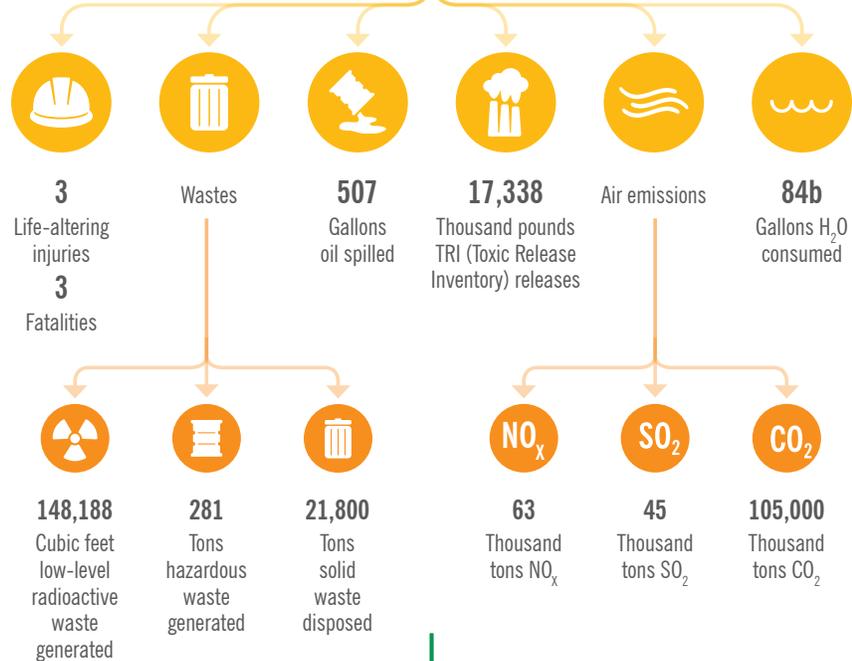
Impacts and Value Created on next page

# VALUE CREATION MODEL

CONTINUED

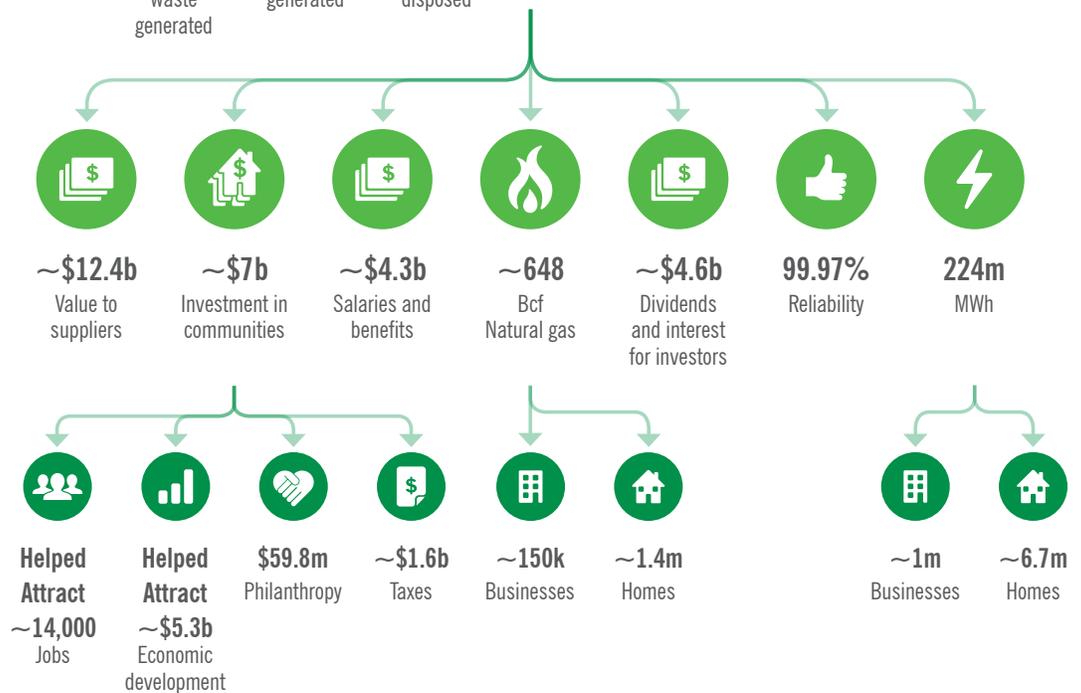
## Mitigating Impacts

Generating energy creates environmental impacts. Duke Energy works hard to mitigate them. Our track record over the past decade is good, but we employ a mindset of continuous improvement when it comes to environmental stewardship.



## Creating Value

We power lives, support communities and fuel the economy. Duke Energy also helps build strong communities with the taxes it pays, philanthropic contributions, employee volunteerism and the jobs we help attract.



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 2018 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.

# OUR STAKEHOLDERS AND WHAT MATTERS MOST

## Our Stakeholders

Engagement and collaboration with our stakeholders underpins Duke Energy's business strategy.

The company has a rich history of engaging with a diverse range of stakeholders, many of whom have differing views from us. Now more than ever, it is critical that we all work together to find common ground and work to transform our collective energy future.

We achieve better outcomes for our customers through collaboration. Recognizing the value of sustained engagement, we continue to expand our stakeholder engagement capabilities. Every stakeholder has a different priority, but they are all important. We work to understand those priorities and be open to compromise. Our goal is to find innovative and transparent solutions that effectively address these many competing interests.

Our jurisdictions currently have Advisory or Listening Councils. These councils provide an opportunity for Duke Energy to hear people from diverse stakeholder groups as the company develops and adapts its long-term business plans.

We are also making changes to solicit stakeholder input earlier than ever. For example, during a recent transmission siting project, the company worked with the local communities and landowners to understand the unique historic and cultural sensitivities, which led to significant changes to the final route selection.

Our business is different than most. The vitality of our communities depends upon energy, so we lack the option to stop making our product in the face of opposition. Therefore, we must find new ways to engage with stakeholders and find solutions that are workable for all to provide cleaner, affordable and reliable energy for our customers.

## 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 stakeholder feedback, surveys, thought leader perspectives, social and traditional media coverage, and shareholder proposals in our sector.

We have mapped our priority issues to the [United Nations Sustainable Development Goals](#) (SDGs), which aim to “end poverty, protect the planet and ensure prosperity for all.” Since their development in 2015, the 17 SDGs have gained traction with stakeholders concerned about sustainability issues. While there was alignment between our priorities and several of the SDGs, goals “Seven: Affordable and Clean Energy,” and “Thirteen: Climate Action,” are especially applicable to our company.

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 our No. one priority.

# OUR STAKEHOLDERS AND WHAT MATTERS MOST

CONTINUED



**KEY** | ● Our Stakeholders  
● What Matters Most

<b>GOAL STATUS</b>	● Achieved or on track
	● Currently not on track
	● Target 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 average.  
**2018 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). [\(See related graphic on page 20: "Duke Energy's Electric Rates: Below U.S. Average."\)](#)
  - **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.  
**2018 status:** As of year-end 2018, energy consumption was reduced by more than 16,700 GWh.  
**Updated goal:** Duke Energy is committed to surpassing its initial goal of cumulative reduction in energy consumption of 15,000 GWh by 25% by 2020.
  - **Energy efficiency – peak demand:** Achieve a cumulative reduction in peak demand of 6,000 MW (equivalent to 10 600-MW power plants) by 2020.  
**2018 status:** As of year-end 2018, peak demand was reduced by more than 5,900 MW.  
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:** The Duke Energy Foundation will invest more than \$30 million annually in charitable giving.  
**2018 status:** The Duke Energy Foundation contributed \$31.6 million. Total 2018 charitable giving was \$59.8 million. [\(See related graphic on page 22: "2018 Charitable Giving."\)](#)
  - **Community leader ratings:** During 2018, conduct a community leader study across all our service territories to maintain insight into our performance with this important customer segment.  
**2018 status:** Community leaders reported overall satisfaction ratings ranging from 85 to 97% across all Duke Energy jurisdictions. Final results showed satisfaction with our power quality and reliability performance, customer service and communications. Areas for improvement included minimizing rate increases/high bills, improving tree trimming performance and expanding our renewable energy options.
- New goal – Community volunteerism:** We will support our communities with more than 100,000 employee and retiree volunteer hours annually.

## 2 | GROWTH

Grow and adapt the business, and achieve our financial objectives.

### GOALS:

- **Economic development:** Stimulate growth in our communities and help attract at least 40,000 jobs and \$10 billion in capital investments from 2017 to 2021.  
**2018 status:** Since 2017, Duke Energy helped our communities attract more than 25,000 jobs and over \$11.1 billion in capital investments to our service territories. [\(See related graphic on page 30: "Economic Development."\)](#)
- **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).  
**2018 status:** Duke Energy's TSR results were:
  - 7.4% in 2018, compared to the UTY return of 3.5%.
  - 11.2% over three years on an annualized basis, compared to the annualized UTY return of 11.1%.
- **Renewables:** Own or contract 8,000 MW of wind, solar and biomass by 2020.  
**2018 status:** As of year-end 2018, Duke Energy owned or had under contract over 7,100 MW of wind, solar and biomass.
- **Governance:** Keep abreast of developments regarding corporate governance principles and recommend internal improvements as appropriate.  
**2018 status:** In 2018, the Board of Directors amended the Corporation's Principles for Corporate Governance to clarify the talent, experience and core competencies that the Board looks for in potential director candidates, including diversity of background, skill set, experience, thought, ethnicity, race, gender, age and nationality. As part of the Board's focus on director refreshment, the Board appointed one new director in 2018 and two new directors in 2019. The Board now consists of approximately 40% directors who are members of a traditional diverse class, including four women – with an average age of 63 and tenure of approximately five years. The Corporation also enhanced its disclosure of political expenditures in its Corporate Political Expenditure Report for the second half of 2018.
- **Transparency:** Achieve top-quartile performance in disclosure, as measured by Bloomberg Environmental, Social and Governance (ESG) Disclosure Scores for our industry.  
**2018 status:** As of March 29, 2019, Duke Energy had a Bloomberg ESG Disclosure Score of 56.6, the second-best score and in the top quartile of our peer U.S. utilities.

# OUR SUSTAINABILITY PLAN AND GOALS

CONTINUED

<b>GOAL STATUS</b>	● Achieved or on track
	● Currently not on track
	● Target not achieved

## 3 | OPERATIONS

Excel in safety, operational performance and environmental stewardship.

### GOALS:

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

**2018 status:** Tragically, in 2018 there were three work-related fatalities.

● **Safety – incident rate:** Achieve an employee Total Incident Case Rate (TICR) of 0.38.

**2018 status:** Total company employee TICR was 0.43. While we fell short of our aggressive target, based on preliminary 2018 industry TICR information, Duke Energy will be a top performing company for the fourth straight year.

**Reliable energy – generation:** During 2018, maintain the high reliability of our generation fleet with a nuclear optimized reliability of less than 203.41, fossil/hydro optimized reliability of less than 63.28 and renewables availability of at least 94.5%.

**2018 status:**

- **Nuclear:** Optimized reliability was 198.49.
- **Fossil/hydro:** Optimized reliability was 59.54.
- **Renewables:** Renewables availability was 95.3%.

● **Reliable energy – power delivery:**

During 2018, maintain the high reliability of our distribution system with a System Average Interruption Duration Index (SAIDI, or average time without power) of 145 minutes or less.

**2018 status:** SAIDI was 155 minutes. (Outages longer than five minutes, per customer. Excludes planned outages.)

● **Reliable energy – natural gas distribution:** Maintain the high reliability of our natural gas distribution system with two or fewer outages.

**2018 status:** There were three outages. (Outages impacting at least 100 customers that were not caused by a third party.)

● **Carbon – emissions:** Reduce the carbon dioxide (CO<sub>2</sub>) emissions from our generation fleet by 40% from the 2005 level by 2030 (equates to a reduction from 153 million tons to 92 million tons).

**2018 status:** Our generation fleet emitted about 105 million tons of CO<sub>2</sub>, a reduction of 31%.

● **Carbon – intensity:** 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).

**2018 status:** Generation carbon intensity was 0.94 in 2018, a reduction of 27%.

**New goal – Water withdrawals:** Reduce water withdrawals by our generation fleet by 1 trillion gallons by 2030 from the 2016 level (5.34 trillion gallons).

**New goal – Releases to water:** Reduce releases of TRI (Toxic Release Inventory) chemicals to water by half by 2030 from the 2016 level (212,000 pounds).

● **Solid waste:** Maintain the percentage of solid waste that is recycled at 80%. (This goal excludes Duke Energy Renewables, which has a relatively small waste stream.)

**2018 status:** Approximately 79% of solid waste generated in 2018 was recycled. We are working on strategies to meet this goal in the future.

● **Coal ash management:** Meet all federal and state regulatory requirements, including those of N.C. House Bill 630 to obtain a low-risk ranking for the remaining six sites and safely move and store 20 million tons of coal ash from the high-priority sites.

**2018 status:** In 2018, we safely moved 4.9 million tons of coal ash bringing the total amount removed from high-priority N.C. sites and stored in approved facilities to 19 million tons. We met all requirements for N.C. House Bill 630 and received a low-risk ranking for the remaining six N.C. sites from the North Carolina Department of Environmental Quality.

## 4 | EMPLOYEES

Develop and engage employees, and strengthen leadership.

### GOALS:

**Overall goal:** Foster a high-impact, engaged, diverse and inclusive culture built on strong leadership.

**New goal – Employee engagement:**

Strive for a companywide engagement score of 76% by 2022, measured by favorable responses to employee engagement surveys.

**New goal – Diversity and inclusion:**

Increase the percentage of females and minorities in our workforce to 25% and 20%, respectively, by 2020.

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

**2018 status:** Approximately 1,650 leaders completed a leadership training program in 2018. In addition, the top 350 leaders at Duke Energy and Piedmont Natural Gas were asked to spend a half-day visiting a Customer Care Center to help create a deeper customer mindset.

# MANAGEMENT APPROACH TO SUSTAINABILITY

## Sustainability Governance

Duke Energy has adopted a management approach to sustainability that engages all levels of the company from the Board of Directors to our employees. We also strive to embed sustainable business practices throughout the company.

### The Corporate Governance Committee of the Board of Directors

Provides board level oversight over sustainability issues.

### Chief Executive Officer

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

### Senior Vice President, Stakeholder Strategy and Sustainability | President, Duke Energy Foundation

Responsible for partnering with business units to develop sustainability goals, integrating sustainable business practices across the company and sustainability reporting.

### 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. Social and environmental 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.

## 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 Disclosures. Sections of this report with information responsive to the GRI indicators/disclosures include the following:

- **General:** [Introduction Section](#) (See pages 3-11), [Our Sustainability Plan and Goals Section](#) (See pages 12-13)
- **Economic:** [Customers Section](#) (See pages 15-23), [Growth Section](#) (See pages 24-33)
- **Environmental:** [Operations Section](#) (See pages 34-46), [Growth Section](#) (See pages 24-33)
- **Social:** [Employees Section](#) (See pages 47-53), [Customers Section](#) (See pages 15-23)

# 1

## CUSTOMERS

Improve the Lives of Our Customers and Vitality of Our Communities





## CUSTOMERS

### 2018 HIGHLIGHTS

- As of year-end 2018, customer energy consumption and peak demand were reduced by more than 16,700 gigawatt-hours and 5,900 megawatts, respectively.
- Customers benefited from electric rates below the national average in all customer classes and all service areas for the fifth consecutive year.
- Installed 1.6 million smart meters in 2018. To date, more than 62 percent of our customers now have smart meters. Smart meters provide real-time information that enables customers to make better decisions about their energy usage.
- During 2018, the Duke Energy Foundation contributed \$31.6 million to our communities, and our employees and retirees volunteered 126,000 hours.
- Developed a human rights policy to clearly articulate and demonstrate our respect for international human rights principles.

### CHALLENGES AND OPPORTUNITIES

- Respond to the accelerating pace of industry transformation and use data, technology and insights to bring customers better value.
- Continue our investments to create a smarter, greener energy grid that is also more resilient and better prepared for severe weather events.
- Continue to engage with stakeholders to identify positive outcomes to issues important to our communities.



| Duke Energy crews repair equipment damaged by hurricane winds.

## Expanded Referral Program Delivers Energy Efficiency

As customer expectations change, Duke Energy is working to better serve our customers.

Duke Energy's Referral Network launched its Find It Duke campaign to help customers find professionals for home improvement services such as attic insulation and HVAC and water heating repair and replacement. Contractors in the network can assist customers in qualifying for up to \$1,450 in rebates for upgrades.

At the new Find It Duke website, customers can track the status of an existing rebate application, use a cost estimator tool to estimate savings, find special discounts on energy-efficient products and services and get tips on saving energy.

The program has doubled the number of referrals each year since 2016 with more than 21,000 referrals generated in 2018 in the Carolinas. The program expanded to Kentucky, Indiana and Ohio in 2018.

In addition to new programs, Duke Energy customers continue to benefit from established programs. Since 2009, the company has delivered more than 90 million energy-efficient lighting products to residential customers at deeply discounted prices. Newly expanded options for lamps and fixtures provide even more energy-efficient solutions for customers.

LEDs use up to 66 percent less energy and last 24 times longer than traditional bulbs, leading to savings on customers' bills. Eligible customers can receive lighting options at participating retailers, accessing company-offered programs and by visiting the online store.

The company continues to expand its portfolio of [energy efficiency programs](#) to help the environment and customers get the most value for their money.

## Duke Energy Restores Power After Two Major Hurricanes

Duke Energy crews responded to massive customer power outages after two back-to-back hurricanes struck the company's southeast U.S. service area in fall 2018.

### Hurricane Florence

In September, Hurricane Florence made landfall and slowly moved inland through North Carolina and South Carolina, cutting power to more than 1.8 million Duke Energy customers and causing historic flooding, widespread structural damage and multiple highway closures.

Though the flooding and road closures presented major challenges, repair crews restored power to nearly 1.2 million customers within three days after the hurricane's landfall, and most of the remaining customers within seven days.

In advance of the hurricane, Duke Energy staged more than 20,000 repair workers – its own and those provided by other utility companies nationwide – in what was Duke Energy's largest storm resource mobilization ever.

Duke Energy earned the Edison Electric Institute (EEI) "Emergency Recovery Award" for the company's power restoration efforts after Hurricane Florence.



| Duke Energy electrical substation immersed in floodwaters after Hurricane Florence.

“Duke Energy’s crews worked tirelessly in hazardous conditions to quickly and safely restore power,” said EEI President Tom Kuhn. “They are truly deserving of this award.”

### Hurricane Michael

In October, Hurricane Michael ripped through the Florida Panhandle with 155 mph winds and record storm surges before speeding north into Alabama, Georgia, South Carolina and North Carolina as a downgraded – but still powerful – tropical storm. In Florida, the category 4 hurricane destroyed entire Gulf Coast communities, demolishing houses, apartment buildings, shopping centers and much of the electric grid.

Duke Energy crews restored power to more than 75,000 Florida customers in the immediate aftermath of the storm.

They also began the longer-term task of rebuilding obliterated sections of the Panhandle’s electric grid, including transmission towers, utility poles, substations and transformers.

One day after striking Florida, what became Tropical Storm Michael hit the Carolinas, cutting power to more than 1 million Duke Energy customers, most of them in North Carolina. More than 10,000 repair workers restored power to most customers within five days.

“It was a challenging month-long period for our customers and employees, who endured back-to-back historic storms,” said Harry Sideris, Duke Energy’s chief distribution officer.

### Shared Solar Shines on All Customers

Shared Solar, sometimes referred to as Community Solar, allows customers to benefit from renewable energy without having to have solar panels at their premises.

In South Carolina, the company’s first Shared Solar program kicked off in 2018. Additional facilities are expected online in South Carolina in 2019, with expansion in other states planned.

Customers joining the program pay a one-time application fee and a monthly subscription cost to fund their share of supporting the operation of a solar facility located in Dillon County.

The company is waiving the application cost and upfront fees for qualified low-income customers to make the offering more widely available. By subscribing to the Shared Solar Program, customers receive a monthly credit from Duke Energy equal to the amount of solar energy the customer’s share produces.

The Dillon County facility was recently named The Whitney M. Slater Shared Solar Facility to honor a local community resident. Slater was a Darlington, South Carolina, nursing student attending North Carolina State University when she died of breast cancer at the age of 21. After receiving her diagnosis, she made it her mission to raise awareness about environmental health and breast cancer. Her mother attended the ceremony to kick off the program in August.

The 7-megawatt facility has more than 20,000 solar panels, and supplies more than 1,000 homes during peak output. Expect Shared Solar offerings from the company to continue to grow.

## Grid Improvements Help Keep the Power On

Duke Energy's multiyear grid improvement initiative advanced significantly through 2018, providing increased benefits to customers and demonstrating the value of smart technologies during historic storms that impacted the company's service area.

Duke Energy is making strategic, data-driven investments across its six-state service area to improve reliability, strengthen the grid against cyber and physical threats, expand solar and innovative technologies, and provide customers with the intelligent information they need to make smart energy choices and save money.

The company's smart-thinking grid technology, which is currently being installed in every state it serves, quickly identifies outages and automatically reroutes power to restore customers – often in less than a minute – and can help to reduce the number of customers affected by an outage by as much as 75 percent. A smart-thinking grid also supports the two-way power flow needed to effectively integrate rooftop solar and other distributed technologies.

Smart-thinking technologies delivered significant benefits to customers during Hurricane Florence by helping to avoid more than 80,000 extended customer outages and keeping the power on for thousands of customers when they needed it most. These self-healing technologies also aided power restoration in Florida following Hurricane Michael in October. In total,

around 700,000 extended outages were avoided across the company's smart-thinking grid in 2018, saving customers 1.58 million hours of outage time.

Following Hurricane Michael and a major winter storm in December, crews working in areas where smart meters have been deployed were able to “ping” meters at homes and businesses along repaired electric lines to instantly determine if power was restored or if more repairs were needed. Previously, this work could only be done by manually patrolling each power line to confirm restorations. This smart meter technology helped to shorten final restorations after recent major storms by up to two days, on average.

Duke Energy has also delivered improved options and control for customers in 2018 through smart meter deployments taking place in the Carolinas, Florida and the Midwest.

With about 5 million already deployed, smart meters are delivering information to help customers take control of their energy use and save energy and money before their bill arrives. They also provide improved outage detection and can help to speed restoration following a major outage.

Additional work in 2018 included grid hardening activities, physical and cyber security improvements and targeted undergrounding of outage-prone lines, all of which will help deliver a better experience for customers when the next storm strikes.



### STRATEGIC INVESTMENTS

Duke Energy is making strategic, data-driven investments across its six-state service area to improve reliability, strengthen the grid against cyber and physical threats, and expand solar and innovative technologies.

With severe weather events increasing in frequency and severity across the company's service area, improving the grid to make it stronger and more resilient will continue to be a top priority for Duke Energy to reliably serve customers now and in the future.

## Transforming the Customer Experience

At Duke Energy, the customer is at the center of our mission. Evolving customer expectations, emerging technologies and changing public policies all converge to create a dynamic environment for Duke Energy and the industry.

Duke Energy is working to build genuine connections with all customers by listening, anticipating their needs and offering solutions. The company is now using Net Promoter Score, a metric that tracks customer loyalty and helps the company get better insight into improving customer satisfaction.

Using data and analytics, the company is executing a long-term, customer-focused strategy designed to deliver greater value to our customers.

An example of this work is a builder and developer portal and mobile app that is designed to provide more transparency in our service – making project management for these customers easier and more consistent.

These tools allow builders to easily access the most updated information on their project, get direct contact information for their technicians, and submit service requests – all without ever having to call our contact center.

## DUKE ENERGY'S ELECTRIC RATES: BELOW U.S. AVERAGE

In effect as of July 1, 2018  
(cents per kilowatt-hour (kWh))

### Residential

Duke Energy Kentucky	9.95
Duke Energy Carolinas-NC	10.47
Duke Energy Carolinas-SC	11.39
Duke Energy Ohio	11.65
Duke Energy Progress-NC	11.82
Duke Energy Indiana	12.28
Duke Energy Florida	12.42
Duke Energy Progress-SC	12.62
<b>U.S. AVERAGE</b>	<b>14.28</b>

### Commercial

Duke Energy Progress-NC	8.51
Duke Energy Ohio	8.66
Duke Energy Carolinas-NC	9.21
Duke Energy Progress-SC	9.31
Duke Energy Kentucky	9.52
Duke Energy Indiana	9.69
Duke Energy Carolinas-SC	9.73
Duke Energy Florida	10.13
<b>U.S. AVERAGE</b>	<b>12.04</b>

### Industrial

Duke Energy Ohio	7.74
Duke Energy Progress-SC	8.01
Duke Energy Progress-NC	8.16
Duke Energy Carolinas-NC	8.33
Duke Energy Indiana	8.67
Duke Energy Carolinas-SC	8.74
Duke Energy Kentucky	8.88
Duke Energy Florida	9.30
<b>U.S. AVERAGE</b>	<b>10.26</b>

Source: Edison Electric Institute Typical Bills and Average Rates Reports, Summer 2018 (latest available).

Notes: Rates are based on the following typical bill assumptions. Residential: 1,000 kWh per month usage. Commercial: 40-kW demand and 14,000 kWh per month usage. Industrial: 1,000-kW demand and 400,000 kWh per month usage.

The Duke Energy Kentucky industrial rate shown here differs from what was published in the EEI reference, because the published rate was incorrect.



| Duke Energy employees volunteer their time to numerous nonprofit community groups.



#### CHARITABLE GIVING

Combined with the other Duke Energy In Action programs, the company's employees and retirees contributed \$9.5 million in 2018 and volunteered 126,000 hours.

Digital tools and other technology provide more opportunity to serve customers in new and innovative ways. The company's Home Energy Report allows customers to see how their electrical usage compares to similar homes. The text service to customers for outage information was especially impactful during 2018 hurricanes.

Duke Energy is creating solutions, driven by data, that deliver real value for the communities we serve.

### Building Powerful Communities

At Duke Energy, employees believe in the power of giving. For more than a century, they have supported local communities through volunteerism and charitable giving.

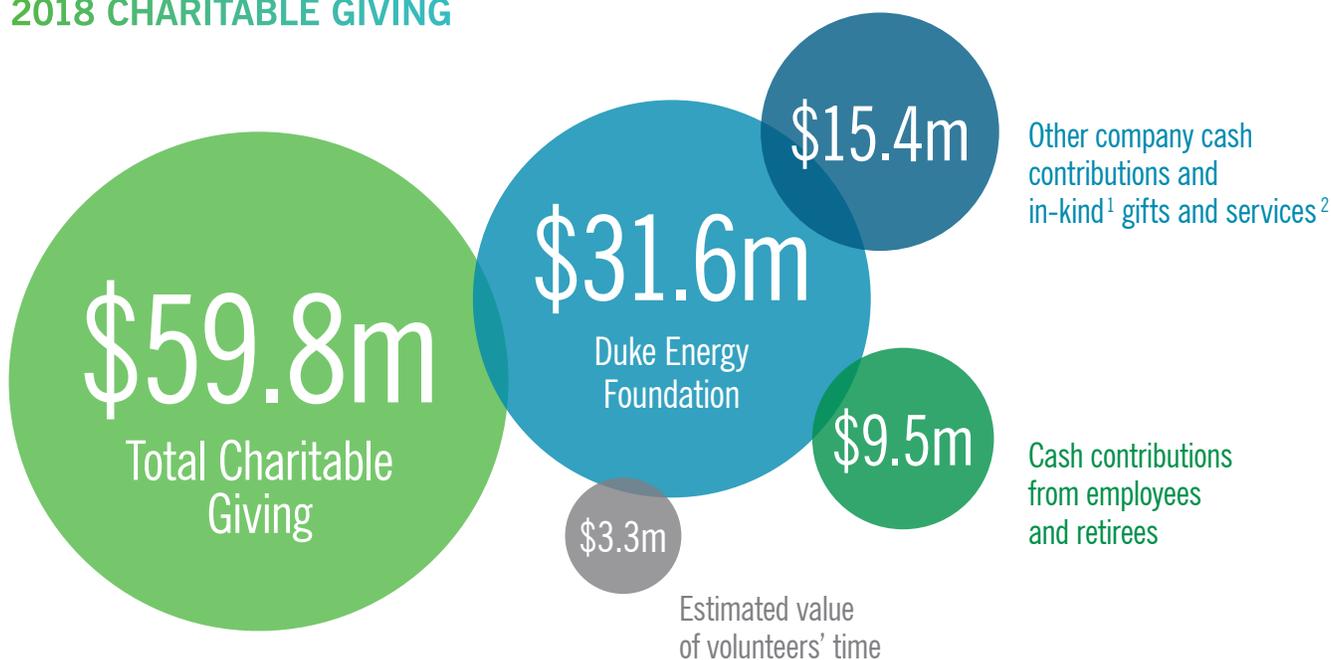
In 2018, the company launched its first annual Power of Giving campaign, which empowers employees to support the cause(s) of their choice and have their donations matched dollar for dollar by the Duke Energy Foundation.

Through the campaign, Duke Energy employees pledged \$5.3 million in charitable contributions to more than 3,700 different organizations representing a diverse array of causes. When combined with the Foundation matching gifts, that's more than \$10 million in funding to support local communities. Combined with the other Duke Energy In Action programs, the company's employees and retirees contributed \$9.5 million in 2018 and volunteered 126,000 hours.

"I give back because it's aligned with my purpose," said Keith Gabriel, economic development specialist for Duke Energy. "Duke Energy enables me and supports me to go out to our communities and make a difference."

Also in 2018, the Duke Energy Foundation announced a new philanthropic grant program, launching this year, called Powerful Communities. Through the Powerful Communities grant program, the Foundation awards charitable grants to nonprofit organizations working to bolster education, develop the future workforce of the energy sector, conserve and protect our environment and strengthen local communities.

## 2018 CHARITABLE GIVING



<sup>1</sup> Payment made in the form of goods and services instead of money.  
<sup>2</sup> Includes charitable giving associated with regulatory settlements.

### Duke Energy Affirms Support for Human Rights

Since the company was founded more than a century ago, Duke Energy has made respect for our employees' and communities' rights a fundamental belief inherent in the way we operate. To amplify this belief, the company adopted a [Human Rights Policy](#) in April 2019 that outlines policies and practices that support an ongoing commitment to, and respect for, human rights.

Duke Energy respects international human rights principles, including those identified in the United Nations Universal Declaration of Human Rights and the United Nations Guiding Principles on Business and Human Rights. The company's [Code of Business Ethics](#) and [Supplier Code of Conduct](#) provide the backbone to the commitments outlined in the human rights policy, which include:

- Workforce:** We uphold human and workplace rights in all our operations, treat workers fairly and without discrimination and provide working conditions that reflect the human dignity of the people working at Duke Energy. Furthermore, we prohibit the use of forced labor, child labor and any form of human trafficking.

- Communities and Stakeholders:** Duke Energy respects the rights of people in the communities it serves and seeks to operate the business in ways that protect the environment and mitigate adverse impacts from operations.
- Suppliers and Partners:** Duke Energy expects its suppliers of goods and services to adhere to the same beliefs that the company has prioritized, applying them to how they do business locally and around the world.

Duke Energy engages an independent, third-party vendor to operate its EthicsLine, which is available 24 hours a day, seven days a week, via phone or online. Employees, suppliers, customers and other stakeholders can report a human rights concern through the EthicsLine, which provides anonymity, or directly to the company.

Adherence to and respect for human rights is more than a verbal commitment at Duke Energy. It's an ongoing process of learning, evaluating and improving how we operate. Duke Energy will conduct periodic human rights assessments to determine whether its processes and systems used to identify and investigate any alleged violations are appropriate, and will publicly report on its human rights-related commitments in the annual Sustainability Report.

## DIVERSE SUPPLIER SPENDING<sup>1</sup>

(in millions)	2015	2016	2017	2018
Spending with Tier I diverse suppliers <sup>2</sup>	\$633	\$681	\$776	<b>\$850</b>
Spending with Tier II diverse suppliers <sup>3</sup>	\$405	\$494	\$437	<b>\$492</b>
Total	\$1,038	\$1,175	\$1,213	<b>\$1,342</b>

1 Piedmont Natural Gas data from the first three quarters are included in 2016. Full-year data are included beginning in 2017.

2 Tier I represents direct purchases from diverse suppliers.

3 Tier II consists of spend by Duke Energy suppliers with diverse suppliers/subcontractors.



### \$12 BILLION

To provide electricity, natural gas, and renewable energy to our customers, Duke Energy purchased more than \$12 billion worth of goods and services in 2018.

### Supplier Relationships Advance Company Goals

To provide electricity, natural gas, and renewable energy to our customers, Duke Energy purchased more than \$12 billion worth of goods and services in 2018.

Our supplier partners share the company's commitment to the local economies and communities we serve. We spent more than \$4 billion with local suppliers in 2018, and our annual spending with minority-, women-, veteran-, service-disabled veteran-owned and HUBZone businesses has exceeded \$1 billion every year since 2015.

Duke Energy is committed to environmental stewardship and partners with vendors who are themselves environmentally friendly and support the company's sustainability goals. Many of those suppliers are also locally based and/or diverse. Duke Energy's expectations for suppliers are described in detail in our [Supplier Code of Conduct](#), which was updated in 2018.

Our suppliers help us create a better energy future. In 2018, more than 100 individuals representing about 40 companies attended the third annual Duke Energy Supplier Exchange Forum. The company recognized key suppliers for excellence in corporate responsibility, diversity and safety – all important aspects of the company's supply chain objectives.

With the inclusion of local and diverse suppliers as one of the company's priorities, Duke Energy was honored for having a Top Veteran-Friendly Supplier Diversity Program by the U.S. Veterans magazine.

Our efforts to identify and recruit diverse suppliers are important to the company's overall supply chain sourcing strategy. The relationships we have with state and community economic development organizations (veteran-related and others) enables Duke to positively impact our communities while creating enhanced value for the company.

# 2

## GROWTH

Grow and Adapt the Business and Achieve Our Financial Objectives





## GROWTH

### 2018 HIGHLIGHTS

- Helped our communities attract nearly 14,000 new jobs and \$5.3 billion in capital investments to our service territories.
- Achieved adjusted diluted earnings per share of \$4.72 – at the top half of our original guidance range.
- Increased the quarterly dividend by 4.2 percent; 2019 will mark the 93rd consecutive year Duke Energy has paid a quarterly dividend.
- The company completed its inaugural issuance of \$1 billion in green bonds for the Duke Energy Carolinas utility during late 2018. This was followed up with an issuance of \$600 million in green bonds for the Duke Energy Progress utility in early 2019.
- As of year-end 2018, owned or had under contract 7,100 megawatts (MW) of wind, solar and biomass.
- Outlined plans to deploy about 300 MW of battery storage projects in the Carolinas over the next 15 years.

### CHALLENGES AND OPPORTUNITIES

- Continue to help attract jobs and capital investments in our communities through our economic development programs.
- Work diligently to complete the Atlantic Coast Pipeline project to bring low-cost gas supply and economic development opportunities to the Mid-Atlantic.
- Deliver value to our customers and grow our business by investing \$37 billion in growth capital over the next five years.
- Maintain our position as an industry leader in environmental, social and governance disclosure.



| Duke Energy is a national leader in energy storage using large-scale batteries.



#### NEW PROJECTS

Over the next 15 years, the company has more than 400 megawatts of battery storage planned, with new projects being put online and announced around the country.

### Batteries Secure a Place in Future Energy Mix

Battery storage is showing signs of being a major factor in the future energy mix, and Duke Energy is one of the leading companies pushing its development.

Over the next 15 years, the company has more than 400 megawatts (MW) of battery storage planned, with new projects being put online and announced around the country. That's about 10 times more than Duke Energy has online today.

In addition to simply storing energy for use at another time, battery storage can help expand the development of renewable energy and support a modernized energy grid.

The company announced plans to bring 300 MW of battery storage in the Carolinas online over the next 15 years – a \$500 million investment.

In western North Carolina, the company has one battery project online in Haywood County, with two others set to be online in 2020 in Buncombe and Madison counties.

In Indiana, Duke Energy is planning to install a 5-MW battery storage system and 3 MW of solar that will operate as a microgrid at the Indiana National Guard's Camp Atterbury training operation.

In Maryland, a similar microgrid project went online in 2018 at two government facilities.

The microgrid – connected energy sources like solar and a battery – can serve a customer on its own. It can also help with reliability and grid security.

Battery storage can not only store excess energy for when its needed, it can also control energy flow inside power lines, which results in fewer outages and flickers.

For example, clouds moving over solar panels and winds changing throughout the day lead to fluctuations in energy supply. For the energy grid, which depends on a perfect match between energy produced and customer demand, it's difficult to manage.

Even a slight change in frequency or voltage can cause interruptions in power to a home or business. When needed, batteries can react in a fraction of a second to absorb the swings and stabilize the flow of energy.

Of course, batteries are not the only energy storage method. The company has more than 2,000 MW of pumped storage hydro power. Over the next few years, Duke Energy will increase the capacity at its Bad Creek facility in South Carolina by more than 300 MW as it upgrades the facility.



| Duke Energy continues to build large solar power facilities in multiple states.

## In Many Ways, Solar Power Keeps Growing

Solar, in all shapes and sizes, was the big renewable energy story at Duke Energy in 2018.

Driven by rebate programs and other incentives, Duke Energy's number of rooftop solar customers in our regulated states rose around 30 percent during the year. Florida, North Carolina and South Carolina remain the top Duke Energy states for privately owned solar systems, with more than 30,000 customers owning facilities.

In Florida, the 74.9-megawatt (MW) Hamilton Solar Plant came online in Jasper – making it the company's largest solar facility to date.

In 2018, Duke Energy broke ground on the Columbia Solar Power Plant in Fort White, Florida. Duke Energy will own, operate and maintain the 74.9-MW facility, which is expected to be fully operational in 2020. In March 2019, the company announced three more solar projects in Florida, totaling 195 MW, that are expected to be in service in late 2019 or early 2020.

In the Carolinas, the company continues to roll out new offerings for customers interested in solar power. In its first two years, around 3,000 customers took advantage of Duke Energy's \$62 million solar rebate program in North Carolina. A similar, and just as popular, program is wrapping up in South Carolina.

The company will also be offering solar leasing to North Carolina customers through a subsidiary that will build, own and operate on-site solar facilities for customers. The program will provide customers another option to access renewable energy without paying a large upfront investment.

For large customers, the company's new Green Source Advantage program will allow customers to secure renewable power to meet sustainability and renewable energy goals. This "green tariff" provides customers the flexibility to negotiate directly with solar developers to add more renewable energy to the grid, with no cost to other customer classes.

The company's unregulated unit, Duke Energy Renewables, expanded its operating solar portfolio to another state, with the 24.9-MW Shoreham Solar Commons Project near Brookhaven, New York. The project, placed into service in July, is about 60 miles east of Manhattan. Long Island Power Authority is purchasing the power produced from the project from Duke Energy Renewables.

The company continues to be on track for its sustainability goal of owning or purchasing 8,000 MW of wind, solar and biomass capacity by 2020. At the end of 2018, the company's overall total was 7,100 MW.



| Charging an electric vehicle: Duke Energy is helping to install hundreds of charging stations.

## Is Electricity a Better Fuel Choice?

Electricity fuels so much of our lives, it's difficult to imagine it powering even more.

But that's not how Duke Energy sees it. The company is now discovering new ways electricity can be the fuel of choice over other options – promoting efficiency and lower emissions to the environment.

**Electric Vehicles** – Electric vehicles (EVs) save consumers money through reduced fuel and maintenance expense. And, they contribute to cleaner air through lower emissions. Using electricity instead of gasoline as a fuel source drops the emissions from an EV by half versus a gas-powered automobile.

There are about 1 million EVs in the United States today. But that number is expected to grow to about 5 million by 2025. Duke Energy has around 160 electric vehicles in its fleet, and the company has committed that 5 percent of new vehicle purchases will be electric.

Duke Energy is helping build the public EV charging station infrastructure needed to support EVs. Two years ago, Duke Energy provided grants to towns and cities in North Carolina to locate 200 public EV charging stations in the state. Most of these stations have now been installed. By 2022, the company will have installed more than 500 charging stations in Florida.

**Standby Refrigeration** – So much of the nation's food supply is transported by diesel trucks and refrigerated trailers. But many trailers use diesel-driven refrigeration units at distribution warehouses as they wait to be dispatched. Duke Energy has worked with two companies in North Carolina to install plug-in outlets – allowing the refrigerated trailers to use electricity instead of diesel fuel.

The North Carolina projects – at Golden States Foods in Garner and Merchants Distributors in Hickory – are plugging in for lower operating costs, a quieter workplace and reduced emissions.



### ELECTRIC VEHICLES

There are about 1 million EVs in the United States today. But that number is expected to grow to about 5 million by 2025.

**Forklifts** – Noise and emissions can be drastically cut as adoption of electric forklifts increases in warehouses across the nation. Like heavy-duty EVs, they are more expensive than traditional diesel-fuel vehicles, but reduced operating costs allow companies to recoup their investment in two years.

Since electric forklifts have 90 percent fewer parts than internal combustion vehicles, repair costs are much lower. Plus, they provide a health benefit to warehouse employees. The electric forklifts have no airborne emissions and are quieter to work around.

## Growing Sustainably on Five Major Fronts

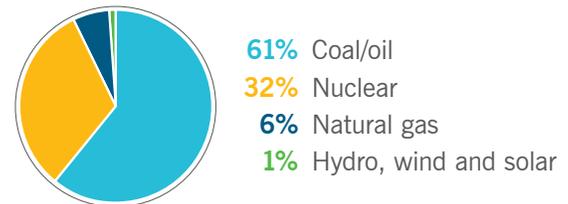
Duke Energy continues to build a sustainable and smarter energy future:

- **Modernizing the energy grid.** Duke Energy is investing to create a smarter energy grid that will give customers more control over their energy usage, boost customer convenience, increase service reliability, accommodate additional renewable energy and bolster energy system security – both physical and cyber. [\(See related article on page 19, “Grid Improvements Help Keep the Power On.”\)](#)
- **Generating cleaner energy.** Duke Energy continues to generate cleaner energy by investing in natural gas-fired power plants, solar and wind energy, and other renewable sources.
- **Expanding natural gas infrastructure.** Natural gas will play a major role in Duke Energy’s cleaner energy future. The company is investing in natural gas-fired power plants, interstate natural gas pipelines, and the retrofitting of coal-fired power plants to also burn natural gas. [\(See related article on page 32, “Natural Gas Plays Key Role in Cleaner Energy Future.”\)](#)

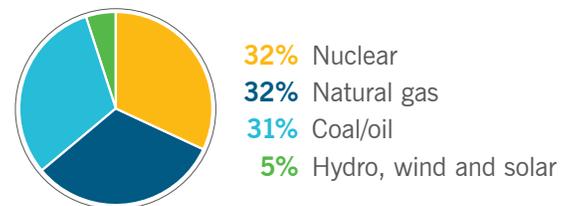
## MOVING TOWARD A CLEANER GENERATION FLEET AND INCREASED FUEL DIVERSITY

(megawatt-hour output)

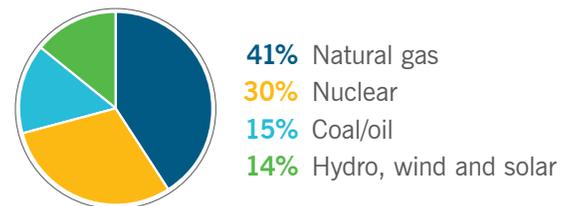
2005<sup>1</sup>



2018<sup>1,2</sup>



2030E<sup>3</sup>



<sup>1</sup> 2005 and 2018 data based on Duke’s ownership share of U.S. generation assets as of December 31, 2018.

<sup>2</sup> 2018 data excludes 8,519 GWh of purchased renewables, equivalent to approximately 4% of Duke Energy’s output.

<sup>3</sup> 2030 estimate will be influenced by customer demand for electricity, weather, fuel availability and prices.

## ECONOMIC DEVELOPMENT

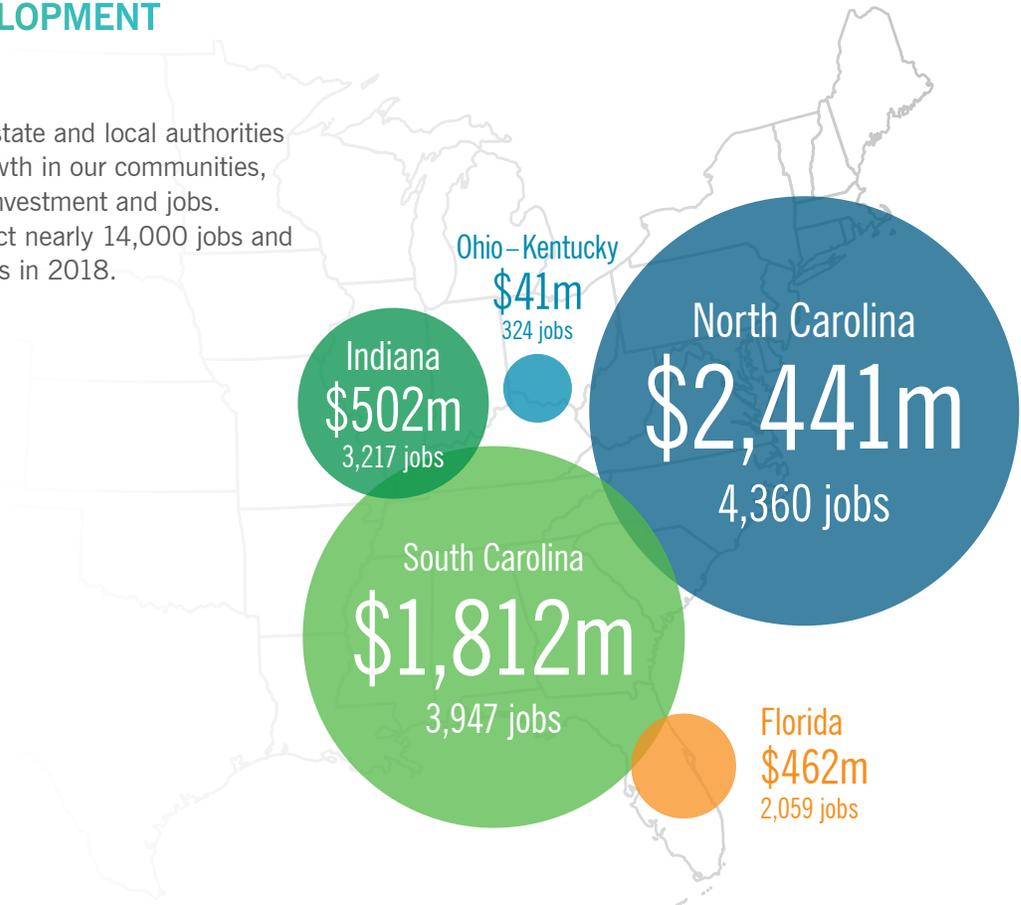
Duke Energy works with state and local authorities to promote economic growth in our communities, helping attract business investment and jobs. Duke Energy helped attract nearly 14,000 jobs and \$5.3 billion of investments in 2018.

**\$5,300m**

Total Capital Investment  
\$ (million)

**14,000**

Total Jobs



- Transforming the customer experience.** Duke Energy is working hard to further improve the customer experience. New technology is shortening and sometimes eliminating power outages. Smart meters are giving customers new ways to manage and reduce electricity usage, saving them money. Electric vehicle charging stations are giving customers new transportation fuel options.
- Engaging stakeholders.** Fortune magazine named Duke Energy to its 2019 “World’s Most Admired Companies” list – an indication that Duke Energy’s many diverse stakeholders recognize and value the company’s significant progress on its future-focused journey. The company continues to work collaboratively with regulators, legislators, environmentalists, consumer advocates and many others on its multiple sustainability and modernization initiatives.

### Economic Development: Jobs and Major Investment

Duke Energy’s economic development team in 2018 helped bring nearly 14,000 new jobs and \$5.3 billion in private-sector investment – through 94 projects – to the six states served by the company’s electric utilities.

Site Selection magazine named Duke Energy to its “Top Utilities in Economic Development” list for the 14th consecutive year.

Duke Energy’s economic development specialists work to attract new industry to North Carolina, South Carolina, Florida, Indiana, Ohio and Kentucky. The team also encourages existing companies in those states to expand at home, rather than look elsewhere.

In 2018, the team evaluated 26 properties for potential business and industrial development through Duke Energy’s Site Readiness Program. The program identifies potential business and industrial sites, then

## ENVIRONMENTAL, SOCIAL AND GOVERNANCE RATINGS

Duke Energy benchmarks its environmental, social and governance practices against best-in-class and peer companies. The risk ratings provided for Duke Energy by ISS, a leading corporate governance and responsible investment advisory service to the financial community, are provided below.

	QuickScore 2017 <sup>1</sup>	QualityScore 2018 <sup>1</sup>	QualityScore 2019 <sup>1,2</sup>	Rating Scale
<b>Environmental</b>	—	—	<b>3</b>	1 = Lowest risk (best rating) 10 = Highest risk
<b>Social</b>	—	—	<b>4</b>	
<b>Governance</b>	3	3	<b>2</b>	

Published with permission of ISS.

1 As of March 1.

2 2019 is the first year that the ISS environmental and social scores were available at the time our sustainability report was published.

partners with local government agencies and economic development professionals to build strategies to bring key infrastructure – water, sewer, natural gas and electricity – to those properties.

The team also completed a study of potential industrial development sites along a proposed natural gas pipeline in eastern North Carolina, and deployed a new drone program to assist in site evaluations in all six states.

The Duke Energy Foundation also provided more than \$1 million to local economic development agencies and initiatives to fund job creation and business development projects.

“Economic development is a team sport, and we are a key position player – working with many local and regional partners in different capacities to achieve success,” says Stu Heishman, Duke Energy’s vice president of economic development. “We’re strongly committed to bringing capital investment and jobs to the communities we serve.”

Three members of Duke Energy’s economic development team received national recognition in 2018 from site selection professional organizations: Consultant Connect named Margaret O’Riley and Erin Schneider to its “North America’s Top 50 Economic Developers” list; DCI named Danielle Ruiz to its “40 Under 40” list of 40 rising stars under age 40 in the economic development field.

### A Strong Civic Voice

Having constructive dialogue with lawmakers and regulators is vital to a highly regulated business such as Duke Energy. As one of the largest and most diverse power holding companies in the United States, Duke Energy is well-positioned to provide a balanced view on issues that impact the company, industry and communities.

The company advocates for practical public policies in Washington, D.C., and state capitals throughout its service territory. And, the company encourages civic participation at all levels – from voting in local elections to engaging with federal regulators.

Duke Energy has many tools to ensure it meets its mission to create business value through better public policy. One such tool is DukePAC, a voluntary, nonpartisan political action committee that leverages the collective financial contributions of eligible employees to support political organizations and candidates seeking elected office at the federal and state levels. In 2018, DukePAC contributions were \$1,518,430.

Duke Energy’s total reportable federal lobbying expenses in 2018 were \$5,345,592. That amount includes \$1,188,921 in trade association dues (includes dues in excess of \$50,000) to support policy research and advocacy. The company also contributed approximately \$1,623,700 to Section 527 organizations created to support the nomination, election, appointment or defeat of a candidate.



| Duke Energy's new natural gas-fired power plant in Anderson County, South Carolina.

Duke Energy's [Political Expenditures Policy](#) requires compliance with laws and regulations governing political contributions, government interaction and lobbying activities. It also requires a semiannual update on political expenditures to the Corporate Governance Committee of the Duke Energy Board of Directors. The company is legally prohibited from making direct contributions to candidates for U.S. federal offices and certain state offices.

## Natural Gas Plays Key Role in Cleaner Energy Future

Natural gas is playing a key role as Duke Energy pivots toward a cleaner, lower-carbon energy future, and away from coal-fired electricity generation.

In 2018, the company put into service two new natural gas-fired power plants that replaced older coal plants: the [W.S. Lee Station](#) in Anderson County, South Carolina, and the [Citrus Combined Cycle Station](#) in Citrus County, Florida.

In 2019, Duke Energy will bring online a third new natural gas power plant that also will replace coal units: the [Asheville combined-cycle natural gas plant project](#) in Buncombe County, North Carolina.

Meanwhile, the company has retrofitted two coal units at its [Rogers Energy Complex](#) near Cliffside, North Carolina, enabling it to reduce emissions by burning a combination of natural gas and coal – rather than coal only – to produce electricity. Similar retrofitting projects are underway at two other Duke Energy coal plants in North Carolina: Belews Creek Steam Station in Stokes County, and Marshall Steam Station in Catawba County.

In addition, the company is expanding its [Lincoln Combustion Turbine Station](#), a natural gas power plant near Denver, North Carolina, adding a new generation unit that will significantly increase the plant's electricity output, particularly during high-demand periods. When fully operational in 2024, the new unit will be about 34 percent more efficient than the site's 16 existing units.

On another front, legal and regulatory work related to the proposed [Atlantic Coast Pipeline](#) – partly owned by Duke Energy – continues. The approximately 600-mile underground natural gas pipeline will start in West Virginia and traverse Virginia and eastern North Carolina.



### LOWER CARBON

Natural gas is playing a key role as Duke Energy pivots toward a cleaner, lower-carbon energy future, and away from coal-fired electricity generation.

The pipeline's natural gas will be used in Virginia and North Carolina to fuel power plants and industrial facilities; heat homes and businesses; support local economic development; and ensure that natural gas utilities have enough natural gas to meet growing customer demand.

## Delivering Results for Customers and Shareholders

In 2018, Duke Energy achieved adjusted diluted earnings per share of \$4.72. Through investments in the energy grid, cleaner generation and natural gas infrastructure, as well as a continued focus on managing costs across the business and using digital capabilities, the company delivered on its financial commitments to shareholders.

2018 was a year marked by execution. The company's electric and gas businesses saw strong growth, underpinned by a robust capital plan and operational excellence. And, Duke Energy displayed financial flexibility as the company responded to delays with the Atlantic Coast Pipeline and significant costs associated with storms throughout the year. This dexterity enabled the company to extend its earnings per share objective of 4 to 6 percent through 2023, based off the midpoint of the 2019 guidance range of \$4.80 to \$5.20 per share.

Duke Energy remains committed to offering an attractive long-term investment to its shareholders. 2019 marks the company's 93rd consecutive year paying a dividend to its investors, and Duke Energy grew that dividend by approximately 4.2 percent in 2018.

Duke Energy's total shareholder return – measured as the change in stock price plus the reinvestment of dividends – for 2018 was 7.4 percent, compared to 3.5 percent for the Philadelphia Utility Index (20 U.S. utilities) and -4.4 percent for the S&P 500 during the same period. Duke Energy gained traction in the market during 2018, demonstrating investors' confidence in the long-term vision for the company, and the utility sector performed well as a result of macro uncertainties in the market.

The company also completed its inaugural issuance of \$1 billion in green bonds for the Duke Energy Carolinas utility during 2018. This was followed up with an issuance of \$600 million in green bonds for the Duke Energy Progress utility in early 2019. The funds will finance eligible green energy projects – including zero-carbon solar and energy storage – in the Carolinas.

Looking ahead, Duke Energy will continue to create value for customers and shareholders. With solid investment opportunities and a strong focus on the dividend, the company is well-positioned to continue delivering on its financial commitments in 2019 and beyond.

## FINANCIAL HIGHLIGHTS

December 31, 2018

(In millions, except per share data) <sup>1</sup>	2016 <sup>2</sup>	2017 <sup>2</sup>	2018
<b>Total operating revenues</b>	\$22,743	\$23,565	<b>\$24,521</b>
<b>Income from continuing operations</b>	\$2,578	\$3,070	<b>\$2,625</b>
<b>Reported diluted earnings per share (GAAP)</b>	\$3.11	\$4.36	<b>\$3.76</b>
<b>Adjusted diluted earnings per share (Non-GAAP)</b>	\$4.69	\$4.57	<b>\$4.72</b>
<b>Dividends declared per share</b>	\$3.36	\$3.49	<b>\$3.64</b>
<b>Total assets</b>	\$132,761	\$137,914	<b>\$145,392</b>
<b>Long-term debt including capital leases, less current maturities</b>	\$45,576	\$49,035	<b>\$51,123</b>

<sup>1</sup> See Duke Energy's Annual Report on Form 10-K for the year ended December 31, 2018, for detailed notes and further explanations.

<sup>2</sup> Prior year data has been recast to reflect the classification of the International Disposal Group as discontinued operations and to reflect the impacts of new accounting standards.

# 3

## OPERATIONS

Excel in Safety, Operational Performance and Environmental Stewardship





## OPERATIONS

### 2018 HIGHLIGHTS

- Maintained industry leading safety performance with a Total Incident Case Rate (TICR) of 0.43.
- Since 2005, decreased carbon dioxide (CO<sub>2</sub>) emissions by 31 percent, sulfur dioxide emissions by 96 percent and nitrogen oxides emissions by 74 percent.
- Achieved a nuclear capacity factor of 93 percent; it was the 20th consecutive year the fleet capacity factor exceeded 90 percent.
- Retrofitted two coal units at our Rogers Energy Complex, enabling it to reduce CO<sub>2</sub> emissions by burning a combination of natural gas and coal – rather than coal only.
- Reduced water withdrawn for electric generation more than 15 percent since 2011.
- Recycled 79 percent of our solid waste, diverting approximately 82,000 tons of solid waste from landfills.

### CHALLENGES AND OPPORTUNITIES

- Maintain industry leading safety performance 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.
- Strengthen the grid against cyber and physical threats through our grid modernization programs.
- Move to a lower-carbon future by reducing our CO<sub>2</sub> emissions by 40 percent from 2005 levels by 2030.



| Duke Energy's Renewable Control Center monitors wind and solar facilities nationwide.

## Control Center Helps Grow Renewable Energy

Duke Energy Renewables, the company's unregulated renewables business unit, not only produces wind, solar and battery storage power, it also keeps an eye on it, too.

Its Renewable Control Center (RCC) in Charlotte, North Carolina, uses technology and data to monitor and control energy across the United States.

A total of 30 employees monitor wind, solar and battery storage facilities all day and all night, from coast to coast, and direct 5,000 megawatts of energy to light cities and towns from North Carolina to California.

Some of that energy comes from power plants and facilities owned by other companies. That includes the nation's first offshore wind farm 3 miles off the coast of Rhode Island. Overall, the center oversees enough power to provide electricity to 1 million homes.

The center started in 2009 with a manager and one operator per shift. Ten years later, employees monitor more than 90 wind, solar and battery sites. For smaller companies, hiring Duke Energy Renewables allows them to afford more renewable energy without investing in a high-tech facility of their own.

The RCC uses weather data from Duke Energy meteorologists to predict how much renewable energy can be produced each hour and potentially in the days ahead. The more accurate their predictions are, the more valuable the forecast is for energy buyers. Here are some of the ways the center uses technology to increase renewable energy production and keep employees safe.

- It starts, stops and resets wind turbines and solar inverters to maximize availability and keep technicians safe. The center also adjusts solar panels to reduce damage during high winds and severe weather. In addition to monitoring individual plant components, operators look at the plant's performance and output to make sure it is producing as much power as possible.
- The technology alerts operators to equipment malfunctions, which in some cases can be repaired remotely in minutes. When repairs require in-person assistance, employees in Charlotte will dispatch the nearest technician.
- In addition to the six monitors at their desks, employees use eight television-size screens mounted on the wall to watch more systems – including weather, site cameras and substation components.



### CONSTANT MONITORING

Employees monitor more than 90 wind, solar and battery sites all day and all night.

## SAFETY PERFORMANCE METRICS

	2014	2015	2016	2017	2018 <sup>1</sup>
Employee and contractor work-related fatalities	4	5	0	2	3
Employee Total Incident Case Rate (TICR) <sup>2,3</sup>	0.58	0.41	0.40	0.36	0.43 <sup>4</sup>
Employee Lost Workday Case Rate (LWCR) <sup>2,5</sup>	0.17	0.18	0.15	0.15	0.15
Contractor Total Incident Case Rate (TICR) <sup>3</sup>	1.05	1.18	0.87	0.80	0.74
Contractor Lost Workday Case Rate (LWCR) <sup>5</sup>	0.28	0.21	0.15	0.10	0.11

1 2018 is the first year that Piedmont Natural Gas results are included.

2 Includes both employees and workforce augmentation contractors.

3 Number of recordable incidents per 100 workers (based on OSHA criteria). Top decile in 2017 for employee TICR was 0.42 (Edison Electric Institute survey for companies with more than 7,000 employees).

4 TICR excluding Natural Gas Business Unit is 0.34.

5 Number of lost workdays per 100 workers.

### Striving for a Safer Workplace

Duke Energy is committed to the health and safety of its workforce and communities. Putting safety first not only enhances quality of life but contributes to the company's business success.

In 2018, our employees delivered strong safety results, consistent with our industry-leading performance from previous years. However, we fell short of our aggressive target for our total incident case rate.

To help drive improvement, the company focused on injury prevention through two campaigns, including a summer program aimed at reducing heat-related illness and insect bites. The second campaign focused on reducing line-of-fire injuries caused by sharp, moving and low-hanging objects striking workers.

In addition to delivering results in business-as-usual situations, Duke Energy employees exceeded expectations under adverse weather conditions. The company safely and efficiently restored power to millions of customers after two catastrophic hurricanes impacted our territory during 2018.

Despite an improving safety trend, there is still work to be done. Duke Energy experienced three work-related fatalities and one life-altering injury in 2018. Reducing the number of serious injuries will be a focus for Duke Energy in 2019 as the company strives to be an injury- and illness-free workplace.

### Commitment to a Lower-Carbon Future

Duke Energy continues to build an energy future that is cleaner, smarter and more resilient. Duke Energy recognizes the long-term challenge that climate change presents, and that reducing carbon dioxide (CO<sub>2</sub>) emissions is a benchmark in addressing this global challenge.

The company is at the forefront of the transformation underway in the industry. It is expanding renewable generation, transitioning our generation fleet from coal to natural gas and modernizing the grid to support new technologies. It has reduced its CO<sub>2</sub> emissions by 31 percent compared to 2005 levels, outpacing the industry average of 28 percent, and plans to reach a 40 percent reduction by 2030.



#### SAFETY FIRST

In 2018, our employees delivered strong safety results, consistent with our industry-leading performance from previous years.



| Duke Energy uses 60 drones – unmanned aerial vehicles – for multiple tasks that benefit customers.

The investments Duke Energy has made to retire less efficient coal- and oil-fired power plants, build highly efficient natural gas generation, expand its portfolio of renewables, and support its zero-CO<sub>2</sub> emissions hydropower and nuclear plants have diversified the company's system and significantly reduced CO<sub>2</sub> emissions.

Duke Energy's dedication to the facts, the science and a balanced generation portfolio helped it to achieve its 2018 emissions milestone, and positions the company for further reductions. Along with significant coal unit retirements over recent years, the company has saved over a million homes-worth of energy through efficiency programs, dedicated \$11 billion to cleaner energy capacity, and maintained its existing nuclear generation, among other achievements detailed in this report.

Reducing CO<sub>2</sub> emissions is only part of Duke Energy's commitment to a cleaner energy future. Duke Energy has a responsibility to take a comprehensive approach to reducing its environmental footprint, and has made significant progress across a number of areas, including reducing sulfur dioxide emissions by 96 percent from 2005 levels, to using municipal reclaimed water in energy generation in Florida.

## Drones: Doing Work Faster and Safer

For nearly a century, unmanned aerial vehicles – or drones – were primarily tools for the military. But in the last decade, various industries have embraced this emerging technology.

The energy industry is no exception. Duke Energy started using drones in 2015 to inspect wind and solar sites. The uses keep growing: In February 2018, drone operators engineered a way to help string power lines in Puerto Rico following Hurricane Maria.

The company now has close to 100 qualified drone pilots, and operates around 60 drones. Employees in various departments are now certified pilots supporting every major line of business.

Drones have many uses at the company:

- Flying a drone with an infrared camera over a solar site eliminates time-consuming electrical testing and helps technicians identify faulty equipment within seconds of takeoff.

- Helicopters remain the primary tool for damage assessment after major storms because they can travel faster and farther than drones, but operators can use drones to perform detailed inspections, especially in densely populated areas where a helicopter cannot go safely.

Duke Energy first used drones for storm damage assessment following Hurricane Matthew in 2016 when crews were unable to drive through the Carolinas' flooded roads. With drones, the team could inspect power lines and vegetation quicker – knocking days off the company's assessment.

Recently in Ohio, a team completed a drone inspection of a transmission tower and power lines in days along the Ohio River. These inspections would have taken weeks if lineworkers had to climb the towers.

Across the energy industry, drones are making it easier and safer to inspect many tall structures. Instead of climbing a power pole (some are more than 300 feet tall), a drone can fly to the top and take pictures from multiple angles. Drones are also able to zoom in on equipment, which makes it easier to see small defects like cracks on a wind turbine or porcelain insulator.

## Staying Ahead of the Game: Securing the Energy Grid

The world is becoming more digital every day – and with more technology comes more opportunities for cybersecurity threats.

As the largest operator of the energy grid, protecting our infrastructure, operations and customer information is a top priority for Duke Energy. The company is making the electric grid more secure, so that it can withstand and protect against the growing threats of cyber and physical attacks. With multiple layers of security, company experts can quickly identify threats and protect essential systems and equipment.

Duke Energy focuses its cybersecurity efforts in many areas. The company educates employees and increases awareness of threats – from routine test phishing emails and annual trainings to seminars and video resources. Duke Energy also maintains a round-the-clock incident response team of highly skilled cybersecurity professionals solely devoted to this issue, who identify and mitigate threats.

The company has implemented defenses to safeguard our systems – and continues to implement new safeguards as threats and technology evolve. To prepare for an incident, the company conducts drills to test emergency response plans and ensure employees are prepared in case an event occurs.

As with many industries, information sharing is also essential – that's why Duke Energy works with many federal and regional agencies, industry organizations and emergency management to share lessons learned.



### AERIAL INSPECTIONS

Across the energy industry, drones are making it easier and safer to inspect many tall structures.

## Hydro Team Manages Lakes During Wet Year

For more than 100 years, Duke Energy has been harnessing rivers to generate clean renewable energy. Its hydropower plants are key to the company's long-term mission to provide sustainable energy solutions that customers value.

2018 was an especially challenging year for Duke Energy's hydro operations team, with hurricanes Florence and Michael, followed by winter storm Diego and back-to-back rain storms in December. It contributed to one of the wettest years in almost 50 years.

For Duke Energy's hydro system, the 2018 yearly total rainfall was 56.55 inches, 10.29 inches above the 47-year long-term average. December was the wettest December since 1971, with 8.40 inches of rain across the entire hydro system.

Because the safety of downstream residents is the company's highest priority, the hydro team works closely with the company's meteorologists and hydrologists to anticipate and prepare for severe weather that could affect lake levels.

The company's 32 hydro stations and reservoirs in the Carolinas are operated from the Regulated Renewables Operations Center in Charlotte, which is staffed around the clock to manage reservoirs along the Catawba-Wataree, Yadkin-Pee Dee, Keowee-Toxaway, Broad and Nantahala rivers.

## RELIABLE POWER

Safe, reliable power is a high priority for Duke Energy and our 7.7 million customers. In 2018, reliability remained high, despite hurricanes Florence and Michael, and winter storm Diego. Each year the company sets power delivery and generation fleet performance targets.

### Power Delivery

The significant number of 2018 storms increased Duke Energy's average time without power.

### Outage Statistics

	2015	2016	2017	2018	2018 Target
<b>System Average Interruption Duration Index (SAIDI, or average time without power in minutes)<sup>1,2</sup></b>	128	137	143	<b>155</b>	<b>145</b>

### Generation

Duke Energy's diverse generation fleet with carbon-free nuclear, hydro, wind and solar; lower-carbon natural gas; and higher-carbon coal and oil reliably met customer demand.

The nuclear fleet optimized reliability, which is a measure of generation reliability along with the cost to achieve that reliability, continued a four-year positive trend, with a 2018 index of 198.49. The fossil/hydro fleet's optimized reliability continued its four-year positive trend, with a 2018 index of 59.54. The commercial fleet's renewables availability also continued its steady improvement trend, increasing from 94.6 percent in 2017 to 95.3 percent in 2018.

### Generation Reliability

	2015	2016	2017	2018	2018 Target
<b>Nuclear optimized reliability<sup>2,3</sup></b>	278.81	243.88	230.46	<b>198.49</b>	<b>203.41</b>
<b>Fossil/hydro optimized reliability<sup>2,3</sup></b>	66.98	63.88	61.64	<b>59.54</b>	<b>63.28</b>
<b>Commercial renewables availability<sup>3</sup></b>	93.3%	94.2%	94.6%	<b>95.3%</b>	<b>94.5%</b>

1 Outages with a duration greater than five minutes; statistics are reported per customer, excluding planned outages. Calculated in accordance with applicable guidelines.

2 Lower numbers indicate better performance.

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



## COMMUNITY INPUT

Duke Energy is working proactively with local communities on more than 750 transmission projects.

The largest lakes on the Catawba River system – Lake James, Norman and Wylie – can store substantial amounts of precipitation and runoff, which significantly reduces downstream impacts to property and public safety. With a forecast of 8 to 10 inches of rainfall in the river basin from Hurricane Florence, the hydro team aggressively moved water in advance of the storm to create additional storage capacity, lowering the three lakes as much as 4 to 5 feet over six days.

During high water and flooding conditions, Duke Energy works closely with local emergency management officials to notify and protect the public. The company also maintains a lake website with current lake level information and high-water alerts, as well as a toll-free phone line with current lake levels, special information and advisories.

Although 2018 was a challenging year for managing reservoirs, the hydro operations team succeeded at keeping reservoirs from reaching critical levels that could have resulted in evacuations or power disconnects in low-lying areas.

### Engaging the Community on Transmission Projects

Duke Energy is working proactively with local communities on more than 750 transmission projects. Projects range from new transmission line installations and rebuilding existing lines, to new substations, substation expansions, safety and security equipment, interconnection projects and pole replacements.

Customers have a desire to know what's happening near their homes and in their communities. They want more specific and detailed information regarding those projects.

To provide customers more information, Duke Energy is communicating through multiple channels including letters, postcards, project-specific documents, face-to-face meetings with key stakeholders, project-specific websites, public meetings, interactive maps and dedicated telephone project hotlines. The company takes customer preferences regarding the route and aesthetics into account to the extent practical while designing the project.

In Polk County, Florida, Duke Energy is rebuilding a 19.9-mile, 230-kilovolt transmission line. In advance of construction, company representatives worked with local communities to minimize the impacts from construction such as traffic lane closures, noise and other potential inconveniences to property owners.

This type of collaboration is playing out continuously throughout the Duke Energy service territory and resulting in better education about projects for the public, improved understanding by the company of community interests, and fewer impacts to property, natural and cultural resources, communities and commerce.

### Strong Progress To Permanently Close Ash Basins

As Duke Energy's work to close 59 ash basins at 21 plants continues to accelerate, expert teams focused on basin closure logged more than 7 million hours in 2018, demonstrating the company's commitment to safely managing coal ash.

By the end of 2018, the company had ceased sending ash to nearly all basins, well in advance of state and federal requirements. At most operating coal plants, new systems and equipment replaced ash basins, positioning Duke Energy to begin the closure process.

## COAL PLANT RETIREMENTS

About 22 million tons of ash have been excavated since basin closure began, including more than 5 million tons moved in 2018. Ash has been excavated from seven basins in North Carolina, South Carolina and Indiana, with seven others in North Carolina and Kentucky expected to be complete in 2019, including the Dan River site.

Duke Energy continues to look for innovative ways to recycle and reuse coal ash. Overall, the company successfully recycled nearly 80 percent of the coal ash produced at its operating power plants in 2018.

Hurricane Florence brought historic flooding to the Sutton and H.F. Lee facilities, displacing a small amount of ash and cenospheres, another combustion byproduct. N.C. Department of Environmental Quality testing validated that the public and water quality remained protected throughout the storm. The company's experts and spokespeople responded quickly to address and correct misleading media reports during the hurricane.

In April 2019, North Carolina officials ordered the company to excavate nine basins where closure decisions had not yet been made. We believe the decision imposes a financial burden on our customers and the economy of the Carolinas through the most expensive and disruptive closure option possible, despite that these basins are rated "low risk" by the state and capping would be fully protective of people and the environment.

The company is appealing the order as we continue to advocate for common sense plans to close all of our basins in ways that benefit customers and communities.

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

	Location	Units	Total capacity (megawatts)	Actual retirement date
Edwardsport Station	Ind.	6, 7, 8	160	2010
Cliffside Steam Station	N.C.	1, 2, 3, 4	198	2011
Buck Steam Station	N.C.	3, 4	113	2011
W.H. Weatherspoon Plant	N.C.	1, 2, 3	177	2011
Gallagher 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 Station	Ind.	2, 3, 4, 5, 6	668	2016
Crystal River Energy Complex	Fla.	1, 2	766	2018
<b>Total</b>		<b>49</b>	<b>6,190</b>	

### Planned Coal Unit Retirements

	Location	Units	Total capacity (megawatts)	Planned retirement date
Asheville Plant	N.C.	1, 2	378	2020
Gallagher Station	Ind.	2, 4	280	2022
Allen Steam Station	N.C.	1, 2, 3	582	2024
<b>Total</b>		<b>7</b>	<b>1,240</b>	

### Total Actual/Planned Retirements

**7,430**

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



## NUCLEAR CORNERSTONE

With the company looking to reduce 2005 greenhouse gas levels by 40 percent by 2030, nuclear generation is the cornerstone for achieving this target.

### Piedmont Innovates with Vertical Main Project

Although our natural gas business serves 1.6 million residential customers across its service territories, natural gas service in residential buildings such as apartments or condominiums is uncommon.

When the developer of City Lights in Nashville, Tennessee, approached Piedmont Natural Gas to bring natural gas service to its residents in a seven-story condominium complex, the company stepped up to the challenge.

“The growth in Nashville has been phenomenal over the past five years,” said Eddie Davidson, state government affairs director for Piedmont Natural Gas. “New buildings are being built taller and taller, requiring inventive natural gas solutions.”

While Piedmont is accustomed to burying pipelines – and running underground service lines to homes – delivering service vertically to homes dozens of feet off the ground requires a unique approach.

The Piedmont team engineered a “vertical main,” a natural gas line that runs upward through the entire building to a series of meter rooms, one on each floor. From these meter rooms, service lines run to the building’s 71 individual residences, as well as to an amenities area and restaurant space on the development’s first floor.

As with every project Piedmont undertakes, safety is the No. 1 priority. To ensure proper ventilation in the building, the team created a mechanical ventilation system from the first floor of the building to the roof where a fan runs continuously to draw air up and out of the building.

Because of its work on the City Lights project, Piedmont has the specifications in place to safely bring this innovative approach to other buildings, expanding the market of residential customers for the future.

### Nuclear: Carbon-Free Powerhouse

Generating one-third of the company’s electricity, nuclear power is Duke Energy’s largest source of carbon-free energy.

All the company’s 11 nuclear generating units in the Carolinas have been operating for longer than 30 years. Yet, in many ways, the units are operating better than ever.

The company’s fleet achieved a combined capacity factor of 93 percent in 2018, which is above the industry average. That means the units were operating practically all the time. It was the 20th consecutive year the fleet capacity factor exceeded 90 percent.

Many units of the company’s plants produced record generation during 2018 – in either specific months or quarters. That power was needed during the hottest and coldest days of the year – since 2018 had both extreme cold and heat in the Carolinas.

Continuous operation marks of more than 500 days in a row were hit by several units in 2018. For the nuclear industry, that was unheard of 20 years ago.

With the company looking to reduce 2005 greenhouse gas levels by 40 percent by 2030, nuclear generation is the cornerstone for achieving this target.

# ENVIRONMENTAL PERFORMANCE METRICS

## 2018 Electricity Generated and Generation Capacity<sup>1</sup>

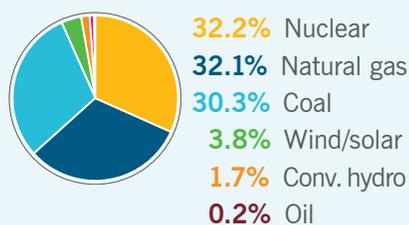
	Electricity Generated (net megawatt-hours)		Generation Capacity (megawatts)	
	MWh (thousands)	Percent	MW	Percent
<b>Total Carbon-Free</b>	<b>84,596</b>	<b>37.7%</b>	<b>13,515</b>	<b>25.1%</b>
Nuclear	72,262	32.2%	8,854	16.4%
Wind	6,782	3.0%	2,312	4.3%
Conventional hydro	3,774	1.7%	1,364	2.5%
Solar	1,778	0.8%	985	1.8%
<b>Total Lower-Carbon</b>	<b>72,048</b>	<b>32.1%</b>	<b>19,903</b>	<b>37.0%</b>
Natural gas	72,048	32.1%	7,780	14.4%
Natural gas/oil <sup>2</sup>			12,123	22.5%
<b>Total Higher-Carbon</b>	<b>68,457</b>	<b>30.5%</b>	<b>18,276</b>	<b>33.9%</b>
Coal	67,964	30.3%	16,998	31.6%
Oil	493	0.2%	1,278	2.4%
Pumped-storage hydro <sup>3</sup>	(492)	(0.2)%	2,150	4.0%
<b>Total</b>	<b>224,609</b>	<b>100.0%</b>	<b>53,844</b>	<b>100.00%</b>
<b>Purchased Renewables</b> (Solar, Wind, Hydro, Biomass)	<b>8,519</b>	<b>Equivalent to 3.8%</b>	<b>3,872</b>	<b>Equivalent to 7.2%</b>

- All data, except for purchased renewables, based on Duke Energy's ownership share of generating plants as of December 31, 2018. Totals may not add up exactly because of rounding.
- Uses nearly all natural gas. Oil can be used as a backup fuel.
- Pumped-storage hydro helps meet peak demand and, like other storage technologies, consumes more energy than it produces.

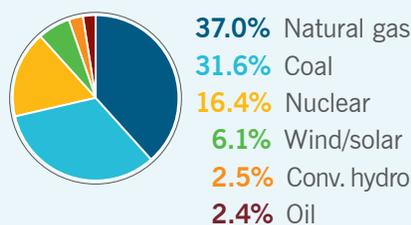
## 2018 electricity generated and generation capacity

Duke Energy has a diverse, increasingly clean generation portfolio. Almost 38 percent of the electricity we generated in 2018 was from carbon-free (nearly zero carbon emissions) sources, including nuclear, wind, hydro and solar. Over 32 percent was from lower-carbon natural gas, which emits about half as much carbon dioxide as coal when used for electric generation. About 30 percent was from higher-carbon coal and oil. Taken together, owned and purchased renewables are equivalent to over 9 percent of our generation. Duke Energy Renewables sells the electricity and/or Renewable Energy Certificates (RECs) it generates to its customers.

### 2018 Electricity Generated<sup>1</sup>



### 2018 Generation Capacity<sup>1</sup>



- Excludes pumped-storage hydro.

## Fuels Consumed For Electric Generation<sup>1</sup>

	2008	2016	2017	2018
Coal (million tons)	63.1	31.7	31.1	29.3
Oil (million gallons)	230.6	29.5	30.1	64.9
Natural gas (billion cubic feet)	163.4	545.2	496.6	610.3

- All data based on Duke Energy's ownership share of generating assets as of the end of each calendar year.

## Fuels consumed for electric generation

Since 2008, the use of coal and oil as generation fuels has significantly decreased. These fuels are being replaced by natural gas and renewables.

## ENVIRONMENTAL PERFORMANCE METRICS

CONTINUED

### Water Withdrawn and Consumed for Electric Generation

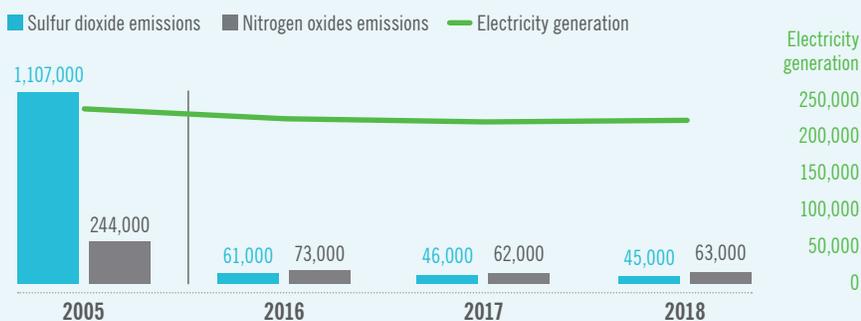
(billion gallons)

	2011	2016	2017	2018
<b>Withdrawn</b>	5,900	5,341	5,293	<b>4,991</b>
<b>Consumed</b>	105	74	71	<b>84</b>
<b>Consumption intensity</b> (gallons per MWh generated)	456	337	324	<b>374</b>

### Emissions From Electric Generation<sup>1</sup>

	2005	2016	2017	2018
<b>CO<sub>2</sub> emissions</b> (thousand tons)	153,000	108,000	105,000	<b>105,000</b>
<b>CO<sub>2</sub> emissions intensity</b> (pounds per net kWh)	1.29	0.97	0.96	<b>0.94</b>
<b>SO<sub>2</sub> emissions</b> (tons)	1,107,000	61,000	46,000	<b>45,000</b>
<b>SO<sub>2</sub> emissions intensity</b> (pounds per net MWh)	9.3	0.6	0.4	<b>0.4</b>
<b>NO<sub>x</sub> emissions</b> (tons)	244,000	73,000	62,000	<b>63,000</b>
<b>NO<sub>x</sub> emissions intensity</b> (pounds per net MWh)	2.1	0.7	0.6	<b>0.6</b>
<b>CH<sub>4</sub> emissions</b> (CO <sub>2</sub> equivalent) (thousand tons)	420	236	230	<b>218</b>
<b>N<sub>2</sub>O emissions</b> (CO <sub>2</sub> equivalent) (thousand tons)	731	402	391	<b>369</b>

### Sulfur Dioxide and Nitrogen Oxides Emissions (tons)<sup>2</sup> and Electricity Generation (thousand net megawatt-hours)



### Methane Emissions from Pipeline Operations

(thousand tons)<sup>3</sup>

	2015	2016	2017	2018
<b>CH<sub>4</sub> emissions</b> (CO <sub>2</sub> equivalent)	184	184	248	<b>264</b>

1 All data based on Duke Energy's ownership share of generating assets as of December 31, 2018. Totals may not add up exactly due to rounding.

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

3 Piedmont Natural Gas is included beginning in 2017.

### 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, over 98 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 intensities, demand for electricity, weather, fuel availability and prices, and emissions controls deployed. Since 2005, our carbon dioxide (CO<sub>2</sub>) emissions decreased by 31 percent, sulfur dioxide (SO<sub>2</sub>) emissions decreased by 96 percent and nitrogen oxides (NO<sub>x</sub>) emissions decreased by 74 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.

## ENVIRONMENTAL PERFORMANCE METRICS

CONTINUED

### Sulfur Hexafluoride Emissions from Electric Transmission and Distribution Operations

(thousand tons)<sup>1</sup>

	2015	2016	2017	2018
SF <sub>6</sub> emissions (CO <sub>2</sub> equivalent)	291	570	552	574

### Toxic Release Inventory

(thousand pounds)<sup>2</sup>

	2007	2015	2016	2017
Releases to air	97,969	10,396	6,074	5,226
Releases to water	257	145	212	174
Releases to land	22,052	9,666	9,738	9,728
Off-site transfers	155	1,363	2,628	2,211
<b>Total</b>	<b>120,434</b>	<b>21,570</b>	<b>18,652</b>	<b>17,338</b>

### Waste

	2015	2016	2017	2018
Solid waste				
■ Total generated (thousand tons) <sup>3</sup>	88	102	109	104
■ Percent recycled	72%	76%	80%	79%
Hazardous waste generated (tons) <sup>4</sup>	317	1,195	126	281
Low-level radioactive waste (Class A, B and C) generated (cubic feet) <sup>5</sup>	200,667	193,996	148,188	—

### Reportable Oil Spills<sup>6</sup>

	2015	2016	2017	2018
Spills	23	23	18	28
Gallons	3,425	3,970	728	507

### Environmental Regulatory Citations<sup>7</sup>

	2015	2016	2017	2018
Citations	9	9	10	17
Fines/penalties (dollars)	\$114,585,735	\$7,114,090	\$19,797	\$533,776

1 SF<sub>6</sub> emissions fluctuations are due to maintenance, replacement and storm repair needs.

2 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.

3 Weights are estimated based on volumes where necessary. Excludes Duke Energy Renewables, which has smaller volumes, and large nonreplicable projects such as plant demolitions. Piedmont Natural Gas is included beginning in 2017.

4 Excludes Duke Energy Renewables. Hazardous waste generation fluctuates mainly due to maintenance projects.

5 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 2018 will be available later in 2019.

6 Excludes Piedmont Natural Gas.

7 Includes international and U.S. federal, state and local citations and fines/penalties.

### Sulfur hexafluoride emissions

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 2017 were down nearly 86 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 2018 will be available in August 2019.)

### Waste

We came in just below our goal to recycle 80 percent of our solid waste, and are working on strategies to meet this goal in the future. (This goal excludes Duke Energy Renewables, which has a relatively small waste stream.)

### 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 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 "Legal Cases Resolved" article in the 2015 Sustainability Report.

# 4

## EMPLOYEES

Develop and Engage Employees and Strengthen Leadership





## EMPLOYEES

### 2018 HIGHLIGHTS

- Achieved a companywide employee engagement score of 68 percent, measured by favorable responses to the employee engagement sample survey.
- Received the 2018 Secretary of Defense Employer Support Freedom Award.
- Black Enterprise magazine named Duke Energy to its “50 Best Companies for Diversity.”
- Duke Energy earned the Human Rights Campaign’s distinction as a “Best Place to Work for LGBTQ Equality” with a perfect score of 100 percent in its Corporate Equality Index.
- Became the first energy company to sign up for the Historically Black Colleges and Universities Partnership Challenge.

### CHALLENGES AND OPPORTUNITIES

- Foster a high-performance and inclusive culture built on strong leadership and highly engaged and diverse employees.
- Continue to invest in education and workforce development to help build a pipeline of skilled workers.
- Ensure knowledge transfer as our baby boomers retire.



| Duke Energy employs more than 2,000 military veterans, including engineers and powerline technicians.

## A Strong Commitment to Those Who Serve in the Military

Employees who work as a team and can solve problems describes the men and women who serve in the military. It's the main reason that Duke Energy is striving to attract these people to our workforce.

"Duke Energy highly values employees who are military veterans, National Guard members and military reservists," says Lynn Good, company chairman, president and CEO. "We're extremely proud to support the men and women who serve our country, protect our freedom and make our company great.

"They possess training, technical skills and leadership qualities that transfer to business. They excel at working in diverse teams and adapting to new environments and assignments. And, they have a determination to see a job through to the end, no matter what the circumstance."

Duke Energy received the 2018 Secretary of Defense Employer Support Freedom Award – the highest honor given by the U.S. Department of Defense to companies that provide outstanding support to employees who serve in the National Guard and Reserve.

The company was one of only 15 companies to receive the award out of more than 2,300 companies nominated.

Highlights of Duke Energy's commitment to those who serve in the military:

- Duke Energy employs more than 2,000 military veterans – from engineers who operate the company's nuclear power plants to lineworkers who connect customers to the electric grid.
- Duke Energy provides 120 hours (three weeks) of full pay for annual military leave to employees who serve in the National Guard and Reserve. That puts Duke Energy near the top of companies supporting those who serve their country.
- "Together We Stand" – a 450-member, veteran-focused Duke Energy employee resource group – mentors newly hired veterans at the company.
- Duke Energy actively participates in Enable America, a nonprofit group (funded in part by the Duke Energy Foundation) that provides training and job placement assistance to disabled veterans and transitioning service members.

To learn more about how the company helps veterans transition from the military to start a career at Duke Energy, visit [duke-energy.com/our-company/careers/military-programs](https://duke-energy.com/our-company/careers/military-programs).



| Duke Energy's commitment to diversity and inclusion helps the company attract top talent.

## Deepening and Diversifying the Talent Pipeline

Duke Energy's communities, customers and workforce are more diverse today than ever. Diverse employees and leadership are critical assets as the company transforms to better serve customers and communities.

Duke Energy believes that a commitment to diversity and inclusion helps foster innovation and enables us to attract and retain world-class talent.

With that in mind, the company elevated diversity and inclusion to the C-suite and named Joni Davis as chief diversity and inclusion officer. In that role, Davis is focused on building a diverse and inclusive organization that delivers the right products and services to its customers, grows the business and enables people to reach their full potential.

One of the many ways the company aims to diversify its talent pipeline is through deepening relationships with Historically Black Colleges and Universities (HBCUs). In 2018, Duke Energy became the first energy company to sign up for the HBCU Partnership Challenge created by the Bipartisan HBCU Caucus.

Congresswoman Alma S. Adams (D-NC) and Congressman Bradley Byrne (R-AL), co-chairs of the Bipartisan HBCU Caucus, launched the HBCU Partnership Challenge to promote greater engagement and support from private companies with HBCUs.

Duke Energy's wide-ranging support of HBCUs underscores the company's commitment to attract and retain the diverse talent the business needs to successfully serve its customers. For example:

- Through the Duke Energy Foundation, the company has provided more than \$1.5 million to nine HBCUs to support scholarships, academic programs and other initiatives, with a focus on programs aligned with the energy industry's future workforce needs. For instance, the company invested in a five-week bridge program at North Carolina A&T State University to attract and retain high-achieving students in engineering and computer science disciplines.
- In 2018, Duke Energy established the position of HBCU and Diversity Recruiter, which is solely focused on deepening the talent pipeline from HBCUs and other diverse organizations and communities.
- The company participates in career fairs and information sessions and conducts on-campus interviews at several HBCUs across our service footprint, including North Carolina A&T State University, Florida A&M University, Johnson C. Smith University, Wilberforce University and South Carolina State University.

## Managing Human Assets with the Future in Mind

To grow as a company, Duke Energy is looking for better ways to manage its assets, including the ones most critical to the company's success: employees. Through both formal training and knowledge transfer, the company continues to invest in and prepare workers to meet industry challenges.



## FOCUSING ON EMPLOYEES

Through both formal training and knowledge transfer, the company continues to invest in and prepare workers to meet industry challenges.

The Duke Energy Leadership Academy offers a variety of learning and development opportunities companywide. The core curriculum offers independent studies and facilitated programs to address the needs of each leadership level. Elective resources are also available to further support specific learning and development needs.

Duke Energy's nuclear fleet is using 3-D printing to train employees. In addition to seeing pictures of breakers and valves, students can touch and study 3-D printed models of the metal components they'll encounter.

Since the models are plastic, they are easy to handle and can be customized to meet the needs of student training. And, the printed models mean real, more expensive components are not needed simply for training.

Nuclear employees are also transferring knowledge in other ways. The company's North American Young Generation in Nuclear (NAYGN) members created a fleetwide program to formally recognize experienced employees who mentor newer teammates.

The program, which has been replicated at nuclear plants nationwide, encourages more experienced employees to help their less-seasoned colleagues gain the valuable knowledge and experience to ensure the nuclear fleet continues operational excellence. Such knowledge transfer leads to error-free work, workload reduction and a more engaged workforce.

As Duke Energy looks to extend the licenses of its nuclear fleet for another 20 years, programs like these ensure valuable operating knowledge and experience are retained and passed on to the next generation of workers.

And, they serve as a model for the rest of the company as Duke Energy evolves to meet the needs and expectations of all customers.

## Training the Next Generation of Lineworkers

North Carolina's community colleges are key to creating a skilled workforce and thriving business climate. That's why Duke Energy partners with several of these institutions as it harnesses new technologies and works to innovate and transform the customer experience.

The Carolinas Energy Workforce Consortium estimates the industry will need 1,500 new lineworkers each year for the next five to six years in North Carolina. It's important the company collaborates to develop job-specific training and energy-related curriculums, while helping introduce much needed entry-level talent into the job market.

Duke Energy relies on the expertise of lineworkers to maintain and grow energy infrastructure across the state, not to mention to power North Carolina's economy and communities. As the company works to build an even smarter energy grid that will improve the way Duke Energy serves customers, the need for skilled line technicians will be even greater.

To date, Duke Energy has partnered with 10 community colleges in North Carolina to develop lineworker training programs that blend hands-on learning and classroom instruction to train the next generation of employees.

One of those institutions is Cape Fear Community College, located in Wilmington, North Carolina. With the help of a \$200,000 grant from Duke Energy, the college launched its Power Line Technician Program in June 2018. The program includes a 10-week course to teach students pole climbing and equipment installation as well as commercial driving. This program is graduating roughly 40 new students every class and has projections to reach 150 to 200 graduates annually.



| Rick Burger – Duke Energy’s Rick Burger was honored for his decades of service to Indiana communities.



#### COMMITTED TO SERVICE

In 2018, Rick Burger was honored with a James B. Duke Award, Duke Energy’s highest employee honor for service to the company and community.

In late 2018, Duke Energy announced it is partnering with the South Carolina Technical College System to invest \$1 million in grants to expand training opportunities for lineworkers across the state. A committee will award grants twice a year with a maximum grant for any program capped at \$200,000. The Carolinas Energy Workforce Consortium is projecting the need for at least 500 lineworker hires every year for the next five years in South Carolina.

### With Hands, Heart, Rick Burger Makes Indiana Better

In 2018, Rick Burger was honored with a James B. Duke Award, Duke Energy’s highest employee honor for service to the company and community.

The award honored Burger’s lifetime achievement to the company. In more than four decades with Duke Energy, he has become a household name in west central Indiana. He’s taken the company’s commitment to charitable giving and volunteerism to a high level – helping raise millions of dollars for charities.

During the holiday season, you’ll find Burger dropping off cookies to community leaders as a “thank you.” Or, the government and community relations manager might be helping raise money for a new animal shelter.

Burger’s first job for predecessor company Public Service Indiana was as an agricultural representative – working with farmers on their needs for electricity.

Now, he’s the person local reporters contact when they’re chasing an energy-related story – doing more than 100 interviews a year.

When he learned that the police department in Brazil, Indiana, needed a new station, he helped negotiate the sale of an old Duke Energy office to the city.

In 2018, he helped organize an air show that featured the U.S. Navy Blue Angels, Air Force’s F-22 Raptor and Tora! Tora! Tora! The event drew 60,000 people and had a major economic impact on the community.

When someone asks Burger how he’s doing, he hands out a business card with a simple message: “Working for the people and living the dream.”

# WORKFORCE PERFORMANCE METRICS

## Workforce Statistics

	12/31/16	12/31/17	12/31/18
Full- and part-time employees	28,790	29,143	<b>29,923</b>
Collective bargaining unit members as percent of workforce	19.1%	18.8%	<b>18.1%</b>

## Workforce Demographics

	12/31/16	12/31/17	12/31/18
Ethnic diversity as percent of workforce <sup>1</sup>			
■ White	83.3%	82.2%	<b>80.4%</b>
■ Black/African American	11.8%	12.0%	<b>11.9%</b>
■ Hispanic/Latino	2.7%	1.7%	<b>2.3%</b>
■ Asian	1.5%	1.5%	<b>1.6%</b>
■ American Indian/Alaska Native	0.6%	0.6%	<b>0.6%</b>
■ Native Hawaiian/Other Pacific Islander	0.1%	0.1%	<b>0.1%</b>
■ Not specified	0.0%	0.0%	<b>1.8%</b>
■ Two or more races (not Hispanic or Latino)	—	1.9%	<b>1.4%</b>
Females/minorities as percent of workforce/management			
■ Females as percent of workforce	22.8%	23.1%	<b>23.3%</b>
■ Females as percent of management	17.6%	18.0%	<b>18.8%</b>
■ Minorities as percent of workforce	16.7%	17.7%	<b>18.1%</b>
■ Minorities as percent of management	11.1%	11.5%	<b>11.9%</b>

## Employee Turnover Summary

	2016	2017	2018
Turnover as percent of workforce	9.6%	8.1%	<b>8.0%</b>
Percentage of employees eligible to retire in five years <sup>2</sup>	45%	45%	<b>42%</b>
Percentage of employees eligible to retire in 10 years <sup>2</sup>	57%	57%	<b>54%</b>

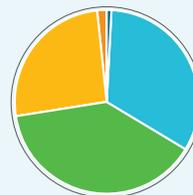
1 Totals may not add up exactly because of rounding.

2 "Eligible to retire" is defined as 55 years of age or older, with at least five years of service.

## A Multigenerational Workforce

Younger generations are becoming a larger part of our workforce, and assuming more responsibility at Duke Energy. As our workforce evolves, we work hard to assure that we are qualified, skilled, engaged and enabled to grow Duke Energy's evolving business.

## Five Generations of Duke Energy Employees\*



- 0.1%** Traditionalists (born before 1946)
- 33%** Baby boomers (born 1946-1964)
- 39%** Generation X (born 1965-1981)
- 26%** Millennials (born 1982-1995)
- 1%** Generation Z (born after 1995)

\* Totals do not add up exactly because of rounding.

# FORWARD-LOOKING INFORMATION

## Cautionary statement 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, including those related to 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 rate case proceedings and 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;
- 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 sustained downturns of the economy and the economic health of our service territories or variations in customer usage patterns, including energy efficiency efforts and use of alternative energy sources, such as 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 private solar and battery storage, in Duke Energy 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 natural 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 obtain the necessary permits and approvals and to complete necessary or desirable pipeline expansion or infrastructure projects in our natural gas business;
- Operational interruptions to our natural gas distribution and transmission activities;
- The availability of adequate interstate pipeline transportation capacity and natural gas supply;
- The impact on facilities and business from a terrorist attack, cybersecurity threats, data security breaches, operational accidents, information technology failures or other catastrophic events, such as fires, explosions, pandemic health events or other similar occurrences;
- The inherent risks associated with the operation of nuclear facilities, including environmental, health, safety, regulatory and financial risks, including the financial stability of third-party service providers;
- The timing and extent of changes in commodity prices and interest 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, compliance with debt covenants and conditions and general market and economic conditions;
- Credit ratings of the Duke Energy Registrants may be different from what is expected;
- 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 the Duke Energy Registrants' 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;
- The impact of U.S. tax legislation to our financial condition, results of operations or cash flows and our credit ratings;
- The impacts from potential impairments of goodwill or equity method investment carrying values; and
- The ability to implement our business strategy, including enhancing existing technology systems.

Additional risks and uncertainties are identified and discussed in the Duke Energy Registrants' reports filed with the SEC and available at the SEC's website at [sec.gov](http://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 and the Duke Energy Registrants expressly disclaim an obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

## NON-GAAP FINANCIAL INFORMATION

### Non-GAAP Measures

Management evaluates financial performance in part based on non-GAAP financial measures, including adjusted earnings and adjusted diluted EPS. These items represent income from continuing operations attributable to Duke Energy, adjusted for the dollar and 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 earnings and 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 these non-GAAP financial measures for planning and forecasting, and for reporting financial results to the 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 earnings and adjusted diluted EPS are GAAP Reported Earnings and GAAP Reported EPS, respectively.

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

- Costs to Achieve Mergers represents charges that result from strategic acquisitions.
- Regulatory and Legislative Impacts in 2018 represents charges related to the Duke Energy Progress and Duke Energy Carolinas North Carolina rate case orders and the repeal of the South Carolina Base Load Review Act. For 2017, it represents charges related to the Levy nuclear project in Florida and the Mayo Zero Liquid Discharge and Sutton combustion turbine projects in North Carolina.
- Impairment Charges in 2018 represents an impairment at Citrus County CC, a goodwill impairment at Commercial Renewables and an other-than-temporary impairment of an investment in Constitution Pipeline Company, LLC. For 2017 and 2016, the charges represent goodwill and other-than-temporary asset impairments at Commercial Renewables.
- Sale of Retired Plant represents the loss associated with selling Beckjord, a nonregulated generating facility in Ohio.
- Impacts of the Tax Act represents amounts recognized related to the Tax Act.
- Severance Charges relate to companywide initiatives, excluding merger integration, to standardize processes and systems, leverage technology and workforce optimization.

Adjusted earnings also include the operating results of the International Disposal Group, which has been classified as discontinued operations. Management believes inclusion of the operating results of the International Disposal Group within adjusted earnings and adjusted diluted EPS results in a better reflection of Duke Energy's financial performance during the period.

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

### Reconciliation of GAAP Reported Amounts to Adjusted Amounts

The following table presents a reconciliation of adjusted earnings and adjusted diluted EPS to the most directly comparable GAAP measures.

(per share amounts)	Years Ended December 31,		
	2018 EPS	2017 EPS	2016 EPS
GAAP Reported EPS	\$3.76	\$4.36	\$3.11
Adjustments to Reported:			
Costs to Achieve Mergers	0.09	0.09	0.48
Regulatory and Legislative Impacts	0.29	0.14	—
Impairment Charges	0.25	0.11	0.07
Sale of Retired Plant	0.12	—	—
Impacts of the Tax Act	0.03	(0.14)	—
Severance Charges	0.21	—	0.08
Discontinued Operations	(0.03)	0.01	0.95
Adjusted Diluted EPS	\$4.72	\$4.57	\$4.69



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